

(No Model.)

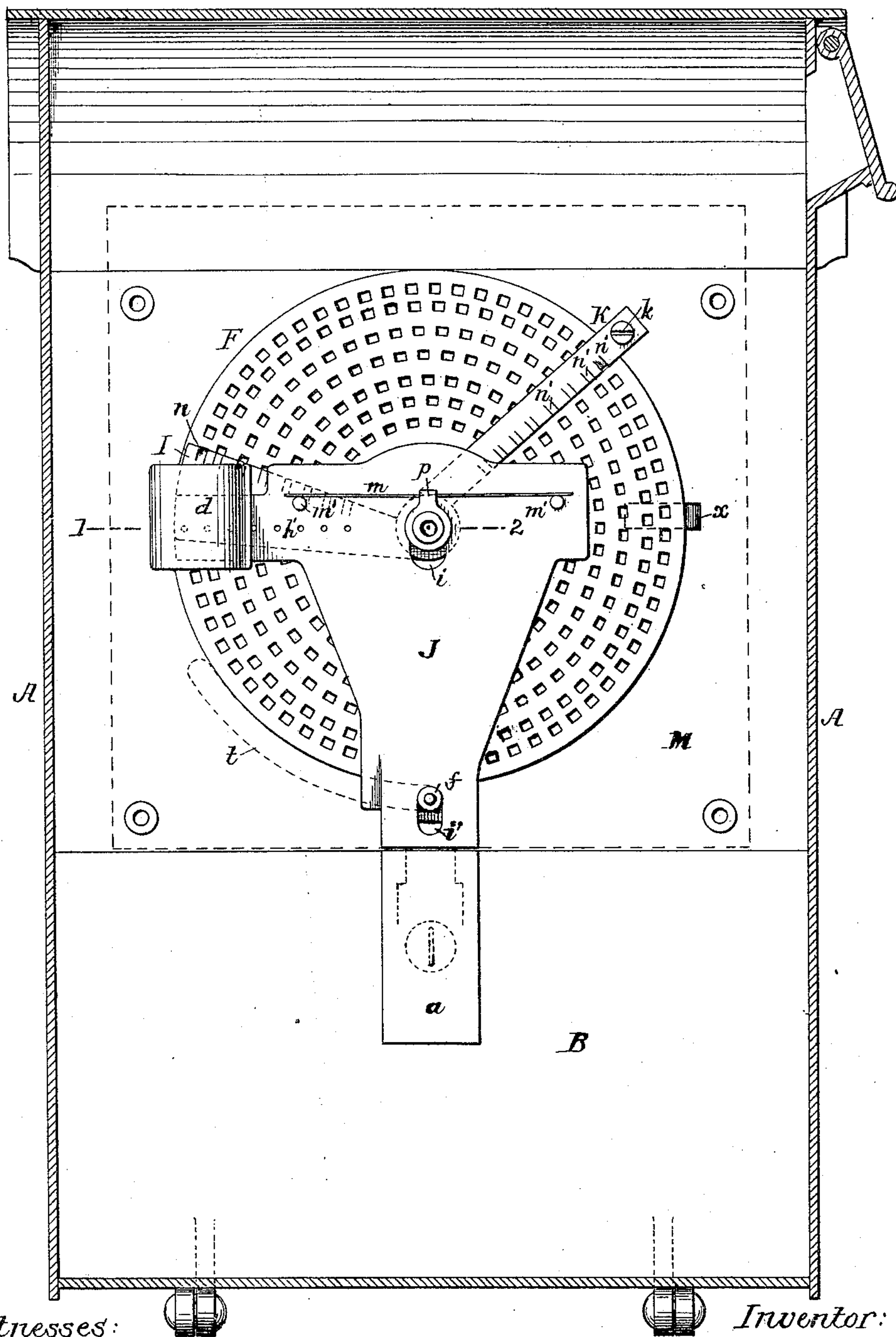
2 Sheets—Sheet 1.

H. B. GRIFFITHS.
INDICATOR FOR LETTER BOXES.

No. 432,306.

Patented July 15, 1890.

FIG. 1.



Witnesses:

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A.V. Group.

