

G. W. HEENE.
WORKMAN'S TIME RECORDER.

No. 491,556.

Patented Feb. 14, 1893.

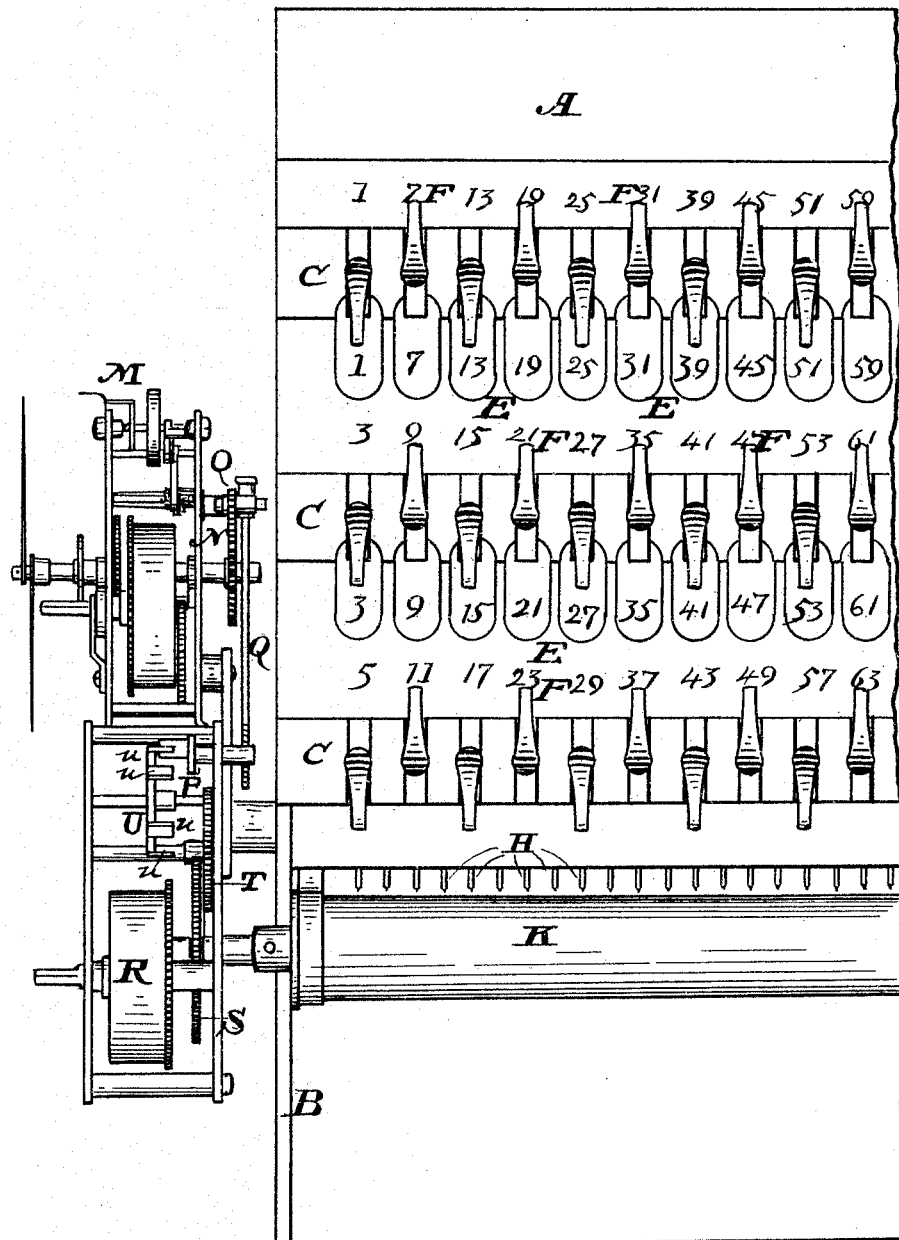


Fig. 1. *Inventor.*

Witnesses

C. J. Quittner
W. Buffington

George W. Heene,
By Geo. W. Tibbitts Atty.

