

June 19, 1923.

J. O. NASLIN

1,459,238

DOORCHECK

Filed Sept. 22, 1919

3 Sheets-Sheet 1

Fig. 1

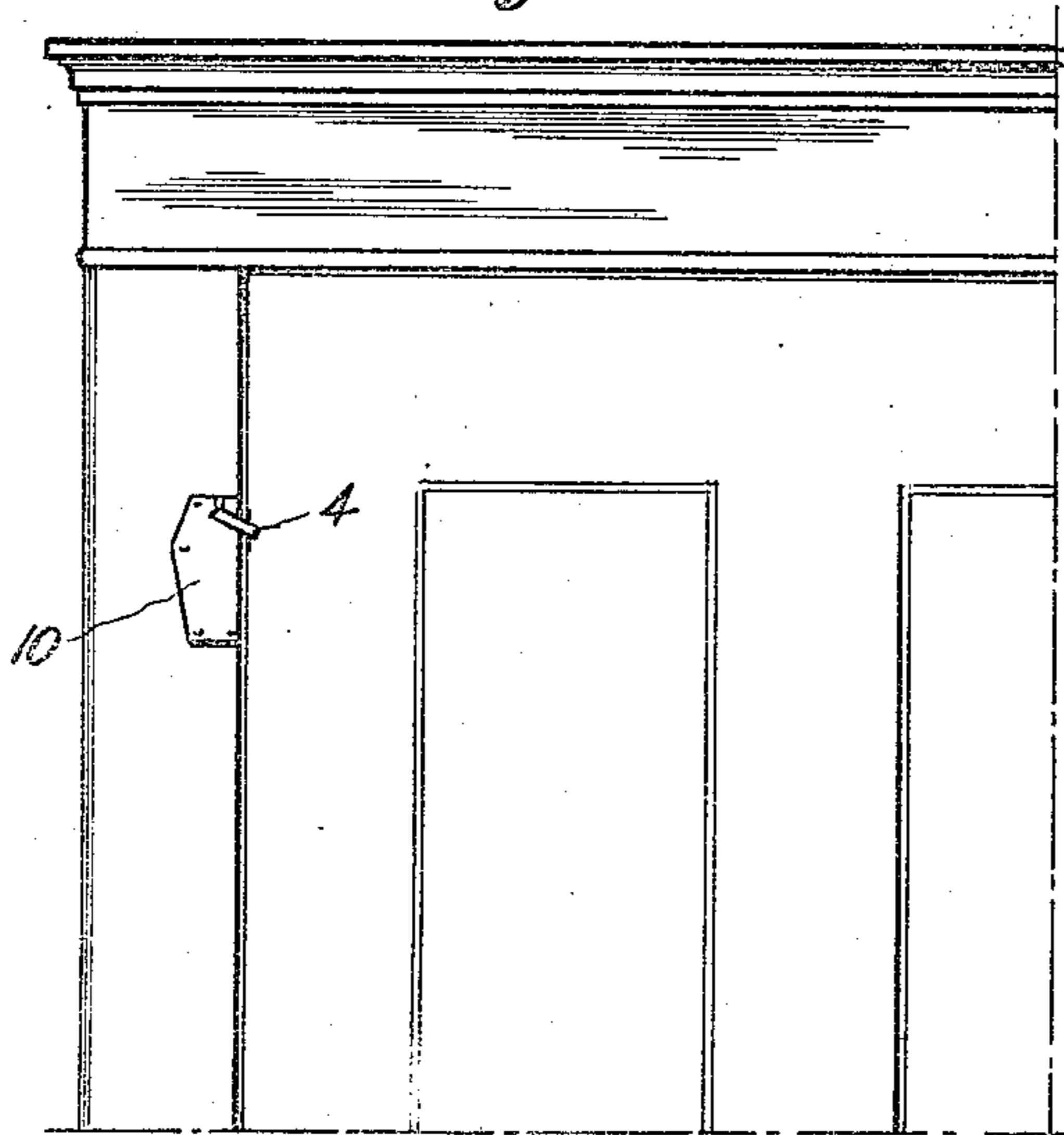


Fig. 2

