(No Model.) 2 Sheets—Sheet 1.

E. CHOL & D. MONNIER.

BURGLAR ALARM.

No. 342,577. Patented May 25, 1886.

Fig. 1

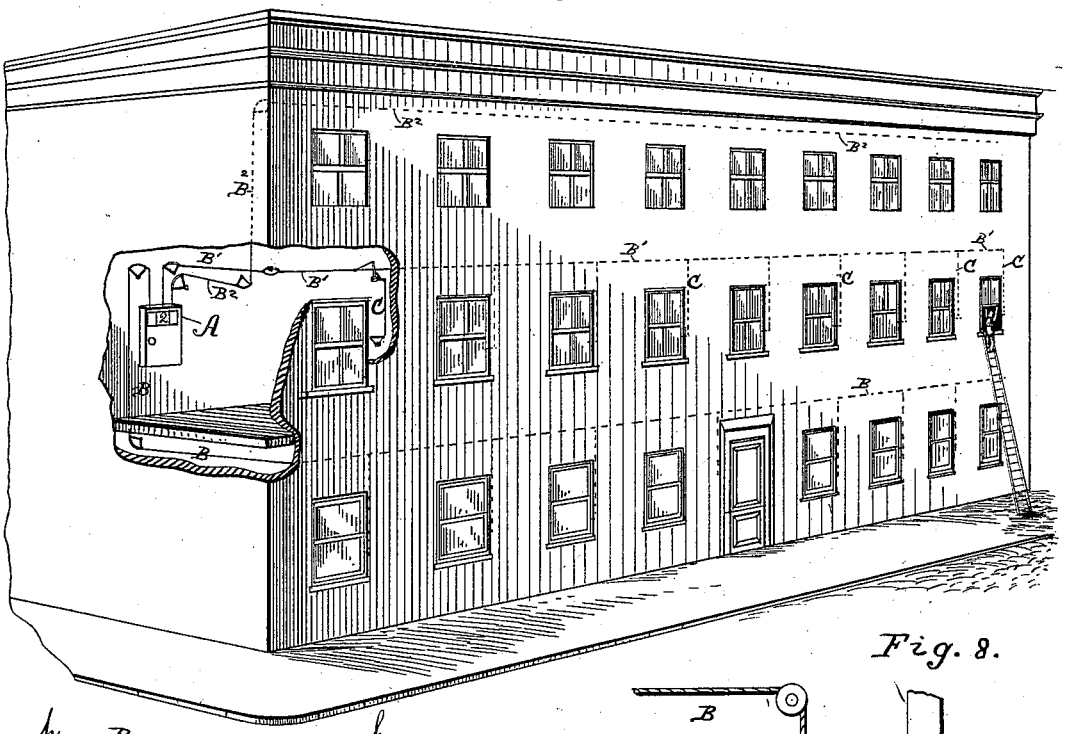


Fig. 8.

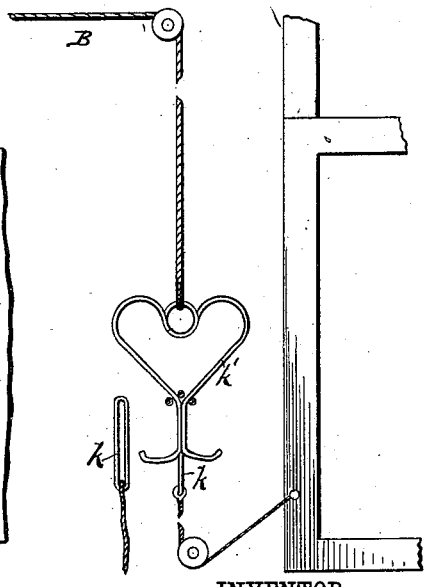
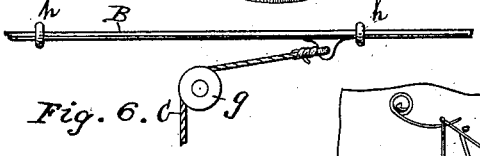


Fig. 6.



