

**943,305.**

Fig. 1.

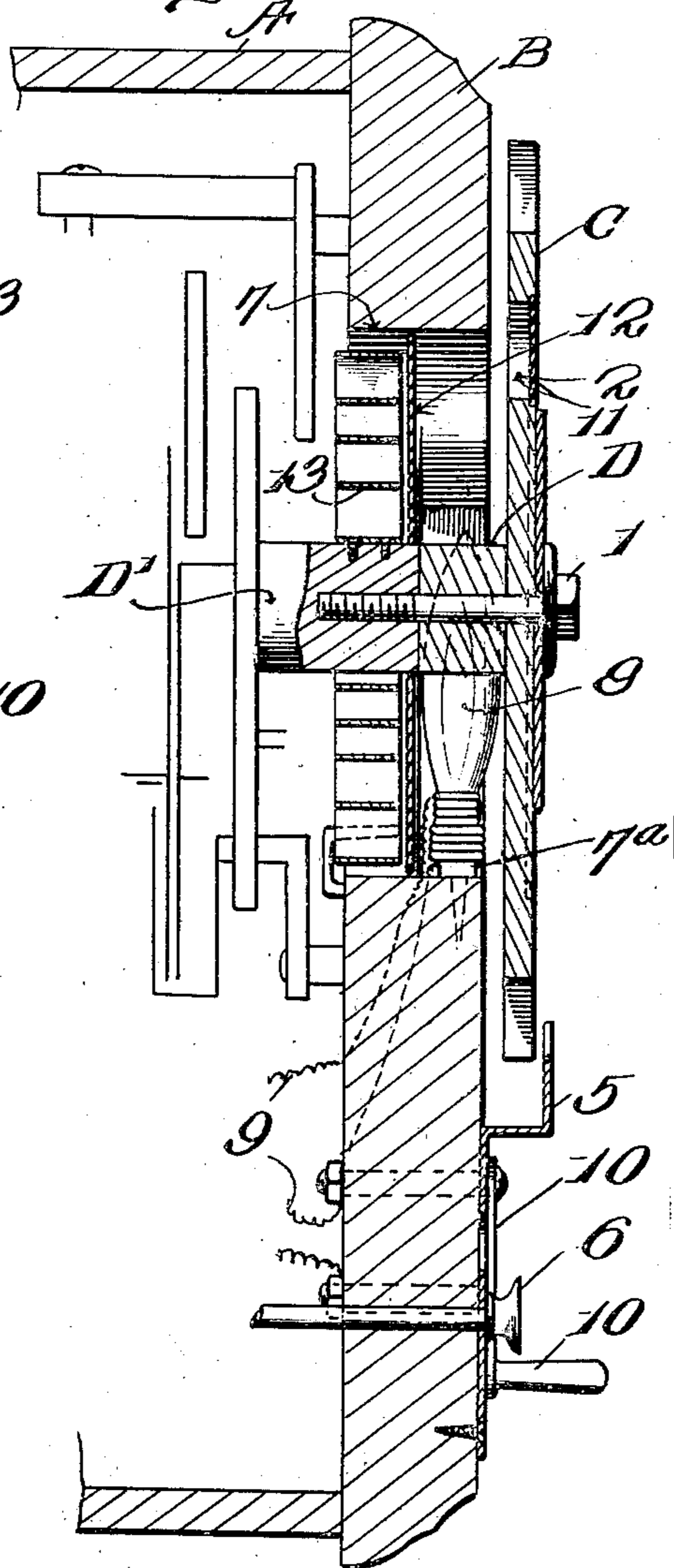


Fig. 2.

