

C. E. ONGLEY.
WORKMAN'S TIME RECORDER.

APPLICATION FILED MAY 14, 1900.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.

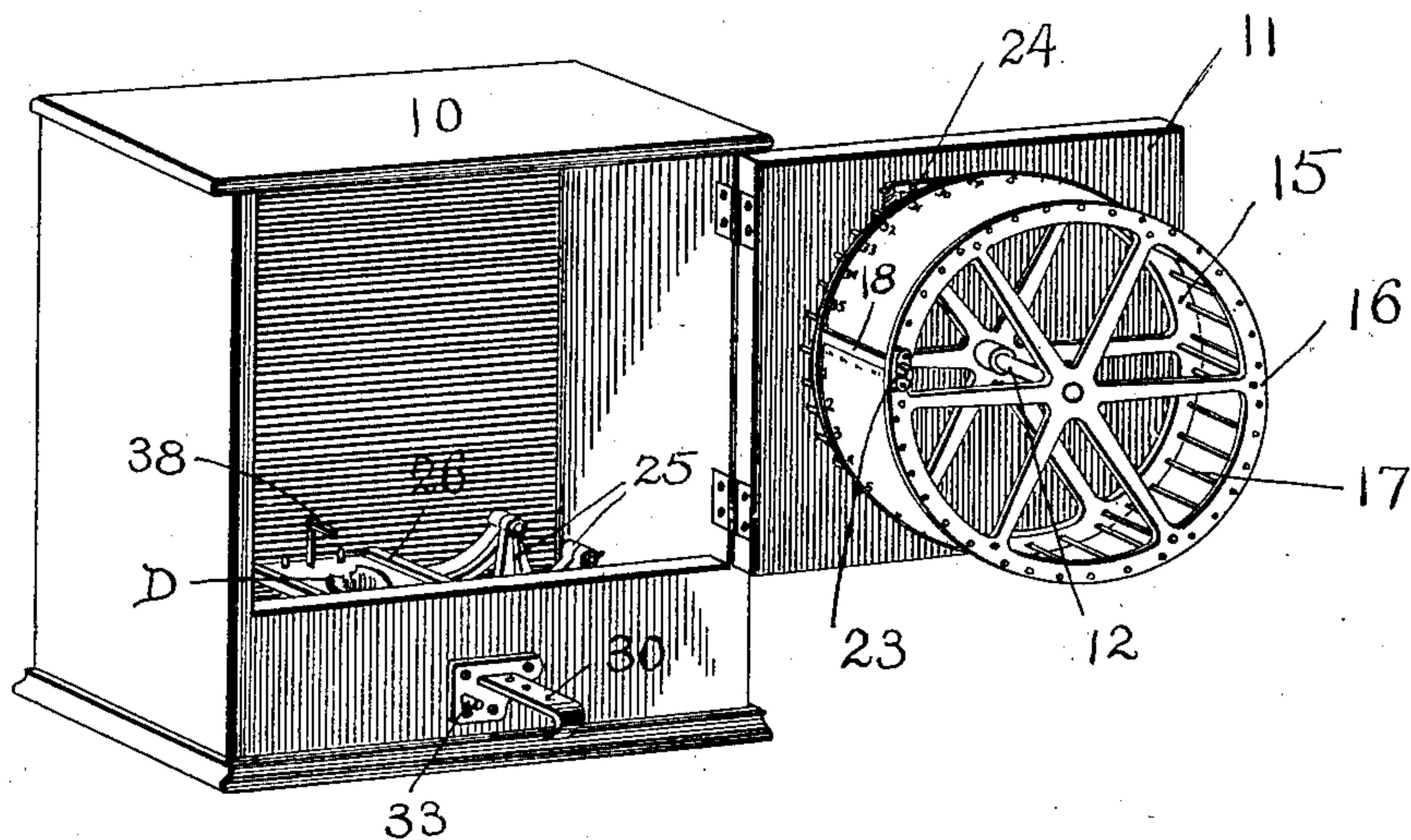
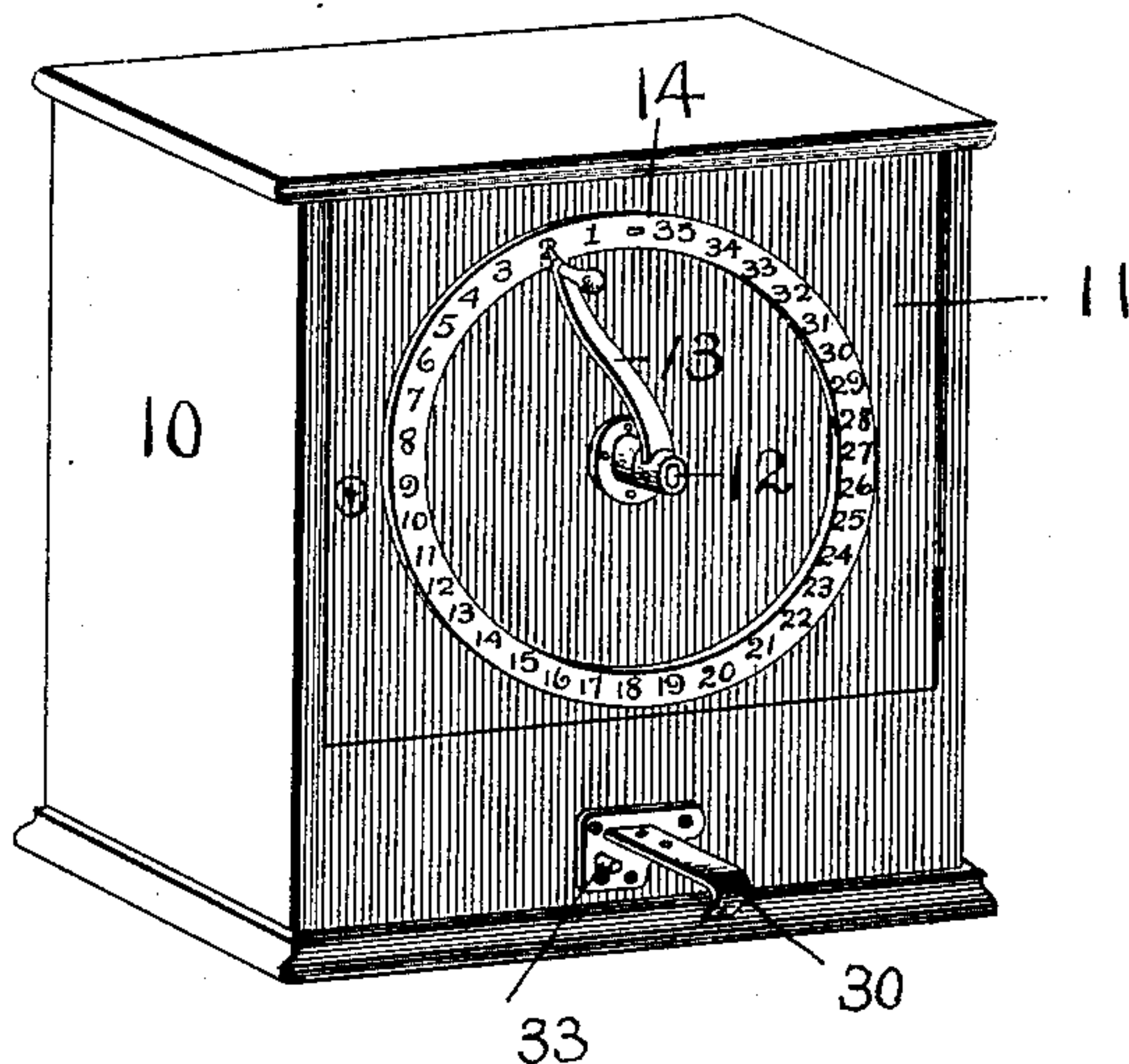


