R. N. TOOKER.

Fire-Alarm Signal-Box.

No. 202,891. Patented April 23, 1878.

FIG. 1.

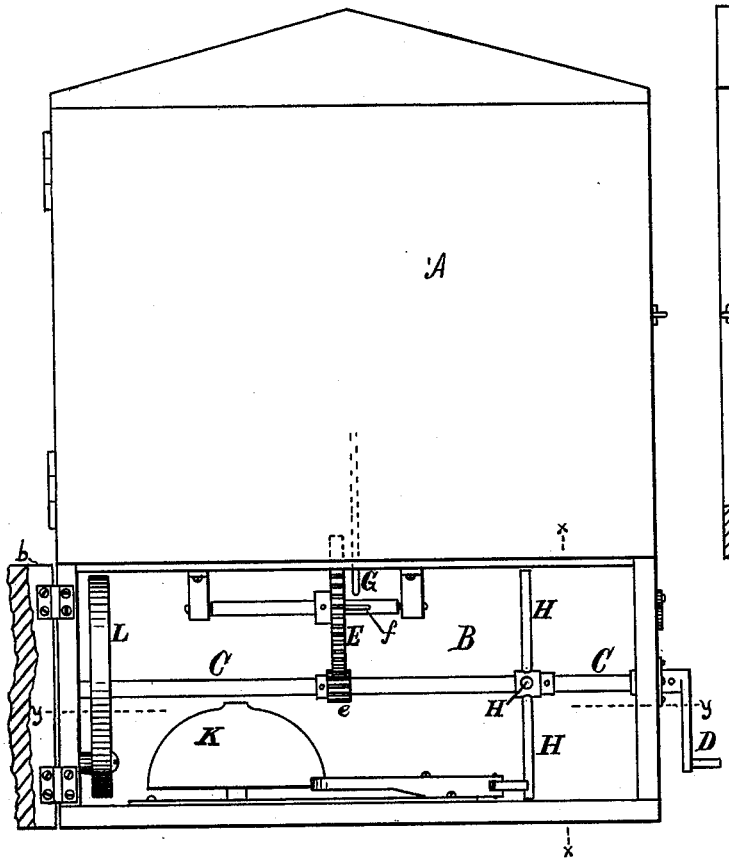
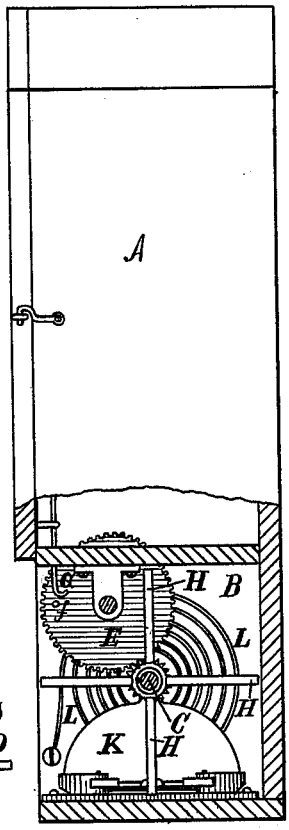


FIG. 2.



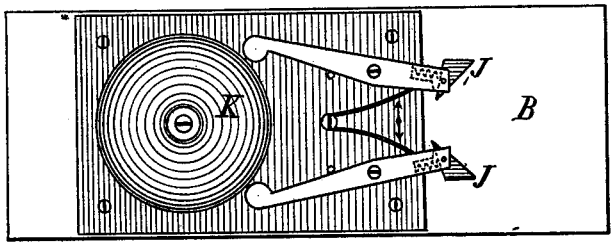


FIG. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT N. TOOKER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FIRE-ALARM SIGNAL-BOXES.

Specification forming part of Letters Patent No. **202,891**, dated April 23, 1878; application filed April 1, 1878.

