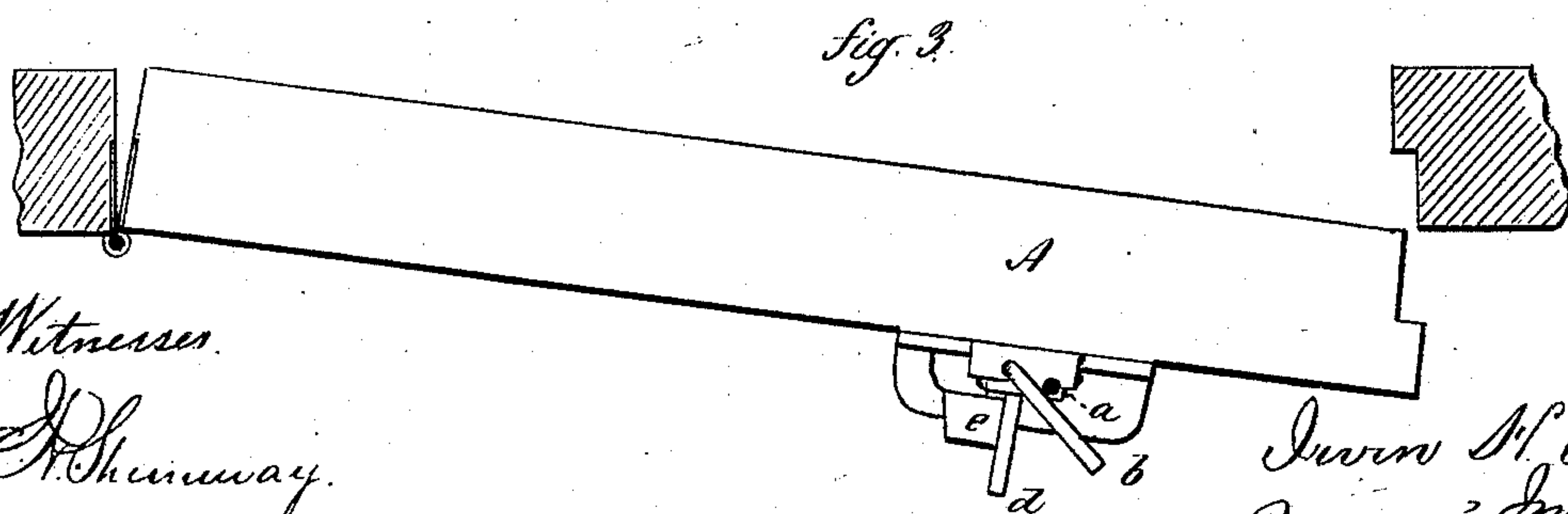
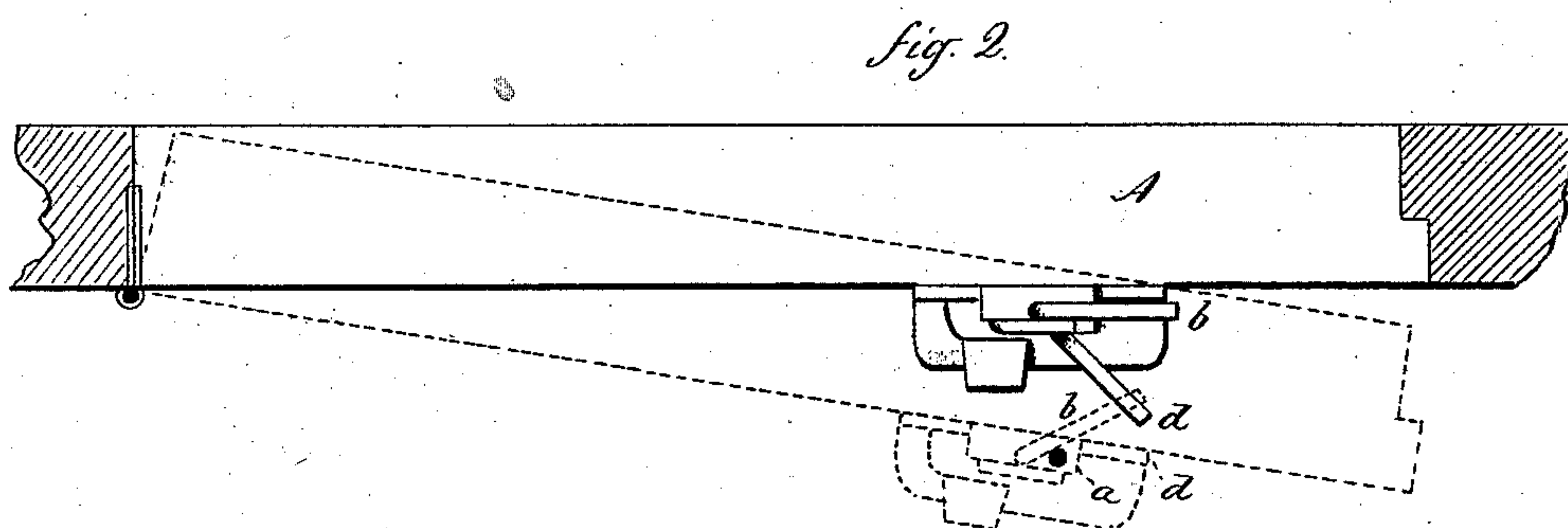
