# BUILDING TERMINALS—MECHANICAL PROTECTION

# DESCRIPTION AND INSTALLATION

CONTENTS PAGE



## 1. GENERAL

1.01 This section covers the description and installation of cable terminal sections for enclosing building terminals and/or cable splices where mechanical protection is required.

1.02 This section is reissued to include information on 3A- and 4A-type cable terminal sections and the 115C1 and 115D1 apparatus boxes. The 115B1 apparatus box is rated Mfr Disc. Revision arrows are used to emphasize the more significant changes.

## 2. DESCRIPTION

### GA- AND GC-TYPE CABLE TERMINAL BOXES

**2.01** The GA- and GC-type cable terminal boxes are sheet metal housings consisting of a hinged cover, knockouts in each end for installation of cables or wires, a No. 8A distributing ring, and screws for mounting terminal blocks.

**2.02** The GA- and GC-type boxes are available in a variety of sizes and are designed primarily to accommodate 2A-type terminal blocks.

**2.03** The GA-type cable terminal box is shown in Fig. 1. The dimensions are listed in Table A.

TABLE A

DIMENSIONS OF GA-TYPE CABLE TERMINAL BOX

| CABLE TERMINAL BOX | HEIGHT (INCHES) | WIDTH (INCHES) | DEPTH (INCHES) |
|---|---|---|---|
| GA11 | 10-3/16 | 4-1/2 | 2-9/16 |
| GA16 | 13-5/16 | 4-1/2 | 2-9/16 |
| GA26 | 19-9/16 | 4-1/2 | 2-9/16 |

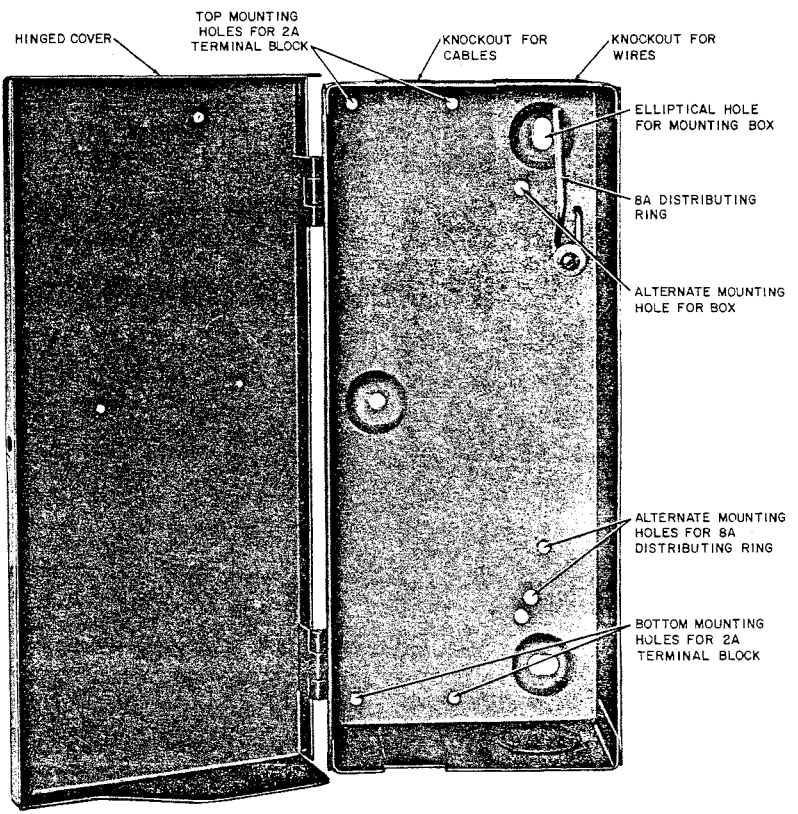


Fig. 1—GA-Type Cable Terminal Box

**2.04** The GC-type cable terminal box is shown in Fig. 2. The dimensions are listed in Table B.

TABLE B

DIMENSIONS OF GC-TYPE CABLE TERMINAL BOX

| CABLE TERMINAL BOX | HEIGHT (INCHES) | WIDTH (INCHES) | DEPTH (INCHES) |
|---|---|---|---|
| GC52 | 21 | 8-3/16 | 2-1/2 |
| GC102 | 21 | 11-15/16 | 2-1/2 |

## H-TYPE CABLE TERMINAL SECTION

**2.05** The H-type cable terminal sections are sheet metal housings consisting of a lift-out type door and top and bottom assemblies with an identical arrangement of knockouts for the entering cables and wires.

