No. 656,309. Patented Aug. 21, 1900.

P. V. VANDEVELDE.

ELECTRIC BURGLAR ALARM.

(Application filed Feb. 16, 1900.)

(No Model.)

Fig. 1.

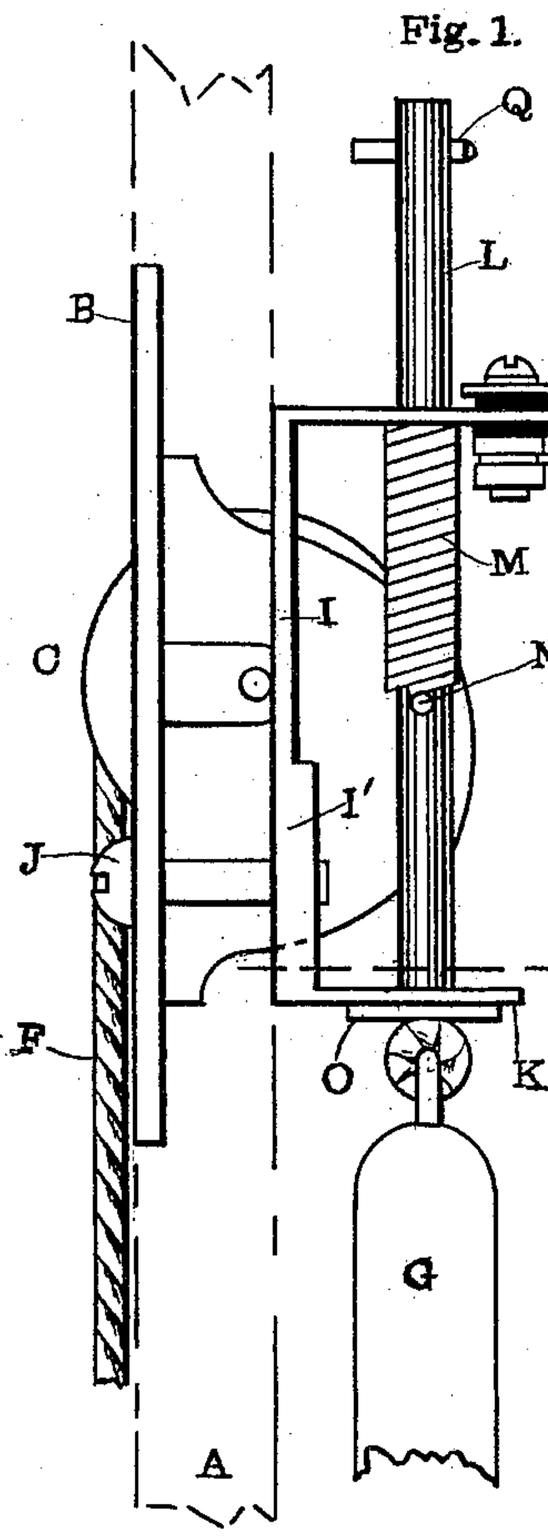


Fig. 2.

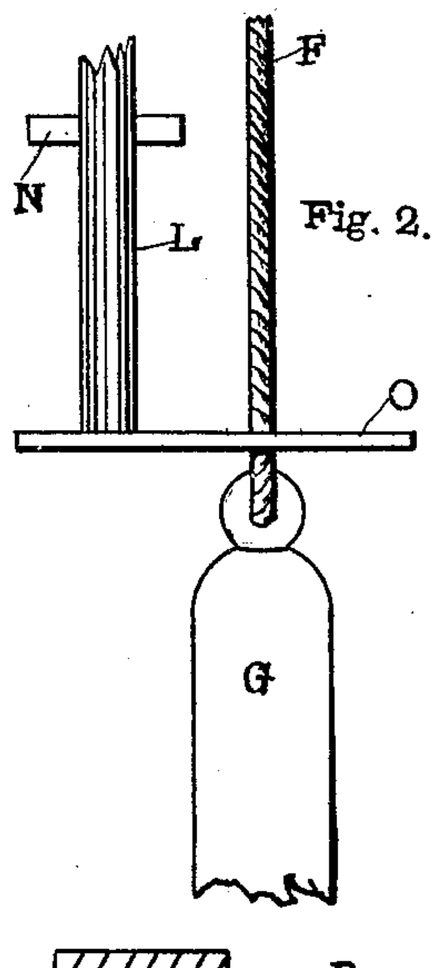
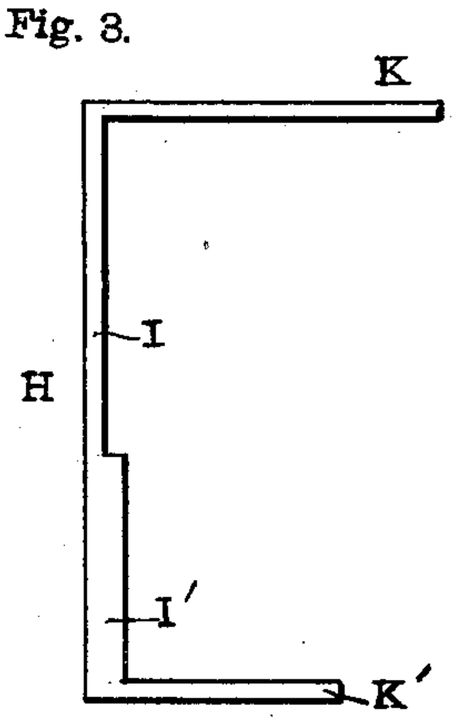


