# PERKO.

AND HARDWARE CORPORATION BROOKLYN, N. Y.

(Incorporated 1917)

1943 Pitkin Ave., Brooklyn 7, N. Y. 157 Snediker Ave., Brooklyn 7, N. Y.

Telephone - Dlckens 2-1920

Manufacturers of

Running Lights, Searchlights, Binnacles, Steering Wheels, Stoves, Pumps, Toilets, Lavatories. Blocks, Brass and Galvanized Marine Hardware and Sheet Metal Specialties of Every Description for All Types of Boats from Canoes to Ocean Liners

# Catalog No. 145

1954



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# FOREWORD AND GENERAL INFORMATION

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This catalog has been arranged for convenient reference by grouping the material according to its application in the marine field.

You will find illustrated herein a number of new items added to our fast growing line, indicating constant attention to changes in the marine field, our determination to keep abreast of the times and to retain the ability to supply the most desirable and modern equipment.

Of course we continue our strictest rules of adherence to highest quality and finish, fastest possible delivery and cooperation with our numerous friends and customers throughout the world.

PRICES
AND TERMS

Our costs are subject to change due to causes beyond our control. The prices listed herein are only intended for guidance of our jobbers and do not necessarily establish resale prices. Applicable governmental regulations, shipping costs and other complications must be considered in arriving at a fair price. I.E. In areas west of the Mississippi, prices are generally 10% to 15% higher because of the heavy shipping cost involved. All prices are subject to change without notice and are F.O.B. New York, unless quoted otherwise. Terms are 30 days net; 2% if pay ment is sent 10 days from date of invoice.

**GUARANTEE** 

Every item bearing our trade-mark is guaranteed free from defects at time of shipment. In case of defects, adjustments will gladly be made, provided the material is returned to our factory and repairs have not been attempted by other than our own workmen.

RETURN GOODS Material made to order is not returnable. Stock material is only returnable when permission has been granted by us, and is subject to a handling and refinishing charge.

WEIGHTS

The weights given in this catalog are not guaranteed, but have been carefully determined and should be sufficient for general purposes.

RATING

Orders from firms unknown to us and having no satisfactory commercial credit rating must be accompanied by cash or satisfactory references. C. O. D. shipments will be made if a 25% deposit is sent with order.

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Customers should send specific shipping instructions, if this is not done, we will use our own judgment in selecting route.

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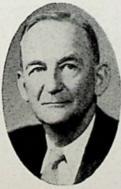
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## UNITED STATES COAST GUARD

## MOTORBOAT REGISTRATIONS & NAVIGATION FINES SECTION

# Requirements for Motorboats NOT in Commercial Service

For complete details, contact local Coast Guard office or write to, Commandant, U. S. Coast Guard, Washington, D. C. for copy of "Motorboat Regulations" C.G. 168 latest issue.

copy of "Motorboat Regu	lations" C.G. 168 latest issu	ue.			
EQUIPMENT	CLASS A 0' to 15' 11"	CLASS 1 16' to 25' 11"	CLASS 2 26' to 39' 11"	CLASS 3 40' to 65'	
COMBINATION LIGHT	port and green to s	boat showing red to starboard from right paft the beam, visible	NONE NONE		
PORT SIDE LIGHT	NONE	NONE	1—on port side, properly screened to show red from right ahead to 2 points abaft the beam, visible at least 1 mile.		
STARBOARD SIDE LIGHT	NONE	NONE	1—on starboard side, properly screened to show green from right ahead to 2 points abaft the beam, visible at least 1 mile.		
STERN LIGHT	1—bright white l	ight aft showing all ar	ound the horizon, visi	ble at least 2 miles.	
BOW LIGHT	NONE	NONE	1—bright white light in fore part of boat showing from right ahead to 2 points abaft the beam on both sides, visible at least 2 miles.		
WHISTLE	NONE	l—hand, mouth, or power-operated. Audible at least ½ mile.			
BELL	NONE	NONE	1-which produces, when struck, a clear bell-like tone of full round characteristic		
LIFESAVING DEVICES	1—life preserver o	1—life preserver or ring buoy or buoyant cushion for each person on aboard. (Approved.)  1—life preserver ring buoy for each person on board. (Approved).			
FLAME ARRESTORS	l—on each carbu	retor of all gasoline en	ngines installed after	April 25, 1940, except	
VENTILATION	hilges in engine	At least 2 ventilators with cowls or equivalent capable of removing gases from the bilges in engine and fuel tank compartments of boats constructed or decked after April 25, 1940, using gasoline or other fuel of a flashpoint less than 110° Fahrenheit.			
FIRE EXTINGUISHERS	foam or 1 - 4-lb. C	1—1-Qt. carbon tetrachloride or 1-1¼ gal. foam or 1 - 4-lb. CO <sub>2</sub> extinguisher. None required on outboard motorboats, not carrying passengers for hire.  2—1-Qt. tetrachloride 3—1-Qt. carbon or 2 - 1½ gallon rachloride or 3 - 1 gallon foam or 3 extinguishers.			

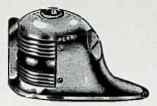


## STREAMLINE COMBINATION LIGHTS

FOR OUTBOARD MOTOR BOATS AND SMALL RUNABOUTS

## Heavy Gauge Wrought Brass

WITH REBULBING FEATURE AND FLAG POLE SOCKET





method of chang-ing bulb

Fig. 1140

Furnished complete with red and green fresnel lenses and double contact socket.

Height	Base	Lens	Socket	Weigh
Inches	Inches	Inches	Inches	Pound
31/4	3 34 x 6 14	2%16x3	34	1
Bright	Polished	Chromium	Spare	Spare
Finish	Brass	Plated	Lenses	Sockets
Each	Each	Each	Each	Each
\$7.00	\$8.00	\$9.25	\$1.20	\$ .45

Spare D.C. Sockets, see Fig. 747, No. 1. Spare Lenses, see Fig. 259, Class A.

WITHOUT REBULBING FEATURE OR FLAG POLE SOCKET



Fig. 1140-A

With red and green fresnel lenses and double contact socket.

Dimensions same as Fig. 1140 above.

Bright Finish	Polished Bruss	Chromium Plated	Spare Leuses	Spare Socket
Ench	Each	Each	Ench	Ench
\$6.25	\$7.25	\$8.25	\$1.20	\$ .45

SELF CONTAINED BATTERY TYPE WITH FLAG POLE SOCKET AND SWITCH FOR SINGLE CELL FLASHLIGHT BATTERY





Fig. 1144

Battery and bulb easily replaced by removal of three thunib screws from base.

With red and green fresnel lenses, miniature socket and bulb. Battery not included.

Dimensions same as Fig. 1140 above.

Bright	Polished	Chromium	Spare	Spare
Finish	Brass	Plated	Lenses	Bulbs
Each	Each	Each	Each	Each
\$9.25	\$10.25	\$11.50	\$1.20	\$ .25

"Little Joe"

DIE CAST ALUMINUM ALLOY—WITH FLAG POLE SOCKET—NO REBULBING FEATURE



Fig. 1146

A neat little light suitable for small boats to which an outboard motor is attached.

Polished Each	Spare Lenses Each	Height Inches	Base Inches	Height Lens Inches		Weight Ounces
\$3.75	\$.70	2	414x3%	19/16	1/2	4
			et S.C. bul		\$.22.	

Cast Bronze
WITH REBULBING FEATURE AND F. P. SOCKET





Rear view showing method of changing bulb.

Fig. 598

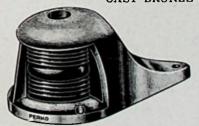
Complete with red and green fresnel lenses and double contact electric socket.

				Flagpole	
No.	Height Inches	Base Inches	Lens Inches	Socket Inches	Weight Pounds
1	3 1/8	3 % x 6 1/4	2%16x3	34	?
2	31/2	434 x 734	2916x3	1	3 1/2
3	4 3/8	5½x8¾	35/16x3%	1	13%
No.	Polished Bronze Ench	Chromium Plated Each		sea	Spare Sockets Each
1	\$12.75	\$14.50	\$1.	20	\$ .45
2	15.00	17.00	1.	20	.45
3	18.75	22.00	1.	80	.45

Spare Lenses, see Fig. 259.

Spare D.C. Sockets, see Fig. 747 No. 1.

VENTILATOR TYPE WITH REBULBING FEATURE AND F. P. SOCKET CAST BRONZE





Complete with red and green fresnel lenses and double contact socket.

Height	Base	Lens	Socket	Pounds
Inches	Inches	Inches	Inches	Weight
31/2	41/2×73/4	2%igx3	1	31/4
Polished	Chromium		Spare	Spare
Bronze	Plated		Lenses	Sockets
Each	Each		Each	Each
\$16.00	\$18.00		\$1.20	\$ .45

NOTE - Spare Rebulbing Features Complete for Figs. 598, 640, and 1140, Polished \$1.80, Chrome \$2.20 each.





# New "2 in 1"

# Streamline Combination Light

WITH REBULBING FEATURE FLAG POLE SOCKET-FLASHLIGHT CASE WITH SWITCH-2 SPRING CLAMPS-BULB ALL WIRED READY FOR INSTALLATION ALL BRASS LIGHT

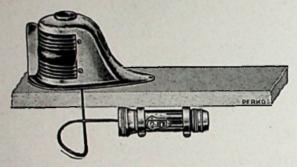


Fig. 1147

In addition to a very practical and attractive navigation light, the user has a 2 cell flashlight available and handy at all times as the flashlight case is complete with reflector for light projection.

Supplied with 4 feet of wire to permit location of flashlight case at most convenient spot. Lamp socket is miniature screw type.

Batteries are not included.

Height Light Inches 3 1/4	Base Light Inches 3 % x6 1/4	Size Lens Inches 2%16x3	Flag Pole Socket Inches	Weight Pounds
Bright Finish Each \$10.25	Polished Brass Each \$11.25	Chromium Plated Each \$12.50	Spare Lenses Each \$1.20	Spare Bulbs Each

# Streamline Combination Light

FOR CLASS 1 CRUISERS HEAVY GAUGE WROUGHT BRASS WITH REBULBING FEATURE AND F. P. SOCKET

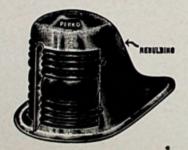


Fig. 1141

Inches Height	Base Inches	Lens Inches	So	eket Weight ches Pounds
5 1/4	5%x91/2	41/4×3	<del>1/4</del>	1 2
Bright Finish Each	Polished Brass Each	Chromium Plated Each	Spare Lenses Each	Spare Sockets Each
\$11.75	\$12.50	\$15.50	\$2.50	\$ .45

Spare D.C. Sockets, see Fig. 747, No. 5. Spare Rebulbing feature complete, Polished \$1.80, Chrome \$2.20 each.

# "Sport Kit" Lights

FLASHLIGHT BATTERY TYPE - 2 CELL ALL BRASS-CHROMIUM PLATED



Fig. 1142 Comb. Light

\$9.35



Stern Light

\$ .22

Designed for small craft such as rowboats, canoes, dinghys, etc., when an outboard motor is attached. Lights are required by law in such cases.

Height Overall Inches Fig. 1142	Height Overall Inches Fig. 1143 20	Diam. Stem Inches	Size Lens Inches Fig. 1142 2%6x3	Size Globe Inches Fig. 1143	Weight Each Pounds
Fig. 11	42	Fig.	1148	B	ctra ulbs

\$8.35 Clearance in regular clamp is 1 1/8"; with larger clamp, 2" clearance, add \$.60 each.

Price includes one bulb in each light, no batteries.

#### SPARE PARTS

Lenses for Fig. 1142Each	\$1.20
Globe for Fig. 1143Each	1.50
Head with lenses for Fig. 1142Each	
Battery container onlyEach	
Dattery container only	3.23
Clamp onlyEach	3.50

# **Outboard Combination Light**

WROUGHT BRASS



Fig. 485

Complete with red and green fresnel lenses and double contact electric socket.

Height Overall Inches 4½	Dlam. Body Inches 2½	Sizes Lens Inches 2%(x3	Weight Pounds	
Polished Brass Each \$4.75	Chromium Plated Each \$6.00	Spare Lenses Each	Spare Sockets Each	

# Improved Pole Light Assembly

21/2 OR 3 INCH GLOBE, FIG. 250 OR 251 COMPLETE WITH FLAG POLE SOCKET AND ELECTRIC CONNECTIONS IN POLE AND SOCKET HOLLOW MAHOGANY POLE—VARNISHED



Fig. 531

Insert pole in socket and electric connection is complete. No wires exposed, no springs to corrode. A real positive hook-up, unaffected by water or corrosion.

Pole may remain in socket at all times, no switch necessary. Female part of connector in base of pole has four holes, two for on position, two for off position. Male part of connector in flag pole socket has two prongs (no springs). To light, loosen thumb screw, lift pole, give half turn and reset. To disconnect, reverse operation.

Globe will accommodate bulb up to 50 C. P.

Length Pole Inches	Polished Brass Each	Chromium Plated Each	Diam. Base of Pole Inches	Weight Pounds
24	\$13.00	\$14.50	11/4	2
30	13.75	15.25	11/4	21/2
36	14.50	16.00	134	21/4
48	15.50	17.00	11/4	3
	11 /01/			

Spare clear globes (21/2 or 3 inch) \$1.80 Each Spare electric bulb sockets fig. 747, No. 2 .45 Each Electric connectors only (male & female) 1.10 per set Complete except F. P. socket, deduct 1.50 Each With Red, Green or Blue Globe, add .50 Each Furnished with 21/2 inch globe unless otherwise specified.

Junior Pole Light Assembly
1½ INCH FRESNEL BALL GLOBE, FIG. 604
COMPLETE WITH SOCKET AND ELECTRIC
CONNECTIONS IN POLE AND SOCKET
MANGEMENT BOLE AND SOCKET MAHOGANY POLE—CASE BRONZE SOCKET



Fig. 1145

Wired through hollow center of pole. Globe will take a 6 C. P. bulb, double contact. Base of pole is 1 inch.

Length Pole Inches	Polished Brass Each	Chromium Plated Each	Weight Pounds
20	\$11.50	\$13.25	111/6
24	12.00	13.75	
30	12.75	14.50	11/4
Complete	\$1.00 Each		
Spare clea	1.20 Each		
Spare elec	.45 Each		
Electric co	1.00 per set		

Junior Pole Light Assembly

ELECTRIC CONNECTIONS IN POLE AND SOCKET HOLLOW BRASS POLE—CAST BRONZE SOCKET 1½ INCH FRESNEL BALL GLOBE, FIG. 604



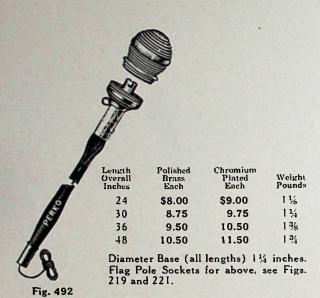
		8. 010		
ength Pole nches	Polished Brass Each	Chromium Plated Each	Diam. Pole Inches	Weis
20	\$ 9.75	\$11.50	*	-13
24	10.00	11.75	%	13
30	10.25	12.00	3/4	1

Complete except F. P. socket, deduct Spare clear globes Spare electric bulb sockets, fig. 747, No. 2 Electric connectors only (male & female) \$ .80 Each 1.20 Each 45 Eac 1.00 per :



# Combination Flag Pole and Light

ELECTRIC-HOLLOW MAHOGANY POLE 2½ OR 3 INCH CLEAR GLOBE, FIG. 250 OR 251 DOUBLE CONTACT SOCKET-WIRED



NOTE—Furnished with wire outlet through side of pole instead of bottom if desired. Add \$.50 each.

Globe will accommodate up to 50 C. P. bulb. 2½ inch globes furnished unless 3 inch is specified. Spare clear globes (21/2 or 3 inch) \$1.80 Each Spare electric bulb sockets fig. 747, No. 2 .45 Each With Red, Green or Blue Globe, add .50 Each Connectors for above. see Fig. 283 .35 Each

# Phenolic Flag Pole Light

LAMINATED BAKELITE LIGHT MAHOGANY COLOR 11/2 INCH FRESNEL BALL GLOBE FIG. 604 DOUBLE CONTACT ELECTRIC SOCKET

Fig. 551

This new pole light produced for the purpose of saving scarce materials such as brass or aluminum and to offer a low priced light without sacrificing appearance, practicability or

Laminated bakelite is salt spray resistant, weather proof and non-corrosive. Has high specific tensile

The color of this light will match the average light mahogany deck.

ength Weight Ounces Each 20 \$4.75

## Junior Flag Pole Light

1½ INCH FRESNEL BALL GLOBE, FIG. 604 HOLLOW BRASS POLE—CAST BRONZE SOCKET DOUBLE CONTACT—WIRED

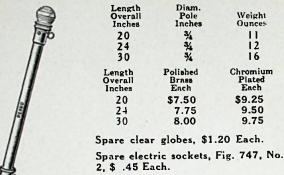


Fig. 603

Adjustable Flag Pole Light

1½ INCH FRESNEL BALL GLOBE, 11G. 604 HOLLOW BRASS POLE—WITH CONNECTORS CAST BRONZE STREAMLINE SOCKET DOUBLE CONTACT—WIRED



Adjustable to various lengths down to 5 inches if desired. Knurled nut holds pole firmly in socket. Connectors pass through socket for removal of pole.

Diam.

Spare Flag Pole Sockets, Pol. Brass

\$2.20; Chrome Plated \$2.85 Each.

Connectors for above, see Fig. 283.

Maximum Length Inches 20 Weight Inches Pounda 11/3 34 1 3/2 30 Maximum Polished Chromium Length Inches Brass Each Each \$9.75 20 \$8.00 8.25 10.00 30 8.50 10.25

Spare clear globes, \$1.20 Each. Spare electric sockets fig. 747, No. 2, \$ .45 Each.

Spare Flag Pole Sockets, Pol. Brass \$3.00; Chrome Plated \$3.75 Each.

# "Little Joe" Pole Light

ALL POLISHED ALUMINUM INCH FRESNEL BALL GLOBE DOUBLE CONTACT ELECTRIC SOCKET

An attractive companion for our "Little Joe" combination light Fig. 1146. Pole is adjustable to various lengths down to 5 inches.

Each	Length Overall Inches	Diam. Pole Inches	Weight Ounces
\$6.00	20	%16	10

Fig. 625



# **Battery Pole Light**

ALL BRASS BATTERY CASE - CHROMIUM PLATED SOLID MAHOGNAY POLE-FRESNEL GLOBE



Two standard flashlight cells in battery case will supply weeks of service in ordinary intermit-

Supplied complete with bulb and switch, no batteries.

Ench	Length Overall Inches	Diam. Base Inches	Weight Ounces
\$6.60	20	1	8

# **Battery Pole Light**

ALL BRASS -CHROMIUM PLATED



Uses two standard flashlight cells in battery case.

Supplied complete with bulb and switch. No batteries.

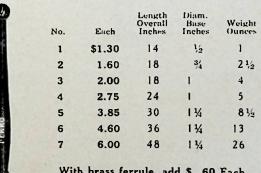
This unit is the same as our Fig. 710 except that the pole is brass instead of wood,

Each	Length Overall Inches	Diam. Base Inches	Weight Ounces
\$6.75	20	34	. 17

Fig. 711

# Mahogany Flag Poles

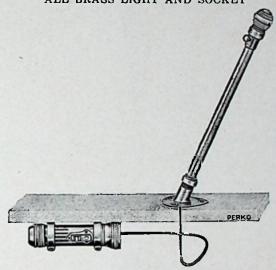
Turned from solid seasoned mahogany. Varnished, hand rubbed polished finish.



With brass ferrule, add \$ .60 Each.

# New "2 in 1" Adjustable Flag Pole Light

WITH FRESNEL BALL GLOBE STREAMLINE DECK SOCKET - FLASHLIGHT CASE WITH SWITCH-2 SPRING CLAMPS-BULB ALL WIRED READY FOR INSTALLATION. ALL BRASS LIGHT AND SOCKET



This is our popular Fig. 609 pole light supplied with a 2 cell flashlight case, mounting clamps and sufficient wire for locating case at most convenient spot.

Fig. 1148

The flashlight case is complete with reflector for light projection so the user not only has an attractive stern light for night running but in addition a handy flashlight for other purposes.

Pole is adjustable to various lengths down to 5 inches. Lamp socket is miniature screw type.

Batteries are not included.

Maximum Length Inches	Polished Brass Each	Chromium Plated Each	Diameter Pole Inches	Weight Pounds
20	\$12.25	\$14.25	34	1%
24	12.50	14.50	34	1 1/8
Spare cl	ear globes Fi	g. 604	\$	1.20 Each

# **Battery Anchor Light**

BRASS CASE WITH TOGGLE SWITCH AND BULB



Uses ordinary 11/2 volt dry cell such as Eveready No. 6 or equal. Bulb is Mazda No. 131.

Polished Brass Each	Chromium Plated Each	Height Inches	Diam. Base Inches
\$13.00	\$15.25	101/2	3
With bat	terv. add \$1	50 each	

With red, green or blue globe, add \$ .50 each. Spare globes, see Fig. 250.

Spare batteries, \$1.50 each. Spare bulbs, \$ .25 each.

Fig. 496



# Pole Lights

BRASS—WITH THREADED FRESNEL GLOBE DOUBLE CONTACT SOCKET—NOT WIRED

JUNIOR TYPE
WITH 1½ INCH GLOBE, FIG. 604
FOR SMALL BOATS—MAXIMUM BULB 6 C. P.



Fig. 600

Polished Brass Each	Chromium Plated Each	Spare Globes Each	Spare Sockets Each	Height Inches	I. D. Neck Inches	Wt.
\$3.85	\$4.85	\$1.20	\$ .45	41/4	5%	7

STANDARD TYPE
WITH 2½ OR 3 INCH GLOBE FIG. 250 OR 251
FOR CLASS 1, 2 AND 3 BOATS
MAXIMUM BULB 50 C. P.



Fig. 491

No.	Polished Brass Each	Chromium Plated Each	Spare Globes Each	Diam. Globe In.	Height In.	I. D. Neck In.	Wt.
1	\$5.00	\$6.00	\$1.80	21/2	5	*	12
2	5.00	6.00	1.80	3	5%	%	14

HEAVY DUTY TYPE
GLOBE HOLDER MILLED FROM BRASS ROD
WITH 2½ OR 3 INCH GLOBE FIG. 250 OR 251



Fig. 484

No.	Polished Brass Each	Chromium Plated Each	Spare Globes Each	Diam. Globe In.	Height In.	I. D. Neck In.	Wt. Oz.
1 2	\$6.25	\$7.25	\$1.80	2 ½	5	%	16
	6.25	7.25	1.80	3	5 %	%	18

NOTES With Red, Green or Blue Globe, add \$ .50 Each. With Side Hole for Cable Exit, supplied to order, add \$ .50 Each.

# Stern Lights

BRASS—WITH THREADED FRESNEL GLOBE DOUBLE CONTACT SOCKET JUNIOR TYPE

WITA 14 INCH GLOBE, FIG. 604 FOR SMALL CRÜISERS—MAXIMUM BULB 6 C. P.



Polished Brass Each \$4.75	Plated Each	Spare Globes Each \$1.20	Spare Sockets Each	Height Overall Inches	Diam. Base Inches 23's	Wt. Oz.
34.75	\$6.00	\$1.20	\$ .45	2 72	2 78	/

#### STANDARD TYPE

GLOBE HOLDER SPUN FROM SHEET BRASS WITH 2½ OR 3 INCH GLOBE FIG. 250 OR 251



Fig. 422

No.	Polished Brass Each	Chromium Plated Each	Diam. Globe Inches	Height Overall Inches	Diam. Base Inches	Weight Oz.
1	\$5.50	\$6.75	2 1/2	5 1/2	2 3/8	12
2	5.50	6.75	3	6	2 3/8	14
3	6.25	7.75	3	12	2 3/8	20

HEAVY DUTY TYPE
GLOBE HOLDER MILLED FROM BRASS ROD
WITH 2½ OR 3 INCH GLOBE FIG. 250 OR 251



Fig. 506

No.	Polished Brass Each	Chromium Plated Each	Diam. Globe Inches	Height Overall Inches	Diam. Base Inches	Weight Oz.
1	\$7.50	\$8.75	21/2	51/2	2 %	18
2	7.50	8.75	3	6	2 %	20
3	8.25	9.50	3	12	2 %	26

#### NOTES

Fige. 422, 484, 491, 506, Maximum Bulb, 50 C.P. Spare clear globes for Figs. 422 and 506, \$1.80 Each Spare sockets Fig. 747, \$ .45 Each. With Red, Green or Blue Globe, add \$ .50 Each.

# Stern Lights

CAST BRONZE



Equipped with 360 degree fresnel lens and double contact electric socket.

Any height desired can be secured by placing required length of 1 inch brass pipe at joint marked A. These parts have standard 1 inch pipe thread. 375TOPS-CASTINGS

AMERICAN MARINE BRASS . 5911

Fig.	375
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Height Inches	Diam. Base Inches	Diam. Body Inches	Size Lens Inches	Weight Pounds
7	3 1/2	3 1/2	35/16 x 35/16	2 3/4

Plain Bronze	Polished Bronze	Chromlum Plated	Spare Lens Fig. 261	Spare Socket Fig. 747
Each	Each	Each	Each	Each
\$11.75	\$12.75	\$14.75	\$1.80	\$ .45

With red, green, blue or amber lens, add \$1.25 each. With medium screw socket fig. 346 for 15 watt bulb, add \$1.50 each.

# Stern Lights

CAST BRONZE

WITH FIG. 106 THREADED GLOBE FOR BULB UP TO 60 WATTS



Equipped with clear fresnel globe and fig. 222 No. 1 medium screw electric socket.

Height Overall Inches 8 1/4	Diam. Base Inches	Size of Glohe Inches 5x3½	Weight Pounds 3 %
Plain Bronze Each	В	Polished Bronze Each	
\$10.00	\$	11.75	\$14.00

Spare globes, \$2.75 each. Spare sockets, \$ .70 each.

With red, green, blue or amber globe, add \$1.75 each. With double contact socket fig. 276, add \$ .75 each.

# Stern Lights

WROUGHT BRASS

Diam.

Base

31/2

Polished

Brass

\$9.50

Height

Overall Inches

10

With 360 degree fresnel lens and

double contact electric socket.

Can be furnished in any height desired. 18" and longer has a 5 4" diameter base.

Diam. Neck Inches

Weight Pounds

Inches

35/16x35/16 134

Chromium

Each

\$11.00



Fig. 1119

Height other than standard, add \$1.50 for each 6 inches or fraction thereof.

With red, green, blue or amber lens add \$1.25 each.

Spare clear lens fig. 261, \$1.80 each. Spare socket fig. 276, \$ .75 each.

# Mast Lights

CAST BRONZE



Equipped with 360 degree clear fresnel lens and double contact electric socket. Extra long neck.

Inside Inside

Fig. 521

Height Inches 6%	Diam. Body Inches 3 1/2		Size Lens Inches	Length Neck Inches 21/2	Diam. Neck Inches	Weight Pounds 2
Plain	Polls	hed	Chromium	Spare I	ens Spa	re Socket

\$10.75 \$11.50 \$13.00 \$1.80 \$ .45

With red, green, blue or amber lens, add \$1.25 each. With medium screw socket fig. 346 for 15 watt bulb, add \$1.50 each.

# Mast Lights

CAST BRONZE WITH FIG. 106 THREADED GLOBE FOR BULB UP TO 60 WATTS



Equipped with clear fresnel globe and fig. 222 medium screw electric socket.

Height Overall Inches	Bottom Opening Inches	Length Neck Inches 2½	Size of Globe Inches 5x3½	Weight Pounds 4
Pla Bro Ea	nze	Polished Bronze Each	1	romium Plated Each
\$10	).50	\$12.50	\$1	14.75

Spare globes, \$2.75 each. Spare sockets, \$ .70 each.

Diam. Inside

With red, green, blue or amber globe, add \$1.75 each. With double contact socket fig. 276, add \$ .75 each.

Improved Mast Light

CAST BRONZE—WITH THREADED GLOBE GUARD INTEGRAL CABLE ENTRANCE WITH TERMINAL TUBE



With Fig. 106 Clear Threaded Globe for bulb up to 60 watts, medium screw socket. Diam.

Hgt. Over-Inside Length Neck Size of Opening Inches Weight Pounds Inches 1% 51/4 5x3% Plain Polished

Chromium Bronze Each Plated Each \$16.50 \$19.50 \$22.50

Spare clear globes, \$2.75 each. Spare guards, \$4.00 each. Spare sockets, \$ .70 each.

With red, green, blue or amber globe, add \$1.75 each With double contact socket fig. 276, add \$ .75 each



Pole or Mast Light

HEAVY BRASS—THREADED FRESNEL GLOBE DOUBLE CONTACT SOCKET—FOR ½ INCH PIPE



Fig. 362
With 2½ or 3 inch globe fig. 250 or 251, will accommodate up to 50 C. P. bulb.

No.	Plain Brass Each	Polished Brass Each	Chromium Plated Each	Globe	Height Overall Inches	Diam. Base Inches	Wt. Lbs.
1 2	\$5.00 5.00	\$5.75 5.75	\$6.50 6.50	2½ 3	3 1/2 4	2 1/8 2 1/8	11/8

Mast and Yardarm Lights

CAST BRONZE—CLEAR FRESNEL GLOBE MEDIUM SCREW SOCKET—FOR 15 WATT BULB



Fig. 103 threaded for ½ inch pipe.
Fig. 104 for mounting on Truck or Yardarm.
Will accommodate 15 watt A-17 bulb.

0:-	Plain Bronze	Polished Bronze	Chromium Plated	Height Overall	Diam. Globe W	
Fig.	Each	Each	Each	Inches	Inches Po	unds
103	\$7.25	\$9.00	\$11.00	6	3	2
104	8.00	10.25	12.25	5 %	3	2
With	red, gre	en or blue	e globe, a	dd \$1.0	0 each.	
Spar	e clear g	lobes fig. 2	249, \$2.00	each.		
Spare	e sockets	fig. 222, \$	.70 each.			
With	double	contact so	ket fig. 2	76. add	\$ .75	ach.

# Mast Lights

BRASS BASE—CLEAR FRESNEL GLOBE MEDIUM SCREW SOCKET





Fig. 488 threaded ½ inch I. P. S. Fig. 489 drilled for mounting on mast truck.

Plain	Polished	Height	Diam.	Size	Opening	Weight
Bronze	Bronze	Overall	Base	Globe	in Globe	
Each	Ench	Inches	Inches	Inches	Inches	
\$5.75	\$6.50	6	23/4	51/2×23/4	1 7/8	1

Chromium plated finish, add \$1.00 to polished price. Spare clear globes fig. 77, \$1.80 each. With red, green or blue globe, add \$1.00 each. Special porcelain electric sockets only fig. 222, \$1.00

Bulbs for above, 120 volt 10 watt, clear \$ .50 each.

Mast Lights

CAST BRONZE-WITH MEDIUM SCREW SOCKET FIG. 106 THREADED GLOBE-60 WATT



Fig. 309

Height Overall Inches	Size Globe Inches 5 x 3 1/2	Opening In globe Inches 2 3/4	Tapped for Pipe Size Inches	Weight Pounds 2 1/2
Plain Bronze Each		Polished Bronze Ench	Chro	mium ited
\$8.00		\$9.50	\$1	1.50

With red, green, blue or amber globe, add \$1.75 each. Spare clear globes fig. 106, \$2.75 each.

Spare sockets fig. 222. \$ .70 each.

With double contact stocket fig. 276, add \$ .75 each.

# Guarded Mast Light

CAST BRONZE-WITH MEDIUM SCREW SOCKET LENS GUARD AND FIG. 106 GLOBE-60 WATT



Plain Bronze Each	Height Overall Inches	Size Globe Inohes	In Globe Inches		Weight Pounds
\$12.00	7 3/8	5x31/2	2 3/4	1/2	314

Spare Threaded Brass Guards \$4.00 each. Other Spares and Extras, see Fig. 309 above.

# Meal and Absent Light

CAST BRONZE-WATERTIGHT



Fig. 329 with Double Contact Socket Fig. 330 with Medium Screw Socket

For mounting on yardarm. Supplied with two Fresnel globes, one blue, the other clear.

Fig.	Polished Bronze Each	Chromium Plated Each	Length Overall Inches	Size Base Inches	Diam. Globe Inches	Wt. Lbs.
329 330	\$14.75 17.00	\$18.25 20.50	10	3%x1% 3%x1%	2 1/2	2 1/2

Bulbs for Fig. 329, see Fig. 337 all sizes listed. Bulbs for Fig. 330, see Fig. 8 all sizes listed.

# "Perko" De-Lite Anchor Lights

TURRET TOP—REMOVABLE GUARDS FOR CLASSES 1, 2 AND 3 BOATS





	Fig. 0-2		Fig. 0-6	
Fig.	Height Less Ring Inches	Diam. Base Inches	Size of Lens Inches	Weight Pounds
0-2	8 5%	4 1/2	35/16x 35/16	2
0.6	1134	5 1/8	414 x4	3
	OIL OR	ELECTRIC	ONLY	

	Galv.	Polished Brass	Chromium Plated
Fig.	Each	Each	Ench
0-2	\$7.75	\$ 9.25	\$12.00
0-6	9.25	10.75	13.75

Comb. Oil and Electric, add \$ .75 each. Fig. 0-6 with Hinged Bottom, add \$.75 each.

FLAT TOP—REMOVABLE GUARDS FOR CLASSES 1, 2 AND 3 BOATS



Junior

Fig. 11



Senior

Fig. 12

Fig.	Less Ring Inches	Base Inches	Lens Inches	Weight Pounds
11	6	4 1/2	35/16x33/16	1 1/2
12	9	5 %	4 1/4 x 4	2 1/2
ELECT	RIC ONLY	—DOUE	BLE CONTACT Polished Brass	SOCKETS Chromium Plated
Fig.	Each		Each	Each
11	\$7.75		\$ 9.25	\$12.00
12	9.25		10.75	13.75
With	Red, Green,			each.

Figs. 0-2 and 11, add \$1.80 each.
Figs. 0-6 and 12, add 2.20 each.
All above lights with Medium Screw Electric Sockets,
add \$1.40 each.
SPARE PARTS

	Each
Lenses, fig. 261, Clear, for figs. 0-2 and 11\$	1.80
Lenses, fig. 261, Clear, for figs. 0-6 and 12	2.40
Oil Founts, fig. 287, Brass, for fig. 0-2	
Oil Founts, fig. 286, Brass, for fig. 0-6	1.65
Oil and Electric Founts, fig. 735, for figs. 0-2 & 11	3.60
Oil and Electric Founts, fig. 736, for figs .0-6 & 12.	
Oil Burners, fig. 246, No. 0, Brass, for fig. 0-2	28
Oil Burners, fig. 246, No. 1, Brass, for fig. 0-6	
Oil Burnets, iig. 2 to, 100. 1, brass, for iig. 0-0	.55
Other parts, see page 16.	

# 10 Day Oil Anchor Light

360 DEGREE CLEAR FRESNEL LENS LATCHED SWIVEL FOUNT





Fig. 596

Fig. 596A

At least 10 days of continuous light on one filling of good grade Kerosene. Wick is non-carbonizing type.

Polished Brass Each	Size Lens Inches	Height Overall Inches	Diam. Fount Inches	Capacity Fount Pints	Weight Pounds
\$21.50	41/4×4	14	7	31/2	4 1/2

With red, green, blue or amber lens, add \$2.20 each.

Fig. 596-A Fount complete, \$11.00 each.

Light only, less Fount, \$13.00 each.

Spare burners, wicks and chimneys, see figs. 245 and 272.

Spare lenses, see fig. 261.

# Sail Boat Side Lights

SMALL SIZE - OIL BURNING

Designed for Sail Boats where small oil burning side lights are desirable.



Fig. 69

Size of Lens Inches	Extreme Height Inches	Diam. of Base Inches	Weight Per Pair Pounds
35/16x358	9	414	4
Galvanized Per Pair	Pol. E Per I		Chromium Plated Per Pair
\$14.00	\$17	.00	\$22.75

Oil and Electric. with Fig. 735 Fount, add \$1.50 per pair.

Electric socket is bayonet double contact.

Spare Lenses, see Fig. 259, Class 1.

Spare Founts, see Figs. 287 or 735.

Spare Burners and Wicks, see Figs. 246 and 302 No. 0.



# Royal Combination Lights

ELECTRIC ONLY — DOUBLE CONTACT FOR CLASSES A AND 1 BOATS



Made of heavy gauge material, flat back and double contact electric socket. May be stored in very small space.

	Height Inches	Width		Weight Lbs.
	3%	41/4	35/10x3	% 11/4
	Galvan Eac		Polished Brass Each	Chromium Plated Each
	\$7.0		\$8.00	\$10.50
S	pare	Lenses,	see Fig.	259, Cl. 1.

Royal Side Lights

ELECTRIC ONLY — DOUBLE CONTACT FOR CLASSES 1, 2 AND 3 BOATS

Same construction as above.



	Height Inches	Size Lens Inches	Per Pair Lbs.
Class 1	41/4	35/16×35%	134
Class 2	5	41/4 ×43/4	2
Class 3	6	53/16×5%	3
		Polished	Chromium
	Galv.	Brass	Plated
	Per	Per	Per
	Pair	Pair	Pair
Class 1	\$10.50	\$13.00	\$18.00
Class 2	11.00	13.50	18.50/
Class 3	12.50	15.00	20.00
Spare	Lenses,	see Fig. 2	.,

Royal Bow Lights

ELECTRIC ONLY — DOUBLE CONTACT FOR CLASSES 1, 2 AND 3 BOATS

Same construction as above.



Fig. 92

	Inches	Inches	Lbs.
Class 1	41/4	37/16x538	1
Class'2	5	4 1/4 x 6 1/8	11/2
Class 3	6	53/16×713/16	2
	Galv. Each	Polished C Brass Each	hromium Plated Each
Class I	\$5.25	\$6.50 \$	9.00
Class 2	5.50	6.75	9.25
Class 3	6.25	7.50	10.00
Spare	Lenses.	see Fig. 260	0.

Royal Anchor Lights

FOR CLASSES 1, 2 AND 3 BOATS



	Height Inches	Size La Inche	ens es	Weight Lbs.
Junior Senior	4½ 5½	35/16×35 41/4×4	<b>16</b>	2 2
		Polished Brass Each	P	omium Inted Each
- Junior Senior		\$6.00 8.00		8.25 0.25

Fig. 90 Spare Lenses, see Fig. 261.

Above lights cannot be equipped with medium screw sockets.

Spare Brackets, see Fig. 25.

Spare Electric Adapters, see Fig. 138.

De-Lite Side Lights

WITH FRONT DOORS FOR CLASSES 2 AND 3 BOATS CAST BRONZE

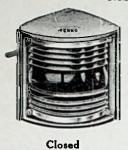




Fig. 504

A quick change of bulb or lens is simple. Lenses are fastened in doors by brass straps and machine screws. Doors have positive latch which cannot work loose due

to vibration or wind.
Furnished in pairs, with red and green fresnel lenses

and double contact or medium screw sockets. Weight Per Pair Lbs. Height Angle Class Inches Inches Inches 3 14 x 3 1/4 41/4 x 43/4 61/2 2 5 1/2 5%16×5%16 x4 Polished Chromium Spare Spare Bronze Per Pair Each Class Each \$27.50 \$2.50 \$ .75 .75 \$23.00 27.00 32.00

With medium screw sockets, add \$3.00 per pair. Spare D.C. Sockets, see Fig. 276, No. 0. Spare Lenses, see Fig. 259. With clear lens, Class 2 or 3, add \$1.50 per pair.

# De-Lite Bow Lights

WITH FRONT DOORS FOR CLASSES 2 AND 3 BOATS CAST BRONZE



Fig. 505

Same construction as Fig. 504 above. Furnished with clear fresnel lens and double contact or medium screw socket.

Class 2 3	Height Inches 5 1/2 6 1/2	Width Inches 5½ 6	Size Lens Inches 4 1/4 × 6 3/8 5 3/16 × 7 1 3/16	Weight Lbs. 3 1/4 4 1/4
Class 2 3	Polished Bronze Each \$11.50 13.50	Chromium Plated Each \$13.75 16.00	Spare Lenses Each \$2.50 3.15	Spare Sockets Each \$ .75

With medium screw sockets, add \$1.50 Each. Spare D.C. Sockets, see Fig. 276, No. 0. Spare Lenses, see Fig. 260. With Colored Lens, Class 2, add \$1.75 Each. With Colored Lens, Class 3, add \$2.25 Each. Colored Lenses are Red, Green or Blue. Amber available in Class 2 only.

## \_

# Streamline Side Lights

CAST BRONZE

CLASSES 2 AND 3 -ELECTRIC



Fig. 563

With our popular rebulbing feature which makes it unnecessary to remove light from the boat to change bulb.

Furnished in pairs, with red and green fresnel lenses and double contact electric sockets.

Class	Height Inches 434	Length Inches	Size Lens Inohes 4 1/4 x 4 3/4	Weight Per Pair Pounds 5½
3	6	101/2	5%10×5%6	71/2
Class	Polished Bronze Per Pair	Chromium Plated Per Pair	Spare Lenses Each	Spare Sockets Each
2	\$22.00	\$26.50	\$2.50	\$ .45
3	32.50	37.50	3.15	.45

Spare Lenses, see Fig. 259.

Spare D.C. Sockets, see Fig. 747, No. 1.

# Streamline Bow Lights

CAST BRONZE

CLASSES 2 AND 3—ELECTRIC

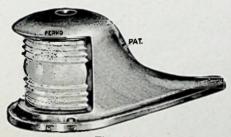


Fig. 561

Furnished with clear fresnel lens and double contact electric socket.

Class 2 3	Height Inches 51/4 63/8	In	Size Base Iches KII½ KI3	Inc 41/4	ze ens ehes x 6 % x 7 1 3/18	Flagpole Socket Inches		Weight Pounds 7 8%
Class 2	Polish Bron Encl \$19	ze	Chron Plat Eac	ed h	Spa Len Ea \$2.	ses ch	So	pare ockets Each
3 Spa	27. re Lense re D.C.	s, see	Fig. 2	.25 60. Fig. 74		15		.45

# Streamline Side Lights

WROUGHT BRASS
CLASS 2—ELECTRIC



Fig. 1138

Design is gracefully streamlined and quality is up to our usual high standard.

Contains our patented swivel type waterproof rebulbing feature or screws to remove

ing feature, no screws to remove.

Furnished in pairs, with red and green fresnel lenses, and double contact electric sockets.

Extreme	Extreme	Si	ns	Weight
Height	Length	Le		Per Pair
Inches	Inches	Inc		Pounds
6¾6	9 %	41/4 x	4 3/4	31/4
Bright	Polished	Chromium	Spare	Spare
Finish	Brass	Plated	Lenses	Sockets
Per Pair	Per Pair	Per Pair	Each	Each
\$18.00	\$19.50	\$24.00	\$2.50	\$ .45

Spare Lenses, see Fig. 259. Spare D.C. Sockets, see 747, No. 1.

# Streamline Bow Lights

WROUGHT BRASS CLASS 2—ELECTRIC



Fig. 1139

A very attractive running mate for Fig. 1138 above. Containing our swivel type waterproof rebulbing feature, no screws to remove.

Furnished with clear fresnel lens and double contact electric socket.

A flag pole socket in top if required.

Height Inches	Size Base Inches	Size Lens Inches	Flagpole Socket Inches	Weight Pounds
5 1/8	5%x91/2	41/4×63/8	1	2
Bright Finish Each \$12.75	Polished Brass Each \$13.75	Chromium Plated Each \$16.00	Spare Lenses Each \$2.50	Spare Sockets Each \$ .45

Spare Lenses, see Fig. 260.

Spare D.C. Sockets, see Fig. 747, No. 5.

With Flag Pole Socket add \$ .85 each.

Furnished without Flag Pole Socket unless otherwise specified.

SPARE REBULBING FEATURES FOR ALL ABOVE LIGHTS, POLISHED \$1.80, CHROME \$2.29 EACH.
LIGHTS ON THIS PAGE CANNOT BE SUPPLIED WITH MEDIUM SCREW SOCKET.



# "Perko" De-Lite Combination Lights

TURRET TOP-FRONT DOOR

FOR CLASS ONE BOATS—16 FEET AND OVER AND LESS THAN 26 FEET IN LENGTH

OIL AND ELECTRIC, DOUBLE CONTACT

Green Lens for Starboard, Red Lens for Port

Height, less ring, 9% inches
Measurements of base, 5 inches x 5½ inches
Size of lens, 3% inches x 3% inches
Weight, 3% pounds

Fig. 0-1

Galvanized Each \$11.25 Polished Brass Each \$12.75

Chromium Plated Each \$15.75



(Opened)

# **De-Lite Combination Lights**

FLAT TOP-FRONT DOOR

ELECTRIC ONLY—DOUBLE CONTACT SOCKET

Height, less ring, 6½ inches

Measurements of base, 5 inches x 5½ inches

Size of lens, 3½ inches x 3½ inches

Weight, 3 pounds

Fig. 0-10

Galvanized Each \$11.25 Polished Brass Each \$12.75

Chromium Plated Each \$15.75



# Combination Lights

TURRET TOP—BOTTOM OPENING FOR CLASS 1 BOATS WITH RED AND GREEN LENSES



Fig. 1

(Closed)

Height less Ring, 9 inches. Meas. of Base, 4%x4½ inches. Size of Lenses, 3%ex3% inches. Weight, 2% pounds.

Galvanized Brass Each
Oil or Elec. Only \$8.75 \$10.25
Oil and Electric 9.50 11.00
Chromium plated finish, add \$3.00 each to Pol. Brass price.

Electric Socket is Double Contact.

Combination Lights

FLAT TOP-BOTTOM OPENING

FOR CLASS 1 BOATS

ELECTRIC ONLY—DOUBLE CONTACT SOCKET

WITH RED AND GREEN LENSES



Height less Ring, 6¼ inches. Meas. of Base, 4¾x4½ inches. Size of Lenses, 3¾6x3% inches. Weight, 2 pounds.

Galvanized Brass Each Each Each \$8.75 \$10.25 \$13.25

Fig. 3

ALL LIGHTS ON THIS PAGE WITH MEDIUM SCREW ELECTRIC SOCKETS ADD \$1.40 EACH

SPARE PARTS	Each
Lenses, fig. 259, Class 1 Combination.	\$1.80
Oil Founts, fig. 582, Brass, for fig. 01	1.65 1.65
Oil and Electric Founts, fig. 733, Brass, for fig. 1	3.60
Oil Burners, fig. 246, No. 0, Brass	.28
Electric Sockets, Double Contact, fig. 276, No. 2	.75
Electric Sockets, Medium Screw, fig. 346, No. 1	.55

# "Perko" De-Lite Side Lights

TURRET TOP
FOR CLASS 2 BOATS-26 FEET OR OVER AND LESS THAN 40 FEET IN LENGTH
OIL AND ELECTRIC, DOUBLE CONTACT
Furnished in pairs—one green light for Starboard and one red light for Port



Height, less ring, 10½ inches Measurements of base, 5¼ inches x 5¼ inches Size of lens, 414 inches x 414 inches Weight, per pair, 61/4 pounds

Fig	0.4

	Polished	Chromium
Galvanized	Brass	Plated
Per Pair	Per Pair	Per Pair
\$19.50	\$23.00	\$29.00



(Opened)



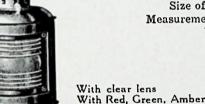
(Closed)

# "Perko" De-Lite Bow Lights

TURRET TOP CLASS 2-OIL AND ELECTRIC, DOUBLE CONTACT

Height, less ring, 101/2 inches Size of lens, 414 inches x 636 inches Measurements of base, 5 inches x 51/2 inches Weight, each 3 pounds

E: . A E



Blue Lens

	rig. U-5		
	Galvanized Each	Polished Brass Each	Chromium Plated Each
	\$9.75	\$11.50	\$14.50
per or	11.50	13.25	16.25



(Opened)



(Closed)

# "Perko" De-Lite Side Lights

FLAT TOP-CLASS 2 ELECTRIC ONLY-DOUBLE CONTACT SOCKET

Height, less ring, 7¼ inches Measurements of base, 5% inches x 5% inches Size of lens, 4¼ inches x 4¾ inches Weight, per pair, 5½ pounds

Fig. 0-40

	Polished	Chromium
Galvanized	Brass	Plated
Per Pair	Per Pair	Per Pair
\$19.50	\$23.00	\$29.00



(Opened)



FLAT TOP-CLASS 2 ELECTRIC ONLY—DOUBLE CONTACT SOCKET

Height, less ring, 7% inches
Measurements of base, 5 inches x 5½ inches
Size of lens, 4¼ inches x 6% inches Weight, each, 2% pounds



Fig. 0-50 Polished Chromium Galvanized Brass Plated Each \$9.75 \$11.50 \$14.50 With clear lens With Red, Green, Amber or 16.25 11.50 13.25 Blue Lens

(Opened)

(Closed) ALL LIGHTS ON THIS PAGE WITH MEDIUM SCREW ELECTRIC SOCKETS ADD \$1.40 EACH

SPARE PARTS	Each
Lenses, fig. 259, Class 2, for figs. 0-4 and 0-40	\$2.50
Lenses, fig. 260, Class 2, for figs. 0-5 and 0-50	2.50
Oil Founts, fig. 582, Brass, for figs. 0-4 and 0-5	1 65
Oil Burners, fig. 246, No. 1, Brass, for figs. 0-4 and 0-5.	.33
Oil Wicks, fig. 302, No. 1	0.6
Electric Sockets, Double Contact, fig. 276, No. 2	P) P
Electric Sockets, Medium Screw, fig. 346, No. 1	.55
	.33





(Closed)

# "Perko" De-Lite Side Lights

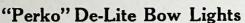
TURRET TOP

FOR CLASS 3 BOATS-40 FEET OR OVER AND NOT MORE THAN 65 FEET IN LENGTH OIL AND ELECTRIC, DOUBLE CONTACT

Size of lens, 5%6 inches x 5%6 inches Height, less rings, 12% inches Measurements of base, 5% inches x 5% inches Weight, per pair, 8 pounds

Fig. 0-8

Galvanized Per Pair	Polished Brass Per Pair	Chromium Plated Per Pair
\$22.50	\$26.00	\$33.50
944.JU	φ20.00	400.00



TURRET TOP

CLASS 3-OIL AND ELECTRIC, DOUBLE CONTACT

Size of lens, 5%6 inches x 71%6 inches Height, less ring, 12% inches Measurements of base, 5% inches x 6% inches Weight, each, 4 pounds

	Fig. 0-9		
	Galvanized Each	Polished Brass Each	Chromius Plated Each
With clear lens	\$11.25	\$13.00	\$16.75
With Red, Green or Blue Lens	13.50	15.25	19.00
		Galvanized Each With clear lens \$11.25	Galvanized Brass Each Each With clear lens \$11.25 \$13.00





(Closed)

(Closed)

# "Perko" De-Lite Side Lights

FLAT TOP-CLASS 3

ELECTRIC ONLY—DOUBLE CONTACT SOCKET Size of lens, 5% inches x 5% inches
Height, less ring, 8% inches
Measurements of base, 5% inches x 5% inches
Weight, per pair, 7 pounds

Fig. 0-80

Polished Brass	Chromium Plated
Per Pair	Per Pair
\$26.00	\$33.50
	Per Pair

# "Perko" De-Lite Bow Lights

FLAT TOP-CLASS 3 ELECTRIC ONLY—DOUBLE CONTACT SOCKET

Size of lens, 5\% inches x 71\% inches Height, less ring, 8\% inches Measurements of base, 5\% inches x 6\% inches Weight, each, 4 pounds

	g. 0-00		
With clear lens With Red, Green or Blue Lens	Galvanized Each \$11.25 13.50	Polished Brass Each \$13.00 15.25	Chromiun Plated Each \$16.75 19.00

Fig 0.00

CLASS 3 SIDE
(Opened)



(Opened)



(Opened)



(Opened)

ALL LIGHTS ON THIS PAGE WITH MEDIUM SCREW ELECTRIC SOCKETS ADD \$1.40 EACH

SPARE PARTS	Each
	\$3.15 3.15 1.65 .33 .06 .75



# Class 2 Side Lights

BOTTOM OPENING—SPRING FOUNT FOR BOATS 26 TO 39 FEET LONG INCLUSIVE



Size of Lenses, 4 1/4 x 4 3/4 inches. Extreme Height, 101/2 inches. Size of Base, 4 1/4 x5 1/2 inches. Weight, per pair, 51/2 lbs.

	Galvanized Per Pair	Polished Brass Per Pair
Oil or Elec. only	\$15.00	\$17.50
Oil and Electric	16.00	18.50

Chromium plated finish, add \$5.50 per pair to Polished Brass price.

Fig. 17

# Class 3 Side Lights

BOTTOM OPENING—SPRING FOUNT FOR BOATS 40 TO 65 FEET LONG INCLUSIVE



Size of Lenses, 5 16x5 16 inches Extreme Height, 121/2 inches Size of Base, 5x614 inches Weight, per pair, 71/2 lbs.

Galvanized Per Pair		Polished Brass Per Pair
il or Elec. Only	\$18.50	\$22.00
il and Electric	20.00	23.50

Chromium plated finish, add \$6.00 per pair to Polished Brass price.

Fig. 19

# Flat Top Side Lights

CLASS 2 AND 3 BOTTOM OPENING—SPRING FOUNT ELECTRIC ONLY—DOUBLE CONTACT SOCKET



#### CLASS 2

Size of Lenses, 44x44 in. Extreme Height, 714 in. Size of Base, 434 x51/2 in. Weight, per pair, 5 lbs.

#### CLASS 3

Size of Lenses, 5¾6x5¼6 in. Extreme Height, 8½ in. Size of Base, 5x6¼ in. Weight, per pair, 7 lbs.

	Fig. 4		
Class	Galvanized Per Pair	Polished Brass Per Pair	Chromiun Plated Per Pair
2	\$15.00	\$17.50	\$23.00
3	18.50	22.00	28.00

Class 2 Bow Lights

BOTTOM OPENING—SPRING FOUNT FOR BOATS 26 TO 39 FEET LONG INCLUSIVE



Fig. 18

Size of Lens, 41/4x6% inches Extreme Height, 10½ inches Size of Base 4½x5 inches Weight, each, 3 lbs.

#### WITH CLEAR LENS

	Galvanized Each	Brass Ench
Oil or Elec. Only	\$7.50	\$8.75
Oil and Electric	8.00	9.25
Chromium plated	finish, add	\$2.75

each to Polished Brass price.

With Red, Green, Amber or Blue Lens add \$1.75 Each.

# Class 3 Bow Lights

BOTTOM OPENING—SPRING FOUNT FOR BOATS 40 TO 65 FEET LONG INCLUSIVE



Size of Lens, 53/6x713/16 inches Extreme Height, 12½ inches Size of Base, 5½x6¼ inches Weight, each 31/2 lbs.

#### WITH CLEAR LENS

	Galvanized Each	Polished Brass Each
Oil or Elec. Only	\$9.25	\$11.00
Oil and Electric	10.00	11.75

Chromium plated finish, add \$3.00 each to Polished Brass price.

With Red, Green or Blue Lens add \$2.25 Each.

# Flat Top Bow Lights

CLASS 2 AND 3 BOTTOM OPENING—SPRING FOUNT ELECTRIC ONLY—DOUBLE CONTACT SOCKET



#### CLASS 2

Size of Lens, 44x6% inches. Extreme Height, 7¼ inches Size of Base, 4½x5 inches. Weight, each, 2½ lbs.

### CLASS 3

Size of Lens, 5% ox71% inches. Extreme Height, 8½ inches. Size of Base, 5½x6¼ inches. Weight, each, 31/4 lbs.

Fig. 5

Class	Galvanized Each	Polished Brass Each	Chromium Plated Each
2 3	\$7.50	\$ 8.75	\$11.50
	9.25	11.00	14.00
Class	2 with Red, C	Green, or Blue lens add	\$1.75 each.
Class	3 with Red, C	Green, or Blue lens add	

ALL LIGHTS ON THIS PAGE WITH MEDIUM SCREW ELECTRIC SOCKETS ADD \$1.40 EACH. ALL LIGHTS ON THIS PAGE WITH HINGED BOTTOMS ADD \$ .75 EACH.

#### SPARE PARTS

Oil and Electric Founts fig. 736 Oil Founts, fig. 286 Lenses, figs. 259 and 260

Electric Adapters, figs. 291 or 292 Electric D.C. Adapters fig. 355 Oil Burners and Wicks figs. 246 and 302 No. 1



## TOWING OR SIGNAL LIGHTS

ALL CAST BRONZE - WITH WATERTIGHT BOX MEDIUM SCREW SOCKET -- CLEAR FRESNEL GLOBES -- CAST BRONZE GUARD MAXIMUM LAMP 60 WATTS-VISIBILITY 5 MILES PER U.S.C.G. REGULATIONS

#### SINGLE LIGHT

#### TRIPLE LIGHT

With 1/2" Brass Pipe - Lights 3 Feet Apart

Fig. 542

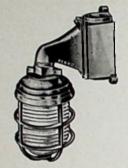


Fig. 540 Box Not Tapped, See Below

Each	Height Overall Inches	Width Overall Inches	Weight Pounds
\$24.00	101/4	6%	6%

#### DOUBLE LIGHT

With 1/2" Brass Pipe - Lights 3 Feet Apart

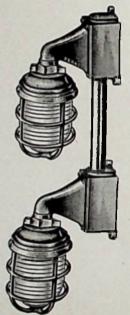


Fig. 541

Each	Height Overall Inches	Width Overall Inches	Weight Pounds	Each	Overall Inches	Overall Inches	Weight Pounds
\$57.00	461/2	6%	16	\$90.00	821/2	634	251/2

SPARE GLOBES clear Fig. 106. \$2.75 each.

COLORED GLOBES can be supplied. Colors are red, green, blue or amber. Add \$1.75 for each globe.

SPARE GUARDS Cast Bronze. \$4.00 each.
SPARE SOCKETS Phenolic, U. S. Navy drawing 9-S-4836-L, \$.90 each.

TAPPING Fig. 540 with one ½ inch pipe tap, add \$.50, with two ½ inch pipe taps, add \$1.00. Box will accommodate ¾ inch pipe tap, if such tapping required, price on application.

Figs. 541 and 542 with ¾ inch pipe or tapping for same, price on application.

Figs. 541 and 542 are tapped for the connecting pipe only. If additional taps required, see above.

# Blinker and Loading Light

CAST BRONZE—PLAIN FINISH
WITH RED AND CLEAR FRESNEL LENSES
MEDIUM SCREW BAKELITE SOCKETS



Four sockets in lower section for 25 watt tubular bulbs. One socket in upper section for bulb up to 60 watt. Bulbs not included. Base threaded 1 inch I. P. S.

Extreme Size Height Red Lens Inches I

Tubular Spare Sockets Each Each Each \$63.00 \$.80 \$.55

Spare clear lenses fig. 261, \$7.25 each.

Spare red lense fig. 106, \$4.50 each.



# Portable Staff Light

ELECTRIC—360° FRESNEL LENS WITH PACKING GLAND FOR

CABLE MEDIUM SCREW SOCKET

Diam. Base Weight Inches Pounds 5 % 2 ½			
Electric Fount Ench			
	Inches 5 % Elect		

With red, green or blue lens, add \$2.25 each. Spare lenses, see fig. 261, Senior.

Globe-Distress or Signal Light

Diam.



CLE	AR	GLOBE
OIL	BU	RNING

Height

Globe Inches	Inches	Pounds
6	11	4
8	141/2	6
10	22	12
Diam. Globe nches	Galvanized Steel Each	Polished Brass Each
6	\$14.00	\$20.00
8	16.25	23.50
10	29.00	39.50

Fig. 44

With red, green, blue or frosted globe, add \$4.00 each. Electric only, same prices as above.

Comb. oil and electric 6 and 8 inch, add \$1.65 each.

Comb. oil and electric 10 inch, add \$2.50 each.

Hinged bottom furnished with 8 inch size only.

SPARE PARTS

Size Globes Burners Oil Founts Elec.
6 Fig. 264 Fig. 246 No. 0 Fig. 735 Fig. 274
8 Fig. 264 Fig. 246 No. 1 Fig. 286 Fig. 292
10 Fig. 264 Fig. 242 No. 2 Fig. 282 Fig. 288

Note—6 inch size with Green Globe, not available.

# Mast or Blinker Signaling Lights

CAST BRONZE—WATERTIGHT—PLAIN FINISH WITH 360° FRESNEL LENS



Fig. 403

Size No.	Size L Inch		Height Overal Inches	l Thread	Weight Pounds	For Vess Fee	el
1	3 t x	3 3	63/4	1/2	4	up to	65
2	41/4 x	4	81/4	3/4	6	65 to	150
3	51/2 x	51/4	93/4	ī	10	over	150
Size No.	Clear Each	Colored Each	1		lectrical ulpment		
1	\$21.00	\$22.00	1 (	medium :	screw so	ocket	
2	24.25	25.75	1	medium :	screw so	ocket	
2-B	30.00	31.50	) 6	light can	delabra	unit	

2-C I mogul 3 wire socket 27.50 29.00 3 34.50 40.00 I medium screw socket 3-A 39.00 44.50 4 medium screw sockets 6 light candelabra unit 3-C 40.00 46.00 I mogul 3 wire socket 37.50 43.00

All above sockets are Phenolic (Bakelite).

For spare lenses, see fig. 261.

Colored lenses are red, green, blue or amber.

#### BULBS FOR ABOVE

120 volt 60 watt A-18 clear for Nos. 1, 2, 3, \$ .50 each.

120 volt 25 watt T-10 clear fcr No. 3-A, \$ .80 each. 120 volt 50/50 watt P-25 clear for No. 2-C, 3-D, \$5.50 each

120 Volt, 15 Watt, T-7 clear with candelabra base for Nos. 2-B and 3-C. \$ .95 each.

# Watertight Blinker Key

CAST BRONZE—PLAIN FINISH—IMPROVED TUNGSTEN POINTS—CONDENSER U.S.C.G. APPROVED



Fig. 9

Condenser is metal encased, 400 volts D. C. .25 M. F. D. Ground test 2000 volts

F. D. Ground test 2000 volts.

Cover sealed by 6 screws and rubber gasket. Box has three mounting lugs.

Each	Length Inches	Width Inches	Height Inches	Weight Pounds
\$28.00	4 3/8	23/4	2 %	4
terior com	plete with	Condenses	anak	\$11.00



# **ELECTRIC NAVIGATION LIGHTS FOR VESSELS OVER 65 FT. LONG**

Watertight — Cast Bronze Rebulbing Cap — Terminal Tubes MOGUL 3-WIRE PHENOLIC SOCKETS FIG. 270 FOR DOUBLE FILAMENT BULBS



Side Lights, Fig. 1150

1121/2 DEGREE RED AND GREEN LENSES-10 POINT-IN PAIRS WITH BRACKET FOR MOUNTING

No.	Galvanized Steel Per Pair	Polished Brass Per Pair	Fig. 259 Height Inches	Height Less Handle Inches	Size Base Inches	Weight Per Pair Pounds	For Size Vessel Feet
1	\$83.00	\$100.00	634	11	71/4 x 71/4	18	65 to 150
2	108.00	126.00	7 1/2	131/2	9½ x 9½	30	over 150
3	184.00	208.00	81/2	151/4	10% x 10%	36	over 150

Fig. 1150

# Masthead, Range and Towing Lights, Fig. 1151

225 DEGREE CLEAR LENS-20 POINT WITH FOUR LUGS FOR MOUNTING

No.	Galvanized Steel Each	Polished Brass Each	Lens Fig. 256 Height Inches	Height Less Handle Inches	Size Base Inches	C to C of Lugs Inches	Weight Each Pounds
1	\$41.50	\$50.00	634	11	71/4 x 73/4	85%	10
2	54.00	63.00	71/2	131/2	9 x 10	10%	15
3	92.00	104.00	8 1/2	151/4	10% x 11%	123/4	21

With red or green lens (special purpose) add \$9.00 each. With amber lens in Sizes No. 1 and 2 only, add \$9.00 each.



Fig. 1151



# Stern Lights, Fig. 1152

135 DEGREE CLEAR LENS—12 POINT WITH FOUR LUGS FOR MOUNTING

No.	Galvanized Steel Each	Polished Brass Each	Lens Fig. 269 Height Inches	Height Less Handle Inches	Size Base Inches	C to C of Lugs Inches	Weight Each Pounds
1	\$41.50	\$50.00	634	11	7 x 7½	8 %	. 9
2	54.00	63.00	71/2	131/2	9 x 10	10 %	12
3	92.00	104.00	8 1/2	151/4	10 1/8 x 10 3/8	121/4	15

Fig. 1152

With red or green lens (special purpose) add \$9.00 each. With 45 degree red lens (for suction dredges) add \$12.00 each. With amber lens in Sizes No. 1 and 2 only, add \$9.00 each.

Anchor Lights, Fig. 1153

Weight
Each
Pounds
- 11
16
22

Breakdown Lights, Fig. 1154

360 DEGREE RED LENS—32 POINT FOUR LASHING EYES AND WIRE GUARD Height Less Handle Inches Weight Each Galvanized Steel Each Polished Brass Each Lens Fig. 261 Height Base Inches \$45.00 \$54.00 58.00 67.00 98.00 110.00 NOTES



Fig. 1153 Fig. 1154

Above prices do not include bulbs. Complete with double filament bulb fig. 532, 50 or 100 watt, add \$5.50 each. With 2 Medium Screw Phenolic Sockets, sizes No. 2 and 3 only, add \$5.50 each.

With Medium Screw Phenolic Sockets fig. 346, deduct \$1.00 each.

Spare cast bronze watertight caps with gasket, \$5.50 each. COPPER LIGHTS MADE TO ORDER-PRICE ON APPLICATION



# OIL NAVIGATION LIGHTS FOR VESSELS OVER 65 FT. LONG

American Improved Hinged Top - Bottom Opening SWIVEL FOUNT FIG. 282 — HINGED BURNER FIG. 242 LIP CHIMNEY FIG. 267 — FLAT WICK FIG. 302

Side Lights, Fig. 1155

112½ DEGREE RED AND GREEN LENSES—10 POINT—IN PAIRS WITH BRACKET FOR MOUNTING

No.	Galvanized Steel Per Pair	Polished Brass Per Pair	Fig. 259 Height Inches	Height Less Handle Inches	Size Base Inches	Weight Per Pair Pounds	For Size Vessel Feet
0	\$80.00	\$97.00	51/2	1334	634 x 634	14	65 to 90
1	83.00	100.00	63/4	143/4	71/4 x 71/4	18	90 to 150
2	108.00	126.00	71/2	18	9½ x 9½	29	over 150
3	184.00	208.00	8 1/2	1934	10% x 10%	38	over 150

Fig. 1155

# Masthead, Range and Towing Lights Fig. 1156

225 DEGREE CLEAR LENS-20 POINT WITH FOUR LUGS FOR MOUNTING

No. 0	Galvanized Steel Each \$40.00	Polished Brass Each \$48.50	Lens Fig. 256 Height Inches 5 ½	Height Less Handle Inches 1334	Size Base Inches 7 x 7 1/4	C to C of lugs Inches 8 ½ 8 5%	Weight Each Pounds 7
2 3	41.50 54.00 92.00	50.00 63.00 104.00	6¾ 7½ 8½	143/4 18 193/4	7 1/8 x 7 3/4 9 x 10 10 3/4 x 11 1/4	10 %	15 21

With red or green lens, (special purpose) add \$9.00 each. With amber lens Sizes No. 0, 1 and 2 only, add \$9.00 each.

Fig. 1156



Oil Lamp used in Lights on this page
No. Each
O or 1 Comp. \$5.35

# Stern Lights, Fig. 1157

135 DEGREE CLEAR LENS—12 POINT WITH FOUR LUGS FOR MOUNTING

	Galvanized Steel Each	Polished Brass Each	Lens Fig. 269 Height Inches	Height Less Handle Inches	Base Inches	of lugs Inches	Each Pounds
io.						8 1/2	6
0	\$40.00	\$48.50	5 1/2	13 3/4	7 x 71/4		U
ĭ	41.50	50.00	63/4	1434	7 x 7½	8 %	8
			71/2	18	9 - 10	10%	13
2	54.00	63.00		10			11
3	92.00	104.00	81/2	1934	10½ x 10%	1214	16

With red or green lens, (special purpose) add \$9.00 each. With 45 degree red lens (for suction dredges) add \$12.00 each. With amber lens Sizes No. 0, 1 and 2 only, add \$9.00 each.

Fig. 1157

Anchor Lights, Fig. 1158
360 DEGREE CLEAR LENS—32 POINT
WITH FOUR LASHING EYES AND WIRE GUARD

D.	Galv. Steel Each	Polished Brass Each	Fig. 261 Height Inches 5 1/2	Height Less Handle Inches	Diam. Base Inches 7%	Wt. Each Lbs.	
)	\$39.00	\$47.50					
	40.00	49.00	634	14	73%	11	
,	53.00	62.00	71/2	171/4	934	17	
4			816	1854	101/6	23	
•	01.00	103 00	N 4/0	1 / 1/4	1079	23	

Breakdown Lights, Fig. 1159
360 DEGREE RED LENS—32 POINT

	WITH FOUL	<b>LASHIN</b>	G EILD	WMD MI	VE GOVE	.D
	.,		Lens	Height		
	Galv.	Polished	Fig. 261	Less	Diam.	Wt.
	Steel	Brass	Height	Handle	Base	Each
No.	Each	Each	Inches	Inches	Inches	Lbs.
0	\$44.00	\$52.50	5 1/2	13	7%	10
1	45.00	54.00	63/4	14	7 3/8	11
2	58.00	67.00	71/2	171/4	934	17
		110.00	81/2	18%	101/2	23
3	98.00	110.00	0 72	1078	1072	2.5

Fig 1158

2 or 3 Comp. \$6.35 ELECTRIC ONLY

With Fig. 288 Medium Screw Adapter, use above price. With Fig. 289 Medium Screw Adapter, add \$2.25 each. With Fig. 1082 3 Wire Mogul Adapter, add \$2.50 each.

COMBINATION OIL AND ELECTRIC
With Fig. 288 Medium Screw Adapter, add \$3.75 each.
With Fig. 289 Medium Screw Adapter, add \$6.00 each. With Fig. 1082 3 Wire Mogul Adapter, add \$6.25 each.



# ELECTRIC NAVIGATION LIGHTS FOR VESSELS OVER 65 FT. LONG Flat Top Style — Bottom Opening

MEDIUM SCREW 2 WIRE PHENOLIC ADAPTER FIG. 288 FOR SINGLE FILAMENT BULBS



# Side Lights, Fig. 30

112½ DEGREE RED AND GREEN LENSES—10 POINT—IN PAIRS WITH BRACKET FOR MOUNTING

No.	Galvanized Steel Per Pair	Polished Brass Per Pair	Fig. 259 Height Inches	Height Less Handle Inches	Size Base Inches	Weight Per Pair Pounds	For Size Vessel Feet
0	\$60.00	\$78.00	51/2	101/2	6½ x 6½	12	65 to 90
1	64.00	83.00	634	11	7½ x 7½	14	90 to 150
2	84.00	106.00	7 1/2	131/2	9½ x 9½	24	over 150

Fig. 30

# Masthead, Range and Towing Lights, Fig. 983

225 DEGREE CLEAR LENS—20 POINT WITH FOUR LUGS FOR MOUNTING

No.	Galvanized Steel Each	Polished Brass Each	Lens Fig. 256 Height Inches	Height Less Handle Inches	1	Sia Ba nel		C to C of Lugs Inches	Weight Each Pounds
0	\$30.00	\$39.00	5 1/2	101/2	7	x	7	8 1/2	6
1	32.00	41.50	634	11	7	x	7	8 %	8
2	42.00	53.00	71/2	131/2	9	x	91/2	10%	121/2

With red or green lens (special purpose) add \$9.00 each. With amber lens, add \$9.00 each.



Fig. 983



# Stern Lights, Fig. 986

135 DEGREE CLEAR LENS—12 POINT WITH FOUR LUGS FOR MOUNTING

No.	Galvanized Steel Each	Polished Brass Each	Lens Fig. 209 Height Inches	Helght Less Handle Inches	Size Base Inches	C to C of Lugs Inches	Weight Each Pounds
0	\$30.00	\$39.00	5 1/2	101/2	7 x 7	81/2	5 1/2
1	32.00	41.50	63/4	11	7 x 7	8 %	7
2	42.00	53.00	71/2	131/2	9 x 9½	10%	91/2

With red or green lens (special purpose) add \$9.00 each. With 45 degree red lens (for suction dredges) add \$12.00 each. With amber lens, add \$9.00 each.

Fig. 986

# Anchor Lights, Fig. 32

360 DEGREE CLEAR LENS—32 POINT WITH FOUR LASHING EYES AND WIRE GUARD

No.	Galvanized Steel	Pollshed Brass	Lens Fig. 261 Height	Height Less Handle	Diam. Buse	Weight Each
0	Each \$29.00	Each \$38.00	Inches 5½	Inches 9%	Inches 7½	Pounds 8
1	31.00	40.00	6 %	10%	71/2	9
4	41.00	52.00	71/2	12%	9%	13

Breakdown Lights, Fig. 84

360 DEGREE RED LENS--32 POINT WITH FOUR LASHING EYES AND WIRE GUARD red Polished Lens Fig. 201 Height D Lens Fig. 261 Height Inches Weight Each Galvanized Steel Each Brass Each Less Handle Base Pounds \$34.00 \$43.00 8 36.00 45.00 46.00 13



Fig. 32 Fig. 84

46.00 57.00 7½ 12¾ NOTES

Above prices do not include bulbs.
With double 2 wire medium screw adapter fig. 289 (Size 2 only) add \$2.25 each.
With 3 wire mogul adapter fig. 1082 for double filament bulb, add \$2.50 each.
COPPER LIGHTS MADE TO ORDER—PRICE ON APPLICATION



# OIL NAVIGATION LIGHTS FOR VESSELS OVER 65 FT. LONG

Turret Top — Bottom Opening SWIVEL FOUNT FIG. 282 — HINGED BURNER FIG. 242

LIP CHIMNEY FIG. 267 — FLAT WICK FIG. 302



1121/2 DEGREE RED AND GREEN LENSES-10 POINT-IN PAIRS WITH BRACKET FOR MOUNTING

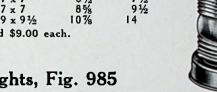
No.	Galvanized Steel Per Pair	Polished Brass Per Pair	Lens Fig. 259 Height Inches	Height Less Ring Inches	Size Base Inches	Weight Per Pair Pounds	For Size Vessel Feet
9	\$60.00	\$78.00	51/2	14	61/2 x 61/2	13	65 to 90
10	64.00	83.00	634	15	7½ x 7½	15	90 to 150
11	84.00	106.00	71/2	1834	9½ x 9½	26	over 150

Fig. 21

# Masthead, Range and Towing Lights, Fig. 982

225 DEGREE CLEAR LENS-20 POINT WITH FOUR LUGS FOR MOUNTING Galvanized Steel Each C to C of Lugs Inches 8½ 8% Polished Lens Fig. 256 Height Height Less Ring Size Base Weight Each Brass Inches 5½ No. Each Inches Pounds \$30.00 7½ 9½ \$39.00  $7 \times 7$ 32.00 41.50 6 3/4  $7 \times 7$ 42.00 1834 9 x 91/2

> With red or green lens (special purpose) add \$9.00 each. With amber lens, add \$9.00 each.



Stern Lights, Fig. 985

135 DEGREE CLEAR LENS—12 POINT WITH FOUR LUGS FOR MOUNTING

No. 0	Galvanized Steel Each \$30.00	Polished Brass Each \$39.00	Lens Fig. 269 Height Inches 5 1/2	Height Less Ring Inches 14	Size Base Inches 7 x 7	C to C of Lugs Inches 8½	Weight Each Pounds 6
1	32.00	41.50	6%	10	7 x 7	8%	71/2
2	42.00	53.00	7½	1834	9 x 9½	10%	10%

With red or green lens (special purpose) add \$9.00 each. With 45 degree red lens (for suction dredges) add \$12.00 each. With amber lens, add \$9.00 each.

Fig. 985

# Anchor Lights, Fig. 23

				MA LENS-		
		WITH FOUR	LASHING	EYES AND	WIRE GUARD	
	Galvanized	Pollshed	Lens Fig. 261	Height	Diam.	Weight
	Steel	Brass	Height	Less Ring	Base	Each
No.	Each	Each	Inches	Inches	Inches	Pounds
22	\$29.00	\$38.00	5 1/2	13%	7½	81/2
221/2	31.00	40.00	6%	141/2	7½	10
23	41.00	52.00	71/2	17%	9 3/4	14

Breakdown Lights, Fig. 129

		360 DEGRE	E RED LENS-	-32 POINT		
	WITH	FOUR LAS	HING EYES A	ND WIRE	GUARD	
	Galvanized	Polished	Lens Fig. 261	Height	Diam.	Weight
	Steel	Brase	Height	Less Ring	Base	Each
No.	Each	Each	Inches	Inches	Inches	Pounds
22	\$34.00	\$43.00	51/2	13%	71/2	81/2
221/2	36.00	45.00	634	141/2	7½	10
23	46.00	57.00	71/2	17%	93/4	14



Fig. 982

Fig. 23 or Fig. 129

#### **ELECTRIC ONLY**

With Fig. 288 Medium Screw Adapter, use above prices. With Fig. 289 Medium Screw Adapter, installed only in Sizes No. 2, 11 and 23, add \$2.25 each.

With Fig. 1082 3 Wire Mogul Adapter, add \$2.50 each.

#### COMBINATION OIL AND ELECTRIC

With Fig. 288 Medium Screw Adapter, add \$3.75 each. With Fig. 289 Medium Screw Adapter, installed only in Sizes No. 2, 11 and 23 add \$6.00 each.

With Fig. 1082 3 Wire Mogul Adapter, add \$6.25 each.

