

No. 624,413.

Patented May 2, 1899.

A. E. WAGGONER.
WATCHMAN'S CLOCK.

(Application filed Nov. 25, 1898.)

(No Model.)

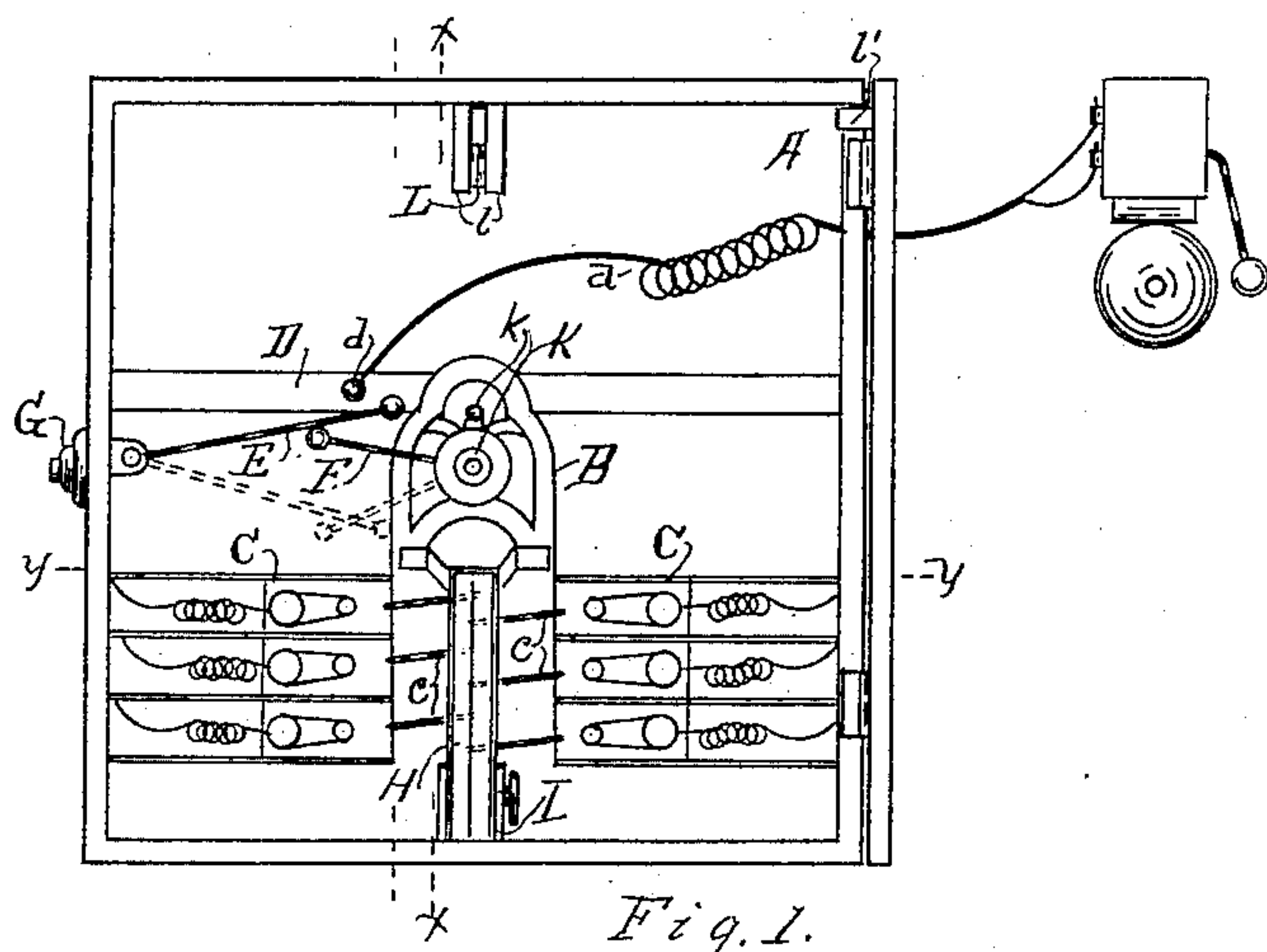


Fig. 1.

