

(No Model.)

E. M. HOTCHKISS..

DOOR ALARM.

No. 345,138.

Patented July 6, 1886.

Fig. 1.

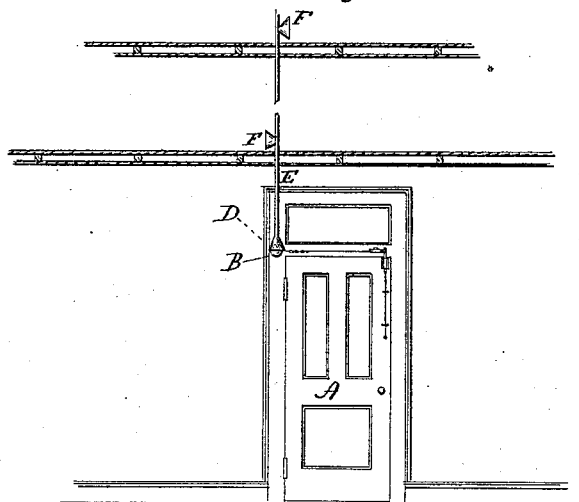


Fig. 2.

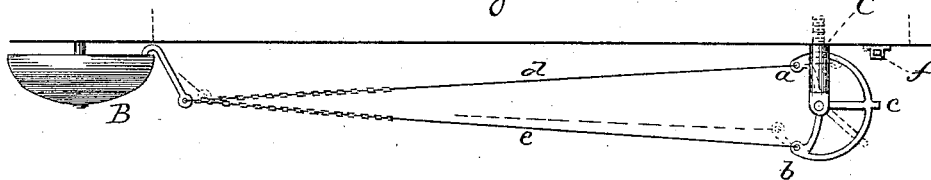
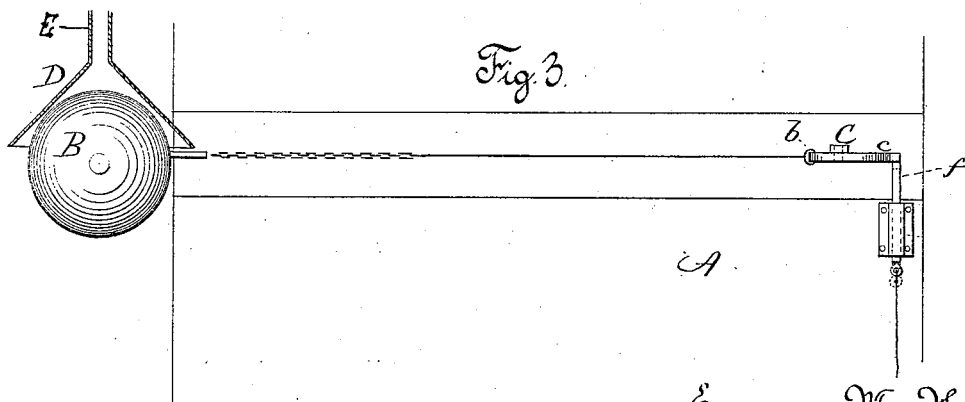


Fig. 3.



Witnesses.

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DOOR-ALARM.

SPECIFICATION forming part of Letters Patent No. 345,133, dated July 6, 1886.

Application filed August 3, 1885. Serial No. 173,388. (No model.)

To all whom it may concern:

Be it known that I, EMERSON M. HOTCHKISS, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Door-Alarms; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a door in an apartment with the alarm applied, showing floors above, to which the conducting-tube leads and opens; Fig. 2, a top view of the alarm mechanism enlarged; Fig. 3, a side view of the same.

This invention relates to a device which may be employed in connection with a door to indicate or give some alarm or signal when the door is opened or closed, and such as used in shops, offices, and other places where the occupants do not find it convenient to be always present near the door, but, being in different parts of the building, desire to be signaled whenever the door shall be opened.

It is a common device to apply a bell to a door in such manner that it shall sound when the door is opened or closed, to indicate that a person has entered or gone out. Such signal serves a good purpose for the apartment in which the door is located; but in buildings of considerable extent, as in stores or shops, and occupying several stories or lofts, such signal is of little effect for other apartments than that in which the door is located.

