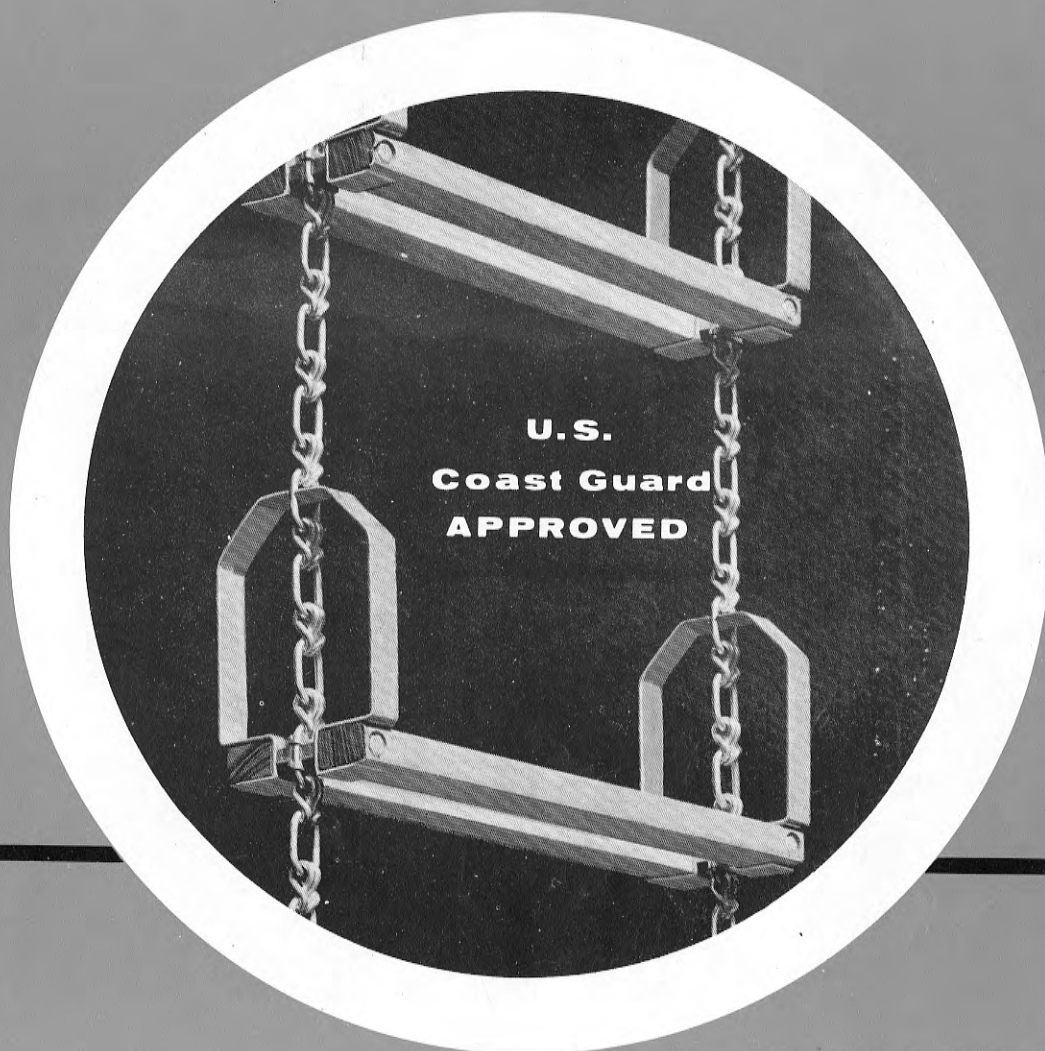


Flexible Embarkation - Debarkation

MASTER SAFETY LADDER

PATENT NUMBER 2,943,696

GALVANIZED STEEL & HARDWOOD



SUPERIORITY UNMATCHED

- Built-in Safety
- Replaceable Parts
- Compact Stowability

MARINE & SHIP SUPPLY, INC.
986-6122
1110 BAYVIEW STREET
SAN FRANCISCO, CALIF. 94132

ROBERTON and SCHWARTZ, Inc.

