

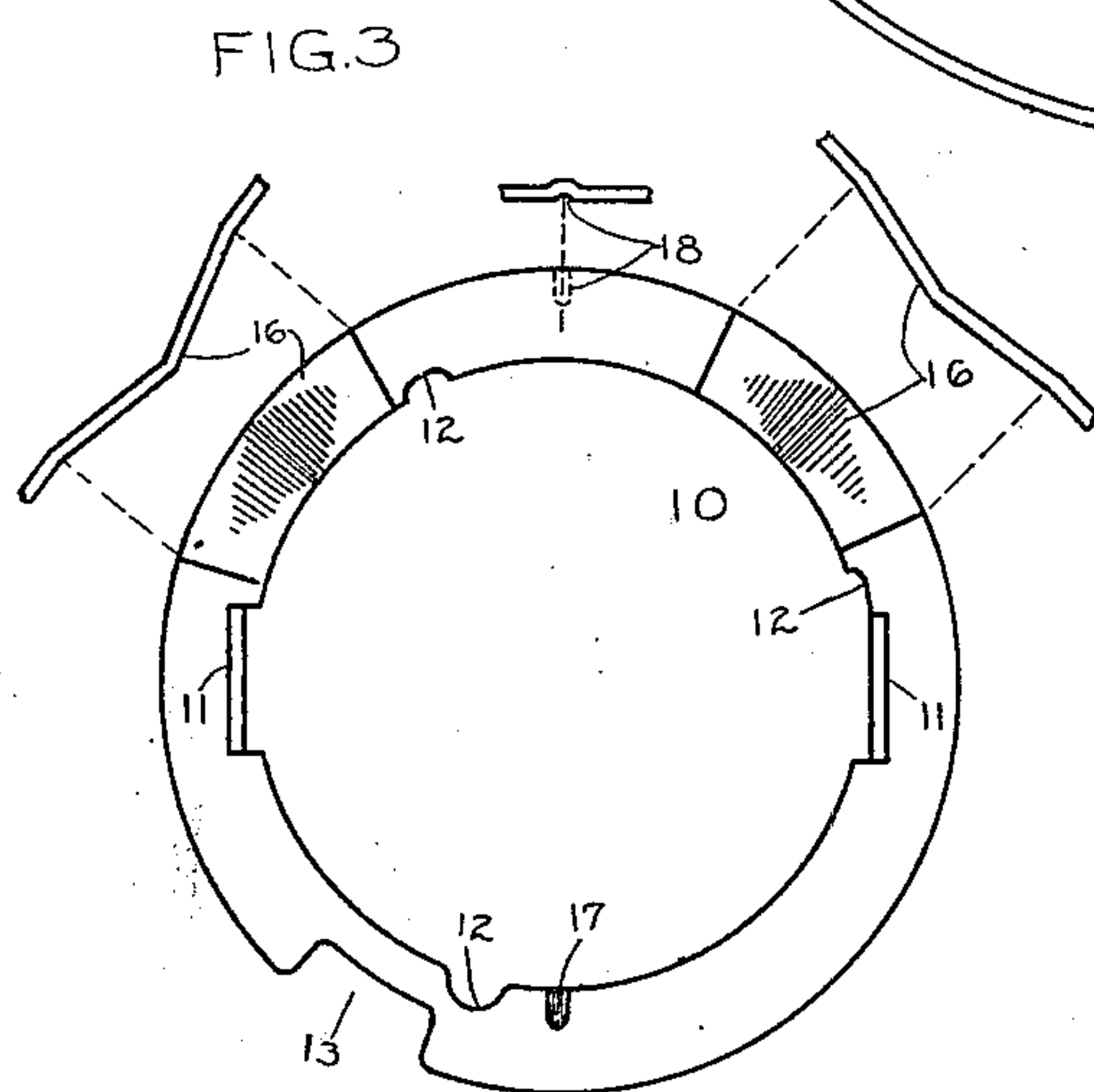
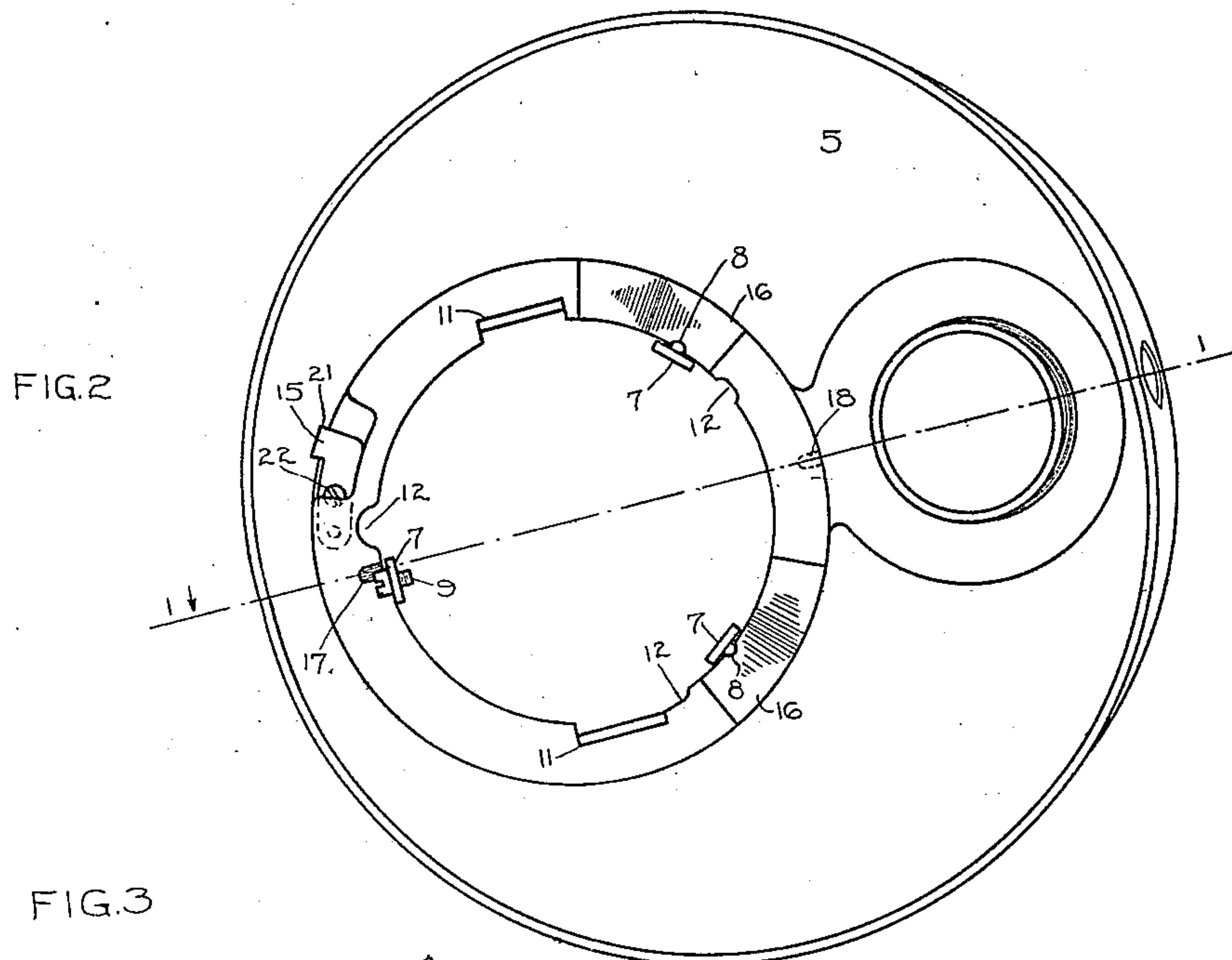
