

Dec. 27, 1932.

W. D. ENGLAND ET AL

1,892,336

COMBINATION WINDOW SASH LOCK AND BURGLAR ALARM

Filed May 17, 1930

2 Sheets-Sheet 1

Fig. 1.

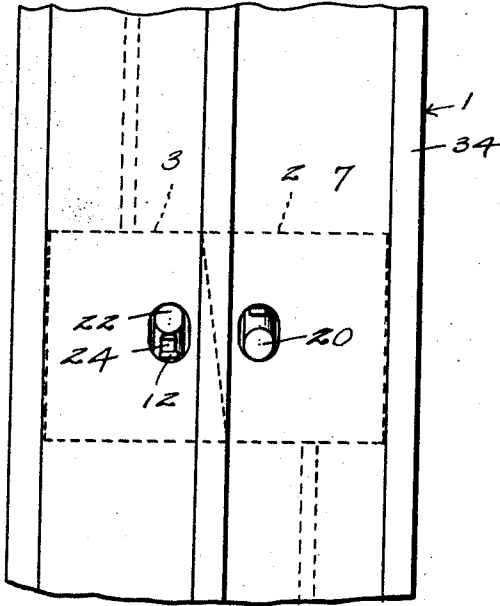


Fig. 3.

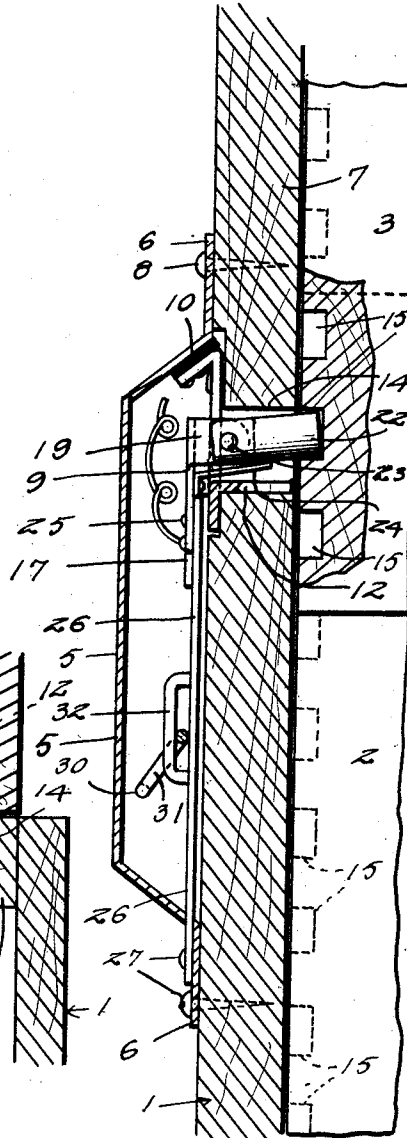


Fig. 4.

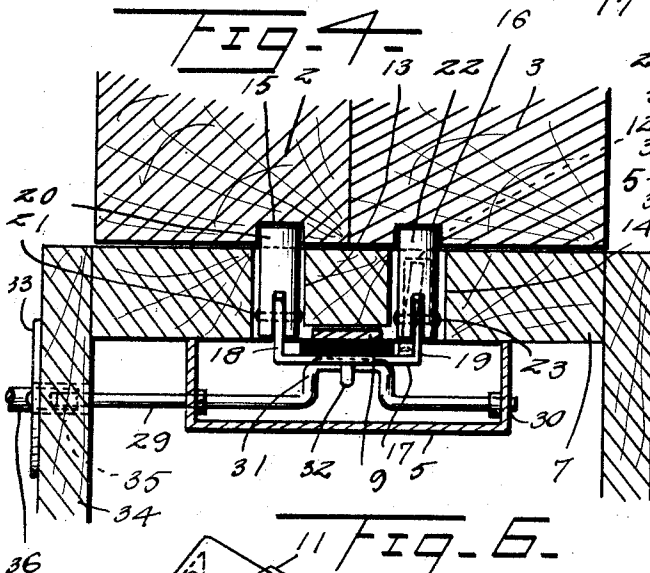
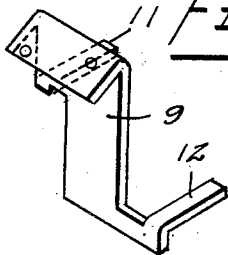


Fig. 5.



