

**July 8, 1930.**

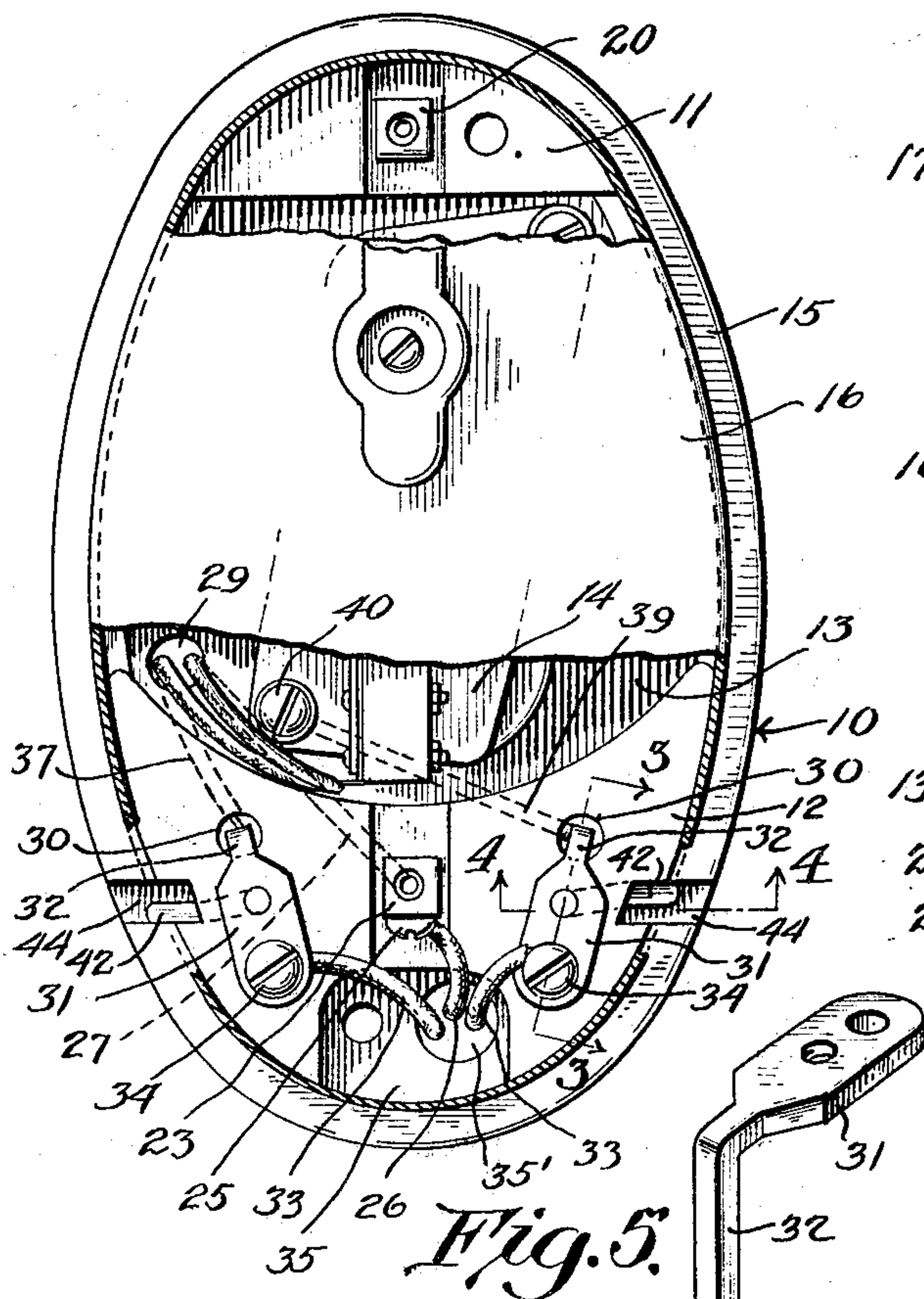
**G. W. JANSON**

**1,770,370**

