(Model.)

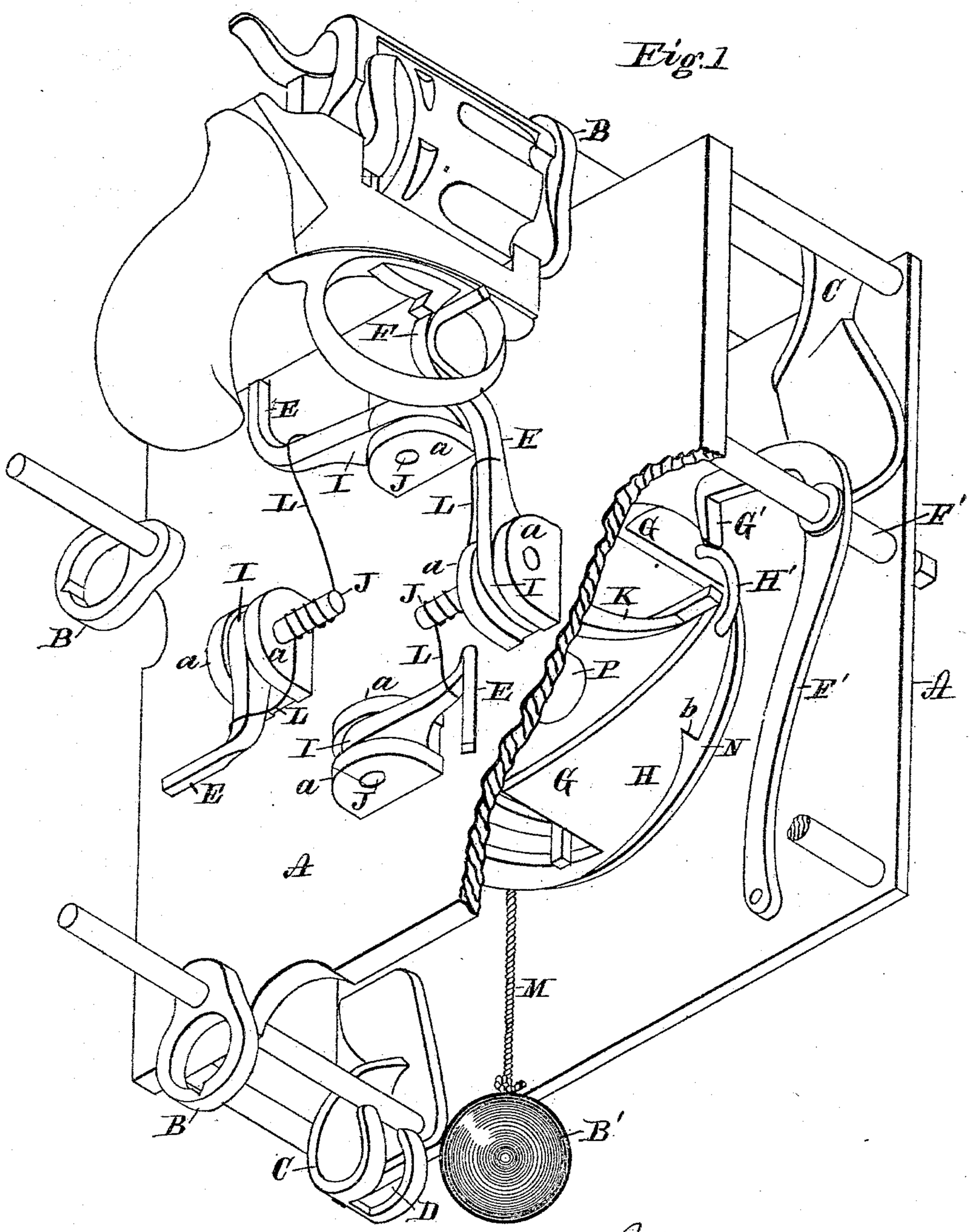
3 Sheets—Sheet 1.

S. BROICHGANS.

BURGLAR ALARM.

No. 321,679. Patented July 7, 1885.

Fig. 1



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(Model.)

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3 Sheets—Sheet 2.

BURGLAR ALARM.

No. 321,679. Patented July 7, 1885.

