No. 625,262. Patented May 16, 1899.

D. HEPP.

WORKMAN'S TIME RECORDER.

(Application filed Nov. 29, 1898.)

(No Model.) 2 Sheets—Sheet 1.

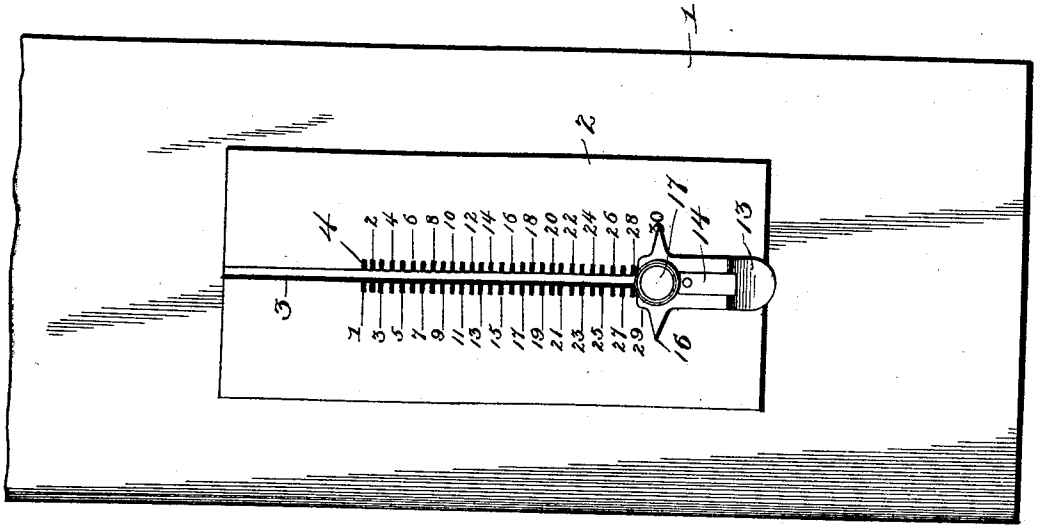

Fig. 2.

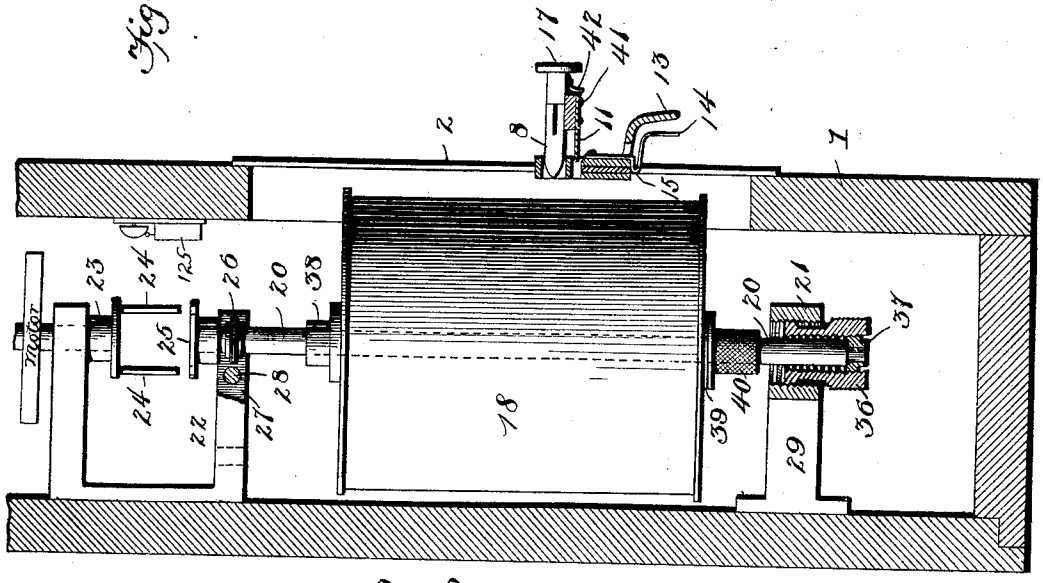

Fig. 1.

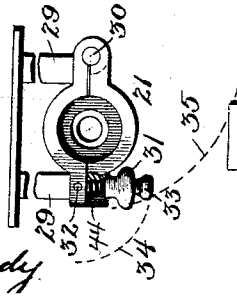

Fig. 3.

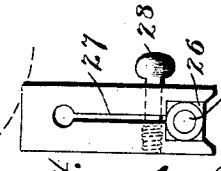

Fig. 4.

