June 21, 1927. 1,632,893

M. GLAUS

DOOR ALARM

Filed March 18, 1926

Fig. 1.

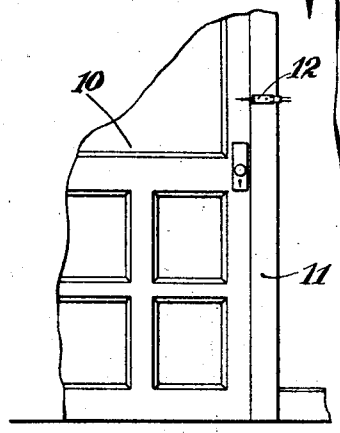


Fig. 2.

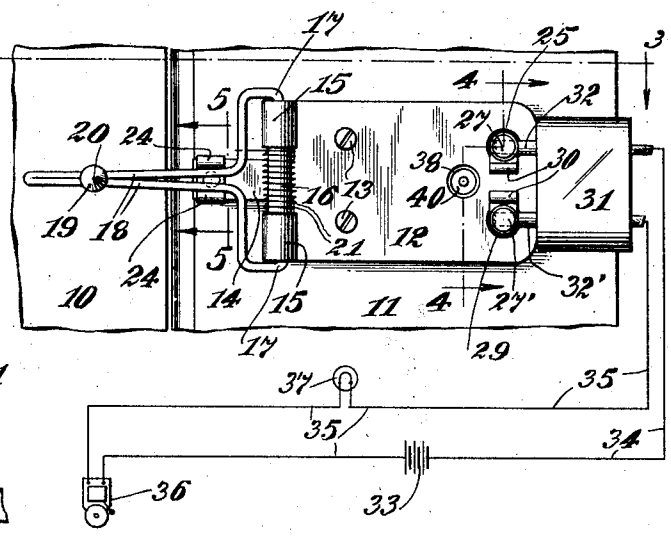


Fig. 3.

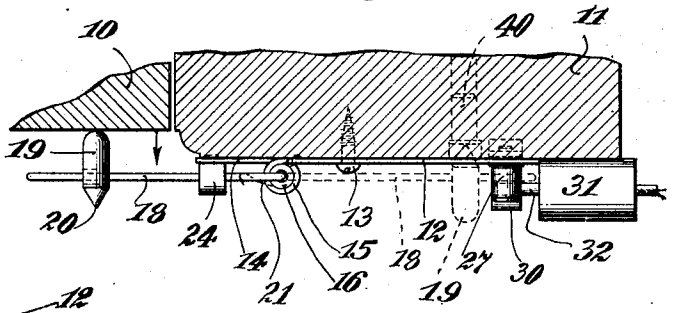


Fig. 4.

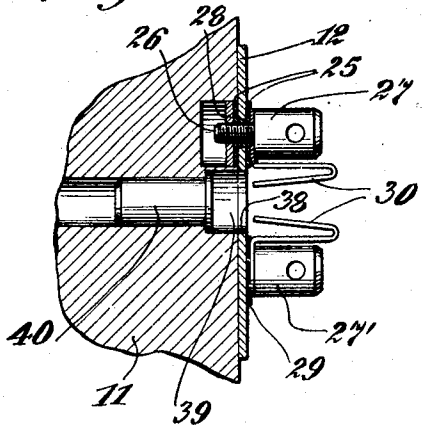
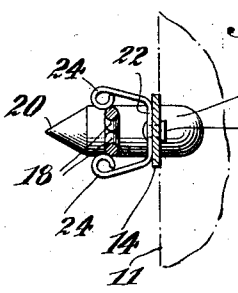


Fig. 5.



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UNITED STATES PATENT OFFICE.

MARIE GLAUS, OF UNION CITY, NEW JERSEY.

DOOR ALARM.

Application filed March 18, 1926. Serial No. 95,558.

This invention relates to improvements in burglar alarms and more particularly to types adapted to be used in connection with swinging doors.

One of the objects of the invention is to provide an alarm device, operable immediately upon an initial opening movement of a door to which it is applied.

A further feature is in the provision of an alarm, including an electric bell and electric light having a control switch operated by movement of a door whereby the bell and light are placed in circuit instantaneously.

Another aim is to so arrange the conductors that they may be readily connected or disconnected relative to the device.

A further purpose is to combine with the device means for detonating a cartridge coincidentally with placing the audible and visible features of the device in operation.