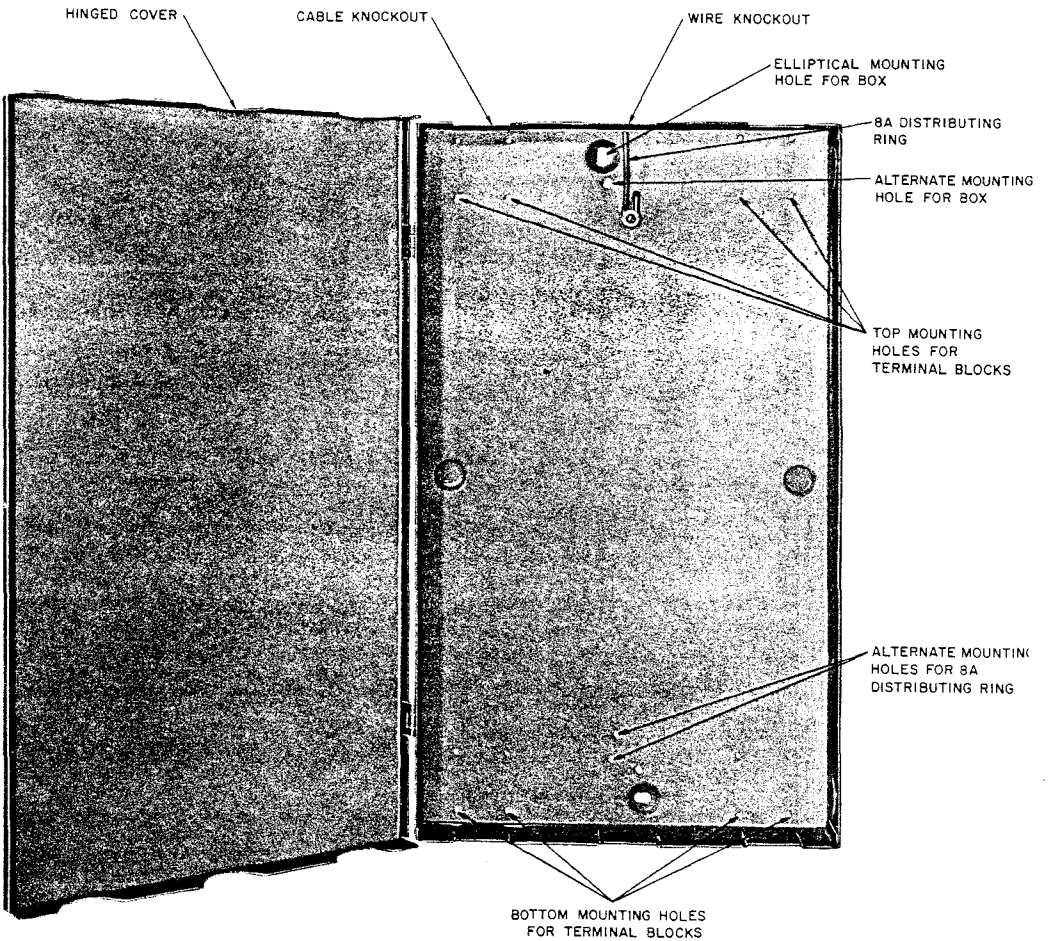


**Fig. 2—GC-Type Cable Terminal Box**

**2.06** The H-type terminal sections are shipped unassembled and must be assembled as shown in Fig. 3.

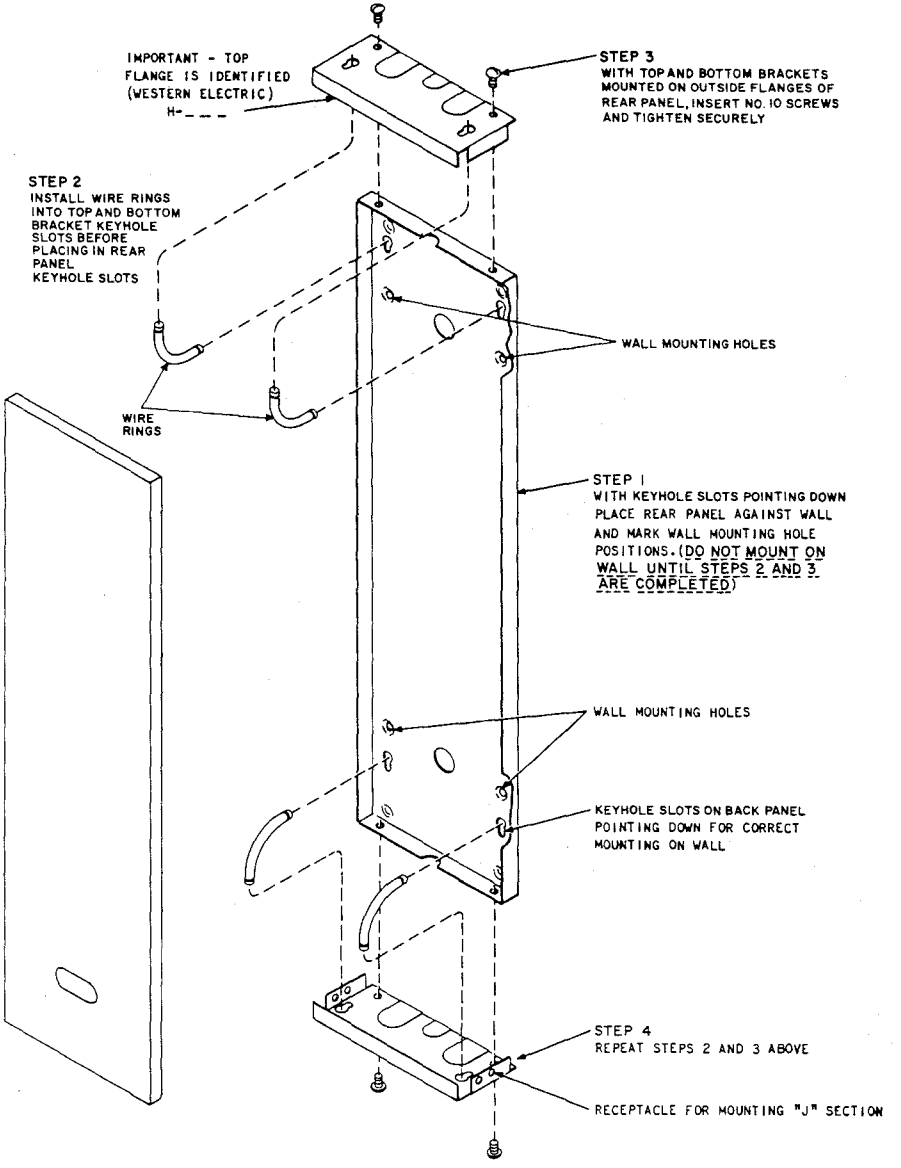


**Fig. 3—Assembly of H-Type Terminal Section**

**2.07** The H-type cable terminal sections shown in Fig. 4, 5, and 6 are available in three sizes. The dimensions of the sections are listed in Table C. Same size H-type cable terminal sections can be joined to provide any width enclosure.

