

MIL-M-11982A

30 APRIL 1953

SUPERSEDING

MIL-M-11982(Ord)

30 April 1952

MILITARY SPECIFICATION**MOUNT, A.A., MACHINE GUN, CAL. .50, M63
(W/SPARE PARTS)**

This specification has been approved by the Departments of the Army, the Navy, and the Air Force.

1. SCOPE

1.1 This specification covers one type of anti-aircraft ground mount designed for mounting the caliber .50, M2, heavy-barrel machine gun (see 6.3).

2. APPLICABLE SPECIFICATIONS, STANDARDS, DRAWINGS, AND PUBLICATIONS

2.1 The following specifications, standards, and drawings, of the issue in effect on date of invitation for bids, form a part of this specification:

SPECIFICATIONS**FEDERAL**

TT-I-559—Ink, Stencil, Opaque, for Marking Porous Surfaces (Wooden Boxes, Fiber Cartons, Etc.)

MILITARY

JAN-P-106 —Packaging and Packing for Overseas Shipment—Boxes; Wood Nailed (For Weight of Contents Not In Excess of 1,000 Pounds).

MIL-P-116 — Preservation, Method of.

JAN-B-121 — Barrier - Materials, Greaseproof.

JAN-P-125 —Packaging and Packing for Overseas Shipment—Barrier-Materials, Waterproof, Flexible.

JAN-P-127 —Packaging and Packing for Overseas Shipment—Tape, Adhesive, Pressure-Sensitive, Water Resistant.

MIL-L-3150 —Lubricating-Oil, Preservative, Medium.

U. S. ARMY

52-0-1—General Specification Governing the Manufacture and Inspection of Small Arms Weapons, Spare and Replacement Parts, and Accessories.

STANDARDS**MILITARY**

MIL-STD-129—Marking of Shipments.

DRAWINGS**ARMY ORDNANCE CORPS**

D7142396—Mount, A.A., M.G., Cal. .50, M63

(Copies of specifications, standards, and drawings required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

3. REQUIREMENTS**3.1 Parts.**

3.1.1 *General.*—Parts, materials, and procedures used in the manufacture of the mounts shall be in accordance with the requirements of the applicable drawings and specifications. Materials conforming to manufacturer's specifications may be used provided the specifications are approved by the Government and contain provisions for adequate tests. The use of manufacturer's specifications will not constitute waiver of the

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Government inspection. Materials listed as "commercial" on the drawings shall be of the best commercial quality that complies with the requirements.

3.1.2 *Manufacture.*

3.1.2.1 *Welding, riveting, heat-treatment, treatment for rust prevention, painting, lubrication, and other manufacturing processes shall be as specified by the applicable drawings and specifications and Specification 52-0-1.*

3.1.2.2 *Processing.*—Dimensions, surface finishes, drilled holes, tapped holes, threads, and other machine operations shall be as specified by the applicable drawings and specifications.

3.1.2.3 *Interchangeability.* — Except for parts designated as mating parts on the drawings or those altered by subsequent incorporation into an assembly (see 3.2), like parts including those intended for repair or maintenance parts shall be interchangeable without modification.

3.1.2.4 *Locking devices.*—All locking devices, pins and clamps shall function without interference and be positive in action. Elongation of mating holes to permit entry of locking pins or plungers is not permissible.

3.1.2.5 *Spade and positioning projections on legs shall be in proper alinement with one another when assembled to the tubular member prior to welding.*

3.2 *Assemblies.*—Assemblies and subassemblies, consisting of two or more parts combined for welding, machining, or other operations, shall conform to the applicable drawings and specifications.

3.2.1 All finished surfaces shall be protected against rust and injury during manufacture and until delivery. All surfaces shall be free from burrs. All fins shall be removed from castings.

3.3 *Repair or maintenance parts.*—Unless otherwise specified, mounts shall be accompanied by the proportional quantity of repair or maintenance parts. The quantity of parts to be furnished shall be as specified on lists furnished by the contracting officer.

3.4 *Assembly groups.*

3.4.1 *Mounting and dismounting.*—The locking devices provided to assemble and disassemble the mount shall be positive and quick in action. Locking devices shall maintain proper adjustment when the weapon is being fired.

3.4.2 *Firing mechanism.* — The linkage shall be positive in action to insure proper firing of the gun when a grip is depressed. Firing shall be stopped when the grips are released.

3.5 *Associated requirements.*

3.5.1 *Maneuverability.*—Each mount shall function with a minimum of lost motion. During firing, the gun shall be capable of being held in each required firing position with no appreciable alteration of this position due to improper construction of the mount.

3.5.2 *Construction.*—The mount shall be constructed to the tolerances shown on the applicable drawings. Vibration shall be reduced to a minimum, and the mount shall be capable of withstanding the stresses and shocks incident to service, as demonstrated during proof firing (see 4.5.3). Moving parts shall function properly without interference due to looseness or friction.

3.6 *Quality and inspection.*—Unless otherwise specified, inspection, gaging, and testing of materials and parts, and the establishment and maintenance of an adequate inspection system during manufacture shall be the responsibility of the contractor. The contractor shall submit to the Government for

acceptance only those mounts and repair or maintenance parts which meet the quality requirements of this specification.

3.7 Workmanship.—Workmanship shall be of the quality necessary to produce gun mounts free from defects that may affect appearance, serviceability, or proper functioning.

4. SAMPLING, INSPECTION, AND TEST PROCEDURES

4.1 Government inspection.—Government inspection will be limited to the inspection and testing of the completed mount, the inspection, gaging, and testing of repair or maintenance parts (see 4.3), and the inspection of the packaging, packing, and marking of the mounts and repair or maintenance parts prior to shipment.

4.2 Lot.

4.2.1 Mounts may be submitted for Government inspection and tests individually or in groups. The lot size of completed mounts submitted for final acceptance shall not exceed 500 units.

4.2.2 Parts.—For sampling purposes the lot size of component parts shall be that quantity necessary to produce one acceptance lot of mounts plus the proportional quantity of repair or maintenance parts for that lot.