Inventor:

Howard B. Griffiths
by his Attorneys
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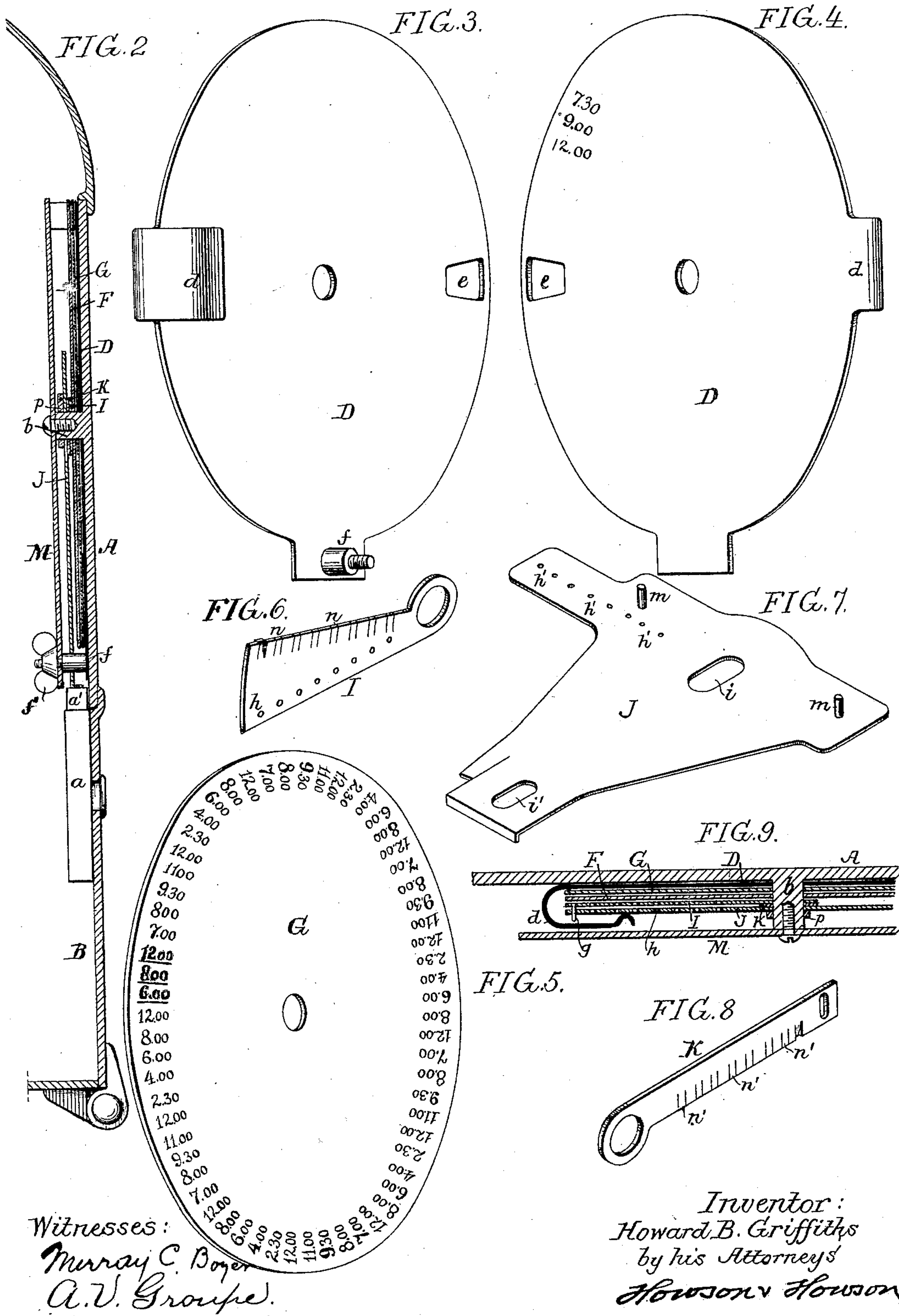
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UNITED STATES PATENT OFFICE.

HOWARD B. GRIFFITHS, OF PHILADELPHIA, PENNSYLVANIA.

INDICATOR FOR LETTER-BOXES.

SPECIFICATION forming part of Letters Patent No. 432,306, dated July 15, 1890.

Application filed March 24, 1890. Serial No. 345,078. (No model.)

To all whom it may concern:

Be it known that I, HOWARD B. GRIFFITHS, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Indicators for Letter-Boxes, of which the following is a specification.

