

POST OFFICE ENGINEERING DEPARTMENT.

TECHNICAL INSTRUCTIONS, XXV.

(Provisional Issue.)

Automatic Telephone Exchange Systems.

Part 24A.—Apparatus—Description and Adjustment of
Dial Mechanisms.

DIAGRAMS.

(The Instruction relating to these Diagrams is issued separately.)



ENGINEER-IN-CHIEF'S OFFICE,
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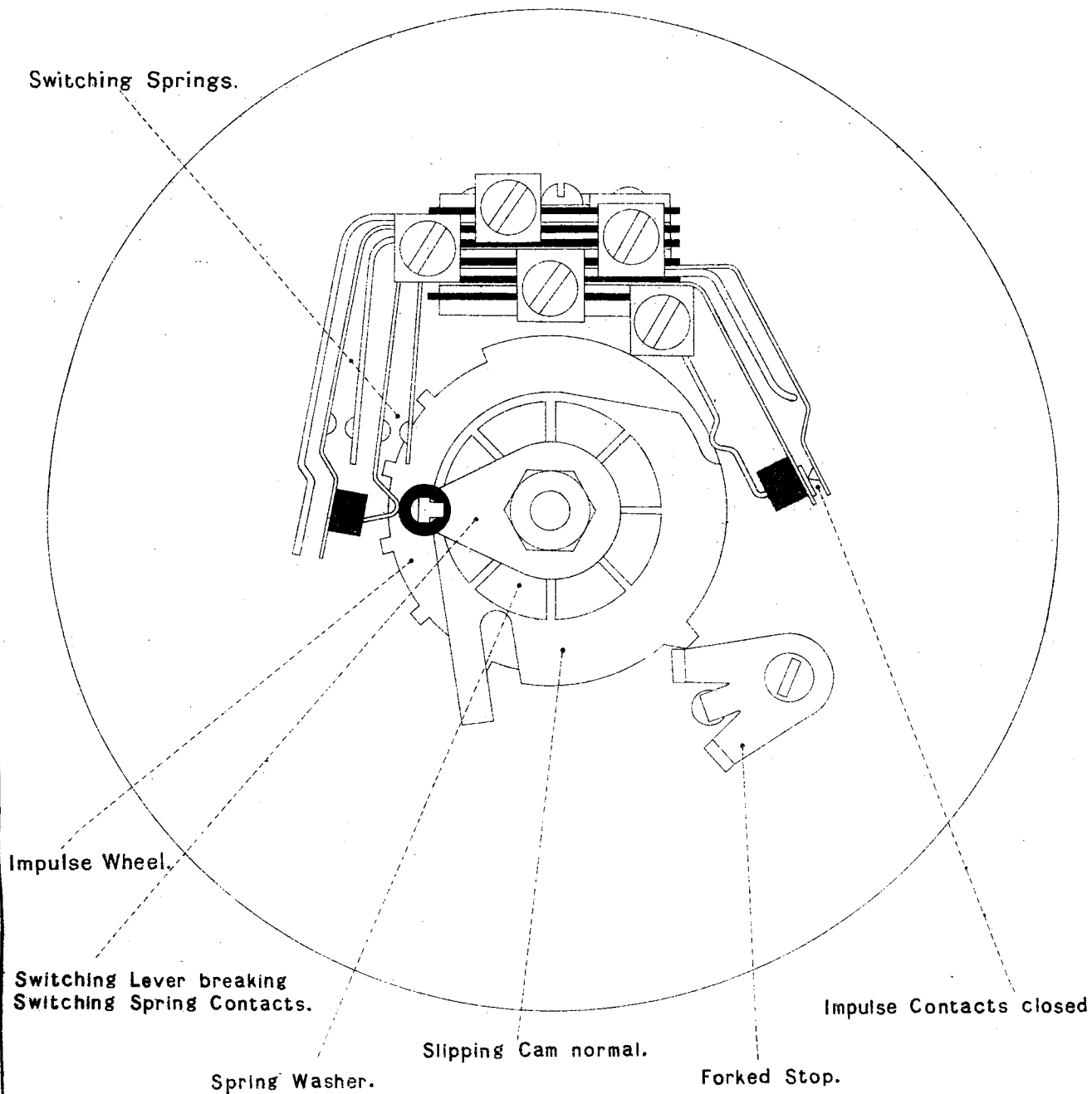
APPARATUS—DESCRIPTION AND ADJUSTMENT OF
DIAL MECHANISMS.

LIST OF FIGURES.

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- (3) „ „ one impulse prepared.
- (4) „ „ one impulse sending.
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- (7) „ rear view.
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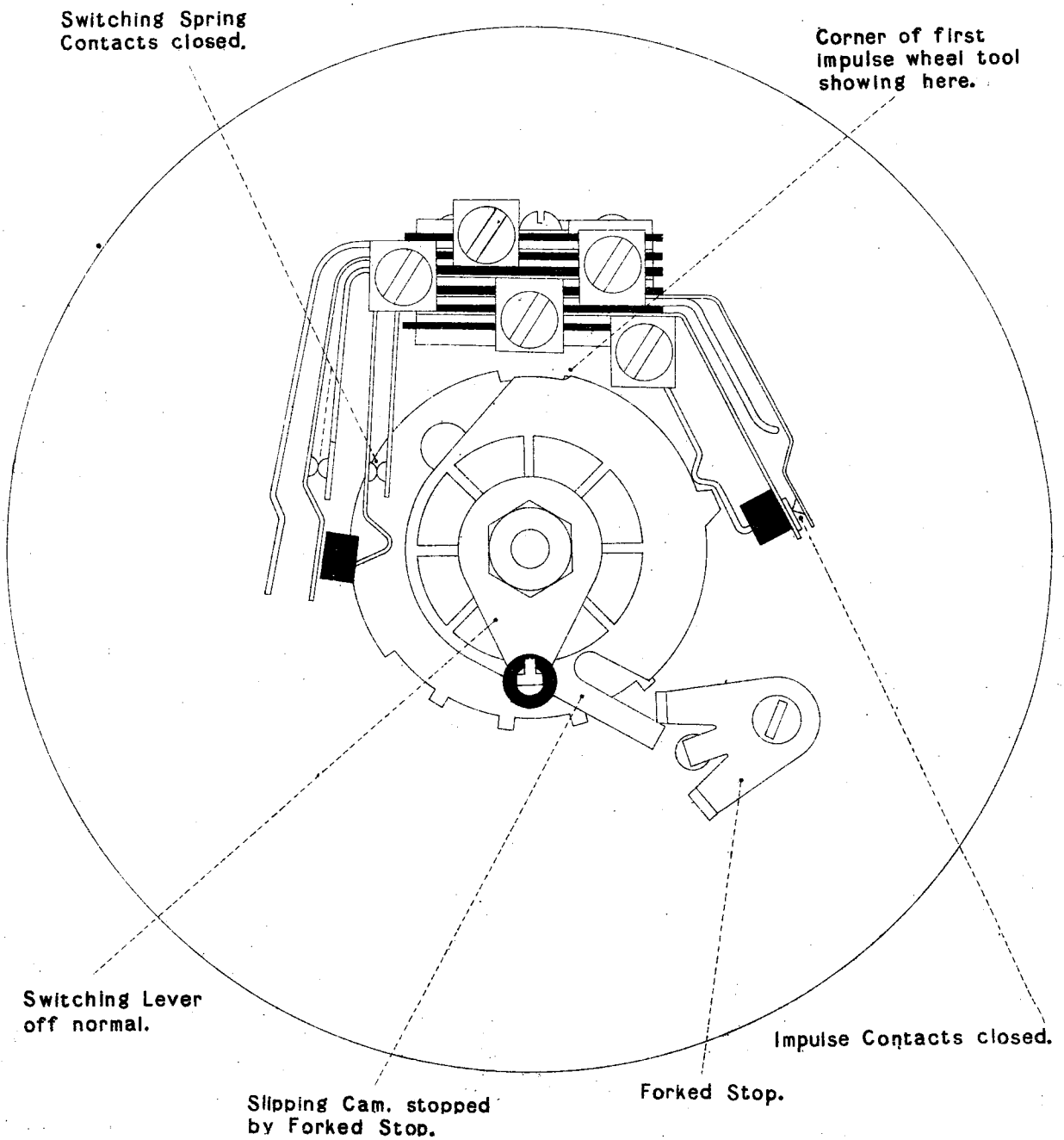
FIG. 1.
Dial, Auto., No. 10.



REAR VIEW OF DIAL SHOWING IMPULSING MECHANISM.

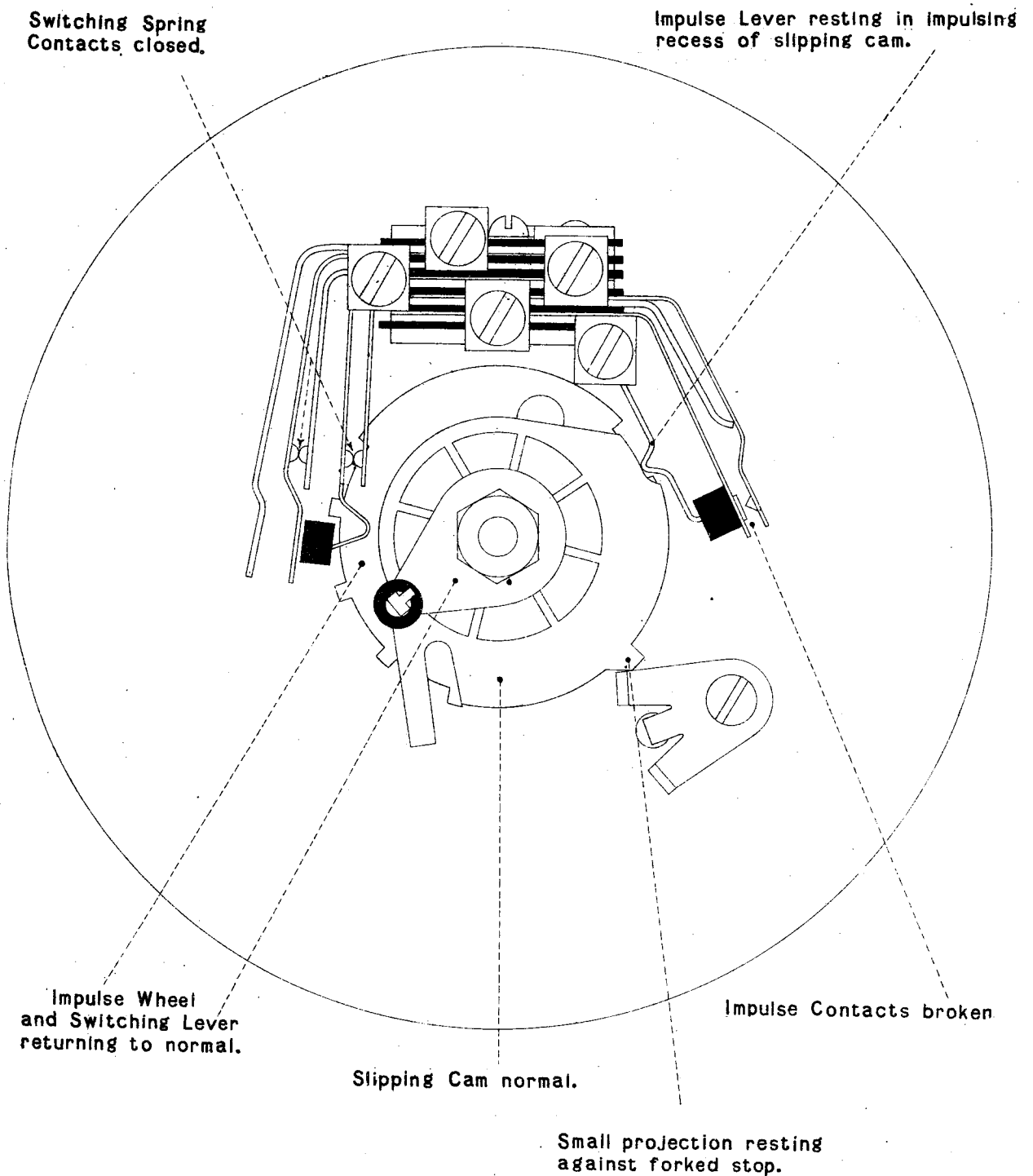
DIAL AUTO N°10.