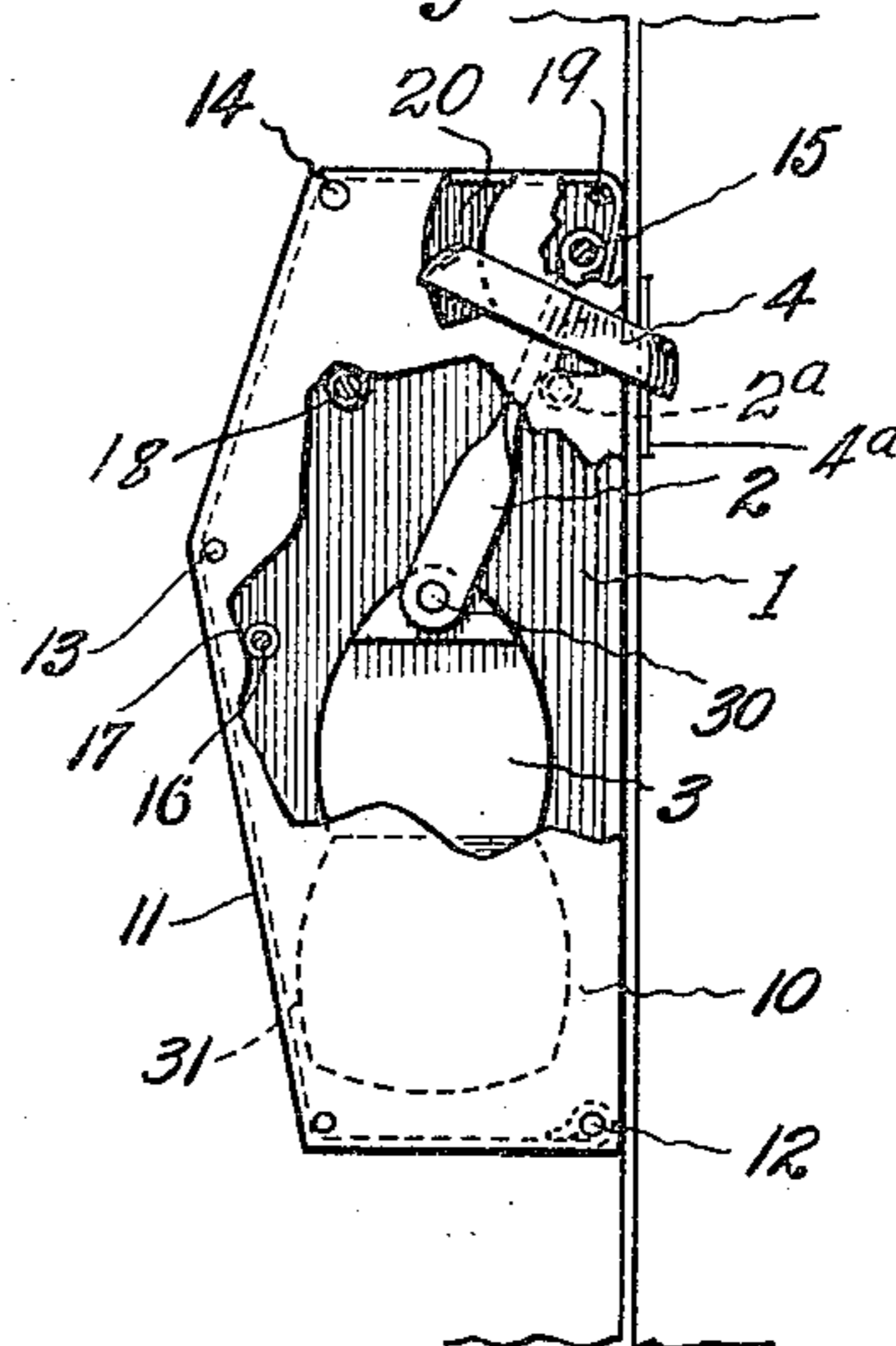


Fig. 3

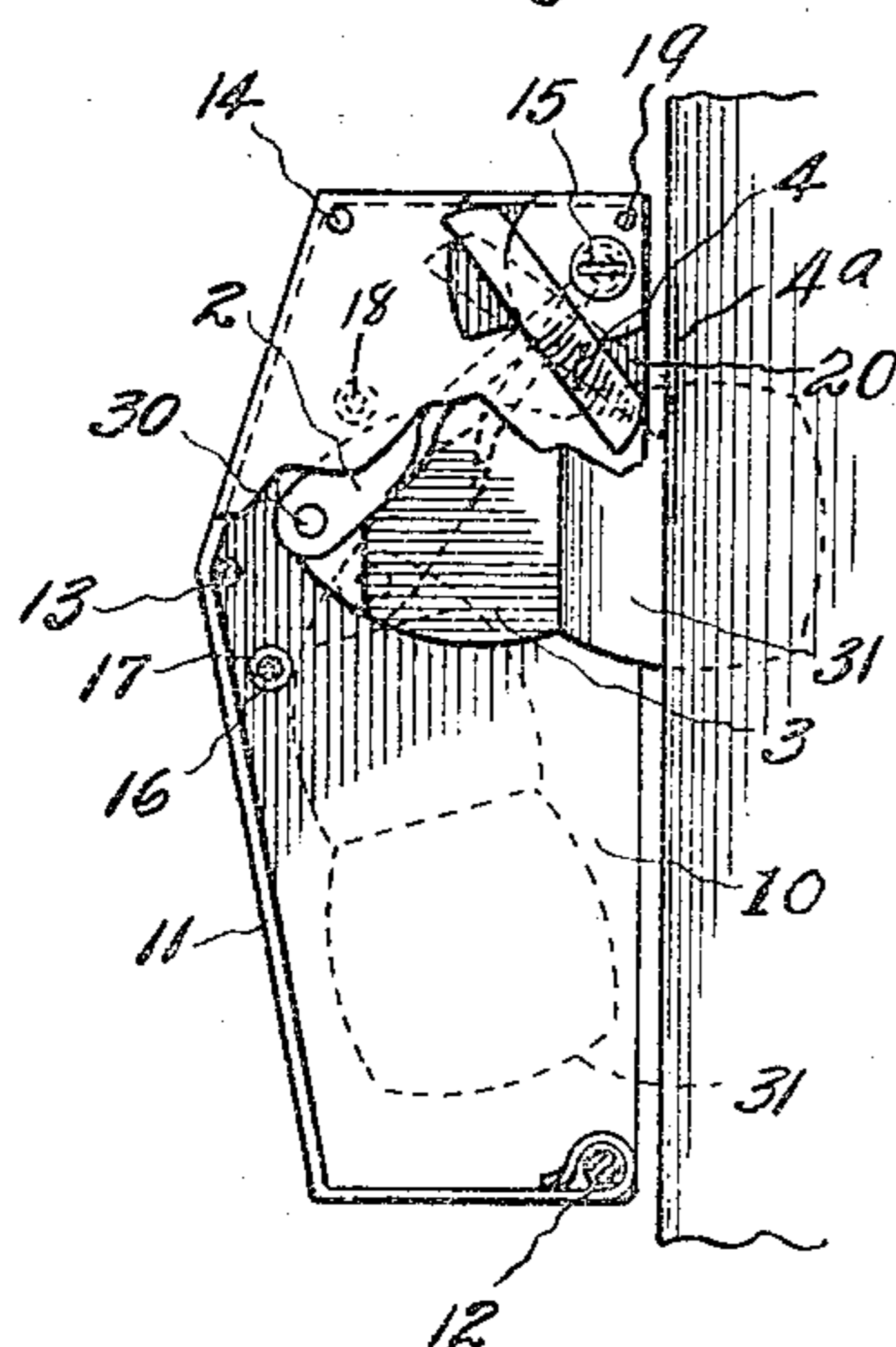


Fig. 4

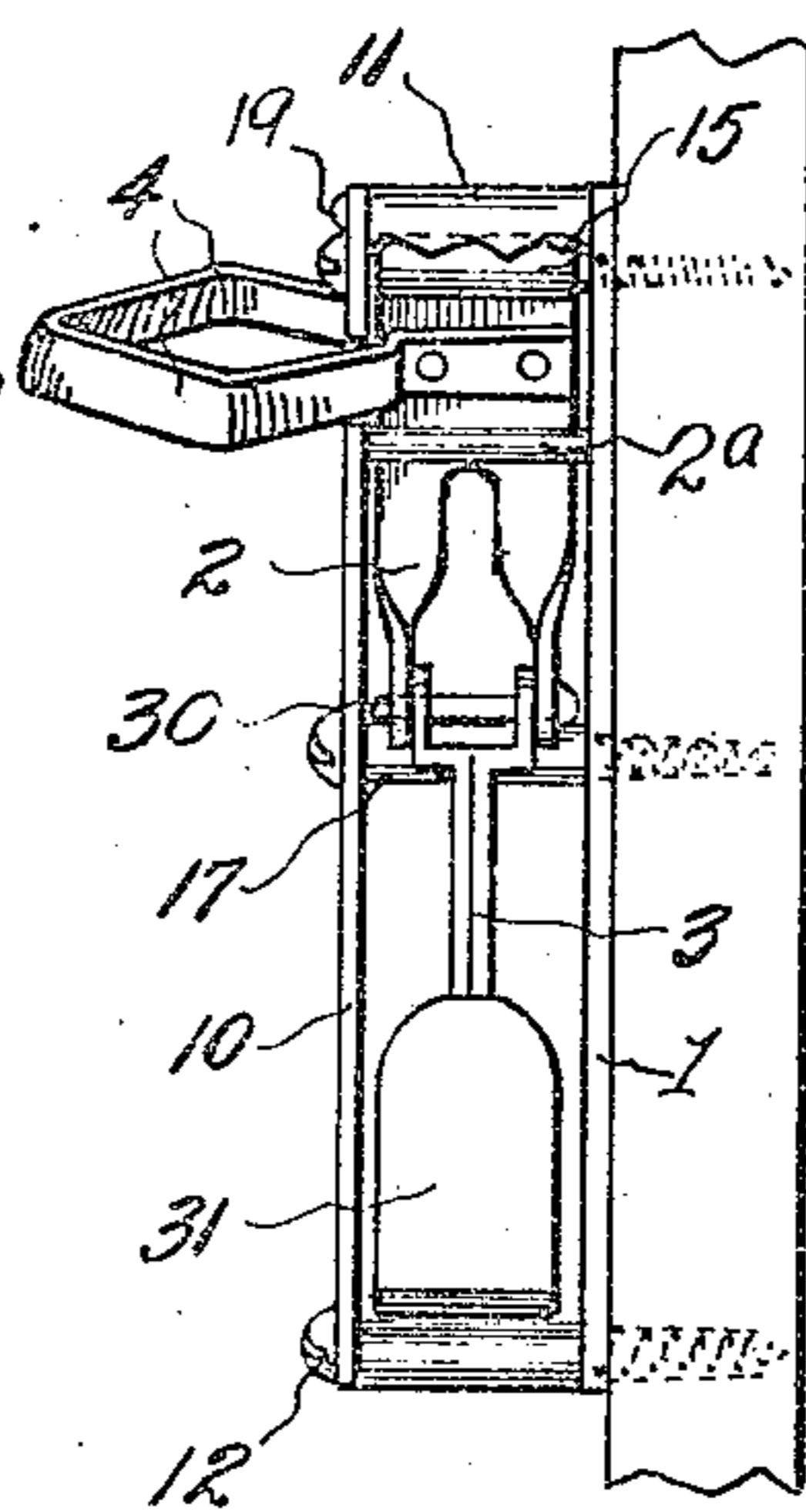
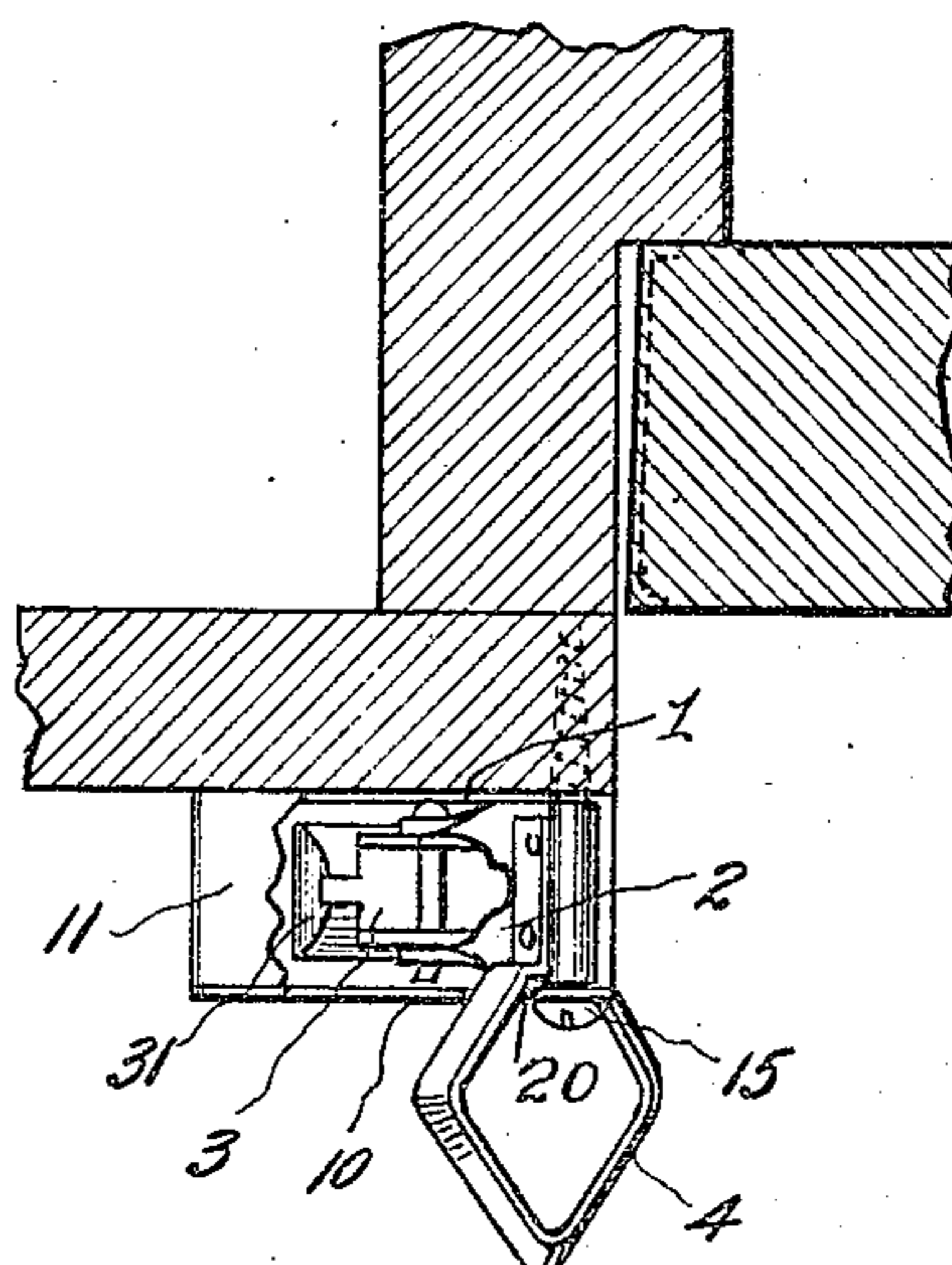


