

(No Model.)

2 Sheets—Sheet 2.

A. PALFY.
STATION INDICATOR FOR RAILWAYS.

No. 573,350.

Patented Dec. 15, 1896.

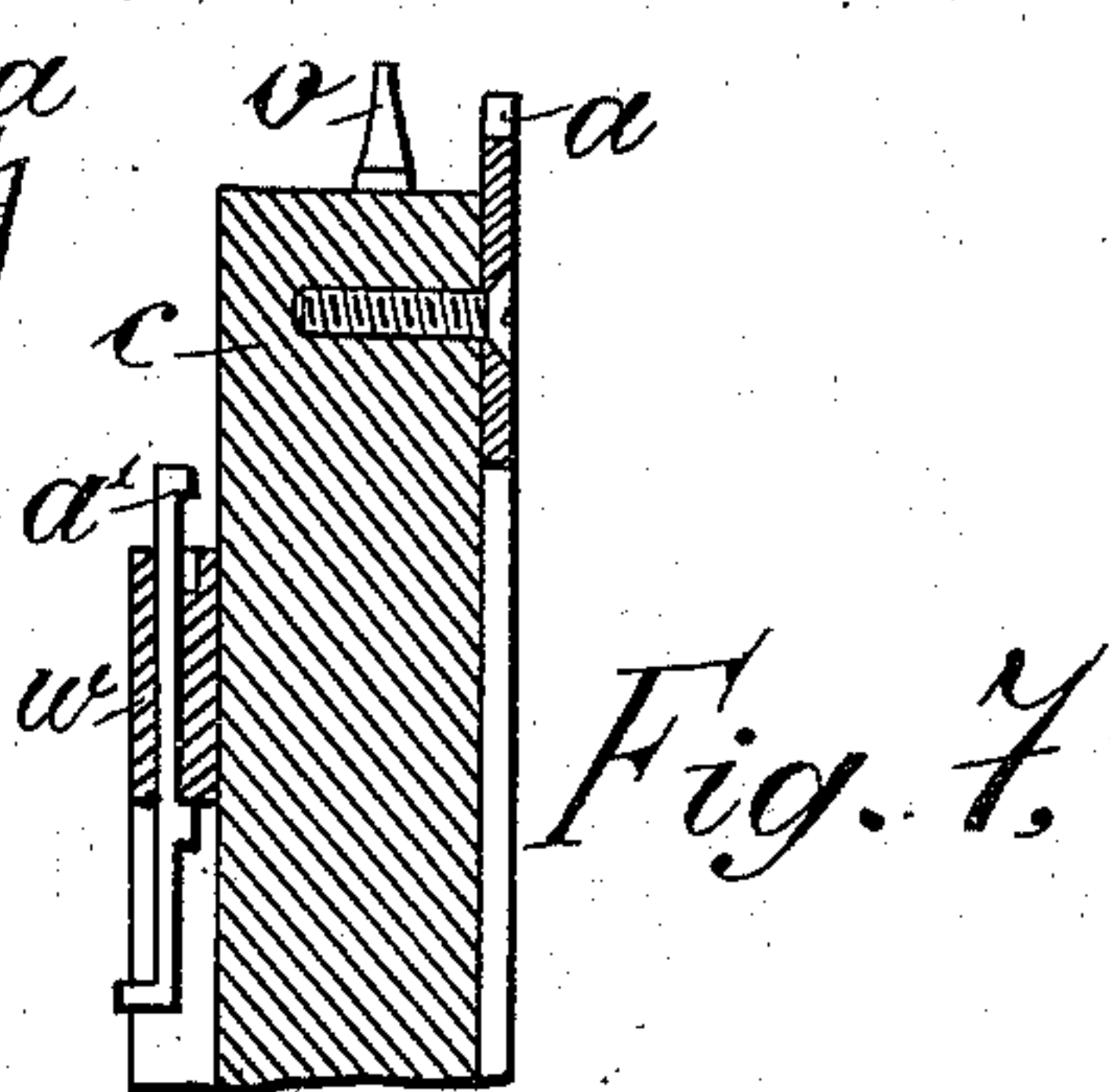