NORMAL POSITION.



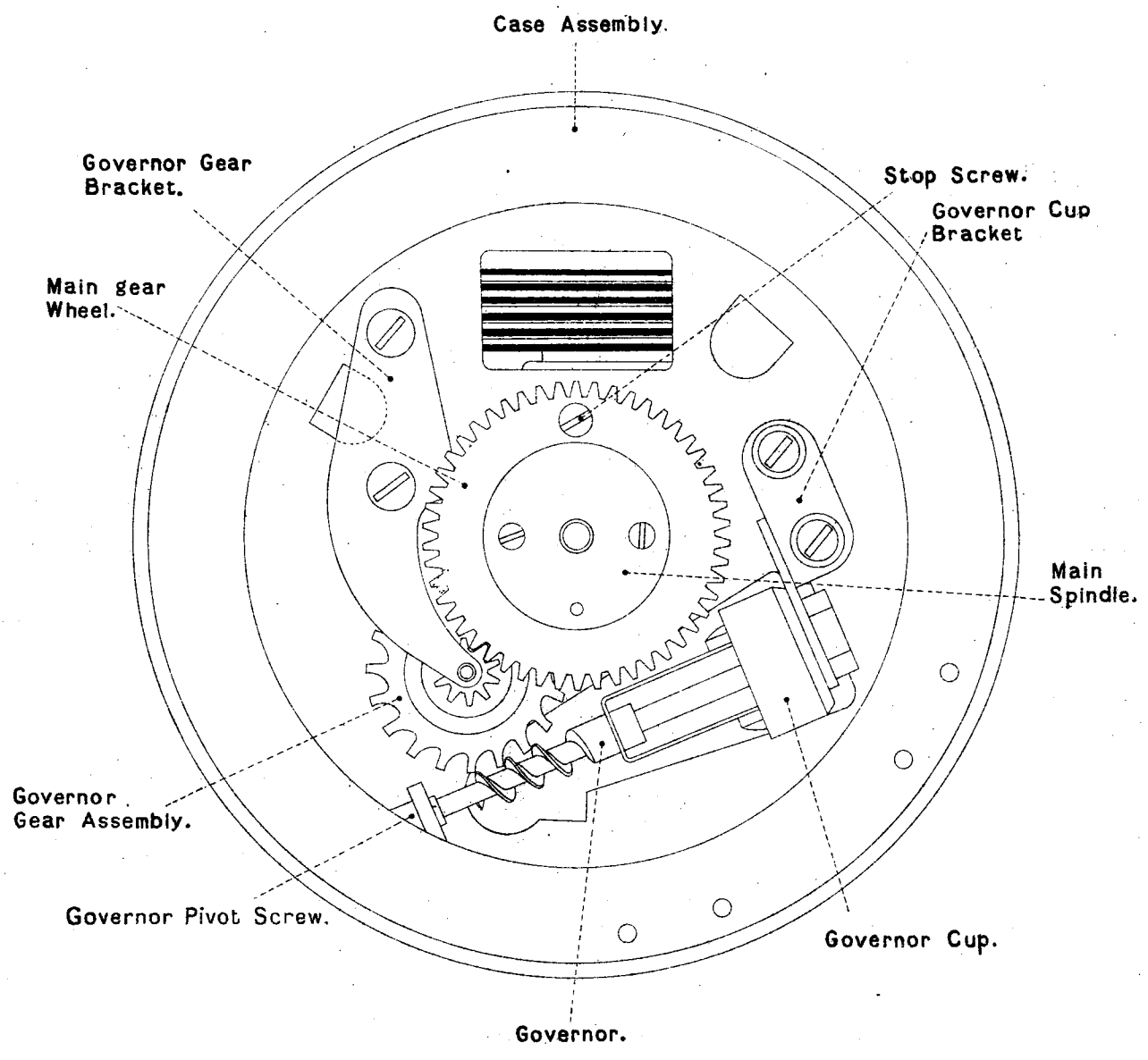
DIAL AUTO N°10.

ONE IMPULSE PREPARED.



DIAL AUTO N° 10.

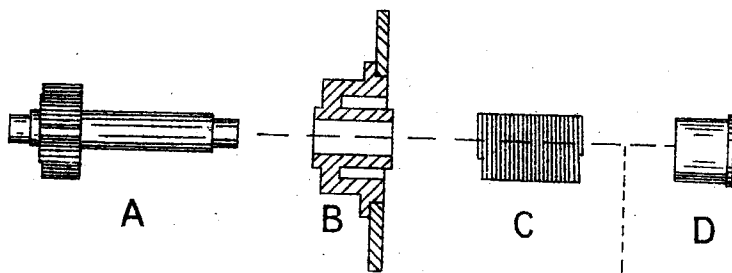
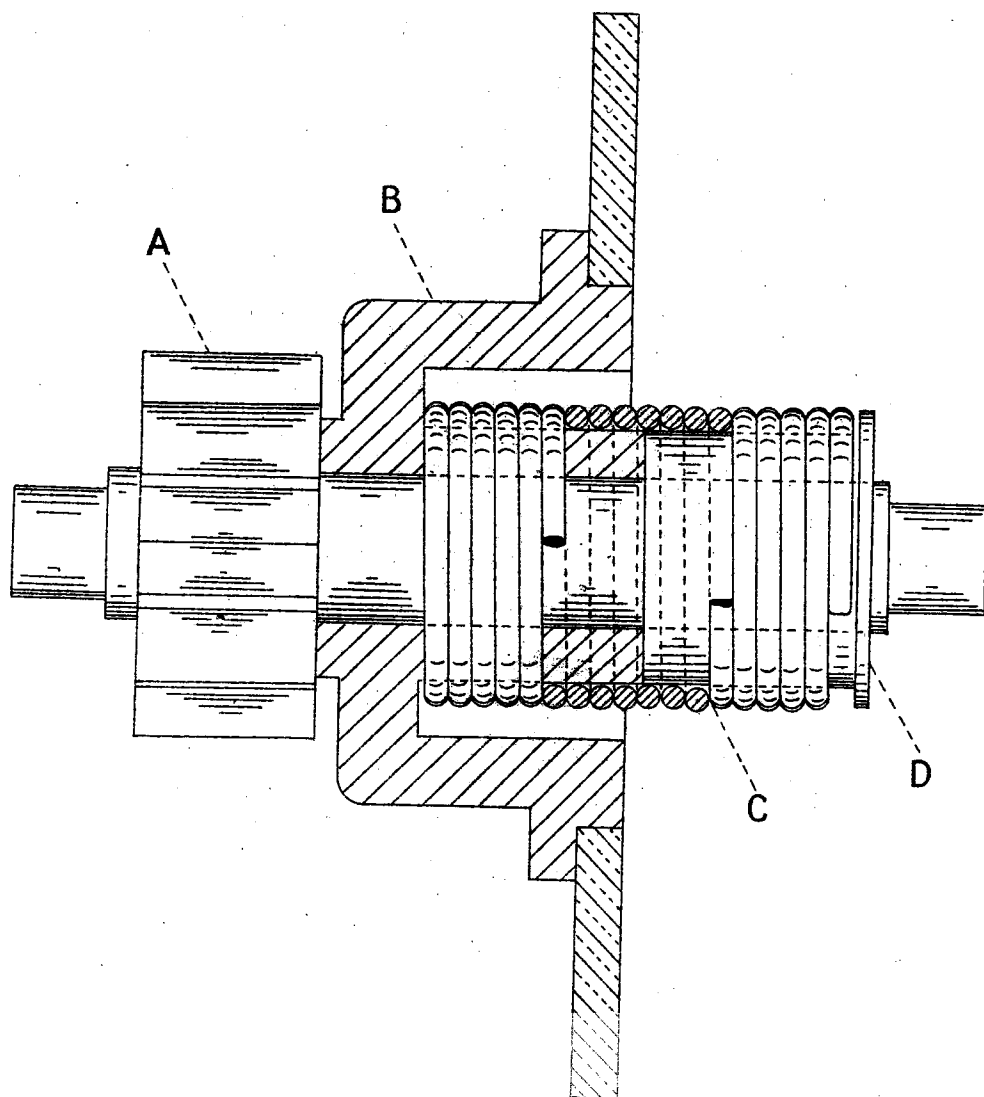
ONE IMPULSE SENDING.



DIAL AUTO N°10.

FRONT VIEW.

(FINGER PLATE REMOVED.)



Bush D makes a driving fit on Spindle A.

DIAL AUTO N° 10.
GOVERNOR GEAR ASSEMBLY.

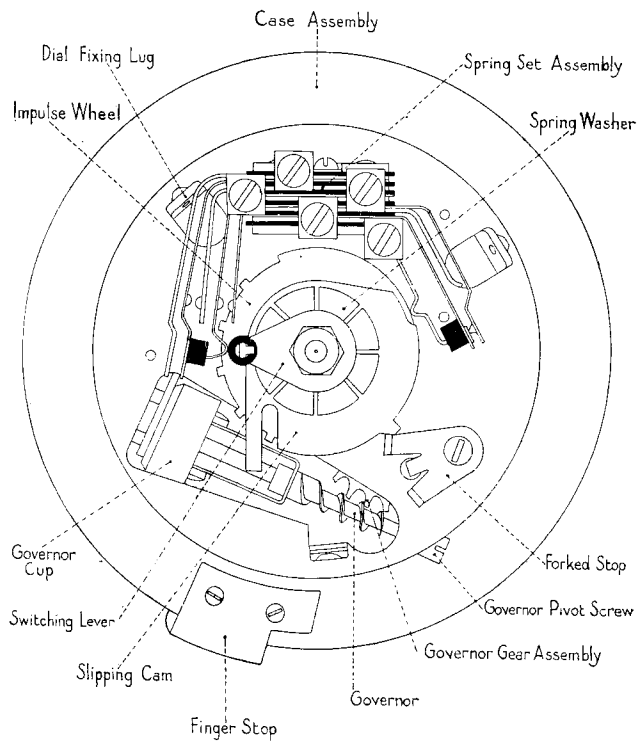
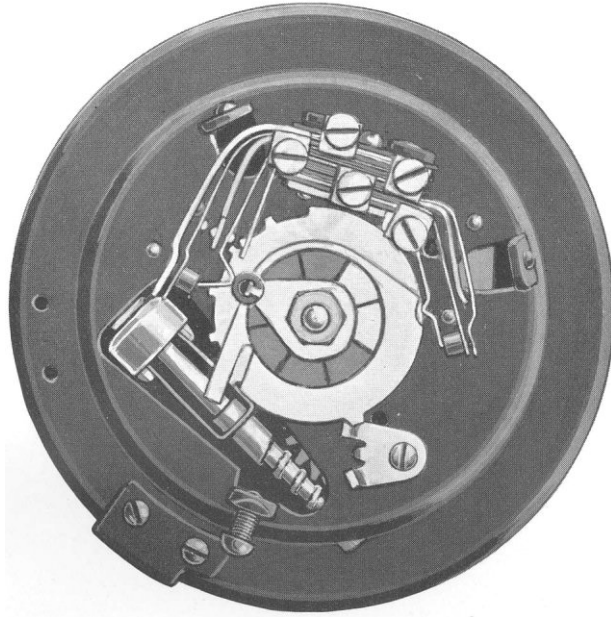


FIG. 7.
Dial, Auto., No. 10.
Rear View.

