

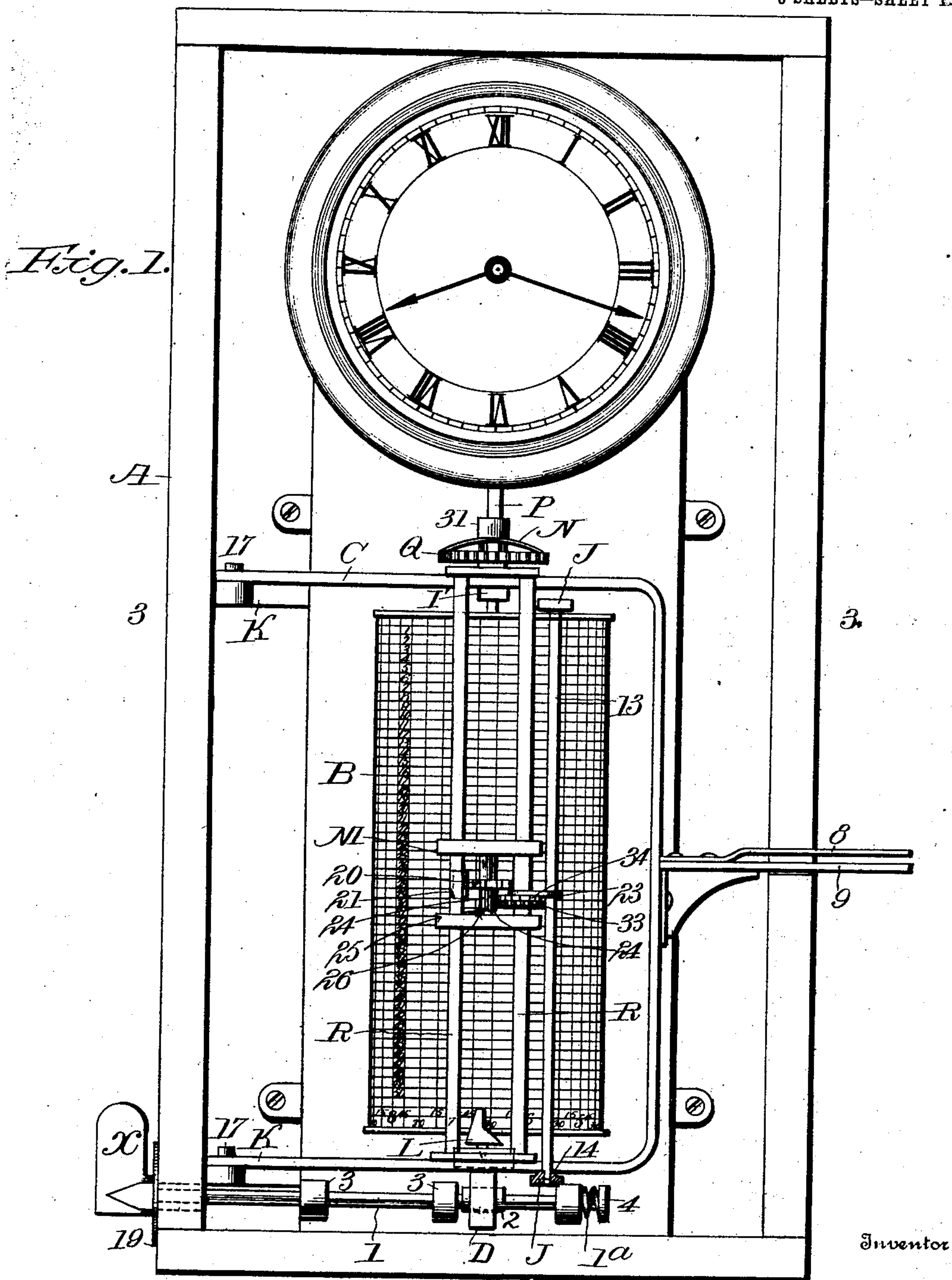
No. 721,187.