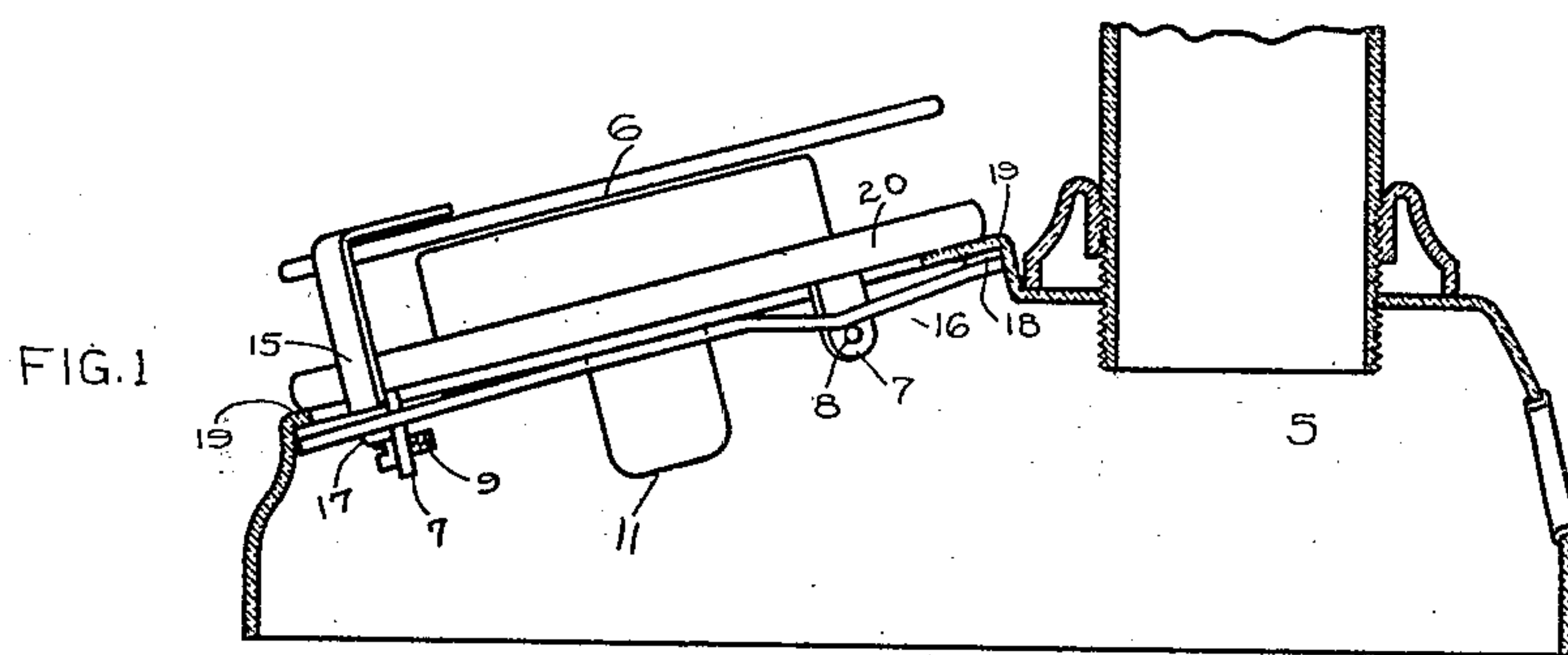
R. H. MANSON.