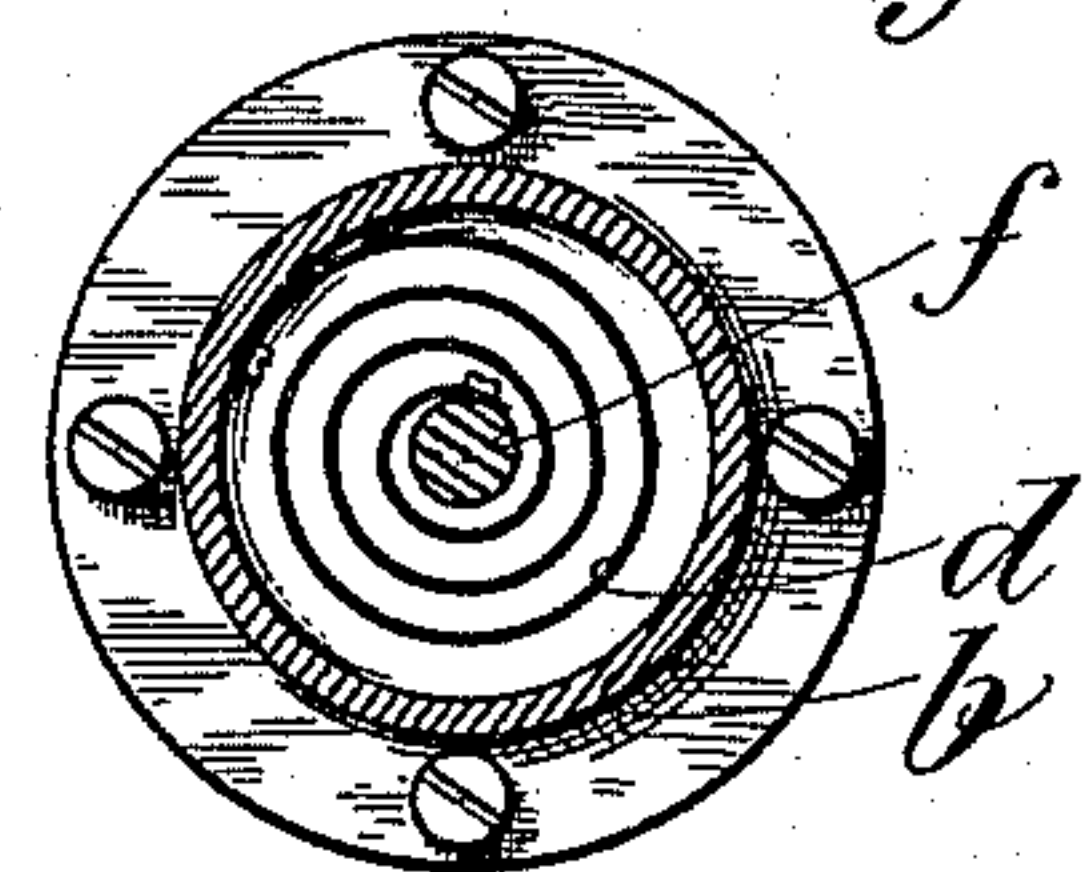
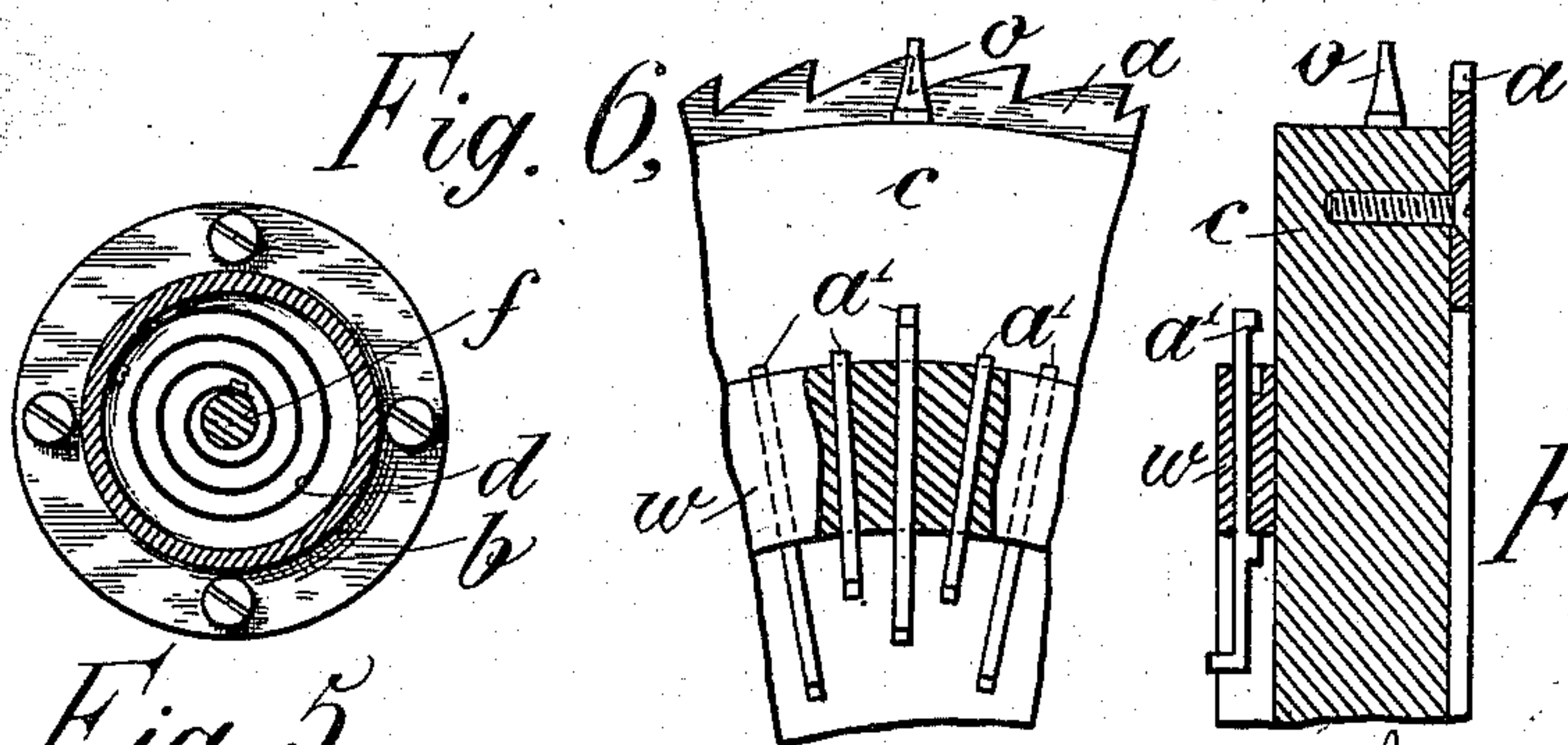
