

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C52.206
Issue 2, 1-25-36
AT&T Co. Standard

TELEPHONE BOOTHS

1, 2, 5, 6 AND 7 TYPES

INSTALLATION

1. GENERAL

1.01 This section treats of the installation of 1, 2, 5, 6 and 7 type (folding door) telephone booths. It does not, however, treat of the installation in or on these booths of coin collectors, subscriber sets, directories, directory shelves, holders and signs, etc., inasmuch as these items are covered in other sections.

1.02 This section is reissued to include information on the 7 type booth and to cover changes in the installation of booth lighting equipment. Information covering the installation of a fan, directory light fixture and package rack, where called for, is also included.

1.03 Information pertaining to materials and parts required in the installation of telephone booths of the types referred to herein is covered in Section C52.205.

2. LOCATING

2.01 Locate booths as specified by service order or attachment thereto. If location specified conflicts with any of the rules outlined hereinafter, notify your supervisor and do not start the installation unless instructed to do so. In general, it will be found desirable to arrange for a preliminary survey of the public telephone agent's premises in order to select the location for the booths and to negotiate with the agent for the clearing of the space selected prior to the delivery of booths.

2.02 Each booth shall be easily accessible to the public and shall be located so that its door is not obstructed by a counter or other fixture. In this connection see that:

(a) Where booth is located so that the end of a counter or other fixture is in front of it, the distance between front of booth and counter or other fixture is at least 18 inches.

(b) Where booth is located so that the public side of a sales counter or other fixture is parallel to the front of it, the distance between front of booth and counter or other fixture is at least 36 inches.

- 2.03 Where practicable, booth shall be located so as to get the greatest amount of light in the booth at all times.
- 2.04 The approach to each booth shall be free from hazards, such as nearby staircase leading down, a trapdoor, etc.
- 2.05 The floor shall be in good condition. If the floor is not in good condition, the public telephone agent should be requested to have the floor repaired before booth is installed.
- 2.06 The location of each booth shall be such as will permit easy access to adjacent wall equipment, such as a fuse box or switch box. Furthermore, the location shall be sufficiently remote from radiators, steam pipes, registers, flushing traps, etc., to prevent probable damage to booth or apparatus from either excessive heat or water. In addition sufficient space should be left over top of booth, if practicable, to permit access for maintenance of booth lighting equipment. If this is not practicable arrangements should be made with the public telephone agent or customer to provide removable panel or similar facility which will permit access to booth lighting equipment.
- 2.07 These booths are intended for use indoors where they will not be exposed to the action of the elements. If booth is to be installed in exposed location, consider the use of a specially designed booth.

3. DIMENSIONS

- 3.01 The dimensions shown in the following tables are overall outside dimensions and include panels and separators.
- 3.02 The height dimension for a booth includes the metal ventilator in booth roof. When booth roof is not equipped with a metal ventilator, subtract $3/8$ inch from its height dimension if a 5 or 6 type booth, and $1/8$ inch if a 1 or 2 type booth. All 7 type booths are equipped with ventilators.

Single Installation—1, 2, 5, 6 and 7 Type Booths

Type of Booth	Overall Width		Depth		Height	
	Feet	Inches	Feet	Inches	Feet	Inches
1	2	6 $\frac{3}{4}$	2	6 $\frac{1}{2}$	7	4 $\frac{3}{8}$
2	2	5	2	6 $\frac{1}{2}$	7	4 $\frac{3}{8}$
5	2	6 $\frac{5}{8}$	2	6 $\frac{1}{2}$	6	11 $\frac{9}{16}$
6	2	6 $\frac{5}{8}$	2	6 $\frac{1}{2}$	6	11 $\frac{9}{16}$
7	3	2 $\frac{3}{4}$	3	$\frac{1}{2}$	7	$\frac{3}{4}$

3.03 The overall width for multiple installations includes two end panels per bank, and the required number of separators. Where a separator is used in place of one of the end panels, on the 5, 6 and 7 type booths subtract 1/8 inch from the overall width dimensions. (Separators for these booths are 3/4 inch thick and panels are 7/8 inch thick.)

Multiple Installations

Number of Units	OVERALL WIDTH					
	1 Type Booths		5 and 6 Type Booths		7 Type Booths	
	Feet	Inches	Feet	Inches	Feet	Inches
2	5	5/8	5	1/4	6	4 1/2
3	7	6 1/2	7	5 7/8	9	6 1/4
4	10	3/8	9	11 1/2	12	8
5	12	6 1/4	12	5 1/8	15	9 3/4
6	15	1/8	14	10 3/4	18	11 1/2
7	17	6	17	4 3/8	22	1 1/4
8	19	11 7/8	19	10	25	3
9	22	5 3/4	22	3 5/8	28	4 3/4
10	24	11 5/8	24	9 1/4	31	6 1/2

4. ASSEMBLING

(a) General

4.01 Booths usually are shipped assembled except when the order specifically states that they are to be shipped unassembled ("knocked down"). When shipped unassembled, screws and other material required for the assembly are in-

cluded in the shipment. Moreover, screw holes required for the assembly are properly aligned so that the booths can be readily assembled in the field. In order to remove or attach end panels to 7 type booths or 5 and 6 type booths equipped with smooth linings it will be necessary to remove corner mouldings to gain access to screw holes. Corner mouldings are snapped on over clips. To remove the moulding insert the edge of a screwdriver between the moulding and the lining and then with a slight forward twist pry the moulding loose. Reinsert screwdriver at different points until moulding is freed from the clips.

(b) Method

4.02 Set each booth on floor so that it is level and does not rock. If the building floor is not level or is not even, block up booth by placing wooden shims under booth floor supports. In placing shims under 5, 6 and 7 type booths, place shims under middle supports also to prevent possible sagging of the booth floor. Setting of booths shall be such that with the booth door closed, top of booth door will be in alignment with booth door frame.

4.03 Setting of booths on floors with a considerable slope, such as ramps, inclined passageways between rooms, etc., should be avoided. When such locations cannot be avoided special arrangements should be made locally to insure that booths will remain stationary and secure.

4.04 If there is a gap of 1/4 inch or more between the booth and the building floor at the front or at any exposed side or the back, seal the space with strips of wood stained to match the finish of the booth.

4.05 In multiple installations, line up booths so that their fronts and tops present a straight line before attempting to screw the booths together. Because of the difference in their heights, 5 and 6 type booths should not be assembled in the same bank with 1 type booths.

4.06 Assemble booths in accordance with the following typical layout. When booths are assembled, the sides of booth units should make contact with the separators or panels along their entire height.

When backs of booths are not exposed, install booths having soft wood backs.

When backs of booths are exposed and good appearance is important, install booths having hard wood backs.

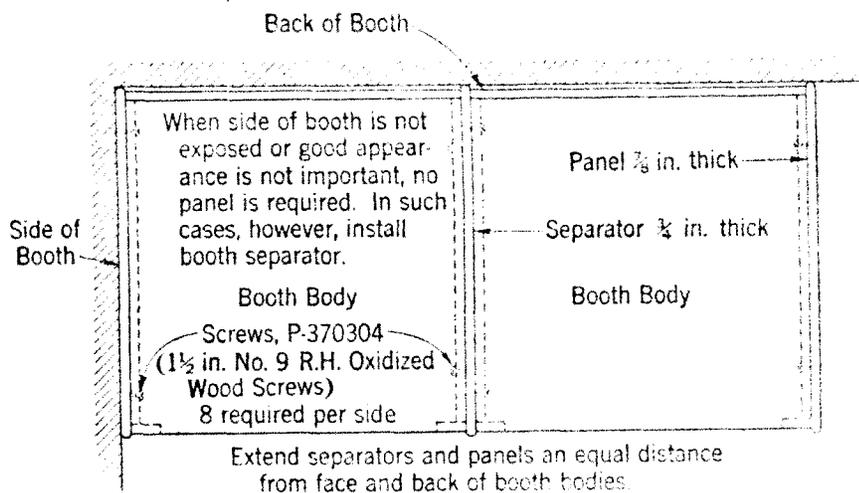


Fig. 1

5. INSTALLATION OF ELECTRIC SERVICE WIRES

(a) General

5.01 Booths equipped with electric lights generally will be ordered for installation at locations where it is found impracticable to get a sufficient amount of light in booth from other sources. In dial districts or in districts definitely assigned for conversion to dial operation where the coin collector will be equipped with a dial, all booths shall be equipped with electric lights.

