

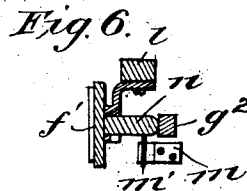
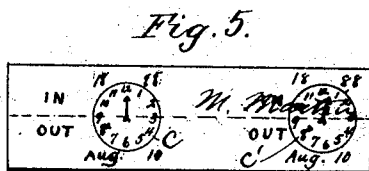
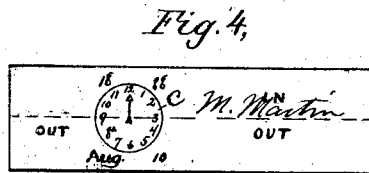
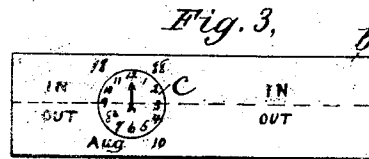
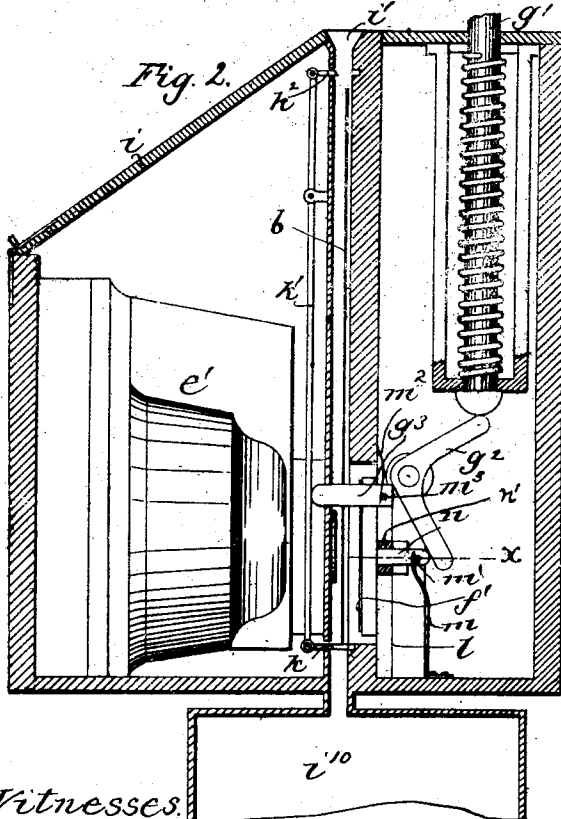
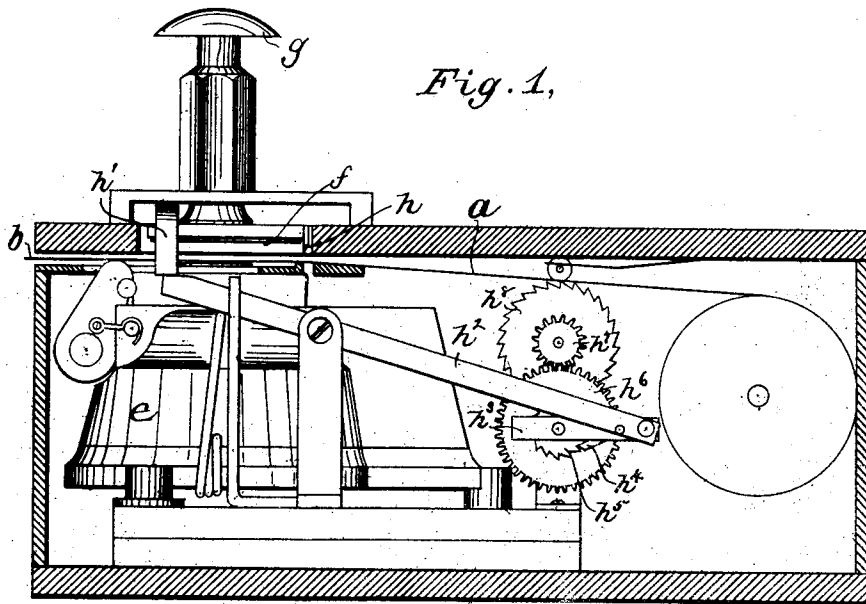
(No Model.)

M. MARTIN.

APPARATUS FOR RECORDING THE TIME OF WORKMEN.

No. 503,430.

Patented Aug. 15, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

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

APPARATUS FOR RECORDING THE TIME OF WORKMEN.