Fig. 5



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June 19, 1923.

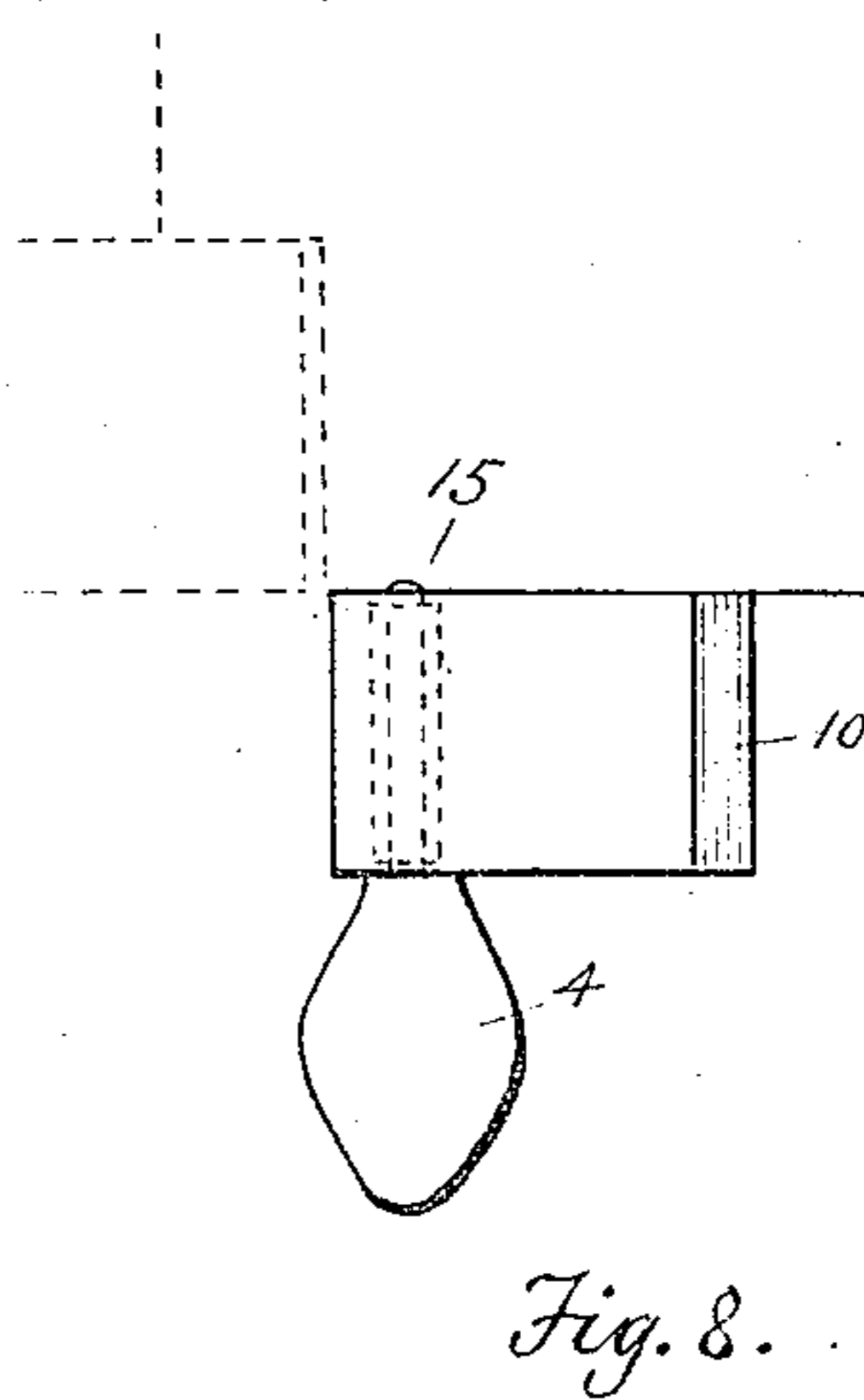
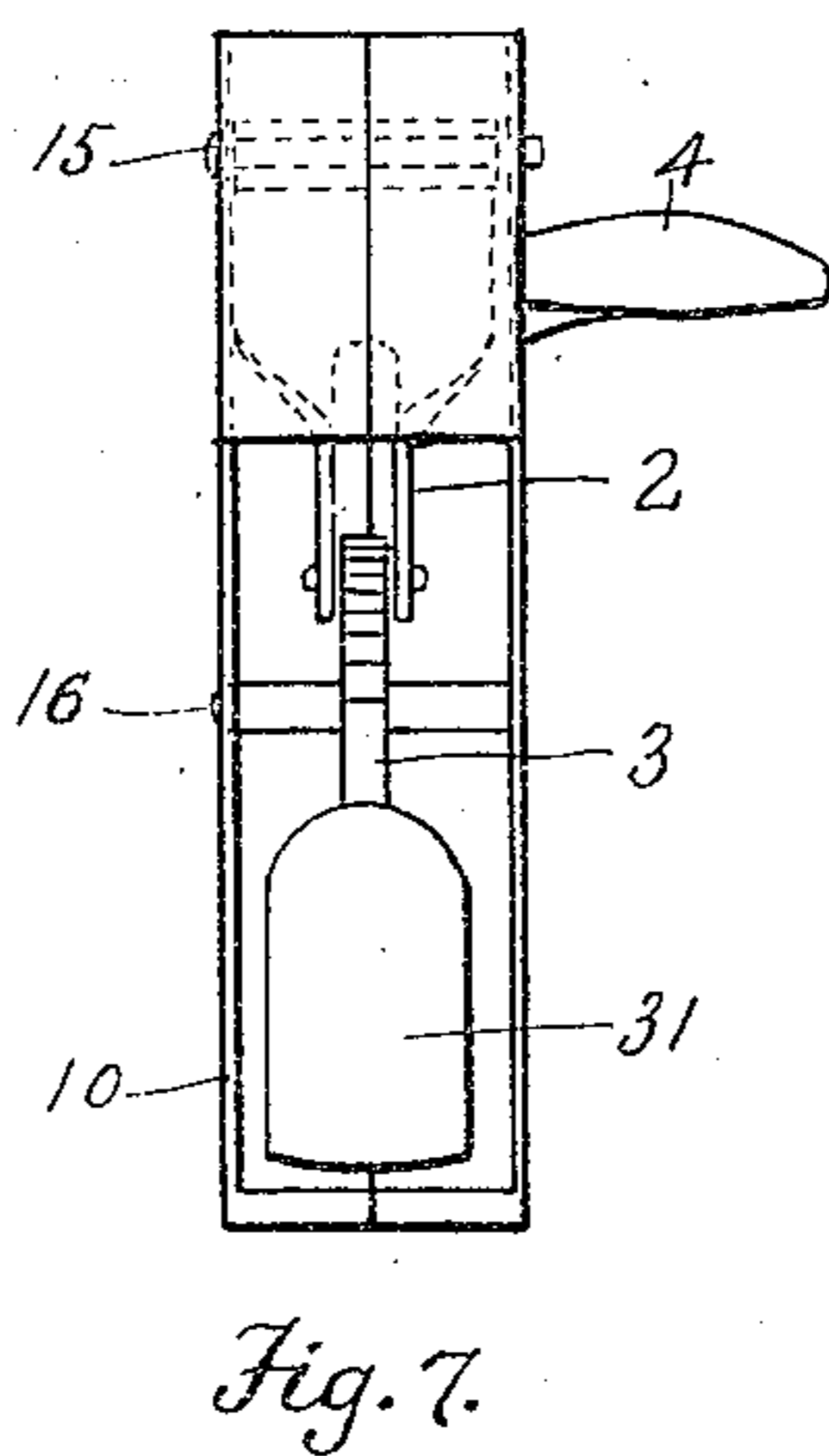
