

(No Model.)

2 Sheets—Sheet 1.

M. MARTIN.
WORKMAN'S TIME RECORDER.

No. 475,457.

Patented May 24, 1892.

Fig. 1,

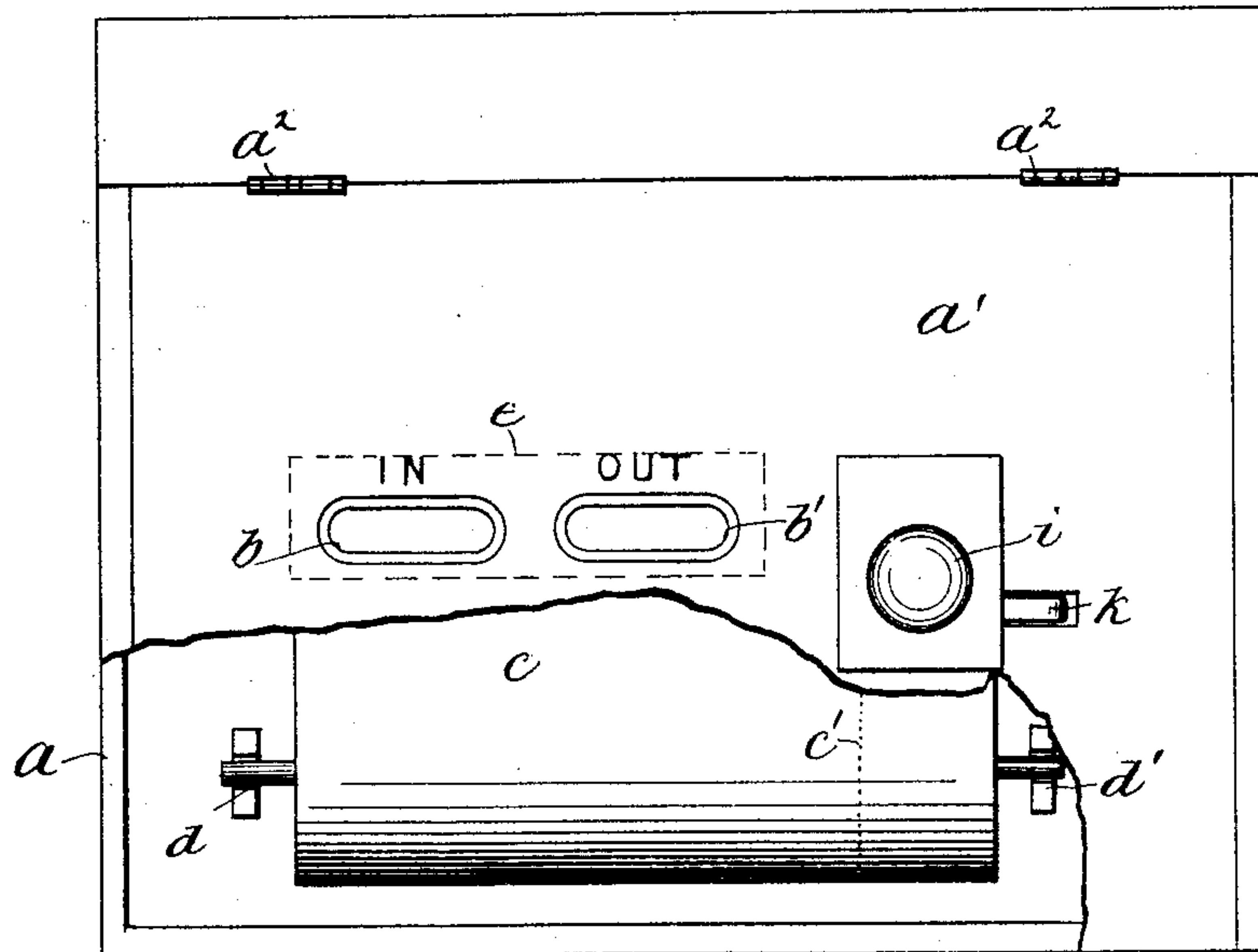
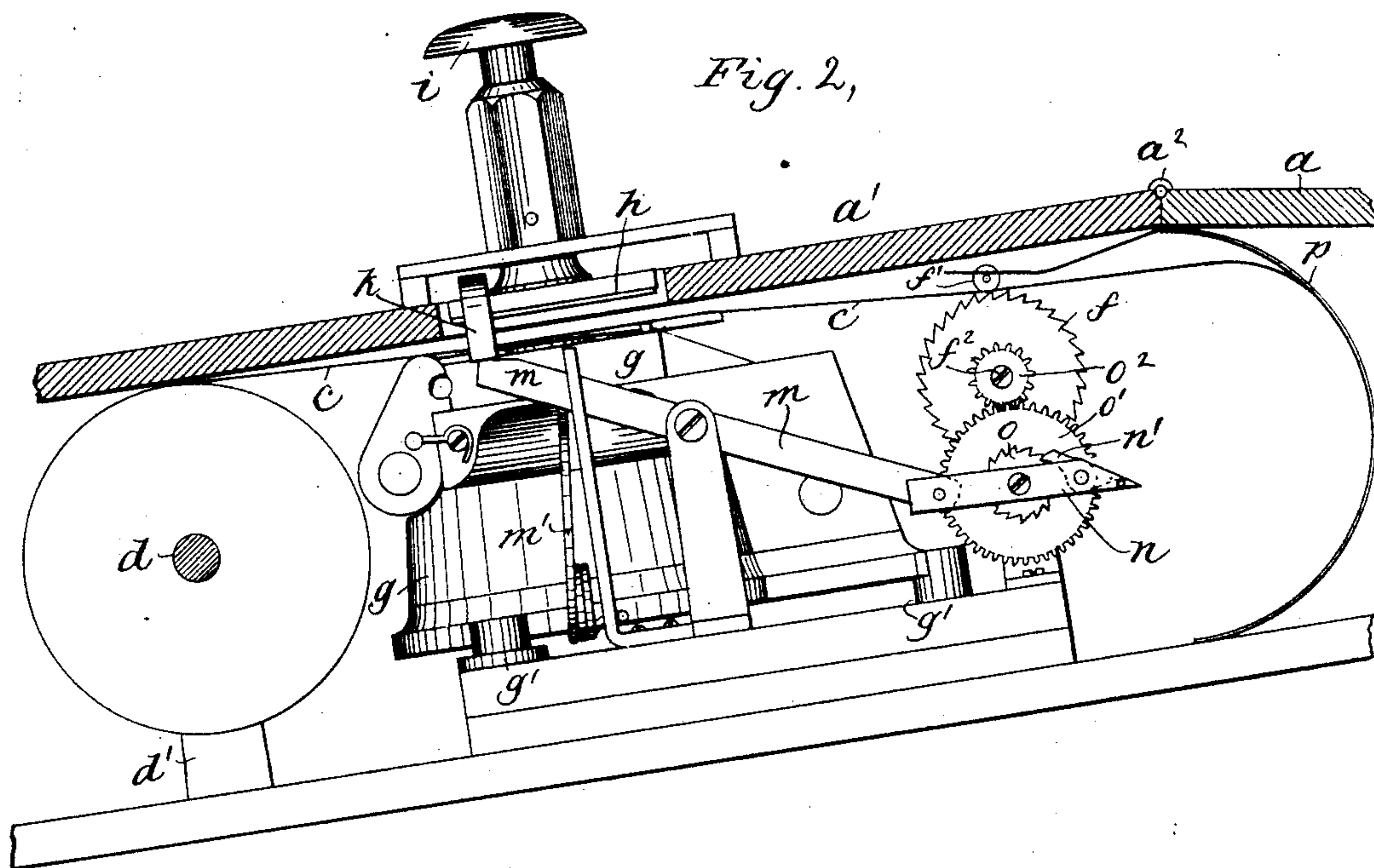


Fig. 2,



Witnesses,
Jas. J. McAloney.
W. Livermore.