SPECIFICATION forming part of Letters Patent No. 503,430, dated August 15, 1893.

Application filed August 13, 1888. Serial No. 282,509. (No model.)

To all whom it may concern:

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

Like letters on the drawings represent like parts throughout the several views.

This invention relates to an apparatus for producing a permanent record of the time that employes enter and leave an establishment at which they are employed.

In another application, Serial No. 280,368, filed by me July 19, 1888, I have shown and described an apparatus for keeping a record of the time attendance of workmen, consisting mainly of a recording surface on which the person whose attendance is to be recorded affixes his signature at the time of entering and leaving the establishment, and which surface is at the same time imprinted with a stamp which indicates the time at which the signature was written. The operation of the time stamp in such apparatus also feeds the recording strip or surface so that the different signatures and time imprints successively made follow one another on the strip. This mode of operation necessitates that when several persons arrive at the same time, some have to wait while the others are writing their names, and the different records can be made only as rapidly as the several persons can write their names and operate the time stamp.

The apparatus for producing a permanent record of the time in which employes enter and leave an establishment, forming the subject-matter of this invention, consists of certain novel features hereinafter described and particularly pointed out in the claims. Each person is provided with a record piece which is hereinafter called a card, which is printed with the time at which it is delivered to the employe, who then signs his name upon the card, and lastly delivers the said card into the apparatus forming the subject-matter of this application. The card is then printed and after being printed is automatically dropped into a closed receptacle for receiving

it. For certain uses the signing of the name may be dispensed with, as, for example, if there is but one person whose acts are to be timed, as in the case of a watchman, it is sufficient merely to imprint the time at which the record strip was furnished to or obtained by him, and if desired, the time at which it was delivered. As the operation of furnishing and delivering the cards occupies but a moment, there will be but little delay if several persons arrive almost simultaneously, since when each has been provided with a card in turn, they can all be affixing their signatures simultaneously after which the cards can be delivered successively with great rapidity.

The object of the second imprint is to prevent persons arriving at an earlier hour from withdrawing cards for those arriving at a later hour, so that the ones coming later might write their names on cards that have been previously stamped with an earlier hour. Such proceeding would be shown by the second imprint which is made in the act of delivering the card and consequently cannot be made until after the signature is written. If on the other hand, the second imprint were alone depended upon, a person might obtain an additional card on one day and sign the same and hand it to another person, who would arrive on time to deliver on a following day enabling the person who has signed to come at a later hour without detection, but by having the two stamps, one applied in the act of furnishing the card to the signer, and the other in the act of delivering the card by the signer, it is impossible to falsify the record, otherwise than by writing a false signature, which is liable to detection like any other forgery. Such attempts at falsifying may be guarded against further by having the date printed as a part of the time stamp.

An apparatus is herein shown sufficient to indicate the means for imprinting cards in the act of furnishing them to employes, and another apparatus for receiving said cards from the employes after they have signed their names thereto.

In the accompanying drawings,—Figure 1 is a sectional view of an apparatus for fur-

nishing imprinting record pieces or cards upon which signatures are to be written by the workmen. Fig. 2 is a similar view of an apparatus for imprinting the time on a card when the same is delivered into the said apparatus beyond the control of the party who signed it. Figs. 3, 4 and 5 are views of the card showing the condition at successive steps; Fig. 3 representing the impression made in the act of delivering the card to the employé; Fig. 4 representing the impression made when the card has been signed by the employé, and Fig. 5 representing the card as it appears after the last impression. Fig. 6 represents an enlarged sectional plan view.

As shown in Fig. 1, the record strips or cards are cut successively, one at a time, from a continuous strip or web of paper which has the time stamped upon it at which it is delivered to the workman. A card *b* which has received the imprint of the time at which it was delivered, receives the signature of the workman and is dropped into the imprinting apparatus which is provided with a support for holding it in position preparatory to printing. By means of suitable mechanism the imprinting takes place and the support which held the card preparatory to being printed is removed so that after the impression has been made the card drops into a receptacle provided for it.

