

J. GANZFRIED.
BURGLAR ALARM.

Patented Mar. 7, 1893.

The figure contains two technical drawings. The top drawing, labeled "Fig. 2.", shows a cross-section of a mechanical assembly. It features a large hatched rectangular block on the left and a smaller hatched rectangular block on the right. A horizontal rod or shaft passes through both blocks. On the right side, there is a spring mechanism with a coiled spring and a lever arm. Various parts are labeled with letters: R, P, Q, M, N, K, G, B, E, H, F, S, X, W, V, T. The bottom drawing, labeled "Fig. 3.", shows a detailed view of a mechanical component, possibly a valve or a switch. It has a central vertical stem with several horizontal arms or flaps. Labels include D, E, B, and A. There are also some small circular components at the bottom.

Attest:
A. N. Jespersen.
A. Widder.

Inventor:
 b Ganzfried
 am B. Greeley
 Atty.

UNITED STATES PATENT OFFICE.

JACOB GANZFRIED, OF NEW YORK, N. Y.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 492,792, dated March 7, 1893.

Application filed May 4, 1892. Serial No. 431,801. (No model.)

To all whom it may concern:

Be it known that I, JACOB GANZFRIED, of New York, in the county and State of New York, have invented certain new and useful Improvements in Burglar-Alarms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

My invention relates to mechanical burglar alarms in which a bell or other sounding body is caused to be struck by a suitable hammer upon the opening of a door or window. Heretofore, so far as I am aware, alarms of this character have been so constructed that the bell is struck a single blow only or is caused to ring during the continuance of pressure upon the releasing device. In other cases the mechanism has been so arranged that the bell does not cease ringing until the motor runs down. In the cases first above referred to the alarm is of insufficient duration to be of any practical value, while devices of the other class are objectionable for the reason that they must be rewound or reset after every operation.

It is the object of my present invention to provide an alarm which shall ring for a period sufficiently long to attract attention and at the same time shall reset itself in readiness for another operation without the necessity of rewinding or of any other manipulation until the motor has entirely run down. Alarms of this character are useful not only as burglar alarms but particularly for shop and office doors and the like.

In the accompanying drawings: Figure 1 is a vertical section on the line $x-x$ of Fig. 2 illustrating the application of my improved alarm to a door. Fig. 2 is a horizontal section on the line $y-y$ of Fig. 1. Fig. 3 is a detail view, in rear elevation and partly broken out, of the stopping and releasing devices.

The bell or other sounding body A may be of any suitable character and, as shown, is sounded by a hammer B which is fixed to a shaft C. A verge D is carried by the same shaft and through the action of a toothed wheel E upon the pallet the hammer B is caused to vibrate and to strike the bell repeatedly.

The toothed wheel E may be driven by any suitable motor through a suitable train of gear-

ing. I have shown the motor as a clock spring F, and the intermediate gearing as consisting of a large gear G on the winding shaft or arbor H and a pinion g on the shaft e which bears the toothed wheel E.

One shaft of the motor train, preferably the winding arbor H, carries a stop disk K, the periphery of which is unbroken except by a single stop tooth or shoulder k. In order that the stop disk may not be disturbed during the winding up of the motor and in order that the mechanism may be very simple and inexpensive the disk is loose on the shaft H and carries a pawl L which engages with a ratchet M fixed to the shaft H. The gear G, as usual, is loose upon the winding arbor and presses a pawl N which engages a ratchet O fixed on the arbor H.

A stop rod P is pivoted to slide in suitable guides carried by the frame or casing and is pressed by a spring p or, it might be, by its own weight, to rest upon the periphery of the stop-disk K in position to engage its tooth k. The rod P has projecting therefrom a finger Q so that it may be operated directly by a moving body, or it may have attached thereto a cord or wire R to be operated by a door or window at a distance.

Preferably the alarm mechanism is fixed to the casing of a door or window and may be covered by a suitable box, not shown in the drawings. In order that the alarm may not be operated unless so desired by the proper person I have provided a sliding bolt S supported by a suitable case T which may be affixed to the door or window. The bolt is thrown forward normally by a spring V into such position as to operate the stop rod P. A pin W projects from the stem of the bolt through a slot in the casing T and is engaged by a pivoted latch X by which it may be held either in operative or inoperative position.

In the practical use of my improved burglar alarm the spring F is of such length and strength that when fully wound it will rotate the shaft or winding arbor H many times. If the motor be released by the movement of the stop rod the alarm will sound until the stop disk has made a complete rotation, bringing its tooth k again into engagement with the stop rod P. The apparatus is then in position for another operation without any fur-

ther attention on the part of any person and after every operation it will automatically reset itself in readiness for another.

I claim as my invention—

- 5 1. The combination of a bell, a vibrating hammer, a toothed wheel for operating said hammer, a motor, a winding shaft driven through a ratchet and pawl from said motor, gearing intermediate said shaft and said
10 toothed wheel, a stop-disk loose on said shaft and having a pawl and ratchet connection therewith, said stop disk having a single tooth on its periphery, and a movable stop to en-
15 15 a door or window, substantially as shown and described.

2. The combination of a bell, a vibrating hammer, a motor train operating said hammer, a stop-disk having a single-tooth on its periphery, a sliding stop-rod, a finger carried
20 thereby, a sliding bolt carried by the door or window to be protected, and a latch to retain said bolt in its operative or inoperative position, substantially as shown and described.

In testimony whereof I have signed my
25 name to this specification in the presence of two subscribing witnesses.

JACOB GANZFRIED.

Witnesses:

A. N. JESBERA,

A. WIDDER.