Inventor,
Morris Martin
by Jos. P. Livamore
Att'y.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3,

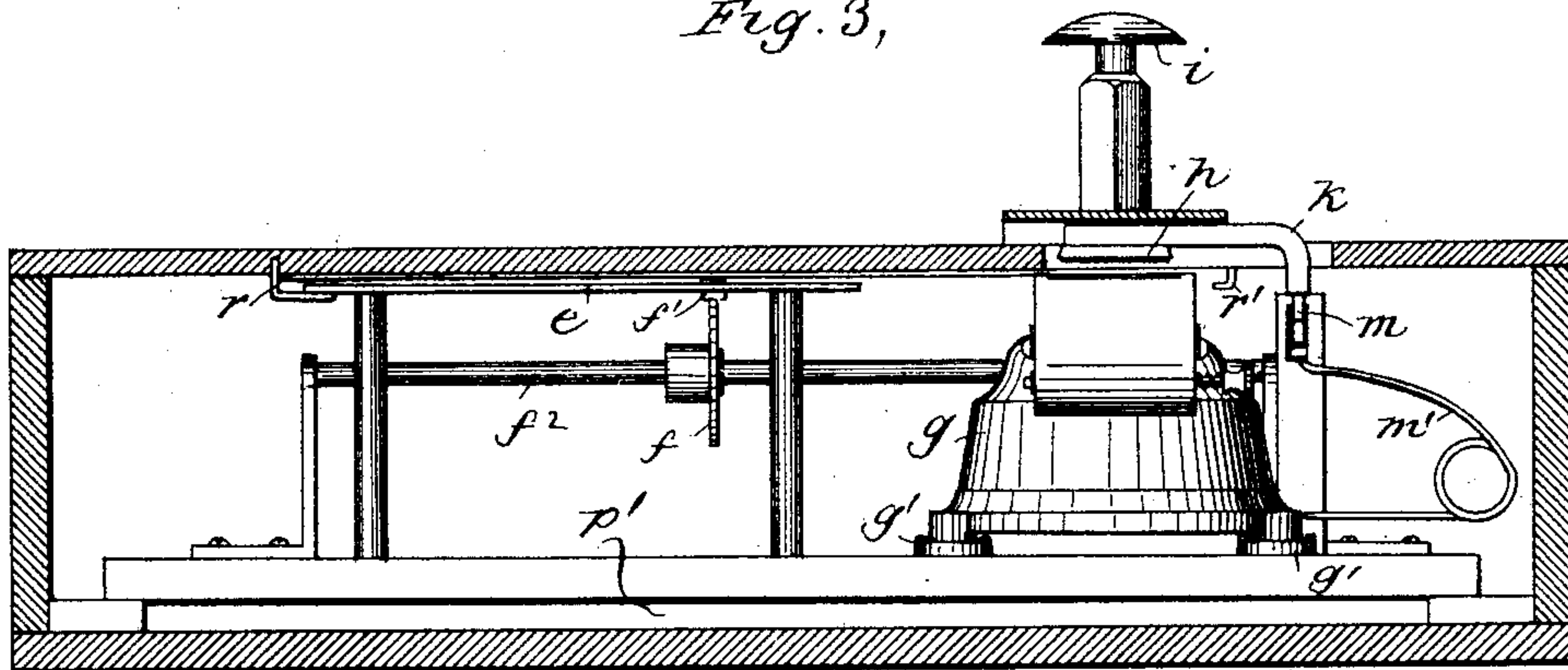