COPPER LIGHTS MADE TO ORDER—PRICE ON APPLICATION



# NEW TYPE TWO LENS NAVIGATION LIGHTS FOR SHIPS

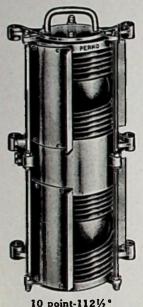
PER A.I.E.E. SPECIFICATION NO. 45 SECTION 34 PARAGRAPH 34.01
WATERTIGHT—ELECTRIC ONLY—CAST BRONZE
U.S. COAST GUARD APPROVED

SIDE LIGHTS

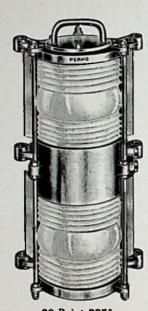
MASTHEAD—RANGE & TOWING LIGHTS

STERN LIGHTS

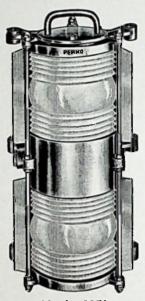
ANCHOR OR BREAKDOWN LIGHTS



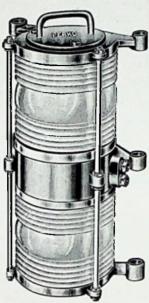
10 point-112½ Fig. 1164



20 Point-225° Fig. 1165



12point-135° Fig. 1166



32 point-360° Fig. 1167-Clear Fig. 1168-Red

Two individual lights in one body. Each section contains a Fresnel Lens, a medium screw phenolic socket for single filament lamp and a watertight cap for relamping or cleaning. A watertight terminal tube for cable entrance to each section and shields for light angle are included.

Fig.	Description		Price
1164	in the letter tot purt side, green jenses for starpoard side.	Per Pair	\$230.00
1165	MASTHEAD, RANGE OR TOWING LIGHTS, with clear lenses	Each	110.00
1166	STERN LIGHTS, with clear lenses	Each	110.00
1167	ANCHOR LIGHTS, with clear lenses	Each	107.00
1168	BREAKDOWN LIGHTS, with red lenses	Each	112.00
FIC	G'S 1165 OR 1166 WITH COLORED LENSES, RED OR GREEN, ADD \$6.00 EACH		

Each	1½	Spare Sockets	Spare Rubber	Height	Centers of	Height	Weight
	Colored	Fig. 346 No. 2	Lens Gaskets	Less Handle	Mounting Lugs	Lens	Each
	Each	Each	Each	Inches	Inches	Inches	Pounds
\$11.50	\$17.25	\$ .55	\$2.50	181/6	8 %	63/	30



Fig. 1169-Clear Fig. 1170-Red

# New Type Single Lens Anchor or Breakdown Lights

PER A.I.E.E. SPECIFICATIONS NO. 45
WATERTIGHT—ELECTRIC ONLY—CAST BRONZE
32 POINT—360 DEGREE CLEAR OR RED LENS
Medium Screw Phenolic Socket For Single Filament Lamp

Fig. 1169 Each	Fig. 1170 Each	Height Less Handle Inches	Mounting Lugs Inches	Height Lens Inches	Weight Pounds
\$75.00	\$78.00	9	8 %	63/4	15 1/2

With shield for reduced light angles, (give degrees of light required) add each \$10.00.

# Navy or Life Boat Lantern

OIL BURNING-APPROVED HINGED TOP-CLEAR GLOBE



Galv. Each	Polished Brass Each	Height Inches	Diam. of Base Inches	Size of Globe Inches	Weight Lbs.
\$9.25	\$11.00	11	5 %	4x6½	3

With Red or Green globe, add \$1.50 each. With electric adapter fig. 292, add \$1.40 each.

#### SPARE PARTS

Globe fig. 262. Burner fig. 246, size 1.

Wick fig. 302, size 1. Fount fig. 286.

# Bulkhead Lantern

WITH REMOVABLE GLASSES OIL BURNING



Fig. 46

Galvanized Each	Polished Brass Each	Glasses Only Each	Front Inches	Body————————————————————————————————————	Height Overall Inches
\$25.50	\$34.50	\$1.10	9 x 13	7% × 13	16

Supplied for electric only with medium screw socket to order, add \$3.00 each.

Spare brass founts only, \$4.50 each. Spare burners, Fig. 242 No. 2, \$1.50 each. Spare chimneys Fig. 267 No. 2, \$1.00 each. Spare reflectors, \$4.00 each.

# Watertight Hand Portables

CAST BRONZE-WOOD HANDLE THREADED GLOBE



Fig. 1180

#### With Medium Screw Socket

No.	Complete Each	Spare Globes Each	Wattage	Overall Length Inches	Length Globe Inches
1	\$9.75	\$1.20	25	131/2	4
2	10.25	1.55	60	151/2	6

# Day Signals

FOLDING TYPE-24 INCH DIAMETER HEAVY DUCK-DOUBLE STITCHED-BRASS GROMMETS-GALVANIZED ROD AND RIBS



Fig. 169



ig.	No.			Weight Lbs.	Each
69	5	Black ball	24	2 1/2	\$12.00
70R	3	Red ball	24	234	16.00

# **Ditty Bags**

COMPLETE



A waterproof canvas bag containing sailmaker's palm, needles, sail twine, marline, marline spike, and



# SELF CONTAINED BATTERY NAVIGATION LIGHTS For Oil Carriers, Barges, Scows, Etc.

#### WATERTIGHT TYPE

3 MILE VISIBILITY-FOR 3 NO. 6 DRY CELLS IN SERIES-WITH SWITCH





Fig 1001

Masthead or Range Light 225 Degrees



Fig. 1002

Stern Light 135 Degrees



Fig. 1003

Standard No. 6 Dry Cells used with These Lights



	Fig. 1001							- DIMENSIO	ons ——	Weight
	Red and Green Per Pair	Clear Each	Amber Each	Clear Each	Amber Each	Fig.	Lens Height Inches	Height Body Inches	Size Base Inches	Less Batteries Pounds
Galvanized	\$ 89.00	\$57.00	\$66.00	\$57.00	\$66.00	1001	6 3/1	11	71/4 x 71/4	18
Pol. Brass	107.00	66.00	75.00	66.00	75.00	1002	71/2	131/2	9 x 10	15
Spare Lenses	20.50	13.75	23.50	10.00	16.00	1003	7 1/2	131/2	9 x 10	12

Above prices include bulbs, no batteries. With batteries add \$4.50 per set of 3. Spare bulbs, G. E. No. 518, 4 volts, .55 amps, miniature screw base. \$ .40 each.

Note-If longer life of batteries and two mile visibility is desirable, use bulb G. E. No. 13, 3.8 volts, .3 amps.

#### WATERPROOF TYPE

2 MILE VISIBILITY—FOR 2 NO. 6 DRY CELLS IN SERIES—WITH SWITCH 200 HOURS CONTINUOUS OPERATION ON ONE SET OF BATTERIES

Side Lights 112½ Degrees



Fig. 1008

Masthead or Range Light 225 Degrees



Fig. 1013

Stern Light 135 Degrees



Fig. 1014

	Fig. 1008 Red and Green Per Pair	Clear Each	1013 — Amber Each	Clear Each	. 1014 — Amber Each	Fig.	Lens Height Inches	— DIMENSIO Height Body Inches	Size Base Inches	Weight Less Batteries Pounds
Galvanized	\$72.00	\$50.00	\$59.00	\$50.00	\$59.00	1008	6%	11	7½ x 7½	15
Spare Lenses	20.50	13.75	23.50	10.00	16.00	1013	71/2	131/2	9 x 9½	13
						1014	71/2	131/2	9 x 91/2	10

Above prices include bulbs, no batteries.

With batteries, add \$3.00 per set of 2

Bulb is double contact 2.5 volts .15 amp. S-8. \$1.40 each.

Battery containers as illustrated, complete with reflector, socket, bulb and switch. Without batteries, \$26.00 per pair.

# 30 Day Battery Anchor Light

360 DEGREE CLEAR FRESNEL LENS WATERTIGHT-WITH SWITCH



For use with four ordinary 11/2 volt dry cells such as Eveready No. 6, readily obtainable.
720 continuous hours of light on one set of batteries.

No.	Galv. Steel Each	Polished Copper Each	Size Lens Inches	Height Overall Inches	Diam Base Inches	Wt. Lbs.
1	\$31.50	\$36.00	41/4 x 4	15	634	5 1/2
2	45.00	49.00	51/2 x 51/4	161/2	6 34	8 1/2

No. 1 red, green, blue or amber lens, add \$2.20 each. No. 2 red, green, blue or amber lens, add \$5.00 each. Light shielded to 1121/2, 135 or 225 degrees, add \$8.00

Prices include bulb. With batteries, add \$6.00 per set. Spare bulbs, 6 volt .04 amp. miniature base, \$.40 each. Spare lenses, see fig. 261. Spare switches, see fig. 745. Spare sockets, \$ .50 each.

Spare battery containers, galv., \$10.00 each. Copper,

# 8 Day Western Trap Light

360 DEGREE CLEAR FRESNEL LENS OIL BURNING-LATCHED FOUNT



Fig. 14

With special Zenith burner and gear arrangement for control of wick from exterior of light.

Eight days of continuous light on one filling.

NOTE-This light is made to order and only in quantities of 12 or more.

Galvanized Steel Each	Height Lens Inches	Height Overall Inches	Diam. Bottom Inches	Capacity Fount Pints	Weight
Face	rucues	Tuchen	тиспев	Linta	1.Office
\$82.00	71/2	22	10	6	20

With red, green or blue lens, add \$6.50 each. Fount complete with burner and gears, \$36.00 each. Light only, without Fount, \$55.00 each. Zenith burner only, \$2.00 each. Zenith burner with gears, \$5.50 each. Spare lenses, see fig. 261.

# Tri-Color Trawler Lights

FOR VESSELS UP TO 75 FEET

ELECTRIC ONLY-MEDIUM SCREW SOCKET 45 DEGREE CLEAR FRESNEL LENS - 4 POINT 90 DEGREE RED AND GREEN FRESNEL LENSES - 8 POINT

WITH FIG. 131 BACK BRACKET BOTTOM OPENING - SPRING FOUNT



Fig. 408 -- No. 0

Galvanized Steel Each	Spare Lenses Each	Height Less Ring Inches	Height Lenses Inches	Weight Pounds
\$30.00	\$3.50	81/2	53/16	3 1/2

With bayonet double contact socket to order, same price as above.

With ventilated top for oil burning add \$5.00 each. For oil and electric, add \$5.75 each.

# Tri-Color Trawler Lights

FOR STEAM TRAWLERS AND FISHING VESSELS LONGER THAN 75 FEET

45 DEGREE CLEAR FRESNEL LENS - 4 POINT 90 DEGREE RED AND GREEN FRESNEL LENSES - 8 POINT WITH FOUR LUGS FOR MOUNTING

BOTTOM OPENING - SWIVEL FOUNT



Fig. 407 - No. 1 Oil or Oil and Electric



Fig. 408 — No. 1 Electric only

Galv.	Spare	Less I	ight Handle —	Centers	Height	Weight
Steel Each	Lenses Each	Fig. 407 Inches	Fig. 408 Inches	of Lugs Inches	Lenses Inches	Fig. 407 Pounds
\$62.00	\$5.50	14%	111/2	81/2	634	9

Above prices apply to Fig. 407 oil or electric and Fig. 408 electric only, with medium screw socket. Fig. 407 oil and electric, add \$3.75 each.



# "PERKO" BRIDGE AND PIER LIGHTS

In strict accordance with specifications and regulations of the Treasury Department, U. S. Coast Guard, on marking and lighting of bridges. See "Aids To Navigation" C.G.-208 Subpart 68.15, January 1st, 1949 and last four pages of this Catalog before Index.

## REGULATION PIER LIGHTS

For Piers, Axis, Abutments, Channel Sides, or Channel Margins
180 Degree Red Fresnel Lens
Body of Sheet Steel or Sheet Brass
Electric Socket Is Phenolic Medium Screw, U.S.C.G. Approved

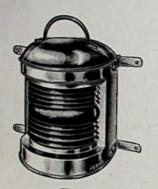


Fig. 29

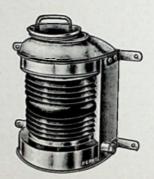


Fig. 31

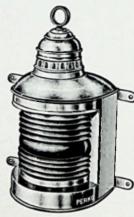


Fig. 59

- FIG. 29-For electric only. With bottom opening and brass swivel electric adapter.
- FIG. 31-Watertight, for electric only, with cast bronze threaded cap and brass packing gland for cable.
- FIG. 59—For Oil, Electric or Oil and Electric. Has bottom opening and brass swivel fount with burner, wick and chimney for oil, or brass electric adapter for electricity. Both supplied for "Oil and Electric".

All above supplied with four brackets for mounting.

FIG.	Gaiv. Steel Each	Polished Brass Each	Height Overall Lens Inches	•Height Overall Light Inches	Width Overall Inches	Size Base Inches	Weight Pounds
29 Electric only	\$58.00	\$68.00	7 3/8	131/4	141/2	9 % x 9 1/8	9
31 Electric only	64.00	74.00	7 3/8	131/4	141/2	9% x 91/8	11
59 Oil or Electric	58.00	68.00	7 3/8	18	141/2	9% x 91/s	13
59 Oil and Electric	61.75	71.75	7 3/8	18	141/2	9 % x 9 1/8	13

With Clear Lens for main channel markers on fixed bridges or with green or amber lens for special purpose, use above prices.

\*Height of light does not include handle or ring.

#### SPARE PARTS

Fresnel Lenseseach	\$17.50	Oil Founteach	\$3.75
Mounting Bracketseach	1.10	Oil Burnereach	1.50
Electric Socketeach	.55	Oil Wickseach	.08
Electric Adaptereach	3.75	Chimneyseach	1.00

## REGULATION PIER LIGHTS

Cast Bronze or Cast Aluminum — Emery Finish — Watertight
For Piers, Axis, Abutments, Channel Sides or Channel Margins
180 Degree Red Fresnel Lens
Electric Only — With Phenolic Medium Screw Approved Socket





RED

Fig. 1005

Fig. 1010

FIG. 1005-Has four integral mounting lugs drilled for % inch diameter bolt and brass packing gland for cable.

FIG. 125—This is fig. 1005 mounted on I inch brass pipe and good sturdy cast bronze flange. Brass packing gland for cable with 2 inch pipe and flange, add \$10.00 each.

FIG. 1010—This is fig. 1005 mounted on 2 inch brass pipe and fittings. Standard length of pipe at "A" is 3½ inches. Special length, please specify, price on application.

Cast Bronze		Cast Aluminum		Overall Light	Width Light	Size Base	Pounds Pounds		
FIG.	Each	Each	Inches	Inches	Inches	Inches	Bronze	Aluminum	
1005	\$ 85.00	\$ 85.00	7 3/8	91/4	**91/4	8% x 7%	18	12	
125	95.00	95.00	7 3/8	19	81/4	5	24	18	
1010	135.00	135.00	7 3/8	171/2	81/4	6	28	22	

With clear lens for main channel markers on fixed bridges or with green or amber lens for special purpose, use above prices.

\*Height of light does not include handle.

\*\*Width is to centers of mounting holes.



# SPECIAL PURPOSE LIGHTS ON PEDESTAL

With 360 Degree Red, Green, or Clear Lens
For Sheer Booms, Isolated Piers, Obstructions, etc.
Cast Bronze or Cast Aluminum — Emery Finish
Watertight — Electric Only

Mounted on 1 inch brass pipe and good sturdy cast bronze stange. Has phenolic medium screw socket and brass packing gland for cable. Cast threaded cap.

Cast Bronze Each	Cast Aluminum	Height Overall Lens Inches	<ul> <li>Height Overall Light Inches</li> </ul>	Width Light	Diam. Base	Weight Pounds	
	Each			Inches	Inches	Br.	Alum.
\$95.00	\$95.00	7 %	19	111/2	5	24	18

This light can be supplied shielded to various degrees as required. Price on application.

\*Height of light does not include handle.

NOTE-Figs. 125, 126 and 1010 in special height other than standard, price on application.



# REGULATION SWING, DRAW OR FOLDING BRIDGE LIGHTS

For Span of Through, Deck and Half Through Swing Bridges or Single Opening Draw Bridges with Alternate Red and Green 60 Degree Fresnel Lenses.

Socket Is Phenolic Medium Screw, U.S.C.G. Approved.



Fig. 35

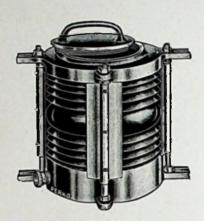


Fig. 39

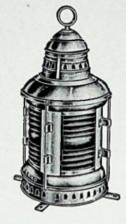


Fig. 50

- FIG. 35—Watertight, for electric only. Made of sheet metal, either galvanized steel or brass with cast bronze threaded cap and brass packing gland for cable.
- FIG. 39—Watertight, for electric only. Made of cast bronze or cast aluminum in emery finish. With cast threaded cap and packing gland for cable.
- FIG. 50—For Oil, Electric or Oil and Electric. Made of sheet metal, either galvanized steel or brass. Has bottom opening and brass swivel fount with burner, wick and chimney for oil, or adapter for electricity. Both supplied for "Oil and Electric".

	Galv.	Polished Brass	Cast Bronze	Cast Aluminum	Spare	Overall	Overall Light	••Width Overall	Pou	
FIG.	Each	Each	Each	Each	Lenses Each	Lens Inches	Inches	Inches	Br.	Alum.
35 Elec. only	\$78.50	\$88.50			\$9.00	7 %	131/4	121/2	131/2	
39 Elec. only			100.00	100.00	9.00	73%	10	12	22	15
50 Oil or Elec.	66.50	76.50			9.00	7 %	18	121/2	14	
50 Oil and Elec.	70.00	80.00			9.00	7%	18	121/2	141/2	
		00.00			5.00	1 /8		12/2	, , 2	

# **BOX TYPE REGULATION DRAW SPAN LIGHTS**

With 360 Degree Clear Fresnel Lens Enclosed by Alternate Red and Green Flat Glass Panels Showing 60 Degrees of Light.



Fig. 63

FIG. 63—For Oil, Electric or Oil and Electric, made of Sheet Steel and Galvanized. Bottom opening with brass fount or adapter.

FIG. 1007—Watertight, for electric only. Made of cast bronze with threaded cap and packing gland.

FIG.		Galv. Each	Bronze Each	Lens Each	Panels Each
63	Oil or Elec.	\$87.00		\$12.50	\$3.60
63	Oil and Elec.	92.50		12.50	3.60
1007	Elec. only		163.00	12.50	3.60
Spare	oil fount for	Fig. 63,	each \$9	.50	
_				1 40 5	

Spare electric adapter for Fig. 63, each \$8.50.

FIG. 63 1007	Lens Inches 7% 7%	Less Handle Inches 18 12	Overall Inches 111/4 121/2	of Panels Inches 9½ x 10¾ 9 x 9	Weight Pounds 18 48

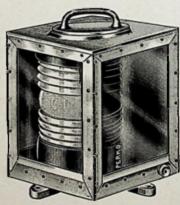


Fig. 1007

All lights on this page supplied with one lens or panel shielded for 3 way light (one red, two green) use above prices, please specify.

# **REGULATION MID-CHANNEL SPAN LIGHTS**

For Fixed Bridges 360 Degree Green Fresnel Lens Electric Socket Is Phenolic Medium Screw, U.S.C.G. Approved



Fig. 68



Fig. 1006

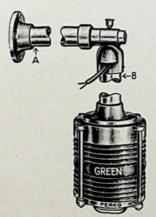


Fig. 80

- FIG. 68-For electric only, with bottom opening and brass swivel electric adapter. Made of sheet metal, either galvanized steel or brass.
- FIG. 1006—Watertight, for electric only. Made of cast bronze or cast aluminum in emery finish. With cast threaded cap and brass packing gland.
- 80—For oil, electric or oil and electric. Made of sheet metal, either galvanized steel or brass. Has bottom opening and brass swivel fount with burner, wick and chimney for oil, or brass electric adapter for electricity, both supplied for "oil and electric".

FIG.	Galvanized Steel Each	Steel Brass	Cast Cast Bronze Aluminum Each Each		Overall Lens	Overall Light Inches	Width Overall Inches	Pounds		
					Inches			Br.	Alum.	
68	Electric only	\$49.00	\$60.00			73%	141/2	9 1/2	13	
1006	Electric Only			\$85.00	\$85.00	73%	9 1/2	11%	21	14
80	Oil or Elec.	61.00	70.00			7%	18	934	17	
80	Oil and Elec.	64.75	73.75			7 %	18	934	17	

With clear, or red lens for special purpose, use above prices.



# REGULATION MID-CHANNEL SPAN LIGHT WITH PIVOT MOUNTING

Cast Bronze or Cast Aluminum — Emery Finish Watertight - Electric Only - Medium Screw Socket 360 Degree Green Fresnel Lens

This is Fig. 1006 with pivot mounting allowing light to be seen beneath the bridge yet can be swung to the upper level for rebulbing or cleaning. Entrance is through cast threaded cap in bottom of light body. Pipe is brass, 2 inch size. Standard length at "A" and "B" is 2 inches. Flanges and other fittings are cast bronze.

Cast Bronze	Cast Aluminium	Overall Lens	•Height Overall	Width Overall	Weight Pounds		
Each	Each	Inches	Inches	Inches	Bronze	Aluminum	
\$160.00	\$160.00	7 %	201/4	111/2	36	29	

NOTE-With special length of pipe at "A" or "B", price on application. \*Height does not include handle.



# LIFT SPAN LIGHTS FOR BASCULE BRIDGES

For Single and Double Lift Bridges 180 Degree Red and Green Fresnel Lenses Cast Bronze or Cast Aluminum — Emery Finish Watertight - Electric Only - Medium Screw Socket



Fig. 22

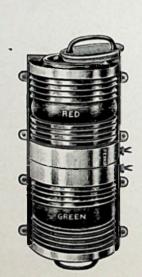


Fig. 127



Fig. 1012

- FIG. 22—Swinging type with fixed extension. Pipe is brass, 2 inch size, 6 inches long. Bracket is cast bronze. Light contains two bakelite medium screw sockets, one for each lens. Entrance for rebulbing or cleaning is through two 4½ inch openings, one in back of upper section, the other in bottom of lower section, both closed by threaded cast caps. Complete with brass grease cup.
- 127—Fixed type, has eight integral mounting lugs, drilled for % inch diameter bolt. Two brass packing glands for cable and two threaded caps for entrance to each section.
- FIG. 1012—Swinging type with pipe extension, pipe "A" and "B" is brass, 2 inch size, 2 inches long at "A" and 6 inches long at "B". Other fittings are cast bronze. Light is the same as Fig. 22 above.

Cast Bronze		Cast Aluminum	"Height Overall		Width Light	Size of Bracket	Weight Pounds	
FIG.	Each	Each	Inches	Inches	Inches	Inches	Bronze	Aluminum
22	\$260.00	\$260.00	301/2	73/8	81/2	6¼ x 6¼	54	42
127	180.00	180.00	181/2	7%	**91/4		36	24
1012	270.00	270.00	32	738	8 1/2	6	56	44

NOTE-Supplied in special color combinations if required, such as two red or two green lenses also clear or amber lenses at above prices.

Special length of pipe at "A" or "B", price on application.

\*\*Width is to centers of mounting holes.

<sup>\*</sup>Height does not include handle.

# LIGHT COLORS AND HORIZONTAL ARCS OF VISIBILITY IN ACCORDANCE WITH "AIDS TO NAVIGATION" REGULATIONS ON LIGHTING FOR BRIDGES



180 DEGREE RED—For piers, axis, abutments, channel sides or channel margins.



180 DEGREE CLEAR-For main channel markers on fixed bridges.



360 DEGREE RED, GREEN OR CLEAR—For sheer booms, isolated piers and obstructions not part of the bridge or bridge approach structure. May be shielded to various degrees as required.



60 DEGREE ALTERNATE RED AND GREEN—For draw span of draw bridges or swing span of through swing bridges. When required for swing span of deck or half-through swing bridges, one red lens is shielded.



360 DEGREE GREEN—For mid-channel or channel center, for span of fixed bridge over a navigable channel.



180 DEGREE GREEN AND RED—For span of single and double-lift bascule bridges. Green when lift span is fully open for navigation, red for all other positions of lift span.

#### SPARE PARTS FOR BRIDGE AND PIER LIGHTS

)	180 DEGREE LENSES—For figs. 22-29-31-59-125-127-1005-1010-1012 Clear \$12.50 each, Colored \$17	7.50 e	each
	360 DEGREE LENSES—For figs. 68-80-126-1006-1011 Clear \$12.50 each, Colored \$19	.00	each
)	WATERTIGHT CAPS—Cast Bronze—For figs. 22-31-35-39-125-126-127-1005-1006- 1007-1010-1011-1012\$	6.00 e	each
	RUBBER GASKETS—For caps\$	.30	each
,	RUBBER GASKETS—For 360 degree lenses	3.00	each
	ELECTRIC SOCKETS—Medium screw—For all lights	.55	each
,	SOCKET SUPPORTS—Brass—For all watertight electric lights	1.00	each
	ELECTRIC ADAPTERS—For figs. 29-50-59-68-80	3.75	each
,	OIL FOUNTS—Brass—For figs. 50-59-80	3.75	each
	OIL BURNERS—Brass—For above founts	1.50	each
,	OIL WICKS—For above burners\$	.08	each
	CHIMNEYS—For above burners	1.00	each
,			

NOTE-For extracts from Government Regulations on Lighting for Bridges, see last four pages of this Catalog, before Index.



#### "PERKO" MARINE HOUSE FIXTURES

These are not imitations of marine lamps, they are the real thing, with authentic fresnel lenses and solid brass metal parts. The same lamps that we manufacture for use on all classes of vessels that sail the seas, they meet all marine requirements for visibility, light projection, durability, resistance to corrosion and the ability to withstand the worst in weather conditions.

Exceptionally desirable for homes along the waterways, yacht clubs, establishments with marine motif or nautural atmosphere, marine rooms or dens, etc.

All complete with Coast Guard approved medium screw electric socket in the upper section and a hinged dome bottom with diffusing globe for illumination below the fixture. NOT WIRED.

#### Marine Pattern

WITH CLEAR FRESNEL LENS



Ring in Top Fig. 853



Wall Type Fig. 856



Ceiling Type Fig. 858

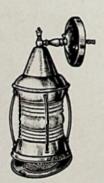
No.	Polished Brass Each	. 853 — Chromium Plated Each	Polished Brass Each	Chromium Plated Each	Polished Brass Each	Chromium Plated Each	Height Lamp Inches	Diam. Lamp Inches	Size Lens Inches	Diam. Wall Plate Inches	Diam. Ceiling Canopy Inches	Approx. Weight Pounds
1 2	\$13.00 15.00	\$16.00 18.00	\$17.00 18.75	\$21.00 22.75	\$15.25 17.25	\$19.25 21.25	8% 11%	4 ½ 5 5/8	35/16×33/16 41/4×4	4 1/2 4 1/2	4 ½ 4 ½	3

### Sou'wester Pattern

WITH CLEAR FRESNEL LENS



Ring in Top Fig. 845



Wall Type Fig. 862



Ceiling Type Fig. 863

No	Polished Brass Each	Chromium Plated Each	Polished Brass Each	Chromium Plated Each	Polished Brass Each	Chromium Plated Each	Height Lamp Inches	Diam. Lamp Inches	Size Lens Inches	Diam. Wall Plate Inches	Diam. Ceiling Canopy Inches	Approx. Weight Pounds
1 2 3	\$12.75 14.75 23.00	\$14.00 16.00 25.50	\$14.75 16.75 25.00	\$18.75 20.75 31.00	\$14.75 16.75 25.00	\$17.00 19.00 28.50	8½ 11 13	4 % 5 % 7	35/16x33/16 41/4x4 51/2x51/4	4 ½ 4 ½ 4 ½ 4 ½	4 ½ 4 ½ 4 ½ 4 ½	2 1/6 3 1/4 6

NOTE—ALL ABOVE LIGHTS WITH COLORED LENS (RED, GREEN, BLUE OR AMBER) SIZE NO. 1 ADD \$.50 EACH. SIZE NO. 2 ADD \$1.00 EACH. SIZE NO. 3 ADD \$4.50 EACH. WITH OPEN BOTTOM (No Hinged Door) DEDUCT \$1.00 EACH.

#### Whaler Pattern

WITH CLEAR TRANSPARENT GLOBE-NOT WIRED

Centuries ago this style was a whale oil burning lamp used aboard ship for navigational and illuminating purposes, and is still used today for signalling.



Ring in Top Fig. 833



Fig. 866



Ceiling Type Fig. 867

No.	Polished Brass Each	Chromium Plated Each	Polished Brass Each	. 866 —— Chromium Plated Each		Chromium Plated Each	Height Lamp Inches	Diam. Globe Inches	Diam. Wall Plate Inches	Diam. Ceiling Canopy Inches	Approx. Weight Pounds
1	\$22.00	\$26.50	\$26.00	\$32.00	\$24.00	\$29.50	11	6	4 ½	4 1/2	2 ¾
2	24.75	29.50	29.50	38.00	26.75	32.50	14	8	4 ½	4 1/2	4 ¼
3	49.00	55.50	53.00	63.00	51.00	58.50	16½	10	4 ½	4 1/2	6 ½

With frosted or colored globe (red, green or blue), Sizes 1 or 2, add \$3.00 each. Size No. 3 add \$4.00 each. Size No. I not available with green globe.

With open bottom (no hinged door) deduct \$1.00 each.

#### "Sea-Gull"



A small colorful lamp ideally suited for children's room or night table.

Has two marine fresnel lenses, one red, the other green. Creates an attractive night light which does not

Has sockets in top and bottom with three-way switch and a hand painted nautical shade.

	np Only s Shade	-				
Polished Brass Each	Chromium Plated Each	Shade Only Each	Height Inches	Diam. Base Inches	Size Shade Inches	Weight Pounds
\$17.00	\$19.50	\$3.25	121/2	4 1/2	4x8x6	114

#### Plain Shades

FOR TABLE LAMPS PAPER PARCHMENT

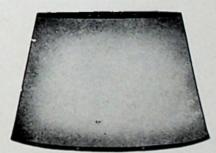


Fig. 1220

For those who prefer to paint or mount their ow designs photos decals etc.

No.	Each	Diameter Top Inches	Diameter Bottom Inches	Height Inches	Weight Ounces
1	\$2.50	5	9	61/2	6
2	4.00	10	14	9	10

Size No. 1 has spring clip for bulb and is suitable for lamps Fig. 1211, 1213, 1214, 1215.

Size No. 2 has washer for mounting on harp and is suitable for lamps Fig. 1212, 1216, 1217.



#### **AUTHENTIC MARINE TABLE LAMPS**

WITH HAND PAINTED SHADES

Presenting an attractive assortment of table lamps designed for those who have a natural love for the sea and vessels that sail upon it, and who desire a nautical atmosphere or motif in their surroundings, be it their home, boat, office, club or eating place.

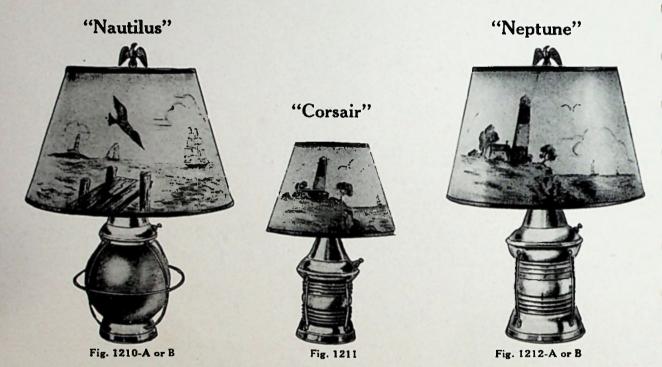
Manufactured and designed by this country's oldest and most highly regarded manufacturer of navigation lights, these lamps are the real thing, not imitations.

All lenses are true molded fresnels made to government requirements for navigational purposes, in light projection and color. Colors (Red, Green, Blue, etc.) are molded into the lens not coated or painted on.

Shades are all paper parchment hand painted in colorful nautical scenes.

Metal parts are all solid brass or cast bronze, polished or chromium plated. NOT LACQUERED.

All wired and complete with extension and plug.



Above are equipped with two Keyless Sockets, one under the shade, the other inside globe or lens. A three way turn switch for light above or below or both.

Fig.	Pollshed Brass Each	y Less Shade—— Chromium Plated Each	Shade Only Each	Height Inches	Diam. Base Inches	Size of Shade Inches	Size of Globe Inches	Weight Pounds
1210-A	\$29.50	\$36.00	\$5.75	19	4¼	9x15x 9	6	3
1210-B	34.00	41.50	8.00	21½	5¾	10x18x10½	8	4
1211	18.50	21.25	4.25	14	4¼	6x10x 6½	3%ex3%e	2
1212-A	22.50	26.00	6.00	18¾	5¾	10x14x 9	4%x4	3
1212-B	28.00	32.00	8.00	21½	7	10x18x10½	5%x5%	4 %

NOTE—ABOVE LAMPS SHIPPED COMPLETE WITH SHADE UNLESS OTHERWISE SPECIFIED.

Height shown above is from base to top of shade. Sizes of shade shown above are 1st, diameter of top; 2nd, diameter of bottom; 3rd, height.

Prices shown above apply to Fig. 1210 with white frosted globe, Figures 1211 or 1212 with clear fresnel lenses.

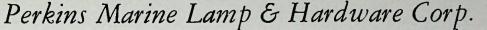
Fig. 1210-A with colored globe (red or blue) add \$3.50 each.

Fig. 1210-B with colored globe (red. green or blue) add \$3.50 each."

Fig. 1211 with colored lens (red, green, blue or amber) add \$.75 each.

Fig. 1212-A with colored lens (red, green, blue or amber) add \$1.50 each.

Fig. 1212-B with colored lens (red, green, blue or amber) add \$5.00 each.





"Mariner"





Fig. 1213

"Voyager"



Fig. 121

"Seafarer"





Fig. 1215

"Skipper"



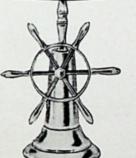


Fig. 1216

"Trade-Wind"



Fig. 1217

	-Lamp On	ly Less Shade-						
Fig.	Pollshed Brass Each	Chromium Plated Each	Shade Only Each	Height Inches	Ham. Base Inches	Size of Shade Inches	*Diameter Wheel Inches	Weight Pounds
1213	\$21.50	\$24.00	\$4.25	15	5 1/2	5x 9x63/2	4 %	2%
1214	19.50	22.00	**3.00	15	5 1/2	5x 9x61/2		21/2
1215	19.50	22.00	4.25	15	5 1/2	5x 9x6½		234
1216	32.00	38.50	6.00	201/2	5 %	10x14x9	8 1/2	134
1217	26.00	32.00	6.00	201/2	5 %	10x14x9		5

NOTE-ABOVE LAMPS SHIPPED COMPLETE WITH SHADE UNLESS OTHERWISE SPECIFIED.

Height shown above is from base to top of shade.

Sizes of shade shown above are 1st, diameter of top; 2nd, diameter of bottom; 3rd, height.

NOTE—Shades are interchangeable, i.e., if lamp Fig. 1213 is preferred with shade Fig. 1215, etc., or if lamp Fig. 1216 is preferred with shade Fig. 1217 etc., please specify.

\*Diameter of wheel is measured from end to end of handles.

\*\*This shade has printed map of the world. All others are hand painted.
All lamps on this page have weighted base.



#### New Junior Cabin Lamp

DOUBLE SWING-WEIGHTED BASE ALL BRASS



Fig. 168

Same construction as our well known Newport Cabin Lamp Fig. 141, but reduced in size for use where space or headroom is limited.

No.	Polished Brass Each	Chromium Plated Each	Height	sion	Capacity Fount Pints	Weight Ounces
0	\$11.00	\$14.50	9	5	1/2	19

#### Newport Cabin Lamp

DOUBLE SWING—WEIGHTED BASE

ALL BRASS



Fig. 141

This lamp is of very sturdy construction, refined appearance and minimum practical extension from wall. Diameter of wall plate 2½ inches.

	Polished Brass	Chromium Plated	Overall Height	Exten- sion	Capacity Fount	Weight
No.	Each	Each	Inches	Inches ·	Pints	Pounds
1	\$11.00	\$14.50	101/2	5 1/2	1	134
2	12.50	16.00	121/2	6	11/4	2

#### SPARE PARTS FOR CABIN LAMPS

No.		Each
0 and 1 S	pare Burners Fig. 231	\$ .55
0 and 1 Si	pare Chimneys Fig. 230	55
2 and 4 S	pare Burners Fig. 242 No. 2	1.50
2 and 4 S	pare Chimneys Fig. 267 No. 2	1.00

#### Philadelphia Cabin Lamp

DOUBLE SWING—WEIGHTED BASE REMOVABLE FOUNT—ALL BRASS



Fig. 137

With 2½ inch diameter wall plate, hinge burner Fig. 242 No. 2 and 6 inch chimney Fig. 267 No. 2.

No.	Polished Brass Each	Chromium Plated Each	Overall Height Inches	sion	Capacity Pints	Weight Pounds
4	\$15.50	\$19.00	14	8 1/2	1 1/2	3 3/4

#### Universal Wall Lamp

TIN PLATE OR ALL BRASS



Fig. 312

Has polished reflector and gives excellent illumination. Uses No. 2 size wick.

Tin	Brass	Spare Chimneys			of Fount	Weight Each
Each	Ench	Each	Each	Inches	Inches	Lbs.
\$5.50	\$7.50	\$1.00	\$ .75	9	5	1 1/2

#### Smoke Bell and Arm

ALL BRASS



Fig. 128

No.	Polished Brass Each	Chromium Plated Each	Diam. Bell Inches	Extension to Center Inches	Weight Ounces
0	\$2.75	\$3.85	31/2	3 1/2	31/2
1	2.75	3.85	4	3 3/4	4
2	2.75	3.85	4	4	4
4	2.75	3.85	61/4	61/2	7

No. 0 size is for lamp Fig. 168.

No. 1 and 2 sizes are for lamp Fig. 141.

No. 4 size is for lamp Fig. 137.



#### **ELECTRIC CABIN FIXTURES**

WITH MEDIUM SCREW SOCKETS FOR 6-12-32 OR 110 VOLTS

#### Round Base Pattern

WITH TURN SWITCH-SPUN BRASS



Fig. 308

Polished Brass Each	Chromium Plated Each	Diam. Base Inches	Drop less Lamp Inches	Projection less Lamp Inches	Weight Ounces
\$3.25	\$4.25	2 1/2	21/2	3	6
Spare s	ocket with	switch, \$	.90 each	1.	

#### Square Base Pattern

WITH TOGGLE SWITCH—CAST BRONZE



1400-L WITH 1886 X ATTACH. 227.50M CIRCLE F MFG CO RENTON

Fig. 450

Polished Bronze Each \$4.75	Chromium Plated Each \$5.75	Size Base Inches 2x2	Drop less Lump Inches	Projection less Lamp Inches 2 %	Weight Ounces 12	
	teriors only, ggle switch,					

#### Streamline Pattern

CHROMIUM PLATED BAKELITE MEDIUM SCREW SOCKET -TURN SWITCH



Chromium Size Plated Base Each Inche \$3.50 2½ x	Drop Depth Less Lamp Less Lamp Inches Inches 2 1/4 2 1/2	Weight Ounces 8
--	--	-----------------------

Spare sockets with switch, \$ .90 each.

#### Upright Pattern

WITH TURN SWITCH-CHROMIUM PLATED



Chromium Plated Each \$3.00	Size Base Inches 3 1/2 x 2 1/2	Length Overall Inches 5 %	Projection less Lamp Inches 2 3/4	Weight Ounces 10
Spare sock	ets with switch	, \$ .90 e	ach.	

#### Upright Pattern

WITH TOGGLE SWITCH-CAST BRONZE

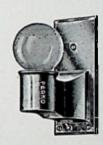


Fig. 304

Polished Bronze Ench \$7.25	Chromium Plated Each \$9.25	Size Plate Inches 4 ½ x 2 5/8	Projection Less Lamp Inches 2 %	Weight Ounces 17
	teriors only,			

#### Junior Fixtures

WITH DOUBLE CONTACT SOCKET TOGGLE SWITCH—CAST BRONZE



Polished Bronze Each \$4.50	Chromium Plated Each \$5,50	Size Base Inches	Drop L Less Lamp Inches	Projection Less Lamp Inches 2	Weight Ounces 8
c	. 1 1				

Spare toggle switch, see Fig. 745.

PRICES ON THIS PAGE DO NOT INCLUDE BULBS. WHEN ORDERING BULBS, SPECIFY VOLTAGE AND CANDLEPOWER, FROSTED OR CLEAR. ABOVE FIXTURES ARE SUPPLIED NOT WIRED, NOTE-ATTRACTIVE SHADES AND SHIELDS FOR ABOVE FIXTURES ARE SHOWN ON PAGE 42.



#### **Double Ceiling Fixture**

CAST BRONZE—MEDIUM SCREW SOCKETS
WITH TOGGLE SWITCH



Fig. 451

Polished Bronze Each Chromium Plated Each \$10.75

Size Base Inches 31/2×2 Extension from Ceiling Inches

Spare interior only, \$1.00 each.

#### "Tear-Drop" Fixture

CHROMIUM PLATED
DOUBLE CONTACT SOCKET—TURN SWITCH



Fig. 301



Side View

An attractive fixture for cabin or berth. Has streamlined thick glass globe and supplied with 6 volt 21 C.P. bulb.

Complete Each	Spare Globe Each	Spare Socket Each	Spare Bulb Each	Overall Size Inches	Depth Inches	Weight
\$5.50	\$1.00	\$.75	\$.50	5 x 3	1 %	-11

Spare Switches, \$.85 each. Spare Gaskets, \$.20 each.

#### Dashboard Lamp

BRASS—NICKEL PLATED
DOUBLE CONTACT SOCKET—WITH SWITCH



Fig. 184

Bulb is not included.

Each	Height Overall Inches	Size Base Inches	Weigh
\$1.00	25/16	1 1/2 x 1 1/2	1 1/2

#### Marine Shields for Fixtures

PARCHMENT PAPER
HAND PAINTED OR PLAIN



For Hanging Bulb Fig. 27



For Upright Bulb Fig. 28

A marine design hand painted in colors makes these shields very decorative and appropriate for a yacht stateroom, cabin club or marine room.

Metal clip is for a bulb up to 60 watts.

Painted	Plain	Width	Depth	Weight
Each	Each	Inches	Inches	Ounces
\$2.00	\$1.80	4	3 34	1 1/2

#### Molded Plastic Shades

WHITE-IVORY-TAN



Fig. 174

Suitable for bulbs up to 60 watts.

Each	Height	Diam.	Weight
	Inches	Inches	Ounces
\$ .60	3 1/2	414	2 1/2

Please specify color when ordering. Ivory shipped unless otherwise specified.

#### Dome Light

WROUGHT BRASS—WITH TOGGLE SWITCH WITH NICKEL PLATED REFLECTOR FROSTED GLASS FIG. 132—MEDIUM SCREW SOCKET FIG. 346



Fig. 753

Will accommodate a bulb up to 100 watts.

Polished Brass Each	Chromium Plated Each \$20.00	Diam. Base Inches 9 5/8	Diam. Depth Glass Overall Inches Inches 8 3	Weight Pounds 2

#### **Dome Lights**

WROUGHT BRASS
WITH FIG. 257 DIFFUSING GLASS
TOGGLE SWITCH—DOUBLE CONTACT SOCKET

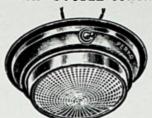


Fig. 294

Diam. Glass Inches	Polished Brass Each	Chromium Plated Each	Diam. Base Inches	Depth Overall Inches	Weight Ounces
3	\$5.25	\$7.00	41/4	2	6
4	6.25	8.00	5 1/2	21/4	9
5	7.00	8.75	61/2	2 1/2	15
6	9.00	10.75	7 1/2	2 34	2-0
Spare	e sockets, s	ee fig. 747, l	No. 4.		

#### Dome Lights

WROUGHT BRASS
WITH FIG. 132 FROSTED GLASS
TOGGLE SWITCH—DOUBLE CONTACT SOCKET



Fig. 296

Diam. Glass Inches	Polished Brass Each	Chromium Plated Each	Diam. Base Inches	Depth Overall Inches	Weight Ounces
3	\$5.25	\$7.00	4 1/4	1 5%	5 1/2
4	6.25	8.00	5 1/2	1 1/8	8 1/2
5	7.00	8.75	6 1/2	2	12
6	9.00	10.75	7 1/2	21/4	15
Spare	sockets, se	ee fig. 747,	No.4.		

#### Dome Lights

WROUGHT BRASS
WITH OPAL GLOBES—TOGGLE SWITCH
DOUBLE CONTACT OR MEDIUM
SCREW SOCKET



Fig. 385 With Fig. 747 No. 4 Double Contact Socket

No.	Polished Brass Each	Plated Each	Base Inches	Globe Inches	Depth Inches	Weight Ounces
7	\$6.75	\$8.50	6	41/4	23/8	12
8	9.00	10.75	7	5%	2 %	15
	With I	Fig. 346 M	edium	Screw S	ocket	
9	9.50	11.25	7	5 %	2 5%	16
		dium screv		for thi	s light,	see Fig.

#### Dome Lights

CAST BRONZE—WITH TOGGLE SWITCH WITH FIG. 257 RIBBED DIFFUSING GLASS



Fig. 555

No. 1 has Fig. 747 double contact socket and will accommodate a 50 C.P. bulb.

No. 2 has Fig. 346 medium screw socket and will accommodate a 15 watt A-17 bulb Fig. 340 or any listed size of Fig. 8.

No.	Polished Bronze Each	Chromium Plated Each	Glass	Diam. Base Inches	Depth Inches	Weight Pounds
1 2	\$12.00 16.50	\$14.25 19.25	4 6	5 ½ 7 %	1 % 3 ½	1 % 3 %

#### Watertight Dome Light

CAST BRONZE—DOUBLE CONTACT SOCKET WITH THREADED DIFFUSING GLOBE



Fig. 1266

For small boats. Will accommodate up to a 50 C.P. No. RP-11 bulb. With Nickel Plated Reflector, toggle switch and one packing gland for cable.

Plain Bronze Each	Polished Bronze Each	Extreme Diameter Inches	Dinmeter Globe Inches	Extreme Depth Inches	Weight Pounds
\$10.50	\$11.75	3 1/2	31/4	2 3/4	1%

Chromium plated finish, add \$2.00 to polished price.

Spare Sockets Fig. 747, No. 1, \$ .45 each.

Spare Globes, \$1.00 each.

SPARE TOGGLE SWITCHES FOR ALL ABOVE LIGHTS, SEE FIG. 745

Extra Packing Glands installed, \$1.75 each gland.



#### **VAPOR-PROOF FIXTURES**

CAST BRONZE BODIES -- WIRE GUARDS -- SCREW GLASS GLOBES STANDARD CAST IRON JUNCTION BOXES STANDARD BLACK MARINE FINISH

#### 90° ANGLE FIXTURES

#### CEILING FIXTURES



Fig. 1075 Fig. 1077



Fig. 1078

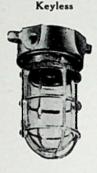


Fig. 1079 Fig. 1080

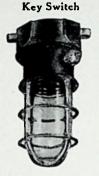


Fig. 1081

Fig.	Each	For Lamp Wattage	Length Guard Inches	Weight Pounds	Fig.	Each	For Lamp Wattage	Length Guard Inches	Weight Pounds
1075 1077 1078	\$12.50 18.50 16.00	60 to 100 150 to 200 60 to 100	6 9	5½ 8½	1079 1080 1081	\$ 8.50 14.00 12.75	60 to 100 150 to 200 60 to 100	6 9 6	4 7 ½ 5 ½

Size of junction box is 41/4 inches in diameter, 11/2 inches in depth.

With cast bronze boxes add to the above prices \$2.25 each.

With cast bronze guards add to the above prices \$1.60 each for 100 watts and \$3.00 each for 200 watts.

### PENDENT FIXTURES CAST BRONZE BODIES—WIRE GUARDS

Keyless

Fig. 1083 Fig. 1084



Key Switch

Fig. 1085 Fig. 1086

## COMBINATION JUNCTION BOX-FIXTURES CEILING AND BULKHEAD TYPE CAST BRONZE WITH WIRE GUARDS

Ceiling Type



Fig. 1087 Fig. 1088



Bulkhead Type

Fig. 1090 Fig. 1091

Fig.	Each	For Lamp Wattage	Length Guard Inches	Weight Pounds	Fig.	Each	For Lamp Wattage	Guard Inches	Weight Pounds
1083	\$ 8.00	60 to 100	6	3	1087	\$ 9.00	60 to 100	6	3 ½
1084	14.00	150 to 200	9	5½	1088	13.00	150 to 200	9	4
1085	12.00	60 to 100	6	3¼	1090	9.00	60 to 100	6	4
1086	18.00	150 to 200	9	6	1091	13.00	150 to 200	9	4 ½

With cast bronze guards add to the above prices \$1.60 each for 100 watts and \$3.00 each for 200 watts. Above fixtures supplied with one 1/2" I.P.S. tapping. Extra tapping \$ .35 per hole.

## T PERKE

## STANDARD MARINE RECEPTACLES AND PLUGS WATERTIGHT—CAST BRONZE BOXES—POLARIZED—10 AMP. 125 VOLTS

#### Plugs for Receptacles

BAKELITE BODY—BRASS FITTINGS



Туре	Each	Length Inches	Body Inches	Weight
2 wire	\$1.95	25/18	1 1/8	4
3 wire	2.65	25/18	1 1/8	4

Overall Diam

Note — When used with the rubber grommet in cap these will accommodate  $\frac{1}{16}$  inch outside diameter cable. Without grommet, use  $\frac{9}{16}$  inch O. D. cable.

Fig. 1260

#### Receptacles

FURNISHED UNTAPPED UNLESS SPECIFIED MAXIMUM I. P. S. THREAD ¾ INCH



SURFACE TYPE
2 wire only

	Diam.
Each	Inches
\$5.50	3
Height	Weight
Inches	Pounds
1 %	21/4

Fig. 1262

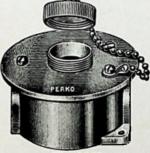


Fig. 1263

### FLUSH TYPE 2 wire only

Each	Diam. Box Inches	Diam. Flange Inches
\$9.00	3	4
Depth Inches		Veight Pounds
1 1/4		21/2

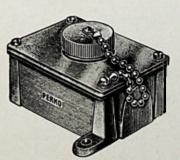


Fig. 1264

#### RECTANGULAR TYPE

2 and 3 wire

	Eacu		
2 wire	\$6.40		
3 wire	7.50		
Size Box	Weight		
Inches	Pounds		
4 1/8 x 3 x 2	3		

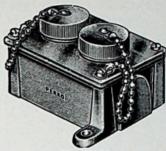
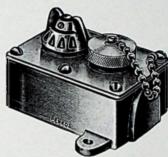


Fig. 1265

#### GANG TYPE 2 wire only

		Each
2 g	ang	\$ 8.80
3 g.	ang	12.25
4 g	ang	17.00
Gang	Size Inches	Weight Pounds
2	4 1/8 x 3 x 2	3
3	614x3x2	3 34
4	8 x3x2	51/4

#### Single Switch and Receptacle



4 1/8 x 3 x 2 3

Supplied in other combinations such as combinations and described as a supplied to the suppli

Size

Inches

\$9.75

Weight

Pounds

supplied in other combinations such as single switch and double receptacle etc. Price on application.

Fig. 1267

#### Watertight Connection Box

CAST BRONZE—SURFACE TYPE

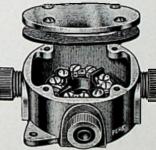


Fig. 1252

With 4 wire phenolic connection block and rubber gasket.

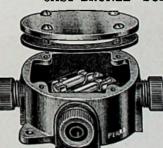
Each		Each
\$6.25		\$1.80
Inside Diam. Inches	Weight	

13%

Price does not include packing glands in illustration.

#### Watertight Fuse Box

CAST BRONZE—SURFACE TYPE



Fi- 1255

With fuse block for 2 glass fuses up to 30 amp., and rubber gasket.

Complete Fuse Blocks
Each Each
\$7.50 \$3.00

Inside Inside

nside Inside
Diam. Depth Weight
nches Inches Pounds
3 1 % 1 34

Price does not include fuses or packing glands in illustration.

NOTE—ALL BOXES ABOVE CAN BE FURNISHED WITH PACKING GLANDS FOR CABLE ENTRANCE AS ILLUSTRATED ON FIG. 1255. ADD \$1.65 FOR EACH GLAND. STATE NUMBER AND POSITION. TAPPING ONLY, ADD \$ .35 PER HOLE.



#### YACHT SIZE RECEPTACLES AND PLUGS

WATERTIGHT — CAST BRONZE BOXES — VOLTAGES 6 TO 125

SMALL AND COMPACT AS PRACTICABLE FOR INSTALLATION WHERE SPARE IS LIMITED

ROUND FLUSH TYPE WITHOUT BOX 5 AMP.—2 WIRE



Fig. 968

Complete With	Plug
Plug	Only
Each	Each
\$8.50	\$3.65

21/4

Depth Inches

Weight Pounds 1,6

ROUND FLUSH TYPE WITH BOX 5 AMP.—BOTTON INLET—2 WIRE



Fig. 969

Complete Vith Plug Each	Plug Onl.		
\$9.95	\$3.65		

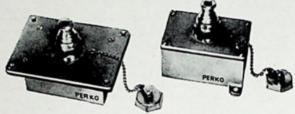
Diam. Plate Inches 21/4

Diam. Box Inches 15%

Depth Box Inches 11/4

Weight 3/4

RECTANGULAR TYPE WITH BOX 5 AMP.—SIDE INLET—2 WIRE FLUSH OR SURFACE MOUNTING



Flush Type Fig. 980

Fig. 980 Fig. 981 Complete Complete \$ 9.50 Single \$10.50 20.50

Plugs Only Each \$3.65 19.50 3.65

Surface Type Fig. 981 Dimensions Box

Weight Inches 3 % x 2 1/8 x 1 1/2 4 1/2 x 2 1/8 x 1 1/2

Note-Double size can be supplied with one receptacle and one switch instead of two receptacles at same price.

#### Watertight Turn Switches

5 AMP.—SIDE INLET—SINGLE POLE—2 WIRE FLUSH OR SURFACE MOUNTING



Flush Type Fig. 988

	Fig. 988
	Complete
	Each
ingle	\$ 6.50
ouble	
onote	11.50

Fig. 993 Complete \$ 5.75

Surface Type Fig. 993

Dimensions Box Inches Weight Pounds 3 % x 2 % x 1 ½ 4 ½ x 2 % x 1 ½ 1 1/2

#### Convenience Outlets for Standard 2 Wire Plugs

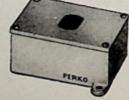
10 AMP. 250 VOLTS—15 AMP. 125 VOLTS CAST BRONZE BOX FLUSH OR SURFACE MOUNTING.



Flush Type Fig. 964

Single Double 7.50

\$5.50 7.00



Surface Type Fig. 965

Dimensions Box Inches

Weight 134

#### Weatherproof Dock Receptacle with Self-Closing Cover

10 AMP 250 VOLTS—15 AMP. 125 VOLTS CAST BRONZE BOX FOR STANDARD 2 WIRE PLUG



Fig. 975

Dimensions Box 3 %x2 1/2x1 1/8 Weight

NOTE-Above are only tapped to order, add \$ .35 for each hole. All plugs are for 1/10 inch O. D. cable.

#### YACHT SIZE RECEPTACLES AND PLUGS

WATERTIGHT — CAST BRONZE BOXES — VOLTAGES 6 TO 125

SMALL AND COMPACT AS PRACTICABLE FOR INSTALLATION WHERE SPARE IS LIMITED

HEAVY DUTY TYPE-10 AMP.-2 WIRE

HEAVY DUTY TYPE-10 AMP.-2 WIRE SINGLE OR DOUBLE RECEPTACLE WITH SWITCH



Fig. 970 Flush Type

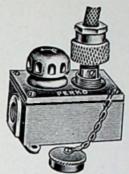
6	OTAL	

Fig. 971 Surface Type Diam.

Box Fig. 971 Inches

Pounds 134

Fig. 970 Complete Each	Fig. 971 Complete Each	Plugs Only Each	Diam. Plate Fig. 970 Inches	I
\$12.50	\$11.50	\$3.65	3 1/2	



	Complete With Plug Each	Plugs Only Each	Dimensions Box Inches	Weight Pounds
Single	\$17.00	\$3.65	4½x2½x1¾	3 ½
Double	24.00	3.65	5½x2½x1¾	4

#### HEAVY DUTY TYPE-10 AMP.-2 WIRE DOUBLE OR TRIPLE

Fig. 972

	Complete Each	Only Each	Box Inches	Weight Pounds
Double	\$17.00	\$3.65	4 1/2 x 2 1/2 x 1 3/4	3 3/4
Triple	27.00	3.65	5 1/2 x 2 1/2 x 1 3/4	4

#### Watertight Junction Boxes

CAST BRONZE-SURFACE TYPE



Fig. 1257

With rubber gasket. For 4 way tapping.

No.	Each	Inside Diam. Inches	Inside Depth Inches	Weight Pounds
1	\$4.25	2 1/4	13%	1_
2	4.25	3	13/8	134

#### Watertight Snap Switch

FLUSH TYPE OR SURFACE TYPE-10 AMP, 2 WIRE

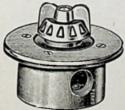


Fig. 974

Ratchet under knob to prevent turning in wrong direction.

	Flush Type	Surface Type	Diam. Plate Inches	Diam. Box Inches	Depth Box Inches	Weight Pounds
Single Pole	\$12.00	\$10.25	4	3	1 1/2	2
Double Pole	13.00	11.25	4	3	1 1/2	2

#### Watertight Push Buttons

CAST BRONZE



Fig. 978

With nickel silver springs, platinum contacts, rubber gaskets and pig skin cap over button, with screws.

Polished Bronze Each \$5.75	Chromium Plated Each \$7.00	Diam. Buse Inches 2 %	Weight Ounces 6
--------------------------------------	--------------------------------------	--------------------------------	-----------------------

NOTE—Above are only tapped to order, add \$ .35 for each hole. All plugs are for 1/2" O.D. cable.



#### Watertight Connection

DOUBLE CONTACT

Deck Socket

All Metal Plug





Fig. 423

Fig. 425

DECK SOCKET. All brass, double contact, complete with threaded cap and chain as illustrated.

PLUG. All brass, double contact, threaded lock nut for fastening to deck socket, Fig. 423. Threaded cap with rubber gasket inside to prevent water running down cable.

h Ench	Inches
00 \$3.00	1½x13/8

Spare electric sockets only, see fig. 747. No. 3.

### Watertight Connection

BRASS-DOUBLE CONTACT



Fig. 477

Complete as illustrated, with rubber grommet inside cap for cable.

Polished	Chromium	Composition Interiors	
Brass	Plated	Only	Size
Each	Each	Per Set	Inches
\$3.50	\$4.50	\$ .55	11/2×11/4

#### Watertight Cable Outlet

BRASS-FOR % INCH CABLE



Fig. 424

Has rubber grommet for watertight passage of cable through deck or bulkhead, also prevents chafing of cable insulation.

iation.		
Polished Brass Each	Chromium Pluted Each	Extrem Diamet Inche
\$1.25	\$2.00	134

#### Medium Screw Sockets

PHENOLIC—250 VOLTS—660 WATTS APPROVED BY U.S.C.G. AND U.S.M.C.



thread. Size Thread Inches No. Each \$ .55 1/8 2 3/8 Extreme Weight Height Inches Diameter Inches Pounds No. 1 % 13% 1 % 13%

With 1/8 or 3/8 inch I. P. S.

Fig. 346

#### Mogul 3 Wire Socket

PHENOLIC—NAVY DRAWING 9-4779-L 600 VOLTS—1500 WATTS

For use with double filament bulb Fig. 532.

Height

Each			Inche
	\$3.50		23/16
		C to C	

Outside Diam. Inches 2 1/8 of Mounting Holes Weight Inches Ounces

Size Base

With white metal mounting cap tapped 3/4 inch I. P. S. add \$ .35 each.

#### Socket Supports

BRASS-% INCH I. P. S. THREAD

Used in Fig. 1150 series Navigation Lights for sockets Fig. 270 and 346.

No. 1 for Lights Sizes No. 1 and 2. No. 2 for Lights Size No. 3.



Fig. 341

No. Each Inches

1 \$1.00 | % x2 %
2 1.30 2 %

C to C of Holes
Inches
Inches

1 2½/6 1½
2 2½/6 3

Height

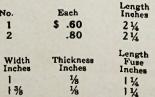
Fuse Panel

BAKELITE—BRASS METAL PARTS
FOR GLASS FUSES UP TO 30 AMP.

No. 1 for one active fuse and one spare.

No. 2 for two active fuses and one spare.

No. Each Inches
1 \$ .60 24





#### Medium Screw Sockets

PORCELAIN-250 VOLTS-660 WATTS



Fig. 222

No.	Complete Each	Unskets Only Each	Height Inches	Size Base Inches	C to C of Blots Inches
1 2	\$ .70 1.00	\$.10 .10	1 5%	2 x11/4 11/4 x11/4	11/2

No. 1 size is standard.

No. 2 size has special small size base for Figs. 488 and 489 mast lights.

### Electric Socket Adapters



For Converting various types of sockets.

No.	Each
650-From Bayonet Dble. Contact to Med. Screw	.75
670-From Med. screw to Bayonet Dble. Contact	
680-From Med. Screw to Bayonet Single Contact.	
830—From Med. Screw to Foreign Bayonet D. C	
X12—From Mogul to Medium Screw	1.00

#### **Bayonet Double Contact Socket**

BRASS CASE\_TAPPED 1/2 INCH I. P. S.



Used in our de-lite motor boat lights, classes 1, 2 and 3, and various types of

No.	Each	Length Overall Inches	Weight Per Dozon Ounces
0	\$ .75	13%	7
1	.75	15%	8
2	.75	2	11
3	.75	2 3/4	14

Fig. 276

#### Socket Support

BRASS-FOR FIG. 276 SOCKET



Threaded % inch I. P. S. Complete with screws for installing.

\$	Each	Height Inches	Size Base Inches	Weight Dozen Ounces
•	.00		78 X 1 72	0

#### **Bayonet Double Contact Socket**

BRASS CASE-HARD RUBBER INSULATION



COLE- HERSEE GO 741. 2DC SOCKET 142.50 M

No.	Each	Length Inohes	Diam. Inches	Weight Dozen Ounces
1	\$ .45	7/8	11/16	5
2	.45	1	11/16	5
3	.45	11/4	11/16	6
4	.45	11/4	11/16	6
5	.45	11/4	11/16	6
6	.50	11/2	11/16	8
7	.50	2	11/16	9

No. 1 No. 2

Wires enter side, screw in bottom.
Wires enter bottom, screws in opposite sides.

Wires enter bottom, screws in opposite sides. No. 3.

Wires enter bottom, screws in same side. 6, 7 Wires enter side, screws in bottom. No. 4

Note - No. 1 used with rebulbing feature in streamline lights such as Figs. 563, 1188, 1140, 1140A.

#### Navy Standard Electric Sockets

PHENOLIC INSULATION—BRONZE PARTS





Candelabra Screw

**Bayonet Double Contact** 

Fig. 15 complies with Navy Drawing 9-S-2036-L. No. 76 complies with Navy Drawing 9-S-4634-L.

Fig.	Each	Height Inches	Size Base Inches	Dozen Ounces
15	\$ .60	1 3/8	1x1½	12
76	.75	1 1/8	1x13/2	16

#### **Bayonet Sockets**

PHENOLIC—SINGLE AND DOUBLE CONTACT



Fig. 472

No.	Each	Туре	Height Inches	Diam. Base Inches	Weight Dozen Ounces
20	\$ .80	Double contact	) ,	13%	0
21	.80	Single contact	}'	1 78	,



#### Double Contact Plug and Socket



Plug and socket insulation is hard

All metal parts are brass.



Per Set	Size Flange In.	Diam. Socket In.	Length Socket In.	Wt. Doz. Oz.
\$1.10	1%x1%	11/16	1 %	14

#### **Bayonet Double Contact Socket**

FLANGED TYPE—BRASS AND HARD RUBBER



Ench	Length Inches	Diam. Inches	Doze Ound
Size-Flange Inches			to C Holes ches

#### **Bayonet Double Contact Adapter**



For adapting oil lights to combina-tion oil and electric. Just remove burner from fount, place collar around threaded portion of burner and re-place assembly in oil fount. Consists of double contact bayonet socket, collar and hollow nut.

Per Set, Complete.....\$1.60

### Bayonet Double Contact Adapter

BRASS AND HARD RUBBER



For adapting oil fount to electricity. Screw adapter in place of oil burner and punch hole in bottom of fount for cable entrance.

Each	Overall Length Inches	Diam. IWeight Thread Dozen Inches Ounces
\$ .75	11/4	<b>%</b> 8

### **Bayonet Double Contact Plugs**

ALL METAL OR HARD RUBBER





All Metal Fig. 383

Hard Rubber Fig. 746

With flush type contact screws, used with sockets Figs. 76, 276, 377, 472, 747.
Fig. 383 all metal plug has large opening for ½ inch

Fig. 746 has soft rubber waterproof cap.

Fig. 383 Each \$ .60	Fig. 746 Each \$ .40	Length Inches	Diam. Flg. 383 Inches	Diam. Fig. 746 Inches	Weight Dozen Ounces 8
	9 .40	1 72		/10	2.76

#### **Double Contact Connectors**

HARD RUBBER INSULATION-BRASS CONTACTS WITH SOFT RUBBER WATERPROOF CAPS



Fig. 749

Weight Dozen Each Ounces \$ .80 15/16×2 1/2

#### "Midget" Connectors

BAKELITE BODY—BRASS CONTACTS
DOUBLE CONTACT



Fig. 26

Designed for use in limited space. Split pins insure a firm positive connection.

Each	Size Inches	Weight Dozen Ounce:
\$ .95	%16×17/8	6

#### **Brass Dagger Connectors**



Fig. 283

These are very handy "pull apart" connectors for many uses. Dimension  $1\frac{1}{2} \times \frac{3}{10}$  inches.

Each Set (as illustrated) .....\$ .35

#### Ship to Shore Heavy Duty Connector

110 VOLT—25 AMPS.
BAKELITE AND RUBBER CONSTRUCTION
ALL BRASS METAL PARTS

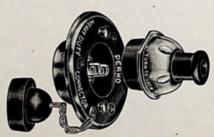


Fig. 72

Bakelite base has heavy duty male terminals. Plug is phenolic with bronze female prongs, all rubber covered. Will accommodate No. 10 wire. Plug locks in base. A chained rubber cap for base when disconnected.

Each \$2.65	Diam. Base Overall Inches 3 1/8	Depth of Base Inches	Diam. Hole Required Inches	Weight Ounces
-------------	---------------------------------	-------------------------------	-------------------------------------	------------------



#### Brass Cable Straps

FOR CABLE, TUBING, CONTROL WIRE, ETC.



Fig. 121

Inside Diam. Inches	Per 100	Length Inches	Width Inches
1/8	\$2.25	17/16	1/2
3/16	2.50	1 %	1/2
1/4	2.75	15/10	1/2
31c	2.75	13/16	1/2
3/8	3.00	1 %	1/2
7/1G	3.25	1 %	1/2
1/2	3.50	1 1/2	1/2
5/8	4.25	134	1/2
3/4	4.50	1 %	1/2

FOR LEAD COVERED CABLE



Fig. 1076

Per	Inside	Longth	Width
100	Inches	Inches	Inches
\$4.50	7/32×7/16	1 1/2	1/2

#### Line Support Clips

ALUMINUM

WITH SYNTHETIC RUBBER CUSHION

Used in the aircraft industry for supporting electrical, fuel, instrument, oil and water lines.

#### SINGLE LINE For O.D. Line Inches Per 100 Width Inches % % ½ ½ ½ ½ ½ \$ 6.00 6.50 8.00 Fig. 163 DOUBLE LINE \$13.00 14.00 TRIPLE LINE

Fig. 165

#### Knife or Battery Switches

FIBRE BASE-SINGLE POLE-30 AMP. UPRIGHT TYPE



Fig. 70

		Dimensions Base Inches	Weight Ounces
Single Throw	\$2.00	2½x1 1/8	1 3/4
Double Throw	2.40	3 1/8	2 1/2

FLAT TYPE



Fig. 74

	Each	Dimensions Base Inches	Weight Ounces
Single Throw Double Throw	\$ .90 1.10	2 % x l	134 214

#### Knife or Battery Switches

EBONY ASBESTOS BASE—HIGH JAWS ONE OR TWO POLE SINGLE OR DOUBLE THROW 250 VOLT D.C.-500 VOLT A.C.

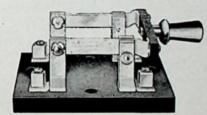


Fig. 191

#### SINGLE POLE—SINGLE THROW

	OINGLL	I ODD	-BINGE	THICOM	
No. 1 2 3	Each \$ 3.20 6.50 11.50	Amps. 60 100 200	B	x 34	Weight Pounds
	SINGLE	POLE—	-DOUBLE	THROW	
4	5.25	60	914 x	2 x 3/4	21/2
5	12.00	100	10 x	3 x 3/4	4
6	18.50	200	12 x	4 x1	8
	DOUBLE	POLE	-SINGLE	THROW	1
7	5.00	60		41/2 x 5/8	3
8	10.00	100	7 1/8 x		5 1/2
9	16.50	200	91/2 1		10%
	DOUBLE	POLE-	-DOUBL	E THRO	
10	7.75	60	9 1/2 3		51/4
11	18.50	100	10%	x7 x 3/4	81/2
12	27.50	200	15	x7% x1	16



#### Switch Panels

BLACK BAKELITE PANEL—WHITE LETTERING BRASS, NICKEL PLATED TOGGLE SWITCHES WITH OR WITHOUT FUSE HOLDERS

All lettering is engraved. "On" position of switch is indicated. Fuse holders are the enclosed type for glass fuses up to 30 amp.

SINGLE SWITCH PANEL



Fig. 516

Supplied complete with any one of the Fig. 519 name plates shown below, please specify.

With Fuse Holder Each	
C2 95	

Without Fuse Holder Each \$3.00 With Fuse Holder Size Inches 4 1/2 x 1 1/4 Without Fuse Holder Size Inches 3 % x | 1/4

#### 5 GANG SWITCH PANEL



Fig. 517

Our stock panel is illustrated. Dealer or user may change name plates as desired as they are removable. For additional selection see Fig. 519. For changes made at factory, add \$1.00 each.

With Fuse Holders Each	
\$15.50	

Without Fuse Holders Each \$11.00 With Fuse Holders Size Inches 61/2 x 4 1/4 Without Fuse Holders Size Inches 6½x3¾

Supplied with fuse holders unless otherwise specified.

#### Starter — Ignition — Lights Switch Panel

BLACK BAKELITE PANEL—WHITE LETTERING 2 POINT PUSH BUTTON STARTER SWITCH LOCK TYPE IGNITION SWITCH—TWO KEYS BRASS TOGGLE TYPE LIGHT SWITCH



Fig. 514

Visible portion of all switches is chromium plated.

Complete Each	L
\$7.25	

Length Inches 5 Width Inches 2 1/2 Weight Ounces 8

#### Starter and Ignition Switch Panel

BLACK BAKELITE PANEL—WHITE LETTERING TWO POINT PUSH BUTTON STARTER SWITCH LOCK TYPE IGNITION SWITCH—TWO KEYS



Fig. 518

Visible portion of both switches is chromium plated.

	plete ich
**	00

Length Inches 4 ½ Width Inches 2 ½

Weight Ounces 5

SPARE PARTS

Ignition Switches, see Fig. 316.
Toggle Switches, see Fig. 745.

Fuse Holders, \$ .90 each.
Starter Switches, see Fig. 255, all Brass.

#### Switch Name Plates

BLACK BAKELITE-ENGRAVED WHITE LETTERING



Fig. 519

In addition to those illustrated, stock name plates

are as follows:
HORN
SIREN
FUEL PUMP
DECK LIGHTS
PILOT
PANEL LIGHTS
CHOKE
IGNITION
REVERSE

STARTER FAN MASTER HEATER ON OFF LIGHTS THROTTLE FORWARD MASTHEAD LIGHT PORT LIGHT STBD. LIGHT RANGE LIGHT FLOOD LIGHTS TOWING LIGHTS SPREADER LIGHT NEUTRAL

Per Dozen 7.20 Length Inches Width Inches Per Dozen Weight Ounces

Packed one dozen each name per box.

Less than one dozen each name \$ .80 each.

Special name plates, price on application. Specify lettering and size.



Toggle Switches
BRASS WITH BAKELITE INSULATION
WITH 6 INCH WIRE LEADS



Fig. 745

No.	Brass Finish Each	Nickel Plated Each	Length Neck Inches	Diam, Neck Inches	Between Lock Nuts Inches	Weight Ounces
1	\$ .80	\$ .95	71G	716	3/16	5/8
2	.80	.95	716	7/16	916	34
No.	2 supplied	unless	otherwise		d.	

Toggle Switch with Face Plate BRASS WITH BAKELITE INSULATION SCREW POSTS—NO LEADS



Fig. 718

Chromium
Plated
Each
\$1.00

Size Face Plate Inches 1 % x 1

#### Push and Pull Switch

ALL BRASS THROUGHOUT



Fig. 105

Chromium Plated Each 1.00

n
Diameter
Neck
Inches
36

Length Neck Inches

Length Overall Inches

Weight Ounces 1 1/2

#### Push and Pull Switch with Face Plate

ALL BRASS THROUGHOUT

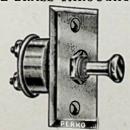


Fig. 216

Chromium Plated Each \$1.20

Diameter Neck

Length Neck Inches

Size Face Plate Inches 1 % x 1

Weight Ounces 134

#### Push and Pull Switches

STEEL OR BRASS-WITH IVORY KNOB



Fig. 94

With ivory colored tenite knob. Steel switches are cadmium plated.

No. 1	No. 2	Diameter	Length	Weight
Steel	Brass	Neck	Neck	Ounces
Each	Each	Inches	Inches	1 34
1.00	\$1.20	3/8	1	1%

Momentary Starter Switches
OR DASHBOARD HORN BUTTON
PUSH BUTTON TYPE—STEEL OR BRASS

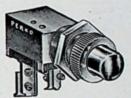


Fig. 255

2 point 2 terminal spring action switch with chromium plated button. Steel switches are cadmium plated.

No. 1	No. 2	D
Steel	Brass	
Each	Each	
1.45	\$2.10	

Diameter Neck Inches 5/8

Weight Ounces 2½

Momentary Starter Switch

PULL TYPE—ALL BRASS

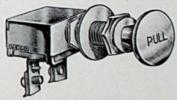


Fig. 142

2 point, 2 terminal spring action with chrome plated knob imprinted "Pull". Rated 20 amps. at 6 volts.

Each	Diameter Neck Inches	Length Neck Inches	Weight Ounces
\$1.75	3/8	1	3

#### Ignition Lock Switch 2 TERMINAL-2 KEYS



Brass lock, switch, terminal screws and lock nut. Face plate is chromium plated.

	Diameter	
nch	Neck Inches	
.95	3/4	

Length Weight Ounces

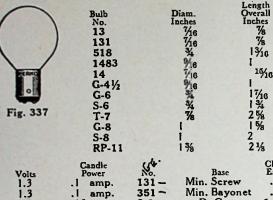
## 54 Perkins Marine Lamp & Hardware Corp. PRINGER



Frosted Each \$ .70 .70 .90 .75 .75 1.00 .60 .60

#### MAZDA LIGHTING BULBS

Miniature	Screw	or	Bayonet	Base
				L



/			1	
(				1
/			/	/
	1	(3.0.0)		
	-			
	Fie	. 340	,	

#### Medium Screw Base

Length Overall Inches	
5%	
31/4	
3 %	
315/16	
47/16	

	KP-11		178 2	78
Volts	Candle Power	No.	Base	Clear Each
1.3	.l amp.	131 -	Min. Screw	.25
1.3	.1 amp.	351 ~	Min. Bayonet	.25
2.5	,15 amp.	S-8	D. C.	1.40
2.5	.3 amp.	14-	Min. Screw	.22
3.8	.3 amp.	13 -	Min. Screw	.25
4.0	.55 amp.	518~	Min. Screw	.40
		1483~	Min. Screw	.40
6	.04 amp.		Min. Bayonet	.22
6	26:11	51 -		
	6511/2-	G-41/2	Min. Bayonet	.16
6 8-	64 3	G-6	D. C.	.16
6- 8-	82 6	G-6	D. C.	.18
6-8-	. 84 15	S-8	D. C.	.33
6- 8-		S-8	D. C.	.36
12		G-41/2	Min. Bayonet	.30
12-16-		G-6	D. C.	.18
12-16-		G-6	D. C.	.22
12-16-		S-8	D. C.	.35
			D. C.	.40
12—16-		S-8 G-6	D.C.	.70
4/	I YYY 1	1 12	1/ (.	- / U

Volts	Watts	No.	Base	Clear Each
6	15	A-17	Medium	\$ .95
6	25	A-19	Medium	
6	50	A-21	Medium	
12	15	A-17	Medium	1.00
12	25	A-19	Medium	
12	50	A-21	Medium	
32	15	A-17	Medium	.80
32	25	A-19	Medium	
32	50	A-21	Medium	
120	25	T-10	Medium	.80
120	10	S-14	Medium	.45
120	50	A-19	Medium	.50
120	60	A-19	Medium	.50
120	100	A-21	Medium	.55

Packed, 6 bulbs to a package Please specify, clear or frosted

### Packed, 10 bulbs to a box.

**RP-11** 

1010	DOME AND
	Bulb No. S-11
	Volts 6— 8 S 12—16 S 32 S 120 S
Fig. 8	Pack

0 watt

15 watt

OMIL AND	, ,,,,,		2.0	
Bulb No. S-11		Diam. Inches		Length Overall Inches 2 1/8
Volts 6— 8 12—16		C.P. or Watts 21 21	Base Medium Medium Medium	Clear Each \$ .90 1.00 1.50
120	S-11	15	Medium	1.25
Pa	cked,	6 bulb	s to a box	BY 11

D. C. D. C. D. C.

Candelabra

#### Double Filament Bulb

MOGUL BASE FOR THREE WIRE SYSTEM 120 VOLTS



Eliminates the method of using two separate bulbs in two light electric installations. Lamps are always properly focused.