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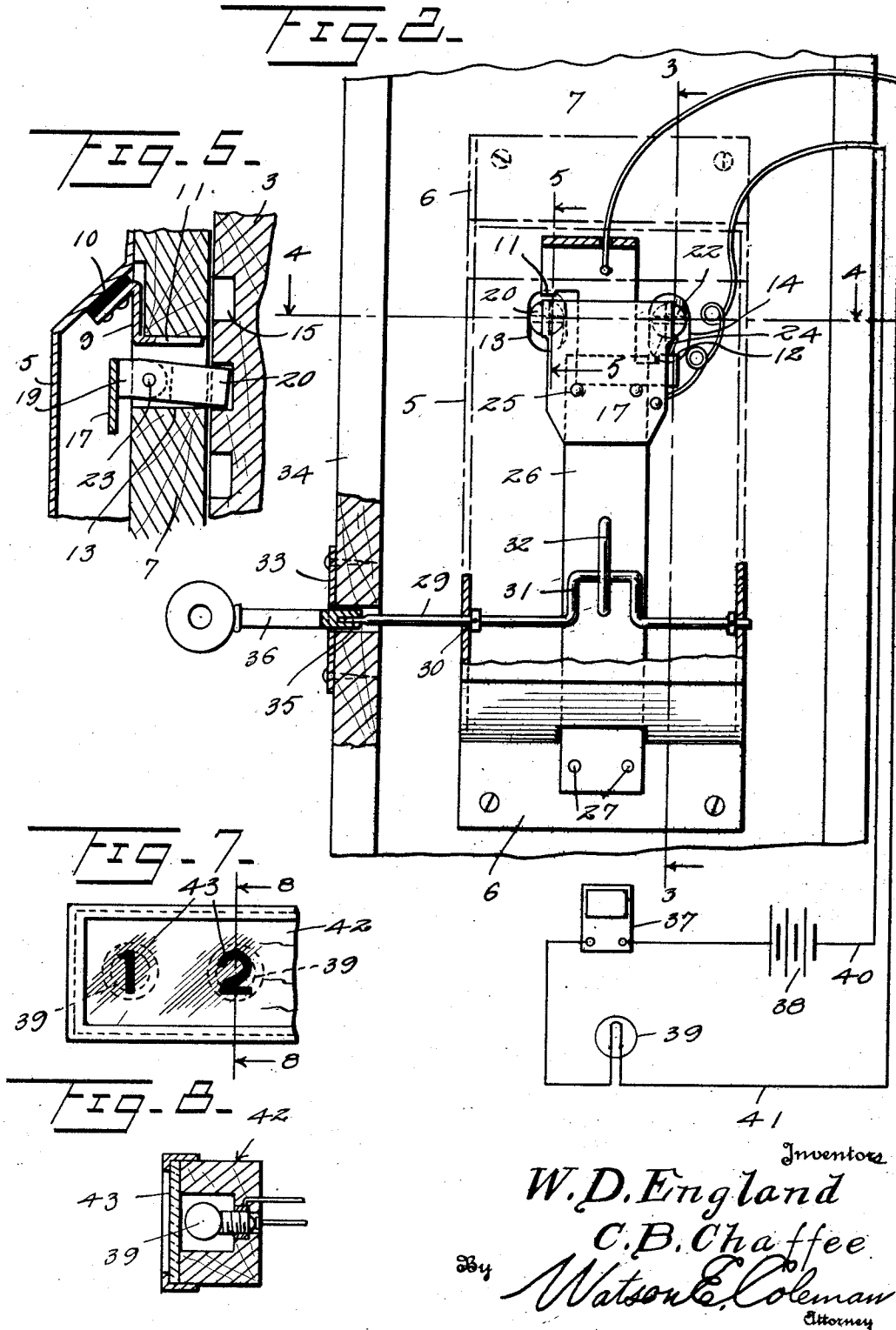
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2 Sheets-Sheet 2



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COMBINATION WINDOW SASH LOCK AND BURGLAR ALARM

Application filed May 17, 1930. Serial No. 453,324.