Fig: 2

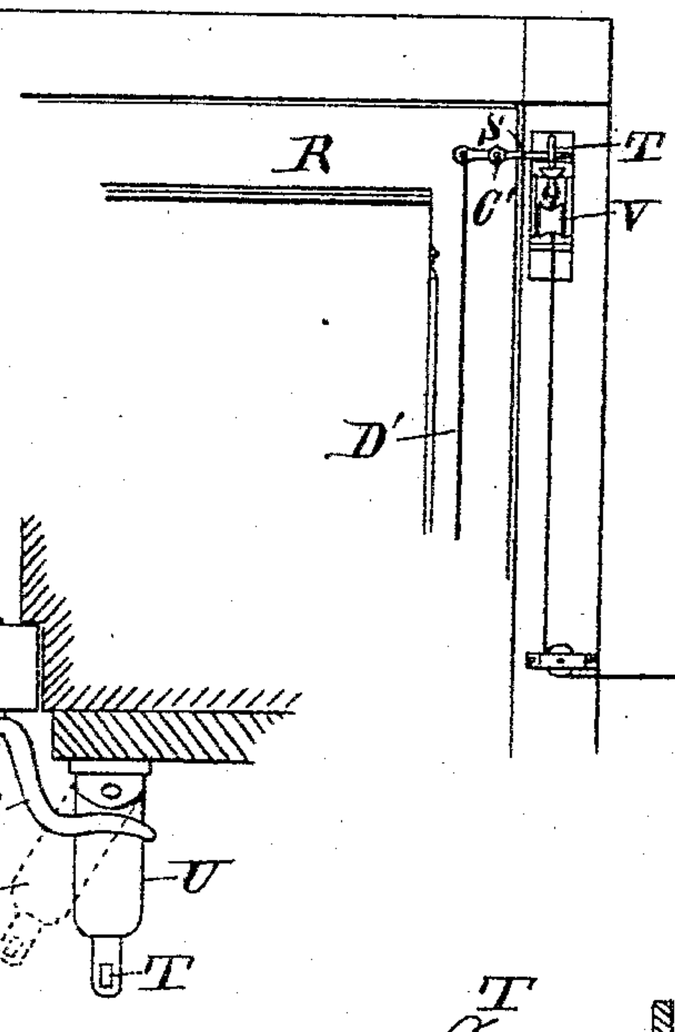


Fig: 3.

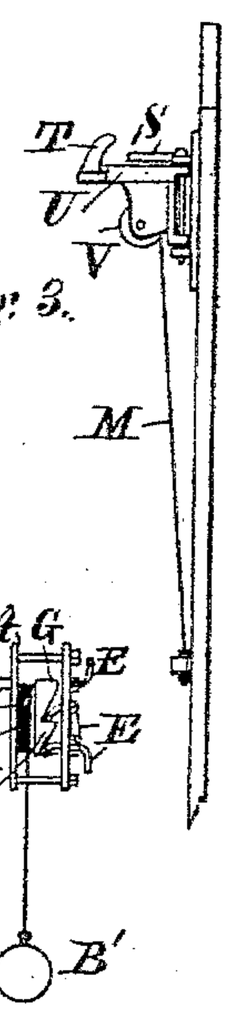


Fig: 4

Fig: 5

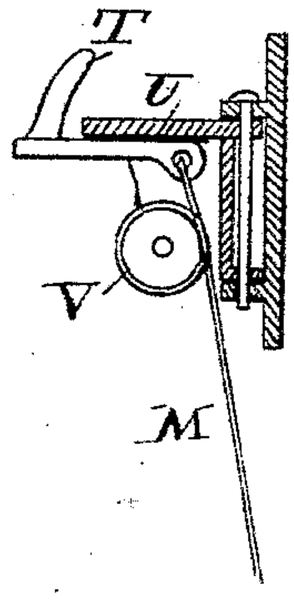


Fig: 6

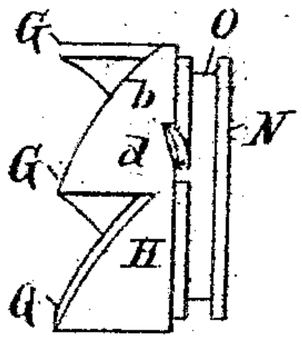
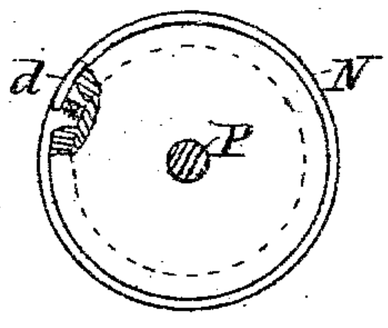


Fig: 7



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(Model.)