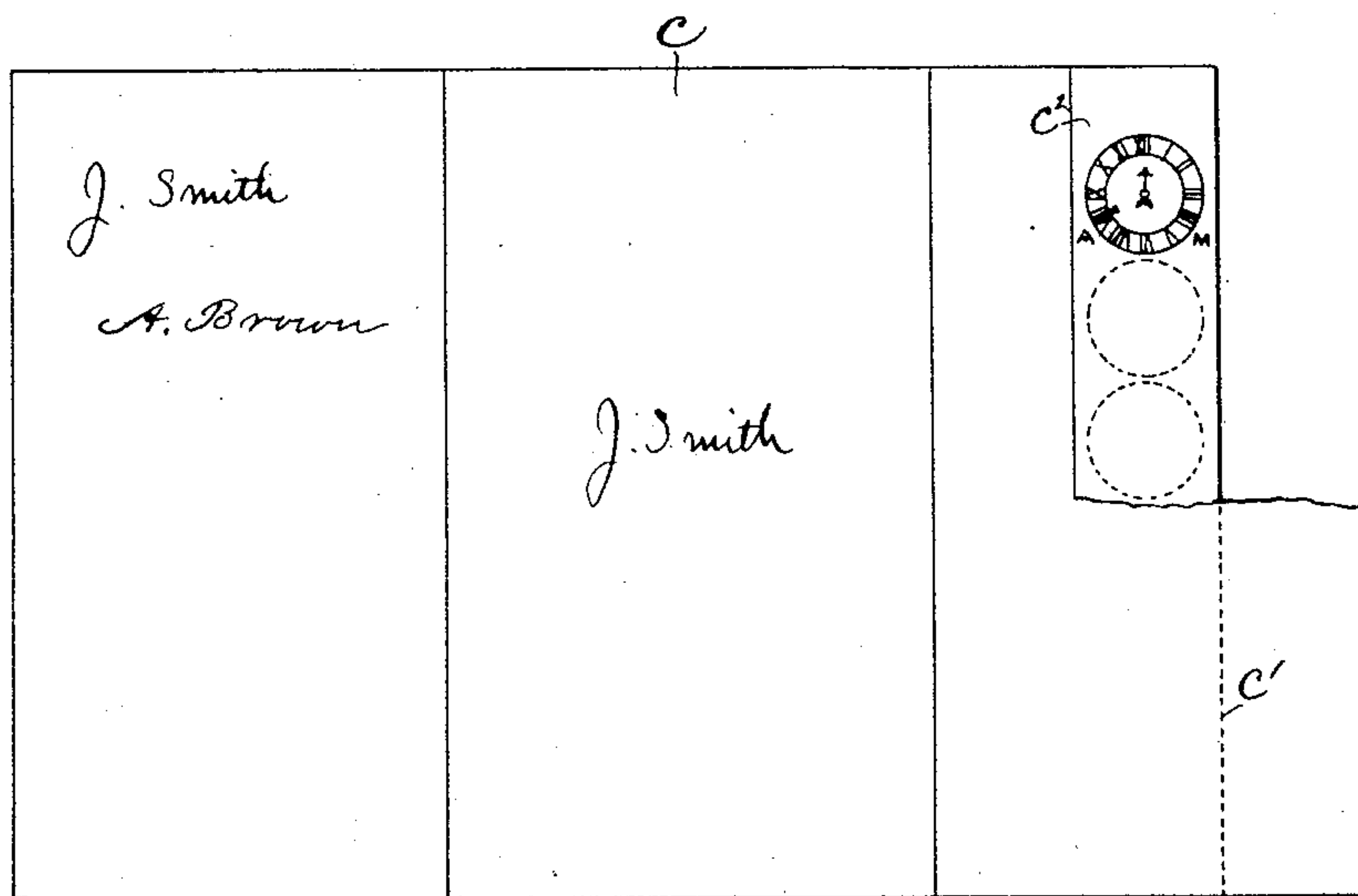


Fig. 4,



Witnesses.

Jas. H. Maloney.
W. J. Livermore.

Inventor,
Morris Martin
by J. P. Livermore
Att'y.

UNITED STATES PATENT OFFICE.

