

July 14, 1925.

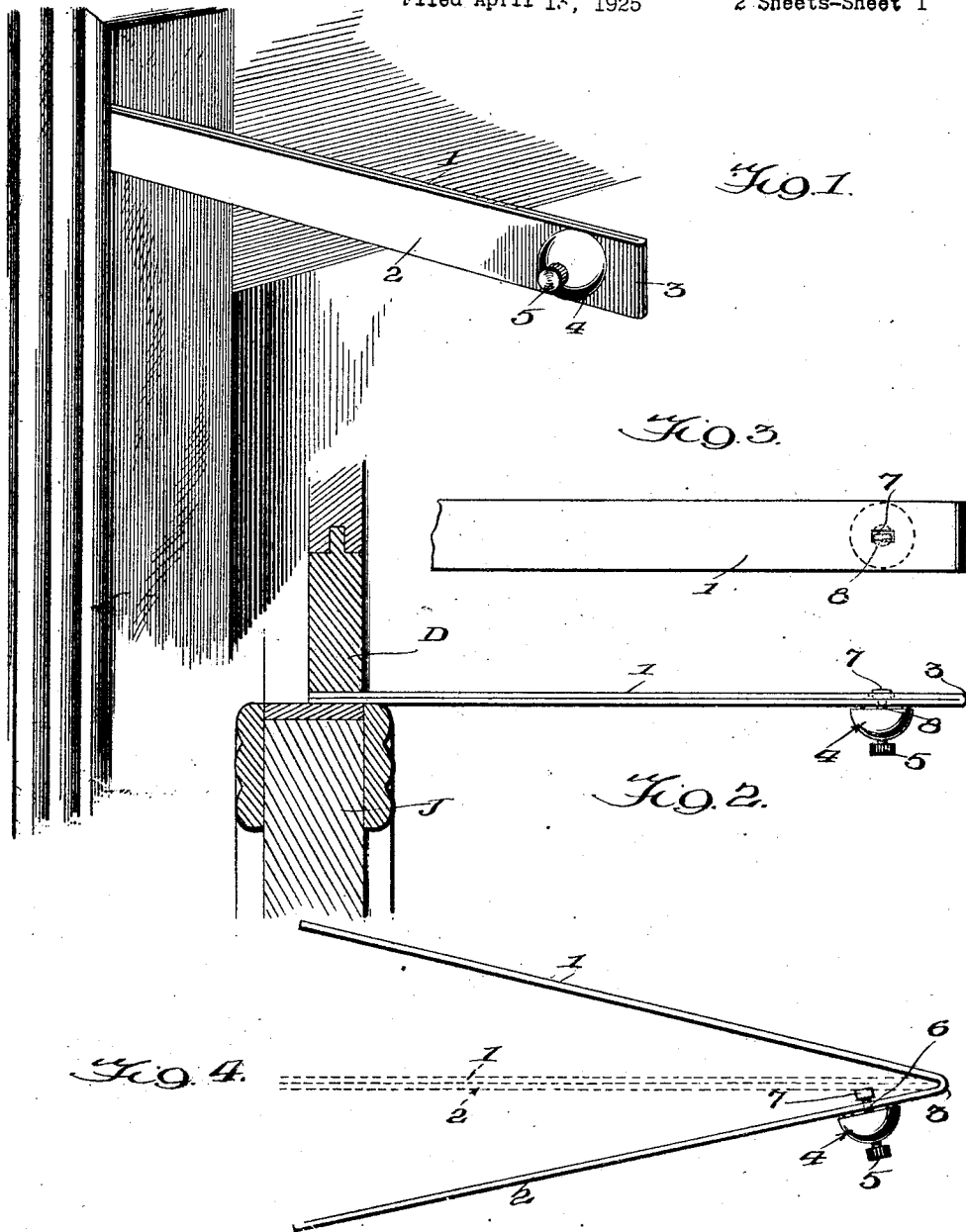
1,545,947

W. W. DAVIES

BURGLAR ALARM

Filed April 13, 1925

2 Sheets-Sheet 1



WITNESSES

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Fig. 5.