PATENTED FEB. 24, 1903.

D. HEPP.
WORKMAN'S TIME RECORDER.
APPLICATION FILED AUG. 4, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 3.

Fig. 3.

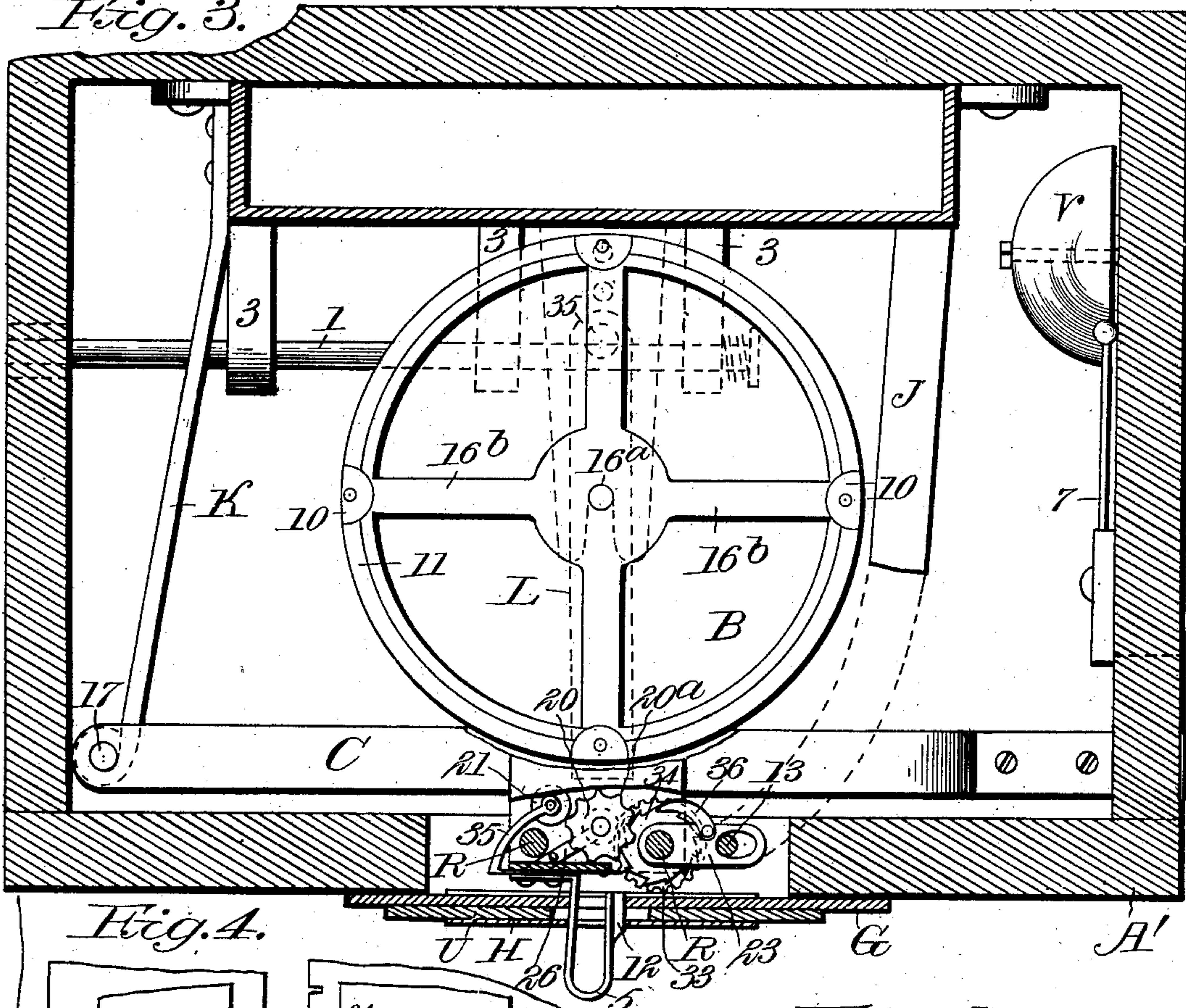


Fig. 4.