GOVERNOR CUP AND BRACKET.

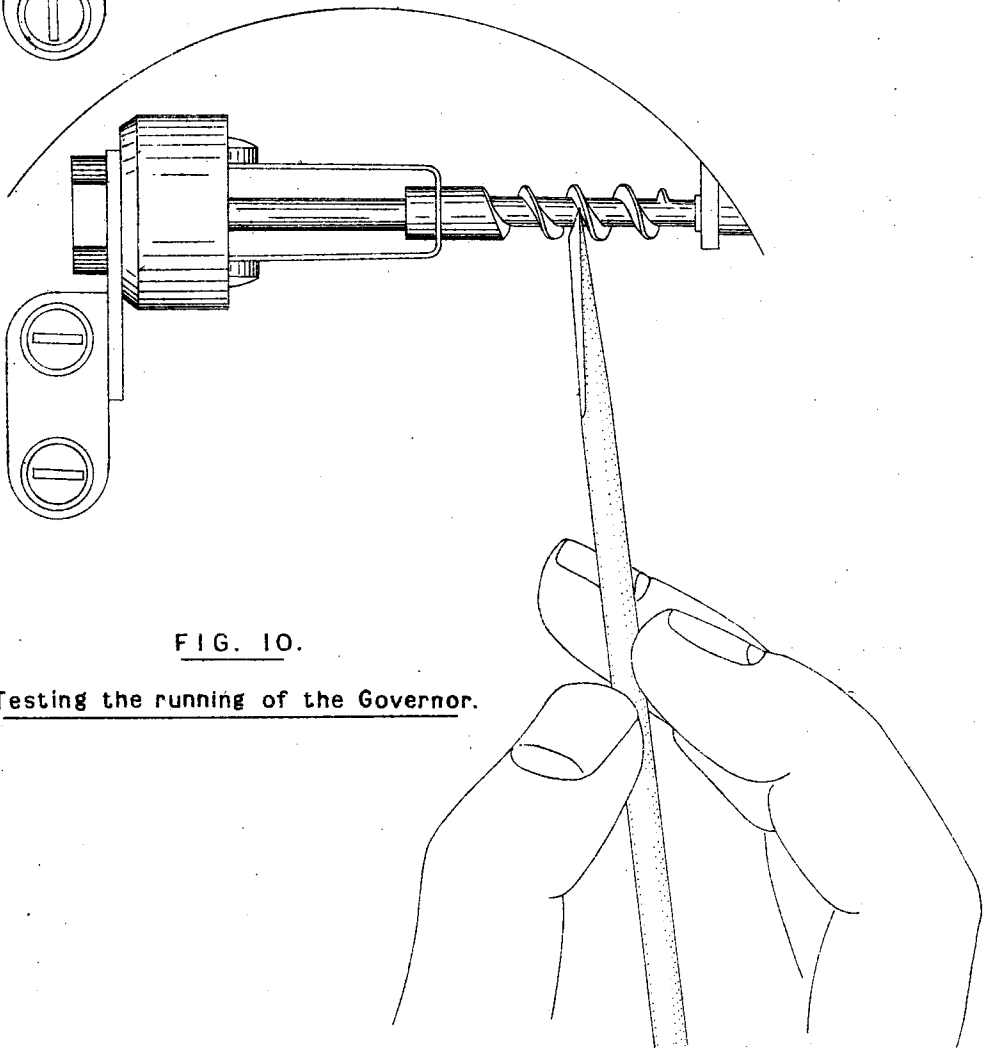
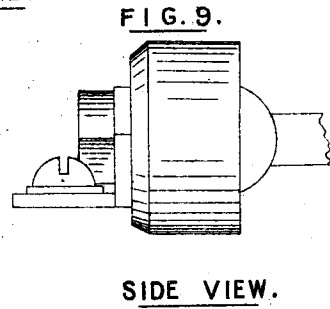
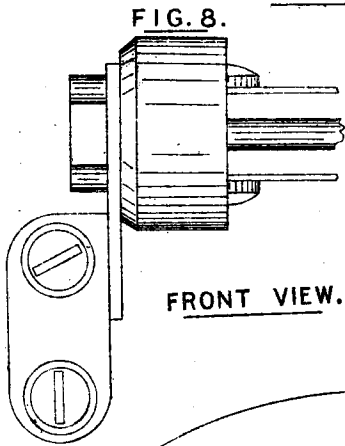
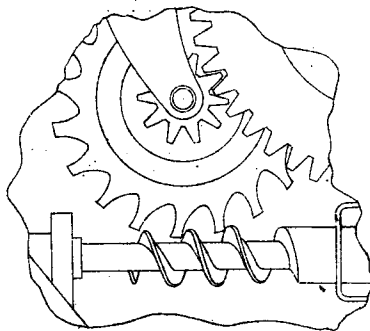


FIG. II.
Showing how the Governor Gear should be set.



DIAL AUTO N° 10.

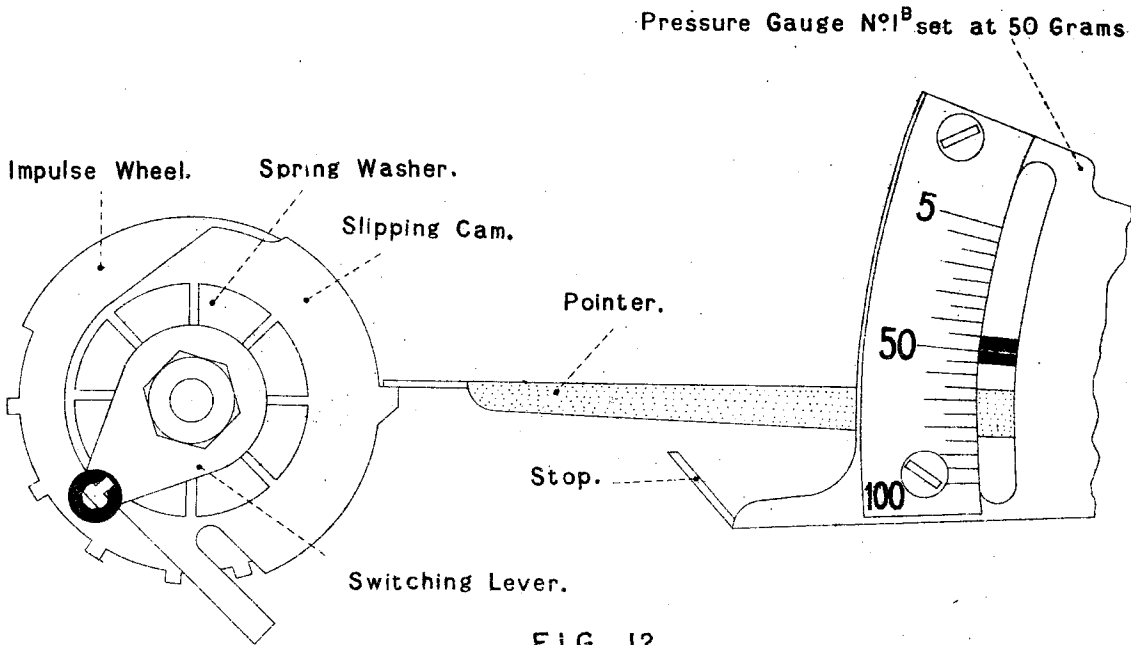


FIG. 12.

SHOWING THE SPRING WASHER RESISTING A LEVERAGE OF 50 GRAMS.

Note: The Slipping Cam should not move but the Pointer of the Gauge should leave the Gauge Stop.

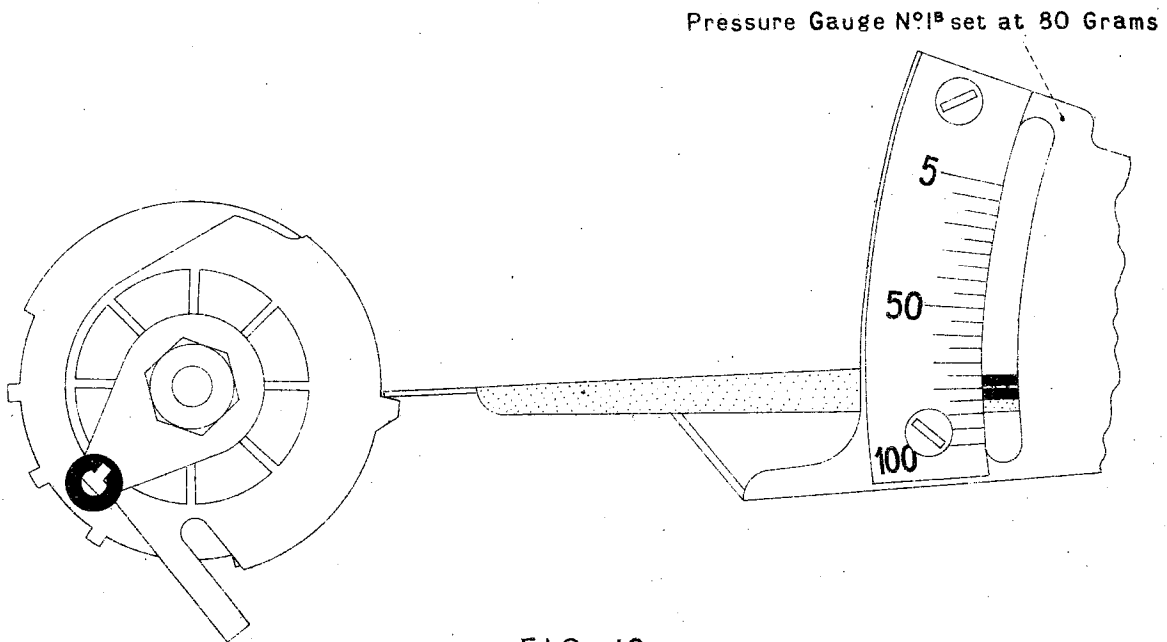


FIG. 13.

SHOWING THE SPRING WASHER ALLOWING THE SLIPPING CAM TO SLIP WITH A LEVERAGE OF 80 GRAMS.

Note: The Slipping Cam should slip but the Pointer of the Gauge should not leave the Gauge Stop.

DIAL AUTO N°10.

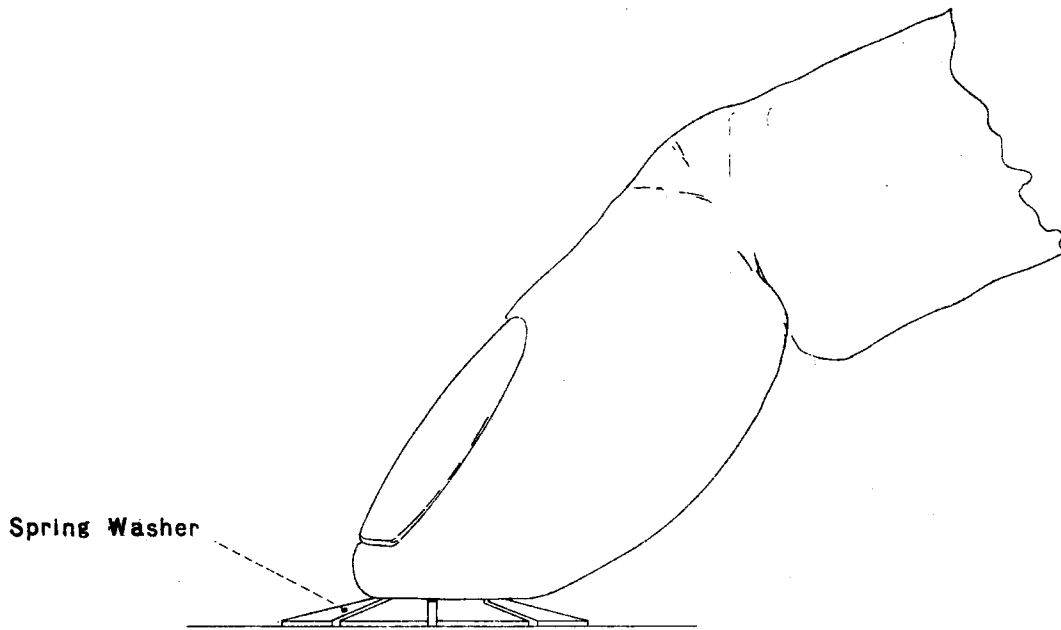


FIG. 14.

