

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C44.121
Issue 2, 11-15-49
AT&T Co Standard

TELEPHONE BOOTHS

1, 2, 5, 6, 7, 10 AND 11 TYPES

MAINTENANCE

1. GENERAL

- 1.01 This section covers procedures for the maintenance of 1, 2, 5, 6, 7, 10 and 11 type telephone booths in service.
- 1.02 This section is reissued to add maintenance information covering the 10 and 11 type booths, to delete reference to parts and procedures which have become obsolete and to make other miscellaneous changes. Due to extensive changes, arrows to indicate changes in the text are omitted.
- 1.03 Information pertaining to the materials and parts required in the maintenance of telephone booths of the types referred to herein is covered in Section C44.103.

2. LIGHTING EQUIPMENT

Caution: If it is necessary to make any alterations or replacements in the electrical equipment, first disconnect the plug or open the service switch and make sure that the circuit is dead by checking with an electric wire tester.

1 and 2 Type Telephone Booths

2.01 If the electrical switch (140A or 204A), is defective, replace it with a good switch of the same type if one can be obtained. If such a switch cannot readily be obtained, consideration should be given to the replacement of the ceiling with a D-92967 or D-92966 (if available) or D-178437 ceiling assembly (see Section C44.103 Part 3). The method for the replacement of ceilings in 1 and 2 type booths is outlined in Part 9(D) of Section C44.111. However, in 2 type booths the front and rear edges of the ceiling protrude into horizontal channels cut into the front and back of the booth, therefore the booth requires a ceiling of greater front to back dimension than in other booths. The side edges of these ceilings abut against the inside surfaces of the walls instead of resting on the top edges of the walls as in other booths. Therefore, a narrower ceiling is required. If a D-92967 ceiling is not available and a D-178437 ceiling has to be used, it must be modified accordingly. Replacement of the 140A switch with a 204A switch

even if one can be obtained from recoveries and repairs is not recommended.

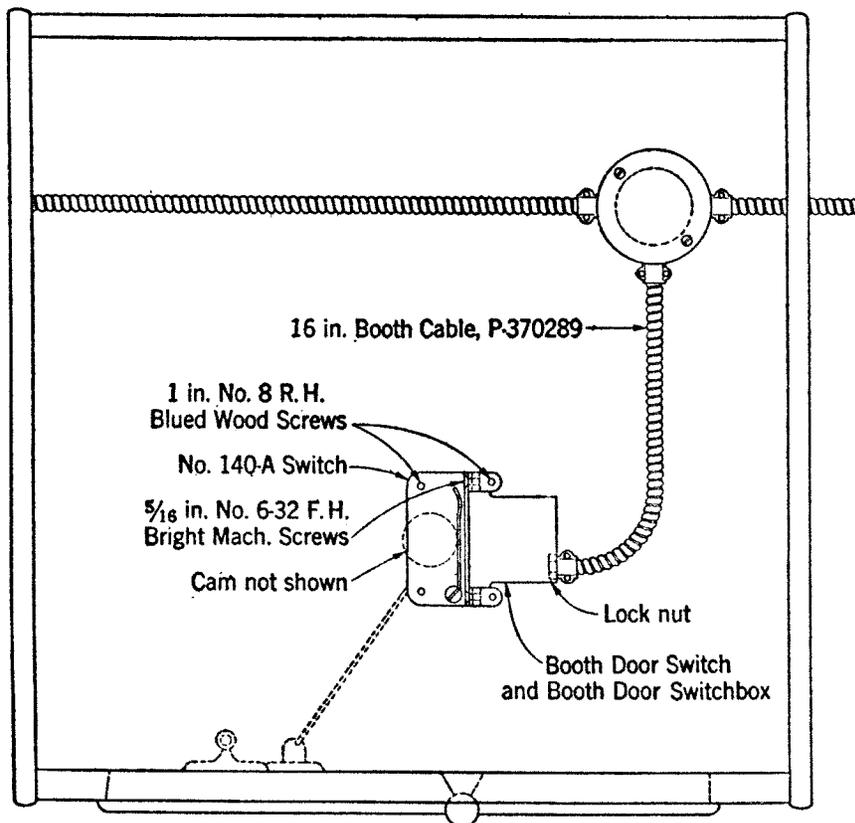


Fig. 1

2.02 If the 140A switch is still serviceable, check that when door is closed and then opened approximately 13", the light is extinguished. Adjust cam to obtain this result.

