

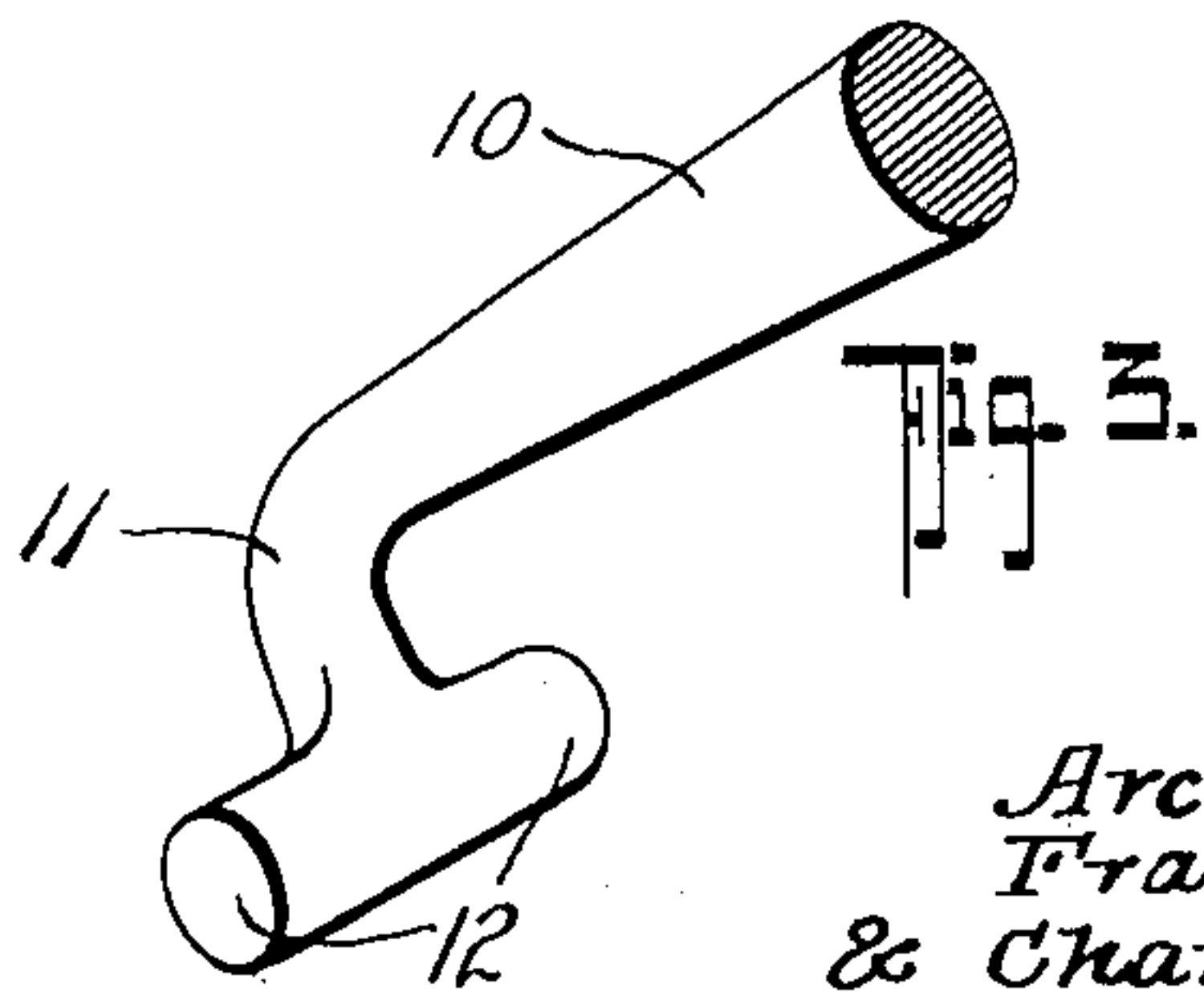
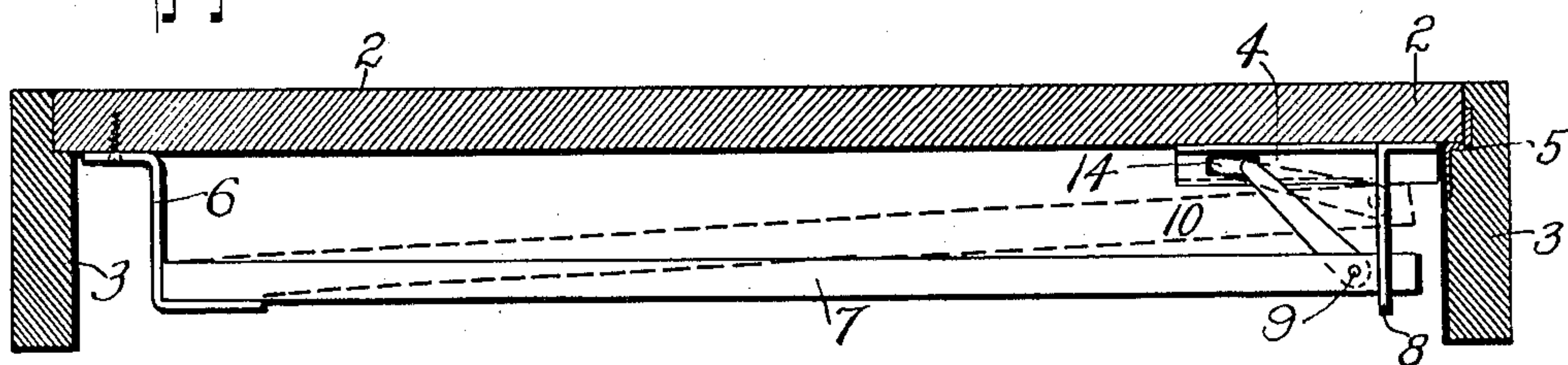
