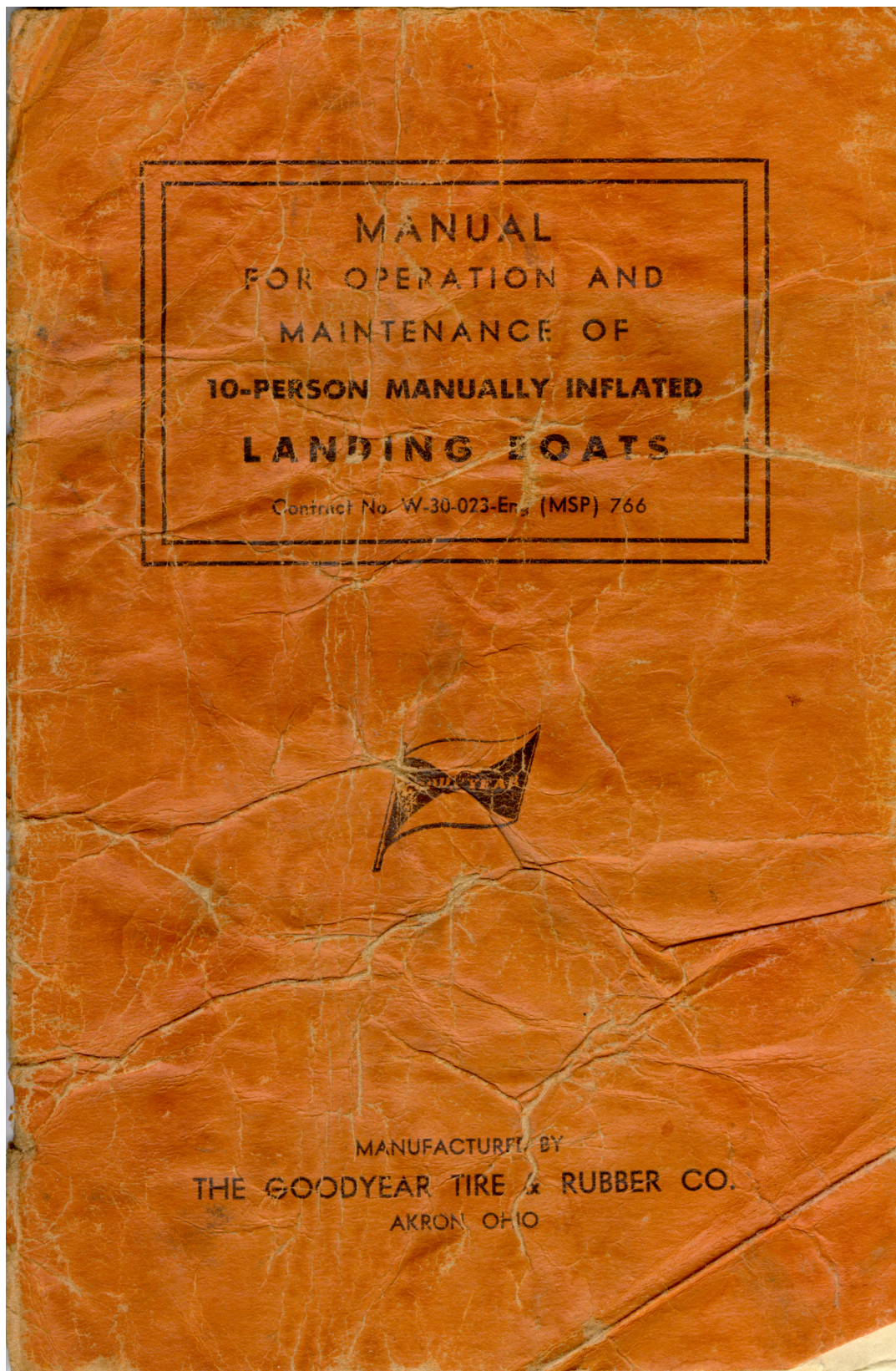


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MANUAL FOR OPERATION AND MAINTENANCE OF RUBBER OR NEOPRENE BOATS

This manual covers operating instructions for the 10-Person Manually Inflated Rubber or Neoprene Landing Boat. Personnel who are required to understand the operation and servicing of this boat shall read and be familiar with the information contained herein. This boat is intended for use in connection with surf landings.

