

(No Model.)

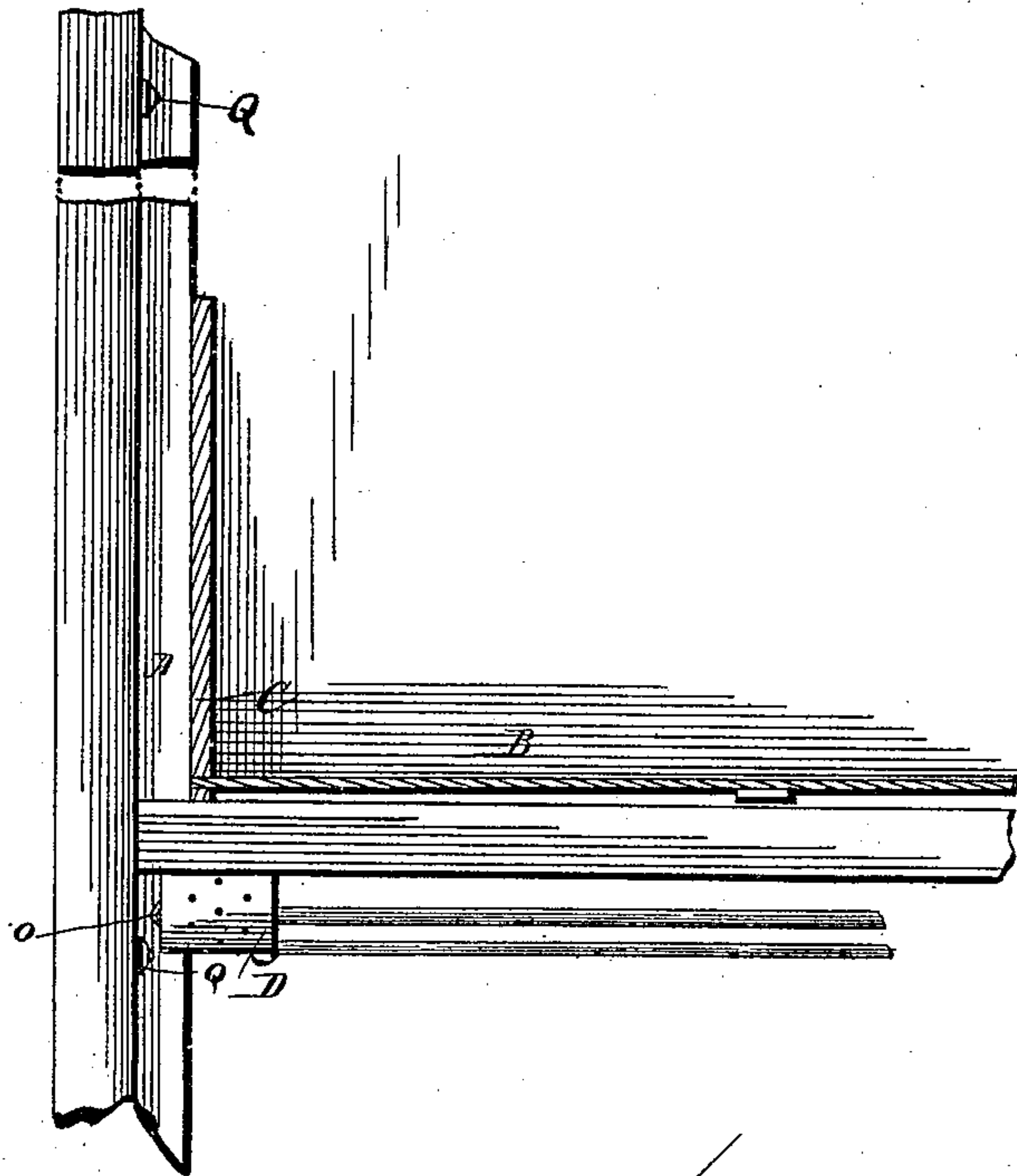
J. H. FLAUGHER & A. B. SCOTT.

AUTOMATIC BELL ALARM FOR ELEVATOR CAGES.