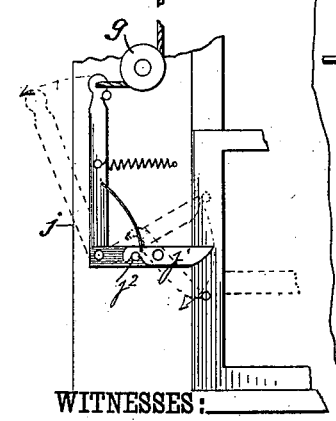
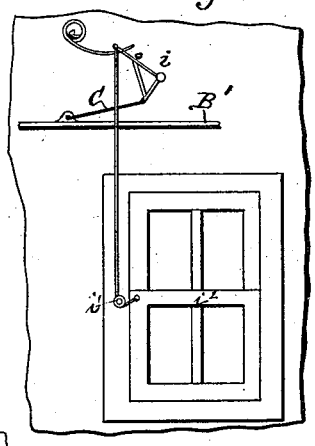


Fig. 7.



WITNESSES:

Thos. Houghton.

Amos W. Hart

INVENTOR:

E. Chol

D. Monnier

BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

E. CHOL & D. MONNIER.

BURGLAR ALARM.

No. 342,577. Patented May 25, 1886.

Fig. 2.

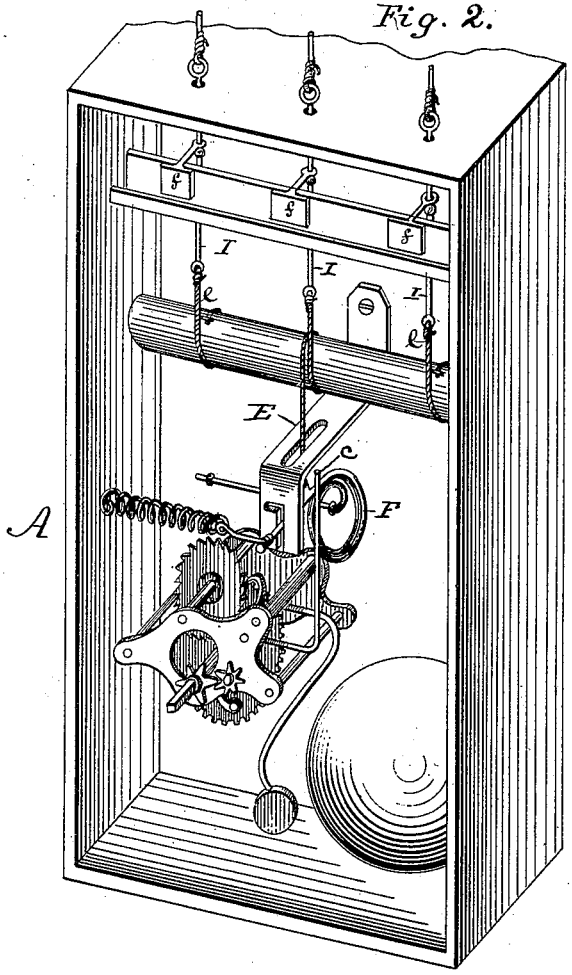


Fig. 3.

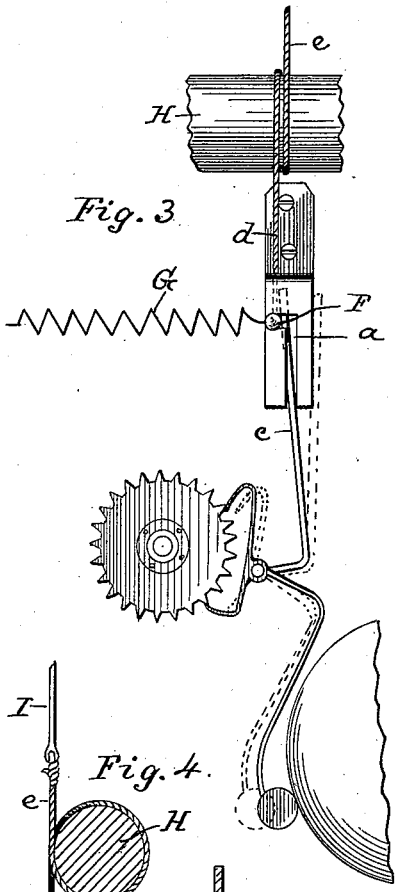


Fig. 4.