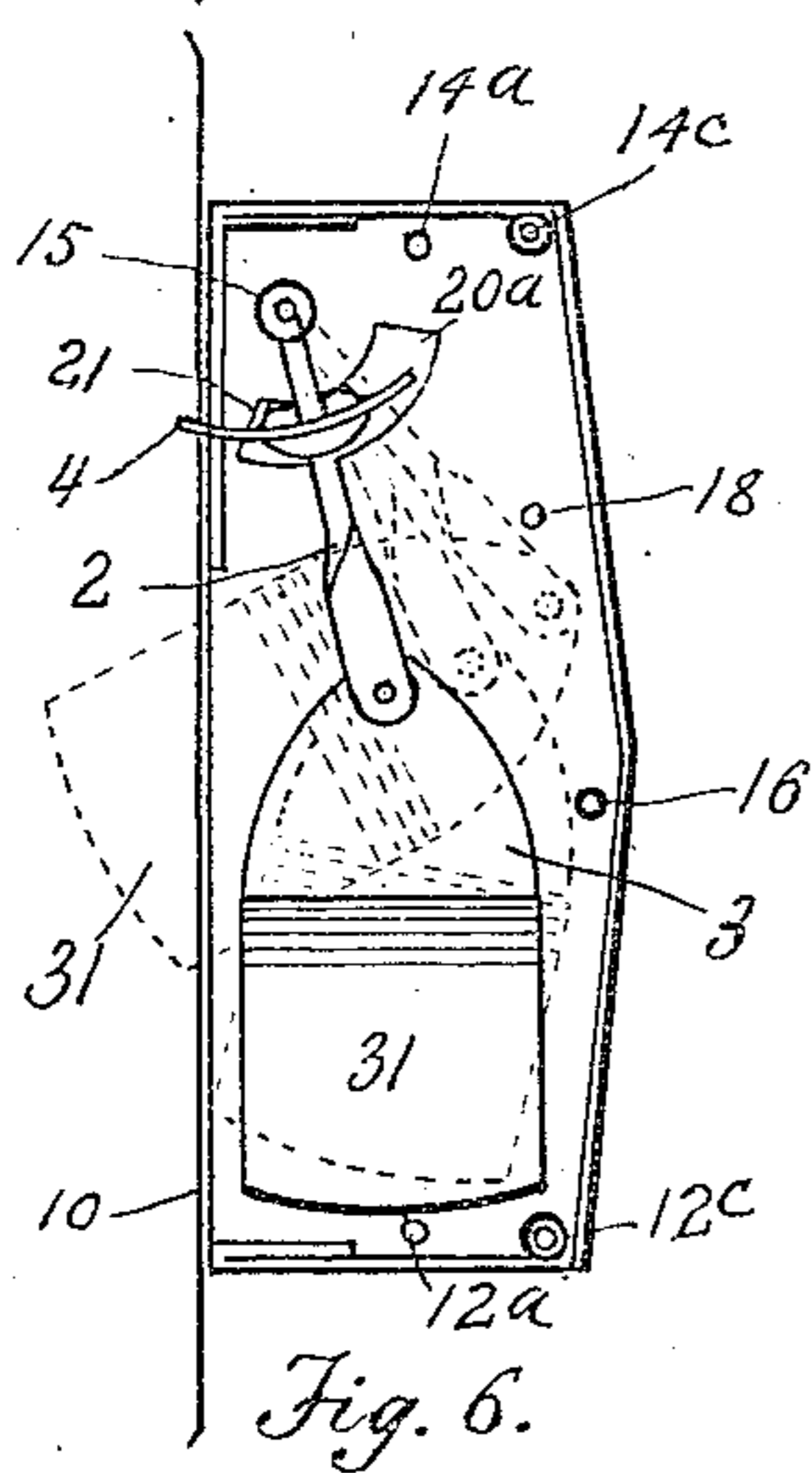
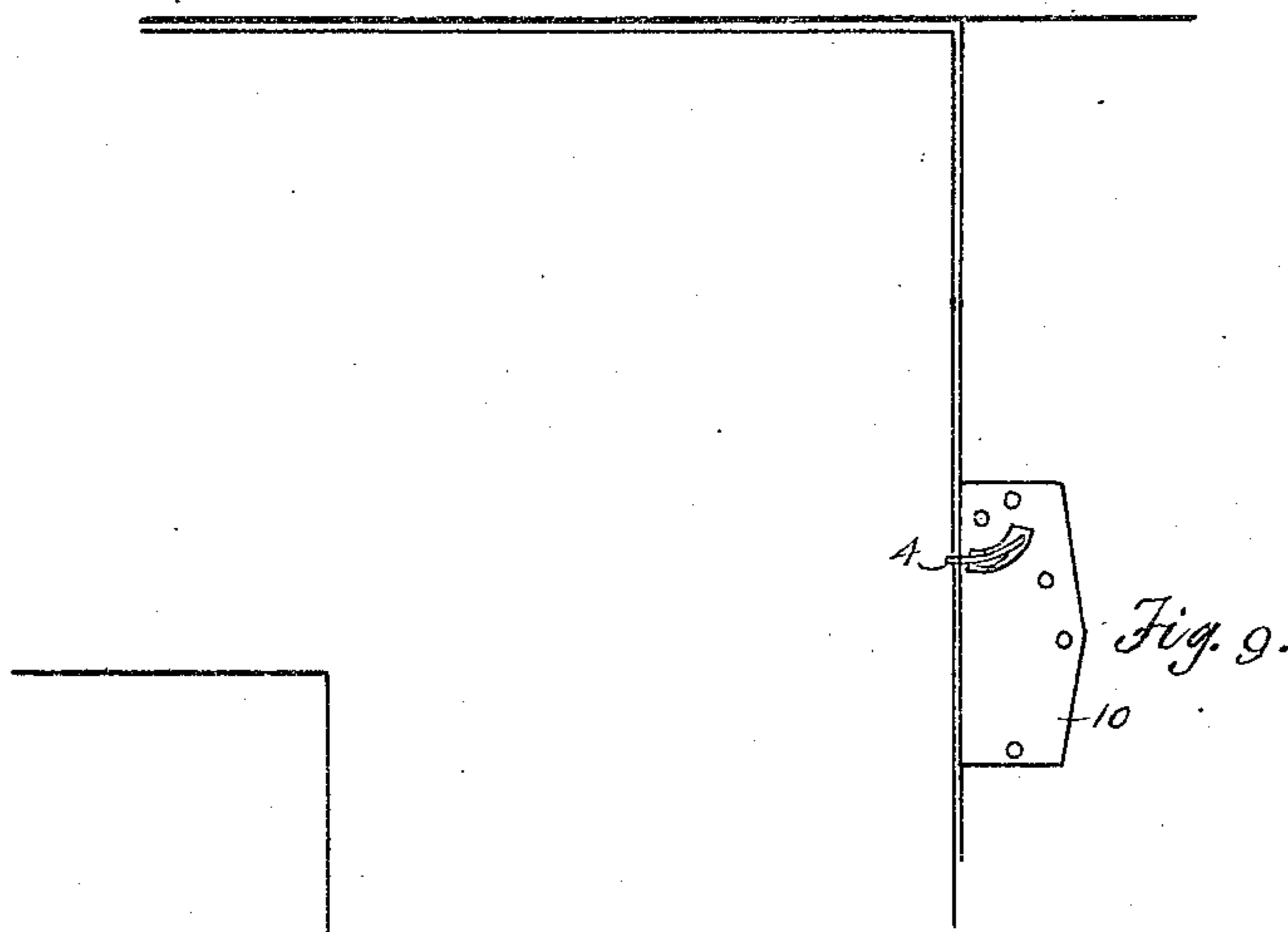
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Fig. 10.

