No. 803,888. PATENTED NOV. 7, 1905.

W. I. FOLLETT.

TIME RECORDER.

APPLICATION FILED APR. 26, 1905.

2 SHEETS—SHEET 1.

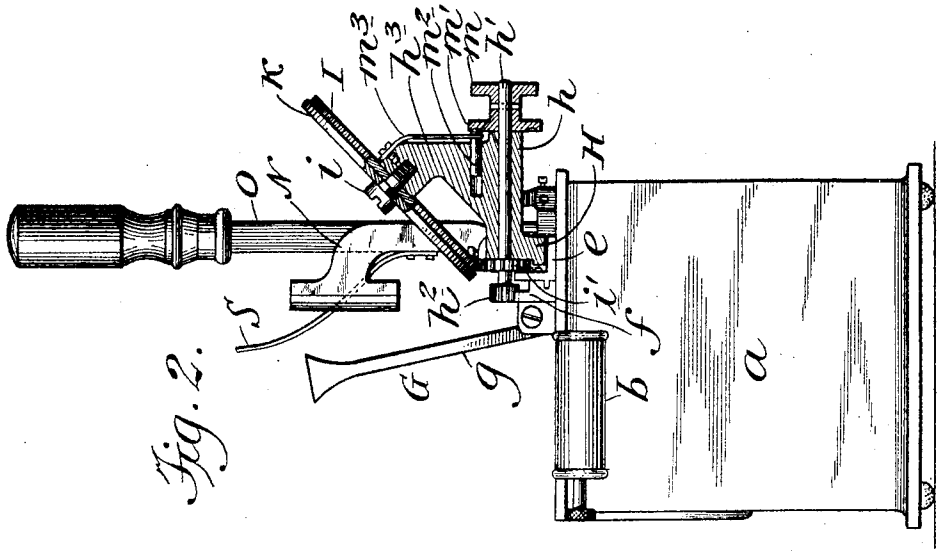


Fig. 2.

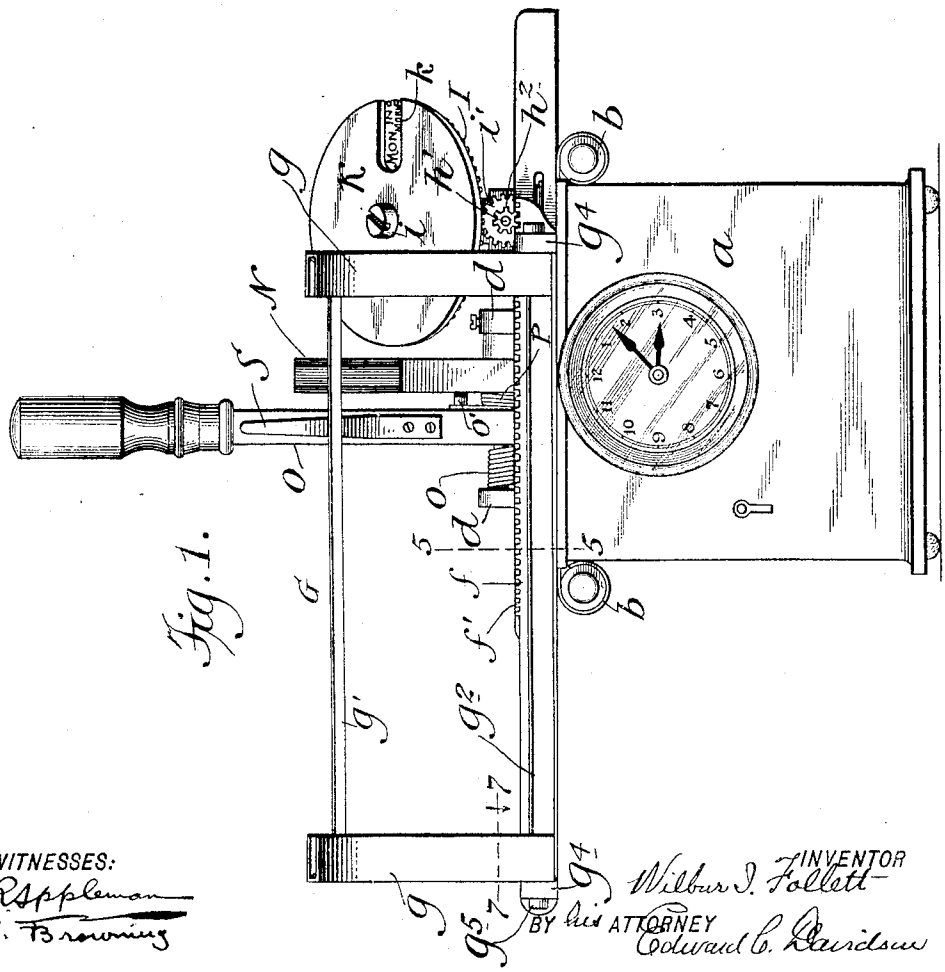


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 8.

