(No Model.) 2 Sheets—Sheet 1.

J. H. PRUITT

BURGLAR ALARM.

No. 486,893. Patented Nov. 29, 1892.

Fig. 1.

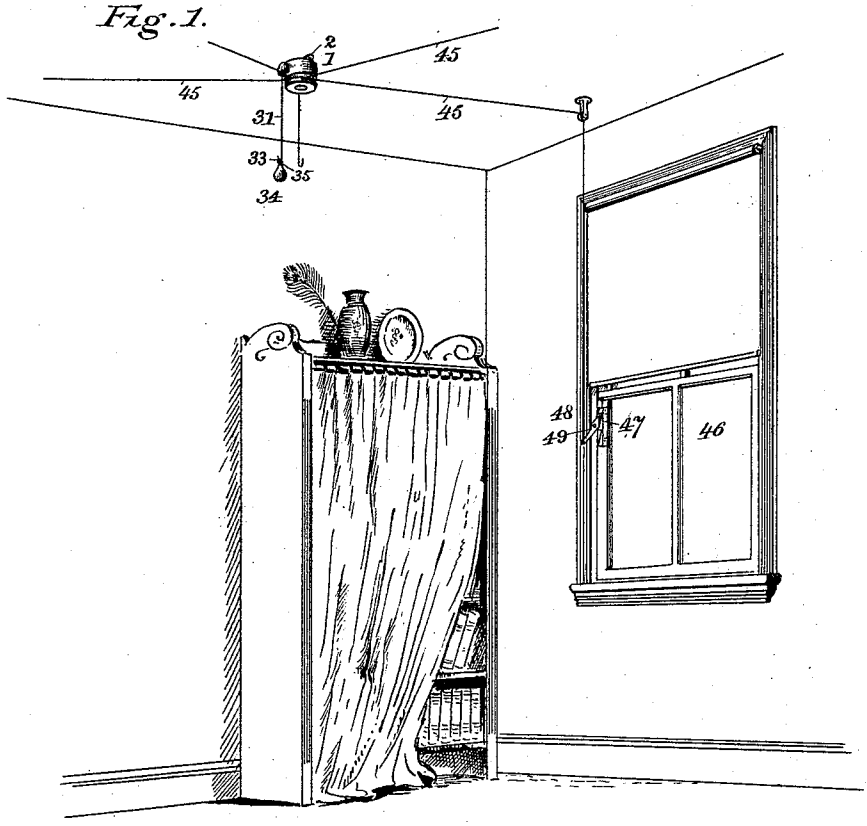
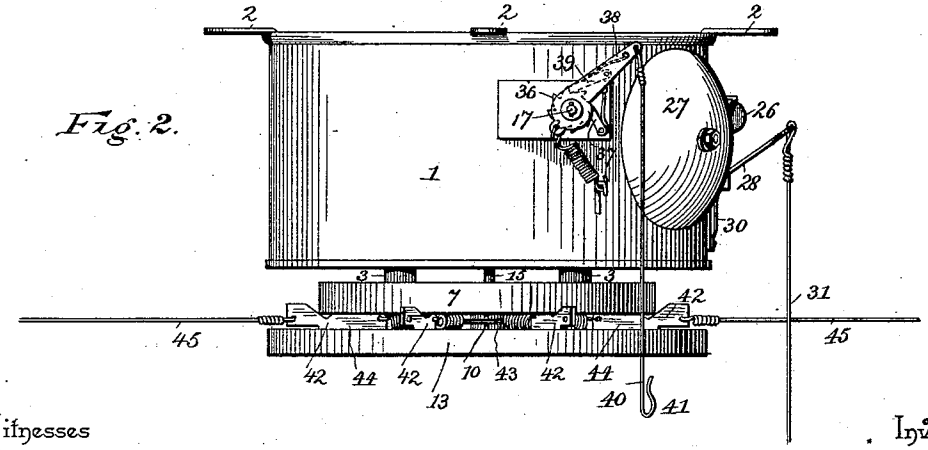


Fig. 2.



Witnesses

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W. J. Durand

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

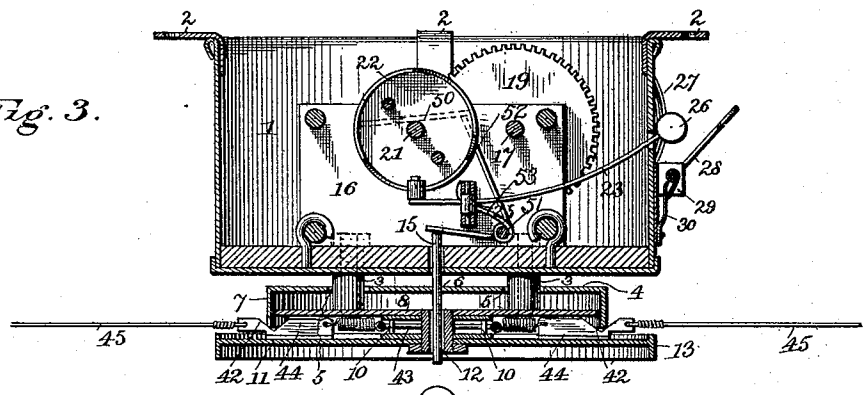


Fig. 4.