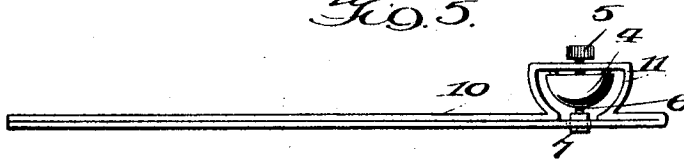


Fig. 6.

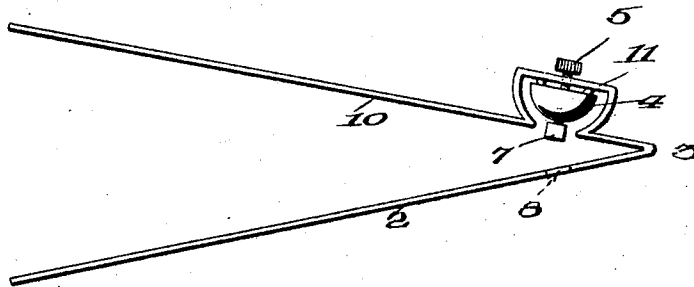


Fig. 7.

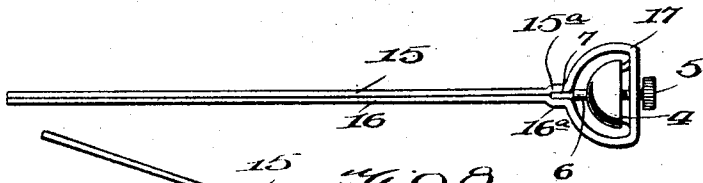


Fig. 8.

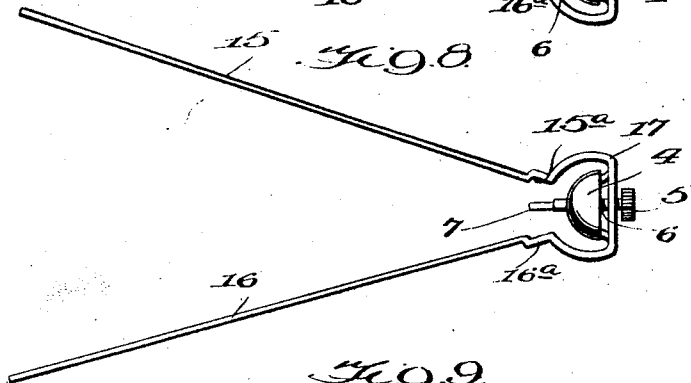
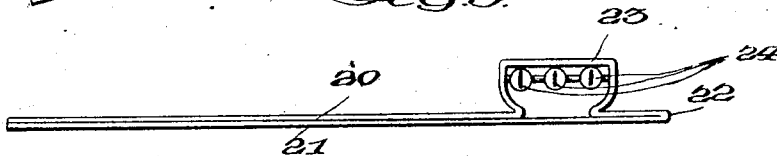


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE.

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BURGLAR ALARM.

Application filed April 13, 1925. Serial No. 22,862.

To all whom it may concern:

Be it known that I, WILLIAM WATKINS DAVIES, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Burglar Alarms, of which the following is a specification.

This invention relates to an improvement in burglar alarms especially adapted for use with doors, windows or other closures and designed to sound an alarm when the door, window or other closure is opened by an unauthorized or intruding person.

The object of the invention resides in the provision of a burglar alarm having these advantages and capacities and which is of simple and compact structure so that it may be conveniently carried around by travellers and used to guard against the unauthorized entry of burglars, sneak thieves or other unauthorized persons into the room or suite of the traveller.

A still further object resides in the provision of a device of this character which is adapted to be manufactured at a comparatively slight expense from any materials and by means of facilities ordinarily available.

Other objects and advantages reside in certain novel features of the construction, arrangement and combination of parts, which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view showing one embodiment of the invention operatively associated with a door.

Figure 2 is a view showing the device in top plan and the door and adjacent structure of the building in horizontal section.

Figure 3 is a view in side elevation looking toward the side of the device opposite from the alarm thereof.

Figure 4 is a view of the device in top plan showing the parts positioned as when the alarm is sounded.

Figure 5 is a plan view of another embodiment of the invention showing the parts positioned as when set.

Figure 6 is a view similar to Figure 5 but showing the parts positioned when the alarm is sounding.