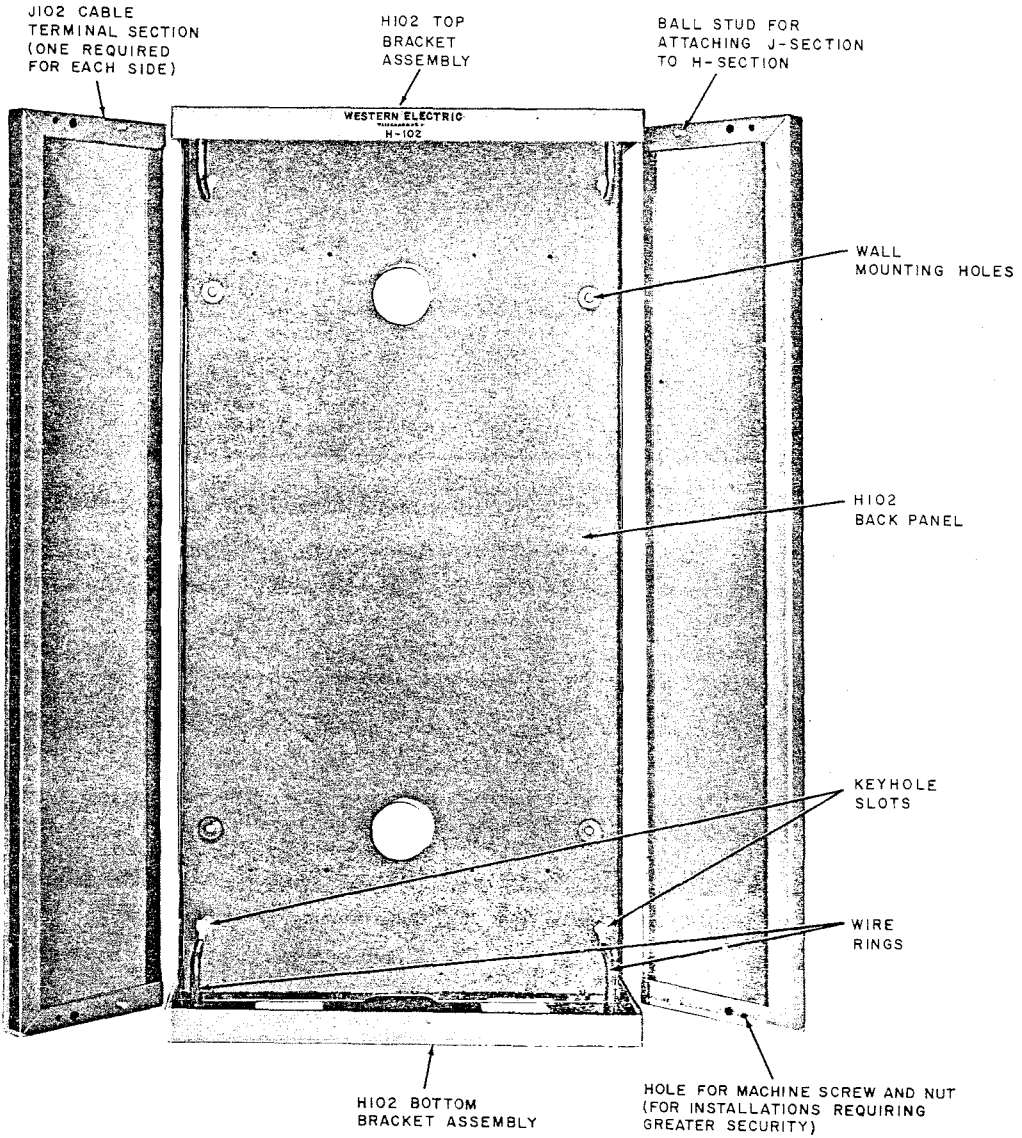


**Fig. 4—H102 Cable Terminal Section With J102 Cable Terminal Section Installed (Lift-Out Type Door Omitted for Clarity)**