MORRIS MARTIN, OF MALDEN, MASSACHUSETTS, ASSIGNOR TO THE AUTOMATIC TIME STAMP AND REGISTER COMPANY, OF PORTLAND, MAINE.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 475,457, dated May 24, 1892.

Application filed July 19, 1888. Serial No. 280,368. (No model.)

To all whom it may concern:

Be it known that I, MORRIS MARTIN, of Malden, county of Middlesex, and State of Massachusetts, have invented an Improvement in
5 Apparatus for Recording the Time of Workmen, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 My invention relates to an apparatus for recording the time that workmen or other employes enter and leave their place of occupation, the object being to produce an apparatus that will make a permanent record which cannot be tampered with or falsified in any way.

15 My improved apparatus contains a stamp having a die for imprinting on a recording-strip and a co-operating movable platen and strip engaging and moving means, combined
20 with connections between the said strip engaging and moving means and the said platen, whereby when the platen is moved to print the strip the said connections are moved into their starting position, and thereafter as the platen
25 returns into its normal position the said connections are actuated to move the strip engaging and moving means and feed the strip, as will be described.

30 My invention also includes an inclosing case having a signature-opening, a stamp including a die, and a co-operating platen having a hand-piece extended out through the said case, and strip engaging and moving means combined with connections between the said
35 strip engaging and moving means, &c., as above. The time stamp or imprinting device is preferably set a distance equal to the paper-feed for one operation in advance of the signature-opening, so that the time-
40 imprint is made first, and is then carried forward with the paper into line with the signature-opening, such signature being opposite or in line with the time-imprint. This arrangement prevents opportunity of falsifying
45 by a person affixing the signature and arranging with another person to make the time-imprint later, as the time-imprint must be made before the name is written in order to have the imprint and name correspond in position. The record can thus be falsified only
50 by one person signing the name of another,

which would soon lead to detection from the character of the handwriting.

The invention further consists in various details of construction that will be hereinafter pointed out.

Figure 1 is a plan view of a time-recording apparatus embodying this invention, a portion of the inclosing case being broken away to show the parts below; Fig. 2, an end elevation of the working parts within the case on a larger scale; Fig. 3, a front elevation of the operative parts in the case, which is shown in section; and Fig. 4 a diagram showing a portion of the record.

65 The main operative parts of the apparatus are inclosed in a case *a*, which may for convenience be made with an inclined top *a'*, hinged at *a''*, so as to afford access to the parts beneath for purposes of removing the record, renewing the recording-strip, winding the time-stamp apparatus, &c., the said case being, however, securely locked, so as to prevent opening by any person other than one authorized to do so. The said case has writing or signature openings *b b'*, through which the signature of the person whose time is to be recorded is made, the two openings being for the purpose of indicating more readily on the finished record which was the time of entrance and which the time of leaving, although it is obvious that a single opening might be employed, and the time sequence of the signatures would be sufficient to explain their significance, or the word "In" or "Out" might be written with the signature, if preferred. The said case incloses a recording-strip *c* (shown as a continuous web or roll of paper wound on a spool or drum *d*) supported in bearings *d'* near the front of the case. From said roll the strip *c* is carried forward beneath the top of the case and over a platform or support *e*, just beneath the openings *b b'*, as shown in dotted lines, Fig. 1, which supports the paper while the signature is being written thereon, and beyond the said openings the strip is engaged with feeding devices *f*, (shown in this instance as a toothed wheel,) against which the strip is pressed by a yielding roller *f'*. The case referred to incloses a time-stamp, the main body of which is marked *g*, the platen being marked *h*, the

rod carrying the platen having a hand-piece or knob *i*, the platen being normally elevated by or through the action of a suitable spring.

The time-stamp is substantially such a time-stamp as in United States Patent No. 224,666, dated February 17, 1880, it containing as a part of it a printing-die representing the dial of a clock and printing-die pointer, which are actuated by a clock-movement, so as to move the parts in time with the hands of a clock, so that the marks made by them with relation to the dial-die will indicate the time at which the imprint is made.