Should one filament burn out it will be indicated on the telltale panel, the other filament can be immediately switched into use.

		Height Overall	Diam.
Watts	Each	Inches	Inches
50-50	\$5.50	5	31/8
100-100	6.00	5	31/8

#### Mazda Searchlight Bulbs Fig. 24

.80 .90

1.10

.60 .50

.95

Volts	Watts Candle Power	No.	Base	Diameter Inches	Length Overall Inches	Each
6 8	(134 - 32	RP-11	D. C.	11/4	25/16	\$ .40
		RP-11	D. C.	1 3/8	2 %	.45
6 8			D. C.	21/16	3	2.00
6— 8	1018 -100	G-16½		31/8	4 %	4.75
6 8	108 — 18 amp.	P-25	Medium	11/4	25/16	.45
12-16	1144 - 32	RP-11	D. C.	1 74.	2716	.70
12—16	1196 -50	RP-11	D. C.	1%	2%	2.00
12-16	(eve -100	G-161/2	D. C.	21/16	3	
12-16	216 — 8 amp.	P-25	Medium	31/8	4 %	5.50
32	1054 - 32	RP-11	D. C.	11/4	25/10	1.25
32	60	RP-11	D. C.	1%	2 %	1.75
32		G-161/2	D. C.	21/18	3	2.25
32 32 32 32 120	2. amp. 446 -100		D. C.	21/18	3	2.75
32	3.5 amp. 173 9 -150	G-16½	Medium	3 1/8	4 3/4	5.50
32	200 camp	. P-25		21/18	2 **	2.25
120	100	G-161/2	D. C.	2718	£1/	7.00
120	250	T-10	Medium	11/4	51/2	6.00
120	500	T-20	Medium	21/2	51/2	
120	1000	T-20	Medium	21/2	5 1/2	10.00
120	1000	T-20	Mogul Screw	21/2	9	14.00

#### Marcy Hinge Burners

ALL BRASS—HEAVY PATTERN



Fig. 242

Used in all cabin lamps, large running lights, bulk head lamps, etc.

No.	Per Dozen	Diam. Thread Inches	Wick Inches
2	\$18.00	11/4	7/8
2-A	18.00		7/8

Size No. 2-A is for same size chimney, Fig. 267.

#### Brass Burners



Diam. Thread Inches 3.96 5.76 No. 0 used in Class 1 lights. No. 1 used in Class 2 and 3 lights. No. 2 used in larger lights.

Fig. 246

#### Flat Wicks

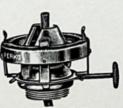


Flat Wicks, No. 0, 1/2 inch wide \$ .60 Flat Wicks, No. 1, % inch wide .72 Flat Wicks, No. 2. % inch wide

Fig. 302

#### Long Time Burner and Chimney

HEAVY BRASS Used in 10 Day Anchor Lights, Fig. 596





Height Chimney Inches

1 %

Fig. 245

Burners Per Dozen \$24.00

Chimneys Per Dozen \$10.00

Per Dozen \$2.40

Diameter Chimney Inches

#### Navy Lantern Globes



This globe is standard equipment in Navy lantern, Fig. 49.

Diameter of top Diameter of bottom 2½ inches 4 inches Height overall 6½ inches Net weight, per dozen 9 pounds

Clear Red Per Doz. Per Doz. \$10.50 \$25.00 \$25.00 \$25.00 Colored globes are solid colors, not painted.

Fig. 262

#### Marcy Lip or Dual Chimneys



No.	Per Dozen	Height Inches	Diam. Bottom Inches
2	12.00	5	21/16
2	12.00	51/2	21/16
2	12.00	6	21/18
2-A	12.00	6	2%16

Specify height of chimney when

Fig. 267

#### Hornet Chimney and Burner

CLEAR CHIMNEY—ALL BRASS BURNER Used on Cabin Lamp Fig. 141 Size and Fig. 168 Size 0.







Burner used with Flat Wick Fig. 302 No. 0.

Burner Thread Inches Chimney Burners Per Dozen Chimneys Per Dozen Size Inches 4% x 11/2 \$6.60 \$6.60

#### Round Globes

FOR FIG. 44 GLOBE OR DISTRESS LIGHTS



Supplied in clear, colored or frosted. Colors are Red Green or Blue.

		Frosted or	Dia	meter —	Height
Size Inches	Clear Each	Colored Each	Top Inches	Bottom Inches	Overall Inches
6	\$3.75	\$7.00	31/8	31/8	63/16
8	6.00	9.25	4	4	71/2
10	8.75	12.50	5 %	53%	10%

NOTE-6 inch size not available in green.

#### Fresnel Ball Globes

#### 11/2 INCH DIAMETER

For pole lights, Figs. 404, 551, 600, 603. 609, 625, 846, 1145, 1148.



Outside diameter Height overall	1½ in. 1% in.
Diameter of opening	13/16 in.
Net weight, cach	1¾ oz.

Clear	Red	Green	Blue
Each	Each	Each	Each
\$1.20	\$1.70	\$1.70	\$1.70

#### 234 INCH DIAMETER

With threaded base as illustrated, for pole lights, Figs. 329, 362, 422, 484, 491, 492, 506, 531.



Outside diameter Height overall Diameter of opening Diameter of thread Net weight, each			2½ in. 2% in. 1½ in. 2 in. 6 oz.
Clear	Red	Green	Blue
Each	Each	Each	Each
\$1.80	\$2.30	\$2.30	\$2.30

#### 3 INCH DIAMETER



Fig. 251

\$1.80

492, 506. 5	s, rigs. 330, 531.	302, 422,	484, 491,
Outside d			3 in. 3 in.
	of opening		1½ in. 2 in.
Net weigh			7 oz.
Clear Each	Red Each	Green Each	Blue Each

\$2.30

\$2.30

With threaded base as illustrated, for

#### 3 INCH DIAMETER

\$2.30



Fig. 249

Figs. 103, 104.	base.	ror	mast	lights,
Outside dinmeter				

Height Diamete Diamete	overall er of opening er of thread ght, each		3% in. 2¼ in. 2¾ in. 10 oz.
Clear Each	Red Each	Green Each	Blue Each
\$2.00	\$3.00	\$3.00	\$3.00

#### 31/2 INCH DIAMETER



Fig. 106

With threaded base for mast and stern lights, Figs. 83, 112, 113, 145, 309, 1163.

in.
in.
in.
lbs.
ber
1

### Special Mast Light Globe 2% INCH DIAMETER



With threaded base as illustrated for mast lights Figs. 488, 489.

Outside Diameter Inches 23/4	Height Overall Inches 5½	Diameter Opening Inches	Diameter Thread Inches 2½	Weight Ounces 13
Clear Each	Red Each		Green Each	Blue Each
\$1.80	\$2.75		\$2.75	\$2.75

### Ribbed Diffusing Dome Glasses



Fig. 257

For Dome Lights Figs. 294, 555.

Trade Size Inches	Each	Diam. Overall Inches	Depth Inches
3	\$1.20	2 1/8	34
4	1.50	4	7/8
5	2.00	5	13%
6	3.00	6	1 1/2

### Frosted Dome Glasses



Fig. 132

For Dome Lights Figs. 296, 753

Trade Size Inches	Each	Diam. Overall Inches	Depth Inches
3	\$1.20	2 1/8	3/8
4	1.50	4	1/2
5	2.00	. 5	3/4
6	3.00	6	7/8
8	4.00	7 3/4	7/8

#### Ribbed Opal Dome Globes



Fig. 133

	For Dome Lights, Fig. 385.	
Outside Diam, Inches	Each	Extreme Depth Inches
41/4	\$2.50	1 1/8
5%	3.75	13%

-Spare gaskets for above ball and mast light globes, \$ .20 each.
Spare gaskets for above dome glasses and globes, \$ .30 each.

## ON PERKI

#### Fresnel Lenses

### FOR SIDE AND COMBINATION LIGHTS 112½ DEGREES

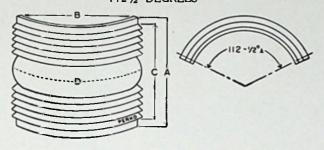


Fig. 259

For Motor Boats	A In.	B In.	C In.	D In.	Clear Each	Red or Green Each	Ambe: Each
Class A	29/16	134	21/8	3		1.20	
Class I	35/10	29/10	2 1/8	3 5/8	1.80	1.80	2.20
Class 2	41/4	33/10	311/16	4 3/4	2.50	2.50	3.00
Class 3	53/10	311/16	43%	59/10	3.15	3.15	
For Vessels Over 65 ft.							
No. 8	5 1/2	41/16	413/10	5 1/8		5.25	
No. 0 or 9	5 1/2	5 3/4	5	85/16	7.15	7.15	
No. 1 or 10	6%	6	6	8 5%		10.25	
No. 2 or 11	7 1/2	81/2	6 %	11%		14.50	
No. 3	8 1/2	9 3/4	7 3/4	13		16.00	

#### FOR ANCHOR LIGHTS-360 DEGREES

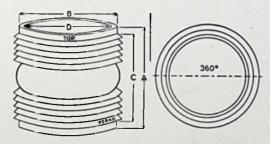


Fig. 261

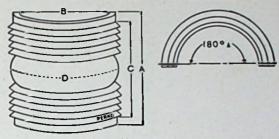
For Motor Boats	A In.	B In.	C In.	D In.	Clear Each	Colored Each
Junior	33/16	33/16	2 1/8	2 3/4	\$1.80	\$2.40
Senior	41/4	4	3910	37/16	2.40	3.60
For Vessels over 65 ft.						
No. 0 or 22	51/2	51/4	5	4 3%	7.25	12.50
No. 1 or 221/2	634	51/4	61/8	4 1/2	10.50	16.00
No. 1½	634	6	6	57/10	11.50	17.25
No. 2 or 23	71/8	71/2	61/4	61/2	12.50	19.00
No. 3	81/2	81/2	73/4	7%	15.75	25.00

Colors are red, green, blue or amber.

Sizes No. 1 and 2 not available in blue.

Sizes No. 11/2 and 3 not available in blue or amber.

#### FOR BOW LIGHTS-180 DEGREES



		I	Fig. 260			
For	A	B	C	D	Clear	Colored
Motor Boats	In.	In.	In.	In.	Each	Each
Class 1	31/16	2 34	2 %	5 %	\$2.40	\$4.00
Class 2	41/4	3 14	3 %	6 %	2.50	4.15
Class 3	53/16	3 78	4 %	713/10	3.15	5.25
Mld. 59	7%	6 78	6 %	1 2 5%	12.50	17.50

Colors are red, green, blue or amber. Size Class 3 not available in amber. Size Mld. 59 not available in blue. Mld. 59 used in pier and lift span lights for bridges.

#### FOR MASTHEAD LIGHTS-225 DEGREES

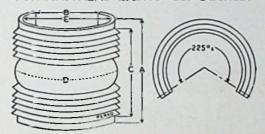


Fig. 256

A In.	B In.	C In.	D In.	E In.	Clear Each	Colored Each
5 1/2	4	5	121/8	4 3/8	\$ 8.75	\$18.00
634	4	6	12 1/8	4 1/2	11.25	20.50
71/2	5 1/8	634	16%	61/2	13.75	23.50
8 1/2	6%	75%	185%	7 3/4	16.50	27.00
	5 ½ 6 ¾ 7 ½	5 ½ 4 6 ¾ 4 7 ½ 5 %	5½ 4 5 6¾ 4 6 7½ 5% 6¾	In. In. In. In. 5½ 4 5 12½ 6¾ 4 6 12½ 7½ 5% 6¾ 16%	In. In. In. In. In. In. 5½ 4 5 12½ 4% 6¾ 4 6 12½ 4½ 7½ 5% 6¾ 16% 6½	In. In. In. In. In. In. Each 5½ 4 5 12½ 4¾ \$ 8.75 6¾ 4 6 12½ 4½ 11.25 7½ 5% 6¾ 16% 6½ 13.75

Colors are red, green or amber. Size No. 3 not available in amber.

#### FOR STERN LIGHTS—135 DEGREES

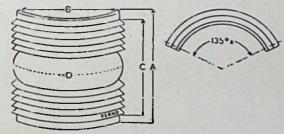


Fig. 269

For Vessels Over 65 ft.	A In.	B In.	C In.	D In.	Clear Each	Colored Each
No. 0	51/2	4 3/8	4 1/8	7 1/2	\$ .700	\$10.00
No. 1	6%	4 3/8	61/8	7 1/2	8.00	10.75
No. 2	7 1/2	6%	634	10	10.00	16.00
No. 3	81/2	71/2	7%	. 11%	12.00	18.00

Colors are red, green, blue or amber. Size No. 0 not available in blue. Size No. 3 not available in blue or amber.



### OIL FOUNTS AND ELECTRIC ADAPTERS

ALL BRASS-FOR LIGHTS CLASS 3 AND SMALLER

Oil

Fig. 582

Medium Screw Electric



Fig. 588

#### Delite Type

Fig.	Each	Diameter Inches	Weight Ounces	For Lights Figs.
582 588	\$1.65 2.50	2 ¾ 2 ¾	4 4	01-04-05-08-09 01-010-04-05-040-050-08 09-080-090

Price of Fig. 582 does not include holder illustrated. Holder only, \$1.00 each.

#### Spring Type

Oil

Fig. 286





Fig. 736

Electric **Double Contact** 

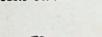




Fig. 291

Electric Medium Screw



Fig. 292

Oil and Electric Double Contact



Fig. 733

Fig.	Each	Diameter Overall Inches	Opening In Light Inches	Weight Per Dozen Pounds	For Lights Pigs.
286	\$1.65	3 %	3 3	21/2	06-17-18-19-20-49-408 No. 0 and 44, 8 inch size
291	2.50	35%	3 3	3	06-12-17-18-19-20
292	2.50	35%	3 3	3 1/2	06-12-17-18-19-20-49-408 No. Oand 44, 8 inch size
*733 oil only	1.65	31/2	2 %	2	
733 O. and I	E. 3.60	31/2	2 %	3 %	1
736	3.60	3 %	3 3	4 1/2	06-17-18-19-20

### \*Supplied without burner or wick.

#### Swivel Type

Oil



Fig. 287



Fig. 293



Electric

Medium Screw

Fig. 274



Fig. 735

Fig.	Each	Diameter Overali Inches	Opening In Light Inches	Weight Per Dozen Pounds	For Lights Figs.
274	\$2.50	4 1/2	4	4	02-11-69 and 44, 6 inch siz
287	1.65	4 1/2	4	3	02-69 and 44, 6 inch size
293	2.50	4 1/2	4	4	02-11-69 and 44, 6 inch size
735	3.60	4 1/2	4	4 1/2	02-69

NOTES

Oil burners and wicks, see Figs. 246 and 302.

D. C. Electric sockets for Figs. 291 and 293, see Fig. 355.

D. C. Electric sockets for Figs. 733, 735 and 736, see Fig. 276.

D. C. Electric sockets and holders for Figs. 733, 735 and 736, see Fig. 458. Medium screw sockets for Figs. 274, 292, and 588, see Fig. 346, No. 1.

#### OIL FOUNTS AND ELECTRIC ADAPTERS ALL BRASS-LIGHTS FOR VESSELS OVER 65 FEET LONG Swivel Type

Oil

Single Electric 2 Wire Medium Screw

Double Electric 2 Wire Medium Screw

Electric 3 Wire Mogul







Fig. 288





Fig. 1082

Size No.	Height Fig. 282 Inches	Diameter Overall Inches	Diameter Opening In Light Inches	Fig. 282 Only Each	Fig. 282 Complete Each	Fig. 288 Each	Fig. 289 Each	Fig. 1082 Each
0	2 1/8	4 3/4	3 3/4	\$2.75	\$5.35	\$3.75		\$6.25
1	3 1/2	4 3/4	3 3/4	2.75	5.35	3.75		6.25
2	4 1/2	5 3/4	4 3/4	3.75	6.35	3.75	\$6.00	6.25
			***************************************	*A1. TO	TIT 1 01:			

\*Complete with Burner, Wick and Chimney

#### ABOVE ARE FOR THE FOLLOWING LIGHTS

	SIDE	LIGHTS		THEAD GHTS	STERN	LIGHTS	ANCHOR	LIGHTS		KDOWN HTS
Fount No.	Light Fig.	Light Size								
0	21	9	982	0	985	0	23	22	84	0
1	21	10	982	1	985	1	23	221/2	84	1
2	21	11	982	2	985	2	23	23	84	2
0	30	0	983	0	986	0	32	0	129	22
1	30	1	983		986	1	32	1	129	22 1/2
2	30	2	983	2	986	2	32	2	129	23
0	1155	0	1156	0	1157	0	1158	0	1159	0
1	1155	1	1156	1	1157	- 1	1158	1	1159	1
2	1155	2-3	1156	2-3	1157	2-3	1158	2-3	1159	2-3

Also used in Fig. 44, 10 inch size; Figs. 407 and 408, No. 1 Also used in Figs. 29-50-59-68-80

#### Mounting Brackets

FOR NAVIGATION LIGHTS GALVANIZED SHEET IRON

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	В		1	
	и		ı	
	П	8	8	
	ď	n	ı	
	H	4	В.	
	E	e	-1	

Fig. 131

No.	Galvanized Each	Width Inches	Height Inches
1	\$ .80	11/2	4 1/8
2	1.20	2 .	6 3/8

No. 1- For motor boat side and bow lights, Classes 1, 2 and 3.

No. 2 - For larger side lights, sizes 0, 1, 9 and 10.

#### Mounting Brackets

FOR NAVIGATION LIGHTS GALVANIZED MALL. IRON



Fig. 135

Each	- Height	Width	Width
	Overall	Overall	Bracket
	Inches	Inches	Inches
\$2.50	7½	5 %	2 1/2

For large side lights, sizes 2, 3 and 11.

#### Electric Adapter

BRASS — DOUBLE CONTACT FOR ROYAL LIGHTS FIGS. 89 to 92 Inc.



Each	Diam. Overall Inches	Opening in Light Inches	Weight
\$1.40	23/16	1 1/8	1 1/2

Fig. 138

Specify whether for Class 1, 2 or 3.

#### Mounting Sockets

GALVANIZED IRON OR BRASS



and i			
а			
æ			
981			
Œ)			

\$ .60 \$ .95

Inside Width Inches \$1.30 1%

Fig. 25

For mounting Royal Lights Fig. 89 to 92 inclusive.

#### Color Shield

FOR COMBINATION LIGHTS DIVIDES RED AND GREEN LENSES

Used on class 1 combination lights, Figs. 01-010-1-3 and 89. If for Fig. 89 please specify. Made of heavy gauge brass or galvanized iron.

Polished Brass Each

Chrome

Fig. 130 \$1.20

\$1.50

\$2.00



#### "PERKO" SEALED BEAM SEARCHLIGHTS

#### POLISHED BRASS OR CHROMIUM PLATED

#### WITH CLEAR LENS — NOT FLUTED

SIZE NO. 1 — 6 VOLT ONLY — 30 WATT — RANGE ABOUT 1/4 MILE — 45,000 BEAM CANDLEPOWER SIZE NO. 2 — 6 AND 12 VOLT — 30 WATT — RANGE ABOUT 1/3 MILE — 95,000 BEAM CANDLEPOWER SIZE NO. 3 — 6 AND 12 VOLT — 100 WATT — RANGE ABOUT 1/2 MILE — 200,000 BEAM CANDLEPOWER

A "SEALED BEAM" unit consisting of the bulb, reflector and lens all in one piece is the most practical for marine searchlights. It is absolutely watertight and vibration proof.

A watertight packing gland is installed around control rod to prevent entrance of water where rod passes through pilot house roof.

#### Deck Control

WITH TOGGLE SWITCH IN HEAD WIRING NOT VISIBLE



Fig. 436

	6 1	Volt-			Пеісьі	
No.	Polished Brass Each	Chromium Plated Each	Diam. Lens Inches	Diam. Base Inches	Above Deck Inches	Weight Pounds
1	\$19.00	\$21.00	41/2	4	9	2
2	23.00	25.00	6	4	101/2	21/4
3	26.50	29.50	7	61/4	13	4
12	volt, sizes	No. 2 and	3 only	v. add \$	1.75 ea	ch.

#### Deck Control

WITH TOGGLE SWITCH IN HEAD RUBBER COVERED WIRING VISIBLE



Fig. 454

No.	Polished Brass Each	Chromium Plated Each	Diam. Lens Inches	Dlam. Base Inches	Reight Above Deck Inches	Weight Pounds
1	\$15.50	\$17.50	4 1/2	4	9	2
2	19.50	21.50	6	4	101/2	21/4
3	23.00	25.00	7	61/4	13	4
1700	2 volt. size	No. 2 an	d 3 onl	y, add	\$1.75 ea	ch.

#### Pilot House Control

WIRING NOT VISIBLE



Sizes No. 1 and 2



Fig. 437 Size No. 3

NOTE—Size No. 3 is equipped with lever type control shown above instead of ball.

Length of control below base, 8 inches.

No.	Polished Brass Each	Volt———— Chromium Plated Each	Diam. Lens Inches	Diam. Base Inches	Height Above Deck Inches	Weight Pounds
1	\$30.00	\$33.00	4 1/2	41/8	8%	2 3/4
2	33.00	36.00	6	41/8	101/4	3
3	38.00	42.00	7	61/4	131/2	5

12 volt, sizes No. 2 and 3 only, add \$1.75 each.

#### Telescoping Searchlights

BRASS-CHROMIUM PLATED FOR MOUNTING AFT OF WINDSHIELD SEALED BEAM-6 OR 12 VOLTS



Fig. 240

Completely adjustable in height and angle, to permit mounting on any type and size of runabout regardless of height or angle of windshield.

Height can be increased to 15 inches below the head or reduced to 8 inches if desired.

Complete with toggle switch in head.

No.	6 Volt Each	12 Volt Each	Lens Inches	Base Inches	Weight Pounds
1	\$30.00		4 1/2	3x1½	3
2	31.00	\$32.75	6	3x1½	3 1/4

#### Combination Light and Searchlight

POLISHED BRASS OR CHROMIUM PLATED SEALED BEAM SEARCHLIGHT 6 VOLT - 30 WATT - RANGE 4 MILE



Fig. 416

The searchlight is our 4½ inch diameter sealed beam type. The combination light is our Fig. 1140 with rebulbing feature. The searchlight has a toggle switch.

Polished Brase Each	Chromium l'lated Each	Height Overall Inches	Size Rase Inches	Weight Pounds
\$26.00	\$30.00	9	33/4×61/4	21/4

## Remote Control Searchlights FOR OPERATION FROM DASH SEALED BEAM—6 OR 12 VOLTS

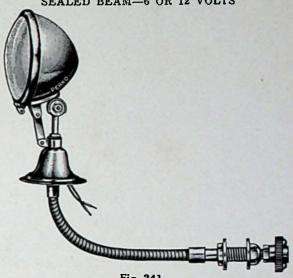


Fig. 241

These operate with extreme ease in both the vertical and horizontal range by an effortless twist or pull of the attractive control handle on the dash.

The light may be mounted at any desired location on the deck,

The control casing is galvanized steel with okoseal rubber covering which protects the casing against cor-

rosion and acts as a grease retainer.

Horizontal angle of beam is 360 degrees. Vertical angle of beam is 27 degrees below and 35 degrees above

Electric cable is not exposed, it passes through controls and exits under the base. Height

Above Deck luches

Dlam.

Weight

Diam.

1 2	41/2	101/2	51/4 51/4	31/2
No.	-With 30 In Polished Brass Each	ch Control— Chromium Plated Each		Inch Control— Chromium Plated Ench
1	\$43.50	\$49.00	\$45.00	\$51.00
2	44.50	50.00	46.00	52.00

12 volt, Size No. 2 only, add \$1.75 each. NOTE-Above not supplied with special length of

#### Sealed Beam Spotlight Units 6 OR 12 VOLTS



Fig. 433

The sealed all glass unit used in the searchlights on this and the preceding page. The lens is hermetically sealed to the reflector. Dirt and moisture are positively excluded. The reflector cannot tarnish.

No.	6 Volt Each	12 Volt Each	Diam. Lens Inches	Watts	Beam C. P.	Range About
1	\$2.50		436	30	45M	¼ mile
2	2.50	\$3.25	6	30	95M	ia mile
3	5.50	5.50	7	100	200M	½ mile



#### Hand Searchlight

BRASS—CHROMIUM PLATED
SEALED BEAM—PISTOL GRIP
PUSH BUTTON SWITCH—8 FT. COILED CORD
WITH DOUBLE CONTACT OR
CIGAR LIGHTER PLUG



Fig. 440

Has 6 volt sealed beam spotlight unit, range about ¼ mile, supplied with or without chrome plated wire stand illustrated.

Without Stand Each	With Stand Each	Diameter Lens Inches	Weight Pounds
\$18.50	\$19.50	4 1/2	2

Supplied with cigar lighter plug unless otherwise specified.

#### Spreader Floodlight

ALL BRASS—CHROMIUM PLATED DOUBLE CONTACT BAYONET SOCKET WITH 6, 12 or 82 VOLT—15 C.P. BULB



Fig. 254

For illumination of sails and rigging when underway at night, or for flood-lighting decks, anchorages, docks, etc.

For attachment to narrow spreader. An additional reflector around neck of bulb makes fixture quite waterproof.

Each	Diam. Reflector Inches	Projection From Spreader Inches	Size Mounting Plate Inches	Weight Ounces
\$9.75	4 3/4	3 1/2	6 x 1	8

Please specify voltage. 6 volt supplied unless otherwise specified.

#### "Sunbeam" Searchlights

WITH CHROMIUM PLATED REFLECTOR
6 OR 12 VOLT—50 CANDLEPOWER
BAYONET DOUBLE CONTACT SOCKET
ENCASED WIRING—FOCUSING DEVICE
WATERTIGHT GLANDS AT CABLE
AND CONTROL ROD ENTRANCES
RANGE—ABOUT ½ MILE
For higher power see notes below.

#### Pilot House Control



Fig. 306

No.	Polished Brass Each	Chromium Plated Each	Diam. Inches	Diam. Reflector Inches	Helght Above Deck Inches	Diam. Base Inches
3	\$77.00	\$ 91.00	8	7 %	14	51/2
4	98.50	112.50	8	7	14	5 1/2

Length control rod below base, 10 inches.

No. 4 has mangin mirror reflector and 100 C. P. bulb, range about 3/4 mile.

#### **Deck Control**

WITH TOGGLE SWITCH IN HEAD



Fig. 305

No.	Polished Brass Each \$53.00	Chromium Plated Each \$63.00	Diam. Inches	Diam. Reflector Inches 7%	Height Above Deck Inches	Diam. Base Inches	
4	63.00	73.00	8	7	14	5 1/2	

No. 4 has mangin mirror reflector and 100 C. P. bulb.
Note — Figs. 305 and 306 with 6 or 12 Volt 100 C. P.
bulb, add \$1.75 each. With 32 Volt 50 C. P. bulb, add
\$1.75 each. 32 Volt 100 C. P. bulb, add \$2.50 each.
Spare lenses, reflectors, bulbs, etc., see pages 54 and 64.

### "Perko" High Power Searchlights

WITH MIRROR REFLECTOR—MEDIUM SCREW SOCKET VOLTAGE—6, 12, 32, AND 120 VOLTS

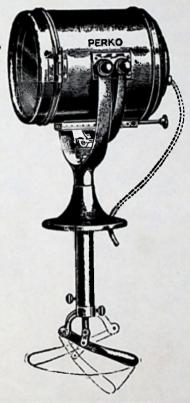
#### PACKING GLANDS AT CABLE AND CONTROL ROD ENTRANCES

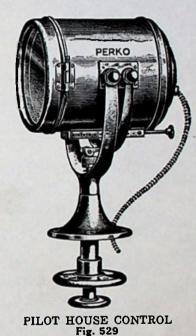
BODIES—are constructed of heavy wrought brass; stands, yokes, and control mechanism are all cast bronze. REFLECTORS—a glass mirror reflector, which projects a highly concentrated beam of light a great distance. FOCUSING DEVICE—of patented design, containing no wires to twist or break; very easy to control. PILOT HOUSE CONTROLS—are of the wheel or lever type, both having their distinct advantages.

WIRING-enclosed in flexible metal hose, fully protected from weather.

BULBS—Bulbs furnished as standard equipment in various voltages are as follows—6 volts, 18 amps.; 12 volts, 18 amps.; 32 volts, 8 amps.; 120 volts, 500 watt. Can also furnish 120 volts, 250 or 1000 watt bulbs for additional price. See notes below.







PILOT HOUSE CONTROL

Size Inches	Diameter Reflector Inches		Ra	nge		Beam Candle Power	Length of Body Inches	Clearance of Glass in Door Inches	Height Above Deck Inches	Weight Pilot House Type Pounds	Diameter of Base Inches
8	8	up	to	3/4	mile	350,000	12%	7%	19	30	6%
10	10	up	to	1	mile	590,000	14%	91/2	21	34	6%
12	12	up		11/4	miles	700,000	17	11%	24	41	6 7/8
14	14	up		2	miles	850,000	19	131/2	26	56	81/8
	Fig.	480			_		Fig. 297 -			Fig. 52	9 ——

Fig. 297

	Fig.	480	Fig.	297	—— Fig. 529 ——		
Size Inches	Polished Brass Each	Chromium Plated Each	Polished Brass Each	Chromium Plated Each	Polished Brass Each	Chromium Plated Each	
8	\$170.00	\$190.00	\$190.00	\$220.00	\$210.00	\$240.00	
10	190.00	215.00	215.00	245.00	235.00	265.00	
12	235.00	265.00	260.00	295.00	280.00	315.00	
14	290.00	320.00	315.00	350.00	335.00	370.00	

NOTES

With 120 volt 250 watt bulb, add \$2.00 each.

With 120 volt 1000 watt mogul screw bulb (special construction) in 12 or 14 inch sizes only, add \$65.00 each. Spare bulbs, reflectors, lenses, etc. See pages 54 and 64. Standard length of control below base, Fig. 297 all sizes, from base to fulcrum of handle, 8 inches. Fig. 529 all sizes, from base to center of upper wheel rim, 6½ in. Special length of pilot house control on Fig. 297 only to order, price on application.

Spare medium screw sockets, \$1.00 each.



#### **Floodlights**

#### ENCLOSED - WEATHERPROOF

An economically priced line with choice of types to fill most requirements.

CLAMP TYPE with Mogul Socket

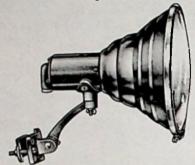


Fig. 227

With polished spun aluminum reflector and heat resisting glass lens. Cast aluminum bracket, spun aluminum housing.

For mounting on wall, cross arm or pipe up to 2½ inches.

Each	Spare Lens Each	Spare Rims Each	Diam. Lens Inohes	Length Housing Inches	Maximum Wattage	
\$24.00	\$7.00	\$4.00	12	14	500	7

#### DECK TYPE

with Medium Screw Socket



Fig. 228

With glossy white enameled reflector and weatherproof sealed lens, gray tone enamel exterior, 6 foot approved cord and plug.

Each	Diam. Lens Inches	Length Housing Inches	Diam. Base Inches	Maximum Wattage	Weight Pounds
\$8.80	71/2	8	414	100	3

#### Mirror Reflectors FOR SEARCHLIGHTS



Fig. 427

High grade mirrors designed for long distance projection of concentrated beam of light.

Diam. Inches	Each	Style	For Searchlights Fig. and Size
7-	\$12.00	Mangin	305-306 No. 4
8	20.00	Parabolic	297-480-529— 8 inch
10.	22.00	Parabolic	297-480-529—10 inch
12	27.50	Parabolic	297-480-529—12 inch
14	37.50	Parabolic	297-480-529—14 inch

#### Metal Reflectors

FOR SEARCHLIGHT BRASS—CHROMIUM PLATED



Fig. 428

Extreme Diam. Inches	Each	For Searchlights Fig. and Size
7	\$7.25	Old 1022-1023
7 %	8.00	305-306 No. 3
Cork Gaskets	for Reflectors, \$	.50 each.

#### Front Lens FOR SEARCHLIGHTS



Fig. 429

		Fig. 429	
Diam. Inches	Each	Style	For Searchlights Fig. and Size
7	\$2.00	Convex	Old 1022-1023
7 3/4	2.25	Convex	305-306 Nos. 3 & 4
8%	2.50	Flat	297-480-529- 8 inch
101/4	2.85	Flat	297-480-529-10 inch
121/4	3.60	Flat	297-480-529-12 inch
141/4	4.75	Flat	297-480-529-14 inch

#### Lucite Parallel Rules

TRANSPARENT WITH BRASS, CHROMIUM PLATED BARS

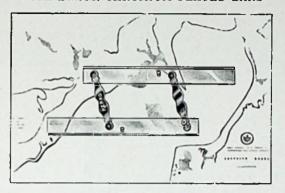


Fig. 630

A new transparent rule of heavy lucite through which the chart data can be easily seen. Supplied with finger grips and tightening device.

Length Closed Inches	Each	Width Closed Inches	Weight Ounces
12	\$6.50	2 1/2	5
15	7.75	2 1/2	6 1/2

#### Parallel Rules

EBONY FINISH-BRASS, NICKEL PLATED PARTS



Fig. 686

Length Closed		Width	Weight
Inches	Each	Inches	Ounces
12	\$3.75	2 1/2	6
15	4.50	2 1/2	6 1/2
18	5.25	2 1/2	7

#### **Dividers**

BRASS-NICKEL PLATED-NAVY TYPE



. Length, 5½ inches, each......\$1.60

2 Length, 7 inches, each...... 4.00

#### Chart Cases



Fig. 372

Made of galvanized iron or sheet copper, water-tight cover, folding handle on side for carrying.

Diam. Inches	Length Inches	Galv. Each	Copper Each
3	36	\$7.50	\$14.00
4	36	9.00	16.50

#### Improved Course Protractor

INDICATES COURSE AND REVERSE COURSE TRANSPARENT

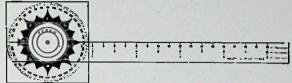


Fig. 706

Arm has various mileage scales used on all coastal and harbor charts.

Arm extended on short end to show reverse course.

A precision instrument, accurate in detail. Positions depths, etc., are clearly visible when covered by protractor.

Each \$3.25	Length Length Luches	Compass Card Inches 63/8

#### Yacht Log Books

100 PAGES-NEAT PRINTING



Fig. 708

In addition to pages for log data, these books contain useful information such as extracts from Bowditch Practical Navigator on symbols for weather, state of sea, cloud formations, force of wind, etc.

#### Electric Compass Light



To be mounted on compass box for illuminating compass at night. A shield is furnished over the bulb to eliminate glare. Shield has small hole sufficient to illuminate proper portion of compass card.

Polished	Caromium	Height
Brass	Plated	Overall
Each	Each	Inches
\$3.60	\$4.25	8

NOTE — Shield will accommodate a G-6 bayonet D.C. bulb 6, 12 or 32 volt.

Fig. 707



### "Star" Spherical Compasses With Built-in Compensator

31/2 INCH DIAMETER 5 DEGREE CARD BLACK CARD-WHITE POINTS AND LETTERING PLEXIGLASS DOME-OVERLIGHTED ALL BRASS HOUSING-BLACK FINISH

Featuring a super-sensitive metal barometer type diaphragm, special alloy high power magnets, nonwarping all metal dial, genuine hand polished sapphire jewel and pivot bearing. Universal bracket for vertical or horizontal mounting.

Oscillation Period-6 seconds.

Displacement Factor-Less than 5° after maximum disturbance.

#### THE "GUIDARE" CRUISER MODEL



Fig. 448

	Diameter Overall	Height Overall	Weight
Ench	Inches	Inches	Pounds
\$37.00	4 5/8	51/4	3

Supplied with Flush Shelf Mounting if desired, add \$5.50 each.

#### THE "GUIDARE" SAILBOAT MODEL



Fig. 562

With internal gimbal ring to compensate for extra amount of heel prevalent in all types of sailing craft. Gives steady performance even at 90 degree heel. Lubber line is also self aligning.

	Diameter	Height	Weight
	Overall	Overall	Pounds
Each	Inches	Inches	
\$58.50	4 %	51/4	3
Supplied	with Flush She	Mounting :	

\$5.50 each.

The "Guidare" In Semi-binnacle

"Star" Spherical Compass

POLISHED BRASS OR CHROMIUM PLATED

The "Guidare" compasses Figures 448 or 562 illustrated on this page are available in semi-binnacle for deck or shelf mounting on cruiser or sailboat.

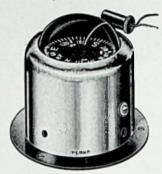


Fig. 560

Fig. 448			ith Compass—	~Binnacle	only—
Polished Brass Each	Chrom. Plated Each	Polished Brass Each	Chrom. Plated Each	Polished Brass Each	Chrom. Plated Each
\$49.00	\$52.00	\$70.00	\$73.00	\$12.00	\$15.00
-	- Complete			Binnacle Only Diam.	_
Height Overall Inches	Diam. Base Inches	Weight Pounds	Height Inches	Opening For Dome Inches	Weight Pounds
51/4	61/4	3 1/2	4	3 %	1/2

### "Star" Spherical Dome Oil Compass

WITH REDUCED BLACK DIAL-MAGNIFIED COMPLETE WITH MAHOGANY BOX

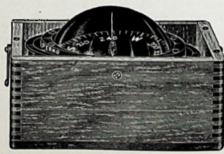


Fig. 463

The "Star" Spherical Dome Oil Compass gives to the marine field an inexpensive compass embodying many practical features not found in more expensive types.

The small diameter magnified card assures steadiness under all sailing conditions, reduced surface friction and liquid drag. It is easy to read at 15 foot distance in a standing or sitting position within a range of 130 degrees.

Diameter Dial Inches	With Box Each	Outside Diam. Gimbal Inches	Outside Mess. Box Inches
3	\$36.00	4 3/4	61/8×61/6
4	43.00	,	71/8×71/6
5	52.00	6%	81/2181/3

#### Oil Compasses

WITH JEWEL BEARING



Fig. 487

Has several exclusive features such as special alloy magnets that hold their magnetic charge indefinitely. Hand treated non-warping dial, a barometer type diaphragm for expansion and contraction and a hand polished pivot.

A guaranteed trouble and bubble proof compass.

Diameter Card Inches	Complete With Box Each	Outside Diam. Gimbal Ring Inches	Outside Mens. Box Inches	Weight Pounds
2	\$16.00	311/16	4 3/4 x 4 3/4	21/4
2 1/4	18.25	41/4	5 1/2 x 5 1/2	2 1/2
3	24.75	4 34	6 x 6	31/4
4	32.00	6	7 x 7	7
5	41.25	77/16	8 % x 8 %	10
6	57.50	8 34	101/4 x 101/4	15

#### Cruiser Binnacle

WROUGHT BRASS-TWO PIECE



Fig. 401

Removable head allows easy access to compass. Furnished complete with double contact electric fixture for illuminating compass at night. Head is held fast to base by internal catch.

For Size Compass Inches	Height Overall Inches	Inside Diam. Inches	Diam. Base Inches	Compass Supports Inches	Weight Less Compass Pounds
4 5	7½ 8¾	6 ½ 7 %	10	6 73%	1 1/3 2 3/4
For Size Compass Inches	—With Polished Brass Each	Pla	nss— mium ated ach	With Oil C Polished Brass Each	ompass— Chromium Plated Each
4 5	\$35.00 41.00	\$42 49	.00	\$67.00 82.00	\$74.00 90.00

Compass supplied with above is Fig. 487.

### "Star" Pathfinder Compasses

MAGNIFIED DIAL-INDIRECT ILLUMINATION WITH MAGNETIC COMPENSATORS

Designed for small boats, cruisers runabouts etc.



Each \$17.50

Diam. Face Inches Depth Inches 2 3/4 21/4

Diam. Mounting Inches 31%

Fig. 34

Weight Ounces 13

#### FLUSH TYPE FOR DASHBOARD WITHOUT COMPENSATORS



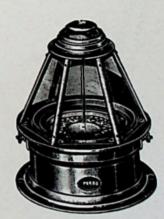
Fig. 447

Each	Diam. Face Inches	Diam. Plate Inches	Diam. Hole in Dashboard Inches	Weight Ounces
\$17.50	2 1/4	3 1/2	3	10

### Skylight Binnacle

BRASS

Extra heavy brass throughout. Complete with night hood and double contact electric fixture.



For Size Compass Inches	Height Overall Inches	Inside Diam. Inches
4	101/2	6%
Diam. Base	Between Compass Supports	Weight
Inches	Inches	Pounds

834

- Without	Compass -
Polished	Chromium
Brass	Plated
Each	Ench
\$36.00	\$42.00

4 1/2

With Compass - See Fig. 487. 4 inch size, add price of same to above.

Fig. 534



#### New Combination Swinging Ash Trays and Glass Holders

ALL BRASS-CHROMIUM PLATED







Fig. 799

Ash tray complete with cigarette clip. Glass holder will accommodate average tumbler or highball glass.

Fig.	Each	Mounting Plate Inches	Dinm. Ring Inches	Weight Ounces
798	\$6.50	134x114	2 5/8	131/2
799	4.00	14x14	2 %	3 1/2

#### Streamlined Mast

PHILLIPINE MAHOGANY—VARNISHED



Fig. 584

Height Feet	Without Light Each	With Brass Light Each	With Chrome Light Each	Width Cross Arm Inches	Size Base Inches	Weight Pounds
4	\$33.00	\$37.00	\$38.00	26	9x51/4	6
6	40.00	44.00	45.00	33	9x51/4	8

Hinged masts are available to order add \$15.00 each.

#### "Neptune" Marked Lead Lines

WITH VINYLITE PLASTIC MARKERS 1-INCH CIRC. ITALIAN HEMP LINE

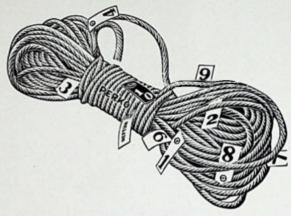


Fig. 190

A lead line that makes sense and can be easily read by anyone using it regardless of experience.

Instead of the old cryptic markings, it makes use of colored Vinylite Plastic Markers printed with numerals in contrasting colors. These markers are soft and resilient, unaffected by salt, grease, oil and sunlight.

The Neptune line was widely used during the war by the Navy, Army and U. S. Maritime Commission.

Length Fathoms	Each	Length Fathoms	Each
7	\$ 5.50	50	\$24.50
10	6.60	60	26.50
15	8.80	75	33.00
20	10.45	100	60.50
25	12.65	120	68.20
30	14.85	150	82.50
40	19.80		

NOTE MARKINGS, up to 10 fathoms inclusive marked every fathom and half fathom, the latter indicated by yellow strip.

Longer lines marked according to Navy standard IE, 2-3-5-7-10-13-15-17-20 fathoms and every 5 fathoms thereafter.

#### Sounding Leads



Fig. 940

All weights from 2 to 16 pounds each inclusive carried in stock.

P	Per ound
2 to 14 Pounds	.62
15 to 50 Pounds	.60
Larger Sizes	.55

#### **Automatic Boat Drainers**

BRASS TUBING-CAST BRONZE FITTINGS BALL TYPE-STREAMLINE



Fig. 397

Requires no attention after it is installed. Water cannot back up into the boat as the top of the tubing is above the water line.

A sponge rubber ball is forced into a machined seat automatically closing the opening when the boat is in reverse or not in motion.

Heavy bronze strainer in inlet end.

Starts draining at speed of 7 miles per hour.

No.	Each	Height Inside Hull Inches	Diam. Tubing Inches	For Thickness Hull Inches	Weight Pounds
1	\$12.50	8	3/4	up to 1½	2
2	18.00	151/2	1 1/8	up to 21/4	4

#### SPARE RUBBER BALLS

Size	No.	1,	15/16	inch	diameter,	per	dozen	•••••	\$1.50
Size	No.	2.	13%	inch	diameter,	per	dozen		3.00

#### Small Boat Drainer

CAST BRONZE-PLAIN



Fig. 386

Starts draining at speed of 5 miles per hour.

Install in after end of boat and be sure that mouth is toward the stern.

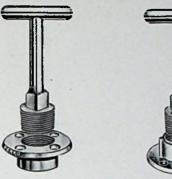
Made for hulls % inch or thicker but may be used with thinner hulls by cutting away necessary portion of neck.

Depth of mouth below hull is 34 inch.

Each	Height Inside Bont Inches	Width Overall Inches	Weight Pounds
\$5.25	2 1/4	21/2	11/4

#### Garboard Drain Plugs

CAST BRONZE-PLAIN



The handle and plug are cast in one piece eliminating the need for a wrench. However if the plug should "freeze" into the flange a wrench may be used on the squared portion of the stem.

	Pipe Size	Diam. Flange	Depth	Weight
Each	Inches	Inches	Inches	Ounces
\$3.25	3/4	23/8	5/8	11

#### Garboard Drain Plugs

CAST BRONZE-PLAIN



Fig. 714



A few of these installed in garboard allows quick drainage of boat when hauled out, by removing heavy plug. Threads are tapered pipe sizes and plugs are watertight.

Fig.	Plain Bronze Each	Pipe Size Inches	Diam. Flange Inches	Depth Inches	Weight Ounces
714	\$1.75	1/2	2	3/8	3
124	3.00	1	31/8	1	10

Fig. 124 is furnished complete with galvanized wrench.

#### **Automatic Boat Drain**

CAST BRONZE-PLAIN



Fig. 213

For use in life boats. Made of heavy cast bronze, with sponge rubber ball valve. Cast bronze cover with chain attached, threaded 113/16 inches, No. 14 thread.

Complete Each \$5.50	With Chain Each \$1.75	Balls Only Per Dozen \$3.00	Diam. Opening Inches	Diam. Flange Inches 3 %	Diam. Ball Inches

#### "Champion" Navy Bilge Pump

FOR PIPE

BRASS CYLINDER—CAST BRONZE PARTS WITH WEIGHTED LEATHER VALVE





Flax Packed Plunger



Weighted Leather Valve

Fig. 1016 CAPACITY-13 STROKES-5 GALLONS

Each	Extreme Length Inches	Diameter Cylinder Inches	Inlet Pipe Thread Inches	Outlet Pipe Thread Inches	Diameter Plunger Rod Inches	
\$23.00	24	234	11/4	1 1/2	1/2	
Fig. 147-	-Weighte	d leather	valve only	, each	\$1.20	
			ger only			

#### "Junior" Navy Bilge Pump

FOR PIPE WITH WEIGHTED LEATHER VALVE



Fig. 1018

This is the Fig. 1016 "Champion" Pump reduced in length for installation in limited space.

|--|--|

#### "Super" Navy Bilge Pump

FOR HOSE OR PIPE WITH WEIGHTED LEATHER VALVE

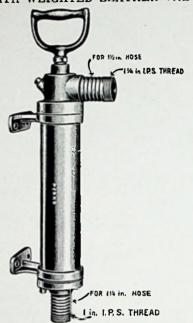


Fig. 701

This is our very popular "Champion" Pump improved by cast bronze integral fittings at inlet and outlet ends for connecting hose or pipe.

	Extreme	Inlet	Sizes -		Sizes -
Each	Length Inches	Pipe Inches	Hose Inches	Pipe Inches	Hose Inches
\$26.00	27	1	11/4	1.34	1 1/2

#### "Midget" Navy Bilge Pump

FOR HOSE OR PIPE WITH WEIGHTED LEATHER VALVE

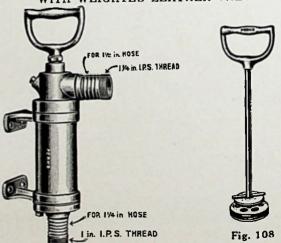


Fig. 702

Our Fig. 701 pump reduced in length for boats requiring a large capacity pump to be installed where space is limited.

Each \$24.50	Extreme Length Inches 181/4	Diam. Cylinder Inches 2 3/4	Pine	Hose	Pipe Inches	Hose Inches

Fig. 108 Plunger Assembly only, complete, No. 1 for pumps Fig's 702 and 1018, \$7.50 each, No. 2 for pumps Fig's 701 and 1016, \$8.00 each.

## Brass Bilge Pumps

DOUBLE ACTION

Fig. 200

Heavy brass seamless tubing, cast bronze fittings, treated leather packing, hollow brass ball checks. D shaped handle. Moulded rubber hose 5 feet long furnished with each pump.

No.	With Hose Each	Height Inches	Diam. Inches	Capacity Per Min. Gallons	Weight Pounds
1	\$ 9.25	175/8	1 1/8	6	21/4
2	11.75	20	1 1/2	12	31/4
4	15.00	29	1 1/2	161/2	4
With	out hose,	deduct \$ .	50 each.		

Brass Bilge Pumps

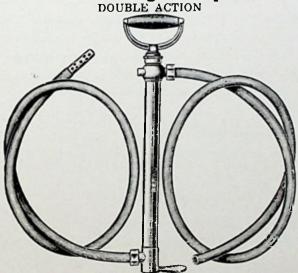


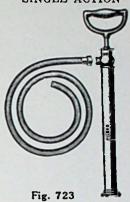
Fig. 202

Cast bronze foot rest and two 5 foot lengths of hose for suction and discharge.

No.	With Hose Each	Height Inches	Diameter Inches	Capacity Per Min, Gallons	Weight Pounds
5	\$12.50	185%	1 1/8	6	3
6	15,90	21	11/2	12	4
8	19.50	30	1 1/2	161/2	5
Wit	hout hose.	deduct \$ .5	50 for eac	h hose.	

#### Brass Bilge Pump

SINGLE ACTION



Complete with 5 feet of rubber hose.

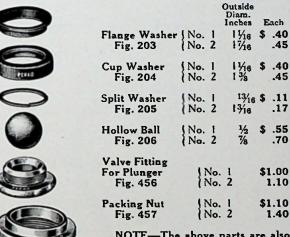
Has moulded neoprene rubber plunger producing excellent capacity. Capacity 2½ gallons per minute.

With Hose Each	Without Hose Each	Diameter Inches	Extreme Length Inches	Weight Pounds	
\$8.25	\$7.75	1 1/8	17%	2	

#### Parts for Brass Bilge Pumps

Flange and cup washers are leather, especially treated for use in salt water. Split washer is wrought brass. Ball is hollow and made of wrought brass.

No. 1 for numbers 1 and 5 bilge pumps. No. 2 for numbers 2, 4, 6 and 8 bilge pumps.



NOTE—The above parts are also used in Fig. 345 bilge pumps, and Fig. 146 crank case pump.

#### Rubber Hose and Strainer

FOR FIGS. 200, 202 and 723 BRASS BILGE PUMPS



Heavy moulded rubber hose, durable and lasting. % inch inside diameter.

Standard 5 ft. length Cast Bronze Strainer

Other lengths of hose can be furnished. Price on application.

Fig. 208 Fig. 209



#### Small Boat Bilge Pump

STEEL—ZINC PLATED
GOOD CAPACITY—EASY OPERATION

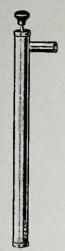


Fig. 152

Has felt retainer washer to prevent squirt through cap. Capacity—7 gallons per minute at normal speed.

Each	Length Inches	Diameter Body Inches	Diameter Spout Inches	Weight Pounds
\$3.75	24	11/2	1	2 1/2

#### Outboard Bilge Pump

ALL BRASS—WITH 3 FT. RUBBER HOSE BRASS BRACKETS FOR MOUNTING

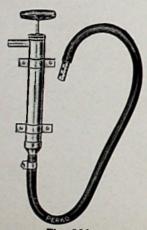


Fig. 201

For small boats, outboard motor, sail or rowboats.

Brackets permit permanent installation on transom or side, allowing one hand pumping while boat is in

Complete with bronze intake strainer.

Each	Length Body Inches	Diam. Inches	Capacity Per Min. Gallons	Weight Pounds
\$7.50	11	11/2	1 1/2	21/4

#### "Perko" Wing Pumps

DOUBLE ACTION—ALL BRONZE
FOR MARINE, INDUSTRIAL AND DOMESTIC USE
IMPROVED VALVES HOLD PRIME

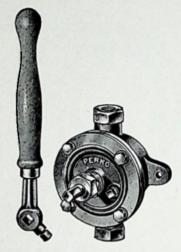


Fig. 681

Constructed entirely of cast bronze, principally for use as a marine bilge pump, but is used in large quantities in the industrial field for pumping oil and gasoline, hot liquids, juices, etc.

The interior consists of a cast bronze wing which oscillates on a bronze shaft connected to handle. The wing has lubricated square flax packing set in grooves which runs on interior of drum and as no metal parts rub together this pump will last for years without noticeable wear. Packing is very easily replaced.

Intake valves have been greatly improved and priming is unnecessary even after several weeks of disuse.

GREAT CAPACITY—LIFT AND HEAD OVER 35 FT. EFFORTLESS OPERATION—HARDWOOD HANDLE

No.	Each	Size Pipe Connection Inches		Capacity Per Minute Gallons	Weight Pounds
0	\$45.00	1/2	5 1/8	5	111/2
1	50.00	3/4	5 3/4	7	14
2	59.00	1	6%	9 3/4	193/2

Spare handles, complete, \$6.00 each. Wood only, \$1.00 each.

#### Brass Bilge Pumps

DOUBLE ACTION-WITH BULKHEAD BRACKETS THREADED FOR % INCH PIPE



Fig. 345

No.	Without Tail Pieces Each	With Tail Pieces Each	Diam. Barrel Inches	Length Overall Inches	Weight Pounds
2	\$16.50	\$18.50	1 1/2	21	3
4	19.50	21.50	1 1/2	31	4

Spare Parts, See Page 71. With tail piece supplied if not specified.

#### Steel Boat Bailers

GALVANIZED—RIVETED HANDLE



Fig. 180

Each	Diameter Inches	Weight Pounds
\$3.50	81/4	

#### Crank Case Pump

FOR RUBBER HOSE OR TUBING SINGLE ACTION—STEEL OR BRASS



Fig. 335

Steel pump is painted red. Brass pump is in natural finish.

Inlet and outlet tubes will fit % inch rubber hose or tubing, so equipped, this pump may also be used as a bilge pump for small boats.

Steel Each	Brass Each	Length Body Inches	Diam. Body Inches	Weight Pounds
\$3.25	\$4.50	11	1 1/2	11/8

#### Crank Case Pump

DOUBLE ACTION-ALL BRASS



Fig. 146

For draining the crank case through filler opening, with outlet spout for attaching rubber hose. Intake is bronze flexible metal hose.

Complete Each	Spare Intake Hose Each	Length Overall Inches	Length Intake Hose Inches	Diam. Pump Inches	Weight Pounds
\$10.25	\$3.50	171/2	121/2	1 1/8	21/2

NOTE-Above supplied with intake tube for 5% inch rubber hose instead of metal hose illustrated, specify Fig. 1029. \$9.00 each.

#### Improved Crank Case Pump

SINGLE ACTION-ALL BRASS WITH BRONZE FLEXIBLE METAL HOSE OUTLET SPOUT AND NEOPRENE PLUNGER

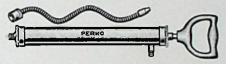


Fig. 388

Outlet spout permits continuous operation. The new plunger has increased capacity with smoother operation.

Complete Each	Spare Intake Hose Each	Diam. Barrel Inches	Length Barrel Inches	Length Overall Inches	Weight Pounds
\$7.25	\$2.85	1 1/2	12	1534	2

Spare Neoprene plungers, \$ .30 each.

#### Crank Case Pump

WITH FLEXIBLE METAL INTAKE HOSE SINGLE ACTION—STEEL OR BRASS

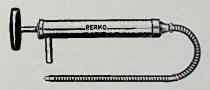


Fig. 336

Steel pump is painted red. Brass pump is in natural

Flexible intake hose is 18 inches long, 1/2 inch outside diameter. Outlet spout is 21/2 inches long, % inch outside diameter.

Steel Each	Brass Each	Length Body Inches	Diam. Body Inches	Weight Pounds
\$3.85	\$5.85	11	11/6	114



## Perko Improved "Flexo-Shaft" Electric Bilge Pumps

Patented

WITH FLEXIBLE PHOSPHOR BRONZE DRIVE SHAFT AND WATERPROOF CASING CASING HAS "TEMFLEX" PLASTIC COVERING TO INCREASE ITS STRENGTH ALL BRONZE EXCEPT MOTOR—GRAY WRINKLE PAINTED FINISH

The value of this pump arrangement is obvious at first sight.

Pass the shaft around corners, over or under bulkhead, ribs or any other obstructions and it operates.

Mount the motor anywhere, in a cabin, pilot house, or out in the cockpit far removed from gasoline fumes that usually settle in low places; place the pump where it is needed at the moment, at the lowest point of the bilge, under the engine, under low decking or any place other types of pumps cannot reach.

Inlet is through base which has heavy gauge brass strainer. Outlet is illustrated and is for 1 inch rubber

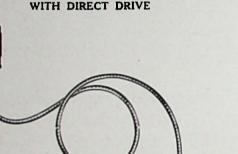
hose, or 1/2 inch pipe.

Motor only

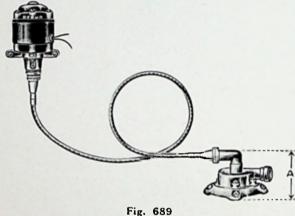
11.50

CAPACITY — 650 gallons per hour at 1 foot, MAXIMUM HEAD — 11 feet, with 3 foot shaft.

MOTOR IS LOW AMPERAGE 1/16 H.P. at 2000 R.P.M.







	н
Height Diam. Pump Base Weight Inches Inches Pounds  4 1/4 4 3/4 7	at In
6 Volt 12 Volt 32 Volt Volts Each Each Each Each With 3 ft. shaft \$35.00 \$37.00 \$46.50 \$46.50 With With 6 ft. shaft 39.50 41.50 51.00 51.00 With	
The state of the s	, ,,,

23.00

13.50

I	Base nches	Weight Pounds 7½	
6 Volt Each	12 Volt Each	32 Volt Each	Volts Each
\$39.50	\$41.50	\$51.00	\$51.00
	_		55.50 23.00
	6 Volt Each	Each Each \$39.50 \$41.50 44.00 46.00	Base Inches Pounds 4 % 7½  6 Volt 12 Volt Each Each Each \$39.50 \$41.50 \$51.00 44.00 46.00 55.50

CAPACITY WITH 4 FOOT HEAD—400 GALLONS PER HOUR CAPACITY WITH 8 FOOT HEAD—170 GALLONS PER HOUR.

23.00

#### SPARE PARTS

3 Foot shafts only 6 Foot shafts only Fig. 666 Complete Pump Unit only Fig. 689 Complete Pump Unit only	\$ 9.25 Each 13.75 Each 13.00 Each 17.00 Each	Fig. 689 Mitre Gears with shaft Fig. 689 Angle Elbow Less Gears Motor Bulkhead Bracket only	\$3.00 Per Pair 3.30 Each 3.50 Each
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#### Automatic Switch For Bilge Pumps

PRESSURE OPERATED DIAPHRAGM TYPE — FOR NON-AUTOMATIC BILGE PUMPS CAST BRONZE — WITH SYNTHETIC RUBBER DIAPHRAGM — HEAVY DUTY MECHANICAL SWITCH

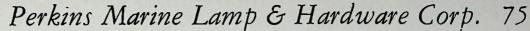
For All Voltages From 6 to 110

This device consists of a very sensitive switch in contact with a diaphragm of oil and grease resistant material. The wires are led through a neoprene hose above any normal water level.

This switch will start the pump operating when the water reaches the top of the switch or 2¼ inches. It will turn off again when the water reaches a depth of 1 inch but by connecting ¼ inch tubing to the ¼ inch pipe tapped end of switch and into the discharge line of the pump the pressure in the pump discharge line will continue to operate the switch until the pump sucks air.



Fig. 662



## Perko Improved "Flexo-Shaft" Automatic Electric Bilge Pumps

FLEXIBLE PHOSPHOR BRONZE DRIVE SHAFT AND WATERPROOF CASING CASING HAS "TEMFLEX" PLASTIC COVERING TO INCREASE ITS STRENGTH PRESSURE OPERATED DIAPHRAGM TYPE AUTOMATIC SWITCH-THREE WAY DASHBOARD SWITCH ALL BRONZE EXCEPT MOTOR-6-12-32 AND 110 VOLTS-GRAY WRINKLE PAINTED FINISH WATERTIGHT-OPERATES WITH PUMP AND SWITCH HOUSING SUBMERGED

FEATURES — See write up on Fig's. 666 and 689 (opposite page) for installation and other features. BREATHER TUBE - Is heavy flexible "Koroseal", 18 inches long with 1/8 inch wall.

THREE WAY DASHBOARD SWITCH - Is indicated "Off", "Automatic" and "Non-automatic" and permits remote control accordingly.

ADJUSTABLE BUSHING - For adjustment of tension on drive shaft to assure full R.P.M. of pump impeller.

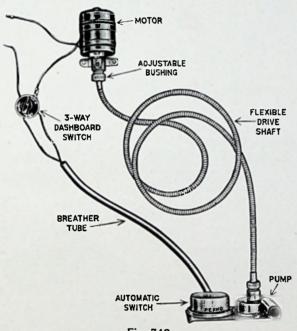
AUTOMATIC SWITCH — Starts pump operating when bilge water reaches a depth of about 1½ inches and will "Shut off" at a depth of about ¾ inch.

CAPACITY - 650 gallons per hour at I foot head - 400 gallons at 4 feet - 170 gallons at 8 feet. Maximum head II feet with 3 foot shaft.

MOTOR — Low amperage 1/16 H.P. at 2000 R.P.M.

#### WITH DIRECT DRIVE

#### WITH ANGLE DRIVE



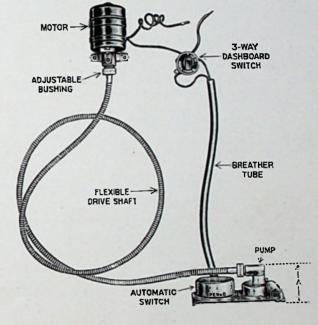


Fig. 742

Fig. 743

	Fig. 742					Fig. 743				Fig. 743		
	6 Volt Each	12 Volt Each	32 Volt Each	110 D.C. Volts Each	6 Volt Each	12 Volt Each	32 Volt Each	110 D.C. Volts Each	Height Pump Inches	Height at "A" Inches		Weight Pounds
With 3 foot shaft With 6 foot shaft	\$47.50 52.00	\$49.50 54.00	\$59.00 63.50	\$59.00 63.50	\$52.00 56.50	\$54.00 58.50	\$63.50 68.00	\$63.50 68.00	2 ½ 2 ½	234	7×4 7×4	8
Spare pump unit, Spare 3 way dash					Fig. 742,	\$30.00	each, Fig.	743, \$34	1.50 eac	h.		

Other spare parts, see page 74.

#### PERKO "FLEXO-SHAFT" WATER SYSTEM PUMP

WITH PIPE INLET AND OUTLET—1/2 INCH CAST BRONZE—GRAY WRINKLE FINISH

Supplied complete with Flexible Drive Shaft and Motor per Fig. 666 Page 74. See Page 80 for diagram of installation. Capacity same as Fig. 666.

	6 Volt Ench	12 Volt Ench	32 Volt Each	110 D.C. Volts Each	Height Pump Inches	Weight Pump only Pounds
With 3 foot shaft With 6 foot shaft	\$35.50 40.00	\$37.50 42.00	\$47.00 51.50	\$47.00 51.50	314	2 2

Pump only as illustrated, no shaft or motor, \$13.00 each.

NOTE—This pump does not have the ability to lift water from below the pump level, therefore, it is not intended for use as a bilge pump.

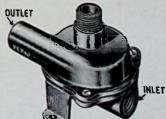


Fig. 748



## New "Junior" Electric Bilge Pump

NON-AUTOMATIC—6, 12 OR 32 VOLTS ALL BRASS EXCEPT MOTOR BAKED GRAY FINISH



Fig. 780

The result of a determined effort to produce a good practical electric bilge pump of high capacity at a price as low as possible and within the means of the majority of small boat owners.

Maximum head-7 feet

Capacity at 1 foot head—7 gallons per minute
Capacity at 4 foot head—4 gallons per minute
Motor is 1/60 H.P. at 2000 R.P.M.—5.3 amps. at 6 volts
Outlet is for regular % inch garden hose

Complete	6 Volt Each \$21.00	12 Volt Each \$23.00	32 Volt Each \$25.00	Height Overall Inches 81/2	Weight Pounds 2 %
Motor only	8.00	10.00	12.00	- /-	- 78

## New Electric Bait Tank or Water System Pump

6, 12 OR 32 VOLTS
ALL BRASS EXCEPT MOTOR
BAKED GRAY FINISH



Fig. 781

When installed at or below the water line this pump is ideal for keeping the bait tank supplied with constant water changes.

As a water system pump it can be placed in the supply line from the fresh water tank to sink, lavatory, shower, etc., per diagram on page 80.

Complete with side mounting bracket
Outlet on side for regular % inch garden hose
Inlet in bottom tapped for ½ inch pipe
Information on head, capacity and motor see Fig. 780

Complete	6 Volt Each \$21.50	12 Voit Each \$23.50	32 Volt Each \$25.50	Height Overall Inches 8 1/2	Weight Pounds 2 %
Motor only	8.00	10.00	12.00	1000000	

#### Pump Valves



Galvanized iron with oak leather clapper, galvanized iron weight on both sides of leather riveted together and screwed to casting.

Fig. 237

Diameter, inches	2	2 1/2	3	4
Wgt., per dz. lbs.	4	6	7	11
Per doz.	\$8.00	\$10.00	\$12.00	\$18.00



## Leather Plungers

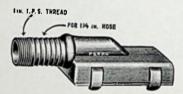
OAK LEATHER

Riveted together, strong and durable.

or Diam. Pump Inches	Per Dozen	Weight Per Dozen Lbs.
2	\$ 6.50	3/4
2 1/2	7.50	1 1/4
3	9.50	1 1/2
4	10.50	134

Fig. 239

### Bronze Navy Pump Strainers



D

Fig. 704

Fig. 705





Fig. 721

Fig.722

Fig.	Each	Pipe Thread Inches	For Hose Inches	Length Inches	Width Inches	Weight Pounds
704	\$3.00	1	11/4	7	2 1/4	2
705	3.00	i	1 1/4	4 34	2 3/4	1 1/2
721	3.00	11/4		5	2 3/4	1 1/2
722	3.00	11/4		4 34	2 3/4	13%

### Junior Strainer

CAST BRONZE FOR % INCH RUBBER HOSE



Fig 709

Excellent for use with bilge pumps having % inch hose for intake such as our Fig. 202, etc.

	Length Overall	Width	Weight
Euch	Inches	Inches	Ounces
\$1.90	4	1 3/4	6



Perko Improved "Rotoflex" Pumps
SYNTHETIC NEOPRENE COMPOUND ROTOR—NEOPRENE U-CUP SEALS—LEAKPROOF ALL BRONZE
BODY—MONEL SHAFT—BRASS GREASE CUPS—GRAY WRINKLE PAINTED FINISH

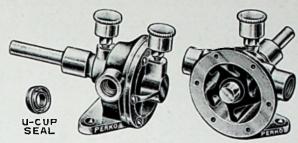


Fig. 696

Quiet operation—long continuous service—large capacity at low speed—for use with salt water, oil and tars. Self priming.—Will pump in either direction.

The rotor is a synthetic compound of neoprene and other chemicals resulting in high resistance to abrasion or wear, is impervious to oil and other impurities. The vanes of the rotor are highly flexible yet tough enough to resist the wear encountered by the passage of sand and other foreign matter; produce the necessary high vacuum and stand the continuous flexing as the rotor revolves.

The use of u-cup seals eliminates packing and packing glands. Lift in feet, 25 to 30. Head in feet, 30 to 40.

Not to be used with synthetic solvents such as gasoline, naphtha, etc.

		Spare	Size Pipe	Diam.	Extreme	Extreme	Extreme	Dimensions	Car	acity G.P	M.	
No.	Each	Rotors Each	Connection Inches	Shaft Inches	Height Inches	Width Inches	Length Inches	Base Inches	600 R.P.M.	*1000 R.P.M.	1500 R.P.M.	Weight Pounds
2	\$15.25	\$1.65	3/8	1/2	3 1/2	3 1/2	61/4	3 x13/4	4.1	4.9	6.4	2 5/8
3	20.00	2.50	1/2	5/8	3 3/4	4	6%	3 1/8 x 2 1/8	7.1	8.5	11.0	334
4	24.25	3.25	3/4	5/8	4	4 1/2	83%	4 x3	13.0	16.5	22.0	5 34
5	29.00	3.25	1	5/8	4	5	8 %	41/8×3	15.7	19.2	26.0	6
6	54.00	7.25	134	5/8	5	71/4	91/2	51/2 x 3 1/2	19.5	33.5	48.0	14

Spare U-cup seals with brass retainer—\$ .60 each. Specify size of shaft.

\*Recommended maximum for continuous duty. Capacity shown based on 0 lbs. pressure. With special length of shaft, price on application. Motor recommended ¼ to ½ H.P. for sizes No. 2-3-4-5 and up to ¾ H.P. for size No. 6.

### "Perko Rotoflex" Pump with V Belt Pulley

SHAFT SEAL—BALL BEARING PULLEY

Side pull absorbed by ball bearing and body, not by shaft. A large, double shielded, grease packed, lifetime ball bearing is mounted inside the pulley and on the pump body. Only torque is applied to the shaft. All sizes are supplied with double packed shaft seals which minimize shaft leakage and avoid necessity of tightening stuffing box. Supplied with brass grease cups.

0.8	P pranii P a anii	-upprou			
No.	Each	Diameter Pulley Inches	No.	Each	Dinmeter Pulley Inches
2	\$26.50	4	5	\$40.00	6
3	32.00	6	6	61.00	6
4	35.50	6			

For dimensions, capacity and other data, see Fig. 696 above.

## "Perko" Ford Gear Pumps

ALL BRONZE FOR MODEL A FORD MOTOR CONVERSIONS

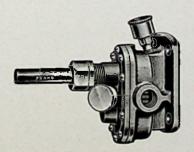


Fig. 530

With Spur Gears Each \$18.75

Size Pipe Connections Inches

Inches

Weight Pounds 4 1/2

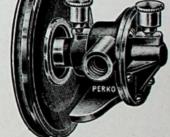


Fig. 703

## "Perko" Star Gear Pump

ALL BRONZE FOR STAR MARINE MOTOR CONVERSIONS

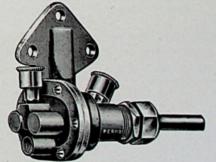


Fig. 804

With Spur Gears Each \$18.75

Size Pipe Inches 3/8

Diameter Drive Shaft

Weight Pounds 4



#### "PERKO" BRONZE GEAR TYPE PUMPS

NON CORROSIVE BRONZE THROUGHOUT WITH TOBIN BRONZE SHAFTS AND GEARS SIZES NO. 3 AND 4 HAVE DROP FORGED BRONZE BODIES

The entire interior, including bearings, is tool machined, insuring perfect alignment and absolutely tight joints, blank bearing ends are solid (not soldered), all bearings are fully lubricated by brass grease cups. The drive shaft is in perfect alignment with the pump body. Pipe connections are Briggs standard pipe tap.

### Single Lower Drive Shaft

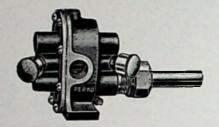


Fig. 684

Pump No.	With Spur Gears Each	With Herringbone Gears Each	Size Pipe Con- nection Inches		Approximate Weight Each Pounds
2	\$17.25	\$19.25	1/4	1/2	3 3/4
3	19.75	21.75	3/8	5/8	5 1/2
4	21.50		1/2	5/8	6
7	27.75	29.75	3/4	5/8	9
9	29.00	31.00	1	5/8	91/2

#### Double Lower Drive Shaft

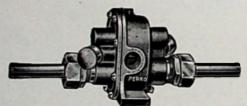


Fig. 685

Pump No.	With Spur Gears Each	With Herringbone Gears Each	Size Pipe Con- nection Inches	Size Drive Shaft Inches	Approximate Weight Each Pounds
2	\$20.50	\$22.50	1/4	1/2	4 1/2
3	23.50	25.50	3/8	5/8	61/4
4	25.25		1/2	5/8	63/4
7	32.00	34.00	3/4	5/8	91/2
9	34.00	36.00	-1	5/8	93/4

#### Single Upper Drive Shaft

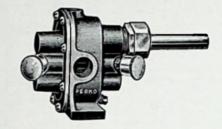


Fig. 682

Pump No.	With Spur Gears Each	With Herringbone Gears Each	Size Pipe Con- nection Inches	Size Drive Shaft Inches	Approximate Weight Each Pounds
2	\$17.25	\$19.25	1/4	1,42	3 3/4
3	19.75	21.75	3/8	5/8	5 1/2
4	21.50		1/2	5/8	6
7	27.75	29.75	3/4	3/8	9
9	29.00	31.00	1	5%	9 1/2

## Double Upper Drive Shaft

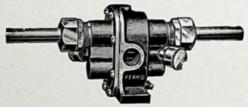


Fig. 683

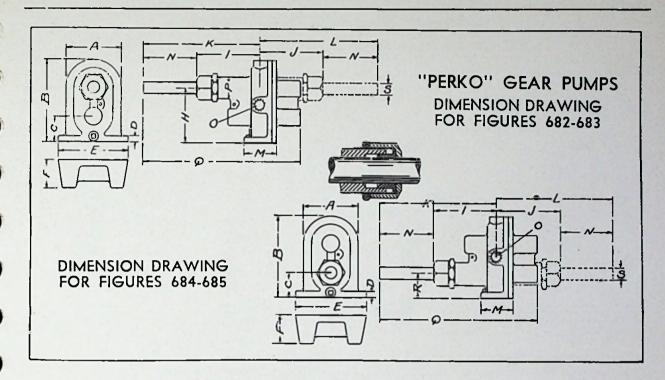
Pump No.	With Spur Gears Each	With Herringbone Gears Each	Size Pipe Con- nection Inches	Drive Shaft Inches	Approximate Weight Each Pounds
2	\$20.50	\$22.50	1/4	1/2	4 1/2
3	23.50	25.50	3/8	5/8	61/4
4	25.25		1/2	5/8	6 34
7	32.00	34.00	3/4	5/8	9 1/2
9	34.00	36.00	1	3/4	93/4

NOTE—Figs. 682 and 684 in all sizes except 1 inch are reversible. That is, any person, dealer, user, etc., can change a lower shaft pump to "upper shaft" or vice versa in a few minutes.

NOTE—Don't fail to state figure and pump number desired. When ordering pump with herringbone gears be sure to specify direction of rotation, clockwise or counter clockwise.

"Perko" Bronze Gear Pump Parts

			- 01110	21 OILLO	- COUL -	carries - con-			
Pump No.	Size Pipe Connection Inches	Cover Each	Spur Gear Each	Body Each	Drive Shaft Each	Metal Pack Gland Each	Lock Nut Each	Pack Nut Each	Idle Gear Shaft Each
2	.1/4	\$3.45	\$2.50	\$5.75	\$1.75	\$1.15	\$ .60	\$1.20	\$1.10
3	3/8	3.80	2.80	6.00	2.00	1.45	.75	1.25	1.60
4	1/2	4.50	3.25	7.00	2.00	1.45	.75	1.25	1.60
7	34	5.20	5.00	8.60	2.00	1.45	.75	1.25	1.60
9		7.00	6.00	9.00	2.00	1.45	.75	1.25	1.60



#### DIMENSION TABLE FOR "PERKO" GEAR PUMPS

Pump No.	Α	В	С	D	E	F	Н	I*	J*	K*	L*	М	N	Ot	P	Q	R	S
2	23%	31/2	123/32	3/10	2 1/8	17/32	2%	213/16	213/16	415/10	415/16	17/32	21/8	1/4	11/8	67/16	11/10	1/2
3	2¾	3 1/8	1 1/8	1/4	3%	1%2	234	2 1/8	2 1/8	5 3/8	5 %	115/32	21/2	3/8	11/4	7%	13/16	5/8
4	234	3%	1 1/8	1/4	3 1/8	13/8	234	31/16	31/10	591a	5916	19/16	21/2	1/2	11/4	7%	13/16	3/8
7	31/4	5%16	2%16	1/4	41/10	15/16	3%6	31/16	31/16	5%16	5%g	111/16	21/2	3,4	13%	732	19/16	5/8
9	31/4	5%16	29/16	1/4	4%10	1%6	3916	33/16	33/10	511/16	511/16	115/16	21/2	1	13%	7½	1916	58

Dimension in inches-Standard Pumps.

\*From center line of gear.

†Briggs standard pipe tap.

#### CAPACITY TABLE FOR "PERKO" GEAR PUMPS

#### 1200 REVOLUTIONS PER MINUTE

			P R	E	SS	UR	E	N.S.		
Pump	0 //	b	20 /	20 16.		40 <i>lb</i> .		lb.	80 <i>lb</i> .	
No.	GPM	нР	GPM	пр	GPM	НР	GPM	НР	GPM	нР
2	3.	1/6	2.62	1/6	2.25	1/4	1.8	14	1.45	1/3
3	5.	1/11	4.25	1/4	3.7	1/6	3.2	1/2	2.8	3/4
4	7.5	1/4	6.3	1/3	5.4	1/2	4.6	%	3.8	1
7	13.5	1/3	11.5	1/2	9.9	34	8.75	1	7.7	11/2
9	17	1/6	15.5	34	14.1	11/4	127	11/4	112	136

#### 1800 REVOLUTIONS PER MINUTE

							-			
Pump No.	0 10	b	20 16		40	16.	60 l	b.	80 16	
100.	GPM	нР	GPM	НР	GPM	HP	GPM	нР	GPM	нР
2	4.5	1/4	4.2	1/4	3.85	1/3	3.45	1/2	3.1	1,6
3	7.5	1/3	6.75	1/2	6.1	3/4	5.6	1	5.25	1
4	11.	1/2	10.	34	9.	3,	8.2	1	7.3	11/2
7	16.*	* 1/2	15.*	1*	13.3*	*1	12.*	11/2*	10.8*	*11/
9	20.*	* 3/4	18.75	1*	17.7*	*13/2	16.5*	2*	15.3*	+2

\*At 1500 R.P.M.
Gallons per minute flow of clean water—63° F.—no pipe friction.
Motor recommended shown by H. P. indicated.
Head in feet = 2.3 x lbs. pressure



### "Perko" Electric Water Faucets

ALL CAST BRONZE-WITH ADJUSTABLE SPOUT-6-12-32 AND 110 VOLTS

TURN THE HANDLE OR PRESS THE FOOT SWITCH AND THE WATER STARTS TO FLOW. NO HAND PUMPING OR PRIMING NECESSARY.

