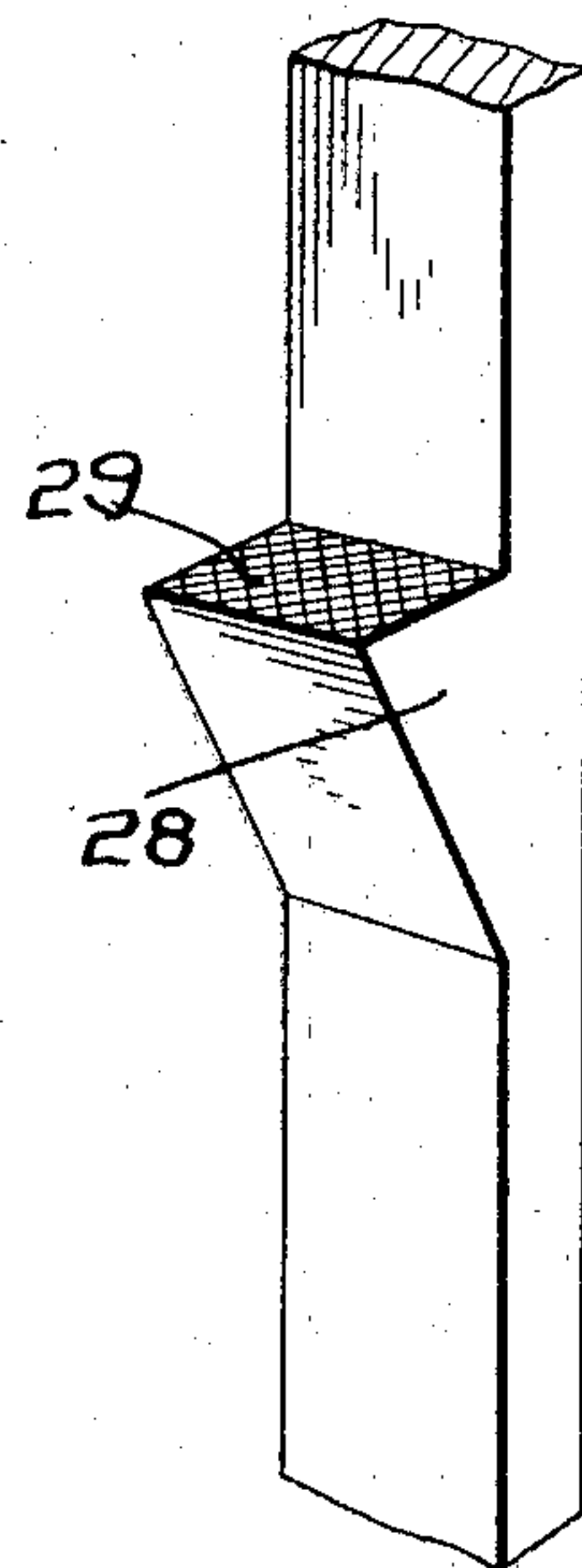
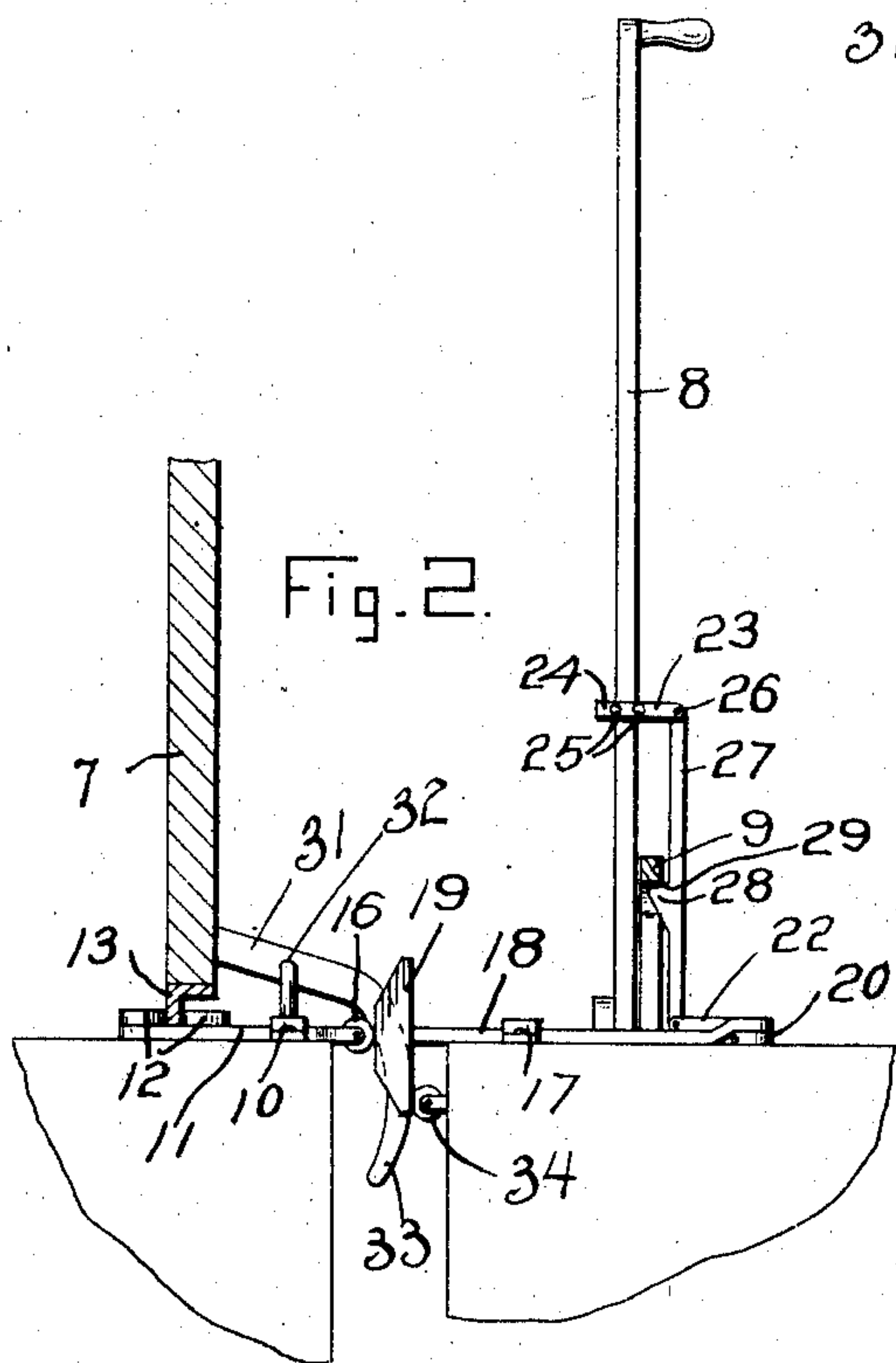