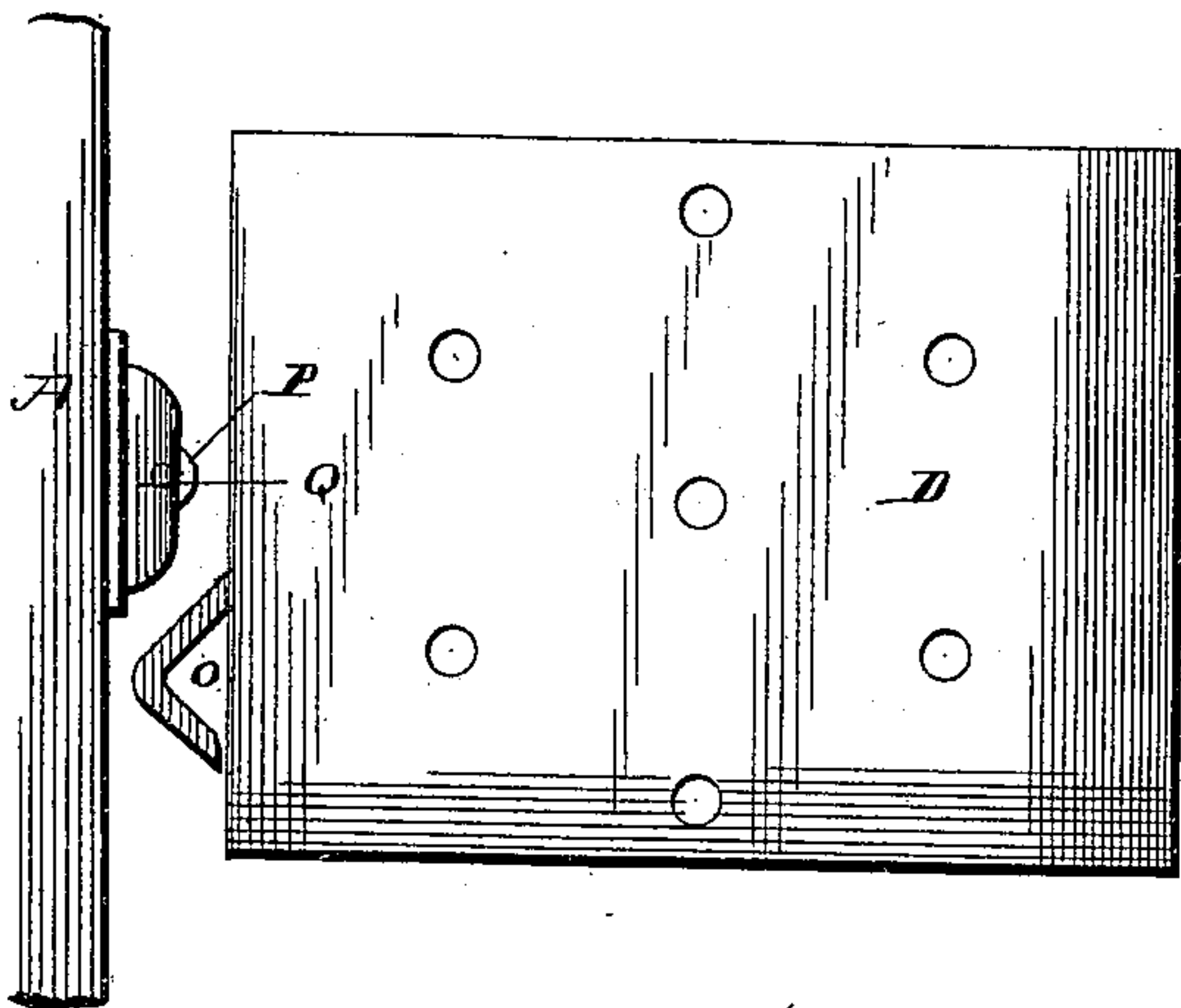
No. 356,461.

Patented Jan. 25, 1887.