Connect one or several of the faucets to our Figure 748 electric pump. (See bottom of page for suggested installation.) Water is then supplied to your sink or lavatory as easily as in your home. All connections are threaded for 1/2 inch pipe.

# WITH HAND SWITCH High Spout Low Spout Fig. 727 Fig. 728

Fig.	Chromium Plated Each	Height Above Drain Board Inches	Length Below Drain Board Inches	Weight Pounds
727	\$29.50	8¼	5½	2 ½
728	29.00	3%	5½	2 ¼

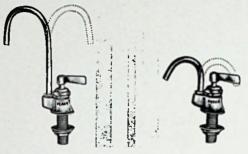
### Self Closing Handle Type



Chromium plated with hand switch. The handle is a spring action self-closing type that cannot waste water. Turn handle to start pump. The pump suffered by the start pump. automatically stops when handle springs closed.

Ht. Above Drain Board Inches	Spout Projects Inches	Weight Pounds
3 %	2 %	21/2
	Drain Board Inches	Drain Spout Board Projects Inches Inches

#### FOR FOOT SWITCH



High Spout Fig. 729

Low Spout Fig. 730

Fig.	Chromium Plated Each	Height Above Drain Board Inches	Length Tail Piece Inches	Weight Pounds
729	\$20.50	8 1/4	2 1/4	1 1/2
730	20.00	3 %	2 1/4	1 1/2

#### Foot Switch

CAST BRONZE-WATERTITE FOR USE WITH FAUCETS, FIGS. 729 AND 730

Fig. 731

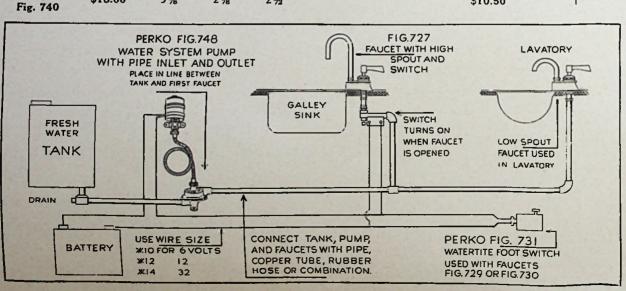
For convenient location in galley or lavatory.

A spring type switch requiring very slight pressure. May also be operated by knee or hand.

Size Box, inches, 35/16x25/16x11/8.

Chromium Plated Each \$10.50

Weight Pounds





### Improved Galley and Lavatory Pumps

IMPROVED INLET VALVE TO HOLD PRIME-WITH LEAKPROOF NEOPRENE U-CUP SEALS POLISHED BRONZE OR CHROMIUM PLATED

All Metal Handle High Spout



Fig. 467 Straight Base

Mahogany Handle High Spout



Fig. 473 Straight Base Fig. 478 Flared Base

Mahogany Handle Low Spout

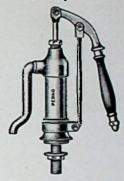


Fig. 474 Flared Base Fig. 479 Straight Base

These pumps have been greatly improved by the new inlet valves which operate under phosphor bronze spring tension holding the prime a considerable time. Also the use of a neoprene u-cup seal around the plunger rod instead of packing glands that always require attention. The handles cannot pinch the hand.

Fig.	Polished Bronze Each	Chromium Plated Each	Bronze Handle Only Each	Plated Handle Only Each	Mahogany Grip Only Each	Diam. Barrel Inches	Length Barrel Inches	Length Neck Inches	Threaded For Pipe Inches	Spread Handle Up Inches	Weight Pounds
467 473-478 474-479	\$19.25 21.75 24.25	\$23.00 25.30 28.00	\$2.50 3.30 3.30	\$3.60 4.50 4.50	\$.85 .85	½   ½   ½	6 ½ 6 6	2 ½ 2 ½ 2 ½ 2 ½	1/2 1/2 1/2 1/2	13½ 14 14	3½ 3½ 3½

NOTE-Fig. 467 supplied with flared base if desired, at same price.

ANGLE TYPE DOUBLE ACTION—SWIVEL SPOUT EFFORTLESS OPERATION



Fig. 677

Angle toward user when installed permits easy effortless operation.

Spout swivels to various positions.

Bottom valve is an improved type to hold prime. Capacity, 10 strokes per quart.

Polished Bronze Each	Chromium Plated Each	Inlet Pipe Size Inches	Spout Pro- jection Inches	Height Flange to Spout Inches	Weight Pounds
\$17.50	\$20.00	3/8	4	41/4	21/4

The "Ezy-Flo"

ALL BRASS-CHROMIUM PLATED

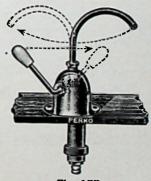


Fig. 177

Finger tip control, easy operation, self priming. Handle operates with short rocking strokes so effortless a child can work it.

Spout swivels to any direction desired. Inlet fits %" rubber hose or %" pipe. Capacity-20 strokes per quart.

Extreme Height Above Drain Board Inches Mounting Base Inches Weight Pounds Each \$21.00 4 x 1 1/3 214 Repair Kit, each-\$5.00

REPAIR PARTS-Due to several changes and improvments on all above except Fig. 177, we suggest that old parts needing replacement should be returned or accurately described.



## Galley and Lavatory Pumps

POLISHED BRONZE OR CHROMIUM PLATED NEOPRENE PLUNGER IMPROVED VALVES FLARED FLANGE





Fig. 144

Fig. 1040

Length of stroke is 5 % inches. Inlet is threaded for % inch pipe.

#### Capacity per minute, Low Speed Stroke-3 Gallons

Diam. Barrel Inches	Length Overall Inches	Projection Spout Inches	Height Spout Inches	Weight Pounds
		41/		31/2
Bro	shed nze			Repair Kits Each
\$16	6.00	\$18.00		\$2.00
		19.00		2.00
	Barrel Inches 1 ½ 1 ½ 1 ½ Poli Brc Es \$16	Barrel   Overall     Inches   Inches     1½   13½     1½   14½     Exposed     Polished     Bronze     Each     \$16.00     17.00	Barrel   Overall   Spout   Inches   1½   13½   3   1½   14½   4½	Barrel   Overall   Spout   Inches   I

Repair Parts-See botton of page 81.

## Bronze Utility Check Valve

WITH BRASS BALL CHECK AND STRAINER



Ideal for holding prime in the inlet line of galley and lavatory pumps, bilge pumps, etc. Threaded both ends.

	Pipe		
Each	Size	Length Inches	Weight Ounces
\$1.50	1/2	1 1/8	3 1/2

#### New Round Lavatory Sink

STEEL-WHITE PORCELAIN ENAMELED



Fig. 258

For fitting in minimum space, on corner stand or in small cabinet, has flat rim.

Complete with brass chromium plated drain fitting stopper and 1½ inch tail piece. Capacity 1 gallon.

Complete Each \$5.00	Spare Drain Fitting Each	Outside Diameter Inches	Inside Diameter Inches 1034	Depth Inches 4 1/2	Weight Pounds
	42.00	3 9 3 5 5 5			

#### Stainless Steel Sinks

DEEP DRAWN, SEAMLESS CONSTRUCTION 19 GAUGE 18-8—NATURAL FINISH

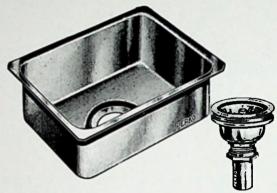


Fig. 356

Fig. 357

Corrosion resistant and immune to rust. No crevices for dirt or bacteria to collect. No painted or coated surface to crack or wear off. Fig. 357 Cup strainer is all stainless steel, with 11/2 inch tail piece used with size No's 1 to 4 inclusive.

No.	Sink Only Each	Strainer Only Each	Size Inside Inches	Size Outside Inches	Depth Inside Inches	
1	\$18.50	\$5.50	9%x13%	11%x15%	5	4
2	22.00	5.50		134x181/2	6	6 1/2
2	33.50	5.50		131/4×211/4	7-	6 1/2
4	45.25	5.50	16 x20 1/8	171/2×215/4	8 1/2	91/2
		OVAL B	OWL-20 g	auge		
5	19.50	2.50	10%x13%	12x15	5	21/4
	P	OUND E	BOWL-20	gauge		
6	14.75	2.50	10	111/8	5	2
7	24.25	2.50	13	141/4	6	4

Size Nos. 5, 6 and 7 have 2 inch drain hole for drain fitting as supplied with Fig. 402.

#### Pressed Steel Sink

WHITE PORCELAIN ENAMELED



Fig. 402

With flat rim and chromium plated combination sink drain and stopper in one unit, 11/2 inch tail piece.

Each Inches I	Size utside Depth uches Inches 34x18 434	Weight Pounds
---------------	--	------------------

Spare Drain Fittings only, each \$2.50

#### Corner Lavatory

WHITE VITREOUS CHINA



Fig. 830

Has integral back and round basin with overflow. Fitted with chromium plated waste plug chainstay, chain and stopper. Size of outlet 14 inches outside diameter. Inlet to pump 1/2 inch inside diameter.

No.	Without Pump or Faucet Each	With Faucet Each	Size of Sides Inches	Diam. of Basin Inches	Height Back Inches
1	\$29.00	\$36.00	12x12	10	2 1/2
2	35.50	42.50	14x14	- 11	21/2

NOTE-Pumps for above, see Figs. 144, 467, 473, 474, 478, 479 and 1040.

Faucets are chromium plated bronze marked hot or cold, please specify.

### Flat Back Lavatory

WHITE VITREOUS CHINA



Fig. 831

Has integral back and round basin with overflow. Complete with chromium plated waste plug, chainstay, and stopper. Size of outlet 11/4 inches outside diameter.

Without Pump or Faucet Each	With Faucet Each	Size Inches	Diam. Basin Inches	Height Back Inches
\$25.00	\$32.00	12×12	10	216

NOTE-Pumps for above, see Figs. 144, 467, 473, 474, 478, 479 and 1040.

Faucets are chromium plated bronze marked hot or cold, please specify.

#### Flat Back Lavatory

WHITE VITREOUS CHINA



Has integral back and round basin with overflow. Complete with chromium plated waste plug, chainstay, chain, and stopper Size of outlet 11/4 inches outside diameter. Inlet to pump 1/2 inch inside diameter.

Without Pump or Faucet Each	With Faucet Each	Size Inches	Diam. Basin Inches	Height Back Inches	
Each	Each	Theries	Anches	attenes	
\$29.50	\$36.50	14x14	- 11	21/2	

NOTE-Pumps for above, see Figs. 144, 467, 473, 474, 478, 479 and 1040.

Faucets are chromium plated bronze marked hot or cold, please specify.

#### Lucite Lavatories

CHIP PROOF-HEAT RESISTANT-RESILIENT LIGHTWEIGHT-IMPERVIOUS TO RUST LUSTROUS WHITE

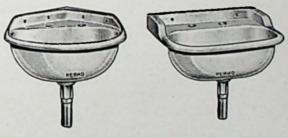


Fig. 823

Fig. 825

These sturdy basins have all the appearance of fine vitreous china and will perform all the functions of same while providing light weight and lower cost.

Will accommodatae regular faucets or our various lavatory pumps.

Supplied complete with 11/4 inch tail piece for outlet.

Fig.	Each	Size Inches	Size Basin Inches	Height Back Inches	Weight Pounds
823 825	\$18.00 18.00	13x13 14x12	12x9 12x7½	1 1/2	2 2

ALL ABOVE FURNISHED WITHOUT PUMP OR FAUCET UNLESS OTHERWISE SPECIFIED.



#### "PERKO" IMPROVED MARINE CLOSETS

FOR ABOVE OR BELOW WATERLINE

WHITE VITREOUS CHINA BOWLS-ALL BRONZE PUMPS AND FITTINGS, WHITE FINISH ALL WHITE SEATS AND COVERS WITH BRASS CHROMIUM PLATED HINGES WITH NEOPRENE "JOKER" BACKWATER CHECK VALVE

BOWL is of rim flushing type with thru-way integral boss on back for positive and watertight connection of supply pipe.

PUMP for supply and discharge is 2½ inches with double action cup leather piston. Length of stroke is 2 inches. VALVES, waste valve contains Neoprene Clack Washers. The combination supply and check valve has thick Neoprene washer. A Neoprene "Joker" Backwater Check Valve is in the discharge tail piece.

WASTE ARM has 1/2 inch pipe size clean out opening in both ends ample to allow cleaning out of foreign matter or quick draining when hauling out.

OUTLET is 11/2 inches I. P. S. with tail piece for lead pipe or hose connection.

INLET is 34 inch l. P. S. with tail piece for lead pipe or hose connection.

DIMENSIONS OVERALL, side to side, 17 inches; front to back, 16 inches; height, 131/4 inches; base 101/4 x 4% inches. Weight 47 pounds. Dimensions and weight include seat and cover.

#### The Boatman

With Hand Operated Supply Valve

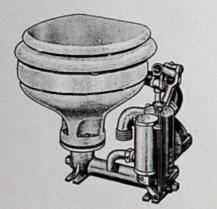


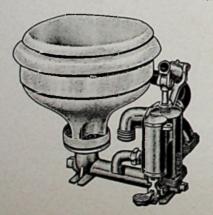




Fig. 828-C-H with Horizontal Handle	\$91.00
Fig. 828-C-V with Vertical Handle	92.00

### The Yachtsman

With Foot Operated Supply Valve





Vertical Handle

NOTE-All furnished with pump on right or left side. Right hand facing supplied unless otherwise specified. For Spare and Repair Parts, see next page. NOTE-HEIGHT HAS BEEN REDUCED 1% INCHES TO PERMIT INSTALLATION UNDER SEATS OR IN VERY LIMITED SPACE.

#### The Guardsman

3½ INCH PUMP-CAST BRONZE-WHITE FINISH-FELT PACKED PISTON VERTICAL HANDLE AND FOOT VALVE-WHITE SEAT AND COVER

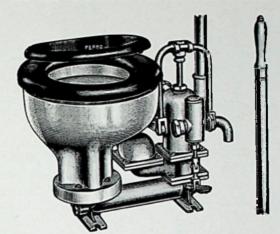


Fig. 1122 ..... Each \$155.00

REPAIR KITS—consisting of all necessary gaskets, washers, packing, clack valves, etc. Each. \$9.25.

BOWL ONLY-Height 12 inches, diameter base 7 inches, diameter top 12½ inches. Each. \$24.00.

DIMENSIONS OVERALL—Side to side, 2014 inches; front to back, 161/2 inches; height, 17 inches; base, 16x7 inches.

CONNECTIONS—Outlet, 2 inches; inlet, 1 inch, I.P.S.

WASTE ARM—Has 34 inch pipe size clean-out openings in both ends.

BORE-31/2 inches; stroke, 31/2 inches.

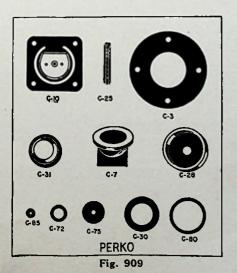
HANDLE-is chromium plated heavy brass tubing.

WEIGHT-72 pounds.

Furnished with pump on right side facing unless otherwise specified.

#### Spare Parts and Repair Kits

FOR FIGS. 828-C AND 829-C



White Seat and Cover complete Each	\$12.00
White Vitreous Bowl onlyEach	20.00
Flush Tube (Rubber Hose)Each	1.25

#### REPAIR KITS

Repair Kits complete, consisting of the following parts and quantity in 

Part No.	Each	Descriptino	Quantity Per Closet
C-3	\$ .75	Bowl Flange Gasket	1
C-7	1.30	Neoprene Joker Valve	
C-10	1.00	Neoprene Clack Valve	2
C-25	.20	Flax Piston Rod Packing	2
C-28	.60	Cup Leathers for Piston	2
C-30	.10	Bowl Spud Friction Washer	2
C-31	10	Bowl Spud Gasket	5
C-72	.10	Inlet Coupling Washer	-
C-75	.15	Inlet Valve Seat Rubber	
C-80	.10	Cap Nut Washer	2
C-85	.30	U-Cup Seal For Supply Valve	1
C-86	.02	Brass Cotter Pins 1/10x1"	6



#### Bronze Sea Cocks

WITH DRAIN PLUGS—ROUND WAY REMOVABLE HANDLE







Fig. 835

Without

Size Inches	Fig. 834 Each	Fig. 835 Each	With Fig. 86 Strainer Add Each	Size Strainer Inches	Hull Connection Deduct Each
3/	\$ 13.25	\$12.95	\$ .80	3 1/2	\$1.45
1	18.80	18.20	.80	3 1/2	1.95
11/4	23.45	22.85	1.15	414	2.85
11/2	26.55	25.95	1.75	5	3.40
2	44.40	43.45	2.00	6	5.50
2 1/2		65.00	4.50	8	7.50

#### **Bronze Tail Pieces**

For lead pipe or hose connections, furnished complete with rubber washer.

	I. P. S. Size Inches	Fig. 67 Each	Fig. 78 Each
727-	1/4	\$ .60	
	1/4 3/8	.65	
	½ ¾	.80	
	34	1.00	\$1.30
	1	1.30	1.90
	11/4	1.70	2.30
Fig. 67 Straight	1½	2.10	2.70
Fig. 78,	2	3.00	3.95
90 Degree	2 1/2	5.75	

## Thru-Hull Connections CAST BRONZE—WITH LOCKNUT WITH AND WITHOUT TAIL PIECE





Size Pipe	Fig.	Fig. 322	Length Neck	O.D. Tail	Diam.	Wt. Fig.	Wt. Fig. 322
Inches	Each	Each	Inches	Piece	Flange Inches	Lbs.	322 Lbs.
3/4	\$1.85	\$1.20	1%	<b>3%</b>	11/4	1/3	14
3/8	1.95	1.30	2%	1/2	1 3/8	1/2	1/6
1/2	2.30	1.50	2 3/8	1/2	1%	3/4	1/3
3/4	2.90	1.90	2 1/8	3/4	2	1	1/2
1	3.80	2.50	2 1/8		21/4	11/4	1/2 3/4
11/4	5.45	3.75	31/2	11/4	2 %	1 3%	1
11/2	6.60	4.50	3%	11/2	3	21/4	11/4
2	9.95	6.95	4	2	31/2	31/2	2
21/2		10.60	4		41/2		23/4

#### Water Outlet

CAST BRONZE

No.	Pipe Inches	Flange Inches	of Pipe Inches	Weight
1	3/4	2 3/4	21/4	12 oz.
2	1 .	3	31/4	1 lb.
	Plain Bronze		lished ronze	Chromium Plated
No.	Each	1	Each	Each
1	\$3.2	5	\$4.25	\$5.00
2	3.7	5	5.00	5.80

## Speedboat Strainers

CAST BRONZE-ONE PIECE



Designed to prevent clogging. Will admit full supply of water at all speeds.

Pipe Size Inches	Each	Length Pipe Inches	Size Strainer Inches	Weight Pounds
1/2	\$2.50	21/4	2½x3½	5/8
3/4	2.90	2%6	3 x4	<b>%</b>
1	3.75	3	31/8×41/4	1 1/8
11/4	5.15	3 %	3 3/8 x 4 1/2	13/4
1 1/2	6.60	3 %	3½x5	2

## Scoop Strainers

CAST BRONZE



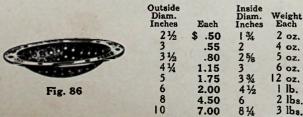
Fig. 66

Can be used with inlet connection, Fig. 64. No. 1 will fit up to ½ inch. No. 2 will fit up to 1 inch. No. 3 will fit up to 1½ inches. No. 4 up to 2 inches.

No.	Each	Outside Dimension Inches	Weight Each
1	\$ .65	3½x2½	4 oz.
2	.90	5 x3½	7 oz.
3	1.50	61/4×41/4	1 lb.
4	3.25	814x514	2 lbs.

### Round Strainers

PLAIN CAST BRONZE





#### Round Portlights

CAST BRONZE GLASS AREA IS SAME DIAMETER AS OPENING

### Deck Lights

CAST BRONZE-FOR WOOD DECKS



Fig. 317



Fig. 838

Diam. Opening Inches	Plain Bronze Each	Glass in Clear Inches	Diam. Frame Inches	Thickness of Glass Inches	Weight Pounds	Diameter Clear Glass	Plain Bronze	Polished Bronze	Thickness Glass	Outside Diam. Frame	Weight	
4	\$ 8.50	4	7%	1/4	2 %	Inches	Each	Each	Inches	Inches	Pounds	
5	10.25	5	8 %	1/4 1/4 3/8 3/8	4 3/8	31/2	\$6.25	\$8.20	1/4	5 3/4	1%	
6	12.00	6	9 %	1/4	55/16	- /-		<b>V</b> 0 <b>U</b>				
7	17.75	7	10%	3/8	8	4	6.60	9.00	1/4	61/2	2	
8	20.00	8	121/4		9 %							
10	37.00	10	15%	1/2	191/2	5	7.75	10.60	3/8	71/2	3 3/8	
12	66.00	12	171/8	1/2	24	6	9.50	12.50	3/8	8 1/2	3 %	
						0	9.50	12.50	78	0 72	J 78	
All si	zes except	12 inch l	have Rei	movable t	linge Pin.	8	16.50	20.50	1/2	11	714	
10 inc	h has Two	Fastening	8.				. 0.00	20.00	/2		- /4	

#### MORE-AIR PORTLIGHTS

INSIDE PATTERN-FOR WOOD HULLS CAST BRONZE—PLAIN COMPLETE WITH OUTSIDE FINISHING RING GLASS AREA IS SAME DIAMETER AS OPENING ALL SIZES ARE GROOVED FOR SCREENS WITH REMOVABLE HINGE PIN



12 inch has Three Fastenings.

Fig. 157





_	]	For Thickness of Wood -				
Opening Inches	1½ Inch Plain Bronze Each	3 Inch Plain Bronze Each	5 Inch Plain Bronze Each	Outside Diameter Frame Inches	Thickness Glass Inches	Weight 1½ Inch Spigot In Pounds
4	\$10.00	\$11.50	\$13.75	6%	1/4	4 1/2
5	12.50	13.75	16.00	7%	1/4	6
6	14.70	16.20	18.50	8%	1/4	7%
7	21.25	23.00	25.75	101/8	%	11
8	24.00	26.25	29.25	111/2	₹8	141/2
9	31.50	34.00	37.75	1314	1/2	181/2
10	42.25	47.00	51.00	141/4	1/2	20
12	52.50	58.50	64.50	17	1/2	321/2

For 1 inch wood, use 11/2 inch price. For 2 or 21/2 inch wood use 3 inch price, etc. 10 and 12 inch sizes have two fastenings.

Without outside finishing ring, deduct from above prices the following:

	4 Inch	5 Inch	6 Inch	7 Inch	5 Inch	9 Inch	10 Inch	12 Inch
Plain	\$ .80	\$1.00	\$1.25	\$2.00	\$2.25	\$3.00	\$3.75	\$5.00

Note - Screens for all portlights above see Fig. 442.

Stock size is for 11/2 inch wood, larger sizes made to order only.



#### Marine Windows

WITH SPIGOT
PLAIN BRONZE OR ALUMINUM
WATERTIGHT—TWO FASTENINGS



Fig. 796

Furnished complete with removable screen and outside finishing frame.

Designed to supply the maximum amount of air and light possible while keeping bulk and weight to a minimum.

No.	Size of Opening Inches	Plain Bronze Each	Alu	lain F	Without inishing Frame Deduct Each	Size Glass in Clear Inches
1	5x12	\$27.50	\$2	5.00	\$1.65	5x12
2	7x16	35.00	3	0.00	1.90	7x16
No.	Dimer Outsi Fra Inc	de of me	Length Spigot Inches	Thickness Glass Inches	Bronze Weight Pounds	Aluminum Weight Pounds
1	7%x	14%	2	1/4	16	7
2	10 x	1914	2	1/4	22	10

#### Marine Windows

WITHOUT SPIGOT
PLAIN BRONZE OR ALUMINUM
WATERTIGHT—TWO FASTENINGS



Fig. 803

Furnished complete with removable screen. Without finishing frame.

No.	Size of Opening Inches	Plain Bronze Each	Plain Aluminum Each	Bronze Weight Pounds	Alum- inum Weight Pounds
3	5x12	\$25.50	\$23.00	111/2	5
4	7x16	32.00	28.00	16	7

#### SPECIAL FINISHING FRAMES FOR FIG. 803

3	5x12	\$ 4.00	\$ 3.75	21/2	201
4	7x16	5.25	5.00	3 1/2	1 1/2
holes d	These	Special Finis	hing Fran	nes have vindow fr	mounting ame.

For other dimensions, see Fig. 796 above.

Note—Spare Screens for Figs. 796 and 803, size 5x12 inches—\$4.50 each. Size 7x16 inches—\$5.25 each.

### Oval Inside Portlights

PLAIN BRONZE OR ALUMINUM WITH OUTSIDE FINISHING RING AND REMOVABLE HINGE PIN



Fig. 897

	Bro	nze —	Alum	inum—
Size of	For Wood	For Wood	For Wood	For Wood
Opening	Thickness	Thickness	Thickness	Thickness
Inches	11/2 Inches	2 Inches	11/2 Inches	2 Inches
4×7	\$21.00	\$21.75	\$16.00	\$17.00
5×9	25.75	26.75	19.25	20.50

#### Without Outside Finishing Ring, Deduct from Above Prices the Following.

Size		Bronze		Aluminum	
Inches		Each		Each	
4x7		\$ .65		\$ .65	
5x9		1.00		1.00	
Size of	Length	Width	Thickness	Bronze	Aluminum
Opening	Flange	Flange	Glass	Weight	Weight
Inches	Inches	Inches	Inches	Pounds	Pounds
4x7	10	7	3/8	8 ½	4 ¼
5x9		8	3/8	1 1 ¾	6
Note-	Screens for	above.	See Fig.	443.	

## Rubber for Portlights



			Fig. 461	
Size			Per	Foot.
1/4	inch	square	\$	.20
%is	inch	square		.25
%	inch	square	***************************************	.30

Supplied only in 121/2 foot lengths

### Glass Run Window Channel

WITH STAINLESS STEEL BEAD



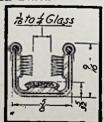


Fig. 482

Vulcanized rubber covered, nichair lined. The highest quality channel of its type.

Supplied only in 8 foot lengths.

Per Length \$5.50	Outside Width Inches	Helght Inches	For Glass Inches	Weight Per Length Pounds
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#### Round Frames For Glass

CAST BRONZE



Fig. 444

Size No.	Plain Each	Polished Each	Chromium Plated Each	Inside Diameter Inches	Outside Diameter Inches	Weight Each in Lbs.
1	\$1.25	\$2.00	\$3.00	3 %	5 3/4	1/2
2	1.35	2.10	3.10	4 3/8	61/4	5/8
3	1.45	2.30	3.40	4 1/8	634	11/18
4	1.50	2.60	3.75	51/4	71/4	3/4
5	2.10	3.30	4.50	5 %	8	7/8
6	2.50	3.75	5.25	61/4	81/2	1
7	3.00	4.40	6.00	71/4	934	1 3/8
8	4.25	6.00	8.00	81/4	111/4	1 7/8
9	4.95	7.25	9.75	91/4	121/4	2
10	6.00	8.10	10.75	101/4	131/4	2 3/4

## Round Finishing Rings For Inside Portlights

CAST BRONZE-PLAIN



Fig. 455

Size Plain Portlight Diam. Diam. No. Each Inches Inches Inches	Weight Pounds
1 \$1.10 4 4\%32 5\%16	1/2
2 1.30 5 55/16 69/16	1/2
3 1.60 6 6\(\frac{1}{16}\) 7\(\frac{1}{16}\)	5/8
4 2.65 7 75/16 91/16	1
5 2.75 8 85/16 101/4	1 34
6 3.75 9 95/16 11 1/2	2 3/4
7 4.75 10 10% 13	2 3/4
8 6.75 12 12 15 1/4	3 %

## Portlight Chains

POLISHED BRONZE



Length Inches

Each

\$1.50

Size Plate Inches

Weight Ounces

### Round Portlight Screens

BRONZE—SPRING TYPE
FOR FIGS. 157 AND 317 PORTLIGHTS



Fig. 442

For Size Opening Inches	Bronze Each	Dull Chrome Plate Each	For Size Opening Inches	Bronze Each	Dull Chrome Plate Each
4	\$2.65	\$3.65	8	\$4.35	\$5.35
5	3.00	4.00	9	4.65	5.65
6	3.35	4.35	10	5.75	6.75
7	3.95	5.00	12	6.60	7.75

#### Oval Portlight Screens

BRONZE—SPRING TYPE FOR FIG. 897 PORTLIGHT



Fig. 443

For Size Opening Inches	Bronze Ench	Chrome Plate Each
4 x 7	\$3.85	\$4.85 5.50
5 x 9	4.50	3.30

## Round Portlight Screens

BRASS FRAME—COPPER SCREENING FRICTION TYPE—FOR RECESSED PORTLIGHTS



Fig. 434

Outside Diameter Inches	For Size Portlight Inches	Each	Outside Diameter Inches	For Size Portlight Inches	Each
41/16	4	\$2.50	83/16	8	\$4.20
51/16	5	2.85	9316	9	4.40
61/18	6	3.20	101/18	10	5.50
71/16	7	3.80	111/16	12	6.25

Larger sizes made to order—Price on Application.



#### "PERKO" MONEL ALCOHOL STOVE

2 BURNER — PRESSURE TYPE —WITH REMOVABLE TRAY

MONEL METAL BODY AND TRAY — NATURAL FINISH

CAST BRONZE BURNERS — BRASS. CHROMIUM PLATED GUARD RAIL

CONSTRUCTION - of heavy gauge monel metal. Satin finish.

BURNERS - Cast bronze with slotted manifold producing intense heat.

TRAY — An integral part of front apron, readily removable for cleaning but will not rattle. It insulates the fuel tank from heat. Sheet asbestos is affixed to its bottom. Tray cannot slide out when boat is heeled.

GUARD RAIL - Brass, chromium plated. Front section is removable to accommodate large pots and pans.

AIR PRESSURE GAUGE - Accurate and easy to read; it shows best working pressure.

PRESSURE PUMP - All brass, knob locks into pump, cannot back out under back pressure.

FILLER CAP AND AIR ESCAPE VALVE - Inside of front apron, but readily accessible.

FUEL TANK — 1 1/8 gallon capacity, rectangular shape and hidden by front apron, fully insulated from heat of burners.

FUEL CONSUMPTION — Using a good grade of "Burning Alcohol", both burners will operate continuously for 14 hours on one gallon of fuel and one pound of air pressure.

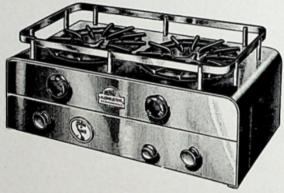


Fig. 364

Complete Each	
\$82.50	

Extreme Length Inches 20½

Extreme Width Inches Extreme Height Inches 8½

Weight Pounds 27

ABOVE PRICE INCLUDES A FIG. 365 FUNNEL FOR FILLING.

#### **Funnel**

HEAVY GAUGE ZINC-BRASS STRAINER



Fig. 365

Designed primarily for filling our stoves, this funnel is a handy one for various purposes on a boat, at home or in a garage.

Each	Capacity Ounces	Diam. Mouth Inches	Diam. Spout Inches	Welght Ounces
\$2.00	3	3	3%	2

#### Pot Holders

ALL BRASS-CHROMIUM PLATED

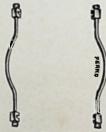


Fig. 369

Made for attachment to our alcohol stove (fig. 364) Adjustable on the stove for various sizes of pots, pans, etc.

No.	Per Pair	Length Centers of Rall Inches	Weight Per Pair Ounces
1	\$3.00	9%	71/2
2	3.00	101/2	8

Size No. 1 is for older models of stove.

#### "PERKO" STEEL ALCOHOL STOVES

2 OR 3 BURNERS—PRESSURE TYPE—WITH REMOVABLE TRAY GALVANIZED SHEET STEEL BODY—NATURAL FINISH CAST BRONZE BURNERS—BLACK PLASTIC CONTROL KNOBS

CONSTRUCTION - Of galvanized sheet steel to permit finishing as desired.

BURNERS - Cast bronze with slotted manifold producing intense heat.

TRAYS - Readily removable for cleaning but will not rattle and cannot slide out when boat is heeled.

AIR PRESSURE GAUGE - Accurate and easy to read; it shows best working pressure.

PRESSURE PUMP - All brass, knob locks into pump, cannot back out under back pressure.

FUEL TANK — One half gallon capacity, cylindrical shape and insulated from heat of burners. The 3 burner stove has two tanks spaced evenly between the burners.

FUEL CONSUMPTION — Using a good grade of "Burning Alcohol," the 2 burner stove will operate continuously for seven hours on one filling of fuel and one pound of air pressure.

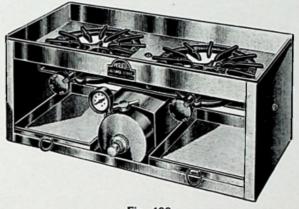


Fig. 400

	Complete Each	Length Body Inches	Width Body Inches	Extreme Height Inches	Weight Pounds
2 Burner	\$54.00	20¾	101/2	8 %	20
3 Burner	83.00	31		8 %	30

#### **Funnel**

HEAVY GAUGE ZINC-BRASS STRAINER



Fig. 365

Designed primarily for filling our stoves, this funnel is a handy one for various purposes on a boat, at home or in a garage.

Each	Capacity Ounces	Diam. Mouth Inches	Diam, Spout Inches	Weight Ounces
\$2.00	3	3	₩	2

#### Pot Holders

ALL BRASS-CHROMIUM PLATED

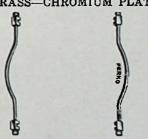


Fig. 369

Made for attachment to our alcohol or gas stoves. Adjustable on the stove for various sizes of pots, pans, etc.

No.	Per Pair	Length Centers of Rail Inches	Weight Per Pair Ounces
1	\$3.00	93%	71/2
2	3.00	103%	8
Size No.	1 is for older mo	dels of stove.	



## "PERKO" STEEL BOTTLED GAS STOVES

FOR USE WITH PROPANE OR BUTANE L. P. GAS
2 OR 3 BURNERS—WITH REMOVABLE TRAY
GALVANIZED SHEET STEEL BODY—NATURAL FINISH
COLD FORGED ALUMINUM CENTER SIMMER BURNERS
BLACK PLASTIC CONTROL KNOBS

Supplied in galvanized finish for maximum reduction in price and to enable the owner to paint or finish as desired to match decorative scheme of galley.

THE BURNER is especially unique, in fact it's two burners in one. The outer rim is a high speed cooking burner for quick boiling, frying, etc. There is also a tiny, inner, economical simmer burner which maintains the cooking while using only a fraction of the gas usually consumed with ordinary single burners and it can be used independently of the starting burner; no other type of burner possesses this decided advantage. The center simmer burner provides exactly the right heat for every cooking requirement from the full fire power of the starting burner to the mere beads of flame of the "keep-warm" position of the center simmer. All controlled by the one control knob.

EASY CLEANING - The burner cap can be removed in less than one second.

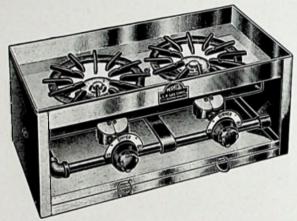
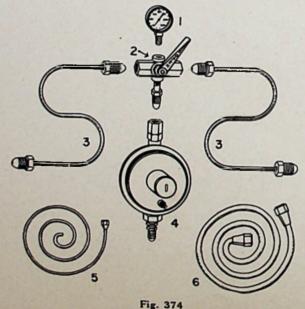


Fig. 300

	Complete Each	Length Body Inches	Width Body Inches	Extreme Height Inches	Weight Pounds
2 Burner	\$42.50	20 ¾	101/2	8 %	20
3 Burner	62.00	3 I		8 %	30

## **BOTTLED GAS STOVE EQUIPMENT**



No.	Description	Each
1	Polished Brass Pressure Gauge	3.75
2	Forged Bronze Two Way Valve Manifold with Indicating Handle	13.50
3	Pigtails (Tank Connections)	2.75
4	Pressure Regulator with Relief Valve and Mounting Brackets	10.50
5	1/4 inch Copper 10 Foot Vent Line with One Fitting	3.00
6	½ inch Copper 20 Foot Fuel Supply Line with Two Fittings	9.50
7	Plugs for Manifold	1.50

Note—The above Manifold item No. 2 and Regulator item No. 4 is listed by the Underwriters' Laboratories.

#### "PERKO" MONEL BOTTLED GAS STOVE

FOR USE WITH PROPANE OR BUTANE L. P. GAS 2 BURNER - WITH REMOVABLE TRAY MONEL METAL BODY AND TRAY - SATIN FINISH COLD FORGED ALUMINUM CENTER SIMMER BURNERS BRASS, CHROMIUM PLATED GUARD RAIL AND POSTS BLACK PLASTIC CONTROL KNOBS AND TRAY HANDLE

The last word in convenience, practicability and good looks with many of the faults of older models eliminated. No enamel to chip, crack or discolor. Monel metal is rich looking, easily cleaned and is non-corrosive.

THE BURNER is especially unique, in fact it's two burners in one. The outer rim is a high speed cooking burner for quick broiling, frying, etc. There is also a tiny, inner, economical simmer burner which maintains the cooking while using only a fraction of the gas usually consumed with ordinary single burners and it can be used independently of the starting burner; no other type of burner possesses this decided advantage. The center simmer burner provides exactly the right heat for every cooking requirement from the full fire power of the starting burner to the mere beads of flame of the "keep-warm" position of the center simmer. All controlled by the one control knob.

EASY CLEANING - The burner cap can be removed in less than one second.

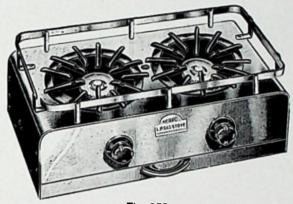


Fig. 373

Complete Each \$77.00

Extreme Length Inches 20 34

Extreme Width Inches 12

Extreme Height Inches

Weight

### **BOTTLED GAS STOVE EQUIPMENT**

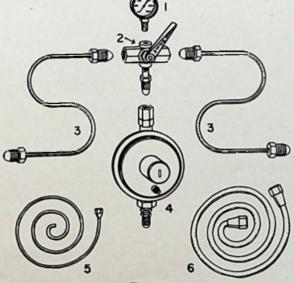


Fig. 374

No.	Description	Each
-	Polished Brass Pressure Gauge\$	3.75
2	Forged Bronze Two Way Valve Manifold with Indicating Handle	13.50
3	Pigtails (Tank Connections)	2.75
4	Pressure Regulator with Relief Valve and Mounting Brackets	10.50
5	¼ inch Copper 10 Foot Vent Line with One Fitting	3.00
6	½ inch Copper 20 Foot Fuel Supply Line with Two Fittings	9.50
7	Plugs for Manifold	1.50

Note - The above Manifold item No. 2 and Regulator item No. 4 is listed by the Underwriters' Laboratories.



### "Perko" Alcohol Burner



	Each
Burner with Needle Valve and Control Handle, no	
Fittings, Filter or Priming Pan\$	11.00
Wire Brush Filters Only	
Priming Pan Only	
Packing Nut for Valve Stem	
Grates only for Stove	

#### Alcohol Stove Parts

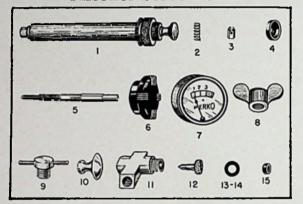


	Fig. 368	
No.		Each
	Fuel Tank Air Pump complete	\$2.75
2	Pump Check Valve Spring	
3	Pump Check Valve	.45
4 5	Leather Plunger for Pump	.30
5	Needle Valve Stem	.55
6	Plastic Control Knob	.85
7	Air Pressure Gauge	2.75
8	Wing Nut for Filter Entrance	
9	Filler Cap for Fuel Tank	
10	Knob for Removable Tray	.55
11	Fitting for Fuel Supply Line	.90
12	Screw for Air Escape Valve	
13	Lead Gasket for Wing Nut No. 8	
14	Lead Gasket for Filler Cap No. 9	
15	Graphite Packing for Valve Stem	.12

#### Water Deck Irons GALVANIZED CAST IRON



Size of Stove Pipe Inches	Each	Outside Diam. of Neck Inches	Diam. Flange Inches	Weight Pounds
2	\$2.75	21/4	51/2	11/4
2 1/2	4.40	2 3/4	61/2	i ¾
3	4.65	3 %	71/2	4
31/2	5.80	3 %	81/2	5
4	6.50	4 3/8	91/4	61/4
4 1/2	7.50	4 1/8	10	8
5	8.50	5 %	101/2	9
51/2	9.00	5 %	ii"	934
6	10.00	61/2	111/4	11%
7	12.50	7%	123/4	131/4
8	18.00	8 3/8	13%	19

#### Hot Air Cabin Heater

CAST ALUMINUM BODY 6-12-32 AND 110 VOLTS

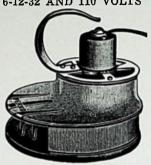


Fig. 595

Now you can use your galley stove to heat your boat. Works equally well on gas, alcohol, kerosene, coal or any other type of stove.

This Hot Air Heater takes the heat from the stove and distributes it to all corners of the cabin. This blast of hot air will heat the average cabin in a few minutes and maintain a comfortable temperature as long as required.

Just place the heater on the stove over the burner, connect electric fan wires to battery, light the stove and in a few minutes the cabin will be as comfortable as you want it.

Volts	Each	Amperes	Diam. Inches	Height Inches	Weight Pounds
6	\$24.00	1.5	81/2	7	91/2
12	26.00	.75	8 1/2	71/4	9 34
32	28.00	.28	81/2	7 3/4	101/4
110 D.C.	30.00	.08	8 1/2	8	11

The 110 volt heater furnished for D.C. current only Specify Voltage When Ordering

# Improved Blower and Ignition Switches

CAST BRONZE-FLUSH TYPE



Watertite Enclosed Switch Fig. 149



Non-Watertite Switch Fig. 155

With these improved switches the engine cannot be started before the blower has been turned on, then before the engine can be stopped the blower must again be started thus clearing out any remaining fumes before and after engine operation.

Fig.	Polished Bronze Each	Chromium Plated Each	Diam. Face Plate Inches	Diam. Box Inches	Depth Inches	Weight Pounds
149 155	\$12.50 11.50	\$14.00 13.00	4 1/4 3 3/8	3 1/4	1 3/4	1 34

#### Marine Exhaust Blowers

CAST ALUMINUM HOUSING 6-12-32 OR 110 VOLTS



Fig. 778

For removing dangerous gasoline fumes from the bilge and engine room, exhausting excess heat and cooking odors from the galley. Getting rid of foul air or odors from cargo holds and bilges.

An absolute necessity to the motor boat because their use decreases the hazard of fires and explosions from gasoline fumes.

No.	Intake Inches	Outle	t	Overall Inches	Cubic Per Mi	Feet	Flange Inches
1	3	21/2	7	1/2 x 6 x 6	90	)	31/2 x 31/2
2	4	4		½x8x8	186	5	4 ½ x 4 ½
Volts	No. Eac		No. 2 Each	No. 1	eres— No. 2	Ho. 1	No. 2
6	\$20.0	00	\$32.00	5.5	7.0	1/75	1/40
12	22.0	00	35.00	2.7	4.0	1/75	1/40
32	25.5	50	40.00	1.0	1.3	1/75	1/40
LIAD	C 20 0	20	40.00	30	32	1/40	1/60

A caution plate is furnished with every Blower.

## Exhaust Blowers For Bilge Installation

FULLY ENCLOSED SPARKPROOF MOTOR CAST ALUMINUM HOUSING—ALL VOLTAGES



Fig. 791

A blower that may be installed in the bilge without fear of sparks igniting gasoline fumes.

Motor enclosed in brass cover. Shaft passes through a Neoprene seal and electric cable enters cover through a watertight packing gland.

No.	Size Intake Inches	Size Outle Inch	et	mensions Overall Inches	Capa Cubic Per M	Feet	Size Flange Inches
1	3	23/	2 7	1/2 x 6 x 6	90	0	31/2×31/2
2	4	4		½x8x8	18	6	4 1/2 x 4 1/2
Volts	No. Eac		No. 2 Each	—Amr	eres_ No. 2	No.	rsepower 1 No. 2
6	\$26.0	00	\$38.00	5.5	7.0	1/7	5 1/40
12	28.0	00	41.00	2.7	4.0	1/7	5 1/40
32	31.0	00	46.00	1.0	1.3	1/7	5 1/40
110 D	.C. 33.	50	46.00	.30	.32	1/4	0 1/60

A caution plate is furnished with every Blower.

#### Improved Exhaust Blowers

CAST ALUMINUM HOUSING 6-12-32 OR 110 VOLTS

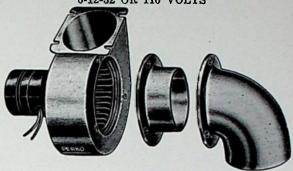


Fig. 795

The improvement is obvious; notice that the inlet fittings are not an integral part of the housing, permitting use of the straight or 90° fitting whichever is preferred.

The neck of the straight fitting is 1½ inches long allowing better fit of duct. The 90° fitting can be set at three different angles and eliminates the use of an elbow in the duct.

	3 Inc		4 Inch		
	With	With	With	With	
	Straight	900	Straight	900	
	Inlet	Inlet	Inlet	Inlet	
Volts	Each	Each	Each	Each	
6	\$24.00	\$25.50	\$37.00	\$39.50	
12	26.00	27.50	39.00	41.50	
32	29.50	31.00	45.00	47.50	
110 D.C.	32.50	34.00	45.00	47.50	

All other dimensions and data, same as Fig. 778. Specify type of inlet required.

#### Turbine Ventilators

FOR MARINE USE
IMPROVED BEARING RUNNING IN OIL
GALVANIZED STEEL OR COPPER



Fig. 744

For removing gasoline fumes from engine room and bilge, cooking odors from the galley, ventilation of the cabins, etc.

The moving breeze whirls the head and the resulting vacuum causes a powerful upward lift to the air below.

Absolutely quiet in operation, durable and rainproof.

Inside Diam. Inches	Galv. Steel Each	Copper Each	Height Overall Inches	Diam. Overall Inches	Capacity C.F.M.	Galv. Weight Pounds
4	\$12.00	\$20.00	10	7	140	234
5	12.25	20.50	12 .	81/2	152	31/2
6	12.50	21.00	13	91/2	196	41/2
7	14.75	25.00	15	11	243	6
8	15.75	26.50	16	121/2	285	7
10	19.25	32.50	181/2	15	445	10
12	22.00	36.00	20	1732	650	12

With reinforcing band around bottom of neck supplied to order, price on application.

Galvanized vents are painted aluminum.



#### Cowl Ventilators

ROUND MOUTH WITH THREADED DECK PLATE SHEET STEEL OR SHEET BRASS CAST BRONZE DECK PLATE



Fig. 510

Steel ventilators are hot galvanized after fabrication.

Deck Plate Size Inches	Galv. Each	Polished Brass Each	Chromium Plated Each	Diam. Mouth Inches	Height Overall Inches	Weight Pounds
2	\$16.25	\$22.50	\$28.50	4	51/2	11/8
21/2	17.50	24.00	30.00	5	61/2	134
3	19.00	25.00	32.00	6	8	2 1/2
4	23.00	29.00	36.00	8	11	4
5	38.50	45.00	54.00	10	13	6
6	51.50	58.00	69.00	12	16	9
8	97.00	115.00	143.00	16	21	151/2

#### Cowl Ventilators

WITH SWIVEL DECK PLATE SHEET STEEL OR SHEET BRASS CAST BRONZE DECK PLATE



Fig. 513

Deck Plate Size Inches	Galv. Each	Polished Brass Each	Chromium Plated Each	Dium. Mouth Inches	Height Overall Inches	
3	\$21.50	\$27.75	\$34.50	6	8	2
4	27.75	34.00	42.50	8	12	3 3/4
5	41.00	47.75	59.00	10	131/2	4 3/4
6	54.00	62.00	77.00	12	171/2	71/2
8	80.00	98.00	123.00	16	201/2	111/2
10	139.00			20	28	30

Note—10 inch size is heavy 18 gauge steel and price applies to cowl only with galvanized band on neck. No deck plate.

Cover for Fig. 513 deck plate for use when ventilator is removed, price on application.

Polished copper vents supplied to order, price on application.

#### Cowl Ventilators

OVAL MOUTH
CAST BRONZE—WITH THREADED DECK PLATE

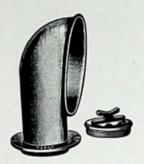


Fig. 509

Deck Pinte Size Inches	Polished Bronze Each	Chromium Plated Each	Size Mouth Inches	Height Above Deck Inches	Weight Pounds
3 4	\$27.00	\$35.00	6 1/4 x 4	8 1/8	6
	36.00	46.00	6 1/2 x 4 3/4	8 5/8	8

#### Cowl Ventilators

OVAL MOUTH

CAST BRONZE-WITH SWIVEL DECK PLATE



Fig. 515

Supplied complete with cover for use when ventilator is removed.

Deck Plate Size Inches	Polished Bronze Each	Chromium Pinted Ench	Size Mouth Inches	Height Above Deck Inches	Weight Pounds
3 4	\$32.00 41.00	\$40.00 51.00	61/4×4 61/4×43/4	9 1/8 9 5/8	6

#### VENTILATOR NOTES

Spare Deck Plates for above Cowl Ventilators, see Figs. 419 and 527.

When ordering cowl ventilators only, without deck plate, please specify whether with or without ring on neck

All above cowl ventilator sizes are standard; special sizes and heights made to order.



#### Cast Bronze Cowl Ventilators

WITH CAST BRONZE SCREW DECK PLATE ROUND MOUTH



Fig. 421

Deck Plate Size Inches	Polished Bronze Each	Chromium Plated Each	Diam. Mouth Inches	Height Overall Inches	Weight Pounds
3	\$27.00	\$35.00	6	73%	4 1/2
4	36.00	46.00	8	93%	812

### Midget Ventilators

CAST BRONZE-OVAL MOUTH BRONZE SWIVEL DECK PLATE AND COVER



Fig. 634

Polished Bronze Each	Chromium Plated Each	Diam. Bottom Opening Inches	Extreme Height Inches	Size of Mouth Inches
\$16.50	\$22.00	2	61/8	21/4 x 4 1/2

### Ice Box Ventilators

CAST BRONZE



Fig. 783

No.	Polished Bronze Ench	Chromium Plated Each	Diam. of Opening Inches	Size Plate Inches	Weight Pounds
1	\$6.25	\$8.25	1 %	21/2×21/2	1/2
-2	6.50	8.60	2 1/2	34x31/4	× 1
3	8.00	10.25	3	41/8×41/8	1 1/2
4	9.75	12.25	3 3 %	4%x4%	134

## Streamlined Space Saver Ventilator

CAST BRONZE



Starboard Side Fig. 771

For mounting on catwalk against outside of deck house or bulkhead where space is limited.

Bosses for fastening are inside ventilator out of sight but angled toward mouth for insertion of wood screws.

Supplied in pairs for starboard and port sides. When ordering a half pair mention side required.

Polished	Chromium	Extreme	Extreme	Dimensions	Weight
Bronze	Plated	Length	Height	Mouth	Per Pair
Per Pair	Per Pair	Inches	Inches	Inches	Pounds
\$12.50	\$15.00	934	412	4x   34	

### Space Saver Ventilators

CAST BRONZE-IMPROVED

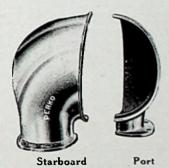


Fig. 782

Designed especially for mounting against outside of deck house or cabin, takes up very little space, can be used to advantage in connection with exhaust fan Fig. 778.

No.	Diameter at Base Inches	Measurements at Mouth Inches	Extreme Height Inches	Weight Per Pair Pounds
1 2	2 ½ 3 ½	2%x5 31/8x71/2	6.34	3%
No.	Plain Bronze Per Pair		ze	Chromium Plated Per Pair
1 2	\$11.00 15.50			\$20.50 25.50

Note-When ordering a half pair, please mention whether for port or starboard side.



### New Rain and Spray Proof Cowl Ventilator

ALL BRASS
COMPLETE WITH BRONZE THREADED
DECK PLATE, COVER AND KEY



Fig. 503

Provides ventilation at all times regardless of weather or water conditions.

May be turned in any direction, volume can be regulated and ventilator closed entirely from inside the cabin.

Equipped with brass mosquito screen and locking screw to prevent removal of cowl.

Deck Plate Size Inches	Polished Brass Each	Chromium Pated Each	Diam. Mouth Incnes	Height Overall Closed Inches	Weight Pounds
3	\$48.00	\$56.00	6	91/2	41/4
4	69.00	78.00	8	10%	71/4
5	96.00	108.00	10	141/2	111/2

# New Rain and Spray Proof Streamline Ventilator

SHEET BRASS

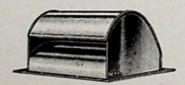


Fig. 633

This ventilator will swallow large volume of air but traps rain or spray against entrance to area being ventilated. Water will drain out onto deck.

Equipped with brass mosquito screen.

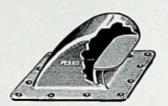
Polished Brass Each \$42.00	Chromiun Plated Each \$49.50	Extreme Height Inches 5½	Dimensions Base Inches	Dimensions Mouth Inches	Weight Pounds 21/2
5000000				71 72	472

#### Cruiser Ventilator

STREAMLINE—CAST BRONZE



Fig. 908



Cut away view showing screen and water guard

An extremely neat ventilator for cruiser decks and cabin roofs.

An integral water guard inside mouth prevents spray or rain from entering ventilator. A bronze screen permanently installed to keep insects out of cabin.

Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Size Base Inches	Height Overall Inches	Weight Pounds
\$16.50	\$21.00	\$23.50	7×7	3 1/2	4 3/4

#### Junior Transom Ventilators

CAST BRONZE



Fig. 1059

Plain Bronze Each	Polished Bronze Each	Chromium Pinted Each	Size Flange Inches	Depth Collar Inches	Weight Pounds
\$1.65	\$2.75	\$3.85	6 34 x 2 1/4	3/4	3/4

With bronze screen soldered in, add \$.80 each.

## New Senior Transom Ventilator

CAST BRONZE



Fig. 1052

Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Dimensions Inches	Weight Pounds
\$3.00	\$4.00	\$5.00	10x4	1

No.

Weight

Weight Ounces

#### Clam Shell Ventilators

CAST BRONZE



Fig. 323

Width Opening Inches	Height Opening Inches	Size Base Inches
2 % 3 ½	1 3/4	3 % x 3 ½ 4 x 3 %
No.	Polished Bronze Each	Chromium Plated Each
4	\$2.30	\$3.40
ä	2.70	3.60

#### Streamline Ventilator

CAST BRONZE



Fig. 324

No.	Width	Height	Size
	Opening	Opening	Base
	Inches	Inches	Inches
2 3	1 ¾	1	2 % x 3 %
	2 ¾	1 %	3 % x 4 %
	No.	Polished Bronze Each	Chromium Plated Each
	2	\$2.30	\$3.40 3.60

## Streamline Ventilator

CAST BRONZE

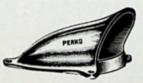


Fig. 476

No.	Polished Bronze Each	Chromium Plated Each	Width Opening Inches	Height Opening Inches	Size Base Inches	Weight Pounde
6	\$6.00	\$7.50	31/2	2 3/4	5x6	- 1
7	7.50	9.00	4 3/8	31/4	6x7	2
8	10.00	12.00	5%	31/2	7x8	234

#### Streamline Ventilator

CAST BRONZE



Fig. 310

A ventilator with graceful lines that will enhance the appearance of any boat.

Polished Bronze Each \$6.00	Chromium Plated Each \$7.75	Size Opening Inches 3x1	Size Base Inches 7½x4	Weight Pounds
--------------------------------------	--------------------------------------	----------------------------------	--------------------------------	------------------

#### Ventilator Deck Plates

CAST BRONZE-SCREW TYPE



Fig. 527

Complete with key and extra ring for cowl.

Diameter Opening Inches	Machine Finish Each	Polished Brouze Each	Chromium Plated Each	Diameter Plate Inches	Weight Pounds
2	\$ 6.25	\$ 7.25	\$ 8.75	3 5%	3/4
21/2	7.00	8.00	9.50	4 1/2	1
3	8.00	9.25	11.00	4 1/8	11/4
31/2	10.50	12.00	14.00	51/2	134
4	12.00	14.00	16.00	5 3/4	21/4
5	17.50	20.00	22.50	71/16	334
6	22.50	25.00	27.50	81/4	4 1/2
8	48.00	52.00	57.00	101/4	71/2

#### Swivel Deck Plates

CAST BRONZE—FOR COWL VENTILATORS



Fig. 419

Permits cowl to be turned to any direction.

For Size Venti- lator Inches	Open- ing in Base Inches	Machine Finish Each	For Size Venti- lator Inches	Inches Open- ing in Base	Machine Finish Each	
3	21/4	\$10.25	8	7	\$30.00	
4	31/2	15.50	10	91/2	50.00	
5	41/2	19.25	12	1114	61.00	
6	5	23.00				

Price does not include cap, if cap is desired add 25% to above prices.



# IMPROVED "PERKO" DASHBOARD STEERERS WITH CREAM COLORED WHEEL

15 INCH WHEEL—HARD RUBBER, STEEL CORE POLISHED ALUMINUM CASTINGS—DOUBLE DRUM TYPE—FOR TILLER ROPE

These steerers have definite improvements over older models, both in looks and practicability.

THE WHEEL — Has an attractive glossy cream color, baked on by a new process that is resistant to wear. scratches and weather.

THE THROTTLE CONTROL — Of pleasing modern automotive design, it is located below the wheel as illustrated; thus located it is more readily available to the operator while out of the way of clothing and accidental operation. It also provides more direct and positive operation of the throttle with less effort than the old center-of-wheel type.

THE SHAFTS — Are all keyed at both ends, into the wheel and the drum. No pins used. Steel shafts are cad mium plated.

THE ALUMINUM HOUSING — is mortised into hub of wheel for more rigid construction and better appearance.

DASH BRACKET — is fixed and at an angle of 22 degrees.

#### WITHOUT THROTTLE CONTROL

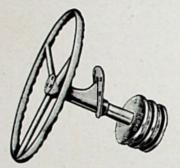


Fig. 537

With Steel Shaft Each	With Brass Shaft Each	Length Overall Inches	Diam. Drum Inches	Length Dash to Wheel Inches	Weight Pounds
\$16.50	\$19.00	13	3 1/2	6	5

### Nylon Covered Tiller Rope

STEEL CENTER-VERY FLEXIBLE



Fig. 760

Nylon plastic is extruded around the steel strands under heat and pressure to form a solid one piece coating, a rope which combines strength, flexibility, durability and corrosion resistance.

The nylon coating cushions the wires against abrasion and protects them against oils, detergents, alkalies and oxidizing acids.

The glass smooth surface is pleasant and smooth to andle

The steel core construction is 7 x 19.

Outside Diameter Inches	Per 100 Feet	Core Diameter Inches	Breaking Strength Pounds	Weight Per 100 Ft. Pounds
552 348	\$22.00	7532	920	1.6
	28.00	732	920	-3.6
14	48.50	310	4200	7.5

Supplied only in 250 foot reels.

#### WITH THROTTLE CONTROL

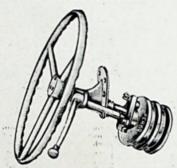


Fig. 538

With Steel Shaft Each	With Brass Shaft Each	Length Overall Inches	Diam. Drum Inches	Length Dash to Wheel Inches		Weight Pounds
\$24.50	\$26.50	13	31/2	6	6	6

#### Braided Tiller Rope

MAHOGANY COLOR—BRONZE WIRE CENTER



Fig. 761

No.	Outside Diam. Inches	Per 100 Feet
6	%6	\$12.00
8	1/4	15.50
10	5/16	20.00
12	%6 %	22.50

Supplied only in 500 foot coils.



### Racing Outboard Steerers

WITHOUT CONTROLS CREAM COLORED WHEEL DOUBLE DRUM TYPE

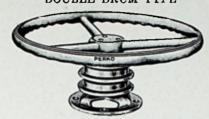


Fig. 737

All metal parts are aluminum alloy castings for light weight. Wheel is 3 spoke hard rubber in glossy cream finish with steel core.

Each	Diam. Wheel Inches	Diam. Base Inches	0verall Height Inches	Diam. Drum Inches	Weight Pounds
\$16.00	15	614	6	3 1/2	6 1/2

#### **Drum Steerers**

GALVANIZED CAST IRON OR CAST BRONZE FOR TILLER ROPE



Fig. 661

Overall Diam. Inches	Galv. Each	Polished Bronze Each	Size Base Inches	Diam. Drum Inches	Length Drum Inches
12	\$ 8.25	\$11.00	3 % x 3 %	2 3/8	3
16	11.25	18.50	4 x4	2 5/8	3 3/8
20	19.50	31.00	51/8×51/8	3 %	4 5/8

#### SPARE PARTS

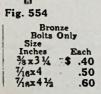
	12	inch-	16	inch-	20 i	nch-
Posts with	Galv.	Bronze	Galv.	Bronze Each	Galv.	Bronze
Back Plates	\$1.55	\$2.25	\$2.60	\$4.50	\$4.50	\$7.10
Drums	.70	.70	1.30	1.30	3.25	3.25
Acorn Nuts	.25	.80	.45	1.00	.70	1.60
*Wheel Only	3.50	5.00	5.00	8.00	7.50	11.00
*Does not inc	lude ha	ndles or	bolts.			

## Handles and Bolts FOR STEERING WHEELS



Fig. 553

Handles Only geth Bolts Only Size Inches Each 1/2 30 40 7/ax 4 .3:



#### Worm Geared Steerers

ALL BRONZE THROUGHOUT—PLAIN FINISH MODEL A-1—FOR WHEEL BOX MOUNTING

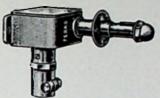


Fig. 512

Steering ratio,  $10\frac{1}{2}$  to 1.  $1\frac{1}{4}$  turns equals 45 degree rudder angle.

For rudder of 4 square foot area.

For 1 inch vertical shaft.

	Diam. Wheel Shaft	*Length Wheel Shaft	Length For Huh	Size Box Overall	Weight
Each	Inches	Inches	Inches	Inches	Lhs.
\$60.00	1	4	21/8	7×2½	133,

MODEL E—With reversed shaft for thru - bulkhead mounting at above price. Please specify.

\*Length between box and wheel.

MODEL A-1 supplied unless otherwise specified.

WITH WHEEL AND FITTINGS ALL BRONZE WITHOUT VERTICAL SHAFT

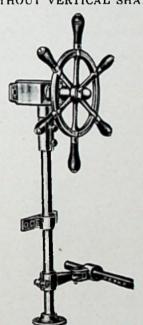


Fig. 820

No.	With Polished Bronze Wheel Each	With Chromium Plated Wheel Each	Diameter Wheel Inches	Weight Pounds
1	\$ 95.00	\$105.00	16	22
2	98.00	108.00	20	25
3	114.50	126.00	24	29

Wheel used is Fig. 976 sizes 4, 5 or 6.

If preferred with wheel Figs. 657 or 914 add difference in price of wheel only.

Other spare parts see Fig. 865 Part Nos. 1, 5, 6 & 8.



#### Chain Type Steerers

ALL BRONZE-WITH ROLLER CHAIN FOR WHEEL BOX MOUNTING



Sprocket, 4% inch diameter, 21 teeth. Chain, 36 inches long, % inch pitch. Shaft machined for hub 2% inches thick.

Wheel End of Shaft Inches	Each	Length Shaft Inches	Dimensions of Bracket Inches	Weight Pounds
<b>7∕8</b>	\$44.00	2 1/8	6x5½	11
1	44 00	27/6	6 - 5 16	111/6

#### \*Length between bracket and wheel.

Chain only, without Shackles, per foot\$ Chain Shackles, each	
Acorn Nuts, each Sprocket only, each	1.10
Wheels for above see Figs. 657, 914 and 976, Size 5 and 6.	s 4.

Special machining of shaft, on application.

Supplied with reversed shaft for thru-bulkhead mounting at above prices, please specify.

## Chain Type Steerers WITH INLAID MAHOGANY WHEEL



Fig. 676

Diameter Wheel Inches 20 24 28	Each \$91.00 97.50 110.00	Wheel End of Shaft Inches 7/8

Supplied for wheel box or thru-bulhead mounting at same price, please specify.

#### Chain Type Steerers

WITH CAST BRONZE WHEEL POLISHED OR CHROMIUM PLATED

These are our Fig. 678 steerers with Fig. 976 sizes No. 1, 2 or 3 wheels.

#### FOR WHEEL BOX MOUNTING



Fig. 67

Outside Diameter Wheel Inches	Polished Bronze Each	Chromium Plated Each	Machined Wheel End of Shaft Inches	Diam. Shaft Inches
16	\$56.00	\$65.00	<b>7</b> /8	1
20	64.50	75.00	7/8	i
24	75.00	85.00	1	i

Wheel, shaft and nut only are polished or plated, balance of steerer is plain bronze.

#### FOR THRU-BULKHEAD MOUNTING

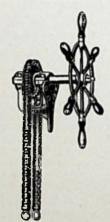


Fig. 675

Outside Diameter Wheel Inches	Polished Bronze Each	Chromium Plated Each	Machined Wneel End of Shaft Inches	Diam. Shaft Inches
16	\$56.00	\$65.00	<b>%</b>	1
20	64.50	75.00	<b>%</b>	1
24	75.00	85.00		1

Wheel, shaft and nut only are polished or plated, balance of steerer is plain bronze.

NOTE—Both of the above steerers can be supplied with Fig. 914 wheel on Page 103. For price, add the difference between Figs. 976 and 914, sizes No. 1, 2 or 3.



#### Steering Wheels

CAST BRONZE—WOOD GRIPS
% INCH KEYWAY



Fig. 976

With Short Hub for steerers Figs. 674 and 675

No.	Overall Diam. Inches	Polished Bronze Each	Chromium Plated Each	For Shaft Inches	Length Hub Inches	Weight Pounds
1	16	\$18.00	\$23.50	7/8	1	4
2	20	21 00	29.00	7/8	1	634
3	24	36.50	45.00	1	11/4	10%

#### With Long Hub for steerers Figs. 512 and 678

No.	Overall Diam. Inches	Polished Bronze Each	Chromium Plated Each	For Shaft Inches	Length Huh Inches	Wt. Lhs.
4	16	\$21.00	\$26.50	34, % or I	21/8	41/4
5	20	25 00	33.00	%. % or 1	21/8	73/4
6	24	41.00	49.50	1	21/8	11

### Aluminum Steering Wheel

CAST ALUMINUM—NON MAGNETIC 2 SPOKE TYPE EMERY FINISH

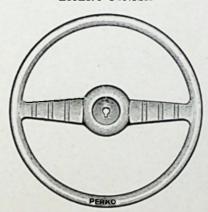


Fig. 539

A modern and attractive design, this wheel made of non-magnetic aluminum will not effect action of compass. An ideal type of wheel for flying bridge steerers.

Nub is not bored or keyseated but is supplied with 4-inch pilot hole.

Will accommodate maximum bore of 11/4-inches with keyway.

Each	Dinmeter Inches	O.D. Hub Inches	Pounds
\$24.00	161/2	41/4	61/2

Brass finishing cap for hub of wheel in chromium plated, satin finish, is available, each \$3.00.

#### Steering Wheels

BRASS—WOOD GRIPS—ROUND SPOKES
4 INCH KEYWAY



Fig. 914

With Short Hub for steerers Figs. 674 and 675

No.	Overall Diam. Inches	Polished Brass Each	Chromium Plated Each	For Shaft Inches	Length Hub Inches	Weight Pounds
1	16	\$22.00	\$26.50	7/8	1	41/4
2	20	25.50	31.50	7/8	1	51/4
3	24	31.50	38.00	1	11/4	6%

#### With Long Hub for steerers Figs. 512 and 678

No.	Overall Diam. Inches	Polished Brass Each	Chromium Plated Each	For Shaft Inches	Length Hub Inches	Wt.
4	16	\$25.50	\$30.00	%, % or 1	2 1/8	4 3/4
5	20	29.50	35.75	34, % or 1	21/8	61/4
6	24	36.50	43.00	1	21/4	7

### Mahogany Steering Wheels

WITH PLUGGED OR INLAID RIM CAST BRONZE HUB—POLISHED

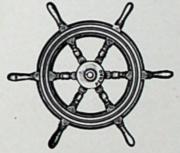


Fig. 657

Diam. Overall Inches	Plugged Each	Inlaid Each	For Shaft Inches	Size Keyway Inches	Thickness of Hub Inches	No. of Spokes
18	\$37.50	\$42.50	7/8	1/4	21/8	6
20	40.50	47.00	% or 1	1/4	21/4	6
24	48.75	53.50	1	1/4	2 1/8	6
28	61.50	67.50		1/4	2 1/8	6
30	67.50	75.00	1	%16	21/8	8
32	81.00	91.00	11/4	3%	2 1/2	8
36	110.00	121.00	11/4	3%	2 3/2	8
42	126.00	138.00	114	%	21/2	8
48	141.00	154.00	1%	3/8	3	8
54	177.00	190.00	1%	₩,	31/4	8
60	197.00	210.00	1 %	3/8	31/4	10

Chromium plated hub supplied to order sizes up to 28 inches inclusive, add \$5.50 each. 30 to 36 inches inclusive, add \$7.50 each.

NOTE—Shaft sizes above are stock bores, special boring supplied to order, price on application.

Wheel with inlaid hub supplied unless otherwise specified.



#### Cruiser Rudders

CAST MANGANESE BRONZE



Fig. 816

*	Rlade Size Inches	Each	Blade Thick- ness Inches	Diam. of Stock Inches	Length of Stock Inches	Longer Stocks Per Inch	Weight Pounds
7	1 12x12	\$26.50	1/4	1	12	\$ .33	18
¥	2 13x13	28.75	14	1	12	.33	21
	14x14	34.75	1/4	1	12	.33	22
	15x15	39.50	14		12	,33	25
	16x16	44.25	1/4	1	12	.33	30
	18x16	46.25	14	1	12.	.33	33
	18x18	50.00	14	1	12	.33	35
	20x18	60.00	1/4	1 1/4	18	.52	37
	20x20	66.00	14	11/4	18	.52	40
	22x18	68.50	1/4	11/4	18	.52	43
	22x20	86.00	3,8	11/4	18	.52	56
	22x22	88.00	3/8	134	18	.52	61
	24x20	88.00	3/8	11/4	18	.52	69
	24x22	90.00	3/8	11/4	18	.52	77
	24×24	92.50	3%	11/4	18	.52	83

### Runabout Rudders

HARD BRONZE BLADE-BRONZE SHAFT



Fig. 824

Hard Bronze having a composition of 60% copper and 40% zinc has a tensile test of 80,000 pounds, which is higher than that of the best quality brass.

Length of shaft above blade is 12 inches. Special lengths to order, price on application.

No.	Each	-Width of Top Inches	Bottom	Height of Blade Inches	Thickness of Blade Inches	Diam. Shaft Inches
1	\$14.50	8	7	7	14	34
. 2	22.00	9	8	8	716.	1
W.	night No. 1.	4 pound	s; No.	2, 71/4	pounds.	

#### Speed Boat Rudders

CAST MANGANESE BRONZE

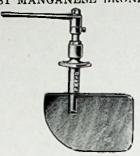


Fig. 813

Furnished complete with tiller, collar, nut, rudder port and machined stock. Standard length stock above blade 12 inches.

No.	Complete Each	Rudder Only Ench	Blade Size Inches	Diam. Stock Inches	Length Tiller Inches	Weight Rudder Only Pounds	
1	\$55.50	\$28.75	9x14	1	12	13:	
2	62.00	35.50	10x16	1	12	14	
3	75.00	39.50	11x18	11/8	14	22	
4	98.50	51.00	12x20	11/4	16	26	

With stock longer than standard, price on application. "Rudder Only" supplied without machined stock. With machined stock, price on application.

#### Hyspeed Rudder and Stock

CAST MANGANESE BRONZE

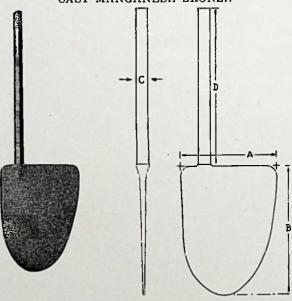


Fig. 818

Constructed in perfectly balanced proportion. Designed for express cruisers, runabouts, speedboats and all boats not carrying a skag.

		Longer Stock Add per		mensions.	Inches-		Weight
N.	Ench	Inch	A	В	C	D	Pounds
1	\$30.75	\$ .33	9	12	1	16	121/2
2	37.50	.39	101/2	14	1 1/8	18	15
3	39.50	.52	12	16	134	18	20
4	52.75	.59	131/2	18	1 %	24	30
5	74.50	.65	15	20	1 1/2	24	46
6	110.00	.85	161/2	22	134	30	69
7	149.00	1.10	18	24	2	36	84
8	202.00	1.30	20	26	21/4	40	120
9	315.60	1.45	24	. 30	21/2	48 -	225

### Galvanized Rudders

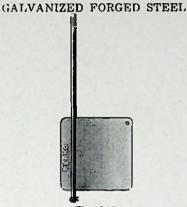


Fig. 6	347
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Size No.	Galv. Each	Size Plate Inches	End of Post Inches	Rudder Post Inches	Rudder Post Inches	Weight Pounds
0.0	\$ 6.25	6x 8x1/10	5/8	25	34	3
0	11.50	12x12x18	5/8	40	3/4	- 11
1	13.75	14x14x1/8	5/8	42	34	13
2	20.50	16x16x3/16	34	48	1	25
3	29.50	18x18x3/16	34	52	- 1	35

### Rudder Skags

DROP FORGED STEEL OR BRONZE



Fig. 649

Size No.	Galv. Each \$ 4.25	Plain Bronze Each \$ 9.00	Dimensions Inches 24x1½x3/8 30-13/-14	Rudder Post Inches	Weight Pounds 4 ½
1	6.25	14.50	30x1 1/4 x 1/2	74	7
2	11.50	27.75	42x2 x 5/8		17

Straight Tillers
GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 650 With square hole and set screw for Fig. 647 rudder.

Length Inches	Galv. Each	Plain Bronze Each	Square Hole Inches	Weight (Iron) Pounds
8	\$2.85	\$ 5.30	5/8 x 5/8	1
10	3.20	5.85	58 x 58	134
12	4.80	6.35	34 x 34	21/8
15	6.00	11.50	1/8 x 1/8	31/2

### Bronze Tillers

CAST BRONZE



Fig. 810
For round stock rudders Figs. 813, 816 818.

No.	Each	Length Inches	Rudder Stock Inches	S:ze Keyway Inches	Weight Pounds
1	\$ 6.35	8	% or 1	7/16 or 1/4	11/2
2	7.50	10	1	1/4	2
3	8.80	12	1	1/4	31/4
4	15.75	14	1 1/8	1/4	41/2
5	25.00	16	11/4	5/1e	7
Note	—Size No.	1, please	specify	size of rudder	stock.

## Rudder Ports with Stuffing Box

CAST BRONZE-PLAIN

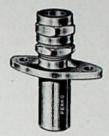


Fig. 1089

Eliminates leakage at rudder post entrance through

Bronze bearing is full length of casting. Assures smooth action with minimum wear.

Size Inches	Each	Size Flange Inches	Length Bearing Inches	Drilled for Fastening Inches	Weight Pounds
3/1	\$ 9.25	4 x2	5 1/8	%6	3
7/8	9.50	41/4×21/4	5%	3/8	314
1	9.75	41/4 x 21/2	51/4	3/8	3 1/2
1 1/8	10.75	5 x25/8	51/4	1/2	334
11/4	12.00	5%x3	6%	3/2	5 1/2
138	14.00	61/4×31/4	634	1/2	61/2
1 1/2	15.50	6½x3½	634	3/2	634

#### Bronze Rudder Collars



Fig. 815

For Diam. Stock Inches	Each	Outside Dinmeter Inches	Thickness Inches	Weight Ounces
34	\$1.80	13/8	13/16	24
7/4	2.00	11/4	7/8	4
1	2.40	134	15/16	7
1 1/8	2.40	134	15/16	6 1/2
14	3.25	2 1/8	15/16	- 11
13/8	4.00	2 1/2	138	19
1 1/2	4.25	21/2	1 1/8	19

### Quadrant Tillers

GALVANIZED MALLEABLE IRON



		Fig. 651		
Radius Inches	Galv. Each	Max. Diam. Rope Inches	Square Hole Adjustable Inches	Weight Pounds
7	\$ 9.00	% % %	% to %	3
10	13.00	3/8	%s to 1	514
12	16.00	3/8	% to 1%	81/2
15	31.00	1/2	34 to 134	13
18	44.00	5%	1 to 13/8	27
24	79.00	34	11/2 to 1%	46



#### Rudder Brace Pintles

GALVANIZED MALLEABLE IRON OR BRONZE

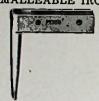


Fig. 1071

Size No.	Galv. Each	Plain L. o.120 Each	Between Straps Inches	Length Straps Inches	Width Straps Inches	Galv. Weight Ounces
00	\$ .65	\$ .80	5%	2 %	3/4	8
0	.70	.90	*4	31/2	7/8	9
1	1.00	1.10	3/8	41/4	%	IÓ
2	1.20	1.40	1	4 1/2	1	11
3	1.60	1.75	11/4	4%	1	13
4	2.10	2.50	1 1/2	5 1/2	14	22

## Rudder Brace Gudgeons

GALVANIZED MALLEABLE IRON OR BRONZE STRAP TYPE



Fig. 1070

Size No.	Galv. Each	Plain Bronze Each	Between Straps Inches	Length Straps Inches	Hole Minimum Inches	Galv. Weight Ounces
00	\$ .46	\$ .60	5/8	2	1/2	4
0	.52	.70	3/4	2 1/2	1/2	5
1	.65	.85	<b>7/8</b>	3 "	1/2	61/2
2	.80	1.20	1	3	9/16	7 2
3	.95	1.50	114	31/4	%	á
4	1.20	1.80	1 1/2	3 %	3/4	15

#### NARROW PLATE TYPE



Fig. 1072

Size No. 00 0	Galv. Each \$.52 .53	Plain Bronze Each \$.65 .70 .75	Length Plate Inches 2 2 2 ½	Width Plate Inches I I	Hole Mini- mum Inches 1/2 1/2	Galv. Weight Ounces 2½ 2½ 4
2	.80		2 %	11/4	%16	4

#### WIDE PLATE TYPE



Fig. 1073

Size No. 00 0 1 2 3	Galv. Each \$ .53 .62 .65 .80 1.00 1.15	Plain B. or.ze Each \$ .70 .75 .80 .95 1.25 1.40	Length Plate Inches 3 ½ 3 ½ 3 ½ 4 ½ 4 ½ 4 ½ 4 ½ 4 ½ 4 ½ 4 ½	Width Plate Inches % % % 1 1 1/8	Hole M.ni- mum Inches 1/2 1/2 1/2 1/2 1/2 1/2 1/2	Galv. Weight Ounces 3 3 4 6 8
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### Rudder Brace Gudgeons

GALVANIZED MALLEABLE IRON OR BRONZE SCREW TYPE



Fig. 1074

Size No.	Galv. Each	Plain Bronze Each	Diam. Shank Inches	I. D. Hote Minimum Inches	Galv. Weight Ounces
00	\$.24	\$.24	3%	1/2	1
0	.30	.30	%	1/2	i 1/2
1	.40	.40		1/2	ż ′-
2	.50		%16 1/2	%16	2

## Reverse Gear Controls

CAST BRONZE

A good substantial handle which will not bend under side leverage, special hard government bronze. Handle is removable and a flush plate is furnished to fit opening in deck flange.

