No. 868,543. PATENTED OCT. 15, 1907.

H. K. GEIGER.

BURGLAR ALARM.

APPLICATION FILED DEC. 12, 1906.

Fig. 1.

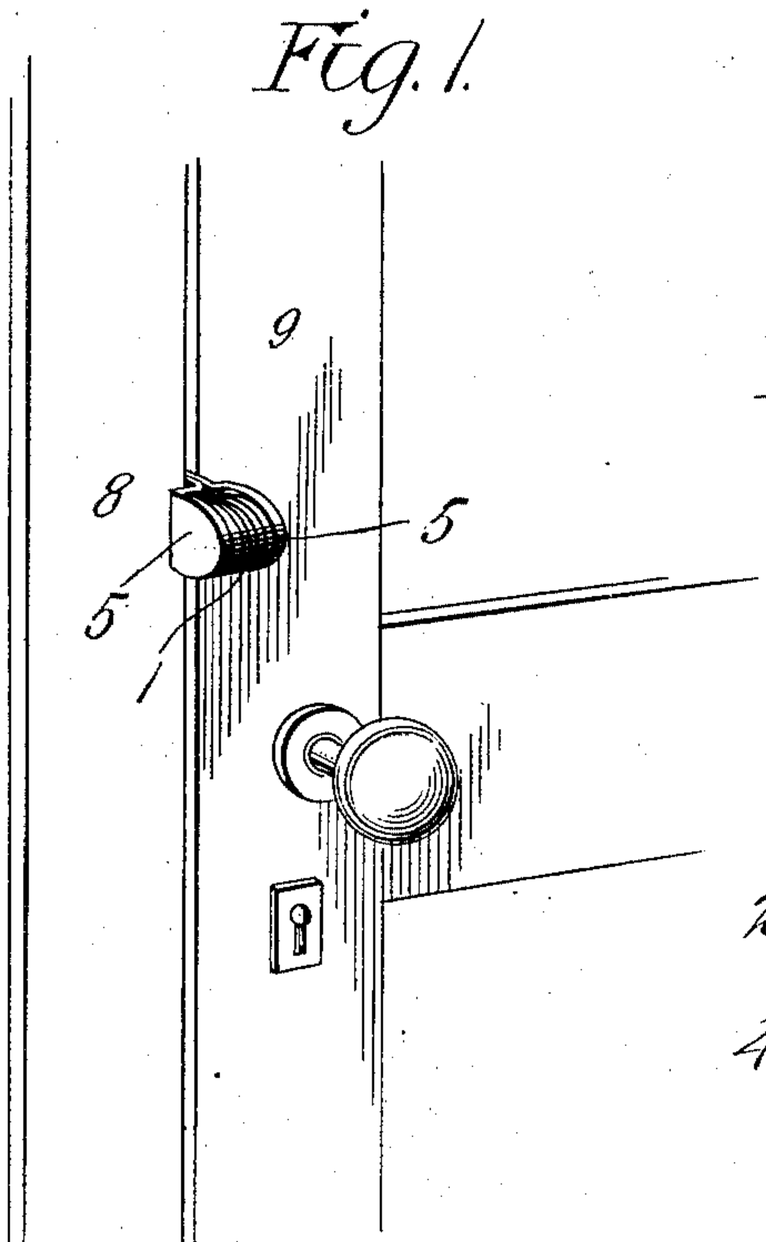


Fig. 2.

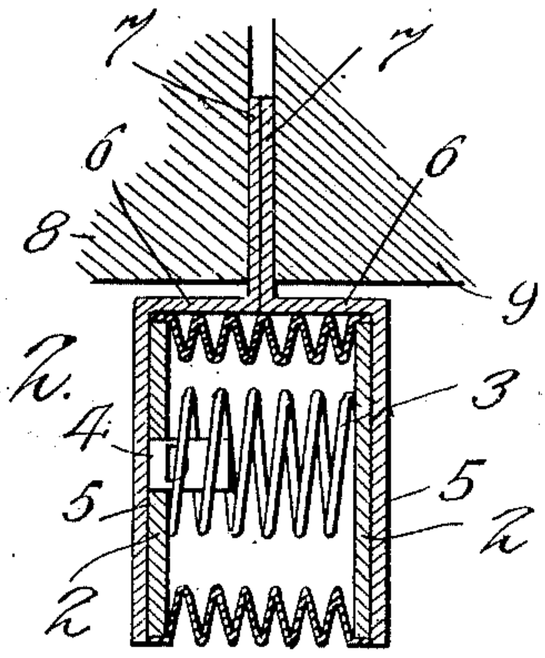


Fig. 3.