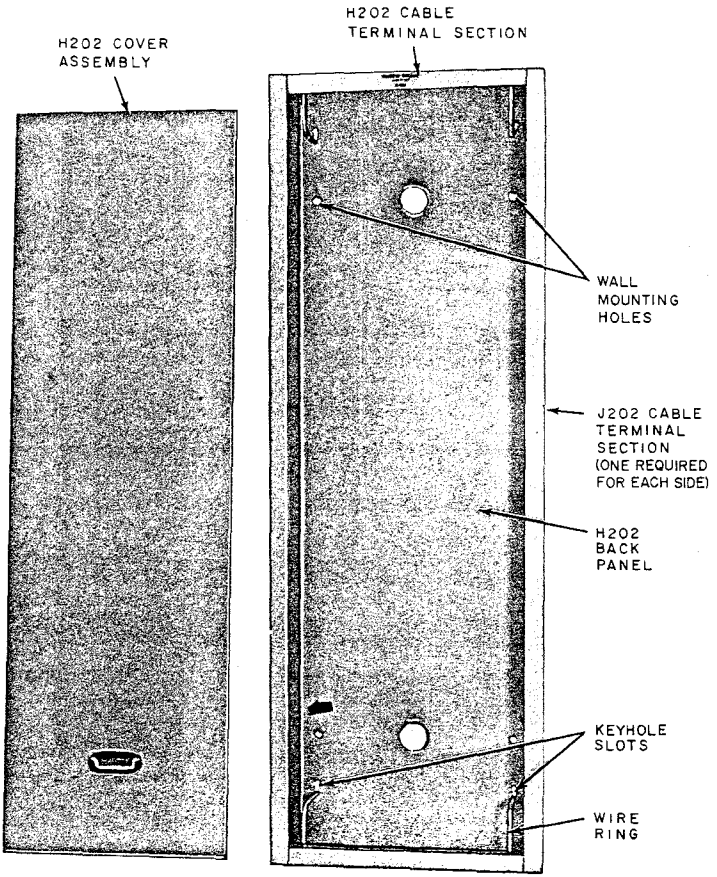


Fig. 5—H202 Cable Terminal Section With J202 Cable Terminal Section Installed

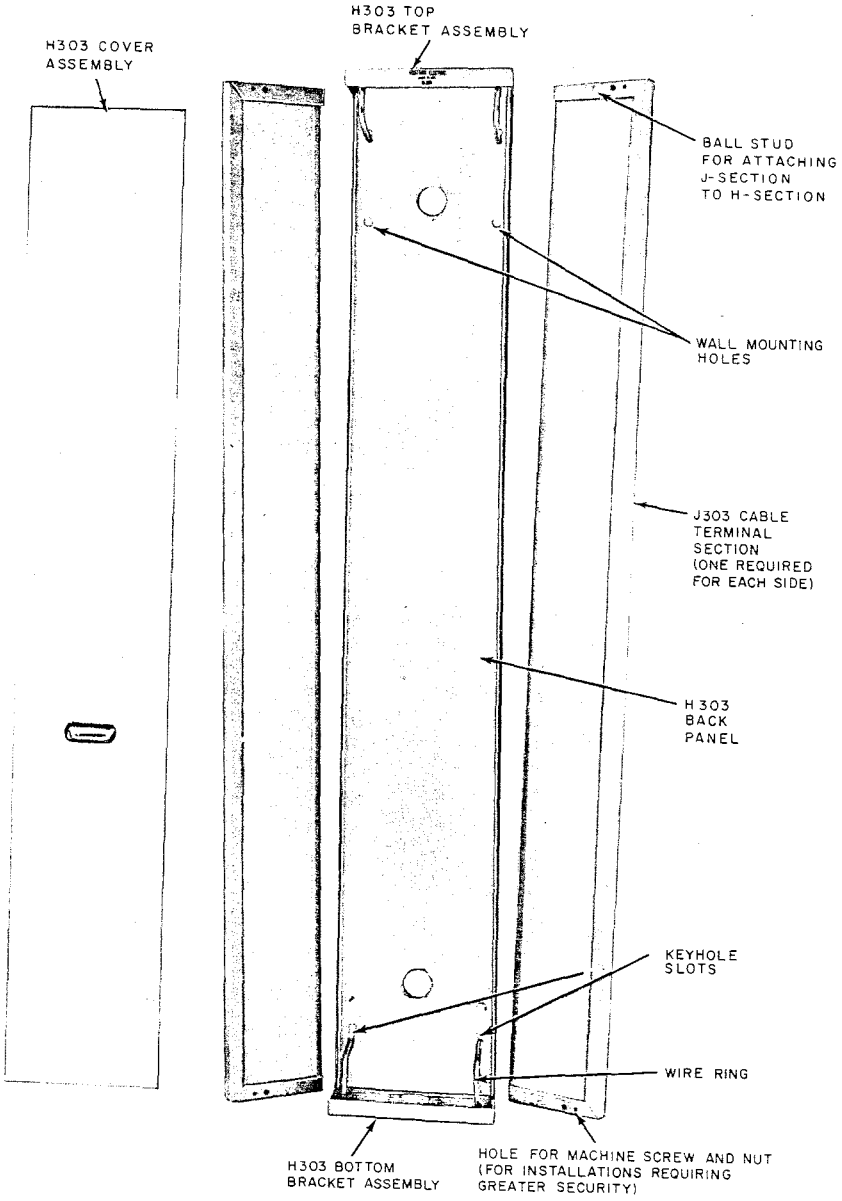


**Fig. 6—H303 Cable Terminal Section With J303 Cable Terminal Section**

TABLE C

DIMENSIONS OF H-TYPE CABLE TERMINAL SECTION

| H CABLE TERMINAL SECTION | HEIGHT (INCHES) | WIDTH (INCHES) | DEPTH (INCHES) |
|---|---|---|---|
| H102 | 29-1/8 | 14-1/2 | 5-13/16 |
| H202 | 49-7/8 | 14-1/2 | 5-13/16 |
| H303 | 68 | 10-1/2 | 6-11/16 |

**2.08** Covers for the H-type cable terminal sections are provided with a recessed handle for easy installation and removal. The covers are ordered as follows:

FOR CABLE TERMINAL SECTION_____COVER (CODES)

H102 Cover, 841682065 H102

H202 Cover, 841682073 H202

H303 Cover, 841682081 H303

**2.09** The J-type cable terminal section is a sheet metal section used to close one end of a single or multiple installation of H sections. These J sections are available in three sizes corresponding to those of the H section. The J sections are equipped with ball stud fasteners that snap into mating receptacles of the H-section. If greater security is required, the J section may be fastened to the mating H-section using machine screws and nuts provided. The J-type cable terminal sections installed on their corresponding H-type cable terminal sections are shown in Fig. 4, 5, and 6.

*Note:* Redesigned J-type cable terminal sections may be installed on early H-type cable terminal sections by removing ball stud fasteners and aligning sections for screw and nut assembly.

## 1A1 AND 2A1 CABLE TERMINAL SECTIONS

**2.10** The 1A1 cable terminal section (Fig. 7) is constructed of sheet metal and has an olive-green baked enamel finish. The 1A1 section is provided with a removable cover, knockouts in the top and bottom for cable and wire entrances, eight screws for mounting terminal blocks, and six screws for attaching the 2A1 cable terminal section to the 1A1 cable terminal section. The 1A1 cable terminal section is 23-11/16 inches high, 10-1/4 inches wide, and 2-11/16 inches deep. The 1A1 cable terminal sections can be joined to provide any width closure.

**2.11** The 2A1 cable terminal section is a sheet metal section used to enclose one end of a single or multiple installation of 1A1 sections. The 2A1 cable terminal section installed on a 1A1 cable terminal section is shown in Fig. 7.