The impression is made by pressing the surface to be printed upon against an inked ribbon lying over the face of said dies by means of a platen *h*, connected with a handle *i*, so that a blow or pressure on said handle forces the paper against the inked ribbon, causing the imprint to be made thereon of the raised or projecting portions of the die-face in the usual manner. The said platen *h* or its operating-handle also has connected with it an arm *k*, (best shown in Fig. 3,) which co-operates with a feed-lever *m*, connected with a rocking yoke *n*, (see Fig. 2,) provided with a pawl *n'*, and pivoted concentrically with a ratchet *o*, fixed to a toothed wheel *o'*, meshing with a toothed pinion *o''* on the shaft *f''* of the feed-wheel *f*. The depression of the handle *i* by which the imprint is made depresses the lever *m* and advances the pawl *n'* over a tooth of the wheel *o*, and when the platen-handle *i* is released a spring *m'* (best shown in Fig. 3) raises the lever *m*, causing the yoke *n* to be swung and to carry with it by the pawl *n'* the ratchet *o*, which through the gearing turns the paper-feed wheel and feeds the paper a space about equal to the width of the openings *b b'* in the case, thus carrying away the name that was previously written through the opening and presenting a fresh surface beneath the openings for the next signature.

The time-stamp is set with the dies a distance equal to that traveled by the paper in one feed movement in advance of the signature-openings on the side from which the paper is fed, so that the feed movement which takes place in the return movement of the handle *i* after the imprint has been made carries the time-marks into line with the signature, and the persons using the apparatus are instructed to operate the handle *i* first and then sign their names through the proper opening, leaving the name in sight until removed by the person who next operates the time-stamp in the same manner. Thus the time-imprint has to be made before the corresponding signature is written, and as it would be of no advantage to the signer to delay the signature after the imprint is made, either going or coming, the signatures will naturally be made immediately after the time-imprint, which will thus record on a line with the signature practically the time at which the signature was made, and no falsifying to

the advantage of the operator can be effected otherwise than by signing a false name, which probably would never be attempted owing to the danger of detection. The paper, with the signatures and time-imprints, is carried forward and may be taken up inside of the case in any suitable manner.

As herein shown, the case is provided with a guide *p*, which carries the paper that has been operated upon around and back through a suitable opening or space *p'* (see Fig. 3) between the platform that supports the operative parts and the bottom of the case. The paper, with the record upon it, may be removed at suitable intervals by the person in charge and filed away, thus making a permanent and reliable record of the time of attendance of all persons using the apparatus. With the arrangements shown the time-imprint is made on the opposite surface of the paper from that bearing the signatures, and for convenience the strip *c* is perforated or creased, as shown at *c'*, between the part occupied by the time-imprint and the part occupied by the signatures, so that when the strip is removed for examination or filing away the portion *c''* containing the time-imprints may be folded over, as shown in Fig. 4, thus bringing the imprints on the same side as the signatures.

Fig. 4 represents the form of record that will be made by the herein-described apparatus, one only of the time-imprints being shown in full, and indicating that the person whose signature is uppermost on the left-hand column of the sheet arrived at eight o'clock. The signatures in the right-hand column are on line with the time-imprints, showing the time of leaving.

If desired, a person signing in the proper opening may write a date in the other opening or the date may be printed by the time-stamp, as usual, and there can be no dispute as to the time of attendance, as each person can be shown his own signature and the corresponding time-records.

Suitable guides are provided for controlling the edges of the paper, as shown at *r r'*.

The platen and its operating-handle and actuating-arm *k* for the paper-feeding mechanism are all connected with the top or cover of the case, while all the other parts are enclosed in the body of the case and are below the paper, and consequently when the cover is raised the recording-strip is perfectly accessible.

The time-stamp *g* is set in sockets *g'*, so that it can be easily removed for the purpose of winding and setting the time movement.