Fig. 2.

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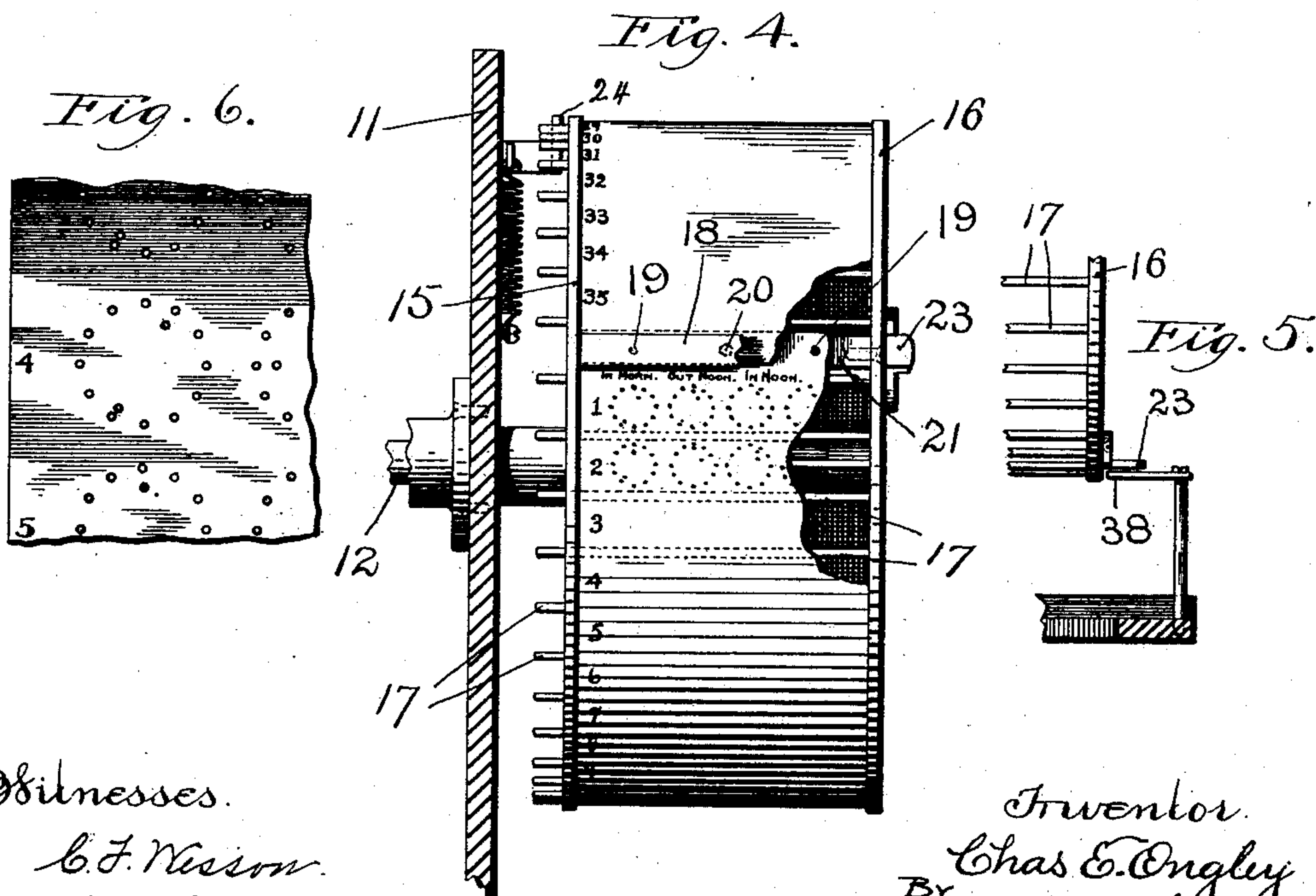
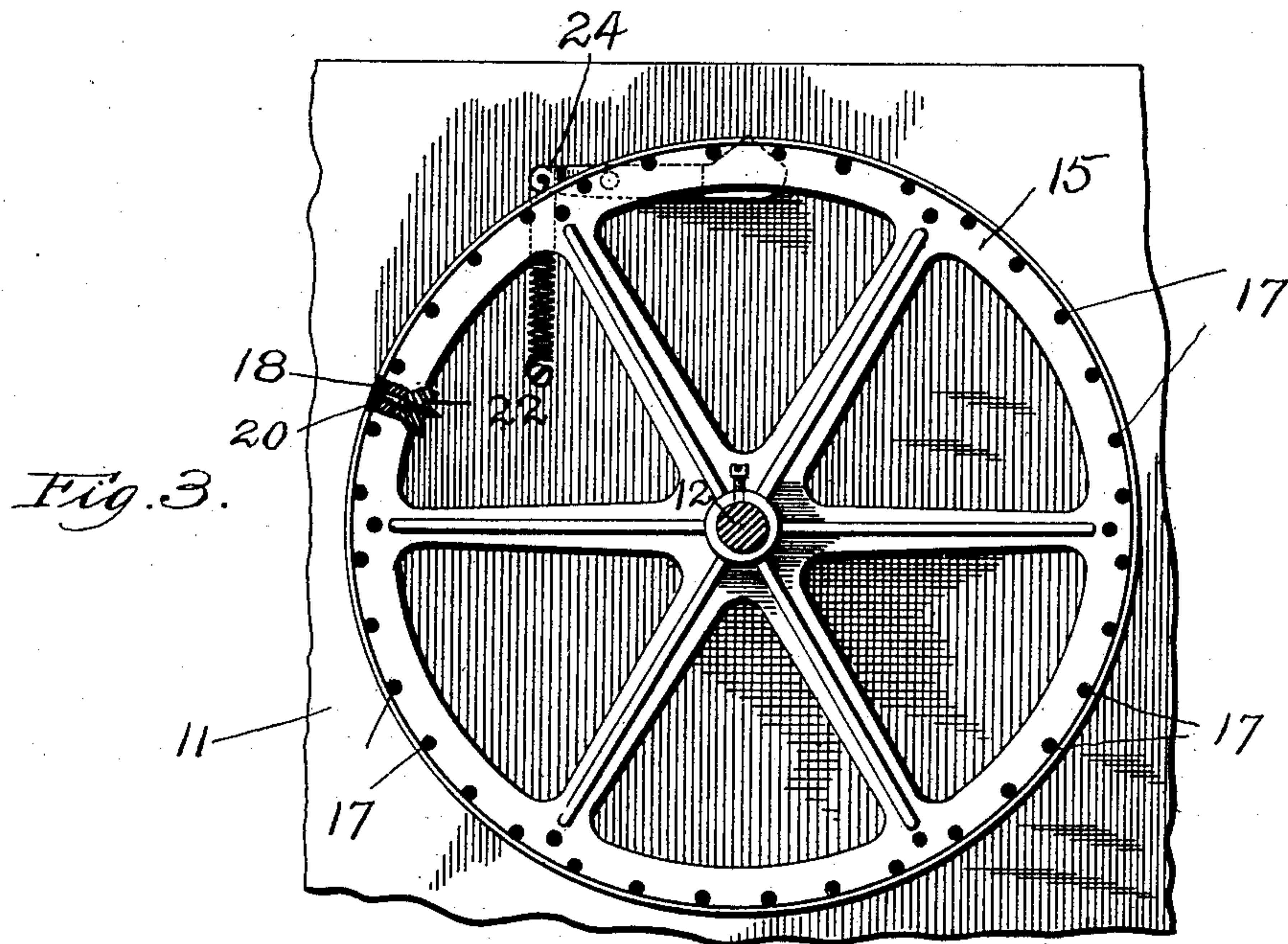
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4 SHEETS—SHEET 2.



