

DIALS 2, 4, 5, AND 6 TYPES  
AND  
ASSOCIATED DIAL MOUNTINGS AND DIAL ADAPTERS  
PIECE-PART DATA AND REPLACEMENT PROCEDURES

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of 2-, 4-, 5-, and 6-type dials, 6000- and 6044-type dial mountings, and No. 52D, 59B, 62B, and 64A dial adapters.

1.02 This section is reissued to include plastic finger wheels, the No. 6044B dial mounting, and to revise the piece-part information as required. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted. Detailed reasons for reissue will be found at the end of the section.

1.03 Part 2 of this section covers the piece-part numbers and the corresponding names of the parts, which it is practicable to replace in the field, in the maintenance of 2-, 4-, 5-, and 6-type dials and associated mountings. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called Piece-part Data.

1.04 Part 3 of this section covers the approved procedures for the replacement of the parts listed in Part 2. This information is called Replacement Procedures.

2. PIECE-PART DATA

2.01 The figures included in this part show the various piece parts in their proper relation to other parts of the apparatus. The piece-part numbers of the various parts are given together with the names of the parts as listed by the Western Electric Company Merchandise Department. When these names differ from those in general use in the field, the latter names, in some cases, are shown in parentheses.

2.02 When ordering piece parts for replacement purposes, give both the number and name of the piece part. For example, P-153971 Finger Dial. Do not refer to the BSP number or to any information shown in parentheses following the piece-part numbers.