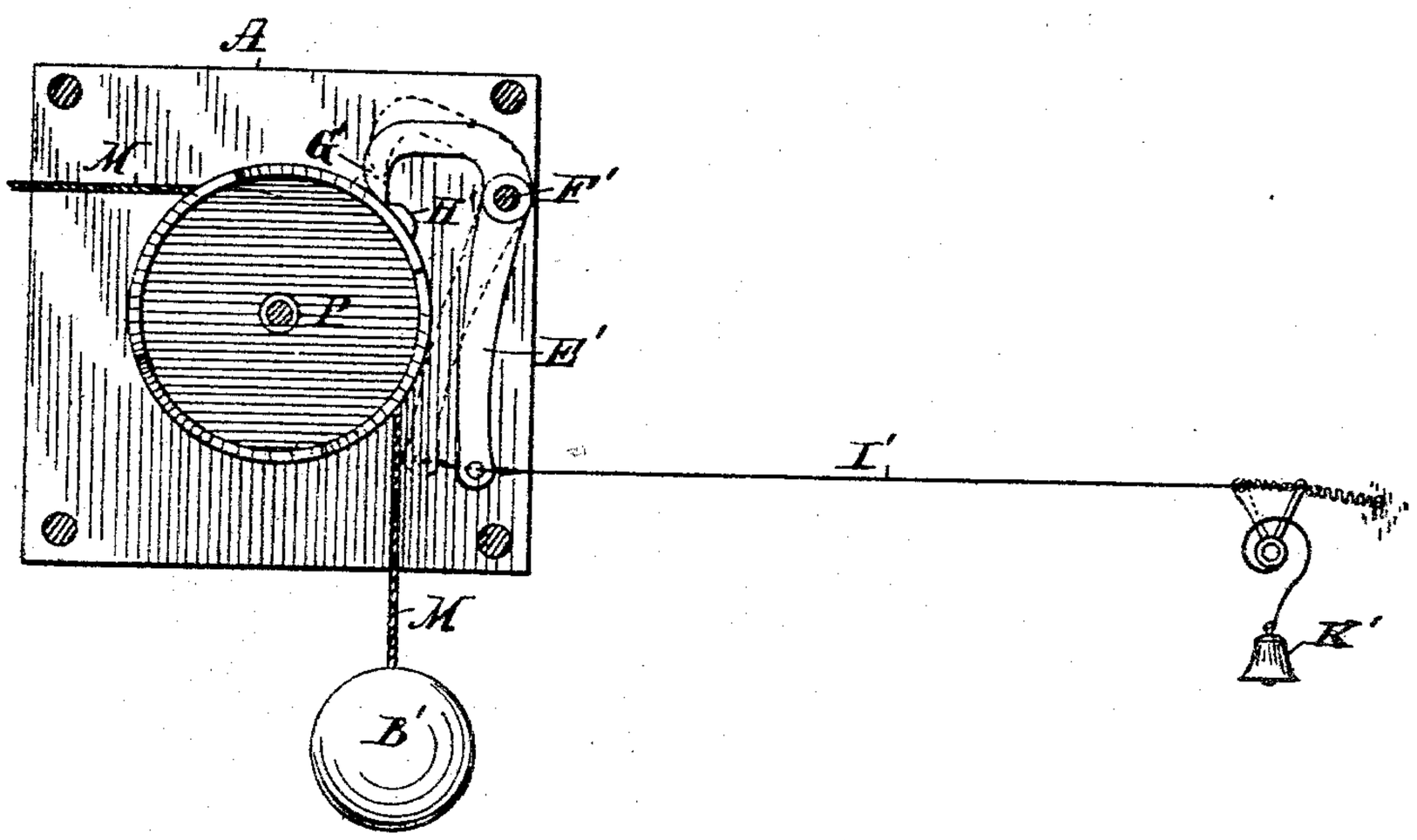
3 Sheets—Sheet 3

S. BROICHGANS.

BURGLAR ALARM.

No. 321,679. Patented July 7, 1885.

Fig. 8



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UNITED STATES PATENT OFFICE.

STEPHAN BROICHGANS, OF MILWAUKEE, WISCONSIN.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 321,679, dated July 7, 1885.

Application filed December 6, 1884. (Model.)

To all whom it may concern:

Be it known that I, STEPHAN BROICHGANS, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Burglar-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to burglar-alarms, and pertains to that class of devices in which a fire-arm is discharged or a bell is rung, or both.

The construction and operation of my device is herein described, and is explained by reference to the accompanying drawings, in which—

Figure 1 represents a perspective view of the device for holding and discharging the fire-arm, and a part of the mechanism for sounding an alarm-bell. Figs. 6 and 7 are details of Fig. 1. Figs. 2, 3, 4, and 5 are details showing the manner of connecting the discharging device and alarm with the door; and Fig. 8 shows the alarm-bell and the mechanism for sounding it.

Like parts are represented by the same reference-letters throughout the several views.

