

T. H. SMITH.

2 Sheets—Sheet 1.

Time Alarm.

No. 103,251.

Patented May 17, 1870.

Fig. 1.

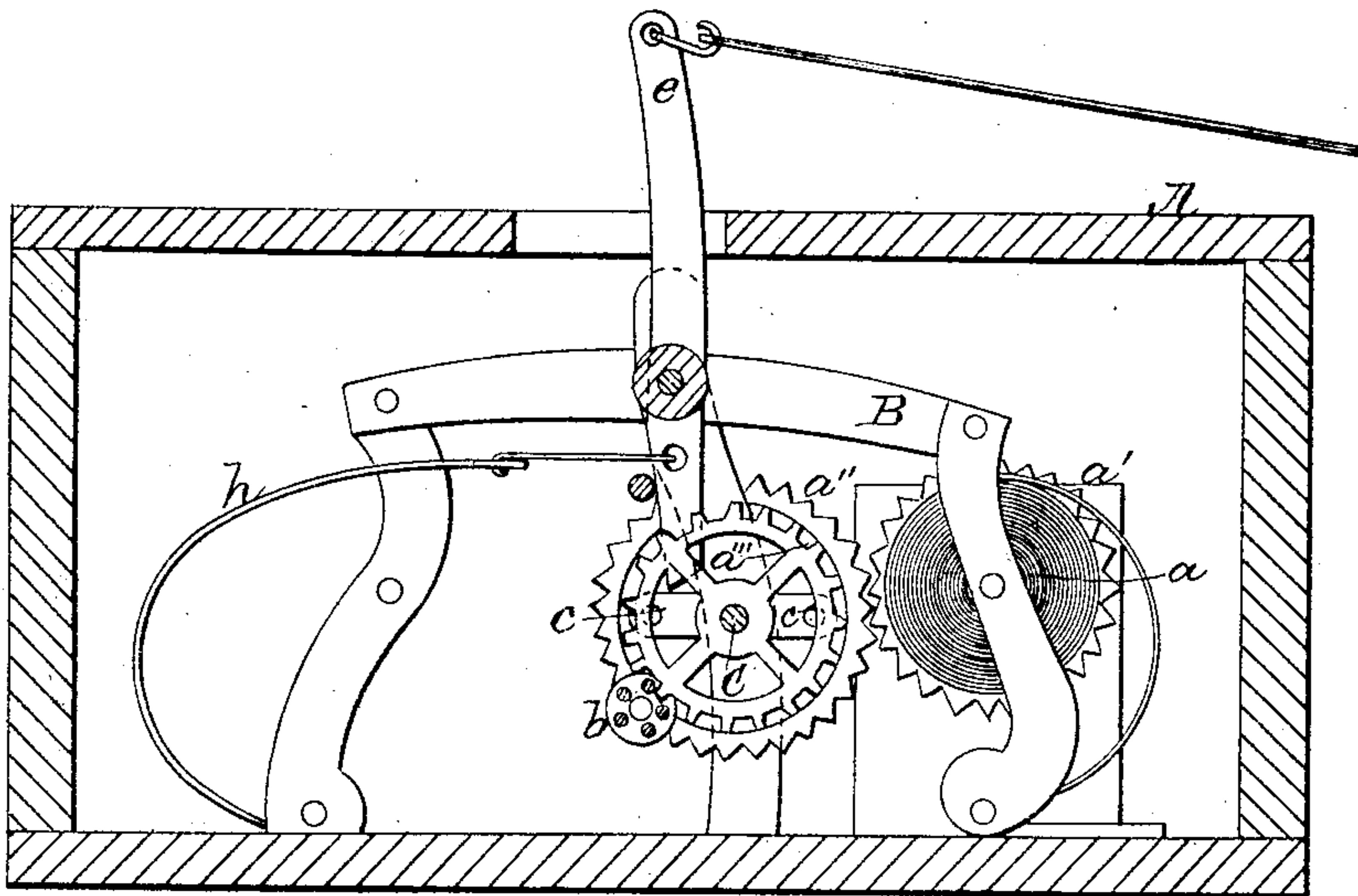
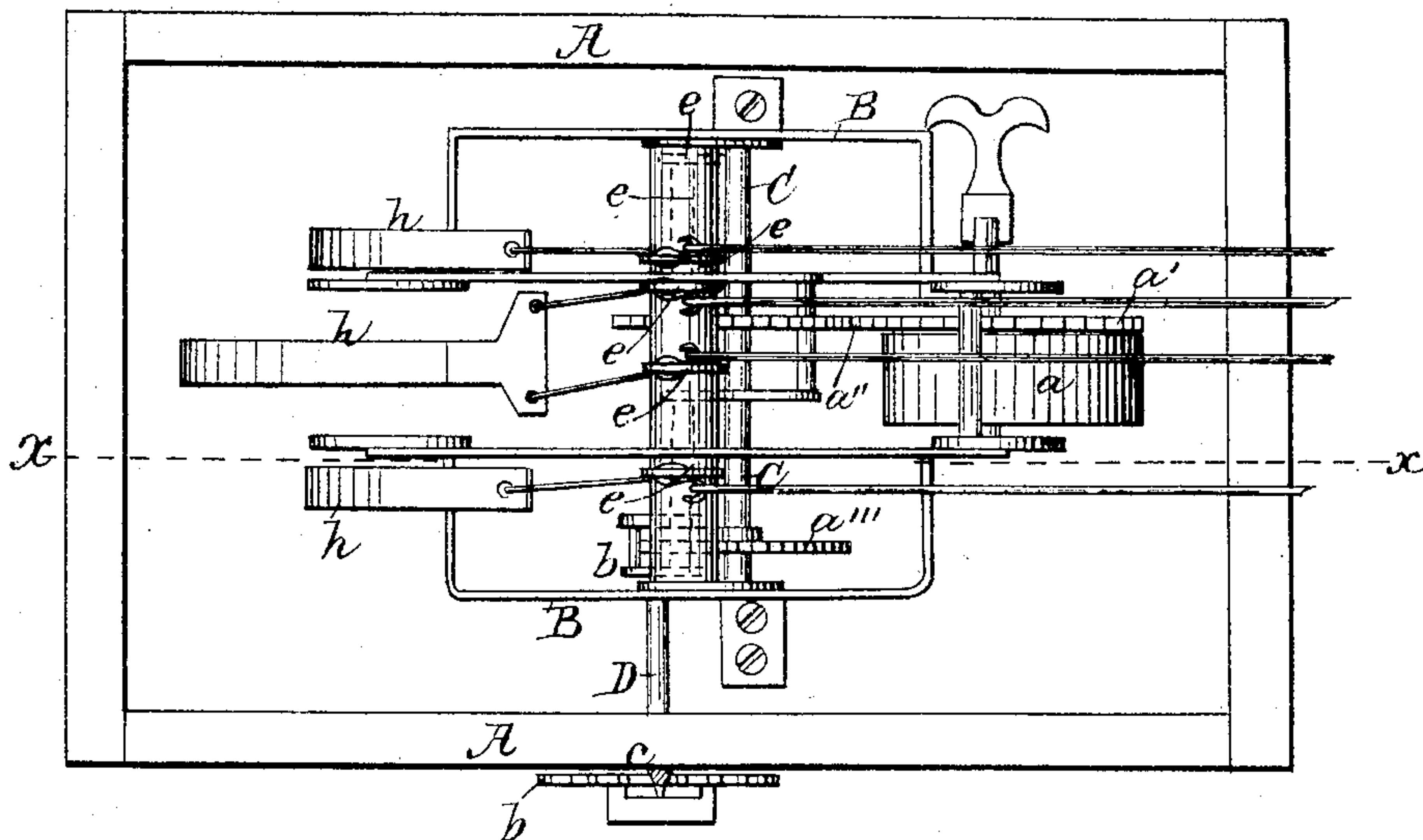


Fig. 2.