CONTENTS

Section I

	PAGE
General Description.....	2
Main Tube.....	2
Motor and Machine Gun Mounts.....	3
Towing Line Assembly.....	3
Sea Anchor.....	3
Displacement.....	3
Standard Equipment.....	4
Field Repair Kit.....	4
Emergency Repair Kit.....	5

Section II

Putting Boat Into Service.....	6
Taking Out of Service.....	8

Section III

Maintenance and Repair.....	14
Emergency Repairs.....	14
Permanent Repairs.....	16

SECTION I

General Description

The Ten-Person Inflatable Landing Boat is constructed from Neoprene or rubberized fabric and consists essentially of a fabric tube outer framework called the main tube, 19" in diameter and patterned to provide the desired contour and size, approximately 15 ft. long by 7 ft. 10 in. maximum beam. Three 12" diameter cross tubes act as stiffening members and serve as seats. A fabric bottom is attached to the main tube and supports an inflatable and removable floor member, this floor member is equipped with a life line so that in cases of emergency it may be used as a life raft. An inflatable tube 4" in diameter secured to the main tube along both sides and around the bow, acts as a spray tube, and fender. A towing bridle attachment, a life line, and carrying handles are also attached to the main tube.

In order to prevent complete loss of buoyancy and subsequent loss of the boat in the event of a leak in or damage to the main tube, it is divided into two compartments by means of a fabric diaphragm throughout its length on the horizontal axis.

Main Tube

The main tube is inflated through two large valves cured in the main tube. A hand pump equipped with suitable dual connections insures equal distribution of air to the two compartments. The inflatable cross tubes, floor and spray tube are inflated by means of a hand pump or air line through suitable valves.

Motor and Machine Gun Mounts

By means of fabric patches secured to the main tube, provision is made for attaching a machine gun mount on either the port or starboard side at the bow and an outboard motor on the stern.

Towing Line Assembly

A towing line assembly consisting of a quick-release hook, two shackles, two bridle ropes and one release rope, is furnished with each boat for towing purposes. A dee ring towing patch is provided on each side of the bow for attachment of the bridle ropes.

The rope of the towing vessel is hooked to the quick release hook. This arrangement enables the crew of the boat to cast off quickly, whenever necessary, by pulling on the release rope.

Dee ring patches are also fitted on each side at the stern for the attachment of towing gear.

Sea Anchor

A mildew proof fabric sea anchor with 60 ft. of line is provided for emergency use in rough seas and for towing astern during surf landings as necessary. Hand pumps, emergency repair kit and miscellaneous equipment are provided in pockets built onto the main tube and cross tubes.

Displacement

The displacement of all inflated tubes of the boat including the pneumatic floor fully submerged in fresh water and in salt water is as follows:

	<i>Approximate Volume</i>	<i>Approximate Displacement</i>	
		<i>Fresh Water</i>	<i>Salt Water</i>
Main Tubes.....	60 cu. ft.	3750 lbs.	3860 lbs.
Cross Tubes.....	8 cu. ft.	500 lbs.	515 lbs.
Spray Tubes.....	3 cu. ft.	180 lbs.	185 lbs.
Pneumatic Floor.....	7 cu. ft.	450 lbs.	465 lbs.
Total.....	78 cu. ft.	4880 lbs.	5025 lbs.

Standard Equipment

The following standard equipment is furnished with each boat.

<i>Quantity</i>	<i>Description</i>
1	Motor Mount
1	Machine Gun Mount
7	Straps for Machine Gun Mount
2	Straps for Motor Mount
1	Small Hand Pump and 12" Hose (Inflation Type, with Adapter)
1	Small Hand Pump (Deflation Type, with Adapter)
1	Large Hand Pump with Inflation Hose and Adapters
10	5' long paddles
2	6' long paddles
1	Towing Bridle Assembly
1	Pneumatic Floor
1	Emergency Repair Kit
1	Field Repair Kit
1	Carrying Case