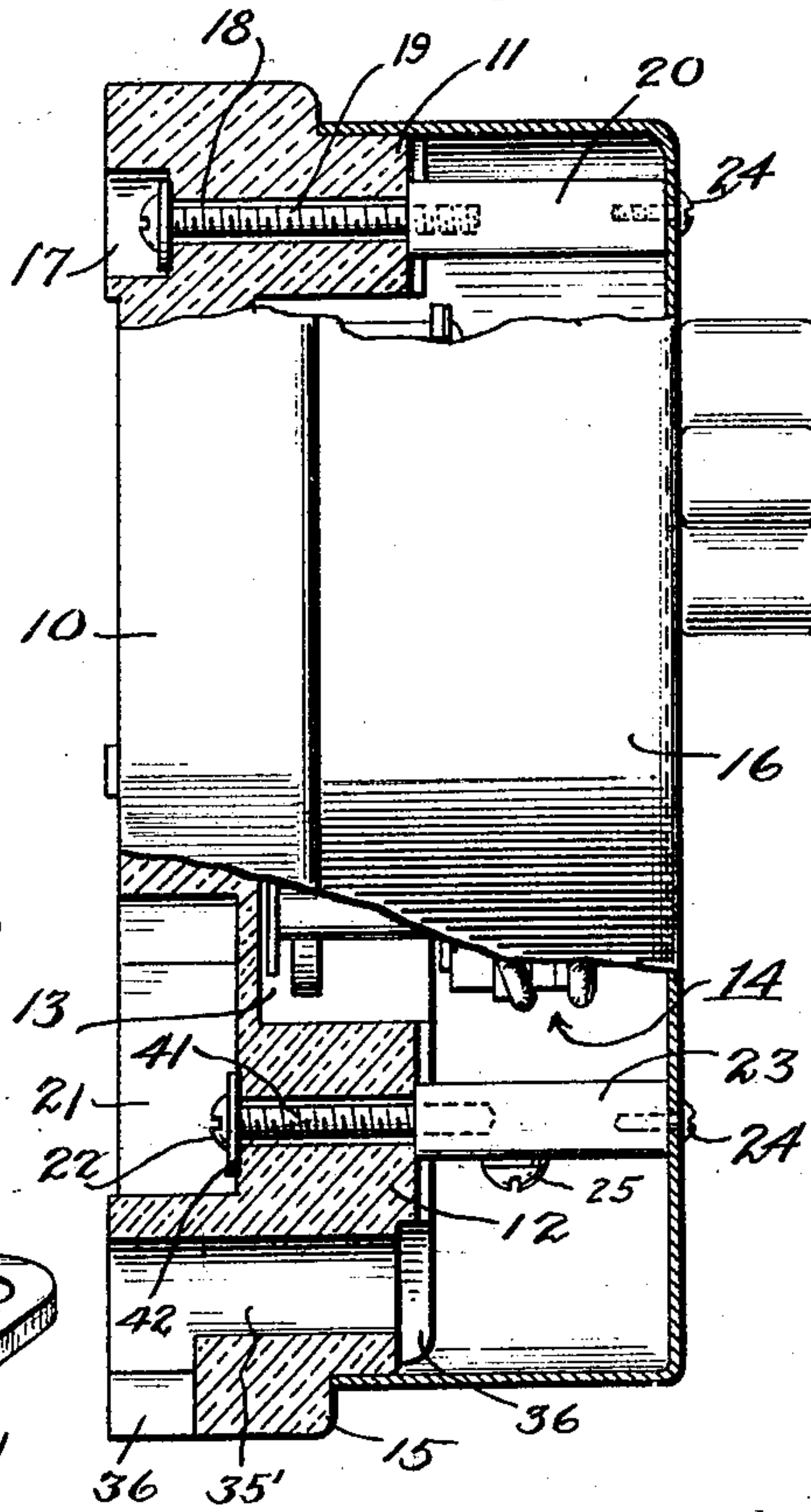
**MESSENGER CALL BOX**

Original Filed Aug. 20, 1926