4.3 Sampling of parts and assemblies.—Samples taken at random for inspection, gaging, and testing shall be those parts accompanying each acceptance lot which are to be segregated for shipment as repair or maintenance parts. A sample of at least 10 percent of the lot shall be selected and tested by the inspector when less than 50 repair or maintenance parts are included in an acceptance lot. Any test which may be destructive to the part or which may affect its functioning shall be performed on the same quantity of test specimens produced concurrently with the lot.

4.4 Inspection.

4.4.1 Place of inspection.—Unless otherwise specified, Government inspection and tests, except proof firing, shall be performed at the place of manufacture.

4.4.2 Visual inspection.—Each completed mount which has successfully passed the tests specified in 4.5 shall be visually inspected for compliance with this specification.

4.4.3 Gaging.—All parts used for sampling purposes (see 4.3) shall be inspected and gaged by the Government inspector to determine compliance with the applicable drawings and this specification. The acceptance or rejection of these parts shall determine the acceptance or rejection of the respective parts lot from which they were taken.

4.5 Tests.

4.5.1 Performance.—Each mount shall be checked by the Government inspector for proper operation to insure quick mounting for ring and dismounting for carrying.

4.5.2 Interchangeability of parts.—A minimum of five mounts from each final acceptance lot shall be disassembled into parts or assemblies (see 3.1.2.3). The parts shall be interchanged and reassembled. Failure of reassembled mounts to function in the same manner as before disassembly shall be cause for rejection of the lot.

4.5.3 Proof firing.—Unless otherwise specified, the first mount manufactured under a contract and at least 1 percent of the mounts manufactured thereafter, assembled with gun, shall be proof fired a minimum of 100 rounds as specified in Specification 52-0-1. U. S. Government standard service ball ammunition shall be used during proof firing to check proper operation of the mount at all positions of elevation, depression, and traverse under conditions of slow and rapid fire. A thorough visual inspection of the mount shall be made after proof firing for the purpose of detecting any defects.

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4.5.4 *Rejection.*—The failure of any part to conform to the applicable drawings and specifications following proof firing shall be cause for the rejection of the final acceptance lot or lots involved.

4.6 *Resubmission.*—Rejected lots shall not be resubmitted until the entire lot has been screened and all defects removed or repaired; the Government inspector is notified of precautionary measures instituted to prevent recurrence of failures causing rejection; and the lot has been plainly marked as a resubmitted lot.

4.6.1 In addition to testing the proportional quantity of repair or maintenance parts of a resubmitted lot the Government inspector may test additional parts of the lot if he so desires.

4.7 *Packing.*—To determine whether or not a pack is adequately blocked, braced, and provisions made against shifting of parts, one completely packed, closed, and strapped shipping container from each lot shall be tested by one of the following methods:

4.7.1 *Crane method.*—The pack shall be raised with a crane and slings or grabhooks to a height sufficient to allow the pack to swing clear of the ground. The pack shall be swung causing one end or corner to strike against a solid barrier at a speed of approximately 8 miles per hour. This can be achieved by pulling the pack back and up along the arc of free swing until the center of gravity reaches a point approximately 27 inches above its original position (also point of impact), measured vertically. The test shall be repeated for the opposite end of the pack. Evidence of failure of the pack shall be cause for rejection.

4.7.2 *Drop method.*—The pack shall be slowly pushed end-wise off the smooth edge of a platform 42 inches above a solid concrete, stone, or iron surface until the equilibrium of the container is upset when its end will be allowed freely to describe an arc and

strike the surface. These drops shall be given twice on each end of the container, once with the top up and once with the bottom up. At the conclusion of this test, the contents and interior packing such as bracing, blocking, bolting, cushioning, and interior containers showing injury that would affect their utility, or evidence of a substantial amount of shifting within the shipping container which would create conditions likely to cause such damage during shipment shall be cause for rejection.

4.7.3 *Sample shipping container.*—Unless otherwise specified by the procuring agency, the contractor shall furnish one complete production sample container to determine acceptability of the materials and workmanship as soon as practicable after award of contract and prior to submission of any completely processed and packed containers for final acceptance. Approval of the production sample shall not relieve the contractor of his responsibility to supply a container complying with this specification.

4.8 *Final acceptance.*—Completed mounts shall be finally accepted only after they have passed the inspections and tests specified in section 4, have been stamped by the inspector, and have been prepared for delivery as specified in section 5.

5. PREPARATION FOR DELIVERY

5.1 Mount.

5.1.1 *Disassembly.*—The mount shall be disassembled into the following components to assure proper cleaning and preservation:

- Leg assembly
- Base assembly
- Elevator assembly
- Yoke, cradle, trigger control mechanism, and trigger frame assemblies
- Ammunition tray holder
- Trigger side plate assembly

5.1.2 *Cleaning.*—All exposed unpainted or finished surfaces of the various assemblies

of the mount shall be cleaned in accordance with the C-2 petroleum solvent method of Specification MIL-P-116. The C-7 vapor degreasing method of Specification MIL-P-116 may be used provided the plastic grips of the trigger frame assembly are not subjected to this type of cleaning.

5.1.3 *Preservation.*—The trigger side plate assembly shall be treated with a medium preservative lubricating-oil conforming to Specification MIL-L-3150. A medium rust-preventive compound conforming to type P5 of Specification MIL-P-116 shall be applied to the following.

- (a) The sliding surfaces of the moving parts of the trigger frame and trigger control mechanism assemblies.
- (b) The pintle of the yoke assembly.
- (c) The pintle bore and traverse lock of the elevator assembly.
- (d) The bearing socket of the base assembly.
- (e) All pins and threaded surfaces of the entire mount.
- (f) All other unpainted or finished surfaces.

5.1.4 After the preceding preservation has been accomplished, the entire mount, with the exception of the ammunition tray holder legs, shall be reassembled and locked into the position shown on figure 6.