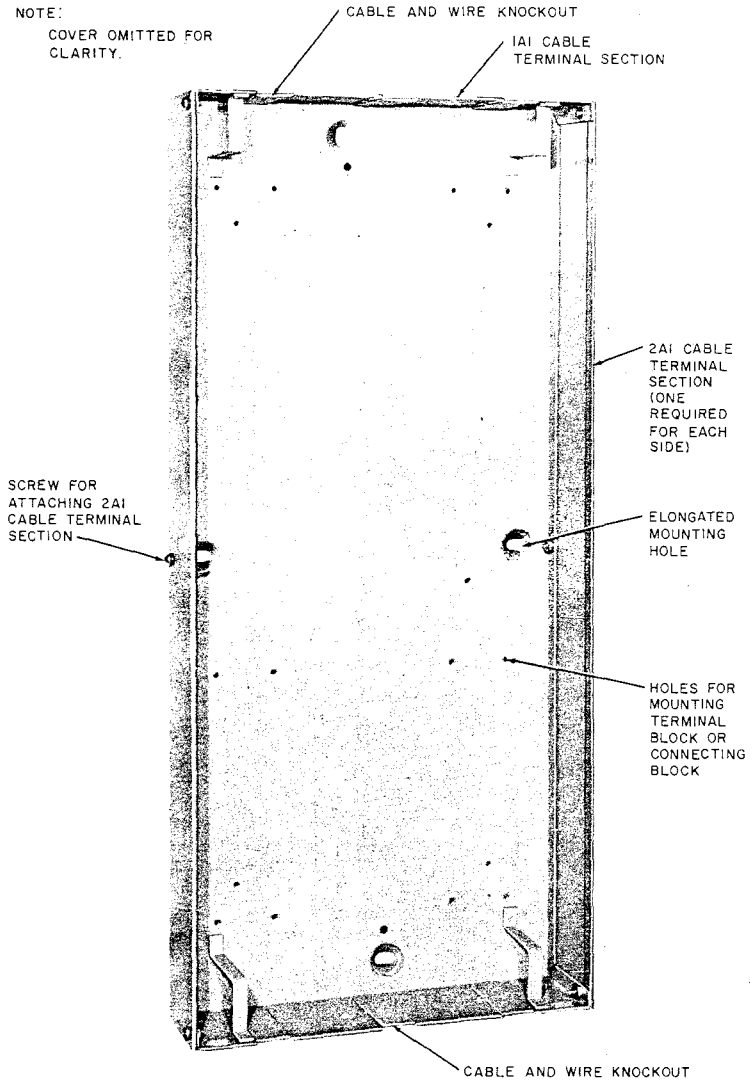


**Fig. 7—1A1 Cable Terminal Section With Two 2A1 Cable Terminal Sections Installed**

### 115-TYPE APPARATUS BOX

**2.12** The 115-type apparatus box (Fig. 8) consists of a light olive metal housing and snap-on cover which is reversible to permit opening from either the top or bottom of the housing. This provides greater flexibility of arrangement in space restricted locations. Distributing rings and hardware are provided for mounting connecting blocks.

### ▶3A-TYPE CABLE TERMINAL SECTIONS

**2.13** The 3A-type cable terminal section (Fig. 9) is a preassembled housing consisting of a metallic top and bottom bolted to a aluminum foil covered plywood backboard. A lift-out type door is furnished with the housing. The 3A-type cable terminal sections are available in two sizes as listed in Table D.