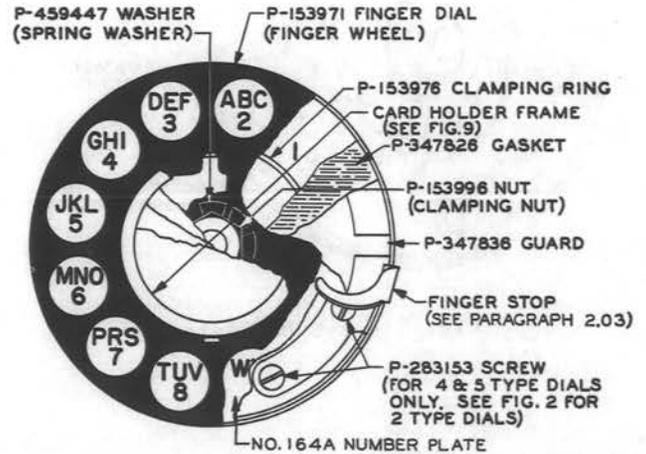


Fig. 1 - 2-, 4-, and 5-type Dials  
Except the No. 5JB Dial

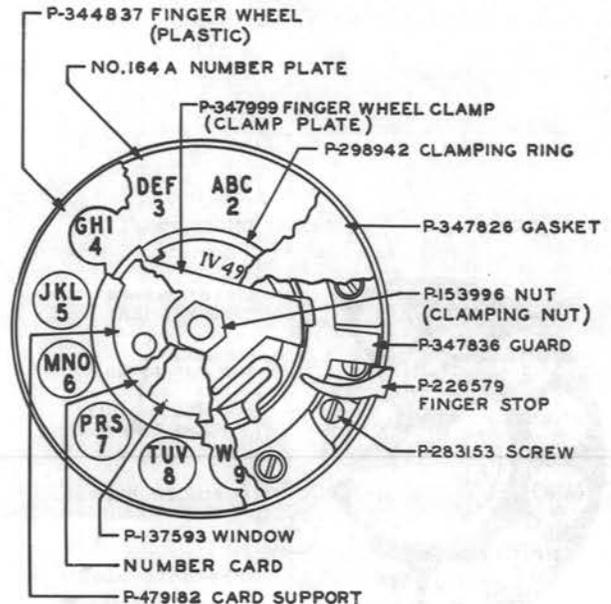


Fig. 2 - No. 5JB Dial

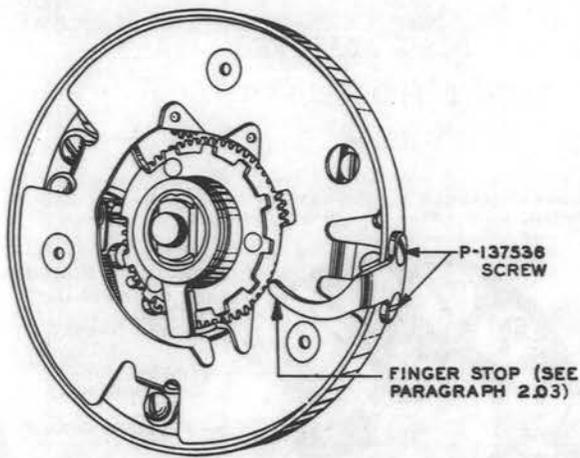


Fig. 3 - 2-type Dials

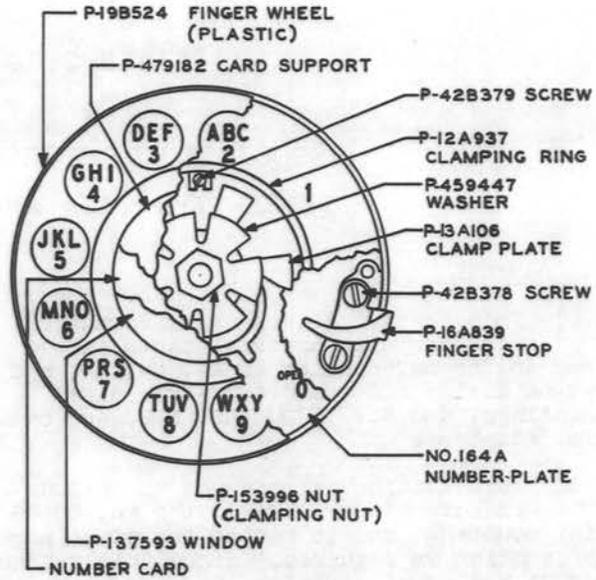


Fig. 5 - No. 6D Dial

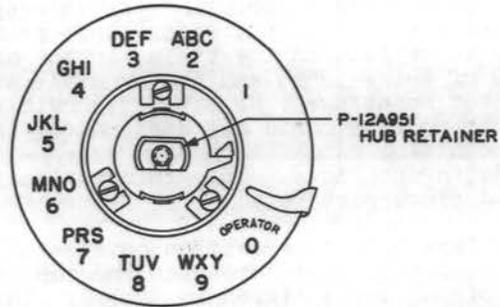


Fig. 6 - 6-type Dials - Finger Wheel Removed

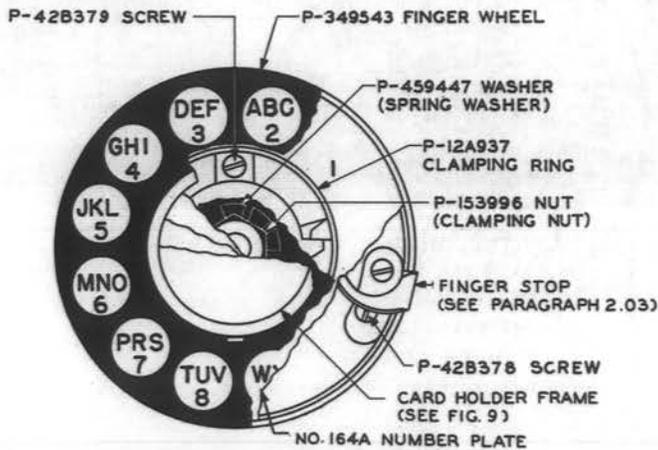


Fig. 4 - 6-type Dials Except the No. 6D Dial

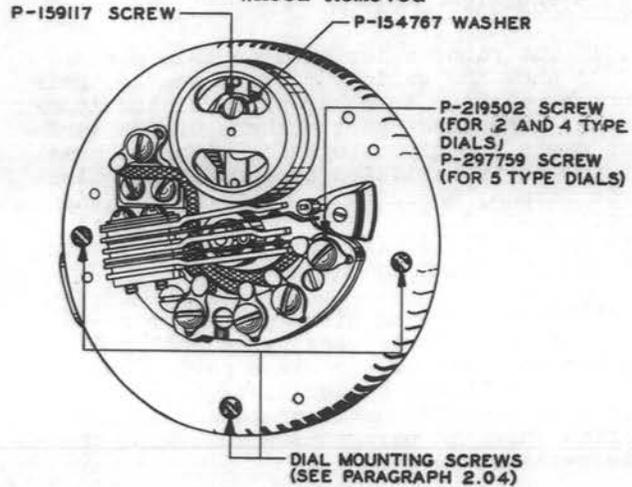


Fig. 7 - 2-, 4-, and 5-type Dials - Rear View