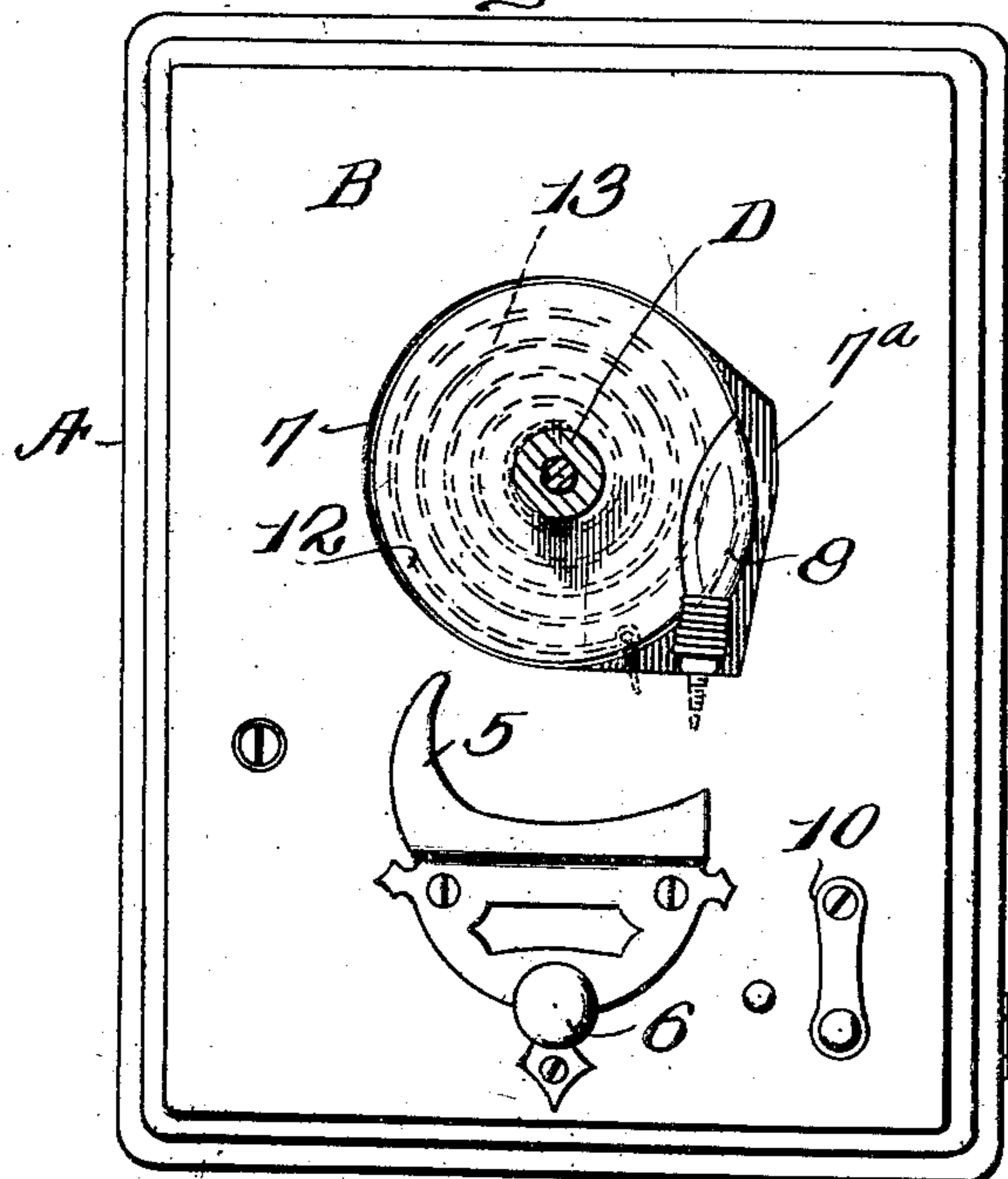
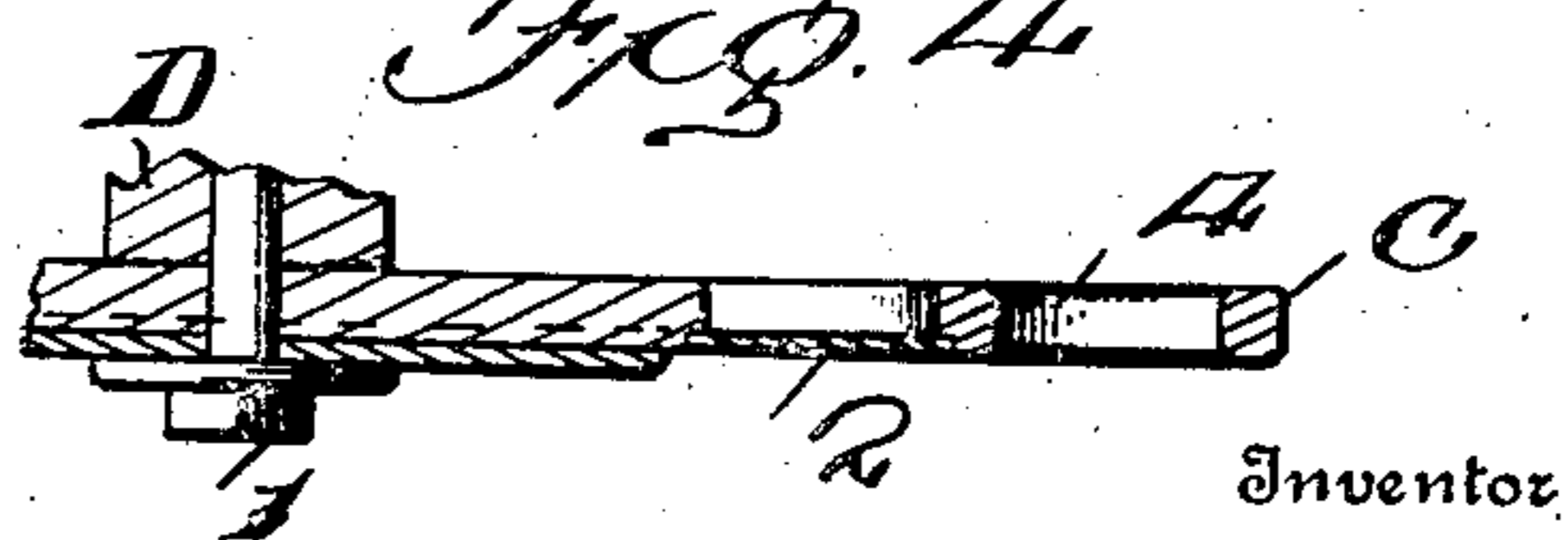


