

(No Model.)

G. W. & A. D. BLODGETT.
Watchman's Clock.

No. 240,647.

Patented April 26, 1881.

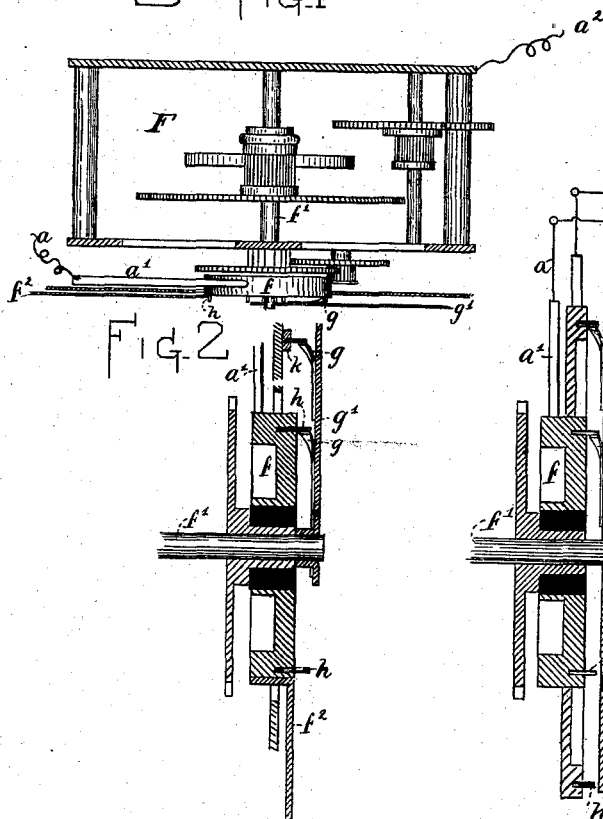
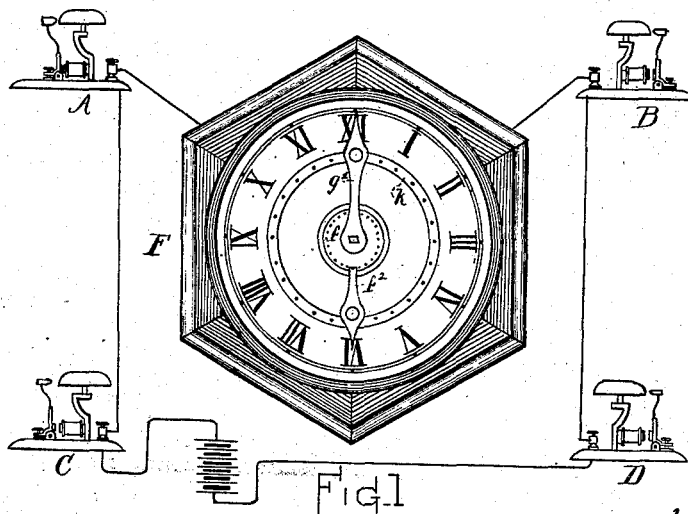


FIG. 2.

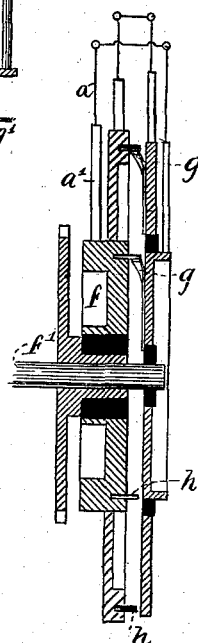


FIG. 3.

Witnesses:

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their attys.

UNITED STATES PATENT OFFICE.

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WATCHMAN'S CLOCK.

SPECIFICATION forming part of Letters Patent No. 240,647, dated April 26, 1881.

Application filed January 20, 1881. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. BLODGETT, of Boston, in the county of Suffolk and State of Massachusetts, and AARON D. BLODGETT, of Newton, in the county of Middlesex and said State, have invented an Improved Watchman's Clock, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, making a part of hereof, in which—

Figure 1 is a diagram illustrating our invention. Fig. 2 is a horizontal central section of the clock shown in Fig. 1. Fig. 3 is a sectional view enlarged. Fig. 4 is a modification.