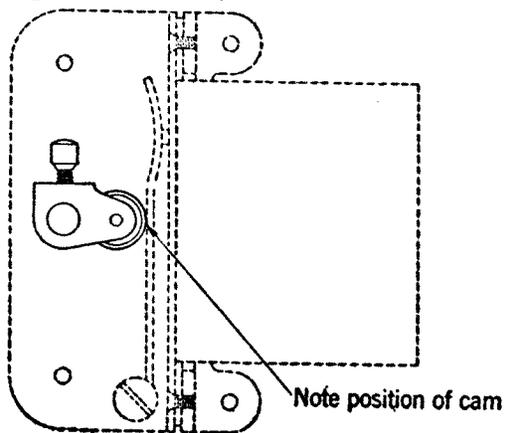


Fig. 2

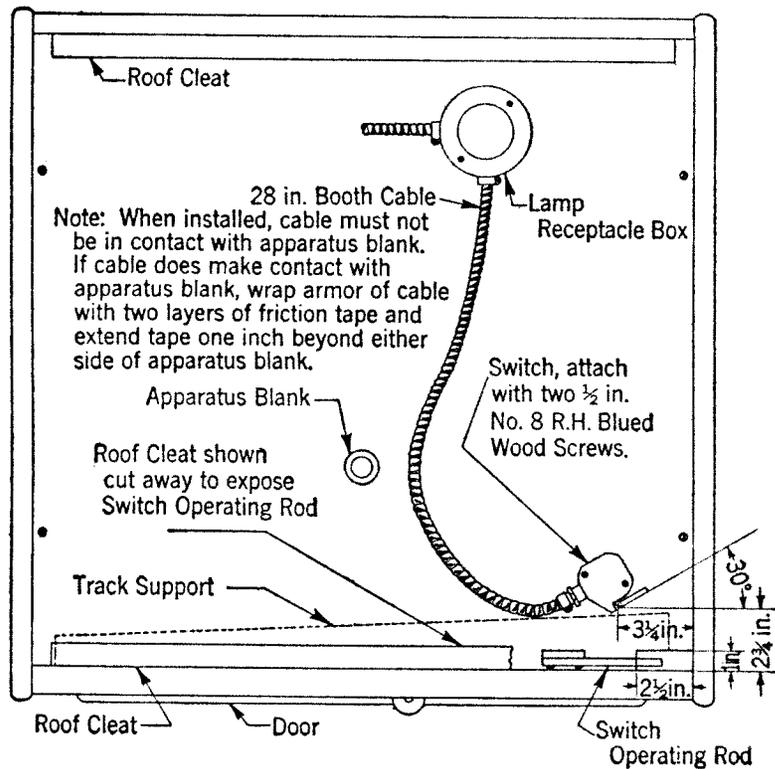
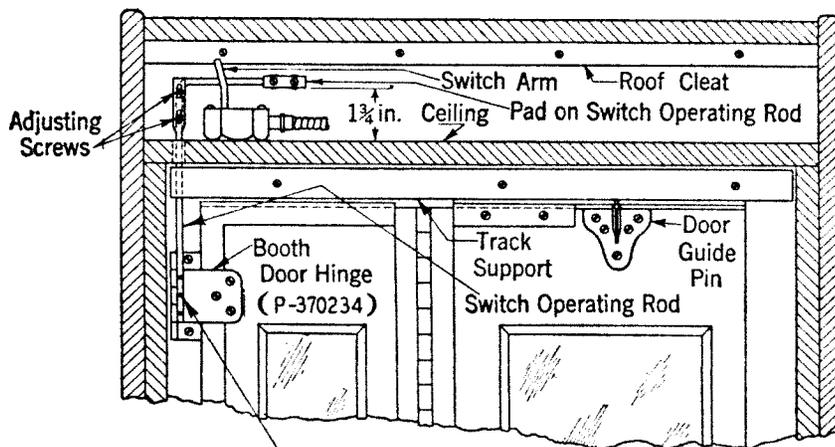


Fig. 3

2.03 If the 204A switch is still serviceable, check that the pad on the switch operating rod does not override the switch arm.



Use three 3/8 in. 8-36 R.H. Iron Mach. Screws with lockwasher placed under head of each screw.

Fig. 4

- 2.04 Check that a 40 or 25 watt lamp is in the light fixture. Clean lamp and lamp guard (or lens) if necessary.
- 2.05 Where 1 and 2 type booths are equipped with 1, 3 or 4 type light fixtures, follow same maintenance procedure outlined for 5, 6, 7, 10 and 11 type booths.