Fig. 4.



### Witnesses

Indurina  
O. T. Woodman

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**H. A. Remy,** Attorneys.

# UNITED STATES PATENT OFFICE.

RUFUS B. HALLOCK, OF PORTLAND, OREGON.

ILLUMINATED TELEPHONE-DIAL.

943,305.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed February 18, 1909. Serial No. 478,600.

*To all whom it may concern:*

Be it known that I, RUFUS B. HALLOCK, citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Illuminated Telephone-Dials, of which the following is a specification.

This invention comprehends certain new and useful improvements in telephones, and relates particularly to telephones of the automatic type.

The invention has for its primary object, means for illuminating the dials of either wall or desk telephones of this character, in a simple manner which will possess positive advantages as well as the characteristic of easy adaptation with a minimum amount of labor and alteration, to automatic telephones that are already installed, and, in the cases of wall telephones, without the necessity of so much as removing the telephone instrument from the wall.

The invention also has for its object, an illuminated dial for a telephone instrument so arranged that the electric energy required to illuminate the dial be secured from a connection with the telephone current and not supplied by batteries, and whereby a rearrangement and enlargement of the whole telephone instrument is rendered unnecessary, while the additional expense consequent upon their re-charging or replacing is entirely avoided.

The invention also has for its object, an improved illuminating telephone dial wherein the light glows until cut off at will, which is a manifest advantage, in that it may be necessary to consult the telephone book to verify the number called, or to look up another number, the light made by the dial being sufficient for this purpose, thereby distinguishing the invention from the illuminated dials in which the light is extinguished when the call button is pressed. And the invention also has for its object an illuminated dial, particularly for wall or house telephones, which is composed of comparatively few parts that may be easily and cheaply applied to the telephone, and to which access may be easily had for the purpose of repair, or for renewing or replacing the lamp.

With these and other objects in view as will more fully appear as the description

proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a face view of the box of an automatic telephone instrument; Fig. 2 is a similar view with the dial removed; Fig. 3 is an enlarged vertical sectional view; and Fig. 4 is a detail fragmentary section through the dial.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, wherein is illustrated a wall or house telephone embodying the improvements of my invention, A designates the telephone instrument, and B the box face or door thereof, which latter constitutes the support for the dial C.

The dial C is mounted at its center upon a pivot 1 which may be in the nature of a screw bolt secured at its inner end to the relatively stationary boss D' that is secured to and which forms a part of the telephone mechanism, which latter, as it forms no part of my present invention, is not shown or described.

As is usual in instruments of this character, the box face or door B is formed with a substantially circular mortise 7 in which the pivot stud or bolt is centrally disposed, the dial C being mounted upon this stud, as before mentioned, and a thimble D being mounted to turn upon the stud and being interposed between the rear face of the dial and the front end of the bushing D'.

13 designates a spring which is secured at one end to the boss D' and which is designed to return the dial C to its place, after it has been turned in the operation of securing a connection.

