(Model.)

2 Sheets—Sheet 1.

E. AXTHELM.

ELEVATOR ALARM INDICATOR.

No. 408,399. Patented Aug. 6, 1889.

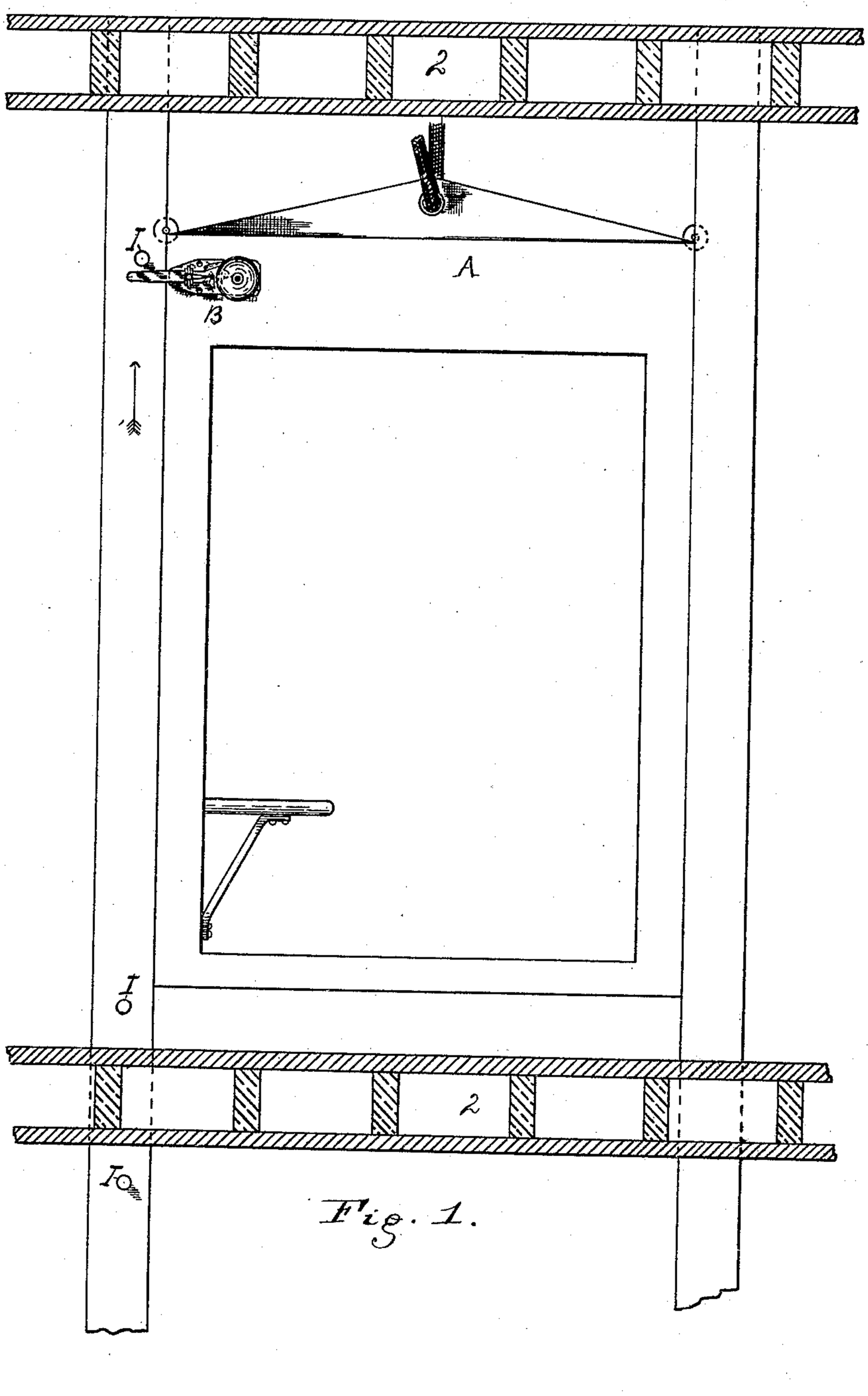

Fig. 1.

WITNESSES:

John H. Kerr

C. E. Etnier

INVENTOR

Ernst Axthelm

BY Wm. L. Peirce

his ATTORNEY

(Model.) 2 Sheets—Sheet 2.