5.02 To make the booth lighting equipment operative it is necessary to have electric service wires from a lighting circuit extended to the booth lighting equipment. This is usually provided for by the installation of a plug receptacle above the booth from which connection to the booth lighting equipment may be made by flexible cable or cord equipped with a plug. However, the electric service wires may, in some cases, be extended to either a plug fuse cutout or a booth cutout switch located in the booth ceiling. In determining which of the above devices to employ be guided by local regulations covering their use.

5.03 All work in connection with the installation of electric service wires should be provided for by the public telephone agent or customer and should be done by an electrical contractor or other approved electrician. Furthermore,

the work should be in accordance with the rules and regulations of the "National Electric Code" (Rules and Regulations of the National Board of Fire Underwriters) and any supplemental local rules and regulations. Arrangements for the extension of electric service wires should be made when the preliminary survey to determine the location of booths is made. Make-shift or temporary connection of booth lighting equipment to electric lighting circuits shall not be made under any circumstances.

5.04 When electric service wires for booth are connected to knob and tube work, arrangements should also be made to have a ground wire run from a suitable ground to the cover of the outlet box for the plug receptacle to which the booth lighting equipment will be connected.

5.05 To provide slot in booth roof for entrance of flexible cable or cord, cut a 5/8 inch x 1-1/2 inch slot centered in the rear of the booth roof. Where entrance in rear center of booth roof is not practicable, a 3/4 inch notch, cut in either rear corner of the booth roof, will be sufficient, no clearance for booth roof cleat being required. If required, entrance hole in back of booth for electric service wires (armored cable, etc.) should be drilled between roof cleat and ceiling. The exact location for the hole should be such as will permit the wires to be placed in a workmanlike manner. New booth roofs are provided with slots for entrance of flexible cable or cord.

(b) Receptacle for Three-Wire Attachment Plug

5.06 Where local regulations permit, connect booth lighting equipment to a lighting circuit as outlined hereinafter.

5.07 A three-wire flush type plug receptacle with grounding shunt, such as the Hubbell 7189 or approved equivalent, should be installed near and just above the top of booth (approximately seven feet above the floor and within a radius of 24 inches from either rear corner of the top of the booth). If a multiple installation, the receptacle should be located near and just above an end booth where practicable.

5.08 With the Hubbell 7189 receptacle or approved equivalent, grounding is accomplished by a shunt from the unpaired terminal to the outlet box through the supporting lugs. This type of receptacle is shown below:

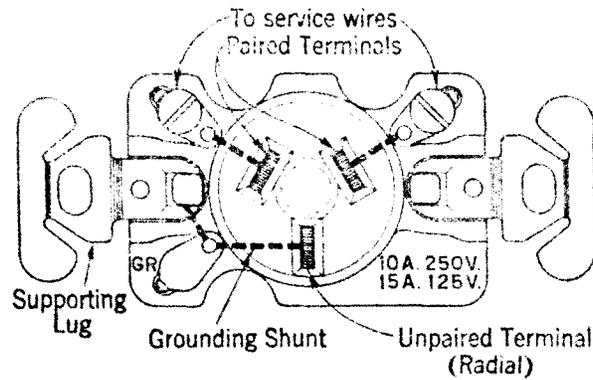
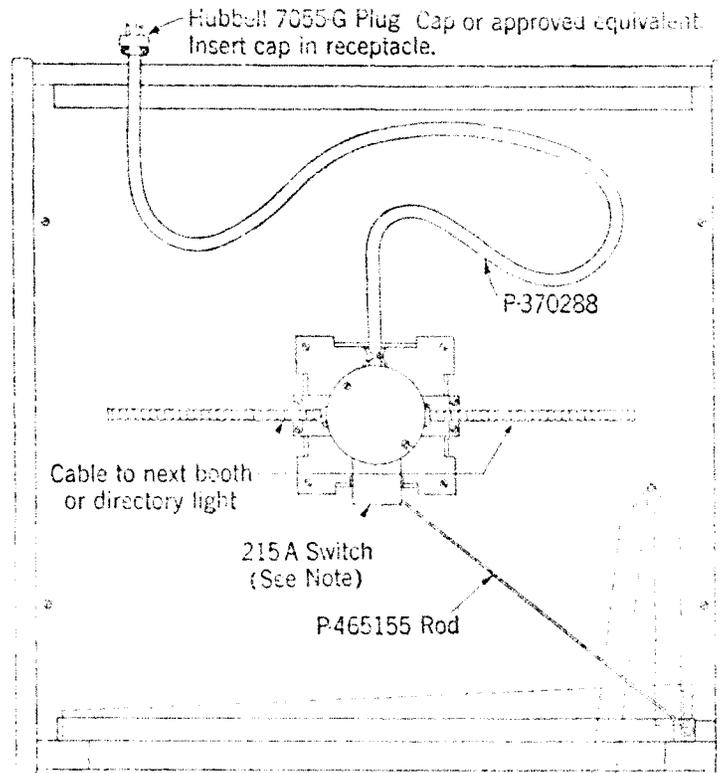


Fig. 2—Three-Wire Flush Type Receptacle with Grounding Shunt

5.09 The installation of the flexible cord between plug receptacle and lamp receptacle of booth is indicated below:



Note: Booth may be equipped with 204 A switch.

Fig. 3

(c) Receptacle for Two-Wire Attachment Plug

5.10 Where required by local regulations, connect booth lighting equipment to a lighting circuit as outlined below.

5.11 A parallel blade, single (not duplex), flush type receptacle should be installed at the booth location approximately 92 inches above the floor and within a radius of 24 inches from either rear corner of the top of the booth. Where it is definitely known that stepless (5, 6 and 7) type booths will be installed, a slightly better appearance may be obtained if the receptacle is located 87 inches above the floor instead of 92. This type of receptacle is shown in Fig. 4.

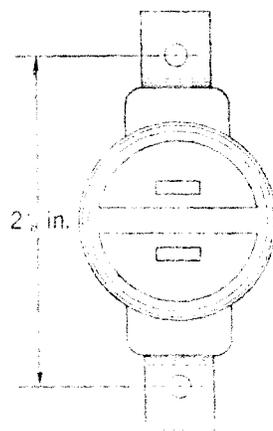
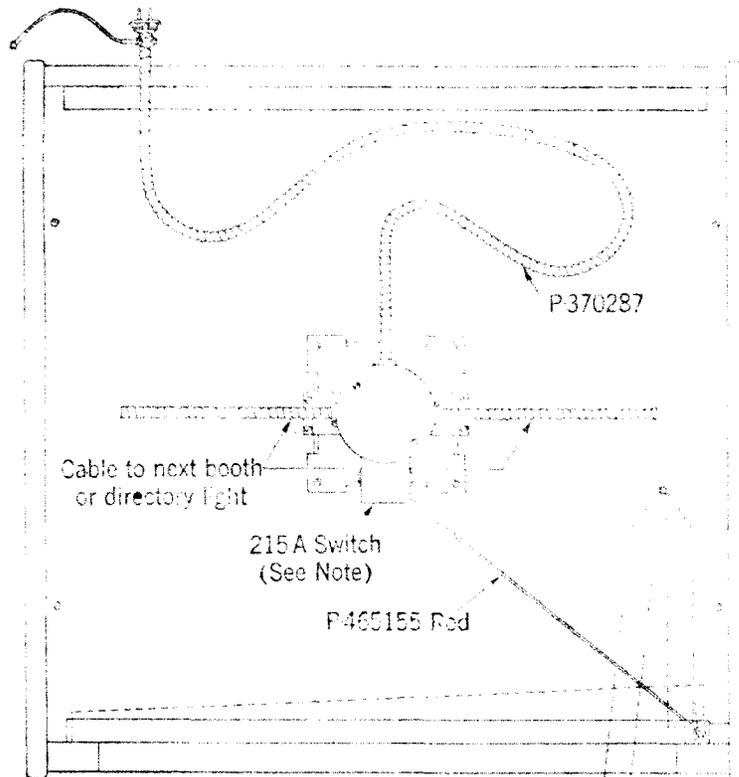


Fig. 4—Parallel Blade, Single, Flush Type Receptacle

5.12 Connection between this receptacle and the booth lighting equipment is made with a two-conductor armored flexible cable, one end of which is attached to the receptacle box of the 1 type light fixture and the plug end of which is secured in the receptacle by means of a locking ring and locking type plug. Grounding of the receptacle box on the booth is accomplished by terminating the ground wire jumper attached to the armor of the cable under one of the attachment screws of the locking ring. Figs. 5 and 6 show the typical arrangements.



Note: Booth may be equipped with 204 A switch.