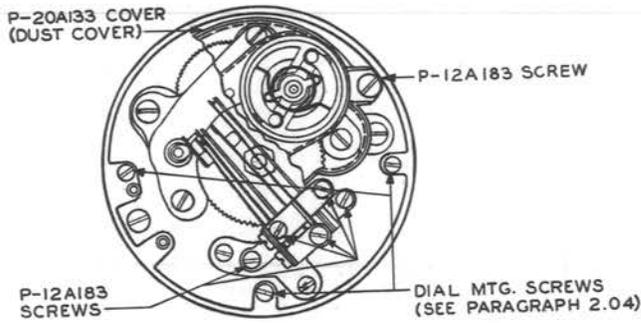


Fig. 8 - 6-type Dials - Rear View

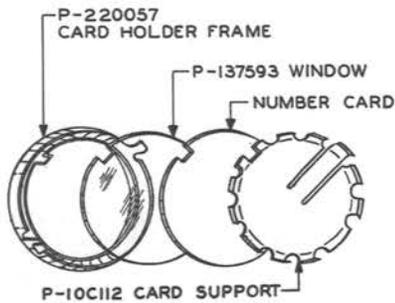


Fig. 9 - Assembly of Card Holder Parts

2.03 Table A lists the finger stops which are not common to all dials.

TABLE A

Dial	Finger Stop
2A	*P-172189
2C	*P-172189
2E	*P-290194
2F	*P-290194
2G	*P-290194
2H	*P-172189
4A	P-226579
4C	P-226579
4E	P-242192
4F	P-242192
4G	P-242192
4H	P-226579
5E	P-242192
5F	P-242192
5K	P-242192
5L	P-242192
6E	P-19B604
6F	P-19B604
6G	P-19B604
D157233	P-242192

\*Specify code number of dial when ordering finger stops for these dials.