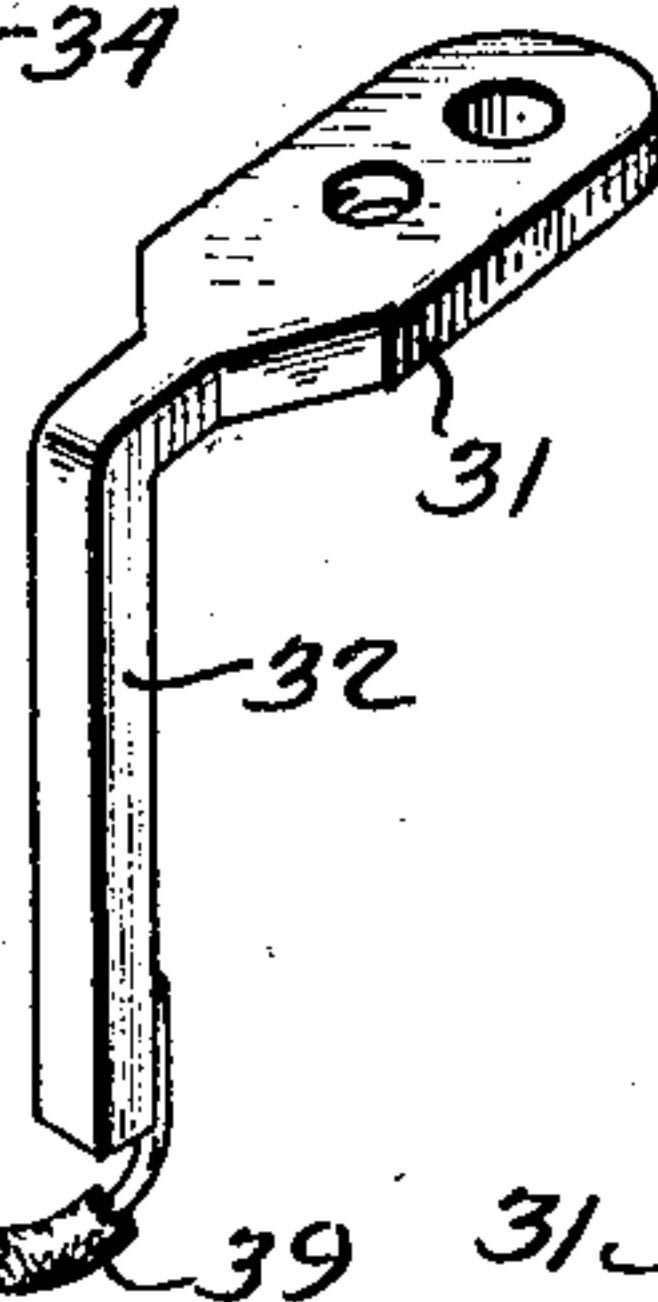
*Fig. 1.*



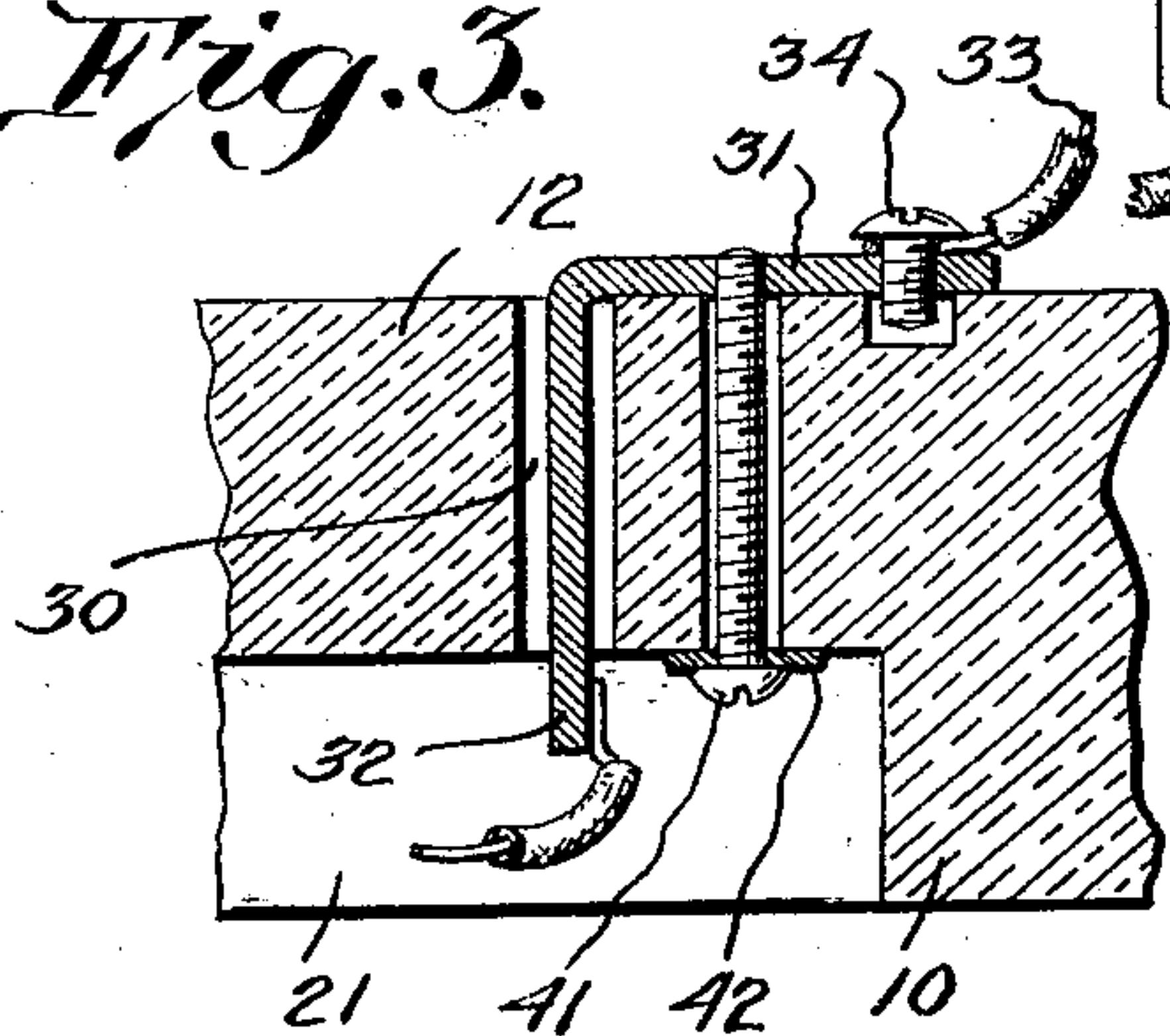
*Fig. 2.*