163 Main Street - San Francisco 5, California

Remarkable new ladde

MASTER SAFETY LADDER

Setting new standards of function and durability, the Master Safety Ladder out-performs, out-wears, out-stows all other flexible ladders, rope or chain. Flared and flat, newly designed steel ears serve as secure lashing rings for shortening ladder, lie flush against ship's side for improved climbing stability, supply safe grip for hands. Double-rung hardwood steps provide firm foothold. Method of assembling steps and weldless lock-link suspension members resists kinking, misalignment, permits easy replacement of worn parts. The Master Safety Ladder meets U. S. Coast Guard specifications in every requirement of materials, construction, workmanship and performance. No other ladder combines such safety in use — ease in maintenance — compactness in storage.

SAFE

FULLY ADJUSTABLE. Ears serve as super-secure lashing rings — permit safe, easy adjustment of ladder's length for pilot or barge work. Steps can be assembled 15 $\frac{3}{8}$ ", 13 $\frac{1}{4}$ " or 11" apart, as usage requires.

BUILT-IN SECURITY. Entire step structure is held together by a single bolt on each side for new simplicity of maintenance. However, as ears are reeved through chain, maximum strength is preserved.

EASY INSPECTION. Open construction makes worn parts easy to see — simplifies inspection to insure safety at all times.

EARS LIE FLAT. New design assures that ears lie flush against ship's side for greater steadiness in climbing. Ears also double as safe, sure hand grips.

DAMAGE RESISTANT. Can't chafe or fray. Open structure eliminates rust-inviting water traps. Lashing ropes take ladder's full stress, prevent bending or cutting of chain links over gunwale.

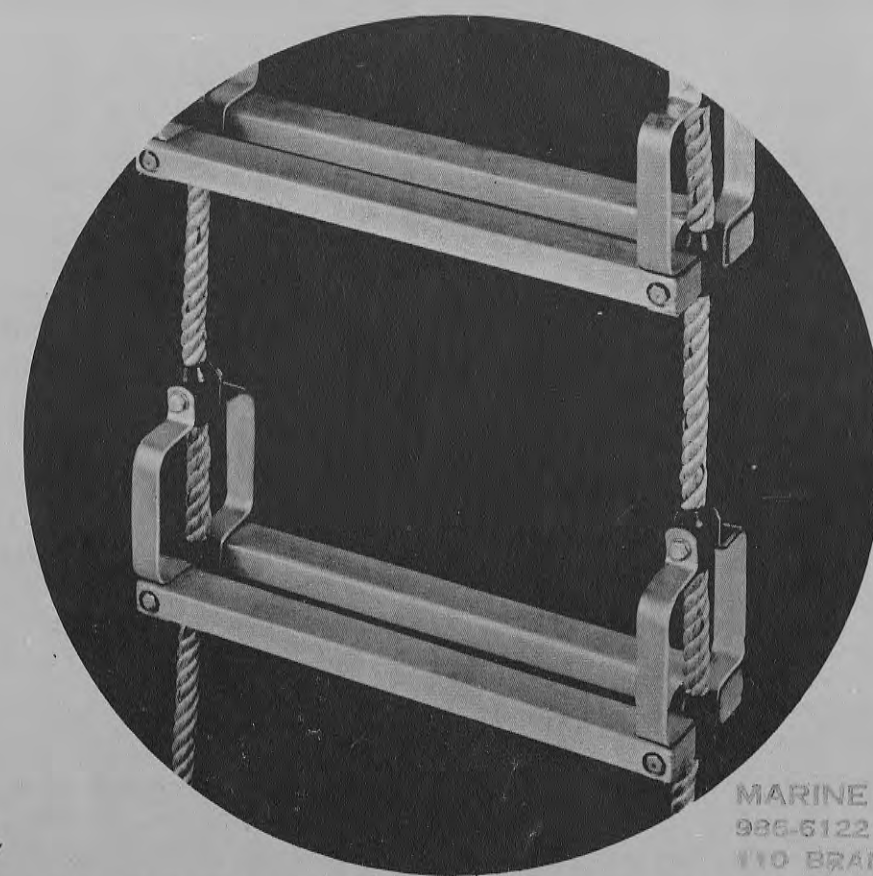
Superior stability of ladder, pictured at left, results from flat-shaped ears that lie flush against ship's side, serve also as utility lashing rings for shortening ladder in pilot or barge work.

