(No Model.) 2 Sheets—Sheet 1.

S. HALL.

WORKMAN'S TIME RECORDER.

No. 456,564. Patented July 28, 1891.

Fig. 2.

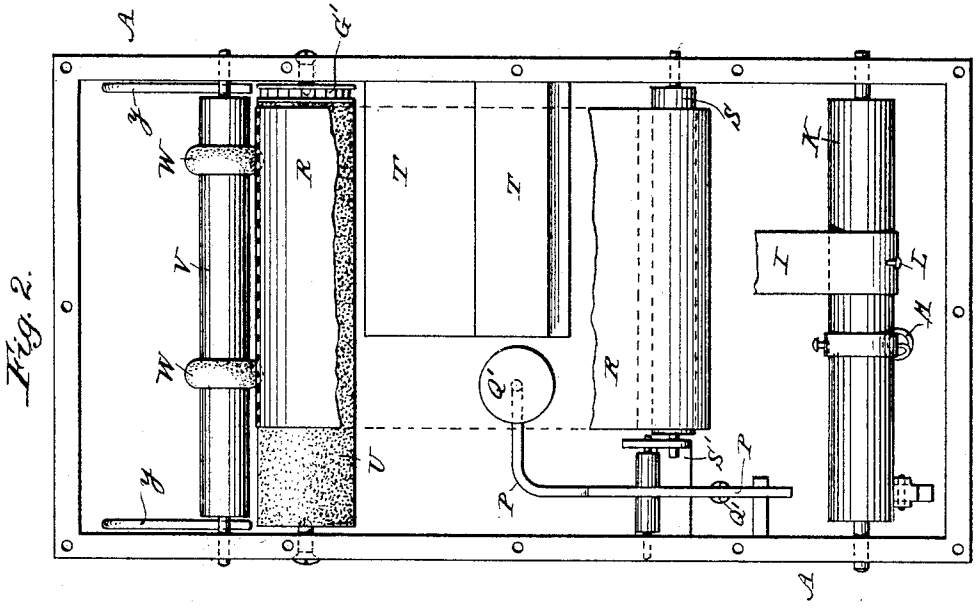
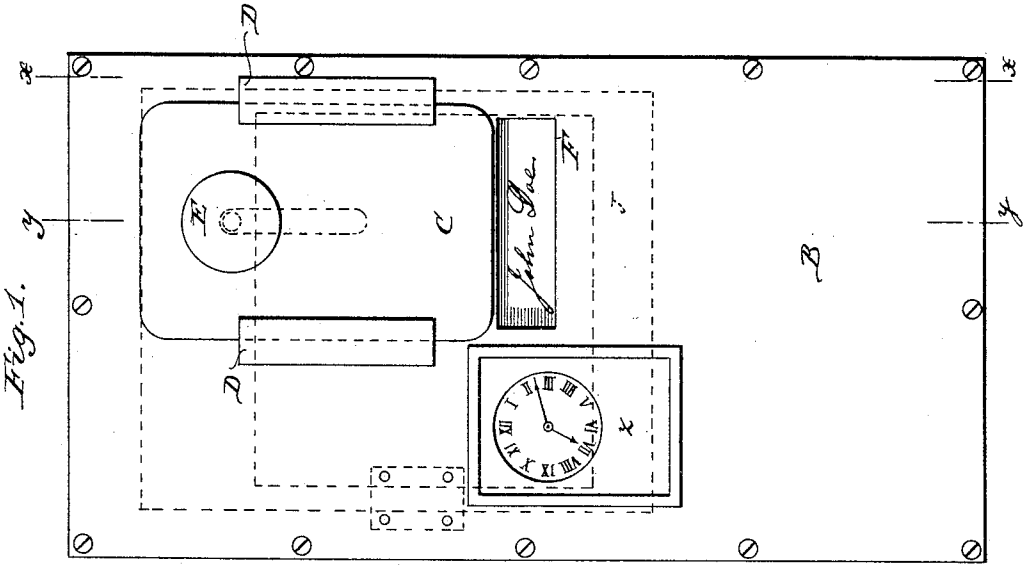