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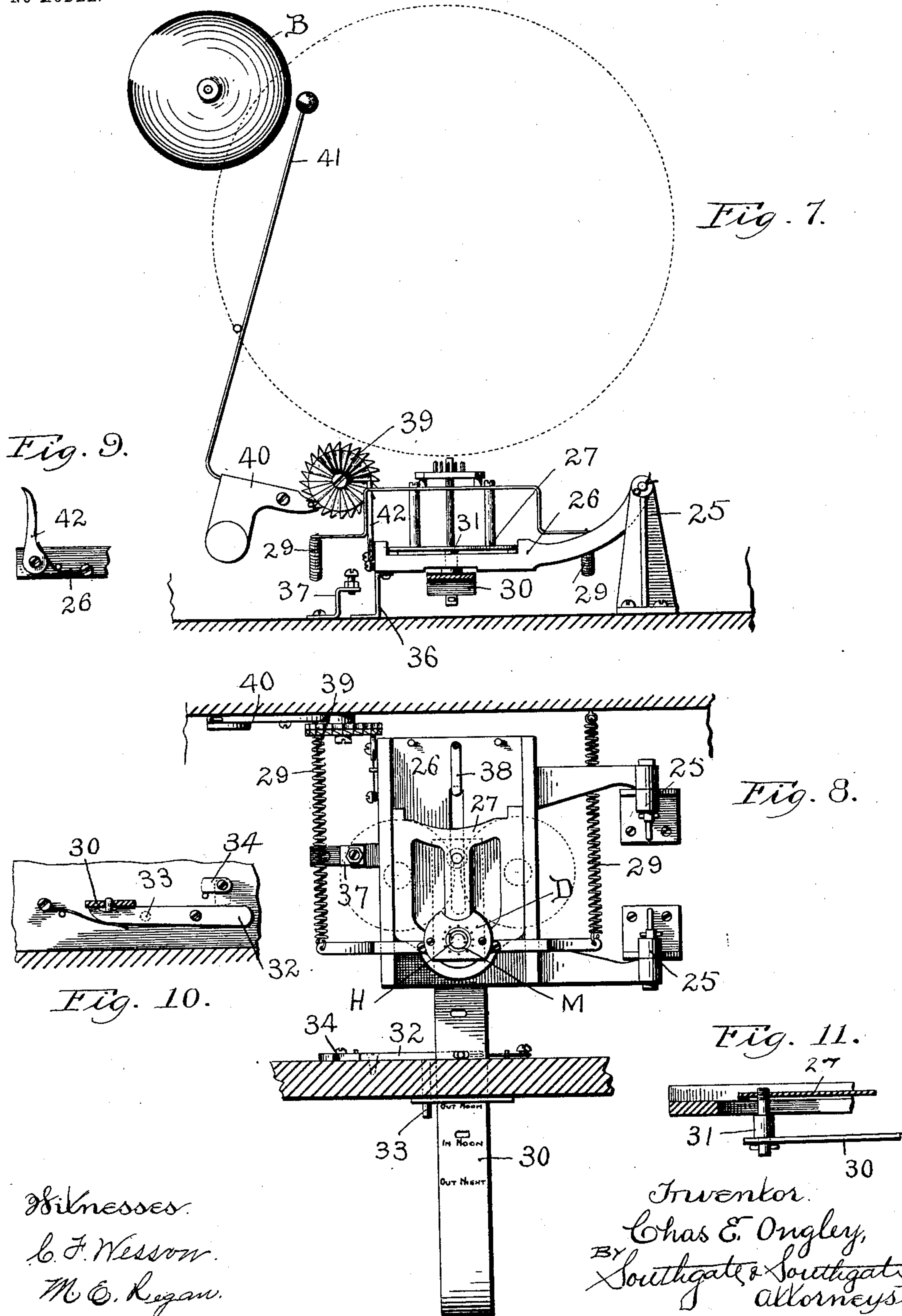
No. 720,958.

PATENTED FEB. 17, 1903.

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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