SHOWING HOW TO DECREASE THE PRESURE OF THE SPRING WASHER

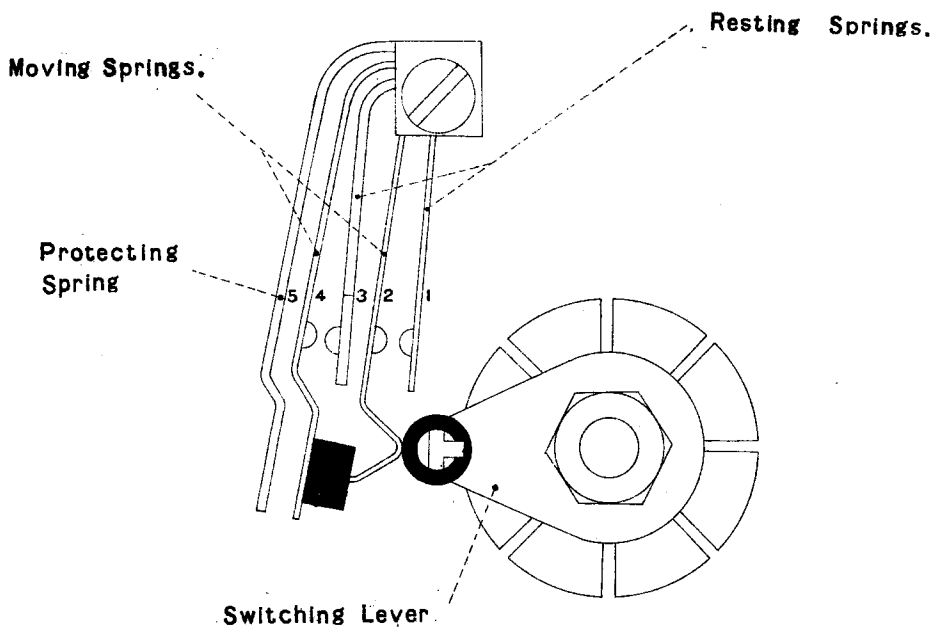


FIG. 15.

ADJUST THE SWITCHING LEVER SO THAT WHEN THE DIAL IS NORMAL THE LEVER BUFFER RESTS AT THE TOP OF THE SET OF THE FIRST MOVING SPRING.

DIAL AUTO N° 10.

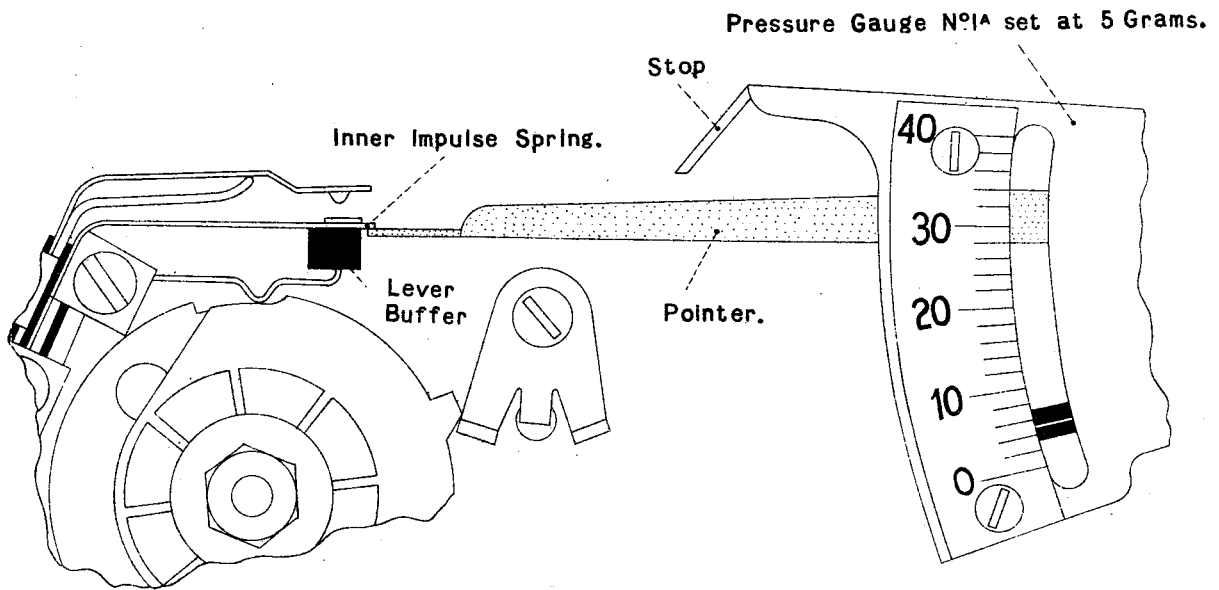


FIG. 16.

THE INNER IMPULSE SPRING RESISTING A LEVERAGE OF 5 GRAMS.

Note: The Inner Impulse Spring is resting on the Lever Buffer and the Pointer of the Gauge has left the Gauge Stop.

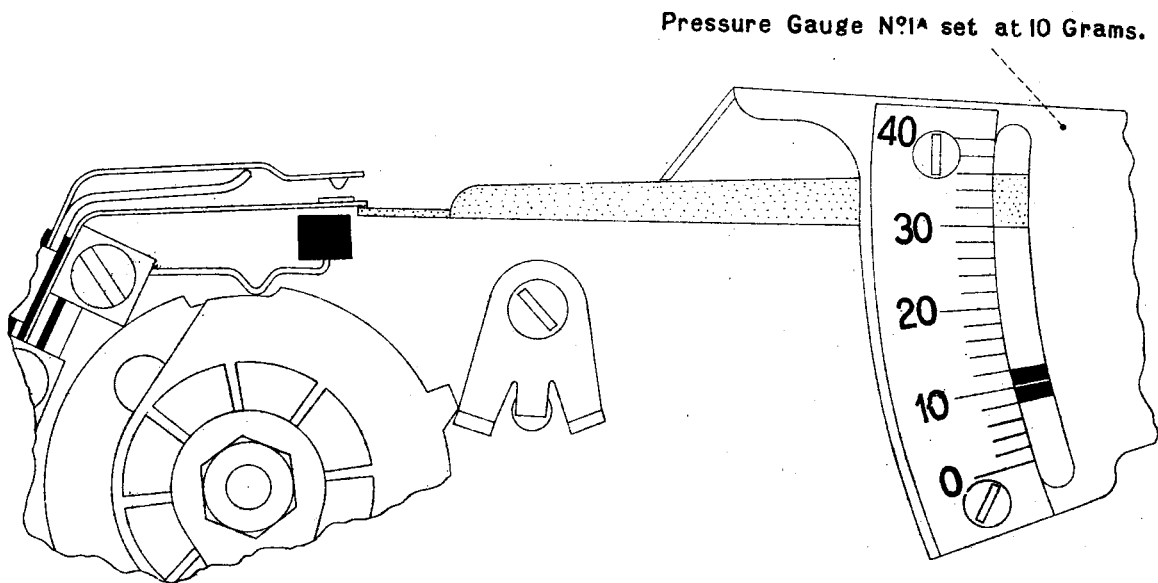


FIG. 17.

THE INNER IMPULSE SPRING LIFTING FROM THE LEVER BUFFER WITH A LEVERAGE OF 10 GRAMS.

Note: The Inner Impulse Spring has lifted from the Lever Buffer but the Pointer of the Gauge has not left the Gauge Stop.

DIAL AUTO N°10.

Pressure Gauge N°1A set at 20 Grams

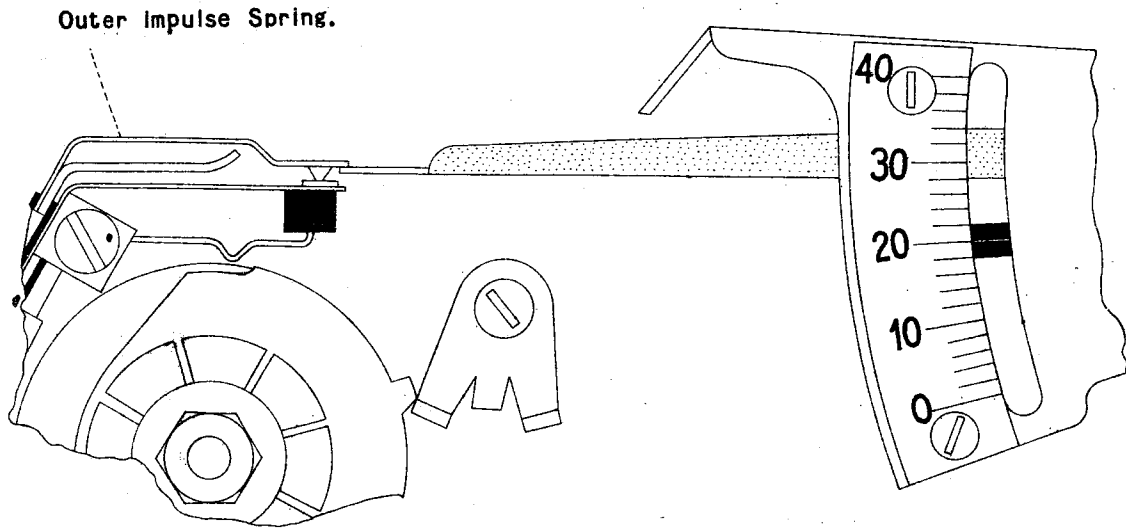


FIG. 18.

OUTER IMPULSE SPRING RESISTING A LEVERAGE OF 20 GRAMS.

Pressure Gauge N°1A set at 30 Grams.

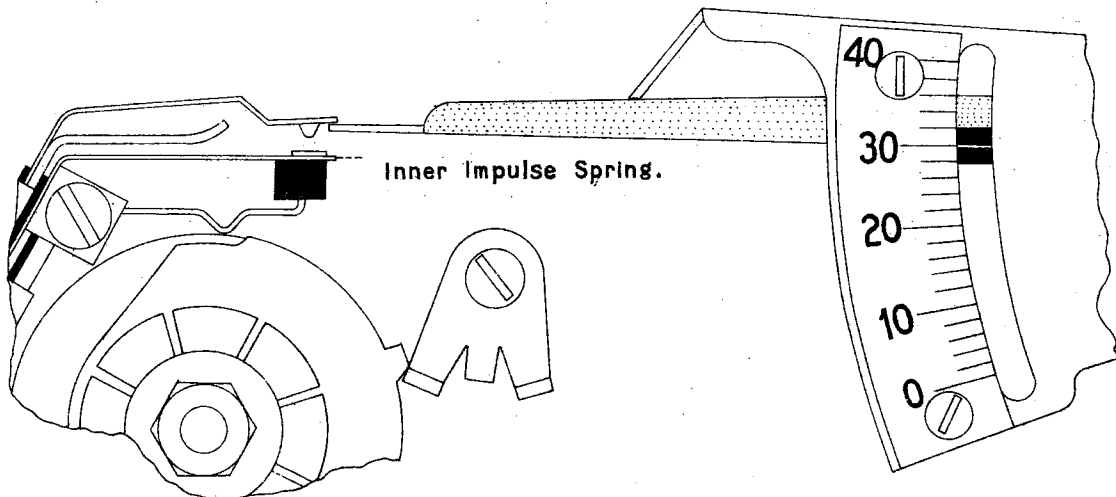


FIG. 19.