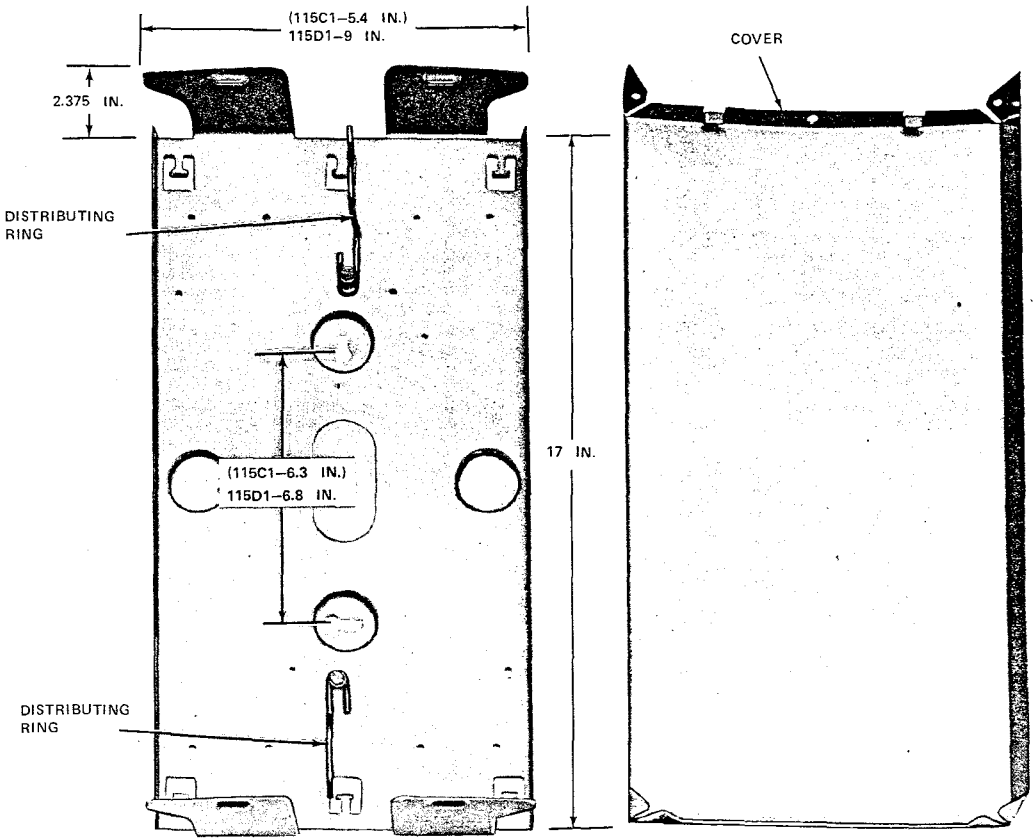


Fig. 8—115-Type Apparatus Box

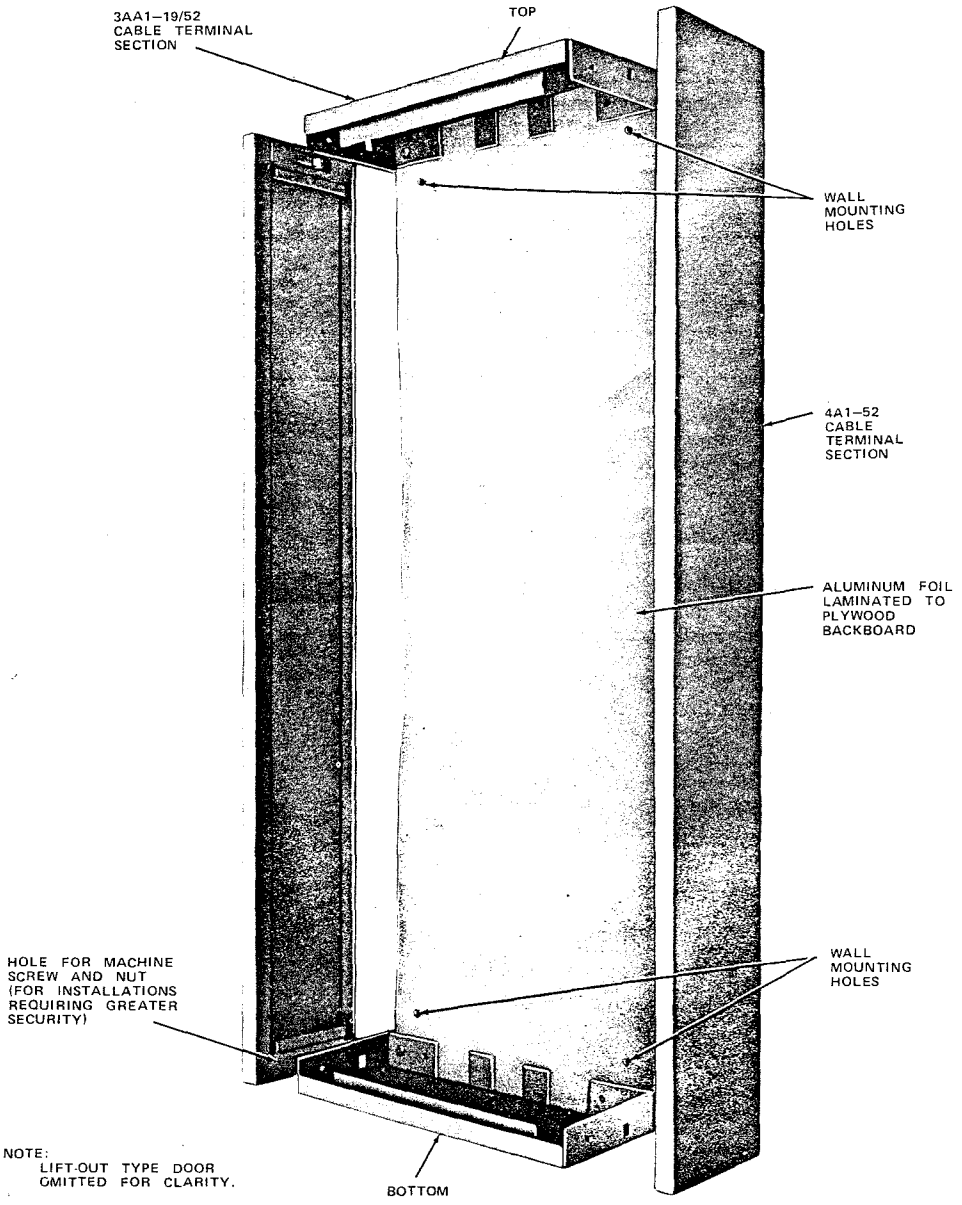


**Fig. 9—3AA1-Type Cable Terminal Section**

TABLE D

DIMENSIONS OF 3A- AND 4A-TYPE
CABLE TERMINAL SECTIONS

| TERMINAL SECTION | EXTERIOR DIMENSIONS (INCHES) | | | INTERIOR DIMENSIONS (INCHES) | | |
|---|---|---|---|---|---|---|
| | HEIGTH | WIDTH | DEPTH | HEIGTH | WIDTH | DEPTH |
| 3AA1-19/52 | 52 | 19-1/2 | 6-1/2 | 48 | 19-1/2 | 5 |
| 3AA1-19/72 | 72 | 19-1/2 | 6-1/2 | 68-1/2 | 19-1/2 | 5 |
| 4A1-52 | 52 | 1 | 6-1/2 | — | — | — |
| 4A1-72 | 72 | 1 | 6-1/2 | — | — | — |

**2.14** Two 4A-type cable terminal sections (Fig. 9) (ordered separately) are required to close the ends of one 3A-type section or a group of sections.

**2.15** Matching knockouts for entering cables and wires are provided in the top and bottom of the 3A-type cable terminal section. A ground bracket which will accommodate three ground wires is also provided on the top and bottom of the section. The bottom has a bracket for the lift-out cover to rest on and holes for mounting a lock latch assembly (see paragraph 2.16).

**2.16** The lift-out cover is provided with a knockout for installing a lock kit (ordered separately) when security is desired (see Fig. 10 and 11 and Table E). Install lock kits as outlined in paragraph 4.03.

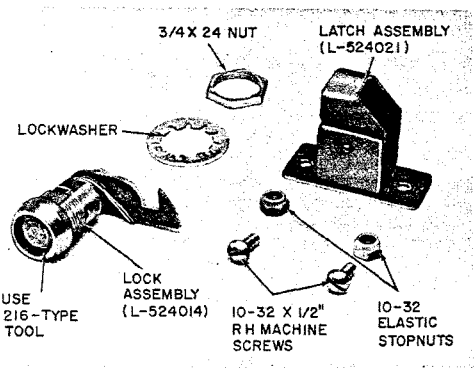


**Fig. 10—D-180991 Lock Kit**

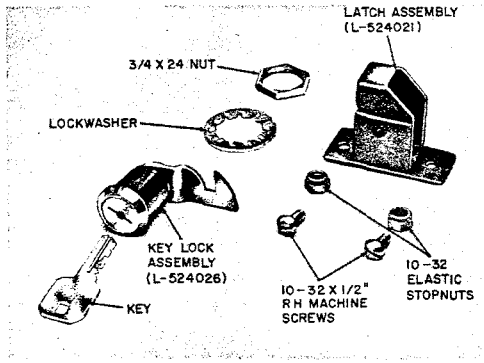


**Fig. 11—D-180992 Lock Kit**

TABLE E

LOCK KIT FOR 3A-TYPE
CABLE TERMINAL SECTIONS

| LOCK KIT | CLASS OF SECURITY | TYPE KEY | FIG. NO. |
|---|---|---|---|
| D-180991 | Light | 216-Type Tool | 10 |
| D-180992 | Medium | Commercial Key | 11 |

## 3. INSTALLATION

**3.01** Install the cable terminal section or 115-type apparatus box on a wall as follows:

(a) Place the housing or template on a wall and mark the location of the mounting holes.