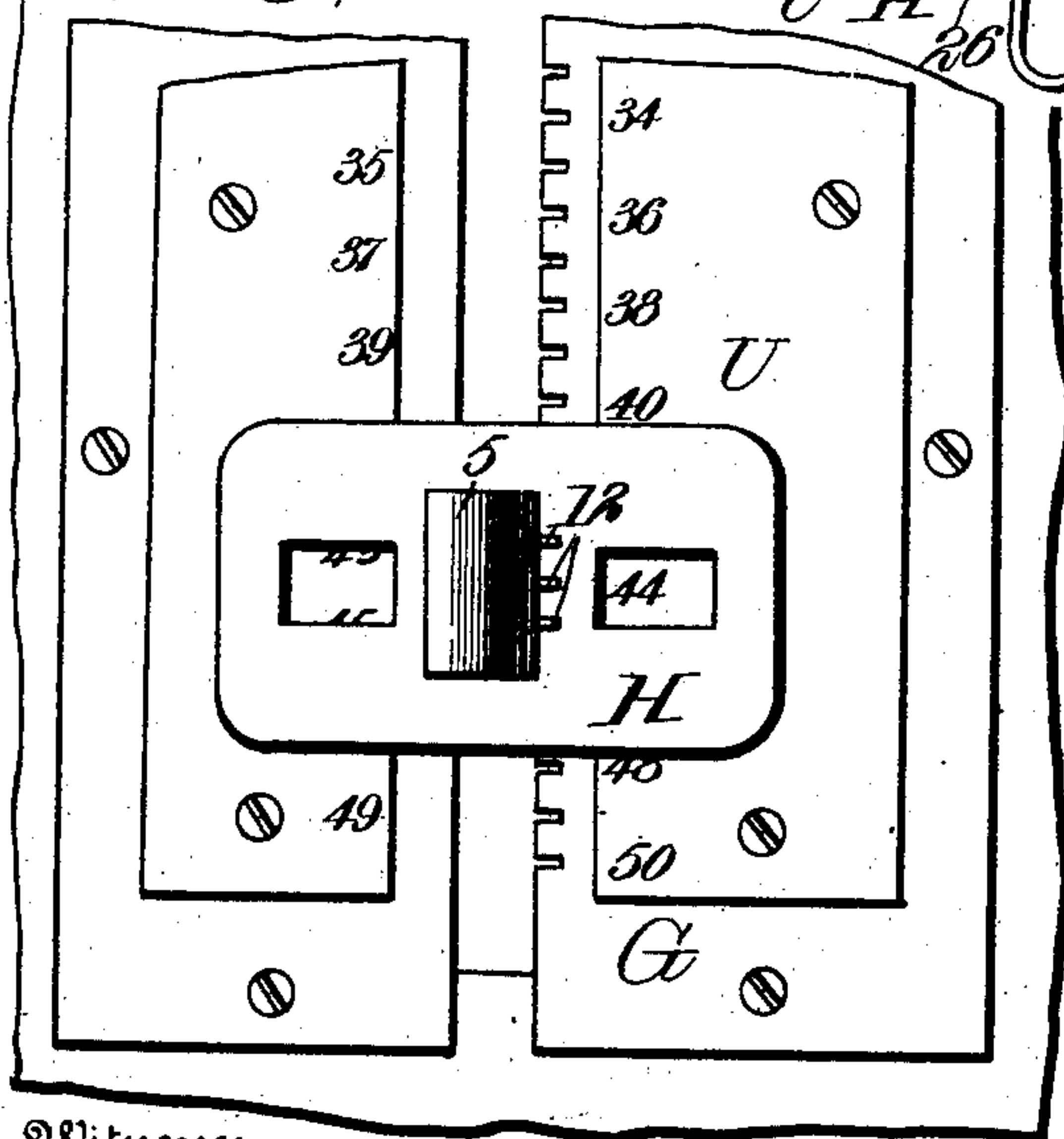


Fig. 5.