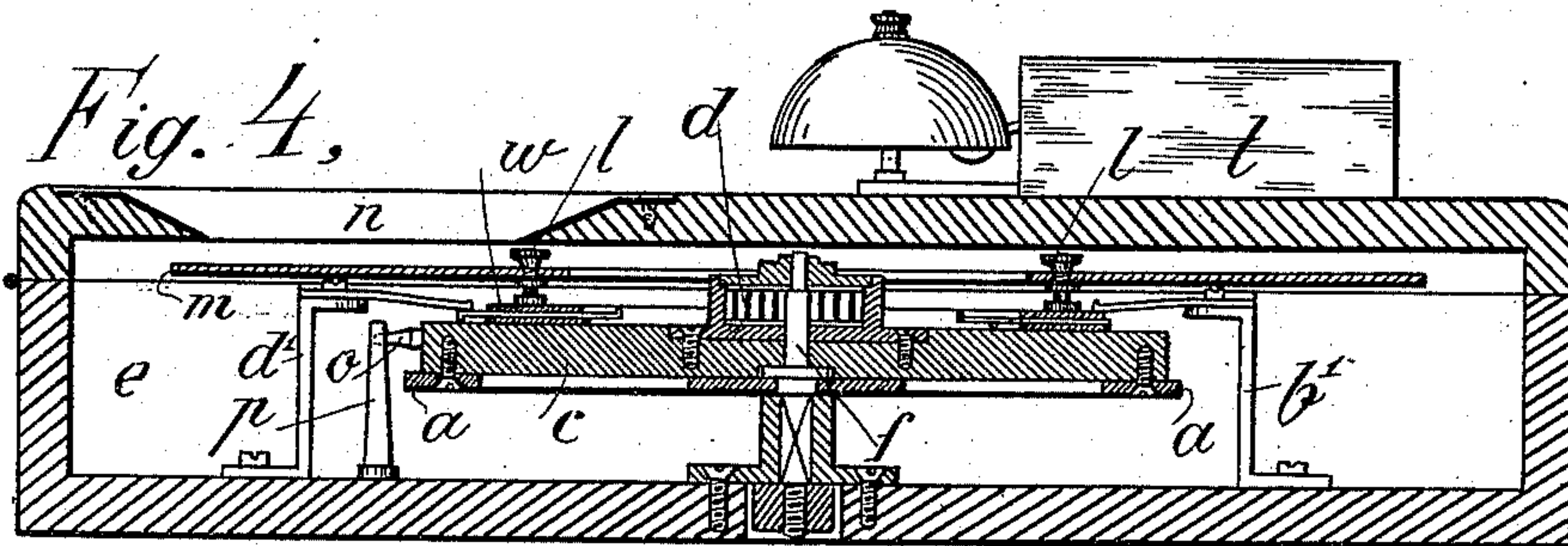
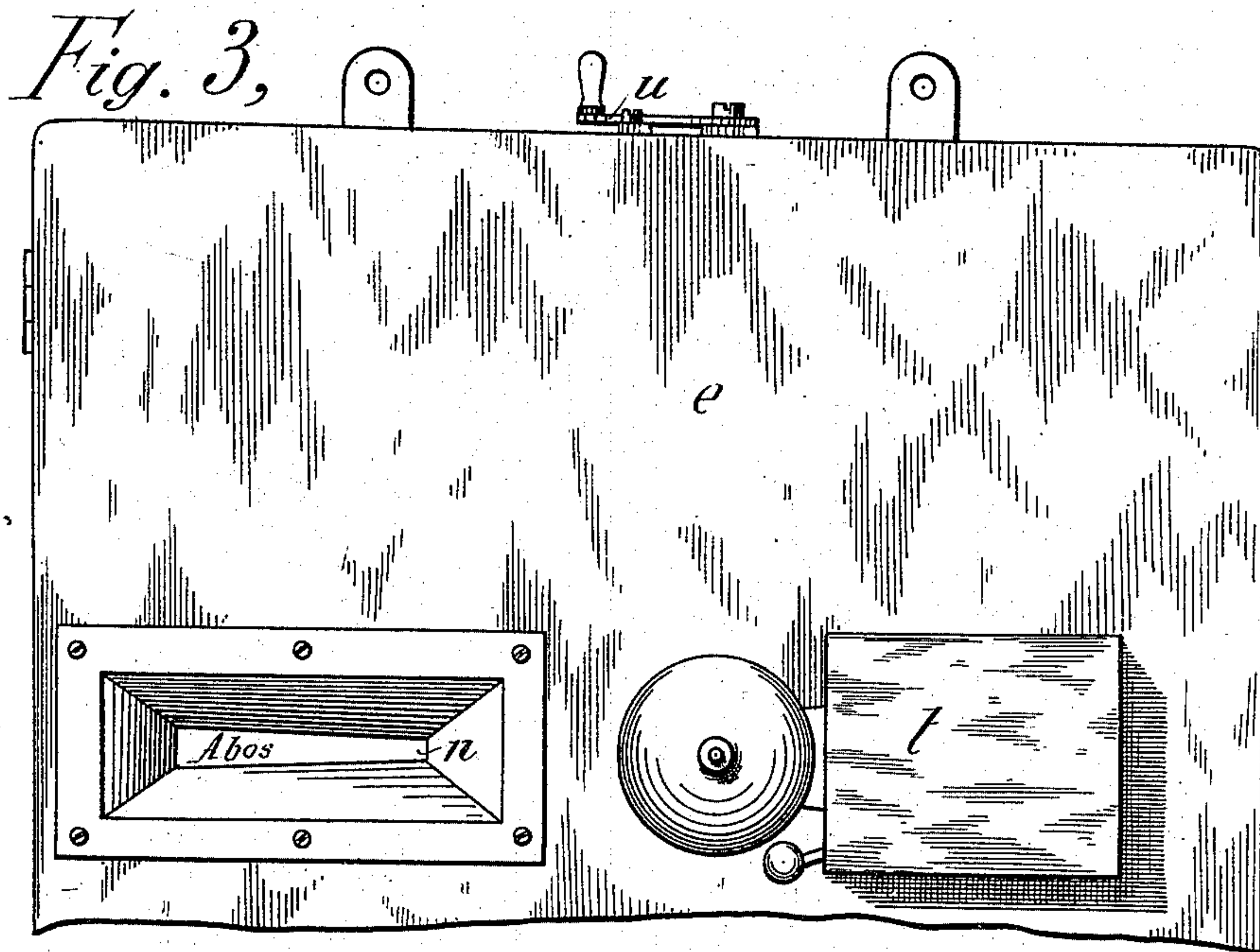