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

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D. HEPP.

WORKMAN'S TIME RECORDER.

(Application filed Nov. 29,. 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5

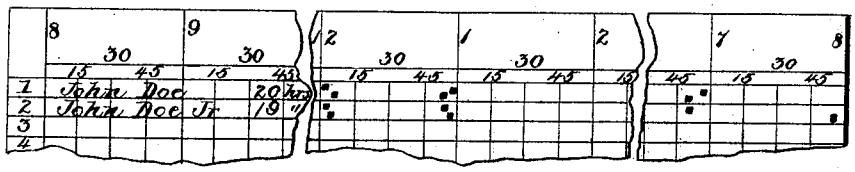


Fig. 7.

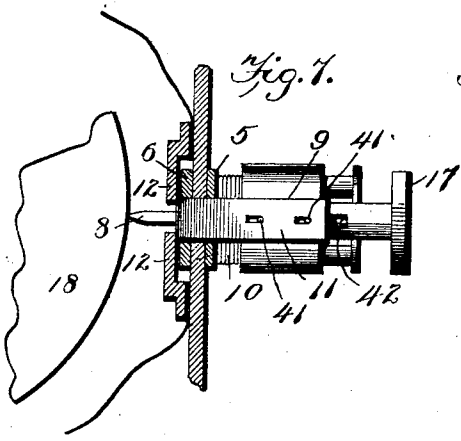


Fig. 6.

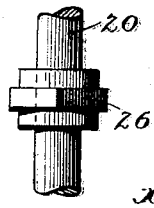


Fig. 8.

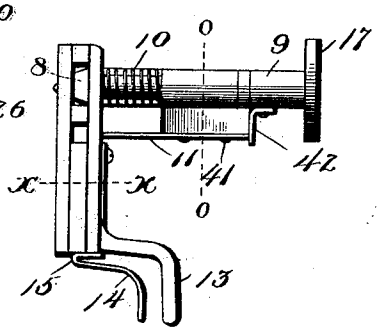


Fig. 9.

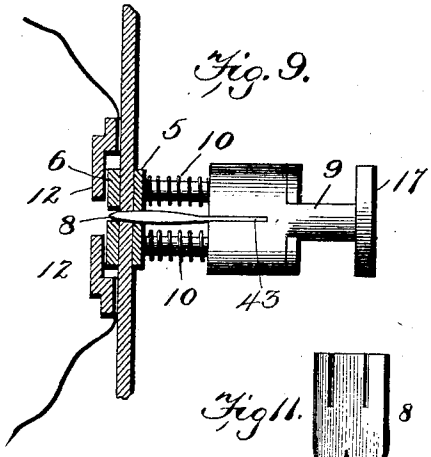


Fig. 11.

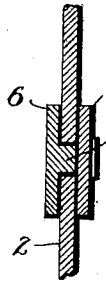


Fig. 10.

Fig. 12.

Fig. 13.

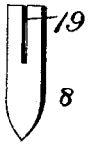
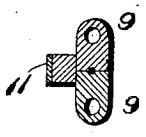


Fig. 14.



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UNITED STATES PATENT OFFICE.

DANIEL HEPP, OF CHICAGO, ILLINOIS.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 625,262, dated May 16, 1899.

Application filed November 29, 1898. Serial No. 697,772. (No model.)

To all whom it may concern:

Be it known that I, DANIEL HEPP, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented and produced a new and useful Improvement in Workmen's Time-Recorders; and I do 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, reference being had to the figures marked on the accompanying drawings, which form a part of this specification.

My invention relates to workmen's time-recorders, and has for its particular object to provide a means for recording accurately the time of arrival and departure of employees from shops, factories, and the like, so that a permanent record of said employees may be kept.

A further object is to reduce the size of the recorders now in use by abolishing the key-board where every employee has his or her key, which if lost causes great annoyance and inconvenience.

My invention consists in the following constructions and combinations of parts, the details of which will be described first, and the patentable features of the invention then set forth and claimed.

In the drawings, Figure 1 represents a side view of a workman's time-recorder, partly in section and partly in elevation, to which my invention has been applied. Fig. 2 represents a door-panel, showing the slotted plate and penholder in position. Fig. 3 is a plan view of the lower support of the cylinder. Fig. 4 is a similar view of the upper bearing of the cylinder. Fig. 5 represents the time-slip. Fig. 6 is the bearing-block of the upper bearing. Fig. 7 is a partial section and elevation of the penholder on the line $x\,x$ of Fig. 8. Fig. 8 is a side section and elevation of the penholder. Fig. 9 is a front section and elevation of the penholder. Fig. 10 is a cross-section of the plates 5 and 6 in the slot. Fig. 11 is the pen-blank. Fig. 12 is one of the pens ready for use. Fig. 13 is a side view of the pen. Fig. 14 is a cross-section of the penholder on the line $o\,o$ of Fig. 8.