(b) Install the housing on a wood surface as follows:

(1) Drill lead holes in the marked hole location.

(2) Align the holes of the housing with the drilled holes and secure with wood screws.

(c) Install the housing on brick, concrete, or masonry by placing the housing over the marked mounting hole location. Using a masonry drive tool described in Section 081-745-113 and a masonry fastener described in Section 462-030-130, secure the housing to the mounting surface.

***Caution: Eye protection must be worn to protect the eyes when driving fasteners in masonry or similar materials.***

**3.02** ▶Figure 12 shows the typical installation of a 3A- and 4A-type cable terminal section.◀

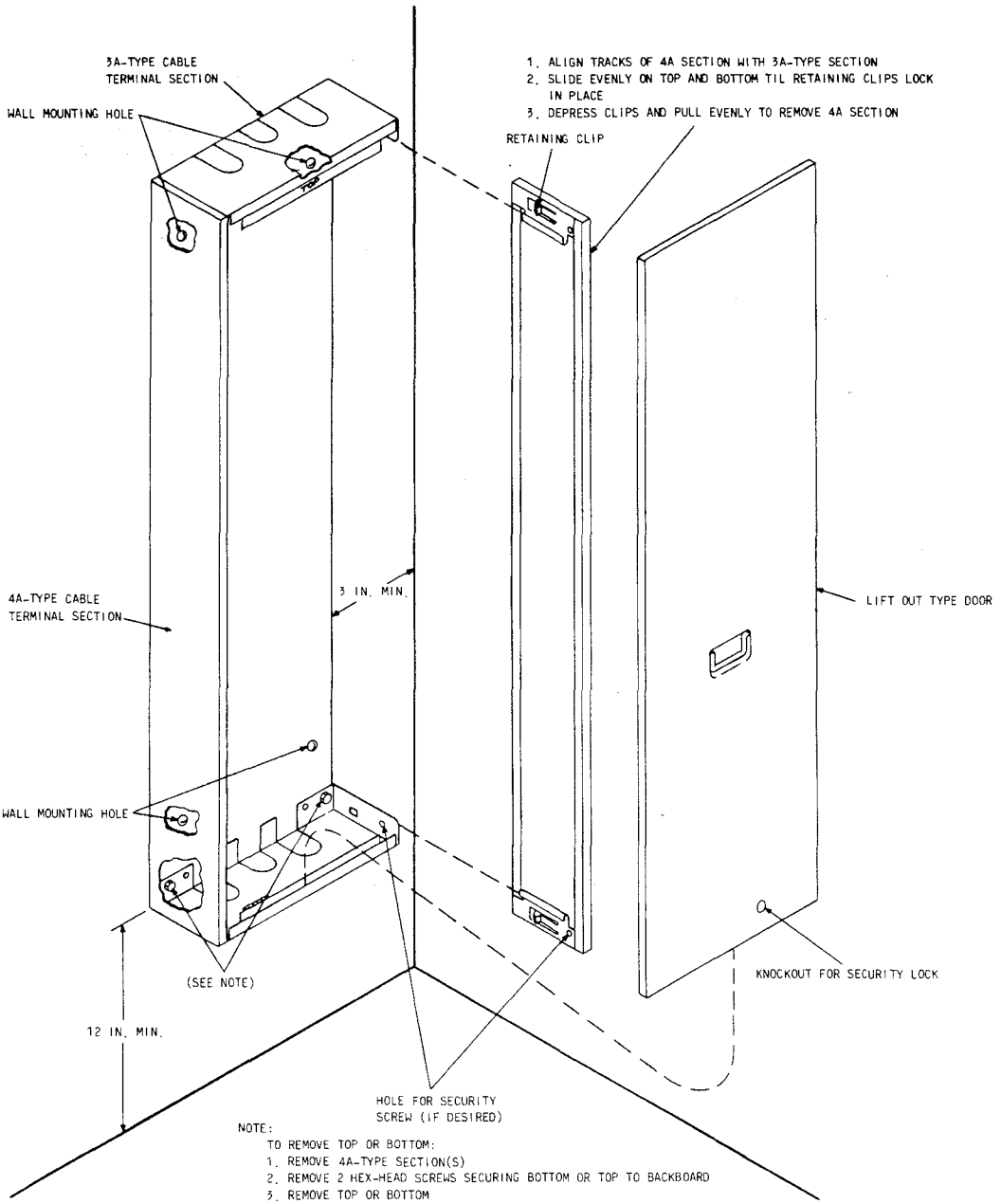


**Fig. 12—Installation of 3A- and 4A-Type Cable Terminal Sections**

**3.03** When two or more H- sections, 1A1 or 3A-type cable terminal sections are to be joined, fasten the sections together using the plated external tooth lockwashers, nuts, and bolts which are furnished. This is to obtain proper bonding between sections.

**3.04** Gussets should be used on multiple installations of H-type cable terminal sections to prevent the top and bottom parts of the sections from sagging thus eliminating the possibility of the lift-out doors falling out. ⧫Gussets are not required in the 3A-type cable terminal sections.⧫

**3.05** The gussets, Comcode No. 841059108, are used for all three sizes of H-type cable terminal sections. They must be ordered separately and are shipped two per package.

**3.06** The gussets must be formed as shown in Fig. 13 to provide the door stops for multiple installations where the distributing rings are removed.