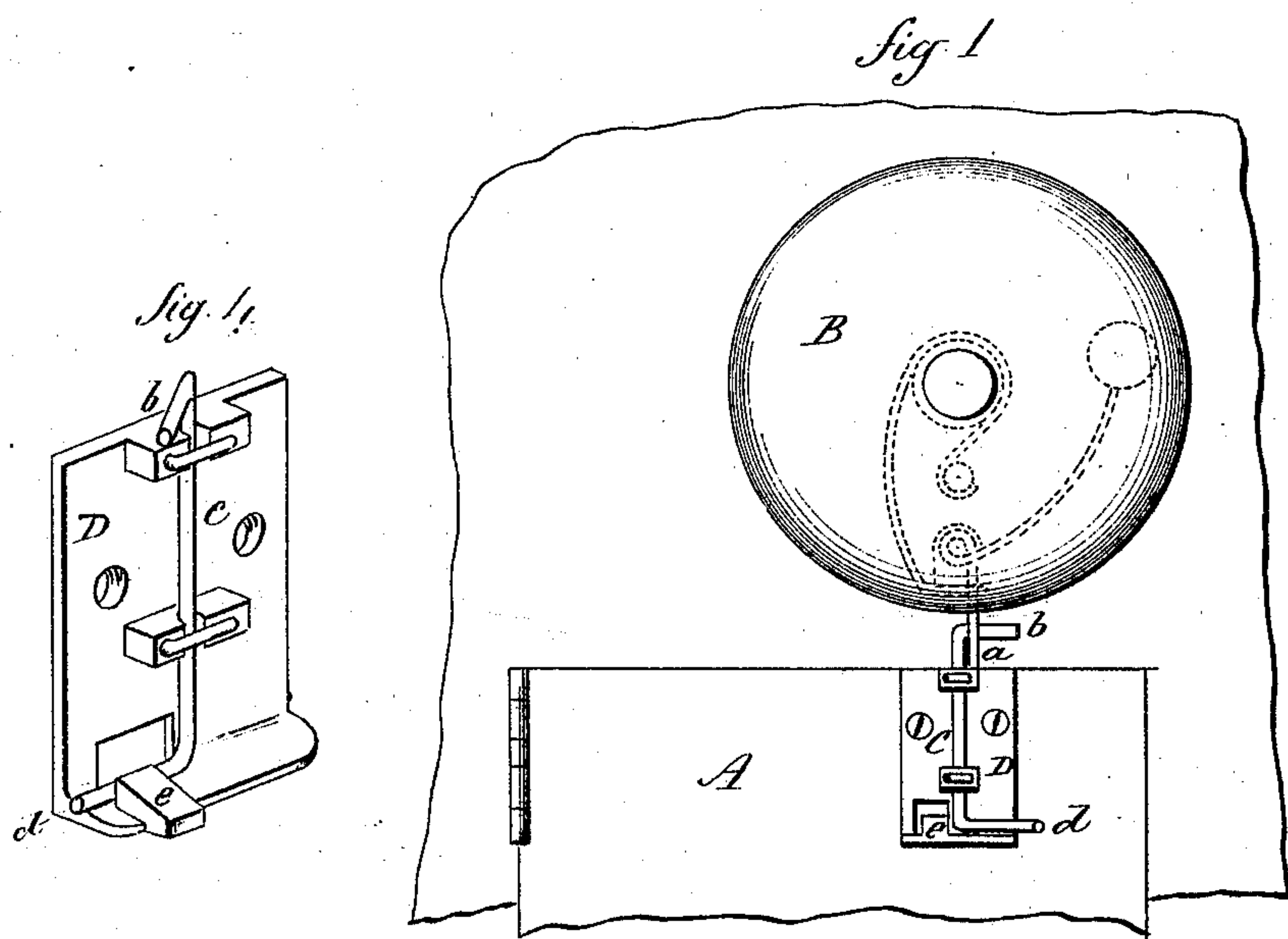