Fig. 5

5.13 If a multiple installation, the plug receptacle should be located near an end booth, if practicable. Booth lighting equipment of booths in a bank will be connected together by interconnecting cable (P-370283 or P-370300). In general, a single plug receptacle may be used to supply electric lighting current to a bank of booths not exceeding ten in number. However, local regulations may require the installation of an additional plug receptacle where a multiple installation consists of more than six booths.

5.14 To connect booth armored cable assembly to the plug receptacle (Fig. 6), remove the screws in the receptacle cover plate and attach the locking ring to the receptacle with the two longer screws furnished with the ring. To avoid difficulty remove and substitute the screws one at a time. Terminate the ground wire jumper under one of the screws.

5.15 Insert plug in receptacle. Test booth lamp socket for polarity as outlined in Part 8. Reverse plug, if necessary.

5.16 Lock plug in receptacle by turning the lugs on the locking ring until they slide over the plug flange.

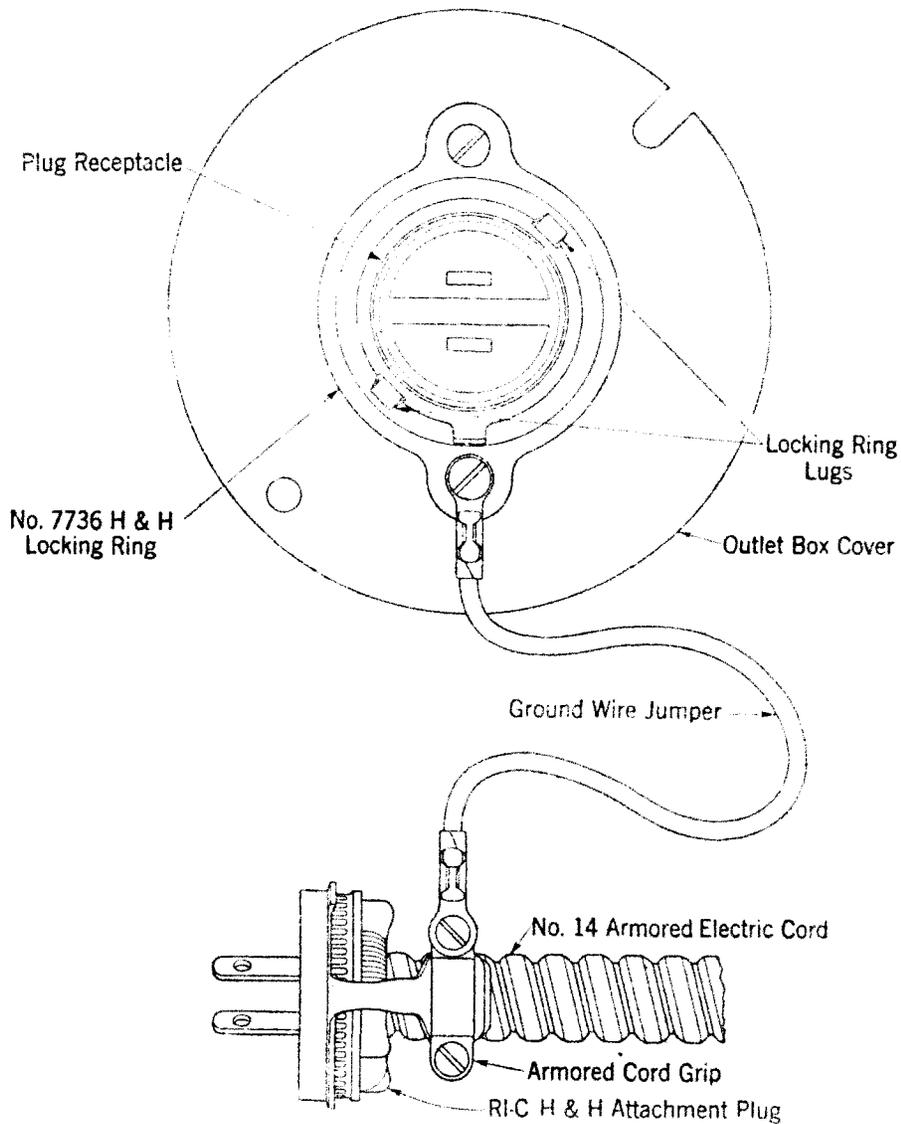


Fig. 6

5.17 The plug receptacle arrangements described in the foregoing paragraphs provide a ready means for temporarily opening the lighting circuit, which should be done whenever it is necessary to work on booth lighting equipment.

5.18 In some areas, local practices may specify that each booth in a bank be equipped with a flexible cord and plug so that the lighting circuits of the individual booth may be temporarily opened.

(d) Plug Fuse Cutout

5.19 Where required by local regulations, plug fuse cutout may be installed as shown below.

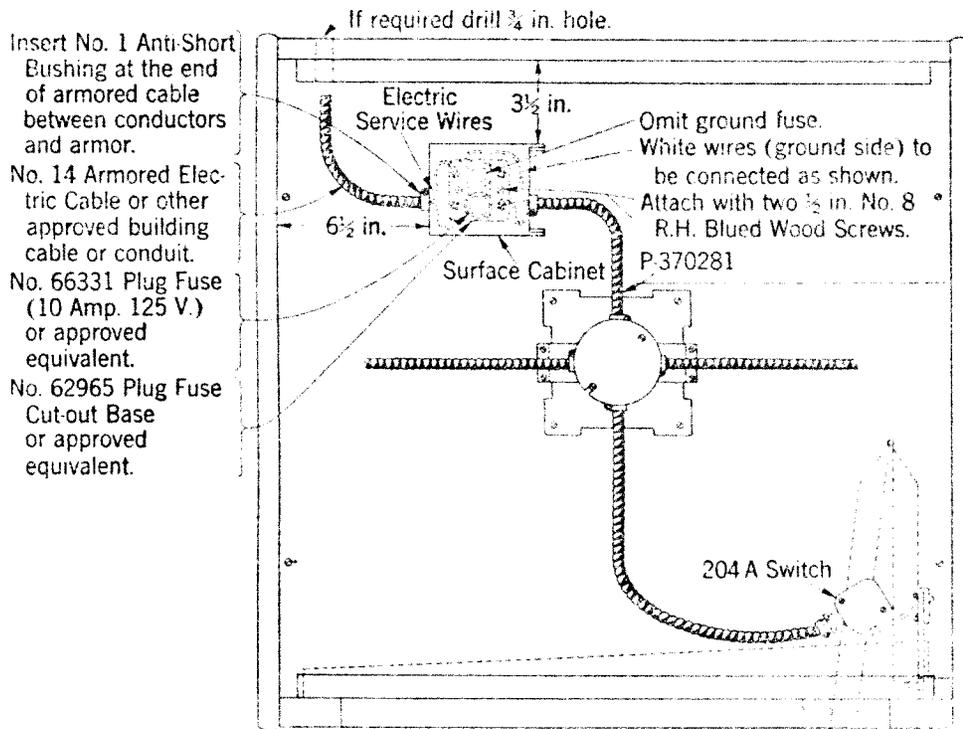


Fig. 7

(e) Booth Cutout Switch

5.20 Where required by local regulations, booth cutout switch may be installed as shown below.

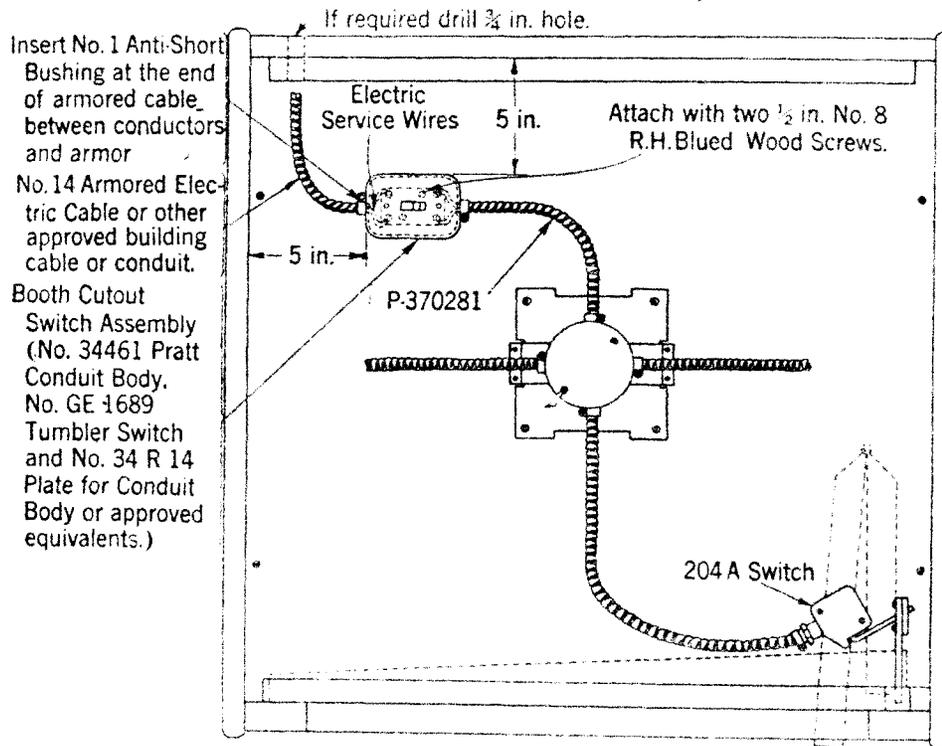


Fig. 8

(f) Connection of Electric Service Wires to Plug Fuse Cut-out or Booth Cutout Switch