5.1.5 *Packaging.*—After the mount has been reassembled, all remaining exposed surfaces which have received an application of preservative shall be wrapped in two thicknesses of greaseproof barrier-material conforming to type I or II, grade C, and class 2 of Specification JAN-B-121. The joint between the base and elevator assemblies and between the elevator and yoke assemblies shall be sealed on all sides by the application of water-resistant, pressure-sensitive adhesive tape conforming to type I, any grade and color (preferably olive drab) of Specification JAN-P-127. This same tape

shall be used to secure the pins and their chains to the adjoining mount surface.

5.1.6 *Packing.*

5.1.6.1 *Shipping container.*—The mount shall be packed in a shipping container constructed in accordance with figures 1 through 9, inclusive, using the dimensions as specified in table 1 and the applicable requirements of a style II, nailed and strapped, wood box in conformance with Specification JAN-P-106 with Appendix I.

5.1.6.2 *Protective insulation.*—Wherever wood blocking or supports contact the mount, those surfaces of the mount shall be protected by two thicknesses of waterproof barrier-material conforming to type E-2 or E-3 of Specification JAN-P-125.

5.1.6.3 *Packing procedure.*—Assemble the base, sides, and ends of the box. Position the pedestal legs on the base and place block 10 and its cleats, followed by blocks 7 and 8 with their respective cleats, in position as shown on figures 3 and 5. Locate the mount proper in the container as shown on figure 7 and secure it with the three bolts and nuts as specified in table 1, and blocks 13. Fasten the ammunition tray to the side panel by use of the four carriage bolts and nuts and block 9. The exposed threads of the seven bolts shall be coated with thin-film rust-preventive compound conforming to type P-1 of MIL-P-116.

5.2 *Repair or maintenance parts.*—Repair or maintenance parts shall be packaged and packed as specified in the applicable specification or the procurement documents, and shall be immobilized in the shipping container together with the mount.

5.3 *Marking.*—In addition to any special marking required by the contract or order, marking for shipment shall be in accordance with Standard MIL-STD-129, using black opaque stencil ink conforming to Specification TT-I-559.

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TABLE I.—Dimensions, weight, and bill of material for one complete shipping container.

Dimensions	Inside	Outside	Weight:	
Length (in.)	33 ¼	36 ¼	Container (lbs.)	76
Width (in.)	22	23 ¼	Contents (lbs.)	159
Depth (in.)	17 ½	18 ¼	Gross (lbs.)	235
Displacement: 9.12 Cubic Feet				

BILL OF MATERIAL

Pcs	Part name	Part No.	Actual size (Inches)			Wood group	Reference
			Length	Width	Thick-ness		
4	Cleat vertical -----	1	17 ¾	2 ¼	¾	II or III	Figs. 1 and 4
4	Cleat, horizontal -----	1a	17 ¾				
2	End sheathing -----	2	22	17 ½	¾	II or III	Figs. 1 and 4
3	Cleat -----	3	17 ¾	3 ¾	¾	II or III	Figs. 1 and 4
2	Side sheathing -----	4	36 ¼	17 ½	¾	II or III	Figs. 1 and 4
2	Top and botton sheathing--	5	36 ¼	23 ½	½	II or III	Figs. 1 and 4
2	Cleat -----	6	4 ¾	1 ¾	¾	II or III	Figs. 1, 3, 4 and 5
1	Block -----	7	21 ¾	4 ¾	1 ¾	II or III	Figs. 1, 2, 3, 4 and 5
1	Support -----	8	22 ¾	10 ½	1 ¾	II or III	Figs. 1, 2, 3, 4 and 5
1	Block -----	9	12	6 ¾	¾	II or III	Figs. 1, 2, and 4
1	Block -----	10	21 ¾	5 ¾	1 ¾	II or III	Figs. 1, 2, 3, 4 and 5
4	Cleat -----	11	6	3 ¾	¾	II or III	Figs. 1, 2, 3, 4 and 5
2	Cleat -----	12	9	1 ¾	¾	II or III	Figs. 1, 3, 4 and 5
2	Block -----	13	7 ¾	3 ¾	1 ¾	II or III	Figs. 1, 3, and 4
2	Block -----	14	6	1 ¾	¾	II or III	Loc at assy Figs. 1 and 3 Loc at Assy

¾ lb 4d nails

¾ lb 5d nails

¾ lb 7d nails

3 Strapping, steel—90" x ½" x .020"

4 Carriage bolts—¾" dia. nuts and washers 2 ½" long

3 Hex. hd. bolts—½" dia. nuts and washers 3 ¾" long

Greaseproof barrier-material—12 ½ sq. ft.—grade C, type I or II, class 2 of Specification JAN-B-121.

Waterproof barrier-material—5 ½ sq. ft.—type E-2 or E-3 of Specification JAN-P-125.

Adhesive tape, water-resistant, pressure-sensitive,—2" x 8 feet

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6. NOTES

6.1 Ordering data.—Procurement documents should specify the following:

- (a) Title, number, and date of applicable specifications.
- (b) Title, number, and date of applicable drawings.
- (c) List of repair or maintenance parts required.
- (d) Place of inspections and tests.
- (e) Site of proof firing.

6.2 Suggested contractual features.—The manufacturer should be furnished a block of serial numbers to be used.

6.3 Emergency use.—In an emergency, the Aircraft Basic Gun, Cal. .50, or the Water-

Cooled Gun, M2, can also be mounted. In addition, all machine guns, cal. .30, can be mounted on this mount.

Notice.—This specification, together with specifications and drawings pertaining to it and bearing a "Notice" of similar restrictions, is intended for use only in connection with procurement by the United States Government, and shall not be reproduced either wholly or in part, except when authorized in connection with Government procurement, nor be used for any other purpose except when specifically authorized by the Chief of Ordnance.

Custodians:

Army—Ordnance Corps
Navy—Bureau of Ordnance

Other interest:

Army—T
Navy—MC.