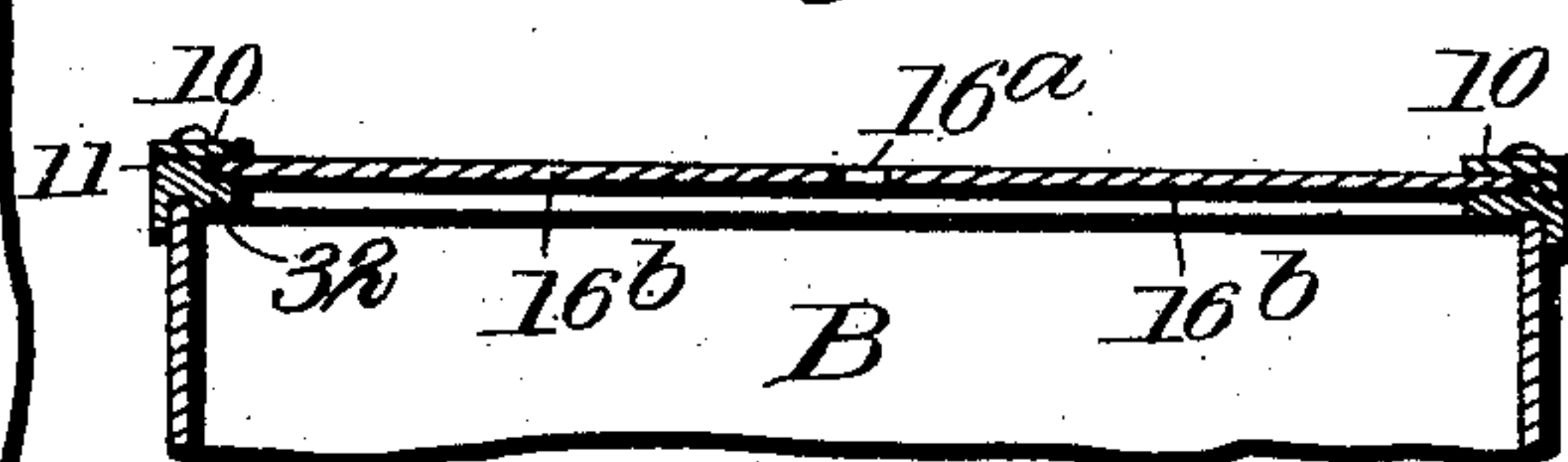
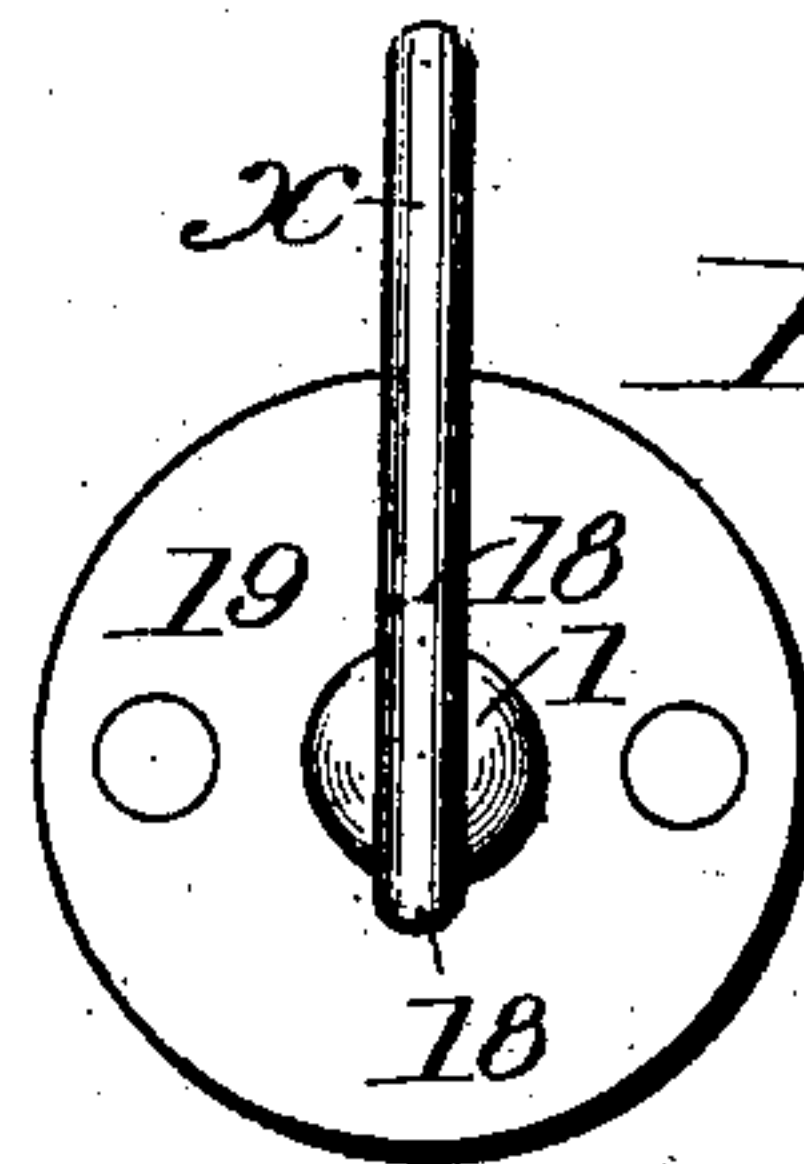


