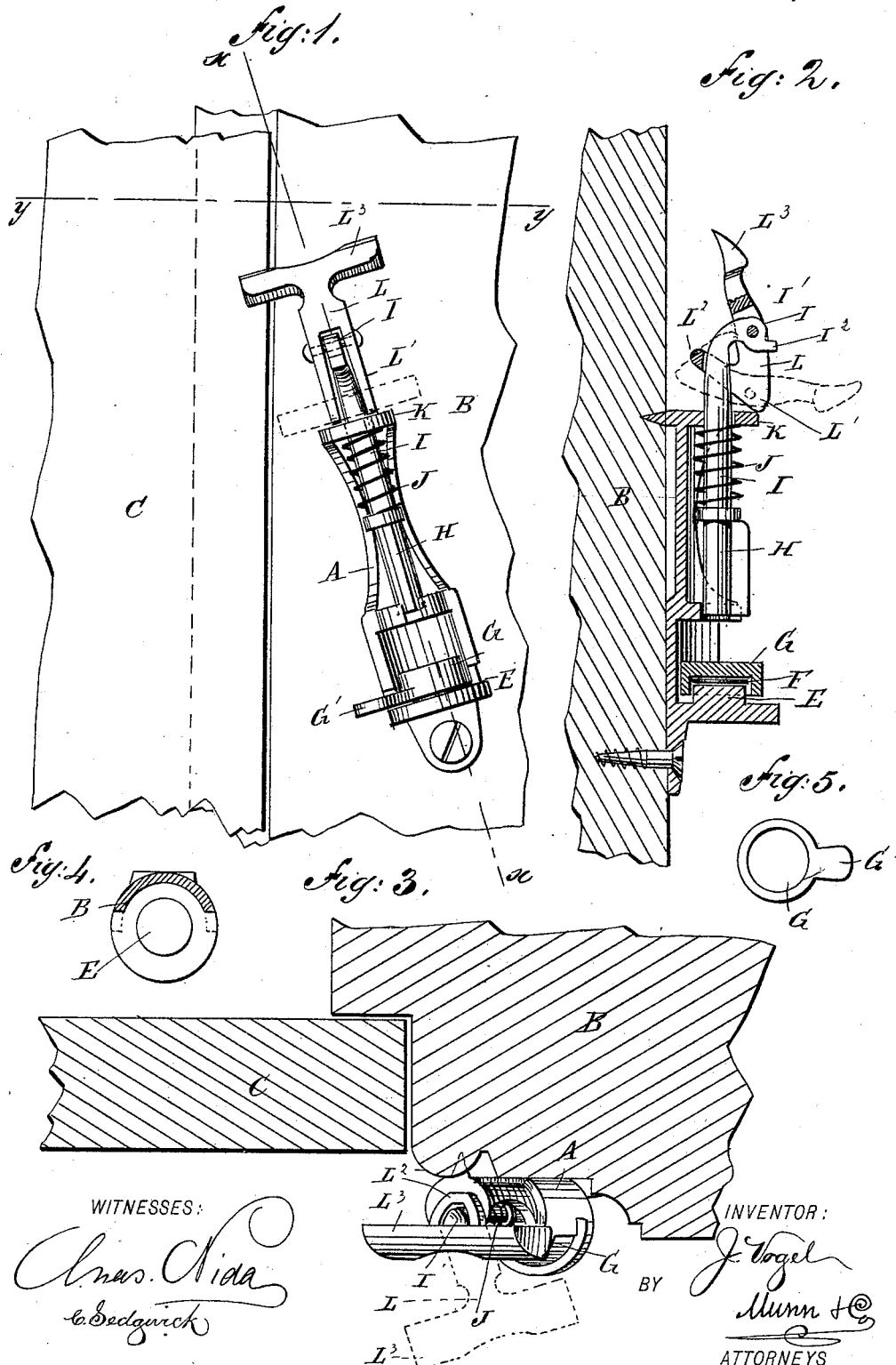


J. VOGEL.
BURGLAR ALARM.

No. 423,195.

Patented Mar. 11, 1890.



WITNESSES:

Chas. Nida
C. Sedgwick

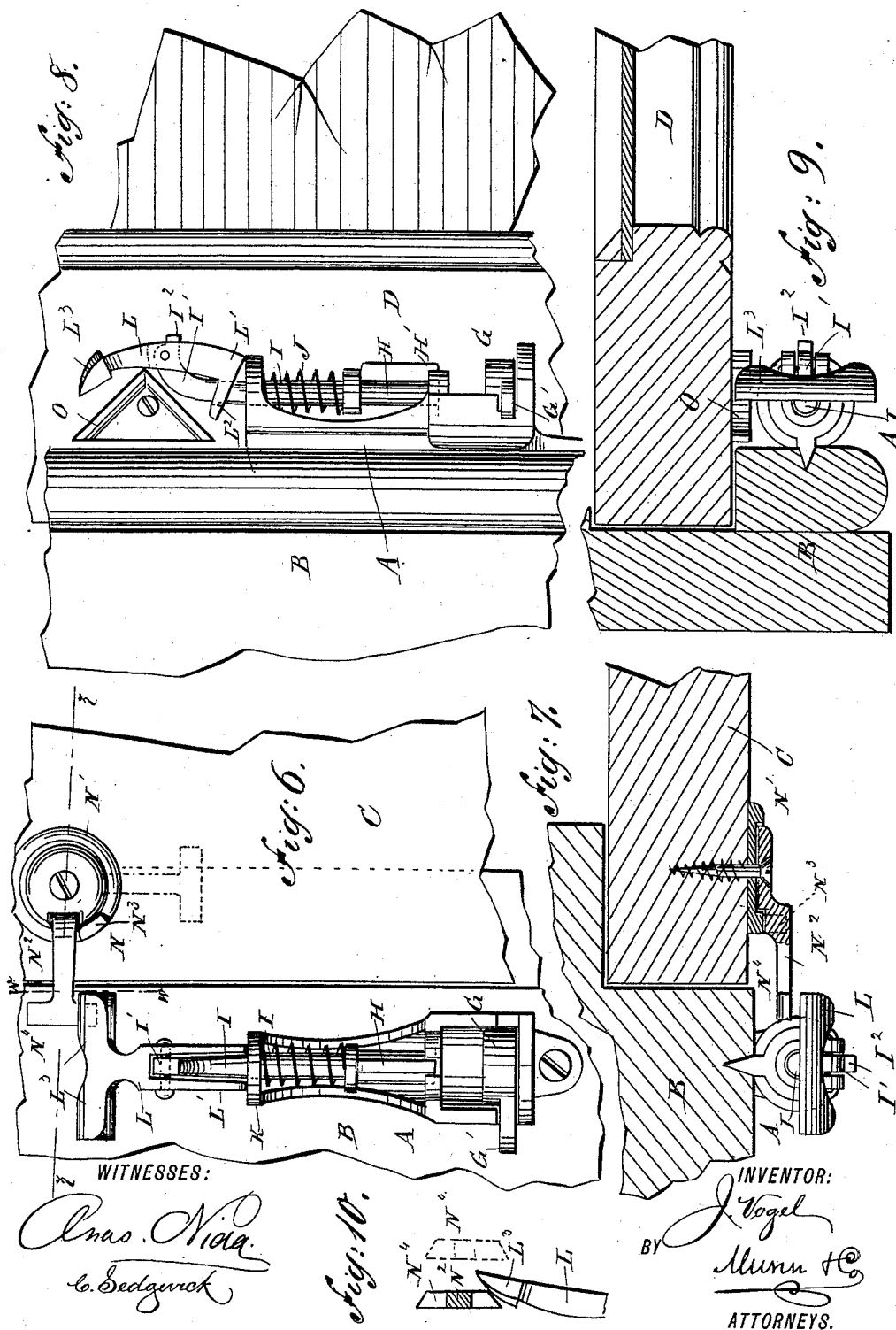
INVENTOR:

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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JULIUS VOGEL, OF NEW YORK, N. Y.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 423,195, dated March 11, 1890.

Application filed October 26, 1889. Serial No. 328,218. (No model.)

To all whom it may concern:

Be it known that I, JULIUS VOGEL, of the city, county, and State of New York, have invented a new and Improved Burglar-Alarm, of which the following is a full, clear, and exact construction.

The invention relates to burglar-alarms for windows and doors, in which a detonating cap is exploded when the door is opened or the window raised or lowered.

The improvement is embodied in the features hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front view of the improvement as applied to a door. Fig. 2 is a transverse section of the same on the line *xx* of Fig. 1. Fig. 3 is a sectional plan view of the same on the line *yy* of Fig. 1. Fig. 4 is a sectional plan view of the lower part of the casing. Fig. 5 is an inverted plan view of the detonating cap-holder. Fig. 6 is a front view of a modified form of the improvement as applied to a door. Fig. 7 is a sectional plan view of the same on the line *zz* of Fig. 6. Fig. 8 is a side elevation of a modified form of the improvement as applied to a window. Fig. 9 is a plan view of the same showing the window in section, and Fig. 10 is a transverse section of part of the improvement on the line *ww* of Fig. 6.

The improved burglar-alarm is provided with a suitably-constructed casing or shell A, fastened by suitable means to the casing B of a door C or window D, as is illustrated in the drawings. When applied to a door, as shown in Figs. 1, 2 and 3, the casing or shell A is placed in an inclined position and the apparatus is tripped when the door C is opened.

On the bottom of the casing A is formed a projection E, on which is held the detonating cap F, inclosed in a cap-holder G, provided with a handle G' for conveniently removing the holder G from the projection or offset E, over which it fits, as is plainly shown in Fig. 2. The holder G prevents the cap F from becoming displaced on the offset E, and also serves as a ready means for placing the cap in position on the said offset.