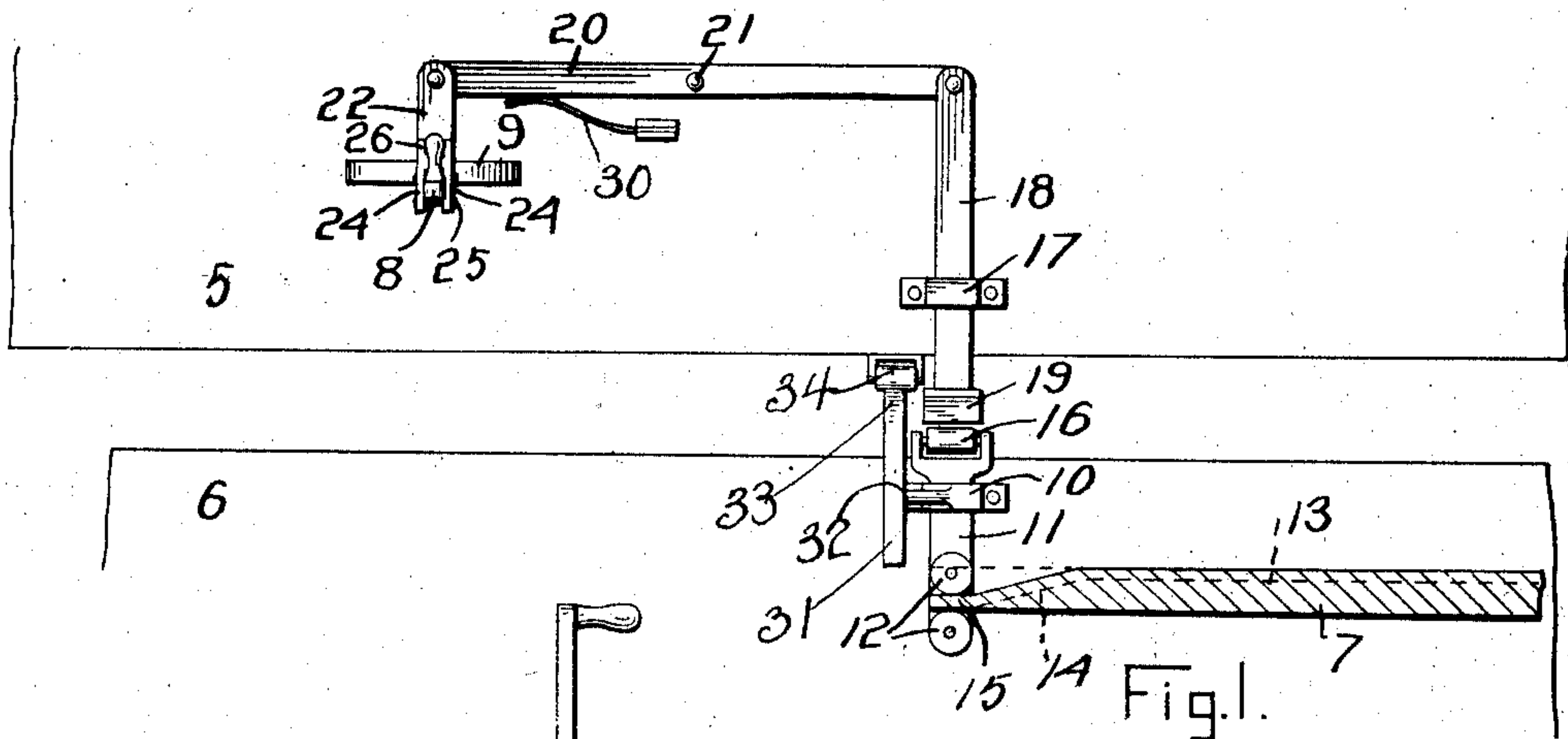