This invention relates to a combined window sash lock and burglar alarm, and has for one of its objects to provide a novel device of this character which shall be adapted to lock the lower and upper sashes of a window in closed position, to lock one of the sashes in closed and the other in partly opened position and to lock both of the sashes in partly opened position, and which shall be adapted to sound an alarm when any attempt is made to raise the lower sash or lower the upper sash.

The invention has for a further object to provide a device of the character stated which shall be simple and adapted to be readily installed, which when installed shall have all the parts thereof so arranged as to render them inaccessible to a person attempting to enter the house by way of the window, and which shall be adapted to be manufactured and sold at a comparatively low cost.

Figure 1 is a fragmentary elevation of the inside face of a window frame equipped with our invention;

Figure 2 is an inside elevation of the window frame showing our sash lock and burglar alarm in place, a portion of the figure being broken away;

Figure 3 is a vertical section on the line 3—3 of Figure 2;

Figure 4 is a section on the line 4—4 of Figure 2;

Figure 5 is a similar view to Figure 3 taken on the line 5—5 of Figure 2;

Figure 6 is a perspective view of the conductor plate;

Figure 7 is a fragmentary face view of a signal casing;

Figure 8 is a section on the line 8—8 of Figure 7.

Referring in detail to the drawings, 1 designates a window frame, and 2 and 3 designate respectively the meeting rails of the lower and upper sashes of the frame.

The combined burglar alarm and sash lock comprises a switch which is adapted to be disposed in one of the sash weight compartments of the window frame 1. The switch comprises a casing 5 which is fully open at its outer side and is provided at its upper and lower ends with lugs 6 which bear against the

inner wall 7 of the sash weight compartment or case and are secured thereto by screws 8. A conductor plate 9 shown in Figure 6 is arranged in the upper end portion of the casing 5, and is secured to and insulated from the top wall of the casing, as shown at 10. The conductor plate 9 carries an upper contact 11 and a lower contact 12. The upper contact 11 is arranged in the upper side of an opening 13 formed in the window frame wall 7, (see Figure 5) and the lower contact 12 is disposed in the lower side of an opening 14 formed in said wall as shown in Figure 2. The opening 13 is adapted to register with one of a series of sockets 15 formed in a side of the lower sash 2, and the opening 14 is adapted to register with one of a series of sockets 16 formed in a side of the upper sash 3.

A conductor plate 17 is arranged in the casing 5 inwardly of the conductor plate 9 and is provided with outwardly directed lugs 18 and 19 which are arranged in alignment with the openings 13 and 14, respectively. A bolt 20 is pivotally connected, as at 21, to the lug 18 and projects through the opening 13 for engagement in one of the sockets 15 of the bottom sash 2, and a bolt 22 is pivotally connected, as at 23, to the lug 19 and extends through the opening 14 for engagement in one of the sockets 16 of the top sash 3. The contact 11 and bolt 20 constitute a circuit closer, and this bolt is normally maintained out of engagement with this contact by its gravity and by the weight of the sash, as shown in Figure 5. The contact 14 and bolt 22 also constitute a circuit closer and this bolt is normally maintained out of engagement with this contact by a spring 24 which is carried by the conductor plate 17 and contacts with the lower side of the bolt as shown in Figure 3.

The conductor plate 17 is secured, as at 25, to the upper end of a vertical leaf spring 26 which is arranged within the casing 5 and is secured at its lower end thereto, as at 27. The spring 26 constantly tends to urge the conductor plate 17 and the bolts 20 and 22 carried thereby into projected position. A block of insulation 28 is disposed between the conductor plate 17 and the conductor plate 9.