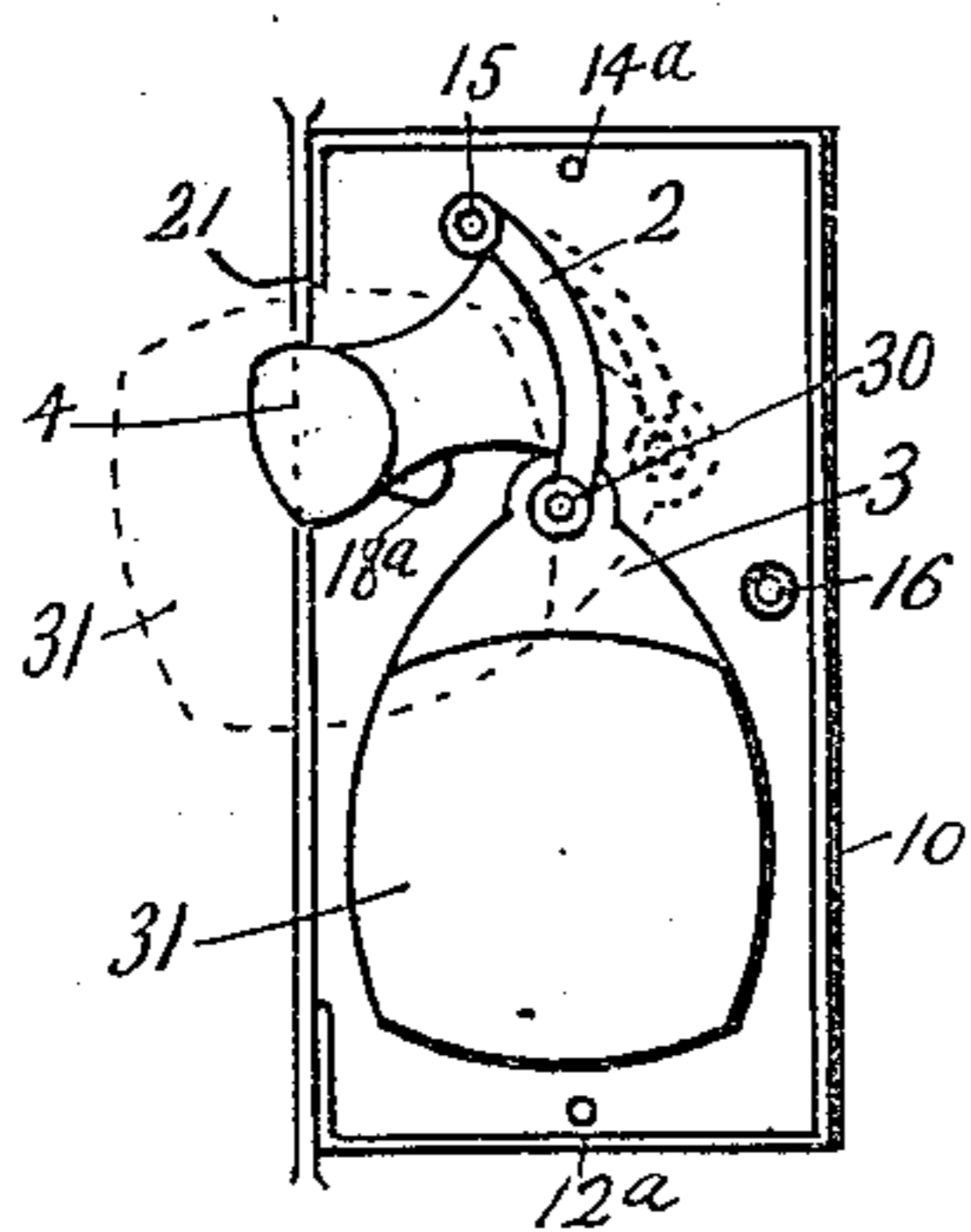


Fig. 11.