5, 6, 7, 10 and 11 Type Booths

- 2.06 In old style 1 type light fixture with heavy opaque lens, if new lens is required, replace lens with latest type lens P-347192.
- 2.07 If the face plate assembly of the 1-type light fixture is defective, replace the part with similar part (P-243867) obtained from recovered booth. If back plate (P-243871) is damaged in removing face plate assembly, replace part also with similar recovered part. To do this loosen light fixture mounting bracket from upper surface of ceiling and slide old back plate out and replacing one in. If recovered parts are not available, replace booth ceiling.
- 2.08 Mercury switch leads in the 215A switch or in the 3-type light fixture shall be located one on each side of the tube outside of the spring clip fingers and inside the upright yoke members. The leads shall be taped together with a narrow strip of friction tape near the end of the tube as they leave the switch, as shown in Fig. 9, Section C44.111.
- 2.09 Check that a 40 watt lamp is in the light fixture.
- 2.10 If booth is equipped with 204A switch, check its operation and if defective replace it. If 204A switch is not available, replace it with a 215 type switch. To do so, remove switch from ceiling, remove 16" cable from light fixture, remove 15A rod from upper hinge on booth door and install 215 type switch (which includes pivot rod and operating rod) as shown in Figs. 8 and 18, Section C44.111.
- 2.11 If booth is equipped with 215 type switch which is inoperative, check operation and adjustment and examine condition of cotter pin and insulating bushing and washers at top of pivot rod. See that mercury tube is in good condition and is not cracked nor its leads shorted where spliced to the tube. Replace if defective.
- 2.12 Check the polarity of the lighting circuit as outlined in Section C44.111 Part 8.
- 2.13 If directory light fixture is defective or should be replaced, replace socket shell assembly with new "Shurlock" S-1628 socket shell assembly having three piece locking screw which prevents key from shorting to shell of socket if polarity of wires has been reversed.

2.14 If the booth is provided with a 171B or KS-9786 Relay instead of a switch (at attended station) check its operation and clean its contacts.

3. DOOR MECHANISM

3.01 If door squeaks or binds when it is opened or closed thoroughly clean both sides of the track using KS-7860 petroleum spirits if necessary. Then lubricate these surfaces as follows:

- (a) For ordinary repair visits rub both surfaces of the track with a "Door Ease Pencil", a "Dixon's No. 711 Graphite Stick (less wax)" or the equivalent.
- (b) If the visit is for extensive booth repair or renovation purposes, lubricate as follows:
 - (1) Prepare lubricant by putting Dixon's No. 635 Graphite to the height of $\frac{3}{4}$ inch into shellac set jar and add orange shellac varnish to the additional height of 2 inches making a total of $2\frac{3}{4}$ inches. When thoroughly mixed, the consistency will be about that of thick cream. The proportion of graphite to shellac varnish is one-half ($\frac{1}{2}$) pound of graphite to one (1) pint of shellac varnish. In some areas this lubricant in prepared form may be available in accordance with local practice.
 - (2) Should lubricant become too thick, due to evaporation, thin lubricant to original consistency with shellac thinner.
 - (3) To lubricate booth door track, place door in such a position that front half of track can be coated with lubricant from outside of booth and remainder of track from inside of booth without moving door.
 - (4) Thoroughly stir lubricant and apply evenly with shellac set brush to side of track only. Brush lubricant on lengthwise of track, taking care not to have coat so thick as to cause lumps or to drop from track. Completely cover all surfaces where any rubbing occurs.
 - (5) It is desirable not to move booth door for at least 20 minutes after applying lubricant, in order to allow lubricant to harden and bind to surface of track.

3.02 If door guide pin of a 1 or 2 type booth does not operate smoothly in track due to pin being badly worn, remove the pin and replace it with a new door guide pin P-370138 and a new door guide pin block P-370165 (Phenol

Fabric block). To mount, place block on pin, insert block in track and fasten pin in the same location formerly occupied by the replaced pin.

3.03 To insure proper operation of the door mechanism, check to see that:

- (a) With the booth door closed, the top of the door is in alignment with the door frame.
- (b) Wooden door stops are not loose, broken or missing and do not pass under the booth door frame. Replace defective stops; attaching new stop with No. 8 O.H. steel bronze finished wood screws. Door stops should extend $\frac{3}{8}$ inch above door with door stop end flush with hinge bevel on small door section and approximately $\frac{1}{16}$ inch from guide pin bracket on large door section.
- (c) Door guide pin is secure to door.

3.04 If piano hinge is noisy or if it binds, lubricate each joint with No. 3A Lubricant per KS-8496 and wipe off all excess lubricant. If hinge is worn to such extent as to show $\frac{1}{8}$ inch separation between the hinge barrels, replace the hinge.

3.05 When a worn or defective bronze piano hinge is replaced by a steel hinge (P-370242) it is necessary to plane the beveled booth door stiles as indicated in Fig. 5 so that the new hinge may be properly seated. Existing screws used to secure the bronze hinge should be replaced with No. 8 $\frac{7}{8}$ inch binding head bronze finish wood screws at location "A" and No. 8 $\frac{5}{8}$ inch binding head bronze finish wood screws at location "B" (see Fig. 5).