— MW EDGE 1/0 — USNS Patrick —

U. S. Coast Guard Approved Rope Ladder

MASTER SAFETY PILOT LADDER

Patent Pending



Approved By

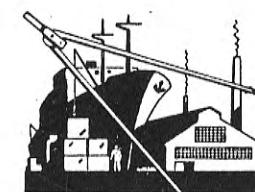
AMERICAN PILOTS' ASSOCIATION

MARINE & SHIP SUPPLY, INC.
936-6122
110 BRANNAN STREET
SAN FRANCISCO, CALIF. 94104

ROBERTON and SCHWARTZ, Inc.

DESIGNERS AND MANUFACTURERS OF MARINE AND INDUSTRIAL MATERIAL HANDLING EQUIPMENT

163 Main Street San Francisco 5, California



America's First Coast Guard Approved Rope Ladder

MASTER SAFETY PILOT LADDER

Now, for the first time, a rope ladder approved for all ship's pilot uses by the U. S. Coast Guard! Master Safety Pilot Ladder is manufactured under strict Coast Guard inspection—meets every rigorous specification. Made of first-grade, 4-strand, $\frac{3}{4}$ " manila rope—with flat, galvanized steel ears and double-rung hardwood steps—the Ladder offers new design and assembly features for greater strength, stability, longer wear—is ideal for barge and shipwork use. No other ladder achieves such high new standards of safety, convenience, economy and easy maintenance!

SAFE

COAST GUARD TESTED. U.S.C.G. Approved, each lot of Ladders is factory-inspected by the Merchant Marine Inspection Division. Rope side members support 2000 lbs.—center of each step, 700 lbs. in factory test.

MINIMUM ROPE CHAFE. Rope is protected from chafing by being secured through the center of the metal ears, which automatically absorb the majority of wear.

BUILT-IN SECURITY. Entire step structure is held together by four bolts, each placed through rope by an exclusive new method which preserves maximum strength.

NON-TIP STEPS. Flared and flat, Master Safety steel ears lie flush against ship's side—hold steps steady for greater climbing stability.

EASY INSPECTION. Open construction of ears makes wear easy to spot—simplifies inspection to insure constant safety.

CONVENIENT

FULLY ADJUSTABLE. Ears serve as secure lashing rings—permit safe, easy adjustment of Ladder's length as usage requires.

EASY OUTRIGGING. Open design of ears makes wooden outriggers exceptionally easy to insert, secure, remove.

LIGHTWEIGHT. Modern, open design keeps weight equal to or less than old style Jacobs ladders.

SAVES SPACE. Ladder *folds* together — stows compactly in approximately half the space of comparable ladders.

REPLACEABLE PARTS

ALL PARTS REPLACEABLE. Ladder can be taken apart simply, safely. Replaceability permits quick, economical insertion of new parts by crew—eliminates dangerous, make-shift repairs—prolongs life of Ladder.

Manufactured by:

For full information, contact Distributor or Manufacturer.