Figure 7 is a plan view of another form of the invention showing the parts set.

Figure 8 is a view similar to Figure 7 but illustrating the parts of the device shown in Figure 7 as positioned when the alarm is sounding.

Figure 9 is a top plan view of still another form of the invention.

Referring to the drawings, and more particularly to Figures 1 to 4 inclusive, it will be seen that the invention comprises a pair of spring arms designated as 1 and 2, the arms 1 and 2 being constructed from a single strip of resilient metal or other springy material and being connected by a bowed connecting portion 3 at one end. The arms are flat and may be pressed so that their adjacent faces snugly engage each other as shown in Figures 1 and 2 but these arms and the connecting portion 3 between them are tensioned so that the resiliency of the material making up the parts tends to maintain them in the position shown in full lines in Figure 4, in which position the arms diverge.

On one of the arms 2 a common and conventional alarm (consisting of a bell, rattle, buzzer or clacker) 4 is mounted, the base or frame of the alarm being fixedly connected by suitable attaching devices to the arm 2. The alarm 4 may be of any conventional construction or material and preferably is of the type including a spring-actuated sounder, like a clapper or vibratory clacking or buzzing armature, the spring of which, being wound up by the winding key 5, actuates the sounder to ring, rattle, clack or buzz. The winding shaft of the alarm, which is actuated from the key 5, is designated at 6, and on the end of the shaft 6 opposite the key 5 a lug 7 is fixed. The lug 7 is flat and elongated and is adapted to fit in a correspondingly shaped portion 8 formed on the arm 1 when the arms 1 and 2 are pressed together. The lug 7 coacts with the walls of the opening 8 to prevent the shaft 6 from turning and the alarm from sounding when the arms 1 and 2 are pressed together.

When the device is in use the arms 1 and 2 are pressed into engagement with each other, the alarm being wound up by the key 5. As long as the lug 7 is located in the opening 8 the alarm cannot sound, since the shaft 6 of the alarm is held against movement. With the alarm 4 wound up and the arms 1 and 2 held together the free ends of the arms are introduced and wedged into the crack be-

tween the door D and jamb J. Of course, if the device is used in connection with a window the free ends of the arms are held between the window sash and the window frame. As long as the door remains undisturbed the alarm will not sound, but when an intruder opens the door the free ends of the arms 1 and 2 are dislodged from between the door and jamb. Then the arms 1 and 2 fly apart, due to their inherent resiliency and to the inherent resiliency of the connecting portion 3, and the entire device falls to the floor. When the arms 1 and 2 fly apart the lug 7 is released so that the spring of the alarm actuates the same and results in a continuous sounding of the alarm. This sounding of the alarm together with the clatter and noise that accompanies the falling of the alarm to the floor, will arouse the occupant of the room guarded and the occupants of the surrounding rooms and will be found to be a very effective means to scare off the burglar or other intruder.

The form of the invention shown in Figures 5 and 6 is exactly the same as the invention shown in Figures 1 to 4 hereinabove described except that one of the spring arms which is designated at 10 is formed with an offset alarm-holding portion or frame 11 on which the alarm 4 is mounted and in which the alarm 4 is practically enclosed. The provision of the alarm-holding frame has the advantage of providing against the possible muffling of the alarm when the device falls on a carpet or floor.

The embodiment of the invention shown in Figures 7 and 8 includes a pair of spring arms designated at 15 and 16 connected by a combined connecting element and alarm-holding frame on which the alarm 4 is mounted and in which the alarm 4 is substantially enclosed. In this form of the invention in lieu of providing an opening in one of the arms to coact with the lug 7 of the shaft 6 of the alarm the arms are provided with coacting clamping portions 15^a and 16^a at the junctures of the arms, with the combined connection portion and alarm-holding frame.

In the form of the invention illustrated in Figure 9 there is included a pair of spring arms designated at 20 and 21, and one end of the arms 20 and 21 is connected by the curved connecting portion 22. The arm 20 has an offset alarm-holding frame 23 formed therein in which are delicately suspended common sleigh bells or conventional rattlers or vibrating jinglers.