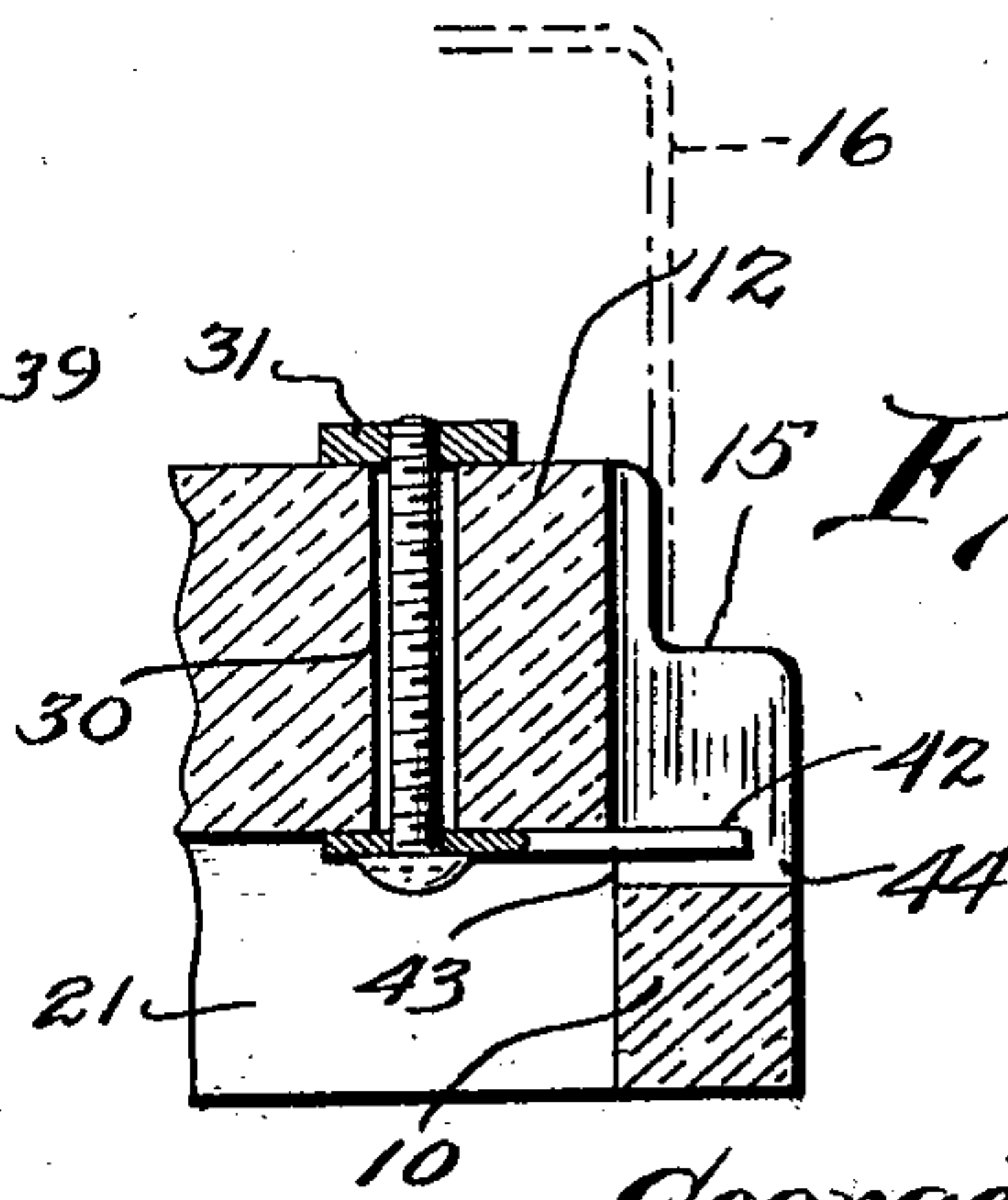
*Fig. 5.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE

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## MESSENGER CALL BOX

Original application filed August 20, 1926, Serial No. 130,528. Patent No. 1,704,389. Divided and this application filed May 17, 1928. Serial No. 278,515.

This invention relates to messenger call boxes such as are employed in the well known McCulloh call system. Such call boxes are commonly provided with double break wheels, toothed according to the number or signal to be transmitted by the box, and with contact pens adapted to be actuated by such break wheels, double break wheels and corresponding pens being provided in order that the box may operate both a metallic return circuit and a ground return circuit, as shown for example, in the patent to M. W. Hamblin No. 808,451.

This type of box, which is now in general use is disclosed in Patent No. 1,164,069, granted to A. A. Clokey, December 14, 1929. It may be briefly described as having a base on which the working mechanism is mounted, three posts being provided at one end of the base for the connection of two line wires and a ground wire. The working mechanism is provided with a cover or casing leaving the posts exposed.

This arrangement is open to serious objections since the exposed posts offer convenient pegs on which to hang objects of various sorts, such as ladies' purses and the like. Naturally, if the object be of such nature that the part engaging the posts is of conductive nature a short circuit is formed so that no signal can be sent from the box. Again, modern practice employs currents of quite high voltage so that a person touching two of the posts at the same time is quite apt to receive a shock which, if not dangerous, it at least unpleasant. Also the exposed position of these posts permits of mischievous tampering by connecting two of the posts with a wire.

With these difficulties in mind the principal objects of the present invention include the provision of an improved call box wherein the construction of the base and cover is such that the connecting posts are housed beneath the cover while provision is made for the application of the usual testing instruments.

In the accompanying drawings like characters of reference are used throughout, and:

Figure 1 is a plan view of the improved

box with the cover partly broken away and in section.

Figure 2 is a side elevation partly in section of said box.

Figure 3 is an enlarged detail section on the line 3—3 of Figure 1.

Figure 4 is an enlarged detail section on the line 4—4 of Figure 1.

Figure 5 is a perspective view of one of the terminal plates used herewith.