Furnished with two sockets threaded for ¾ inch rod. Deck flange is 5 x 2¾ inches. Length of throw is 8½ inches.

Polished	Chromium	Length	Length	
Bronze	Plated	Handle	Lever	
Ench	Each	Inches	Inches	
\$35.00	\$42.00	25	8	

Fig. 720

### Reverse Gear Controls

CAST BRONZE



Fig. 278

An ideal control for light installations, such as runabouts, small cruisers, etc. Clevis supplied for ½-inch pipe.

Polished Bronze Per Set	Chromium Plated Per Set	Length Overall Inches	Length Handle Inches	Size Base Inches	Weight Pounds
\$14.00	\$17.50	20	16	4%x21/2	31/2
Spare cle	vises, see I	ig. 865	Part No	. 2	



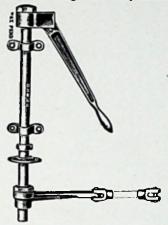
#### "Perko" Reverse Gear Controls

HEAVY CAST BRONZE—POLISHED FOR 1 INCH OR 1% INCH SHAFT

NO MACHINING OF SHAFT—NO EXTRA EXPENSE

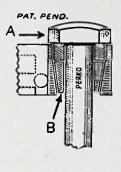
The main feature of "Perko" controls is that it is unnecessary to have shaft machined, such as threading, key seating or drilling.

A mechanically perfect wedging device is incorporated in both upper and lower lever. When installing it is only necessary to insert tapered bushing "B" around shaft and tighten nut "A" and an absolutely fast grip on the shaft is obtained, at no extra expense for machining, and very little labor.



Length

Interior view of tapered fastening device.



Weight

Bulkhead

Fig. 663 Sockets

Length Handle Inches	Lower Lever Inches	Threaded for Rod Inches	to Center of Shaft Inches	Shaft Pounds
18	10	3/4	2	151/4
Fittings con	p'ete—ex	cept shaft	***********	\$45.0

Handle complete with tapered bushing and nut...... 22.50
Lever complete with tapered bushing and nut...... 18.00

Chromium plated, add 30% to above prices.

Do not fail to specify size of shaft when ordering; parts for  $1\frac{1}{8}$  inch shaft supplied unless otherwise specified.

#### Clutch Control Handles

CAST BRONZE-FOR 1 INCH SHAFT



Used with Fig. 822 clutch control.

Length from Center of Bore Inches	Polished Bronze Each	Chromium Plated Each	Weight Pounds
8	\$ 9.00	\$12.50	134
10	10.00	13.50	2
12	11.50	15.00	21/4

#### New Clutch Control Handle for Dual Control

CAST BRONZE-FOR 1 INCH SHAFT



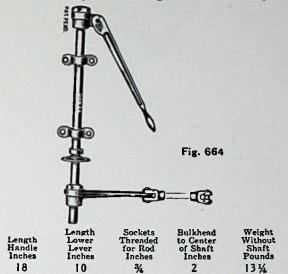
Bored straight through for 1-inch shaft. Has ¼-inch keyway and tightening bolt.

Polished Bronze Ench	Chromium Plated Each	Length from Center of Bore Inches	Weight Pounds
\$11.50	\$14.00	10	2

#### "Perko" Reverse Gear Controls

HEAVY CAST BRONZE—POLISHED FOR 1 INCH OR 1% INCH SHAFT

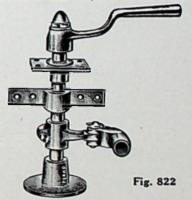
Same tapered bushing device as Fig. 663 in upper and lower levers, no machining of shaft necessary.



Specify size of shaft when ordering; parts for 1 inch shaft supplied unless otherwise specified.

#### Clutch Control

CAST BRONZE—FOR 1 INCH SHAFT



Supplied with bulkhead bracket or shelf plate (please specify). Shaft is not included.

- With 8" Handle -	-With 10	" Handle-	-With 12"	Handle-
Polished Chromium	Polished	Chromium	Polished	Chromium
Bronze Plated	Bronze	Plated	Bronze	
Per Set Per Set	Per Set	Per Set	Per Set	Per Set
\$32.00 \$40.00	\$33.50	\$41.50	\$35.00	\$43.50

#### SPARE PARTS

	Plain Bronze Each	Polished Bronze Each	Chromium Plated Each
Acorn Nut		\$2.25	\$2.75
She'f Plate, Fig. 865 No. 9		4.50	6.50
Bulkhead Bracket, Fig. 865 No. 6		4.90	7.00
Lever, Fig. 865 No. 3	\$6.75		
Clevis, Fig. 865 No. 4	5.00		
Lower Bearing, Fig. 865 No. 11	4.25		
Note-Spare parts for Figs. 65		664, see	Fig. 865,

Nos. 2, 7, 10 and 12.



#### Throttle Control

RATCHET TYPE—CAST BRONZE FOR CONTROL ROD OR BOWDEN WIRE



Fig. 690-For Rod Fig. 690-A-For Wire

For bulkhead up to 2 inches thick. Length of throw, 3 inches. Rod socket is for ¼, ¾6 or ¾ inch rod. Supplied for ¼ inch rod unless otherwise specified.

Polished Bronze Each	Chromium Plated Each	Size Frame Inches	Weight Pounds
\$5.50	\$7.50	41/4 x 3 1/4	5%

#### Spark and Throttle Control

RATCHET TYPE—CAST BRONZE FOR CONTROL ROD OR BOWDEN WIRE

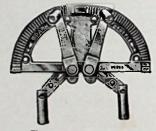


Fig. 691—For Rod Fig. 691-A—For Wire

For bulkhead up to 2 inches thick. Length of throw, 3 inches. Rod sockets are for 4, % or % inch rod. Supplied for 4 inch rod unless otherwise specified.

Polished Bronze Each	Chromium Plated Each	Size Frame Inches	Weight Pounds
\$9.50	\$12.50	6x3	134

#### Spark and Throttle Control

RATCHET TYPE—FOR CONTROL WIRE CAST BRONZE



Fig. 409

Length of throw is 3 inches.

Polished Bronze Each Single \$ 7.25 Double 10.00	Chromium Plated Each \$10.00 13.25	Length Arc Inches 2% 2%	Extreme Projection Inches	Mounting Plate Inches 1 % x 1 % 1 % x 1 %	Weight Pounds
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# "Sea-Husky" Spark and Throttle Control

RATCHET TYPE—FOR CONTROL ROD CAST BRONZE

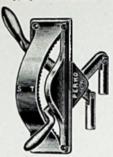


Fig. 331

Length of throw is 3 inches.

Rod sockets are for 14, 5/16 or 3/8 inch rod.

Polished Bronze Each	Chromium Piated Each	Length Plate Inches	Plate	Weight Pounds
\$14.50	\$17.00	6	2 1/2	2 34
Supplied	for 54e inch rod	unless	otherwise	specified

#### Spark and Throttle Control

RATCHET TYPE—FOR CONTROL ROD CAST BRONZE—ADJUSTABLE



Fig. 904

Position can be changed by loosening one screw. Sockets are for 14, 5/16 or 3/8 inch rod.

Length of throw is 234 inches.

	Polished Bronze Each	Chromium Plated Each	Dimensions of Base Inches	Dimensions of Frame Inches	Weight Ounces
Single	\$5.25	\$7.25	2 x 7/8	4½ x3¾	10
Double	6.75	9.75	2 x 7/8	4½ x3¾	

Supplied for 1/4 inch rod unless otherwise specified.

#### Control Levers

PLAIN BRASS

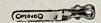


Fig. 354

No.	Each	Length Overall Inches	For Shaft Inches	For Clevis Pin Inches	Weight Ounces
1 2	\$ .80 1.25	2 5/4 3 3/4	%6 %6	7/42 7/42	11/4



#### Throttle Control

RATCHET TYPE—CAST BRONZE FOR BOWDEN WIRE



Knob is black bakelite. Length of throw, 3 inches.

Plain Bronze Each \$10.75	Polished Bronze Each \$13.50	Chromium Plated Each \$15.50	Length Plate Inches	Width Plate Inches 2 %	Weig Pound 2
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#### Throttle Control

RATCHET TYPE-CAST BRONZE FOR CONTROL ROD



Knob is black bakelite. Length of throw, 3 inches. Rod socket is for 4, 16 or 16 inch rod.

Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Length Plate Inches	Width Plate Inches	Weight Pounds
\$10.75	\$13.50	\$15.50	6	2 3/8	2
Supplied	for 1/4 inch	rod unless	otherwi	se spec	ified.

#### Control Cranks

PLAIN CAST BRONZE-FOR CONTROL ROD SIDE TYPE



Fig. 636

Length Arms Inches 2	Height Overall Inches 2 %	Size Base Inches 2 1/4 x 5/8	Weight Single Ounces 5	Weight Double Ounces 7
For Rod Inches	Single Complete Each	Double Complete Each	Cranks Only Each	Brackets Only Each
1/4	\$1.75	\$2.90	\$.60	\$.65
% %	1.85	3.00	.60	.65
<b>%</b>	2.00	3.15	.60	.65

Supplied for 1/4 inch rod unless otherwise specified.

#### "Sea-Way" Throttle Control

RATCHET TYPE-FOR % INCH ROD CAST BRONZE



Fig. 847

A powerful control with a man sized handle. For mounting on top of wheel box or shelf.

A spring type ratchet inside handle hub holds control

at desired position.

Polished Bronze Each	Cheomium Plated Each	Length Handle Inches	For Diam. Rod Inches	Diam. Flange Inches	Weight Pounds
\$9.50	\$10.50	4 1/2	36	2 5/8	- 1

#### "Sea-Prince" Throttle Control

RATCHET TYPE-FOR CONTROL ROD CAST BRONZE



Fig. 848

Same design and ability as the Sea-Way Control above but fitted with lever arm and socket for mounting on side of wheel box or bulkhead.

Length of throw is 5 inches.

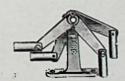
Rod socket is for 4, % or 3 inch rod.

Polished Bronze Each	Chromium Plated Each	Length Handle Inches	Length Lever Arm Inches	Diam. Flange Inches	Weight Pounds
\$10.50	\$11.50	4 1/2	3 1/2	2 %	1

Supplied for 1/16 inch rod unless otherwise specified.

#### Control Cranks

PLAIN CAST BRONZE-FOR CONTROL ROD UPRIGHT TYPE



		rig. do?		
Length Arms Inches	Height Overall Inches	Size Base Inches	Weight Single Ounces	Weight Double Ounces
2	2 %	21/4 x 5/8	5	7
For Rod Inches	Single Complete Each	Double Complete Each	Cranks Only Each	Brackets Only Each
1/4 5/16 3/8	\$1.75 1.85 2.00	\$2.90 3.00 3.15	\$.60 .60 .60	\$.65 .65 .65
Supplied	for 14 incl	h rod unless	otherwise	specified.



#### Improved Throttle Controls

RATCHET TYPE—FOR CONTROL WIRE FORGED BRONZE





Side Mounting Fig. 350

Floor Mounting Fig. 351

A decided improvement over the old style controls. A straight push and pull of the control wire gives smooth action and no kinks.

The spring type ratchet holds the control at the speed desired, non slip.

Fig.	Dull Bronze Each	Polished Bronze Each	Chromium Plated Each	Size Frame Inches	Height Overail Inches	Weight Ounces
350	\$3.50	\$5.80	\$6.80	4½x4	6½	12
351	4.00	6.50	7.50	4½x3¾	6½	13

#### Safety or Racing Control

CAST ALUMINUM—EMERY FINISH INSTANT SHUT-OFF OF MOTOR WHEN RELEASED

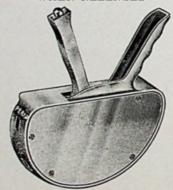


Fig. 247

A must for racing boats and a type that should be used on all fast boats whether used for racing or pleasure.

The control handle is under strong spring tension which snaps it back to the off position as soon as the operator's grip is released, yet it can be set at a desired position by pressing the ratchet control button on top of handle.

This control has simple idling adjustment that can be reached from outside.

Control wire has two positions on lever for pushing or pulling.

Each Dimensions of Housing Handle Weigh Inches Inches Pound

\$12.00 7 1/2 x 4 1/2 4 1 1/2

#### Dashboard Choke Controls

POLISHED BRASS CONTROL HANDLE



Fig. 371

WITH STEEL CASING AND WIRE

5 Ft. 7 Ft. 10 Ft. Lengths Per Set Per Set Per Set \$3.00 \$3.30 \$3.60 \$4.40

#### WITH BRASS CASING AND WIRE

5 Ft.	7 Ft.	10 Ft.	15 Ft.
Lengths		Lengths	Lengths
Per Set		Per Set	Per Set
\$3.70	\$4.20	\$5.00	\$6.60
With	chromium plated	handle, add \$	.40 per set.

Bowden Wire and Casing

BETHANIZED STEEL OR BRASS—FLEXIBLE 4 INCH O.D. CASING—LEFT HAND LAY WIRE DIAMETER .072 INCHES

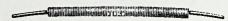


Fig. 353

Stock	Stee	l. Per Le	ngth—	- Braz	s, Per Len	gth
Lengthe		Casing	Wire		Casing	Wire
in Feet	Complete	Only	Only	Complete	Only	Only
5	\$ .80	\$ .60	\$ .22	\$ 1.70	\$ 1.45	\$ .25
7	1.05	.85	.25	2.35	1.95	.35
10	1.45	1.15	.35	3.25	2.65	.50
15	2.00	1.60	.50	4.50	3.80	.60
25	3.30	2.60	.80	7.40	6.35	1.00
50	6.60	5.25	1.60	14.75	12.65	2.00

Improved Control Wire Handles
FOR CASING WITH RIGHT OR LEFT HAND LAY
ALL BRASS



Fig. 692

Control wire and casing can be easily attached. No soldering necessary, wire held by set screw in knob, casing threaded into tube. For use on a dash or bulkhead up to 2 inches thick.

Polished Brass Each	Chromium Plated Each	Length Overall Closed Inches	Ontside Diam. Stem Inches	Weight Ounces
\$1.95	\$2.40	41/2	3/8	3

Left hand thread supplied unless otherwise specified.

#### Bowden Casing Clamp

FORGED BRONZE-SWIVEL TYPE-PLAIN



Will hold control casing firmly while swivel feature allows smooth sliding of control wire in casing at any angle.

Each	Size Base Inches	Weight Ounces	
\$ .75	2½x1	3	

Fig. 352



#### Control Rod Sockets

PLAIN BRASS



Each

\$ .40 .40 .45

.50

.55



Fig. 328

Fig. 295

11/16

Stand	lard Fig.	328		
Tapped For Rod Inches	Outside Diam. Inches	Overall Length Inches	Between Jaws Inches	Length Jaws Inches
1/4 -20	7/16	1 5%	3/16	918
5/16-18	7/16	1 %	3/16	9/16 3/4
3/8-16	1/2	1 %	1/4	3/4
Heavy	Duty Fig	g. 295		

Length jaws measured to center of pin.

#### Control Rod Sockets

EXTRA HEAVY TYPE—BRASS—PLAIN



Fig. 298

	Made	from 1/2	inch squa	re brass	rod.	
2		Tapped For Rod	Outside Diam.	Overall Length	Between Jaws	Length
No.	Ench	Inches	Inches	Inches	Inches	Inches
7	\$ .55	1/4 -20	7/18	1 %	1/4	7/18
8	.55	5/16-18	710	17/18	1/4	7/16
9	.65	3/8 - 16	7/10	17/10	1/4	7/18
Le	ngth jaws	measured	to cente	r of pin.		

#### Control Wire Sockets

PLAIN BRASS

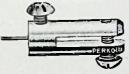


Fig. 679

Complete with brass cotter pin and brass set screws.

Each \$ .40	Length Inches	Dinmeter Inches	Between Jawa Inches	Length Jaws Inches	Weight Ounces ½
	iaura m	engured to	center o	f screw.	

#### Brass Ball Joints





Fig. 792 Fig. 793 Fig. 793 is adjustable for wear. Spring tension around ball with screw for adjusting.

No. 1 2	Fig. 792 Ench \$.45	Fig. 793 Each \$.65	Thrend Inches	Length Thread Inches 1/2 1/2	O. D. Female End Inches	Weight Ounces
2	.00		110	12	716	

#### Steerer and Control Parts

CAST BRONZE





1. Lever





Clevis







6. Bulkhead Bracket

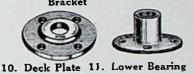
Bracket

Bearing



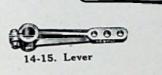






9. Shelf Plate





13. Angle Lever .

O O O PERKO

			Fig.	865			
		Length Overall	Center of Bore	Tapped for Rod	Tapped for Pipe	for Shaft	Weight
No.	Each	Inches	Inches	Inches	Inches	Inches	Pounds
1	\$7.50	8	6				1 7/8
2	2.50	2 %		3/4	1/2		3/4
*2A	3 25	4		1	1/2 3/4		1 1/4
3	6.75	41/2	2 %			1	11/4
	5.00	3 1/2		1	% %		1 1%
4 5	3.60	3	1 %	1	3/4		3/4
13	8.50	**	**			1	1 %
†14	6.50	8	5-6			3/4	1
115	7.25	9	5-6-7			1	1%
						To	

	1.20	,	3-0-7				
No.	Each		Width Overall Inches	Outside Diam. Inches	Bored for Shaft Inches	To Center of Bore Weight Inches Pounds	
6	\$4.90	7	1		I	1 1/8 1/2	
7	4.90	4 1/2	i		1 or 1 1/4	2 1/4	
_		7 /2		3 3/4	. 01 . /8	- <del>%</del>	
8	4.50			374			
9	4.50	4	31/4			1 1/8	
10	4.50			4	lor 1%	1/2	
11	4.25			4	1	1	
12	1.90			1%	1 or 1 1/8	1/4	

\*Same style as No. 2.

\*\*Short arm 6 inch centers. Long arm, 6, 7 and 8 inch

†Has two holes with 5 and 6 inch centers.

‡Has three holes with 5, 6 and 7 inch centers.

Items Nos. 6, 7, 9, 10 and 12 are polished. For chromium plated finish add 40% to above prices. All

others are in plain finish.

Items Nos. 1, 2, 3, 4, 5, 13, 14, 15 are bored for ½ inch bolt. Item No. 1 has ¼ inch keyway.

Items Nos. 2, 2A, 4 and 5 have ½ inch jaws.

Item No. 11 is 2½ inches high.

Note — When ordering Items 2, 2A, 4 and 5 specify whether tapped for rod or pipe.



#### Stuffing Boxes

CAST BRONZE-REGULAR



Fig. 320

Shutt Size Inches	Each	Size Flange Inches	For Diam. Bolt Inches	C. to C. Bolt Holen Inches	Length Bearing Inches	Weight Pounds
54	\$4.25	3%x1%	9/16	2 5%	21/8	1 1/8
16	4.30	4 x1%	3/8	2 %	2 1/8	1 1/8
7/8	4.55	41/8×11/8	7/1e	3	25%	1 1/2
1	5.50	41/4×21/8	7/18	3	25%	134
11/8	6.20	4 %x2 1/8	1/2	3 %	2 1/8	21/4
11/4	7.35	5%x2%	1/2	45/16	2 1/8	3
1%	8.65	614x3	1/2	4 34	3	31/4
11/2	9.85	61/2×3	1/2	5	3	3 1/2
134	15.00	7 x3%	5/8	5 1/2	4	5 34

#### Stern Bearings

CAST BRONZE-REGULAR



Fig. 321

Shaft Size Inches	Each	Size Flange Inches	Diam. Bolt Inches	Bolt Holes Inches	Length Bearing Inches	Weight Pounds	
5/2	\$2.25	3 %x 1 %	%e	25%	21/8	3/4	
34	2.50	4 x1%	3/8	2 %	21/8	3/4	
1/8	2.75	438x178	7/16	3	25%	1	
1	3.20	41/4×21/8	7/10	3	25,	134	
118	3.80	4 1/8 x 2 1/8	1/2	3 %	2 1/4	1 1/2	
1 1/4	4.75	5%x2%	1/2	45/16	2 1/8	2	
138	6.00	61/4 x3	1/2	484	3	214	
1 1/2	6.50	6½x3	1/2	5	- 3	21/2	
1 34	8.75	7 x3%	%	5 1/2	4	33;	

#### Packing Nuts and Locknuts

FOR STUFFING BOXES-CAST BRONZE



E. 43

Shaft Size Inches	Fig. 78 Each	ig. 320 Fig. 79 Each	For F Fig. 73 Each	Fig. 519 Fig. 79 Each
5% 3% 7/8	\$1.80 1.85	\$ .70 .75		
1	2.00 2.10 2.15	.80 .90 1.00	\$4.25 4.60	\$1.80 1.85
134	2.45 2.90	1.10 1.30	4.85 5.50	2.00 2.15
134	3.85 4.65	1.50 2.00	6.00 7.25	2.15 2.75

#### Extra Heavy Stuffing Boxes

RECTANGULAR FLANGE—CAST BRONZE

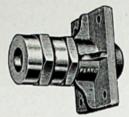


Fig. 819

Shaft Size Inches	Each	Size Flange Inches	For Diam. Bolt Inches	C. to C. Bolt Holes Inches	Length Bearing Inches	Weight Pounds	
1	\$13.25	5 x3	1/2	3%x1%	4	5 1/2	
138	14.50	51/2×3%	1/2	41/4 x 21/4	4 1/4	6 1/2	
1.14	16.00	5 %x 3 5%	1/2	4 1/8 x 2 1/4	43,	7	
13%	18.00	6 x4	1/2	47/16x2 1/2	5	9	
1 1/2	21.00	6 x4 3/8	1/2	41/2×3	5 1/2	10	
1 34	29.00	61/2×41/2	5/8	51/8×31/4	7	131/2	
2	34.00	7%x5	5'R	5 % x 3 %	734	151/2	

#### Extra Heavy Stern Bearings

RECTANGULAR FLANGE—CAST BRONZE



For Diam. Shaft Inches	Plain Each	Weight Pounds
. 1	\$ 8.25	4
136	9.00	5
1 1/4	10.00	51,
138	12.00	63,
119	14.00	8
1 %	19.50	10 ½
2	24.50	12

Fig. 906

All other dimensions same as fig. 819 above.

# Flax Packed Stuffing Boxes and Stern Bearings

WITH RECTANGULAR FLANGE

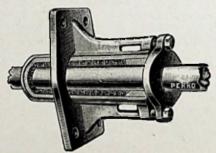


Fig. 811

Shaft Size Inches	Each	Size Flange Inches	Length Bearing Inches
1	\$15.00	5 % x 3	51/4
11,	18.50	6 x3	532
114	22.00	6% x3 1/2	534
134	24.00	7 x3%	5 82
1 1/2	30.00	71/2×41/4	. 61/2
1%	41.00	81/2×4%	61/2
2	54.00	91/2×51/4	818
214	83.50	12 x6	1138
2 1/2	103.00	131/4×65/2	121/4

NOTE-LENGTH BEARING SHOWN DOES NOT INCLUDE PACKING NUT OR SPACE FOR PACKING.



#### Self Aligning Stuffing Boxes

CAST BRONZE-RECTANGULAR FLANGE



Fig. 734

No.	Each	For Shaft Inches	Size Flange Inches	from Flange to End of Box Inches	Weight Pounds
1	\$10.50	3/4	5x31/4	61/2	5
2	11.25	7/8	5x31/4	61/2	5
3	12.00	1	5x31/4	634	5
4	14.50	1 1/8	6x41/4	7%	9
5	15.00	11/4	6x4 1/4	7 %	91/2
6	22.00	1 3/8	7x41/2	8	121/8
7	23.00	1 1/2	7x41/2	81/4	13

#### Bronze Universal Joints

CAST BRONZE-PLAIN



Fig. 93

No.	Bored Each	Tapped Each	Bored for Rod Inches	for Pipe	Extreme Length Inches	Weight Pounds
1	\$7.00	\$ 7.50	3/4	1/2	4 1/2	1
2	9.50	10.00	1	1/4	6	21/4

PLEASE SPECIFY
WHETHER FOR ROD OR PIPE

#### New Outboard Flushing Nozzles

ALUMINUM AND BRASS
FOR INTERNAL FLUSHING OF LOWER
UNIT IN OUTBOARD MOTOR



Fig. 179

The male threaded end is for attachment to all motors having flush plugs.

The female threaded end is for regular garden hose.

Occasional flushing of salt water and other matter
from lower unit will save repair bills to water pump
and other internal parts.

No.	Each	Size Thread	Overall Inches	Weight Ounces
1	\$1.50	3/8" x16	21/8	11/4
2	1.95	%"x16	2 %	2
3	1.50	1/8" Pipe	2	1 1/3
4	1.95	7/10"x20	2 %	2

No. 1 for Johnson 25 H.P., Evinrude 14 and 25 H.P.

No. 2 for Evinrude 15 H.P., Johnson 10 H.P.

No. 3 for Evinrude 71/2 H.P. and others.

No. 4 for Evinrude and Johnson 3 H.P. and others.

#### Iron Shaft Couplings

CAST IRON



Fig. 327

No.	Each	For Diameter Shaft Inches	Diam. Flange Inches	Lgth. Over- all Inches	Wt.
0	\$ 5.00	5/8. 3/4	3	2 5%	21/2
1	6.50	%, %, %, 1, 1%	4	3 1/2	5 1/2
2	8.25	%, %, 1, 1%, 1%,			
		1%, 1½	4 1/2	41/6	8

For divided sizes such as 1 x 1½, add \$1.10 each. For special boring, not listed, add \$2.25 each.

For 1/2 coupling add \$ .55 to half of above prices. No bolts furnished.

#### SIZE OF KEYWAY IN SHAFT COUPLINGS

Size Shaft Inches	Keyway Inches
5% - 34	3/16
7/8-1-11/8	1/4
11/4	518
13/4-13/6	3/2

#### **Bronze Shaft Couplings**

CAST BRONZE



Fig. 389

Set screws, bolts and washers are all bronze.

Each	For Diameter Shaft Inches	Diam. Flange Inches	Length Overall Inches	Weight Pounds
\$8.25	58, 34, 78, 1	2 3/4	234	11/2

For divided sizes such as ¾ inch one end, I inch the other end, add \$.50 each.

% and % inch sizes have % inch keyway. % and I inch sizes have % inch keyway.

#### Sleeve Type Shaft Couplings

CAST BRONZE



Fig. 378

No. 1 2 3	Each \$4.50 4.50 4.50	For Diam. Shaft Inches	Length Inches	Keyway Inches	Weight Pounds
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#### Midget Self Aligning Shaft Logs

CAST BRONZE-FOR SMALL INBOARD ENGINES



Fig. 695

Stuffing box and base are connected by heavy rubber hose to take up vibration and whip. Base is undrilled to allow drilling as required.

No.	Each	Size Shaft Inches	Size Base Inches	Length Overall Inches	Degrees of Pitch	Weight Pounds
0	\$10.00	5/8	93/s x 21/2	15	10	3 3/4
1	10.00	34	9 3/8 x 2 1/2	15	10	3 34

This unit uses stuffing box Fig. 672 size 0 machined for either % or % inch shaft.

#### Adjustable Shaft Logs

CAST BRONZE



Fig. 577

Cast bronze ball and socket arrangement gives ample adjustment in all directions.

Range of adjustment between 12 and 25 degrees.

Flange bolts are locked with set screws.

Furnished complete with grease cup.

No.	Each	Size Shaft Inches	Length Overali Inches	Length Base Inches	Width Base Inches	Wt. Lbs.
1	\$27.00	34	17%	14	3 %	11
2	27.00	7/8	1734	14	3 %	11
3	27.00	1	17%	14	3 5/8	11
4	42.00	11/8	25	20	4 1/2	21
5	43.00	11/4	25	20	4 1/2	21
6	65.00	1 3/8	281/2	23	51/4	28
7	66.00	1 1/2	281/2	23	51/4	28

#### Adjustable Shaft Logs CAST BRONZE—EXTRA HEAVY

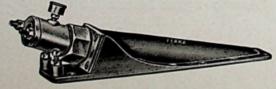


Fig. 627

Furnished complete with grease cup.

No.	Each	Size Shaft Inches	Length Base Inches	Width Base Inches	Weight Pounds
8	\$96.00	13/4	28	51/2	57
9	98.00	2	28	51/2	57

#### Self Aligning Shaft Logs

CAST BRONZE
WITH STAINLESS STEEL HOSE CLAMPS
ALLOWS INSTALLATION OF ENGINE WELL
AFT



Fig. 589

Stuffing box and shaft are cushioned in rubber, reducing vibration in the hull to a minimum and eliminating excessive wear on shaft and bearing.

Furnished without screw or bolt holes to allow drilling as required.

No.	Each	For Size Shaft Inches	Size Base Inches	Length Overall Inches	Degrees of Pitch	Wt.
0	\$11.00	5/8	9x4	10	14	31/2
1	12.00	34	11x5	121/4	14	6
2	12.50	7/8	11x5	121/4	14	6
3	12.75	1	11x5	121/4	14	6

#### Self Aligning Shaft Logs

CAST BRONZE

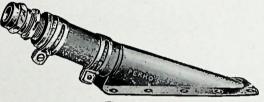


Fig. 671

Stuffing box and base are connected by heavy rubber hose to take up vibration and whip.

No.	Each	Size Shaft Inches	Size Base Inches	Length Overall Inches	Angle in Degrees	Wt.
1	\$12.00	3/4	12x31/2	18	- 11	7
2	12.50	7/8	12x31/2	18	11	7
3	13.50	1	12x3½	18	11	7
4	21.25	11/8	17x41/4	231/2	11	12
5	25.00	11/4	17x41/4	231/2	11	12
6	34.50	13%	19x5	28	11	20
7	38.00	1 1/2	19x5	28	11	20
7	38.00	1 1/2	19x5	28	11	20

STUFFING BOX AND EXTRA RUBBER HOSE FOR SELF ALIGNING SHAFT LOG AND STUFFING BOX







Fig. 672		Fig.	1092	F	ig. 673		
For Log No.	Size Shaft Inches	Stuffing Box Each	Hose Each	Hose Clamps Per Pair	I. D. Hose Inches	O. D. Hose Inches	Length Hose Inches
*0 1 2 3	5/8 3/4 7/8	\$3.85 4.85 5.00	\$ .80 1.15 1.15	\$ .90 1.30 1.30	1 1/4 1 3/4 1 3/4	1¾ 2¼ 2¼	3 1/4 4 4
4 5	11/8	5.75 6.60 7.80	1.15 2.25 2.25	1.30 1.90 1.90	1 % 2 % 2 %	2 1/4 3 1/8 3 1/8	5 5
6 7	11/2	9.60 10.75	4.00	2.90 2.90	2 % 2 %	31/2	5

\*Size 0 also supplied for ¾ inch shaft; same is used on Shaft Log Fig. 695.



#### Adjustable Struts

WITH MARINE BABBITT BEARING ALL CAST BRONZE

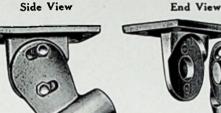


Fig. 628

Adjustable to any practical angle of the propeller shaft, held fast at necessary angle by two heavy bronze bolts. Bearing is of a special marine babbitt, the highest grade obtainable. Length of drop is figured from bottom of keel to center of shaft.

Size Shaft Inches	Width Finnge Inches	Length Flange Inches	Length Bearing Inches	Approx. Weight Pounds
34	3	5 1/2	41/8	61/2
7/8	3	51/2	4 1/8	61/2
1	3	51/2	4 1/8	61/2
11/8	3	5 1/2	4 1/8	61/2
11/4	3 1/2	61/2	4 1/2	121/2
13%	3 1/2	61/2	4 1/2	121/2
1 1/2	3 1/2	61/2	4 1/2	121/2

Dro	n		Siz	e Shaft I	nches		
In.		7/4	1	11/4	11/4	1%	11/2
5	\$22.75	\$22.75	\$22.75	\$22.75			
6	23.50	23.50	23.50	23.50	\$34.75	\$34.75	\$34.75
7	24.25	24.25	24.25	24.25	35.50	35.50	35.50
8	25.00	25.00	25.00	25.00	36.25	36.25	36.25
9	25.75	25.75	25.75	25.75	37.00	37.00	37.00
10	27.00	27.00	27.00	27.00	38.25	38.25	38.25
11	28.25	28.25	28.25	28.25	39.50	39.50	39.50
12					41.25	41.25	41.25

Specify size of shaft and length of drop, when ordering.

#### Midget Adjustable Strut

CAST BRONZE-FOR SMALL INBOARD ENGINES



Fig. 660

Maximum drop is 5 inches, can be reduced to 3 inches. Adjustable to any angle of shaft.

Plain Bronze Each	Diam. Shaft Inches	Size of Base Inches	Length Bearing Inches	Weight Pounds
\$6.50	% or ¾	31/2×21/4	21/4	2

#### Adjustable Struts

FOR CUTLESS RUBBER BEARING CAST BRONZE—EXTRA HEAVY



Fig. 1019

Size Shaft Inches	Width Flange Inches	Length Flange Inches	Length Bearing Inches	Approx. Weight Pounds
3/4	3	5 1/2	3	634
<b>7/8</b>	3	5 1/2	31/2	634
- 1	3	5 1/2	4	634
11/8	3	51/2	4 1/2	634
11/4	31/2	61/2	5	12
13%	3 1/2	61/2	536	12
11/2	31/2	61/2	6	12

PRICES BELOW DO NOT INCLUDE RUBBER BEARING For bearings see Fig. 1021.

Use bearings having the smallest outside diameter listed.

Lgth			C:-	Shaft In	-h		
Drog		7∕8	1	1%	114	1%	11/2
5	\$22.25	\$22.75	\$23.25	\$23.75			
6	23.00	23.50	24.00	24.50	\$33.25	\$34.25	\$35.25
7	23.75	24.25	24.75	25.25	34.00	35.00	36.00
8	24.50	25.00	25.50	26.00	34.75	35.75	36.75
9			26.25	26.75	35.50	36.50	37.50
10			27.50	28.00	36.75	37.25	38.25
11					38.75	39.25	40.25
12					40.75	41.25	42.25

Specify size of shaft and length of drop, when ordering. If desired, complete with rubber bearing, please specify.

#### **Electrolysis Eliminators**

PURE ZINC





Fig. 244

A necessity if the boat is used in salt water. Streamlined for mounting on the deadwood or planking. Arrests electrolysis of under water brass fittings.

Most boats require two, in some cases larger boats require more.

No.	Each .	Length Inches	Width Inches	Depth Inches	Weight Pounds
1	\$1.00	31/2	134	5/8	1/2
2	1.60	514	2 1/8	1"	132



# B. F. GOODRICH CUTLESS RUBBER BEARINGS



Standard Cutless
Bearing with bronze shell

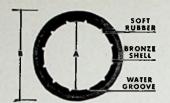


Fig. 1021

#### Often Outlast Hard Surface Bearings 15 Times

- Efficiently lubricated by water.
- Resist sand and grit.
- · No scoring of shaft.
- Reduce vibration and noise.
- Least possible friction.
- · Easy to install.

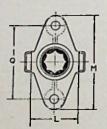
# STANDARD BEARINGS STOCK SIZES—TABLE OF DIMENSIONS, WEIGHTS AND PRICES

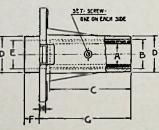
Sizes Shown Here are in Stock for Immediate Shipment

Code	A—Shaft Diameter	B-Outside Diameter	Standard Length	Shipping Weight, Lbs.	Price Each	Special Length Price per Lin. In.4	Code	A—Shaft Diameter	B-Outside Diameter	Standard Length	Shipping Weight, Lbs.	Price Each	Special Length Price per Lin. In.*	Code	A—Shaft Diameter	B—Outside Diameter	Standard Length	Shipping Weight, Lbs.		Special Lengte Price per Lin. In.*
KALE	34"	11/4"	3"	34	\$ 6.70	\$2.49	KITEM	178	25/8"	71/2"	31/4	\$22.90	\$3.67 3.67	NEPHEW		41/2"	141/2"	123/4	\$61.70	\$5.12
KATY	1/8"	13 g# 11/2#	3½" 3½"	134	7.80 7.80		KITEZ KITH KNAVE	11/4"2"	25/8"	8" 8"	31/2 41/2	24.60 24.60	3.72 3.72	NEPTUNE NERVE NEST	334"	4½" 5" 5¼"	15" 15" 15"	10½ 17¾ 18	68.50 68.50 68.50	5.50 5.50 5.50
KAYAK KEFER KEEPER	1"	11.5" 156" 2"	47	1 11/4 11/2	9.00 9.00 9.00	2.62	KNIT KNOB KNOLL	21/8"	213/6" 31/8" 213/6"	8½° 8½° 9°	41.4 43.4 41.6	26.50 26.50 28.60	3.72	NEWELL. NIBBLE. NIBBLED	4"	51/4" 5" 51/4"	15½" 16" 16"	20 28 291/2	73.20 78.70 78.70	5.81 5.92 5.92
KERSEY KERNY KID		15/6" 13/4" 2"	416" 416" 412"	134 132 134	10.80 10.80 10.60	2.75	KORAN KUMISS NABAS	21/4	31/8" 33/8" 33/8"	9" 9"	5 6	28.60 28.60 30.80	3.78	NIBBLING NICETY.	1436"	514° 512°	1616" 17"	31 29½	82.40 85.60	6.15 6.15
KIDNAP	11/4"	13/4"	5" 5"	134	12.40 12.40	2.81 2.81	NAKED NATION.	21/2"	3½8″ 3¾8″	10°	5	31.80 31.80	3.87 3.87	NICHE NICK NICGARD	41/2"	53/4" 51/4" 53/4"	171 <u>6</u> " 18" 18"	33½ 33¼ 35	89.50 94.30 94.30	6.26 6.43 6.43
KIDNEY	134	21/8" 11/8" 2"	5" 514" 512"	2 2	12.40 13.70 13.70	2.59	NATISM . NATIVE . NATURE	23/4"	31/8" 31/8" 31/4"	10½" 11" 11"	5¾ 5¾ 6	34.70 38.50 38.50	4.27 4.27	NIGGARD NIGHLES NIGHTLY	LY45/8" 5434"	616	18½" 19" 19½"	39 43¾ 43	102.90 110.80 116.40	7.10 7.43 7.63
KINAH KINAH KINCY KINDLE	138"	21/8" 23/8"	514"	21/4 21/4 21/2	13.70	2.99	NAVAL NAVY NECK	3"	31/4"	111/4" 12" 12"	63/4 8 81/2	39.90 42.40 42.40	4.40	NIGHT	5"	614"	20" 20"	45 501/4	122.60 122.60 136.10	7.85 7.85 8.30
KINE		23/8"	6"	21/2	15.00 15.80		NECKING	331/8"	41/4"	121/2"	81/2	45.60 49.00		NOBODY.		7"	21"	80½ 75	142.60	8.50
KINKY KINSHIP	.15%*	21/8" 25/8"	6½" 6½"	21/4 3	18.40 18.40		NECTAR NEGATIV NEGLECT	E31/4"	4" 4¼" 4½"	13" 13" 13½"	9¼ 10 10¾	49.00 52.90	4.53	NOBUR NOMAD NOMAR	512"	7"	221/2" 221/2"	65 70	148.60 154.70	8.69 8.84
KTP KITE	.1%"	23/2"	7"	23/4 31/4	20.80	3.56	NEGRO.	3½° R 3½°	41/2"	14" 14"	10 11½	66.50 66.60	4.97	NONAGE.	6"	7" 71/2"	23" 24"	6234 70	161.30 178.40	8.98 9.17
*To obtain	price	e of b	earing	g leng	gths o	ther tha	n standard	, multi	ply le	ngth	in inc	hes by	y price	per lineal i	nch giv	en in	this c	colum	n.	

#### STERN CASTINGS COMPLETE WITH CUTLESS RUBBER BEARINGS, OVAL AND SQUARE BASE











Prices and dimensions of larger sizes furnished on request. When ordering, it is only necessary to give pattern number. Holes in flanges drilled unless otherwise specified.

The advantages of this type of bearing are many. The castings are made of high-grade bronze of heavy construction, and will last as long as the boat. They are not to be confused with some of the light, flimsy constructions often sold at a price.

The flanges correspond in sizes with the usual bronze and babbitted bearings of this type. The B. F. Goodrich Cutless Bearing can be carily removed from the main casting by taking out the set screws.

No vibration. Sand or silt is carried out without injury to shaft or bearing.

No attention or adjustment necessary. These bearings are provided with scoops for water lubrication and no additional scoops or other provisions for water supply tre necessary.

			TA	BLE	OF	DIN	1EN	ISIO	NS .	AND	PRIC	ES		
			Ord	er by	Patte	rn Nu	mbe	r		1				Price Com-
	ensio Cutles			(	astin	g Dime	nsio	ns		Pat.	Drilled	No.	Drilled for	plete with
	Bearin B		D	E	F	G	Н	L	M	Sq. Base	Bolts, Ins.	Oval Base	Bolts, Ins.	Cutles: Bearing
3/4	134	3	1%	11/8	3/2	31/2	*	21/8	434	B-1		B-3		\$18.40
1/8	11/2	31/2	11/8	13/6	X5.75.75	4	17	21/6	43/4	8-1-2-3-4-5-6-7-8-0 E-2-3-4-5-6-7-8-0 E-2-3-4-5-6-7-8-0	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	B-4 C-9	XX-F-EXXXXXX	14.6
13/6	13%	41/2	21/6	15/4	1/2	51/8	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	21/2	51/2	C-2	12	C-10 C-11	12	18.9
13/8	21/8	51/2	21/2	2	1 8	67.	1	31/4	61/5	č	1/2	C-12	1/2	22.8 25.0
11/2	23/8 25/8	6	21/8 31/8	21/2	11/4	714	% 5/a	31/2	8	C-5 C-6	1/2	C-13 C-14	% 8	33.0 40.4
21/4	314	8 9 10	35/8	27/8	113	878 10	% 82	45/6	1012	C-7	52	C-15 C-16	3	53.8
212	31/8	10	4	31/4	1%	11	%	5 1	111/2	E-20	14			68.0 95.0
3	4	11 12	41/2	378	2	12 13	3	7 8	1234	E-21 E-22	178		=	114.0



#### Flat Bearings

GRAY IRON-BABBITTED



Fig. 789

For Shaft Size Inches	Each	Dimensions of Base Inches	C. to C. Bolt Holes Inches	Diam. Bolt Holes Inches	Weight Pounds
5/8	\$4.10	4 x11/8	3 1/8	1/4	1
3/4	4.10	4 1/4 x 1 3/18	3 1/2	5/16	1 1/8
7/8	4.40	41/4×11/4	3 %	5/16	11/4
1	4.40	4 % x 1 1/2	3 3/4	3/8	1 1/2
11/8	5.25	51/4×1%	41/4	3/8	21/3
11/4	5.25	51/2×13/4	41/4	3/8	2 %
1 3/8	6.60	5 % x 1 %	4 5/8	3/8	3 1/2
1 1/2	6.60	61/4×2	4 1/8	7/18	41/4
1 3/4	8.15	6 1/8 x 2 1/4	5 %	1/2	6
2	10.20	71/2×21/2	5 3/4	1/2	71/4

Larger and intermediate sizes supplied to order.

#### Bronze Flat Bearings

CAST BRONZE—NOT BABBITTED



Fig. 809

For Shaft Size Inches	Each	Dimensions of Base Inches	C. to C. Bolt Holes Inches	Dinm. Bolt Holes Inches	Weight Pounds
3/4 7/8	\$5.50 5.50	4½x2 4½x2	35/16 35/16	5/16 5/16	1 1/2
1 78	5.50	4 ½ x 2	35/16	516 516	13%

Intermediate Shaft Bearings
BALL BEARING TYPE—SELF ALIGNING
WITH GREASE RETAINING SEAL
STANDARD DUTY



Fig. 790

For Shaft Size Inches	Each	Dimensions of Base Inches	C. to C. Bolt Holes Inches	Diam. Bolt Holes Inches	Weight Pounds
7/8	\$14.70	7 x2	5%	1/2	3 1/2
1	14.70	7 x2	5 3/8	1/2	3 1/2
11/8	17.30	7½x2	534	3/2	5
11/4	21.00	814×214	614	5/8	61/2
13%	21.00	814x214	64	5/8	61/2
11/2	23.25	81/2×23/8	61/2	58	7 1/2
1 3/4	24.85	8%x2%	61/2	%	8
2	39.00	1114x234	81/2	5%	15

#### Thrust Ball Bearings

Flat Race Bronze Retainers Grooved Race Steel Retainers





	Fig. 786		Fig. 942	
Diameter Shaft Inches	Fig. 786 Each	Fig. 942 Each	Outside Diameter Inches	Thickness Inches
5/8 3/4	\$2.90 3.50	\$1.90	1 1 ½32 1 15/32	%is
3/4 7/8	3.65	2.20	127/32	5/8
1	3.75	2.35	131/32	%
1 1/8	4.00		23/2	5%
11/4	4.10	2.60	21332	%
138	4.75	2.90	215/32	5%
11/2	5.15	3.50	210/32	%
1 %	5.35	3.95	231/32	13/16
1%	6.00	4.20	3332	13/16
2	7.50		311/32	13/16
21/4	9.00		323/32	13/16
21/2	11.00		33132	13/18

#### Thrust Ball Bearings

GROOVED RACES

STEEL RETAINING BAND Diam.



Fig. 943

Shaft Inches	Each	Diam.
	\$1.10	111/52
5/8 3/4	1.10	115/2
<b>7/8</b>	1.50	127/22
1	1.50	131/32
11/8	1.65	2 3/32
11/4	2.25	211/32
13/8	2.90	21550
1 1/2	2 90	219/12
1 5%	6 00	231/2
1%	6.25	3 3/2
2	8.25	311/2
214	8.25	323/2
2 1/2	11.00	331/32

Outside

#### Safety Shaft Collars

MILLED BAR STEEL-MACHINED



Shaft Size Inches	Each	Fig. 787 Outside Diameter Inches	Width Inches	Weight Ounces
% 3½ 7/8	\$ .40	13/32	1/2	11/2
3/4	.45	11/4	%16	2
<b>7/8</b>	.55	11/2	9/18	3
1	.65	1 %	5/8	3 1/2
1 3/8	.80	134	5/8	4
1 1/4	.90	2	11/14	51/2
13%	1.10	2 1/8	3/1	61/2
1 1/2	1.20	21/4	3/4	7 12
1 %	2.60	2%	% % %	13
2	2.85	3	%	15



#### Exhaust Pipe Flanges

CAST BRONZE



Fig. 214

For Pipe Inches 2 2 ½ 3	Inside Diameter Inches 2 % 2 % 3 ½	Outside Diameter Inches 4 4 ½ 5 ½	Weight Pounds 1/3 1/2 3/4
31/2	4	6	1
2	Plain Bronze Each \$1.80	Polished Bronze Each \$3.00	Chromium Plated Each \$3.75
21/2	2.25	3.50	4.25
3 2	2.85	4.25	5.00
31/2	3.10	4.50	5.25

#### Exhaust Tube Flanges

CAST BRONZE



Fig. 738

Tubing Diam. Diam. Inches Inches	Weight Pounds
2 2½18 4	1/3
	1/3
21/2 21/16 41/2	72
3 3½6 5½	%
3 1/2 3 1/16 5 1/2	1/2 5/8 3/4
4 41/16 6	7/8
Plain Polished Bronze Bronze Each Each	Chromium Plated Each
2 \$1.35 \$2.50	\$3.25
2½ 1.80 3.00	3.75
2½ 1.80 3.00 3 2.25 3.60	4.25
3½ 2.85 4.25	5.00
4 3.10 4.50,	5.25

#### Brass Grease Cups



Fig. 961

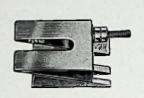
No.	Each	Height Closed Inches	Outside Diam. Inches	Pipe Thread Inches	Capacity Ounces
1	\$ .45	17/16	7/8	1/8	1/4
2	.55	1 3/4		1/8	1/2
3	.80	2	13/18	1/4	3/3

### Gy-A-Liner Engine Aligners

U. S. PATENT NO'S 2123484-2170690-2164615

A simple way to accurate engine alignment. "Gy-A-Liner" consists of leveling wedges made of cast iron. Designed for self adjustment with a few turns on the take-up bolts that anyone can do with accuracy.

Baked Enamel Finish-All Bolts Galvanized.



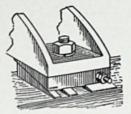


Fig. 1097

For use under motors having only single corner bed bolts. Can be used under intermediate propeller shaft bearings.

Each	Size Base Inches	Minimum Height Inches	Maximum Height Inches	For Engine Bolt Inches	Weight Pounds	
\$2.35	21/2×21/2	5%	1:3/16	1/2	3/4	

#### "Perko" Zinc Marine Oilers

SPRING BRASS BOTTOM



Fig. 326

Heavy gauge zinc with spring brass bottom, cut threads. Spouts are interchangeable.

No.	Complete Per Gross	Extra Spouts Per Gross	Capac- ity Ounces	Diam. Inches	Length Spout Inches	Weight Per Gross Pounds
3 4	\$105.00 138.00	\$33.00 36.00	12	4 4 1/2	6	40 48



#### Maxim Silencers

WET TYPE—MODEL M3
CAST IRON



Fig. 334

Size No.	Each	Exhaust Pipe or Tubing Inches	Diameter Inches	Length Overall Inches	Weight Pounds
3	\$ 26.00	1 1/2	4 3/4	131/2	15
4	32.00	2	61/4	15	25
5	40.00	2 1/2	7%	161/2	42
6	50.00	3	91/2	18	60
7	64.00	3 1/2	11	191/2	80
8	74.00	4	121/2	20	110
10	170.00	5	14	281/2	180
12	210.00	6	141/2	33	235

The flanges are tapped and are for use with pipe or tubing.

Used with equal success on Diesel as well as gasoline engines.

Designed to take all the cooling water discharge from the engine making unnecessary any other water discharge through the hull. Can be installed practically anywhere in the exhaust line that is convenient, either near the engine or near the stern, however a two foot tail pipe at the silencer outlet will give best results.

Maxim silencers are available for dry exhausts of gasoline and Diesel engines. Give bore, number of cylinders, R. P. M. and exhaust size.

#### Maxim Silencers

CAST IRON-WET TYPE-MODEL M-4



Fig. 755

Admirably suited to the line of small engines being presented to the field at the present time for the propulsion of small boats and for use with generating units in larger vessels.

Similar in construction to model M-3 and installed in like fashion.

Size No.	Each	For Exhaust Pipe Inches	Diameter Inches	Length Overall Inches	Weight Pounds
1	\$ 9.40	1/2	31/4	7%	4
1 1/2	10.75	3/4	3 1/2	81/4	5
2	12.00	1	3 %	9	6
2 1/2	14.80	11/4	41/4	91/2	10

#### Universal Marine Hose Clamps

INSTANTLY ADJUSTABLE FOR ANY SIZE
HOSE UP TO 6 INCH
ALL 18-8 STAINLESS STEEL OR
ELECTRO GALVANIZED STEEL WITH
ZINC PLATED SCREW



Fig. 499

Designed primarily for marine and aircraft use.

Uniform pressure on entire circumference of hose, no distortion or crimping to permit leaks.

These two sizes do the job of eight or more sizes necessary when ordinary hose clamps are used.

These may be used for larger sizes of hose by joining two or more clamps together, used in this way the size range is practically unlimited.

Extremely easy to install or remove, will not slip or loosen from vibration.

#### Packed 50 Clamps Per Box

No.	Stainless Steel Each	Electro Galvanized Ench	Length Open Inches	Width Strap Inches	Diam. Screw Inches	Weight Ounces
1	\$.60	\$.13	12	1/2	962	11/2
2	.70		18	1/2	9/42	2

Size No. 1 shipped unless otherwise specified.

#### "Snaplock" Hose Clamps

HEAT TREATED—RUST PROOF PLATING



Fig. 565

Size No.	Each	From Inches	Hose To Inches	Clamp Di Minimum Inches	ameter — Maximum Inches
12	\$.33	1/2	3/4	%	11/4
20	.35	1	11/4	1%	134
28	.36	11/2	1%	1 7/8	21/4
36	.38	2	21/4	2 %	234
48	.41	2 1/2	3	2 1/8	31/2

#### Packed 10 Clamps Per Package.

An attractive counter display box containing 50 assorted "Snaplock" clamps is available.

Per box \$18.00



#### Improved Gasoline Strainers

WITH "KWICK KLEAN" FILTER ELEMENTS
CAST BRONZE HOUSING

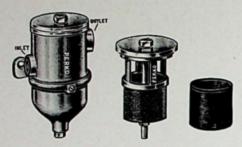


Fig. 299

The filter elements used are equivalent to 300 mesh screen cloth and are guaranteed to strain water from gasoline. They have a high flow rate, long life and are easy to clean. They can also be replaced in a few minutes by the removal of one nut. A soldering iron is not necessary.

Cover easily removed and the strainer removed for cleaning without disturbing pipe connections. Pipe plug in bottom for draining. Side bracket supports the strainer, relieving the fuel pipes of all weight.

Size No.	Complete Each	Spare Elements Each	Length Overall Inches	Diam. Inches	Tapped For Pipe Inches	Weight Pounds
1	\$10.50	\$ .90	5 1/2	2%	14 or 3/8	3 3/4
1 1/2	11.50	1.00	61/4	3 1/8	3% or ½	6
2	15.75	1.25	71/4	3 %	1/2 or 3/4	7

Note—When ordering, be sure to specify pipe size, otherwise largest size shown will be supplied.

#### "Perko" Gasoline Filters

WITH "KWICK KLEAN" FILTER ELEMENTS COPPER BOWL

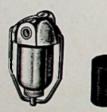


Fig. 406

The filter element will strain water out of gasoline as it is equivalent to 300 mesh screen cloth. It is easy to clean, has high flow rate and long life.

The copper bowl and element can be quickly removed for cleaning, by a few turns of the knurled nut illustrated.

No.	Complete Each	Spare Elements Each	Tapped for Fipe Inches	Height Overall Inches	Width Overall Inches	Weight Ounces
1	\$3.75	\$ .85	1/8	41/4	21/2	91/2
2	3.75	.85	1/4	41/4	21/2	91/2

#### Flame Arresters

U. S. COAST GUARD APPROVED RUGGED CONSTRUCTION—LONG LIFE REQUIRED BY LAW ON ALL MARINE CARBURETOR INSTALLATION



Fig. 464

A Flame Arrester attached to the air inlet of the carburetor eliminates the possibility of a fire being caused by backfiring through the carburetor. A special element, consisting of curved plates, dissipates the heat and in this way fire does not extend through the flame arrester.

Size Style No. No.	Diam. Each Inches	Dimensions of Top Inches	Height Overall Inches
2 B-175-19 3 B-175-19A 4 B-175-14 5 B-175-12A 6 B-175-12 7 B-175-16 8 B-175-13	5.30 1 ¼ 6.20 1 ½ 6.20 1 ½ 7.15 2 ½ 6 8.00 2 ½ 8.00 2 ½ 9.30 3 9.30 3 ½	213/10×21/16 323/32×25/16 35% ×25/16 41/8 ×211/16 51/8 ×215/16 51/8 ×215/16 51/8 ×215/16 51/8 ×31/16 51/8 ×31/16	2 2 1/8 2 1/8 2 1/8 2 1/9/32 2 1/9/32 2 1/9/32 2 1/9/32

#### Safety Drip Collectors

FOR ANY MAKE OF CARBURETOR WORKS AUTOMATICALLY—HELPS STARTING

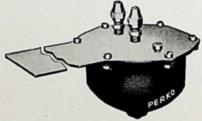


Fig. 465

When a gasoline engine stops, the fuel trapped in the intake manifold condenses and drains back to the carburetor. Carburetors without automatic drain features do not, as a rule, have sumps of sufficient capacity to hold the condensed fuel, consequently it drains out.

The Safety Drip Collector provides protection against the danger of normal carburetor drainage by collecting it from the carburetor.

Supplied complete with all necessary parts and connections for installation.

	With Steel Bowl
No.	Each
C-13-42	For Engines with one carburetor\$13.50
C-13-43	For Engines with two carburetors 14.90
	With Brass Bowl
C-13-53	For engines with one carburetor 16.85
C-13-54	For engines with two carburetors 18.55



#### Intake Water Strainers

CAST BRONZE MONEL METAL STRAINER TRANSPARENT LUCITE CYLINDER



Fig. 493

For installation between hull connection and water pump to the engine.

Lucite cylinders are difficult to break even when struck with hammer. Gaskets are corprene, (neoprene and cork) waterproof and resilient.

No.	Complete Each	Spare Cylinders Each	Spare Gaskets Each	Spare Strainers Each
1	\$19.00	\$ 4.50	\$ .30	\$ 2.00
2	30.00	6.00	.40	3.00
3	31.00	6.50	.40	3.25
4	32.00	7.00	.40	3.50
5	42.00	11.00	.80	5.00
6	81.00	22.00	.80	14.00

No.	Pipe Size Inches	Size Cylinder Inches	Height Inches	Width Overall Inches	Weight Pounds
1	1/2	3½x 4	6	41/4	31/2
2	3/4	4½x 5	7 3/4	5 1/2	61/2
3	1	41/2x 51/2	81/4	5 1/2	634
4	11/4	4½x 6	8 3/4	5 1/2	7
5	1 1/2	6 x 8	111/2	7	12
6	2	6 x12	171/4	9	22

Height does not include top nut or drain plug.

#### Gasoline Funnels

GALVANIZED-WITH STRAINER



Fig. 81

Made of galvanized sheet steel with No. 100 mesh bronze removable strainer.

No.	Ench	Diam. Top Inches	Height Inches	Capacity Pints	Weight Ounces
1 2	\$2.25 2.65	6 % 8	7 8½	1 2	6 81/2

# The Improved "Engine Saver" Combination Intake Water Strainer and Rust Preventer

CAST BRONZE—WITH MOUNTING BRACKETS
MONEL METAL STRAINER
TRANSPARENT LUCITE CYLINDER
FILLED WITH ANTI-RUST CRYSTALS

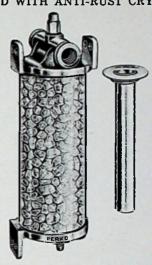


Fig. 494

For installation in the cooling system between the hull connection and pump or between pump and engine.

The cooling water (salt or fresh) passing through the "Engine Saver" slowly dissolves the crystals, creating a chemical solution which forms a very thin film on the inner surfaces of the cooling system (water jackets, manifolds, etc.), protecting the metal from rust and assisting in the control of electrolysis.

The rate of crystal consumption is very small, as low as 2 pounds per year in the No. 2 size, depending upon the amount of use and temperature of the water.

The monel metal strainer is installed in tubular form, the full length of the lucite cylinder, giving extreme cubic area of filtering surface and effectively keeping foreign matter out of cooling system.

The brass tube illustrated is located inside of the monel strainer, same has been added to assure maximum solution as the water must pass into the lower end of the tube to reach the outlet.

Gaskets are of neoprene and cork. Castings are carefully machined against leakage.

No.	Motor H.P.	Complete Each	Spare Cylinders Each	Spare Gaskets Each	Spare Strainers Each
1	up to 60	\$35.00	\$ 9.00	\$.30	\$3.00
2	60 to 150	53.00	12.00	.40	4.75
3	60 to 150	55.50	12.00	.40	5.00
4	60 to 150	58.50	12.00	.40	5.25
5	150 to 200	80.00	18.00	.80	7.50

Anti-rust crystals, per pound \$1.50, in 1, 5 or 10 pound bags.

No.	Pipe Size Inches	Size Cylinder Inches	Height Inches	Width Overall Inches	Weight Complete Pounds
1	1/2	31/2x 81/2	1032	41/4	11
2	*4	41/2×11	14	5 1/2	151/2
3	1	4½x12	15	5 1/2	18
4	11/4	4½x13	16	51/2	20
5	11/2	6 x15	181/2	7	30

Height does not include top nut or drain plug.



#### Open Base Boat Cleats

GALVANIZED IRON OR CAST BRONZE



Fig. 544

Length Inches	Cast Iron Each	Mall. Iron Each	Polished Chromium Bronze Plated Each Each	Galv. Weight Pounds
3 1/2	\$ .22	\$ .35		310
4	.24	.45	See Figure	1/4
5	.36	.55	544 A	3/8
6	.44	.80		1/2
8	.80	1.50	\$ 2.80 \$ 3.60	11/4
10	1.70	2.30	4.00 - 5.80	21/4
12	2.40	3.20	6.00 . 7.50	3 3/4
14	3.60	5.50		61/4
18	5.90	9.00		111/2

Galvanized cleats supplied in cast unless otherwise specified.

#### Solid Base Boat Cleats

DROP FORGED BRONZE



Fig. 544-A

These have much greater strength than cast bronze cleats. The finish is finer (no sand holes). They polish and plate to a smoothness and brilliance not probable with castings.

Length Inches	Dull Bronze Each	Polished Bronze Each	Chromium Plated Each	For Wood Screw No.	Weight Ounces
3	\$ .70	\$ .85	\$1.35	8	2 1/2
4	.90	1.05	1.60	10	4
5	1.10	1.30	1.90	14	5 1/2
6	1.40	1.60	2.40	14	8

#### Sturdy Cleats

CAST BRONZE-HEAVY DUTY



Fig. 384

Length Inches	Polished Bronze Each	Chromium Plated Each	For Rope Inches	Weight Pounds
4	\$1.85	\$3.00	1/4	1½
5	2.80	3.90	3/8	34
6	3.40	4.70	7/10	1
8	5.90	7.90	1/10	1 34

#### Flag Pole or Fender Cleats

BRASS



An all brass cleat designed for small flag halyards but it will also serve for hanging small fenders. Drilled for No. 5 round head screws.

Burnished Brass Each	Chromium Plated Each	Length Inches	Weight Ounces
\$ .28	\$ .40	1 %	1/3

Brass shipped unless otherwise specified.

#### Streamline Fender Cleats

DIE CAST, CHROMIUM PLATED



Fig. 566

Length Inches	Chromium Pinted Each	Size Base Inches	For Diam, Rope Inches	Weight Ounces
2	\$ .75	1½x1	5/16 1/2	1
3	1.00	2 % x 1 %	1/2	3
4 1/2	2.25	3 x 1 3/1	1/2	8
6	3.00	3 ½ x 2	5/8	16

#### Fender Cleats

DROP FORGED BRONZE



Fig. 583

Length Inches	Dull Finish Each	Polished Bronze Each	Chromium Plated Each	Size Base Inches	Weight Ounces
21/4	\$ .55	\$ .75	\$1.15	13/8×1	11/2

#### Hollow Cleats

CAST BRONZE—CLOSED ENDS



Fig. 572

Length Inches	Polished Bronze Each	Chromium Plated Each	Weight Pounds
4½ 5½ 6½	\$2.20 2.30 2,50	\$2.90 3.00 3.30	1/2 5/8 3/4
8	3.50 6.20	4.50 7.40	11/4
12	0 50	11 00	•



#### **Awning Cleats**

GALVANIZED MALLEABLE IRON



Fig. 927

Length Inches	Per 100 Pieces	Wt. Per 100 in Lbs.
4 1/2	\$11.00	4 3/8
6	16.00	8 3/4
8	25.00	1334

#### **Bow Chocks**

GALVANIZED OR BRONZE



Fig. 546

Lgth. Inch.	Gnlv. Iron Per Pair	Dull Bronze Per Pair	Polished Bronze Per Pair	Chrom. Plated Per Pair	Width Inches	For Diam. Rope Inches	Wt. Per Pair Lbs.
3	\$ .45	\$1.60	\$ 1.90	\$ 3.20	5/8	1/2	1/4
4	.50	1.90	2.25	4.00	3/4	5/8	1/2
5	.90	2.90	3.30	5.45	7/8	<b>7/8</b>	1
6	1.60		5.50	8.50	1	1	1 1/2
8	2.40		9.00	12.50	11/4	1 1/8	3
10	4.00		15.00	22.00	1 3/4	11/4	5 3/4
12	11.50		24.00	29.00	2	11/4	11%
15	26.00				3 1/2	1 3/4	40

NOTE-3, 4 and 5 inch sizes are forged bronze. Balance of sizes are cast bronze.

#### Straight Stern Chocks

GALVANIZED OR BRONZE



Fig. 119

Lgth. Inch.	Galv. Iron Each	Dull Bronze Each	Polished Bronze Each	Chrom. Plated Each	Width Inches	Diam. Rope Inches	Wt. Each Lbs.
4	\$ .30	\$1.10	\$ 1.25	\$ 2.15	7/8	3/4	1/4
5	.45	1.50	1.70	2.90	I	7/8	1/2
6	.70		2.60	4.20	11/8	1	3/4
8	1.45		4.60	6.60	1 1/2	11/3	11/2
10	1.75		7.60	. 10.25	134	1 1/2	2 3/4
12	4.00		12.75	16.00	2 %	1%	71/2
15	9.20				3 %	13/4	20
18	14.00				3 1/2	2	31

NOTE—4 and 5 inch sizes are forged bronze.

Balance of sizes are cast bronze.

#### Ship Cleats

CAST IRON-HEAVY



Fig. 511

Length Inches	Galv. Each	Size of Base Inches	Holes for Diam. Bolts Inches	Weight Each Pounds
8	\$ 1.90	4 1/4 x 23/16	7/16	3
10	3.00	434×21/2	1/2	5 3/4
12	4.80	6%x3	%	10
15	6.70	71/4×31/2	3/4	14
18	9.80	7½x4	3/4	201/4
24	24.60	81/2×4%	7/8	35
30	37.50	10%x5%	1	73
36	62.50	13 x71/4	11/4	117

#### Skene Bow Chocks

CAST BRONZE



Fig. 160

Size No.	Polished Bronze Per Pair	Chromium Plated Per Pair	Length Inches	Width Inches	Open- ing Inches	Weight Per Pair Pounds
1	\$ 3.60	\$ 5.50	41/2	3/4	5%	3/4
2	5.25	7.50	51/8	1 1/8	<b>%</b>	132
3	9.00	11.75	71/4	138	1	4
4	13.00	16.00	8	11/2	11%	5 1/2
5	19.50	23.50	10	1%	1 %	8 1/2

#### Skene Stern Chocks

CAST BRONZE



Fig. 161

Size No.	Polished Bronze Each	Chromium Plated Each	Length Inches	Width Inches	Opening	Weight Each Pounds
11	\$ 1.60	\$ 2.35	4	7/8	3/4	3/2
12	2.85	3.90	5%	11/4	1	1
13	5.50	7.00	7	15%	134	2
14	10.50	13.00	9	21/8	1%	4



#### Skene Bulwark Bow Chocks



Fig. 751

Length Inches	Pol. Bronze Per Pair	Chromium Plated Per Pair	For Diam. Rope Up to Inches	Thick- ness of Rail Inches	Height Inches	Weight Per Pair Pounds
6	\$10.00	\$14.75	1	11/4	21/4	2 3/4
7	14.50	18.75	11/4	11/2	23/4	41/4

# Skene Bulwark Stern Chocks CAST BRONZE



Fig. 752

Lengti Inches	Pol. Bronze Each	Chromium Plated Each	For Diam. Rope Up to Inches	Thick- ness of Rail Inches	Height Inches	Weight Each Pounds
6	\$7.50	\$10.20	134	1 1/2	2 3/4	2

#### **Bulwark Bow Chocks**

CAST BRONZE



Fig. 768

No.	Polished Bronze Per Pair	Chromium Plated Per Pair	Length Inches	Width Overall Inches	Height Inches	Size of Rope Inches
1	\$15.00	\$19.00	10	1	1 %	1
2	19.00	23.00	111/4	11/4	21/4	11/4
3	23.00	28.50	1114	1 1/2	2 1/2	1 1/2

#### Bulwark Stern Chocks

CAST BRONZE



Fig. 769

No. 1 \$1	Each 0.00 \$:	romium Plated Leng Each Inch 12.00 91 14.00 112	Inches	Height Inches 2 %	Size of Rope Inches 1 1/2 1 3/4
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#### New Tiller Rope Tighteners

CADMIUM PLATED STEEL OR ALL BRASS MAXIMUM PULL 80 POUNDS



Fig. 732

For eliminating slack and keeping tension on tiller rope at all times.

The all brass tightener will outlast several of the lower priced steel tighteners.

Made of heavy gauge spring wire.

Steel Each	All Brass Each	Normal Length Inches	Length Com- pressed Inches	Outside Dinmeter Inches	Weight Ounces
\$ .50	\$ .95	4	5	11/16	4 1/2

#### Tiller Rope Tighteners

CADMIUM PLATED STEEL
MAXIMUM PULL 100 POUNDS



Fig. 754

For eliminating slack and keeping tension on tiller rope at all times. Especially desirable when installing tiller rope in outboard motor boats.

Each	Normal Length Inches	Max. Length Compressed Inches	Outside Diameter Inches	Weight Ounces
\$ .60	53/4	7 34	3/4	5

#### New Dock Line Spring

STEEL—ZINC PLATED FOR % INCH ROPE



Fig. 759

A very strong compression spring for dock and mooring lines. It cushions the strain and contributes greatly to the life of the line.

The end loops will accommodate a % inch thimble and may be readily disassembled for attachment of other fittings.

We recommend the application of zinc chromate paint under a marine paint to thoroughly protect the spring against corrosion.

Each	Length Overall Inches	Diameter Spring Inches	Diameter Metal Inches	Compression Inches	Weight Pounds
\$4.75	i 8	2	1/4	8	2 3/4



#### Mooring Bitts

CAST BRONZE
ROUND POST—ROUND BASE
POST TAPERED TO HOLD LINE AT BOTTOM
ROUND TO PREVENT WEAR ON LINE

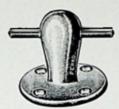


Fig. 597

An improved design in appearance and practicability for small boats. The line stays at the bottom of the post, the point of greatest holding power. The round post will not chafe the line.

No.	Polished Bronze Each	Chromium Plated Each	Diam, Base Inches	Height Inches	Weight Pounds
1	\$5.25	\$6.75	2 3/4	2 5/8	3/4
2	6.50	8.00	3%	3 5%	1 1/2

#### Riding Bitts

GALVANIZED CAST IRON



Fig. 926

Size No.	Galv. Each	Height Inches	Size Base Inches	Bored for Bolt Diam. Inches	Weight Pounds
00	\$ 3.30	3 1/2	21/2×21/2	1/4	11/2
0	4.25	4 1/2	3 x3	%18	21/4
01	5.25	5 3/4	31/2×31/2	3/8	4
1	5.80	63/4	5 x5	1/2	6
11/2	8.25	81/4	51/2×51/2	5/8	9
2	15.00	10	51/2×71/2	5/8	18

#### Anchor Lift Leaders

GALVANIZED MALLEABLE IRON



Fig. 483

For attaching to bow of boat. The sheave projects over the stem. These are very handy for raising or dropping anchor.

Each \$2.00	For Diam. Rope Inches	Size Sheave Inches 2 x ½	Length Overall Inches 7½	Length Plate Inches 4 ½	Weight Pounds
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#### Mooring Bitts

CAST BRONZE



Fig. 608

No.	Polished Bronze Each	Chromium Plated Each	Size Base Inches	Height Inches	Weight Lbs.
1	\$ 5.75	\$ 7.95	3 x3	21/2	7/8
2	7.15	9.50	41/4×41/4	31/2	11/2
3	14.30	18.00	6 x6	5	41/2
4	23.00	27.50	7 x7	61/2	12

#### Comb. Bitt and Rope Deck Pipes

CAST BRONZE



Fig. 431

A hollow one piece casting of minimum weight but maximum strength. An opening in one side of bitt to allow rope to be stored below deck but always ready for use.

No.	Polished Bronze Each	Chromium Plated Each	Size Base Inches	Height Inches	For Diam. Rope Inches
1	\$ 8.75	\$10.25	41/2×41/2	3 1/2	34
2	16.50	18.50	6 x6	5	1

Rope Deck Pipes

GALVANIZED CAST IRON OR CAST BRONZE



Fig. 741

o.	For Diam. Rope Inches	Inside Diam. Inches	Diam. Flange Inches	Height Above Deck Inches
1	34 & 1	1%	41/4	134
2	11/4	2 1/8	4 5/8	1 1/8

Galvanized Each	Polished Bronze Ench	Chromium Plated Each
\$2.75	\$ 8.00	\$11.50
4.40	12.00	15.00
	Ench \$2.75	Galvanized Bronze Each Each \$2.75 \$ 8.00

No



#### Ribbed Socket Rowlocks

GALVANIZED-CAST IRON



Fig. 638

Size No.	Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Opening Inches	Weight Per Pair Pounds
0	\$ .90	\$ .55	\$ .40	134	11/8
1	.95	.60	.45	2	11/4
2	1.30	.85	.55	2 1/4	1 34

#### Standard Socket Rowlocks

GALVANIZED MALLEABLE IRON



Fig. 639

Size No.	Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Opening Inches	Weight Per Pair Pounds
0	\$1.25	\$ .95	\$ .40	134	11/8
1	1.50	1.15	.45	2	11/4
2	2.10	1.50	.70	21/4	1 3/4
3	2.95	2.30	.85	2 1/2	2 5/8

#### Davis Pattern Rowlocks

GALVANIZED MALLEABLE IRON OR BRONZE



Size No.	Gaiv. Per Pair	Plain Bronze Per Pair	Polished Bronze Per Pair	Chromium Plated Per Pair	Opening	Weight Per Pair Pounds
0	\$2.60 2.85	\$4.00	\$7.30	60.00	13/4	2
5	3.85	\$4.00	\$7.50	\$8.80	21/4	234

#### North River Rowlocks

GALVANIZED MALLEABLE IRON OR BRONZE





Fig. 644

Fig.	Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Opening	Weight Per Pair Pounds
643 Galv.	\$1.70	\$1.35	\$ .45	21/8	1 1/2
644 Galv.	2.15	1.40	.85	2 1/8	1 1/2
643 Pl. Bronze	2.55	1.85	.80	21/8	1 1/2
644 Pl. Bronze	3.10	1.85	1.35	2 1/8	1 1/2
643 Pol. Bronze	4.70	3.40	1.40	2 1/8	1/2
644 Pol. Bronze	5.70	3.40	2.40	2 1/8	1 1/2
643 Chrom. Pltd.		4.80	2.20	2 1/8	1 1/2
644 Chrom, Pltd.	7.90	4.80	3.20	2 1/8	11/2

Hole in horn shank for chain not included.