5.21 Since the electric service wires are to be connected by an electrical contractor or other approved electrician, proceed as follows:

- (a) Indicate which booth to enter and point of entrance. If a multiple installation, enter through an end booth where practicable. Where required, drill hole for entering flexible cable or notch booth roof as outlined in Paragraph 5.05.
- (b) Where practicable, arrange to coordinate the installation of the booth and booth wiring with the connection of the electric service wires to the cutout by the electrician. When the electrician has connected the service wires, test at the lamp socket for proper polarity as outlined in Part 8. If necessary, request electrician to reverse

service wires. Where this is not practicable, install booth and booth wiring and when the electric service wires have been subsequently connected, it will be necessary to revisit the installation to test for proper polarity of the booth lighting equipment as outlined in Part 8.

6. LAMP RECEPTACLE CONNECTIONS

6.01 Make connections at lamp receptacle as shown below:

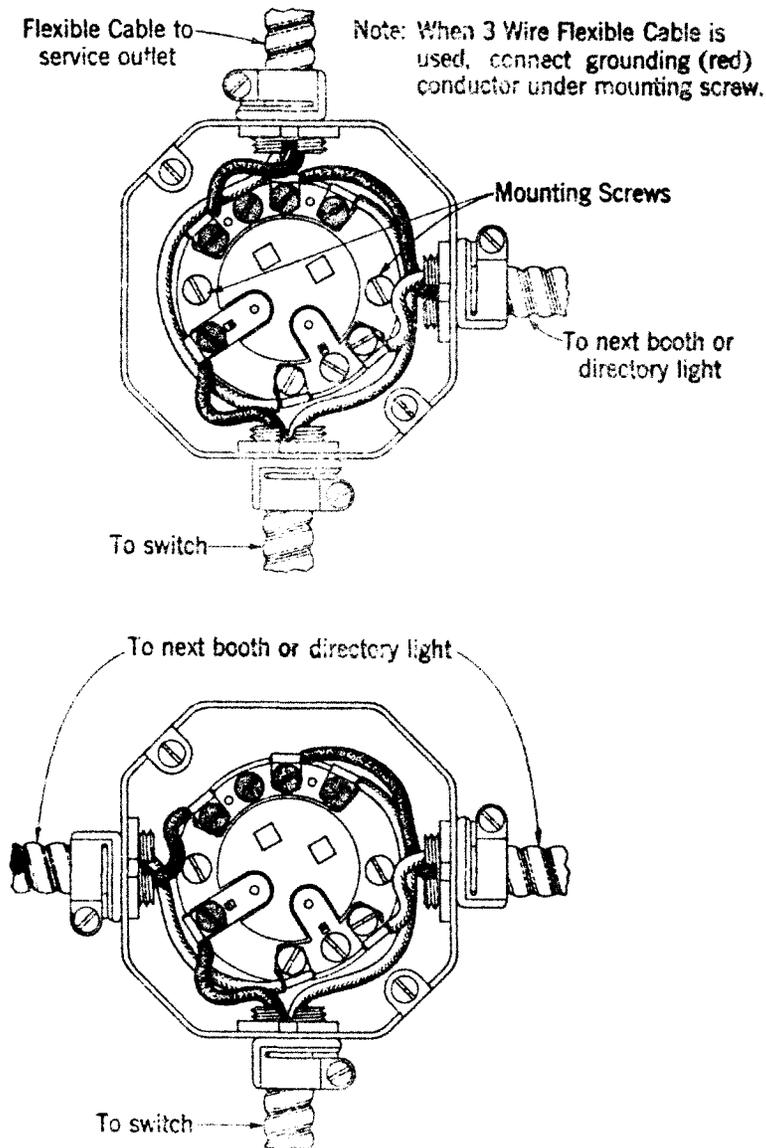


Fig. 9—For Three Cables

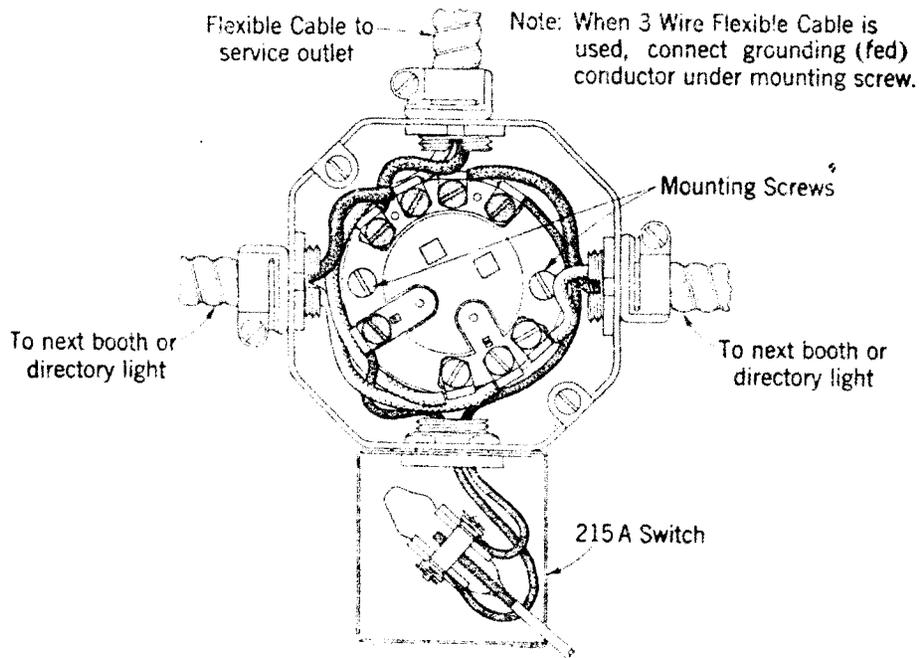


Fig. 10—For Four Cables

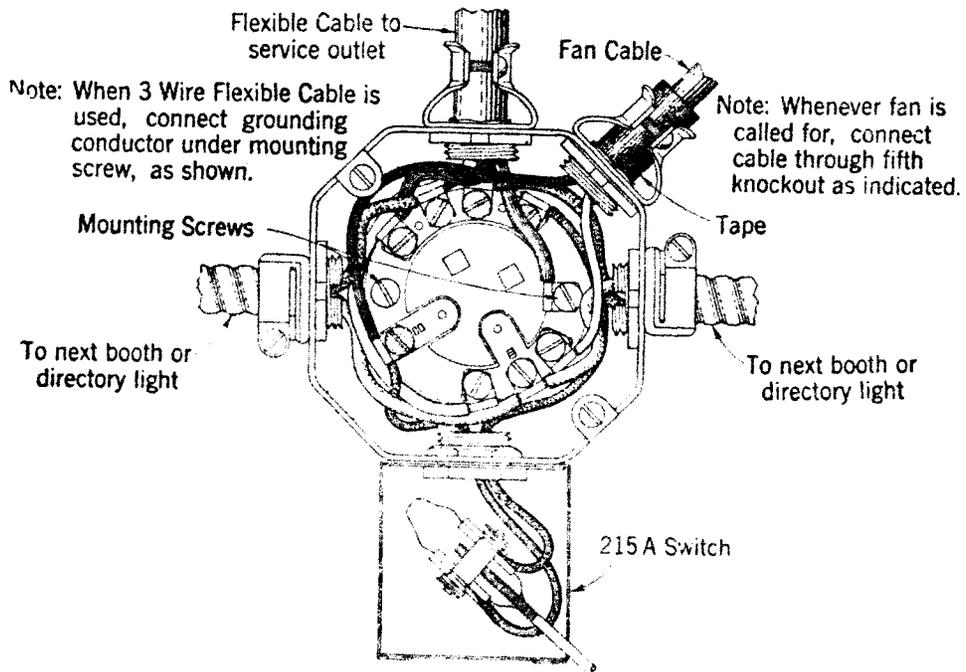


Fig. 11—For Five Cables

7. INSTALLATION OF 2B, 2C AND 2D LIGHT FIXTURES (DIRECTORY LIGHTS)

(a) New Installations

7.01 Booths ordered for new installations will generally be furnished with light fixtures, cables, switches and fan, where called for installed on the booth, except that the directory light may be added in the field because of the risk of its being damaged in transportation if attached to the booth.