Fig. 6.



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DANIEL HEPP, OF CHICAGO, ILLINOIS.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 721,187, dated February 24, 1903.

Application filed August 4, 1902. Serial No. 118,305. (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
5 invented certain new and useful Improvements in Workmen's Time-Recorders; 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
10 to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention relates to workmen's time-recorders; and the object thereof is to provide such improvements in construction and operation as will be apparent from the following description and claims.

20 Generally speaking, the apparatus comprises a clock-operated cylinder carrying a record-sheet containing a time-record and the numbers or names of the workmen and a printing mechanism which may be operated
25 by the workmen to put a dot or mark on the time-record opposite his number or name, which dot will indicate the time by its position in the time-record subdivisions and also whether the workmen went in or out by its
30 position in the name or number subdivision. The printing mechanism is vertically adjustable on a swinging frame, so that it may be located properly with respect to the workman's number. Novelty and improvement
35 will also appear in the means for supporting and rotating the cylinder bearing the record-sheet and for supporting and operating the printing device.

40 In the accompanying drawings, Figure 1 is a front elevation of the invention, the front door of the casing being removed. Fig. 2 is a side elevation. Fig. 3 is a horizontal section on the line 3 3 of Fig. 1. Fig. 4 is an elevation of a portion of the front door, showing the sliding number-indicating plate. Fig.
45 5 is a fragmentary section of the cylinder, and Fig. 6 is a side elevation of the "in" and "out" crank.

50 Referring specifically to the drawings, A indicates the outer casing of the device, and A' the front door thereof.

B indicates the recording or form cylinder,

carrying a sheet containing vertical columns of time-divisions and horizontal divisions with the numbers of the workmen. This cylinder 55 is rotated by suitable connection with a clock, P indicating a shaft leading from the clock, and O a pinion thereon. This pinion is in mesh with a gear-wheel Q, the hub of which is extended, as at Q', to form a sleeve around 60 which the split end of a driving-crank I is clamped. The clamp is sufficiently tight to cause the crank and cylinder to turn with the motion of the wheel Q, but sufficiently loose to allow the crank to be turned by hand on 65 the sleeve to set the cylinder, as hereinafter explained.