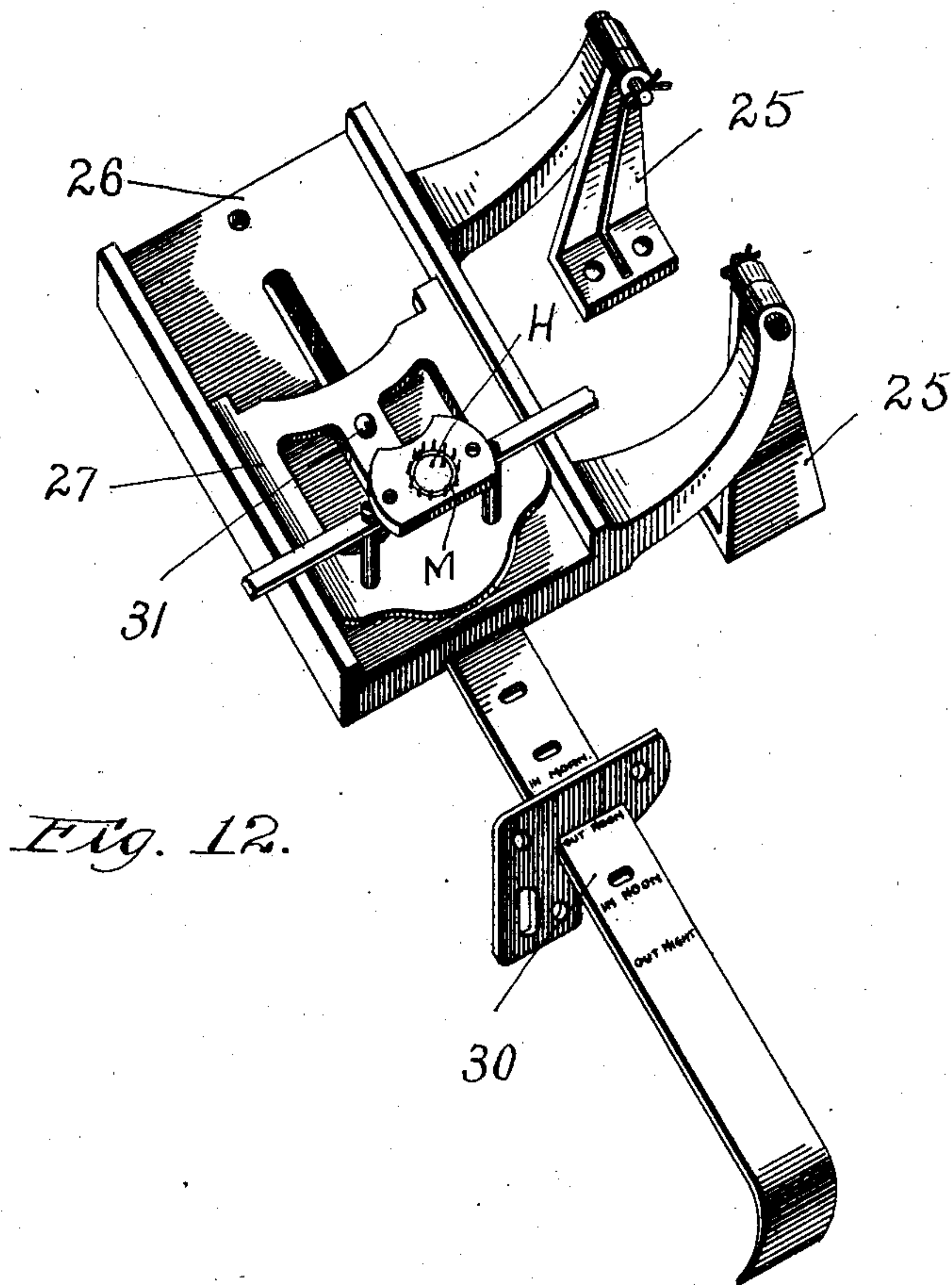


Fig. 12.