Field Repair Kit

<i>Quantity</i>	<i>Description</i>
1	Fabric 1½ sq. yds. Main Tube Fabric
1	Fabric 1½ sq. yds. Seat Tube, Spray Tube and Inflatable Floor Fabric
1	Tape—Type #1—1⅝" wide—10 yds.
8	Cement—Rubber. Type "B" or Neoprene—4 oz.
3	Solvent—Carbon Tetrachloride—4 oz.
5	Soapstone—2 oz. container or equivalent
1	Steel Roller—1½"x1½"
1	Brush—Steel Wire
1	Scissors—10"
1	Pliers—5"
1	Cheesecloth—Type #2—1 yd.
1	Paint Brush—Type #1—Size 3
2	Valve Caps for Mattress Valves
2	Air Seal Washers
1	Manual

Emergency Repair Kit

<i>Quantity</i>	<i>Description</i>
2	Wooden Plugs—3"
2	Wooden Plugs—5"
1	Fabric—6"x32". Main Tube Fabric
1	Fabric—6"x32". Seat Tube, Spray Tube and Inflatable Floor Fabric
2	Cement—Rubber. Type "B" or Neoprene—4 oz.
2	Soapstone—2 oz. container or equivalent
4	4"x4" Sandpaper
1	Scissors—6"
1	Pliers—5"
1	Cheesecloth—Type #2—1/2 yd.
1	Solvent—Carbon Tetrachloride—4 oz.
1	Holland Backed Patch—12"x12"
1	Manual

SECTION II

Putting Boat Into Service

To place boat in service unlace carrying case, remove rolled-up boat and very carefully unroll and unfold boat so as not to

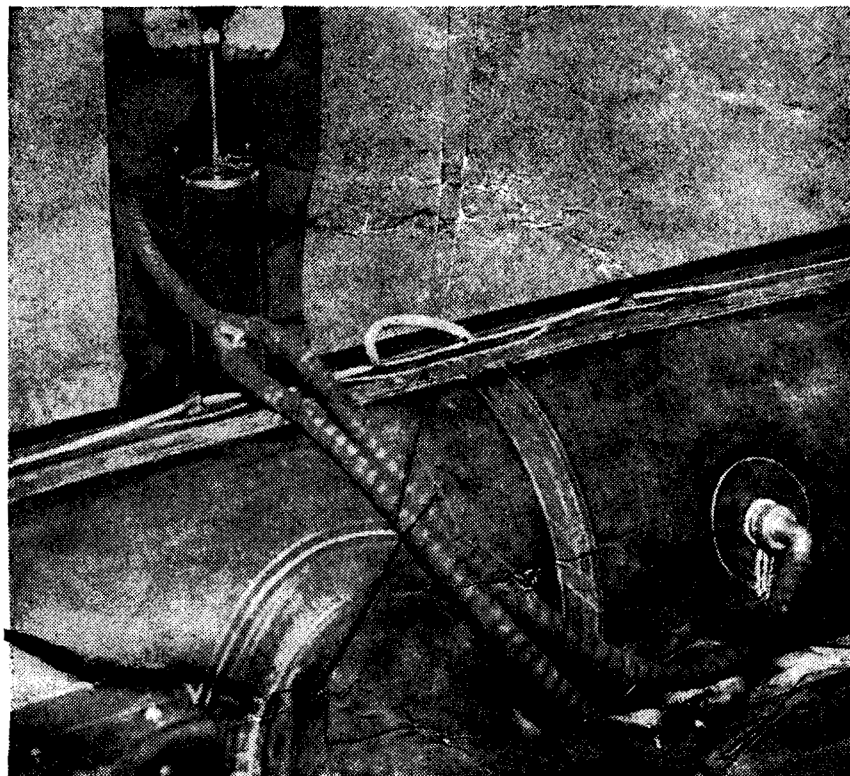


Figure 1. Preliminary inflation with large pump.

damage equipment in the boat. The manner in which the boat was folded before being rolled up should be carefully noted to facilitate subsequent packing.

