No. 660,250. Patented Oct. 23, 1900.

P. G. GIROUD.

WORKMAN'S TIME RECORDER.

(Application filed Nov. 13, 1899. Renewed Sept. 6, 1900.)

(No Model.) 2 Sheets—Sheet 1.

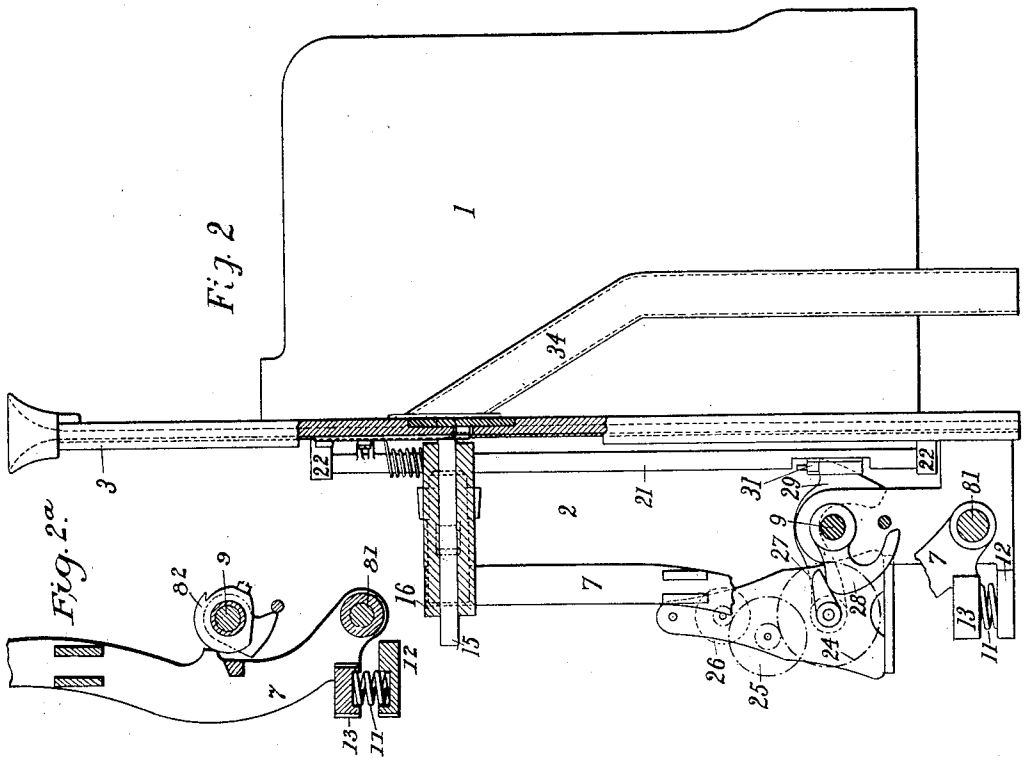


Fig. 2.

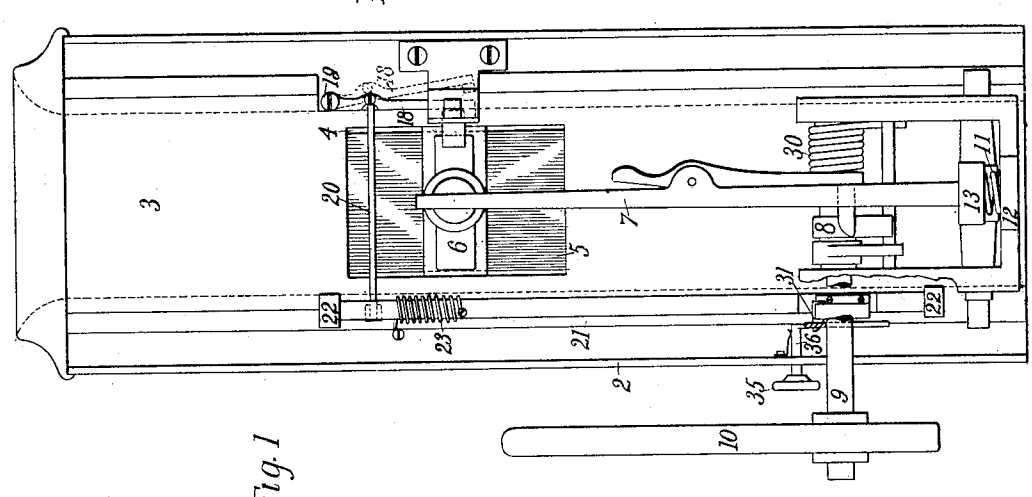


Fig. 1.