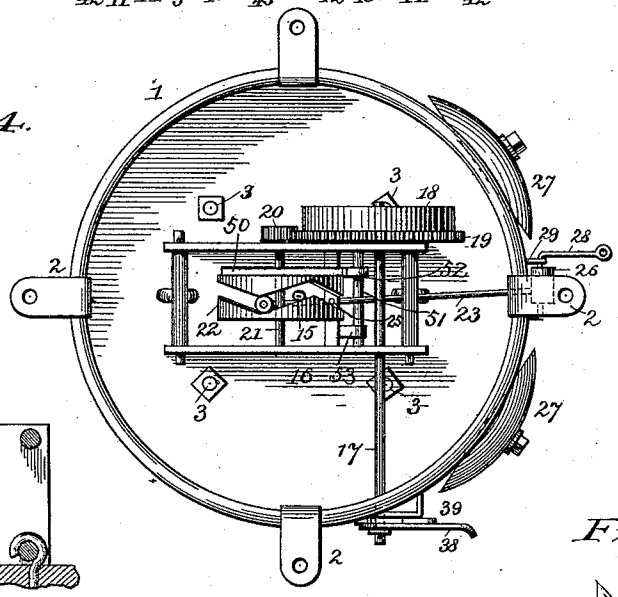


Fig. 7.

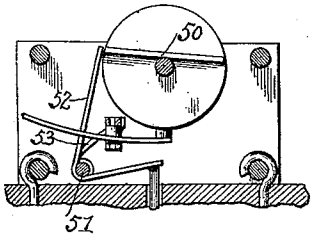


Fig. 6.

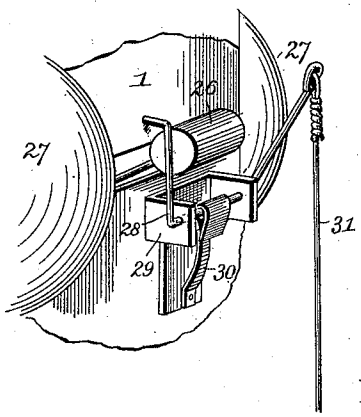
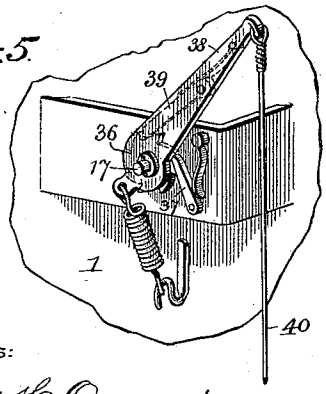


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN H. PRUITT, OF MARKTON, ALABAMA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 486,893, dated November 29, 1892.

Application filed September 7, 1891. Serial No. 405,005. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PRUITT, a citizen of the United States, residing at Markton, in the county of Etowah and State of Alabama, have invented a new and useful Burglar-Alarm, of which the following is a specification.

This invention relates to improvements in burglar-alarms especially designed for use in dwelling-houses and adapted to indicate by sounding an alarm the fact that a window has been raised or lowered or a door opened.