A shaft 29 extends across the casing 5 inwardly of the spring 26, and is journaled in bearing openings 30 formed in the side walls of the casing. The shaft 29 is provided with a crank 31 which engages a loop 32 secured to the outer side of the spring 26. One end of the shaft 29 is arranged in an escutcheon 33 secured to the inner facing strip 34 of the window frame 1, and this end 35 of the shaft is formed in cross section to permit it to be engaged by a key 36 used for turning the shaft when it is desired to retract the bolts 20 and 22. The retraction of the bolts 20 and 22 takes place against the tension of the spring 26, with the result that when the shaft is released, the spring reacts to effect the projection of the bolts.

An alarm 37, which may be in the form of an electric bell, buzzer or the like, is connected to one terminal of a battery 38 and to one terminal of the filament of an incandescent lamp 39. The other terminal of the battery 38 is connected to the conductor plate 17 by a conductor 40, and the other terminal of the lamp filament is connected to the conductor plate 9 by a conductor 41.

In practice, each of the windows of a dwelling or other building through which unlawful entry may be gained to the building, will be equipped with one of the switches 4, each switch will be connected to the battery 38, the alarm 37 and a lamp similar to the lamp 39, and the lamps will be housed in a casing 42 which will be provided with a series of transparent panels 43 bearing numbers, the respective numbers indicating the location of the respective windows.

The bolt 20 engages in one of the sockets 15 to secure the lower sash 2 in closed or partly opened position, and the bolt 22 engages in one of the sockets 16 to secure the upper sash 3 in closed or partly opened position. Any attempt to raise the lower sash will result in the movement of the bolt 20 into engagement with its contact 11, and any attempt to lower the upper sash will result in the movement of the bolt 22 into engagement with its contact 12. When either of the bolts 20 and 22 is moved into engagement with its contact, the circuit including the alarm 37 and lamp 39 will be closed, with the result that the occupants of the building will be notified that an attempt is being made to enter the building by way of one of the windows, the particular window being tampered with being indicated by the lamp 39. When it is desired to release either the bottom sash 2 or the top sash 3 for adjustment, it is only necessary to turn the shaft 29 through the medium of the key 36, resulting in the retraction of the bolts 20 and 22, the release of the sashes for adjustment. The casing 5 protects all parts of the switch from damage by the sash weights.

While we have described the principle of

the invention, together with the structure which we now consider the preferred embodiment thereof, it is to be understood that the structure shown is merely illustrative and that such changes may be made, when desired, as fall within the scope of the invention as claimed.

We claim:—

1. A lock circuit closer, comprising a casing having horizontal openings, a leaf spring arranged vertically within the casing and secured at its lower end thereto and having its upper end located near said openings, bolts projecting through said openings beyond the casing and normally held in projected position by the upper end of the spring, means connecting the bolts to the upper end of the spring for movement about horizontal axes, a contact located in the casing above one of the bolts and insulated from the casing, such bolt being held by gravity out of engagement with said contact, a contact located in the casing beneath the other of the bolts and insulated from the casing, and means yieldingly supporting said other bolt out of engagement with its contacts.

2. A lock circuit closer, comprising a casing provided in a wall thereof with oppositely disposed horizontal openings, a leaf spring arranged vertically within the casing and secured at its lower end thereto, a conductor plate secured to the upper end of the spring and provided with lugs extending therefrom into said openings, bolts arranged in said openings with their outer ends projecting beyond the casing and connected at their inner ends to the lugs for pivotal movement thereon about horizontal axes, a second conductor plate located in the housing and secured thereto and insulated therefrom, a contact fixedly secured to said second conductor plate and located in one of said openings above the bolt therein, such bolt being held by gravity out of engagement with said contact, a second contact fixedly secured to said second conductor plate and located in the other of said openings below the bolt therein, and a spring carried by said first conductor plate and supporting said last named bolt out of engagement with its contact.

In testimony whereof we hereunto affix our signatures.

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