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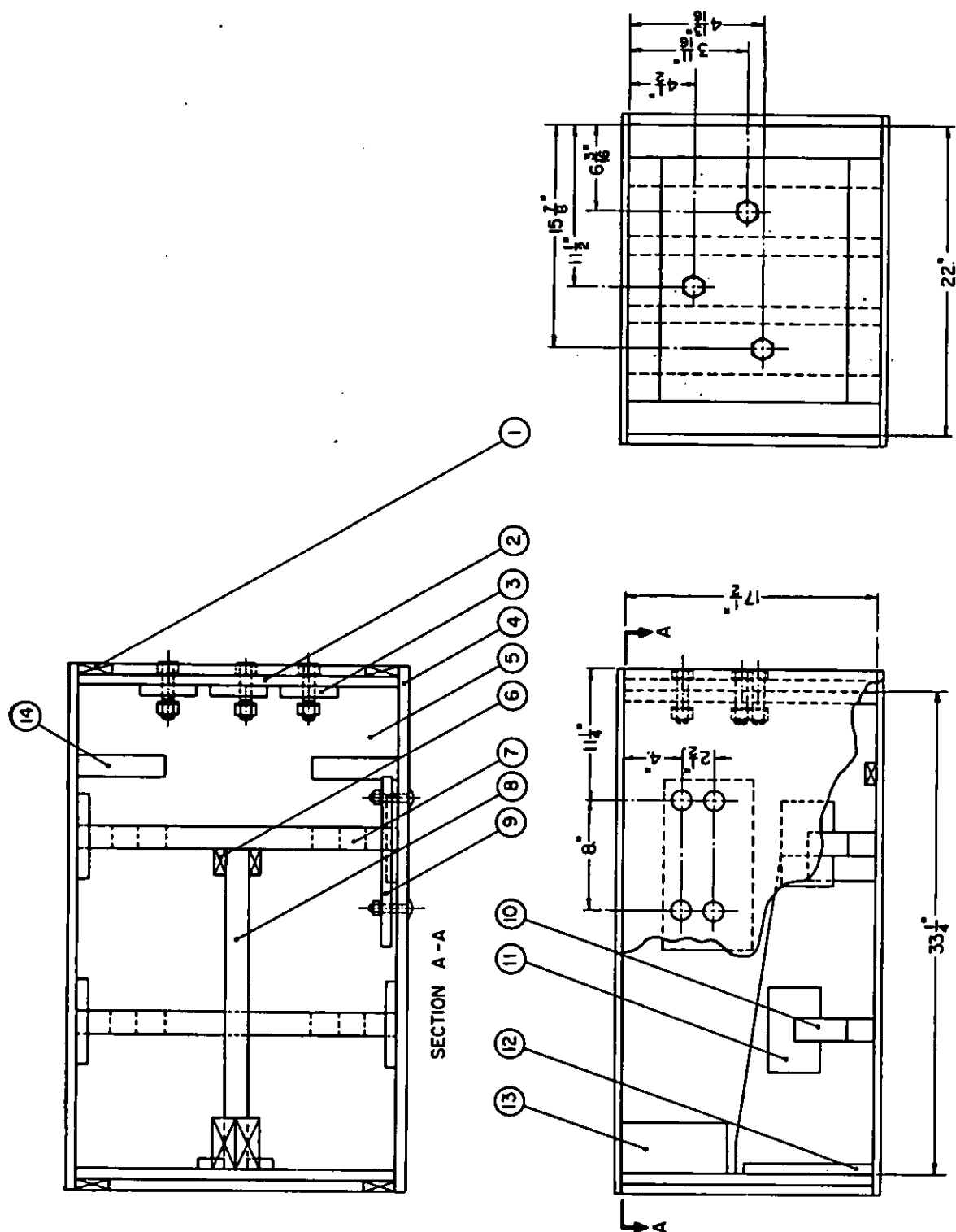


FIGURE 1.—Plan and elevation views.