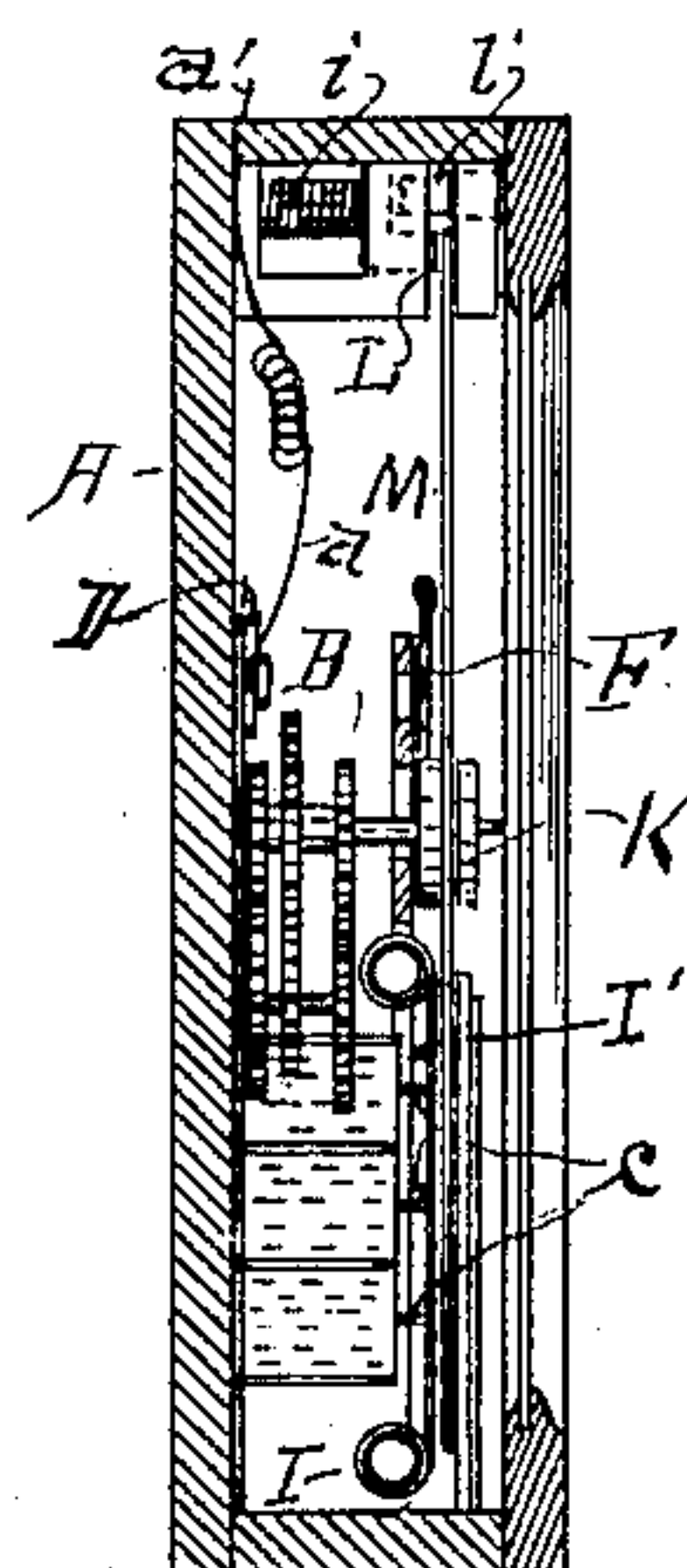


Fig. 3.