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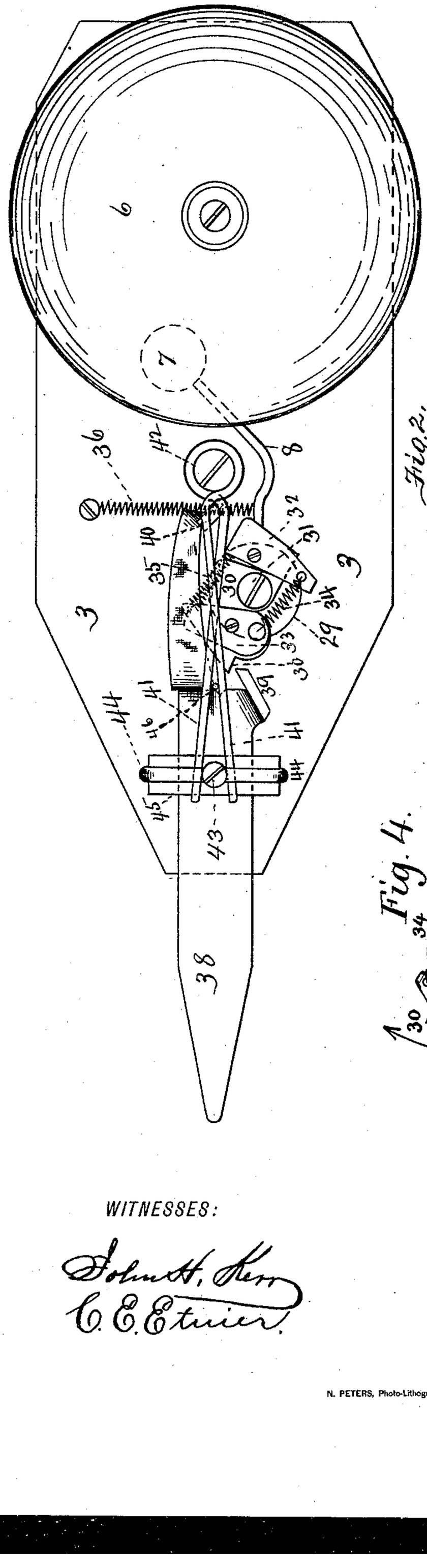

Fig. 2.

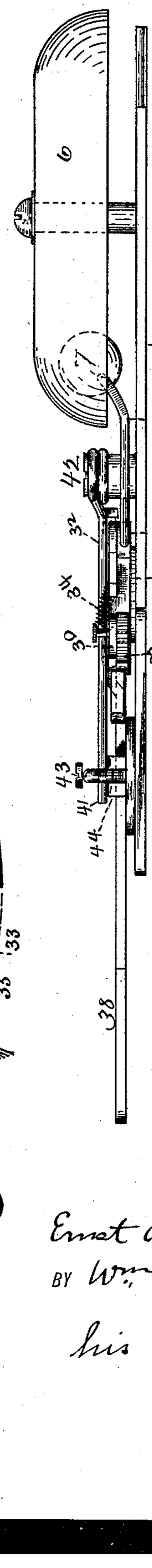

Fig. 3.

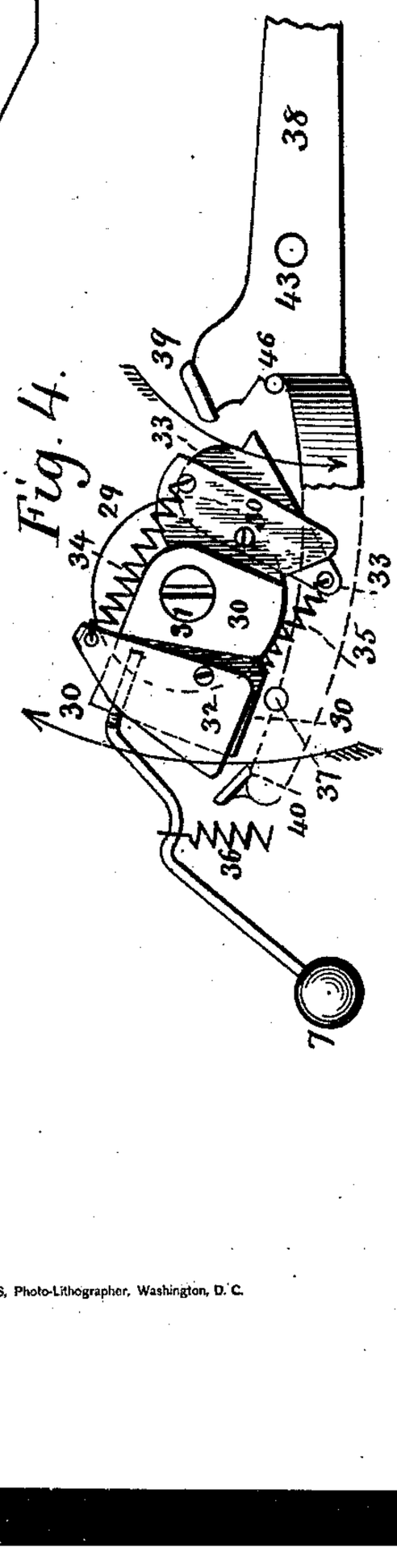

Fig. 4.