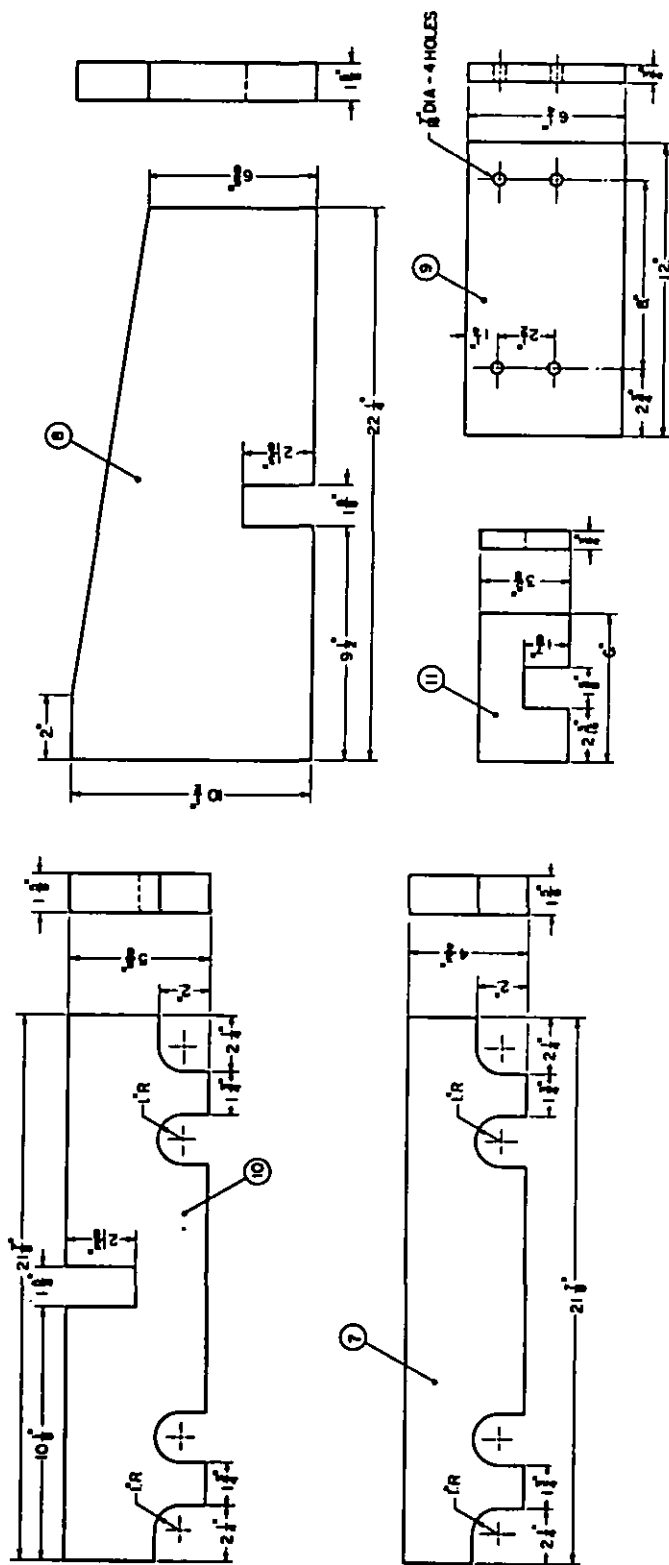


FIGURE 2.—Details of blocking.

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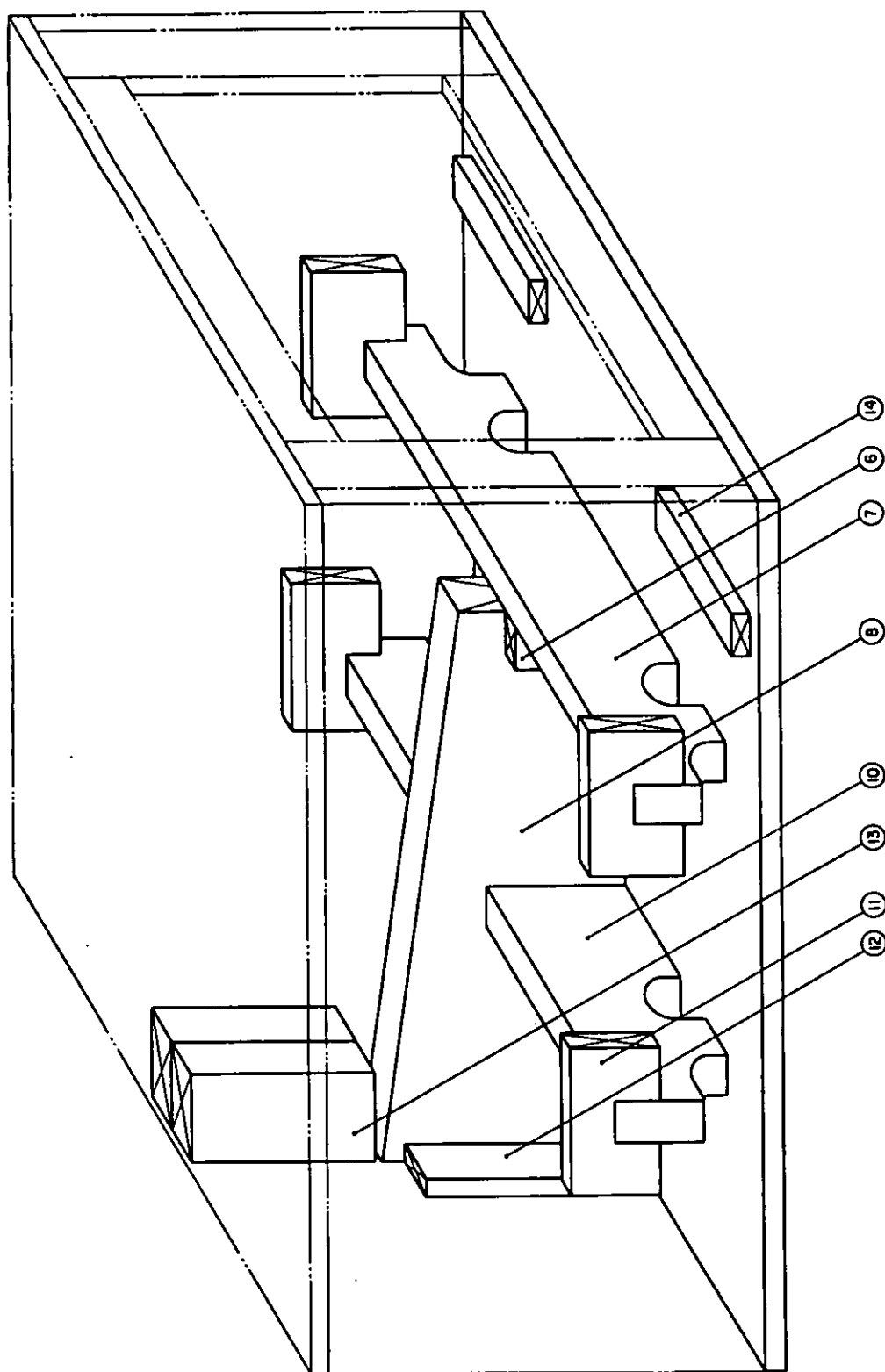


FIGURE 3.—Shipping container assembly.