7.02 Install 2B, 2C or 2D light fixture as shown in Fig. 12.

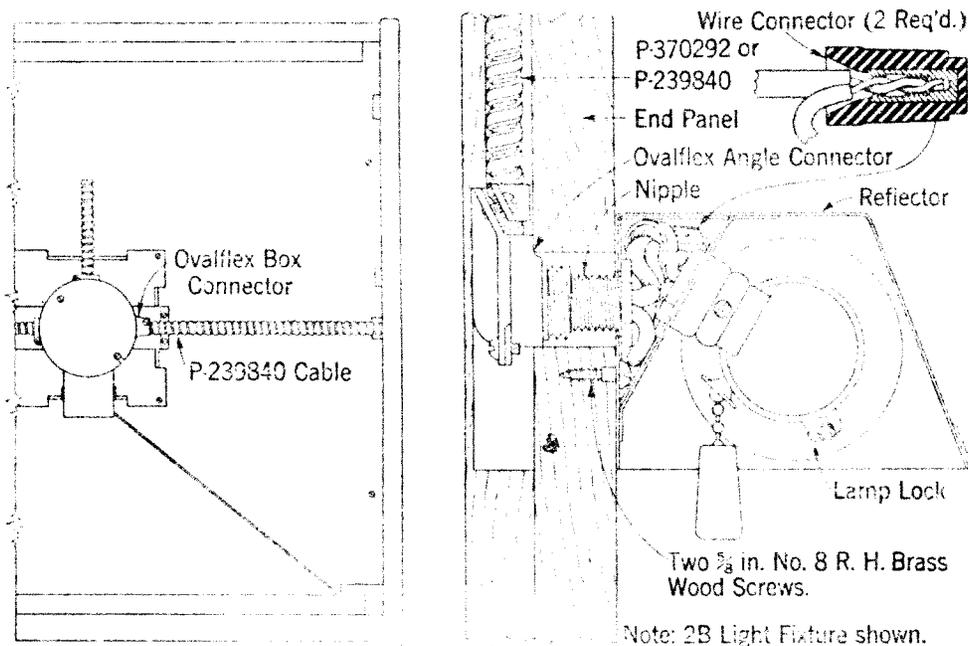


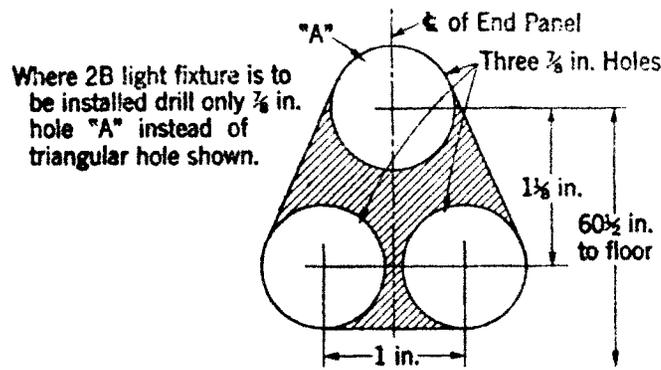
Fig. 12

7.03 Make connections to the booth lamp receptacle as shown in Fig. 9, 10 or 11.

7.04 Check operation of directory light. Test polarity of lamp socket as outlined in Part 8. Replace lamp and lock in place.

(b) Existing Installations

7.05 At existing installations drill end panel as shown in Fig. 13.



Where 2B light fixture is to be installed drill only $\frac{7}{8}$ in. hole "A" instead of triangular hole shown.

Fig. 13

7.06 Remove end panel and complete opening indicated by the shaded lines.

7.07 If booth side is not equipped with wiring slot, cut slot and recess as indicated in Fig. 14, first removing any lining nails from the inside of booth which may interfere with cutting the slot or which might come in contact with the directory light cable and ground the booth lining.

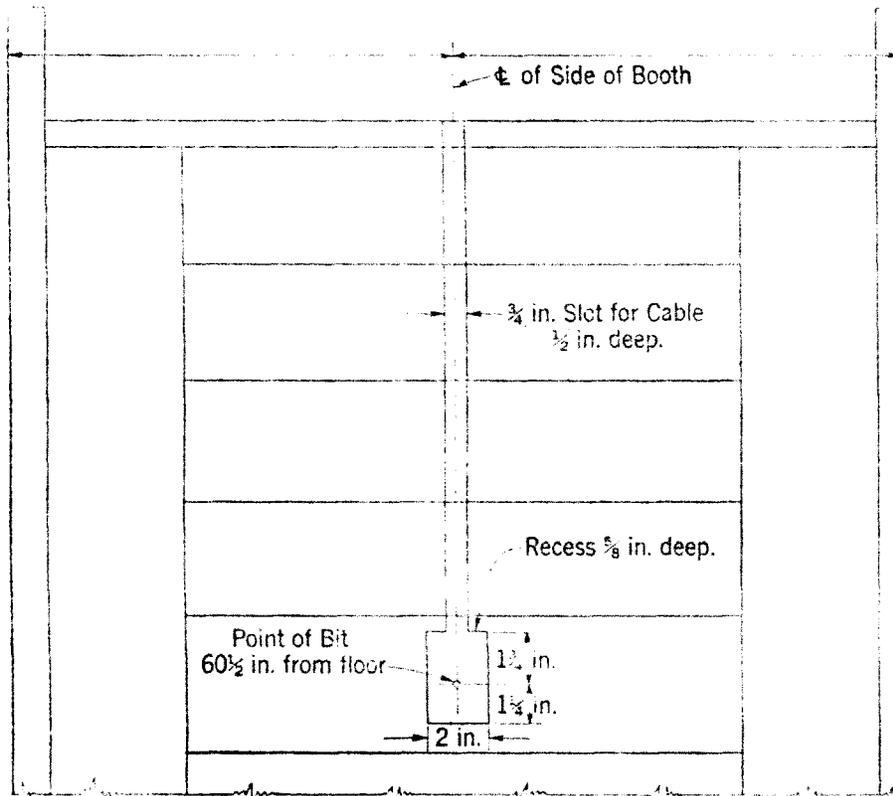


Fig. 14

7.08 Install directory light fixture as outlined in Paragraphs 7.02 to 7.04 inclusive.

8. TESTING POLARITY OF BOOTH LIGHTING EQUIPMENT

8.01 The polarity of the lighting circuit shall be such that the live side of the circuit (black wire) is terminated on the center contact of each lamp socket and the grounded or dead side of the circuit (white wire) is terminated on the shell or fixture side of each lamp socket. This is particularly important in the case of directory lights.

8.02 For this purpose, various Commercial testing devices are available which will be satisfactory for the polarity test.

8.03 Test the lamp socket of the booth at which the service wires are brought in first to insure that the live side of the lighting circuit is connected to the brass terminals of the booth lamp receptacle. Then test all other lamp sockets to insure that the polarity is correct throughout the booth wiring. Moreover, the tester should be used to determine if ground has been properly continued to the cable on the booth roof and to insure that both sides of the lighting circuit are not live nor grounded.

8.04 Where a two-wire plug receptacle arrangement is installed, reverse plug in receptacle to correct polarity of the lighting circuit used. When, however, the service wires are brought into the booth to a cutout switch, plug fuse cut-out, or to a three-wire plug receptacle, it will be necessary to leave booth lighting equipment disconnected and arrange to have polarity corrected by electrical contractor or other approved electrician.

8.05 Polarity of booth lighting equipment shall be corrected at point of reversal on the booth.

8.06 Where ground is not properly continued to booth cable or both sides of lighting circuit are live or grounded, lighting equipment shall be left disconnected and lighting circuit referred for correction as in Paragraph 8.04.