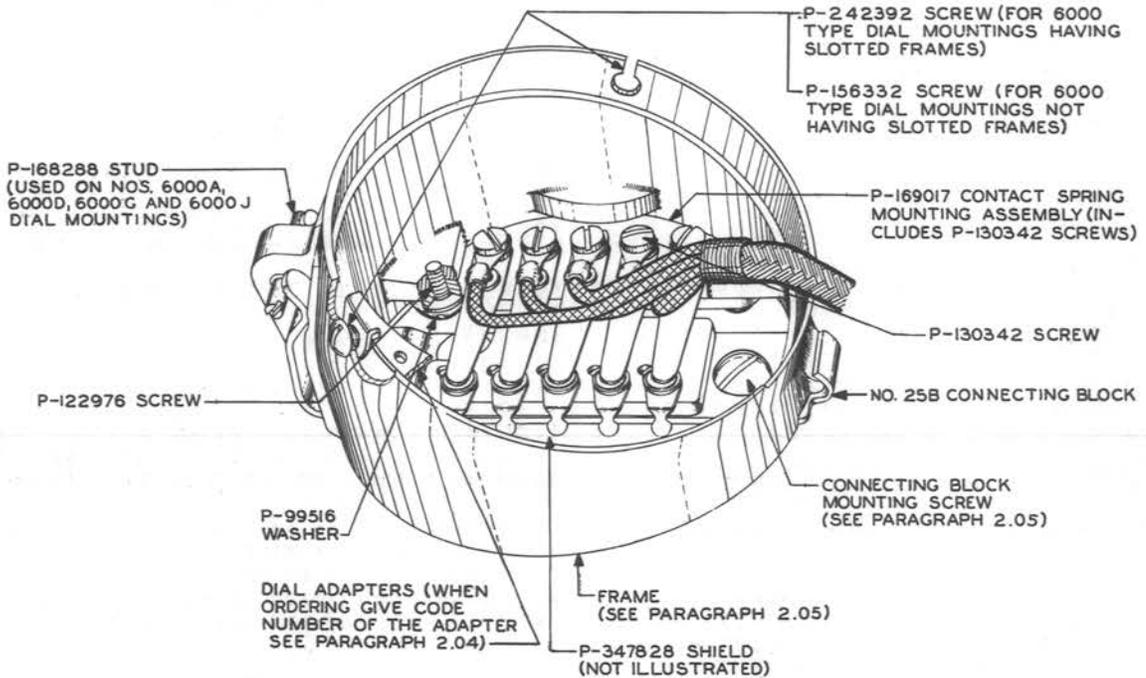


Fig. 10 - 6000-type Dial Mounting

SECTION 028-300-801

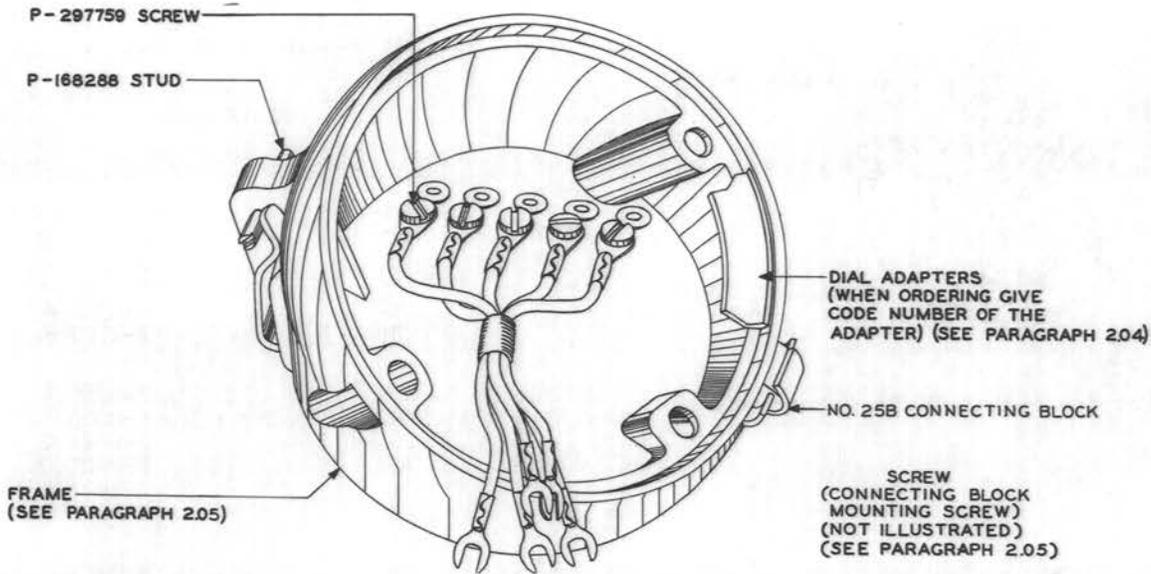


Fig. 11 - 6044-type Dial Mounting

2.04 The following is a list of replacement dial adapters required for mounting dials on the dial mountings shown in Fig. 10 and 11.

Dials	Dial Mountings	Dial Adapters	Screws (Dial Mounting)
2,4, or 5	6000A, B, C, D, E, & F	52D	P-125035
6	6000A, B, C, D, E, & F	52D with 64A	P-42B080
2,4,5, or 6	6000G, H & J	62B	P-131556
2,4, or 5	6044A	59B	P-131556
6	6044A	59B with 64A	P-42B080
6	6044B	59B	P-131556

Dial Mounting	Frame	Screw (Connecting Block Mounting Screw)
6000G	P-473255	P-219744
6000H	P-473255	P-219744
6000J	P-476767	P-219744
6044A	P-479512	P-219744
6044B	P-10C666	P-219744

3. REPLACEMENT PROCEDURES

3.01 List of Tools

Code or Spec No.	Description
260	Dial Governor Holder
311	3/8- and 7/16-inch Hex. Double-end Socket Wrench
445A	Dial Card Holder Tool
KS-6854	3-1/2-inch Screwdriver
-	3-inch Cabinet Screwdriver

2.05 The following is a list of dial mountings and associated piece parts which are not common to all mountings.

Dial Mounting	Frame	Screw (Connecting Block Mounting Screw)
6000A	P-168294	P-92200
6000B	P-169063	P-92200
6000C	P-172077	P-92200
6000D	P-219795	P-219744
6000E	P-219796	P-219744
6000F	P-227772	P-219744

3.02 After making any replacement of parts of dials, the part or parts replaced shall meet the readjust requirements involved as specified in Section 028-300-701. Other parts, whose adjustment may have been disturbed by the replacing operations, shall be checked to the readjust requirements and an over-all operation check of the apparatus shall be made before restoring the dials to service.

3.03 No replacement procedures are specified for screws and other parts where the procedure consists of a simple operation.