As best seen in Fig. 1, the dial C carries an indicator disk 2 which is usually constructed of celluloid or some other translucent substance, the said disk being provided with a series of segmental compartments 3 containing numerals or letters, or both, the said numerals or letters or combinations

thereof being the calls. The dial C is provided in concentric relation to the indicating portion of the indicator disk 2 with a series of finger holes 4 registering with the respective indicator compartments 3. When the operator uses the telephone, his finger is placed in one of the finger holes 4, according to the number that is desired, and is pressed downwardly until the finger contacts with the stop 5, and the dial then being released, swings backwardly by the tension of its spring 13. This operation is repeated until the call has been secured, whereupon the call button 6 is pressed inwardly, and the desired party thereby automatically connected.

One of the disadvantages in the use of a telephone of this character, resides in the fact that with these telephones as ordinarily constructed, it is necessary to employ an independent light so that the letters or numerals on the indicator disk may be seen. To avoid the necessity of such a light, in carrying out my invention, I merely enlarge the mortise 7 to form a recess 7<sup>a</sup> which need not extend entirely through the door or face B, and which is of sufficient size to accommodate a small incandescent lamp 8, as shown. It should be remarked that the mortise 7 is primarily designed for the dial-returning spring 13, which latter, however, does not occupy the entire mortise, but only one-half thereof, the depth of the mortise being considered. Thus it will be seen that there is ample room for the lamp 8 after the relatively small recess 7<sup>a</sup> has been formed, and to form such recess, it is obvious that it is only necessary to unscrew the bolt 1, so as to permit the dial C and the thimble D to be removed, thereby fully exposing the front of the spring 13 in the mortise 7. Before replacing the parts D and C and securing them by the screw or pivot 1, a circular reflector 12 is slipped over the front end of the bushing D' so as to cover the front of the spring and serve to intensify the light which shines from the lamp 8 through the translucent indicator disk 2.

The leads 9 of the lamp 8 are so connected to the supply leads for the speech transmission and other currents as to do away entirely with the necessity of separate batteries for the lamp. One of the lamp leads is provided with a switch 10 which is operated from outside of the case of the instrument, and which may be opened and closed at will, remaining closed as long as desired, entirely independent of the receiver hook or other accessories of the instrument. The said hook, transmitter and bells are not shown in the accompanying drawing, as they form no part of the present invention.

As clearly illustrated in the drawings, the dial C is formed with a curved slot 11 which registers with the indicator portion of the disk 2 and with the recess 7<sup>a</sup>, so that the

light from the lamp 8 may continuously shine through the translucent disk and illuminate the call numbers or letters, at the same time providing means for reading the telephone book, or for similar purposes which will readily suggest themselves.

From the foregoing description, in connection with the accompanying drawings, it will be seen that I have provided very simple means for illuminating the dials of telephone instruments of the automatic type, and that the improvements may be very easily incorporated in instruments that have already been installed. For instance, as before noted, it is only necessary to enlarge the already formed mortise in the box door or face B of a wall or house telephone, and apply the lamp 8 and wire the same. Obviously, in the case of a desk telephone, it is only necessary for the purpose of incorporating my improvements, to increase the depth of the drum or casing, as for instance, by applying a supplemental collar. It is also necessary to form a curved slot in the dial C immediately back of the characters on the disk 2.

Having thus described the invention, what is claimed as new is:—

1. The combination of a telephone instrument of the automatic type, the instrument being provided with a dial, of a lamp, a support therefor, said support being formed with a mortise in which the lamp is located, and the dial being formed with a slot in registry with said mortise, and means for supplying said lamp with current.

2. The combination with a telephone instrument of the automatic type, the same being provided with a dial, and a translucent indicator disk, of a lamp mounted in the instrument and designed to shine through the dial, the instrument being provided with a recess in which said lamp is located, means for supplying the lamp with current, and a reflector mounted within and designed to cover the rear side of said recess back of the lamp.

3. The combination with a telephone instrument of the automatic type, the same being provided with a dial and a translucent indicator disk, the instrument being also formed with a mortise, of a boss located centrally of the mortise at the rear side thereof, a spring secured to said boss and arranged to return the dial to normal position, a reflector disk secured to said boss in front of the spring, and a lamp interposed between the reflector disk and the rear face of the dial.

In testimony whereof I affix my signature in presence of two witnesses.

RUFUS B. HALLOCK. [L. S.]

Witnesses:

J. HERSE HENSELMAN,  
CLAUDE M. JOHNS.