CLAMP.

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1,432,711.

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CLAMP.

Application filed February 13, 1920. Serial No. 358,506.

To all whom it may concern:

Be it known that I, RAY H. MANSON, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Clamps, of which the following is a full, clear, concise, and exact description.

This invention relates to clamps for fastening impulse transmitting devices to telephone instruments. In telephone instruments for use in automatic telephone systems it is customary to provide an impulse sender which consists preferably of a rotary dial interrupter.

It is the purpose of the present invention to provide a simple device for securing the impulse sender to the telephone instrument without the use of screws or bolts. In the present arrangement, the impulse sending device is secured to the telephone instrument through the spring action of a clamp.

For a more detailed description of the invention, reference is made to the drawings wherein Fig. 1 represents a side elevation partially in section of a dial impulse sender secured to a desk telephone stand by means of the clamp of the present invention. This section is taken on the line 1—1 of Fig. 2. Fig. 2 is a bottom view of the desk stand with the bottom plate removed to show the arrangement of the clamp and impulse sender. Fig. 3 is a plan view of the clamp.

In the drawings 5 designates a telephone instrument herein illustrated as a desk stand which may be of any well known design, although, it will be understood that the present invention can be used with a so-called "wall telephone set" in which the casing is provided with an opening to receive the dial sender. It has not been deemed necessary to illustrate how the present invention would be used with a wall telephone set as last mentioned, since this use will be obvious to anyone skilled in the art.

The desk stand 5 is provided with an annular raised portion 19 having an opening and a notch 21 (Fig. 2) in which the dial impulse sender 6 is inserted. This sender may be of the general structure of that disclosed in the patent to Keith, #1,279,352, patented September 17, 1918, and is provided with a base 20, having extensions 7. Two of these extensions are provided with

lugs 8, while a third is provided with a set screw 9. These lugs 8 and the set screw 9 are engaged by a clamp generally designated 10 and shown in Fig. 3. The clamp 10 is substantially annular in form and is provided with arms 11, which serve as handles when the clamp is being adjusted. The clamp 10 is also provided with notches 12, so positioned that the lugs 8 and the set screw 9 will pass through, and an additional cut-out portion 13 is necessary so that the lower portion of the finger stop 15, with its holding screw 22, will enter therein when the clamp is being adjusted. The annular portion of the clamp is provided with cam sections 16, made resilient to adapt for inequalities in the position of the lugs and with an embossed portion 18 which tends to give greater resiliency to certain portions of the clamp.