1 represents the panel of a door upon which the index-plate 2 is fastened. The plate 2 has a slot 3, upon each side of which are notches 4, numbered to correspond with the number of the employee whose name appears opposite the numbers on the time-slip. Mounted in the slot 3 are the pen and penholder for marking upon the time-slip the record of the workman's arrival and departure. The penholder consists of a top and bottom plate 5 and 6, joined by a short bar 7, which runs in the slot 3 to hold the pen in a vertical position. The pen 8 is supported in the plunger 9, which is pushed away from the cylinder 18 or record-carrying element by spiral springs 10. Attached to the plunger 9 is a contact-plate 11, which when the plunger is depressed makes an electrical connection between the insulated strips 12 on each side of the slot, thus ringing an alarm-bell 125 or other electrical alarm mechanism in circuit with the strips 12. The top plate 5 is bent upward to form the handle 13, below which is a flat spring 14, bent in the shape of a catch 15. The formation of the spring 14 is such as to fit into the notches 4 and then pass upwardly through a mortise in the handle 13 and screwed to top plate 5.

When the workman enters or leaves the building, he places his thumb on the handle 13 and his first finger under the tongue 14 and presses them together. The penholder can then be moved up or down until the index-arrow 16 points to his number, and he then pushes the button 17 in until it strikes the cylinder 18, thereby marking upon the time-slip around the cylinder a small dot, indicating the time the button 17 was depressed, and at the same time the metal plate 11 comes into contact with the insulated strips 12, which rings a bell.

Only the alternate notches are given numbers on each side of the slot, so that by moving the penholder one space but one right or left hand number comes under the index-arrow points 16. The workman will therefore have no difficulty in properly selecting the notch indicated—for instance, by his number.

The pen is cut and made into the form as shown in Fig. 11 and bent longitudinally through the center. The pen at its upper end is slotted and bulged out at 19, so as to form a small reservoir and duct for the ink.

The cylinder 18 is supported by the shaft

20, which is held in place by the bearing 21 at the bottom and by the clutch mechanism 22 at the top. The clutch at the top consists of the coupling 23, with pins 24 entering holes in the coupling 25. The coupling 23 is attached to the clock mechanism or other motor of the recorder from above and is held in a fixed position by the upper arm of the support 22. The coupling 25 is stationary with the shaft 20, which is adapted to be moved laterally in the lower bearing of the support 22. The square bearing-block 26, (shown in Fig. 6,) through which the shaft 20 moves, has a rabbeted edge which fits into a corresponding depression in the slit 27, which after adjustment is held in place by tightening the thumb-screw 28, while the shaft 20 slides through it. The bearing-block 25 constitutes a transversely-adjustable bearing for the shaft 20.

The lower end of the shaft 20 is supported by an adjustment held by the arms 29. The ends of the arms 29 are connected by the stationary part of a hinged bearing 21. The other member of this hinged bearing 21 is pivoted at 30 and held tight by the adjusting-screw 31, which is so pivoted at 32 that by slightly loosening the screw 31 the bolt 33 may be swung around through a slot 44 in 21 on the dotted line 34, thereby leaving the movable member of the bearing 21 free to be swung in the direction of the dotted line 35. Within this bearing, which is internally threaded, is a threaded tube 36, which surrounds the threaded end nut 37. The interiorly-threaded tube 36 is milled at its lower end, so as to allow easy adjustment by hand, and is exteriorly threaded at its upper end for engagement with the internal threads of the bearing, while the nut 37 has an angular head for the use of a wrench or other tool. When the cylinder has been put in a relatively correct vertical position by the nut 37, the hollow tube 36 is then turned by hand so as to procure a nice and accurate adjustment of the cylinder and time-slip with respect to the pen, and then the gate is fastened, making a lock for the lower bearing, but allowing the shaft 20 to turn easily. This lower bearing for the shaft 20 is removable, as stated, by releasing the gate, and it comprises two distinct adjustments—to wit, that secured by the movement of the nut 37 within the tube 36 and by the movement or adjustment of the nut 36 within the gate or two-part bracket. By the provision of this shaft-supporting mechanism and the upper bearing 26, surmounted by a clutch, nicety of vertical and horizontal or longitudinal and lateral adjustment of the shaft may be obtained and the shaft, with its record-cylinder, may be readily removed when desired.