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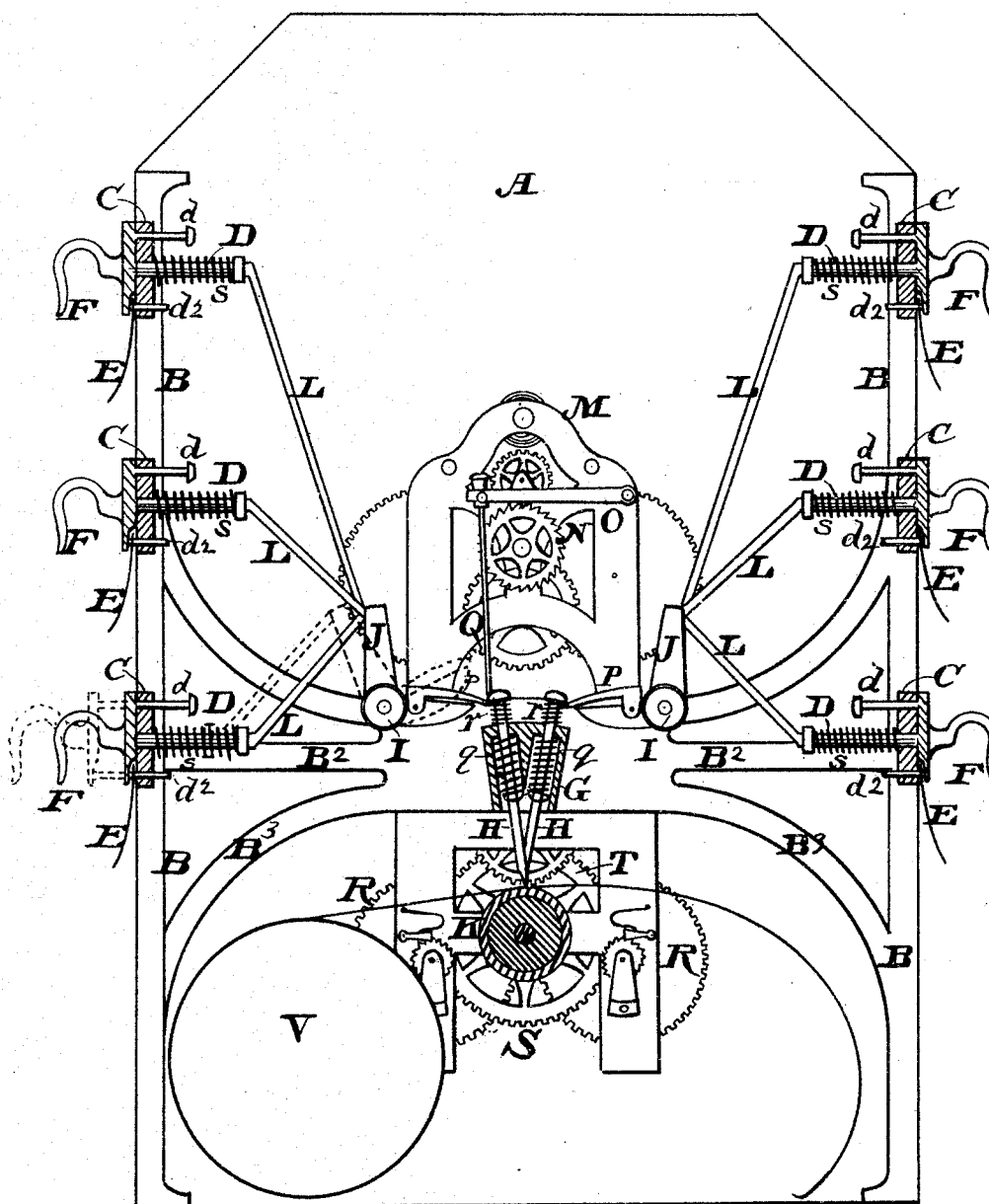


Fig. 2.