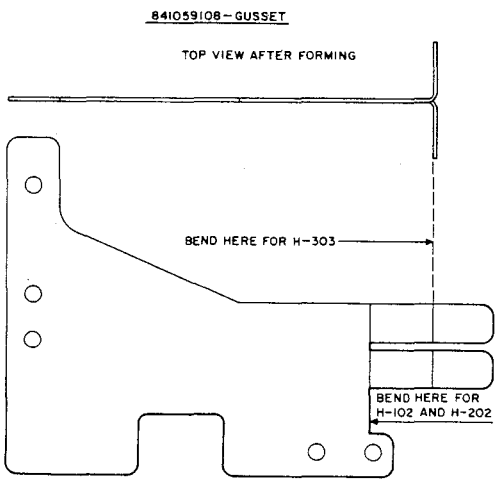


**Fig. 13—Forming Gusset**

**3.07** Where additional distributing rings are required, the 13D, E, and F distributing rings may be ordered separately.

**3.08** Figure 14 shows completed installation of gussets.

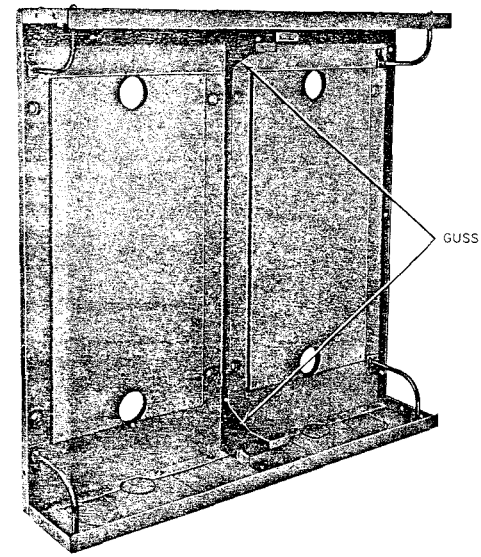


**Fig. 14—Installed Gussets**

## 4. EQUIPPING CABLE TERMINAL SECTIONS

**4.01** ▶See the appropriate section(s) in the 631 Division of the Bell System Practices for installation of specific equipment.◀

**4.02** The 82-type backboards are available to permit mounting of apparatus in the H-type cable terminal section. Figure 15 illustrates the 82-type backboards installed in the H-type cable terminal section. ▶The 3A-type cable terminal sections do not require a backboard.◀

***Note:*** 82-type backboards may be 3/4-inch thick, AD grade, interior plywood or high density particleboard (particleboard used for floor underlayment is ***not*** suitable as density and screw holding power is too low). Drill a 1/8-inch or 9/64-inch pilot hole for a No. 8 or No. 10 type AB sheet metal screw,, respectively, to secure apparatus to particleboard backboard.

▶4.03 ▶Lock kits for the 3A-type cable terminal sections are installed as illustrated Fig. 16.◀

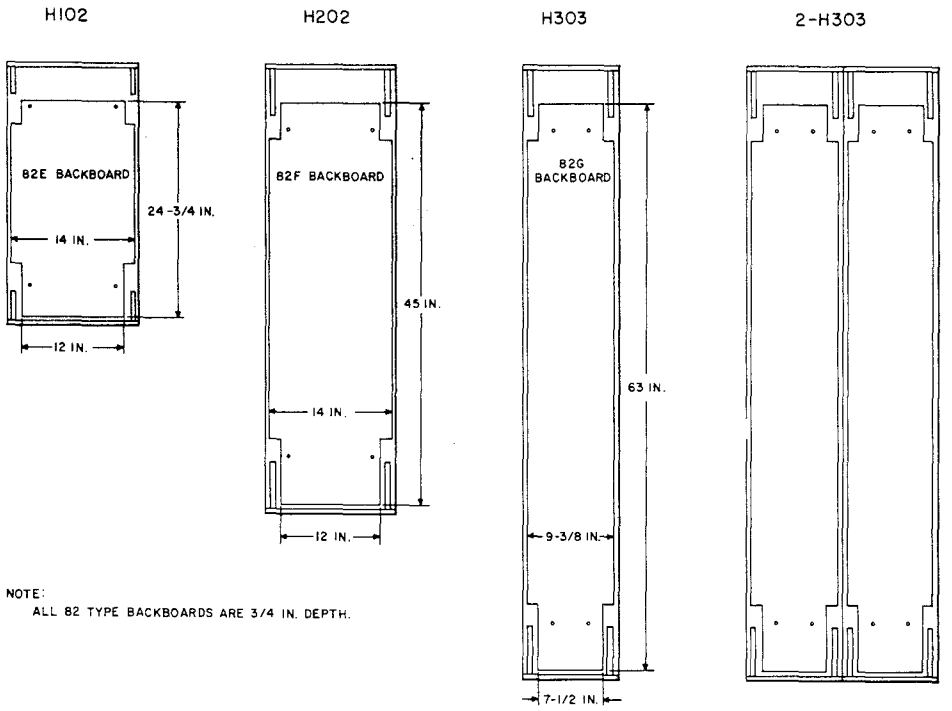


**Fig. 15—Installed Backboards**

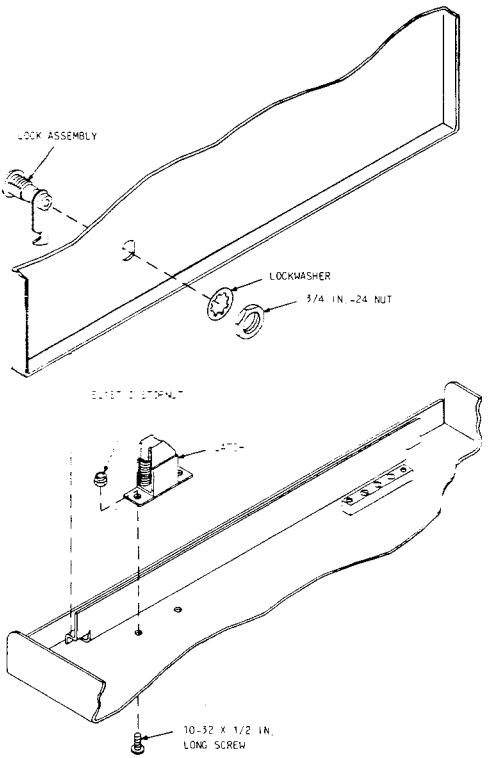


**Fig. 16—Installing Lock Kit**