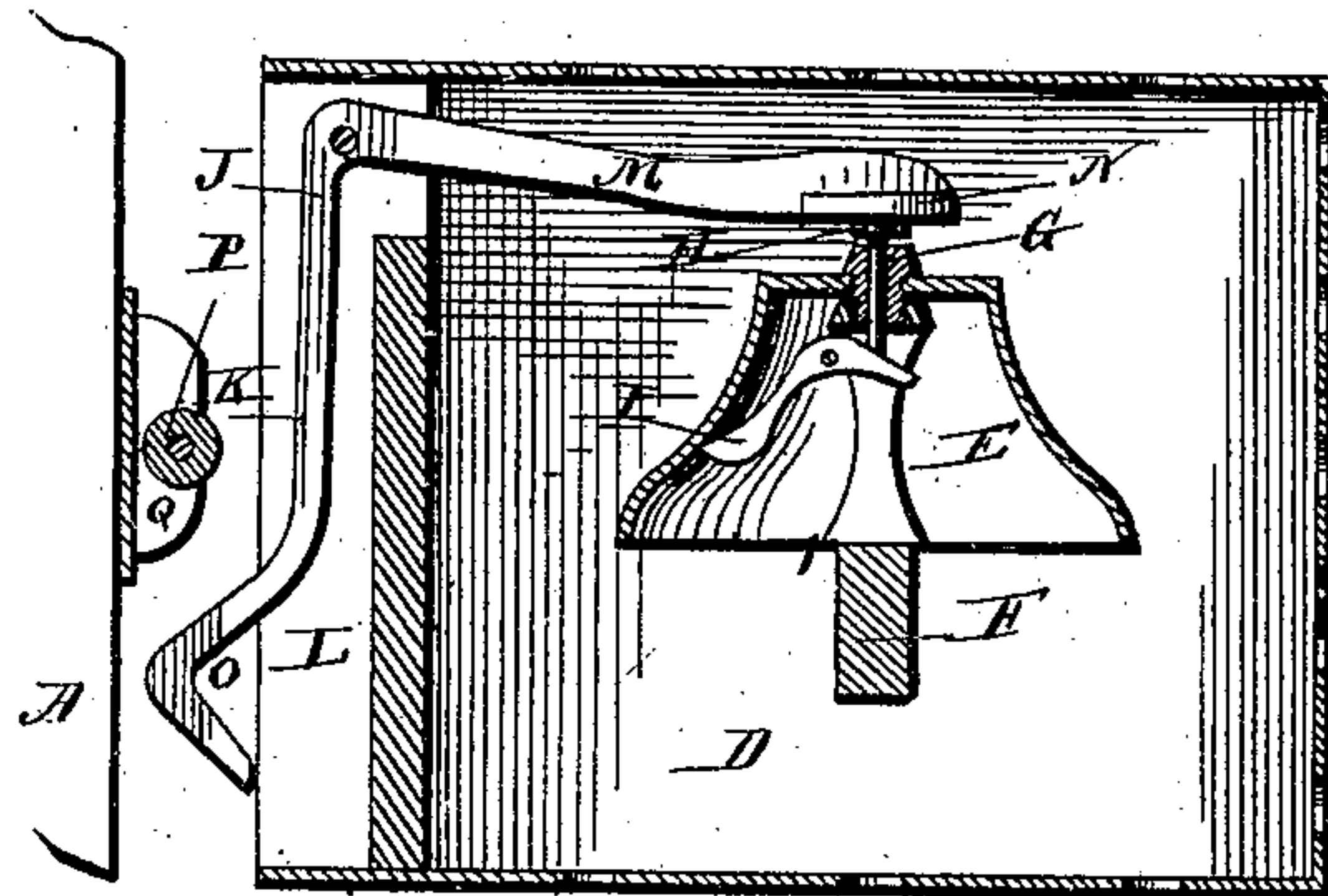
*Fig. 1*



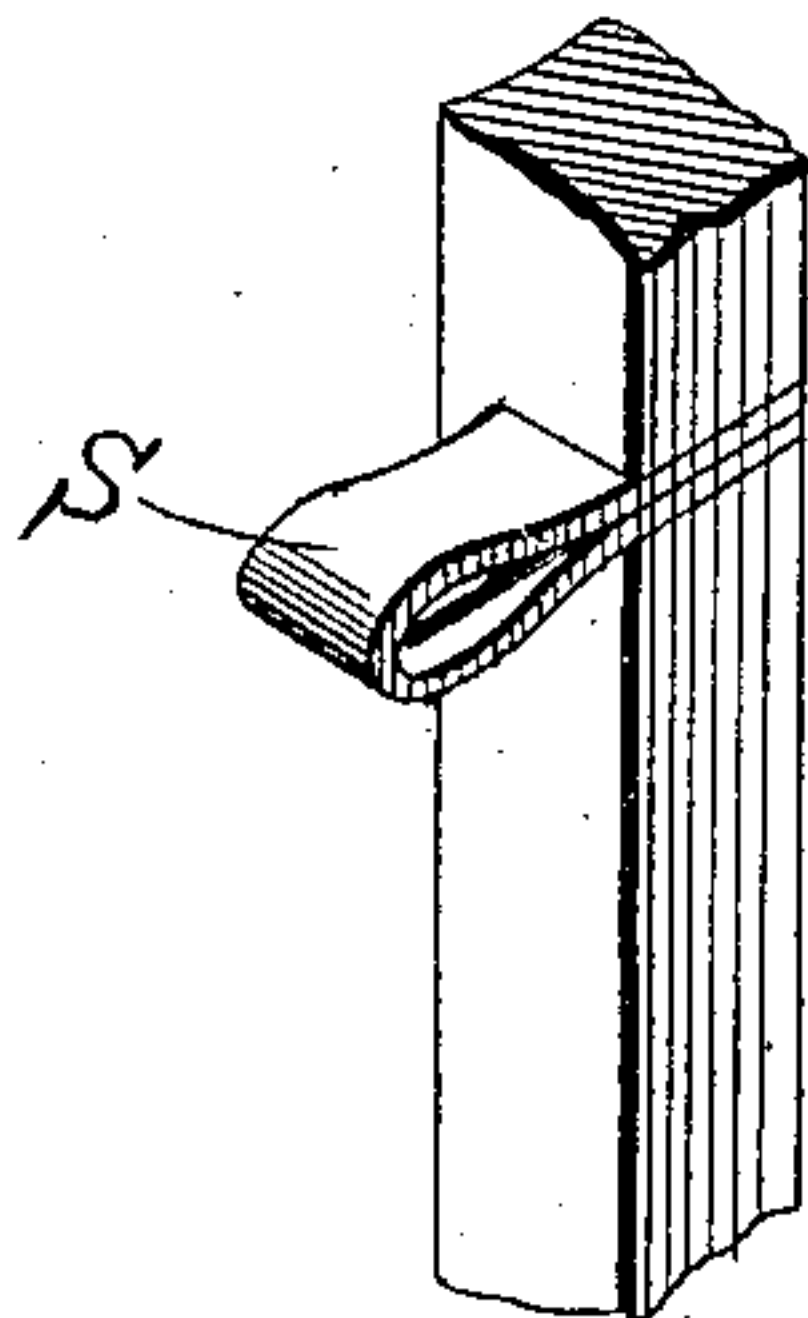
*Fig. 2*



*Fig. 3*



*Fig. 4*



WITNESSES

*F. L. Ouraud*  
*Edward Stanton*

*John H. Flaugher*  
*Alvin B. Scott,*  
INVENTORS.

By *Louis Bagger & Co.*  
Attorney S.



# UNITED STATES PATENT OFFICE.

JOHN HENRY FLAUGHER AND ALVIN BROOKS SCOTT, OF MANCHESTER, OHIO.

## AUTOMATIC BELL-ALARM FOR ELEVATOR-CAGES.

SPECIFICATION forming part of Letters Patent No. 356,461, dated January 25, 1887.