Card Holder Frame, Window, and Card Support

3.04 Remove the card holder frame by inserting the point of the No. 445A dial card holder tool into either of the two slots at the top or rear of the card holder frame and forcing the other end of the tool away from the finger wheel as shown in Fig. 12. Remove the card retainer spring or card support by inserting the edge of the KS-6854 screwdriver under the part and forcing it out of the card holder. Where the dial is equipped with an earlier type card retainer and card retainer spring, discard these parts and substitute the later card support. Substitute other new parts as required and reassemble in the reverse order of removal. Remount the card holder on the dial.

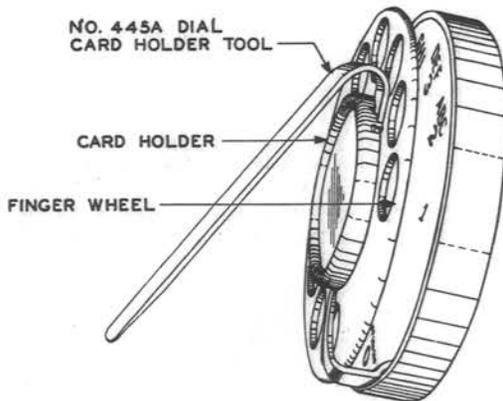


Fig. 12 - Method of Removing Dial Card Holder

Metal Finger Wheel and Finger Wheel Clamping Nut and Spring Washer

3.05 2-, 4-, and 5-type Dials: To replace the finger wheel or finger wheel clamping nut or spring washer, proceed as follows. Remove the card holder frame as described in 3.04. With the No. 311 wrench, remove the finger wheel clamping nut and spring washer, if provided. Then remove the finger wheel. A 3-inch cabinet screwdriver or the equivalent may be inserted into the slot of the No. 311 wrench to assist in turning the nut. Substitute the new parts and reassemble in the reverse order of removal.

3.06 6-type Dials: To replace the finger wheel or finger wheel clamping nut or spring washer, proceed as follows. Remove the card holder frame as described in 3.04.

With the No. 311 wrench, remove the finger wheel clamping nut and spring washer. Then remove the finger wheel. A 3-inch cabinet screwdriver or the equivalent may be inserted into the slot of the No. 311 wrench to assist in turning the nut.

Caution: On dials equipped with unfinished brass finger wheel clamping nuts, exercise care in order to prevent the motor spring and hub assembly from slipping or jumping out of its proper position. This will not occur when the dial is equipped with a black-finished clamping nut, as the parts are either staked or held in position by a hub retainer. If the motor spring does slip or jump out of its position, replace the dial.

Substitute the new parts and reassemble in the reverse order of removal. When the motor spring and hub assembly is not staked, mount a P-12A951 hub retainer on the shaft, as shown in Fig. 13, to secure the hub and spring assembly in place. Replace the unfinished nut with a black-finished nut.

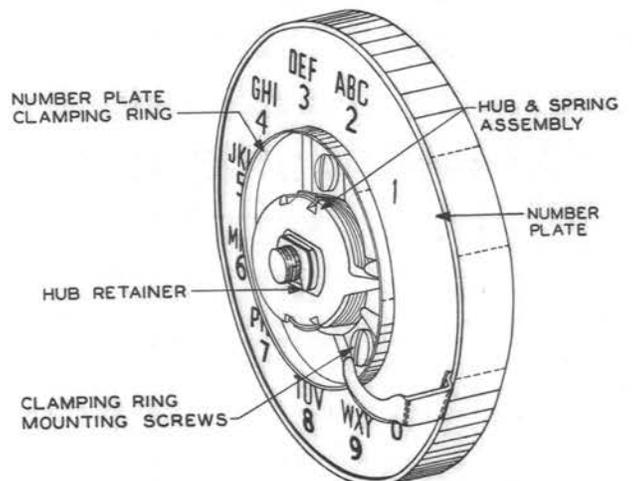


Fig. 13 - Illustrating the Hub Retainer and the Clamping Ring on 6-type Dials

Plastic Finger Wheel, Window and Card Support, Finger Wheel Clamping Nut, and Clamp Plate

3.07 General: To remove the finger wheel, rotate it in a clockwise direction as far as possible. Then, while holding it in this position, insert a stiff wire or the end of a straightened paper clip into the small hole in the edge of the raised center portion of the finger wheel adjacent to the

finger stop. Push down on the wire to disengage the finger wheel clamp plate while applying pressure to the wheel in the direction of rotation. Remove the finger wheel. Make the necessary substitution of parts as covered in the following paragraph. Remount the finger wheel as follows. With the dial normal, place the finger wheel on the dial so that the hole that is normally over the 0 is over the 9. Make sure the finger wheel is approximately level and then rotate it counterclockwise until a click is heard or the holes are over the proper digits.

