W. J. SMITH.

BURGLAR-ALARM.

No. 189,803. Patented April 17, 1877.

Fig. 1.

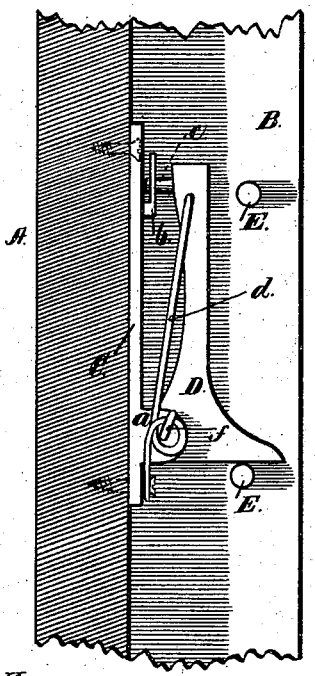



Fig. 2.

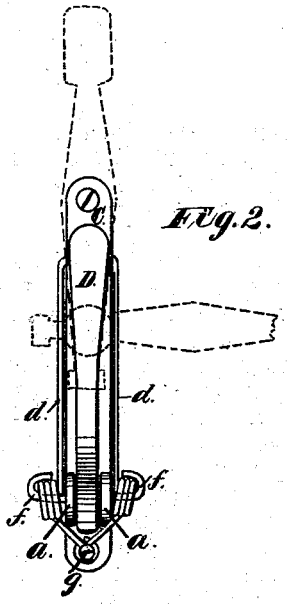
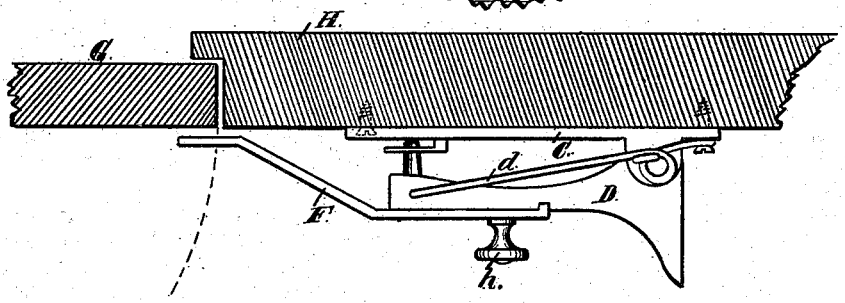



Fig. 3.

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# UNITED STATES PATENT OFFICE.

WILLIAM JOHN SMITH, OF DAYTON, OHIO.

## IMPROVEMENT IN BURGLAR-ALARMS.

Specification forming part of Letters Patent No. **189,803**, dated April 17, 1877; application filed March 6, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM JOHN SMITH, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Combined Burglar-Alarms and Window-Catches; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to that class of burglar-alarms consisting of a spring-trigger, suitably mounted and attached to a window-sash or door-frame, so as to be operated to discharge a percussion cap or cartridge upon opening either the window or door.

My improvement consists in the structure of the spring-hammer, and its arrangement upon a window-sash in such manner that it serves the purpose of a catch to hold the window up at any desired point during the day, and acts as an alarm at night; also, in the application to the trigger of an adjustable arm, which enables the same device to be applied to a door, all as will be herewith described and claimed.

Figure 1 represents a side elevation of my improved burglar-alarm and window-catch applied to a portion of a window sash and frame. Fig. 2 is a plan view of the same, with the adjustable arm indicated by the dotted lines. Fig. 3 shows the application of my improved device to a door.

A, Fig. 1, represents, in section, the portion of a side of a window and sash; and B, a portion of the frame at right angles thereto. Screwed to the sash, close to the frame, is the base-plate C of my device, which consists of a straight flat strip of metal, having at its lower end, on each side, two bearing-ears, *a*, and at its upper end an annulus of metal, *b*, raised a little above the plate, as shown, for the purpose of holding paper cartridges. Between the ears *a* is pivoted the lower end of the hammer D, a piece of metal of right-angular form, with its back at the lower end curved, as represented. At its top, on the side next the plate, is a nipple, *c*, which comes in contact with the plate C through the center of the annulus *b*. The form of a spring to actuate the hammer may be varied at will; but I consider the one represented as simple and efficient as any other. It consists of a spring-wire, *d*, passed through the top end of the trigger, as shown, and having its ends extending along the sides of the hammer to its bottom, where they are coiled around the projecting bent ends of the pivot *f* of the trigger. After being coiled, the ends of the wire may be fastened around the head of the screw *g*, which likewise serves to hold the plate to the sash. Studs or pins E are so secured in the frame B that, in raising the sash, they come in contact with the curved back of the hammer, and raise it for striking. As soon as the pin is passed, the trigger falls under the action of its spring, and discharges the cap upon its nipple, or the cartridge under the annulus *b*.

During the day the percussion devices are omitted, and the bottom edge of the hammer rests upon the pins, as indicated by the lower one in Fig. 1, to hold the sash open at any desired point. To lower the window, it is only necessary to raise it slightly, and draw forward the top of the hammer until its lower edge can pass the pins without obstruction. To apply the device to a door, I provide an arm, F, Fig. 3, of the shape shown, which has its rear end resting upon the back of the hammer, where it is held by a thumb-screw, *h*, and the clip *i*, which is formed at its extreme end, and which embraces the sides of the hammer.

In Fig. 3, G represents the opening section of a door, and H its frame, the dotted curved line being the arc described by the edge of the door when opening. As the door is opened it comes in contact with the end of the arm F, and raises the hammer. During the day, when the device is not needed, the arm F can either be removed entirely, or, by loosening the thumb-screw, be permitted to hang down at right angles to the hammer, as shown by the dotted lines in Fig. 2.

I claim—

1. The herein-described combined burglar-alarm and window-catch, composed of the plate C, with its bearing-ears, and the spring-hammer D, with its nipple *c* pivoted thereto, when constructed as described, and operated by pins E, substantially as and for the purpose described.

2. The annulus *b*, in combination with the

plate C and hammer D, as and for the purpose specified.

3. The combination, with the hammer of a burglar-alarm, of the adjustable and removable arm F, constructed and applied as shown, whereby the device may be applied to a door, as and for the purpose specified.

Witness my hand this 22d day of February, A. D. 1877.

WILLIAM JOHN SMITH.

Witnesses:
CHAS. M. PECK,
WM. RITCHIE.