Fig. 5,
Witnesses.
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UNITED STATES PATENT OFFICE.

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STATION-INDICATOR FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 573,350, dated December 15, 1896.

Application filed August 3, 1896. Serial No. 601,494. (No model.)

To all whom it may concern:

Be it known that I, ANDRES PÁLFY, a subject of the Emperor of Austria-Hungary, and a resident of No. 11 Marie-Valerie Gasse, Buda-Pesth, in the Empire of Austria-Hungary, have invented a new and useful Improved Station-Indicator for Railways, of which the following is an exact, full, and clear description.

This invention relates to an improved station-indicator for railways of any kind, such indicator being operated by an electric current and showing the names of the different stations of a line in regular succession or in a predetermined order and being also provided with a clock-signal operated when a change of the name of the station is effected.

In the accompanying drawings, Figure 1 is a sectional elevation of the indicator opened to show the inner construction and arrangement, part of the cover and disk with the names of the stations being broken away. Fig. 2 is a plan view of the indicator. Fig. 3 is a part of the front view of the indicator. Fig. 4 is a cross-section on the line $x x$ of Fig. 1. Fig. 5 is a vertical section of the barrel of the indicator. Fig. 6 is a detail side elevation, partly in section, of a portion of the disk; and Fig. 7 is a vertical section through Fig. 6.

The station-indicator consists of a disk c , pivoted on a spindle f in a shallow casing e and provided in the center with a barrel or spring-box b , Figs. 1 and 4, and formed at its periphery as a ratchet-wheel a . The disk c is turned in the direction of the arrow, Fig. 1, by the tension of the spring d of the barrel b , a pawl g , pivoted to the casing and engaging the ratchet-teeth a , preventing the free rotation of the disk c . The pawl g is in connection with a double-armed lever h , the one end of which forms the armature of an electromagnet i , the other end of such lever being passed between adjusting-screws j and secured to a spring k , so as to limit the stroke of the lever h with armature and pawl g .

By passing an electric current through the electromagnet i for temporarily exciting same the lever h is attracted, and released again when the circuit is broken.

The disk c is rotated each time the electromagnet is operated to the extent of one tooth,

each movement of the disk corresponding to one station. For this purpose a circular ring-plate m is secured to the disk c by means of pins l , such plate m receiving the names of the stations in the proper order and in radial direction. The names of the different stations are rendered visible in a slot or recess n of the cover of the casing e , Figs. 3 and 4. The disk c can only make one revolution each time, a lateral stop o coming in contact with a stop-pin p of the casing and thus preventing further rotation of the disk. For further operation the disk is returned by hand to its initial position, for which purpose the one point, g' , of the pawl g is jointed to the body of the pawl and controlled by a spring g^2 in such manner that the said point g' can be moved outward, but not deflected to the inner side. The disk c , having made a complete or full revolution, has exposed the names of all stations on the plate m in the slot n , such plate m bearing on its back side the same names of all stations, but in the reverse order, so that the device can be used for indicating the stations when the train returns on the same line. In the latter case it is only necessary to put the disk m on the pins l with the back side to the front.