OUTER IMPULSE SPRING LIFTING FROM THE INNER IMPULSE SPRING CONTACT WITH A LEVERAGE OF 30 GRAMS.

DIAL AUTO N°10.

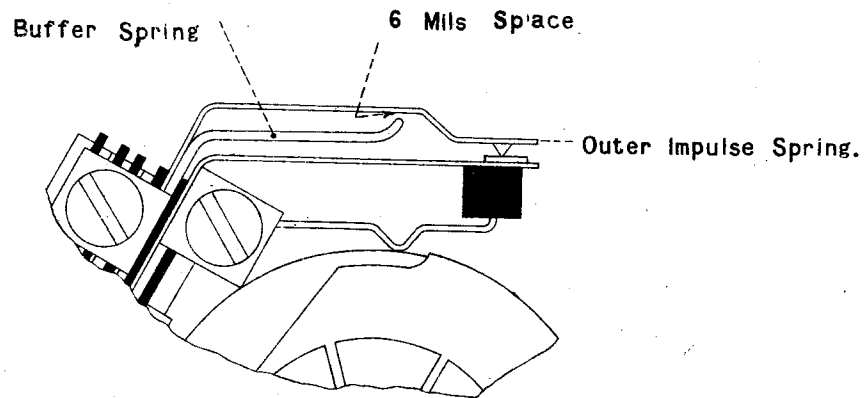


FIG. 20.

THE BUFFER SPRING SHOULD BE ADJUSTED SO THAT THERE IS A SPACE OF 6 MILS BETWEEN THE TIP OF THE BUFFER SPRING AND THE OUTER IMPULSE SPRING WITH THE DIAL AT NORMAL.

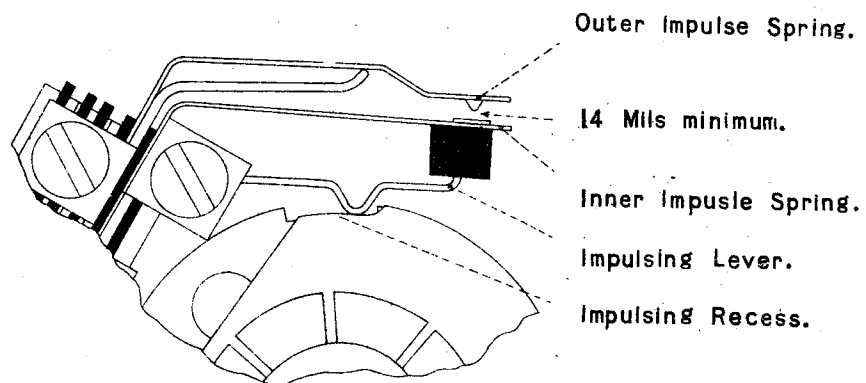


FIG. 21.

THE OPENING OF THE IMPULSE CONTACTS SHOULD NOT BE LESS THAN 14 MILS WHEN THE IMPULSING LEVER IS RESTING IN THE IMPULSING RECESS OF THE SLIPPING CAM.

DIAL AUTO N°10.

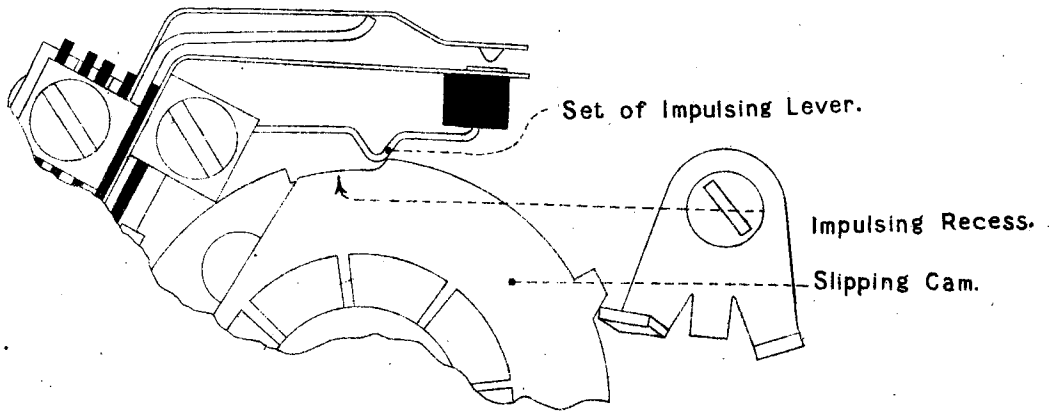


FIG. 22.

Set of Impulsing Lever not resting correctly in Impulsing Recess of Slipping Cam.

FIG. 23.

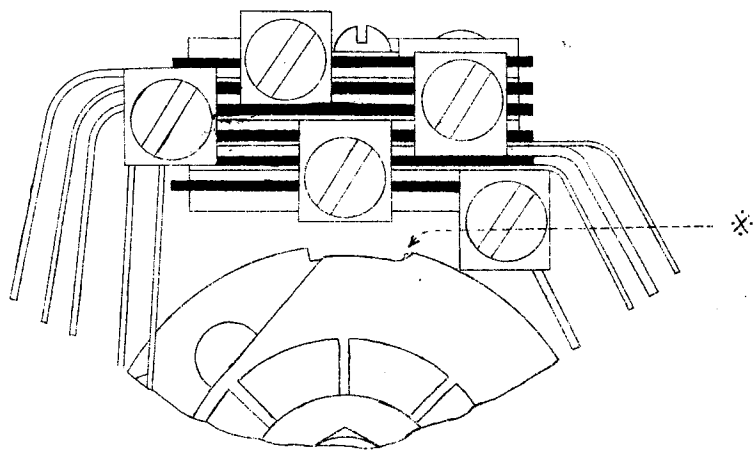
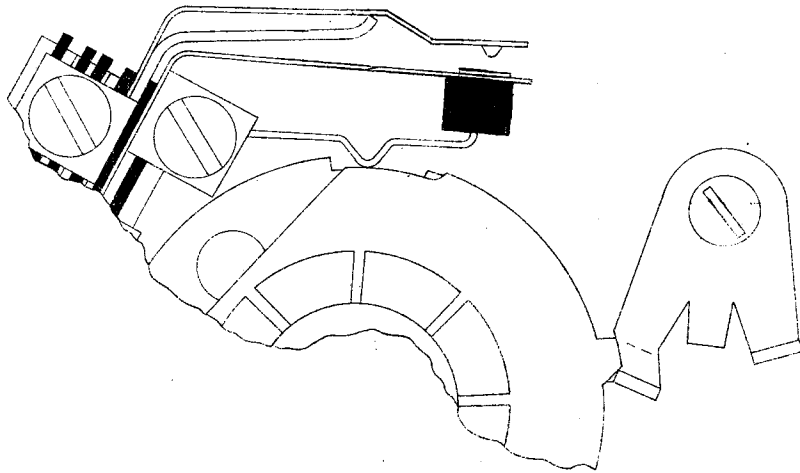
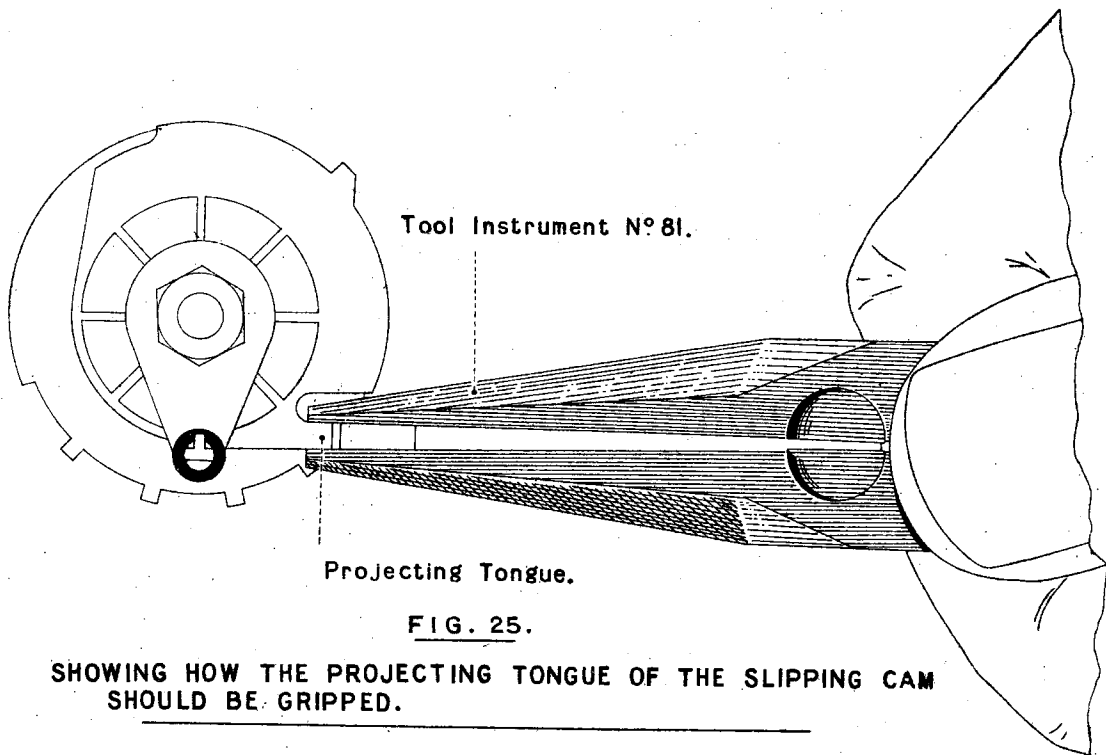


FIG. 24.

THE CORNER OF AN IMPULSE WHEEL TOOTH SHOULD BE JUST SHOWING IN THE IMPULSING RECESS OF THE SLIPPING CAM* WHEN THE HOLE OF ANY DIGIT IN THE FINGER PLATE IS PULLED ROUND TO THE FINGER STOP.

DIAL AUTO N°10.

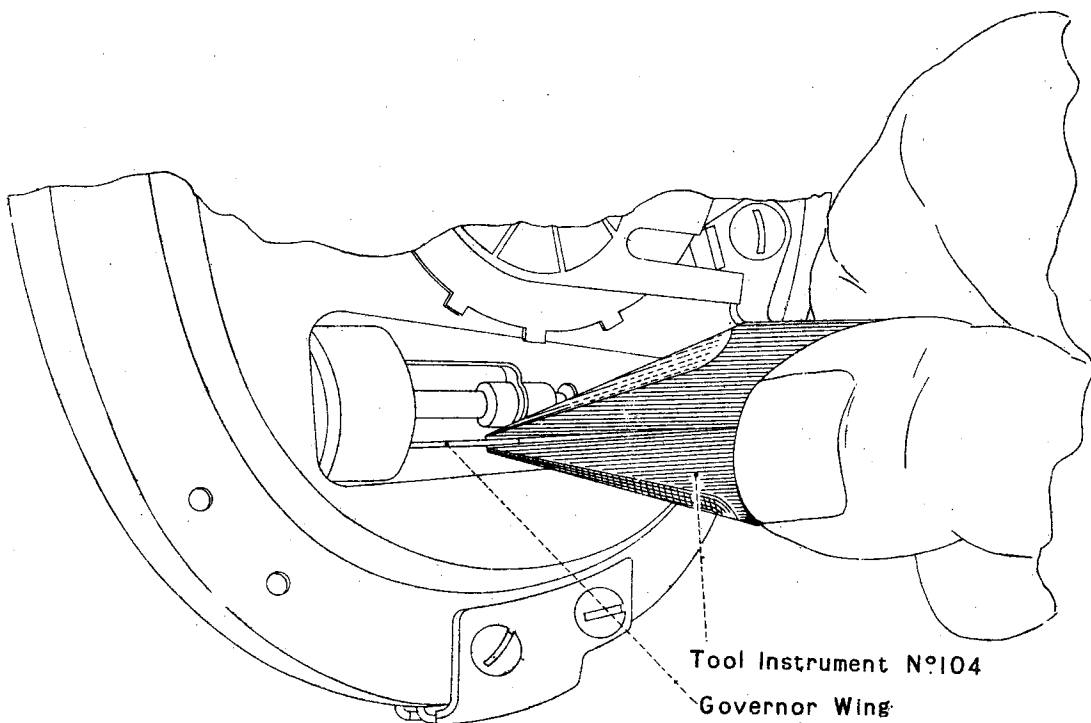


Tool Instrument N°81.