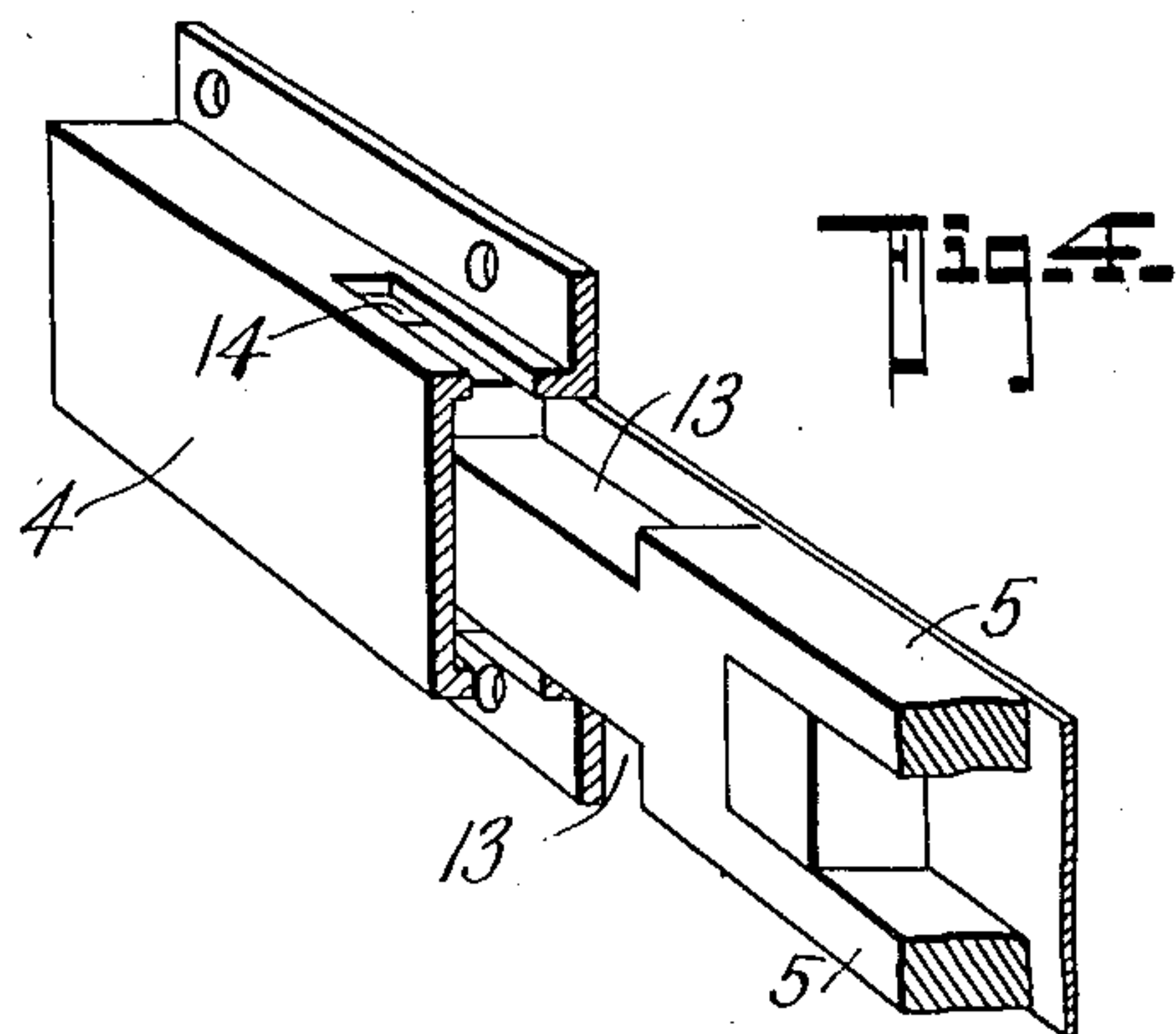
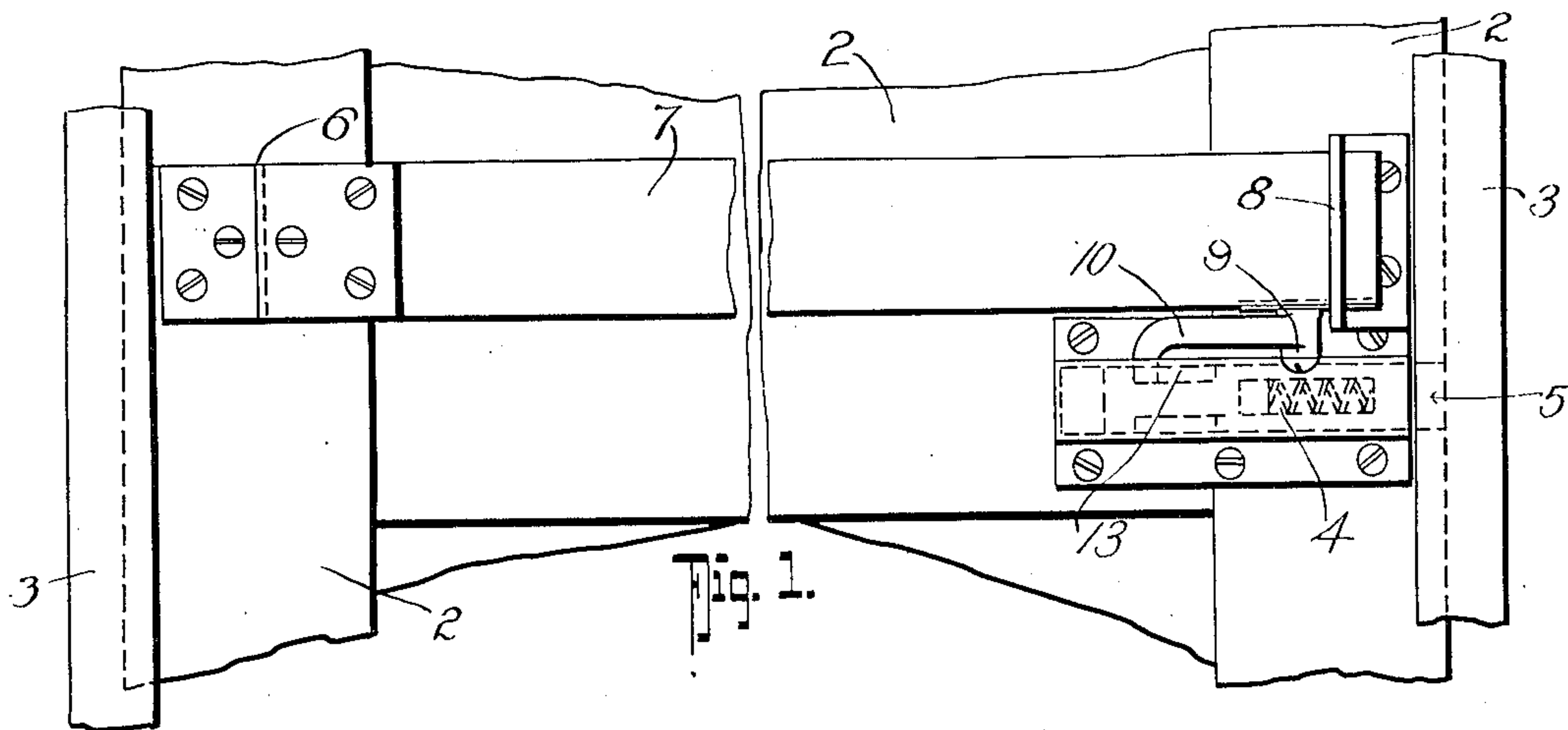
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SAFETY DOOR LATCH.

