No. 617,410. Patented Jan. 10, 1899.

W. WHITEHEAD.

APPARATUS FOR RECORDING AND CHECKING WORKMEN'S TIME.

(Application filed Dec. 29, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 4.

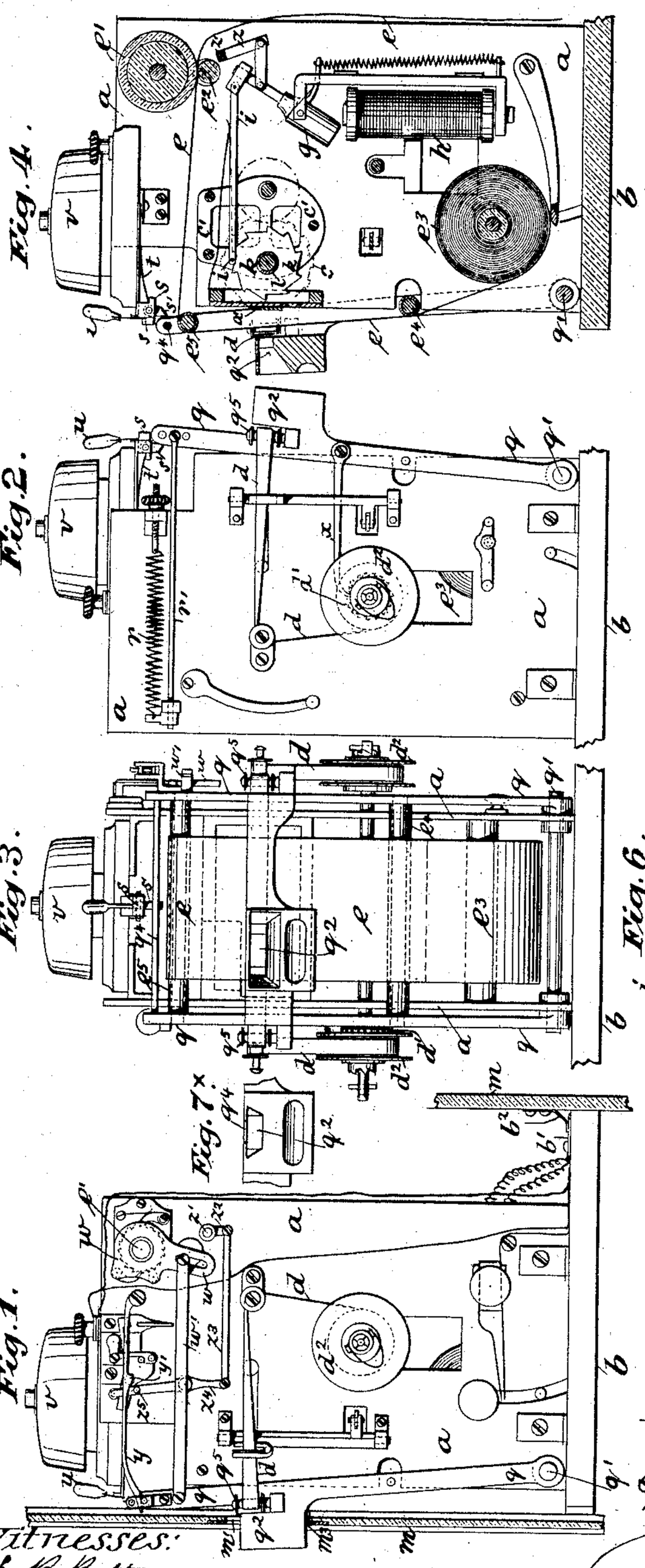


Fig. 9.

Fig. 2.

Fig. 8.

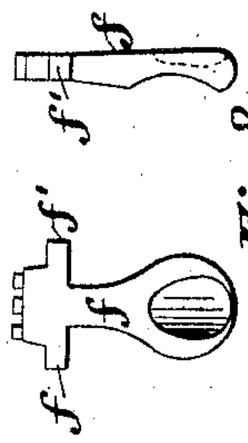


Fig. 3.

Fig. 6.