As here shown there is provided a base of the usual elliptical shape, this base being molded from porcelain or other suitable insulating material. On the face of this base at the upper end there is provided a raised portion 11, and at the lower end a larger raised portion 12 so that a well 13 is left between these portions wherein is seated the working mechanism indicated in general at 14. Inasmuch as this working mechanism is of the general type now used the specific details are not necessary to be described and only those parts will be particularly referred to which enter into the present invention. At the sides of the well there is provided a raised flange 15, the end surfaces of the raised portions and the outer surfaces of these flanges forming, in plan, an ellipse on which is fitted the top or cover 16 which thus covers the entire base except for a narrow rim projecting evenly all around from beneath the cover. At the upper end of the base there is provided on its under surface a small recess 17 from which extends a screw receiving passage 18 opening through the top of the base. Through this passage extends a screw 19 which projects through the base and carries a post 20 on which the top of the cover rests. At the lower end of the base a much larger irregularly shaped recess 21 is formed in the underside and from this recess also extends an opening receiving a screw 22 which projects like the screw 19 and, like it, carries a post 23 on which the top of the cover rests. These posts are provided with threaded openings to receive screws 24 holding the cover removably in position. A binding screw 25 is screwed into the lower side of this post 23 for connection of the ground wire 26 so that the post not only holds the cover but also acts as



the ground post and performs the function of the exposed ground post in the present form of call box. The screw 22 is connected by a wire 27 with the grounded contact pen (not shown) of the mechanism, the wire passing through an opening 29 leading from the recess 21 to the well 13. At each side of the post 23 an opening 30 extends downwardly through the raised end 12 to the recess 21. Positioned on the face of the raised portion 12 is a pair of terminal plates 31 having fingers 32 which extend into the recess 21 through the openings 30. These plates have the line wires 33 secured thereto by binding screws 34 and these wires and the ground wire 26 pass into a recess 35 formed in the lower part of the portion 12 and thence through an opening 35' and downwardly through a slot 36, opening through the rear face of the base at the bottom thereof. The fingers 32 have lead wires soldered to them and one wire 37 passes up through the opening 29 and is connected to the contact pen (not shown). The other of these wires 39 leads to one of the frame screws 40, the lower end of which projects into the recess 21. Thus, with the cover in place, the ground post 23 and terminals 34 are enclosed and inaccessible to tampering unless the cover be deliberately removed.

In order to provide testing contacts without removing the cover, the terminal plates 31 are held in position by screws 41, the heads of which hold contact members 42. These contacts pass out of the recess 21 through lateral openings 43 and terminate in small channels 44 formed in the sides of the base. The contacts 42 may thus be touched by testing instrument terminals inserted in these channels but the contacts are so housed that they cannot be touched with a person's fingers. It will be seen in Figure 4 that the recesses 44 each have an inner wall alined with a side wall of the recess 21 so that no drilling or coring is necessary to form the opening 43 and the base block can be molded in a simple two part mold. Thus the terminals for the line and ground wires are housed without interfering with the application of testing instruments.

This application is a division of my application Serial No. 130,528, filed August 20, 1926, now Patent No. 1,704,389.

I claim:

1. In a call box, a base, cover securing posts carried by the base adjacent its ends, one of said posts constituting a ground wire terminal and having means for attaching a ground wire, line wire terminals adjacent the ground wire terminal, a cover for said base enclosing said terminals, and secured to the posts exposed channels in said base and contact members connected to the line wire terminals and extending into said channels.

2. A call box, comprising a molded base having a recess in its rear face, and lateral

channels in its perimeter, each of said channels having an inner wall alined with a side wall of the recess, thereby forming an opening from the channel to the recess, a line terminal extending into said recess, means for attaching a line conductor to said terminal and a contact member independent of said line conductor connected to the line terminal and extending through said opening.

3. In a call box, a base, cover securing posts carried by the base adjacent its ends, one of said posts constituting a ground wire terminal and having means for attaching a ground wire, line wire terminals adjacent the ground wire terminal, a cover for said base enclosing said terminals and secured to the posts, and testing contacts projecting from beneath the cover, and connected to the line wire terminals, said base having outwardly opening recesses into which said contacts project.

4. In a call box, a base having a recess in its rear face, a ground terminal on said base, line terminals on said base cover for said base enclosing said terminals, screw extending through the base from said recesses to secure the line terminals to the base, and testing contacts secured beneath the heads of said screws and projecting laterally from said recess, said base having lateral channels wherein said contacts terminate communicating with said recess.

In testimony whereof I affix my signature.  
GEORGE W. JANSON.

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