The devices employed for making the time imprints may be time stamps of usual construction which are indicated at *e*, *e'*, Figs. 1 and 2, a suitable instrument for this purpose being shown, for example, in Letters Patent No. 224,666, dated February 17, 1880, the same having a stationary die representing the figures of a dial of a clock as indicated by the imprints Figs. 3 and 5, and movable dies representing arrow heads or pointers which are operated by a clock work so as to move around the said dial die like the hands of a clock, said dies being caused to make their imprint upon the paper by inking their surface or by an inked ribbon lying over their surface against which the paper is pressed by a platen *f*, *f'*, Figs. 1 and 2, operated by a handle *g* or *g'*. In the instrument shown in Fig. 1 the platen *f* is also provided with a knife *h* that severs the strip *a*, cutting off the portion *b* that constitutes the card in the act of producing the imprint thereon, by the platen *f* and die beneath it. The said platen is also provided with an arm *h'*, that operates a lever *h²* connected with a yoke *h³* provided with a pawl *h⁴*, engaging a ratchet *h⁵*, connected with a train of wheel work *h⁶*, *h⁷*, that operates a feed roll *h⁸*, by which the strip *a* is fed forward in the return movement of the platen *f*, and its handle *g*, after an imprint has been made, thus bringing the end of the strip *a* in position to be imprinted and cut off for the next card. The cards *b* may thus be furnished to the operatives as rapidly as the handle *g* can be operated and each person as soon as the card is obtained will sign

the same, it being possible in this manner for several persons to be signing at the same time. The second imprint may then be produced in the act of delivering the card out of reach of the signer, by the devices shown in Fig. 2, consisting of a case *i* having a guiding or directing chute or chamber with an opening *i'* similar to that in a letter box, into which the card *b* is dropped and supported or arrested, as shown, in proper position to have an imprint applied to it by the time stamp *e'* and its platen *f'* contained within the case *i*. The card *b* may rest when first dropped upon a support or arresting device *k*, which may be so low that the upper end of the card is beyond the operator's reach after it has once been dropped through the opening *i'* into the chute or chamber, and the time stamp is itself preferably arranged to act near the lower end of the card *b*, so that the latter cannot be imprinted and withdrawn from the chute or chamber by the operator. The support or arresting device *k* is attached to the lower end of the long arm of the pivoted lever *k'* which is also provided at its upper extremity with a plate, knife or chopper *k²* and when the lever *k'* is in its normal position a card dropped into the opening *i'* will have its descent into the closed receptacle *i¹⁰* prevented by the support or arresting device *k* which extends across the chute or chamber near its lower end. The office of the plate, knife or chopper *k²* is to prevent anything from being dropped into, held in or withdrawn from the chute or chamber during the operation of stamping.

To the bottom of the case *i* are attached the supporting post *l* and the flat spring *m*. The platen *f'* has an arm *n* which moves in a bearing *n'* supported by the post *l*. A flat spring *m* is secured to the bottom of the casing and extends upwardly and exerts a pressure rearwardly against a pin *m'* on the arm *n*, thereby keeping the platen from contact with the printing devices. A flat spring *m²* bears against a pin *m³* and when pressure is removed, tends to withdraw a plunger *g³* from contact with the lever *k'*, thereby allowing the support *k* to close the bottom of the chute and thereby hold the card in position for printing.

The apparatus operates as follows:—A card having been dropped into the chute or chamber through the opening *i*, descends to and rests upon the support or arresting device *k*. Then by a stamping blow given to the handle *g'* the elbow lever *g²* is turned on the pivot *o*, and as it moves pushes a rod or plunger *g³* loosely journaled in the walls of the chute or chamber against the lever *k'*, thus removing the support *k* from out of the path of the card. At the same time that the lever *k'* is being moved from its normal position by the depression of the handle *g'*, the lever *g³* also engages with the arm or projection of the platen *f'* and forcing it forward carries the card with it into contact with the printing dies of the time stamp just after the support or arresting device *k* is freed from the card by the move-

ment of the lever k' and before it has time to fall an appreciable distance, the gripping of the card between the platen f' and the printing dies being practically coincident with the removal of the support or arresting device k . The handle g' being now released, its coiled spring carries it back to its normal place and the elbow lever g^2 and the platen f' are also returned to their normal positions by the retractive force of the flat spring m . The respective weights of the lever k' , the rod or plunger g^3 and the card are so proportioned that when the platen is retracted the lever k' will not move quickly enough to interfere with the descent of the card into the closed receptacle i^{10} . The rod or plunger g^3 is moved in one direction by the movement of the elbow lever g^2 and in the opposite direction by the movement of the lever k' , and it is journaled in the walls of the chute or chamber at a point to one side of the platen and out of the path of the card.