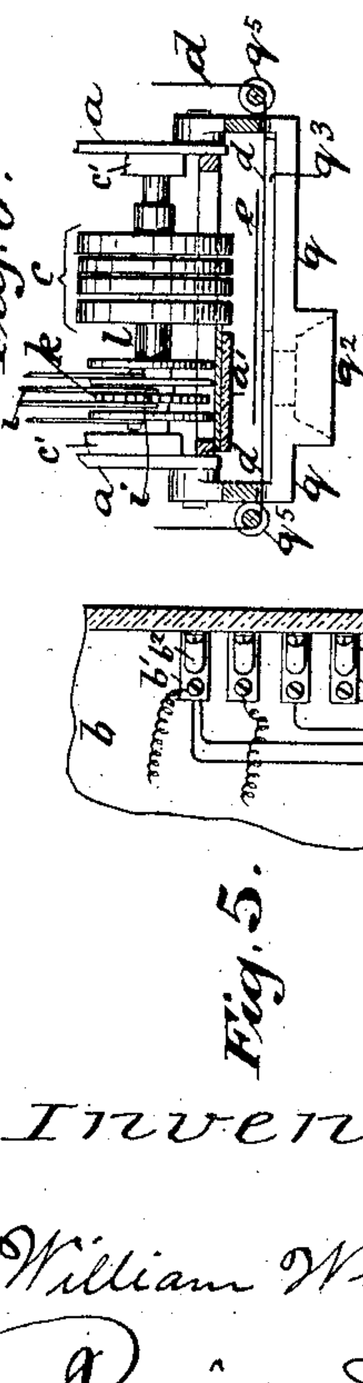


Fig. 7.

Fig. 7×

Fig. 1.

Fig. 5.

Witnesses:
E. B. Bolton
A. D. Minor

Inventor:
William Whitehead
By Richards & R
his Attorneys.

No. 617,410. Patented Jan. 10, 1899.

W. WHITEHEAD.

APPARATUS FOR RECORDING AND CHECKING WORKMEN'S TIME.

(Application filed Dec. 29, 1897.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 11.

