

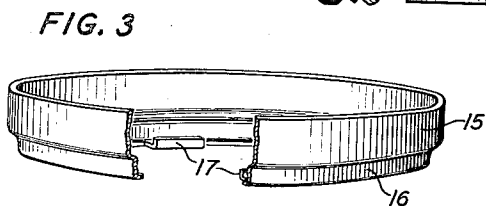
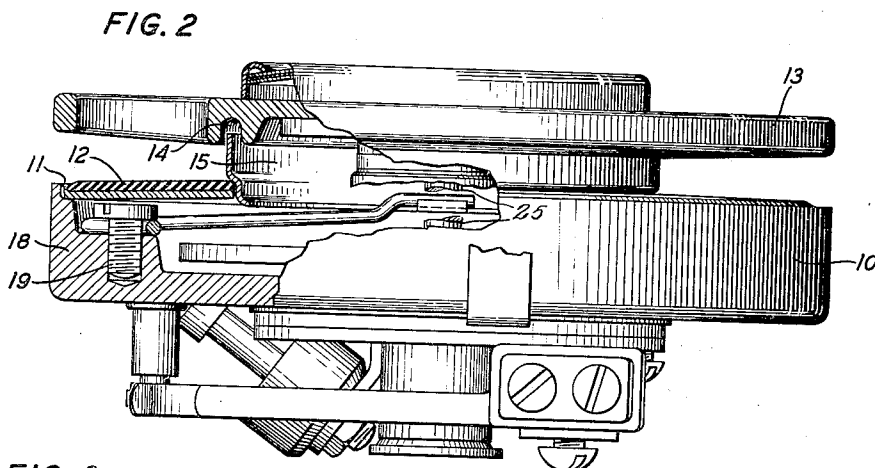
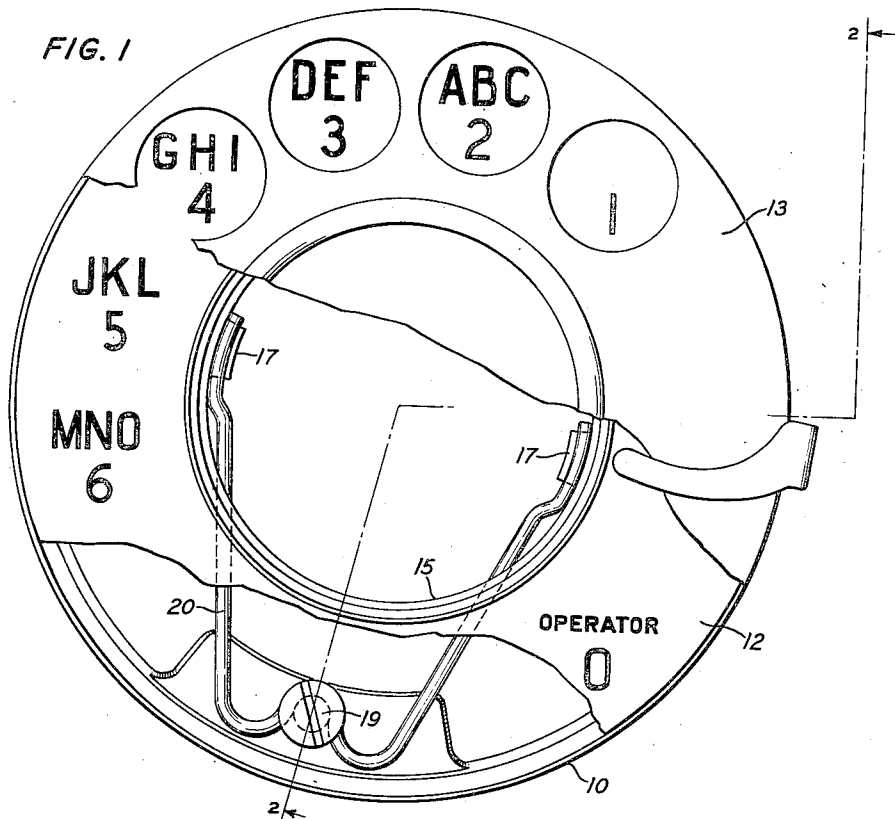
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IMPULSE TRANSMITTER

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IMPULSE TRANSMITTER

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2 Claims. (Cl. 179—90)

This invention relates to impulse transmitters and particularly to calling dials of the type commonly employed in automatic and semi-automatic telephone systems.

Telephone dials or impulse transmitters to which this invention is applicable for use as shown in Patent 1,860,535 to H. W. Goff, dated May 31, 1932, for example, generally consist of a cup-shaped mounting, a number plate supported by the cup-shaped mounting, a clamping ring for securing the number plate, a centrally disposed shaft journaled in a bushing carried by the mounting, a fingerwheel secured to the top disposed end of the shaft and a gearing mechanism actuated through the operation of the fingerwheel for actuating the pulsing contacts.