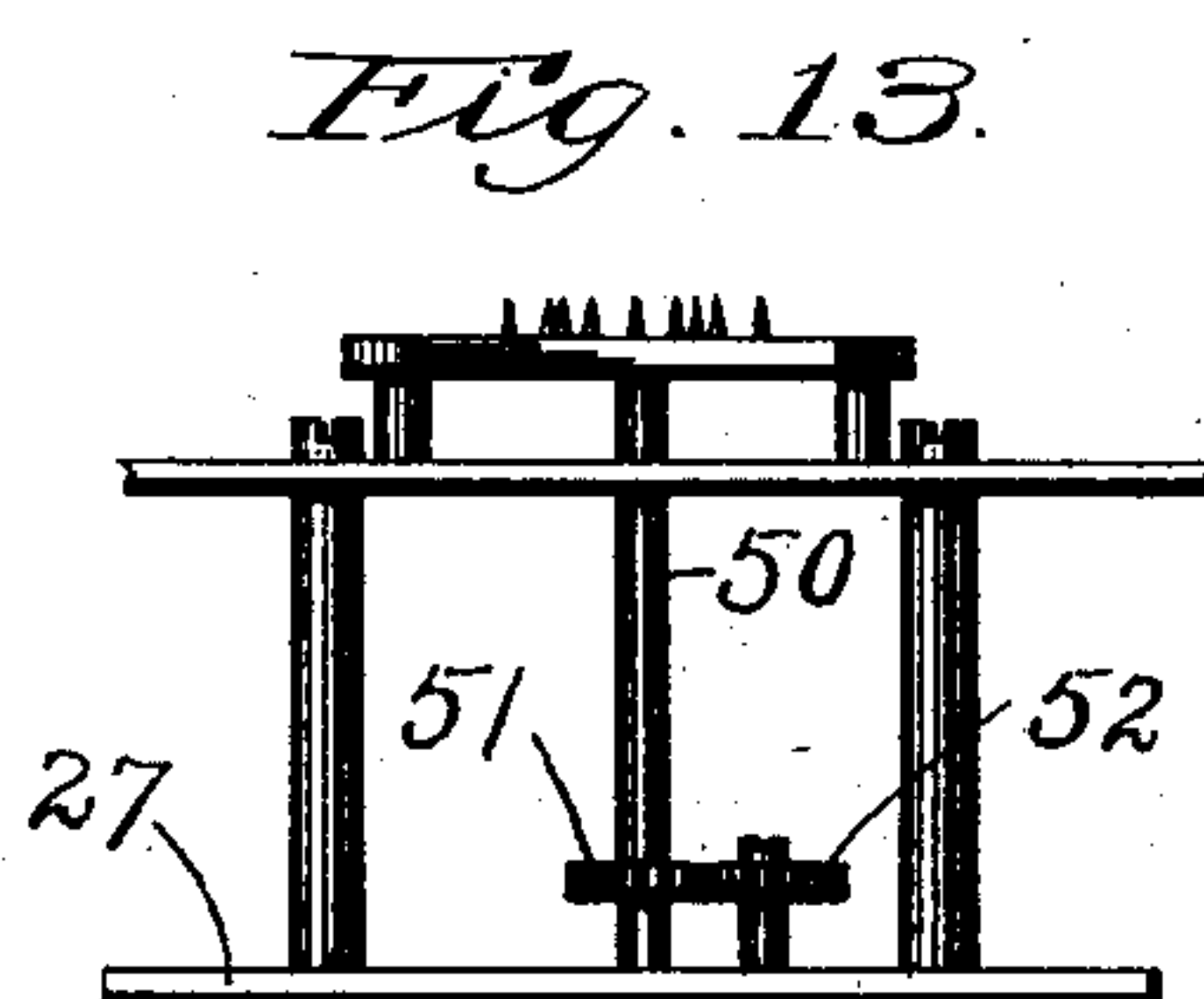


Fig. 13.

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UNITED STATES PATENT OFFICE.

CHARLES E. ONGLEY, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE UNITED STATES ELECTRIC CLOCK COMPANY OF NEW YORK, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

WORKMAN'S TIME-RECORDER.

SPECIFICATION forming part of Letters Patent No. 720,958, dated February 17, 1903.

Application filed May 14, 1900. Serial No. 16,556. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. ONGLEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Workman's Time-Recorder, of which the following is a specification.

This invention relates to a device for preserving an accurate record of the time of the arrival or departure of a number of employees; and the object of this invention is to provide a simple, durable, inexpensive, and efficient workman's time-recorder which is of a simpler and less expensive construction than recording devices which have heretofore been made and which may be manufactured and placed on the market at a cost considerably less than the devices now used.

To these ends this invention consists of the recorder and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying three sheets of drawings, Figure 1 is a perspective view illustrating a workman's time-recorder constructed according to this invention. Fig. 2 is a similar view showing the door of the casing swung open. Fig. 3 is a transverse sectional view of the paper-carrier. Fig. 4 is a side view of the same. Fig. 5 is a fragmentary view illustrating the construction employed for preventing the paper-clamping bar of the paper-carrier from engaging with or injuring the embossing-points of the clock-dial. Fig. 6 is a fragmentary view, on an enlarged scale, of a portion of paper on which the time-records are made. Fig. 7 is a detail side view illustrating the manner in which the clock is mounted. Fig. 8 is a detail plan view of the same. Fig. 9 is a detail view of the pawl which turns the star-wheel to ring the bell when the machine is operated. Fig. 10 is a detail view of the catch for holding the clock in the position to which the same is set. Fig. 11 is a detail view of the connection between the clock setting and operating lever and the bottom plate of the clock-frame. Fig. 12 is an enlarged perspective view illustrating the manner in

which the clock is mounted and the connections for operating the same, and Fig. 13 is a detail view of the gearing for causing the clock to turn in the opposite direction from ordinary clocks.

In nearly all establishments where there are a number of employees it has been found desirable to provide some means for preserving a record of the time of the arrival and departure of the employees.