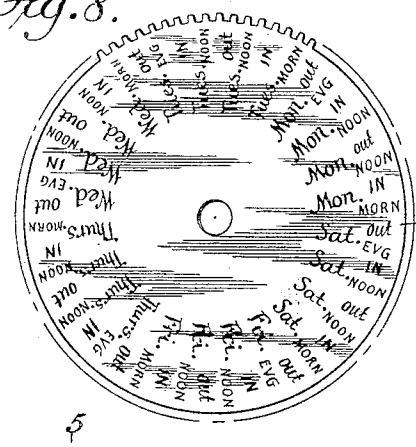


Fig. 3.

Fig. 7.

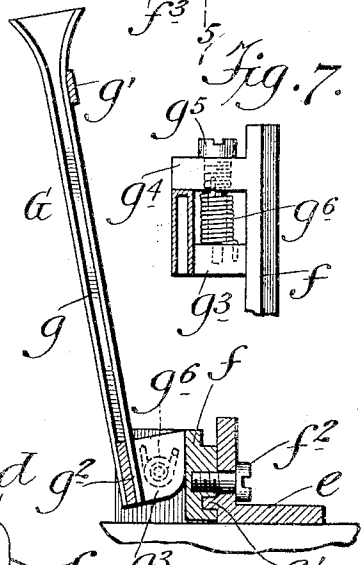


Fig. 4.

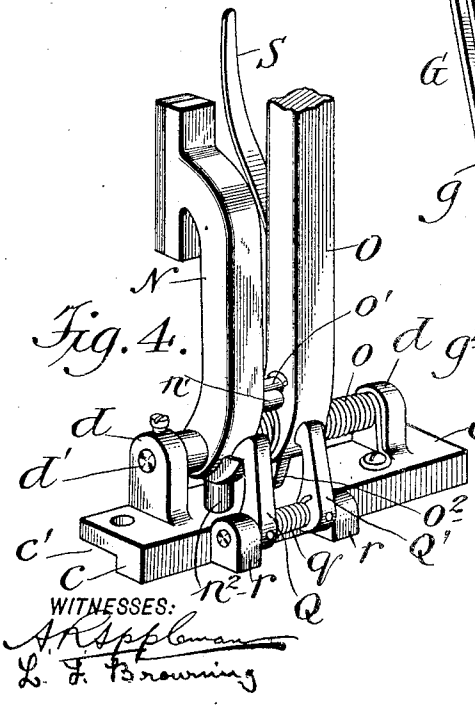
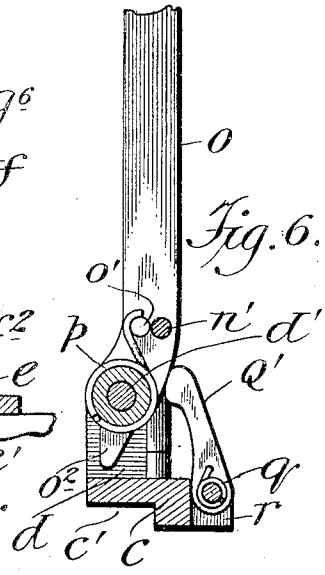


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE.

WILBUR I. FOLLETT, OF NEW YORK, N. Y.

TIME-RECORDER.

No. 803,888. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed April 26, 1905. Serial No. 257,422.

To all whom it may concern:

Be it known that I, WILBUR I. FOLLETT, a citizen of the United States, residing in the borough of Brooklyn, city of New York, State of New York, have invented certain new and useful Improvements in Time-Recorders, of which the following is a specification.

This invention comprises novel features of construction and arrangement hereinafter set forth in detail, conspicuous among which is the provision of a spring-actuated hammer or platen delivering a blow of uniform force and tripped when required to take an impression from the time-printing wheels.

In the drawings, which illustrate an embodiment of the invention which experience has shown to be practical and efficient, but which may be varied by those skilled in the art, Figure 1 is a front elevation; Fig. 2, a side elevation, partly in section; Fig. 3, a detail rear view on an enlarged scale; Fig. 4, a perspective view of some of the parts shown in Fig. 3; Fig. 5, an enlarged detail section on the line 5 5 of Figs. 1 and 3; Fig. 6, a section on the line 6 6 of Fig. 3; Fig. 7, an enlarged detail section on line 7 7 of Fig. 1, and Fig. 8 a plan view of an indicating and registering disk.