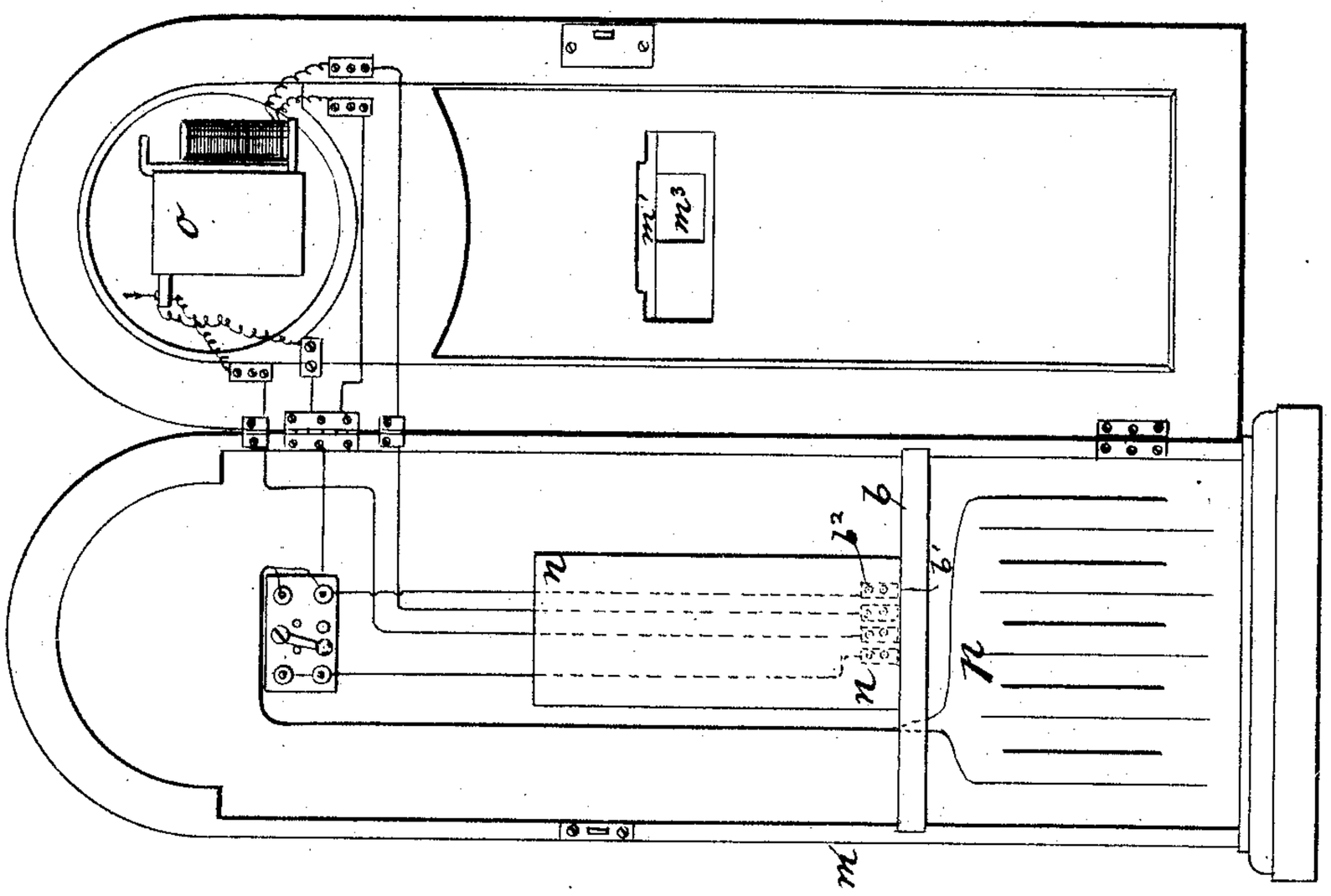
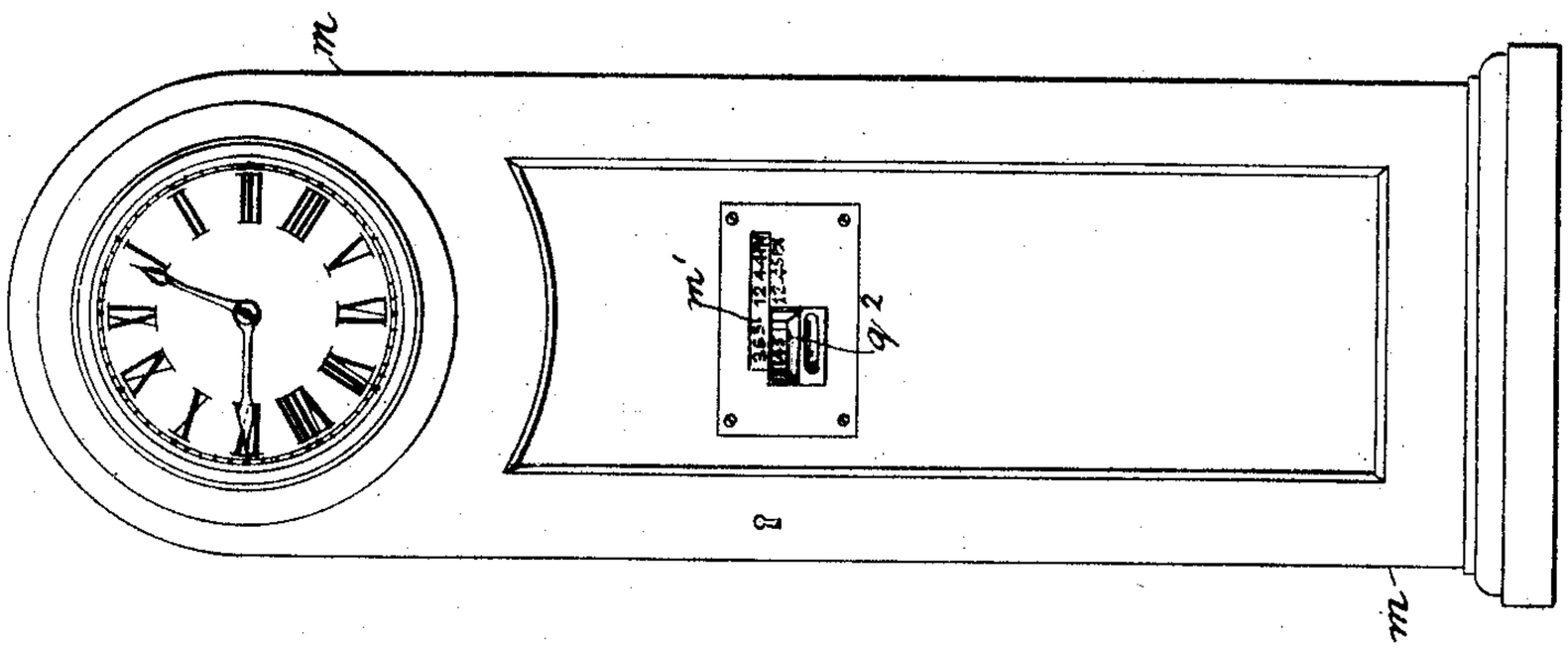


Fig. 10.