Fig. 1.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

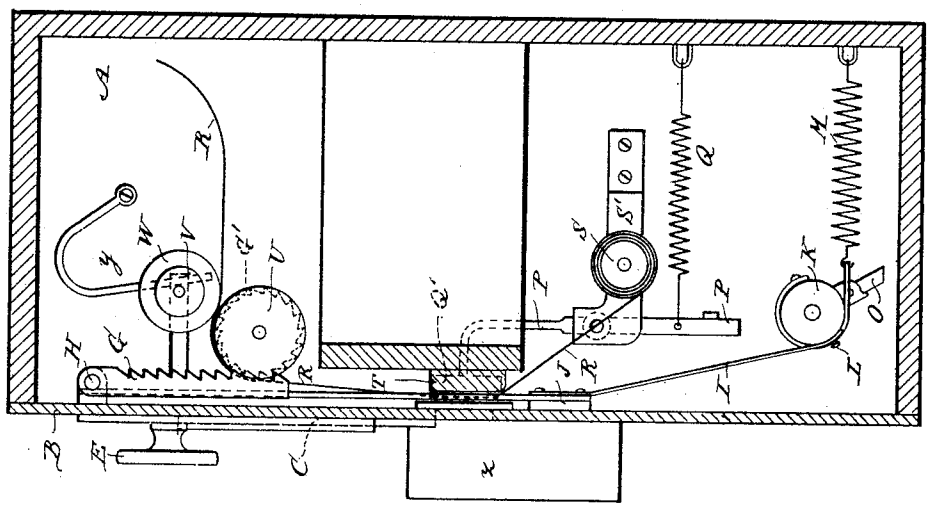
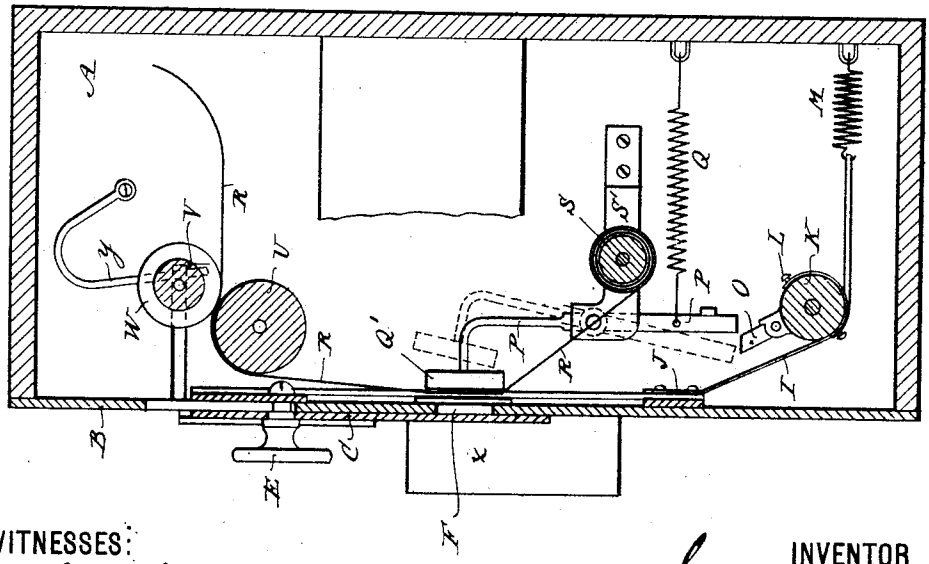


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL HALL, OF EAST ORANGE, NEW JERSEY.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 456,564, dated July 28, 1891.

Application filed July 30, 1890. Serial No. 360,410. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HALL, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improved Time-Registering Apparatus, of which the following is a specification.

My invention relates to a time-keeping device for use where it is desirable to keep the time of a number of employés; and it consists in a partially automatic apparatus so constructed and arranged that the exact time at which each employé reports for work and also his personal presence at that time will be recorded with certainty and without the possibility of error occurring, either through carelessness of a time-taker, or through deceptive action on the part of the employé whose time is taken, or by connivance on the part of any one.

In the drawings the same letters of reference refer to the same parts in all the figures.

Figure 1 illustrates a plan of the invention. Fig. 2 illustrates a plan, the cover being removed. Fig. 3 illustrates a side view, the side of the case being removed—in other words, on the line *x x* of Fig. 2—the slide being open, exposing the paper for the signature of the employé. Fig. 4 illustrates a view similar to that shown in Fig. 3, excepting that the table is partly removed, and in it the parts are shown in dotted lines in position to spring and mark the time upon the web or piece of paper on which the record is made. It is taken on the line *y y* of Fig. 1.

A is a box or case made of any suitable material.

B is a cover, which is fastened and locked in any preferred manner. I show it as screwed down. It may be hinged and locked, or a suitable door may be provided in any preferred part of the apparatus.

C is a movable slide, which is guided by guides D D, and provided with a thumb-piece or knob E, whereby it may be moved.

F is a slot in the cover normally covered by the slide C.

G is a toothed rack-bar pivoted to the under side of the slide at H.

I is a band of any suitable flexible material, which is attached to a frame J, which is connected to the slide C and moves with it. The connecting devices may be studs or rivets, which slide through slots made in the cover. The spindle for the thumb-piece E is one of them. The band I is wound around a roller K, and connected to it at L.

M is a spring, which is attached to the bottom of the case at one end and to the roller K at the other end.

O is a pivoted latch attached to the roller K.