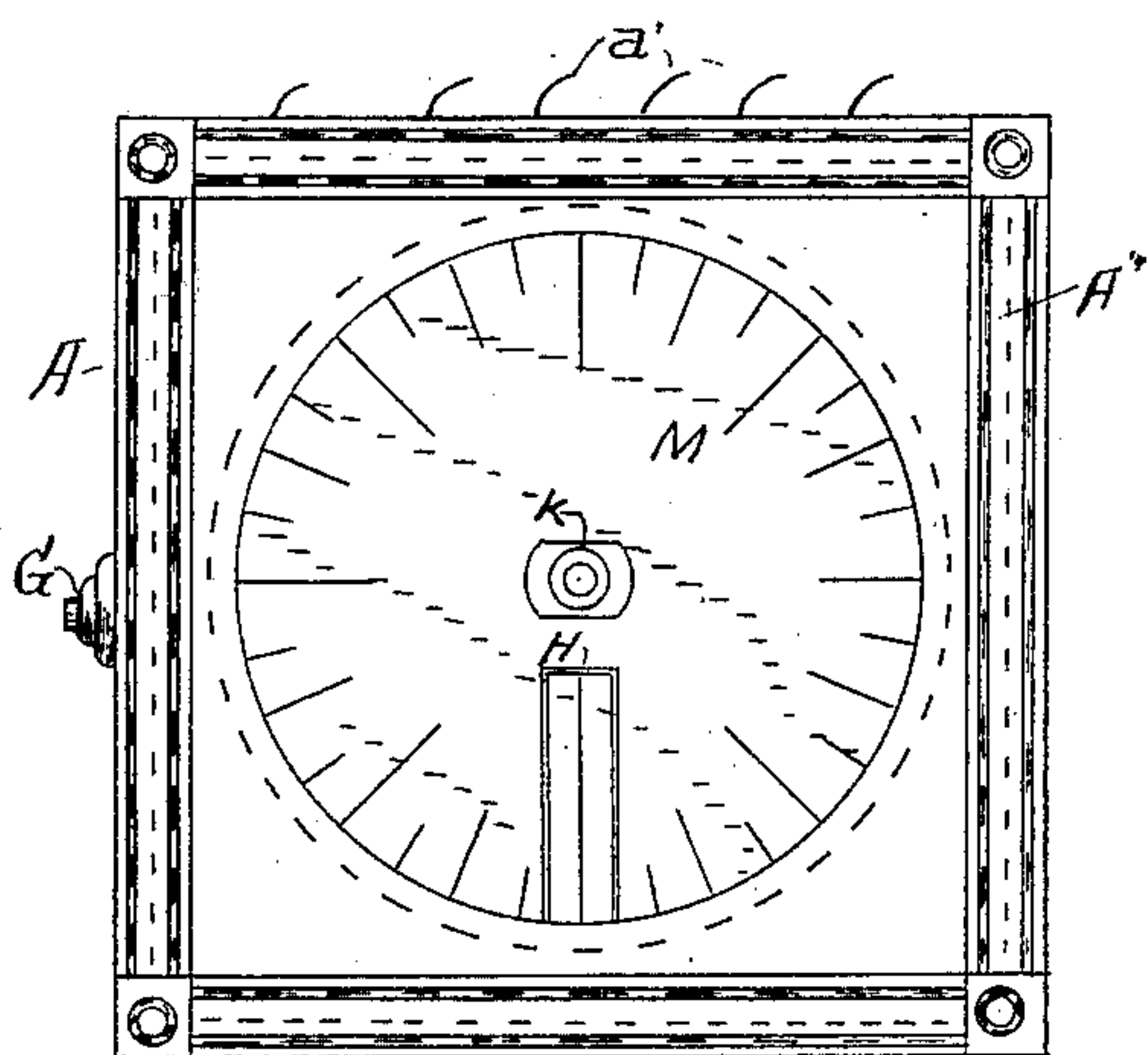


Fig. 2.