3.06 When the door is closed and then opened approximately 13 inches, the switch shall operate, extinguishing the light and stopping the fan, where provided. If booth light is controlled by a 171B or KS-9786 relay, check operation of light from attendant's P.B.X.

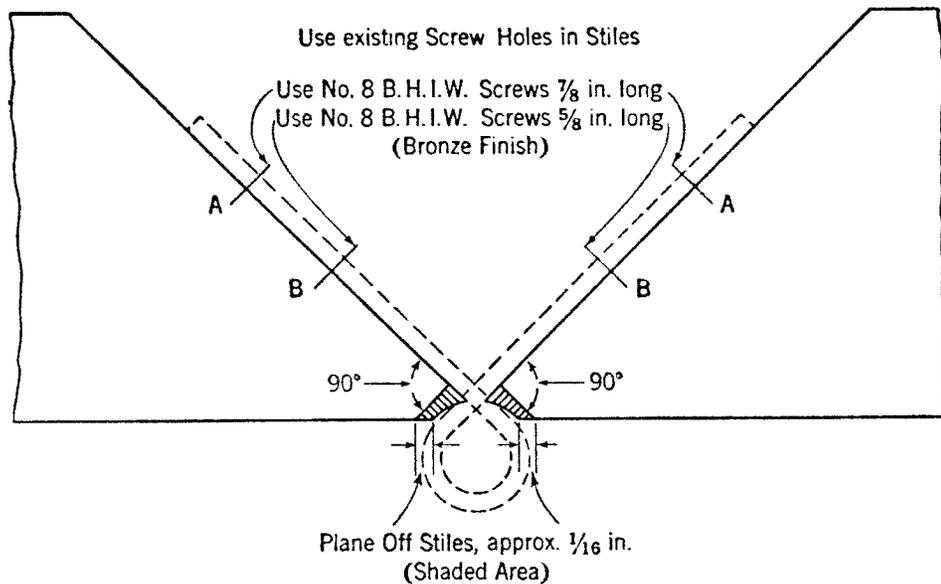


Fig. 5

4. FAN, BLOWER, VENTILATOR

- 4.01 Lubricate bearings of fan motor periodically with 3 drops of KS-6232 oil.
- 4.02 Commutator brushes on d-c KS-5474 fans which are less than $\frac{3}{16}$ inch long shall be replaced.
- 4.03 KS-5474 fan giving excessive noise or vibration check for bent fan blade. Where trouble is experienced because of bent or dented fan guard, it shall be removed and straightened.
- 4.04 If rubber blades of KS-8164 ventilator are cut or damaged replace the fan blades or the fan. With KS-8187 wrench, back out screw in nosing by turning clockwise, then remove spider behind nosing.
- 4.05 Field maintenance procedures on fans other than those mentioned in Paragraphs 4.02, 4.03 and 4.04 are not recommended.
- 4.06 Field maintenance procedures on KS-14125 blowers are not recommended. If the blower fails to function properly, replace it. See Fig. 21, Section C44.111.

5. SWIVEL CHAIR (7 TYPE BOOTHS) (For seat in 6 type booths see Part 9)

5.01 Check to see that neither arm of the chair can pinch the occupant's hands against the rear or side wall. If it does pinch, the stop pin or set screw is not functioning properly. If the stop pin is broken, replace the chair.

5.02 On all chairs having a stop pin limiting the rotation of the chair, as shown in Fig. 6, the stop pin shall be 3/8 inch diameter. Chairs having 5/16 inch stop pins are subject to pin breakage and should be replaced.

5.03 The stop pin shall clear, by at least 1/16 inch, the top surface of the castellated truncated sector over which it swings as shown in Fig. 6.

Note: Requirements 5.02 and 5.03 do not apply to chairs having their rotation limited by a set screw in the pedestal which protrudes into a vertical groove cut in the spindle of the chair as shown in Fig. 7.