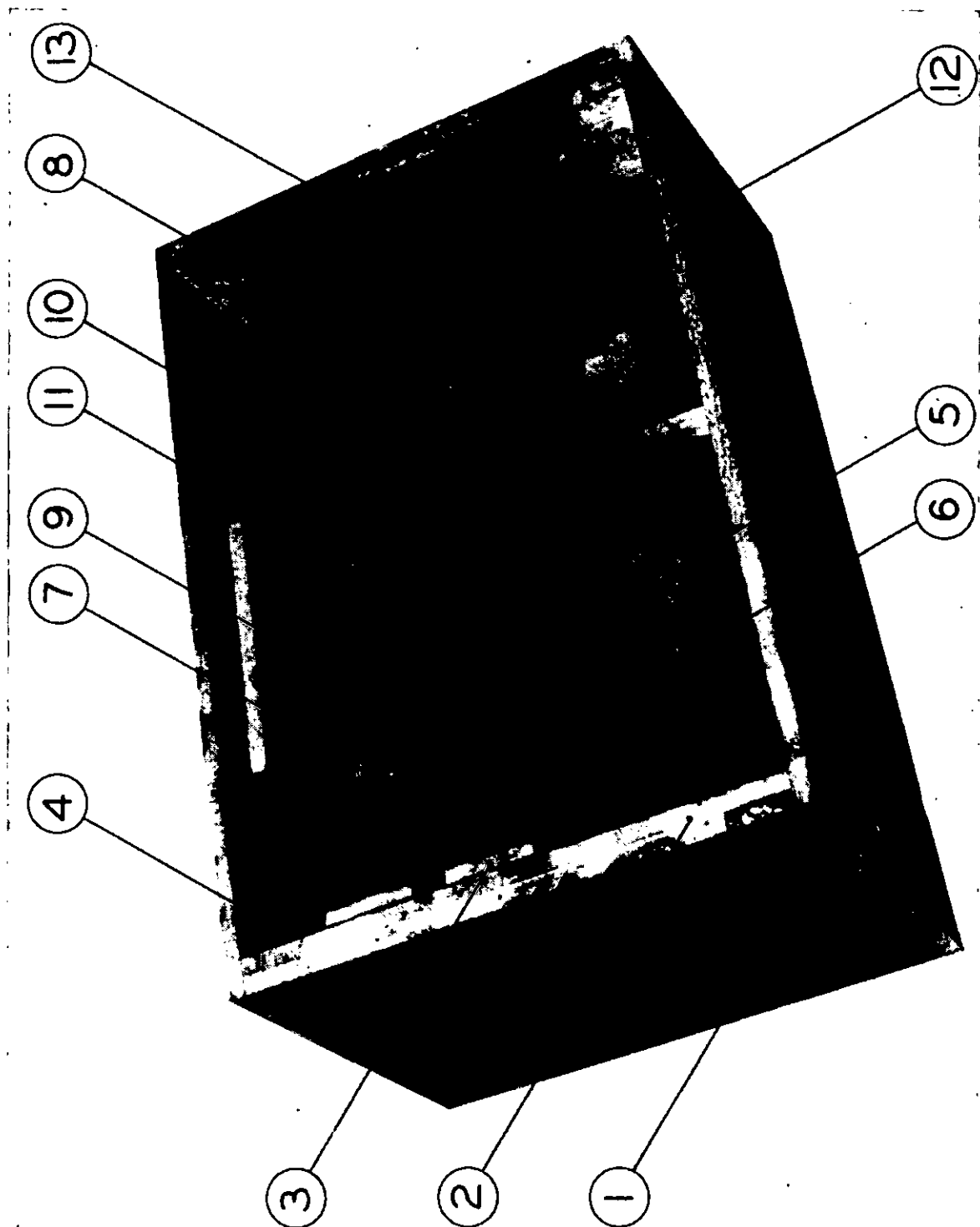


FIGURE 4.—Container empty.

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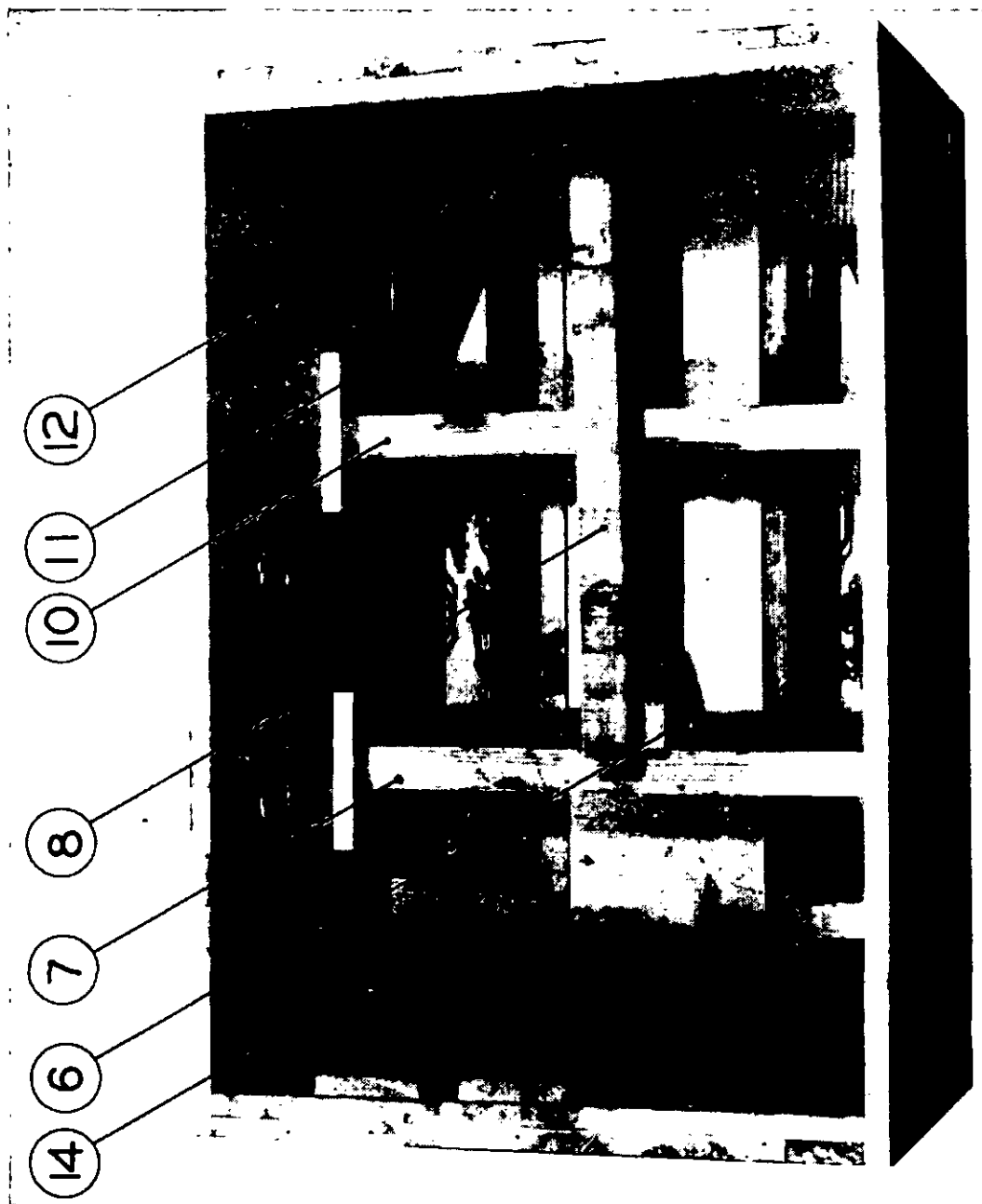