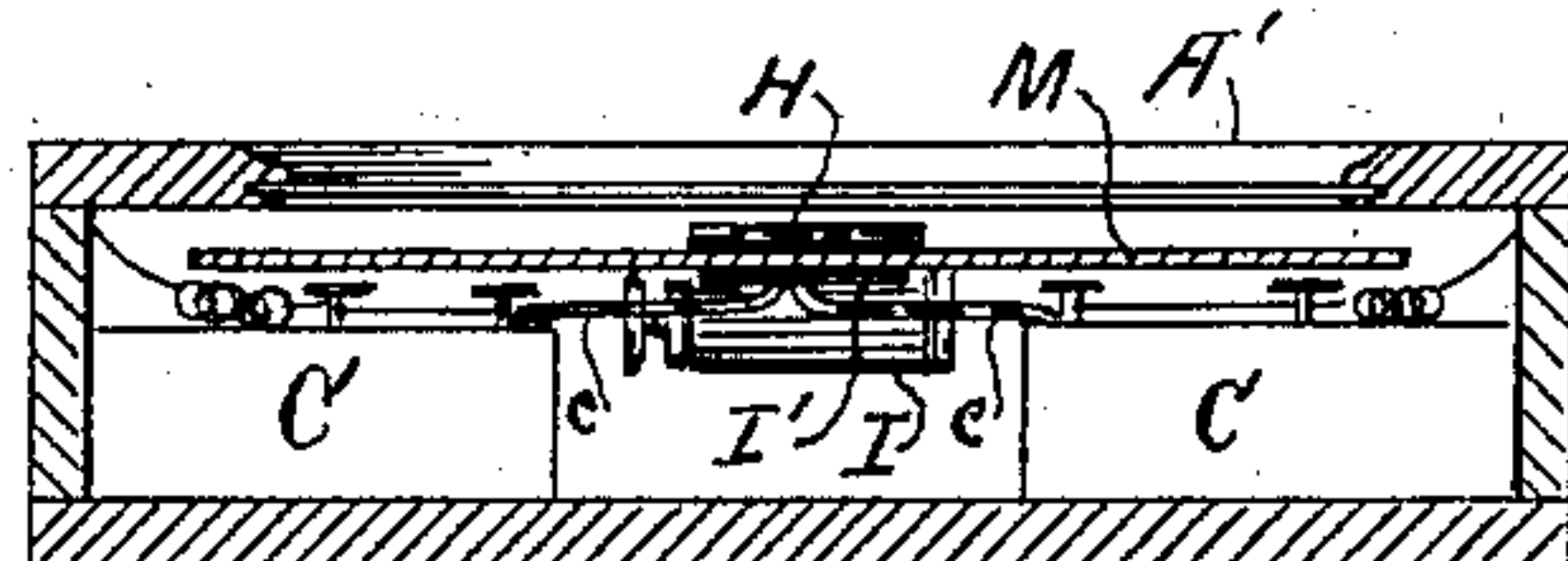


Fig. 4.

Witnesses.

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WATCHMAN'S CLOCK.

SPECIFICATION forming part of Letters Patent No. 624,413, dated May 2, 1899.

Application filed November 25, 1898. Serial No. 697,452. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. WAGGONER, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented certain new and useful Improvements in Watchmen's Clocks, of which the following is a specification.

My invention relates to improvements in time and alarm clocks for use in mills, factories, stores, and other places where it is necessary to employ a watchman and it is desirable that his presence in different parts of the building may be recorded for future use by the superintendent; and its objects are, first, to so arrange the several marking devices that a record may be entered upon the dial from any part of the building from several fixed stations; second, to so arrange the dial and the markers that the station from which the alarm is transmitted may be readily ascertained by the marking of the dial; third, to so arrange the recording instrument that if the watchman neglects to record his whereabouts at given periods an alarm will be sounded at a previously-arranged station and will continue to sound until the watchman rearranges the recording mechanism, and, fourth, to so arrange the recording mechanism that the dial cannot be tampered with without recording the same, so that it may be detected by the superintendent or others having the supervision of the building or factory where the clock is in use. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the clock with the dial removed and the door open. Fig. 2 is the same with the dial in place and the door closed. Fig. 3 is a transverse vertical section on the line $x x$ of Fig. 1. Fig. 4 is a sectional plan of the same on the line $y y$ of Fig. 1.

Similar letters refer to similar parts throughout the several views.

My device is inclosed in an ordinary case A, having a door A' and containing a clock B, which supports and rotates the dial M. I make this dial of thin stiff paper, so that it may be cheaply constructed, easily adjusted, and conveniently filed away, and it has an aperture through the center, by means of which it is supported upon the post K and is pre-

vented from slipping on the post by the pin k . Immediately below the post K and near the door I place a glass standard H, which is designed to stand outside of the dial and act as a resistance-post to support the lower portion of the dial against the strokes of the recording-fingers c , which are supported upon vibrating armatures induced to vibrate by the electromagnets C, which are electrically charged by a broken circuit of electricity, so that at any time when the circuit is completed the arm c will be caused to vibrate against the ink-ribbon I' and print upon the back of the dial without making any imprint or mark upon the face of the dial, and the watchman cannot detect what impressions are recorded upon the back of the dial and cannot readjust it.