9. CONVERSIONS, ADDITIONS AND CHANGES

(a) General

9.01 Where backboard for coin collector, shelf and card frame are moved to a new location, or where seat is removed and lining of booth shows the outline of the old loca-

tion, clean lining of booth with a soft cloth moistened with the approved paste metal polish or other approved equivalent. If this does not remove the outline of the old location, the lining of booth should be repainted or reported for repainting in accordance with local instructions.

9.02 Screw or wiring holes which are left exposed by changing the location of the above apparatus shall be plugged. Plug screw holes with plastic wood, and wiring holes with 42B apparatus blanks refinished to match lining of the booth.

(b) Seat

9.03 Where order specifies a seat, install seat as shown below. Moreover, change location of card frame, backboard for coin collector and shelf as shown in Fig. 16.

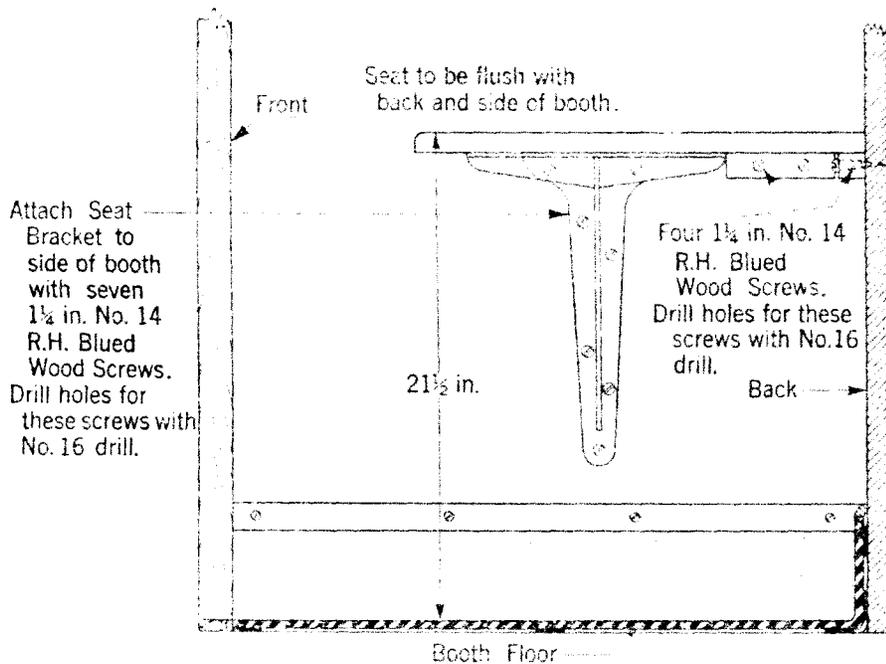


Fig. 15

(c) Card Frame, Backboard for Coin Collector, and Shelf

9.04 Where required to change location of card frame, backboard for coin collector, and shelf because of the addition or removal of seat, install such apparatus as shown below:

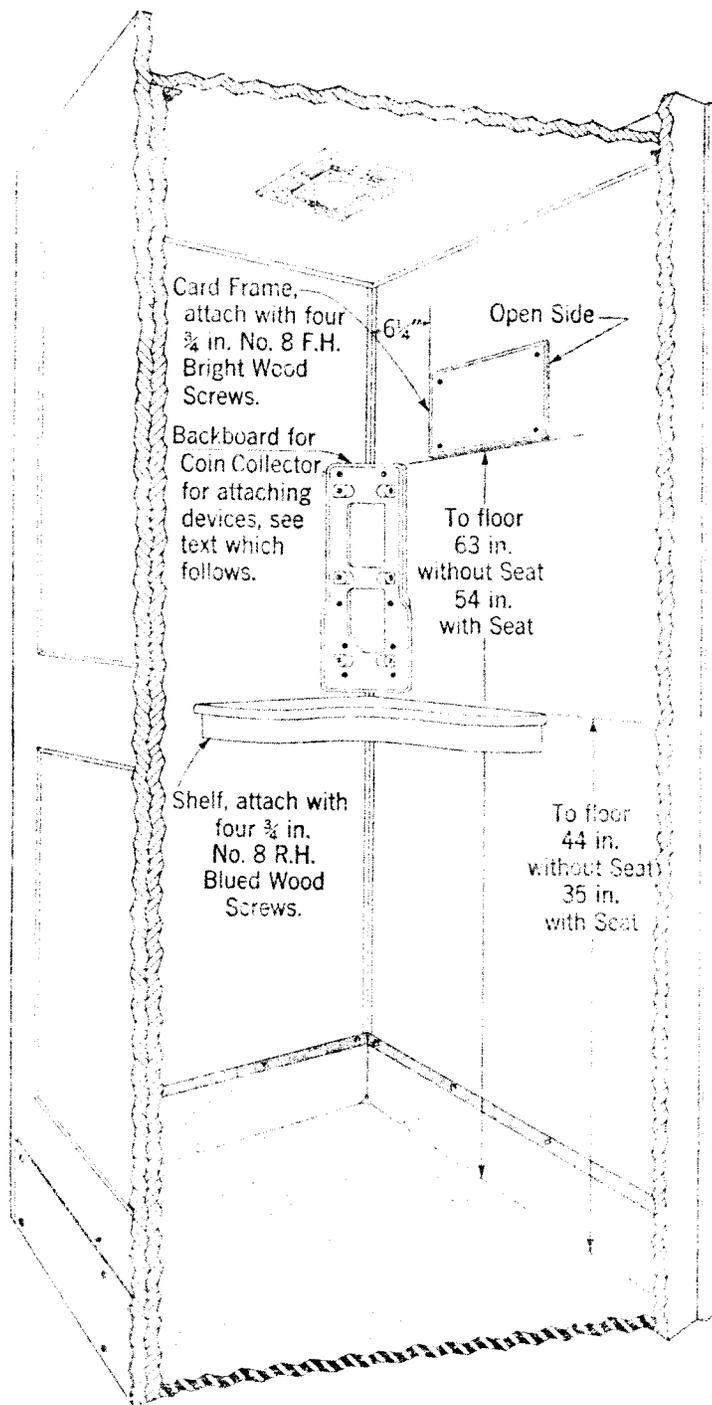


Fig. 16

For booths with softwood backs, attach backboard with six 3/16 inch—24 x 2 inch Step Bolts; for booths with hardwood backs use three 3/16 inch—24 x 2 inch Step Bolts in the side and three 1-1/4 inch No. 14 R. H. Blued Wood Screws in the back, except that in the case of 6 type booths the lower screw in the hardwood back shall be 1-1/2 inches long.

(d) Booth Lighting Equipment

9.05 **General:** Where booth lighting is required at existing installations, extension of electric service wires to booths should be arranged for on the same basis as covered in Part 5 of this section for new installations.

9.06 Where light fixture and assembly of the required type for making connection to electric service wires are found installed on booth, it requires only the connection of electric service wires. Where booth lighting equipment assembly is not of the required type, remove existing assembly and install cable P-370287, cable P-370283, plug fuse cutout, or booth cutout switch as required.

9.07 Where light fixture and the associated apparatus are not installed on booth, install a complete ceiling assembly with its associated switch operating parts, cables, and plug fuse cutout or booth cutout switch as required and such apparatus as outlined hereinafter.

9.08 **1 and 2 Type Telephone Booths:** Where ceiling is provided with a 7-1/4 inch x 7-1/4 inch opening for light fixture, install complete ceiling assembly and associated booth light wiring as outlined in Paragraph 9.07.

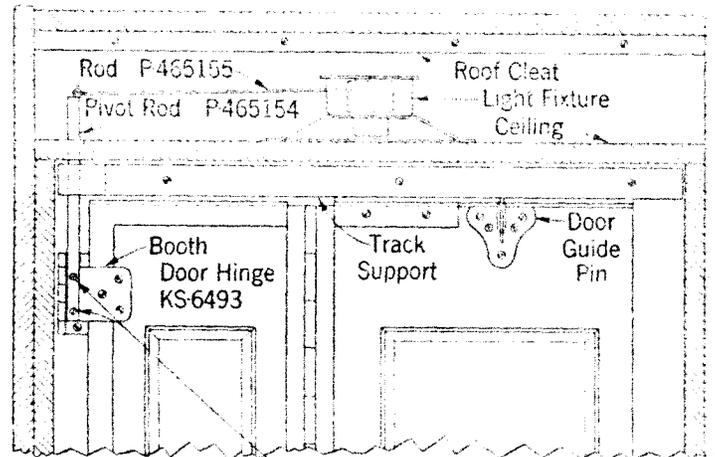
9.09 Where ceiling is not provided with a 7-1/4 inch x 7-1/4 inch opening for light fixture, remove roof, wiring at connecting block, and other attachments from existing ceiling, and then remove ceiling. It may be necessary in some cases to remove one of the roof cleats before removing ceiling.