FIGURE 5.—Legs of mount blocked in container.

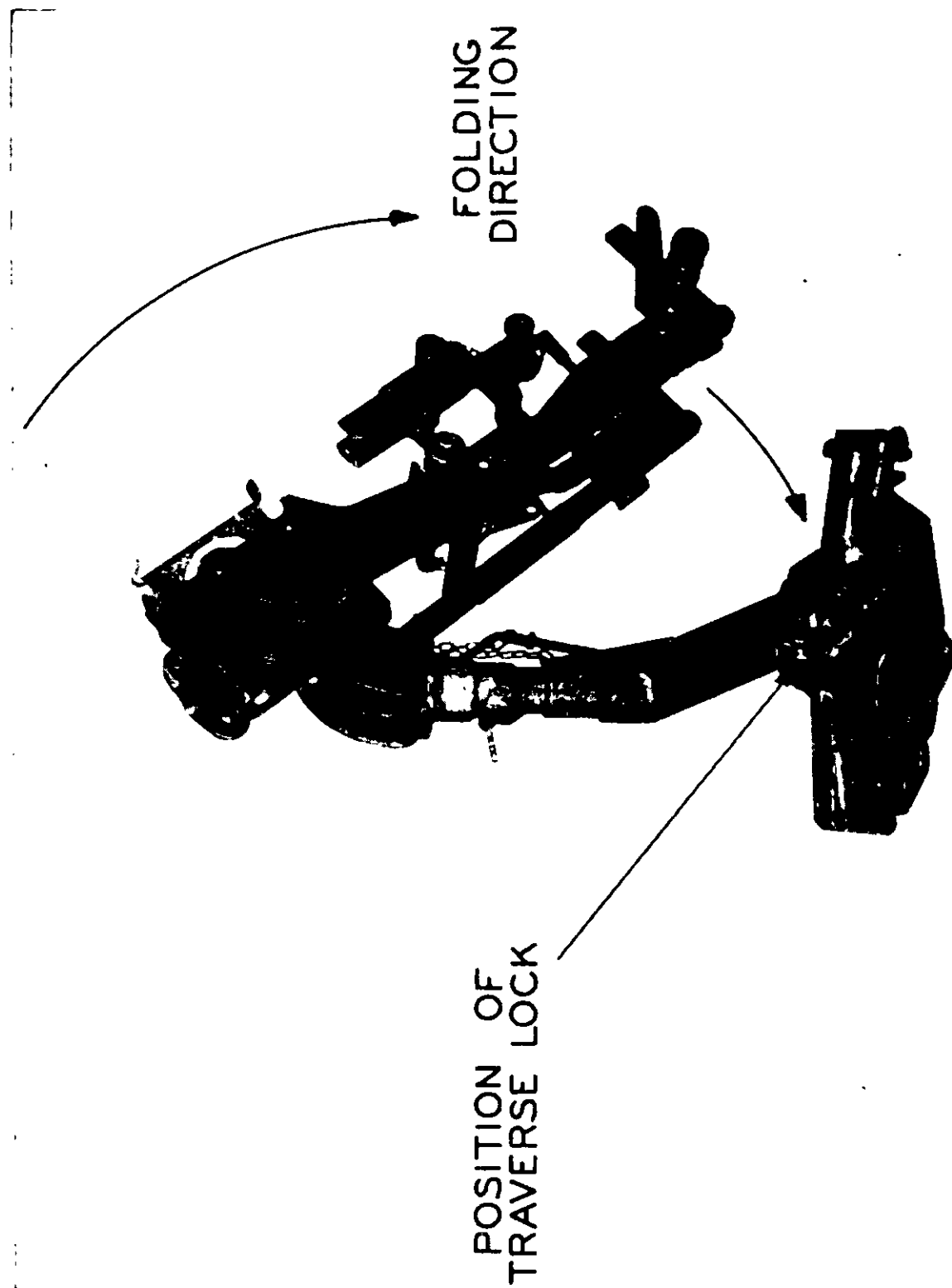


FIGURE 6.—Folding of mount prior to packing.

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FIGURE 7.—Container with contents unwrapped.