The objects of my invention are to provide an alarm of very cheap and simple construction adapted to serve for a series of doors and windows and to positively and immediately indicate any tampering with said doors or windows and to provide a convenient means for setting the alarm and for throwing the same into and out of operation.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of an alarm constructed in accordance with my invention, the same being illustrated in operative position in a room. Fig. 2 is a detail in elevation of the alarm. Fig. 3 is a transverse section. Fig. 4 is a top plan. Fig. 5 is a detail of the winding ratchet-lever and adjacent parts. Fig. 6 is a similar view of the alarm-locking device. Fig. 7 is a vertical section of the upper portion of the alarm, the parts being reversed to the position in which they are shown in Fig. 3.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates a cylindrical casing having a bottom and provided at its upper (preferably open) end with radiating perforated lugs 2, through which screws or nails may be passed for the purpose of securing the said housing or casing to a ceiling or other convenient support. From the bottom of the casing 1 depends a series of studs 3, and the same passes through a disk 4, said disk being perforated, as at 5, to loosely receive the studs and capable of vertical movement thereon. The disk is provided at its center with a perforation 6, and is surrounded by an annular flange 7, which depends below the lower surface or bottom of the disk. Rigidly secured to the lower ends of the studs is a supporting-head 8, slightly smaller in diameter than the disk 4 and inclosed by the flange of the latter, so that when not otherwise influenced the disk will fall by gravity. This head, like the disk, is also provided with a perforation which is vertically below that of the disk. A series of short studs 10, depending from the head 8, supports below the same a short distance a circular platform 11, greater in diameter than either the head or disk and provided with a central perforation 12, aligning with those of the disk and head and surrounded by an annular flange 13, the upper edge of which is above the plane of the platform. Secured rigidly in the perforation of the disk and passing above and below the same through the perforations in the head, platform, and bottom of the casing is a trip-rod 15, which latter at its upper end, for a purpose hereinafter apparent, extends upwardly a short distance into the casing.

16 designates an alarm-frame, which comprises the opposite plates secured together and spaced apart by suitable tie-bolts and mounted in the casing 1. In the alarm-frame a winding-shaft 17 is journaled, and the same at one end extends outside of the casing. The inner end of the shaft has mounted thereon an ordinary spring-drum 18 and a master-gear 19, which latter engages the small pinion 20, located upon a shaft 21, journaled in the frame, which shaft has mounted thereon a cam-wheel 22, provided at one side with the transverse stop-rod 50, extending from its face. The cam-wheel 22 receives the end of a bell-hammer 23, which end is provided with an antifriction-roller, as shown. The hammer is pivoted between two parallel bars 25, and at its outer end, which is projected through a lateral slot in the casing, is provided with a head 26, which, as the cam-wheel is rotated through the medium of the gears and spring, is vibrated between and alternately brought in contact with a pair of alarm-bells 27, secured to the exterior of the casing 1. Such vibrations, however, may be prevented when the alarm is not set for operation by a U-shaped lever 28, which is pivoted in a bracket 29 immediately below the bell-hammer, said lever having a central depending portion normally

pressed by a spring 30 upwardly, so that the branches of the lever lie at opposite sides of the hammer-head, and hence prevent contact of the latter with the alarm-bells. A wire 31 depends from one of the terminals of the U-shaped locking-lever, said wire terminating in a hook 33, adapted to receive removably a weighted handle 34, which is provided with an eye 35 for engaging the hook. When such handle is supported by the wire, the U-shaped lever is drawn downwardly against the tension of its spring, and hence does not perform when in this position any locking function, and the alarm is set for operation. The winding-shaft, outside of the casing, is provided with a ratchet 36, which is engaged by a spring-pressed locking-pawl 37, whereby it is prevented from retrograding. A lever 38, loosely mounted upon the shaft at one side of the pawl, carries a winding-pawl 39, that also engages the said ratchet-wheel. A spring connected with the lever at one side of its pivot and to the casing retains the lever in an elevated position and returns it to such position when depressed or drawn downward through the medium of a wire 40, which depends from the free end of the lever and is provided with a hook 41 for removably engaging with the eye of the removable handle 34. By grasping this handle and raising and lowering the same it will be obvious that the winding-shaft is rotated and locked against retrograding.

42 designates a slide, of which there is a series, being arranged annularly upon the platform and below the head. The slides are connected by short spiral springs to a ring 43, that surrounds the studs that connect the head and platform, whereby said slides are normally drawn inwardly when not otherwise influenced. Each slide is provided upon its upper side with an inclined notch or recess 44 and has connected to its rear end a wire 45, which wires extend to various doors and windows, and through the medium thereof, when the doors and windows are opened, serve to draw the slides outwardly, so that their notches or recesses are brought under the encircling depending flange of the disk, and hence permit said disk to lower by gravity. A rock-shaft 51 is located in rear of the transverse bars 25, and to the same a bell-cranked lever 52 is secured at its angle. The lower branch of the bell-crank extends horizontally under the cam-wheel and lies in the path of the alarm-rod 15, while the upper branch of the said bell-crank lever lies at one side of the cam-wheel for operating the bell-hammer lever and extends into the path of the transverse stop-bar 50. A light spring 53 is secured to the rock-shaft 51 and at its upper free end bears against and is sprung under the upper cross-bar 25, whereby, through the tendency of the spring, the bell-crank lever 52 when not otherwise in use has its lower branch depressed into the path of the alarm-rod 15 and its upper end or branch thrown forward into the path of the stop-bar 50. The platform-flange prevents too much of a withdrawal of the slides and permits only of such withdrawal as will bring the recesses or notches of the slides opposite the depending flange of the gravity-disk.