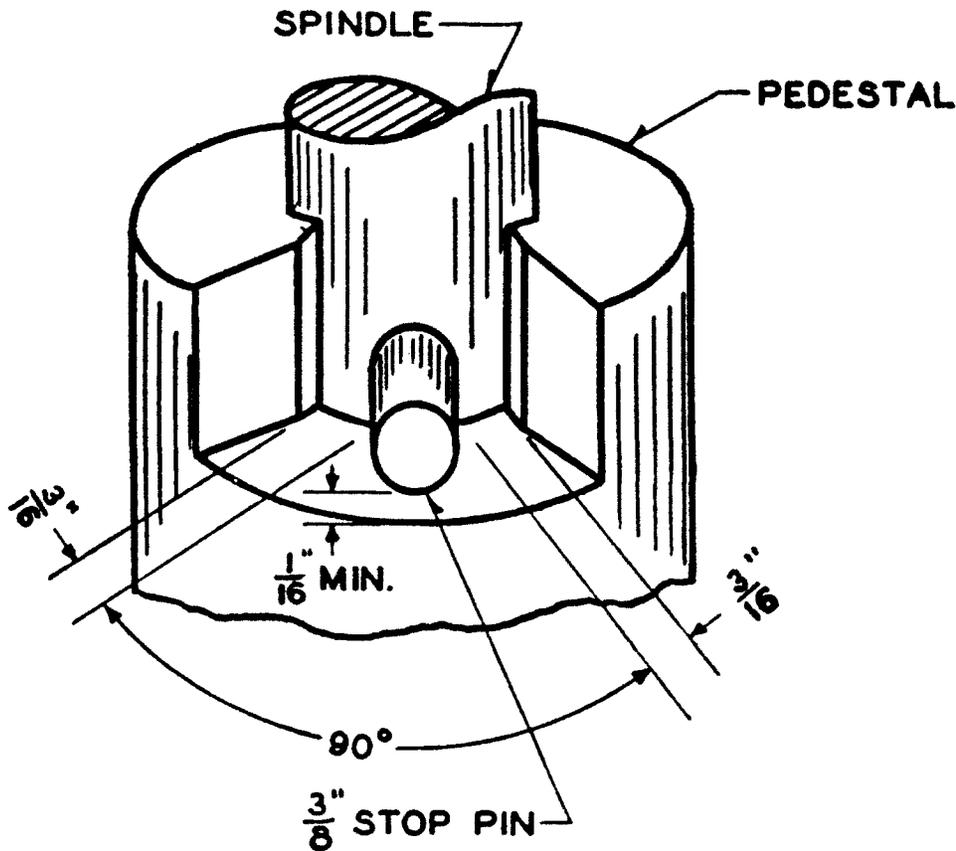


Fig. 6

5.04 Check to see that the set screw, Fig. 7, has not been driven in so far as to prevent the free rotation of the chair nor backed out so far as to fail to limit the rotation of the chair.

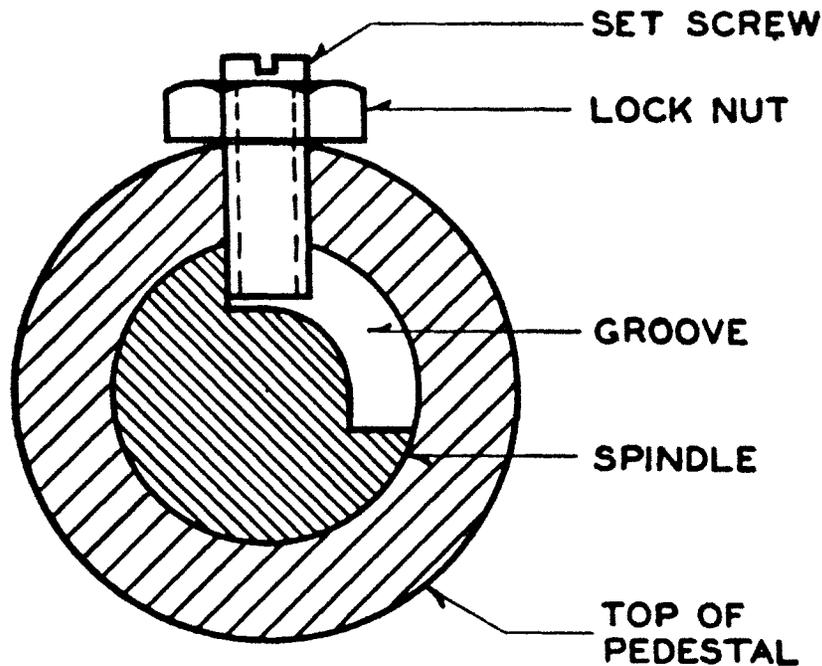


Fig. 7

5.05 Check to see that the spindle-bracket assembly is fastened to the under surface of the seat of the chair by means of four No. 14 x 1-1/2 inch R. H. steel wood screws (P-381097), tightly set up. If No. 14 Screws (judge by size of head) are present and are tightly set up, it will not be necessary to remove them to see if they are 1-1/2 inch long.

5.06 The spindle, especially the lower end of it shall be well coated with lubricating oil or petrolatum.

5.07 Check that the screws P-370489 (3/4"-12-24 F.H.M.S.) for fastening the pedestal to the booth base are not loose or missing.

5.08 Rough spots or splinters which might damage clothing or cause injury should be sandpapered, smoothed, and touched up as outlined in Part 7 of this Section.