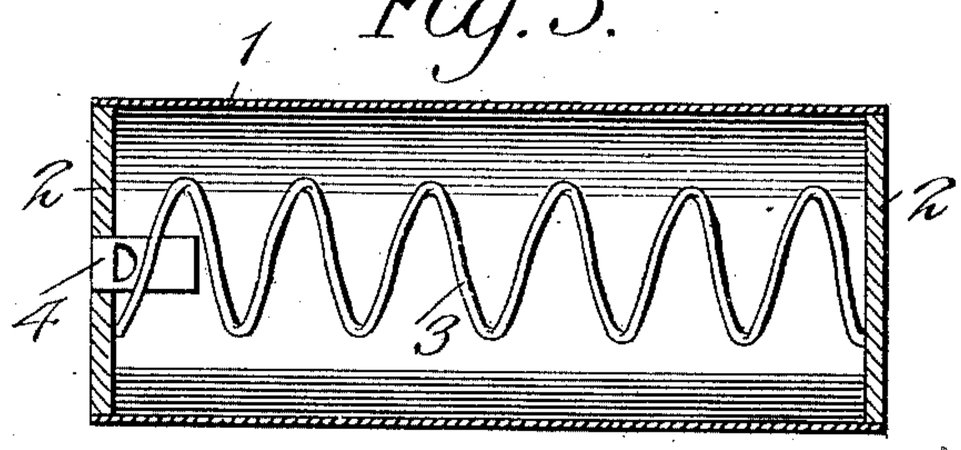


Fig. 4.

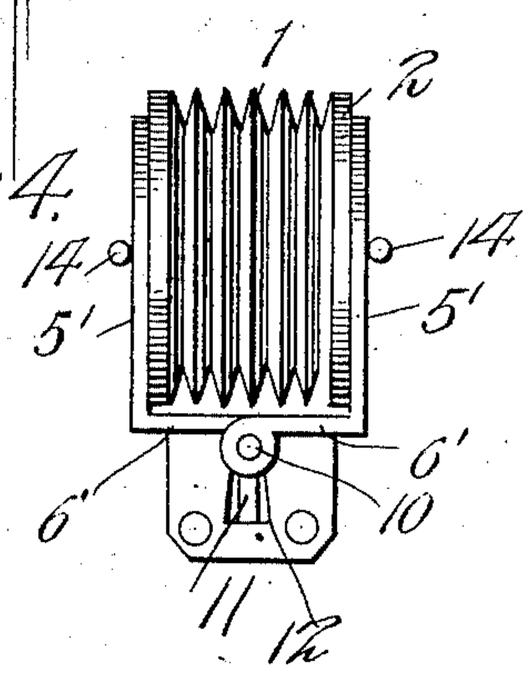
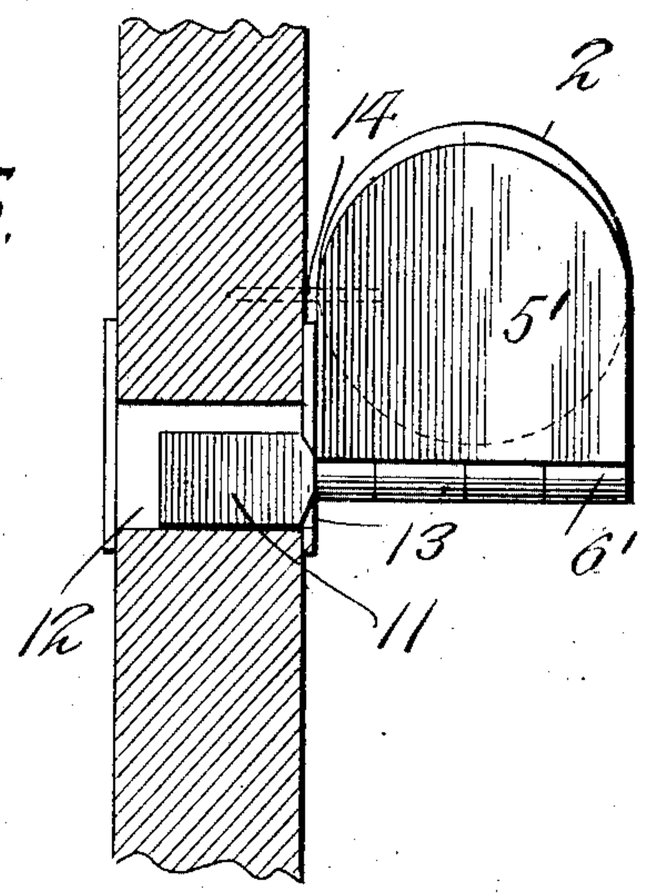


Fig. 5.



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BURGLAR-ALARM.

No. 868,543. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed December 12, 1906. Serial No. 347,544.

To all whom it may concern:

Be it known that I, HANS K. GEIGER, a citizen of the Swiss Republic, residing at Munich, Germany, have invented new and useful Improvements in Burglar-Alarms, of which the following is a specification.

This invention relates to portable burglar alarms, comprehending particularly an improved construction of alarm of that character adapted to be used in connection with doors, windows and other like closures to automatically give an alarm when the door, window or other closure guarded thereby is opened or tampered with sufficiently to throw the alarm device into action.