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

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Fig. 6

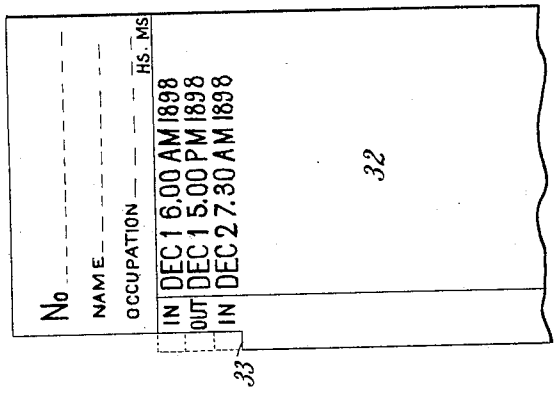


Fig. 3

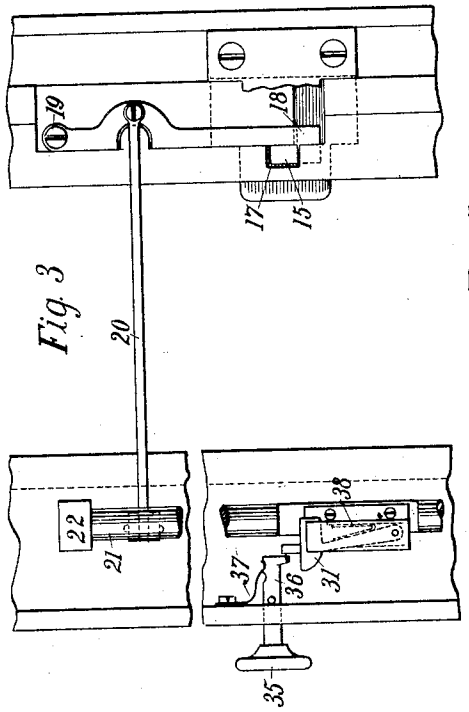


Fig. 5

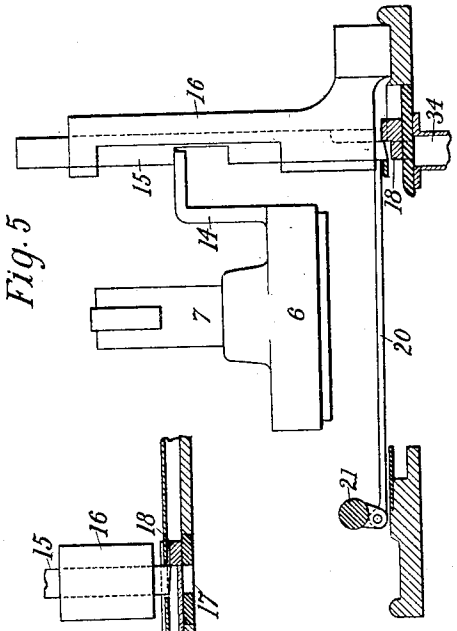
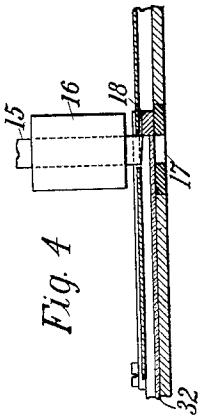


Fig. 4



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UNITED STATES PATENT OFFICE.

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WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 660,250, dated October 23, 1900.

Application filed November 13, 1899. Renewed September 6, 1900. Serial No. 29,241. (No model.)

To all whom it may concern:

Be it known that I, PETER G. GIROUD, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Workmen's Time-Recorders, of which the following is a specification.

My invention relates to an improvement in workmen's time-recorders designed to record upon a slip or card inserted in the apparatus by the workman the time of passing to and from his work. It is more specifically designed as an improvement upon the invention set forth in United States Letters Patent granted to me on April 26, 1898, No. 602,845, and it contemplates particularly improvements in the mechanism for adjusting and holding the card or slip in the proper position for receiving the impression from the type-wheels, in mechanism for properly cutting the edge of the card to prepare it for its next adjustment, in the mechanism for permitting the card to pass out of the machine after it has been printed, and in mechanism which may be employed to prevent the card from passing out of the machine and to hold it until it is withdrawn from the conduit in which it was inserted.