Fig. 3.



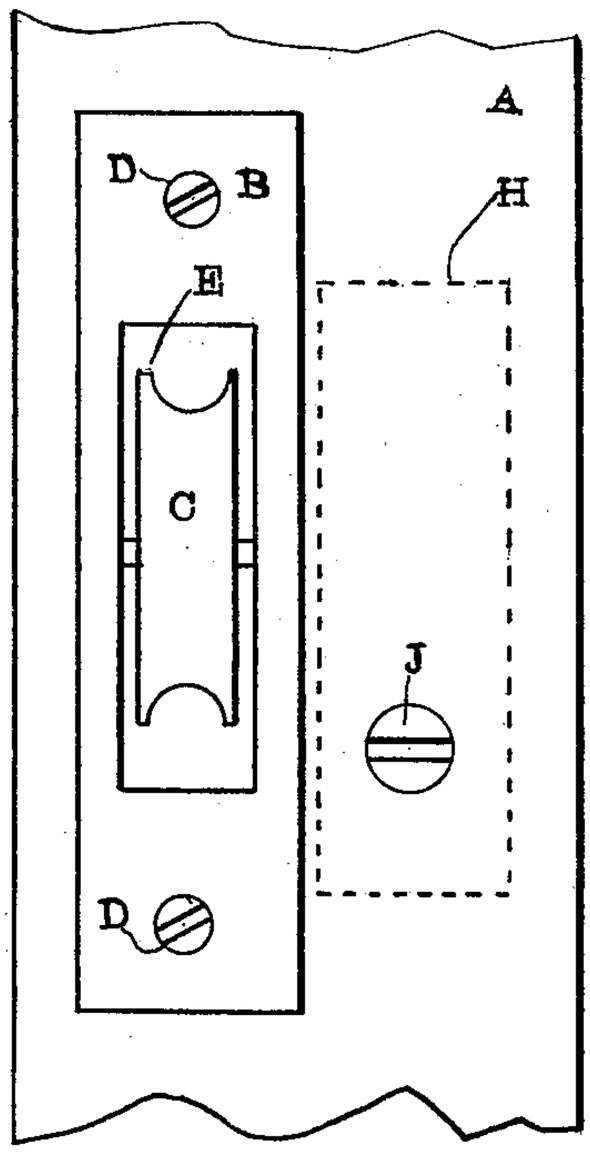


Fig. 4.

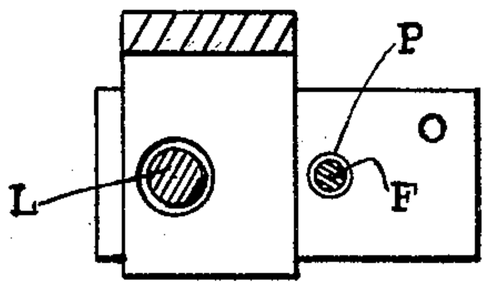


Fig. 5.

WITNESSES:

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PAUL VICTOR VANDEVELDE, OF NEW YORK, N. Y.

ELECTRIC BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 656,309, dated August 21, 1900.

Application filed February 16, 1900. Serial No. 5,472. (No model.)

To all whom it may concern:

Be it known that I, PAUL VICTOR VANDEVELDE, a citizen of the United States of America, and a resident of New York, (Corona,) Queens county, State of New York, have invented a new and useful Improvement in Electric Burglar-Alarms, of which the following is a specification.

My invention relates to an electric burglar-alarm, especially adapted for the windows of a house having the usual sash weights and cords.

Heretofore a patent was granted to me, No. 592,503, dated October 26, 1897, entitled "Automatic electric-alarm device." The present invention relates to improvements on the patented device.

Experience has taught me that the sash-cord, being of non-metallic material, usually varies in its length according to the sash-weight, the weather, the amount of use, &c., and generally it becomes stretched. My present invention is constructed in such a manner that the alarm can be depended upon whether the sash-cord shrinks or stretches in length. This is an example of the advantages possessed by the present form of alarm device as constructed by me.