Distributed by:

MARINE & SHIP SUPPLY, INC.
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SAN FRANCISCO, CALIF. 94102

MASTER SAFETY PILOT LADDER

U. S. PATENT No. 3,008,537

USCG APPROVAL No. 160.017/34/0

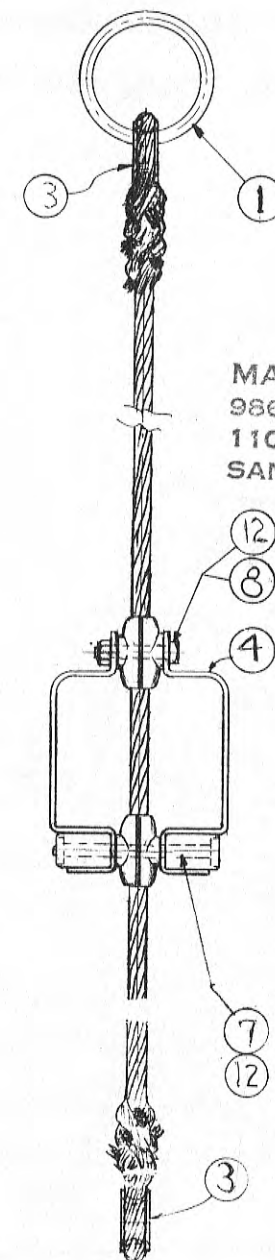
Maintenance Instructions

① TO REPLACE A RUNG—Part (5)

- Back off nut from, part (7) at both ends of damaged rung(5).
- Remove damaged rung(5) and replace with new rung(5).
- Rebolt in place, make certain that lock washer, (12) is in position.

② TO REPLACE AN EAR—Part (4)

- Back off nuts (7) and (8) located at damaged ear (4).
- Remove damaged ear, (4) and replace with new ear, (4).
- Rebolt in place, make certain that lock washers (12) are in position against nuts on bolts (7) and (8).



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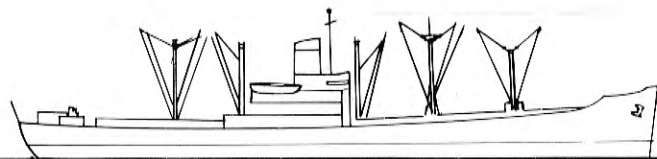
REPLACEMENT PARTS LIST

- Lashing Ring, Steel, Galvanized
- Thimble, Steel, Manila
- Ears, Steel, Galvanized
- Rungs, Hardwood
- Bolt, $\frac{5}{16}$ " x $4\frac{1}{2}$ "*
Steel, Galvanized
- Bolt, $\frac{5}{16}$ " x $1\frac{1}{4}$ "*
Steel, Galvanized
- Spacer Clip, Plastic
- Lock Washer

*Includes Nut and Washer

ROBERTON AND SCHWARTZ INC.
163 MAIN STREET • SAN FRANCISCO 5, CALIFORNIA

er makes all others obsolete



COMPACT

SAVES SPACE. Requires up to one half less space than comparable ladders.

40' length packs neatly into a 41" x 22" x 19" area!

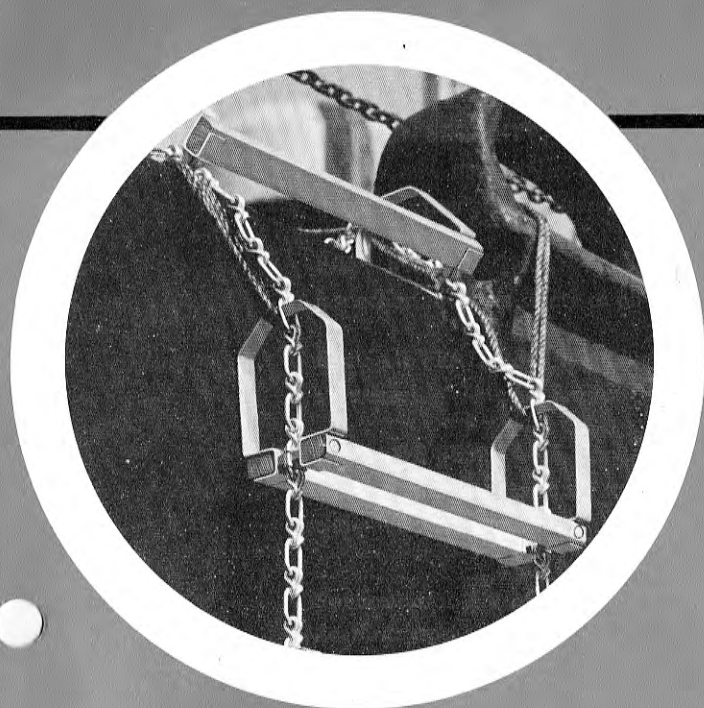
STOWS CONVENIENTLY. For lifeboat use, ladder stows between thwarts—clears boat deck of bulky bundles.