In establishments where a comparatively large number of persons are employed the time-recorders which are now used are comparatively complicated and expensive, and the cost of installing and keeping such time-recorders in proper working condition is considerable.

The especial object of this invention is to provide a time-recorder of such simple and inexpensive construction that it can be employed to advantage in establishments having comparatively few employees and which is of such simple and durable construction that it will neither require frequent adjustment nor repair.

In all prior time-recorders which have gone generally into use and with which I am familiar it is customary to employ printing or time wheels which are turned or actuated by a clock-movement.

In a prior application filed by me September 13, 1899, Serial No. 730,356, I have shown and described an employee's time-recorder which dispensed with the use of clock-actuated printing-wheels or other time-rolls, the record instead of being printed being formed by providing a clock-dial with embossing points or prickers located in the positions ordinarily occupied by the numerals of a clock-dial and also providing the clock-hands each with an embossing point or pricker, all of which embossing points or prickers will perforate the paper on which the records are to be made, so as to indicate the time at which the machine is operated.

In the machine of my prior application for patent the records are made on a strip of paper which is automatically fed forward whenever the machine is operated, and a

printing mechanism is employed for printing on the paper a number or character to indicate the person operating the machine.

One especial object of my present invention is to simplify and improve upon the time-recorder shown in my prior application for patent by dispensing with the use of the special printing mechanism for printing the number or character designating the person operating the machine and to provide a construction having a rotatable paper-carrier for carrying a strip of prepared paper, the paper-carrier being mounted so that it may be turned or set to different positions by means of an index to receive the imprint or time-record thereon.

Further objects of my invention are to provide the paper-carrier with a holding device or spring-pawl which will prevent the embossing-points of the clock from hitting the paper-supporting bars of the paper-carrier, to provide a safety-stop for preventing the paper-clamping bar from hitting the embossing-points of the clock, to provide means for setting the clock to different positions in the casing to indicate arrivals or departures at different times of the day, to provide a special catch and detent for holding the clock in the position to which the same is set, and to provide a special construction for sounding a bell when the machine is operated.