A is a frame to which the several revolvers or other fire-arms and the principal mechanism of the device are attached. The frame A is preferably provided with four revolvers, which are respectively attached near the corners of the frame by the retaining-clasps B and C, similar clasps to that shown at the lower corner in Fig. 1 being provided at the other corners. The revolver is retained in position by inserting its barrel through said clasps, as shown, the sight at the discharge end of the barrel being engaged in the slot D in the clasp C. The outer arms, E, of the four levers I bear against and operate the triggers F of the revolvers, and the four arms are operated simultaneously in the same manner by the four ratchet-teeth G of the cylindrical ratchet-wheel H. The several arms I are pivoted to the frame between the lugs *a a* by pins J. The inner ends K of the arms I have bearings against the ratchet-teeth G, which, as said wheel revolves, carries said arms outward toward the ends of the teeth, (discharging the revolvers,) and when the wheel H ceases to revolve, and the pressure therefrom against said arms is released, said arms will be pressed inward again back to the base of the teeth by the springs L L. The springs L have their centers wound spirally around two of the pins J, while the respective ends of the springs rest upon and bear against two of the arms E, whereby each spring operates two separate arms, as shown. When the revolvers are in place, as shown in Fig. 1, the outer arm, E, is brought to bear against the front side of the triggers in such a manner that as said arms are thrown back they bear against the triggers, and thus disengage the locks and discharge the revolvers. The wheel H is rotated by cord M, which passes around the pulley N within the groove O. Both the wheel H and pulley N are supported on the shaft P, the wheel H being rigidly attached to the shaft while the pulley turns freely upon it. The wheel is provided with a notch, *b*, for the reception of the pawl *d*. (Shown in Fig. 6.) The pawl *d* is pivoted to the pulley N. Thus it is obvious that as the pulley N is rotated by the cord M it moves forward alone until the pawl engages the catch *b*, when said wheel is caught by the pawl and rotated with said pulley. The horizontally swinging bracket U is pivoted to a lug, which lug is rigidly affixed to the door-casing, preferably near the top of the door. Within said bracket U is supported a sliding arm having an upwardly-projecting finger, T. The cord M is attached to the rear end of this sliding arm and passes over the pulley V, supported and rotating in lugs projecting from said bracket U. The cord M runs to the pulley N, either directly from the pulley V or over such intervening pulleys as are necessary to changing its direction and furnishing proper bearings for its course to the pulley N, and is there wound one or more times around the pulley N, and to its free end is attached a weight, B′, which draws down-

ward upon the cord M, taking up any slack in the cord, and causing it to engage the pulley N more closely, thus preventing it from slipping upon the surface of the pulley as it is drawn upward by the opening of the door. The weight also causes the pulley to be turned back when the tension is released at the other end of the cord M, and the wheel H is rotated backward to its original position by the action of the springs L L upon levers I through arms K, bearing upon the angular surface of the ratchet-teeth G. An arm, S, is attached to and projects from the outer edge of the door R, which arm, as the door is opened, strikes against the upwardly-projecting finger T of the sliding arm, to which the cord M is attached, and carries this sliding arm outwardly as the door opens, thereby drawing the cord M after it, causing the wheel H to rotate sufficiently to operate the lever I and discharge the fire-arm. The arm S is attached to the door by the pivotal bolt C′, and its outer end may be raised up, so as to pass over the finger T when the door is opened, by pulling down on the cord D′, which is attached to the inner end of the arm S, as shown in Fig. 2. An additional alarm is produced by ringing a bell, K′, which is suitably suspended and connected by a cord, I′, with the long arm of the lever E′. The lever E′ is centrally pivoted to the frame A upon shaft F′, while its short arm G′ is adapted to bear against the bearing-lug H′, which lug is rigidly affixed to the outside of wheel H. Thus as the wheel H rotates against said short arm the same is thrown outward, while its long arm is swung inward, thereby producing the required movement for ringing the bell K′.

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

1. In a burglar-alarm, the combination, with the frame A, of one or more arms, I, pivoted to said frame, springs L, adapted to bear upon said arms, wheel H, having ratchet-teeth G, pulley N, provided with pawl *d*, engaging in catch *b* of said wheel H, weight B′, and cord M, said cord being attached at one end to said weight and at its other end to an arm actuated by the opening of a door, through which arm and cord motion is communicated from the opening door to the operative mechanism of said alarm, substantially as set forth.

2. In a burglar-alarm, the pulley N, the rotating wheel H, provided with a bearing-lug, H′, lever E′, one arm of which bears against said lug H′ and the other end of which is connected with an alarm-bell, and the alarm-bell K′, in combination with cord M and weight B′, substantially as set forth.

3. In a burglar-alarm, the arm S, pivoted to the door, in combination with bracket U, attached to the casing of the door, the sliding arm supported in said bracket and provided with projecting finger T, the alarm mechanism, the cord M, and weight B′, for connecting said sliding arm and alarm mechanism, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

STEPHAN BROICHGANS.

Witnesses:
C. T. BENEDICT,
MATTHEW SCHINNER.