The time mechanism and printing-wheels are inclosed in an appropriate casing *a*, having an opening in the top through which the printing-wheels are exposed and across which is disposed a ribbon contained in a suitable ribbon-holder, of which *b b* are the housings or cylinders containing the bobbins or spindles upon which the ribbon is wound. The construction is or may be in all respects the same as disclosed in my United States applications, Serial No. 248,163, filed March 2, 1905, and Serial No. 236,770, filed December 13, 1904, or any suitable and appropriate arrangement may be adapted.

Along the rear of the top of the casing is bolted a casting *c* in upright lugs or posts *d*, on which is mounted a shaft *d'*. The casting is cut away on the front part of its under face, as seen at *c'*, Fig. 4, to receive an angle-plate *e*, which is secured by the same bolts c^2 that attach the castings *c* to the top of the casing. On the front face of the upright part of the angle-piece *e* is a guiding-rib *e'*, fitting in a groove in the rear face of a rack-plate *f*, whose upper edge is appropriately formed as a toothed rack *f'* and which is held in position by a headed screw f^2, working in a slot f^3 in the upright part of the angle-plate *e*.

The card-holder G is a light open rectangular frame comprising sheet-metal end pockets *g* for the cards connected by cross-pieces *g'* g^2, the lower one of which, g^2, has upon its rear face lugs g^3. Adjacent the ends of the rack-plate are forwardly-projecting lugs g^4, and a screw pivot-bolt g^5 passes through each lug g^4 and into the lug g^3 and is surrounded by coiled spring g^6, the reaction of which tends normally to hold the card-holder in upright position, as seen in Figs. 1 and 5, from which, however, it is to be depressed into horizontal position when an impression is to be made upon the card. At one side of the casting *c* and bolted to the horizontal part of the angle-plate *e* is a casting H, formed with an extension, through the horizontal portion *h* of which extends a shaft *h'*, having on its front end a pinion h^2, meshing with the rack *f'*, so that by rotation of the shaft the rack-plate, and with it the card-holder, may be moved either way. Extending upwardly from the part *h* of the bracket is a part h^3, upon the upper end of which a circular peripherally-toothed indicator-plate I is mounted at an angle of about forty-five degrees upon a pivot-bolt *i*, screwing into the end of the casting and serving also to secure over the plate *i* a cover-plate K, having in it a radial slot *k*. The registering or indicating plate I (shown in plan in Fig. 8) has engraved or otherwise displayed upon it in radial lines the days of the week and matter indicating the periods of a day and the "in" and "out" trips of the workmen—for instance, "Tuesday morning in," "Tuesday noon out," "Tuesday noon in," "Tuesday evening out."

The shaft *h'* carries a pinion *i'*, that is located between the front face of the casting H and the rear face of the angle-plate and intermeshes with the teeth of the circular registering or indicating plate I. The relative number of teeth in the plate and pinion is such that for the revolution of the pin through a given arc a printing-line on the time-card carried in the card-holder will be brought into position to receive an impression from the time-printing wheels, obtained as hereinafter described.

The drawings contemplate that a quarter-revolution of the shaft *h'* and pinion *i'* will produce a movement of the card-holder sufficient to carry the card into position to receive in proper position a desired impression from the type-wheels next following that one previously printed.

Of course the time-card may be provided with suitable characters opposite and in line with which the time-printing may be effected and which correspond with the indications upon the registering-dial. Moreover, the radial slot k in cover-plate K is so disposed that when a given reading upon the registering-plate is in position opposite the slot the time-card will be in a corresponding position with reference to the time-printing wheels to receive the desired impression therefrom. Applied to the rear end of the shaft h is a thumb-nut m, having an annular flange m', in the front face of which are four equidistant sockets engaged by a pin m^2, working in a socket in the casting H and normally urged against the front face of the flange by a flat spring m^3. The registering-disk is therefore brought with certainty into proper position, being partially locked by the engagement of the pin with the socket in the front face of the flange m'. This lock, however, may be overcome by applying sufficient force to the thumb-piece to move the card-rack in either direction.