LIGHTWEIGHT. Open structure eliminates unnecessary weight, makes ladder lighter, easier to handle.

KINK-PROOF. Chain suspension members roll with natural lay—resist kinking.

SHIPS COMPACTLY. Sturdy lumber crate prevents damage in shipping—permits inspection of contents without opening—stacks easily for storage using minimum space.

Packed for shipping, at right, Master Safety Ladder stows neatly, quickly—is the most compact flexible ladder in existence. Requires up to half the space of comparable ladders.



Replaceable Parts

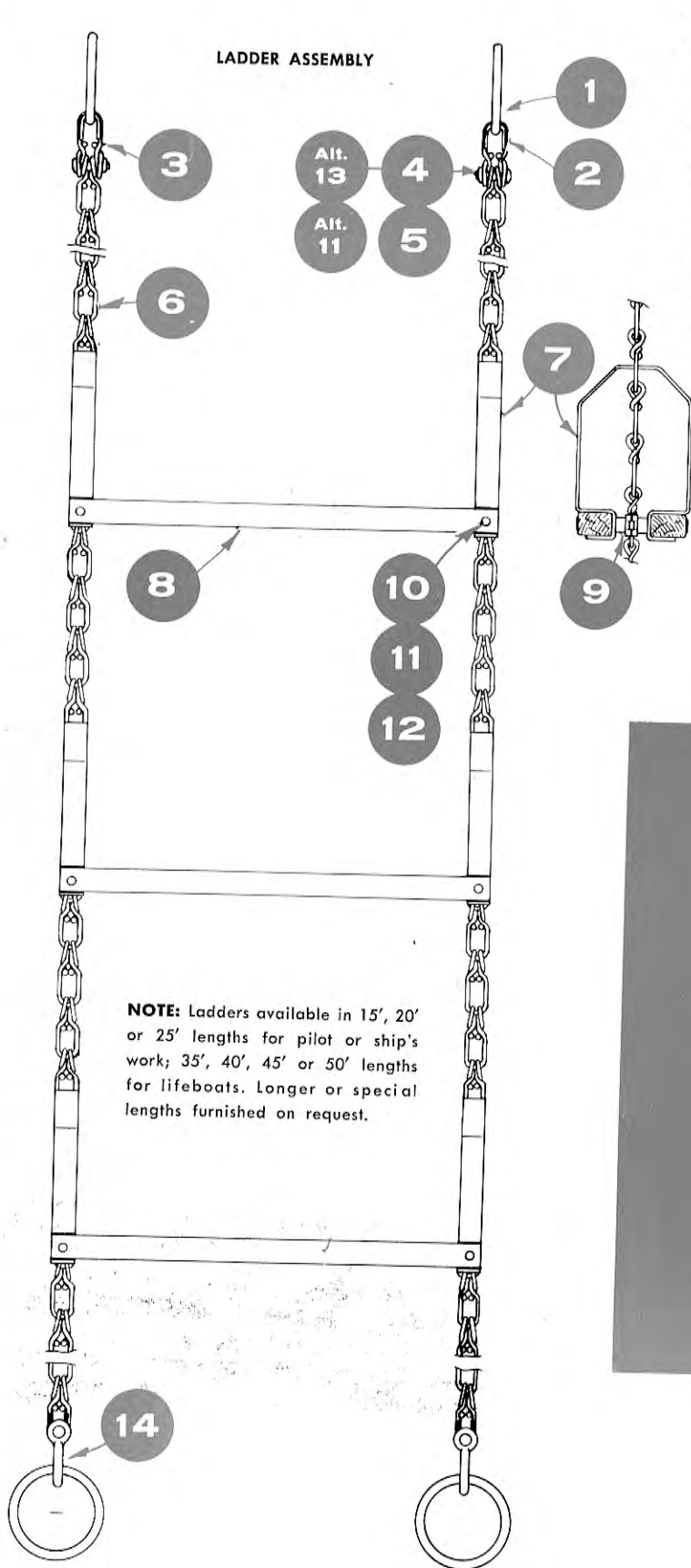
ALL PARTS REPLACEABLE. Ladder can be taken apart, reassembled simply, safely. Replaceability permits quick, economical insertion of new parts by crew—eliminates time-consuming, make-shift repairs or outright scrapping of damaged ladder.