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943,973.

Patented Dec. 21, 1909.



Witnesses
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UNITED STATES PATENT OFFICE.

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SAFETY DOOR-LATCH.

943,973.

Specification of Letters Patent. Patented Dec. 21, 1909.

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To all whom it may concern:

Be it known that I, ARCHIBALD CAMPBELL HOPE, FRANK FARQUHAR, and CHARLES ANTHONY HILCHEY, citizens of the Dominion of Canada, residing at the city of Vancouver, in the Province of British Columbia, Canada, have invented a new and useful Safety Door-Latch, of which the following is a specification.

This invention relates to a means for operating a latch for the doors of schools or other public buildings where they open on to emergency exits or fire escapes and is designed to effect the release of a positive-check latch bolt before the pressure of a crowd can come upon the door itself which might interfere with such release.

The invention is particularly described in the following specification reference being made to the drawings by which it is accompanied in which:

Figure 1 is a front elevation from the inside showing the application of a device to a door; Fig. 2 a sectional plan of the same, and Figs. 3 and 4 enlarged details in perspective and part section of the end of the connecting rod which engages the latch bolt, and of that portion of the latch bolt and its casing which receives the same.

In these drawings 2 represents a portion of an outwardly opening door adjacent to the lock rail and 3 the corresponding door frame. To the innerside of the door 2 is applied an ordinary spring latch having a slidable bevel ended bolt 5 endwise slidable within its casing against the resistance of a spring. Extending across the width of the door adjacent to the latch and preferably above it, is a rail 7 which is flexibly secured to the hinge stile of the door by a resilient member 6, and supported toward the other side in a member 8 within which it is susceptible of movement toward the door as indicated by dotted lines in Fig. 2. To the free end of this rail 7 is pivotally attached at 9, a connecting member 10, the end 11 of which is downwardly turned to enter through an elongated slot 14 in the casing 4 of the latch, and engage the latch bolt 5 in such a manner that when the rail 7 is pushed to the position indicated by dotted lines the latch bolt 5 will be withdrawn from the keeper in the door frame and the door will be free to open with the same pressure that draws its bolt. The downwardly turned end

is preferably provided with a T end as at 12 which may be passed through the elongated aperture 14 and when turned into the position which it occupies when connected to the rail 7 will be prevented from becoming accidentally displaced. The recess 13 in the bolt 5 into which the downwardly turned end 11 of the connection 10 is applied is elongated toward the outer end of the latch bolt 5, as shown in Fig. 1 so that the bolt is free to move endwise in the act of latching without actuating the operating rail 7, and a recess 13 and elongated slot 14 is provided on both the top and bottom of the latch bolt and its casing, so that the bolt may be applied to either a right or left hand door.

A device is thus provided that is exceedingly simple both in its construction and in application to an existing door, and that will effectively release the latch when required; while the latch itself is one that retains a positive hold until so released.

An advantageous feature of this device is that in the event of a panic rush causing a crowd against the door, that crowd cannot cause a pressure to come upon the latch that might prevent its release, for as soon as the body of an individual is crowded against the door the rail 7 will be pressed toward the door and effect the release of the latch before the pressure can come on the door or its latch.

Having now particularly described our invention and the manner of its operation we hereby declare that what we claim as new and desire to be protected in by Letters Patent is:

1. In a device of the class described, the combination with a spring latch bolt, of a bar flexibly connected to the hinged stile of the door and extending horizontally across it to a position adjacent to the latch, and a short rod pivotally attached to the free end of this bar and connecting it to the latch bolt in a manner that when the horizontal bar is pressed toward the latch it will withdraw the latch bolt from its engagement with the door frame.

2. In a device of the class described the combination with a latch bolt endwise slidable within a casing against the resistance of a spring said latch bolt having an endwise elongated recess and the latch bolt casing an aperture adjacent to the recess but elongated backward from it, a bar flexibly con-

5 nected to the hinge stile of the door and extending across it to a position adjacent to the latch, means for supporting this bar while permitting movement of it toward the door, and a connection pivotally mounted at the free end of the bar said connection having a downwardly turned end that will pass through the aperture of the casing and into engagement with the end of the recess in the latch bolt.

10 3. In a device of the class described the combination with a spring latch bolt 5 having a recess 13 said latch bolt endwise slidable in a casing 4 having an elongated aperture 14 in the upper side relatively narrower than the thickness of the bolt, the bar 7 flexibly connected at 6 to the hinge stile of

the door and supported by a member 9 affording it limited movement toward the door, the connection 10 pivotally mounted at 9 at the free end of the bar 7 and having a downwardly turned end 11 with projections 12 that will retain the end of 10 within the latch bolt casing.

In testimony whereof we have hereunto severally signed our names to this specification in the presence of two subscribing witnesses.

ARCHIBALD C. HOPE.

FRANK FARQUHAR.

CHARLES ANTHONY HILCHEY.

In the presence of—

ROLAND BRITTAIN,

MAY A. WHYTE.