To inflate main tube, attach dual hose to both valves in tube, attach remaining end of hose to large capacity hand pump and proceed with pumping operation. See Figure 1. At start of inflation lift and shake various sections of the main tube to be sure flow of air is not restricted by folds or wrinkles.

have been thoroughly deflated fold the boat as shown in Fig. 5, roll up and place on carrying case with loose accessories. Fold up case and lace shut. If boat is to be placed in stowage a cool dry location protected from the light should be chosen. At least once every 4 or 6 months the case should be opened and the boat

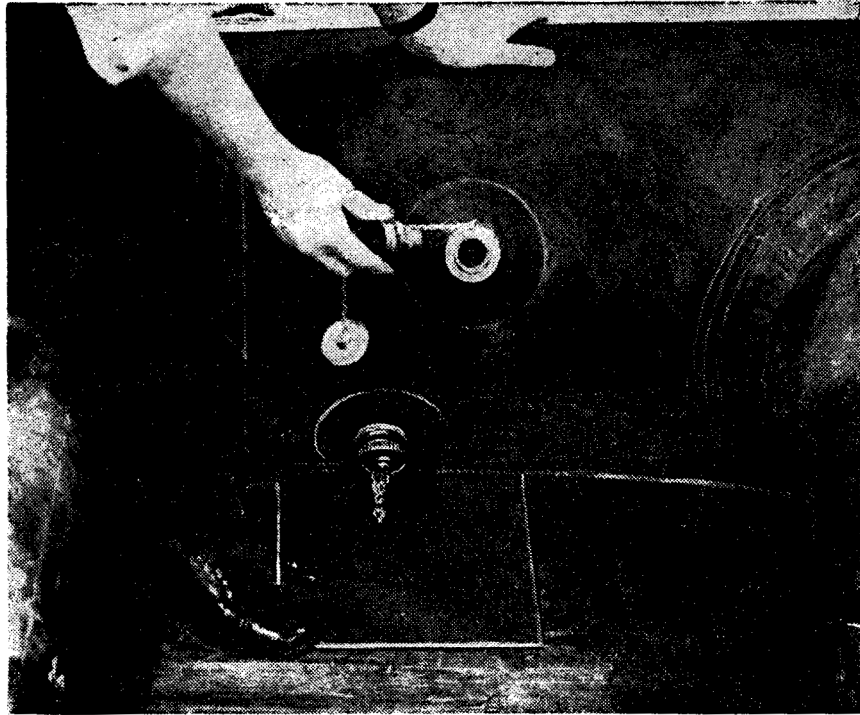
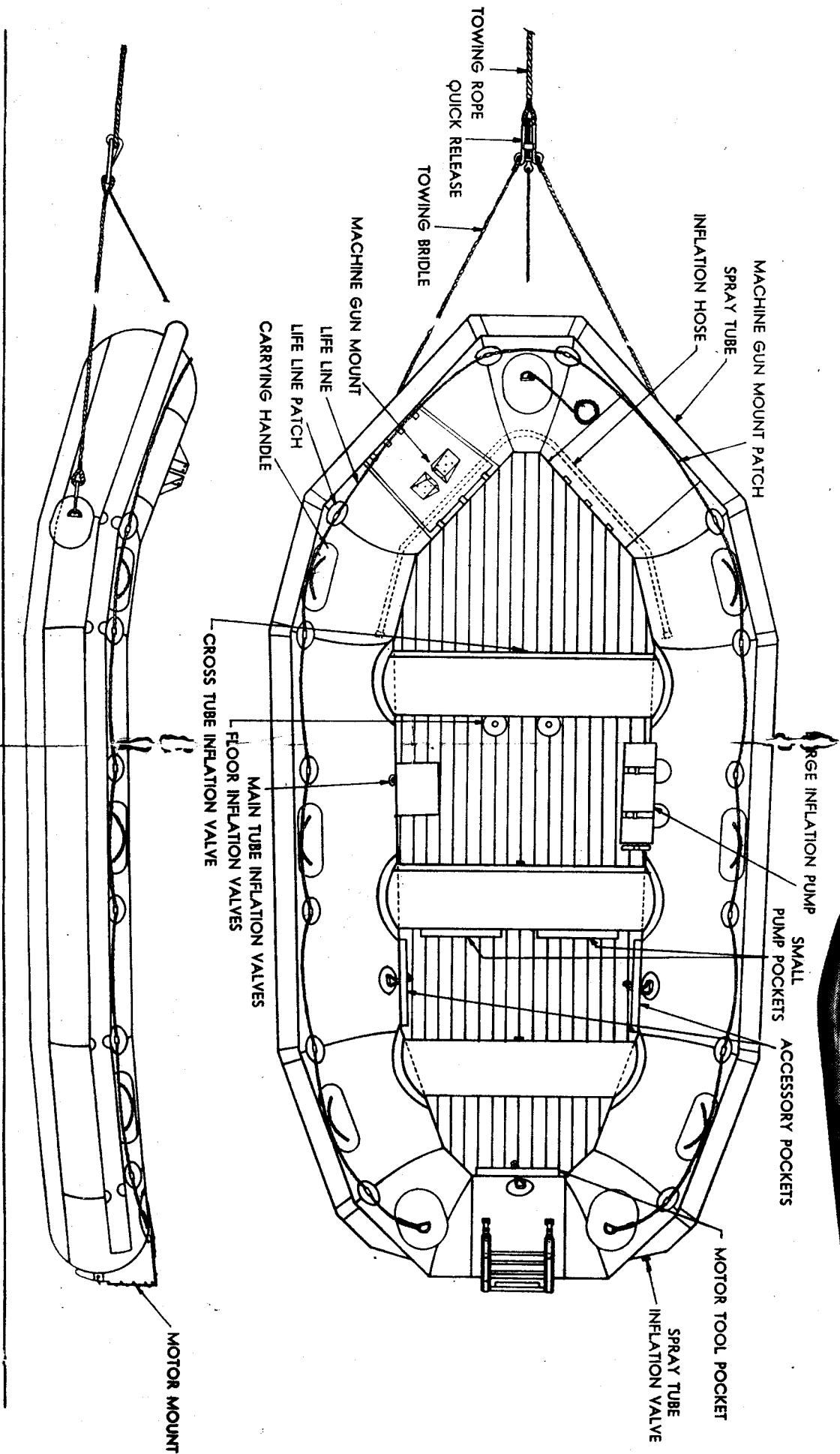
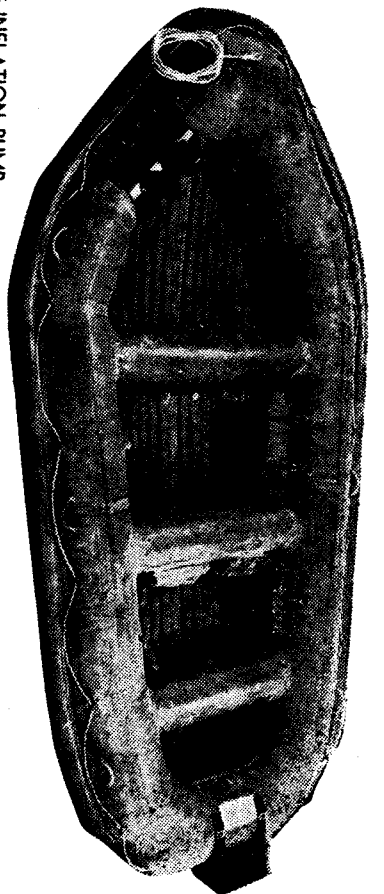