Referring to the accompanying drawings and in detail, a time-recorder constructed according to this invention, as herein illustrated, comprises a casing 10. Hinged at one side of the casing 10, so as to close the front thereof, is a swinging door 11, which may be normally locked or kept closed in the ordinary manner. Journaled in the door 11 is a shaft 12. Secured on the outer end of the shaft 12 is a handle 13, carrying a pointer co-operating with an index 14. Secured on the inner end of the shaft 12 is a rotatable paper-carrier. This paper-carrier, as herein illustrated, comprises disks or end plates 15 and 16, which are connected by paper-supporting rods 17. To clamp a strip of prepared paper upon this rotatable wheel or paper-carrier, I prefer to provide a clamping-bar 18, as shown most clearly in Figs. 3 and 4, which clamping-bar is provided with centering-pins 19 for engaging sockets in a cross-bar 21, the clamping-bar being held or tightened in position to hold the ends of the paper by a nut 22, as shown in Fig. 3. The rotatable wheel or paper-carrier is provided with a stop-piece 23 opposite the paper-clamping bar 18 for preventing said clamping-bar from hitting the embossing-points of the clock.

Any desired form of ratchet mechanism or spring holding device may be employed for stopping the paper-carrier in position so that the perforations or records shall be made between the paper-supporting bars, as shown in Fig. 4. The stopping or holding device herein illustrated consists of a spring-pressed lever or pawl 24, which is pivoted in position to en-

gage the projecting ends of the paper-supporting rods 17, as shown most clearly in Figs. 3 and 4.

Secured in the casing 10 in position to co-operate with the paper-carrier, and preferably movably mounted in the casing, is a clock-movement, as shown most clearly in Figs. 7 and 8. As shown in these figures, bearings or supports 25 are secured in the casing, and journaled in the bearings 25 is a supporting-frame 26. The bottom plate of the clock-movement is movably mounted in the supporting-plate 26, so that it can be drawn forward, but is normally pulled back by springs 29. An operating-handle 30 is connected to the bottom plate 27 of the clock-movement by a loose stud 31, as shown in Fig. 11. The clock-dial, as illustrated most clearly in Fig. 8, is provided with embossing points or prick-ers corresponding in position to the position of the numerals on an ordinary clock-dial, and the movable parts of the clock, which in the present instance consist of concentric rotary pieces comprising the piece M, which corresponds with the minute-hand of an ordinary clock, and the piece H, which corresponds with the hour-hand of an ordinary clock, are also provided with embossing points or prick-ers.

The clock-movement which operates the movable parts or hands M and H may be of any of the ordinary constructions. In practice, however, I prefer to introduce a supplemental intermediate gear into the time-train, so that the parts or hands M and H will turn in the reverse direction from that ordinarily traveled by clock-hands, and I prefer to use this form of clockwork in order that the records pricked into the paper, as hereinafter described, may be read from the same side of the paper from which the impressions are made, whereas when an ordinary clock-movement is used the record has to be read from the opposite or inside of the paper and cannot, therefore, be conveniently read until the paper is removed from the paper-holder. As illustrated most clearly in Fig. 13, the spindle 50, which operates the minute hand or piece M, may be provided with a pinion 51, which meshes with and is driven by a pinion 52 of the same size, the pinion 52 gearing into the time-train of the clock instead of said time-train being directly geared with the pinion 51 of the minute-hand spindle. By means of this construction the operating-handle 30 may be first pulled in or out to set the clock to the desired position, and by then pushing down on the outer end of the operating-handle 30, so that said operating-handle will fulcrum or turn in the casing, the clock will be lifted to perforate the paper on the paper-carrier to form records, substantially as illustrated in Fig. 4 or as shown on an enlarged scale in Fig. 6.

In order to hold the clock in the position to which the same is drawn by the operating-handle 30, I employ a spring-catch 32, which may be operated by a pin 33, extending

through to the front of the casing below the operating-handle 30, as shown most clearly in Figs. 1 and 2. By means of this construction the catch 32 may be released by its pin 5 33 to allow the clock to be set to the desired position.

In some cases it is desirable to lock the clock in the position to which it is set, so that the same cannot be shifted or moved without first securing access to the inside of the recorder-casing. In order to accomplish this purpose, I provide a small locking-pin 34 for preventing the spring-catch 32 from being released, as desired, as shown in Fig. 10. To 15 limit the upward movement of the clock, the supporting-frame 26 is provided with a foot-piece 36, which engages a screw adjustably threaded into a bracket 37, as shown most clearly in Fig. 7. Projecting up from the 20 plate 26, at the rear side thereof, is an arm or stop-piece 38, which coöperates with the stop 23, carried by the rotatable paper-carrier, as shown most clearly in Fig. 5, so as to prevent the embossing-points of the clock 25 from being carried up into engagement with the paper-clamping bar 18.

In order to provide connections for sounding a bell when the machine is operated, I may employ a star-wheel 39, as shown in Fig. 30 7. The star-wheel 39 is provided on its front face with ratchet-teeth, which are engaged by a pawl 42, carried by the plate 26. The star-wheel 39 is provided with teeth engaging a pin on a weighted lever 40, which carries a 35 striker 41. The striker 41 is normally held out of engagement with the bell, but is sufficiently flexible so that when vibrated by the star-wheel 39 it will sound the bell, as B, to indicate the operation of the machine.

