H. JONES.

DETONATING ALARM.

APPLICATION FILED MAR. 16, 1911.

1,005,844.

Patented Oct. 17, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

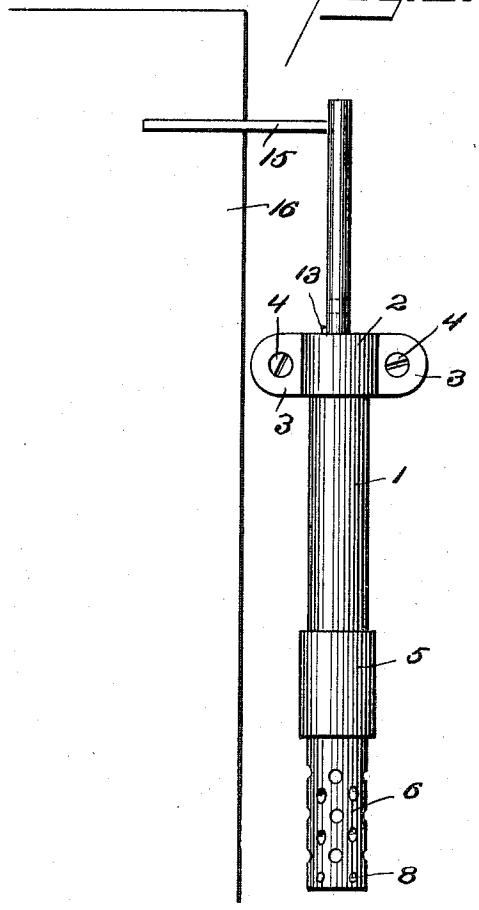


Fig. 2.

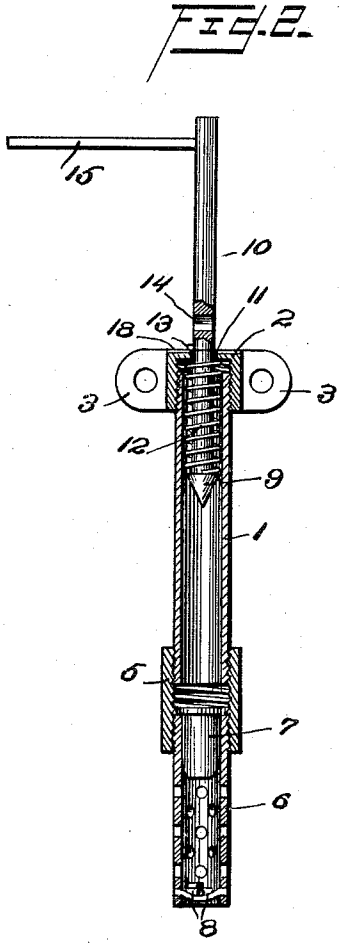


Fig. 3.

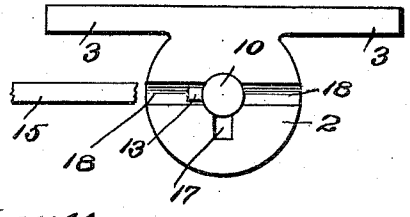
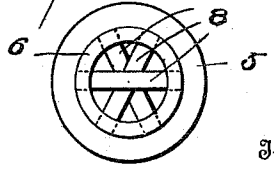


Fig. 4.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 6.

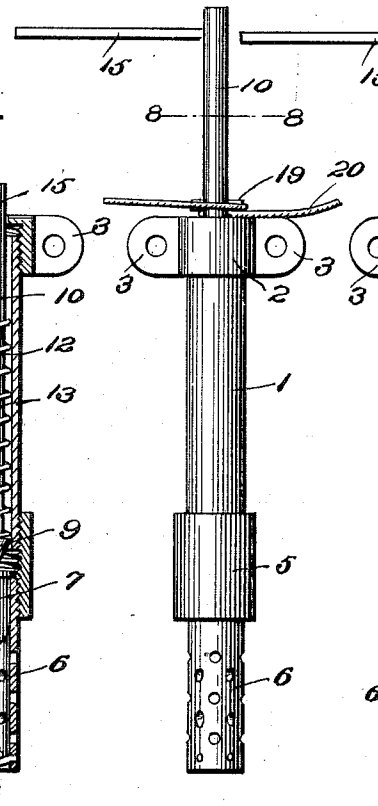


Fig. 9.

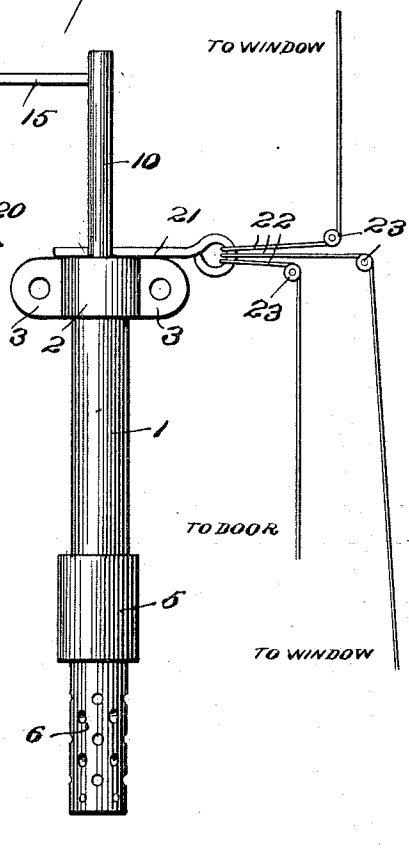


Fig. 5.