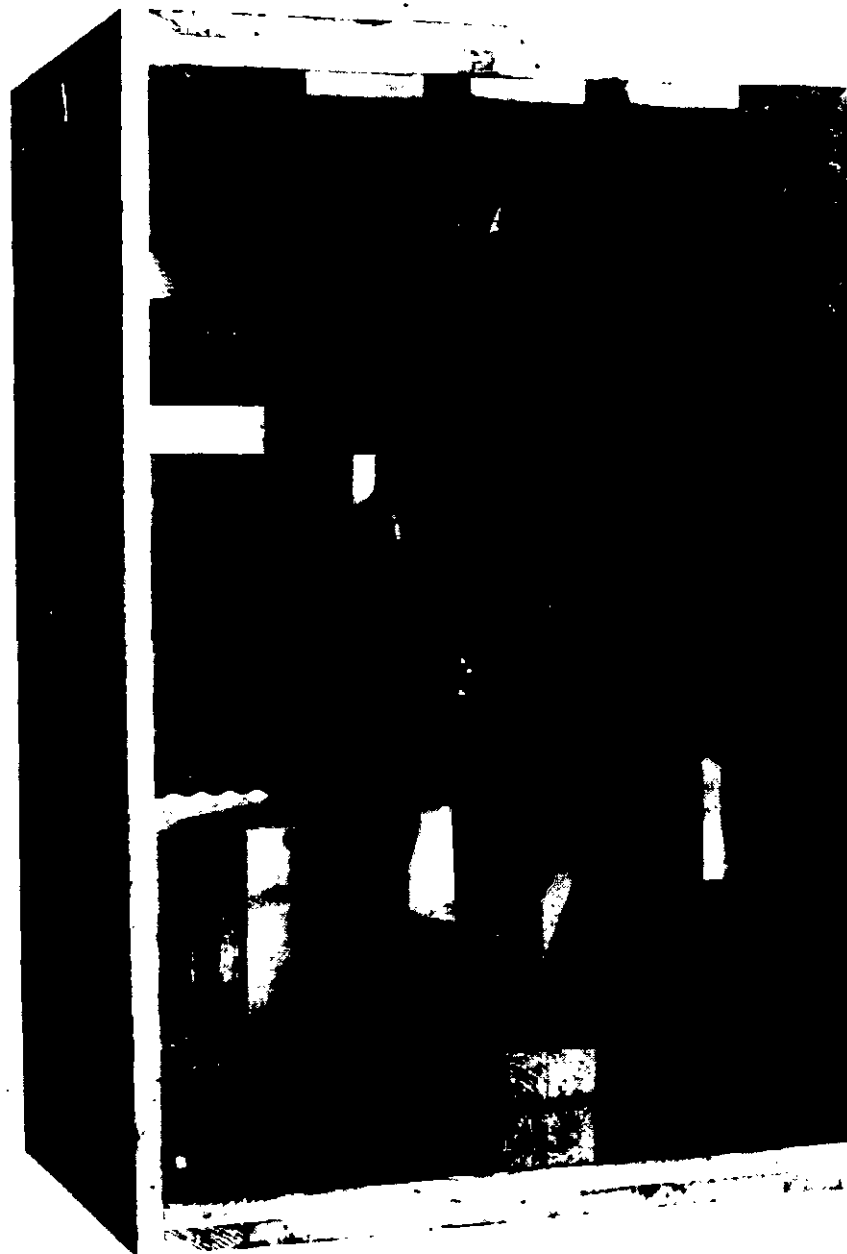
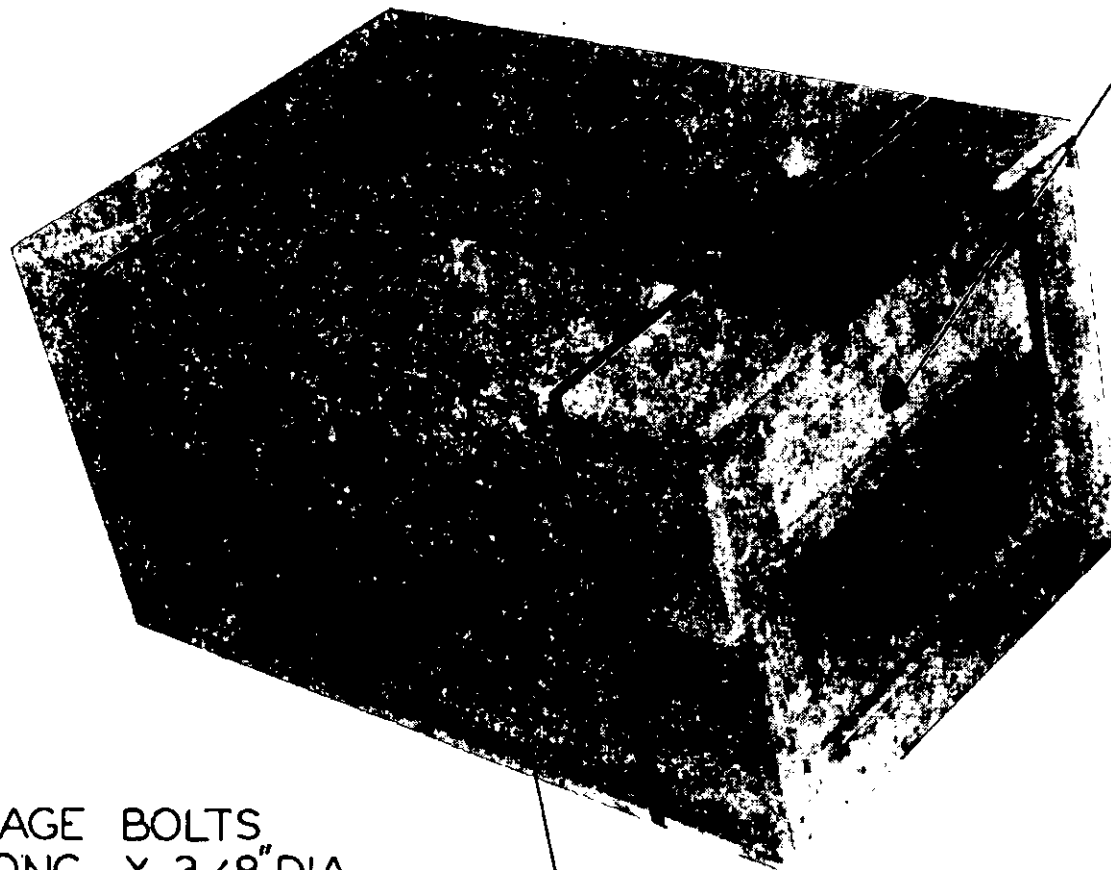


FIGURE 8.—Container with contents wrapped.

3 SQ OR HEX HEAD BOLTS
3-3/4" LONG X 1/2" DIA
WITH NUTS AND WASHERS



4 CARRIAGE BOLTS
2-1/2" LONG X 3/8" DIA
WITH NUTS AND WASHERS

FIGURE 9.—Container assembled.