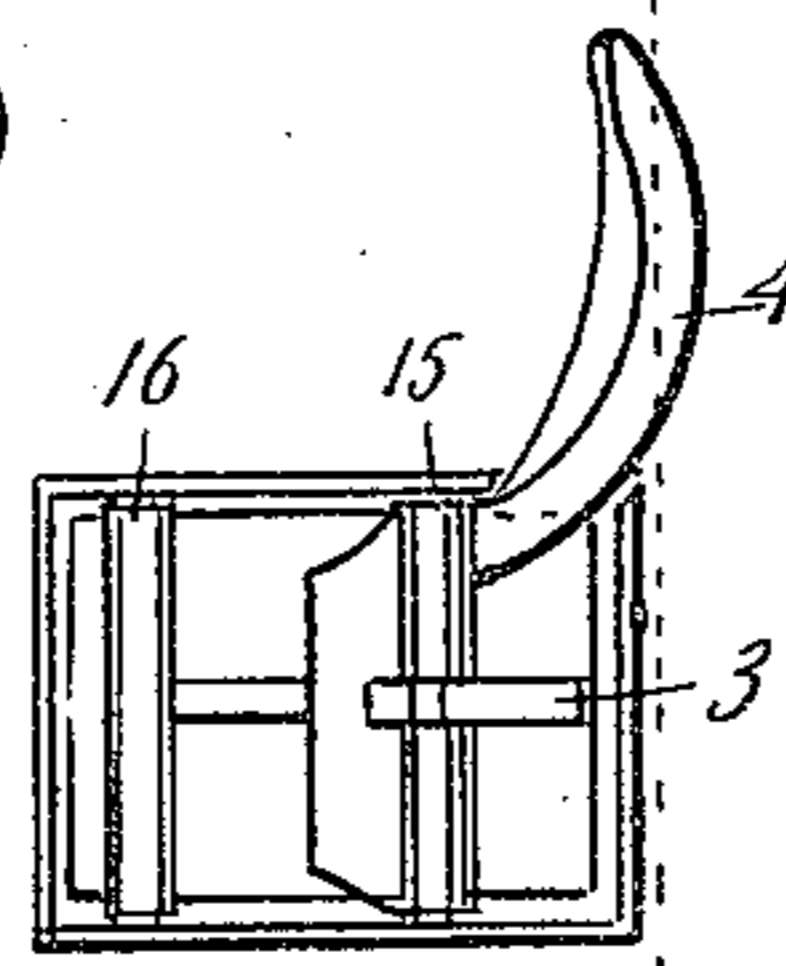
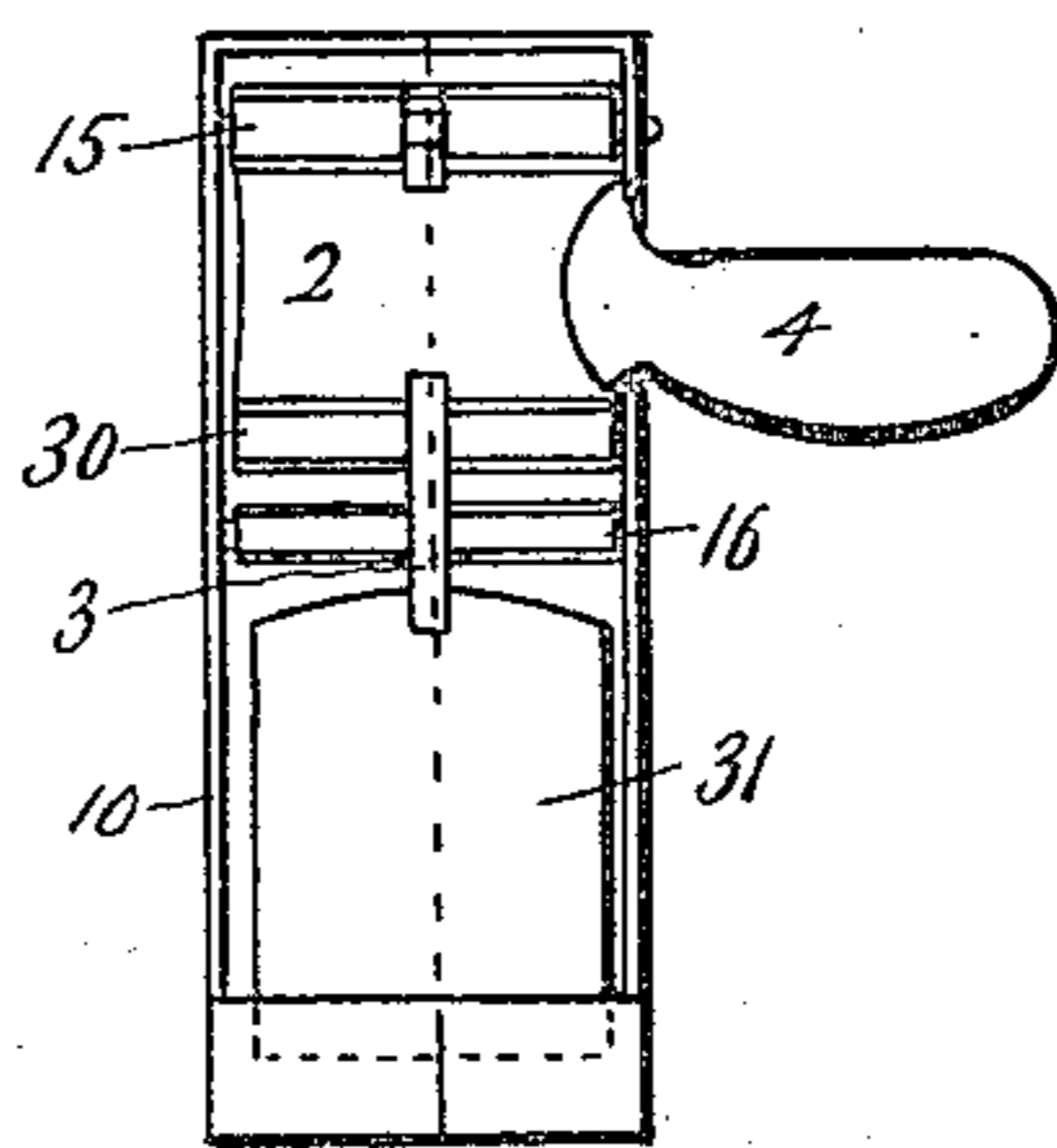


Fig. 12.

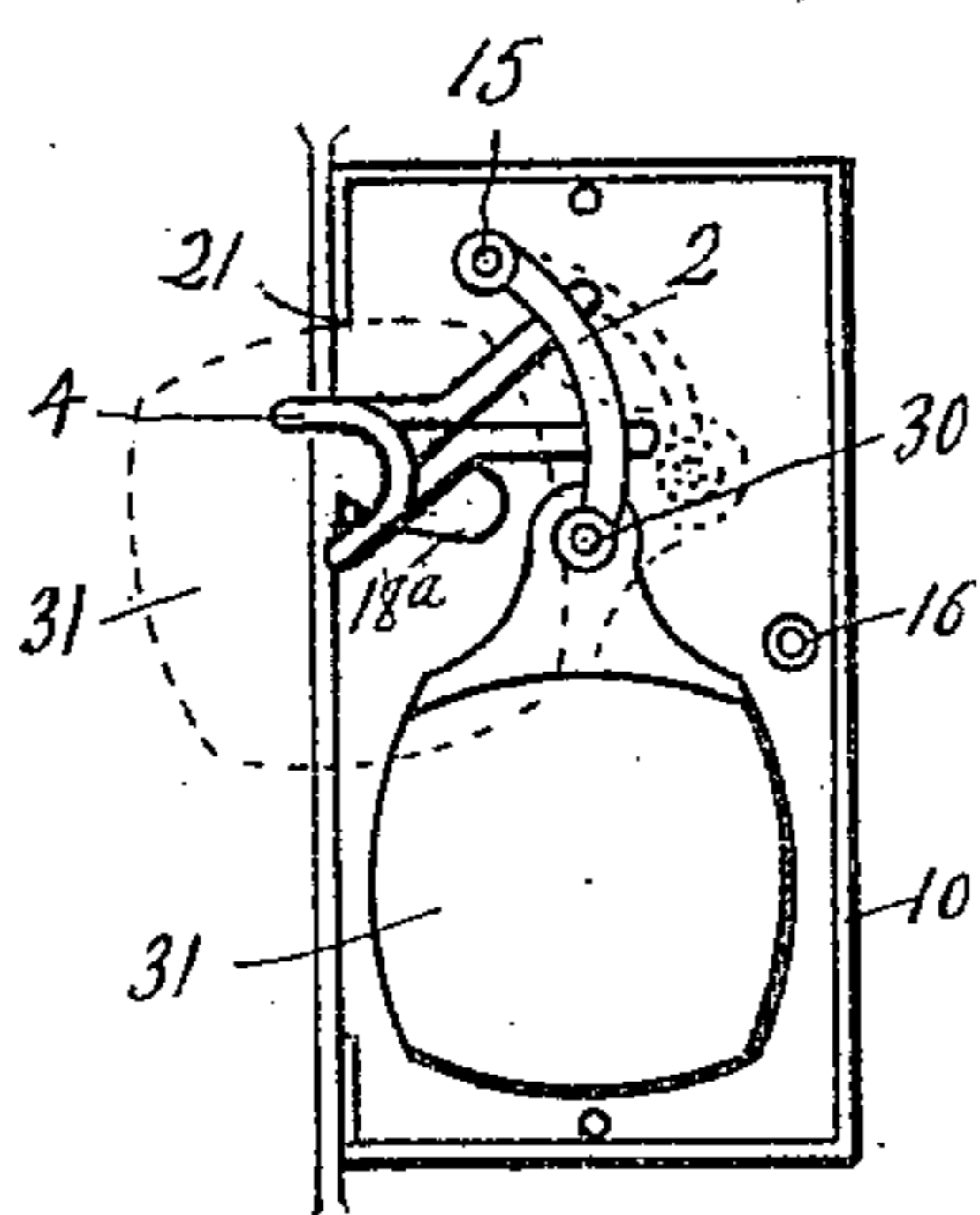


Fig. 13.