6. LINING

6.01 To clean linings not badly soiled, use approved metal polish applied with a cloth. Remove excess paste and polish cleaned surface with a clean dry cloth.

Note: Cleaning process may be facilitated by adding a few drops of KS-6232 oil to thin the paste.

6.02 Where finish of booth lining is badly soiled or discolored, but otherwise in good condition, clean and polish it as follows:

(a) Where the area of surface to be cleaned is extensive or a number of booths are to be cleaned at one time, wash the lining with soap and hot water. After washing and before the cleaned parts have had time to dry, rinse them thoroughly with clean warm water. Wiping dry is not necessary but excess water should be removed with the rinsed and wrung scrub cloth.

(b) Then polish the cleaned surfaces of the metal lining by using a small piece of dust or wiping cloth moistened with the approved furniture polish. Apply the polish in straight strokes. After drying, polish the surface, using light strokes at the beginning and increasing the pressure for the final finish if necessary. (See 6.09, 6.10 and 6.11 for presdwood linings.)

Caution: Do not attempt to rub applications of the polish until it is dry, otherwise the polish will be wiped from the surface and inferior results obtained.

(c) Use two cloths for polishing, as the first one will accumulate some of the wax in the polish and become unfit for producing the final dry, lustrous finish. The finishing cloth should be substituted for the first polishing cloth when it requires replacement and a clean finishing cloth provided. Best polishing results are obtained by final rubbing in the direction in which the polish was applied.

6.03 Where pebbled lining has rusty spots which do not extend through, sand free from rust by first applying No. 1-1/2 sandpaper, and then finish off with No. 00 sandpaper. After this is done, touch up spots with booth lining paint. See also last sentence of 6.04.

6.04 To refinish pebbled booth lining, clean as in 6.01 (a) and give one coat of booth lining paint. Care should be taken to see that other parts of booth, such as floor covering, shelf, light fixture, molding in corners, etc., are not covered or spotted with paint. Place booth out-of-service until paint is thoroughly dry, by posting a suitable sign at entrance of booth or otherwise blocking access.

6.05 Where improved appearance is desired in 1 and 2 type booths and the lining within 5-1/2 in. of floor is broken or is corroded through, place the proper base plates as outlined below:

- (a) Cut off 6 inches from lower end of corner moldings.
- (b) Place base plates in position by first putting back plate in position and then the side plates.
- (c) Secure each base plate with 3/4 in. No. 8 B.H. iron wood screws.

6.06 Where lining is rusted through and appearance of booth cannot be improved by placing base plates, consult your supervisor for the proper corrective measure.

6.07 Replace projecting lining nails with No. 13 oval head steel cement coated barbed brads 5/8 in. long placed near old nail locations. Use 3/8 in. long brad in hardwood backs.

6.08 Where lining is grounded, consult your supervisor.

6.09 Clean presdwood linings by washing as described in 6.02 (a). After cleaning the linings should be simonized. It will not be necessary to rub the simonize application beyond what is necessary to give it a glossy appearance.

6.10 If, after applying the ordinary cleaning and before applying the waxing treatment, appearance is not satisfactory, wash lining with a solution of trisodium phosphate (Oakite in warm water), rinse with clear water and simonize.

Note: If any of the three linings in a booth after a thorough washing with trisodium phosphate are in a condition which after waxing would not present a satisfactory appearance, the three surfaces shall be thoroughly dried and then given two coats of booth lining paint. Residual trisodium phosphate as well as residual wax will react to prevent good adherence of subsequent coats of paint and it is, therefore, important that the washing operation be followed by a thorough rinsing with clear warm water.

6.11 Presdwood linings which have been cut or mutilated to such an extent that their general appearance cannot be satisfactorily restored by means of applications of plastic wood, consult your supervisor as to corrective measures.

7. FINISHED WOOD SURFACES

7.01 Where woodwork has become marred and can readily be touched up, smooth surface with sandpaper, apply stain to match the booth finish and then apply one coat of shellac.

7.02 Where improved appearance is desired and finished wood surfaces are soiled or discolored but parts are otherwise in good condition, clean and polish as outlined for booth linings in Paragraph 6.01. In general, finished wood surfaces should be polished with approved furniture polish after cleaning with paste metal polish. The furniture polish should be applied with the grain of the wood or in straight strokes.

7.03 Where parts are splintered or otherwise damaged so that they are hazardous to the public, refer the matter to your supervisor.

7.04 Where the lower parts of panels of 1 type booths, sides of 2 type booths, or backs of either type booths are discolored due to mopping and improved appearance is desired, install base plates at the base of such panels, sides or backs with the lower edge of plates 1/16 in. above bottom of booth. Secure these base plates with 3/4 in. No. 8 B.H. iron wood screws.