To all whom it may concern:

Be it known that I, ROBERT N. TOOKER, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Fire-Alarm Signal-Boxes, of which the following is a specification:

This invention relates to improvements in fire-alarm signal-boxes, and is in the same general line of invention as the improvement patented to me heretofore in Letters Patent of the United States No. 164,406, dated June 15, 1875. In that patent I set forth the invention generally as follows:

"Fire-alarm signal-boxes as now usually constructed can only be opened by appropriate keys, which are carried by patrolling policemen or deposited in some building near by, the building, in the latter case, being designated by a sign placed upon or adjacent to the box. Hence any one other than a custodian of a key must, before he can give an alarm, look up one of those instruments. Much time is apt to be lost in this search by such contingencies as the absence of the inmates of the building where the key is kept, or the loss or misplacing of the key, and from other causes not necessary to be enumerated here.

"It is estimated by experienced firemen that upon the average at least five minutes are lost between the breaking out of a fire and the giving of the alarm, and that much of this lost time may be charged to the causes mentioned. What is done during these five minutes in bringing the fire-extinguishing apparatus into play is, of course, of the utmost consequence in determining the extent and duration of the fire; and hence it becomes very desirable to obtain some form of alarm-box which may be opened without a key by any one desiring to give an alarm, but which shall at the same time afford such means for the detection of trifling and malicious persons that they will be deterred from meddling with the same, and so prevent, in a measure, false alarms.

"My invention has for its main object the providing of a box which shall possess the qualities just mentioned, and I accomplish it by attaching a bell or gong, which is sounded by mechanism set in motion by turning the handle to unlatch the door, the bell thus acting as a local alarm."

The present improvement consists in combining the local alarm with the box in such manner that the pulling of the signal may be effected without opening the box, and the local alarm sounded by the act of pulling the signal.

The special mechanism which I have devised for the accomplishment of this invention, and which is the best form which has thus far occurred to me for the carrying out of the invention, is shown in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front view of a fire-alarm signal-box provided with my improvement. Fig. 2 is a section on the line *x x* of Fig. 1, and Fig. 3 is a section on the line *y y* of Fig. 1.

Like letters of reference indicate like parts wherever used.

In the said drawings, A represents a common fire-alarm signal-box, of which I have deemed it unnecessary to show more than the exterior. Attached to the bottom of the box, or forming part with said box, is a supplemental chamber, B, for containing the appliances for generating the local alarm. Within this casing or chamber B is a shaft, C, running from one end to the other. At one end it projects outside of the casing, and is provided with a crank, D, upon the outside, so that when the door of the signal-box is closed and locked, and the door *b* of the chamber B is also closed and locked, the only thing accessible will be this crank. Upon this shaft is a pinion, *e*, which engages a cog-wheel, E, provided with a projecting pin, *f*. Matters are so contrived that a hook, G, attached to the pull of the fire-alarm signal in the box above, depends so as to stand in the path of the pin *f*. By turning the crank the pin is carried around until it engages the hook and pulls the signal. But in the meantime the turning of the crank has caused a local alarm, which commenced to sound as soon as the crank commenced to turn, and continued twice as long as the crank is turned, which local alarm is produced as follows: Upon the shaft C which carries the crank is a hub, carrying several arms or spokes, H, which spokes, as the shaft is revolved, come in contact with spring-hammers J J, causing said hammers to rapidly strike a gong, K. When the crank is

released the shaft is carried rapidly back in an opposite revolution by means of the coiled spring L, which has been coiled up by the revolution of the shaft, thus prolonging the alarm.

Of course it will be understood that these several details and special mechanisms may be considerably modified without changing the character of the invention.

I claim—

1. The combination, with a fire-alarm signal-box, of a local alarm which is sounded by the mechanism which turns in the alarm, substantially as set forth.

2. In combination with the signal-giving mechanism and the local alarm of a fire-alarm signal-box, a crank or other operating device placed outside the box, and connected with and operating both the signal and local alarm, substantially as set forth, whereby the opening of the door is rendered unnecessary.

ROBT. N. TOOKER.

Witnesses:
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