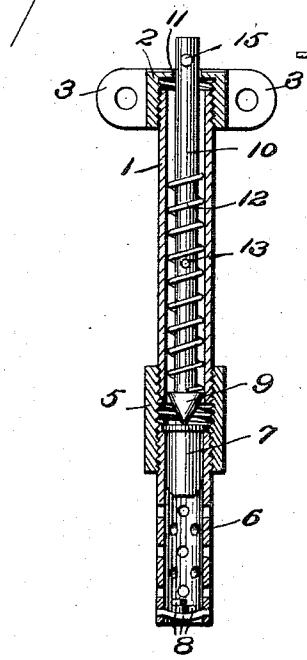


Fig. 7.

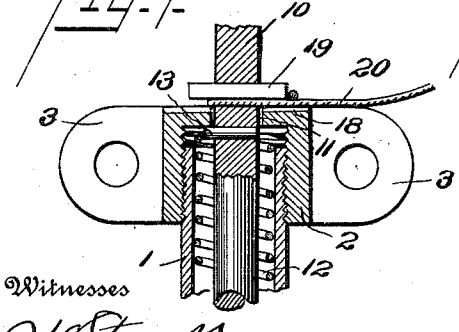
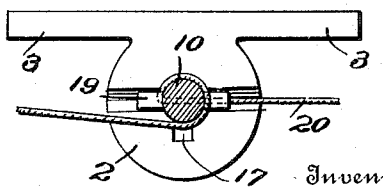


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY JONES, OF WILMINGTON, DELAWARE.

DETONATING ALARM.

1,005,844. Specification of Letters Patent. Patented Oct. 17, 1911.

Application filed March 16, 1911. Serial No. 614,781.

To all whom it may concern:

Be it known that I, HENRY JONES, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Detonating Alarms, of which the following is a specification.

My invention relates to improvements in detonating alarms, the object of the invention being to provide an improved device of this character which is adapted for use either as a burglar or a fire alarm, and which is of extremely simple inexpensive construction, neat and attractive in appearance, strong and durable in use.

A further object is to provide an improved device of this character which will absolutely break up the wadding in the shell, so as to prevent any possibility of the wad doing any damage.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a view in elevation illustrating my improvements in set position when used as a burglar alarm. Fig. 2, is a view in longitudinal section. Fig. 3, is a top plan view on an enlarged scale showing the contacting arm broken away to illustrate parts below. Fig. 4, is a view of the lower end of the device on an enlarged scale. Fig. 5, is a view in longitudinal section showing the parts in firing position. Fig. 6, is a view in elevation illustrating my improvements in use as a fire alarm. Fig. 7, is an enlarged fragmentary view in longitudinal section of the structure shown in Fig. 6. Fig. 8, is a view in section on an enlarged scale on the line 8—8 of Fig. 6, and Fig. 9, is a view partly in elevation and partly diagrammatic illustrating my improved alarm in connection with a number of operating devices adapted to be connected to windows and doors.

1, represents a tubular barrel which is externally screw-threaded at both ends. One end of this barrel 1 is screwed into a threaded cap 2, the latter having perforated ears 3 thereon for the reception of screws 4 to secure the device in place.

On the lower end of barrel 1, an internally screw-threaded sleeve 5 is screwed and into this sleeve 5, a perforated cartridge holder 6 is removably screwed. This cartridge holder 6 is of an internal diameter to receive the cartridge illustrated at 7, is perforated throughout its length to allow the escape of exploded gases, and the end of said cartridge holder is provided with a plurality of crossed wires or pins 8, all of which extend across the longitudinal center of the cartridge holder, and effectually break up the wadding of the cartridge. This prevents any possibility of the wadding doing any damage.

In barrel 1, a plunger 9 is located, and is secured upon a rod 10, which projects through an opening 11 in cap 2. This plunger 9 is preferably sharp or conical in form as illustrated, so as to engage and fire the cartridge 7. Between the plunger 9 and the cap 2, and located around rod 10, is a coiled spring 12 which exerts pressure on the plunger to fire the cartridge as will be hereinafter explained. Rod 10 is provided with a lug 13, and with an opening 14 above the lug, and an arm 15 projects at right angles from the rod and is adapted to project over the face of a door illustrated at 16, so that when the door is opened, it will engage arm 15 and turn rod 10, for a purpose which will hereinafter appear.

