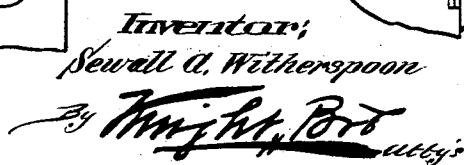


S. A. WITHERSPOON.
BURGLAR ALARM.

Patented Aug. 3, 1897.



UNITED STATES PATENT OFFICE.

SEWALL A. WITHERSPOON, OF ST. LOUIS, MISSOURI.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 587,541, dated August 3, 1897.

Application filed January 26, 1897. Serial No. 620,820. (No model.)

To all whom it may concern:

Be it known that I, SEWALL A. WITHERSPOON, a citizen of the United States, residing at the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Automatic Burglar-Alarms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to alarms of a nature designed to furnish warning of an attempt of burglars to gain entrance to a building through a window or door, the construction of my alarm being such that an unauthorized opening of the window or door to which the device is attached causes the alarm to be operated and warning given to the occupants of the building.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, Figure I is a view in front elevation of one side of a window-frame and portions of the sashes with my alarm applied thereto. Fig. II shows an enlarged front elevation of the alarm. Fig. III shows a side elevation. Fig. IV illustrates an enlarged cross-section taken on line IV IV, Fig. III. Fig. V is a detail view of the trip. Fig. VI is a view illustrating one of the alarm-hammers at rest and another hammer in process of tripping.

In the drawings, 1 designates the frame of a window, 2 the lower sash, and 3 the upper sash of the window.

4 designates a slotted guide in which a slide 5 operates.

Formed upon the slide 5 are beds 6, designed to receive percussion-caps, held in place by spring-clips 7, attached at one side of the slide.

8 designates hammers, located in the straight line of the window's movement, pivoted to the slide 5, each hammer being provided with a trigger 9, rigidly formed on the hammer. Each of the hammers is controlled by a spring 10, one end of which is connected to the hammer and the other end attached to the slide beneath the cap-bed 6, in which position the tendency of the springs is to normally hold the hammers against the cap-beds, while

the springs are practically relaxed, whereas when the hammers are tripped the springs are distended and their power is exerted to return the hammers and explode the percussion-cap on the tripping of the hammers.

4 designates a bracket secured to the window-frame and provided with a shaft 12, on which a trip 13 is loosely mounted. This trip is normally held against the stop-pin 14 by means of a coil-spring 15, that surrounds the shaft 12 and has one end connected to the stop-pin 14 and the opposite end bearing against the trip 13. The spring-actuated trip 13 performs the tripping of the hammers 8 as the trigger 9 of each hammer is brought into contact with the trip.

The trip 13 and hammer-support (slide) 5 are secured, one to the window and the other to a fixed part of the frame, so that when the window is opened the single trip is made to engage all of the hammers successively.

The alarm is shown applied to the lower sash of a window and would be actuated on the raising of the lower sash, but to provide for the operation of the alarm on the lowering of the upper sash of the window I attach a cord 17 to an eye 16 in the upper end of the slide 5. The cord 16 is extended upward over a pulley or guide attached to the window-frame, and has the end remote from the alarm secured to the upper sash by any suitable means.

The operation of the alarm is as follows: On the lower sash being lifted the trigger 9 of first one and then the next in succession of the hammers 8 strike against the trip 13, causing them to be elevated, as illustrated in Fig. VI, and as soon as the sash is moved a sufficient distance for a trigger to pass the trip the hammer is drawn forward under the action of the spring 10 and striking the percussion-cap held beneath the clip 7 on the bed 6 the cap is exploded, thereby giving warning to the occupants of the building of the window having been elevated. As the upward movement of the window continues the other hammers are tripped in the same manner as the first, thereby furnishing a repetition of warnings. The trip 13 is free to move in a backward direction, and on the return of the slide the triggers 9 striking against the trip swing it backward, and as soon as each

trigger is past the trip it is returned to its normal position against the stop-pin under the action of the spring 15. In the event of the upper sash being lowered the cord 17, traveling on the pulley or guide 18, draws the slide 5 upward in the slotted guide 4, and the hammers of the alarm are tripped in the same manner as before described in connection with the lower sash of the window.

10 I have shown and described the actuated part of the alarm attached to the window-sash and the trip device attached to the frame of the window; but I do not limit myself to attaching the parts in this specific manner, as it is evident that the positions of the parts might be reversed, the actuated part being 15 attached to the frame and the trip device attached to the sash, and the same result be accomplished.

20 I have shown and described the device as applied to a window; but by the employment of the cord 17 it is practical of employment when attached to a door or similar object. The opening of the door in such application 25 would cause the cord to be drawn forward and the slide to be moved and the device operated in substantially the same manner as where the cord is attached to the upper sash of a window.

30 I claim as my invention—

1. In a burglar-alarm, the combination of a guide, a slide located in said guide, a series of spring-actuated hammers pivoted to said slide, a cap-receiving bed for each of said hammers and a trip located in the line of said hammers so as to engage them successively, 35 substantially as set forth.

2. In a burglar-alarm, the combination of a guide, a slide located in said guide, a series of spring-actuated hammers pivoted to said slide, a cap-receiving bed for each of said hammers, and a spring-actuated trip arranged to operate said hammers, as set forth. 40

3. In a burglar-alarm the combination of a guide, a slide located in said guide, a series of spring-actuated hammers pivoted to said slide, a cap-receiving bed for each of said hammers on said support, spring cap-holding clips on said cap-receiving beds, and a spring-actuated trip arranged to operate said hammers, substantially as set forth. 45 50

4. In a burglar-alarm, the combination of a guide, a slide located in said guide, a series of spring-actuated hammers pivoted to said slide, an integral trigger carried by each of said hammers, a cap-receiving bed for each hammer on said slide, and a spring-actuated trip arranged to operate said hammers through means of said triggers, substantially as set forth. 55 60

5. In a burglar-alarm, the combination of a guide, a slide arranged to operate in said guide, a series of spring-actuated hammers pivoted to said slide, a cap-receiving bed for each of said hammers on said slide, a spring-actuated trip arranged to operate said hammers, and a cord attached to said slide and arranged to move said slide in its guide to bring said hammers into contact with said trip, substantially as set forth. 65

SEWALL A. WITHERSPOON.

In presence of—

E. S. KNIGHT,
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