Witnesses:
E. R. Bolton
O. D. Munn

Inventor
William Whitehead
By Dewey & Co.
his Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM WHITEHEAD, OF MANCHESTER, ENGLAND.

APPARATUS FOR RECORDING AND CHECKING WORKMEN'S TIME.

SPECIFICATION forming part of Letters Patent No. 617,410, dated January 10, 1899.

Application filed December 29, 1897. Serial No. 664,314. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WHITEHEAD, a subject of the Queen of Great Britain, residing at Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Apparatus for Recording and Checking Workmen's Time and for other Similar Purposes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in that type of apparatus for recording and checking workmen's time and for other similar purposes wherein the time the workman enters or leaves the works is stamped or impressed upon a recording-strip, the object being to provide means whereby the number of the workman and the said time are recorded on the said strip in one action, and thus the use of the apparatus simplified and expediated. I attain these objects by the mechanism illustrated in the accompanying two sheets of drawings, in which—

Figures 1 and 2, Sheet I, are side views. Fig. 3 is a front view, and Fig. 4 a vertical section, of my improved apparatus for recording and checking workmen's time and for other similar purposes shown removed from the casing which contains it and the clock that actuates the stamp type-wheels. Fig. 5 is a detached plan of Fig. 1; Figs. 6 and 7, of Fig. 3; Fig. 7×, a front view of Fig. 7. Fig. 8 shows a side, end, and edge view of the stamp carried by workmen; and Fig. 9 is a side view and plan of a modification in the construction of the magnet and armature employed in my improved recording and checking apparatus. Figs. 10 and 11, Sheet II, are front views of the casing in which the recording and checking apparatus and clock working the stamp type-wheels are fixed, Fig. 10 showing the casing closed and Fig. 11 open.

Similar letters refer to similar parts throughout the several views.

Referring to Sheet I, *a* is the main frame of my improved recording and checking apparatus; *b*, the shelf upon which it is mounted. *c* are the stamp type-wheels. *d* is the inking-ribbon; *e*, the recording-strip; *f*, the stamp carried by the workman. *g* is the armature, and *h* its magnet. *i* is the pawl and *k* the ratchet-wheel by which the stamp type-wheels *c* are intermittently rotated, the pawl *i* being attached to the armature *g* and the ratchet-wheel *k* secured upon the sleeve *l*, upon which the stamp type-wheels *c* revolve.

Referring to Sheet II, *m* is the casing with my improved recording and checking apparatus *n* in position therein, and *o* the clock from which the stamp type-wheels *c* are actuated and which in the present instance is worked electrically from the battery *p* in the casing *m*, all of which are shown diagrammatically.

In carrying out my invention and referring to the figures generally I preferably employ a time-stamp type-wheel mechanism such as described in specification of Letters Patent granted to me, No. 550,856, dated the 3d day of December, 1895, the frame *c'*, carrying the type-wheels *c* and their locking device, being stationary in this case—*i. e.*, secured to the sides of the main frame *a*. In connection with the periphery of the stamp type-wheels *c* I employ a lever-like frame *q*, the upper end of which is placed under the influence of a spring *r*, which has a tendency of retaining the lever-like frame in its outer position, (shown in the drawings,) one end of the said spring being attached to the main frame *a*, (see Fig. 2,) and the other by a rod *r'* to the lever-like frame *q*. The latter has its fulcrum at *q'* on the main frame *a*, and in front is formed with a funnel-shaped mouth q^2, adapted to receive the stamp *f* with the workman's number upon it. This stamp is carried by the workman, and is inserted into the said mouth and thrust forward by him, together with the lever-like frame *q*, which action causes his number to be printed upon the front of the recording-strip *e* and at the same time brings the back of the recording-strip against the stamp type-wheels *c*, and thus prints both number and time in one line simultaneously. At the back of the mouth q^2 is fixed to the frame *a* a platen *a'*, over which the recording-strip *e* and across the latter the inking-ribbon *d* pass, the workman's stamp being pressed upon the inking-ribbon and thus the number thereon printed upon the recording-strip from the front, while the time is impressed or embossed by the type-wheels upon the front of the recording-strip

from the back, another platen q^3 being attached to the lever-like frame q at the side of the mouth q^2. The workman's stamp f, Fig. 8, is formed at each end with a projection f', which serve to guide the stamp and also to bear its thrust when inserted into and pushed against the bottom of the mouth q^2. In connection with the upper end of the lever-like frame q a lever s, having a loose end s' and under the influence of a spring t, is arranged. This lever carries a bell-tongue u, adapted to strike the bell v each time the said frame q is depressed or pushed forward to the required extent by the workman's stamp and its upper end q^4 brought into contact with the loose end s'.