16 is a pin on which the gear-wheel and cylinder turn, and it is supported by a suitable bracket 31. 70

N is a backlash-spring between the bracket and the gear-wheel.

The lower end of the pin 16 enters a hole 16^a in the top plate of the cylinder, and the depending portion I' of the crank is forked 75 to span one of the spokes 16^b of the top plate. The rim of the top plate is indicated at 11, and this is held in friction engagement with the cast rim 32 by clasps 10. The cylinder and record-sheet are carried by the rim 32, 80 and the construction permits said rim to be moved relative to the top plate so that the pointer L will indicate the exact time in setting the device, as hereinafter explained.

The lower pivot of the cylinder is indicated 85 at 15, and it enters a hole in the supporting pointer-arm L, which is pivoted at 35 to a block D. This block is vertically adjustable on rods 29, which are fastened by screws 30 in lugs 28, projecting from the back frame. 90 Said rods pass through holes in the block, which slides thereon. The block is raised and lowered by an eccentric 2 on shaft 1, the bearing-blocks of which are indicated at 3. The outer end of this shaft projects through 95 the side of the casing and has thereon the "in" and "out" crank x. A half-turn of the crank raises or lowers the block, and with it the cylinder, according to the throw of the eccentric, and the dot printed on the record 100 is accordingly at the upper or lower edge of the workman's number-space, as illustrated in Fig. 1, thereby indicating the arrival or departure of the workman. To hold the

crank the way it is set, the shaft 1 passes through a plate 19, having recesses entered by nibs 18 on the shaft. A spring 1^a at the inner end of the shaft, between the block 3 and the collar 4, holds the nibs in engagement and yields to permit sidewise movement of the shaft to disengage the nibs, so that the crank may be turned.

J indicates upper and lower brackets to support the tripping-rod 13. This rod extends loosely through a hole in the upper bracket and into a socket 14 on the lower bracket. The rod is removable when desired and also extends loosely through a tripping-crank 23. This rod acts to cause the printing-wheel to turn and receive fresh ink after each impression.

The printing device is indicated at M, and comprises a printing-wheel 20, the edge of which has points 20^a to print a dot on the record-sheet. This wheel contacts with an inking-roller 21 and is turned by means of a gear-wheel 33, which is in mesh with a pinion 24 on the shaft of the wheel 20. The wheel 33 is turned by ratchet-wheel 34 on the same shaft, said ratchet-wheel being engaged and turned by pawl 36 on the tripping-lever 23. This train is properly supported in a frame 25, which slides up and down on rods R, adjacent the cylinder. These rods are carried by a swinging frame C, pivoted at 17 to brackets K in such position that by swinging the frame a point of the wheel 20 is caused to contact with and print a dot on the record-sheet.

9 indicates a handle for the frame C, projecting through the side of the casing, and has a spring-latch 8 to prevent unintentional movement.

7 is a spring-lever to sound the bell V when the handle is pushed back at each impression.

The inking-roller 21 is carried and held in contact with the printing-wheel 20 by a spring 35, attached to the inker-frame, and to insure the direct presentation of a point 20^a to the cylinder the shaft of the wheel 20 has a saw-tooth crown-wheel 24, engaged by a spring-click 26, which is so positioned that the wheel will always stop with one of the points 20^a direct to the cylinder.

The inking device is moved up and down on the rods R by means of a spring-handle 5, which projects out through an opening-slot in the front door of the casing and fits through a hole in the indicator-plate H, which is slidable vertically before the plate U, having numbers corresponding to the numbers on the record-sheet. The handle 5 and inking device are held at adjustment by engagement of the flanges 12 in the notches of the plate G, which notches correspond to the numbers on the plate U.