In such call transmitters it was found that dust became deposited on the operating parts of the impulse mechanism and that this dust reached these parts through the space between the clamping ring and the underside of the fingerwheel.

According to this invention a call transmitter is provided with an improved ring for clamping the number plate on the mounting while cooperating with an improved fingerwheel for preventing the entry of dust or other foreign particles into the casing thus formed to such a degree as to render the interior of this mounting substantially dust proof and thereby insuring the proper operation of its impulse actuating mechanism for a maximum length of time, means secured to the interior of the cup-shaped mounting being provided for engaging portions of the clamping ring for holding it in adjusted relation with the fingerwheel and the number plate in adjusted position on the cup-shaped mounting.

These and other features of the invention will be readily understood from the following detailed description made with reference to the accompanying drawing in which:

Fig. 1 is a plan view of a telephone dial with the fingerwheel and number plate partially broken away showing the number plate clamping ring and its associated securing spring in assembled relation.

Fig. 2 is a side view of the dial shown in Fig. 1 showing a number of operating parts in section taken along the line 2—2 and looking in the direction of the arrows; and

Fig. 3 is a perspective view of the removable clamping ring partially broken away to disclose the integral lugs with which its securing spring engages when the ring is set in adjusted position.

It is believed unnecessary to describe in de-

tail the call transmitter mechanism or its operation as this part of the call transmitter is fully disclosed and described in U. S. Patent 1,860,535 above mentioned, and forms no part of the present invention.

The dial casing or mounting 10 is provided with a circular recess 11 which forms a shoulder portion upon which the outer edge of the number plate 12 rests, as is clearly shown in Fig. 2.

The fingerwheel 13, which is mounted on the centrally disposed shaft 25, is provided with a circular groove 14 which is of sufficient depth and width to accommodate the upper edge of the clamping ring 15 in such a manner as to permit the fingerwheel 13 to freely rotate.

The clamping ring or shield 15 thus formed is provided with a circular shoulder 16, the upper edge of which rests on the inner edge of the annular number plate 12 when the ring is set in position. Two integral lugs 17 are located on the inner lower edge of the collar 15 and are oppositely disposed.

The dial casing 10 is provided with a boss 18 which is tapped to receive the screw 19. A hair-pin-shaped spring 20 is secured in position on the casing boss 18 by means of the screw 19 as shown in Figs. 1 and 2. The extreme end portions of the clamping spring 20 are adapted to engage the ring lugs 17.

The horizontal plane in which the lugs 17 of ring 15 are located when the collar is set in position, is higher than that of the normal position of spring 20, and the end portions of spring 20 are separated by a distance greater than the internal diameter of the collar 15 so that, after the spring is made fast to the dial casing, the finger-like extensions are forced nearer together and lifted from their normal position to effect engagement with the lugs 17. It is readily understood therefore that when the end portions of the spring 20 are brought into operative association with the lugs 17, they exert a downward pressure and an outward pressure on the lugs 17 and inner surfaces of the ring 15 respectively. In this manner the ring 15 is firmly held in position against the inner edge of the number plate 12 and holds the number plate 12 in adjusted position in the shoulder portion or recess 11 formed at the top disposed edge of cup-shaped mounting 10.

The integral lugs 17 are provided with an external flange which prevents the spring ends from being accidentally dislodged.

The provision of the clamping ring 15 with its upper edge extending in the circular recess 14

in the underside of the fingerwheel 13 decreases the area of the air path between the fingerwheel and the edge of the clamping ring to a degree as to make the interior of the mounting substantially dust proof while the spring 20 affords a simple and convenient arrangement for collectively holding the clamping ring on the number plate and the number plate on the mounting.

What is claimed is:

- 10 1. A call transmitter mechanism comprising an annular number plate, a mounting for said mechanism provided with a flange for mounting said number plate, a shaft journaled in said mounting, a fingerwheel carried by said shaft
- 15 in superposed spaced relation to said number plate and provided with an annular groove, a ring resting on the inner edge of said number

plate and extending therefrom into the groove in said fingerwheel, said ring constituting a barrier between said number plate and said fingerwheel, and means for securing said ring on the inner edge of said number plate.

2. A call transmitter comprising a mounting, a number plate, a shaft journaled in said mounting, a fingerwheel carried by said shaft in spaced relation to said number plate, a ring-shaped member engaging said number plate and having one of its edges extending in a circular groove in said fingerwheel, and spring means secured to said mounting and engaging diametrically disposed portions formed with said ring for securing said number plate on said mounting.

HAROLD W. GOFF.