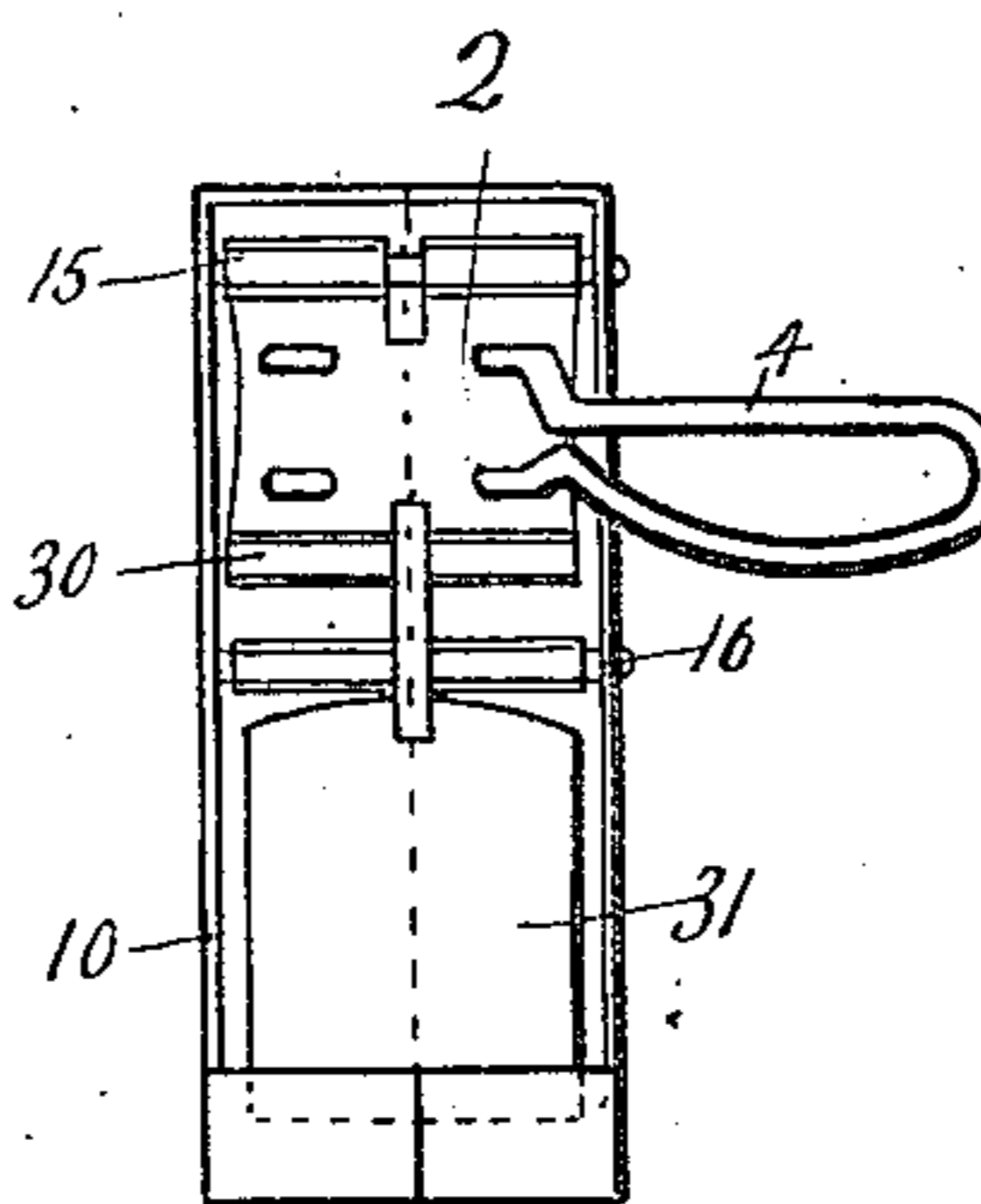


Fig. 14.

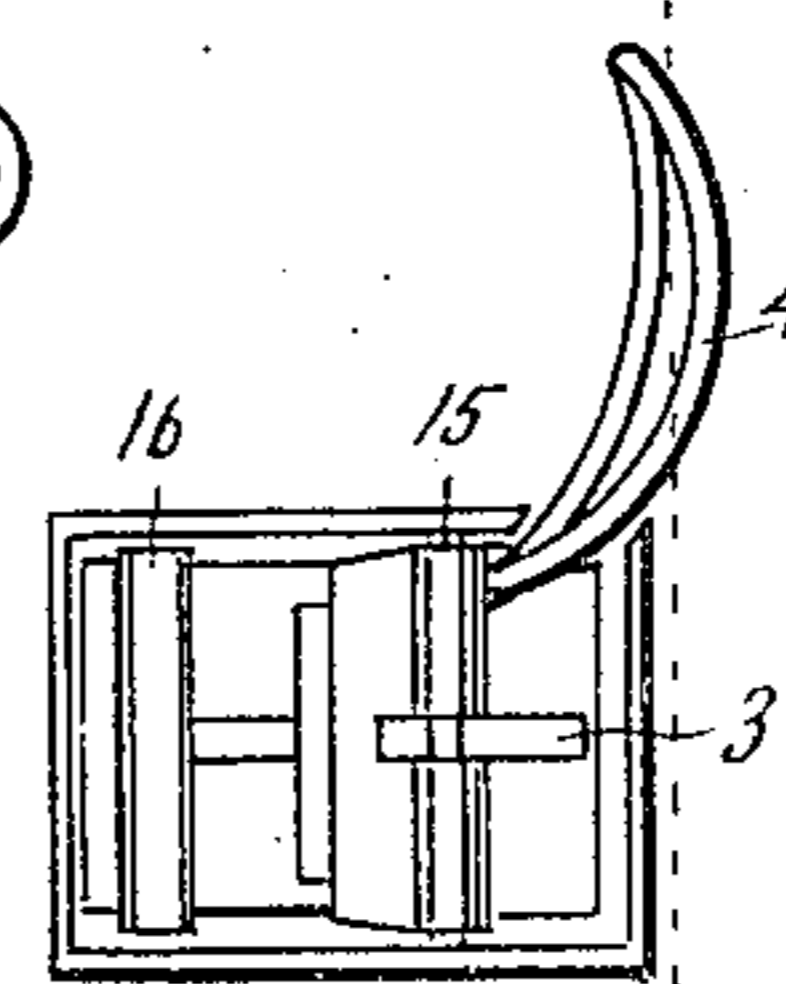


Fig. 15.

INVENTOR

John O. Naslin

Patented June 19, 1923.

1,459,238

UNITED STATES PATENT OFFICE.

JOHN O. NASLIN, OF SEATTLE, WASHINGTON.

DOORCHECK.

Application filed September 22, 1919. Serial No. 325,378.

To all whom it may concern:

Be it known that I, JOHN O. NASLIN, a citizen of the United States, and resident of the city of Seattle, county of King, and State of Washington, have invented certain new and useful Improvements in Door-checks, of which the following is a specification.