Projecting Tongue.

FIG. 25.

SHOWING HOW THE PROJECTING TONGUE OF THE SLIPPING CAM SHOULD BE GRIPPED.



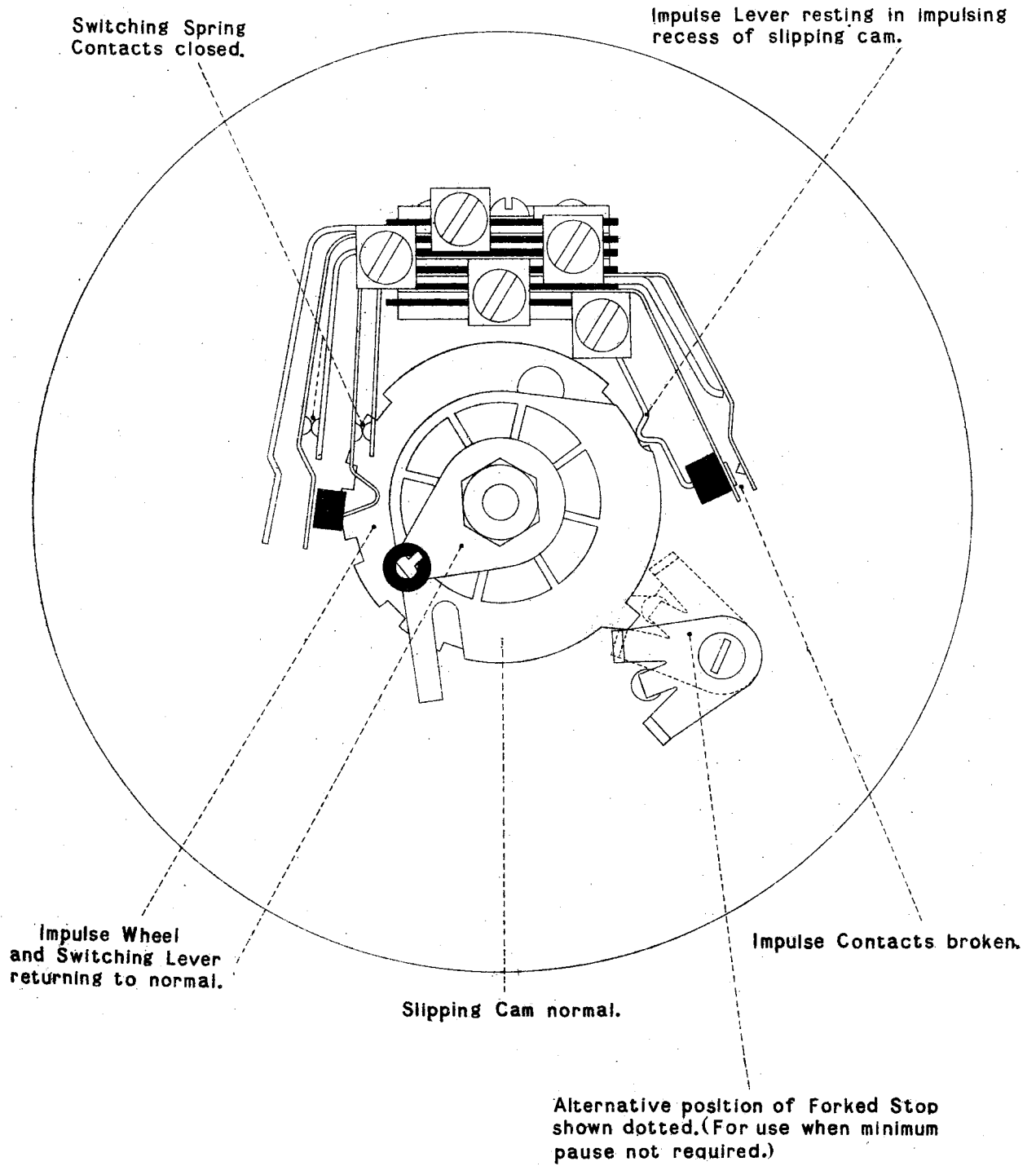
Tool Instrument N°104

Governor Wing

FIG. 26.

SHOWING HOW THE GOVERNOR WINGS SHOULD BE ADJUSTED. TOOL INSTRUMENT N°104 GRIPPING THE GOVERNOR WING AT THE ROOT.

DIAL AUTO N°10.



DIAL AUTO N° 10.

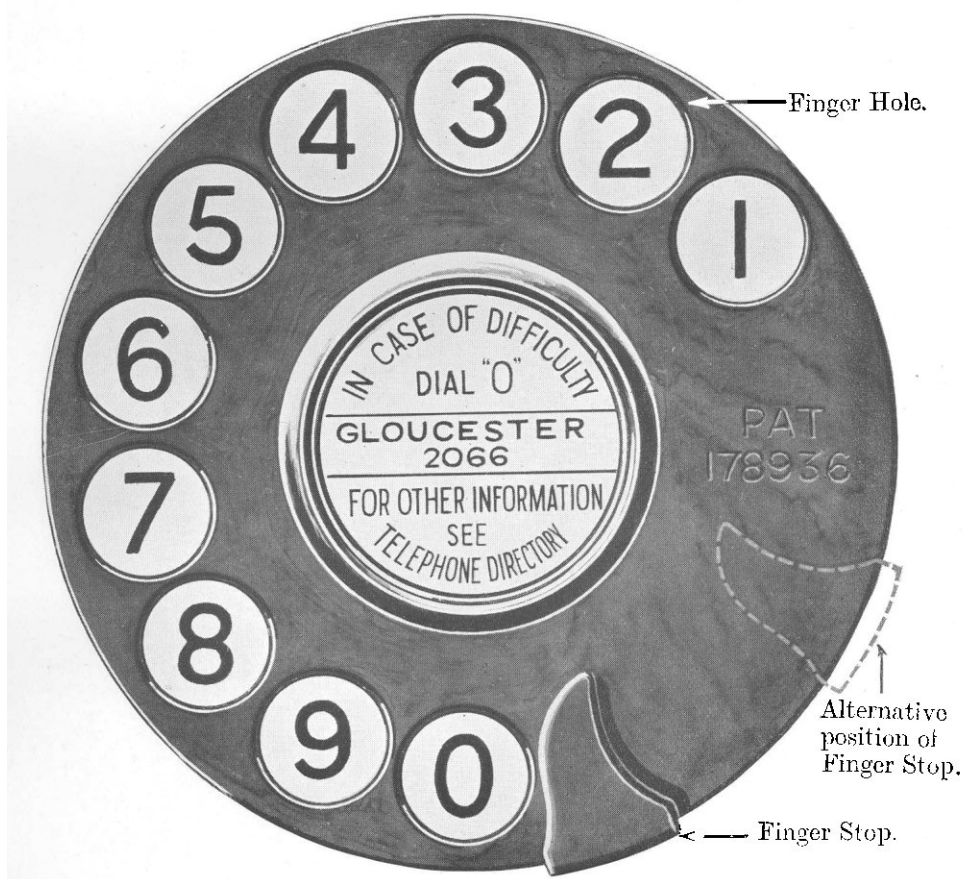


FIG. 28.

Dial, Auto., No. 10.—Showing alternative position of Finger Stop.

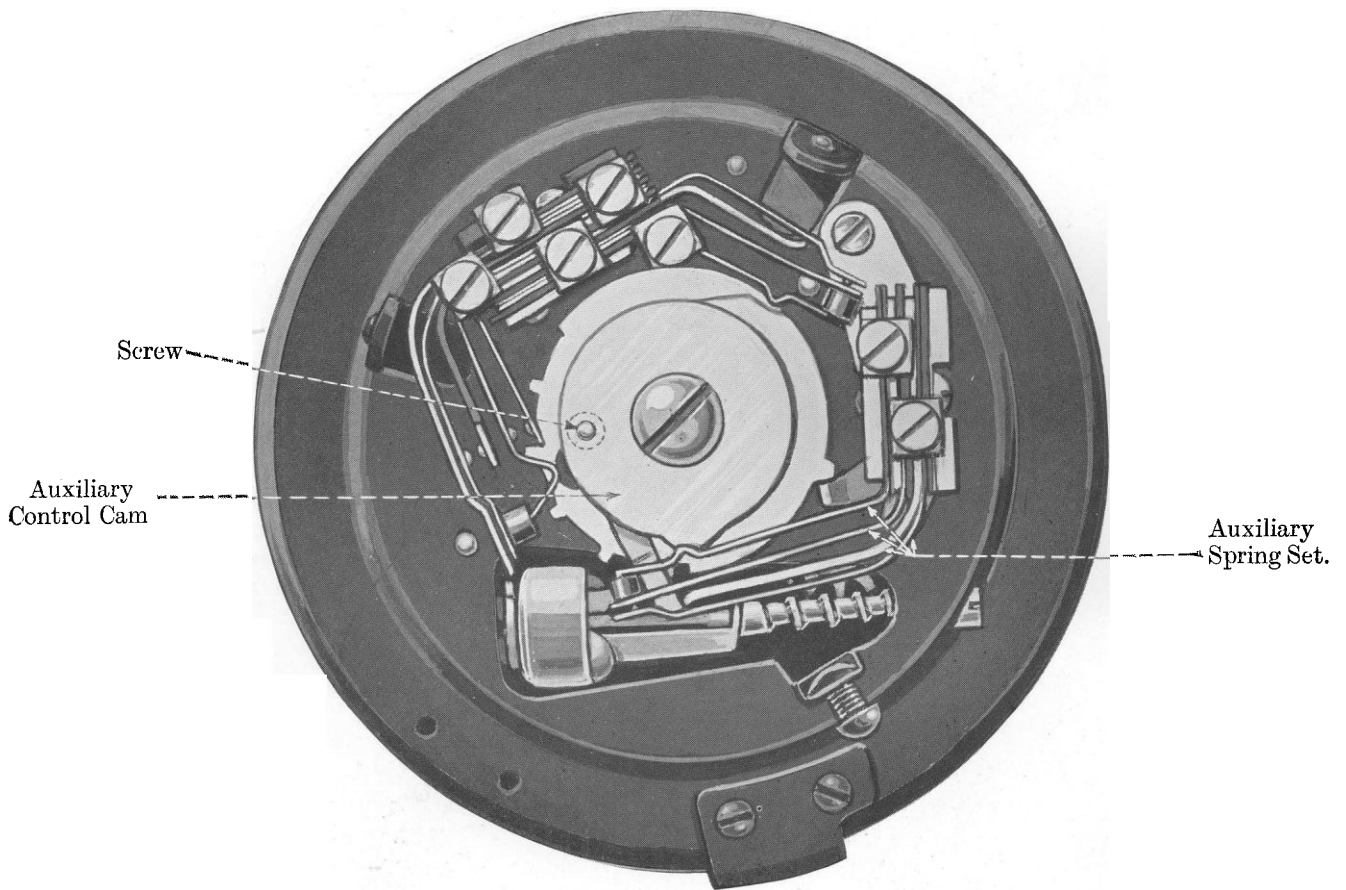


FIG. 29.
Dial, Auto., No. 11.