As already stated, the operation of the indicator is effected by an electromagnet i , such magnet being in connection with a line by means of a conductor r and the posts q , with which line any number of similar apparatus can be connected. In case this line is closed from any point the electromagnet i attracts the lever h and the pawl g operates the disk c . The line r is provided with a branch line s , an electrical bell t being in connection therewith, which bell strikes each time the apparatus is operated. A cut-out u , arranged in this branch line s , enables this electric bell to be put out of operation, the cut-out or switch u being in the center position, as shown in dotted lines in Fig. 2, whereas it is in connection with the contact v if the electric bell t is to be operated.

In case the electric bell is to ring only at some special stations the following arrangement is provided: A metallic ring w is secured to the disk c , such ring being provided with radial slides or bars a' , normally not extending from the ring w outward. A contact b' ,

connected with the line *s* by means of the conductor *c'*, is on the ring *w*, whereas a contact *d'*, connected with the second contact *u'* of the cut-out *u*, is arranged just below the recess or slot *n* in such manner that it is not in contact with the ring *w*, but comes in electric contact with same as soon as a slide *a'*, extended or drawn out from the ring *w*, is brought against this contact *d'* by the rotation of the disk *c*. Since such slide *a'* is provided for every station after the connection of the cut-out *u* with the contact *u'* the bell is struck only at that station the slide *a'* of which is drawn out from the ring *w*.

When it is desired to rotate the indicating-disk without ringing the bell, the switch *u* is moved into the central position, (shown in Fig. 2,) out of contact with both of the contact-points. The current in this instance passes from one of the posts *q*, over the line-wire *r*, through the electromagnet, and by means of the other line-wire *r* back to the opposite post *q*. If the bell is to be rung at each station, the switch is placed in contact with the contact-point *v* and a shunt-circuit is established from one of the wires *r* through the bell and switch by means of the line *s* back to the other wire *r*, as indicated by the full-line arrows in Fig. 2. If the bell is to be rung at predetermined stations, the switch is placed in contact with the contact-point *u'* and the circuit passes from one of the wires *r* through the bell, thence by the shunt-wire *c'* into the contact *b'*, thence through the metallic ring *w* and slides *a'*, when extended, into the contact *d'*, and from thence by means of the wire *e'*, contact-point *u'*, switch *u*, and wire *s* into the opposite or return wire *r* to the post. The direction of this circuit from the bell to the return-wire *r* is indicated by dotted arrows in Fig. 2 of the drawings.

Having now particularly described and ascertained the nature of my said invention, I declare that what I claim, and desire to secure by Letters Patent, is—

1. In a station-indicator, the combination with a revolving disk carrying an indicating-plate, of ratchet-teeth upon the periphery of said disk, a spring to rotate the disk in one direction, a pawl mechanism to hold said disk against rotation, an electromagnet to actuate said pawl to permit a movement of the disk, an electric bell, a shunt-circuit connecting

said bell with the circuit which actuates said electromagnet, a secondary shunt-circuit leading to terminals adapted to be placed in contact with a conducting-surface on said disk, whereby said secondary shunt-circuit may be completed at intervals through said conducting-surface and a switch adapted to contact with a conductor in either of said shunt-circuits whereby the bell may be actuated through either shunt-circuit as desired, substantially as described.

2. In a station-indicator, the combination with a revolving disk carrying an indicating-plate, of means for rotating said disk intermittently, a conducting-surface carried by said disk, a series of sliding contact-points located thereon, a contact-point adapted to make electrical connection with the conducting-surface on the disk, a contact-point adjacent to the disk and adapted to be engaged by the sliding contact-points when the same are shifted, and an electric circuit having a signal-bell therein and extending from the contact in connection with the conductor upon the disk to the contact adjacent to the disk, substantially as described.

3. In a station-indicator, the combination with a revolving disk carrying an indicating-plate, of means for rotating said disk intermittently, a circular metallic conducting-plate carried by said disk and provided with a series of radially-arranged sockets therein, a series of contact slides or bars located in said sockets and adapted to be independently shifted therein, a contact-point adapted to make electrical connection with the conducting-surface on the disk, a contact-point adjacent to the disk and adapted to be engaged by the contact slides or bars when the same are shifted outwardly from the disk, and an electric circuit having a signal-bell therein and extending from the contact in connection with the conducting-plate to the contact adapted to be engaged by the slides or bars, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ANDRES PÁLFY.

Witnesses:

MARIE HENRYERF,
FRÉDÉRIC MULLER.