Master Safety Ladder becomes a permanent, maintainable part of ship's equipment.

Full stress of ladder, illustrated at left, is taken by lashing rope, ending damage to chain links over gunwale. A single bolt on each side locks step assembly securely yet simply, permitting fast, safe replacement of worn parts.

MASTER SAFETY LADDER

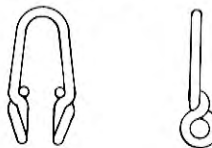
Details - Parts



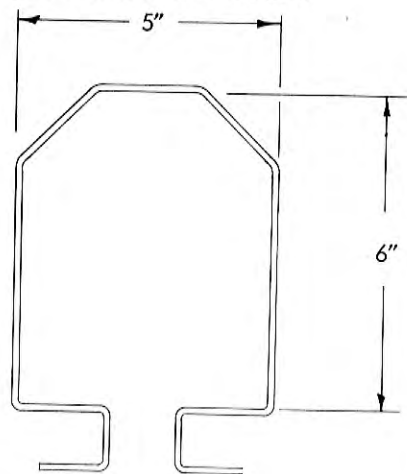
**DETAIL OF SPACER
CLIP • Part 9**



**DETAIL OF REVERSE
LINK • Part 3**



DETAIL OF EAR LOOP • Part 7



DETAIL OF RUNG • Part 8



NOTE: Ladders available in 15', 20' or 25' lengths for pilot or ship's work; 35', 40', 45' or 50' lengths for lifeboats. Longer or special lengths furnished on request.

1. Lashing Ring: steel, $\frac{3}{8}$ " x 3" I.D.
2. Thimble: steel, $\frac{1}{4}$ ", Fed. Spec. 4855
3. Reverse Link: steel, from 7/0 chain
4. Rivet, R.Hd.: steel, $\frac{3}{32}$ " Diam. x $1\frac{3}{8}$ "
5. Clinch Ring: steel, $\frac{5}{16}$ " I.D.
6. Lock Link Chain: 7/0, .205 Diam. wire
7. Ear: steel, $\frac{1}{8}$ " x 1" bar
8. Rung: hardwood, preservative applied
9. Spacer Clip: steel
10. Bolt, Hex. Hd.: steel, $\frac{5}{16}$ " x $4\frac{1}{2}$ " Lg.
11. Nut, Hex. Hd.: steel, $\frac{5}{16}$ " x 18 N.C.
12. Washer, thin S.A.E.: $\frac{5}{16}$ " ($1\frac{1}{16}$ " O.D.)
13. Bolt, Hex. Hd.: steel, $\frac{5}{16}$ " x $1\frac{1}{2}$ " Lg.
14. Shackle: $\frac{1}{4}$ " screw pin, $\frac{5}{16}$ " Diam.

All parts individually available.

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