Application filed February 25, 1886. Serial No. 193,182. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN HENRY FLAUGHER and ALVIN BROOKS SCOTT, both residents of Manchester, in the county of Adams and State of Ohio, have invented certain new and useful Improvements in Automatic Bell-Alarms for Elevator-Cages; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a view of a portion of the shaft and cage of an elevator provided with our improved alarm. Fig. 2 is a front view, on an enlarged scale, of the alarm and of the operating-rollers. Fig. 3 is a vertical sectional view of the same. Fig. 4 is a detail view showing a modified form of the projections for operating the alarm.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to automatic alarms for elevator-cages, which will sound an alarm at every landing in the elevator-shaft, warning persons in the cage and about the shaft of the approach of the cage; and it consists in the improved construction of parts of such an alarm, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates one of the side rails of the elevator-shaft which guide the cage, or an upright rail secured in the side of the shaft, and B indicates the bottom of the cage, having side pieces, C.

A small casing or box, D, is formed in one corner of the bottom of the cage, having, preferably, perforated sides which will freely admit the sound of the bell-alarm to pass out through them, and a bell, E, is supported within this casing upon a horizontal bar, F. This bell is provided with a vertically-sliding rod, G, sliding through the top of the bell and having, preferably, a knob, H, upon its upper end, and this vertically-sliding rod is suitably connected with the hammer I, which will strike the side of the bell when the vertical rod is depressed.

An elbow-lever, J, is pivoted at its bend in

the side of the elevator-casing, the outer side of which is formed with a vertical groove or recess, L, in which the downwardly-projecting arm K of the elbow-lever may rest. The inwardly-projecting arm M of the lever rests normally with its end against the knob of the vertically-sliding operating-rod, having, preferably, a projecting lip, N, at that end, which will increase the weight of that arm and afford a larger surface for resting upon the knob. The downwardly-projecting arm of the lever is formed with an outwardly-bulging triangular portion, O, which projects outside of the groove or recess in which the arm rests.

The vertical rail at the side of the elevator-shaft is provided with one or more transverse rollers, P, journaled between lips Q, secured upon the rail, suitable spaces being between each roller, and these rollers are secured to the rail at every landing or hatchway of the elevator-shaft, and may engage the bulged portion of the elbow-lever as the cage passes the rollers.

If desired, the number of rollers may correspond to the number of the story at which attached, so that the bell will indicate at which story of the building, in which the elevator is, the cage has arrived.

In the way of a modification, instead of constructing the device for operating the alarm with rollers adapted to engage the bulged portion of the elbow-lever, the vertical rail at the side of the elevator-shaft may be provided with projecting triggers made of leather or other flexible material, as shown at S. The projecting part of these triggers would actuate the elbow-lever in precisely the same manner as the rollers, and being flexible they will yield to the passage of the car up and down, so as not to interfere with the smooth working of the same.

The bell may be constructed, as shown in the drawings and as described, with the vertically-sliding rod passing through the top of the same; but this construction being found in a number of other bells and being old it follows that any other suitable construction of bell may be used in which the inner weighted arm of the elbow-lever will sound the bell, this construction being, however, preferable on account of its simplicity and efficiency.



Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In combination with a vertical rail in an elevator-shaft and an elevator-cage, an alarm consisting of projections upon the vertical rail, a bell, and a lever pivoted in the side of the elevator-cage, the outer end of said lever adapted to engage said projections, and the inner end being weighted to operate the hammer of said bell, as and for the purpose shown and set forth.

2. In an elevator, the combination of rollers journaled upon the face of a vertical rail in the elevator-shaft at the landings, an elbow-lever pivoted in the side of the elevator-cage and having a downwardly-projecting arm formed with a bulging portion and an inner weighted arm, and a bell having its operating-rod below the end of the weighted arm, as and for the purpose shown and set forth.

3. In an elevator, the combination of rollers

journaled upon the face of a vertical rail in the elevator-shaft, an elbow-lever pivoted at its bend in the side of the cage and having its vertical arm resting in a groove in the outer side of the cage, and formed at its lower end with an outwardly-projecting bulge engaging the rollers and having its inwardly-projecting arm weighted and formed with a lip at its inner end, and a bell secured in the cage and having the knob of its vertically-sliding operating-rod under the lip of the weighted arm of the lever, as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JOHN HENRY FLAUGHER.  
ALVIN BROOKS SCOTT.

Witnesses:

DUDLEY B. PHILLIPS,  
TIMOTHY MENDELL.