Witnesses.

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Time Alarm.

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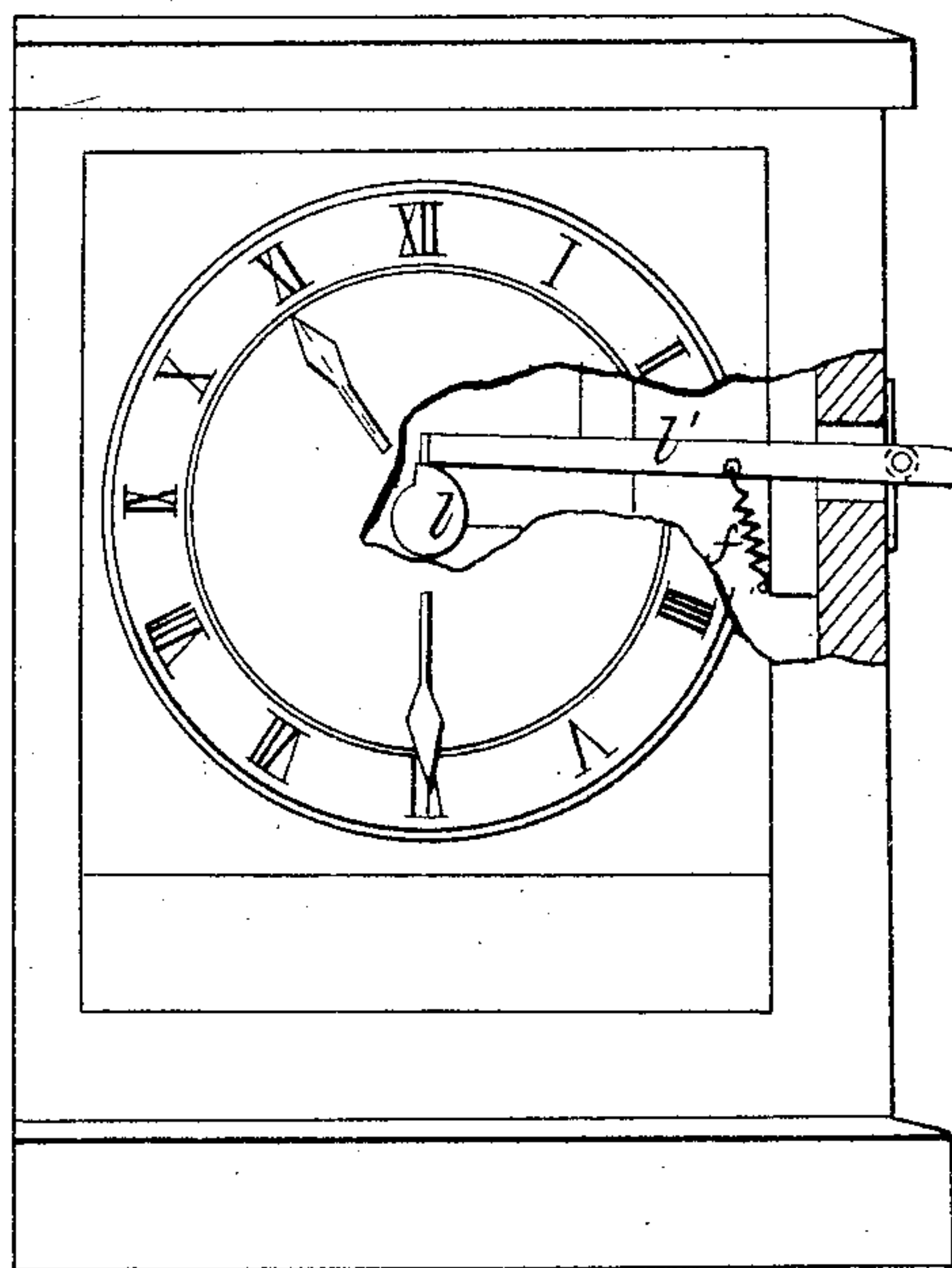
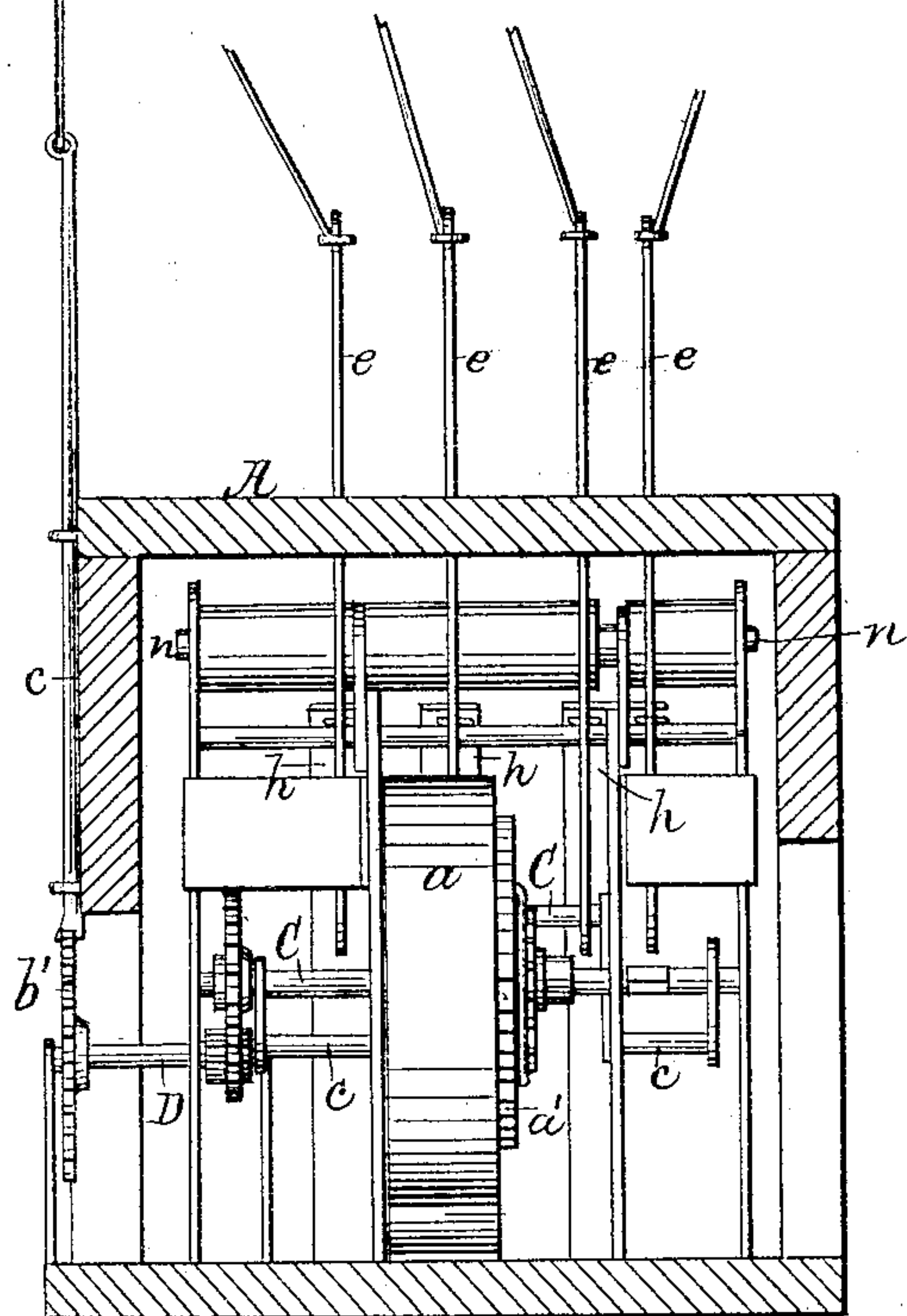


Fig. 3.