In operation by the workman he first raises or lowers the cylinder, according to whether he is going in or out. Then he shifts the plate H until his number is indicated through the

opening therein, which carries the printing device to the proper position relative to the cylinder, when by pushing back the handle 9 the printing-wheel contacts with the record-sheet and leaves a dot.

To remove and replace the cylinder and record-sheet, the operation is as follows: On opening the door of the casing the indicator H will leave the handle 5 and drop to the lower part of the number-plates. The flanges 12 will also be disengaged from the notch-plate G, carried by the door, and the handle and the printing device will drop to the bottom of the rods R. Then lift the trip-rod 13 out of the brackets J and also out of the lever 23. Then the frame C may be swung outward on its pivot, which allows the cylinder to be taken out by slightly raising it and swinging the arm L to one side. When supplied with a new sheet, which may be held on by rubber bands or otherwise, the cylinder is replaced, the crank I being moved to a proper position to engage one of the spokes 16^b. If then the time by the pointer L is not right with the clock, the cylinder and rim 32 may be moved by hand to the right position, the friction engagement between the rim 11 and the rim 32 allowing this movement. The frame C is then swung in, the tripping-rod 13 replaced, and the front door closed, with the handle 5 projecting through the indicator-plate H.

What I claim as new is—

1. In a workman's time-recorder having a rotatable cylinder, the swinging cylinder-supporting pointer-arm L, as and for the purpose described.

2. In a workman's time-recorder, the combination with a movable record-carrier, said record having time and workmen's divisions, and means to mark the same, of means to shift the carrier to locate "in" and "out" marks differently, comprising a movable support for the carrier, a crank-shaft adapted to be turned by a workman, and an eccentric on the shaft bearing against the support, to shift the same, substantially as described.

3. In a workman's time-recorder, the combination with a movable record-carrier, the record having time and workmen's divisions, a swinging frame, a marker slidable thereon to position opposite each workman's division, and means to shift the carrier to locate "in" and "out" marks differently in such division.

4. In a workman's time-recorder, in combination, a movable record-carrier, said record having time and workmen's divisions, a swinging frame carrying a marking device to and from the record, said device being adjustable on the frame relative to the workmen's divisions, and means to shift the carrier to differentiate "in" and "out" marks.

5. In a workman's time-recorder, the combination with a movable record-carrier having time and workmen's divisions, of a swinging frame carrying a marker adjustable to each workman's division, and means actu-

ated by the swing of the frame to ink the marker.

5 6. The combination with a record-carrier, of a swinging frame, a marker and inker carried thereby, a stationary rod, and a tripping-lever connected to the marker and engaging the rod, operating to ink the marker when the frame is swung.

10 7. The combination with the rotatable record-cylinder, of the block on which the cylinder is pivoted, the "in" and "out" crank connected to the block to move the same and shift the cylinder, as and for the purpose described.

15 8. The combination with the rotatable record-cylinder, of the swinging frame, the marker and inker adjustable thereon, the stationary rod, and the lever connected to the marker and having sliding engagement with the rod, and operating the marker to ink the same when the frame is moved.

20 9. The combination with the record-carry-

ing cylinder having time and workmen's divisions, of the swinging frame, a frame adjustable thereon carrying marking and ink- 25 ing wheels, a train, and a tripping-lever, and a stationary rod slidably engaging the lever and actuating the same to move the train and wheels when the swinging frame is moved.

10. In a workman's time-recorder, the combination with a record-carrier having time 30 and workmen's divisions, of a swinging frame, guides thereon, a marking device slidable on the guides, an index-plate having a scale corresponding to the workmen's divisions, and 35 an indicator for the scale connected to the marking device and adjustable therewith.

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

DANIEL HEPP.

Witnesses:

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A. B. TAYLOR.