My invention consists of certain improvements in that class of indicators for letter-boxes in which the indicator is automatically moved on the opening or closing of the box, so as to show, through a suitable opening in the face of the box, the hour at which the next collection is to be made.

The objects of my improvements are to simplify the construction of an indicator of this class, to provide for the ready changing of the indicator to accord with any change in the hours of collection, and to prevent any interference with the action of the indicator, such as might be caused by the difference in the character of the collections on Sundays and holidays as compared with those during the week. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of an ordinary form of letter-box, showing, in elevation, my improved indicator mounted within the box. Fig. 2 is a transverse section of part of the box and indicator. Figs. 3 and 4 are respectively a rear and front perspective view of one of the plates of the indicator. Fig. 5 is a perspective view of the indicating-disk. Figs. 6, 7, and 8 are detached perspective views of parts of the indicating mechanism; and Fig. 9 is a sectional plan view on the line 1 2, Fig. 1.

A represents part of the casing of the box, which may be of any of the usual constructions, and B is the hinged door, through which access to the interior of the box is gained, this door having the usual lock *a*, with bolt *a'*.

On the casing A of the box is an internally-projecting stud or hub *b*, upon which are mounted so as to be free to turn a circular plate or disk D and a rack-disk F, the latter having secured to its face an indicator-disk G. The disk D has a guard-finger *d*, an opening *e*, and a projecting stud or pin *f*, and the indicator-disk G has around its periphery an

annularly-arranged series of numerals indicating the different hours of collection for an entire week—that is to say, for the six week-days and Sunday, there being usually a much smaller number of collections on Sunday than on week-days. The disk shown in the drawings has numerals representing ten collections on each week-day and three collections on Sunday, amounting to sixty-three collections in all, and when the number of collections is changed a new card according with said new number of collections will be substituted. The rack-disk has a number of annularly-arranged rows of openings forming annular racks, the number of openings in each of these annular rows or sets corresponding with the number of collections made in a week under different circumstances. Thus the outer row may have sixty-three openings, so that when the rack-disk is moved to the extent of one opening on each locking of the box it will move the indicator-disk (shown in Fig. 5) so as to bring the hours of collection indicated thereon successively in front of the usual opening in the front of the box, the opening *e* in the plate D being in line with said opening in the box under ordinary circumstances. The second row of openings on the rack-disk may comprise fifty-seven openings, representing nine collections on week-days and three on Sunday. The third row may have fifty-one openings, representing eight collections on each week-day and three on Sunday, and so on through the various rows. To the stud *b* is hung the inner end of an actuating-pawl I, the outer end of which is supported by a pin *g*, adapted to one of a series of openings *h*, formed in the pawl, and to a corresponding one of a like series of openings *h'*, formed in a slide J, which has a slot *i*, spanning the stud *b*, and another slot *i'*, spanning the stud *f* of the plate D, so that the slide J is free to rise and fall, the upward movement being imparted by the bolt *a'* of the lock as the latter is shot into its place on the closing of the door B, and downward movement of the slide being caused by a spring-plate *m*, carried by a saddle *p* at the inner end of the stud *b*, said spring-plate acting upon studs *m'* on the slide, as shown in Fig. 1. In the forward face of the pawl I are a series of slits or notches, so

as to form on said face a series of tongues n —one for each of the rows of openings in the rack-disk F—so that the pawl can be caused to engage with the openings of any row by simply bending down the finger in line with that row, thus causing it to form a tooth for engagement with the openings.

The amount of movement imparted to the pawl I by the slide J is only equal to the movement which it is necessary to impart to the rack-disk in order to bring successive numbers of the indicating-disk into line with the opening in the casing when the greatest number of such indicating-numbers is employed. Hence in order to provide for the greater movement of the disk, which becomes necessary when a smaller number of indicating-numbers are employed, I provide in the slide J and pawl I the series of openings $h h'$, of which there is one for each tooth of the pawl, so that the pin g may be adapted to those openings corresponding with the tooth of the pawl which is in engagement with the openings of the rack-disk, and as the openings of each rack are at uniform distances apart, while the openings h are at varying distances from the fulcrum of the pawl I, it follows that the movement of the rack-disk and the indicator carried thereby on each movement of the slide J will be just sufficient to bring the proper indication on the card in line with the opening in the casing of the box, no matter how many of these indications are used upon the card. In other words, the less the number of indications on the card the farther they will be apart; but the movement of the disk F on each reciprocation of the slide J will be proportionately greater. For instance, if the outermost finger n of the pawl I constitutes the acting-tooth of said pawl, it will require sixty-three operations of the slide J to impart one complete movement of rotation to the rack-disk and its indicating-card, while if the second finger n of the pawl constitutes the acting-tooth but fifty-seven movements of the slide will be necessary to cause a complete rotation of the rack-disk and indicator-card, and, in like manner, when the third finger of the pawl constitutes the acting-tooth but fifty-one movements of the slide are necessary to cause a complete rotation, and so on down.