By reference particularly to Fig. 3, it will be noted that the top of the cap is made with a key-way 17 communicating with opening 11, and of an area sufficient to allow the lug 13 to pass through the cap. To do this, rod 10 must be drawn outwardly, compressing spring 12, and when said lug is drawn through the cap, rod 10 is given a quarter turn to position the lug 13 in one of the grooves 18 in the top of cap 2. These grooves 18 are not deep, but merely to perform the function of preventing accidental rotary movement of the rod. It will be noted that when the rod is set as above described, and as shown in Figs. 1 and 2, and is in position on a door frame with its arm 15 projecting over the edge of the door, if such door should be opened, rod 10 will be turned far enough to permit lug 13 to pass through the key-way 17, when the spring 12 will move the plunger 9 into engagement with the cartridge 7, and fire the same.

When my improvements are to be used as a fire alarm, I draw the rod 10 outwardly until the opening 14 is exposed, but not far enough to draw the lug 13 through the cap

2. Through this opening 14, I then position a small section of fusible wire 19, and below the same, and through the opening 14, I pass a section of fuse 20, which is preferably wrapped around the rod as shown most clearly in Fig. 8. If the temperature of the room reaches a height sufficient to melt the fuse wire 19, the alarm will be sounded, but it frequently happens that it takes some time for the temperature to reach such a height, even though there be flame in the room, in such event the flame will ignite the fuse 20, and the latter will melt the fuse wire 19.

In Fig. 9, I illustrate my improvements in use with a number of doors and windows. To do this, I provide a key 21 which is projected through the opening 14, and to this key I connect a number of flexible connecting devices 22 which are passed around pulleys 23, and are connected with doors and windows in such a way that when said doors or windows are opened, a pull will be had on these connecting devices 22. This movement of any of the connecting devices will draw the key 21 out of opening 14, and permit spring 12 to force the plunger into engagement with the cartridge.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A device of the character described, comprising a barrel screw-threaded at both ends, an internally screw-threaded sleeve on one end of said barrel, an externally screw-threaded cartridge holder screwed into said sleeve, said cartridge holder having perforations therein, cross rods in the end of said cartridge holder, and a spring pressed plunger in said barrel, substantially as described.

2. A device of the character described, comprising a barrel screw-threaded at both ends, an internally screw-threaded sleeve on one end of said barrel, an externally screw-threaded cartridge holder screwed into said sleeve, said cartridge holder having perforations therein, cross rods in the end of said cartridge holder, a supporting cap internally screw-threaded, and into which the barrel is screwed, said cap having an opening therethrough, and a key-way communicating with said opening, a rod in said opening, a plunger on the inner end of said rod, a coiled spring around the rod between the plunger and the cap, and a lug on said rod adapted to be projected through said key-way when the plunger is moved to set position, substantially as described.

3. A device of the character described, comprising a barrel screw-threaded at both ends, an internally screw-threaded sleeve on one end of said barrel, an externally screw-threaded cartridge holder screwed into said sleeve, said cartridge holder having perforations therein, cross rods in the end of said cartridge holder, a supporting cap internally screw-threaded, and into which the barrel is screwed, said cap having an opening therethrough, a key-way communicating with said opening, a rod in said opening, a plunger on the inner end of said rod, a coiled spring around the rod between the plunger and the cap, a lug on said rod adapted to be projected through said key-way when the plunger is moved to set position, said rod having an opening therein above said lug, and means positioned in said opening normally holding said plunger in set position, substantially as described.

4. A device of the character described, comprising a barrel screw-threaded at both ends, an internally screw-threaded sleeve on one end of said barrel, an externally screw-threaded cartridge holder screwed into said sleeve, said cartridge holder having perforations therein, cross rods in the end of said cartridge holder, a supporting cap internally screw-threaded, and into which the barrel is screwed, said cap having an opening therethrough, and a key-way communicating with said opening, a rod in said opening, a plunger on the inner end of said rod, a coiled spring around the rod between the plunger and the cap, a lug on said rod adapted to be projected through said key-way when the plunger is moved to set position, an arm on the outer end of said rod adapted to be engaged by an object to turn the rod, and position the lug in alinement with the key-way permitting the spring-pressed plunger to move to firing position, substantially as described.

5. A device of the character described, comprising a barrel screw-threaded at both ends, an internally screw-threaded sleeve on one end of said barrel, an externally screw-threaded cartridge holder screwed into said sleeve, said cartridge holder having perforations therein, cross rods in the end of said cartridge holder, a supporting cap internally screw-threaded, and into which the barrel is screwed, said cap having an opening therethrough, and a key-way communicating with said opening, a rod in said opening, a plunger on the inner end of said rod, a coiled spring around the rod between the plunger and the cap, a lug on said rod adapted to be projected through said key-way when the plunger is moved to set position, an arm on the outer end of said rod adapted to be engaged by an object to turn

the rod, and position the lug in alinement with the key-way permitting the spring-pressed plunger to move to firing position, and said cap having grooves in its outer face adapted to receive the lug when in set position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY JONES.

Witnesses:
R. H. KRENKEL,
CHARLES E. POTTS.