In the form of the invention shown in Figure 9 the arms 20 and 21 are tensioned to fly apart as in the other embodiments of the invention and this tendency is utilized to hold the alarm in place in the space between the door and jamb or in between the window and its frame and also to actuate the alarm.

What I claim is:

1. In a burglar alarm, a pair of connected spring arms tensioned to diverge with respect to each other from the point of their connection, the arms having ends adapted to be engaged and held together by a closure, the tendency of the arms to diverge aiding the frictional engagement between the ends of the arms and the closure to the end of supporting the alarm on the closure and of holding the alarm in set position solely by virtue of the engagement of the ends of the arms with the closure, and a sounding device mounted on one of the arms and adapted to be actuated when the arms fly apart upon release of the ends of the arms from the closure.

2. In a burglar alarm, a pair of connected spring arms tensioned to diverge with respect to each other from the point of their connection, the arms having ends adapted to be held together by a closure, the tendency of the arms to diverge aiding the frictional engagement between the ends of the arms and the closure to the end of holding the alarm in position, and a sounding device mounted on one of the arms and having a part controlling the actuation of the sounding device, the other arm being cooperable with said part to hold the part against movement when the arms are pressed, the other arm being disengaged from said part when the arms diverge.

3. A burglar alarm comprising a pair of arms having a curved connecting portion for connecting the arms at one end, the arms and the connecting portion being constructed of a single piece of flat spring material, the arms and connecting portion being tensioned so that the arms normally diverge, the arms being adapted to be pressed into snug engagement with each other against the tension of the material making up the arms and the curved connecting portion, the ends of the arms opposite the curved connecting portion being adapted to be engaged by a closure and its support to releasably hold the arms together and to support the entire alarm on the closure and its support while the closure remains closed solely by virtue of the engagement of the ends of the arms with the closure and its support, and a sounding device mounted on one of the arms and adapted to be actuated when the arms fall apart upon the release of their ends from the closure.

4. In a burglar alarm, a pair of spaced arms, means tending to maintain the arms in divergent relation, the arms being adapted to be positioned in engagement with each other and having portions engageable with a closure and the structure on which the closure is mounted to hold the arms engaged with each other, and to support the entire alarm on the closure and its associated structure while the closure re-

mains closed and a sounding device connected with the arms and adapted to be actuated when the arms fly apart upon release of the arms from the closure.

5 5. In a burglar alarm, a pair of spaced arms, means tending to maintain the arms in divergent relation, the arms being adapted to be positioned in engagement with each other and having portions engageable with
10 a closure and the structure on which the closure is mounted to hold the arms engaged with each other, and an alarm mounted on one of the arms and having a part controlling its actuation and engaged with the
15 other arm when the arms are pressed together, said part being disengaged from the other arm when the arms are spread apart.

6. In a burglar alarm, a pair of connected spring arms tensioned to normally diverge
20 from each other but adapted to be pressed together and having portions engageable with a closure and the structure with which the closure co-acts to hold the arms pressed together as long as the closure remains
25 closed, one of the arms having an alarm-holding and enclosing frame and an alarm mounted on said frame.

7. In a burglar alarm, a pair of connected spring arms tensioned to normally diverge
30 from each other but adapted to be pressed together and having portions engageable with a closure and the structure with which

the closure co-acts to hold the arms pressed together as long as the closure remains closed, one of the arms having an alarm-
35 holding and enclosing frame and an alarm mounted on said frame, and having a part controlling its actuation and held, when the arms are pressed together, to prevent actuation of the alarm.

8. A burglar alarm comprising a pair of spring arms and having a curved connecting portion between the arms at one end thereof, an alarm mounted on one of the arms
40 and having a lug controlling its actuation, the other arm having an opening in which the lug is fitted and held to prevent actuation of the alarm when the arms are pressed together, the free ends of the arms being
45 adapted to be held in the space between the closure and its supporting structure as long as the closure is closed.

9. A device of the character described constructed of a single piece of flat resilient material bent to provide a pair of spring
55 arms and a connecting portion between the arms at one end, the arms normally divergent, the free ends of the arms being adapted to be held together by a closure to hold the arms together, and to support the entire
60 device on closure while the closure remains closed and an alarm actuated when the arms are apart.

WILLIAM WATKINS DAVIES.