Figure 3. Remove valve bodies.

inspected, especially for any evidence of mildew. If any mildew has developed these spots should be washed with either gasoline or soft soap water and the entire boat be placed in the sunshine to dry before dusting with soapstone and returning to stowage.

If the boat is to be shipped, care should be taken that it not be placed adjacent to steam pipes, radiators or other sources of heat in excess of 125° F., otherwise it may be irreparably damaged.

VIEWS OF THE 10-PERSON MANUALLY INFLATED LANDING BOAT



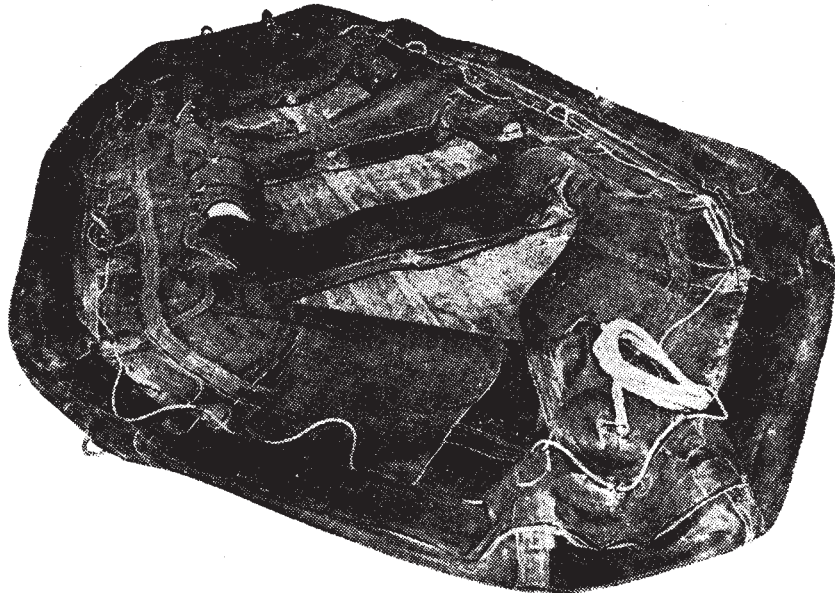


Figure 4. Deflated boat.

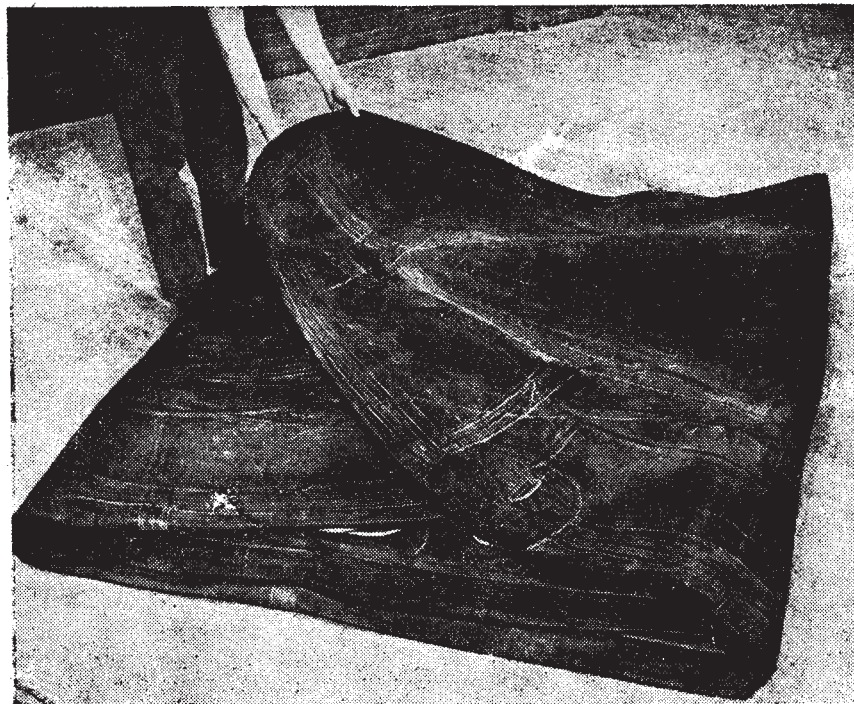


Figure 5. Fold endwise into thirds.

tapering in diameter from $\frac{1}{4}$ " to $\frac{3}{4}$ " and 5" long tapering from $\frac{1}{2}$ " to $1\frac{1}{2}$ ". The tapering thread on each plug provides an effective means of quickly sealing bullet holes by screwing in the plug until it fills the opening.

HOLLAND BACKED PATCH — For cuts or large holes which cannot be repaired with the wooden plugs, Holland Backed Patch material is provided. This should be used as follows:

1. Dry the surface to which the patch is to be applied.
2. Buff the injured area with a roughing tool, sandpaper or wire brush.
3. Cut patch material one (1) inch larger all around than the injury.
4. Wash the buffed surface with the solvent provided in the emergency repair kit. If no solvent is available clean the buffed area by applying a coat of cement and immediately wiping off with a clean dry cloth.
5. Apply two (2) coats of cement to the injured area allowing each coat to dry five (5) minutes.
6. When last coat is dry remove Holland from patch and apply over hole taking care not to trap air. Roll down thoroughly using the cement container or bullet hole plug as a roller.
7. Allow to dry twenty (20) minutes before inflating.
8. Dust entire repaired area with soapstone.

RUBBERIZED FABRIC — In the event Holland Backed Patch material is not available for an emergency repair, rubberized fabric may be used as described above except patch material should be cut two (2) inches larger.

than the injury and the patch material is to be buffed, cleaned and cemented as well as the injured area.