In my invention, as herein embodied, the strip is engaged and moved by the wheels *ff'*, they constituting, therefore, the strip engaging and feeding devices. The wheel *f* derives its movement through the gears *o'' o'*, ratchet *o*, pawl *n'*, pawl-carrier *n*, and lever *m*, the said lever being actuated in one direction by the platen to place the pawl in its

backward or starting position and being moved in the opposite direction to effect the feeding of the strip by the spring *m'*.

For the purposes of the claim I designate the devices *m' n n' o o' o'* as the intermediate connections between the platen and the strip engaging and moving means.

Prior to this invention I am aware that type-wheels set side by side and moved intermittently by a clock mechanism have been employed to stamp a strip fed by a hand-controlled pawl-and-ratchet mechanism and that the said pawl, through intermediate devices controlled by a spring, has been made to strike against a sort of piano-hammer to lift the paper against an ink-ribbon lying below the type-wheels referred to; but in this my invention the parts have been constructed to occupy the least space and so that they may be operated more positively to get a strong impression and secure a positive movement of the strip, and to do this the rod connected with the platen is exposed at the outside of the case, where it may be struck by the hand when making the impression, the blow being more or less hard, as desired, the platen in its descent putting the feeding mechanism into position to engage and feed the strip as the platen recoils, and in this way the operator is confronted in the signature-slot with the signature of the man who preceded him, and before he signs his own name in the signature-slot he depresses the platen, stamps the time of his own name, and by the removal of his hand from the platen permits the strip to be fed to bring a fresh part of the strip in position under the signature-opening to receive his own signature opposite the stamp which he has just made indicating the time. This construction, as has been before stated, prevents the possibility of a contriving workman or employé signing his name the night before upon the strip and having a confederate stamp and feed the strip for him in the morning without his personal presence.

I claim--

1. A time-recorder containing the following instrumentalities, viz: an inclosing case having a signature-opening, a support opposite the said opening for a recording-strip, a time-stamp including a die for imprinting time on the said strip and having a co-operating spring-supported platen provided with a hand-piece or striker extended outwardly through the said casing, means to engage and move the recording-strip and actuating devices therefor, adapted to be operated in one direction by or through the movement of the platen in printing, and a

spring to move the said devices in the opposite direction to feed the strip as the platen rises, the feeding of the strip being made to follow the printing thereon, substantially as as described.

2. In a time-recorder, the following instrumentalities, viz: a time-stamp having a die for imprinting time and having a normally-elevated platen, devices to engage and feed a recording-strip, connections between the said platen and the devices for engaging and moving the said strip, and a spring, the said devices being moved by the said platen and against the said spring while the platen is being moved to cause the same to imprint upon the said strip, the said devices being actuated by the said spring to feed the strip during the recoil of the platen, substantially as described.

3. The inclosing case provided with a signature-opening, combined with a recording-strip contained within said case and movable below said opening, and a time-stamp having a die for imprinting said recording-strip, said time-stamp being set the distance of one paper-feed in advance of the signature-opening or toward that side from which the paper is fed to the opening, as described, whereby the imprint is made before arriving in line with the opening and is subsequently fed into line with the opening, substantially as and for the purpose described.

4. A stamp, including a printing-die and a hand-actuated normally-elevated platen, combined with devices to engage and move a recording-strip and with connections intermediate between the said strip-engaging devices and the said platen, whereby the descent of the platen to stamp the strip places the actuating devices into position to effect the feed of the strip during the return movement of the platen, substantially as described.

5. In a time-registering apparatus, the combination, with an inclosing case provided with a slot or signature-opening, of a recording-strip inclosed in said case and movable beneath the said opening, a printing-die and a support for said strip underneath said recording-strip, and a movable platen above said recording-strip, whereby the strip is pressed against the printing-die and the imprint made upon the under surface of said strip, substantially as described.

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

MORRIS MARTIN.

Witnesses:

JOS. P. LIVERMORE,
M. E. HILL.