38 is a flanged collar fastened to the shaft 20.

39 is a friction-washer which holds the cylinder in place in conjunction with the flanged collar 40.

The time-slip shown in Fig. 5 may be of any suitable form; but I prefer to make it in the form shown, which consists of a sheet ruled horizontally for the name-lines and vertically for the hourly divisions of each day, which may be subdivided to show the quarters of each hour. The dots indicate the marks made by the pen.

Although the plate 2 is described as being attached to the panel of a door, it may be placed in any suitable place in a building where it is suited.

The plunger of the penholder is divided into two shells, one for each side of the pen, and within each of these shells is a pillar which is forced to the edge of the shell by the spiral springs 10. The pen 8 is pushed into a slot 43 between the two pillars.

The plate 11 has two small slots in which are pins or other projections 41, tightened enough to keep the plate in position, while pressing down on this plate is a leaf-spring 42, which allows the plate to move up and down. When the plate 11 comes in contact with the insulated strips 12, the alarm-bell rings, notifying the foreman or other person should the workman be entering or leaving the shop out of time.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a workman's time-recorder, the combination with record-carrying mechanism and actuating means, of a slotted index-plate comprising top and bottom plates in contact with the index-plate and an intermediate bar connecting the top and bottom plates and passing through the slot, a catch for securing the penholder in its adjusted positions, a plunger movably carried by the penholder, means for normally urging the plunger in a direction opposite to the index-plate, and a pen carried by the plunger in alinement with the slot, substantially as specified.

2. In a workman's time-recorder, the combination with record-carrying mechanism and actuating means, of a slotted index-plate, a penholder movably mounted in the slot, cooperating locking mechanism carried by the penholder and index-plate, a movable plunger carried by the penholder, a spring intermediate of the plunger and holder, a pen carried by the plunger and extended through the slot in the index-plate, electrical terminals carried by the index-plate and a contact-plate mounted upon the plunger but capable of movement independent thereof, substantially as specified.

3. In a workman's time-recorder, the combination with record-carrying mechanism and actuating means, of a penholder, a slotted index-plate adjustably supporting said penholder, said plate being provided with notches along the opposite edges of the slot, a handle upon the penholder, a spring-catch located beneath the handle and in engagement with the notches in the index-plate, a spring-actuated plunger carried by the penholder and

a pen carried by the plunger and extending through the slot in the plate, substantially as specified.

4. In a workman's time-recorder, the combination with record-carrying mechanism and actuating means, of a penholder comprising top and bottom plates and an intermediate bar, a slotted index-plate through which said bar extends, a plunger carried by the penholder and movable toward and from the index-plate, a spring normally urging the plunger away from said plate, a pen carried by the plunger and extending through the slot, electrical terminals carried by the index-plate, a longitudinally-slotted contact-plate designed to electrically connect said terminals, and pins projecting from the plunger and engaging said slot, substantially as specified.

5. The combination with a movable record-carrying element and a slotted index-plate, of a penholder adjustably mounted within said slot, strips mounted in proximity to the penholder and constituting the terminals of an alarm-circuit, a movable pen carried by the penholder and designed to be depressed into contact with the record-carrying element, and a contact-plate in operative relation with, but capable of movement independent of the pen and designed by the actuation of said pen to establish electrical connection between the strips, substantially as specified.

6. In a workman's time-recorder, the combination with record-carrying mechanism and actuating means, a slotted index-plate, and an adjustable penholder, of a spring-actuated plunger carried by the penholder, a pen carried by said plunger, electrical terminals mounted upon the plate, a contact-plate mounted upon the plunger and capable of movement independent thereof, and means for resisting such independent movement of the contact-plate, substantially as specified.

7. In a workman's time-recorder, a clutch mechanism consisting of a rabbeted bearing-block fitted in a corresponding depression in a spring-arm, a thumb-screw for tightening the spring, a shaft sliding in said bearing-block, and a head-nut containing holes for the reception of pins from the clock mechanism, substantially as described.

8. In a workman's time-recorder, a bearing mechanism consisting of arms holding a gated box adapted to be opened and closed by a thumb-screw, a hollow tube threaded internally and at one outside end and milled at the other, and an angular nut screwed into the end of said tube for supporting the shaft of the cylinder.

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

DANIEL HEPP.

Witnesses:
E. W. DIERSSEN,
R. W. BARTELMANN.