WITNESSES:

John H. Kerr
C. E. Etwier

INVENTOR
Ernst axthelm
BY Wm L. Peirce
his ATTORNEY

UNITED STATES PATENT OFFICE.

ERNST AXTHELM, OF PITTSBURG, PENNSYLVANIA.

ELEVATOR ALARM-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 408,399, dated August 6, 1889.

Application filed December 31, 1888. Serial No. 295,094. (Model.)

To all whom it may concern:

Be it known that I, ERNST AXTHELM, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered a certain new and useful Improvement in Elevator-Alarms, of which improvement the following is a specification.

The purpose of my invention is to make an automatic signal or alarm more particularly adapted for freight-elevators or dumb-waiters. It is well known that numerous accidents occur from the silent passage of elevators in the shaft. By my invention an alarm will be started or rung at definite intervals when the elevators are in motion, thus giving timely warning to all persons about or in the shaft. My alarm can also be used to give notice of the approach of a dumb-waiter.

Other purposes not necessary to enumerate here can be accomplished by my invention.

In the accompanying drawings, which make part of this specification, Figure 1 is an elevation of the alarm in position on the elevator, shown in outline in the shaft. Fig. 2 is an elevation of the alarm in detail. Fig. 3 is an edge view of the same. Fig. 4 is a similar view to Fig. 2, but with the bell and certain overlying parts removed to show more clearly those beneath.

A in Fig. 1 is the elevator-car, represented as moving up the shaft, and having my alarm B attached to the car and about to strike one of the stops 1 1, set in the sides of the shaft, as more fully explained below.

2 2 are two floors, which the elevators pass. These stops are preferably a short distance above and below each floor, but their position may be varied. This device is made double-acting—*i. e.*, to ring both when the elevator moves up and down.

The base 3 is fastened to the elevator-car. The bell 6 is secured to the base. There is the usual hammer 7 with arm 8. To prevent any friction between the base 3 and the moving parts I mount the latter upon a round plate 29. (Seen in Fig. 4.) Upon this plate 29, I pivot a swiveled turning piece 30 by the pivot 31. The turning piece 30 has two arms projecting from opposite sides, one of said arms carrying a cam pivoted on its upper side—*i. e.*, cam 32—and the other arm carrying the cam 33, pivoted on its under side. The cams 32 and 33 are respectively retracted by the springs 34 and 35, and the turning piece 30 and the bell-arm 8 by the spring 36. A stop 37 keeps the turning piece 30 from moving too far. The arm 8 is secured to the turning piece 30. 38 is a striker, which by the passage of the elevator is brought into contact with the stop 1. The striker 38 has contact-plate 39 projecting therefrom in a plane to strike the cam 33, and having an upwardly and inwardly extending arm, provided with a contact-plate, in a plane to engage the cam 32. To keep the striker central, I provide, as shown in Fig. 2, a double-armed spring 41, secured to a post 42 in base 3. The two arms of this spring inclose the stud 46 on the striker 38. The arms of this spring are kept from displacement by the guard 44 on the cross-piece 45, mounted on the post 42. The striker 38 is also pivoted to the base 3 by the post 43.

The operation of the device is as follows: The striker 38, meeting stop 1, is depressed at its right-hand end, raising contact-plate 40, moving arm 32, which pushes at its upper edge against the turning piece 30, which in turn draws back the arm 8. The contact-plate 40 then slips past the cam 32, releasing the arm 8, which is snapped by the spring 36 against the gong 6. In descending the shaft, the devices at the right-hand end of the figure operate in a similar way.

If desired, the plate 29 can be omitted and the swiveled turning piece 30 be pivoted directly to the base-piece 3.

Having fully described my invention, I claim—

1. In an elevator-alarm, the combination of a striking-arm, having two contact-plates thereon, two spring-retracted cams adapted to be engaged by said contact-plates, a swiveled turning piece upon which said cams are pivoted, a base upon which said turning piece turns, a spring-retracted bell-hammer arm secured to said turning piece, and a gong, all substantially as shown and described.

2. In an elevator-alarm, the combination of a striking-arm having two contact-plates

thereon, two spring-retracted cams adapted to be engaged by said contact-plates, a swiveled turning piece upon which said cams are pivoted, a plate upon which said turning piece turns, a base upon which said plate is set, a spring-retracted bell-hanger arm secured to said turning piece, a gong, a stop set in the base to keep the turning piece from moving too far, and a double-armed spring with guard and cross-piece, all substantially as shown and described.

In testimony whereof I have hereunto set my hand.

ERNST AXTHELM.

Witnesses:
WM. L. PIERCE,
JAMES F. ROBB.