The object of my invention is to provide a means for communicating the sound of the bell to distant points on the same or different floors; and it consists in combining with the bell or gong which is sounded by the opening of the door a tube having a funnel or bonnet at the gong, into which the sound of the gong enters; the said tube, extending to distant points where the signal is desired to be heard, and there opening, communicates the sound of the gong to such distant point or points, as more fully hereinafter described.

A represents a door adapted to swing in the usual manner; B, a gong arranged near the door, preferably near the hinges, so as to be

sounded by the opening or closing of the door, and that it may so sound I provide a bracket, C, adapted to be secured to the lintel over the door, and in this bracket I arrange a three-armed lever, *a b c*, one arm extending substantially parallel with the door, and the others at nearly right angles thereto—one in one direction and the other in the opposite direction. From the arm *a* a connection, *d*, by chain or otherwise, is made with the mechanism of the gong, and from the other arm, *b*, a like connection, *e*, is made with the mechanism of the gong.

The bracket and its lever are secured to the lintel over the door, and on the door a vertically-sliding bolt, *f*, is arranged, so as to be raised, as seen in Fig. 3, and come into line with the arm *c* of the gong-lever, and so that if the bolt be raised and the door opened the bolt will strike the arm *c* and turn the lever, as indicated in broken lines, Fig. 2, thereby turning the arm *a* away from the gong and drawing upon the mechanism, so as to sound the gong before the bolt shall escape from the arm *c*; and on the closing of the door the bolt will in like manner strike the arm *c* upon the reverse side and turn the lever in the opposite direction, the connection *e* then serving to sound the gong, so that the gong will be sounded both in opening and closing the door. One of the levers *a* or *b* may, however, be dispensed with, and so that the gong will be sounded on the closing or opening of the door, according to which arm is attached to the mechanism of the gong. Over the gong B is an inverted funnel or bonnet, D, opening into a tube, E. This tube leads to an apartment wherever it is desirable to communicate the sound of the gong—say to the floors above, and at points wherever it is desirable to hear the gong. Openings or mouths F are arranged as indicated in Fig. 1, which represents such openings as upon two floors next above the door. This illustration will be sufficient to indicate how communication is made to various apartments, it only being necessary that the tube shall be laid after the manner of speaking-tubes to various apartments, and provided with openings in the apartments where it is desirable to hear the sound of the gong.

If at any time it is desirable to cut off the gong, so as not to be sounded when the door is opened or closed, it is only necessary to draw the bolt *f* downward, as in broken lines, Fig. 3, so as to escape the arm *c* of the actuating-lever.

The mechanism of the gong may be any of the many devices common and well known, such mechanism being too well known to require illustration or description in this specification.

The funnel or bonnet *D* at the gong should be arranged so as to partially inclose the gong, and so that the vibrations of the gong will come within the bonnet, thereby insuring the entrance of the sound or vibrations into the conducting-tube.

This device may be employed to advantage as a burglar-alarm, and arranged in connection with windows or doors, so that the opening of any one will ring the gong at the entrance to the tube or conductor, and thereby lead the sound to any apartment where it is desirable to communicate such alarm.

I am aware that tubes extending to different apartments have been arranged for the purpose of conveying signals, and do not claim, broadly, such an arrangement of tubes.

I claim—

1. In combination, a door, a gong mechanism, substantially such as described, between said door and gong, whereby on the movement of the door the gong will be struck, a tube extending from said gong to other apartments than that in which the door is located, the said tube at the gong constructed with a mouth opening to the said gong, and the tube constructed with openings from it in said other apartments, substantially as specified.

2. In a signaling or alarm apparatus, the combination of a swinging door, the three-armed lever *a b c*, hung to swing in a plane parallel with the plane of movement of the door, a gong, with the mechanism of which the two arms *a b* are connected, either of which is adapted to sound the gong, according to the direction in which the lever is turned, a trip on the door adapted to engage the said arm *c*, whereby in the opening or closing of the door the said lever will be turned to sound the gong, a tube or conductor opening from said gong and leading to different apartments, with openings in such apartments, substantially as and for the purpose described.

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Witnesses:

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