#### North River Rowlocks

WITH FANCY SIDE PLATE GALVANIZED MALLEABLE IRON OR BRONZE



				_		
Siz		Complete Per Pair	Horns Only Per Pair		Opening Inches	Weight Per Pair Pounds
1	Galv.	\$2.65	\$1.40	\$1.35	21/8	1 1/2
1	Pl. Bronze	3,65	1.90	1.90	21/8	1 1/2
1	Pol. Bronze	6.70	3.45	3.35	21/8	11/2
1	Chrome Plte	4. 8.75	5.00	4.00	21/8	1 1/2

#### Round Socket Rowlocks

GALVANIZED MALLEABLE IRON OR BRONZE



1110		Fig. 642	
	Size No.	Complete Only Per Pair Per Pair	Sockets Inside Weight Only Diam. Per Pair Per Pair Inches Pounds
Fig. 641	0 Galv.	\$1.25 \$1.05	\$ .35 2 11/8
Polished Chromium Weight	1 Galv.	1.60 1.25	.45 21/4 - 11/4
Bronze Plated Opening Per Pair Per Pair Per Pair Inches Pounds	2 Galv.	2.00 1.45	.65 21/2 11/2
1¾ 2	1 Pl. Bronze	2.90 2.20	.80 - 21/4 11/4
\$7.30 \$8.80 2 2	1 Pol. Bronze	4.90 3.60	1.40 21/4 11/4
NOTE BRASS SAFETY CHAIN	1 Chrome Pltd.		2.00 21/4 11/4
NOTE—BRASS SAFETY CHAIN F	OR ROWLOCKS,	\$.35 PER PAIR	



#### Boston Side Plate Rowlocks

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 646

Size No.		Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Open- ing Inches	Weight Per Pair Pounds
0	Galv.	\$2.05	\$1.00	\$1.15	1 3/4	11/4
1	Galv.	2.15	1.05	1.20	2	1 1/2
0	Pl. Bronze	3.55	1.95	1.75	1 3/4	1 1/4
1	Pl. Bronze	3.65	2.00	1.75	2	1 1/2
0	Pol. Bronze	6.00	2.95	3.30	1 3/4	1 1/4
1	Pol. Bronze	6.25	3.05	3.30	2	1 1/2
0	Chrome Pltd	. 8.00	4.00	4.20	1 34	134
1	Chrome Pltd	. 8.20	4.15	4.20	2	1 1/2

#### **Boston Socket Rowlocks**

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 545

Size No.		Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Open- ing Inches	Weight Per Pair Pounds
0	Galv.	\$1.30	\$1.00	\$ .40	134	7/8
1	Galv.	1.35	1.05	.40	2	1
0	Pl. Bronze	2.60	1.95	.90	1 3/4	7/8
1	Pl. Bronze	2.80	2.00	.90	2	1
0	Pol. Bronze	4.40	2.90	1.65	1 3/4	7/8
1	Pol. Bronze	4.60	3.05	1.65	2	1
0	Chrome Pltd	. 6.50	4.20	2.40	13/4	7/8
	Chrome Pltd		4.30	2.40	2	1

#### Copper Oar and Paddle Tips





Fig. 794

Fig. 788

#### Side Plate Rowlocks

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 645

Size No.	Complete Per Pair	Horns Only Per Pair	Sockets Only Per Pair	Opening Inches	Weight Per Pair Pounds
0 Galv.		\$ .95	\$ .95	134	1%
1 Galv.		1.05	.95	2	1%
1 Pl. Bronze		2.60	1.55 —	2-	1%
1 Pol. Bronze		3.70	2.25	2	1%
1 Chrome Pl		5.00	3.25	2	1%

#### Oar Leathers and Buttons

RUSSET LEATHER



Fig. 233

A high grade russet leather and button.

	r Pair
Complete, Leathers and Buttons	1.60
Leathers Only-7x6 1/2 Inches	1.30
Buttons Only-1/2x13 Inches	.35

#### New "Sav-Or"

COMBINATION OAR SLEEVE AND STOP BLACK MOULDED NATURAL RUBBER

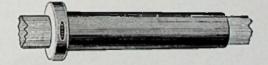


Fig. 648

An excellent item for adding years of life to a pair of oars plus noiseless operation when fishing. Also serves as a sleeve for outrigger or fishing pole socket.

Fits snugly to shape of oar yet easy to attach.

Inside diameter is tapered from 1½ inches at small end to 1¾ inches at large stop end.

Per Pair	Length Inches	Outside Diameter Stop Inches	Thickness Stop Inches	Weight Per Pair Ounces
\$2.75	9	3	34	9



#### Bow Plates

CAST BRONZE



Fig. 181

Polished Bronze Each Chromium Plated Each Size Plate Inches 41/8×4% \$2.30 \$3.00

Diam. Eye Inches Weight Ounces 10

#### Bow Eyes CAST BRONZE



Fig. 303

No. 1 2	Metal in Eye Inches 3/8	Length of Straps Inches 1 34 2 5/8	Extreme Length Inches 3	Diam. Eye Inches	Wt. Ozs. 3 ½ 5
No.		Plain Bronze Each			Chromium Plated Each
1	\$	.75	Each \$1.20		\$1.80
2		.95	1.55		2.20

#### Bow Rings

DROP FORGED BRONZE EXTRA STRONG SHANK



Fig. 238

For towing or mooring small boats. Points under shoulder prevent turning or twisting of eye.

No.	Plain Bronze Each	Pol. Bronze Each	Chromium Plated Each	I. D. Eye Inches	Lgth. Shank Inches	Diam. Shank Inches	Wt. Ozs
1	\$1.05	\$1.65	\$2.10	1	31/8	3/8	5 1/2
2	1.75	2.25	2.60	1	6	3/8	7

#### Solid Brass Rings

POLISHED



Inside Diam. Inches	Thick- ness Inches	Per Dozen	Inside Diam. Inches	Thick- ness Inches	Per Dozen
1/2	9/32	\$1.35	11/4	3/16	3.25
%	9/32	1.50	11/2	3/16 7/32	4.45
3/4	5/32	1.75	134	7/32	6.10
7/8	5/32	2.15	2	1/4	7.15
143 35 36	6/12	2.60	21/2	9/10	9 25

# Ring on Plate GALVANIZED DROP FORGED STEEL



Fig. 607

lo.	Galvanized Each	Size Ring Inches	Size Plate Inches	Weight Per 100 Pounds
1	\$1.00	5/16x 1 1/2	2 x2 x1/4	33
2	1.35	% x 2	21/4 x 21/4 x 1/4	50

Ring on Plate CAST BRONZE—STREAMLINE PATTERN



Fig. 182

No.	Polished Bronze Each	Chromium Plated Each	Length Base Inches	Width Base Inches	Size of Ring Inches	Weight Ounces
1 2	\$1.85 2.35	\$2.50 3.00	2 3/4	1 ½ 1 %	3/16x   1/4 7/32x   1/2	2 ¾ 3 ½

#### Ring and Deck Strap

CAST BRONZE



Fig. 183

Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Size Ring Inches	Length Strap Inches	Width Strap Inches	Weight Ounces
\$.90	\$1.70	\$2.00	7/32x 1 1/2	3 1/2	5/8	11/2
Strap	s only, s	ee Fig. 88	2.			

#### Rings with Straps

GALVANIZED MALLEABLE IRON OR CAST BRONZE—HEAVY PATTERN



			Fig. 1	020		
Size No.	Galv. Each	Plain Bronze Each	Pol. Bronze Each	Chromium Plated Each	Ring Inches	Size Strap Inches
1	\$.75	\$.90	\$1.70	\$2.00	7/32× 1 1/2	41/8×3/4
2	.85				%16x ! %	4 1/8 x 3/4
We	eight No	0. 1, 21/2	ounces,	No. 2. 3	3 ounces	•



#### Bow Lifting Handle

CAST BRONZE OR ALUMINUM

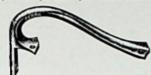


Fig. 363

A strong good looking handle for small boats, with integral stem band for appearance and additional lifting ability.

Polished Bronze Each \$2.70	Chromium Plated Each \$3.50	Polished Aluminum Each \$2.50	Length Overall Inches 6 1/2	Height Above Deck Inches	Bronze Wt. Ozs.
	*	¥	- /-	_	

#### Lifting Handle

FOR BOW OR TRANSOM CAST BRONZE OR ALUMINUM



Fig. 186

	Overall	Height	Base	Opening	Weight
	Inches	Inches	Inches	Inches	Oza.
	6 %	2	11/4	3 1/4 x 1 1/2	12
Polished		Chromium	Alu	lished	
Bronze		Plated		minum	
Ench		Each		Each	
\$2.70		\$3.50	\$2.70		

#### Lifting Handles

FOR TRANSOM CAST BRONZE

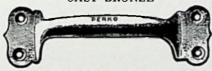


Fig. 775

No.	Polished Bronze Each	Chromium Plated Each	Length Overall Inches	Length Inside Inches	Weight Ounces
1	\$ .90	\$1.10	4 1/4	2 %	2
2	1.35	1.75	5 34	3 3/4	4
Size	No. 2 is U.	S. Govt. Ty	pe No. 12	74.	

#### Streamline Hatch Handle

CAST BRONZE
WITH MACHINE SCREWS AND WASHERS



Fig. 360

Designed for the hatch cover of a good looking runabout. Note that it is fastened through the under side of the hatch.

Polished Chromium Length Heig Bronze Plated Overall Over Each Each Inches Inch \$2.25 \$2.75 5 1/8 1 1/2	rall Opening Weight nes Inches Ounces
---	--

#### Hatch or Lifting Handle

GALV. MALL. IRON OR CAST BRONZE



Fig. 361

A strong sturdy handle at a moderate price

Galv. Each	Plain Bronze Each	Bronze Each	Chromium Plated Eacr	Overall Inches	Size Opening Inches	Weight Ouncer
\$ .75	\$1.10	\$1.70	\$2.50	61/2	314x114	8

#### Outboard Motor Transom Plates

FORGED BRONZE-WITH LEATHER PADS



Fig. 814

These new plates are flat on one edge to permit mounting higher up on transom. An advantage when using a small motor.

Dull		Chromium			Weight
Finish	Polished	Plated	Outside	Inside	Per
Per	Per	Per	Diameter	Diameter	Pair
Pair	Pair	Pair	Inches	Inches	Quicee
\$1.40	\$1.75	\$2.25	3	134	7

#### Transom Plate

FOR OUTBOARD MOTORS CAST ALUMINUM—PLAIN



Fig. 739

Has angle flange to protect top of transom and lip on inboard side to keep motor from jumping off if clamps become loose.

	Dimensions of Plate	Angle Flange	Weight
Each	Inches	Inches	Ounces
\$4.00	814 x 3 34	<b>%</b>	9

# Aluminum Racing Fin CAST SILICON ALUMINUM



Fig. 189

Supplied plain; undrilled or drilled and countersunk (6 holes) as illustrated.

Undrilled Each	Drilled Each	Overall Inches		Flange Inches	Weight Lbs.
\$3.00	\$3.75	91/4	5	23/8×91/4	1
Drilled fin	supplied	unless	otherwise	specified.	



#### Improved Lifting Ring

WITH LOOSE DECK FLANGE CAST BRONZE—FOR % INCH ROD



Fig. 412

The loose deck flange is a simple but worthwhile improvement as it eliminates all strain or pull on the deck when lifting the boat.

Polished Bronze Each	Chromium Plated Each	I. D. Eye Inches	Stock in Eye Inches	Diam. Flange Inches	Weight Ounces
\$4.25	\$5.25	13/8	7/16	2	10

#### Standard Lifting Ring

WITH INTEGRAL DECK FLANGE CAST BRONZE—FOR % INCH ROD



Fig. 415

Polished	Chromium	I. D.	Stock	Size	Weight
Bronze	Plated	Eye	in Eye	Flange	
Each	Each	Inches	Inches	Inches	
\$3.85	\$4.85	1%	1/2	3x21/4	121/2

#### Keel Plates

FOR ABOVE LIFTING RINGS
CAST BRONZE—FOR % INCH ROD



Fig. 446

Size Base Inches	Weight Ounces
3×1%	7
	Base Inches

#### **Battery Container**

FOR

6 VOLT "HOT SHOT" BATTERY
GALVANIZED SHEET STEEL WITH
HEAVY GAUGE WROUGHT STEEL BRACKETS



Fig. 713

The problem of where to stow the battery in an outboard motor boat is now a thing of the past.

This container is designed for fastening to the under side of a seat, out of the way. It fits the 6 volt battery perfectly and has a rubber grommetted exit for the wires.

Supplied complete with two bronze  $\frac{1}{4}$ " x  $1\frac{1}{2}$ " carriage bolts with wing nuts,

Each	Length Box Inches	Width Box Inches	Depth Box Inches	Weight Pounds
\$5.00	101/2	7 3/4	2 3/4	2 1/4

#### **Boat Cover Sockets**

CHROMIUM PLATED

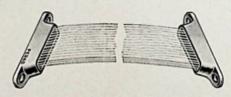


Fig. 578

An excellent item for preventing or eliminating sag in boat cover.

Sockets will accommodate a piece of wood lattice % inches thick and up to 1% inches wide. Cut the lattice a few inches longer than the boat's width to obtain a low arch under the cover.

Per Pair	Length Overall Inches	Size Opening Inches	Width Overall Inches	Weight Per Pair Ounces
\$1.35	31/4	I % x 1/16	5/8	2



#### **Boat Hooks**

GALVANIZED MALLEABLE IRON OR BRONZE SHARP POINTS



eight inces
8
2
6
8

BALL POINTS



Fig. 224

Size No.	Galvanized Each	Polished Bronze Each	Chromium Plated Each	For Diam Pole Inches	Extreme Length Inches	Wt. Ozs.
31/2	\$1.30	\$3.25	\$4.25	1	7 3/8	9
4	1.70	3.50	4.50	11/4	81/4	12
5	2.00	4.50	5.50	1 1/2	93%	18
6	3.50			2	91/2	28

Note-Pole end is measured by outside diameter to fit flush with surface of pole.

#### Boat Hooks with Pole

BALL POINT BRONZE HOOK-MAHOGANY POLE



Length	Polished	Chromium Plated	Diameter Pole	Weight
Overall Feet	Bronze Ench	Each	Inches	Pounds
4 1/2	\$11.00	\$12.00	1	1 1/2
6	12.75	13.75	11/4	2 1/2
7	15.50	16.50	1 1/2	4

#### **Boat Hook Holders**

SPRING BRASS

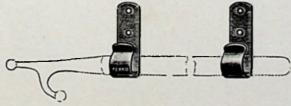


Fig. 490

Made of spring brass, they will accommodate poles up to 11/2 inch in diameter, and hold them firmly in place.

Polished Brass Each	Chromium Plated Each \$1.25	Length Inches	Width Inches	Weight Ounces
\$ .90	\$1.25	31/2		1 1/2

#### "Holdall" Spring Clamps

ALL BRASS-CHROMIUM PLATED

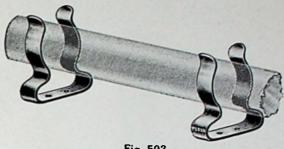


Fig. 502

A clamp having many uses aboard boats of every size and type. Also serves around the home, club, store or factory.

Excellent for stowing fishing rods, boat hook, oars, swab, broom, flashlight, flagstaff, pump, etc., etc.

Produced in two general sizes but both can be adjusted to tightly clamp objects of various sizes.

No.	Chromium Plated Per Pair	Adjust- ability Inches	Length From Wall Inches	Width of Metal Inches	Weight Per Pair Ounces	
1	\$1.40	% to 11/4	1 1/2	1/2	2	
2	1.80	1 to 13/4	21/4	5/8	21/2	

Packed-1 Pair Per Box-25 Boxes Per Package

#### Ring Buoy Holders

CAST BRONZE



Fig. 1017

Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Width Mounting Plate Inches	Height Overall Inches	Weight Pounds
\$1.50	\$2.75	\$3.50	3	41/2	1/2

#### Fender Hooks

GALV, MALLEABLE IRON OR FORGED BRONZE



Fig. 547

No.	Galv. Each	Dull Bronze Each	Polished Bronze Each	Chromium Plated Each	Diam. Inches	Size Plate Inches
1	\$.28	\$.45	\$.65	\$1.00	5/16	1%x1%
2	.75	.85	1.20	1.70	1/2	24x1%

NOTE-Bronze fender hooks in both sizes are forged bronze, not cast.



# Improved Outrigger or Fishing Pole Sockets

HEAVY BRASS TUBING—CAST BRONZE BRACKETS—DETACHABLE

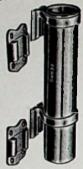


Fig. 460

Note the detachable brackets permitting stowage of the socket when not in use.

No.	Polished Brass Each	Chrome Plated Each	Inside Diam. Inches	Extreme Length Inches	Size Plate Inches	Weight Pounds
1	\$13.75	\$16.50	1 1/8	91/2	21/2×2	2 1/2
2	18.25	21.00	2 %	1134	21/2×2	4

#### Outrigger or Fishing Pole Sockets

HEAVY BRASS TUBING—BRASS BRACKETS



Fig. 1100

No.	Polished Brass Each	Chrome Plated Each	Inside Diam. Inches	Extreme Length Inches	Width Bracket Inches	Wt.
1	\$ 9.75	\$12.00	1 %	91/2	3 %	11/2
2	12.75	15.00	2 %	11%	4	3

#### New Adjustable Outrigger Pole Holders

HEAVY BRASS TUBING—BRONZE CASTINGS

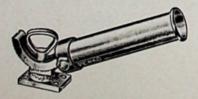


Fig. 475

May be adjusted quickly to any desired angle or position vertically and horizontally. Locked by large thumb screw illustrated.

Plain Finish Each \$14.50	Inside Dium, Socket Inches	Length Socket Inches	Dimensions Base Inches 3 % x 2 1/4	Weight Pounds 3 34
------------------------------------	-------------------------------------	----------------------------	---	--------------------------

#### Flush Flag Pole Socket

GALVANIZED CAST IRON—CAST BRONZE



Fig. 218



Fig. 219

Inside Diam. Inches	Galv. Each	Polished Bronze Each	Chrome Plated Each	Diam. Flange Inches	Depth Socket Inches	Wt. Ozs.
34	\$ .65	\$1.25	\$1.80	2	1 1/2	41/2
1	.70	1.35	2.10	2 %	1 34	6
11/4	1.00	1.70	2.50	2 %	2	10
11/2	1.60	2.50	3.25	3 1/8	2 34	16

#### Upright Flag Pole Socket

ROUND BASE CAST BRONZE



Fig. 220

Stern
· Service
FRIKO

Fig. 221

Inside Diam. Inches	Polished Bronze Each \$1.70	Chromium Plated Each \$2.40	Diam. Base Inches 2 1/8	Height Inches	Weight Ounces 7
1	2.40	3.10	21/2	2	81/2
11/4	2.90	3.60	2 %	2 1/8	11
1 1/2	3.90	4.80	3	3	16

#### Upright Flag Pole Socket

GALVANIZED CAST IRON SQUARE BASE

Bow





Fig. 570



Fig. 57

Inside Diam. Inches	Galv. Each	Height Inches	Size Base Inches	Weight Ounces
34	\$ .45	1%	2 x2	51/2
1	.65	21/4	24x24	11
11/4	.90	234	2 1/4 x 2 1/4	13
11/2	1.65	31/2	3 x4	24



#### Streamline Grab Rail Posts

FOR 1 INCH O. D. TUBING—20 B & S GAUGE CAST BRONZE



Fig. 413

Notice that the tubing does not pass through the post but fits snug over an integral projecting part of post, hence, the post and tubing when assembled provides a smooth streamline unit. No unsightly bulges.

Polished Bronze Each	Chromium Plated Each	Height Overall Inches	Dimensions Base Inches	Weight Each Ounces
\$3.30	\$4.60	21/4	3x2	10
Please	specify whether	center or	end required.	

#### BRASS TUBING, 1 INCH O.D. FOR ABOVE

			Plated Per Foot
6	foot lengths or less		\$2.20
	Not supplied in lengths longer than 6	feet.	
	Price applies to each foot or any fracti	on the	reof.

#### Grab Rails

CAST BRONZE POSTS—BRASS TUBING

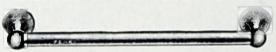


Fig. 379

		- Dinmeter o		
Length	1	Inch ——	11/6 I	
Between	Polished	Chromium	Polished	Chromium
Posts	Bronze	Plated	Bronze	Plated
Inches	Ench	Each	Ench	Each
6	\$7.00	\$9.25	\$7.50	\$9.75
12	7.50	9.75	8.00	10.25
18	8.25	10.50	8.75	11.00

NOTE—Lengths longer than those listed above are made to order only and are not returnable.

Add per foot or	Lengths fraction	
Polished Brass		Chromium Plated
\$1.70		\$2.20

Posts only, end or center, see Fig. 380. Not supplied in lengths longer than 6 feet.

#### Grab Rail Posts

CAST BRONZE-HOLLOW



Fig. 380

No.	Polished Bronze Each	Chromium Plated Each	Diam. Base Inches	Height Overall Inches	Diam. Hole Inches	Weight Each Pounds
1	\$2.75	\$4.00	21/2	3 %	1 or 1 1/8	5/8
2	5.50	7.00	3	3 1/2	11/4	1 3/4
Sn	ecify wh	ether for	center	or end.	also dian	neter of

hole for No. 1 size.

#### Stanchion Posts

GALVANIZED CAST IRON OR BRONZE



Fig. 614—For End Fig. 615—For Center

Size No.	Galv. Ench	Pol. Bronze Each	Chrom. Plated Each	Extreme Height of Post Inches	Diam. Base Inches	Bored For
1	\$ .65	\$1.75	\$3.00	2	15%	%" Rod
1 1/2	.65	1.75	3.00	2	1 5/8	1/4" Pipe
2	.85	2.00	3.25	21/2 -	- 15/8	%" Rod
21/2	.85	2.00	3.25	2 1/2	1 %	¼" Pipe
3	1.00	2.25	3.50	3	1 34	%" Rod
31/2	1.00	2.25	3.50	3	13%	%" Pipe
5	2.35	5.00	6.50	4	2 %	34" Rod
51/2	2.35	5.00	6.50	4	2 %	½" Pipe
_		_		_		

Special boring, other than above, price on application.

#### Hand Rail Sockets

CAST BRONZE



Center



No.	Polished Bronze Each \$2.75	Chromium Plated Each \$3.50	For Diam. Rail Inches	Height Overall Inches	Size of Base Inches 3½x%	Weight Ounces 5
2	3.50	4.25	11/4	2	3 14 x 14	9

Fig. 215

# Wood Rail Hinges and Locks CAST BRONZE

Please specify whether center or end and size.







Fig. 122

Fig. 123

Lock has spring latch on bottom.

		Fig.	122		
No.	Polished Bronze Each \$9.00	Chromium Plated Each \$10.50	Size Rail Inches	Length Inches	Weight Pounds
2	9.00	10.50	1%x3	3%	13%

E:	100
rig.	123

No.	Polished Bronze Per Set	Chromium Plated Per Set	Size Rail Inches	Length Inches	Weight Pounds
1	\$9.50	\$11.00	13/2×23/2	5	13/4
2	9.50	11.00	1%x3	3 %	1%

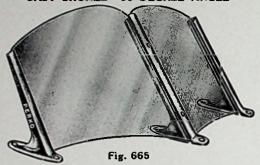


#### Windshield Brackets

FOR RUNABOUTS & OUTBOARD MOTOR BOATS CAST BRONZE OR CAST ALUMINUM

All grooved for % inch glass, end brackets beveled to match the crown of most decks. All center brackets are two piece for quick assembly and easier installation. All brackets are open at the top.

#### CAST BRONZE-50 DEGREE ANGLE



Polished Bronze Per Set \$18.00

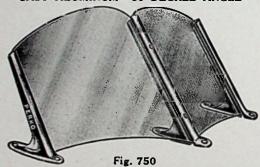
Chromium Plated Per Set \$22.50

Height Center Bracket Inches 8 34

Height End Brackets

Price includes rubber for brackets, no glass supplied.

#### CAST ALUMINUM—50 DEGREE ANGLE



Polished Per Set \$13.50 Helght Center Bracket Inches 8 34

Height End Brackets Inches

Length Center Base

Price includes rubber for brackets, no glass supplied.

#### CAST BRONZE-60 DEGREE ANGLE

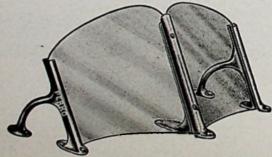


Fig. 930

Chromium Plated Per Set Polished Bronze Per Set \$18.75 \$23.25

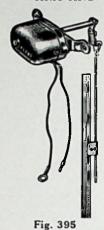
Height 91/4

Height End

Price includes rubber for brackets, no glass supplied.

### Improved Windshield Cleaners

ELECTRIC-6 OR 12 VOLTS BRASS MOTOR COVER-STAINLESS STEEL ARM AND SHAFT—CHROMIUM PLATED



Inside mounting, for swing out windshields. Blade is adjustable to various lengths.

Furnished with drilling template, rubber insulating washers, connecting wires and switch.

Extreme Width Inches	Length Blade Inches	Length Shaft Inches 2 ½	Weight Pounds
6 Volt Ench \$15.00		12 V Enc \$17.	h

Supplied for outside mounting to order. Prices same as above.

#### SPARE PARTS

Arm Assembly	Shaft Assembly \$1.50 Reduction Gear Assy. 1.20 Small Spur Gear Assy. 1.20 Gear Rack 1.20 Large Spur Gear Assy. 1.50
--------------	--

#### Hand Windshield Cleaner

WITH EXTENSIBLE ARM-10 OR 12 INCH BLADE STAINLESS STEEL ARM AND BLADE HOLDER OTHER PARTS, BRONZE, CHROMIUM PLATED



Rustproof-Leakproof

Nothing to get out of order, operates very smoothly by a flip of the wrist. The improved spring tension of the arm holds blade firmly against the glass.

The arm is extensible from 9 to 12 inches, spring tension is adjustable for best wiping pressure.

Chromium Plated Each	•Length Overall Inches	Diam. Shaft Inches	Length Handle Inches	Weight Ounces
\$6.75	15 to 18	3/0	23%	R

\*Length with 12 inch blade.

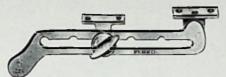
Note-If 10 inch blade is preferred, please specify.

Spare	Arms	each	\$1.45
Spare	Blades	each	.75



#### Windshield Adjusters

CAST BRONZE



Port Side Fig. 82

No.	Polished Bronze Per Pair	Chromium Plated Per Pair	Length Overall Inches	Length Adjustment Inches
1	\$11.00	\$14.50	61/2	5
2	14.00	18.75	9	7
3	17.50	22.00	12	9 1/2

Note-When ordering 1/2 pair, specify whether for port or starboard side.

#### Rubber Insulation for Windshields





Fig. 667

Fig. 668

Live moulded rubber for glass ¼ inch thick.

Fig. 667—For	bottom of	windshields-per foot\$	.25
Fig. 668-For	windshield	brackets-per foot	.15

Fig. 667-Supplied only in 11 ft. lengths.

Fig. 668-Supplied in lengths of 20 feet or longer.

#### Windshield Keeper and Plate

CAST BRONZE

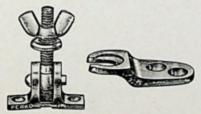


Fig. 697

Locks the windshield, preventing rattles and assisting in keeping same watertight.

Plain Per Set	Polished Per Set	Chromium Plated Per Set	Base of Keeper Inches	Base of Plate Inches	Weight Ounces
\$2.00	\$3.25	\$3.75	1 1/2 x 5/4	14x%	3 1/2

A set consists of parts illustrated.

Non Skid Step Plates

WITH MOULDED RUBBER STEP PADS BLACK OR WHITE CAST BRONZE FRAME—CHROMIUM PLATED



Fig. 1043

No.	Black Complete Each	White Complete Each	Frames Only Each	Extreme Dimensions Inches	Weight Pounds
1	\$5.75	\$6.00	\$4.75	8½x3½-	3/4
2	7.75	8.00	6.25	11½x5½	1 3/4
Bla	ck supplie	d unless o	therwise s	specified.	

# Rubber Pads Only BLACK OR WHITE



Fig. 1050

No.	Black Each	White Each	Length Inches		Thickness Inches	Weight Ounces
1	\$1.00	\$1.25	8	2 1/2	9/16	31/4
2	1.50	1.75	11	5	9/16	81/4

Black supplied unless otherwise specified.

#### **Utility Rubber Step Plates**

HEAVY CORRUGATED
BLACK OR WHITE RUBBER WITH
BRASS, CHROMIUM PLATED FRAME
WITH OR WITHOUT NAME OF BOAT



Fig. 1039-Name Inlaid



Fig. 1044-Plain

No.	Black Each	White Each	Fig. 1039 Black or White Each	Extreme Dimensions Inches	Weight Pounds
3	\$4.20	\$4.35	\$ 8.20	81/2 x 3 1/2	1/2
4	5.25	5.40	9.20	10 x4	3/4
5	5.85	6.05	11.20	13 x5	1
6	6.30	6.50	12.20	17 x6	1 1/2
7	7.40	7.70	13.20	18 x7	2
8	8.40	8.70	14.20	20 x8	2 1/2
9	9.40	9.70	15.20	22 x9	3

Note-Be sure to specify color. Black shipped unless otherwise specified.

Fig. 1039 has name of white rubber inlaid in black

pad or the reverse, please specify.

Each letter requires 2 inches of space, i.e. A 5 letter word will require a 10 inch plate size No. 4.



#### Folding Boarding Ladders

MAHOGANY WITH CAST BRONZE FITTINGS Made of high quality mahogany, varnished. Supplied complete with plates for hanging and polished bronze or chromium plated fittings.

CLOSED 2 STEPS-OPEN 4 STEPS

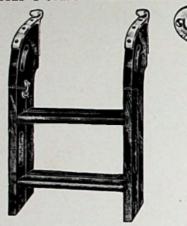


Fig. 557

With Polished Bronze Fittings	With Chromium Plated Fittings	Overall Length Open	Overall Length Closed	Overall Width	Weight
Each	Each	Inches	Inches	Inches	Pounda
\$48.50	\$53.50	36	211/2	15	91/2

#### CLOSED 3 STEPS-OPEN 6 STEPS

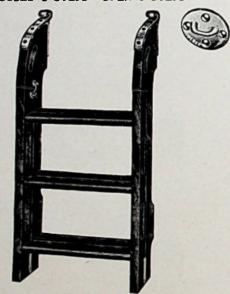


Fig. 558

With Polished Bronze Fittings Each	With Chromium Plated Fittings Each	Overall Length Open Inches	Overali Length Closed Inches	Overall Width Inches	Weight Pounds
\$51.00	\$56.00	51	30	15	1216

#### SPARE PARTS

Hooks and Hanging Plates, See Fig. 717, Page 138 Hinges, See Fig. 556, Page 155

Cabin Door Hooks, See Fig. 956, Page 151

DE LUXE LADDERS

With black rubber matting and chromium plated moulding on step made to order. Fig. 557 add \$13.00 each. Fig. 558 add \$19.50 each.

#### Ladder

FOR COCKPIT OR COMPANIONWAY SOLID MAHOGANY—SPAR VARNISHED WHITE RUBBER STEPS PADS

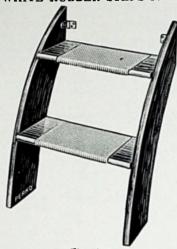


Fig. 601

May be instantly installed or removed. Supplied complete with a set of our Fig. 669 chromium plated ladder locks.

	Height Overall	Width Overall	Height Top Step	Projection	Weight
Each	Inches	Inches	Inches	Inches	Pounds
\$33.00	281/2	19	221/2	15	15

#### Folding Step

FOR COCKPIT OR COMPANIONWAY SOLID MAHOGANY—SPAR VARNISHED WHITE RUBBER STEP PAD



Fig. 602

Supplied complete with hinge and strong folding brackets, all brass, chromium plated.

Complete Each	Spare Folding Brackets Per Pair	Dimensions Step Inches	Thickness Step Inches	Weight Pounds
\$28.00	\$14.00	13%x9	7/8	5 1/2

#### Rope Ladder Hook CAST BRONZE



Plain er Pair	Polished Chrome Per Pair	Length Overall Inches	Projectio Overall Inches
4.00	\$6.50	3	1 1/2



#### Rope Swimming Ladders

WITH ROUND RUNGS OR FLAT STEPS MANILA ROPE RUNGS OR STEPS 12 INCHES APART

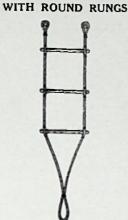


Fig. 991

Rungs are hickory, oil treated, size 1 1/4 x16 inches. Ends for fastening on board are 5 feet long.

	Length		Each		Length	Each
2	Rung	\$	6.75	5	Rung	 \$11.50
3	Rung		8.00	6	Rung	 13.25
4	Rung		9.75			
	Additi	onal runge	dd \$2	2 00	each.	

#### WITH FLAT STEPS



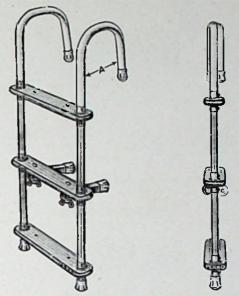
Fig. 992

Steps are hard wood, varnished, size %x3½x20 inches. Ends for fastening on board are 5 feet long. Steps are cut out for hand hold and have white rubber bumpers.

	Length	Each	Length	Each
2	Length Step	\$11.25	5 Step	 20.25
3	Step	14.25	6 Step	 23.25
	Step			
	Additional ste	ps, add \$3.25	each.	

#### New Folding Swimming Ladder

ALUMINUM TUBING—MAHOGANY STEPS WHITE RUBBER TRIM AND BUMPERS



Open for Use

Closed for Stowing

Fig. 1004

A ladder that meets every requirement for small boats, especially desirable for water skiers, aquaplaning and swimming.

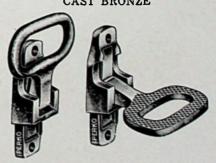
The folding feature permits stowing under deck or seats. Thickness when folded is only 3 inches.

All parts which come in contact with the boat deck or hull are covered with white rubber.

The folding brackets may be attached to any step and can be adjusted to keep the ladder vertical on any boat.

No.	Each	Number of Steps	nt "A" Inches	Overall Inches	Overall Inches	Weight Pounds
1	\$21.50	3	7	37	151/2	534
2	23.00	3	9	37	1535	6
3	29.50	4	11	48	151/2	7

# Folding Step CAST BRONZE



FOLDED

OPEN

Fig. 344

For mounting on hull or transom, folds up out of way when not in use. Spring holds step in position.

Polished Chromium Size Bronze Plated Step Each Each Inches \$6.00 \$7.00 4x2	Size Base Inches 4 1/4 x 1 3/4	Extends Folded Inches	Weight Pounds
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#### Ladder Locks

FOR COMPANIONWAY OR UPPER BERTH CAST BRONZE

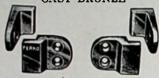


Fig. 669

Polished Bronze Per Set

\$4.50

\$6.75

Chromium Plated Bronze Per Pair \$3.25 \$4.75

A set consists of four pieces illustrated.

#### Ladder Hooks

CAST BRONZE

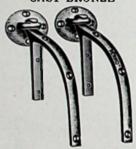


Fig.670

Length Brace Inches

21/2×31/4

Polished Chromium Plated Per Set Bronze Per Set \$18.00 \$24.00

Polished Bronze

-Plates Only-ned Chromium ze Plated Per Pair \$7.25

### Ladder Hooks for Folding Boarding Ladder CAST BRONZE

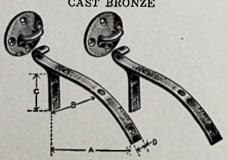


Fig. 717

Used on our Figs. 557 and 558 folding boarding ladders. Designed for wide woodwork.

\$16.50

Polished Chromium
Bronze Plated
Per Set Per Set

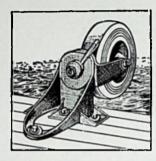
\$21.00

\$5.50

Plates Only
Polished Chromium
Bronze Plated
Per Pair Per Pair \$7.25

#### New **Dual Docking and Bumper Wheels**

GALVANIZED STEEL CASTINGS SOLID WHITE RUBBER TIRE





Position 1

Position 2

Fig. 859

Set in position 1 before casting off, will protect the hull from scraping and will protect the boat from gouging against float when docking.

Set in position 2 when boat is made fast, it will ride against wheel, eliminating the chafing usually caused by fenders.

A simple quick acting lever does the work.

Each \$33.50 Size Tire Inches

Size Overall Inches 15x81/2

Weight Pounds 14

#### New Corner Docking Wheel

GALVANIZED STEEL CASTINGS SOLID WHITE RUBBER TIRE

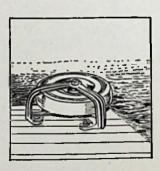


Fig. 860

Designed for mounting on sharp corners of long finger floats.

Eliminates chafing gear or messy fenders.

Euch \$24.75

8x3

Size Overall Inches 15x81/3

Weight Pounds 10



#### Regular Deck Plates

CAST BRONZE-WITH KEY



Fig. 526

Diam. Opening Inches	Machine Finish Complete Each	Polished Bronze Complete Each	Chromium Plated Complete Each	Keys Only Each	Outside Diam. Plate Inches
1	\$ 1.80	\$ 2.50	\$ 3.25	\$ .25	2 1/2
1 1/2	2.50	3.20	4.00	.30	3 1/4
2	3.60	4.40	5.20	.30	3 %
2 1/2	4.20	5.10	6.00	.45	4 1/2
3	4.60	5.60	6.60	.50	4 1/8
3 1/2	6.00	7.20	8.40	.60	5 1/2
4	7.00	8.50	10.00	.65	5 34
5	10.50	12.75	14.75	.80	71/1G
6	13.75	16.00	18.25	1.40	81/4
8	35.00	39.50	45.00	2.00	101/4

Caps only, price is 50% of complete plate.

#### Pipe Deck Plates

CAST BRONZE-WITH KEY-I. P. S. THREAD



Fig. 528

Words, "water," "gas," "oil" or "fuel" marked in flange of all sizes except % inch when specified. Otherwise unmarked deck plates are supplied.

Note, markings are in flange instead of cap. This is an obvious advantage as plate is identified when cap is

removed

Pipe Size Inches	Machine Finish Complete Each	Polished Bronze Complete Each	Polished Chromium Plated Complete Each	Keys Only Each	Outside Diam. Plate Inches
3/4	\$ 2.20	\$ 2.90	\$ 3.65	\$ .25	2 %
1	2.45	3.15	4.15	.25	2 1/8
11/4	3.00	3.80	4.85	.30	35/16
1 1/2	3.40	4.20	5.40	.30	3%
2	4.30	5.30	6.50	.45	41/4
2 1/2	5.25	6.25	7.50	.45	4 %
3	7.00	8.20	9.35	.55	5 %

Safe-Cap Deck Plates

Caps only, price is 50% of complete plate.

CAST BRONZE-WITH KEY-I. P. S. THREAD

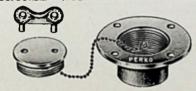


Fig. 525

Our Fig. 528 Pipe Deck Plates can be supplied with chain attached to cap per illustration.

Stock sizes,	14" and	1 1/2"	add each \$ .	50
All other siz	es	•••••	add each \$ .	65

#### Deck Plate Key

CAST BRONZE
ADJUSTABLE TO ALL SIZES OF DECK PLATES
IMPROVED UNBREAKABLE PINS

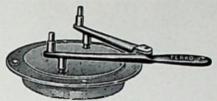


Fig. 826

Will fit all sizes of deck plates up to 8 inch diameter, making it unnecessary to have separate keys for each plate.

	Length Overall	Weight
Each	Inches	Pounds
\$2.00	81/2	1

#### Gas Tank Caps

WITH DECK FLANGE AND SAFETY CHAIN CAST BRONZE



Unusually attractive, will enhance the appearance of any boat, particularly a well finished runabout. Both parts are as shallow as practicable to bring the cap close to the deck.

Length of chain is 15 inches.

No.	Polished Bronze Each	Chromium Plated Each	Threaded for Pipe Inches	Height Overall Inches	Diam. Deck Flange Inches	Weight Pounds
1	\$5.25	\$6.00	11/2	13%	31/4	1,,
2	5.75	6.50	2	13%	4	14

#### Gas Tank Vents

CAST BRONZE—PLAIN WITH FLANGED ELBOW



Fig. 503

A fitting designed for leading the gas tank vent outboard per recommendations of insurance underwriters.

No.	Each	Pipe Size Inches	For Wood Inches	For Tanks Up To	Weight Ounces
1 2	\$2.75	3/8	1 1/8	100 Gals.	8
-	2.75	1/2	11/8	100 Gals.	8



#### Letters and Figures

CAST BRONZE-REGULAR PATTERN





Fig. 348

Height Inches 3 Plain Bronze Each \$ .50 Weight Per 100 in Lbs. 24½

#### GOTHIC PATTERN





Fig. 313

Height Inches Plain Bronze Each \$ .50 Weight Per 100 in Lbs.

#### Brass Axe Brackets

18 GAUGE—POLISHED



Fig. 325 .

A set consists of one blade socket and one handle bracket as illustrated.

Complete Sets Per Dozen \$25.00 Blade Sockets Only Per Dozen \$15.00 Handle Brackets Only Per Dozen \$10.80

For Blade Weight Width Per Set Inches Ounces

#### Sword Fish Darts

PLAIN CAST BRONZE
POINT GROUND AND SHARPENED



Fig. 805

Each \$ .75

Length Inches Weight Ounces

#### Dart Shanks

IRON SHANK-CAST BRONZE SOCKET



Fig. 655

Length overall, 24 inches; Weight, 1¼ pounds.

Each \$2.75

#### Sail Makers Palms

HIDE MOUNTED



Fig. 411

Right
Hand
Per Doz.
Seaming—Half Hide .....\$14.50

Left Hand Per Doz. \$15.00

"Right Hand" supplied unless otherwise specified.

### Quarter Round Rubber Moulding



Fig. 471

Generally used as trim or moulding around cabin windows and windshields.

Size 3/8 x 3/8 inches Per Foot — \$.18

Supplied only in lengths of 25 feet.

#### New Drip Moulding

WHITE SYNTHETIC RUBBER NOT EFFECTED BY SUN OR WEATHER



Fig. 192

Per Height Foot Inches

Extension Inches Weight Per Foot Ounces

Supplied only in standard lengths of 10 feet.

#### New Rub Rail Moulding

ANODIZED ALUMINUM-POLISHED FINISH



Fig. 193

er oot Width Inches Thickness Inches Weight Per Foot Ounces

Supplied only in standard lengths of 12 feet.



#### Continuous Hinge

WROUGHT BRASS-BRASS PIN



Fig. 211

For use on hatch covers, locker doors, windshields, etc. Holes are two inches apart, center to center.

Width Open Inches	Length Inches	Polished Brass Each	Chromium Plated Each	Thickness Inches
11/16	60	\$3.85	\$5.20	.045
11/4	60	4.10	5.50	.040
11/4	72	4.85	6.50	.040
1 1/2	60	4.25	5.50	.040
1 1/2	72	5.00	6.60	.040
2	60	4.50	5.75	.040
2	72	5.50	6.90	.040
_				

#### Flat Hatch Trim

WROUGHT BRASS-DRILLED



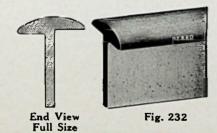
Fig. 243

For finishing around edges of hatch. Drilled and countersunk off center for No. 6 flat head screws.

Width Inches	Length Inches	Polished Brass Each	Ohromium Plated Each	Thickness Inches
11/10	60	\$3.20	\$3.75	.045
11/4	60	3.35	3.90	.040
11/4	72	4.00	4.70	.040
1 1/2	60	3.50	4.10	.040
1 1/2	72	4.20	4.85	.040

#### Hatch Moulding

EXTRUDED BRASS-PLAIN FINISH



This type moulding insures a smooth and neat surface, as it is fastened to hatch on side, screw heads are invisible when hatch is closed.

Per Foot	Width Surface Inches	Depth Inches	Weight Per Foot Ounces
\$1.30	34	13/16	1114

Rubber Fender Moulding
HALF ROUND—WHITE



Fig. 158

A good looking white moulding, easy to keep clean. Excellent for gunwale of small boats. Apply with rubber cement or escutcheon pins.

	Width	Thickness	Weight Per 100 Ft.
Per Foot	Inches	Inches	Pounds
\$ .25	1	1/2	25

Supplied only in 50 or 100 foot lengths.

Fender Moulding

18-8 STAINLESS STEEL .045" THICK POLISHED



Fig. 110

For all classes of boats. A strong moulding with ends formed as illustrated. 6 foot lengths have both ends formed; 12 foot lengths have one end formed, the other end cut for splicing. All punched and countersunk for No. 7 oval head wood screws, 8 inch centers.

6 Foot	12 Foot	Width	Width	Weight
Lengths	Lengths	Outside	Inside	Per Ft.
Each	Each	Inches	Inches	Ounces
\$3.95	\$7.90	₹/s	3/4	3

Moulding Ends
CAST BRONZE—CHROMIUM PLATED



Fig. 111
nd of moulding Fig. 110

For nmsn	ing cut end c	or moulding	g rig. iio.	
Each	Length Overall Inches	Length Head Inches	Width Neck Inches	Weight Ounces
\$1.40	2%	15/16	34	11/2

Moulding Couplings
CAST BRONZE—PLAIN



Fig. 38

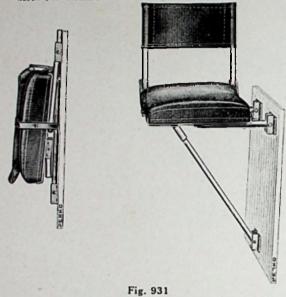
For inside of Fig. 110 moulding at joint. Each \$.35

Supplied only in standard lengths of 12 feet.



#### New Folding Helmsman's Seat

ALL HEAVY GAUGE ALUMINUM KAPOK FILLED CANVAS COVERED CUSHION



An excellent item for cruisers of all sizes. Especially appreciated by the boat owner who has spent hours at the wheel.

The seat cushion is soft, comfortable and roomy enough for the person with wide beam. It is quickly detached for emergency use.

The back is set at proper angle for steering comfort, not for sleeping.

The entire unit folds without effort into a very compact package out of the way when standing is necessary.

May be installed on port or starboard side.

Ench	Dimensions of Sent Inches	Height of Back Inches	Weight Pounds
\$28.00	16%x11¼	18	8

#### Folding Stools

VARNISHED SEAT—CAST BRONZE BRACKET



All metal parts are painted gray, wrinkle finish. Seat is mahogany stained.

No.	Each	Diam. Seat Inches	Projection Inches	Bulkhead Bracket Inches	Weight Pounds
1	\$15.00	12	121/2	81/4	51/4
2	17.00	14	141/2	111/4	8

Swivel Fishing Chair MAHOGANY WITH CAST BRONZE FITTINGS DEMOUNTABLE—WITH COVER FOR DECK PLATE

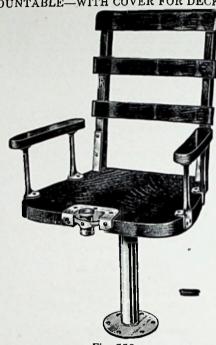


Fig. 559

Complete with universal fishing rod socket

With Polished Bronze Fittings Each	With Chromium Plated Fittings Each	Height of Sent Inches	Dimensions of Sent Inches	Diam, Deck Flange Inches	Weight Pounds
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#### SPARE PARTS

No.		No. Per Chair	Polished Bronze Each	Chromium Plated Each
	Rod Socket Complete	1	\$11.00	\$14.00
2	Seat Flange, Plain	1	7.00	
3	Pedestal—2 inch pipe	. 1	10.00	13.00
	Deck Flange Complete	- 1	12.00	15.00
	Arm Supports	4	3.50	4.50
	Back Rest Sockets	2	3.50	4.50
7	Back Rest Brace	1	8.00	10.50

#### Triplex Motor Boat Whistle

PLASTIC-ORANGE COLOR



Fig. 167

Length Overall Inches	Width Overall Inches	Weight Per Dozen Pounds
6		Louitus
	Overall	Overall Overall

#### Police or Signal Whistle

BRASS-NICKEL PLATED

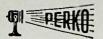


Per
Dozen
\$9.00

Length Inches 2

Width Inches 3/4

Weight Per Doz. Ounces 17



#### Fog Horns

GALVANIZED STEEL OR BRASS



Fig. 162

Length		Galv.	Pol.
Overall		Steel	Brass
Inches		Per Doz.	Per Doz.
18	Without Bell	\$26.00	\$38.00
20	With Bell, as illustrated	30.00	45.00

#### Cast Bronze Fog Bells

HEAVY WEIGHT-WITH REMOVABLE BRACKET



Diameter Inches	Polished Bronze Ench	Chromium Plated Each	Height Overall Inches	Weight Pounds
8	\$36.50	\$ 45.00	8	10
10	70.00	81.00	101/2	22
12	94.00	108.00	12	38

#### WALL PLATE ONLY

8	2.25	3.00
10	3.75	5.00
12	4.50	5.75

#### New Cast Bronze Fog Bells

HEAVY WEIGHT-WITH STATIONARY BRACKET



Fig. 148

Diameter Bronze Inches Each	Polished Bronze Each	Chromium Plated Each	Diameter Base of Bracket Inches	Weight Pounds
10 \$68.00	\$ 76.00	\$ 88.00	5%	24 ½
12 91.00	100.00	115.00	5%	40

Brackets 10.00 14.00 18.00

Length bracket, 7 inches from wall to center of bore. Base drilled for \( \frac{\psi\_0}{0} \) inch bolt.

#### Wrought Brass Fog Bells

WITH REMOVABLE BRACKET PRESSED BELL METAL



Fig. 159

Diam. Inches	Plain Brass Each	Polished Brass Each	Chromium Plated Each	Height Overall Inches	Wt. Lbs.
6	\$5.10	\$6.00	\$8.00	4	1
8	7.35	8.35	10.40	5	21/2
Wall Plate					
only	.85	1.00	1.40	1 %	1/16
Arm only	1.55	1.75	2.40	41/4	₹/16 1/6
Clapper only —	1.20	1.50	2.25		
Eye Bolt only —	.50	.60	.90		

#### Cast Bronze Fog Bells

LIGHTWEIGHT-WITH REMOVABLE BRACKET



Fig. 581

Diam. Inches	Polished Bronze Each	Chromium Plated Each	Height Overall Inches	Weight Pounds
6 8	\$11.00 15.00	\$14.50 19.00	4 1/8 5 1/4	3 5
Wall Plate only	1.20	1.80	2	14

## Cast Bronze Fog Bells

MEDIUM WEIGHT-WITH REMOVABLE BRACKET



Fig. 420

Dinmeter Inches	Polished Bronze Each	Chromium Plated Each	Height Overall Inches	Weight Pounds
6	\$14.50	\$19.00	5	4
8	22.00	27.00	61/8	8

#### WALL PLATE ONLY

	*********	* CAIL	OILL
6	1.75	2.25	
8	2.25	3.00	



### "Sea Echo" Horn

BRASS COVER AND PROJECTOR BRASS SCREEN-CAST BRASS BASE 6 OR 12 VOLTS-CHROMIUM PLATED



A new very loud resonating horn with short projector and a brass chromium plated screen in the mouth of the projector.

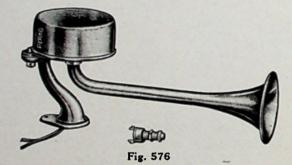
This horn is designed and produced to supply a long felt need for a combination of loud, distinctive tone, short projector and good looks.

Complete with 10 feet of cable and push button.

Volts	Each	Length Overall Inches	Height Overall Inches	Weight Pounds
6	\$29.50	10%	71/8	41/4
12	31.00	1034	71/8	41/4

#### "Sea-Tone" Horn

ALL BRASS-CHROMIUM PLATED-WATER TIGHT-WEATHERPROOF-RESONATING VOLTAGES 6-12-32-110 D.C. RANGE-2 MILES



A horn manufactured for marine use. It has great volume and distinctive tone. It answers the demand for a high quality marine horn that can be heard at great distance and stand the arduous test of use on salt

Supplied complete with heavy duty push button and 16 feet of cable in two eight-foot lengths.

Volts	Each	Extreme Length Inches	Extreme Height Inches	Weight Pounds
6	\$59.00	19	81/2	61/2
12	61.50	19	81/2	61/2
32	61.50	19	81/2	61/2
110 D.C.	80.00	19	81/2	61/2
110 A.C.	supplied t	o order, pri	ce on appli	cation.

Packed in individual cartons.

Brass Electric Horns

VIBRATORY TYPE—6, 12 OR 32 VOLTS POLISHED OR CHROMIUM PLATED COAST GUARD MODEL

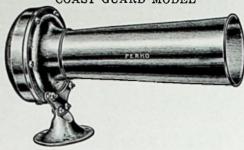


Fig. 75

Complete with button, cable, mounting bolts, screws,

Internal steel parts treated against corrosion.

No.	Pol. Brass Each	Chrom. Pinted Each	Length Overall Inches	Height Overall Inches	Diam. Base Inches	Wt. Lbs.
1 2	\$18.50	\$20.15	13	7 1/4	3 %	4
	25.75	28.75	15%	8 1/2	3 %	6

For 12 volt add \$2.00. For 32 volt add \$3.50. Size No. 2 meets U. S. Coast Guard specification No. CR-23075.

#### Blaster Horn

WITH PUSH BUTTON, CABLE AND RELAY

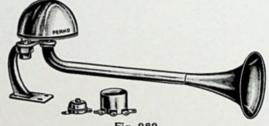


Fig. 989

Pol. Brass Each	Chrom. Plated Each	Length Inches	Width Inches	Height Inches	Wt.
\$23.00	\$25.75	22	5 1/2	9	7

For 12 volt add \$2.00. For 32 volt add \$3.50.

# Super-Blaster Twin Horns WITH PUSH BUTTON, CABLE AND RELAY

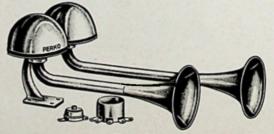


Fig. 990

Pol. Brass Per Pair \$37.35	Chrom Plated Per Pair \$40.25	Length Inches 22	Width Inches	Height Inches	Wt. Lbs.
\$37.35	\$40.25	22		•	11

For 12 Volt, add \$4.00-For 32 Volt, add \$7.00 NOTE - PLEASE SPECIFY VOLTAGE, OTHERWISE 6 VOLT WILL BE SUPPLIED.



#### "Sea-Mite" Streamline Horn

STAINLESS STEEL DIAPHRAGM
DIE CAST BODY AND BASE
CHROMIUM PLATED—6 OR 12 VOLTS



Fig. 1120

#### A HORN-NOT A SIREN

Owners of runabouts and small cruisers have been searching for a horn of this design and size for years; here it is.

This horn has exceptional tone quality for its size and is ideally suited for the above types of boats.

Note that the diaphragm is of stainless steel.

Furnished complete with 10 feet of cable and push button.

6 Volt Each	Volt Each	32 Volt Each	Length Inches	Height Inches	Dinmeter Inches	Weight Pounds
\$29.50	\$31.00	\$33.00	7	6	4 1/2	41/4

Specify voltage when ordering

#### Heavy Duty Marine Siren

DIE CAST WHITE METAL CHROMIUM PLATED—6, 12 OR 32 VOLTS THE YACHTSMAN



Fig. 1118

A siren that audibly commands the right of way. An ear piercing tone that can be heard for miles.

Has specially designed motor for economical opertion. Equipped with greased sealed hall hearings for smooth operation.

turnished complete with long cable and heavy duty push button.

6 i2 32 Volt Volt Length Height Diam. Weight Each Each Inches Inches Inches Pounds \$59.50 \$62.00 \$69.50 10 \( \) 7 \( \) 5 \( \) 10

#### New "Sea-Pitch" Horn

BRASS—CHROMIUM PLATED 6 OR 12 VOLTS



Fig. 1121

A new horn designed to meet the need for a brass horn made for marine use at a price that every small boat owner can afford. Has a very loud tone that can be heard at a great distance.

The base is cast bronze—chromium plated. The diaphragm is cadmium plated, salt spray tested.

6 Volt Each	12 Volt Each	Length Overall Inches	Height Overall Inches	Diam. Base Inches	Weight Pounds
\$14.00	\$16.00	5	71/4	3 %	3 1/2

#### Marine Sirens

DIE CAST WHITE METAL CHROMIUM PLATED—6 OR 12 VOLTS THE SEA-MITE

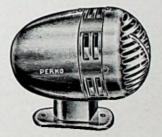


Fig. 1117,

A siren of fine tone quality, dependability and performance.

Furnished complete with 10 ft. cable and heavy duty oush button.

Volte	Each	Length Inches	Height Inches	Diam. Inches	Weight Pounds
6	\$32.25	7	6	4 3/2	41/4
12	35.00	7	6	4 1/2	41/4



Fig. 273

#### Relays

CHROMIUM PLATED

Eliminates line loss where electric unit is located some distance from the battery.

6 Volts 12 Volts 32 Volts Each \$2.20 \$2.95 \$3.75



#### Curtain Fasteners

WROUGHT BRASS



Fastener Fig. 995



Screw Stud Fig. 998



Eyelet Fig. 996



Washer Fig. 997

Made of stamped brass, for single and double curtains. Screws on single and double studs are %" No. 7.

		Single	Double Per 100
\$24.40	\$30.75	\$32.00	\$43.25
27.00	33.50	36.60	47.50
21.00	23.00	23.80	27.00
2.80	2.80	4.75	4.75
1.40	1.40	3.65	3.65
23.30	26.00	28.65	31.30
	\$24.40 27.00 21.00 2.80 1.40	\$24.40 \$30.75 27.00 33.50 21.00 23.00 2.80 2.80 1.40 1.40	Single Per 100         Double Per 100         Single Per 100           \$24.40         \$30.75         \$32.00           27.00         33.50         36.60           21.00         23.00         23.80           2.80         2.80         4.75           1.40         1.40         3.65

Note—Double fasteners when ordered complete are supplied with two eyelets and two washers for each fastener.

#### Hand Punch

FOR ABOVE CURTAIN FASTENERS CAST IRON WITH STEEL CUTTERS



Fig. 284 ..... Each \$5.50

Hand Screw Driver FOR "LIFT THE DOT" STUDS STEEL WITH WOOD HANDLE



Fig. 290 ..... Each \$2.50

### "Lift The Dot" Fasteners

BRASS



Single Stud Fig. 114



Clinch Plate Fig. 118



Double Stud Fig. 115



Single Socket Fig. 116



Double Socket Fig. 117



Clinch Stud Single Fig. 60 Double Fig. 61



Clinch Washer Fig. 62

Above cuts are all full size.

Screws on single and double stude are 1/2" No. 8.

	Brase Single Per 100	Finish — Double Per 100	Nickel Single Per 100	Plated — Double Per 100
Complete Sets,				
Figs. 60-62-116-118	\$15.25		\$17.00	
Figs. 61-62-117-118		\$31.75		\$35.00
Figs. 114-116-118	14.25		15.50	
Figs. 115-117-118		27.50		30.25
Fig. 60 Only	5.35		5.90	
Fig. 61 Only		8.90	*	9.75
Fig. 62 Only	1.35	1.35	1.50	1.50
Fig. 114 Only	5.55		6.10	
Fig. 115 Only		7.00		7.65
Fig. 116 Only	7.65		8.50	
Fig. 117 Only		9.10		10.00
Fig. 118 Only	1.35	1.35	1.50	1.50

Note—Double fasteners, when ordered complete are supplied with two double sockets and two clinch plates for each stud.



#### "Durable Dot" Fasteners

BRASS



Button Fig. 896



Socket Fig. 898

#### Curtain or Grommet Hooks

CAST BRASS



Fig. 1000

Plain Brass Per Dozen \$2.30 Diam. Flange Inches

Grommet Hole Cutters FORGED STEEL

Fig. 903

No.

6

Diam. Hole Inches

1/4

Each

\$1.90

1.90

2.10

No.

Length Screw Inches

> Diam. Hole Inches

Each

\$5.00

5.00

6.00

6.00



Screw Stud Fig. 900



Canvas Stud Fig. 901



Eyelet Fig. 907

Chromium

Screws on Fig. 900 screw studs are ½ inch No. 6.

For canvas to canvas, use sets made up of Figs. 896, 898,901 and 907.

For canvas to wood, use sets made up of Figs. 896,898 and 900.

	Finish	Plated
Complete Sets,	Per 100	Per 100
Figs. 896-898-901-907	\$6.10	\$14.00
Figs. 896-898-900	8.00	14.00
Fig. 896 Only	2.45	4.50
Fig. 898 Only	1.80	3.75
Fig. 900 Only	4.15	6.10
Fig. 901 Only	1.10	3.05
Fig. 907 Only	1.10	3.05

### Senior Grommet Dies

FORGED STEEL

Style B for inserting Spur Grommets
Style C for inserting Washer and Teeth Grommets



Fig. 902

Size No.	Style B Each	Style C Each	Weight Each Lbs.
0	\$ 5.80	\$ 5.80	14
1	6.40	6.40	13%
2	6.55	6.55	1 3/8
3	6.75	6.75	17/10
4	7.50	7.50	23%
5	8.90	8.90	25%
6	17.00	17.00	3 1/2
7	25.00		334
8	25.00		5

Use a wooden mallet with above dies.

#### Hand Set Tool

FOR ABOVE BUTTONS AND EYELETS STEEL



Fig. 905 ..... Each \$1.70

#### Hand Punch

FOR "LIFT THE DOT" FASTENERS CAST IRON WITH STEEL CUTTERS



Fig. 285 ..... Each \$3.25



#### Mortise Lock Sets

CAST BRONZE

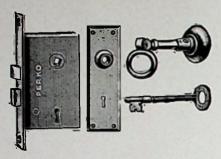


Fig. 945

Set No.	Case Inches		Facing Inches	set Inches	Thickness Inches
1	2 1/4 x 2 1/4	x 1/2	4 1/8 x 3/4	11/2	% to 1 ½
2	3½x3	x 5/8	5 x 34	23/16	1 to 1½
Escu	oination atcheon aches	Rous	nmeter nd Knob nches	Spindle Inches	Shield Escutcheon Inches
47	2x1%		1 3/4	916	1 1/2

#### SET A

#### With Combination Escutcheons, Round Knob and Drop Handle

						Polished Bronze	Chromium Plated
Size	No.	1,	Price	Per	Set	 \$12.75	\$15.60
Size	No.	2,	Price	Per	Set	14.25	17.60

#### SET C

With Shield Escutcheor	s and Two	Round	Knobs
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					\$14.25
Size No.	2, Price	Per Set	•••••	12.75	16.25

#### Rim Lock Sets

CAST BRONZE

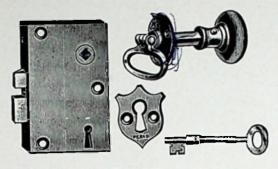


Fig. 1046

Set No.	Size Case Inches	Backset Inches	Door Thickness Inches
1 2	2½ x2 x½ 3¾ x2½ x 5%	17/16 1 1/2	½ to 1 ½ ½ to 1 ½
Combination Escutcheon Inches	Diameter Round Knob Inches	Spindle Inches	Shield Escutcheon Inches

#### SET A

#### With Combination Escutcheons, Round Knob and Drop Handle

						Polished Bronze	Chromium Plated
Size	No.	1,	Price	Per	Set	 \$13.90	\$16.75
Size	No.	2,	Price	Per	Set	 15.00	18.50

#### SET C

#### With Shield Escutcheons and Two Round Knobs

	Size No. 1, Price Per Set Size No. 2, Price Per Set			Size No. 1, Price Per Set		
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Extra keys for above locks furnished to order.

#### Mortise Lock Sets

CAST BRASS

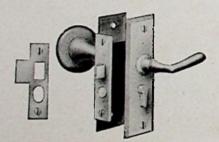


Fig. 960

Polished Brass Per Set	Plated Per Set	S	ase ize ches	Escutel Inch	eon	Facing Inches
\$6.50	\$9.00	15/16x	1 % x 1/16	4xi	1/2	%×3 ½
Backset Inches	H	ndle lub ches	Diame Round I Inch	Knob em		Door nickness n. Inches

#### Knob outside, drop handle inside, locked by thumb lever inside, no keys.

#### Rim Lock Sets

CAST BRASS

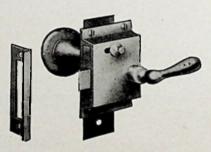


Fig. 1057

Polished Brass Per Set	Chromium Plated Per Set	Case Size Inches	Escutcheon Size Inches
\$8.75	\$12.50	3×2×%	4x   ½
Backset Inches	Spindle Hub Inches ¼	Diameter Round Knob Inches 1 ¾	Door Thickness Min. Inches

Knob outside, drop handle inside, locked by slide stop inside, no keys.



#### **Tubular Lock Sets**

ALL BRASS—FOR SMALL CABIN DOORS POLISHED OR CHROMIUM PLATED

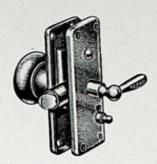


Fig. 567

Polished Brass Ench	Chromium Plated Each	For Thickness Doors Inches	Size Escutcheon Inches	Size Knob Inches	Back- set Inches
\$4.90	<b>\$6</b> .80	% to 1 %	4 % x 1 %	1 3/4	13/R

#### Anti-Rattle Door Fastener

CAST BRASS

Has ¼ inch hole in lever for padlock.

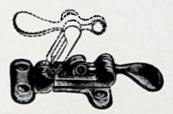


Fig. 1108

Polished Brass Each	Chromium Plated Each	Size Base Inches	Weight Ounces
\$2.45	\$3.50	3x2	6

#### **Elbow Catches**

CAST BRASS

Small spiral brass spring in catch lever. For light cupboard doors, etc.



Fig. 1056

Size Baso Inches	Plain Brass Each \$ .50	Polished Brass Each \$ .70	Chromium Plated Each \$1.00	Weight Ounces
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#### Sliding Door Latches

CAST BRASS HALF MORTISE

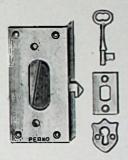


Fig. 573

Operated for inside by finger lever, from outside by key. Complete with strike, key and shield escutcheon for

No.	Polished Brass Per Set	Chromium Plated Per Set	Size Case Inches	Width Face Inches	Weight Ounces
1 2	\$7.00	\$ 9.50	3½6x1¾	5%	6
	9.75	12.50	5 x2½	11/16	20

#### **Door Buttons**

CAST BRASS BUTTON—WROUGHT BRASS PLATE



Fig. 948

		Polished	Brass	-Chromiu	m Plated-
No.	Diam. Inches	Complete Per Dozen	Without Plate Per Dz.	Complete Per Dozen	Without Plate Per Dz.
1 2	1 1/2	\$5.50 6.25	\$2.00 2.50	\$9.00 9.75	\$3.60 4.25
3	2	7.75	3.20	11.40	4.75

#### Friction Catches

ALL BRASS-ADJUSTABLE TENSION







Fig. 178

Above cuts are full size.

Supplied complete with either round or oblong strike. Please specify.

Per Gross -- \$22.50

Weight Per Dozen Pounds

11/2



### **Cupboard Catches**



Fig. 1102

Furnished complete with screws.

No.	Polished Brass Each	Chromium Plated Each	Withou Strike Inches
1	\$2.05	\$2.60	1½x1½
2	2.05	2.60	1½x1½

No. 2 has % inch offset.

#### Cupboard Turns WROUGHT BRONZE

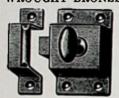


Fig. 1105

Furnished complete with screws.

Polished	Chromium	Without	
Brass	Plated	Strike	
Each	Each	Inches	
\$1.60	\$2.10	21/4×11/	

Weight Per Dozen Pounds

### Cupboard Turns

CAST BRASS U.S. GOVT. TYPE NO. 1082-1083

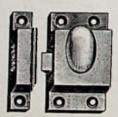


Fig. 949

No.	Emery Finish Each	Polished Brass Each	Chromium Plated Each	Without Strike Inches	Weight Per Dozen Pounds
1	\$1.80	\$2.10	\$2.50	134x134	21/2
2	2.10	2.35	3.00	21/4×1%	3 3/4

#### **Cupboard Catches** CAST BRASS

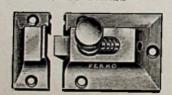


Fig. 950

	Emery	Polished	Chromium	Without				Fig. 1103		
No.	Finish Each \$1.30	Brass Each \$1.45	Plated Each \$1.90	Strike Inches	Weight Ounces	No.	Polished Brass Each	Chromium Plated Each	Size Plate Inches	Weight Ounces
2 3 4	1.45 1.55 1.65	1.60 1.70 1.85	2.00 2.15 2.30	1½x1¼ 1½x1½ 1½x1¾	2 2¼ 2½ 2½	1 2 3	\$1.05 1.30 2.00	\$1.55 1.85 2.65	1 ½ x 1 ½ 1 % x 2 ½ 2 x 2 ¾	1¼ 2¾ 3¼

### Cupboard Bolt

CAST BRASS

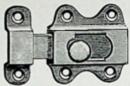


Fig. 1101

Chromium Plated Each Polished Brass Each \$2.20 \$1.70

Emery Finish Each

\$1.35

Size Inches

1%x11/4

Weight Per Dozen Pounds Without Strike Inches 134x15% 1 1/2

#### Flush Ring Catches

CAST BRASS

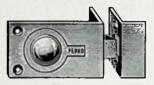


Fig. 1051

Polished
Brass Each
\$1.60

Chromium Plated Each \$2.10

Weight Ounces 1 1/2

### Flush Ring Pulls

CAST BRASS



Fig. 841

No.	Polished Brass Each	Chromium Plated Each	Size Plate Inches	Weight Ounces
1	\$ .80	\$1.15	11/4 x 1 1/2	- 1
2	1.00	1.35	1 1/2 x 1 7/8	1 1/2

#### Flush Ring Pulls

CAST BRASS WITH ROUND STOCK IN RING





#### Barrel Bolts

CAST BRASS



Fig. 947

No.	Polished Brass Each	Chromium Plated Each	Length Rod Inches	Without Strike Inches	Weight Per Dozen Pounds
1	\$1.15	\$1.85	21/4	2 x l	1 1/2
2	1.60	2.30	3	3 x11/8	2
3	1.85	2.70	4	31/2×11/4	3

#### Flush Bolts

CAST BRASS-POLISHED



	Ī	-
Each		
\$1.75		
1.75		

Weight Ounces 1½ 2

#### Ship Bolts CAST BRASS

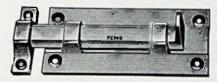


Fig. 1053

Polished	Chromium	Without
Brass Each	Plated Each	Strike Inches
\$1.50	\$1.80	2 1 1/s
2.10	2.50	3%x1%
3.00	3.50	4 1/4 x 1 1/8

#### Square Neck Bolts

CAST BRASS

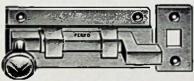


Fig. 1054

Polished	Chromiu
Brass	Plated
Each	Each
\$2.00	\$2.50
2.40	2.90

Size Inches 3 x i 1/4 4 x 17/16

#### Window Bolts

CAST BRONZE SPRING TYPE



Fig. 1055

Chromium Plated Each

#### Cabin Door Hooks

CAST BRASS



Fig. 956

Lgth.	Polished	Chromium		Lgth.	Polished	Chromiun	n
Hook	Brass	Plated	Wt.	Hook	Brass	Plated	₩٤.
In.	Each	Each	Ozs.	In.	Each	Each	Oze.
1 1/2	\$ .80	\$1.20	1	3 1/2	\$1.20	\$1.60	21/2
2	.85	1.25	1 1/2	4	1.30	1.75	3
2 1/2	.95	1.35	1 3/4	5	1.40	2.00	31/2
3	1.05	1.45	2	6	1.55	2.20	4

#### Cabin Door Hooks

DOUBLE JOINTED CAST BRASS



Fig. 957

Length Overall Inches	Polished Brass Each	Chromium Plated Each	Length Overall Inches	Polished Brass Each	Chromium Plated Each
2	\$1.60	\$2.10	4	\$2.40	\$3.10
2 1/2	1.65	2.15	5	2.80	3.50
3	1.70	2.25	1 6	3.20	4.00

### Cabinet Latches

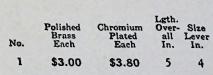
Fig. 1064

With flush striking plate and brass pin, spring closing. Made either right or left hand.

Polished Brass Each	Chromium Plated Each	Length Overall Inches	Length Lever Inches
\$1.25	\$1.50	2 1/2	2
Specify ris	ht or left hand.		

# Refrigerator Fasteners CAST BRASS

Made either right or left hand with flush striking plate. Holds doors without strain on the rivet. Has brass pin. Illustration shows right hand.



Specify right or left hand.

> Base Inches 11/8×11/4

Polished Bronze Each \$1.55

\$1.95

Fig. 1063



#### Cupboard Door Holders

BRASS PLATED



A useful little friction catch for use on cabinets, closets, cupboards and all small doors, size overall—14x1% inches.

Per Dozen ...... \$1.20

#### Door Holders

SIDE PATTERN CAST BRONZE



Fig. 1065

Pollshed	Chromium	Base of	Base of	Proje
Bronze	Plated	Holder	Clip	tion
Per Set	Per Set	Inches	Inches	Inch
\$2.00	\$2.75	1 5/8 x 3/4	21/8 x 3/4	2



Fig. 1066

Polished	Chromium	Height	Base of	Base of
Bronze	Plated	Holder	Holder	Clip
Per Set	Per Set	Inches	Inches	Inches
\$2.60	\$3.35	13/4	25/x13/4	21/4 x 3/4

Door Stops CAST BRONZE RUBBER TIP



Fig. 1109

Furnished complete with screws.

Polished	
Bronze	
Each	
\$1.70	

\$2.10

Security Hinged Hasps WROUGHT BRASS-14 B. & S. GAUGE

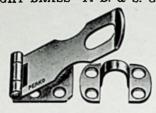


Fig. 979

A lightweight but strong hasp. Ideal for lockers. cupboards, chests, etc.

Length Polished Closed Brass Inches Each		Chromium Plated Each	Width Inches	Weight Ounces
2 1/8	\$ .70	\$1.25	1	11/4

### Security Hinged Hasps

CAST BRONZE



Fig. 955

ength Closed inches	Emery Finish Each	Polished Bronze Each	Chromium Plated Each	Width Inches	Weigh
2	\$1.05	\$1.35	\$1.85	1	1 1/2
3	1.20	1.50	2.00	i	2 1/2
3 34	1.50	1.85	2.40	1 1/4	41/6

#### Safety Hasps

EXTRA HEAVY CAST BRONZE

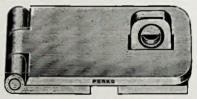


Fig. 1060

Emery Finish Each	Polished Bronze Each	Chromium Plated Each	Length Inches	Width Inches	Weight Ounces
\$3.10	\$3.65	\$4.70	4 1/2	1 3/4	13

### Door Stop and Holder

CAST BRASS



Fig. 574

Polished	
Brass Each	
\$3.65	

Burnished

\$3.00

Chromium Plated \$4.50

Projection Base Inches Inches 3 1/2

Weight Ounces

AAAAAAAA



Strap Hinges
GALVANIZED MALLEABLE IRON OR BRASS PINS



Fig. 120

Length Open Inches	Galvanized Per Pair	Plain Brass Per Pair	Polished Brass Per Pair	Chromium Plated Per Pair	Weight Per Pair Pounds
4	\$1.05	\$1.75	\$3.50	\$4.25	5/16
6	1.70	2.10	4.00	5.10	5/8
8	2.40	3.00	5.40	6.50	7/8
10	2.90	4.50	6.50	7.80	1 1/8
12	4.40	6.00	9.00	10.85	1 5%

#### Port Hinges

GALVANIZED MALLEABLE IRON OR BRASS PINS

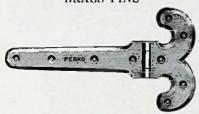
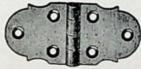


Fig. 109

Length Open Inches	Galvanized Per Pair	Plain Brass Per Pair	Polished Brass Per Pair	Chromium Plated Per Pair	Weight Per Pair Pounds
4	\$1.70	\$2.40	\$4.25	\$5.50	1/2
6	2.15	3.30	6.00	7.00	7/6
8	4.00	5.25	8.90	10.25	1 1/2
10	5.80	7.00	12.00	13.50	2
12	7.70	9.30	15.00	17.00	2 5;

#### **Cuddy Door Hinges**

WROUGHT BRASS-THICKNESS .060 INCHES



Length Open Inches	Extreme Width Inches	Polished Brass Per Doz. Pair	Chromiun Plated Per Doz. Pair
2 1/8	1 3/8	\$12.00	\$18.00
	Packed one de	zen pairs per	box.

#### **Cuddy Door Hinges**

Plain Brass Per Pair	Polished Brass Per Pair	Chromium Plated Per Pair
\$1.50	\$2.25	\$3.00
1.75	2.50	3.25
2.00	3.00	4.00
2.60	3.60	4.75
	Brnss Per Pnir \$1.50 1.75 2.00	Brass Per Pair \$1.50 \$2.25 1.75 2.00 3.00

#### Fast Pin Butt Hinges

CAST BRASS-BRASS PINS



Fig. 952

		Polished			Polished
Size Open Inches		Chromium Plated Per Dz. Pairs	Size Open Inches	Emery Finish Per Dz. Pairs	Chromium Plated Per Dz. Pairs
1 1/2 x 1 1/4	\$14.25	\$28.00	2½x2½	\$29.00	\$53.50
11/2×11/2	14.25	28.00	3 x2	32.50	57.00
2 x 1 1/4	16.65	33.00	3 x21/2	34.20	60.00
2 x 1 ½	16.65	33.00	3 x3	37.80	66.00
2 x134	18.20	36.00	3½x3	45.00	79.80
2 x2	19.00	37.80	3½x3½	50.40	88.80
21/2x13/4	25.00	46.50	4 x3	59.20	96.00
21/2×2	26.35	49.00	4 x4	70.60	116.40

Polished Brass, Price on Application Other Sizes Furnished to Order

#### Loose Pin Butt Hinges

BRASS WITH BRASS PINS



Fig. 953

Size Open Inches	Pol. Brass Per Pair	Chromium Plated Per Pair	Size Open Inches	Pol. Brass Per Pair	Chromium Plated Per Pair
1 1/2 x 1 1/2	\$ 2.60	\$ 3.45	3 x2½	\$ 4.80 5.25	\$ 6.50 7.00
2 x1½ 2 x2	3.00 3.50	4.00 4.60	3½x3	6.00	8.00
21/2×2	4.00	5.50	3½x3½	6.70	9.00
21/2×21/2	4.40	6.00	4 x3	7.00	9.25
3 ×2	4.50	6.10	4 x4	8.00	10.65
Emery Finish Brass, Price on Application.					

#### Flush Surface Hinges

CAST BRASS



Fig. 928

Length Open Inches 21/2

Extreme	Polished	Chromium
Width	Brass	Plated
Inches	Per Pair	Per Pair
2.	\$5.75	\$ 6.75
11/4	5.00	6.00
3	9 25	11 25

Packed 1/2 doz. pairs per box.



Chromium Plated Per Pair

\$.50 .70

> Thickness Inches

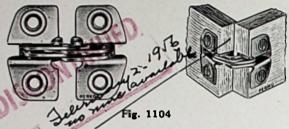
.040

.045

Weight

#### Invisible Hinges

HEAVY GAUGE WROUGHT BRASS WITH BRASS LINKS AND PINS



A smoothly operating hinge invisible when door or hatch is closed. Entire outer surface is free of projections or hardware.

Ideal for light doors, hatch covers, cabinets, etc. Permits door to fit close to frame when closed and allows door to open 180 degrees.

Plain Brass Per Pair	Size Flap Inches	Depth of Mortise Inches	Weight Each Ounces
\$1.30	1 % x l	5/8	2

#### Cabinet Hinges

BRASS—POLISHED OR CHROMIUM PLATED FLUSH OR OFFSET



Fig. 772

Packed one dozen pairs per box, complete with screws. Offset is % inch.

Polished Chromium Brass Plated Per Doz. Pairs Pairs		Size Open Inches	Gauge	Weight Per Pair Ounces
Fairs	Luira	Tucues	Gauge	Ounces
\$16.80	\$16.80	2x 1 ½	14	2

Flush or offset, same price, please specify.