Witnesses

C. M. Buttner
W. C. Buffington

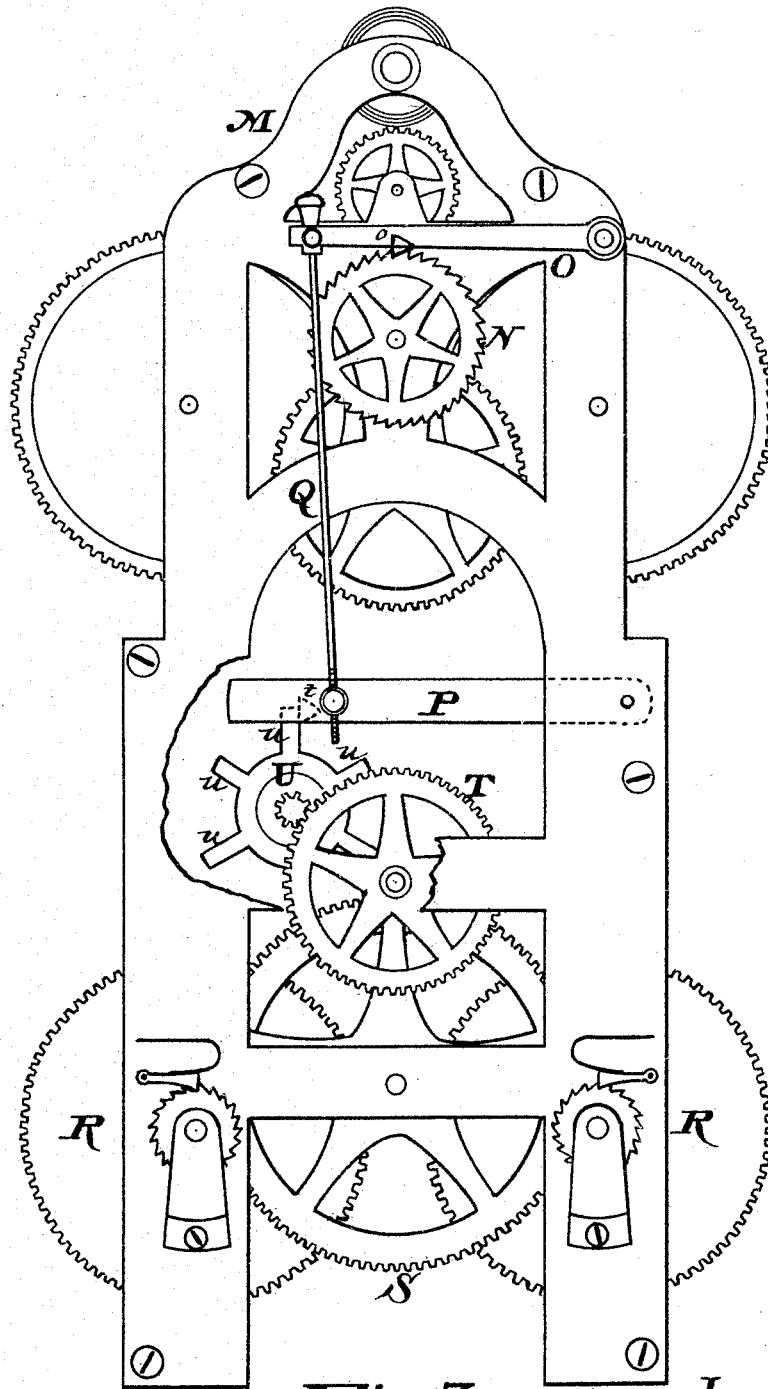
Inventor

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Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE W. HEENE, OF CLEVELAND, OHIO.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 491,556, dated February 14, 1893.

Application filed February 9, 1892. Serial No. 420,928. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HEENE, a citizen of the United States, residing at Cleveland, Cuyahoga county, and State of Ohio, have invented certain new and useful Improvements in Workmen's Time-Recorders, of which the following is a specification.

This invention relates to a device for self recording the time of entry and departure of workmen or employes in factories &c.

The invention consists in the novel construction and combinations of a recording mechanism, recording upon a chart conveyed in unison with and by means of a clock, substantially as hereinafter described and pointed out in the claim.

In the accompanying drawings; Figure 1, Sheet 1, is a side elevation of a portion of the machine, showing several of the check holders and pull hooks, the lower portion of the casing open to show the chart feed roller, and also showing the clock mechanism in connection with said chart feed roller. Fig. 2, Sheet 2, is a cross section of the machine, showing the recording mechanism; Fig. 3, Sheet 3, is a rear side elevation of the clock mechanism, showing the clock connected with the mechanism which rotates the feed roller in conjunction with said clock.

A represents a cabinet of suitable form and dimensions for containing and supporting all the mechanism.