These and other objects, such as simplicity, positiveness in operation and ease of assembly, are accomplished by the novel construction and combination of parts hereinafter described and shown in the accompanying drawing, forming a material part of this disclosure, and in which:—

Figure 1 is a fragmentary front elevational view of a conventional type of door and jamb illustrating the application of the invention.

Figure 2 is a front elevational view of an embodiment of the invention, shown in a set or ready-to-operate condition, together with a diagram of the wiring.

Figure 3 is an edge view showing the door and jamb in section, the view being taken on line 3—3 of Figure 2.

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 2, drawn to an enlarged scale.

Figure 5 is a similar sectional view taken on line 5—5 of Figure 2.

In the drawing the numeral 10 designates in general a common type of door and 11 the casing or jamb, the door being supplied with knob and key escutcheon adjacent the edge opposite its hinges.

A sheet metal plate 12 is firmly attached to the casing 11 by screws 13, a central tongue 14 of the plate extending nearly to the inner edge of the casing and the material on each side of the tongue being curled to produce registering elongated loops 15.

A round rod 16 is mounted in the loops to extend therebetween and pivotally engaged in the ends of the rod are the inturned ends 17 of a strong wire bent and doubled to present a T-shaped arm 18, the elements of which are held in close relation by being forced through a transverse opening in a cylindrical hammer-like block 19 having a sharp conical point 20.

As shown in Figures 2 and 3, the arm and hammer extend outwardly a considerable distance beyond the end of the tongue 14, well into the path of the door 10 to intercept the opening thereof.

A torsional spring 21 is coiled around the rod 16, between the loops 15, the ends of the spring being extended to engage the plate 12 and arm 18 respectively, normally urging the arm to turn upon the axis of the rod from an extended position as shown in full lines, to overlie the plate as indicated by the broken lines in Figure 3.

In order to retain the arm 18 in an extended position a flat spring 22, held by a rivet 23 to the tongue 14 near its end, is shaped to produce a pair of opposed detents 24 presenting curved surfaces to engage the arm as may be seen best in Figure 5.

Near the opposite end of the plate 12 are a pair of openings to receive non-conducting bushings 25 thru which extend the threaded stems 26 of sockets 27 and 27′, the stems being held by clamp nuts 28 disposed in openings approximately formed in the casing, as shown in Figure 4.

Between the bases of the sockets 27 and 27′ and their corresponding insulating bushings 25 are interposed the ends 29 of conducting strips turned outward and then reentrantly towards the plate, presenting convergently inclined flat walls 30, against both of which the outer portion of the arm 18 makes positive contact when released from the detents 24, as by the initial opening of the door, the same moving as indicated by the arrow in Figure 3.

A jack 31, carrying terminals 32 and 32′, engageable in openings in the sockets 27 and 27′ is supplied with current from any convenient source indicated by a battery 33 in Figure 2, through the conductor 34 to the terminal 32.

The mating terminal 32′ is connected by the conductor 35 and in this circuit may be placed a bell 36 and lamp 37, the same being disposed at any preferred location about the premises.

The plate 12 is further provided with an

opening 38 leading to a circular recess 39 in the door frame, this recess being suited to contain a blank cartridge 40 of the center fire type, and retain it in position to be struck with sufficient force by the hammer point 20, when the arm is liberated, causing detonation of the cartridge.

It will now be clear that upon opening the door, a partial distance only, the arm 18 will be disengaged from the keepers 24 and, due to the action of the spring 21, make contact with the conductors 30, in the manner of a snap knife switch, forming a circuit between the terminals 32 and 32′ if the jack 31 be in operative engagement.

Obviously the jack may be easily removed whereupon the electrical circuit is rendered inoperative at will.

It will also be seen that if a cartridge be placed in the recess 39 it will be detonated irrespective of the electric features, thus either or both devices are employed as desired.

As changes in construction could be made within the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

An alarm device comprising in combination with a stationary object and a movable object, of a plate fixed on the stationary object, a spring actuated lever arm pivoted on said plate to swing in a horizontal plane outwardly into the path of said movable object, spring keepers on said plate to engage opposite edges of said arm when extended outwardly in spaced parallel relation therewith, a hammer carried by said arm, and a cartridge accessible through said plate by the hammer.

In testimony whereof I have signed my name to this application.

MARIE GLAUS.