Many plans have been devised for enabling employers to make sure that watchmen and others have been vigilant or have faithfully discharged their duty, and our invention relates to contrivances of this class; and it consists in the combination of a time-piece and one or more electrical bells or other signals in such a manner that the time of striking of the bells or giving the signals can be predetermined by the employer and readily changed at pleasure, but can only be ascertained by the watchman by vigilance, so that if the watchman be required to keep a record of the time when the signal is given, or time and place where there are more than one signal, such record will readily show whether he has been vigilant or not.

In the drawings we have shown four bells, A B C D, which are supposed to be at different rooms of a factory, (although, as is obvious, the number and arrangements of the bells or other signals will vary very largely,) all in one electrical circuit *a a'*, &c. This circuit is open normally, and the hammer of each bell remains away from its bell until the circuit is closed, although, as will be clear, the circuit might be a closed circuit and the alarm or signal be given by breaking the circuit instead of making it. Under these circumstances if the watchman's duty be to visit the four rooms of the factory from time to time during the night and to keep a record of the time when he is in each room, and also to keep a record of the time when each bell strikes, it is clear that he cannot keep a true record unless he knows just

when each bell will strike, and if the apparatus be so set that the bells will strike at irregular but predetermined intervals, a true record is impossible unless the watchman is vigilant and notes the signals and the time when each sounds, and in this case the place where or room in which each sounds. The principle of our invention consists, therefore, in the use of one or more alarms or signals which signal at intervals known to the employer, but unknown to the person employed, the record of the signals by the employé showing conclusively whether he has done his duty or not.

The simplest form of our apparatus is that shown in detail in Fig. 2 of the drawings, where F represents a time-piece, upon the main arbor *f'* of which is secured a disk, *f*, insulated, but in electrical contact with wire *a* by means of spring *a'* pressing upon the periphery of disk *f*, this disk *f* revolving with arbor *f'* and hour-hand *f*².

Upon the minute-hand *g'* is secured a spring, *g*, which is so arranged as to come in contact with the pins *h* as the hour and minute hands are carried around by the mechanism of the clock, and as the wire *a*² is in electrical contact with the metal frame of the clock, the circuit is made whenever spring *g* comes in contact with either of the pins *h*. Now, if the disk *f* be provided with a given number of pins, say at regular intervals, the mere motion of disk *f* at the hour-hand rate will cause the times of contact to vary; for suppose there be but four pins *h*, then if the disk *f* did not revolve the spring carried by the minute-hand would make contact once every quarter of an hour, and if the first contact was on the hour the next would be on the quarter, the next on the half, and the third on the three-quarters, and so on; but as the disk *f* revolves at the hour-hand rate the second contact, supposing the first to be on the hour, will be at nearly seventeen minutes past, the second contact will be about thirty-three minutes past, and so on, each contact and each signal being thus rendered irregular. The disk *f* is provided with a number of holes, so that the pins *h* can be shifted to various positions and their number varied from time to time, for in a few days an intelli-

gent watchman will soon learn, especially if he keeps a careful record, the true order of the signals; but if the position or both the position and number of the pins *h* be varied from time to time, it will at once be seen whether he is faithful or not. As an additional precaution a second series of pins *h* are used, which are inserted in a metallic ring, *k*, secured to the dial, or in proper relation to a second spring *g* on the minute-hand. This ring may be readily revolved by the mechanism of the clock in a manner too well known to require description.

It will be obvious that our system may be largely modified, and that the number of bells and contact-pins will vary with the number of stations—for example, in one case, a machine required to be attended to about five times an hour during the night, and in this case the faithful performance of the attendant's duty was secured by a clock having five pins on the disk *f* and but one bell in the circuit, the second series of pins being unnecessary in this instance.

In some instances it is desirable to have one of the springs *g* the electrode of one circuit and the other spring the electrode of a different circuit. This is readily accomplished by

attaching insulated rings of metal to the minute-hand arbor, as shown in Fig. 4, each ring being connected by a light spring to its own circuit.

We have spoken mainly of watchmen, but it will be clear that our clock is useful in hospitals and other places for the proper serving of prescriptions, in greenhouses and other places for the proper regulation of the temperature, and for many like purposes.

What we claim as our invention is—

The watchman's clock above described, consisting of a time-piece having pins *h* inserted at the face of the clock, in order that they may be readily changed in number and position, or both, each pin being in electrical connection with circuit *a a'*, and also provided with one or more contact-springs, *g*, also connected with circuit *a a'*, whereby contact between spring *g* and any one of the pins *h* completes circuit *a a'* and gives one or more signals, all as above set forth.

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