No. 873,925.

PATENTED DEC. 17, 1907.

M. DASHIELL.
ELEVATOR LOCK.

APPLICATION FILED MAR. 25, 1907.



Witnesses

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ELEVATOR-LOCK.

No. 873,925.

Specification of Letters Patent.

Patented Dec. 17, 1907.

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To all whom it may concern:

Be it known that I, MILTON DASHIELL, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Elevator-Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices for locking the controlling lever of an elevator while the door of a shaft is in open position so that the lever cannot be moved to set the raising or lowering mechanism of the elevator in operation.

Broadly speaking the invention resides in the provision, upon the lever, of a hinged arm which carries a friction element adapted to grip the under edge of the usual rack employed in connection with the lever when the arm is rocked, this rocking of the arm being had through the instrumentality of a system of levers and rocking arms which are actuated by means of a sliding trip designed to be moved by the elevator shaft door when the same is slid to open position. While several devices of this nature are in use, it is essential in nearly every case that the controlling lever be brought to rest exactly at the middle of the segmental rack as otherwise the detent devices for holding the lever against movement will not cooperate with the same.

It is the primary object of my invention to overcome this disadvantageous feature and permit of the locking of the lever at any point between its two motor controlling positions.

In the accompanying drawings, Figure 1 is a plan view of the mechanism showing the relation of the parts carried by the elevator car and by the landing, Fig. 2 is a view in elevation of the parts of the device, the shaft door being shown in section, and, Fig. 3 is a detail perspective view of a portion of the arm which carries the friction element of the device.

Referring more specifically to the drawings there is shown an elevator car which is indicated by the numeral 5 and the floor of a building in which the elevator car is located which floor is indicated by the numeral 6. There is also illustrated a shaft door 7, a controlling lever 8, and a segmental rack 9 with which the lever is adapted to cooperate, all of

these several parts being of the ordinary construction.