In my present invention I contemplate the use of a card which at each impression will receive upon one edge a cut or nick which will determine the position the card is to assume for its next impression. I dispense with manual adjustment of the various parts of the machine preparatory to printing the card properly, and hence the detent or catch for supporting the card while it is printed is always at the same height.

In the drawings, Figure 1 is a front elevation of the recorder, the front casing being removed to show the improvements to which my present invention is particularly directed. Fig. 2 is a side elevation, partly in section, of Fig. 1. Fig. 2^a is a detail of the platen-operating mechanism. Fig. 3 is a detail, on somewhat larger scale, of the mechanism for holding and releasing the slip or card. Fig. 4 is a detail of the platen-plunger and its attached and related parts. Fig. 5 is a detail showing the position of the parts when the card is about to be printed and cut. Fig. 6 represents one of the cards or slips upon which the record is printed.

The machine, which as a whole is more particularly described in the prior patent referred to above, is composed of two main parts 1 and 2. The first of these comprises a casing which contains the time and motor trains of gearing which operate a series of type-wheels for printing the minute, hour, and day of the month and year. The part marked 2 comprises a casing (removed so that the internal mechanism may be seen) which contains means for holding the record-slip in proper position with reference to the type-wheels, the conduit 3 for receiving the record-slip, and the mechanism for printing and cutting the slip and for releasing it to permit it to be withdrawn or to drop out of the machine.

As will be seen in Fig. 1, an opening 4 left in the wall between parts 2 and 3 exposes the inking-ribbon 5, so that the card or slip may pass between the ribbon and the platen 6, which presses it at the proper time against the type-wheels, which are situated behind the ribbon.

The platen 6 is mounted upon a substantially vertical arm 7, pivoted at 81. The operating mechanism is arranged, as shown in my former patent, so that by throwing the operating-lever 10 (situated on the outside of the section 2 of the machine) forward to its full extent the arm 7, carrying the platen 6, is retracted by a cam 8, which is mounted upon shaft 9, until it is released, when it is suddenly thrown forward and pressed against the ribbon and type-wheels by the stress of spring 11, which is mounted upon a seat 12 and below the heel 13 of the arm 7. The arm 7 carries at its outer end a lateral projection 14, which is arranged in the path of movement of a die or punch 15, mounted so as to slide in a support 16. As the arm 7 is advanced the projection 14 drives the die 15 forward to register with a die-plate 17, situated just above the detent or stop 18. The retraction of the arm 7 similarly withdraws die 15. This detent 18 consists of a depending arm pivotally mounted at 19 and adapted to be swung back and forward by the horizontal arm 20, which is pivoted to the rod 21, so that as the latter rocks in its bearings 22

22 the detent 18 is pushed from its normal position to that shown in dotted lines in Fig. 1. A spring 23, coiled about rod 21, tends to rock it back to its normal position and with it the gate 18.

Mounted near the lower part of section 2 of my machine is a clockwork which consists in the present instance of three intermeshing wheels and pinions 24, 25, and 26, Fig. 2, of ordinary construction, and an escapement. (Not shown.) Upon the arbor of the lowest wheel 24 is mounted a tappet 27 in position to be engaged by a cam 28, which is mounted upon shaft 9. These parts are so arranged that when shaft 9 is rocked by pulling the operating-lever 10 forward the cam 28 will engage the tappet 27 and rock the arbor of gear 24 rearwardly, so as to "wind up" the clock-movement or compress its spring. As this takes place a cam-headed arm 29, which is also mounted upon arbor of wheel 24, will be raised. When operating-lever 10 is permitted to spring back under the tension of spring 30 upon shaft 9, the clock-movement will reverse its direction of movement, being driven by its spring, which is preferably a coiled spring seated upon the arbor of wheel 24, and will slowly return the cam-headed arm 29, which will contact with a dog 31 upon shaft 22, thereby rocking it and pushing arm 20, by which the gate 18 is shifted to the right, Fig. 3. As soon as the head of arm 29 passes the dog 31 the shaft 22 rocks back, carrying gate 18 to its normal position.

It will be observed that at a single forward movement of lever 10 the arm 7 and platen 6 are retracted, released, and thrown, thereby both printing the slip and operating the cutting-die 15, and at the same time the clock mechanism 24 25 26 is wound up, while at the release of lever 10 arm 7 is thrown back to its normal position and (as shaft 9 moves back under stress of spring 30) the gate 18 is thrown to the left and returned to its normal position.