A temporary repair should be replaced by a permanent repair as soon as possible. If the temporary patch does not come off easily work a small amount of solvent under the patch to loosen it.

Permanent Repairs

The repair instructions that follow are for permanent repairs made under more or less ideal conditions.

1. It is essential that the area to be repaired be absolutely dry. In the case of repairs to any tubes, the interior as well as the exterior must be thoroughly dry.
2. The patch should be cut so that it is two (2") larger all around than the cut or hole being repaired.
3. Using coarse sandpaper, wire brush, abrasive stick or file thoroughly buff one side of the patch and a 1" border around the other side also buff the area around the hole in the boat. This area should be 3" larger all around than the hole to be repaired. Care must be taken not to injure the fabric, it is only necessary to thoroughly roughen the surface of the coating. (Fig. 8.)
4. Wash all buffed areas with clear gasoline, benzine, engine or carbon tetrachloride, using as little as possible of these solvents. (Fig. 9.)
5. Thin down one can of the applicable cement with carbon tetrachloride in the ratio of 50% cement and 50% solvent.

Apply three coats of the thinned cement to the buffed side patch and buffed area on boat, allowing each coat to dry five minutes before applying the next. (Fig. 10.)

7. Apply, in a similar manner, two or three coats of heavy cement as supplied, allowing at least ten minutes between coats.

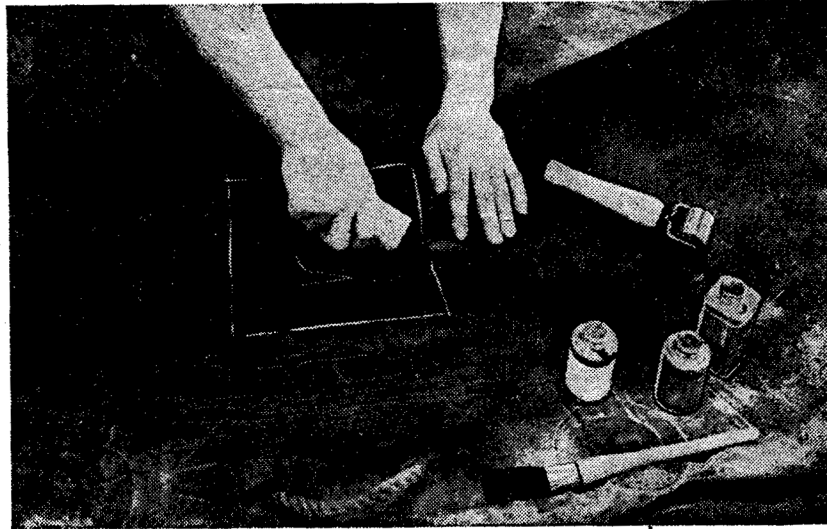


Figure 8. Buffing surface to which patch is to be applied.

8. After the cement is dry to the touch, carefully apply patch to boat, taking care not to trap air between the two. This operation may be facilitated by having that area of the

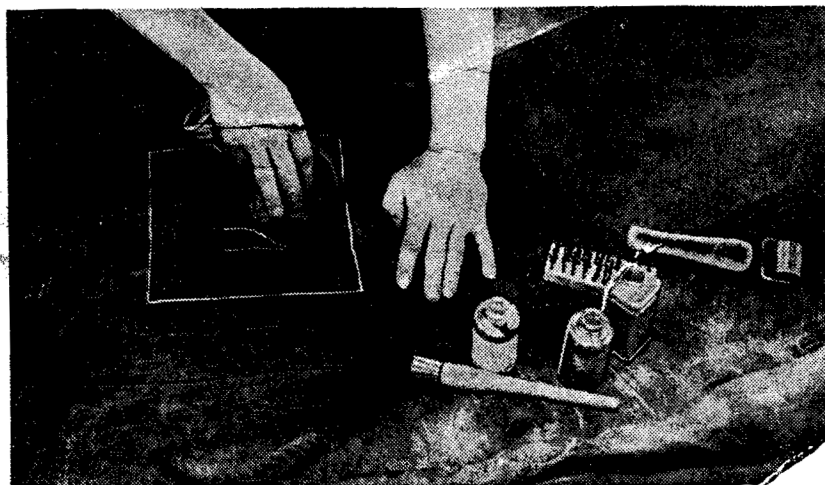


Figure 9. Washing buffed area.