On the shaft d' between the lugs or standards d on the casting c are mounted to loosely rock a platen or hammer N and a handle-bar O. A coiled spring o surrounding the shaft or a spacing-collar thereon and applied to the handle-bar holds it normally in vertical position in which a projection o' on the heel by the handle-bar rests upon a stationary stop on the casting c. Overlapping projections or pins n' and o', attached, respectively, to the hammer and handle-bar, cause the reaction of spring o to return the hammer as well as handle-bar to normal upright position when the handle-bar is released after depression as hereinafter described, the upward movement of the hammer being limited by a stop n^2 on the casting c. A coiled spring P, applied around a loose spacing-collar p, interposed between the handle-bar and hammer, has one end attached to the hammer and the other turned around the pin o' on the handle-bar. The reaction of this spring tends to throw down the hammer, which, however, is held in normal elevated position by a spring-latch Q, pinned to a short shaft having bearings in lugs r r on the rear of the casting c. A latch-tripping arm Q' opposite the rear face of the handle-bar is also pinned to this shaft, and a coiled spring q applied around the shaft tends normally to throw the latch and tripping-arm forward toward the hammer and handle-bar, respectively. On the front of the handle is attached a light arm or leaf-spring S, which when the handle-bar is drawn down strikes the cross-bar g' of the card-holder and carries the holder down into horizontal position for printing. The forward movement of the handle-bar increases the tension of the hammer-spring P; but the hammer is held in its upright position until a projection o^2 on the bottom of the handle-bar beneath the shaft d' strikes the latch-tripping arm Q' and carries the latch Q out of engagement with the hammer, which is then, by the reaction of spring P, thrown down and an impression made upon the card in the holder.

This time-recorder comprises a time-stamp having usual time-dating wheels stationary with reference to a movable card-holder. The card-holder is of proper dimensions to receive an oblong card of sufficient length and having the surface to be printed upon divided into spaces corresponding with the days of the week, and each such space divided for four lines of print corresponding with "Morning in," "Noon out," "Noon in," "Evening out." The range of adjustment of the card-holder with reference to the printing-wheels is such that a time-impression may be printed in four subdivisions of each of the six divisions, representing days, of the card. The registering or indicating disk being correspondingly marked with the six working days of the week and the four subdivisions above recited of each day, the card may be adjusted to receive an impression in twenty-four lines. As illustrated and described, the organization is accomplished by the attachment to the casing of the time-stamp of the card-holder, the means for rocking it and actuating the hammer, and the registering or indicating devices. The organization as a whole fulfils, therefore, all the requirements of high-grade time-recorders, and yet is of great simplicity and cheapness of construction.

I claim as my invention—

1. A card time-recorder comprising the combination of a time-card holder normally standing in an upright position to receive a card and adapted to be rocked to the plane of printing, means for so rocking it and means for making an impression upon the contained card when the holder is depressed.

2. A card time-recorder, comprising printing-wheels, a pivoted card-holder, adapted to be rocked to bring a contained card to the printing-plane, and movable platen for then making an impression upon the card.

3. A card time-recorder comprising the combination of a pivoted time-card holder normally standing in an upright position and adapted to be rocked to the plane of printing, means for so rocking it and a spring-actuated printing-hammer tripped to deliver its blow when the holder is in printing position.

4. A card time-recorder comprising the combination of a time-card holder normally standing in an upright position and adapted to be depressed to the plane of printing, means for so depressing it, a printing-hammer, its actuating-spring, means whereby the tension of the spring is increased as the card-holder is moved to the printing-plane, and means for tripping the hammer.

5. A card time-recorder comprising the combination of a card-holder standing normally in an upright position and adapted to be depressed to the plane of printing, a spring whose reaction returns the card-holder to normal position, a rocking hand-bar having a spring acting to depress the card-holder, a spring whose reaction restores the hand-bar to normal position, a printing-hammer, its actuating-spring, and means whereby on depression of the hand-bar the hammer is tripped when the card-holder is in the printing-plane.

6. A card time-recorder comprising the combination of a card-holder standing normally in an upright position and adapted to be depressed to the plane of printing, a spring whose reaction returns the card-holder to normal position, a rocking hand-bar having a spring acting to depress the card-holder, a spring whose reaction restores the hand-bar to normal position, a printing-hammer, its actuating-spring, means whereby the tension of the hammer-spring is increased as the hand-bar is rocked to depress the card-holder, and means for tripping the hammer when the card-holder is in the printing-plane.

7. A card time-recorder comprising the combination of a card-holder standing normally in an upright position and adapted to be depressed to the plane of printing, a spring whose reaction returns the card-holder to normal position, a rocking hand-bar having a spring acting to depress the card-holder, a spring whose reaction restores the hand-bar to normal position, a printing-hammer, its actuating-spring, means whereby the tension of the hammer-spring is increased as the hand-bar is rocked to depress the card-holder, means for tripping the hammer when the card-holder is in the printing-plane, and means whereby the hand-bar in returning to normal position by the reaction of its spring carries the hammer to normal position.

8. A card time-recorder comprising the combination of a pivoted card-holder, a spring holding it in normal position, means for rocking the holder into printing position, a spring-actuated hammer and means for tripping the hammer when the holder is in printing position.

In testimony whereof I have hereunto subscribed my name.

WILBUR I. FOLLETT.

Witnesses:

M. B. MEEHAN,

PHILIP CARON.