For convenience, the cards may be ruled as shown and the space above may be marked "In" and the space below marked "Out" to receive the signatures of the persons when entering and leaving respectively, and it is also a matter of convenience though not essential, that the two time imprints should be different in appearance, being for example in different colored inks. It is also desirable that the two imprints should be made in such positions that they will not be superimposed. The fact that the first imprint can only be made in the act of furnishing the card, and the second only in the act of delivering or after the card is delivered beyond the reach of the operator, necessitates that the signature must be made in the interval between the two times indicated, but if the first stamp were not made before or in the act of furnishing the card the signature might be written and both stamps subsequently applied by another person and if they were not applied after or in the act of delivering the card both stamps might be applied by a person other than the signer, and the card held back and signed and delivered at a time later than that indicated by the time imprints.

The method of delivering a series of cards in a predetermined order or sequence, individualizing the cards by the name of the employé and thereafter imprinting on the card the time of its delivery by the employé, although described in this application is not claimed herein, but has been made the subject matter of another application, Serial No. 374,445, filed December 12, 1890, and is a division of this application.

I do not limit myself to the exact construction shown as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature and set forth the construction of my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an imprinting machine printing dies, a cooperating imprinting device inclosed within a case, a closed receptacle to receive the card after the imprinting has taken place, and a guiding chute or chamber extending from the outside of the said case and through the interior thereof to the said closed receptacle, in combination with a movable supporting or arresting device located in the said chute or chamber and normally acting to prevent the passage of the card into the said closed receptacle, substantially as set forth.

2. In an imprinting device a stamp, a platen inclosed within a case which is provided with an opening for the introduction of the cards to be imprinted, a closed receptacle connected to said case for receiving the cards after the imprinting has taken place, and a chute or chamber leading from the said opening between the said stamp and platen into the said receptacle, and a movable supporting or arresting device normally standing in the path of the card for supporting it in an imprinting position, and for preventing the passage of the card into the said closed receptacle until the said supporting or arresting device has been moved out of its normal position, in combination with mechanism connected to the said platen and said arresting device adapted to actuate the platen to cause an imprint on the card, and to remove the arresting device, substantially as set forth.

3. In an imprinting machine a receptacle for receiving cards, a stamp, a platen, a movable arresting device for holding a card in position preparatory to receiving an imprint inclosed in a case, and a plate for closing the opening in the said case through which the cards are introduced, a pivoted lever to which the arresting device and the said plate are connected, in combination with mechanism adapted to actuate the platen to cause an imprint on the card, and to actuate the said lever whereby the arresting device is removed and the opening into the case closed by the said plate, substantially as set forth.

4. In a recording apparatus a receptacle for receiving cards, a chute or chamber for guiding or conducting a card into the said receptacle, a movable supporting or arresting device near the lower end of the said chute or chamber for arresting the descent of the card into the said receptacle and supporting it in position preparatory to receiving an imprint, a pivoted lever to which the said arresting device is connected, and an imprinting device in combination with mechanism adapted to move the card and the imprinting device into contact and to remove the said supporting or arresting device, substantially as set forth.

5. In a recording apparatus a receptacle for receiving cards, a chute for the introduction of a card into the said receptacle, a stamp, a platen, a movable arresting device near the lower end of the said chute for holding a card between the platen and the stamp prepara-

tory to receiving an imprint, a plate near the upper end of said chute for closing the opening therein, a pivoted lever to which the arresting device and the said plate are pivotally connected, in combination with mechanism adapted to actuate the platen to cause an imprint on the card, to remove the arresting device, and to close the opening in the chute, substantially as set forth.

6. In a recording apparatus, a receptacle for receiving cards, a chute or chamber for the introduction of a card into the said receptacle, a movable arresting device in said chute or chamber, normally acting to prevent the descent of the card into the said receptacle, stationary printing dies, and a movable cooperating imprinting device near the lower end of the said chute, in combination with mechanism for moving the said arresting device from its normal position, and impressing the falling card between the said imprinting device and the said stationary printing dies, substantially as set forth.

7. In a recording apparatus, printing devices inclosed in a case consisting of stationary printing dies, and a movable platen cooperating with the said dies and adapted to be operated from the outside of the said case, a chute or chamber within the said case, having an opening outwardly through the said case, adapted to receive a card and to guide it between the said stationary dies and the said platen into position to receive an imprint, in combination with a movable arresting device controlled from the outside of the said case and normally acting to prevent the passage of the said card or ticket through the said chute, substantially as set forth.

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.