The object of the invention is to provide a simple, cheap, reliable, and efficient alarm device of this character embodying a flexible or elastic body or element designed to pneumatically operate an audible signal carried thereby, said body being provided with means for normally holding the same inoperative and adapted to produce signal sounding energy when such holding means is released.

Some of the forms contemplated by my invention are illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view showing the alarm arranged in operative position upon a door. Fig. 2 is a horizontal cross section through the locking jamb of the door frame, the swinging stile of the door and the alarm device. Fig. 3 is a longitudinal section through the alarm device as it appears when in normal or inoperative position. Fig. 4 is a view in front elevation showing a modified form of the alarm as applied for use upon a door. Fig. 5 is a sectional view through the door, showing the mode of application of the alarm disclosed in Fig. 4.

Referring to Figs. 1 to 3, inclusive, the alarm comprises a flexible or elastic pneumatic body or casing, embracing a flexible tube 1 hermetically closed at its ends by heads 2 suitably attached to the tube. Within the hollow body thus formed is arranged a coiled spring 3 bearing terminally upon the heads 2 and adapted to exert its expansive energy to force the heads apart and thereby distend the body. One of the heads 2 carries an audible alarm 4, shown in the form of a whistle having its air passage connecting the interior of the hollow body with the external atmosphere. This whistle is so constructed as to be sounded when the body is distended by the spring through the action of air passing therethrough into the body to fill the partial vacuum formed within said body when the latter is folded or compressed.

In setting the alarm for action, the heads are forced together to compress the body in the manner shown in Fig. 2, the flexible tube 1 folding in accordion-shape, such compression serving to exhaust the air from the body through the whistle to form a partial vacuum therein, and the body is held in such condition by holding means, which I will now proceed to describe, the release of said holding means permitting the body to be restored to normal or distended position by the action of the spring, so that the entering air will sound the alarm whistle.

The holding means shown comprises a pair of jaws or plates 5 adapted to bear externally against the heads 2 and provided with inwardly bent arms 6 rebent to form supporting projections 7 adapted to lie in contact when the holder is arranged to maintain the alarm in folded or collapsed condition. The supporting projections are designed to be fitted into the space or crack between the locking jamb 8 of the door frame and the swinging stile 9 of the door and to be clamped therein to secure the alarm in operative position, as will be clearly understood by reference to Figs. 1 and 2.

When the door is opened the parts of the holder will be released, thus allowing the body to be expanded or distended by the spring, whereupon the area of said body will be increased and air will be drawn thereinto through the whistle by the suction thus induced, thus causing the whistle to sound and give the alarm. The alarm will be freed and allowed to drop upon the floor when the door is fully opened or only opened sufficiently to displace the supporting projections 7 of the holder. This form of the invention is also applicable to windows and similar closures, as the projections 7 may be fitted into the space between the meeting rails of the window sashes, so that the alarm will be released when either sash is partially opened.

In the embodiment of the invention shown in Figs. 4 and 5 the elastic body is of the same construction, but the holding jaws or plates 5′ have their inwardly bent arms 6′ formed with knuckles hingedly connected by a pintle pin 10, which is formed at one end with a supporting projection 11 adapted to enter the keyhole 12 in the door through the opening in the keyhole plate 13. Pins 14, or their equivalent, are also employed to assist in supporting the alarm and to normally hold the body from expansion, such pins being arranged upon the opposite sides of the device to bear against the jaws 5′ and driven a sufficient distance into the swinging stile 9 of the door. When a key or other tool is inserted into the keyhole 12 from without in an attempt to unlock the door, the alarm will be forced forward and displaced by the pressure of the key against the projections 11, so that the device will pass beyond the pins 14 and drop upon the floor, leaving the hollow body to be free to be expanded by the spring. It will be understood that in this operation the jaws 5′ will swing outward on their hinge connection under the pressure of the spring, thus permitting the hollow body to distend and

cause the sounding of the whistle in the manner previously described.

Having thus described the invention, what is claimed as new, is:—

1. A burglar alarm comprising a longitudinally expansible bellows tube, heads closing the ends of the tube, an audible alarm supported by one of the heads, means for normally holding the tube in expanded condition, and holders arranged to bear upon the heads to maintain the tube in a collapsed condition.

2. A burglar alarm comprising a longitudinally expansible tube, heads closing the ends of the tube, an audible alarm supported by one of the heads, an expansion spring arranged within the tube and bearing against the heads, and a holder comprising members adapted to bear against the heads to maintain the tube normally in a collapsed condition against the pressure of the spring.

3. A burglar alarm comprising a longitudinally expansible tube, heads closing the ends of the tube, an audible alarm supported by one of the heads, means for normally extending the tube, and a holder comprising jaws arranged to bear against the heads and provided with supporting portions adapted to contact, said devices being adapted to releasably maintain the tube in a collapsed condition.

In testimony whereof, I affix my signature in presence of two witnesses.

HANS K. GEIGER.

Witnesses:
ABRAHAM SCHLESINGER,
LOUIS F. MULLER.