7.05 Where complete exterior re-varnish job is required, follow local instructions.

8. FLOOR COVERING AND TREAD

5, 6, 7, 10 and 11 Type Telephone Booths

8.01 If tread is so badly worn or damaged as to require changing, replace the booth. It will be found impracticable to change the tread of such booths on the premises of the public telephone agent.

8.02 If the rubber floor is badly worn or bulged or in a hazardous condition, replace with a new Perbunan floor P-339595 and liner P-339839 (or floor P-340285 and liner P-340286) as outlined below (except in 7-type booths use flooring P-370960):

- (a) Remove binders and rubber floor (and chair in 7 booth).
- (b) Scrape and remove residue from steel base and between oblique edge of tread and steel base. A putty knife may be used as a scraping tool.
- (c) Apply adhesive EC-847 all over the surface of the booth base and then install the presdwood liner P-339839 pressing it down all over by treading on it.
- (d) Apply EC-847 adhesive on the front 6 inches of the upper surface of the liner.
- (e) Place new floor by first slipping oblique edge of rubber floor under the opened door and force its tapered edge under the tread (exercise care in centering rubber floor)

and then let it fall downward into position. The back and side flaps should fold upward. Press rubber floor against liner with foot.

Note: If the booth is equipped with the old style bronze tread instead of the stainless steel tread, it will be necessary to use the D-178800 Floor consisting of the P-340285 Perbunan floor and the P-340286 liner. These parts are the same as the parts mentioned above except that the front to back dimension is one inch less.

(f) Replace binder (and chair in 7 booth).

8.03 When presdwood or linoleum floor covering or associated base plates are so badly worn as to require replacement, replace with floor assemblies, as required, in accordance with 8.02.

8.04 If the booth is of war-time manufacture having a wooden base instead of steel and is equipped with a presdwood floor as shown in Fig. 8 and the floor has to be replaced, use a D-170476 floor. The existing moldings and base plates will have to be reused so use care in removing the defective floor.

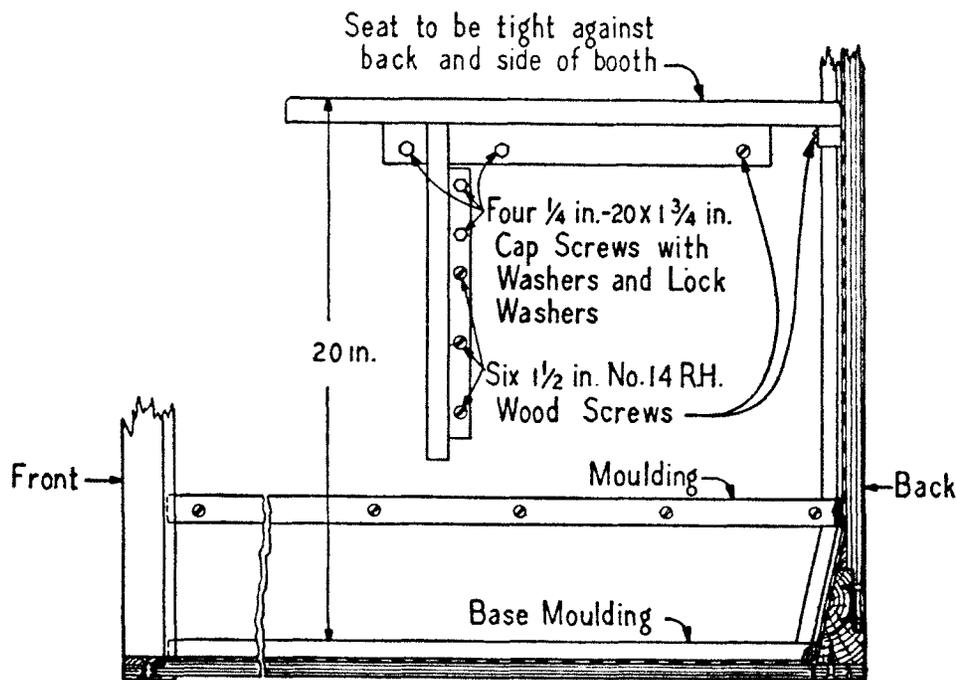


Fig. 8

1 and 2 Type Telephone Booths

- 8.05 Where tread is bent, remove, straighten, and replace it.
- 8.06 Where tread is loose, refasten it. If necessary use slightly longer screws.
- 8.07 Where tread is worn, slippery, or broken, or hazardous in any way, replace it with a new tread as shown below.