Figure 1 is a general outline of the parts composing the invention, the panel of the window-frame being shown by lines alternately short and long, so that the relative positions of the parts may become apparent at a glance. The insulation is shown by very wide black lines. Fig. 2 is a view, taken at right angles to that in Fig. 1, of a portion not clearly apparent as to shape when viewed in Fig. 1. Fig. 3 is a view of one of the details of Fig. 1 shown by itself, so that the construction in Fig. 1 may be more readily understood. Fig. 4 is a front view of a portion of the window-frame panel supporting the sash-pulley and the alarm device, so as to show their relative positions, the latter being shown dotted because on the outside of said panel. Fig. 5 is a plan of a portion of the construction, as shown especially in Fig. 1, made partly in section in order to assist in the understanding of the device when explained by reference-letters, the same letters being used for like parts.

A represents a portion of the window-frame, being one of the panels or strips usually carrying the pulley-block B and pulley C, fastened on the outside by screws D, so that the pulley is located in a hole E, passing through the pulley-block B and panel A.

F is the cord, and G the weight attached to the cord and located within the frame.

H is a squared U-shaped frame having a base part I thickened at the lower portion I′ to well maintain a threaded hole for a screw J and having an upper arm K and a lower arm K′, extending at right angles to the base I. The width of the frame H is small enough to pass through the panel A by taking off the block B. It is with its adjuncts held in position and secured there against the inner surface of the panel A by means of the screw J passing through the thickened portion I′ of the frame H.

L is a rod passing through the upper arm K and the lower arm K′ of the frame H, and there is a retractile spring M, surrounding said rod between the arm K and a pin N, projecting on both sides of said rod to act as a stop for tde expansion of the spring and located about midway between the upper arm K and the lower arm K′. This rod L is normally held in approximately its uppermost position, or in any position except about its lowest position, by the action of the weight G, pulled up against the arm O, to which the lower end of the rod L is permanently secured, said arm O having a hole P through which passes the cord F, the rod L being free to move through said arms K and K′, so that the arm O has a certain swinging movability, so that the cord F can pass through the hole P with practically no friction. By the action of the weight G the electric contacts are maintained positively in a separated condition, one of the contacts being Q, located on the rod L, and the other contact being Q′, carried upon the arm K and insulated therefrom. Other electrical features are not exhibited because so well known in this department of art, it being considered enough to show where the circuit is closed when the alarm is to be given. The weight is in its highest position normally, because the window is normally closed; but when the window is open, attention being paid to the lower sash, the weight G descends in a well-known

manner, and when it has descended a little way the terminal or contact Q closes the circuit by touching the contact Q′, and hence the alarm is given. Even if the cord F should become stretched, yet the terminal Q will surely be held somewhat upon the terminal Q′. The distance shown between the terminals is about an inch, and it is evident that the cord will never stretch, perhaps, even not half that amount. The spring M is shown completely compressed; but of course this need not be so in the highest position of the weight. The figure assumes that the cord has shrunk its maximum amount, thereby making the coils of the spring actually touching each other.

My invention is adapted to be so constructed as to operate for the upper sash.

I claim as my invention—

1. The combination of a sash-weight, a window adapted to move up and down, a sash-cord connecting the said window to said weight, a rod L, a support in which said rod is free to move up and down, a retractile spring tending to hold the said rod in its downward position, one electric terminal on said rod, and another on said support in the path of the first, an arm provided with a hole extending from said rod, said cord passing through said hole, and said arm being in the path of said weight.

2. In an electrical alarm for windows, the combination with the pulley-block for the sash cord and weight, of a squared U-shaped frame, a rod movably supported in said frame, an electric terminal on said rod, a stationary electric terminal in the path of the first terminal, an arm extending from said rod and provided with a hole through which passes the cord, and adapted jointly with said rod to be moved up and down by the action of said weight, a helical spring surrounding said rod between one of the arms of said U-shaped frame, and a pin passed through said rod, said frame being located within the window-frame and secured to the latter.

3. The combination with a panel A, of a window-frame, a sash-weight G adapted to move up and down, a window, a cord supporting said weight and fastened to said window, a support H, having a thickened portion I′, and secured to the inside of the said panel at said thickened portion, arms K and K′, extending from said support, a rod L, extending through and movable up and down through said arms, and carrying an electric terminal Q′, which is upon and insulated from said arm K, and located in the path of the terminal Q, a spring M, tending to hold the rod L, in its lowest position, and an arm O, rigidly secured to said rod, and having a hole through which passes said cord, said weight being attached to said cord, and bearing against said arm, O, and holding it in a raised position, in the normally-closed condition of the window.

In testimony whereof I have hereunto subscribed my name this 9th day of February, 1900.

PAUL VICTOR VANDEVELDE. [L. S]

Witnesses:

GOUV. W. CORD,

C. W. CHARNLETAN.