3.08 Card Support, Number Card Window, and Finger Wheel: Remove the finger wheel as covered in 3.07. Remove the card support by inserting the edge of the KS-6854 screwdriver under the support, being careful to avoid damaging the number card or window. Make the necessary substitution of parts and reassemble in the reverse order. Remount the finger wheel as covered in 3.07.

3.09 Finger Wheel Clamping Nut and Clamp Plate: To replace the finger wheel clamping nut or clamp plate, remove the finger wheel as covered in 3.07. With the No. 311 wrench remove the finger wheel clamping nut and lift off the clamp plate. Substitute the new parts and reassemble in the reverse order of removal.

#### Number Plate and Number Plate Clamping Ring

3.10 2-, 4-, and 5-type Dials: To replace the number plate or number plate clamping ring, first remove the finger wheel or the finger wheel and clamp plate as described in 3.05 or 3.07 and 3.09, then remove the number plate clamping ring with the fingers when the dial is equipped with other than a 132-type number plate. When the dial is equipped with a 132-type number plate, use the KS-6854 screwdriver, as shown in Fig. 14, in order to avoid chipping the enamel on the number plate. Do not apply the end of the screwdriver to the outside of the clamping ring. Remove the number plate if it is to be replaced. Make the necessary substitution of parts and reassemble in the reverse order.

3.11 6-type Dials: To replace the number plate or number plate clamping ring, first cautiously remove the finger wheel or the finger wheel and clamp plate, as described in 3.06 or 3.07 and 3.09, then remove the number plate clamping ring by removing the clamping ring mounting screws with the 3-inch cabinet screwdriver. Remove the number plate if it is to be replaced. Make the necessary substitution of parts and reassemble in the reverse order.

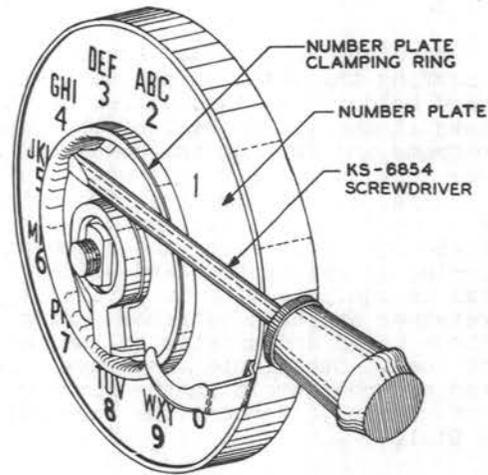


Fig. 14 - Method of Removing the Number Plate Clamping Ring on Dials Equipped With 132-type Number Plates

#### Finger Stop and Finger Stop Screws

3.12 2-type Dials: To replace the finger stop on the above dials, remove the two finger stop mounting screws with the 3-inch cabinet screwdriver. Substitute the new parts and tighten the mounting screws securely.

3.13 4- and 5-type Dials: To replace the finger stop on the above dials, first remove the card holder frame, if provided, finger wheel, and number plate as covered in 3.04, 3.05, 3.10 or 3.07 and 3.09. Remove the two finger stop mounting screws with the 3-inch cabinet screwdriver. Substitute the new parts and tighten the mounting screws securely.

3.14 6-type Dials: To replace the finger stop on the above dials, first remove the card holder frame, if provided, finger wheel, and number plate as covered in 3.04, 3.06, 3.11 or 3.07 and 3.09. Remove the two finger stop mounting screws with the 3-inch cabinet screwdriver. Substitute the new parts and tighten the mounting screws securely.

#### Dust Gasket and Guard

3.15 2-, 4-, and 5-type Dials: To replace the dust gasket and guard, remove the card holder frame, if provided, the finger wheel, and the number plate as covered in 3.04, 3.05, 3.10 or 3.07 and 3.09. Substitute

a new dust gasket and guard as required. Position the guard on the number plate support so that the tabs are slanted downward and the largest radial cutout fits over the pulse pawl and the edge of the inner radial cutout fits against the stop of the number plate support. With the dial stop arm held off-normal, slip the gasket over the arm and main shaft and then over the number plate support stop lug, aligning the outer slits in the periphery of the gasket with the finger stop. (See Fig. 15.)