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# UNITED STATES PATENT OFFICE.

THOMAS H. SMITH, OF URBANA, OHIO.

## IMPROVEMENT IN TIME-ALARMS.

Specification forming part of Letters Patent No. **103,251**, dated May 17, 1870.

*To all whom it may concern:*

Be it known that I, THOMAS H. SMITH, of Urbana, in the county of Champaign and State of Ohio, have invented a new and useful Improvement in Alarms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of my specification, in which—

Figure 1 represents, by a longitudinal vertical section, the alarm mechanism; Fig. 2, a plan of the same, and Fig. 3 an end elevation of the same, showing its connection with an ordinary alarm-clock, which is represented by a front elevation.

The special object of this invention is to provide an alarm for use in hotels; and it consists in combining with the mechanism of an ordinary alarm-clock certain other mechanism which, when set free by the clock at a predetermined hour, will ring at one and the same time all the bells in the different rooms of the hotel, or any one or more of them, as may have been previously determined upon, all as will be hereinafter fully explained.

In the drawings, A represents a box containing my alarm mechanism. The latter is shown as sustained upon a frame, B, and consisting of a coil-spring, *a*, connected with a system of cog-gearing *a' a'' a'''*, the wheels *a''* and *a'''* being upon one central shaft, C, and the wheel *a'''* meshing into the lantern-wheel *b*, which latter is mounted upon a shaft, D, that has secured upon its outer end a cog-wheel, *b'*, just outside the wall of the box A. The spring *a*, when wound up, tends to cause all the wheels connected with it to revolve, which tendency is resisted, and the revolution of the wheels prevented by a pin, *c*, held vertically in sockets along the side of the box A, and resting at its lower end between the two teeth of the wheel *b'*, and thus acting as a brake. At its upper end the pin *c* is connected by a rod, *l'*, with the outer end of a lever, *l*, which is fulcrumed to the clock-case,

and rests at its inner end upon the releasing-cam *l'* of the ordinary alarm-clock.

*e e* are levers, which should correspond in number with the bells in the hotel in which the alarm is to be used, hung upon a rod, *n*, and connected at their upper ends with the bell-wires, and at their lower ends with springs *h*, which, in conjunction with cranks or eccentric pins *e*, (shown in Fig. 1,) when the alarm mechanism is set free, serves to impart an oscillating motion to the levers *e*, and thereby ring the bells.

The alarm mechanism is set free at the proper time by the pin *c* being disengaged from the wheel *b'* by means of the lever *l'* and spring *f*, the latter serving to depress the inner end of the lever, and thereby raise the outer end, and with it the pin *c*, when the cam *l* has revolved far enough to admit of a downward movement of the lever *l'*.

In hotels in which annunciators are used the same wires which are used to give the alarm in the office may be used to sound the alarm in the rooms, no change whatever being required other than to connect the wires in the different rooms of the hotel with bells hung upon the walls of the rooms in the usual manner.

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

In combination with the cam *l* of the ordinary alarm-clock, the lever *l'*, connecting-rod *l''*, and the alarm mechanism herein described, the same consisting essentially of the gearing *b b' a' a'' a'''*, springs *a h*, lever *e e*, shafts C D, and cranks or eccentric pins *e*, substantially as and for the purpose set forth.

To the above specification of my improvement I have set my hand this 26th day of June, 1869.

THOMAS H. SMITH.

Witnesses:

CHAS. A. PETTIT,  
SOLON C. KEMON.