When it is desired to secure the impulse sender 6 to the telephone instrument 5, the bottom plate (not shown) of the telephone is removed and the impulse transmitter is placed in the opening of the telephone instrument from the upper side, as shown in Fig. 1 with the finger stop 15 engaging the notch 21 to prevent rotation of the impulse sender. The clamp is then inserted in the lower side of the desk stand as illustrated in this figure, so that the periphery of the clamp engages the inner surfaces of the annular raised portion 19, to insure that the impulse sender 6 is properly centered. The arms 11 are then moved in a clockwise direction, so that the lugs 8 engage the inclined portion of the cam sections 16 as shown in Fig. 1, while the set screw 9 passes over and engages the opposite side of the embossed portion 17, thus preventing any accidental movement of the clamp with respect to the impulse sender. The screw 22 of the stop 15 limits the clockwise movement of the cam. The embossed portion 18 serves as one of the bearings for the clamping member 10 against the flat surface of the raised portion 19 of the telephone instrument, and also tends to give greater resiliency to the annular portion of the clamp extending between the two cam sections 16.

In the present arrangement the telephone instrument has been shown with a raised portion 19, with which the clamp 10 co-operates to center the impulse sender, and

- the notch 21 has been cut in this raised portion with which the stop 15 co-operates to prevent rotation of the impulse sender. It will be understood, however, that the raised portion 19 may be omitted, and the edge of the opening may have three notches so positioned that they receive the extensions of the impulse sender to properly center and prevent the rotation of the same.
- What I claim is:—
1. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening, and a spring clamping mechanism for securing said impulse sender to said telephone instrument.
 2. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said instrument, and spring clamping mechanism adjusted from the opposite side of said instrument to secure said impulse sender to said telephone instrument.
 3. The combination with a telephone instrument having an opening, of an impulse sender insertable into said opening from one side of said instrument, and clamping mechanism having a resilient portion for securing said impulse sender to said telephone instrument.
 4. The combination with a telephone instrument having an opening, of an impulse sender having extensions insertable into said opening from one side of said instrument, and clamping mechanism having resilient cam surfaces engaging said extensions, and portions to engage said telephone instrument whereby said impulse sender may be secured to said telephone instrument.
 5. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said telephone instrument, and an annular member adjusted from the opposite side of said telephone instrument for securing said sender to said telephone instrument.
 6. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said telephone instrument, and an annular member provided with resilient portions to engage said impulse sender and with portions to engage said telephone instrument.
 7. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said telephone instrument, and an annular member provided with resilient cams to engage said impulse sender, and with portions to engage said telephone instrument.
 8. The combination with a telephone instrument having an opening therein, of a impulse sender provided with extensions insertable into said opening, lugs on said extensions, and an annular clamping member provided with cut-out portions to receive said extensions, cam surfaces on said annular member to engage said lugs, and portions on said annular member to engage said telephone instrument.
 9. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said instrument, means for centering said impulse sender with respect to said telephone instrument, and spring clamping mechanism for securing said impulse sender to said telephone instrument.
 10. The combination with a telephone instrument having an opening therein, of an impulse sender insertable into said opening from one side of said instrument, means for centering and for preventing the movement of said impulse sender, and spring clamping mechanism for securing said impulse sender to said telephone instrument.
 11. The combination with a telephone instrument having an opening therein, of an impulse sender having extensions insertable into said opening, and a cam member engaging said extensions and said telephone instrument to secure said impulse sender to said telephone instrument.
 12. The combination with a telephone instrument provided with a raised portion and an opening therein, of an impulse sender provided with extensions insertable into said opening, and a clamping member engaging said raised portion and said extensions for centering and securing said impulse sender on said telephone instrument.
 13. The combination with a telephone instrument having a support, of an impulse transmitter provided with lugs and cams for engaging said lugs to secure said impulse transmitter to said support.
 14. The combination with a telephone instrument having a support, of an impulse transmitter provided with lugs and resilient cams for engaging said lugs to secure said impulse transmitter to said support.
- In witness whereof, I hereunto subscribe my name this 10th day of February, A. D. 1920.
- RAY H. MANSON.