The ink-ribbon is supported and operated upon reels I immediately between the ends of the arms c and the post H, so that each stroke of the fingers will make the impression on the back side of the dial, substantially as the impressions are made from the ink-ribbons in type-writers. The dials should be divided into hours and these subdivided into halves, quarters, &c., substantially like the dial of an ordinary clock, which it resembles in every particular, except that it rotates with the clockwork instead of being provided with revolving hands.

I provide for identifying the particular portion of the building the watchman may record his presence from by the use of several magnets and wiring each from a different station and connecting an impression-arm from each magnet to make an impression on the dial in a different position. Thus in Fig. 1 I have shown six magnets and recording-arms c , and as each is placed some little distance above the preceding one it will be readily seen that it is an easy matter to follow the rounds of the watchman, not only on account of the different position of the arms, but also on account of the revolving motion of the dial.

I provide for detecting negligence on the part of the watchman to record his presence at the proper time or within a reasonable time thereafter by securing an arm F to the post K, so that it will be carried around with the post; but a slight resistance will hold it, so

that it will allow the post to continue to revolve without retarding its motion or having a tendency to stop the clock, and place immediately within its radius a contact-post *d*, which is supported on the metallic bar D and is connected, by means of the wire *a*, with a bell, as J, which may be placed at any point, either in the building, in the superintendent's house, or at police headquarters, &c., so that when the arm comes in contact with the contact-post an electric current will be established between the clock and the bell and an alarm sounded.

In the drawings I have shown the clock as designed to cover six stations, five of which are in different parts of the building and are communicated with through the wires *a'* and the sixth to be operated by the button G at the clock. With this it is presumed that the watchman will record his whereabouts each ten minutes, and that the button G will force the arm E down against the arm F and carry this arm down to the position indicated by the dotted lines, which is presumed to be a trifle over an hour's travel from the contact-post *d*.

I place upon the upper wall of the clock-case a knife L, which is actuated to throw it forward by a spring, as *i*, and in front of this I place a stop or stops, as *l*, in position so that the upper edge of the dial will be supported between them. On the door I place a short arm, as *l'*, in position to press the knife back into the case when the door is closed and to allow it to be forced out between the stops *l*, so that it will puncture the edge of the dial and render it impossible to open the door without recording it upon the dial, which insures against the danger of the clock being tampered with by the watchman for the purpose of hiding his negligence in recording his position in the building at the proper time.

One advantage that I attain with my clock over others now in use is that no matter what station is signaled from the exact station and time of signaling are both recorded, and that, too, in such a manner that the watchman cannot ascertain from the markings on the dial either the station or the time that the registration is made.

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

1. In combination, a watchman's clock, elec-

tromagnets vibrating armatures connected with said magnets and carrying oscillating arms, a contact-standard, an inked ribbon back of said standard and in the line of vibration of the oscillating arms, a rotating dial between said standard and ribbon and in position to receive the imprint of the ink upon the back without being apparent on the front of the dial, an arm movably attached to the dial-post of the clock, a corresponding arm pivoted to the clock-case, and a contact-plate connected with an alarm, all in position so that the arm upon the dial-post will carry the pivoted arm in contact with the contact-plate and sound an alarm, substantially as and for the purpose set forth.

2. In combination, a watchman's clock, a rotating dial thereon, electromagnets, vibrating armatures actuated by said magnets and carrying oscillating arms said arms arranged to register upon the back of the dial the time when and the place where electric contact is made and in such a manner that knowledge of the position of said contact cannot be obtained by the watchman, a knife in the upper end of the clock-frame in position to puncture the upper edge of the dial when the door is opened, a spring to actuate said knife, a projecting arm on the door to force the knife back when the door is closed, and a support to hold the dial while being punctured by the knife, substantially as and for the purpose set forth.

3. In combination, a watchman's clock, a revoluble dial thereon, electromagnets, vibrating armatures connected therewith and carrying oscillating arms arranged to make an impression upon the dial, a spring-actuated knife in position to puncture the dial if the door of the clock is opened, and an arm on the door to carry said knife from contact with the dial, an arm movably attached to the dial-post, a corresponding arm pivoted to the clock-frame in position to be engaged by the first-named arm, a contact-plate in position to engage the pivoted arm, and an alarm to be sounded thereby, substantially as and for the purpose set forth.

Signed at Muskegon, Michigan, November 7, 1898.

ALBERT E. WAGGONER.

In presence of—

LIZZIE C. LANGE,

PHILIP W. NISKERN.