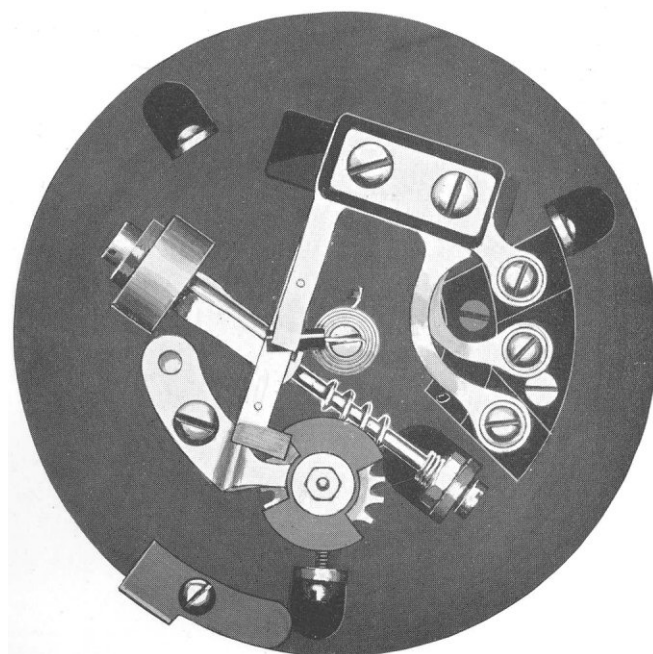
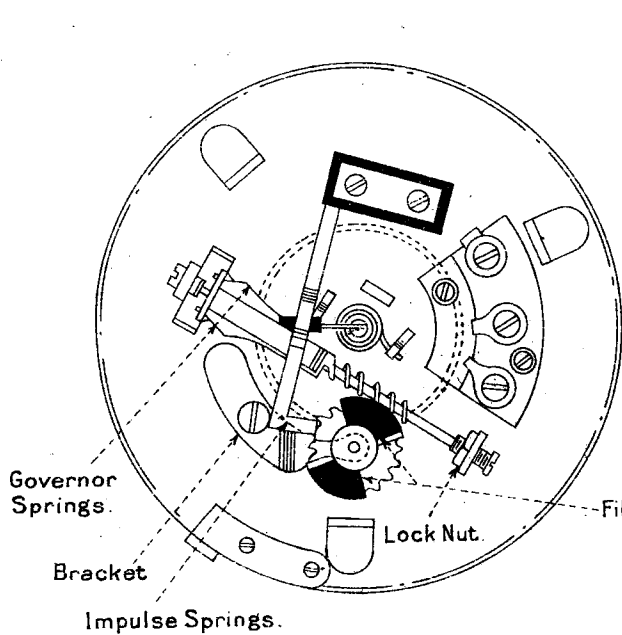
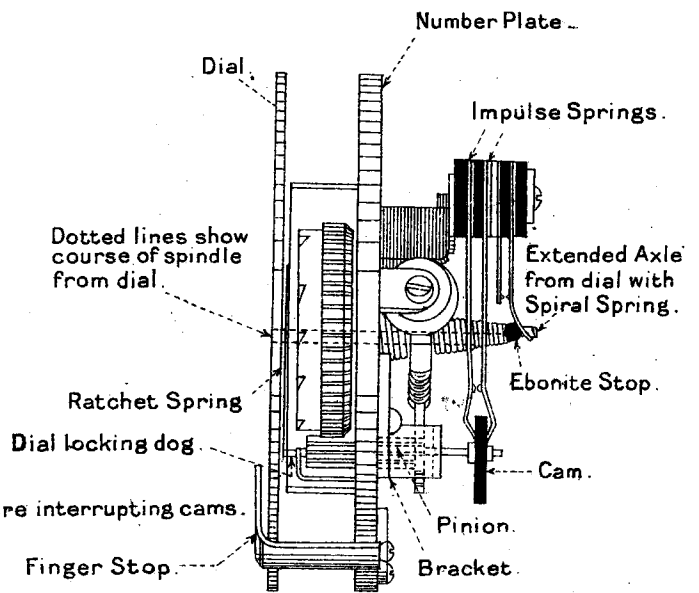


FIG. 30.
Dial, Auto., No. 1.

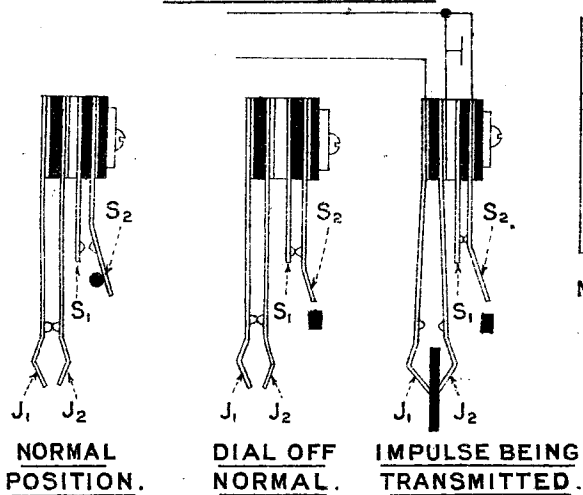


REAR VIEW.
WITH CONNECTING STRIPS REMOVED.



SIDE VIEW.
WITH TERMINALS REMOVED.

SPRING ASSEMBLY.



POSITION OF IMPULSE SPRINGS DURING OPERATION ETC.

Normal Position	Dial Off Normal	Impulse being Transmitted
"J ₁ " and "J ₂ " in contact "S ₂ Dis.	"J ₁ , "J ₂ " and "S ₁ , "S ₂ " in contact.	Interrupter Springs "J" and "J ₂ " breaking contact "S ₁ , "S ₂ " in contact

Note:- "J₂" & S₁ are assembled in contact.



FIG. 32.
Dial, Auto., No. 3.

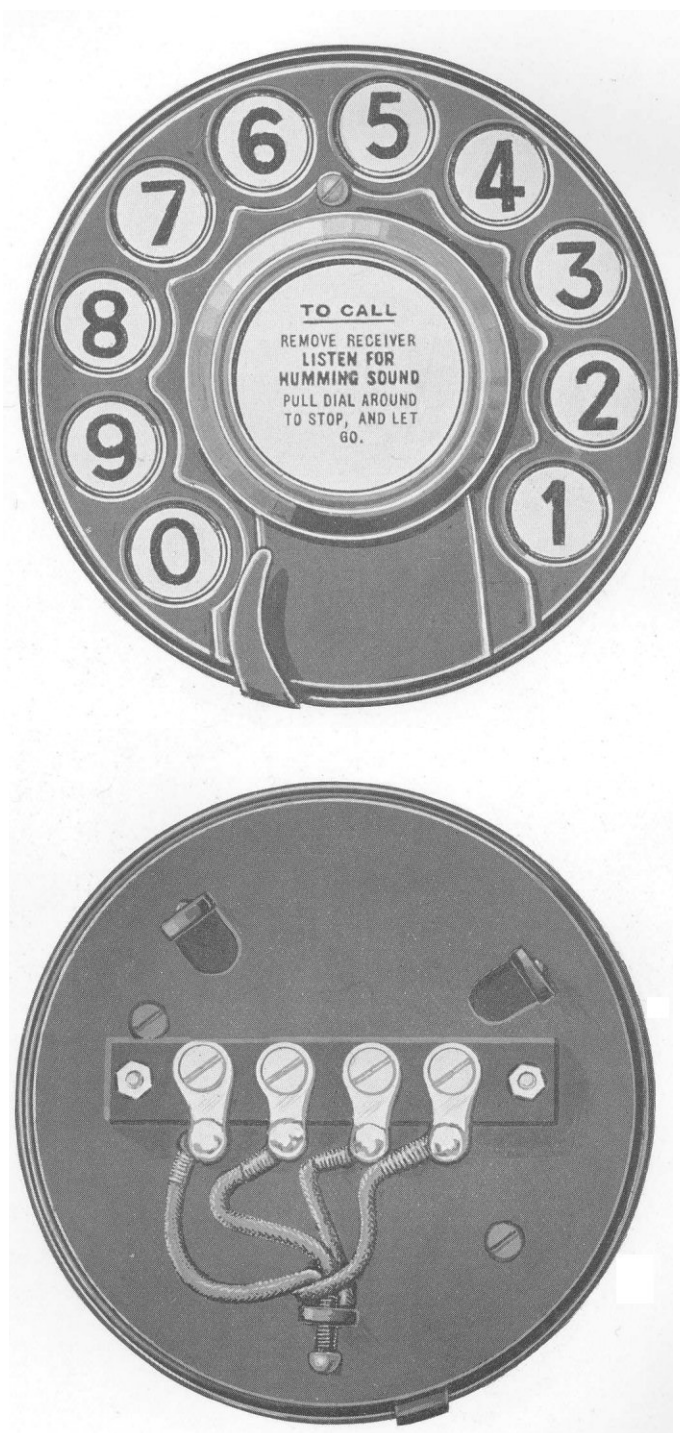


FIG. 33.
Dial, Auto., No. 6.

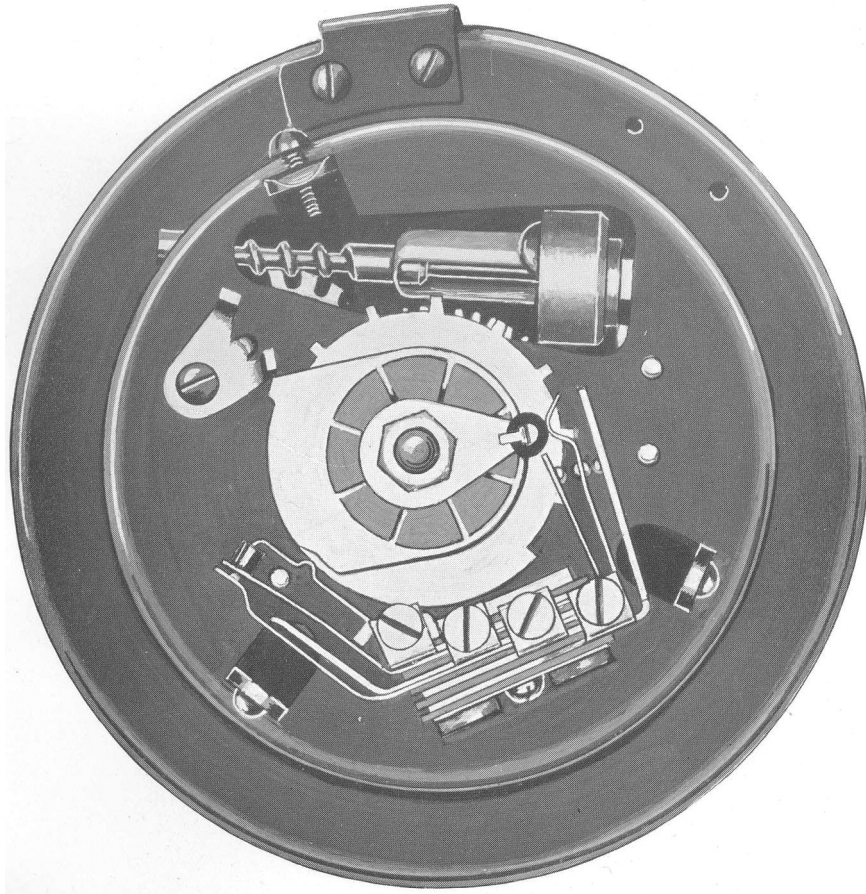


FIG. 34.
Dial, Auto., No. 8.