9.10 Remove existing door track support and modify it as shown below, or use a modified door track support having the proper finish if one is available.



Fig. 17

9.11 Remove upper door hinge, attach pivot rod of 215A switch to new door hinge KS-6493, and mount new door hinge as shown below, using screws from old hinge.



Use two $\frac{1}{4}$ in. 8-36 R. H. Iron Mach. Screws (P206519) with Shake Proof Lock Washer placed under head of each screw.

Fig. 18

9.12 If there is a vertical strip of moulding along the edge of the booth lining behind the door, remove about 6 inches of it from the upper end so as to provide clearance for the pivot rod when the door is opened to its extreme position.

9.13 Replace modified door track support.

9.14 Install the proper ceiling assembly and fasten it with screws from the old ceiling (1-1/2 inch No. 10 F. H. Bright Wood Screws).

9.15 Replace connecting block wiring on ceiling of booth.

9.16 Make any required connections at lamp receptacle as shown in Fig. 9, 10 or 11.

9.17 Place a Mazda lamp in lamp socket and lock lamp in place.

9.18 Place loop end of switch rod over bushing and between fibre washers on pivot rod. Slip cotter pin through hole in pivot rod.

9.19 Adjust position of switch rod in toggle of 215A switch by turning rod in a clockwise or counter-clockwise direction until the requirement specified in Paragraph 10.03 (a) is met. Then spread ends of cotter pin, bending each end back and around pivot rod so that cotter pin will not come in contact with the switch rod. See Fig. 19.

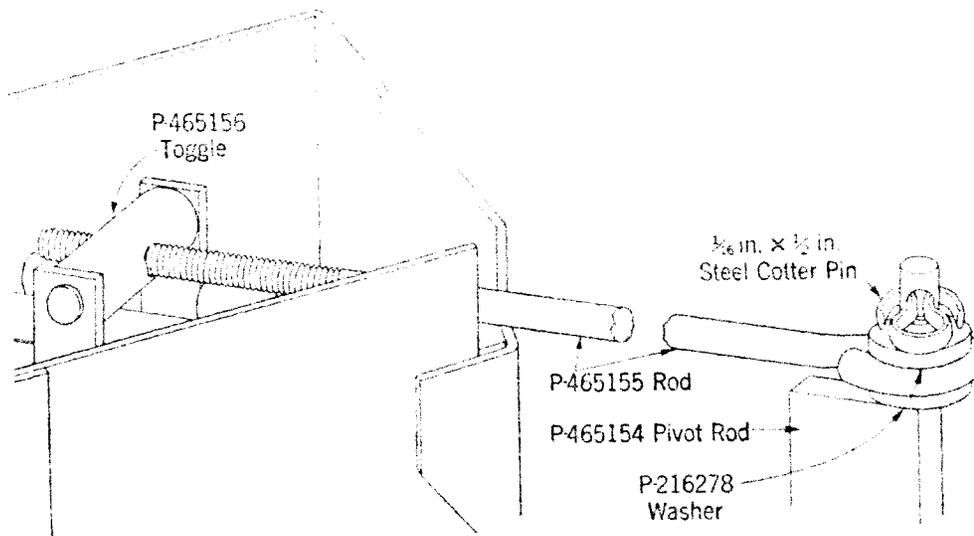
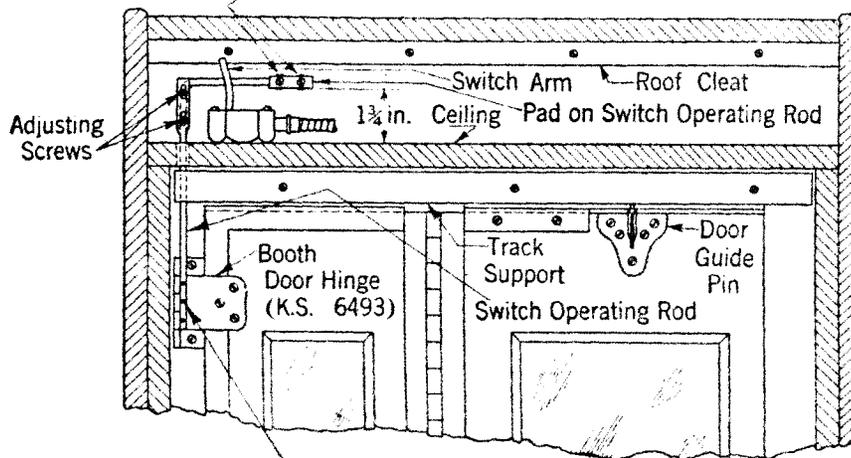


Fig. 19

9.20 Where the new ceiling is provided with a 204A switch instead of a 215A switch, the switch operating rod (15A) with the adjusting screws loosened should be mounted on the new door hinge KS-6493, as shown in Fig. 20.

Drill two $\frac{1}{2}$ in. holes $\frac{1}{8}$ in. deep. With door closed as far as possible, locate center of holes by centers of the two screws on pad of Switch Operating Rod.



Use three $\frac{3}{8}$ in. 8-36 R.H. Iron Mach. Screws with lockwasher placed under head of each screw.

Fig. 20

9.21 Adjust the height of the switch operating rod, and then check the operation of the switch in accordance with Paragraph 10.03.

9.22 Close booth door carefully as far as possible and mark booth where screw heads of pad on switch operating rod touch booth front. Then drill holes to provide clearance for switch operating rod as shown in Fig. 20.

9.23 If roof of booth is not provided with holes or slots for ventilation, drill holes in roof as shown below:

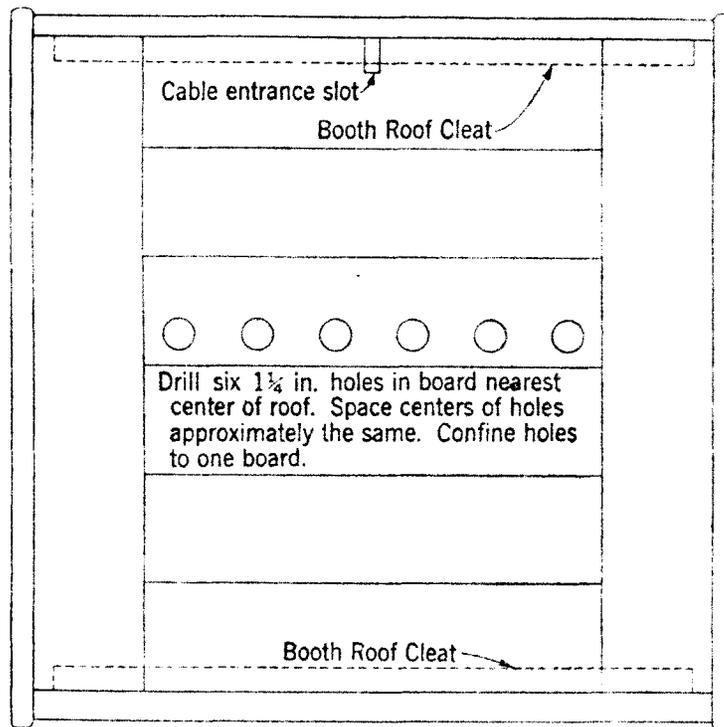


Fig. 21

9.24 Replace booth roof cleat, if removed, place roof in position on booth roof cleats, and then secure roof by means of its retaining screws.