46 designates a window, and to the same at one side I secure a bar 47, having inclined downwardly-disposed teeth. At one side of the bar there is pivoted, as at 48, to the jamb of the window a lever 49, the inner end of which is adapted to be thrown against and into engagement with the teeth of the rack-bar. To the outer end of this lever the wire leading from one of the slides is connected, and between the lever and slide said wire, it will be understood, is properly guided and supported, as shown. It will be obvious that when thus set any raising of the window will cause a movement upon the part of the lever and a drawing down of the wire by the downward movement of the outer end of said lever. An inward or outward movement on the part of any one or all of the slides will cause an elevation of the flanged disk 4, and with it will move vertically the alarm-rod 15. The spring 53 being a light one, its tensile strength is readily overcome by the upward movement given the alarm-rod, and hence the rock-shaft 51 will be rocked outwardly, as will also the bell-cranked lever 52, thus withdrawing its upper branch from the path of the stop-bar 50 and permitting the cam-wheel to be rotated through the medium of the winding mechanism and the bell-hammer shaft to be vibrated between the two bells, thus causing a sounding of the alarm. In this manner it will be seen that numerous doors and windows may be thus connected with the alarm, and any tampering with any one or all of the same will serve to notify the occupants of the house of such fact. In the day, when an alarm is undesirable or unnecessary, the wires may be disconnected from the windows and doors or may be left in a connected condition and the locking U-shaped bail or lever, heretofore described, liberated from the influence of the weighted handle and permitted to be thrown by its spring into a locking position, and hence embracing the bell-hammer, and prevent vibrations of the latter, even though the doors and windows be opened and raised.

By the employment of the rack-bar upon the windows it will be seen that they may be raised a few inches for the purpose of ventilation, and yet too slightly to permit of the passage therethrough of an intruder, and that any further raising, no matter how slight, will serve to sound the alarm.

Having described my invention, what I claim is—

1. In a burglar-alarm, the casing, a bell-sounding alarm mechanism arranged therein, a hammer actuated by the mechanism, and a bell arranged in the path of the hammer, the U-shaped lever pivoted below the bell-hammer, a spring for normally pressing or

elevating one branch of said lever into the path of the hammer, and a removable weight supported by a branch of said lever, substantially as specified.

2. In a burglar-alarm, the combination, with the casing and the alarm mechanism comprising in its make-up a spring-drum and winding shaft, the latter projecting through the casing, of a ratchet mounted on the shaft, a pawl for holding the same, a lever mounted at one side of the ratchet and having a pawl engaging said ratchet, a spring for elevating the lever, a wire depending from the lever and terminating in a hook, a vibratory bell-hammer lever, a U-shaped lever pivoted below the same, a spring for elevating the U-shaped lever into the path of the hammer-lever, a wire depending from the hammer-lever and terminating in a hook, and a weighted handle having an eye adapted to engage removably the hook of the locking-lever or that of the winding-lever, substantially as specified.

3. In a burglar-alarm, the combination, with the casing and the internal alarm mechanism, the latter comprising a winding-shaft projecting through the casing, of a ratchet-wheel mounted on the shaft, a spring-pawl engaging the ratchet-wheel, a lever loosely mounted on the shaft, a pawl pivoted upon the lever and engaging the ratchet-wheel, and a coiled spring connected to the lever and casing at one side of the pivot of the lever, substantially as specified.

4. In a burglar-alarm, the combination, with the casing, the opposite bells, the internal alarm mechanism having and actuating a cam-wheel provided with a stop, and a pivoted vibratory bell-hammer lever actuated by the wheel and adapted to be vibrated between the bells, of a head stationarily supported below the casing, a platform stationarily supported below the head, slides having notches mounted on the platform, springs connecting the same with a ring supported upon the platform, a gravity-disk loosely mounted on the platform and having a depending annular flange supported by the slides, a trip-rod fixed to the center of the disk, extending above and below the same and at its upper end projecting through the casing, and a spring-pressed bell-crank pivoted in the casing and having its upper end projecting into the stop of the cam-wheel and its lower end extending into the path of the stop, substantially as specified.

5. In a burglar-alarm, the combination, with the casing, the alarm mechanism, a platform supported below the casing, and slides mounted thereon and adapted when drawn out to liberate said alarm mechanism, of a window and its frame, a rack-bar having inclined teeth secured to the window, a lever pivoted to the frame and at its inner end engaging the teeth, and a wire connecting the outer end of the lever with the aforesaid slide, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN H. PRUITT.

Witnesses:
JAMES L. YOUNG,
HORACE E. DUNLAP.