#### Table Leg Fasteners

CAST BRASS
For fastening table leg to deck.



Fig. 719

Plain Brass	Polished Brass	Chromium Plated	Length Angle	Width	Weigl
Each \$1.70	\$2.10	\$3.40	Inches	Inches 7/8	Ounce 4

#### **Butterfly Hinges**

WROUGHT BRASS-PLAIN



Fig. 1058

Plain Per Pair	Polished Per Pair	
\$.25	\$.35	
.35	.45	

No

No.

Length Width Weight
Open at Pin Per Pair
Inches Inches Ounces
2 \( \frac{1}{4} \) 3\( \frac{3}{4} \) 1\( \frac{1}{12} \) 1\( \frac{1}{12} \)

Spring Hinges WROUGHT BRASS—PLAIN

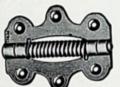


Fig. 1059

lo. Per Pair 1 \$ .90 2 1.30	Length Inches 2 % 3	Open Inches 1 % 2 %	Per Pair Ounces 3 5
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337: As h

Width Inches 21/2

# Spring Hinges CAST BRONZE

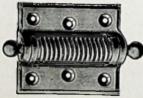


Fig. 1107

lished ronze r Pair	Chremium Plated Per Pair	Length Inches
6.50	\$8.25	3

Hatch Hinges CAST BRONZE

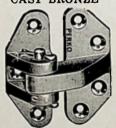


Fig. 773

For use with flush hatch cover.

For use v	vith nush na	ten cover.		
Polished Bronze Per Pair	Chromium Pated Per Pair	Length Inches	Width Overall Inches	Weight Per Pair Pounds
\$8.00 Illustration	\$10.00 shows one	3 1/8 half pair.	2 %	134



Polished Brass Each

\$ .55

### Sash Hinges

CAST BRONZE

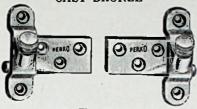


Fig. 418

A set consists of two brackets with adjusting screws and two hinge plates, right and left hand.

No.	Size of Hinge Plates Inches	Size of Bracket Base Inches	Per Set Ounces	of Pin Inches
1	17/16x 7/8	2 1/2 x 11/16	6	7∕8
2	17/16×7/8	31/4 x 11/16	7	7∕8
No.		Polished Bronze Per Set		romium Plated Per Set
1 2		\$3.00 3.50		\$4.25 4.75

### Ladder Hinges

CAST BRONZE



Fig. 556

Polished Bronze Per Pair	Chromium Plated Per Pair	Length Open Inches	Width Inches	Weight Per Pair Ounces
\$7.25	\$8.25	5 %	3/4	9

### Flap Hinges

WROUGHT BRASS-THICKNESS .050 INCHES



Fig. 929

Polished	Chromium	Length	Extreme	Weight
Brass	Plated	Open	Width	Per Pai
Per Pair	Per Pair	Inches	Inches	Ounces
\$ .55	\$ .95	2	<b>3</b> /8	11/4

#### Flap Hinges

CAST BRASS-FAST PIN

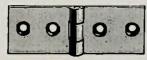


Fig. 984

No.	Emery Finish Per Pair	Polished Brass Per Pair	Chromium Plated Per Pair	Size Open Inches	Weight Per Pair Ounces
1	\$ .75	\$1.10	\$1.55	½ x 2 %	1 ½
2	1.00	1.45	1.85	% x 2 ¾	2
3	1.80	2.30	2.75	% x 4 ½	2 ½

#### Wardrobe Hooks

CAST BRASS



Fig. 1106

Burnished Brass Each	Polished Brass Each	Chromium Plated Each	→ Width Inches	Projection Inches	Weight Ounces
\$ .60	\$ .70	\$ .95	2 %	<b>7/8</b>	11/4

### Wardrobe Hooks

CAST BRASS



Chromium Plated Each	Projection Inches	Width Inches	Weight Ounces
\$ .70	2	11/4	1

# Coat and Hat Hooks CAST BRASS



		1g. 202		
Polished Brass Each	Chromium Plated Each	Projection Inches	Width Base Inches	Weight
\$ .60	\$ .80	2 1/8	1 1/8	1%

# Coat and Hat Hook CAST BRASS U. S. GOVT. TYPE NO. 1172



Fig. 994

Burnished Brass Each \$ .65	Polished Brass Each \$ .85	Chromium Plated Each \$1.10	Projection	Width Base Inches	Weight Ounces 21/4
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#### Flush Hatch Lifting Ring

CAST BRASS-SAFETY TYPE



Fig. 575

No recess to catch heels, chair or table legs, etc.

No.	Polished Brass Each	Chromium Plated Each	Size Plate Inches	Inside Ring Inches	Weight Ounces
1	\$1.20	\$1.60	21/2×17/8	11/8	31/4
2	2.00	2.50	2%x2%	11/4	6

#### Drawer Pulls

CAST BRASS



Fig. 958

No.	Polished Brass Each	Chromium Plated Each	Width Overall Inches	Width Inside Inches	Weight Ounces
1	\$ .55	\$ .80	3 %	21/2	2
2	.70	1.00	4	2 1/8	3

#### Flush Pulls

CAST BRASS FOR DRAWERS, SASH OR SLIDING DOORS

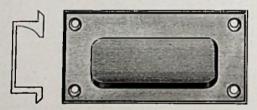


Fig. 1110

inside recessed for finger grip as illustrated.

Emery Finish Each	Polished Brass Each	Chromium Plated Each	Dimensions Inches	Mortise Depth Inches	Weight Ounces
\$1.45	\$1.60	\$2.00	31/2×1%	1/2	4

#### Drawer Knobs

BRASS-FOR DRAWERS UP TO 11/4" THICK



Fig. 925

No	Polished Brass Per Dozen	Chromium Plated Per Dozen	Diameter Inches	Weight Per Dozen Ounces
1	\$6.00	\$ 8.00		12
2	9.50	12.00	134	18

### Flush Hatch Lifting Handle

CAST BRONZE-SAFETY TYPE



Fig. 774

No recess	to catch	neels, chair or	table legs,	etc.
Polished Bronze Each	Chromium Plated Each	Size Plate Inches	Inside Handle Inches	Weight Ouncer
\$3.00	\$4.25	3×24	1%x1	6

#### Flush Drop Handles

CAST BRASS RECESSED TYPE—FOR CHESTS, HATCHES, ETC.

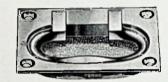


Fig. 1111

No.	Emery Finish Each	Polished Brass Each	Chromium Pinted Each	Size Plate Inches	Width Inside Handle Inches	Weight Ouncer
1	\$2.15	\$2.65	\$3.35	3 x21/4	1 1/8	4
2	2.25	2.80	3.50	31/2×21/2	2 %	6 1/2
3	4.75	5.75	6.70	4 % x 4	2 %	19

### Surface Drop Handles

CAST BRASS SWINGS HALF WAY ONLY

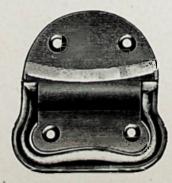


Fig. 1115

			rig. 1110				
lo.	Emery Finish Each	Polished Brass Each	Chromium Plated Each	Dimensions Inches	Width Inside Handle Inches	Weight Ounces	•
1	\$1.60	\$2.10	\$2.85	2%x2%	21/4	41/2	
2	2.00	2.90	3.60	3%x3%	2 %	8	
3	2.40	3.90	4.85	34x34	31/6	10	-



### Hatch Support Hinges

CAST BRASS



Fig. 758

Cut shows left hand hinge.

Length Open Inches	Polished Brass Per Pair	Chromium Pinted Per Pair	Drilled for Screw No.	Packed Per Box Pairs
8	\$4.00	\$5.00	5	12
10	4.50	5.75	6	12
12	5.00	6.50	6	12
14	5.75	7.25	6	6
18	7.50	9.50	6	6

### Hatch Adjusters

CAST BRONZE

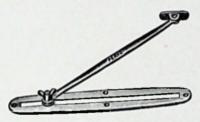


Fig. 797

Polished Bronze Each \$5.10	Chromium Plated Each \$6.50	Length Arm Inches 10	Adjust- ment Inches 9 1/2	Length Plate Inches	Weight Ounces

### Casement Adjusters

ALL BRASS-HEAVY PATTERN



Fig. 1179

A non-slip adjuster with powerful grip to stay put in position desired.

Illustration shows swivel base on left side and swinging base on right.

No.	Chromium Plated Each	Length Closed Inches	Length Open Inches	Diain. Outside Tube Inches	Weight Ounces
1	\$7.25	10	17	1/2	9
2	7.50	12	20	1/2	11

### Casement or Windshield Adjusters

CAST BRASS



Fig. 1116

No.	Machine Polished Each	Chromium Plated Each	Length Inches	Rod Inches	Weight Ounces
1	\$4.20	\$5.60	8	3%	11
2	4.40	5.80	10	*	12
3	4.80	6.20	12	4	13

#### Sash Lifts

CAST BRONZE



Fig. 776

No.	Size or Plate	Polished Bronze Each	Chromium Plated Each	Weight Ounces
1	1/2×11/2	\$ .45	\$ .70	1/2
2	%x17/10	.50	.75	3/4

#### Sash Anti Rattlers

CAST BRONZE

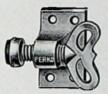


Fig. 839

Furnished with leather tip to prevent defacing of woodwork. Size of base 1%" x 1".

Polished	Bronze,	Each -	 2.20
Chromiu	m Plated	, Each	 2.80

#### Sash or Skylight Fasteners

CAST BRONZE



Fig. 770

Size Inches	Emery Finish Each	Polished Bronze Each	Chromium Plated Each
3/8×4	\$3.35	\$3.85	\$4.95

#### Sash Fasteners

LEFT OR RIGHT HAND CAST BRONZE



Fig. 777

Chromium	
Piated	
Each	
\$1.60	
	Plated Each

Ounting
Plate Weight
Inches Ounces

Please specify left or right hand



#### **ANCHOR SHACKLES**

GALVANIZED DROP FORGED STEEL OR BRONZE

SCREW PIN



Fig. 314

0

ROUND PIN

Fig. 315

Prices and Dimensions Below Apply to both Figs. 314 and 315.

Size Inches	Galvanized Each	Plain Bronze Each	Length Inside Inches	Between Eyes Inches	Diameter Pin Inches	Steel Weight Per 100 in Pounds	Steel Approx. Strength In Pounds
3/1e	\$ .55	\$ .75	7/8	7/1e	1/4	7	3000
716	.55	.85	11/16	7/16	5/16	12	4005
1/4	.62	1.25	11/4	%16	5/16 3/8	20	6165
716	.68	1.85	1 1/2	5/8	7/18	31	7920
% % % % % 5% \$4 %		2.50	13%	5/8 3/4	₹/16 1½ 5% 3¼ <b>7%</b>	47	11925
/16	.88	3.40	2 ~	1/8	5%	69	15570
1/2	1.05	3.40	2 1/2	1 1/8	SV.	137	26100
78	1.60		2 72		74	219	35280
34	2.30		2 1/8	13/16	78		47700
7/8	3.00		31/4	1 1/2		319	
	4.30		3 1/2	1 5/8	1 1/8	500	58140
1 1/8	6.20		41/8	1 7/8	1 1/4	681	68400
11/4	7.70		41/4	2	13%	950	85500
1%	9.60		4 1/8	21/4	1 1/2	1218	104400
11/2	12.45		6	2 1/2	1 %	1625	124200
	17.60		8	3	2	2700	190800
1 1 1 2	26.50		8	3%	21/4	3725	230400

Bronze Shackles are only furnished with screw pin, Fig. 314. 3/16 inch size supplied only with screw pin Fig. 314.

#### CHAIN SHACKLES

GALVANIZED DROP FORGED STEEL

SCREW PIN



Fig. 338

ROUND PIN

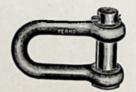


Fig. 339

Size Inches	Galvanized Each	Length Inside Inches	Between Eyes Inches	Diameter Pin Inches	Weight Per 100 in Pounds	Approx. Strength in Pounds
1/4	\$ .55	13/16	7/16	% %	10	4700
54.	.62	1 /10	%16	%	18	7200
5/16	.68	11/4	5%	7/10	28	9300
% %	.88	1 3%	8/4	7/16 1/2	44	14100
1/3	1.05	15%	<b>%</b>	5%	70	18300
%	1.60	2 /8	114	%	130	30800
3/4	2.30	2 %	11/4	<b>%</b>	212	41600
7/8		2 %	i%	1 "	300	56000
178	3.00 4.30	314	1 %	i 1⁄8	470	68800

### MIDGET SHACKLE

STEEL—ZINC PLATED SCREW PIN

~	0
CE HALL	
Fig.	311

	Size Inches
. 311	5/22

:h		
15		

ength	Between
nside	Eyes
nches	Inches
5/1a	3/8

Dinmeter Pin Inches

Weight Approx.
Per 100 Strength
In Pounds In Pounds

2½ 500



### Wire Rope Thimbles

GALVANIZED FORGED STEEL FORGED BRONZE AND STAINLESS STEEL



Fig. 466 REGULAR

For Size Rope Inches	Galv. Per 100	Bronze Per Dozen	Stainless Steel Per Dozen	Length Overall Inches	Width Inside Inches	Galv. Wt. Per 100 in Lbs.	
1/8	\$ 8.00	\$ 1.80	\$2.40	134	5/8	2 %	
3/16	8.00	1.80	2.40	1 3/4	11/16	2 5/8	
1/4	8.00	2.40	3.00	2	3/4	4 %	
5/10	9.60	3.00	4.20	2 1/8	13/16	5 1/2	
3/8	11.60	5.40	6.60	2 3/8	15/16	10%	
1/6	15.40	7.80		2 %	11/8	151/2	
56	23.00	10.80		3 3/8	17/16	271/2	
3/4	30.00	13.20		3 1/8	1 1/2	40	
3/4	40.00			4 1/2	1 5/8	55	
1	60.00			51/4	21/8	79	

EXTRA LARGE

7/8	\$ 62.00	5 1/8	1 1/8	84
1	84.00	61/4	21/4	106
1 1/8	114.00	6%	2 1/2	125
11/4	160.00	7	2 3/4	138
11/2	260.00	7 1/2	3	250
134	530.00	10	3 1/2	512
2	550.00	10	3 1/2	600

### Sail Thimbles

GALVANIZED MALLEABLE IRON OR BRASS



Fig. 469

)	*Size Inches	Galv. Per Dozen	Brass Per Dozen	Diam. Rope Inches	I. D. Hole Inches	Weight Per Doz. in Lbs.	
	1/2		\$ .70	1/8	1/4	1/32	
	5%		.95	3/16	%	1/1e	
Α	%	\$1.00	1.15	1/4	1/2	1/4	
	1	1.20	1.75	%18	₩	3/8	
	11/4	1.65	3.15	%ie	3/4	5%	
	11/2	2.10	4.65	%	1	7/8	
4	1%	2.65	5.25	7∕1e	11/4	11/8	
	2	3.10	7.00	1/2	11/2	11/2	
	21/4	4.20		%	1%	2	
а	21/2	5.35		%	134	2%	
	2%	6.60		*4	2	3	
	3	7.70		*4	21/4	41/4	

\*Size is from edge to edge across hole.

### Manila Rope Thimbles

GALVANIZED DROP FORGED STEEL



For Dia. Rope Inches	Galvanized Per 100	I. D. Hole Inches	Edge to Edge Inches	Weight Per 100 in Lbs.
5/18	\$ 12.00	3%	3/4	11/2
3/8	12.00	1/2	<b>7/8</b>	
7/10	14.80	5%	1"	2 3
7/16 1½ 5% 34 36	15.40	5% %	11/4	51/2
5/8	18.30	7/8	1 1/2	9
3/4	21.40	1	1 3/4	17
₹ <sub>8</sub>	28.60	13/16	2	251/2
1	35.20	1%	21/4	34
1 1/8	38.50	17/10	21/2	38
11/4	57.20	1 3/2	2 3/4	48
1 %	77.00	2	3	70
11/2	96.00	2 %	3 1/2	108
13/4	240.00	2 %	4 5	150
2	435.00	2 %	5	180

Wire Rope Clips
MALLEABLE IRON SADDLE
STEEL U-BOLT AND NUTS
GALVANIZED



Fig. 333

Size Wire Rope Inches	Galvanized Per 100	Est. Wt. Per 100 in Lbs.	Size Wire Rope Inches	Galvanized Per 100	Est. Wt. Per 100 in Lbs.
%16	\$17.25	8 1/2	7/8	\$108.00	149
1/4	20.25	161/2	1	130.00	190
	22.50	19	1 1/8	205.00	310
5/16 3/8	31.00	25	11/4	242.00	375
7/10	35.00	32	13%	431.00	560
7/16 1/2	40.00	40	1 1/2	464.00	645
5/8	53.00	62	134	962.00	1085
3/4	75.50	101	2	1265.00	1620

# Tiller Rope Clamps GALVANIZED IRON AND CAST BRONZE



		rig. 35	5		
For Rope Diameter Inches	Galv. Each	Plain Bronze Each	Width Inches	Length Inches	Weight Ounces
1/8	\$ .26	\$ .34	3/4	1%	134
3/10	.28	.36	3/4	134	2
1/4	.34	.48	1	134	3
%10 %	.46	.60	1	2	31/2
3%	.60	.90	136	71/4	5



#### **OPEN TURNBUCKLES**

DROP FORGED STEEL-HOT GALVANIZED

HOOK AND EYE

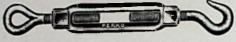


Fig. 390

EYE AND EYE



Fig. 391

HOOK AND HOOK



Fig. 392

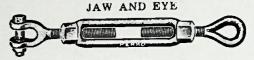


Fig. 393

JAW AND JAW



Fig. 394

Diameter						Overall Length	Opening in	l <u>n</u> side	Inside	Approx.
and Take-up Inches	Fig. 390 Each	Fig. 391 Each	Fig. 392 Each	Fig. 393 Each	Fig. 394 Each	Closed Inches	Hook Inches	Eye Inches	Jaw Inches	Weight Pounds
• 1/4 x 4	\$ .94	\$ .94	\$ .94	\$ 1.22	\$ 1.44	8	3/4	½ x %	5/10× 5/8	1/3
* 5/16x 4 1/2	1.10	1.10	1.10	1.44	1.66	91/4	1/2	1/2 x 11/18	½ x ¾	1/2
* %x 6	1.44	1.44	1.44	1.90	2.10	11%	¥16	% x1	½ x 13/18	3/4
* ½x 6	2.10	2.10	2.10	2.40	2.86	13	11/1A	% x 1 1/8	5% x 1	1 1/2
1/a x 9	3.00	3.00	3.00	3.50	3.86	16		34 x11/8	% x 1	2
½x12	3.60	3.60	3.60	4.20	4.70	19		% x 1 1/8	5% x l	2 1/2
• %x 6	2.50	2.50	2.50	3.00	3.40	14	34	1 x1%	13/18x 1 3/8	3
%x 9	3.50	3.50	3.50	4.20	4.80	17		1 x1%	13/16x 1 3/8	3 %
%x12	4.20	4.20	4.20	4.70	5.40	20		1 x13/8	13/16x 1 3/8	4 1/2
%x18		5.70		6.60	7.40	26		1 =1%	13/16x 1 3/8	6
%x 6	3.60	3.60	3.60	4.50	5.10	151/2	10/14	1 1/8 x 1 1/2	% x 1 ½	3 1/2
* %x 9	4.60	4.60	4.60	5.40	6.00	181/2		1% x1%	% x 1 ½	41/4
%x12	5.40	5.40	5.40	6.20	7.00	211/2		11/8 x11/2	% x I ½	5 1/4
%x18		7.20		8.30	9.40	271/2		1 1/8 x 1 1/2	% x 1 ½	6 34
• %x12	7.20	7.20		7.90	9.60	23%	11/18	15/16 x 113/16	11/8 x 1 %	7 34
%x18		8.30		9.60	11.00	29%		15/18 x 1 13/18	11/8 x 134	10
1 x 6				8.30	9.40	19		17/16 x2	11/4×2	81/2
*1 x12	8.00		8.00	9.10	10.50	25	(4 <sub>ne</sub>	17/16 x2	11/4×2	111/4
1 x18		10.50		12.40	13.80	31		17/16 x2	11/4×2	13%
1 x24				15.30	16.60	37		17/16 x2	11/4 x 2	161/4
*11/4×12		13.80		17.20	21.00	30		113/16×25%	1%x2	17%
1½x18		17.00		20.90	24.80	36		113/16x2%	1 % x 2	22%
11/4×24		22.00		24.80	28.60	42		13%ex2%	1%x2	27%
11/2×12					28.60	32		1 % x2 %	2 x2%	30
*1%x18					34.10	38		1% x2%	2 x23/8	35
1 1/2×24					43.80	44		1% x2%	2 ×23/4	41

For one lock nut add 5% to above, for two locknuts add 10% to above.

<sup>\*</sup>Indicates standard marine length. Same will be shipped when no length is specified.

All turnbuckles have right and left hand threads.

<sup>%</sup> inch diameter and larger in jaw type are supplied with pin and cotter instead of bolt and nut.



#### Improved Pipe Turnbuckles

GALVANIZED DROP FORGED STEEL WITH LOCK NUTS



Eye and Eye Fig. 381 Jaw and Jaw Fig. 382



#### Jaw and Eye Fig. 398

Diam. Thread Inches	Fig. 381 Eye & Eye Each	Fig. 382 Jaw & Jaw Each	Fig. 398 Jaw & Eye Each	Length of Pipe Inches	Weight Per 100 in Lbs.
1/4	\$1.10	\$ 2.60	\$ 2.30	5 1/2	471/2
5/18 3/8	1.30	290 3.40	2.60 3.00	5 34	62½ 102
1,5	2.30	4.70	4.10	8	178
5/8	3.30	6.60	5.80	101/2	369
3/4	4.40	8.50	7.90	101/2	500
7/8	5.75	12.00	11.00	13	775
1	7.75	15.50	13.75	14%	1025
1 1/4		24.00	22.00	16	2050
1 1/2		44.00	39.00	21	3200

#### Petite Turnbuckles

CAST BRONZE-S.A.E. THREADS



Fig. 396

No.	Burnished Per Dozen	Diam. Ends Inches	Length Extended Inches	Takeup Inches	Weight Per 100 in Lbs.
1	\$3.90	1/2	3	3/4	3
2	4.40	5/32	4	1 1/8	61/4
3	6.90	3/16	5	1 1/2	111/2
4	7.30	1/4	534	1 7/8	15
5	9.80	%16	6 1/8	21/4	241/2

Note—Nos. 1, 2 and 3 have wire eyes Nos. 4 and 5 have cast solid eyes.

#### **Swivels**

GALVANIZED MALLEABLE IRON OR BRASS



Fig. 624

No.	Gaiv. Each	Piain Brass Each	Size Inches	f. D. Eye Inches	Swivel	Overall Length Inches	Weight Per 100 in Lbs.
1	\$ .19	\$ .42	3/18	%16	3/8	134	4
2	.27	.60	1/4	3/8	7/18	2 1/8	71/2
3	.42	.72	1/4	7/16	1/2	21/2	10
4	.60	1.00		1/2		31/4	191/2
5	.80	1.25	%16 %	%	%16 %4	31/2	241/2
6	1 10	1.50	74-	3/.	1	ABL	A 1

#### **Swivels**

DROP FORGED STEEL



Fig. 622

Size Inches	Galv. Each	Length Inches	Width Inside Inches	Weight Each in Lbs.
1/4	\$ 1.60	3 %	3/4	1/4
910	2.10	3 3/4	7/8	3/8
3/8	2.20	51/4	1 3/8	3/4
5/16 3/8 1/2 5/8 3/4	3.40	6	1 1/2	114
5/8	5.70	71/4	134	214
3/4	8.10	81/2	2	3 1/4
7∕8	10.50	101/4	21/8	6 1/2

#### Swivel with Jaw End

DROP FORGED STEEL



Fig. 623

Size Inches	Gaiv. Each	Length Inches	Width Between Jaws Inches	Inside of Bail Inches	Weight Each in Lbs.
1/4	\$ 2.20	4	1/2	1%x1%	3%
5/10 3/8	2.60	4 1/8	1/2	114x1%	1/2
3/8	2.90	5	5%	11/x1%	3/4
1/2 5/8	4.60	6	*4	1%x11/2	13%
5/8	6.50	7 %	1 1/8	136x1%	25%
3/4 7/8	9.00	8 1/2	1%	1%x2	434
<b>%</b>	11.50	9	13/8	2 ×2%	73,

#### **Swivels**

NICKEL PLATED BRASS



Fig. 1061

Size No.	Per Doz.	Standard Package Per Doz.	Length Inches	Diam. Eye Inches	Weight Doz. in Oz.
0	\$2.00	1	11/2	1/4	41/4
1	2.65	1	134	918	71/4
2	3.30	1	21/4	3/2	9

#### Lacing Eyes

GALV. MALLEABLE IRON OR CAST BRASS



Without shoulder Fig. 766			With shoulder Fig. 767				
Size No.	Galv. Per 100	Plain Brass Per Dozen	Pol. Brass Per Dozen	I. D. of Eye Inches		Wt. Per 100 in Lbs.	
1	\$ 8.50	\$1.20	\$ 3.60	% %	1	21/2	
2	12.75	1.60	4.30	3/8	11/4	41/2	
3	14.00	2.00	9.00	1/2	11/2	8	
4	23.00	2.65	13.20	5%	2	12	



## Screw Eye Bolts

GALV. DROP FORGED STEEL OR BRONZE LARGE EYE



Without Shoulder-Fig. 500 With Shoulder-Fig. 501

Size Inches 4 x 2 % x 2 ½ % x 2 ½ ½ x 3 ¼ % x 4	Fig. 500 Galv. Each \$ .26 .30 .40 .50 .90	Fig. 501 Galv. Each \$ .26 .30 .40 .50 .90	Fig. 501 Plain Bronze Each \$ .60 .90 1.10 2.20	Inside Diam. Eye Inches ½ 5% 34 1 14 1½	Galv. Weight Per 100 in Lbs. 6 9 16 35 67	Size Inches 14 x 2 16 x 2 1/4 16 x 2 1/2 1/2 x 3 1/4 16 x 4 1/2	Fig. Gn Ea
%x4½ %x5	1.50	1.50 1.50		1 3/4	220	1 x6	4.

Sizes are diameter and length of shank.

### Nut Eye Bolts

GALV. DROP FORGED STEEL OR BRONZE LARGE EYE



Without Shoulder-Fig. 522 With Shoulder-Fig. 523

		T3 F00	Fig. 523 Plain	Inside Diam.	Galv. Weight		With	Shoulder-	Fig. 621		
Size Inches	Fig. 522 Galv. Each \$ .30	Fig. 528 Galv. Each \$ .30	Bronze Each \$ .70	Eye Inches	Per 100 in Lbs.	Size Inches	Fig. 620 Galv. Each	Fig. 621 Galv. Each	Fig. 621 Plain Bronze Each	1. D. Ring Inches	Weight Per 100 in Lbs.
14× 4	.40	.40	1.00 1.00	½ % % %	10	1/4 x 2	\$ .70	\$ .70	\$1.30	13/4	16
1/16x 21/4	.36	.36		78 54	17	1/4 x 4	.80	.80	*****	1 34	19
%16x 414	.56	.56	1.50	3/.	21	%16x 21/4	.80	.80	1.70	2	28
%x 2½	.40	.40	1.40	3/.	27	%16x 41/4	.90	.90		2 2	33
%x 41/2	.60	.60	1.90	3/4 3/4	32	%x 2½	.90	.90	2.10	2 2	42
%x 6	.70		0.50	1 74	45	%x 4½	1.20	1.20		2	48
1/2 x 3 1/4	.60	.60	2.50		65	%x 6	1.30			2	52
1/2 x 6	.90	.90	2.90		75	½x 3½	1.30	1.30		21/2	94
½x 8	1.10				85	1/2× 6	1.65	1.65		2 1/2	115
1/2×10	1.20			11/4	85	½x 8	1.75			2 1/2	131
%x 4	1.00	1.00	4.40	11/4	110	½x10	1.90			21/2	147
%x 6	1.20	1.20	4.46	11/4	135	% x 4	2.00	2.00		2 3/4	175
%x 8	1.40				160	%x 6	2.40	2.40		2 3/4	190
%x10	1.60			11/4	185	%x 8	2,55			2 3/4	205
%x12	1.80			11/4	132	%×10	2.70			2 %	220
%x 4½	1.50	1.50		1 1/2	160	%x12	2.80			2 3/4	235
%x 6	1.90	1.90		11/2		% x 4 1/2	3.25	3.25		3	275
%x 8	2.10			11/2	184	%x 6	3.85	3.85		3	300
%x10	2.30			11/2	208	%x 8	4.00	0.00		3	334
%x12	2.50			11/2	232	%x10	4.20			3	368
%x15	2.80			11/2	268	%x12	4.40			3	400
%x 5	2.30	2.30		1 3/4	215	%x 5	4.80	4.80		31/4	415
%x 8	3.00	3.00		1%	265		5.60	4.00		31/4	465
%×12	3.50			1%	339	%x 8	6.20			3 1/4	531
1 x 6	3.20	3.20		2	340	%x12	6.90	6.90		3 %	630
1 x 9	4.10	4.10		2	400		7.90	0.50		3 %	710
1 x12	4.40			2	463	1 = 9	8.30			3 %	790
1 x18	5.30			2	586	1 x12	0.30			7.4	A TOTAL

# Galvanized Screw Ring Bolts

DROP FORGED STEEL

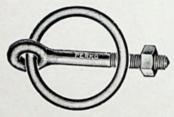


Without Shoulder-Fig. 618 With Shoulder-Fig. 619

Fig. 618	Fig. 619	I. D.	Weight
Galv.	Galv.	Ring	Per 100
Each	Each	Inches	in Lbs.
\$ .60 .70 .80 1,20 1.90 3.10 4.35	\$ .60 .70 .80 1.20 1.90 3.10 4.35	1 % 2 2 2 ½ 2 % 3 3 %	15 25 38 85 160 245 590

### **Nut Ring Bolts**

GALV. DROP FORGED STEEL OR BRONZE



Without Shoulder-Fig. 620 With Shoulder-Fig. 621

Sizes are diameter and length of shank. Special lengths and threading available if ordered in manufacturing quantities. Bronze eye bolts are drop forged bronze, not cast.



#### Paint Scraper Set

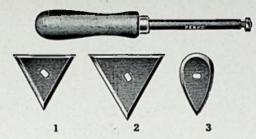


Fig. 1015

Per Set-\$2.80

Set consists of handle with 3 blades illustrated, and nut to change and attach blades.
Packed, 1 set to a box.
No. 1 Blade, Triangular—2%x2% inches.
No. 2 Blade, Triangular—3x3 inches.
No. 3 Blade, Oval—2½x1¼ inches.
Length Handle—8½ inches.

#### Paint Scrapers



Triangular

	Fig. 626		Fig. 918	
ig. 26	Complete Per Doz. \$12.00 15.00	Size Blade Inches 3 x3 2½x1½	Length Inches 9	Weight Per Doz. in Lbs. 6 5 ½

Oval

#### Ship Scrapers

GIBBS PATTERN-TEMPERED STEEL BLADES



		F1g. 320		
Each	Blades Only Each	•Handles Only Each	Size Blade Inches	Length Inches
\$4.65	\$2.10	\$3.25	41/2×1/8	17

\*Handle complete with socket and bolt.

### Genuine File Scrapers

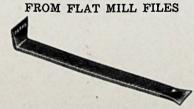


Fig. 1174

Made from 14 inch and 16 inch used files, no selection length. Carefully heat treated.

# Double End Scrapers FINE GRADE TOOL STEEL HEAT TREATED Fig. 1175 Width Per Dozen \$11.75 Inches

Marline Spikes
POLISHED STEEL
FOR WIRE ROPE

	Fig. 921	
Length		Approx. Weight Per Dozen
Inches	Per Dozen	in Pounds
8	\$40.00	6
10	43.00	10
12	46.50	12%
14	55.00	161/2
16	62.00	25
18	71.00	30

FOR MANILA ROPE

Length Inches	Fig. 922	Approx. Weight Per Dozen in Pounds
6	\$22.50	5 3/4
8	22.50	7½
10	25.00	12
12	31.25	17
14	38.00	23 1/2
16	54.00	27
18	65.00	34 %

Hand Fids



Fig. 923 For use in splicing ropes and light flexible cables; has a rounded end for hand use; varnished finish.

	_Per	Size
No.	Dozen	Inches
0	\$10.00	12x1%
1	12.00	14x134
2	13.50	16x2
3	15.50	18x2
4	23,00	20x21/4
5	40.00	24x3

#### Caulking Irons MALLEABLE IRON



Fig. 307

Weight er Dozen

Per Dozen \$16.50	Approx. Width Inches	Approx. Thickness Inches	Approx. Width Blade Inches	Approx. Weight Per Dozen Pounds	Size No. 00 0	Per Dozen \$19.80 19.80 21.50	Thickness Inches 1/32 1/16 1/8	Inches 5 5%	Inches 2 2 1/2	Weight Per Doz. in Lbs. 3½ 4½
						21.50	78	5 %	21/4	514



#### Jib Snaps

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 765

Size No.	Galv. Each	Plain Bronze Each	Extreme Length Inches	For Diam. Stay Inches	Weight Per 100 in Lbs.
0	\$ .55	\$ .55	15%	1/4	4 3/8
i	.65	.60	2	5/16	10
2 .	.75	.75	2 3/8	3/8	121/2
3	.90	.90	2 34	1/2	21
4	1.50	1.85	3	5/8	23 34

#### Fast Eye Boat Snaps

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 612

Size No.	Galv. Each	Plain Bronze Each	Polished Bronze Each	Inside Diam. Eye Inches	Extreme Length Inches	Weight Per 100 Pounds
0	\$ .55	\$ .60	\$1.15	5/8	2	5
1	.65	.70	1.30	5/8	234	10
2	.70	.80	1.45	3/4	31/4	131/8
3	.85	1.05	2.00	34	3 7/8	261/4
4	1.10	1 70		1	41/8	271/2
5	1.45	2.05		11/8	4 1/8	43%
6	1.70			11/4	51/4	561/4

#### Swivel Eye Boat Snaps

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 613

Size No.	Galv. Each	Plain Bronze Each	Polished Bronze Each	Inside Diam. Eye Inches	Extreme Length Inches	Weight Per 100 Pounds
1	\$ .90	\$1.15	\$1.60	5/8	31/4	11
2	1.05	1.25	1.80	3/4	31/4	161/4
3	1.35	1.55	2.50	₹	4 %	32
4	1.60	1.90		1	51/4	37
5	1.95	2.50		11/4	6	60

### Swivel Eye Snaps

MALLEABLE IRON OR BRONZE



Fig. 659

Cadmium Plated Each \$ .55	Plain Bronze Each \$ .65	Extreme Length Inches 3½	Inside Eye Inches	Inside Hook Inches	Weight Ounces

#### Baby Snaps

BRASS-WITH FAST EYE



Fig. 842

Diam. of		
Eve	Brass	Length
Inches	Each	Inches
3/8	\$ .20	1 1/8

#### Baby Snaps

WITH OBLONG EYE
ELECTRO GALVANIZED OR BRASS



Fig. 1041

	118. 10	A T	
Size of Eye Inches	Galvanized Each	Brass Each	Length Inches
% x 3/10	\$ .14	\$ .17	15/8

#### Baby Snaps

WITH SWIVEL EYE
MALL. IRON, NICKEL PLATED OR BRASS



Fig.	1042	
Nickel		
Plated	Brass	Length
Each	Each	Inches
\$ .27	\$ .35	2 5/8
	Nickel Plated Each	Plated Brass Each Each

#### Safety Mooring Hooks

DROP FORGED STEEL—HEAT TREATED STAINLESS STEEL SPRING AND RIVET



Fig. 606

This hook although light in design has exceptional strength. A recommended working load of 750 pounds.

Galvanized Each	I. D. of Eye Inches	Length Overall Inches	Throat Opening Inches	Weight Per 100 in Lbs.
\$ .70	3/4	4	3/4	25

#### Double Snaps

MALLEABLE IRON—CADMIUM PLATED



Fig. 872

	Extreme Length	Insid Hook
ich	Inches	Inche
0	41/4	7/1e

Weight Ounces



#### Galvanized Hooks

DROP FORGED STEEL-LARGE EYE



Fig. 656

				Inroat		Approx.
Size Inches	Galv. Each	Hook Length Inches	I. D. Eye of Hook Inches	Opening of Hook Inches	Approx. Strength Lbs.	Weight Per 100 in Lbs.
3/8	\$ .45	2 1/8	3/4	1/2	1230	12
1/2	.50	3 %	7/8	5/8	2620	30
5/8	.75	5 1/8	11/4	<b>3/8</b>	3810	621/2
3/4	1.00	5 1/2	1 1/2	1	5710	871/2
7/8	1.40	61/2	1 %	1 1/8	9100	135
1	1.80	6 %	I 1/8	17/18	9700	212

#### Hooks With Thimbles

DROP FORGED STEEL-LARGE EYE



With	wire rope	
thimb	le Fig. 610	

With manila rope thimble Fig. 611

Size Inches	Galv. Each	Length Overall of Hook Inches	Score of Wire Thimble Inches	Score of Manila Thimble Inches	Weight Per 100 in Lbs.
3/4	\$ .90	2 1/8	5/16	7/16	23
1/2	1.00	3 %	3/8	5/8	56
5/8	1.65	5 1/8	1/2	3/4	100
3/4	1.80	5 1/2	1/2	<b>%</b>	140
7/8	2.55	61/2	5/8	1	198
1	3.15	6%	3/4	1 1/8	320
For	size of eye	and throat	opening,	see Fig.	656.

~ ....

### Screw Hooks

STEEL-GALVANIZED



Fig. 779

Size Inches	Galvanized Per Doz.	Length Overall Inches	Per Doz. Pounds
1/4	\$1.50	3 1/2	3/4
5/16	2.00	4	1
3/8	2.50	4 3/4	2 1/8
1/2	5.15	5 %	4 1/4

### "S" Hooks

GALVANIZED WROUGHT STEEL



Fig. 680

Nominal Size Inches	Per Dozen	Length Overall Inches	Weight Per Doz. Pounds
3/16 1/4	\$ .78	1 1/2	1/4
1/4	1.08	2	1/2
	1.98	21/2	1
% %	2.40	3	1%
1/2	5.64	3 %	5

#### Connecting or Missing Links

DROP FORGED STEEL WITH INTERLOCKING LUGS

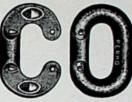


Fig. 319

Size Inches	Gnlv. Per Dozen	Overall Dimensions Inches	Weight Per Doz. Pounds
3/10	\$ 3.20	13/16x 34	%
1/4	3.20	1 1/2 x 1	3/4
5/10	3.50	1 34 x 13/16	1%
1/4 5/10 3/8	4.60	2 1/8 x 1 1/8	21/6
7/10	5.50	2 % x 1 1/2	31/8
1/2	6.60	2 % x 1 34	4 1/2
5%	10.50	3 % x 2 1/8	8
3/4	13.80	3 % x 2 1/2	1414
7/10 1/2 5/8 3/4 7/8	19.30	4½ x 3	22
1	29.20	5 x 3 3/8	32

#### Swing Links

MALLEABLE IRON—WITH BRONZE RIVETS
AND INTERLOCKING LUGS



Fig. 784

Size Inches	Galv. Per Dozen	Overail Length Inches	Diam. Eye Inches	Weight Per Dozen Pounds
3/16	\$ 3.50	134	5/16	7/8
3/16 1/4	3.75	2	%16 %8	1
5/10	4.25	2 1/4	7/16	1 3/4
36	5.35	2 %	1/2	234
5/16 9/8 7/16 1/2	8.20	31/4	5/8	4 1/2
1/2	10.90	3 5/8	3/4	6
56	19.00	4 3/8	7/8	11
5/8 3/4	25.50	514	1	171/2

# Lap Links

GALVANIZED WROUGHT STEEL



Fig. 785

Size nches 16	Per Doz. \$ .90 1.10 2.20	Inside Dimensions of Link Inches   x ½   ½ x ½   ½ x ½	Size Inches 3/8	Per Doz. \$3.00 4.90	Inside Dimension of Link Inches 1%10x 13/1 2 x 1



#### **ANCHOR CHOCKS**

CAST BRONZE-PLAIN

#### FOR NAVY TYPE ANCHORS

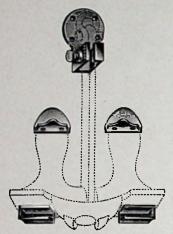


Fig. 938

Consists of five parts illustrated. Head of shank is held in place by an overhang and thumb screw arrangement. For all sizes up to 60 pounds inclusive.

#### Weight Per Set, 3 pounds

Complete, per set	\$9.50 3.90
Fluke supports only, per pair	3.35
Arm supports only, per pair-	2.80

#### FOR KEDGE ANCHORS

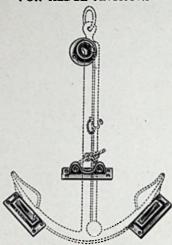


Fig. 939

Consists of four parts illustrated. The lashing piece has two eyes large enough for % inch diameter rope. For all sizes up to 75 pounds inclusive.

#### Weight Per Set, 21/2 pounds

Complete, per set	\$8.25
Shank support only, each	
Lashing fitting only, each	
Fluke supports only, per pair	4.40

#### FOR NORTHILL ANCHORS

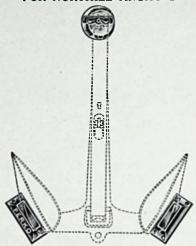


Fig. 941

Consists of three parts illustrated. Part for shank head has threaded bolt to pass through eye of shank, head is fastened down by wing nut and cross bar on bolt. For all sizes up to No. 20-R inclusive.

#### Weight Per Set, 2 pounds

Complete, per	set	\$7.25
Shank support		
Fluke supports	only, per pair	4.40

#### FOR DANFORTH ANCHORS

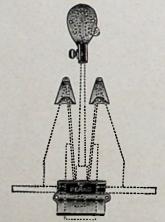


Fig. 933

Consists of four parts illustrated. Head of shank is held fast by slotted casting and thumb screw.

For all sizes up to 30 pounds inclusive.

#### Weight Per Set 1% pounds

Complete, per set	\$7.00
Shank support only, each	3.10
Fluke supports only, per pair	2.20
Crown support only, each	

## FOR DANFORTH ANCHORS NEW DESIGN—CAST MANGANESE BRONZE

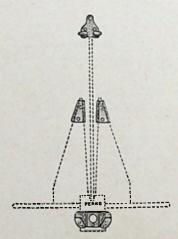


Fig. 1022

Consists of four parts illustrated. Part for shank head has integral cleat for lashing down.

	No. 1	No. 2
Complete per set	\$8.00	\$10.00
Shank support only, each	2.25	2.75
Fluke supports only, per pair	4.50	5.50
Crown support only, each	2.25	2.75
For size anchor, pounds	8 to 22	28 to 90
Weight per set, pounds	1 1/3	2

### Non-Fouling Kedge Anchors

GALVANIZED DROP FORGED STEEL



The result of a great deal of experimenting and testing, the flukes are designed to bite and hold on the first pull of the cable, a weldless reinforcing under each fluke will prevent bending or breaking under maximum

Weight Pounds	Galvanized Each	Length Overall Inches	Width Across Flukes Inches
5	\$ 9.50	21	13
10	13.50	26	15%
15	15.50	29	18
20	18.50	32	19
25	22.00	36	20
30	26.00	36	20
35	28.00	40	22
42	35.00	40	22
50	41.00	43	241/2
60	48.00	441/2	271/2
75	58.00	46	29
100	80.00	50	32
125	96.00	521/2	32
150	110.00	59	341/2
200	165.00	65	341/2
250	220.00	621/2	431/2

### Navy Type Anchors

DROP FORGED SHANK-GALVANIZED



Fie	45

Weight Pounds	Each	Weight Pounds	Each
5	\$ 3.40	50	\$ 26.50
10	5.65	60	33.00
15	7.85	80	45.00
20	9.65	100	60.00
25	13.25	125	75.00
30	15.50	150	90.00
35	19.00	200	115.00
40	21.50		

40

#### Grapnels

GALVANIZED DROP FORGED STEEL FIVE PRONG



Fig. 207

Weight Pounds	Galvanized Each	Weight Pounds	Galvanized Each
4	\$ 6.70	15	\$15.00
7	8.25	20	20.00
10	10.20		
Larger si	zes-prices on a	pplication.	

#### Fisherman's Anchors FOR SMALL BOATS



Fig. 1028

Weight Pounds	Self Colored Each	Galvanized Each	Diam. Inches	Height Inches
7	\$2.45	\$3.35	6	8
ti.	3.40	5.15	7	9
15	4.40	6.40	8	10

### Northill Utility Anchors

HEAT TREATED DUCTILON-GALVANIZED



Fig. 1067

Type No.	Galv. Each	Weight Pounds	parative Weight Kedge Type Pounds	parative Weight Navy Type Pounds
Rowboat	\$ 4.85	3		
3R	11.50	6	30	50
6R	22.50	13	65	110
12R	37.50	25	130	225
20R	53.50	47	225	400
30R	74.50	75	350	610
50R	104.50	105	525	918

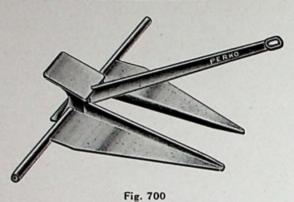
Note-Rowboat Anchor 12" long - 10" wide.

Government Tolerance in Weight, Plus or Minus 5%



#### "Danforth" Anchors

GALVANIZED STEEL



### Fig 700A "Standard" Anchors

FLUKES FABRICATED FROM HIGH STRENGTH ALLOY STEEL PLATE. SHANK IS DROP FORGED STEEL

Weight Pounds	Length Overall Inches	Each	Weight Pounds	Length Overall Inches	Each
21/2	171/4	\$ 3.70	40	4034	\$ 42.00
4	19	7.50	65	50	60.00
8	24	13.50	85	54	76.00
13	281/2	18.50	180	52	145.00
22	35	29.00	200	561/2	176.00

Larger sizes, price on application.

### Fig. 700B "High Tensile" Anchors

FLUKES FABRICATED FROM ROLLED-ALLOY STEEL SECTIONS. SHANK IS DROP FORGED ALLOY STEEL.

Holding power equal to "Standard" anchors of about twice the weight.

Weight Pounds	Length Overall Inches	Each	Weight Pounds	Length Overall Inches	Each
5	21	\$13.50	28	391/2	\$ 52.00
12	271/2	28.00	60	49%	105.00
18	34	38.00	90	53 1/2	125.00

#### Suggested Danforth Anchor Sizes

This table is a general guide; the correct Danforth anchor for your boat may be smaller or larger, depend-ing upon your boat's weight and design, type of holding ground, length of scope possible, harbor exposure, etc.

Maximum		"STANDARD"		"HI-TENSILE"		
Length of Boat	Working Anchor	Storm Anchor	Lunch Hook	Working Anchor	Storm	
12 ft.	21/2	4	****	****	5	
16 ft.	4	8			12	
20 ft.	8	13	4(S	td.) 5	18	
30 ft.	13	22	5	12	28	
40 ft.	40	65	12	18	60	
60 ft.	65	85	18	28	90	
80 ft.	85	180	28	60		
100 ft.	180	200	60	90		
125 ft.	200	300	90			
150 ft.	300	500				
200 ft.	1 500	750				

#### Pick Up Buoys

GALVANIZED SHEET IRON

FLAT TOP



Fig. 234

Pick up handle is riveted to body. Eye on bottom for rope. All double seamed and soldered.

Length shown does not include eye and handle.

No.	Each	Diam. Inches	Length Inches	Weight Pounds
1	\$10.25	9	14	4
2	12.00	12	18	5

CONE TOP



Fig. 235

No.	Each	Diam. Inches	Length Inches	Weight Pounds
0	\$ 7.00	7	11	3
1	9.00	13	22	5
2	11.00	16	24	6 1/2

### **Buoy Rods**

GALVANIZED STEEL

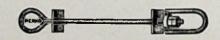


Fig. 166

No.	Ench	Diameter Inches	Length Under Eye Inches	Weight Pounds
1	\$5.25	1/2	18	23/4
2	5.50	1/2	20	2 1/8
3	6.75	5/8	26	51/4
4	7.25	%	30	5%
5	8.00	5½	36	7



#### Round Steel Mooring Buoy

17" DIAM.—18 GAUGE—WELDED—GALVANIZED STEEL ROD THROUGH CENTER—EYE ON TOP— SWIVEL ON BOTTOM WITH 1%" DIAM. RUBBER BUMPER—BLACK FINISH



Fig. 1068

Body of buoy is grooved to firmly hold rubber bumper in place. The buoy rod passes through a length of pipe and is not attached to body of buoy. All strain is on the rod.

Load capacity, half submerged is 60 pounds, dead weight, equal to 75 feet of 1/4 inch chain or 32 feet of 1/4 inch chain, dead weight.

	Diameter Rod	Size Inside Swivel	Weight
Each	Inches	Inches	Pounds
\$35.00	5/ <sub>R</sub>	31/2×2	17

#### Hold Fast Mooring Buoy

WITH RUBBER BUMPER GALVANIZED SHEET IRON



Fig. 445

A heavy gauge galvanized sheet iron body, a % inch forged rod through a galvanized pipe in the body, large eye on top, large heavy swivel on bottom, a substantial rubber bumper set in groove of body, will not mar or scratch hull of boat.

No. 1 Load Capacity, dead weight — 60 pounds No. 2 Load Capacity, dead weight — 100 pounds

No.	Each	Diam. Body Inches	Length Body Inches	Length Overall Inches	Diam. Eye Inches	Weight Pounds
1	\$25.00	13	22	3334	3	15
2	34.00	17	27	381/2	3	24

#### Junior Mooring Buoy

FOR RUNABOUTS AND ALL SMALL BOATS
GALVANIZED SHEET IRON



Fig. 318

Made of sheet iron with ½ inch forged steel galvanized rod through a galvanized pipe in body. Rod has eye on top and swivel on bottom. All the strain is on the rod.

Load capacity, half submerged, 25 lbs., dead weight. Equal to 35 feet of ¼ inch chain.

-		Diam.	Length Body
No.	Each	Body Inches	Inches
1	\$16.00	12	15

#### Cone Mooring Buoy

GALVANIZED SHEET IRON WITH RUBBER BUMPER

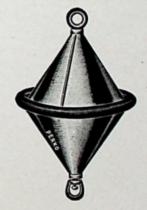


Fig. 370

Heavy galvanized iron, iron pipe running all the way through buoy, heavy galvanized % inch buoy rod through pipe allowing body to swivel, cye on top, swivel on bottom, body grooved for bumper which is of heavy 1½ inch outside diameter rubber hose.

No.	Each	Body Size Inches	Lond Capacity Deadweight Pounds
1	\$38.50	16x24	35
2	48.00	20x30	60
3	58.00	24x36	90
4	69.00	30x36	115
Size does n	ot include swive	el or eye.	





#### Eye Nuts

WELDLESS DROP FORGED STEEL

Threaded For Bolt Inches	Galv. Each	Inside Dimensions Inches	Diam. of Stock Inches	Weight Per 100 in Lbs.
34	\$ .86	%x %	1/4	19
% %	.86	%x %	1/4	19
%	1.06	%x1 1/8	5/16	25
7/16	1.30	1½x1½	38	38
7/16 1/2	1.30	14 x 1 1/2	3/8	38
%	1.66	1½x1%	1/2	63
34	2.10	1 1 x 2 1/16	5/8	94

### Bolt Eyes

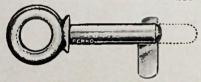
WELDLESS DROP FORGED STEEL GALVANIZED



Each		For Diameter Bolt Inches	Inside Dimensions Inches	
\$ .9	0	5/8	1/2	
Diam. Stock Inches	Overall Length Inches	Base	Weight Per 100 in Lbs.	
1/2	37/1e	21/4	871/2	

### Toggle Bolts

CAST BRASS-PLAIN FINISH



D:	Fig. 196	
Diameter Shank Inches	Length Inches	Each
	1 to 6	
3/8	1 to 6_	On
1/2	1 to 6	Application
% % %	1 to 6	
3/	1 4 . 6	

Length is measured from under shoulder to beginning of milled slot.

### Brass Wing Nuts

U. S. S. THREAD



For Diam. Bolt Inches %16 14 %16 %	Threads Per Inch 24 20 18	Plain Brana Each \$ .08 .09 .12	For Diam. Bolt Inches 7/16 1/2 5/8	Threads Per Inch 14 13	Plain Brass Each \$ .45 .45
/•	10	10	74	10	1.10

#### Assorted Sheaves

GALVANIZED IRON, BRONZE OR PLASTIC COMMON BUSHED—FOR MANILA ROPE

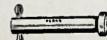


Fig. 154 GALVANIZED

No.	Each	Diam. Inches	Thickness Inches	For Rope Inches	For Size Pin Inches
1	\$ .22	%	5/16	3/16	3/8
2	.30	1	%	1/4	1/8
3	.33	11/4	% % ½ ½ %	5/16	3/16 3/16 1/4
4	.36	11/2	1/2	%	3/16
5	.48	1%	1/16	7/16	1/4
6	.55	2	5% 94	1/2	1/4
7	.65	21/2	8/4	%	3/16
-8	.80	3	7/4	8/4	716 714
		BRO	NZE		
9	.35	7/14	416	1/4	%₂
10	.40	%	<b>%</b>	5/14	1/32
11	.45	11/14	1/16	%	5/32
12	.45	8/4	₹6	5/10	1/4
13	.50	%	1/4	3/8	5/16
14	.50	1	86	1/4	1/4
15	.60	11/6	1/3 8/8 5/8 1/16	7/16	% % % % % %
16	.60	13/16	7/16	5/16	1/4
17	.65	1%	1/3	%	5/16
18	.75	1%	86	5/16	1/4
19	.95	17/8	% % 7/16	7/16	8/4
20	.95	2	7/16	5/16	714
21	1.10	21/4	1/2	%	%
22	5.75	6	3/4	%	74
		PLAST	ric		
23	.45	11/6	%	1/4	1/4
24	.50	11/4	%	1/4	3/16
25	.50	1%	₹/16	5/16	4

#### Assorted Brass Pins

FOR BLOCK SHACKLES, TURNBUCKLES, ETC.



		1			
		Fig.	1176		
No.	Each	Diam. Pin Inches	Length Under Head Inches	Diam. Head Inches	Type Head
1	\$,25	3/14	5%	1/4	Flat
2	.25	¥14	%	1/4	Flat
	.28	1/16	- 1/8	1/4	Flat
4	.28	3/16	1	1/4	Flat
3 4 5 6	.28	14	%	5/1A	Round
6	.30	1/4	%	5/16	Flat
7	,32	1/4	7/4	5/14	Flat
7 8	.35	1/4	<sup>3</sup> ⁄8 1⅓₁₅	5/16	Flat
9	.35	1/4	11/8	5/14	Flat
10	.35	¥ ¥	11/4	14 %6 %16 %16 %16 %16	Flat
11	.35	914 914 914 914	7/4	%	Flat
12	.35	414	15/16	% % % % %	Flat
13	.35	5/14	1	86	Flat
14	.37	5/14	11/14	%	Round
15	.37	9/16 9/16	11/4	96	Flat
16	.37	414	11/4	%	Flat
17	.42	¥16	115/16	1/4	Flat
18	.48	%	15/14	1/14	Flat
19	.48	84	11/14	7/16	Flat
20	.50	% % % %	11/14	1/2	Round
21	.50	46	13/16	1/2	Flat
22	.55	8%	11/4	1/2	Flat
23	.60	86	1%	1/14	Flat
24	.65	1/14	1	1/3	Flat
25	.70	% % % %	2%	56	Flat
26	.75	1/2	11%	96	Flat
27	.75	1/2	11/4	% % %	Flat
28	.80	1/2 1/2	11/4	8%	Flat

Round



#### Fast Eye Blocks

GALVANIZED MALLEABLE IRON OR BRONZE SINGLE

Without Becket





With Becket

Fig.	43

	ize Io.	Galv. Each Fig. 43	Galv. Each Fig. 54	Plain Bronze Each Fig. 43	Pol. Bronze Each Fig. 43	For Rope Diam. Inches	Size Sheaves Inches	Wt. Each Lbs.
	1 3 5	\$.26 .32 .41	\$.30 .40 .50	\$.35 .46 .74	\$.80 1.13 1.60	3/16 1/4 5/16	34 x 5/16   x 3/8   1/4 x 7/16	3/32 3/16 1/4
	7 9 1	.62 .82 1.35	.70 .90 1.50	.85 1.70 2.05	1.85	3/8 7/16 1/2	1 ½ x ½ 1 ¾ x ½ 2 x %	3/8 1/2 5/8
13		2.22 3.05	2.90 4.25			5/8 3/4	2½ x¾ 3 x%	17/16 15/8

NOTE-Blocks with becket supplied only in gal-

### Fast Eye Blocks

GALVANIZED MALLEABLE IRON OR BRONZE DOUBLE

Without Becket



Fig. 51

Size No.	Galv. Each Fig. 51	Galv. Each Fig. 55	Plain Bronze Each Fig. 51	Pol. Bronze Each Fig. 51	For Rope Diam. Inches	Size Sheaves Inches	Wt. Each Lbs.
2 4 6	\$.45 .50 .90	\$.55 .80 1.35	\$.65 1.00 1.60	\$1.70 2.20 3.25	3/16 1/4 5/16	% x ½6   x %   ½ x ½6	% % %
8 10 12	1.10 1.40 1.80	1.60 2.00 2.70	2.00	4.20	% 7/16 1/2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	% % 1¼
14 16	3.25 6.00	4.75 7.00			% %	2½x¾ 3 x%	21/16 23/4

NOTE-Blocks with becket supplied only in gal-

#### Swivel Eye Blocks

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 100

		•		
Size No.	For Diam, Rope Inches	Length Shell Inches	Diameter Sheave Inches	Weight Per Doz in Lbs.
0	3/16	1	½ ¾	1/2
1	3/16	1 1/4	. %	11/4
3 5	1/4			2
5	5/16	2	11/4	2 %
7	%	21/4	1 1/2	4%
	Galvanized		Plain	Polished
Size	Iron		Bronze	Bronze Each
No.	Each		Each	
0	\$ .35		\$1.20	\$2.00
1	.41		1.25	2.05
3	.58		1.65	2.30
3 5	.89		2.00	2.90
7	1.00		2.30	3.75

### Swivel Eye Blocks

GALVANIZED MALLEABLE IRON OR BRONZE

Double



Weight er Doz. n Lbs.
11/16
21/4
3%
41/2
7
ished onze ach
2.30
2.50
3.25
5.50
7.50



#### Loose Hook Blocks

GALVANIZED MALLEABLE IRON BODY FORGED STEEL HOOKS SINGLE

Without Becket

With Becket





	Fig. 52			Fig. 56	
Size No.	Galv. Each Fig. 62	Galv. Each Fig. 66	Length of Shell Inches	For Rope Diameter Inches	Weight Each Pounds
1	\$2.00	\$2.20	1 1/2	3/18	3/16
3	2.10	2.25	1 %	1/4	1/4
5	2.15	2.35	2	%16	5/16
7 9	2.40	2.75	2 %	3/8	%16 58
	3.30	3.50	3	7/16	58
11	4.25	4.75	31/4	7/16 1/2	1
13	5.50	6.00	4	5/8 3/4	21/4
15	8.00	8.75	4 3/8	3/4	21/2

Size of Sheave same as Fig. 43.

#### Loose Hook Blocks

GALVANIZED MALLEABLE IRON DOUBLE

Without Becket

With Becket





	Fig. 53	Fig. 58					
Size No.	Galv. Each Fig. 58	Galv. Each Fig. 58	Length of Shell Inches	For Rope Diameter Inches	Weight Each Pounds		
2 4 6	\$2.25 2.55 2.80	\$2.35 2.75 3.15	1 ½ 1 % 2	3/16 1/4 5/16	1/4 1/8 1/2		
8 10 12	3.20 4.15 5.50	3.30 4.50 5.75	2% 3 3¼	% 7/16 1/2	7/8 1 1 1/2		
14 16	7.50 10.50	7.75 11.00	4 4 3/8	% %	21/2 3 %		

Size of Sheave same as Fig. 51.

#### **Blocks on Plates**

GALVANIZED MALLEABLE IRON OR BRONZE



			Fig. 10	7		
Size No.	Galv. Each	Plain Bronze Each	Pol. Bronze Each	For Rop Diam. Inches	e Style Block	Weight Per 100 in Lbs.
3 5 7 9	\$1.15 1.30 1.85 2.85	\$2.75 3.25 3.75	\$4.20 4.75 5.50	1/4 5/16 3/8 7/16	Swivel Eye Swivel Eye Swivel Eye Fast Eye	20 35 66 72

#### Deck Blocks

OPEN PATTERN GALVANIZED IRON OR BRONZE SINGLE



Fig. 87

Size No.	Mall. Iron Each	Cast Iron Each	Plain Brass Each	For Rope Diam- eter Inches	Size of Sheave Inches	Weight Pounds
0	\$.65	\$.35	\$.90	5/16	11/4 x 3/8	3/16
1	.90	.45	1.10	3/8	1 1/2 x 1/2	%
3	1.60	.95	2.25	1/2	2 x 5/8	13/16
5	2.65	1.90	4.40	5/8	21/2×3/4	19/16
7	3.90	2.50	5.50	3/4	3 x 1/8	23/18

Cast iron furnished unless otherwise specified.

#### Deck Blocks

OPEN PATTERN
GALVANIZED IRON OR BRONZE
DOUBLE



Fig. 88

Size No.	Mall. Iron Each	Cast Iron Each	Plain Bronze Each	For Diam. Rope Inches	Size Sheave Inches
2	\$1.55	\$ .70	\$1.90	5%	11/2×1/2
4	2.90	1.60	4.15	1/2	2 x %
6	5.00	3.00		%	21/2×1/4
8	6.90	4.25		3/4	3 x 1/8

Cast iron furnished unless otherwise specified.



#### Deck Blocks

FOR WIRE ROPE GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 139

Size No.	Galv. Each	Plain Bronze Ench	For Diam. Rope Inches	Size Sheave Inches	Weight Pounds
1	\$1.30	\$1.60	14-5/16	1 % x 1/16	5%
2	2.00	3.20	3/8	3 x 1/16	1 3/8
3	3.90	6.00	7/16	4 x 1/8	3
31/2	5.80		1/2	4 1/2 x 3/4	41/4
4	7.90		5/8	5 x 1/8	51/4
5	10.20		3/4	6 x l	81/2

#### Cheek Blocks

FOR WIRE ROPE GALVANIZED CAST IRON OR BRONZE



Fig. 140

Size No.	Galv. Each	Plain Bronze Each	For Diam. Rope Inches	Size Sheave Inches	Weight Pounds
1	\$ .90	\$1.70	1/4-5/16	1 % x 1/16	5/8
2	1.50	3.00	3/8	3 x%16	1 %
3	2.75	6.60	7/16	4 x 5/8	2 1/4
31/2	3.90		7/16 1/2	41/2×1/4	4 1/4
4	4.60		5/8	4 x 1/8	51/4
5	7.85		34	6 x l	- 11

#### Cheek Blocks

GALVANIZED IRON OR BRONZE SINGLE



Fig. 95

Size No.	Gaiv. Gray Iron Each	Galv. Mall. Iron Each	Plain Bronze Each	For Diam, Rope Inches	Size Sheave Inches	Weight Pounds
0	\$ .55	\$ .85	\$1.00	1/4	1 x%	3/16
1.	.60	1.00	1.30	%16 3%	1 % x 1/16	½ %
2	.65	1.20	1.50	3/8	1 1/2 x 1/2	%
3	1.00	2.25	2.50	1/2	2 x 1/8	3/4
4	1.90	2.95	3.00	5/8	21/2×%	11/4
5	3.00	4.75		3/4	3 x 1/8	2
6	5.20	8.25		7/8	31/2× 1	4

Note-Galvanized malleable blocks shipped unless otherwise specified.

Wire Rope Pulleys
GALVANIZED MALLEABLE IRON OR BRONZE UPRIGHT PATTERN



Fig. 279

SINGLE

Size No.	Galv. Each	Plain Bronze Each	For Diam. Rope Inches	Size Sheave Inches	Weight Pounds
10 20 30	\$2.00 2.40 3.60	\$3.00 3.50 5.50	3/16 1/4 5/16-3/8	2½x¾ 3¼x½ 4½x¾	5% 1 ½ 2 ½
		Fig	g. 280		
		DO	UBLE		
110 120 130	\$3.00 3.40 5.75	\$4.90 5.25 8.75	3/16 14 5/16-3/8	2 ½ x 3/8 3 ¼ x ½ 4 ½ x 9/16	1 1/8 2 4 1/4

Wire Rope Pulleys
GALVANIZED MALLEABLE IRON OR BRONZE

SIDE PATTERN



Fig. 194

SINGLE

Size No.	Galv. Each	Plain Bronze Each	For Diam. Rope Inches	Size Sheave Inches	Weight Pounds
1 2 3	\$2.00 2.40 3.60	\$3.00 3.50 5.50	¾6 ¼ √4 √16-¾	2½x% 3¼x½ 4½x%	1½ 1¼ 2¾
		Fig	g. 195		
		DO	UBLE		
11 12 13	\$3.00 3.40 5.75	\$4.90 5.25 8.75	3/16 1/4 5/16-3/8	2 1/2 x 3/8 3 1/4 x 1/2 4 1/2 x 9/16	1 1/8 2 4 1/4

#### Cheek Blocks

GALVANIZED IRON OR BRONZE DOUBLE



			11g. 30			
Size No.	Galv. Gray Iron Each	Galv. Mall. Iron Each	Plain Bronze Each	For Diam. Rope Inches	Size Sheave Inches	Weight Pounds
11 12 13	\$1.10 1.20 2.00	\$1.80 2.15 3.00	\$2.20 3.30 5.25	% % %	1 % x 7/16 1 1/2 x 1/2 2 x 5/4	11/18

PATENTED



#### Improved Tiller Rope Pulley

FORGED BRONZE WITH LAMINATED PLASTIC SHEAVE SWIVEL TYPE—WITH STRAP



Light in weight but very strong, the plastic sheave is well known for its ability to withstand shock and is impervious to salt water. The swivel eye is free turning and patented.

Dull Bronze Each	For Diam. Rope - Inches	Length Overall Inches	Diam. Sheave Inches	Length Strap Inches	Weight Ounces
\$2.10	516	3 %	134	1 1/8	3

Note: Supplied with bronze sheave if desired, add \$.30 each. Please specify.

### Lightweight Tiller Rope Pulleys

LAMINATED PLASTIC SHEAVE BRASS BODY-FORGED BRONZE STRAP



Fig. 591

No.	Dull Brass Each	For Diam. Rope Inches	Length Overall Inches	Size Sheave Inches	Length Strap Inches	Wt. Ozs.
0	\$1.80	1/4	2	11/4×3/8	1 7/8	1 3/4
1	2.25	%16	2 %	1 % x 1/18	21/4	3

Tiller Rope Pulley LAMINATED PLASTIC SHEAVE WITH STRAP — FORGED BRONZE



Fig. 579

1 1/8 x 1/8

Length

### Lightweight Tiller Rope Pulley

WROUGHT BRASS BODY FORGED BRONZE STRAP LAMINATED PLASTIC SHEAVE SWIVEL TYPE



Fig. 592

Dull Brass Each \$2.00	For Diam. Rope Inches	Length Overall Inches 3 %	Diam. Sheave Inches	Length Strap Inches	Weight Ounces
					3

### Tiller Rope Pulley with Snap

HEAVY WROUGHT BRASS STRAP LAMINATED PLASTIC SHEAVE GALVANIZED OR BRONZE SNAP



Type A — With Galvanized Fast Eye Snap

Type B - With Galvanized Swivel Eye Snap

Type C - With Bronze Swivel Eye Snap

Туре	Each	Diameter Sheave Inches	For Diam. Rope Inches	Length Overall Inches	Weight Ounces
Α	\$1.55	1 3/4	5/16	51/2	2 3/4
В	1.75	1 3/4	5/16	5 3/4	3 %
C	1.90	13/4	5/16	51/2	4

Type A supplied unless otherwise specified.

### Tiller Rope Pulley With Swivel Snap

ALL BRASS WITH LAMINATED PLASTIC SHEAVE



Fig. 616

	For Diam. Rope
Each	Inches
\$2.00	1/ 02 5/4

Weight Ounces

Coaming or Thru-Deck Pulleys

CAST ALUMINUM OR BRONZE
WITH 1% INCH LAMINATED PLASTIC SHEAVE



Fig. 617

Made as small and light as possible while maintaining necessary strength. The plastic sheave has deep score for wire or woven rope.

Dimensi	ite	Diameter	Weight	
Of Pla		Rope	In Bronze	
Inche		Inches	Ounces	
3 % x	1 %	1/4 or 5/16	4	
Polished	Plain	Polished	Chromium	
Aluminum	Bronze	Bronze	Plated	
Each	Each	Each	Each	
\$2.00	\$2.00	\$2.50	\$3.25	

#### Side Pulleys

GALVANIZED CAST IRON OR BRONZE



Fig. 97

Size No.	Galv. Each	Pol. Bronze Each	Size Base Inches	Diam. Rope Inches	Weight Per Doz. in Lbs.
1	\$ .40	\$1.20	34 x 25/16	1/4	1 3/8
2	.50	1.30	7/8 x 2 11/16	9/16	2
3	.80	1.50	1 x3 3/8	3/8	31/4

### Tiller Rope Guides

GALVANIZED CAST IRON OR BRONZE



Fig. 102

No.	Galv. Iron Each	Plain Bronze Each	Polished Bronze Each	Chromium Plated Each	Diam. Rope Inches	Diam. Base Inches
1	\$.35	\$.70	\$1.15	\$2.00	1/4	1 3/8
2	.45	.80	1.40	2.25	%16	111/16
3	.65	1.20	1.90	2.80	3/4	1 3/4

### Tiller Rope Guides

FORGED BRONZE





Upr	ight	
Fig.	593	

1.15

593

	-
Dull	Pol.
ronze	Bronze
Each	Each

1.30

Chromium For Rope Plated Diam. Each Inches \$2.10 2.05

Fig. 594

# Tiller Rope Guides BRONZE



			Fig. 35	9		
No.	Plain Bronze Ench	Polished Bronze Each	Chromium Plated Each	Size Hole Inches	Size Base Inches	Weight Ounces
1	\$.38	\$.70	\$1.20	3/8	1%x %	34
2	.46	.80	1.40	1/2	1 1/2 x 7/8	1 1/2
3	.60	.95	1.60	5/8	134x114	2
N.	1 -: :		L			

### Tiller Rope Guides

GALVANIZED CAST IRON OR BRONZE OVAL PLATE



			rig. 35	19		
No.	Galv. Iron Each	Plain Bronze Each	Pol. Bronze Each	Chromium Plated Each	Size Hole Inches	Size Base Inches
1	\$.20	\$.38	\$.70	\$1.20	3/8	138x 78
2	.25	.46	.80	1.40	1/2	1 1/2 x 1/8
3	.30	.60	.95	1.60	5/8	1%x1%
No.	1 sine i	forged b	ronze			

### Tiller Rope Guides

BRASS SPRING WIRE



Fig. 229 A low priced but sturdy guide made of heavy gauge brass spring wire.

Brass Each	Chromium Plated Each	Size Hole Inches	Length Inches	Weight Ounces
\$ .15	\$ .25	3/8	17/16	1/3

Brass Shipped Unless Otherwise Specified.

### Tiller Rope Guides

BRASS SPRING WIRE



Fig. 932

Chromium
Plated
Each
\$.27

Brass Each

\$.17

Length Inches 11/4

Weight



## LIGHTWEIGHT BLOCKS FOR SAILBOATS

BRASS OR ALUMINUM

14 B & S GAUGE SHELL—LAMINATED PLASTIC SHEAVES SHACKLES, STRAPS AND SWIVEL EYE ARE DROP FORGED BRONZE FOR STRENGTH FITTINGS FOR ALUMINUM BLOCKS ARE NICKEL PLATED TO MATCH ALUMINUM COLOR ALL FITTINGS ARE INTERCHANGEABLE

#### Block Only WITHOUT FITTINGS



No. 0 1	For Rope Inches	Length Overall Inches 2 2½	Size of Sheav Inche	e 8	Weight Brass Ounces I 1/2 2 1/2	Weight Aluminum Ounces 38
No. 0 1	Bright Brass Each \$1.65 2.10	\$1	lished rass ach .75	Brig Alum En \$1.5	inum ch 55	Polished Aluminum Each \$1.65 2.10

### Block With Shackle



Front Shackle Fig. 802



Side Shackle Fig. 806

For sizes etc., see Fig. 801.

No. 0 1	Bright Brass Each \$2.05 2.50	Polished Brass Each \$2.15 2.60	Bright Aluminum Each \$1.95 2.45	Polished Aluminum Each \$2.05 2.55
•	2.50	2.00	2.45	2.55

### Swivel Eye Fittings

FOR ATTACHMENT TO FIG. 801 BLOCK



This fitting attached to a Fig. 801 block creates a swivel eye block of smooth action and adequate strength.

No. 0 1	Bright Brass Each \$1.40 1.55	Nickei Plated Each \$1.50 1.65	I. D. Eye Diam. Pin Inches Inches 1/2 8/16 1/4 1/4	Weight Ounces
---------------	---	--	---	------------------

#### Block With Eye Strap



Fig. 808

For sizes etc., see Fig. 801.

No.	Bright Brass Each	Polished Brass Each	Bright Aluminum Ench	Polished Aluminum Each
0	\$1.80	\$2.15	\$1.80	\$2.05
1	2.25	2.60	2.25	2.55

### Block With Upset Shackle



Front Shackle Fig. 812 For sizes etc., see Fig. 801.



Side Shackle Fig. 821

No. 0	Bright Brass Each \$2.35	Polished Brass Each \$2.50	Bright Aluminum Each \$2.35	Polished Aluminum Each \$2.45
1	\$2.35	\$2.50	\$2.35	\$2.45
	2.85	2.95	2.85	3.00

#### Spare Parts

	Bright Brass Each	Nickel Plated Each
Shackles Fig. 893 No. U	\$ .65	\$ .75
Shackles Fig. 893 No. 1 (Special)	.85	.95
Straps Fig. 881 No. 0 (Special)	.40	.50
Straps Fig. 881 No. 1 (Special)	.50	.60

#### NOTES

Finish-Bright finish is not polished but very attractive and practicable. Polished blocks have bright finished fittings.

Special-The above "Special" Shackles are milled to fit the blocks. Straps are shaped for the same purpose.



### Lightweight Block

WITH FRONT OR SIDE SHACKLE WITH LAMINATED PLASTIC SHEAVE



Fig. 432

No.	Plain Brass Each	Plain Aluminum Each	For Diam. Rope Inches	Size Sheave Inches	Weight Brass Ounces
0	\$2.05	\$1.95	1/4	11/4 x %	2
1	2.50	2.45	5/16	1 34 x 7/10	3 1/2

#### **Bullet Blocks**

FOR JIB SHEETS AND LEADERS FORGED BRONZE



Fig. 869

No.	Dull Finish Each	Polished Each	For Rope Diam. Inches	Size Sheave Inches	Weight Ounces
0	\$1.20	\$1.50	1/4	% x7/16	2
1	1.30	1.80	3%	% x ½	2 1/2
2	1 1 90	2.40	7/1a	1 1/8 x 5/8	5

### Jib Halyard Blocks on Strap

FORGED BRONZE BLOCK—CAST BRONZE STRAP



Fig. 899

No. 0 1	Plain Each \$1.90 2.25	For Rope Diam. Inches	Size Sheave Inches %x%6 %x%	Length Strap Inches 2 1/2 2 1/2	Weight Ounces 3 1/2 4
---------------	---------------------------------	-----------------------------	---	---	--------------------------------

### Swivel Eye Bullet Blocks

FORGED BRONZE



Fig. 934

With unique patented swivel arrangement, no wear on rope.

For jib sheets or halyards on small sail boats.

Dull	Polished	Length	Size	For Diam.	Weight
Finish	Each	Shell	Sheave	Rope	Ounces
Each	\$2.20	Inches	Inches	Inches	21/2
91.00	92.20	1 /8	~ /o	110	- 12

### Swivel Eye Block on Plate

FORGED BRONZE

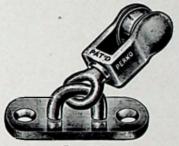


Fig. 935

This is our swivel eye bullet block mounted on brass plate, for deck leads.

Plain Each \$2.45	Length Plate Inches 2 1/4	Width Plate Inches	Weight Complete Ounces 3 1/2
<b>44.45</b>	274	-	3 /8

# Swivel Eye Block on Slide FORGED BRONZE

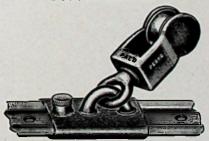


Fig. 936

Our swivel eye bullet block mounted on cast bronze slide for quick and easy adjustment of jib sheet lead. Slide has large head thumb screw for fastening in position with fingers.

Furnished complete with 24 inches of % inch nickel silver track.