The recording-strip-feeding and the inking-ribbon mechanisms are both actuated by suitable connections from the lever-like frame q, the recording-strip e being moved so that its slack is taken up by the feed-roller e'; but when the said frame is caused to recede by its spring r the strip e is held tight by the feed-roller e' e^2, and by the frame q draw off the supply-roll e^3, whereby the number and time stamped onto the strip e is caused to appear above the mouth q^2 of the frame q in front of an opening m' in the casing in sight of the workman, while the blank part of the strip is brought opposite the stamp-mouth q^2, another opening m^3 being also formed in the casing m for the stamp-mouth q^2 to project through.

The recording-strip e runs from the supply-roll e^3 over two guide-rollers e^4 and e^5, mounted in the lever-like frame q, the roller e^5 serving in the meantime to draw the strip off the supply-roll e^3 as required on the return movement of the frame q.

In the present instance the pawl-lever w, which rotates the recording-strip feed-roller e', is actuated from the lever-like frame q by means of the rod w', connected thereto, (see Figs. 1 and 4,) and the ratchet-wheel d', by which the inking-ribbon spools d^2 are rotated, by means of the pawl x, pivoted to the lever-like frame q. (See Figs. 2 and 3.) The lever-like frame q is furnished with a pulley q^5 at each side, over which the inking-ribbon e runs to and from the spools d^2.

When working the stamping apparatus electrically, as in the present instance, I preferably employ a swinging armature g in conjunction with a lever y, which by suitable connections locks the same in position upon the magnet h while the stamp is in use similar as described in the specification of my patent hereinbefore referred to.

In the present instance the upper end of the armature g is linked to an arm z, formed on a shaft z', one end of which projects through the frame a (see Fig. 1) and has secured to it a small lever z^2, which by means of a rod z^3 is connected to the lower end of a double-armed lever z^4, the upper end of which is furnished with a pin z^5, which engages behind the projection y' on the lever y when the armature is attracted, which lever is then locked in position while the stamp is in use by the upper end of the frame q pressing upon the free end thereof.

Instead of inserting the workman's stamp f from the front into the mouth q^2 the latter may be partially closed in front and its upper wall formed with an opening q^4, (see Fig. 7,) which will admit of inserting the stamp into the mouth q^2 from the top.

According to a modification in the construction of the swinging armature g and magnet h, the pole h' of the magnet h may be longer than usual and the lower end of the armature g recessed to partially encircle the pole h', whereby the said magnet and armature are rendered more reliable.

In order to be able to readily remove the recording and checking apparatus described from its casing m, the wires running from the battery p to the stamp-magnet g are broken and their ends attached to brass blades b' b^2, (see Figs. 1 and 5,) fixed, respectively, to the shelf b, upon which the apparatus is mounted, and to the back of the casing m, which blades when the apparatus is slid into place come into contact with each other, and thus complete the wire circuit through the apparatus.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In apparatus for recording and checking workmen's time and for other similar purposes, in combination with time-stamp type-wheels actuated by a clock and adapted to print against an intermittently-moved recording-strip, a frame q, having a stamp-aperture q^2 and platen q^3 at its side, the said frame being adapted to be moved inward and to return automatically and the said strip passing between the said platen and a fixed platen a' employed opposite the said aperture, all substantially as and for the purpose set forth.

2. In combination with the frame q and the type-wheels c the stamp f formed with the number of the workman and adapted to be pressed by him into the aperture q^2 whereby the said frame is moved against the strip e and the latter against the said type-wheels and the workman's number and time are recorded upon a strip e simultaneously in one line, all substantially as set forth.

3. In combination, the case, the type-wheels, the supply and feed rollers, the swinging frame, and guide-rollers for the strip carried by said swinging frame, said frame having an opening for the insertion of a stamp therein whereby the workman's number and the time are recorded upon a strip and the strip fed by the movement of the swinging frame, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM WHITEHEAD.

Witnesses:
ALFRED BOSSHARDT,
STANLEY V. BRAMALL.