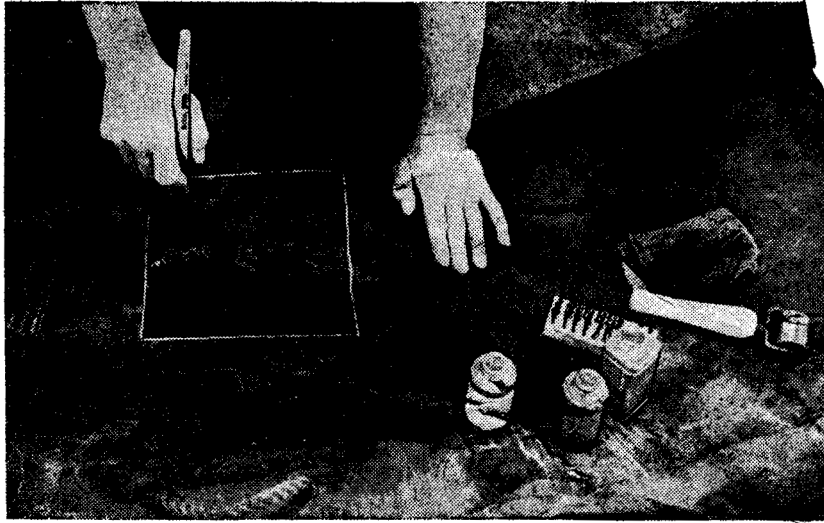


Figure 10. Cementing area to be repaired.

boat being patched laid out flat and free from wrinkles and buckles.

9. Roll patch down thoroughly with roller, working from center to edge to work out any trapped air. (Fig. 11.)
10. All edges of large patches should be taped. Buff and wash the edges of the patch sufficiently so that tape may be applied.
11. Apply two coats of thin cement to the surface to which tape is to be applied, allowing each coat to dry five (5) minutes. The protective coating on the tape is to be removed as the tape is being applied. Where tape overlaps tape it is necessary to use 2 coats of cement on the tape back. If the tape has lost its tackiness the protective covering should be removed, the tape washed with solvent and given a light coat of thin cement before being applied to the edges of the patch. Roll the tape down thoroughly. See Fig. 12.

entire repaired area with soapstone and allow 24 to 48

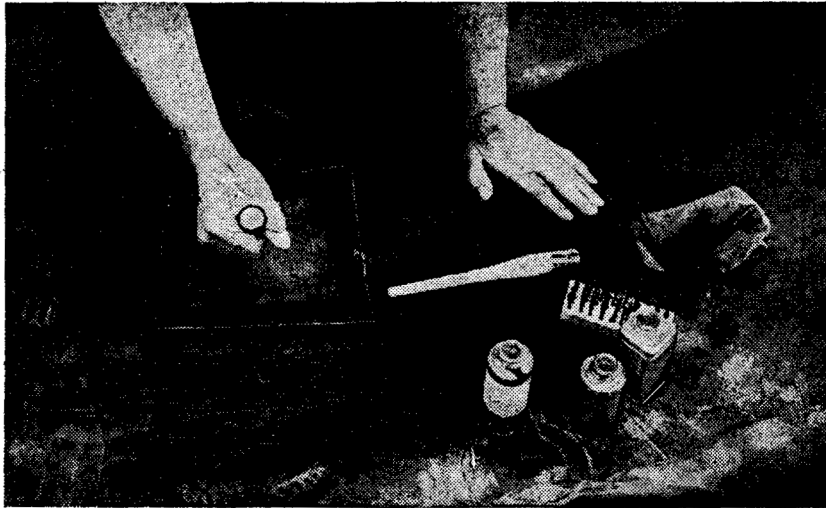


Figure 11. Roll from inside to edge.

hours for cement to cure before inflating or rolling up and packing.

For large cuts or tears on the tubes it is advisable to enlarge the opening sufficiently to permit an inside patch, applied as directed above, followed by another patch on the outside. The



Figure 12. Center the tape over the edge of the patch.

inside patch should be dipped in solvent and quickly inserted into the tube.

Follow the same procedure in applying a reinforcing patch to a severely abraded area.