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Fire-Alarm Signal-Boxes.

No. 140,106.

Patented June 17, 1873.

Fig. 1.

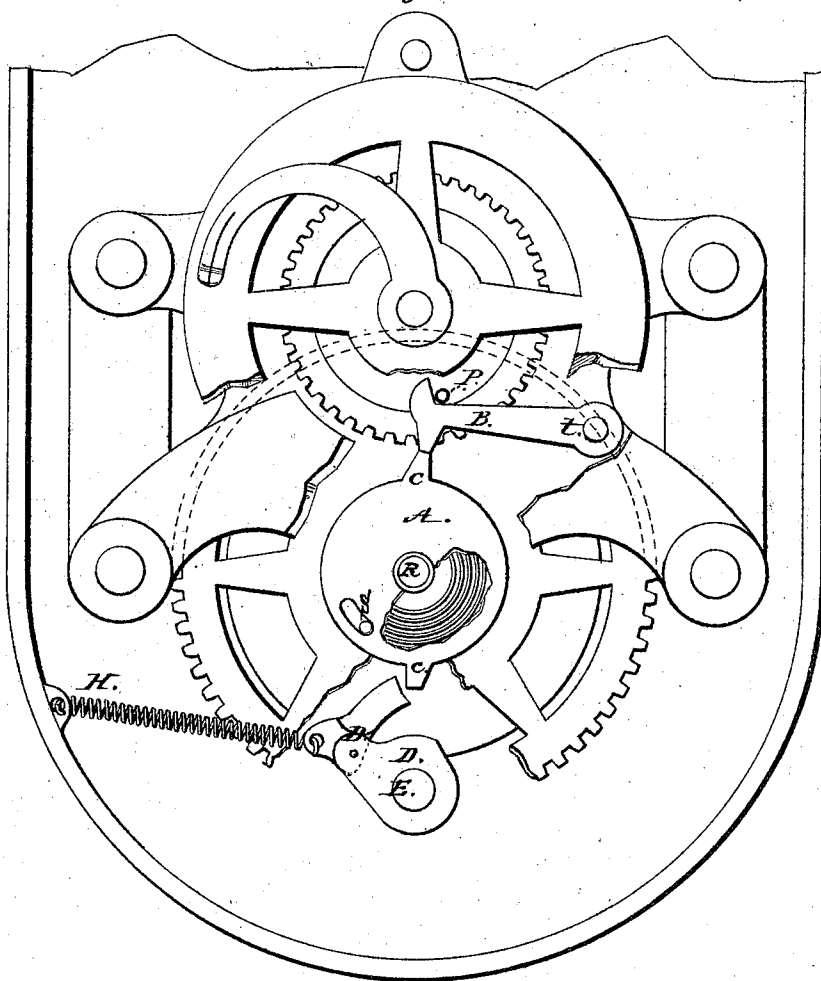
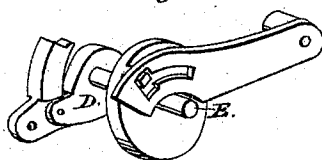


Fig. 2.



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GEORGE WRIGHT, MINARD Y. HOLLEY, AND HENRY R. MILES, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNORS, BY MESNE ASSIGNMENTS, TO GAMEWELL & COMPANY, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-ALARM SIGNAL-BOXES.

Specification forming part of Letters Patent No. **140,106**, dated June 17, 1873; application filed December 18, 1872.

To all whom it may concern:

Be it known that we, GEORGE WRIGHT, MINARD Y. HOLLEY, and HENRY R. MILES, of Washington city, District of Columbia, have invented an Improvement in the Mechanism of Automatic Fire-Alarm Signal-Boxes, for promoting reliability of action, and simplifying, to a great degree, the method and labor of setting in motion and operating automatic signal-boxes, used for fire-alarm, or other purposes.

The object of our invention, in part, is to obviate the necessity of opening the outer door of the signal-box for the purpose of turning in an alarm of fire; and also to secure a device for that purpose, which, when set in motion, cannot be interfered with or diverted in any manner from its work while giving the alarm, either by over zeal, carelessness, or design on the part of those whose business it is to turn in the alarms for fire; and we hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of our invention sufficient to enable those skilled in the art to practice it.

A is a round metal plate, with two abrupt protuberances or cams, C C, as shown in the drawing. This plate works loosely on the driving-shaft R, and against the drum in which the mainspring or propelling power is fastened. The broken curved lines shown in the drawing represent a spring in the back part of the plate A, which holds the plate firmly in its normal position while the clock-work in the signal-box is at rest, and also aids in starting promptly the automatic motion of the clock-work by pressing hard against the end of stop-lever B, when released in the manner hereinafter described. S is a slot in plate A, through which a pin made fast to the drum on driving-shaft protudes. The object of this slot and pin is to allow plate A to turn just far enough on the shaft R to permit lever B, which holds the clock-work at rest, to drop from protuberance C, thereby releasing the pin P in one of the cogged wheels of the clock-work from contact with lever B, and allows the machinery to start instantly and to run

without interruption or possible hindrance until the propelling-shaft R makes a half-revolution, (which is all that is required for one alarm,) bringing the other protuberance C up to the position where it raises lever B in time to stop the machinery in the same relative position from whence it started, and also to leave the electric circuit closed. D D represent a dog, which is operated upon and turned by means of a key inserted through the outer door (but without unlocking or opening it) into a suitable lock for that purpose, which lock should be placed upon an inside door or shield covering the clock and electric works of the signal-box in such a manner as that when the key is inserted in the lock and turned, as in the ordinary method of unlocking an ordinary spring-bolt lock, the dog D is brought in contact with the lower protuberance C of the plate A, and causes said plate to turn upon its shaft far enough to bring the upper protuberance C from beneath lever B, for the purposes already set forth. H is a spring, holding dog D away from protuberance C, when at rest. E is a shaft passing through the front part of the inner box or shield covering the clock-work of the signal-box, on the inner end of which shaft D D is fastened. The other end of this shaft serves as a stud on which the barrel of the key works in the lock. In the central part of shaft E, on the outside of the inner box, there is a plate which is also made fast to the shaft, and upon the face of this plate there is a pin or other suitable projection with which the key comes in contact when being turned, which forces the dog D against protuberance C on plate A, causing said plate to turn upon shaft R, causing lever B to drop, and thereby releasing the pin P, which allows the machinery to start and run, as required. B is a stop-lever playing loosely upon pin *t* in the frame of the clock-work, and when resting upon protuberance C of plate A, as shown in the drawing, it prevents the running of the machinery because of being in contact with pin P in the cogged wheel; but when plate A is turned, as heretofore described, lever B falls by reason of its own weight, disengaging with pin P,

and rests upon the circular part of plate A until again raised by one of the protuberances, by which means pin P is again engaged with the lever B, and the machinery instantly stopped, substantially as described.

We claim—

1. An automatic signal-box, operated by means of a key in the manner described, said key being applied from the outside to the outer door without opening the same.
2. The plate A, constructed substantially

as described, with detents C C, lever B, pin P, dog D D, and spring H, combined substantially as and for the purposes set forth in the foregoing specification.

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