Plain Each \$3.00	Length Slide Inches	Width Slide Inches	Weight Complete Ounces 7 1/2
	deduct \$ 50 and		, 72



#### Centerboard Blocks

GALVANIZED CAST IRON OR BRONZE



Fig. 827

No.	Galv. Each	Plain Bronze Each	Size Rope Inches	Size Sheave Inches	Weight Pounds
1	\$1.10	\$1.90	3/8	1 ½ x ½	3/4
2	1.90	3.90	1/2	2 x 98	1 1/2

Outhaul Cheek Blocks
CAST BRONZE—BURNISHED
FOR ROPE OR WIRE





Fig. 885

Fig. 886

Fig.	Each	For Rope Size Inches	Size Sheave Inches	Weight Ounces
885	\$ .75	1/4 Rope	% x 1/16	3 1/2
886	1.25	1/8 Wire	1 1/4 x 1/32	5

# Eye Straps FORGED BRONZE



Fig. 881

No.	Plain Each	Polished Each \$ .25	Chrome Plated Each \$ .50	Length Inches	Size Eye Inches	Stock in Eye Inches	Wt. Ozs.
0	.25	.50	.75	1 7/8		1/4	1/2
1	.35	.60	.85	21/4	5/16 3/8	9/32	3/4
2	.40	.85	1.15	2 3/4	1/2	5/16	1 1/2
3	.65	1.15	1.60	3 1/8	7/8	7/16	21/2
Size	No 3	in cast by	ORTO				

# Deck Straps CAST BRONZE



			Fig. 8	82			
			Chrome			Stock	
	Plain	Polished	Plated	Length	Size Eye		Wt.
No.	Each	Each	Each	Inches	Inches	Inches	Ozs.
1	\$ .55	\$1.00	\$1.35	3 1/2	1/2	%16	1 1/2
2	.80	1.40	1.80	41/4	%16	<del>%</del> 8	21/2
3	1.10	1.85	2.35	4 %	8 <b>%</b>	7/10	4%

# Flange Eyes CAST BRONZE



			Fig. 8	377		
Size No.	Plain Bronze Each \$.30	Polished Bronze Each \$.65	Chrome Plated Each \$1.00	Size Opening Inches	Size Base Inches 2 1/8 x 15/16	Weight Ounces
						O

# Fast Eye Snap Shackles CAST BRONZE—BURNISHED



No.	Each	For Diam. Rope Inches	I. D. Eye Inches	Length Inside Inches	Width Inside Inches	Wt. Ozs.
0	\$3.25	3/4	3/8	9/10	5/8	2
1	3.50	5/16-3/8	1/2	3/4	11/16	4
2	4.50	7/16-1/2	5/8	13/18	<b>7/8</b>	7

# Swivel Eye Snap Shackles CAST BRONZE—BURNISHED

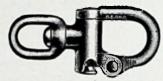


Fig. 874

No.	Each	For Diam. Rope Inches	I. D, Eye Inches	Length Inside Inches	Width Inside Inches	Wt.
0	\$4.25	1/4	7/16	11/16	%16	3
1	5.20	5/16-3/8	5/8	3/4	11/16	6

#### **Block Shackles** FORGED BRONZE



Fig. 893

No.	Size Inches	Plain Each	Pol. Each	Length Inside Inches	Width Inside Inches	Diam. Pin Inches	Wt. Ozs.
0	3/1e	\$.65	\$1.00	5/8	7/18	3/16	1/2
1	1/4	.75	1.10	7/8	7/10	1/4	1
2	5/16	1.00	1.40	11/16	5/8	5/18	1 1/2

Plain shipped unless otherwise specified.

### Halyard Shackles

CAST MANGANESE BRONZE—BURNISHED

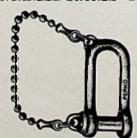


Fig. 887

Size nches	Each	Diam. Pin Inches	Length Inside Inches	Width Inside Inches	Weight Ounces
1/4	\$1.25	%ie	1 %	5%	21/2



### Automatic Jam Cleats

CAST BRONZE-POLISHED

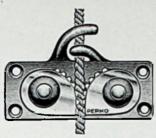


Fig. 895

No.	Each	For Rope Inches	Size Base Inches	Wt. Ozs.
1	\$7.00	14-5/16	31/2 x 1 1/2	1.0
2	8.75	3/8 - 1/2	51/8×13/4	18

### **Double Jam Cleats**

CAST BRONZE-POLISHED



Fig. 1030

No.	Each	Length Jnches	Width Inches	Weight Ounces
0	\$1.00	3	7/16	2
1	1.20	4	1/2	3 1/2
2	1.50	5	5/8	5 1/2

## Roller Jam Cleats

CAST BRONZE



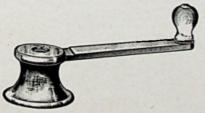
Fig. 894

No

Polished Each	For Diam. Rope Inches	Extreme Length Inches	Weight Ounces
\$2 50	1/8 to 1/4	4	4
3.30	1/4 to 3/3	5 1/4	8

# Ratchet Winches

POLISHED BRONZE-TOP ACTION



Handle is removable but firmly held into winch by snap action socket. Winch has double ratchet. Power ratio about 8 to 1.

No.	Complete Each	Handle l Only Each	For Diam Rope Inches	Height Inches	Diam. Base Inches	Wt. Lbs.
-1	\$26.25	\$6.00	3%	2 %	3 3/2	3

# Single Flare Lip Leaders

CAST BRONZE



Fig. 764

No.	Plain Each	Small Opening Inches	Weight Ounces
1	\$ .30	1/2	11/2
2	.40	<b>%</b>	3

### Thru-Deck Fairleaders

BRONZE



Size No.	Bright Finish Each	Inside Dia. Hole Inches	Outside Dia. Flange Inches	Weight Ounces
1	\$.40	3/8	114	3/4
2	.50	1/2	1 1/2	1 1/2

# Adjustable Jib Sheet Leaders

CAST BRONZE-PLAIN



Fig. 1114

One solid casting with large head thumb serew for fastening with fingers. Furnished with 24 inches of % inch nickel silver track, if required.

Without Track Each	With Track Each	Length Inches	Size Eye Inches Complete	Complete Weight Ounces
\$1.65	\$2.15	1 1/8	¾ x %	6

Silent Sheet Snubbing Winch
CAST BRONZE OR ALUMINUM
NOISELESS IN OPERATION—NO SPRING
NO RATCHET—NOTHING TO GET OUT OF
ORDER—ONE WAY ACTION IS POSITIVE



Many sail boat owners find fault with the ratchet type winch as being to noisy. This new silent winch eliminates that complaint.

Drum is	tapered to	noia line	or sheet at bottom.
Pol.	Chrome	Pol	Diam Diam

No.	Bronze Each	Plated Each	Alum, Each	Height Inches	Top Inches	Base	Wt. Oza.
0	\$6.25	\$8.50	\$6.00	21/8	1 1/8	2.	7
01	7.25	9.50	7.00	2 %	21/4	2	9

Note-Aluminum not recommended for use on salt water.



# Sliding Adjustable Gooseneck CAST MANGANESE BRONZE



Fig. 915

Has three positions for tack of sail, two positions for boom. Ideal and universal for most small boats. Will accommodate booms up to 11/4 inches thick if necessary.

Burnished Each	For Track Inches	For Boom Thickness Inches	Length Inside Straps Inches	Weight Ounces
\$5.00	5/8	% or %	4 3/4	12

# Lightweight Sliding Goosenecks

CAST BRONZE-BURNISHED

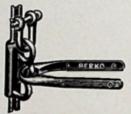


Fig. 916

Straps are adjustable for booms of various thickness. Track not included.

Each	For Track Inches	For Boom Thickness Inches	Length Inside Straps Inches	Weight Ounces
\$3.25	5 <sub>k</sub>	up to 1½	3 1/4	8

# "Snipe" Goosenecks

BRASS STRAPS—BRONZE MAST PLATE



With Plate for Square Mast Fig. 888

mast

With Plate for Round Mast Fig. 890

Plain Brass Each \$3.90	Plain Plates Only Each \$1.90	Width Plate Inches	For Boom Inches	Weight Each Pounds
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### Clew Outhaul

CAST BRONZE-PLAIN



Fig. 1047

Each	For Track Inches	Jaw Opening Inches	Length Inches	Height Inches	Weight Ounces
\$1.75	%	%	1%	1 1/2	31/2

## Whisker Pole Fittings

CAST BRONZE-PLAIN



Designed for quick action in poling out jibs, light in weight but strong. A set consists of three parts illustrated.

Per Set	For Dlam, Pole Inches	Size Eye Plate Inches	Weight Per Set Ounces
3.60	l or 1 1/8	1½x1¼	10

## Boom Travelers

CAST BRONZE-PLAIN FOR MAIN SHEET BLOCKS ON BOOMS



Fig. 1112 For Wide Booms



Fig. 1113 For T Booms

Fig.	Each	For Boom Thickness Inches	V
1112	\$. 65	11/2 to 13/4	
1113	.60	% to 1	



## Bronze Rigging Turnbuckles

S. A. E. THREADS—HEXAGON BODY LIGHTWEIGHT—STRONG



Fig. 917

The use of bronze rod enabled us to produce a very strong lightweight turnbuckle for small boats.

Size			gth o Pin —	Jaw	Diam.	
Thread Inches	Plain Each	Open Inches	Closed Inches	Opening Inches	Pin Inches	Weight
1/4	\$2.40	71/2	5 1/8	3/16	5/32	3 1/2
5/10	3.60	91/2	6	1/4	1/4	5

With check nuts, add \$ .30 to each turnbuckle.

# Bronze Rigging Turnbuckles

DROP FORGED—WELDLESS S. A. E. THREADS



Fig. 459

These are drop forged from special high strength solid bronze bars giving unusual strength as shown in table below.

Size Inches	Plain Each	With Two Check Nuts Add	For Diam. Wire Rope Inches	Weight Each Pounds
1/4	\$ 2.50	\$ .35	1/8	3/8
	4.20	.35	3/16	1/2
5/16 3/8	5.70	.40		3/4
1/2	8.80	.55	5/16 3/8	1 1/2
5/8	11.50	.55	1/2	2 %

1/4 inch size is cast manganese bronze.

Size Inches	Jaw	Diam.	Ultimate		
	Opening Inches	Pin Inches	Extended Inches	Closed Inches	Strength Pounds
1/4	1/4	1/4	8%	61/8	2300
	5/16	5/18	10 %	71/4	4200
%6 %8	% %	%16 3/8	121/4	81/2	6900
1/2	1/2	1/2	141/2	101/4	11000
6/2	5,4	5 <sub>n</sub>	17	12	18000

# Foot Rope Plates

GALVANIZED FORGED STEEL OR CAST BRONZE



		F	ig. 568			
Length Under Eye Inches	Galv. Each	Plain Bronze Each	Size Plate Inches	Inside Diam. Eye Inches	Diam. Metal in Eye Inches	Weight Pounds
3 4 5 6 8	\$ .70 .90 1.00 1.20 1.60 2.40	\$2.00 2.35 2.75	%x% %x%6   x%   x%   x%	½ % % % 1	% % % % %	% % % % 1

### **Bob Stay Straps**

CAST BRONZE



Fig. 303

No.	Plain Bronze Each	Pol. Bronze Each	Chromium Plated Each	in Eye	Length Straps Inches	Eye	Wt. Oss.	
1 2	\$.75 .95	\$1.20 1.55	\$1.80 2.20	3/8 7/18	1 34 2 54	3/4 7/4	3 1/2	

# "Snipe" Chain Plates

BRASS



Fig. 143

No.	Plain Brass Each	Polished Brass Each	Dimensions Inches	Diameter Pin Hole Inches	Weight Ouncer
1 2	\$ .80 1.20	\$1.20 1.80	7 x l x 1/8 10 1/2 x l x 1/4	% %	4 6

# Finishing Plates

CAST BRONZE-FOR FIG. 143 CHAIN PLATE



Fig. 252

Plain Bronze Each	Polished Bronze Ench	Length Inches	Width Inches	Weight Ounces
\$ .40	\$ .60	2	1%	1

## Chain Plates

GALVANIZED FORGED STEEL OR CAST BRONZE



Fig. 569

		118. 505		
Length Under Eye Inches	Galv. Each	Plain Bronze Each	Size of Plate Inches	Weight Galv. Pounds
4 6 8 10 12 14	\$ .60 .80 1.00 2.00 2.30 2.75 4.25	\$2.30 2.85 3.50	1 x % 6 1 x 5/6 1 % x 1/4 1 % x 1/4 1 % x x 1/6 1 % 6 x 5/6 1 % 6 x 5/6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14 14 14 24



# Snipe Centerboards

GALVANIZED IRON



Fig. 134

Each \$16.50	Height Inches 36	Width Inches 21	Thickness Inches	Weight Pounds 36

# Mast Hoops and Jib Rings GALVANIZED WROUGHT STEEL



Fig. 849

MAST	HOOPS
	110013

JIB RINGS

Size Inches 14 x 2 14 x 3 14 x 3 14 x 4 Sizes and 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Per 100 \$12.00 16.00 16.00 22.00 26.50	Size Inches %6x1½ %16x2 %8x2 %x2 %x2 %x3	Per 100 \$16.50 21.00 23.00 23.00 28.50 35.00	Size Inches 38 x 3 ½ ½ x 3 ½ x 3 ½ ½ x 4 ½ x 5 ½ x 6	Per 100 \$39.00 58.00 60.00 77.00 85.00 91.00
	- AL - I				

Sizes are thickness of metal and inside diameter.

# Masthead Sheaves

LAMINATED PLASTIC LIGHTWEIGHT-STRONG-DEEP SCORE



Fig. 919

Weight at the peak of the mast is a very important factor. These sheaves were designed accordingly, light but very strong.

No.	Each	Diam. Inches	For Diam. Rope Inches	Thick- ness Inches	Diam. Bearing Inches	Weight Ounces
23	\$ .45	1 1/8	1/4	3/8	1/4	1/2
24	.50	1 1/4	1/4	3/8	3/16	1/2
25	.50	1 3/4	5/16	7/16	1/4	3/4

# Masthead Sheaves

FOR MANILA ROPE CAST BRONZE-PLAIN BEARING



Fig. 892

Diam. Inches 1 3/4 2 2 1/4	Each \$ .85 .95 1.30	For Diam. Rope Inches 5/16 5/16 3/8	Thickness Inches 3/8 7/16 1/2	Diam. Bearing Inches	Weight Ounces 2 ½ 3 ½ 5 ½
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# Bronze Wire Rope Sockets

CAST BRONZE

Eliminating the necessity of splicing wire rigging, especially the difficult splicing of stainless steel. While lead is commonly used when socketing the wire, we recommend the use of zinc.

CLOSED TYPE



Fig. 756

OPEN TYPE
Name of the last o
SIP

Fig. 757

	Plain	Diam.	TEFEJAL						Fig. 757				
No. 00 0 1 2 3 4 5	Bronze Each \$ .65 .65 .80 1.00 1.40 1.60	Wire Inches 1/16 3/22 1/4 3/16 1/4 5/16 3/8	Width Inside Inches % % % % % % % % % % % % % % % % % % %	Length Overall Inches 1 % 1 % 2 % 2 % 3 3 %	Weight Ounces	No. 9 10 11 12 13 14	Plain Bronze Each \$1.00 1.00 1.20 1.40 1.65 2.75	Diam. Wire Inches 1/16 3/32 1/6 3/16 1/4 5/16 3/4	Jaw Opening Inches ¼ ¼ ¼ % %	Diam. Pin Inches 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	Length Overall Inches 1 3/4 1 3/4 2 3/4 2 3/4 3 3/4	Weight Ounces I I I 2½ 3½ 5	



# Bronze Eye Bands

CAST BRONZE-4 EYE



Fig. 253

Inside Diam. Inches	Plain Bronze Each	Width Inches	Diam. Holes Inches	Weight Pounds
1 ½ 1 ¾ 2	\$2.35 2.40 2.50	% % %	1/4 5/16 5/18	½ % % ¾
21/4	2.75 2.90	% %	% %	1%

## Galvanized Eye Bands

FORGED STEEL-HOT GALVANIZED



Fig. 426

All sizes have bands  $1\frac{1}{4}$ " wide, all eyes are of  $\frac{3}{8}$ " stock with  $\frac{11}{10}$ " inside diameter.

Inside Diam. Inches	1 Eye Each	2 Eye Each	3 Eye Each	4 Eye Each
11/4	\$1.95	\$2.30	\$2.65	\$3.00
1 1/2	2.00	2.40	2.75	3.10
134	2.30	2.65	3.00	3.40
2	2.40	2.75	3.10	3.50
21/4	2.55	2.85	3.20	3.55
21/2	2.65	3.00	3.40	3.75
3	2.85	3.20	3.55	3.90
31/2	3.55	3.90	4.25	4.65
4	3.90	4.25	4.65	5.00
4 1/2	4.25	4.65	5.00	5.40
5	4.65	5.00	5.40	5.75
6	6.40	6.80	7.20	7.60

Special sizes made to order, price on application.

## Belaying Pins

GALVANIZED MALLEABLE IRON OR BRONZE



Fig. 366

Diam. Shank Inches	Galv. Each	Polished Bronze Each	Length Head Inches	Extreme Length Inches	Weight Each Pounds
₹6	\$ .95	\$3.30	3	8	3/8
1/2	1.50	4.15	3 %	9 1/2	34
5%	1.80	5.50	3 %	1014	1
*4	2.20	7.15	414	- 11	134

### Wind Pennants

ADJUSTABLE COUNTERBALANCE

ALUMINUM PENNANT-BRASS STANDARD

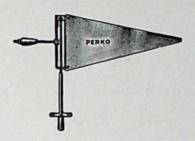


Fig. 435

Pennant swings on a needle point pivot and has an adjustable counterbalance should the weight of the pennant change from the application of paint or attachments of any kind.

Perfect balance and needle point bearing makes this pennant instantly responsive to the lightest of winds.

#### Furnished in Painted Finish, Red or Blue

For Mast 1 Inch Diam. at Top, 36" Hole

No.	Each	Size of Pennant Inches	Height Overall Inches	Weight Ounces
1	\$3.90	6½x3	61/2	21/2
2	4.40	91/2×41/2	7%	4

# Improved Wind Pennants

ADJUSTABLE COUNTERBALANCE

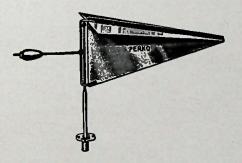


Fig. 837

This is the same as our popular Fig. 435 wind pennant improved by the addition of a horizontal vane attached to the regular vertical vane permitting a more distinct view when directly below the pennant. The horizontal vane is detachable if not required.

#### Furnished in painted finish, either red or blue.

No.	Complete Each	Size of Pennant Inches	Height Overall Inches	Weight Ounces	
5	\$4.75	6½x3	61/2	3	
6	5.25	914-414	73/.	5	



### EXTRACTS FROM LATEST REGULATIONS ON LIGHTING OF BRIDGES

"Aids To Navigation" C.G.-208, January 1, 1953

#### SUBPART 68.01—BASIC PROVISIONS

- § 68.01—1 General requirement. All persons owning, occupying, or operating bridges over the navigable waters of the United States shall maintain at their own expense such lights required for the safety of marine navigation as may be prescribed by the Commandant, and, on bridges constructed between March 23, 1906, and August 2, 1946, or any international bridge constructed after March 23, 1906, such additional signals as may be prescribed by the Commandant.
- § 68.01—5 Penalty for failure to maintain. Any such person required to maintain lights upon any bridge or abutments over or in the navigable waters of the United States who shall fail or refuse to maintain such light or lights, or to obey any of the lawful rules and regulations relating to the same, shall be deemed guilty of a misdemeanor and shall be subject to a fine not exceeding the sum of \$100 for each offense. Each day during which such violations shall continue shall be considered as a new offense. (Sec. 1, 63 Stat. 501; 14 U.S. C. 85.)
- § 68.01—10 Interference or obstruction prohibited. No person shall obstruct or interfere with any lights or signals maintained in accordance with the regulations prescribed in this part. (Sec. 1, 63 Stat. 500; 14 U. S. C. 84.)
- § 68.01—15 **Penalty for interference or obstruction.** Any person violating the provisions of § 68.01—10 of this chapter shall be deemed guilty of a misdemeanor and be subject to a fine not exceeding \$500 for each offense. Each day during which such violation shall continue shall be considered a new offense. (Sec. 1, 63 Stat. 500; 14 U. S. C. 84.)

#### SUBPART 68.10—GENERAL CONDITIONS

- § 68.10—1 Signals pertaining to the operation of bridges. Lights and signals necessary for the execution of rules and regulations pertaining to the operation of bridges issued by the Secretary of the Army will be prescribed by the District Engineer.
  - § 68.10—5 Lighting during bridge construction.
- (a) While a bridge is under construction the District Engineer having jurisdiction over the work will prescribe the lights and other signals to be displayed for the protection of navigation.
- (b) When unusual conditions exist the District Engineer will confer with the District Commander to determine the lights and signals necessary for the protection of navigation.
- (c) When the construction of a bridge is completed the lights and other signals approved by the District Commander shall be displayed.
- § 68.10—10 Lighting for the protection of aerial navigation. The owner of a bridge which constitutes a hazard to aerial navigation should maintain, in addition to the lights prescribed in this part, such lights as may be prescribed by the Administrator of Civil Aeronautics.
- § 68.10—15 *Inspection*. Lights and signals maintained as required by the provisions of this chapter are subject to inspection at any time by the Coast Guard or such agent as may be appointed by the Commandant.
  - § 68.10—20 Periods of operation.
- (a) Lights shall be displayed from sunset to sunrise and at other times when the visibility is less than one mile.
- (b) Operators shall not be required to exhibit the prescribed lights during seasons when vessels are unable to navigate in the vicinity of the bridge.
- § 68.10—25 Visibility of lights. All lights required by the regulations in this part shall be securely attached to the structure, and shall be of sufficient intensity to be visible against the background lighting for a distance of 2,000 yards on a dark night under the prevailing conditions of atmosphere. They shall be located as prescribed by the Commandant, with colors and arcs of visibility as specified.

#### SUBPART 68.15-MARKING REQUIREMENTS

#### § 68.15—1 Lights on fixed bridges.

- (a) Each fixed bridge span over a navigable channel shall be lighted so that the center of the navigable channel under each span will be marked by a range of two green lights, and each margin of each navigable channel will be marked by a red light: Provided, That when a margin of a channel is limited by a pier, only those lights prescribed in paragraph (b) of this section shall be required to mark such channel margin. The green lights shall each show through a horizontal arc of 360°; they shall be securely mounted just below the outermost edge of the bridge span structure so as to be visible from an approaching vessel. Each red light shall show through a horizontal arc of 180°, and shall be securely mounted just below the outermost edge of the bridge span structure to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 68, 80, 125, 126, 1005, 1006, 1010, 1011.)
- (b) **Pier lights.** When the navigable channel extends from pier to pier or when piers are located within the navigable channel, each end of such piers shall be lighted with a red light. Each such light shall show through a horizontal arc of 180°, and shall be securely fastened at the end of the pier as low as practicable but not lower than 2 feet above navigable high water to show 90° on either side of line parallel to the axis of the channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)
- (c) Main channel. When necessary, the District Commander may prescribe that fixed bridges having two or more spans over a navigable channel shall have the main channel span marked with a set of three white lights arranged in a vertical line directly above each green light on the main channel span. Each white light shall show through a horizontal arc of 180°, and shall be mounted so that ½ of the horizontal arc will show on either side of a line parallel to the axis of the channel. These three white lights shall be securely mounted on the bridge structure and spaced as nearly 15 feet apart as the structure of the bridge will permit, with a minimum spacing of 7 feet. The lowest white light in the line of three lights shall be placed not less than 10 nor more than 15 feet above each green light on the main channel span. (See Figs. 29, 31, 59, 125, 1005, 1010, with clear lens.)

#### § 68.15—5 Lights on swing bridges.

- (a) Swing span lights on through bridges. Each swing span of every through swing bridge shall be lighted with three lanterns so that when viewed from an approaching vessel the swing span when closed will display three red lights on top of the span structure, one at each end of the span on the same level and one at the center of the span no less than 10 feet above the other two lights, and when open for navigation will display three green lights on top of the span structure in a line parallel to and directly above the long axis of the span, one at each end of the span on the same level, and one at the center of the span no less than 10 feet above the other two lights. Each lantern shall show through alternate red and green horizontal arcs of 60° each, the axis of adjacent arcs to be 90° from each other; each light shall be securely mounted with the axis of the green arcs parallel to the long axis of the swing span. (See Figs. 35, 39, 50, 63, 1007.)
- (b) Swing span lights on deck and half-through bridges. Each swing span of every deck, half-through, girder, or similar type swing bridge shall be lighted with four lanterns so that when viewed from an approaching vessel the swing span when closed will display one red light at each end, and when open to navigation will display two green lights from each end. Each lantern shall show through one red and two green horizontal arcs of 60° each, the axis of each green arc to be 90° from the axis of the red arc; each light shall be securely mounted at the floor level of the span as near to the side of the span as practicable with the axis of the red light normal to the long axis of the swing span and so that the red light will be visible from an approaching vessel when the span is closed. (See Figs. 35, 39, 50, 63, 1007, with one red lens shielded.)



- (c) Pier lights. Every swing bridge shall be lighted so that each end of the piers adjacent to the navigable channel (draw piers) or each end of their protection piers (draw pier protection piers) and each end of the piers protecting the pivot pier (pivot protection pier) will be marked by a red light. Each of these lights shall show through a horizontal arc of 180° and shall be mounted as low as practicable below the floor level of the swing span to show 90° on either side of a line parallel to the axis of the channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)
- (d) Axis lights. Every swing bridge shall be lighted so that the intersection of the bridge axis with each side of the pivot pier and the channel side of each draw pier which has a protection pier will be marked by a red light: Provided, That if the draw and draw protection piers are straight along their channel faces these lights shall not be required. Each such light shall show through a horizontal arc of 180°, and shall be mounted on the navigable channel face of the pier as low as practicable below the floor level of the swing span to show 90° either side of a line normal to the axis of the navigable channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)
- (e) Omission of lights. Where the permanent navigable channel passes on only one side of the pivot pier of any swing span, the District Commander may authorize the omission of lighting of the unused channel.

#### $\S$ 68.15—10 Lights on single-opening drawbridges.

- (a) Bridges in this class. Bridges of the folding, pontoon and similar type single opening drawbridges are included in this class.
- (b) **Draw span lights.** Each draw span of every single opening drawbridge shall be lighted with two lanterns so that when viewed from an approaching vessel the draw span when closed will display two red lights, one at each end of the span and when open to navigation will display two green lights, one at each end of the span. Each lantern shall show alternate red and green horizontal arcs of 60° each, the axis of adjacent arcs to be located 90° from each other; each lantern shall be securely mounted 15 feet above the roadway with the axis of the green arcs parallel to the long axis of the swing span. (See Figs. 35, 39, 50, 63, 1007.)
- (c) **Pier or abutment lights.** Every swing bridge shall be lighted so that the end of each pier, abutment or fixed portion of the bridge adjacent to the navigable channel through the draw or each end of the protection piers for such piers, abutments, or fixed portions of the bridge will be marked by a red light. Each red light shall show through an arc of 180°, and shall be securely mounted on the pier, abutment or fixed portion of the bridge as low as practicable to show 90° on either side of a line normal to the axis of the channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)

#### § 68.15—15 Lights on bascule bridges.

- (a) Lift span lights. Each lift span of every bascule bridge shall be lighted so that the free end of the span will be marked on each side by a green light which shows only when the span is fully open for the passage of a vessel and by a red light which shows for all other positions of the lift span. Each red and each green light shall show through a horizontal arc of not less than 60° nor more than 180°. The lighting apparatus shall be securely mounted to the side of the span so that the lights will show equally on either side of a line parallel to the axis of the channel, and so that they will be visible from an approaching vessel. (See Figs. 22, 127, 1012.)
- (b) Multiple parallel lift span lights. The outermost side of each outer span of every bascule bridge with parallel multiple lifts shall be lighted as prescribed in paragraph (a) of this section; the lights shall be controlled so that the green lights will be displayed only when all spans are open for navigation. The inner sides of each outer lift span and both sides of each inner lift span of such bascule bridge shall be lighted by red lights for all positions of the lift span. These lights shall have the same arcs of illumination and shall be mounted as described in paragraph (a) of this section. (See Figs. 22, 127, 1012.)
  - (c) Pier lights. Every bascule bridge shall be lighted so that each end of every pier, or pro-

tection pier where provided, in or adjacent to the navigable channels under the lift span or spans will be marked by a red light. Each such red light shall show through a horizontal arc of 180°, and shall be securely mounted as low as practicable on the end of the pier, or protection pier, to show 90° either side of a line parallel to the axis of the navigable channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)

(d) Axis lights. Every bascule bridge which has at least one pier provided with a protection pier shall be lighted so that the intersection of the long axis of the lift span with the channel side of each pier, or protection pier, will be marked by a red light: Provided, That if all such piers and protection piers are straight along their channel faces these lights shall not be required. Each such red light shall show through a horizontal arc of 180° and shall be securely mounted on the navigable channel face of the pier as low as practicable to show 90° on either side of a line normal to the axis of the navigable channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)

#### § 68.15—20 Lights on vertical lift bridges.

- (a) Lift span lights. The vertical lift span of every vertical lift bridge shall be lighted so that the center of the navigable channel under the span will be marked by a range of two green lights when the vertical lift span is open for navigation, and by one red light on each side for all other positions of the lift span. The green lights shall each show through a horizontal arc of 360°; they shall be securely mounted just below the outermost edge of the bridge span structure so as to be visible from an approaching vessel. Each red light shall show through a horizontal arc of 180°, and shall be securely mounted just below the outermost edge of the lift span to show 90° on either side of the line parallel to the axis of the channel so that only one such light will be visible from an approaching vessel. (See Figs. 29, 31, 59, 68, 80, 125, 1005, 1006, 1010, 1011.)
- (b) Pier lights. Every vertical lift bridge shall be lighted so that each end of every pier in or adjacent to navigable channels under the lift span, or each end of every protection pier when provided, will be marked by a red light. Each such light shall show through a horizontal arc of 180°, and shall be securely mounted as low as practicable on the end of the pier, or the protection pier, to show 90° on either side of line parallel to the axis of the navigable channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)
- (c) Axis lights. Every lift bridge which has at least one pier provided with a protection pier shall be lighted so that the intersection of the lift span axis with the channel side of each pier adjacent to the navigable channel will be marked by a red light: Provided, That if every such pier, or protection pier, is straight along its channel face these lights shall not be required. Each such light shall show through a horizontal arc of 180°, and shall be securely mounted on the navigable channel face of the pier as low as practicable to show 90° on either side of a line normal to the axis of the navigable channel so as to be visible from an approaching vessel. (See Figs. 29, 31, 59, 125, 1005, 1010.)

#### SUBPART 68.20—SPECIAL CONDITIONS

- § 68.20—1 Bridges crossing channel obliquely. Bridges crossing a body of water at an angle other than 90° with the axis of the channel shall be lighted in accordance with the regulations in this part with such modifications as are necessary in each particular case.
- § 68.20—5 Lights on sheer booms. The lights on sheer booms, isolated piers, and obstructions not part of the bridge or bridge approach structure come under the purview of § 66.01—35 and shall show a white or green light if kept on the left of vessels approaching from seaward, and shall show a white or red light if kept on the right of vessels approaching from seaward. For rivers the same rule shall apply, white or green lights shall be shown from the right descending bank: white or red lights to be shown from the left descending bank. The color of the light and its characteristics (fixed, flashing, occulting, etc.) shall be determined by the District Commander. (See Figs. 68, 80, 126, 1006, 1011, with color of lens required.)
- § 68.20-10 Modification of requirements. The District Commander may modify or change the requirements for the display of lights and signals on any bridge within the purview of the regulations in this part when a change in local conditions warrant such modification.

THE PERSON NAMED IN COLUMN TO PERSON NAMED I	

r. V	D	Fig. No.	Page	Fig. No.	Page	Fig. No.	Page
Fig. No.	Page						132
0-1		68			173	220	132
0-4		70		141		221	132
0-6			112	143		223	131
0-8		74		144		224	7.1
0-9		75 76		145		227	64
0-40		77		147		228	
0-80		79		149		230	
0-90		80	34	150	143	231	55
3		81		151		232	141
4		83	11	154	170	234	168
5		84		155		235	168
9		85 86		157		237	76 🦪
11	13	87		160	143	238	
					123	240	
14		89 90		162		241	61
16		91		163		242	
18		93		165		244	
19		94		166		245	
21		95	173	168		246	
22	34	97		169 170-R		249	
				174		251	
25	59	102	175	177	81	252	181
26		103		178		253 254	
28		105		180		255	53
29 30		106		181	1 - 1	256 257	
31		107		182		258	82
32		109		184		259 260	1. 1.
34		111		187		261	57
35	32	112	11	188		262 263	
39		113		189	129	264	55
43	171	115	146	191	51	265	82
44		116		192	140	266 267	
46	27	118	146	194	173	269	57
49		120		196	173	270 272	
50		121		200		273	
52		122		201		274	
53	172	124	69	203	71	277	49
55		125		204		278	
56	172	126		206		280	173
58		128		207		282 283	
60		130		209		284	
61		131		211		285	
63	32	133	56		118	286 287	58
65		134		215	133	288	
66		137		217			146
67	86	138		218		291	
							THE RESERVE TO STATE OF THE PARTY.



Fig. No.	Page	Fig. No.	Page	Fig. No.	Page	Fig. No.	Page
292	58	362	12	433	61	509	96
293	58	363		434		510	
294		364		435		511	
295		365		436	7.3	512	
296	43	366	183	437	60	JIJ	96
297	63	367	94	440	62	514	
298		368		441		515	
299		369		442		516	52
300		370		443		517	
301	42	371	110	444	89	J10	52
302	55	372	65	445	169	519	
303	128, 181	373		446	130		139
304		374		447		521	
305			11	448			162
306	62	377	50	450	41	725	162
307	163	378	113	451	42	524	126
308	41	379	133	453	170		139
309			133	454			139
310			161	455		527	
311	158	382	161	456	71	528	139
312	40	383	50	457	71	529	63
	140	384		458		530	77
314	158	385	43	459	181	531	
315		386		460		532	
316	53	388	73	461	88	533	134
317	87	389	113	463	66	534	67
	169		160		120	537	
319		391			120	538	
320		392	160	466	159	539	
321	112	393	160	467	8 i	540	20
322	86	394	160	468	159	541	20
323		395			159	542	
324		396		470		544	
	140	397		471	140	544A	
326		398	161	472	49	545	127
227	112	399	50	473	81	546	123
327 328	111	400		474		547	
329		401		475		551	
330		402		476	99	553	101
331	108	403	21	477	48	554	
222	0.4	404	10	478	81	555	43
332		405		479		556	
334			120	480		557	
335		407		482		558	
336		408	29	483	125	559	142
		409	100	484	10	560	44
337	158	411	108	485	6	561	15
338	158	412		487		562	
340	54	413		488		563	
341		415		489		564	
		414	61	400	121	565	110
344	13/	416		490		565 566	
345	48	418		492		567	
348	140	419		493		568	
349	142	420		494	121	569	
		421	0.7				
350	110	421		496		570	
351	110	422		497		571	
352	110	424		499		572 573	
354	108	425			162		149
						J. T	(32
355	50	17 =	183		162		156
356	82	427		502		576	
357	82	428429		503	139		114
358	175	430		504			130
				505	14	579	174
360	129	431		506	10	581	142
361	129	432	177	508	98	582	143
						302	30

1	RKO	

36785						D	E' N	Page
Fig.	No.	Page	Fig. No.	Page	Fig. No.	Page	Fig. No.	0.0
583		. 122	655		727		796	
584		. 68	656		728		798	40 1
585		. 174	657	103	730		799	
586		. 174	658	164	731			179
588		. 20					001	176
589		. 114	660		732			176
590		. 144	661		734		803	
591	***************************************	. 174	663		735	58	804	77
592		175	664	107	736		805	140
					737	101	806	176
			665	134	738			176
			666		739			176
596	-A	. 13	668	135	740	80		117
597	A	125	669	138	741	125	810	105
			(70	120	742	75	8!1	112
598	***************************************	175	670	114	743		812	
599	***************************************	10	672	114	744		813	
601		136	673	114	745		814	129 105
602		. 136	674	102	746	50		
102		. 8	675	102	747	49		104
			676	102	748		7 1 2	136
			677	81	749			104
606		. 164	678		750			101
607		. 128	679	[1]				
608		125	680	165	752		821	
			681		753		822	
610		. 165	682		754			104
	***************************************		684		756		825	
612	•••••	. 104					004	120
			685		757		826	
			686		758		828-C	
			689	108	760		829-C	
			690-A	108	761		830	
					764	170	831	83
	***************************************		691-A		765		832	
			692		766		833	
			693		767		834	
			694	48	768	124	835	86
623		161	695	114	769	124	836	180
	***************************************		696		770		837	
			697		771		838	
			700-A		772			157
627	***************************************	. 114	700-B	100	773	124	840	107
			701	70	774		841	150
			702		775		842	
		5.5	703		776		845	
			705	1 7	778		847	
						SET STORY		
			706		779			109
			708		781		849 853	
		126	709	76	782		856	
640	••••••	5	710	9	783	9,7	858	
641	•	126	711	9	784	165	950	138
			713	130	785		859 860	138
			714		786	117	862	
			715		787		863	
					788	127	865	[1]
	***************************************		717		789		866	37
	***************************************		718		790		867	
649		105	720		791		869	177
650		105	721	76	792 793			164
651	***************************************	105	722	76				178
652		126	723	71	794 795	127	874	178
				The same of the sa		95	877	178



Fig. No.	Page	Fig. No.	Page	Fig. No.	Page	Fig. No.	Page
	178		151	1046		1121	
882 885		958		1047		1122	
886	178		148	1051		1139	
887	178	961		1052		1140	
888	180	964	46	1053	151	1140-A	5
890		965		1054		1141	
891		968		1055		1142	
892 893	182	969		1056		1143	
		7/0		1057			
	179	971		1058		1145	
895	147	973		1059		1146	
897		974		1061		1148	
898	147	975	46	1062	98	1150	22
899	177	976	103	1063	151	1151	22
900	147	978		1064		1152	22
901	147	979	152	1065		1153	
902	147	981		1066	1 7 7	1154	
904	108	982		1068	169	1156	
906	112	984	155	1070		1158	
907	147	985			106	1159	
908	98	986	24	1072	106	1163	21
909		988		1073		1164	
	103		144	1074		1165	
	180	991	137	1076		1167	
917		992	137	1077		1168	
918	163	993	46	1078	44	1169	26
919	182	994	155	1079		1170	
920	163	995		1080		1174	
921	163	996	146	1081		1175	163
923	163	998	146	1083		1178	
924	156	1001	28	1085		1180	
926	125	1002	28	1086	44	1210-A	38
927	123	1003	28	1087	44	1210-B	38
928	153	1004		1088		1211	
929	155	1005	31	1089		1212-A	
930		1006	32	1090		1212-B	
932		1008	28	1092		1214	
933	166	1009	142	1097	118	1215	30
934	177	1010	31	1100	132	1216	39
935	177	1011		1101		1217	39
936	177	1012		1102		1218	
938	166	1014		1104		1252	
939	68	1016		1106		1257	
941	166	1017	131	1107	154	1260	45
942	117	1018	70	1108	149	1262	45
943	117	1019			152	1263	45
945	148	1020		1111		1264	45
946	107	1021			180	1265	
948	149	1028		1113		1267	
949		1030	179	1114	. 170		
950	150	1039		1115			
051	153	- 1040		1116			
952	153	1041		1117			
					145		
955	152	1043		1119			
956	131	1044	[33	1120	145		



A	Page	Page
	Blinker —	Bullet Blocks177
	Signal Keys	Bumper Wheels138
Page	Signal Lights	Buoy Holders, Ring131
Adapters, Electric 49, 50, 58, 59	Blocks —	Buoy Rods168
Adjustable —	Bullet177	Buoys —
Flag Pole Light 8	Centerboard178	Mooring169 Pickup168
Struts	Cheek173	Burners —
Hose Clamps119 Outrigger Pole Holders132	Deck172, 173 Fast Eye171	For Alcohol Stoves 94
Adjusters —	Jib Halyard177	Oil 55
Casement157	Lightweight176, 177	Butt Hinges153
Hatch157	Loose Hook172	Buttons — 149
Windshield135, 157	On Plates172	Watertight Push
Burners 94	On Slides177 Swivel Eye171, 177	Wateragne Fusi
Stove Parts 94	Yacht176, 177	•
Stoves90, 91	Blower & Ignition Switches 94	
Aligners, Engine118	Blowers 95	
Anchor Chocks166	Boarding Ladders136	Cabin —
Anchor Light 9 13 14 22 to 29	Boat —	Door Hooks
Anchor Lights9, 13, 14, 22 to 29 Anchor Shackles158	Bailers	Heaters 94
Anchors —	Cover Sockets 130	Lamps, Oil 40
Danforth168	Drainers 69	Windows 88
Fishing167	Hook Holders131	Cabinet Hinges154
Grapnel167	Hooks131	Cabinet Latches151
Navy Type167 Non-Fouling Kedge167	Hooks with Pole131	Cable — Outlets
Northill167	Scrapers	Straps
Arresters, Flame120	Bob Stay Straps181	Cans, Oil118
Ash Trays 68	Bolt Eyes170	Caps, Gas Tank139
Awning Cleats123	Bolts —	Casement Adjusters157
Axe Brackets140	Barrel	Casing —
	Cupboard150	Bowden
	Flush	Catches —
В	For Steering Wheels101	Cupboard150
	Ring162	Elbow149
	Ship151	Flush Ring150
Bags, Ditty 27	Square Neck151	Friction149
Bailers, Boat 73	Toggle170	Caulking Irons
Ball — Bearings117	Window	Chain —
Joints111	Boom —	Plates181
Balls, Signal 27	Fittings180	Portlight 89
Bands, Eye183	Travelers180	Roller102
Barge Lights 28	Bottled Gas Stoves92, 93	Shackles
Basin S	Bottled Gas Stove Equip92, 93 Bow —	Chair —
Battery —	Chocks123, 124	Fishing142
Containers130	Eyes128	Folding Helmsman's142
Lights	Lifting Handles129	Channel, Glass Run Window 88
Switches 51	Lights14, 15, 17, 18, 19	Chart Cases 65
Bearings —	Plates128	Check Valve
Babbitt115, 117 Flat117	Rings128 Bowden	Chimneys 55
Goodrich rubber116	Wire & Casing110	Chocks —
Intermediate117	Wire Clamps110	Anchor166
Shaft117	Bowl, Toilet 85	Bow123, 124
Stern112	Boxes —	Bulwark Bow124
Thrust Ball117 Belaying Pins183	Stuffing105, 112, 113, 114	Bulwark Stern124 Skene Bow123
Bells —	Watertight Connection 45 Watertight Fuse 45	Skene Stern123
Fog143	Watertight Junction 47	Straight Stern123
Smoke 40	Braces, Rudder106	Choke Controls110
Bilge Pump —	Bracket, Steerers102	Clam Shell Ventilators 99
Parts	Brackets —	Clamps —
Switches	Axe140	Bowden Casing110 Hose114, 119
Brass70, 71, 72, 73	Light 59 Mounting 59	Spring131
Electric74, 75, 76	Windshield134	Tiller Rope159
Binnacles 67	Breakdown Lights21 to 26	Cleaners, Windshield134
Bitts —	Bridge Lights30 to 35	Cleats —
Mooring	Bulbs, Electric 54	Automatic Jam

Page	C			Page	L	
Page				46		
Dayle   Jam				141		
Double   main   main		Page				
Double   Jam	Boat					149
Fender   125	Double lam	179	Course Protractors	05		
Flag Pole	Fender	122	Cowl Ventilators	96, 97		
Hollow   128	Flag Pole	122				
Roller   James   179	Hollow	122				
Ship   123	Roller Iam	179		153		
Shurdy   122   Catches   150   Door Holders   152   Coulets   Support   Start   Support   Support			Cupboard —			
Claw Outhauls	Sturdy	122	Bolts	150		
Clips	Clew Outhauls	180				
Line Support   51   Wire Rope   159   Curtain			Door Holders	152		
Section	Line Support	51	lurns	150		
Fasteners	Wire Rope	159		118		
Bowls					Sockets	48, 49, 50
Parts		85			Switches	46, 47, 53
Seats					Water Faucets	80
Closets   Boat					Water System Pump	75
Clutch Control Handles			Cutters, Grommet Hole	147	Electrolysis Eliminator	s115
D	Clasels, Doat	107			Ends, Moulding	141
Coaning Pulleys	Clubel Controls	107			Engine Aligners	118
Coat & Hat Hooks	Consider Pullant	175	D		Engine Saver	121
Cocki, Sea	Coaming ruleys	155		1	Exhaust —	
Cocks   Sea	Coat & Hat Hooks	120				
Collectors, Safety Drip   120	Cockpit Ladders	130	Danforth Anchors	168	Pipe Flanges	118
Rudder	Cocks, Sea	00	Dart Shanks	140	Tube Flanges	118
Dashboard   Dashboard   Dashboard   Collectors, Safety Drip   120   Choke Controls   110   Lamps   42   Lamps   42   Colors, Light   35   Steerers   100   Combination   Lights   5, 6, 14, 16   Day Signals   27   Day Signals   28   Day Signals   28   Day Signals   29   Day Signals   28   Day Signals   29   Day Sign	Collars —				Eye —	
Collectors, Safety Drip   120					Bands	183
Colors   Light   Siraps   178   Combination   Lights   Siraps   178   Siraps   178   Combination   Lights   Siraps   Siraps   178   Combination   Lights   Siraps   Siraps   178   Electric   Siraps   Siraps   178   Electric   Siraps   Siraps   Siraps   178   Electric   Siraps   Si	Shalt	117		110	Bolts	162
Combination Lights	Collectors, Safety Drip	120	Choke Controls	110	Nuts	170
Combination Lights	Color Shield	59			Straps	178
Combination	Colors, Light	35				
Combination		14, 16	Day Signals	27	Bolt	170
Blinker & Loading Light		00			Bow	128
Blinker & Loading Light				172, 173	Flange	178
Flag Pole & Light						
Dight & Rope   Deck   Pipes   125   Pipes   Rope   Rope						
Bitt & Rope   Deck   Fipes   123   Companionway Ladder   138   Compasses   66, 67   Straps   128, 178   Fairleaders, Thru-Deck   179   Connecting Links   165   Dies, Grommet   147   Fast Eye   Fast Eye   Fast Eye   Tonnections   50   Distress Lights   21, 27   Snaps   164   Connections   50   Ditty Bags   27   Snap Shackles   178   Tonnections   50   Dividers   65   Inlet   86   Dock Line Spring   124   Courtain   146   Counted   147   Control   148   Connectors   50   Containers   50   Cont					F	
Compasses   66, 67	Bitt & Rope Deck Pipes	125	Plate Keys	139		
Compasses   10, 67	Companionway Ladder	138			Fairlanders Thru-Dack	170
Connection Links   165	Compasses	66, 67				
Connection Boxes   45	Compass Lights	65				
Connection   Soxes   45	Connecting Links	165			Rlocks	171
Dity Bags   27	Connection Boxes	45	Distress Lights	21, 27		
Electric   Sto	Connections -		Ditty Bags	27		
Content	Electric	50				
Outlet	Inlet	86				146
Thru-Hull	Outlet	86	•			
Watertight	Thru-Hull	86	Docking Wheels	138	"D	147
Connectors	Watertight	46, 48	the state of the s		Durable Dot	146
Containers	Connectors -			56	Defeione Dot	121
Door	Flectric	50	Lights	42. 43		
Description	Ship to Shore	50			T-L1 1	154
Sattery			Door	140	l able Leg	154
Continuous Hinge	Rattery	130				80
Continuous Hinge	Oil	118				100
Control         109         Hooks         151         Moulding         141           Cranks         107         Latches, Sliding         149         Fids, Hand         158           Handles, Clutch         108         Levers         108         File Scrapers         140           Levers         108         Drain Plugs         69         File Scrapers         158           Rod Sockets         111         Drainers, Automatic Boat         69         File Scrapers         158           Wire Handles         110         Drains, Automatic Boat         69         File Scrapers         158           Controls         Draw Bridge Lights         32         Finishing Plates         120           Water         121         Water         121           Controls         10         Nobs         156         Finishing Plates         181           Finishing Rings         89         Finishing Rings         89           Knobs         156         Fishing Anchors         167           Remote         110         Drip Collectors, Safety         120         Fishing Chair         141           Reverse Gear         106, 107         Drip Moulding         140         Fittings         Boom         <	Continuous Hinge	141				
Cranks         109         Latches, Sliding         149         Fids, Hand         158           Handles, Clutch         108         Stops         152         Figures, Bronze         140           Levers         111         Drain Plugs         69         File Scrapers         158           Rod Sockets         111         Drainers, Automatic Boat         69         Filters         —           Wire Handles         110         Drains, Automatic Boat         69         Gasoline         120           Wire Sockets         111         Draw Bridge Lights         32         Finishing Plates         181           Controls         107         Knobs         156         Fins, Racing         181           Dashboard Choke         110         Nobs         156         Fins, Racing         129           Remote         110         Drip Collectors, Safety         120         Fishing Anchors         167           Reverse Gear         106, 107         Drip Moulding         140         Fittings         140           Safety         110         Drop Handles         156         Boom         18           Spark and Throttle         108, 109, 110         "Durable Dot" Fasteners         147         Whisker Pole	Cambrial		Holders	134		
Handles, Clutch	Cranks	109	Hooks	151	Moulding	141
Levers	Handles Clutch	107			Fids, Hand	158
Parts	Tanues, Clutch	108	Stops	152	Figures, Bronze	140
Rod Sockets         111         Drainers, Automatic Boat         69         Gasoline         120           Wire Handles         110         Drains, Automatic Boat         69         Water         121           Controls         107         Draw Bridge Lights         32         Finishing Plates         181           Clutch         107         Drawer         Finishing Rings         89           Knobs         156         Finishing Rings         89           Knobs         156         Fishing Anchors         167           Remote         110         Drip Collectors, Safety         120         Fishing Chair         141           Reverse Gear         106, 107         Drip Moulding         140         Fittings         18           Safety         110         Drop Handles         156         Boom         18           Spark and Throttle         108, 109, 110         "Durable Dot" Fasteners         147         Whisker Pole         18	Desta	111	Drain Plugs	69	File Scrapers	158
Wire Handles       110       Drains, Automatic Boat       69       Water       121         Controls       —       107       Draw Bridge Lights       32       Finishing Plates       181         Clutch       107       Knobs       156       Finishing Rings       89         Dashboard Choke       110       Knobs       156       Fins, Racing       122         Recing       110       Drills       156       Fins, Racing       129         Remote       110       Drip Collectors, Safety       120       Fishing Anchors       167         Reverse Gear       106, 107       Drip Moulding       140       Fittings       140         Safety       110       Drop Handles       156       Boom       18         Spark and Throttle       108, 109, 110       "Durable Dot" Fasteners       147       Whisker Pole       18	D-J Sockete	111	Drainers Automatic Boat	69	Filters —	
Wire Sockets         Draw Bridge Lights         32         Finishing Plates         181           Controls — Clutch         107         Drawer — Finishing Rings         89           Dashboard Choke         110         Knobs         156         Fins, Racing         125           Racing         110         Pulls         156         Fishing Anchors         167           Remote         110         Drip Collectors, Safety         120         Fishing Chair         147           Reverse Gear         106, 107         Drip Moulding         140         Fittings         Boom         18           Safety         110         Drum Steerers         101         Swivel Eye         17           Throttle         108, 109, 110         "Durable Dot" Fasteners         147         Whisker Pole         18	W: Lindles	110			Gasoline	120.
Controls —         Institute of the property of the pr	Wire Flatioles	111				
Clutch			Draw Bridge Lights	32		
Dashboard Choke	Controls —	107	Drawer -			
Racing       110       Drip Collectors, Safety       120       Fishing Anteners         Remote       110       Drip Collectors, Safety       120       Fishing Chair       14         Reverse Gear       106, 107       Drip Moulding       140       Fittings       —         Safety       110       Drop Handles       156       Boom       18         Spark and Throttle       108, 109, 110       "Durable Dot" Fasteners       101       Swivel Eye       17         Throttle       108, 109, 110       "Durable Dot" Fasteners       147       Whisker Pole       18	Clutch	110		156		
Remote	Dashboard Choke	110				
Reverse Gear	Racing	110				
Safety 10 Drup Statistes 156 Boom 18 Spark and Throttle 108, 109, 110 Drum Steerers 101 Swivel Eye 17 Throttle 108, 109, 110 "Durable Dot" Fasteners 147 Whisker Pole 18	Remote	06 107				142
Spark and Throttle	Reverse Goar	110				
Spark and Throttle	Safaty	J I U			Doom	18
Throttle108, 109, 110 Durable Dot Fasteners147 Whisker Pole18	Snark and I hrottle	108			Swivel Lye	17
	Throttle108, 1	09, 110	Durable Dot Pasteners	147	Whisker Pole	18



Page	Page	Page
Fixtures	Globe Lights 21	For Ring Buoy131
Electric Cabin41, 42, 43	Globes55, 56	Glass 68
House36, 37	Goodrich Rubber Bearings116	Outrigger Pole132
Truck 12	Goosenecks180	Pot90, 91
Vapor-Proof 44	Grab Rail Posts133	Hollow Cleats122
Flag Pole —	Grab Rails133	Hooks —
Cleats122	Grapnels167	Boat131
Lights7, 8, 9	Grease Cups118	Boat, with Pole131 Cabin Door151
Sockets132	Dies147	Coat and Hat155
Flag Poles	Hole Cutters147	Fender131
Flange —	Hooks147	Galvanized165
Couplings113	Gudgeons, Rudder Brace106	Grommet147
Eyes178	Guides, Tiller Rope175	Ladder136, 138
Flanges —	Guns, Oil 73	Rope Ladder136
Exhaust Pipe118		"S"165
Exhaust Tube118		Safety Mooring164
Flap Hinges155		Screw165
Flexo-Shaft Bilge Pumps74, 75	Н	Snap
Floodlights62, 64	П	Wardrobe155 With Thimbles165
Flush Bolts151		Hoops, Mast182
Flush Drop Handles156 Flush Surface Hinges153		Horns —
Flush Hatch Lifting Handles156	Halyard Shackles178	Electric144, 145
Flush Hatch Lifting Rings156	Hand —	Fog143
Flush Pulls156	Fids158	Hose Clamps114, 119
Flush Ring Catch150	Lamps, Portable27	Hose, Rubber71, 114
Flush Ring Pulls150	Punches146, 147	House Fixtures36, 37
Flushing Nozzles113	Rail Sockets133 Screw Drivers146	Hull Connections 86
Fog Bells143	Searchlight	
Fog Horns143	Tool147	
Folding —	Windshield Cleaners134	
Cockpit Step136	Handles —	
Ladders136, 137 Steps136, 137	Drop156	
Stools142	For Control Wire110	Ice Box Ventilators 97
Foot Rope Plates181	For Steering Wheels	Ignition Switches52, 53
Foot Switch 80	Hatch129, 156	Ignition & Blower Switches 94
Founts, Oil58, 59	Lifting129, 156	Inlet —
Frames for Glass 89	Hasps — Hinged152	Connections 86
Fresnel —	Safety152	Strainers 86
Globes 56	Hatch —	Intermediate Bearings117
Lenses	Adjusters157	Invisible Hinges154
Funnels	Handles129	Irons — Caulking158
Fuse —	Hinges154	Water Deck 94
Boxes 45	Lifting Handle156	Water Deck
Panel 48	Lifting Rings156	
	Moulding141	J
	Support Hinges157	
	Trim	
G	Helmsman's Seat142	Jam Cleats179
	Hinged Hasps152	Jib —
	Hinges —	Halyard Blocks177
Galley -	Butt153	Sheet Leaders179
Pump81, 82	Butterfly154	Snaps164
Sinks 82	Cabinet154	Joints —
Gas —	Continuous141	Ball111
Stoves92, 93	Cuddy Door153	Universal113
Stove Equipment92, 93	Flap155	Junction Boxes45, 47
Tank Caps139 Tank Vents139	Flush Surface153 Hatch154	
Gasoline —	Hatch Support157	T
Filters120	Invisible154	K
Funnels121	Ladder155	A CONTRACTOR OF THE PARTY OF TH
Strainers120	Port153	
Gear Pumps77, 78	Rail133	
Glass Holders 68	Sash155	Kedge Anchors167
Glass Frames	Spring154	Keel Plates130
Glass Run Window Channel 88	Strap153	Keys —
Dome Light 56	Holders —	Blinker 21
Fresnel 57	Boat Hook	Deck Plate
	3007152	Knobs, Drawer156



	Mid-Channel 33	Mounting Brackets 59
	Not-Under Command22 to 26	Mounting Sockets 59
Page	Obstruction	
Lacing Eyes161	Overtaken22 to 26 Pier30 to 35	N
Ladder —	Pole	
Cockpit	Range22 to 28	
Folding136, 137	Sail Boat Side 13	Name Plates, Switch 52
Hinges155	Side14 to 19, 22 to 28	Navy —
Hooks136, 138	Signal20, 21	Anchors
Locks138	Span32, 33, 34	Lanterns 27
Ladders —	Sport Kit 6 Spreader 62	Northill Anchors167
Boarding136	Staff	Not-Under-Command
Swimming137	Stern7 to 11, 22 to 28	Lights22 to 26
Cabin 40	Streamline5, 15	Nozzles, Flushing113
Dashboard 42	Ten Day Anchor 13	Nut Eye Bolts162
Table37, 38, 39	Thirty Day Anchor 29	Nut Ring Bolts162
Wall 40	Towing20, 22 to 26	Nuts — Eye170
Lanterns —	Trawler 29	Lock112
Bulkhead 27	Trouble	Packing112
Navy or Life Boat 27	Yardarm 12	Wing170
Western Trap 29	Line Support Clips 51	
Lap Links165	Lines, Lead	
Cabinet151	Links —	0
Sliding Door149	Connecting165	
Lavatory Pumps81, 82	Lap165	
Lavatories —	Swing165	Oar —
China 83	Lip Leaders179	Leathers127
Lucite 83	Locknuts112	Locks126, 127 Sleeve, "Sav-or"127
Steel 82	Ladder138	
Lead, Lines 68	Mortise148	Tips127
Leaders —	Rail133	Obstruction Lights
Anchor Lift125 Jib Sheet179	Rim148	Compasses66, 67
Lip179	Tubular149	Containers118
Leads, Sounding 68	Log Books 65	Founts58, 59
Leathers, Oar127	Logs, Shaft114	Guns 73
Lenses —	Loose Hook Blocks172	Strainers120
Fresnel 57	Lucite —	Oilers, Zinc118
Searchlight 64	Lavatories 83	Outboard Motor Transom Plates 129
Letters, Bronze140	Parallel Rules 65	Outboard Steerers101
Levers, Control108		Outhaul —
Life Boat Lantern 27	M	Cheek Blocks178 Clew180
Lift Bridge Lights	IAT	Outlet Connections 86
"Lift the Dot" Fasteners146 Lifting Handles129, 156		Outlets —
Lifting Rings130, 156	Manila Rope Thimbles159	Cable 48
Lifts, Sash157	Marline Spikes158	Convenience 46
Lighting Switches 53	Mast Hoops182	Electric 46
Lights —	Mast, Streamlined 68	Water 86
Anchor	Mast, Lights11, 12, 21	Outrigger Pole Sockets132
Battery	Masthead — Lights22 to 28	Overtaken Lights22 to 26
Blinker 21		
Bow14, 15, 17, 18, 19	Sheaves	
Breakdown	Meal & Absent Lights 12	P
Combination5, 6, 14, 16	Mid-Channel Lights 33	
Combination Light	Mogul Sockets 48	
& Searchlight 61	Mooring —	Packing Nuts112
Compass 65	Bitts125	Paddle Tips127
Deck 87	Buoys169	Pads, Step135
Distress or Globe 21	Hook, Safety164	Paint Scrapers158
Dome42, 43	Mortise Locks148	Palms, Sewing140
Eight Day Western Trap 29	Motor Boat Regulations 4 Moulding —	Panels —
Flag Pole	Couplings141	Switch 52
Globe	Drip140	Fuse 48
Lift Bridge 34	Ends141	Parallel Rules 65
Loading 21	Fender141	Parts —
Mast11, 12, 21	Hatch141	Bilge Pump7
Masthead	Rub Rail140	Control11
Meal & Absent 12	Rubber140, 141	Gear Pump 7
		Stove



Protractors, Course	Page		Daning Polms 140
Toilet	Steerer101, 111		
Pennants, Wind	Toilet 85		Pul Pail Moulding 140
Planck   Hinge   148	Pennants, Wind187	Bilge70 to 73	
Fire   Description   Section   Sec	Piano Hinge141	Crank Case	
Fig. 1	Pick Up Buoys168	Electric blige	
Belaying	Pier Lights30 to 35	riexo-snart	
District		Calley	-lose 71 114
Pintles   Rudder Brace   106		Cear	
Pipe		Name 70	
Flanges	Pintles, Rudder Brace106	Navy	
Tumbuckles   161   Water, Electric   74, 75, 76   Braces   105   Pipes, Rope Deck   125   Plastic   72   Pole Light   8   Shades   42   42   Bow   128   Chain   181   Deck   99, 139   Pinishing   181   Foot Rope   181   Foot Rop		D-+-9 77	
Pipes, Rope   Deck   125		Water Floring 74 75 76	
Plastic	l'umbuckles161	Water, Electric	
Pole Light	Pipes, Rope Deck125		
Shades		Commet Hele 147	
Plates		Hand 146 147	
Plates —   Bow   128		Trand	
Bow			
Chain		0	
Deck   99,139   Finishing   181   R		~	
Finishing		Quadrants Tiller 105	Nust Treventer
Foot Rope		Quadrants, riner	
See		D	
Seepage		N.	S
Switch Name   52			
Transom		D:	
Plus		Controls 110	ucu II I
Drain   69   Electric   50   Waterright   45,46,47   Fittings   133   Safety Mooring Hooks   164   Fittings   133   Sail Boat Blocks   176 to 178   Sail value   179			
Electric	Drain		Salety Controls110
Watertight			Salety Hasps
Plungers, Pump	Watertight AS AS AS		
Pole Holders, Doat Holok	Plungers Pump 76		
Pole Holders, Boat Hook	Pole Fittings Whicker 190		
Pole Holders, Outrigger   132   Receptacles, Watertight   4.5, 4.6, 47   Pole Lights   7, 8, 9, 10, 12   Refectors, Searchlight   64   Anti-Rattlers   157   Poles, Flag   7, 8, 9   Refrigerator Fasteners   151   Fasteners   151   Fasteners   157   Port Hinges   153   Regulations for Motor Boats   4   Relays   145   Hinges   155   Easteners   157   Remote Controls   106, 107   Say-Or*, Oar Sleeves   127   Scoop Strainers   86   Say-Or*, Oar Sleeves   127   Scoop Strainers   86   Screens   89   Rigging Turnbuckles, Bronze   181   Boat   158   Boat   159   Boat   159   Boat   159   Boat   159   Boat   159   Boat   150   Boat   158   Boat   158   Boat   158   Boat   158   Boat   159   Boat   158   Boat   158   Boat   159   Bo	Pole Holders Boat Hook 131		
Pole   Lights   7, 8, 9, 10, 12   Reflectors, Searchlight   64   Poles, Flag   7, 8, 9   Refrigerator Fasteners   151   Fasteners   151   Fasteners   157	Pole Holders, Outrigger 132		
Pote Hings	Pole Lights 7 8 9 10 12		
Port Hinges	Poles. Flag 7 8 9		
Portable	Port Hinges		
Hand Lamp	Portable —		
Staff Light			
Portlight — Chains			
Chains			
Finishing Rings			
Frame	Finishing Rings 89		
Rubber	Frame		File 159
Screens			
Portlights			
Ports   Rudder   105	Portlights87, 88		
Posts —	Ports, Rudder105		
Orab   Californ   133	Posts —		Screens Portlight 89
Stanchion	Grab Rail133		
Protractors, Course	Stanchion133		
Protractors, Course	Pot Holders90, 91		
Pulleys —	Protractors, Course 65	Bow128	Hooks 165
Coaming         175         Finishing         89         Sea Cocks         86           Side         175         Jib         182         Sealed Beam Spotlight Unit         61           Swivel Eye.         174         Lifting         130         Seat, Helmsman's         142           Thru-Deck         175         Ventilator         99         Seaming Palms         140           Searchlight         Searchlight         Searchlight         140           Roller         Roller         Bulbs         54           Lenses         64         Lenses         64           Pulls         Jam Cleats         179         Reflectors         64           Rope         Clamps         159         Seats, Toilet         85           Flush         156         Clips         159         Shackles         9           Flush Ring         150         Deck Pipe         125         Anchor         158           Pump         Ladder Hooks         136         Bronze Block         176, 178           Ladders         137         Chain         158           Strainers         76         Sheaves         170         Halyard         178           Switches <td>Pulleys —</td> <td></td> <td></td>	Pulleys —		
Side	Coaming175		
Swive   Eye.	Side175		
Thru-Deck	Swivel Eye174		
Tiller Rope	Thru-Deck		Seaming Palms
Roller   Rope with Snap   174   Wire Rope   173   Chain   102   Lenses   64	Tiller Rope174, 175		
Wire Rope       173       Chain       102       Lenses       64         Pulls       Jam Cleats       179       Reflectors       64         Door       156       Rope       Searchlights       60 to 63         Flush       156       Clamps       159       Seats, Toilet       85         Flush Ring       150       Deck Pipe       125       Anchor       158         Pump       Ladder Hooks       136       Bronze Block       176, 178         Parts       71, 78       Ladders       137       Chain       158         Strainers       76       Sheaves       170       Halyard       178         Switches       74, 75       Tighteners       124       Swivel       178	Tiller Rope with Snap		Bulks 54
Dam Cleats   179   Reflectors   64	Wire Rope 173	Chain102	
Door	Pulls —		
Drawer	Door156		
Flush Ring	Drawer		Seats Toilet85
Flush Ring     150     Deck Pipe     125     Anchor     158       Pump —     Ladder Hooks     136     Bronze Block     176, 178       Parts     71, 78     Ladders     137     Chain     158       Plungers     76     Sheaves     170     Halyard     178       Strainers     76     Thimbles     159     Snap     178       Switches     74, 75     Tighteners     124     Swivel     178	Flush156		
Pump —     Ladder Hooks     136     Bronze Block     176, 178       Parts     71, 78     Ladders     137     Chain     158       Plungers     76     Sheaves     170     Halyard     178       Strainers     76     Thimbles     159     Snap     178       Switches     74, 75     Tighteners     124     Swivel     178	Flush Ring150		
Plungers	Pump —		Bronze Block
Plungers       76       Sheaves       170       Halyard       178         Strainers       76       Thimbles       159       Snap       178         Switches       74, 75       Tighteners       124       Swivel       178	Parts71, 78		
Strainers     76       Thimbles     159       Switches     74, 75       Tighteners     124       Swivel     178	Plungers 76		Halvard
178 Swivel	Strainers 76	Thimbles	Snap
Valves	Switches74 75	Tighteners 124	Swivel178
Juages to: Sault Juages	valves 76	Tiller 100	Shades for Cabin Fixtures 42

## **ALPHABETICAL INDEX**

Shades for Table Lamps	Page
	37
Shaft —	
Bearings	117
Collars	117
Couplings	112
Logs	
Shanks, Dart	140
Sheaves —	
Masthead	182
Rope	
Shields —	
Color	50
For Fixtures	42
	42
Ship —	
Bolts	
Cleats	
Scrapers	158
Ship to Shore Connectors	50
Side —	
Lights13 to 18,	22 10 28
D II	175
Pulleys	175
Signal —	
Balls	27
Lights	20, 21
Signals, Distress	27
Silencers, Maxim	119
Sinks, Galley	82
Sirens, Electric	145
Skags, Rudder	105
Skags, Rudder	103
Skene Chocks	124
Skylights —	
Binnacles	
Fasteners	157
Fasteners	180
Smoke Bell & Arm	40
Snap Shackles	178
	170
Snaps —	
Baby	
Double	
Fast Eye	164
Fast EyeIib	164
Jib	164
Jib	164
Swivel Eye	164 164
JibSwivel EyeSnipe — Centerboard	164 164 164
Jib Swivel Eye Snipe — Centerboard Chain Plates	164 164 182
JibSwivel EyeSnipe — Centerboard	164 164 182
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches	164 164 182 181
Jib	164 164 182 181 179
Jib	164 164 182 181 179
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports	164 164 182 181 179 48, 49
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports	164 164 182 181 179 48, 49
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover	164 164 182 181 179 48, 49 48, 49
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod	164 164 182 181 179 48, 49 48, 49
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire	164 164 181 179 48, 49 48, 49
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric 48	164 164 181 179 48, 49 48, 49 130 111 111
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole	164 164 181 179 48, 49 130 111 111 111 113
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope	
Jib Swivel Eye Snipe— Centerboard Chain Plates Snubbing Winches Socket— Holders Supports Sockets— Boat Cover Control Rod Control Wire Electric Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Sone Parts for Bridge &	
Jib Swivel Eye Snipe— Centerboard Chain Plates Snubbing Winches Socket— Holders Supports Sockets— Boat Cover Control Rod Control Wire Electric Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Sone Parts for Bridge &	
Jib Swivel Eye Snipe— Centerboard Chain Plates Snubbing Winches Socket— Holders Supports Sockets— Boat Cover Control Rod Control Wire Electric Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Sone Parts for Bridge &	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric 48 Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights 32 Spare Parts for Bridge & Pier Lights Spark & Throttle Control Spikes Marline	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spark & Throttle Control Spikes, Marline Sport Kit Lights	164 164 164 182 181 179 48, 49 48, 49 130 131 111 111 3, 49, 50 132 133 133 48 182 182 182 182 182 182 183 184 185 186 186 187 188 188 188 188 188 188 188
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spark & Throttle Control Spikes, Marline Sport Kit Lights	164 164 164 182 181 179 48, 49 48, 49 130 131 111 111 3, 49, 50 132 133 133 48 182 182 182 182 182 182 183 184 185 186 186 187 188 188 188 188 188 188 188
Jib Swivel Eye Snipe— Centerboard Chain Plates Snubbing Winches Socket— Holders Supports Sockets— Boat Cover Control Rod Control Wire Electric Electric Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spare Parts for Bridge & Pier Lights Spark & Throttle Control Spikes, Marline Sport Kit Lights	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spare Parts for Bridge & Pier Lights Spark & Throttle Control Spikes, Marline Spotlights Spotlights Spotlights	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spare Parts for Bridge & Pier Lights Spark & Throttle Control Spikes, Marline Spotlights Spotlight Unit	
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spark & Throttle Control Spikes, Marline Sport Kit Lights Spotlights Spotlights Speader Floodlight	164 164 164 182 181 179 148, 49 130 111 111 3, 49, 50 132 133 158 182 182 182 182 183 184 186 186 186 186 186 186 186
Jib Swivel Eye Snipe — Centerboard Chain Plates Snubbing Winches Socket — Holders Supports Sockets — Boat Cover Control Rod Control Wire Electric Flag Pole Hand Rail Mounting Outrigger Pole Watertight Wire Rope Sounding Leads Span Lights Spare Parts for Bridge & Pier Lights Spark & Throttle Control Spikes, Marline Spotlights Spotlight Unit	

	Page
oprings, Tiller Rope  prings for Dockline  quare Neck Bolts  taff Lights	124
oprings for Dockline	124
ouare Neck Bolts	151
taff Lights	21
Stanchions	12
canchions	13.
starter Switches	52, 53
teerer Parts1	01, 111
teerers —	
Bracket	103
Chain	10
D 11	104
Dashboard	
Drum	10
Geared	101
Racing	101
Runabout	100
Steering Wheels 10	L to 103
Steering Wheels103	10 10
otep, Cockpit	130
Step Plates1	35, 136
Stern —	
Bearings	112
Chooks 1	22 12/
Lights 6 to 11, 2	22 10 20
Dala Links	0 0 14
role Lights	0, 9, 16
otools, Folding	142
Stops, Door	152
Stance	
Alcohol	90 91
Bottled Gas	92 0
Dottied Gas	52, 50
Burners	94
Funnel	90, 91
Parts	94
Strainers —	
Gasoline	120
Inlet	86
D	7/
Pump	
Sink	82
Water	12
Strap Hinges	153
Ca	
Bobstay	181
C-11	E1
Cable	31
Deck1 Eye	28, 178
Eye	178
Strute Adjustable	115
Stuffing Boxes105, 112, 1 Stuffing Box Locknuts Stuffing Box Packing Nuts	13, 114
Stuffing Box Lockmute	112
Carrier Don Don Lie - Note	111
Stummy DOX FACKING INUES	40 44
Supports, Socket Surface Drop Handles	48, 45
Surface Drop Handles	156
Swimming Ladders	137
Swing Links	165
Switch	
	E 2
D 1	34
Name Plates Panels	54
DWILCHES	
Battery	51
Bilge Pump Blower & Ignition	74
Blower & Ignition	94
Electric	53
C	0.
Foot	80
Ignition	52, 53
Pump	74
Starter	52, 53
Toggle	53
ToggleWatertight	46 4
Swivel —	
Swivel —	
Cowl Ventilators	
Deck Plates	9:
Eye Blocks1	71, 17
Eve Fittings	17
Eye Pulleys	17
Eva Sana	
Eye Snaps	16
Fishing Chair	14

Shackles	Page
Swivels	161
Sword Fish Darts	140
T	
Table Lamps37, 3	8, 39
Table Leg Fastener Tail Pieces	154
Tank —	
Caps	139
Vents Ten Day Anchor Lights, Oil	139
Thimbles —	
Manila Rope	159
Sail	159
Thirty Day Anchor Light	. 29
Throttle Controls 108, 109, Thru-Deck Fairleaders	110
Thru-Deck Pulleys	176
Thru-Hull Connections	. 86
7.11	
Rope	.100
Rope Clamps	159
Rope Guides	175
Rope Pulleys174, Rope Tighteners	.124
Tillers	-105
Tips — 0ar	.127
Paddle	.127
Toggle Bolts	.170
Toilet —	
Bowls	- 85
Seats	- 85
Toilets84	1. 85
Tools, Hand20 t	. 147
Transom —	
PlatesVentilators	.129
Travelers, Boom	.180
Travelers, BoomTrawler Lights	. 29
Trays, AshTrench Pumps, Galvanized	. 68 . 71
Trim, Hatch	.141
Trouble Lights	. 27
Truck Fixtures Tube Flanges	.118
Tubular Lock Sets	.149
Turbine Ventilators Turnbuckles —	. 95
Bronze	.191
Open	.160
Petite	-161
Rigging	181
Turns, Cupboard	-150
U	
Universal Joints	113



## ALPHABETICAL INDEX

Page         Valves, Check       82         Valves, Pump       76         Vapor-Proof Fixtures       44         Ventilator Deck Plates       99         Ventilators       99         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Valves, Check       82         Valves, Pump       76         Vapor-Proof Fixtures       44         Ventilator Deck Plates       99         Ventilators       9         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Valves, Pump       76         Vapor-Proof Fixtures       44         Ventilator Deck Plates       99         Ventilators       99         Clam Shell       99         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Vapor-Proof Fixtures       44         Ventilator Deck Plates       99         Ventilators —       99         Clam Shell       99         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Ventilator Deck Plates       99         Ventilators       99         Clam Shell       96, 97, 98         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Ventilators —       99         Clam Shell       96, 97, 98         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Clam Shell       99         Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Cowl       96, 97, 98         Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Cruiser       98         Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Gas Tank       139         Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Hood       96         Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Ice Box       97         Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Oval Mouth       96         Streamline       97, 98, 99         Transom       98         Turbine       95
Streamline       97, 98, 99         Transom       98         Turbine       95
Transom
Turbine 95
W
W
W
Wall Lamps 40
Wardrobe Hooks155
Water —
Deck Irons94
Faucets 80
Outlet
Outlet 80

	Page
Strainers	.121
Watertight -	
Bilge Pumps74	. 75
Blinker Keys	. 21
Cable Outlets	
Connections Boxes	
Connections	
Dome Lights	
Fuse Boxes	45
Hand Portables	
Junction Boxes	
Push Buttons	
Receptacles45, 46	
Ship Lights22	
Switches46	
Western 8-Day Trap Lanterns	- 29
Wheels —	
Bumper	-138
Docking	-138
Steering100 to	103
Whisker Pole Fittings	183
Whistles	
Wicks	. 55
Winches —	
Rachet	
Snubbing	
Wind Pennants	183
Window Bolts	151
Window Channel	. 88
Windows	. 88

	Page
Windshield —	
Adjusters	135, 157
Brackets	
Cleaners	134
Keeper & Plate	
Rubber	
Wipers	
Wing Nuts	
Wing Pumps	
Wire —	
Bowden	110
Rope Clamps	
Rope Clips	173
Rope Pulleys	
Rope Sockets	
Rope Thimbles	
Tiller Rope	
Worm Geared Steerers	101

Y

Yacht			
Blocks		 176.	177
Log Boo	ks	 	65
Scrapers		 	158
Yardarm			

### INDEX OF NEW ITEMS ILLUSTRATED IN THIS CATALOG

Page	Figure	Description	Page	Figure	Description
6 9 40 44 46 46 46 51 68 76 76 82 90 93 98 98 107 113 124 127 128 131	1147 1148 168 Entire Page 964-965 975 980-981 988-993 191 798 799 780 781 258 364 373 508 633 1062 840 179 732 648 238	"2 in 1" Streamline Comb. Light "2 in 1" Adj. Flag Pole Light Junior Cabin Lamp Vapor-Proof Fixtures Convenience Outlets Weatherproof Dock Receptacles Rectangular Receptacles Rectangular Receptacles Watertight Turn Switches Knife or Battery Switches Swinging Ash Tray Swinging Glass Holder Junior Electric Bilge Pump Electric Bait Tank Pump Round Lavatory Sink Monel Alcohol Stove Monel Bottled Gas Stove Rain & Spray-Proof Cowl Ventilator Rain & Spray-Proof Ventilator Senior Transom Ventilator Clutch Control Handle Outboard Flushing Nozzles Tiller Rope Tighteners "Sav-Or" New Size Bow Rings Boat Hooks with Pole	132 137 138 138 140 140 142 143 145 148 148 149 152 156 161 166	475 1004 859 860 192 193 931 148 1121 960 1057 573 574 575 1061 1022	Adjustable Outrigger Pole Holders Folding Swimming Ladder Dual Docking & Bumper Wheels Corner Docking Wheel Rubber Drip Moulding Aluminum Rub Rail Moulding Folding Helmsman's Seat Stationary Bracket Fog Bell "Sea Pitch" Horn Mortise Lock Set Rim Lock Set Sliding Door Latch Door Stop and Holder Flush Hatch Lifting Ring Brass Swivels New Design of Danforth Anchor Chocks Toggle Bolts Tiller Rope Guides

#### INDEX OF DISCONTINUED ITEMS

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MURAL PRESS, INC. 431 WEST 28th STREET 18

NEW YORK 1, N. Y.