(e) Fan

9.25 Install fan, where required, as shown in Fig. 22.

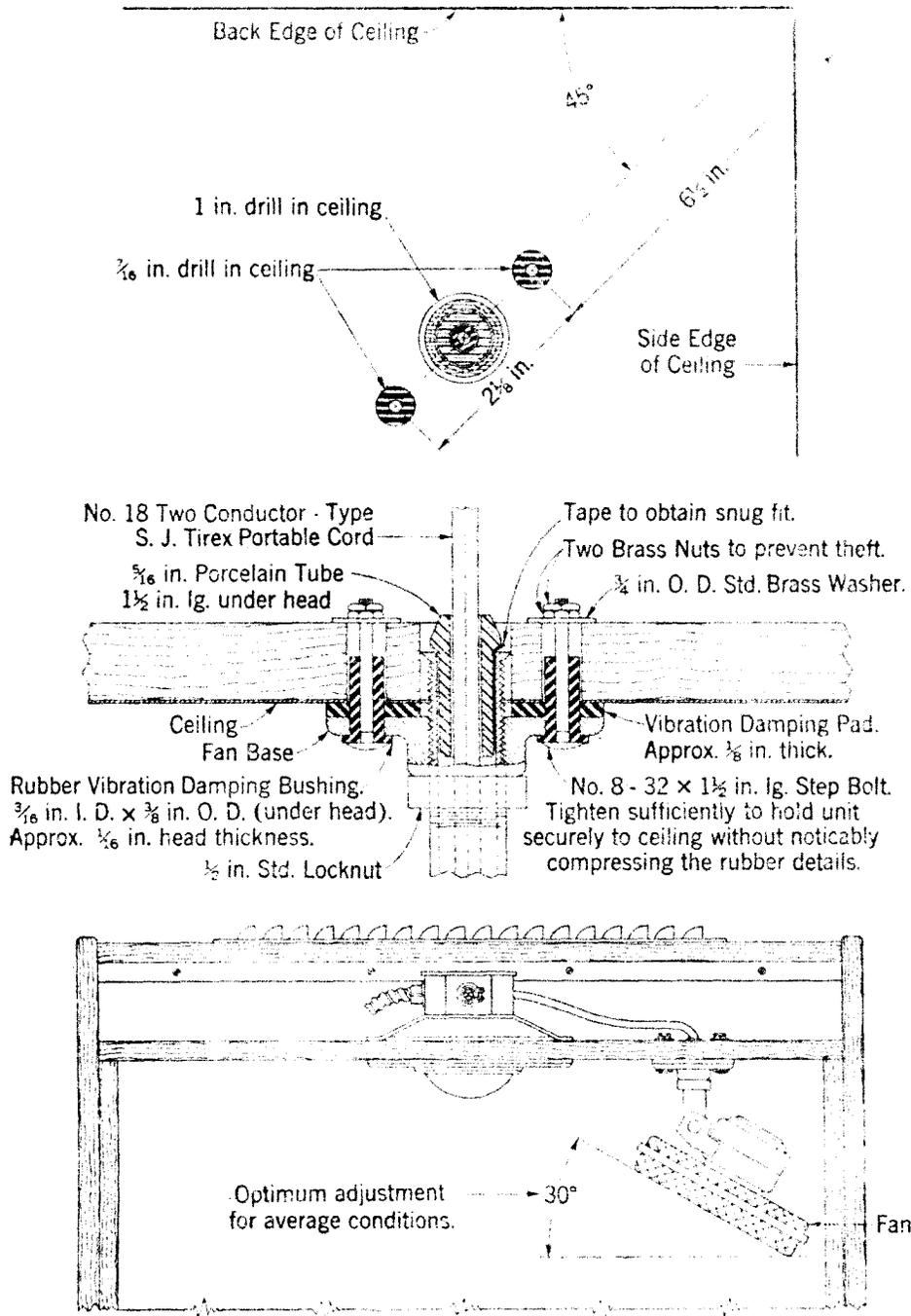
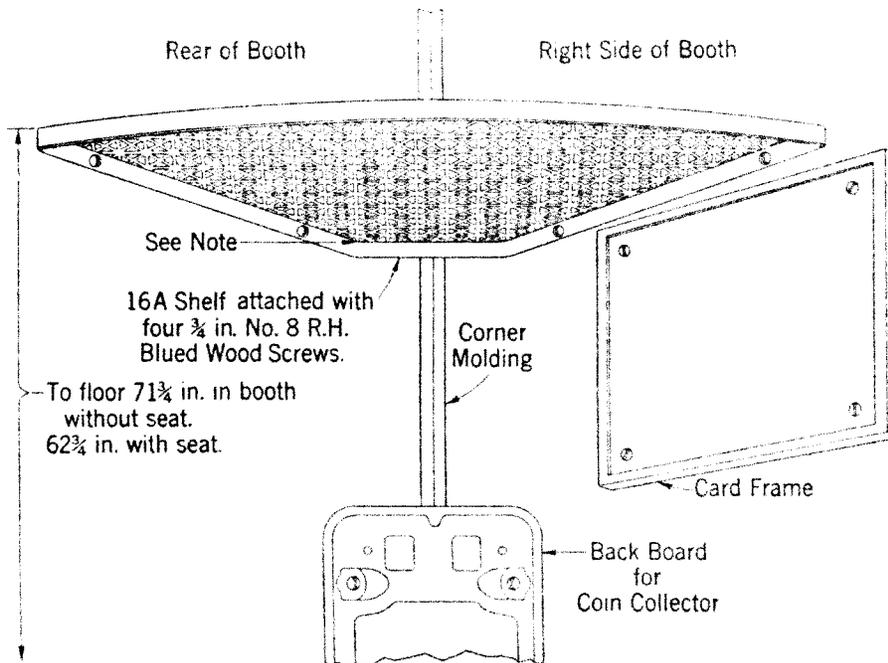


Fig. 22

(f) Shelf (Package Rack)

9.26 Install package rack, where required, as follows:



Note: Rear of shelf should be approx. $\frac{1}{2}$ in. nearer to floor than the front.

Fig. 23

Note: Do not install 16A shelf in booths without seats which are equipped with a fan.

10. MECHANICAL FEATURES AND REQUIREMENTS

(a) General

10.01 Upon completion of job check to see that:

- (a) Booth is complete in all parts.
- (b) All parts are clean and free from spots.
- (c) All parts are free from burrs, sharp edges, projecting nail ends, screw heads, etc., which would be likely to present an accident hazard.
- (d) Wooden parts are not split or damaged so as to affect their use or appearance.
- (e) Screws are tightly set up.
- (f) Metal lining of ceiling, sides and back, face plate of light fixture, pivot rod or switch operating rod if switch is 204 type are free from grounds. Make check of switch operating rod with door open so that switch operating rod is in contact with switch arm.

(b) Door

10.02 Check to see that door fits properly and operates freely.

(c) Light Operating Equipment

10.03 Check to see that light operating equipment functions in accordance with the following requirements:

- (a) When door is closed and then opened approximately 13 inches, the switch shall operate, extinguishing light.
- (b) If switch is 204 type the switch operating rod shall not come within 1/4 inch of overriding the switch arm when door is opened to its extreme position. This requirement is shown below:

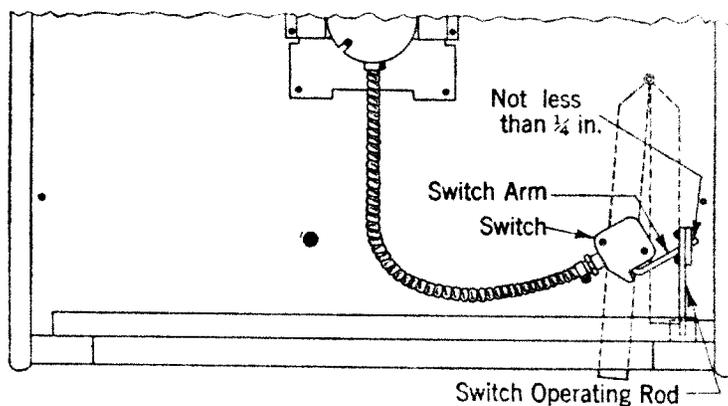


Fig. 24

- (c) Further, the metal pad on the switch operating rod shall ride on the switch arm for all positions during the entire travel of the switch arm. This requirement is shown below:

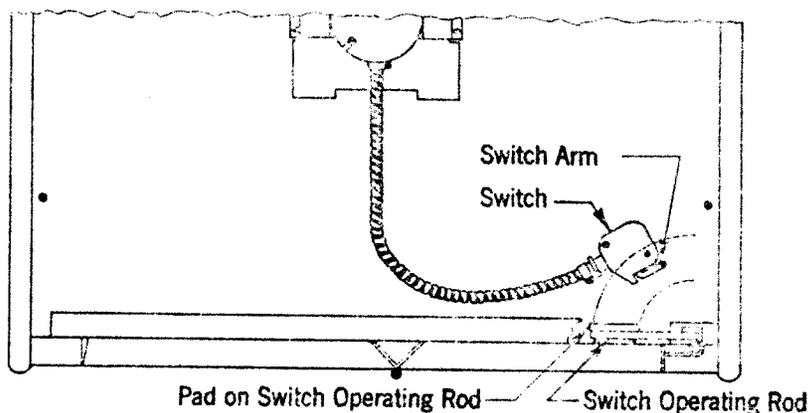


Fig. 25