The operation of the device, so far as it involves my present invention, is as follows: A card, such as 32, Fig. 6, is inserted in the conduit 3, with the upper end down and the face or side to be printed toward the ribbon 5. The card falls until its cut edge 33 is caught by the lower or hooked end of detent 18. Then the workman or operator throws lever 10 forward, whereby the arm 7 is retracted to its full extent and released. It then flies forward under stress of spring 11, carrying with it the plunger 6 against the card, so as to force it into contact with the type-wheels. At the same time the die 15 (see Figs. 4 and 5) is operated by the arm 14, carried by the plunger 6, and it cuts a nick in the edge of the card 32 just above where it contacts with detent 18. (See Fig. 4 and dotted lines to the left of Fig. 6.) Immediately upon the release of the lever 10 shaft 9 is rocked back by spring 30, and it pushes back arm 7 to its normal position by means of a cam 82, while the clock-movement 24 25 26, being free to move toward the right, carries with it arm 29, which contacts with the dog 31 upon rock-shaft 21, so as to rock it from left to right, thus pushing gate 18 to the right for a sufficient time to permit the card to drop down through conduit 3 and out of the machine. As soon as the cam or arm 29 passes dog 31 the spring 22 will rock it back to its normal position and close detent 18. It will be observed, Fig. 6, that the cut 33 made by the die 15 is opposite to the line of printing which has just been made. The shoulder left by this cut will abut against the detent 18 at the next insertion of the card. As it is presented each time the workman goes to and from his work, it is only necessary for the card to be supplied with the words "In" and "Out," alternately, in addition to the marks which identify its owner. The sum of the periods between the successive times marked will give the amount of time to be credited to the workman. The bits of card which are cut out by the die fall into a passage 34, through which they go into a suitable receptacle.

It may be desirable to remove the card from the upper end of conduit 3 after printing instead of having it fall through it. To this end I provide means which will render the gate-opening mechanism inoperative, when desired, thus leaving the card in substantially the position in which it was when printed, being supported by stop or gate 18. This means may consist of a stud or button 35 upon the outside of the machine, which is mounted upon a movable arm 36, which in turn is arranged to contact with the dog 31, which is pivoted upon the rock-shaft 21, Fig. 3. When the button is pressed inwardly, it pushes the dog out of the line of movement of the cam-arm, a spring 37 being provided to hold the button in either its inner or its outer position. When the dog 31 is thus pushed out of the line of travel of cam 29, the latter moves past the rock-shaft 21 without moving it. Consequently the clock-movement fails to open the detent 18, and it then holds the card 32 until it is withdrawn from the upper end of conduit 3. The dog 31 may be provided with a spring 38, (dotted lines, Fig. 3,) tending to restore it to its normal position.

I do not intend to limit myself in any way to the precise details of construction or arrangement of parts shown.

What I claim is—

1. In a time-recorder, the combination of a conduit for the card or slip, a movable detent for retaining the card in position to be printed, and means for simultaneously printing the card and cutting its edge, substantially as and for the purposes described.

2. A stop or detent for holding the card in a time-recorder, having a projection adapted to engage with a cut or nick in the edge of the card, in combination with means for operatively connecting said stop or detent with the

actuating device of the recorder, substantially as described.

3. In a time-recorder the combination of a card notched or cut upon one edge, a detent adapted to engage with said notch or cut, and means for automatically releasing said detent, said means being actuated by the reverse movement of the actuating-shaft of the mechanism, substantially as described.

4. In a time-recorder of the character specified, the combination of a platen operatively connected to the operating-shaft of the mechanism, a cutting-die operatively connected to the platen, a detent situated immediately below the line of the cutting-die, and means for automatically releasing the detent after the stroke of the platen, substantially as and for the purposes described.

5. In a time-recorder, the combination of a conduit for the card or slip, a detent for retaining the card in position to be printed, and means for simultaneously printing the card and cutting its edge, substantially as and for the purposes described.

6. In a time-recorder, the combination of a conduit for the card or slip, a stop for retaining the card in position to be printed, means normally operated by the reverse stroke of the actuating-shaft of the machine for automatically releasing the card, and means for rendering the stop-releasing mechanism inoperative, substantially as and for the purposes described.

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Witnesses:
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