My invention relates to a door checking device designed for use to check a door so as to prevent slamming; and the object of my invention is to provide a cheap but effective device which will be automatically operated by the closing movement of the door, so as to check its velocity, in case it is sufficient to cause any serious slamming; and yet which will permit free closure of the door if the velocity is slow.

The adapted manners of constructions of my invention have been illustrated in the accompanying drawings and in the following specification the construction of this device will be described and the combinations and parts which I believe to be novel, and upon which I desire patent protection, will be defined more fully in the claims.

Figures 1 and 9 show sections of a door in front elevations, illustrating the manners of applying my invention to a door jamb.

Figures 2, 3, 6, 10 and 13 are front views of the device, where a portion or the whole of the perpendicular position of bumper 31 is shown by solid lines, and its position, when swung into the path of the door, is shown by dotted lines.

Figures 4, 7, 11 and 14 are side views of the device from the side next to the door.

Figures 5, 8, 12 and 15 are top views of the device with operating parts exposed to view.

In the several figures the same numbers and characters refer to the same parts.

I have shown my device as mounted and inclosed within a casing, consisting of two sides or parts "10' '10," similar in shape and size, and the edges about which may consist of a separate strip, as shown in Figures 3 and 4, or may be formed out of the sides "10' '10" by being bent to meet on an even line together, as shown in Figures 7, 11 and 14, but leaving the edge which is next to the door in the main open. These parts may be secured together in any convenient manner, as by use of rivets and screws, as at 12, 12^a, 13, 14, 14^a, 14^c, 18 and 19. Pivot 15 is located near the upper end of the de-

vice and close to the edge which is next to the door.

The device is secured to the door jamb so that the straight open edge substantially matches with the edge of the jamb or is in such position that it will nicely clear the edge of the door when swinging. Mounted upon pivot 15 is a suspender 2; secured to this suspender and projecting outwardly through openings in the casing, as at 18^a, 20 and 20^a, is a member 4, which functions as a striker; that is it is struck by the edge of the door in closing; and is shaped so as to be easily pressed laterally, or away from the swinging edge of the door, which is provided with a plate 4^a for engaging said striker, and which also gives wearing protection to the door.

As shown on the drawings this striker is composed of a bent and curved bar, which, as shown in Figures 1 to 5, has its outward projecting portion bent into the approximate shape of an oval or diamond and, as shown in Figures 6 to 15, is more oblong in shape, of which, however, one edge or side normally projects into the path or swing of the door. This device might be made of other forms. The essential feature is that it should have a portion so shaped and positioned, that it may with the least friction be engaged by the door in swinging so as to be easily pressed outward thereby.

The lower or swinging end of suspender 2, at the point 30, is pivoted or jointed to support 3, which should be suitably shaped to engage recoil stop 16 and has, secured to the lower or swinging end thereof, a resilient bumper 31, which is intended for insertion between the jamb and the door and the swinging edge of the door so as to check the door and prevent slamming; a suitable material for this would be rubber, or any equivalent resilient material.

In Figures 2, 6, 10 and 13 the normal position of this bumper outside of the swing of the door, is shown by solid lines, and the position thereof when swung into the path of the door, is shown by dotted lines.

Towards the edge of the casing which is away from the door are placed recoil stops 16 and 18, which may suitably be bolts or rivets, and the former is provided with an enclosing cylinder or roll 17. These stops are so positioned in the casing that when the bumper support 3 is raised, or swung outward due to the swinging of suspender 2, by

reason of engagement of the door with striker 4, the bumper 31 will be raised without projecting beyond the edge of the casing, if this movement be gradual and slow.

5 If, however, the movement of the door is swift, such as would, if unchecked, produce slamming, and in consequence striker 4 is sharply struck by the edge of the door, the support 3 will strike recoil stop 16 sharply,
10 and whereby bumper 31, attached to the lower swinging end of said support, will be thrown upward and outward, either to the positions shown by solid lines in Figure 3 and by dotted lines in Figures 6, 10 and 13;
15 or sufficiently far in that direction to cause a part thereof to be projected into the path of the door. The door striking the bumper 31 and the latter being of compressible or resilient material, the door will be gradu-
20 ally checked and without producing any slamming effect. As soon as the door has recoiled enough to release the bumper, it will drop back into its perpendicular position in the casing, and the shutting of the
25 door is completed. This operation is, however, not a mechanical certainty without the use of stops 18, 20, 20^a and 21, which have the purpose of limiting the lateral movements of suspender 2, which is essential for
30 obtaining the foregoing results. It is thus seen that the operation of this device depends upon a sharp blow producing a recoil, and the momentum of the parts being such that this recoil will carry the bumper, or the
35 door checking member, into the path of the door. To secure this result it is necessary to provide a striker, or a member which is engaged by the door and moved so as to actuate the other parts, and that said striker
40 shall have its door-contacting part suitably shaped and located so as to be engaged by the door to project the bumper into the path of the door. The bumper or the checking device should therefore be located outside,
45 or close to the edge of the door.

The herein mentioned parts of the device are further adapted for right and left side uses, by merely being separated and reversed in position, as may be required for
50 right and left hand swinging doors.

It may be possible that some of the details of construction of this device can be modified in shade and design without changing the principles involved, and I do not there-
55 fore wish to limit my scope of invention to the exact designs herein shown, but reserve the right to use all others which may involve the same principles.

What I claim is:

60 1. In a door check, a pivoted suspender having a fixed striker so shaped and positioned as to be easily engaged by a swinging door, and a bumper fixed to the swing-
ing end of a support jointed to the swinging
65 end of said suspender, whereby said bumper

is positioned outside of the swinging path of said door and adapted to swing into its path and check by recoil its closing movement,

2. A resilient bumper fixed to the swing- 70
ing end of a support jointed to a pivoted suspender having a striker engageable by a swinging door, and means for limiting the movements of said bumper and striker, including recoil stops engageable by said 75
support and suspender, whereby said bumper is swung into the path of said door, when the said stops are sharply struck by said support and suspender.

3. In a door check, a striker fixed to a 80
swinging suspender pivoted to a door jamb so as to be actuated by a swinging door, said suspender and a bumper fixed to the swinging end of a support jointed to said suspender whereby said bumper is adapted 85
to swing into the path of the door, pivot means supporting said suspender, and means adapted to swing said bumper into the path of the door when the latter's movement is swift. 90

4. In a door check, a pivoted suspender and a striker fixed thereto engageable by a swinging door, a bumper support jointed to the swinging end of said suspender, a bumper fixed to the swinging end of said 95
support and normally positioned outside of the swing of said door and adapted with means to swing into its path when thereby the said striker is sharply struck.

5. In a door check, a pivoted suspender 100
and a striker fixed thereon below the pivot supporting said suspender so as to be actuated by a swinging door, a bumper support and a bumper fixed to the swinging 105
end of said support jointed to the swinging end of said suspender, and recoil means for limiting the movements of said support and bumper, and whereby the latter is swung into the path of said door only when thereby the said striker is sharply struck. 110

6. In a door check, a resilient bumper fixed to a support and a suspender jointed to said support and pivoted to a door jamb so as to swingingly suspend said bumper out- 115
side of the swing of said door, a striker fixed to said suspender below its pivot engageable by said door, recoil stops engageable by said support and suspender, whereby the said bumper is swung into the path of the swiftly closing door; a plate on the 120
edge of the door to engage said striker, and a casing with room and openings for the movements of said striker and bumper.

7. In a door check, a swinging suspender adapted for right and left hand purposes, 125
pivoting means for said suspender, and a striker fixed thereon below said pivoting means engageable by a swinging door, a bumper and a support fixed thereto and jointed to said suspender whereby said 130

bumper is positioned outside of the swing of said door and adapted to swing into its path, recoil means whereby to actuate and limit the movements of said suspender and bumper so as to swing said bumper into the path of the closing door when thereby the said striker is sharply struck; and a plate on the edge of the door to engage said striker, and a casing inclosing said support and suspender with room and openings for their movements. 10

Signed at Seattle, Washington, U. S. A.
this 15th day of September, 1919.

JOHN O. NASLIN.