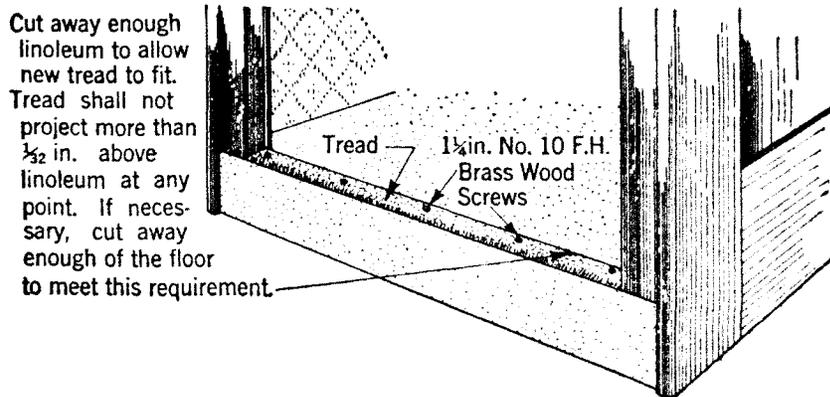


Fig. 9

8.08 When linoleum floor covering is so badly worn or damaged as to require replacing, remove tread and floor covering and replace covering with KS-6850 linoleum if available or place a new presdwood floor P-381071 in position. Fasten new floor with 5/8 inch No. 18 wire brads and then reinstall tread.

8.09 If linoleum on riser below tread is in poor condition and improved appearance is desired, cover linoleum with the proper base plate. Attach base plate directly over linoleum and secure it with 3/4 inch No. 8 F.H. brass wood screws.

9. SEAT (1, 6 AND 11 TYPE BOOTHS)

9.01 Examine seat carefully as to security of its mounting, and if loose, proceed as follows. If any mounting screws are loose or backed out or if set is insecurely mounted to any degree, remove the seat altogether and remount as follows:

- (a) If seat bracket is not provided with 4 drillings at top as shown in Fig. 10 or (Fig. 15, Section C44.111) obtain and install a new 101T or 101U seat assembly.

(b) If booth is located so that left side can be worked at from the outside of booth, remove the end panel and drill side for cap screws and tee nuts and reinstall seat in accordance with Fig. 10.

(c) If booth is located so that left side cannot be worked at from the outside of booth, install seat 1/2 in. lower if booth has a 10 or 15 type shelf (i.e., relocate seat 21 in. top of seat to floor). If booth has 18A shelf, locate top of seat 20 in. from floor. Use seven 1-1/4 in. No. 14 R.H. blued wood screws in No. 16 (.177") drill holes for attaching seat bracket to booth wall.

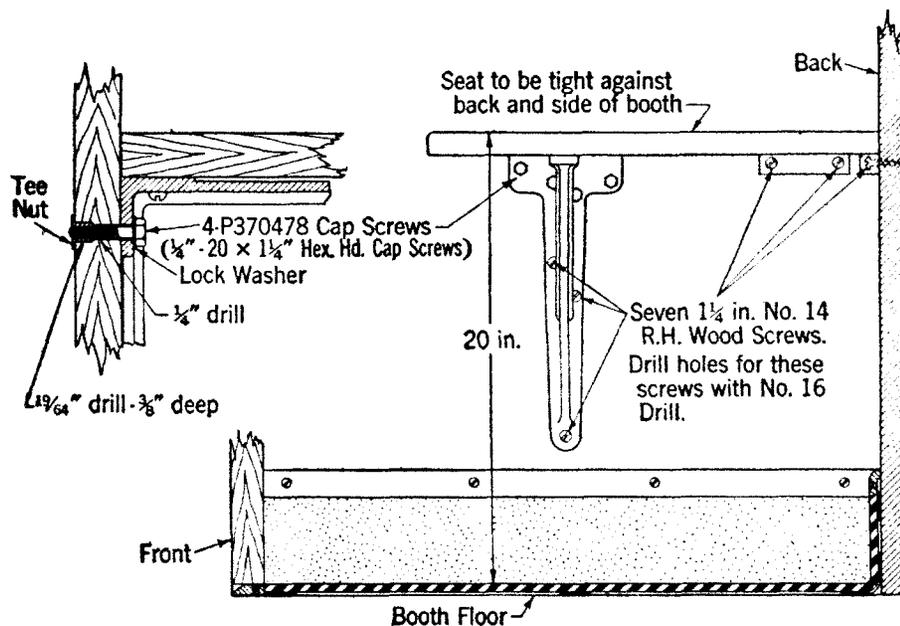


Fig. 10

9.02 Rough spots or splinters which might damage the clothing should be sandpapered, and touched up per Part 7.

10. BACKBOARDS

10.01 Where backboards are fastened with wood screws, re-fasten with step bolts in accordance with Part 9, (C) Section C44.111.

10.02 Booth not equipped with corner type backboards (153 or 167) shall be so equipped and an associated corner type shelf shall also be provided.