P is a lever having a spring Q, which normally throws a padded hammer Q′ upwardly against a strip of paper R, which is wound on a roller S, supported on braces S, and passes upwardly over a stationary table T and thence to a roller U, which is preferably covered with sand-paper or like material to grip and feed the paper, and against which a roller V, provided with rubber bands W W, to generate friction, is pressed by springs Y Y, which bear on the ends of the shaft of the roller.

Z is an ordinary time-movement, which is provided with the usual time-recording stamp and ink-ribbon, now well known as used in conjunction with time-stamps and similar mechanism.

The table T extends laterally from the side of the case a sufficient distance to support the paper R and to afford a space upon which the employés may write their names, as shown in Fig. 1. An opening for this purpose made in the cover is located immediately above this table.

The operation is as follows: The time-movement is continually moving the bands of the time-stamp, the employés are instructed to personally record their own names upon the piece of paper R upon arriving at the shop each morning and noon, as the case may be, and a pencil may be attached to the device in any suitable manner for that purpose. When each person arrives at the works or shop, he lifts the slide C. The upward movement causes the feeding of the paper R by reason of the engagement of the teeth of the rack G in the pinion G′ on the shaft of the roller U, which rotates the roller and moves the paper, as before set forth. Thus a clean space on the paper is exposed opposite the slot in the cover and directly over the table T. The upward movement of the slide also uncovers the slot F, exposing the paper

and at the same time the band I rotates the shaft K, swinging the pivoted latch O past the end of the lever P into the position shown in Fig. 3, and the adjustment is such that the latch passes beyond the end of the lever before the slot F is uncovered. Thus it is impossible for the name of the operator to be written on the paper unless the time-stamp shall be operated. After the name has been written on the paper the knob is released and the spring M drawing back the slide, rotating the shaft K and causing the latch O to trip the lever P. The spring M being stronger than the spring Q, the hammer Q′ is thrown up against the paper R the moment the latch O passes the end of the lever. Thus the exact time when the name was signed to the paper appears opposite the name, and the name itself as written must of course be the autograph of the person who bears it. Thus no substitution of individual is possible. During the downward or return movement of the slide the teeth on the rack-bar G leave the teeth on the pinion G′ in a manner now well understood. The bar may be hung on a slight inclination to secure this result, or a light spring (not shown) may be employed to secure its proper engagement with the pinion. The bind of the friction-roller V against the roller U will prevent it from too easily turning. Each morning, or at such time as desired, the superintendent of the works opens the case and removes the part of the paper containing the record and rearranges the device for the next use.

I desire particularly to call attention to the special location of the friction-generating roller V relative to the roller U—*i. e.*, their axes are so placed that the action of the springs *y y* upon the shafts of the roller V is such that any attempt to move the paper in the wrong direction—as, for instance, by the slight friction of the rack G over the teeth of the pinion G′—will occasion a greatly increased gripping effect upon the paper, whereby the rollers will be partly jammed and their rotation prevented. Thus the paper will be held against movement in the wrong direction.

It will be obvious to those who are skilled in this art that many alterations may be made in the details of construction of my device and still the essential features of my invention be employed. I do not, therefore, limit myself to such details. Also, that my invention may be used for purposes other than recording the time of employés—wherever, in fact, a record is desired of the time when any occurrence takes place—as, for instance, the recording or receiving documents, &c.

I claim—

1. The combination, with a case having a slotted cover, of a slide to cover the slot, a time-stamp, a hammer to make the impression operated by the movement of the slide, and a piece of paper fed by the opening of the slide, substantially as set forth.

2. The combination, with a case having a slotted cover, of a slide to cover the slot, a time-stamp, a hammer to make the impression, actuated by a spring put under tension by the movement of the slide, and a piece of paper automatically advanced every time the slide is operated, substantially as set forth.

3. The combination, with a case having a slotted cover, of a slide to cover the slot, a time-stamp, a hammer to make the impression, and a pivoted latch connected with the slide and engaging with the hammer-lever, substantially as set forth.

4. The combination, with a case having a cover, of a slide to cover the slot, having a latch which engages with a pinion on a paper-feeding roller, a time-stamp, a hammer to make the impression, operated by the movement of the slides, and a table for the support of the paper beneath the slot in the cover, substantially as set forth.

5. The combination, with a case having a slotted cover, of a slide to cover the slot, having a rack which engages with a pinion on the shaft of a feed-roller, and another roller which is pressed against the feed-roller and gives friction to the paper, substantially as set forth.

6. The combination of a paper-moving device actuated from the exterior of the case, a time-stamp actuated by the movement of the paper-moving device, and a slotted cover through which the paper is disclosed, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 25th day of July, A. D. 1890.

SAMUEL HALL.

Witnesses
PHILLIPS ABBOTT,
FREDERICK SMITH.