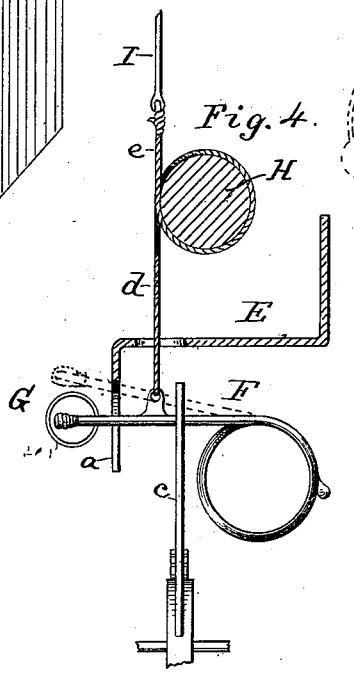
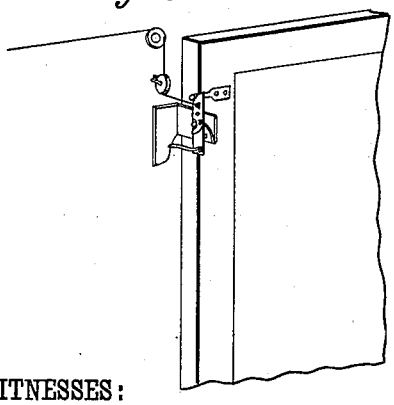


Fig. 5.



WITNESSES:
Thos. Houghton.
Amos W. Hart

INVENTOR:
E. Chol
D. Monnier
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

EMMANUEL CHOL AND DELPHIN MONNIER, OF THIBODEAUX, LOUISIANA.

BURGLAR-ALARM.

SPECIFICATION forming part of Letters Patent No. 342,577, dated May 25, 1886.

Application filed November 2, 1885. Serial No. 181,690. (No model.)

To all whom it may concern:

Be it known that we, EMMANUEL CHOL and DELPHIN MONNIER, of Thibodeaux, in the parish of Lafourche and State of Louisiana, have invented a new and useful Improvement in Burglar-Alarms, of which the following is a description.

Our invention is an improvement in alarms adapted for doors and windows of dwellings, &c., for indicating when they are opened from without.

The invention consists in the construction and combination of parts herein described and claimed.

In the accompanying drawings, Figure 1, Sheet 1, is a perspective view (part being broken out) of a building having our invention applied to it. Fig. 2, Sheet 2, is a face view of the alarm proper enlarged, the side of the box being removed. Fig. 3 is a face view of the main parts of the trip mechanism, shown enlarged. Fig. 4 is a transverse section of the same. Figs. 5, 6, 7, and 8 represent trip devices applied to windows and doors.

A represents the indicator and alarm proper, which is located wherever practicable or desired. In a hotel it would be placed in the office, and in a private dwelling preferably in a chamber or sleeping-room. B B', Fig. 1, indicate wires which extend from said alarm through the building to or past doors and windows with which the alarm A is to be connected. Branch wires C connect these main wires B B' with trip devices operated by opening the doors and windows, traction being thus applied to the wires B C and the alarm sounded.