The top of the holder G is adapted to be

struck by the lower end of a hammer H, mounted to slide in suitable bearings in the shell A and provided with a rod I, extending upward through the top plate K of the casing or shell A, so as to form an additional guide for the hammer. On the rod I is coiled a spring J, which rests with one end on the upper end of the hammer H, and with its other end on the under side of the top plate K, so that when the hammer H is moved into its uppermost position, as is plainly shown in Figs. 1 and 2, the said spring I is compressed, and when the hammer is released the spring forces the latter down onto the holder G, so as to explode the cap, thereby making a detonation. The other end I' of the rod I is curved to one side and on it is pivoted a cam-lever L, provided with a downwardly-extending forked arm L', adapted to rest with its lower end on the top plate K, so as to lock the hammer H in an uppermost position. From the forked arm L' extends rearward a U-shaped arm L², adapted to engage the rod I, so as to prevent the cam-lever L from being swung too far and to always hold the lower end of the cam-lever in contact with the top plate K. On the upper end of the cam-lever L is formed a cross-bar L³, which is slightly beveled and is adapted to be engaged by the door C when the latter is opened.

The hammer H is provided with a longitudinal flange H', engaging the slotted lower bearing of the hammer to prevent turning of the hammer and thereby maintain the proper relative position of the parts.

The operation is as follows: When the hammer H is in its lowermost position, it rests on top of the cap-holder G, and when the operator desires to use the device he takes hold of the cross-bar L³ of the cam-lever L, which is now in the position shown in dotted lines in Fig. 2, and by pressing upward on the cross-bar causes the forked end L' of the lever to travel across the top plate K, thus raising the rod I against the tension of the spring J and at the same time moving the lever L a little beyond the upright position, whereby the lever and the rod I are locked in place. One end of the transverse bar L³ of the lever L now extends across the free end of the door C, and when the latter is opened it moves against the transverse bar L³ of the said le-

ver, thus swinging the same downward into the position shown in dotted lines in Fig. 2, whereby the rod I becomes unlocked and is suddenly forced downward by the action of the compressed spring J. The lower end of the hammer H strikes on the top of the holder G, thus exploding the cap F and creating a detonation which gives the alarm. When the lever L is swung downward, as shown in dotted lines in Figs. 2 and 3, the door C is free to swing open without coming in contact with the burglar-alarm. When the lever is in a lowermost position it is held in place by a projection I², formed on the end I' of the rod I. It is understood that the hammer H is in line with the holder G and the offset E.

Instead of releasing the device by the door directly, it may be actuated by a separate device N, fastened to the door, and illustrated in Figs. 6, 7, and 10. This device N comprises a disk N', secured to the door C, and on it is pivoted an arm N², adapted to rest on a lug N³ on the said disk N' to hold the arm N² in a horizontal position, but permitting an upward swinging motion of the same. On the outer end of the arm N² is formed a cross-piece N⁴, extending downward and beveled at either end, as is plainly shown in Fig. 10.

When the burglar-alarm is in place on the casing and the hammer H is raised and locked in place by the lever L, as previously described, and the door C is opened, the operator swings the arm N² into the position shown in Fig. 6, then, in going out of the door, closes the latter, so that the beveled end of the cross-piece N⁴ travels up one end of the cross-piece L³ of the lever L, finally dropping to the rear of the same when the door is closed, as is shown in full lines in Fig. 6 and in dotted lines in Fig. 10. Now, when any one opens the door C the cross-piece N⁴ comes in contact with the cross-piece L³ of the lever L, so that the latter is swung downward and the compressed spring J forces the hammer

H onto the cap-holder G, so as to explode the cap, thus giving the alarm.

When the burglar-alarm is not to be used, the operator swings the arm N² into the position shown in dotted lines in Fig. 6, whereby the door can be opened and closed without touching the alarm.

For windows I provide a triangular piece O, (shown in Figs. 8 and 9,) fastened to the window D and serving to engage at its inclined sides the transverse bar L³ of the lever L, so as to swing the latter downward to set the hammer H free, which is then forced by the compressed spring J to explode the cap F.

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

1. In a burglar-alarm, the combination, with the casing A, having the top plate K and cap-holding offset E at its lower end, the spring-actuated hammer H, sliding in said casing and having the extension I working in said top plate, of the forked trip-lever L, which is pivoted to the outer end of said rod, one end of the lever bearing normally on the top plate and the other projecting in general alignment with the said casing, as shown and described.

2. In a burglar-alarm, the combination, with a fixed casing, of a spring-pressed hammer held to slide in the said casing, a cam-lever pivotally connected with the said hammer, a pivoted arm mounted to swing on the door and adapted to engage the said cam-lever, and a disk on which the said arm is pivoted and provided with a stop to hold the said pivoted arm in a horizontal position and to permit of its swinging upward, substantially as shown and described.

JULIUS VOGEL.

Witnesses:

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