I. H. ABELL.  
Alarm-Bells.

No. 166,056.

Patented July 27, 1875.



Witnesses.  
J. H. Shumway.  
Clara Broughton.

Irwin M. Abell  
By Atty. Inventor  
John S. Earle

# UNITED STATES PATENT OFFICE.

IRVIN H. ABELL, OF EAST HAMPTON, CONNECTICUT, ASSIGNOR TO THE  
EAST HAMPTON BELL COMPANY, OF SAME PLACE.

## IMPROVEMENT IN ALARM-BELLS.

Specification forming part of Letters Patent No. **166,056**, dated July 27, 1875; application filed  
July 13, 1875.

*To all whom it may concern:*

Be it known that I, IRVIN H. ABELL, of East Hampton, in the county of Middlesex and State of Connecticut, have invented a new Alarm-Bell; and I do hereby declare the following, when taken in connection with the 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, front view; Figs. 2, 3, top views of the tripping mechanism as attached to the door; Fig. 4, perspective view of the trip detached from the door.

This invention relates to a device to be attached to a door for the purpose of sounding an alarm when the door is opened or closed; and it consists in a vertical shaft attached to the door, with an arm projecting from it, and combined with the hammer of a bell, and so that the said arm will turn to form an incline both on the opening and closing of the door, to force the hammer of the bell into action, as more fully hereinafter described.

A represents the door; B, the bell attached to the wall above, with an arm, *a*, projecting downward from the hammer.

The construction of the bell and the mechanism for operating the hammer is immaterial to this invention, it only being essential that an arm be arranged to project outside the bell, and by which the hammer may be actuated.

The tripping mechanism consists of a vertical shaft, C, arranged in suitable bearings, preferably on a plate, D, by which it may be secured to the door. The shaft extends above the door, and from it an arm, *b*, projects, and which, when the door is closed, lies substantially parallel with the door, as seen in Fig. 2. At the lower end of the shaft is a similar arm, *d*, but in a different plane from the arm *b*, as denoted in Figs. 2 and 3. The lower arm is used as a stop to prevent the shaft from turning, so as to carry the arm *b* too far to the right or left. Arranged upon the door, as

seen in Fig. 1, when the door is opened, as denoted in broken lines, Fig. 2, the arm *b* will strike the hammer-arm *a*, (the hammer-arm denoted in solid black, Fig. 2,) and this will cause the arm *b* to turn back until the arm *d* is brought against the plate or to a bearing; then the further opening of the door will cause the hammer-arm *a* to ride over and escape from the inclined arm *b*, and sound the alarm. When the door is closed the arm *b* will strike the hammer-arm from the other side, as seen in Fig. 3, and turn it outward to an opposite angle, or until the arm *d* brings up against a permanent stop *e*; then, closing the door, the hammer-arm will be forced out by the incline of the arm *b* until it escapes from the end of the said arm *b*; then the alarm will be sounded as when the door was opened. Thus the arm *b* is turned back and forth into opposite angles, accordingly as the door is opened or closed, and as it cannot escape the hammer-arm it necessitates the sounding of an alarm.

In case it is desired to detach the alarm, the shaft may be turned and raised until the arm *d* will pass over and drop behind the stop *e*, which brings the arm *b* out of the line of the hammer-arm.

I claim—

1. In combination with an alarm-bell, the shaft C, provided with arms *b d* in different planes, one arm serving as a trip for the bell, and the other as a stop to hold the said trip in either of the two positions of sounding the alarm when the door is open or closed, substantially as described.

2. The herein-described trip for alarm-bells, consisting of the shaft provided with the two arms *b d* in different planes, arranged in bearings on a plate, D, and with the stop *e* on said plate arranged to form a bearing to support the arm *b* at one incline for actuating the bell, and also to hold the said arm *b* in its position of disengagement, substantially as set forth.

IRVIN H. ABELL.

Witnesses:

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P. H. ALBRIGHT.