We will now describe the parts and operation of the apparatus more in detail. The alarm proper may be such as is ordinarily applied to American alarm-clocks, and the one illustrated in Figs. 1 and 2 of drawings is of that kind. Contiguous to said alarm is secured a bracket, E, consisting of a metal bar or plate having a bent arm, in whose pendent portion is formed a vertical open slot, *a*, having a lateral notch or enlargement at its upper end. A spring-depressed finger or trip-bar, F, projects horizontally through this slot, and is drawn laterally by a spring, G. In its normal position this trip-bar F' lies in the lower portion of the slot *a*, and the trigger *c* of alarm E bears laterally against it. It will hence be seen that if trip-bar F is raised it will be drawn laterally into the notch, and thus allow a slight lateral movement, which releases the alarm so that it instantly sounds. To thus operate the alarm, it is necessary to connect the main wires B B' with such trip-bar F, and for this purpose we employ a roller or shaft, H, which is placed above the bracket E, and journaled in suitable bearings so as to rotate freely. A cord or wire, *d*, connects this roller with the trip-bar F. The main wires B B' connect with it by means of small cords or wires *e*, and intermediate sliding bars or wires, I, that constitute parts of the indicator proper—that is to say, the bars I are adapted and arranged to slide (vertically) in suitable guides, and the main wires B B' are attached to their upper ends, while the small wires *e* extend from their lower ends to the roller H, being secured to it so as to be wound thereon in the same direction as the trip-bar wire. It will now be apparent that by traction on either of the main wires B B' the corresponding sliding indicator-wire I will be raised, thus rotating the roller H and tripping and sounding the alarm A, and thereby indicating that a door or window has been opened. The wires B B' extend into different parts of the building, and to indicate which one of them has caused the alarm, and thereby locate as nearly as practicable the door or window that has been surreptitiously opened, we attach a plate, *f*, to each of the sliding bars I, so that when one of the latter is drawn up the plate *f* will also rise and uncover a number, (1 or 2,) which locates the unwarrantable entrance in one portion or the other of the building.

The operation is illustrated in Fig. 1, where one plate, *f*, is shown raised, thus indicating that the entrance is on the line of wire B', leading to the second story of the building.

The branch wires that connect the main wires B with the trip devices applied to the different doors and windows may pass over friction-rollers *g* or through guide-eyes *h*, as shown. We may also employ different trip devices.

In connection with the wire B we show in Fig. 6 one form for windows, and with wire B' in Fig. 7 another form.

The mechanism shown in Fig. 7 consists of a

spring-actuated elbow-lever, *i*, one end of which is connected to main wire B by branch wire, and the other end by a wire that passes over a friction-roller, *i'*, and is attached to a window, *i²*. It is obvious that if the window be raised the elbow-lever *i* will be tilted and traction thus applied to the main wire B, so as to sound the alarm A. The same trip mechanism may also be readily applied to a door.

In Fig. 6 we show a modification consisting of a spring-actuated elbow-lever, *j*, having a trip spring-finger, *j'*, pivoted to one of its arms. When its outer end is pushed upward, this finger *j'* catches on a pin, *j²*, and thus forms a rigid extension of the lever-arm, but when moved downward it yields. Consequently, if the window be raised the lever *j* is tilted and alarm sounded; but if the window is open it may be closed without operating the lever. A modification of this arrangement is shown in Fig. 5, the same being specially adapted for a door.

In Fig. 8 we show still another device for connecting a window-wire, B. It consists of a wire loop, *k*, and a clamp, *k'*, between whose spring-arms the said loop is normally held. The clamp *k'* is attached to wire B, and the loop *k* with the window by a cord passing over a pulley. When the window is raised, the loop *k* is drawn down and the wire B operates the alarm. When it is desired to raise the window without sounding the alarm, the loop *k* may be readily disengaged from the spring-clamp. We do not specifically claim the latter as our invention.

It will be understood that there may be any number of main wires required by the size of the building or other conditions, since the roller H as readily co-operates with many as one.

What we claim is—

1. The combination, with an alarm having a trigger, of a spring-depressed trip-bar, a bracket having a laterally-enlarged guide-slot, a roller connected with said trip-bar, and one or more wires leading to doors or windows, substantially as specified.

2. The combination, with an alarm and a series of wires attached to doors or windows, of an intermediate roller with which both said wires and alarm are connected, substantially as shown and described, whereby traction on any one of said wires rotates the roller and trips the alarm, as specified.

3. The combination, with traction devices connected with doors or windows and the trigger of an alarm, of a spring trip-bar and a slotted guide for the latter, substantially as specified, whereby opening a door or window exerts traction on said trip-bar and removes it from engagement with the alarm-trigger, thus permitting a signal to be given.

4. The combination, with wires connecting with doors or windows, of a corresponding series of vertically-sliding bars, I, and plates attached to and adapted to move with them, and covering numbers indicating location of said doors or windows, as specified.

EMMANUEL CHOL.
DELPHIN MONNIER.

Witnesses:
JOSEPH H. FOOT,
LEO L. MOLAISON.