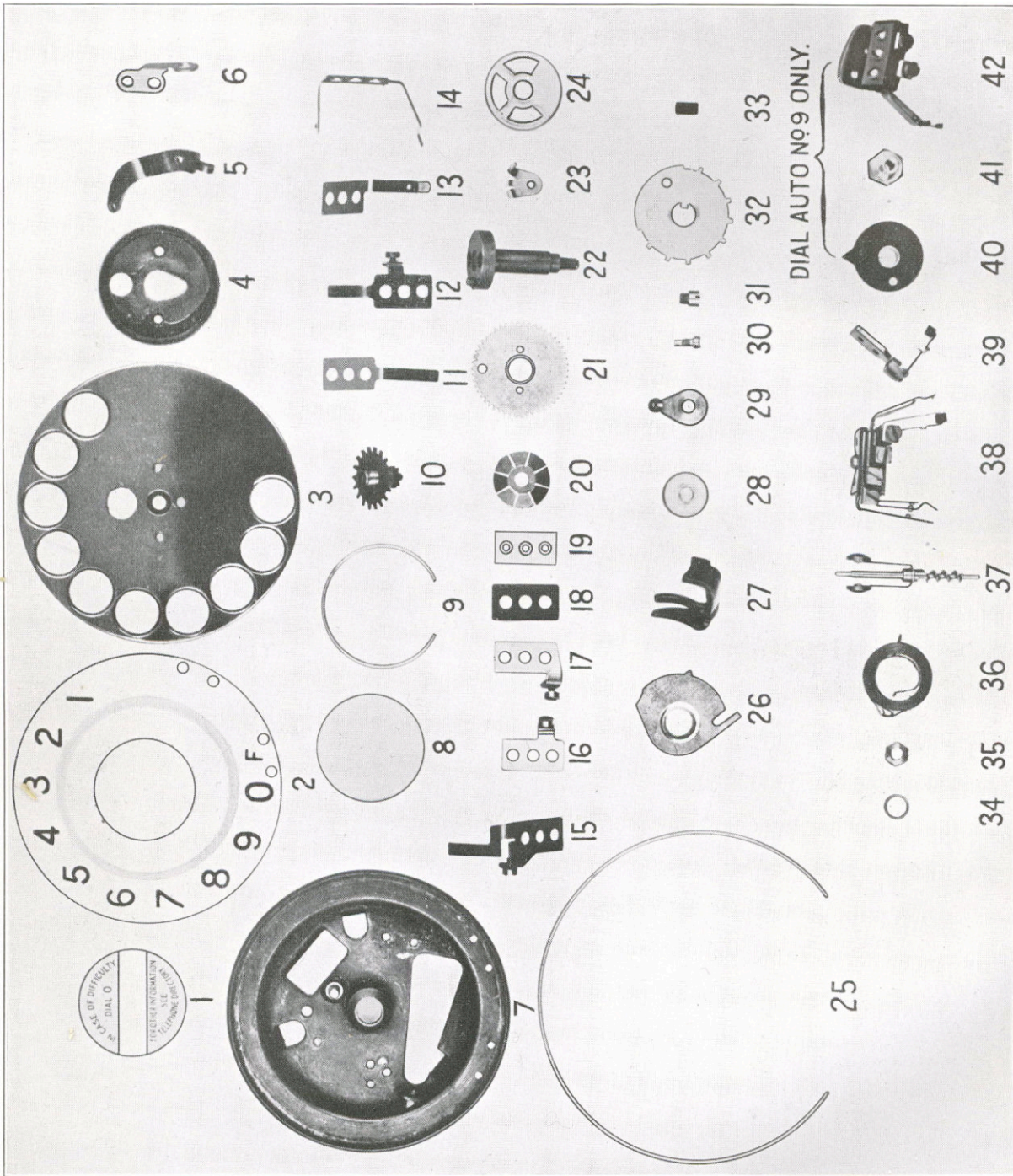


FIG. 35.
 Parts of Dials, Auto., Nos. 8 and 9. (See Schedule III.)

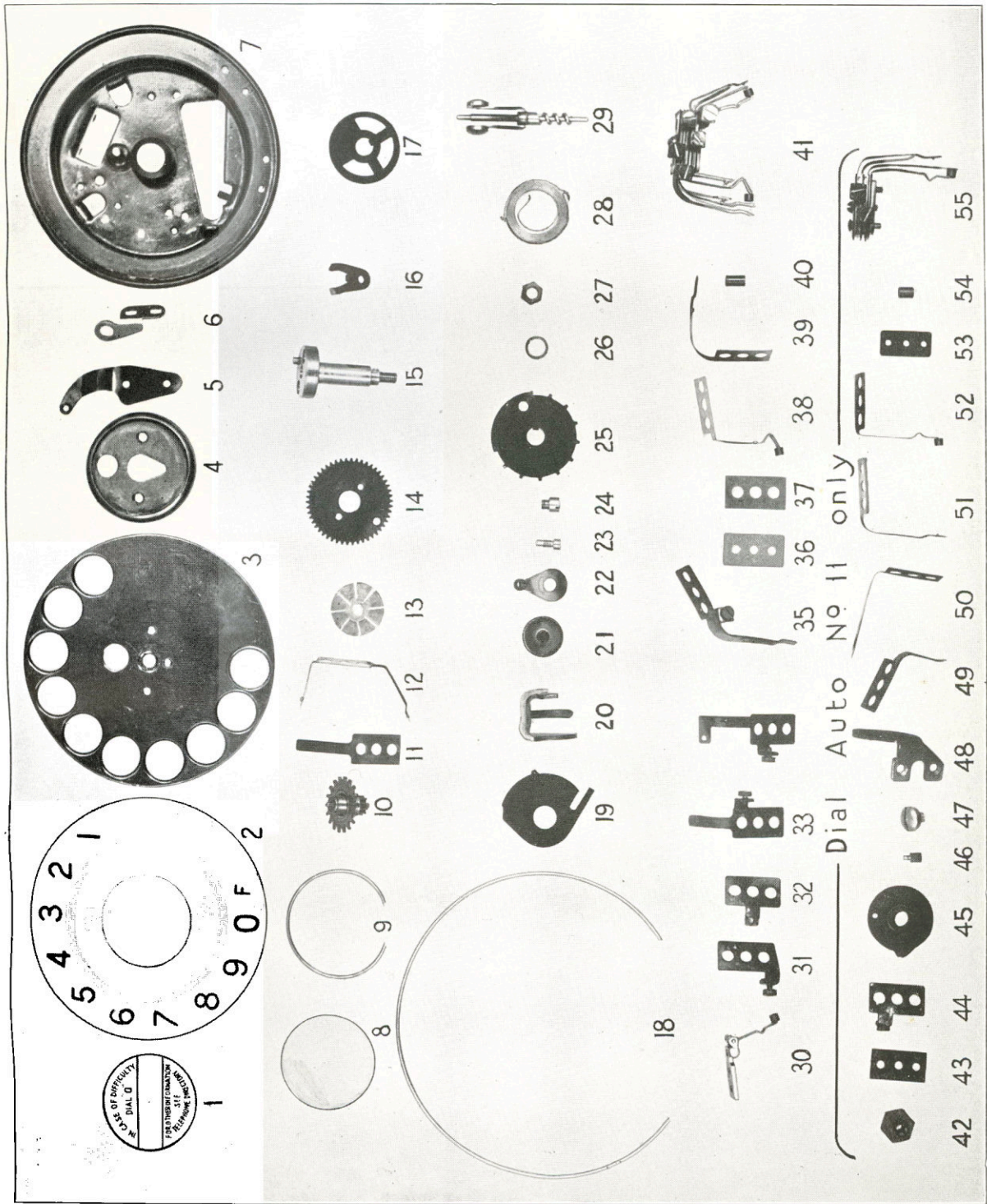
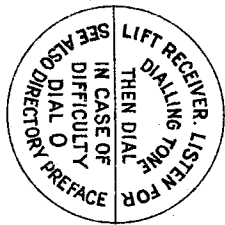
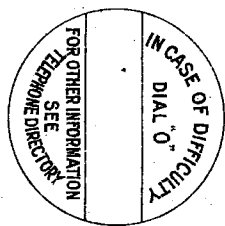


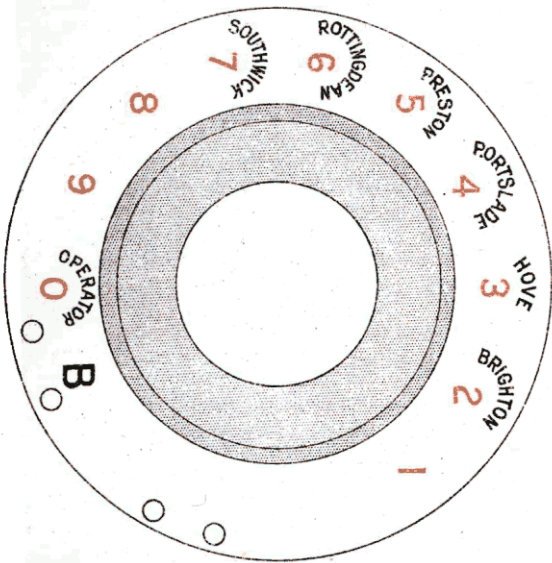
Fig. 36.
 Parts of Dials, Auto., Nos. 10 and 11. (See Schedule IV.)



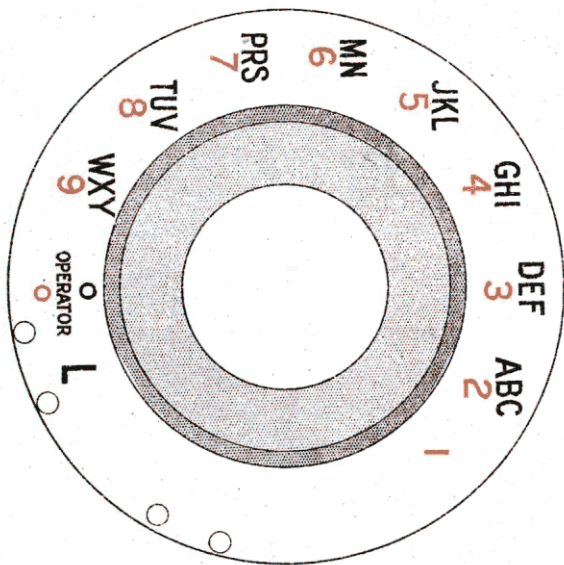
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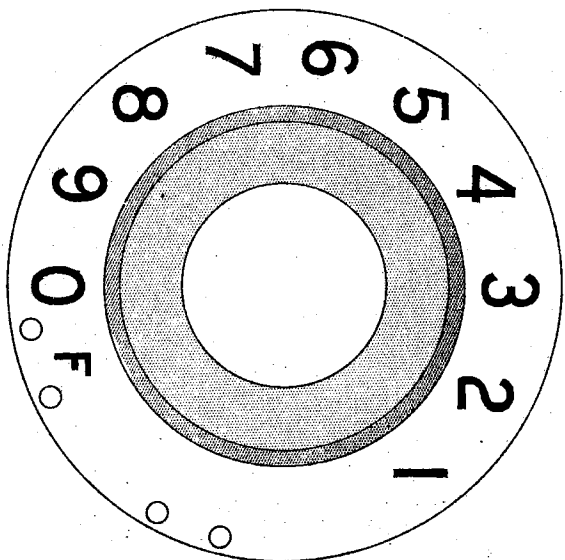
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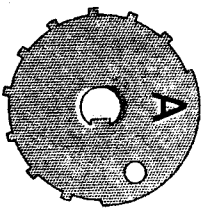
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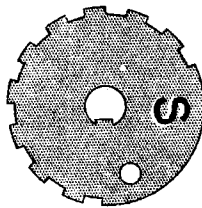
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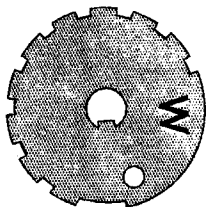
4



6



7



8

PARTS DISTINGUISHING DIALS. FA, FS, FW, BA & LA.

(See Schedule V.)