The operation of the various parts employed in a time-recorder constructed according to this invention have been so fully described in referring to the construction thereof that a description of the operation of the device 45 as a whole is thought to be unnecessary.

One particular advantage in the use of a time-recorder constructed according to this invention resides in the fact that the records will be kept upon strips of paper which may 50 be suitably numbered and cut of a size to fit the rotatable paper-carrier, and as the records are made simply by perforating the paper rather than printing an impression thereon the necessity for the use of ink-ribbons 55 or other inking devices, which are always more or less unreliable, is entirely dispensed with and the production of a permanent record will be insured, in which by numbering the several employees each employee's time- 60 record will always be made in the same relative position on the strip of paper used.

I am aware that numerous changes may be made in the construction of my workman's time-recorder by those skilled in the art without departing from the scope of my invention as expressed in the claims. I do not 65 wish, therefore, to be limited to the features

of construction herein shown and described; but

What I do claim, and desire to secure by 70 Letters Patent of the United States, is—

1. In a time-recorder the combination of a casing, a shaft journaled therein, a handle secured on the outer end of the shaft, an index for setting said shaft, a cylindrical paper-carrier secured on the inner end of the shaft, 75 embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for the hours and one 80 for the minutes, mechanism for turning the hour and minute points or prickers in the opposite direction from the hands of an ordinary clock, and means for operating said parts to perforate the paper on the paper-carrier 85 to form records each consisting of perforations showing a complete dial with the position of the clock-hands indicated thereon which will read correctly from that side of the paper from which the impression is made, 90 substantially as described.

2. In a time-recorder, the combination of a casing, a shaft journaled therein, a handle secured on the outer end of the shaft in position to coöperate with an index, a paper-carrier secured on the inner end of said shaft 95 and consisting of side plates with paper-supporting rods connecting the side plates, embossing points or prickers arranged in a circle in positions corresponding with the numerals 100 of an ordinary clock-dial, an embossing point or pricker for the hours and one for the minutes, a holding device for preventing the paper-carrier from stopping with one of its paper-supporting rods opposite the said points 105 or prickers, and means for actuating the parts so that the said embossing points or prickers will make perforations in the paper between the rods of the paper-carrier to form records showing the times at which the machine is 110 operated, substantially as described.

3. In a time-recorder, the combination of a casing, a shaft journaled therein, a handle secured on the outer end of the shaft in position to coöperate with an index, a paper-carrier secured on the inner end of the shaft and 115 consisting of side plates, embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for 120 the hours and one for the minutes, a spring-pressed lever or pawl for engaging between the projecting ends of the paper-supporting rods for preventing the paper-carrier from stopping with one of its paper-supporting rods 125 opposite the said points or prickers, and means for actuating the parts so that the embossing-points will make perforations in the paper between the rods of the paper-carrier to form records of the time at which the machine is operated, substantially as described. 130

4. In a time-recorder, the combination of a casing, a shaft journaled in said casing and having a handle or pointer secured on its

outer end to cooperate with an index, and having a rotatable paper-carrier secured on the inner end of the shaft, embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for the hours and one for the minutes, means for actuating said parts so that the embossing points or prickers will perforate the paper on the paper-carrier, a paper-clamping mechanism for holding the paper in place on the paper-carrier, and stopping devices arranged to prevent the paper-clamp from coming into contact with said embossing points or prickers, substantially as described.

5. In a time-recorder, the combination of a casing, a cylindrical paper-carrier journaled therein, a vertical movable supporting-plate mounted in the casing below the paper-carrier, embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for the hours and one for the minutes, means for actuating said embossing points or prickers so that they will perforate the paper to form time-records, and a handle extending through the casing and connected so that the same may be pulled out to move the embossing points or prickers to different positions parallel with the axis of the paper-carrier, and so that the same can be actuated to lift the supporting-plate and embossing points or prickers when it is desired to operate the machine, substantially as described.

6. In a time-recorder, the combination of a casing 10, a shaft 12 journaled in the door thereof, an operating-handle 13 secured on the outer end of the shaft to cooperate with an index 14, a paper-carrier supported on the shaft 12 and consisting of side plates connected by paper-supporting rods, a spring-pressed lever 24 cooperating with the pro-

jecting ends of the paper-supporting rods to hold the carrier in different positions, embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for the hours and one for the minutes, and means for actuating said parts so that the embossing points or prickers will perforate the paper on the paper-carrier to form records, each consisting of perforations corresponding to the numerals of a clock-dial and perforations indicating the position of the hands, substantially as described.

7. In a time-recorder, the combination of a casing, a shaft journaled in the door of said casing, a handle secured on the outer end of the shaft to cooperate with an index, an annular or cylindrical paper-carrier secured on the inner end of the shaft, a supporting-plate movably mounted in the casing, embossing points or prickers arranged in a circle in positions corresponding with the numerals of an ordinary clock-dial, an embossing point or pricker for the hours and one for the minutes, said points or prickers being mounted on said supporting-plate so that the same may be set to different positions parallel with the shaft of the paper-carrier, an operating-lever connected to set said points or prickers to different positions and to lift the same so that they will perforate the paper on the paper-carrier, and a spring-catch for holding the said points or prickers in the different positions to which they are set by said operating-lever, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES E. ONGLEY.

Witnesses:

LOUIS W. SOUTHGATE,
PHILIP W. SOUTHGATE.