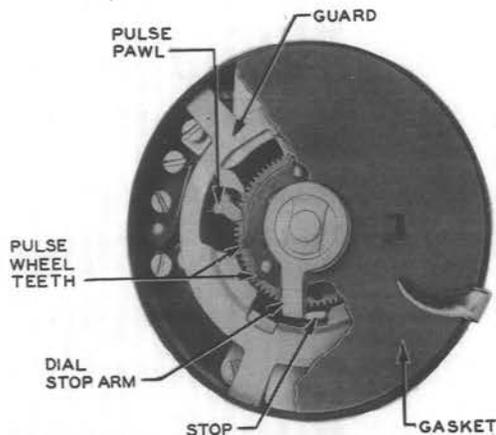


Fig. 15 - Illustrating Gasket and Guard on 2-, 4-, and 5-type Dials

#### Governor Clamping Screw

3.16 2-, 4-, and 5-type Dials: To replace the governor clamping screw, place the No. 260 governor holder on the governor as shown in Fig. 16. Remove the clamping screw with the KS-6854 screwdriver and substitute the new clamping screw. Tighten it and remove the governor holder.

**Note:** In case the tip of the blade of the KS-6854 screwdriver is too thick to engage the slot in the governor clamping screw, select a screwdriver which has a thinner blade or grind the blade down slightly to fit the slot in the screw.

#### Dial Mounting Frame, Dial Mounting Shield, Dial Adapters, Contact Spring Mounting Assembly, and Connecting Block

3.17 6000-type Dial Mounting: To replace the above parts, proceed as follows. Loosen the dial adapter screws using the 3-inch cabinet screwdriver and remove the dial from the mounting. Loosen the screws fastening the cord tips to the contact spring mounting assembly using the screwdriver. Disengage the cord. If an adapter is defective, replace it at this time. Remove the stud (where provided) from the dial mounting frame using the screwdriver. Remove the dial mounting from the connecting block. If it is necessary to replace the

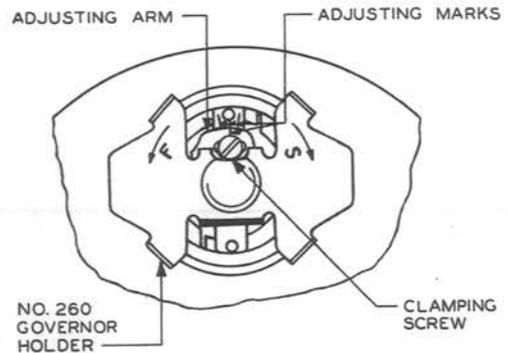


Fig. 16 - Illustrating the Position of the No. 260 Governor Holder

contact spring mounting assembly or the dial mounting shield, remove the associated mounting screws using the screwdriver. If it is necessary to replace the connecting block, remove the associated mounting screws with the screwdriver. Make the necessary substitution of parts and reassemble in the reverse order. When mounting the contact spring mounting assembly, check that the contacts of the springs are approximately centered on their associated contacts on the connecting block.

#### Dial Mounting Frame, Dial Adapters, and Connecting Block

3.18 No. 6044A and No. 6044B Dial Mountings:

To replace the above parts, proceed as follows. Remove the stud from the dial mounting frame using the 3-inch cabinet screwdriver. Lift the dial mounting from the connecting block. If it is necessary to replace the connecting block, remove the associated mounting screws with the screwdriver. To separate the dial from its mounting frame, remove the dial mounting screws. Loosen the screws fastening the cord tips to the dial mounting frame using the screwdriver. Disengage the cord. Make the necessary substitution of parts, including the dial adapters, and reassemble in the reverse order.

#### REASONS FOR REISSUE

1. To add the plastic finger wheels (No. 5JB and No. 6D dials, Fig. 2 and 4).
2. To revise the piece-part information as required (Fig. 5 and 8).
3. To revise the figure covering Assembly of Card Holder Parts (Fig. 9).
4. To add the No. 6044B dial mounting and adapter (2.04 and Fig. 11).
5. To revise the procedure covering Card Holder Frame, Window, and Card Support (3.04).
6. To add a procedure for replacing the plastic finger wheels (3.07, 3.08, and 3.09).