Slidably mounted upon the floor 6 at the edge of the elevator shaft in a suitable bracket 10, is a sliding trip 11 carrying spaced rollers 12 between which a flange 13 upon the under side of the shaft door 7 is adapted to pass. This flange extends for the greater portion of its length along the inner edge of the door but at the rear end of the door, the flange is turned toward the forward edge of the door as indicated at 14 and extends for a short distance along the said forward edge as indicated at 15. It will be understood from the above that when the door is closed, the sliding trip 11 will be in retracted position as shown in Fig. 1 of the drawings, but when the door is open, the passage of the flange between the rollers 12 will serve to shift the sliding trip outwardly from the edge of the floor and in the direction of the elevator car. Journaled at the end of the sliding trip is a roller 16.

Slidably mounted in a suitable bracket 17 upon the floor of the elevator car 5 is a bar 18 which carries at its forward end a head 19 which is adapted to be engaged by the roller 16 when the sliding trip 11 is moved as stated above. Pivoted to the opposite end of the bar 18 is one end of a rocking bar 20 which is pivoted at its middle as at 21 upon the floor 5 of the elevator car and pivoted to the opposite end of the rocking bar 20 is a link 22 the purpose of which will be presently explained.

A plate 23 is bifurcated to form spaced portions 24 between which the lever 8 is received, there being bolts 25 engaged through the said portions 24 in front and in rear of the lever for rigidly securing the plate thereon. The plate is also bifurcated to form spaced ears 26 between which is pivotally received the upper end of an arm 27 which is hingedly connected at its lower end to the link 22. This arm has secured or formed upon its face which opposes the lever, a friction element in the form of a block 28 having a beveled upper face 29 which face is also serrated. Under normal conditions the arm 27 depends in substantially parallel relation with respect to the lever but when the head 19 is engaged by the roller 16 at the time of opening the door 7, the arm will be rocked in the direction of the lever owing to the motion communicated throughout the bars 18 and 20 and the link 22. This rocking of the arm serves to bring

the serrated upper face 29 of the block 28 into frictional engagement with the under edge of the segmental rack 9 and will serve to hold the lever 8 against movement in either
 5 direction. It will be understood of course that it is not necessary, owing to the frictional engagement of the block with the rack, to bring the lever exactly to intermediate position with respect to the rack and that hence
 10 it is only necessary to move the lever out of motor controlled position in order to secure this locking function. A spring 30 is connected with the rocking bar 20 and with the floor of the elevator car and serves to restore
 15 the arm to its normal position after having been rocked.

An arm 31 is pivoted as at 32 upon the guide bracket 10 and extends with one of its ends normally in the path of movement of
 20 the door 7. The opposite end portion of the arm 31 is of cam formation as indicated at 33 and is designed to be engaged by a roller 34 journaled upon the forward edge of the elevator car when the car reaches the landing.
 25 This engagement of the roller 34 with the cam portion 33 of the arm 31 serves to swing the arm so that its first mentioned end will move out of the path of movement of the door and permit opening of the same it being
 30 understood that as the said end of the arm normally projects in the said path of movement of the door the door cannot be opened until the arm is engaged by the roller 34 as above stated. This of course serves to hold
 35 the door closed except when the elevator car is at the landing.

What is claimed is—

1. In a mechanism for locking the controlling levers of elevator cars, the combination
 40 with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a friction element car-

ried by the arm and adapted to frictionally engage the under side of the segment when the arm is swung in the direction of the lever,
 45 a sliding trip adapted for actuation by the movement of the door to open position, and means located in the path of the trip and connected with the arm for swinging the latter when engaged by the trip.

2. In a mechanism for locking the controlling levers of elevator cars, the combination with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a serrated friction ele-
 50 ment carried by the arm and adapted to frictionally engage the under side of the segment when the arm is swung in the direction of the lever, a sliding trip adapted for actuation by the movement of the door to open position,
 60 and means located in the path of the trip and connected with the arm for swinging the latter when engaged by the trip.

3. In a mechanism for locking the controlling levers of elevator cars, the combination
 65 with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a serrated friction element carried by the arm and adapted to frictionally engage the under side of the segment
 70 when the arm is swung in the direction of the lever, a sliding trip adapted for actuation by the movement of the door to open position, a rocking bar, a link connecting one end of the bar and the lower end of the arm, and a bar
 75 pivoted to the other end of the rocking bar and having a cam head adapted for engagement by the trip, when the door is open.

In testimony whereof, I affix my signature, in presence of two witnesses.

MILTON DASHIELL.

Witnesses:

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 BRUCE B. GOOTEE.