A bar K is mounted at the inner end on the stud b and is secured at the outer end by a set-screw k , this bar having fingers n' , similar to the fingers n of the pawl I, any desired one of these fingers being bent down, so as to form a retaining-tooth for engaging with the openings in the rack-disk and preventing the back movement of the same.

On the face of the disk D are a series of indicating-numbers representing the hours of collection on holidays, and in making the last collection on the day before a holiday the postman turns the plate D by means of its projecting stem f , so as to bring the first of these numbers opposite the opening x in the

case or box, the extent of movement of the plate being determined by a slot t in the cover-plate M of the indicating device, this cover-plate and its slot being represented by dotted lines in Fig. 1. The same movement of the plate D causes a movement of the rack-disk and its indicator-card equal to one day's travel of the same, so that the indications on the card will be in proper position for the next day's collections.

After making each collection on a holiday the postman turns back the plate D, so as to properly indicate the hour of the next collection, and when the last collection has been made he restores the plate to its normal position, so as to bring the opening e into line with the opening x in the casing of the box. The plate may be secured in either position after adjustment by means of a thumb-nut f' , adapted to the threaded outer end of the stud f and bearing upon the cover-plate M. The guard-finger d on the plate D bears against the back of the slide J, as shown in Fig. 9, and serves to maintain said slide, the operating-pawl, and the disks in proper lateral relation to each other, and also serves as a friction-brake to prevent any accidental movement of the slide J. By these means I provide for all the varying conditions under which an indicator-card for letter-boxes is to be used, the means whereby the results are attained being of a simple and inexpensive character and not likely to get out of order.

Having thus described my invention, I claim and desire to secure by Letters Patent.

1. The combination of a letter-box and its door and lock with an indicator having an operating-slide acted upon by the bolt of the lock, whereby an impulse is imparted to said slide whenever the door of the box is closed and locked, substantially as specified.

2. The combination, in an indicator for letter-boxes, of the rack-disk carrying the indicator and having a series of graduated racks whereby it is adapted for use with any desired number of daily collections, and a pawl for operating said rack-disk, substantially as specified.

3. The combination of the rack-disk carrying the indicator and having a series of racks with a pawl having a series of fingers, one for each rack, any one of which fingers may be caused to form the operating-tooth of the pawl, substantially as specified.

4. The combination of the rack-disk carrying the indicator and having a series of racks with the operating-pawl and retaining-bar, each having a series of fingers, one for each rack of the disk, either of said fingers being adapted to form the actuating or retaining tooth, substantially as specified.

5. The combination of the rack-disk carrying the indicator and having a series of racks, the pawl having a series of fingers, any one of which may be caused to form an actuating-tooth, and a like series of openings for the reception of an actuating-pin, and the operat-

ing-slide, also having a series of openings coinciding with those of the pawl for the reception of the actuating-pin, substantially as specified.

5 6. The combination of the indicator-card, the rack-disk, and means for operating the latter with a shield-plate for use on holidays or other days of special collections, substantially as specified.

10 7. The combination of the indicator-card, its rack-disk, and means for actuating the latter, the shield-plate having the indications for holidays or other special collections, and stops for limiting the movement of said shield-
15 plate, substantially as specified.

8. The combination of the indicator-card and the rack-disk carrying the same, the actuating-pawl, and the operating-slide with a spring acting upon the latter to depress the same, and a saddle carried by the pivot-stud 20 and carrying said spring, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HOWARD B. GRIFFITHS.

Witnesses:

EUGENE ELTERICH,
HARRY SMITH.