B is an iron frame having a cross-bar B² strengthened by curved braces B³. One of these frames is located in each end of the cabinet, and they are used for supporting all the working parts of the recording mechanism.

C are metal bars secured at their ends to the upright parts of the said frames B. These bars are perforated to receive the pull rods D. D. The pull rods are provided with cross heads and have headed guide pins *d*, which limit the pull and they also have a shorter pin *d*², upon which are hung the numbered checks, E. The pull rods are provided with retracting springs *s*, and on the front of the cross-heads are provided hooks, F, by means of which the rods D are readily pulled. The pins *d*² being shorter than the headed pin *d*, permit the removal and replacing of the checks, when the rods are drawn out.

G is a bar supported at its ends by the cross

bars B² of the frames B, at the middle part of the cabinet. This bar has a double row of perforations made at diagonal lines from the perpendicular, in which are set punch pins, H, H, whose points are thus brought into one horizontal line over the impression roller K, the purpose also being to arrange for pull rods on the two opposite sides of the cabinet. At each side of said middle bar G are provided means for manipulating said punch pins, consisting of rods I I, upon which are pivotally fixed angle levers J, J, the upper arms of which are connected by rods L, L, with their respective pull rods D. The horizontal arms of said angle levers extend inwardly toward the punch pins, and upon said arms are provided pawls *p p*, which reach under the heads of the punch pins, and serve to lift said pins whenever the levers are pulled, as represented in dotted lines on Fig. 2. The bar G has chambers at each side through which the said punch pins pass, and within said chambers the pins are provided with retracting springs, *g, g*, and between the heads of the pins and the bar G are also provided cushion springs *r r*, which just hold the springs free from the chart. This is practically the mechanism comprising my patent No. 461,478, of October 20, 1891, and is represented here to show its relation to the subject of this present application consisting of a clock and motive mechanism which conveys the chart and is described as follows:—

M is a clock, of the usual construction, beneath which is provided a spring power mechanism connected with the chart feed and impression roller, for rotating same at stated intervals.

N is a ratchet tooth wheel fixed on the rear end of the minute pointer shaft of the clock, having sixty teeth.

O is a lever pivoted to the clock frame and extending over the said ratchet wheel, having a beveled lug *o*, riding upon the said ratchet wheel, and by means of which said lever is lifted, as the wheel rotates. P is a lever also pivoted to the clock frame, below the clock, and is connected with the lever O by a connecting rod Q, so that both said levers are actuated in unison.

R R are two spring containing drums revolving in opposite directions for jointly ap-

plying their power to the wheel S, whose shaft is coupled onto the shaft of feed roller K. Above said wheel S is journaled a gear wheel T, having a pinion meshing with gear S.

- 5 U is a wheel journaled diagonally above wheel T, having a pinion meshing with said wheel and actuated thereby. Wheel T has six arms *u u*, having their ends bent at a right angle, and which rest against a stop lug *t* on
 10 the lever P, which holds said wheel from rotating until released by the upward movements of said lever, the arms successively striking against said lug *p*, thereby stopping continuous rotations of the wheel and giving
 15 intermittent rotary motion to said wheel, the said intermittent motion is caused by the ratchet wheel N through the medium of the lever O and connecting rod Q, actuating the lever P, and thus at stated intervals of a
 20 minute, releasing the wheel U whereby the record chart is gradually moved along as the clock measures off the time. The purpose of thus moving the chart is to keep the record of the impressions made thereon in exact ac-

cordance with the movements of the clock. 25
 The chart is ruled and spaced, into half minute divisions from top to bottom and ruled in columns, said columns are numbered across the top in accordance with the punch pins. The charts are made in a continuous roll, and 30
 are fed from a reel V suitably supported at one side of the feed roller and the charts are daily severed from the roll, and preserved as a record of the time of arrival and departure of employés. 35

Having described my invention I claim as follows:—

In a workman's time recorder the combination of chart carrying roller K, gear S mounted on chart roller shaft, motor springs and 40
 gears R R, gear T, armed wheel U, tripping mechanism O P Q and clock M, constructed and arranged to operate substantially as and for the purpose set forth.

GEORGE W. HEENE.

Witnesses:

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 D. C. GROVER.