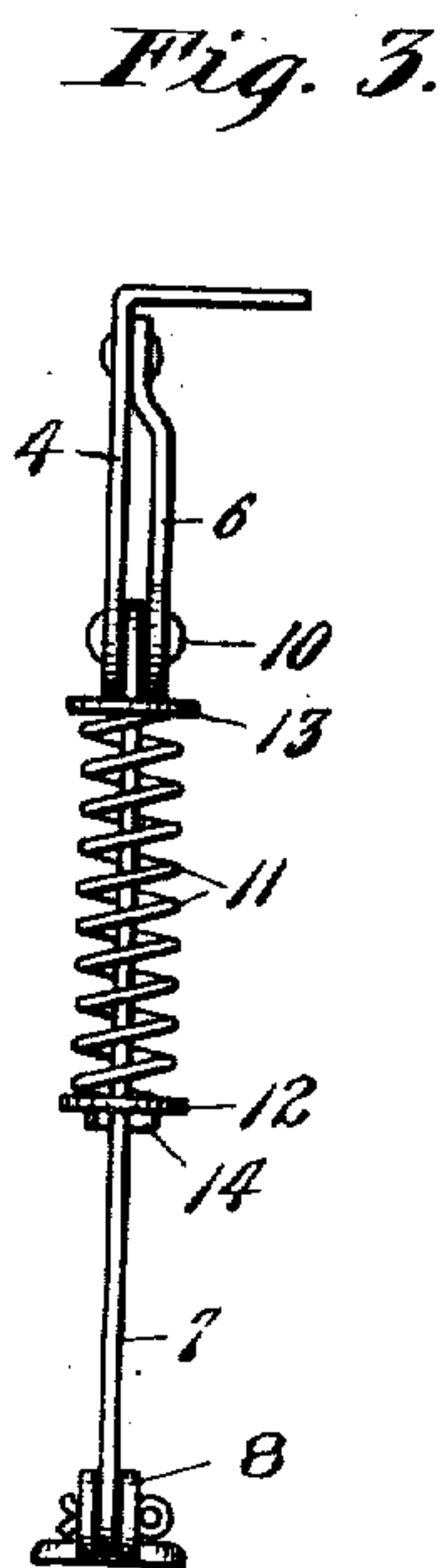
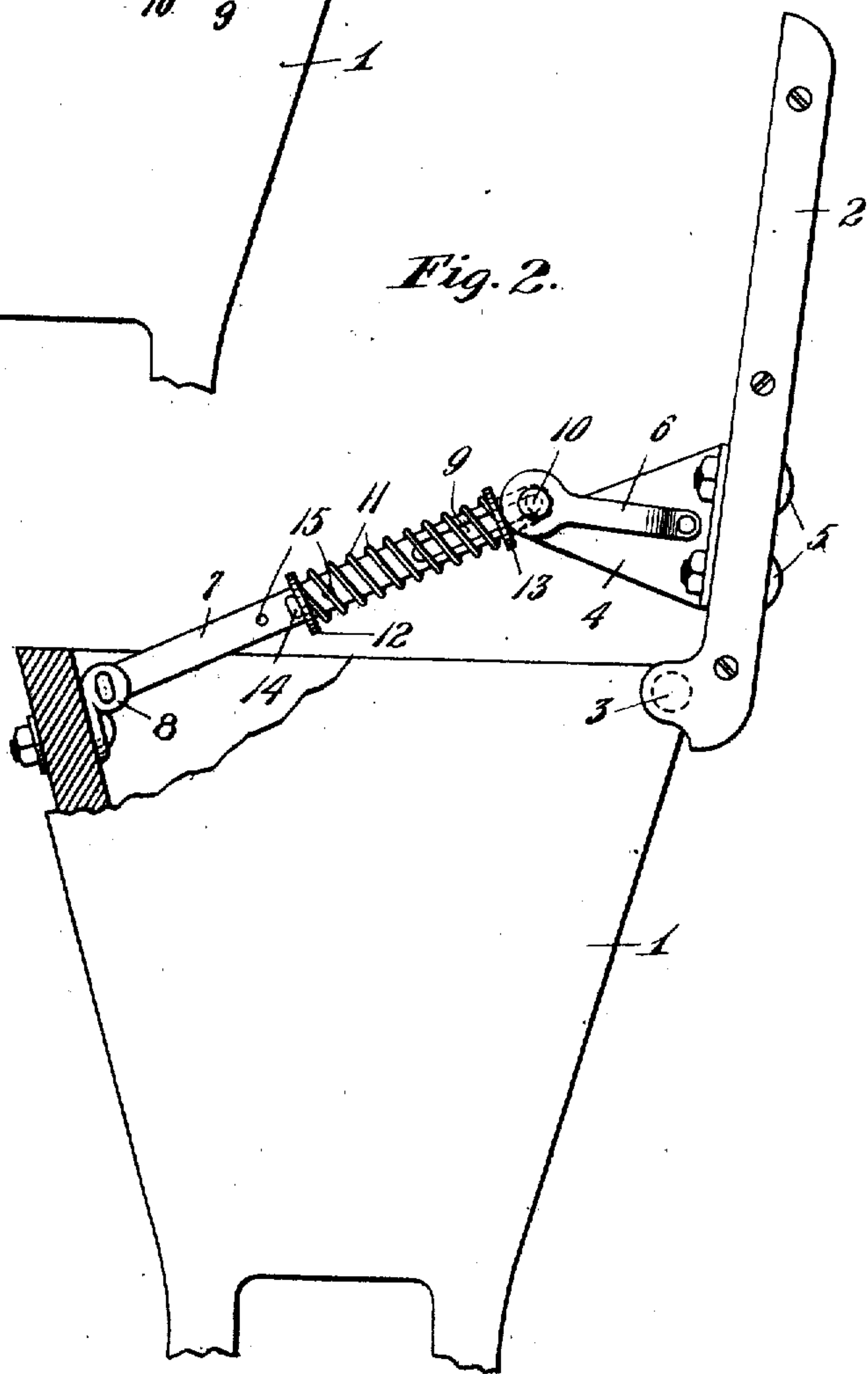
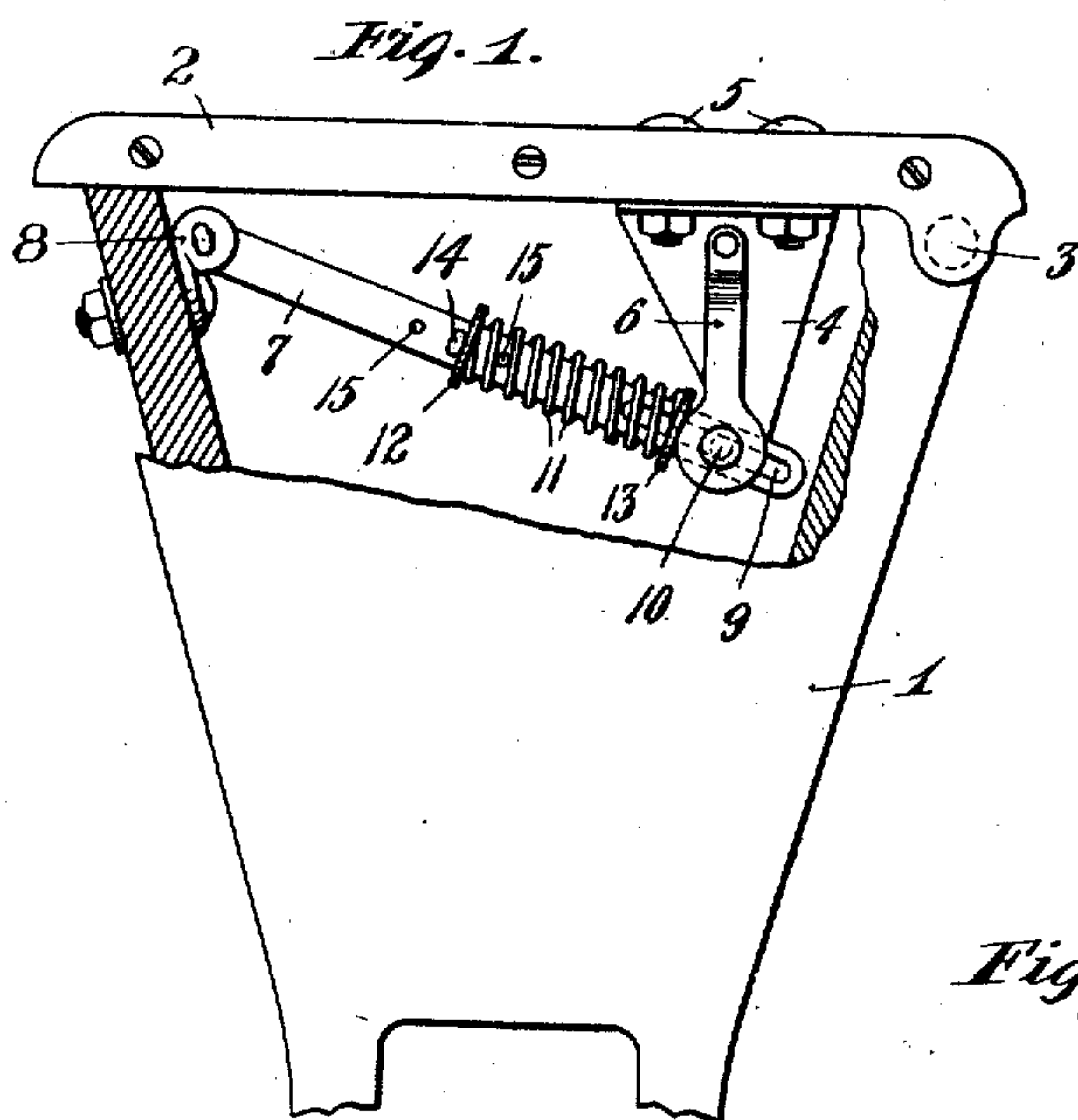


No. 829,385.

PATENTED AUG. 28, 1906.

T. BRENNAN, JR.
LID CLOSING DEVICE FOR BOXES.

APPLICATION FILED DEC. 29, 1905.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS BRENNAN, JR., OF ST. LOUIS PARK, MINNESOTA.

LID-CLOSING DEVICE FOR BOXES.

No. 829,385.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed December 29, 1905. Serial No. 293,739.

To all whom it may concern:

Be it known that I, THOMAS BRENNAN, JR., a citizen of the United States, residing at St. Louis Park, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Lid-Closing Devices for Boxes; 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.

My invention relates generally to boxes having hinged lids, and particularly to seed-boxes or hoppers for drills and other seeding-machines, and is particularly directed to the provision of improved means for yieldingly holding the lid open or closed, according to the position in which it is set.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in end elevation, showing the seedbox or hopper of a seeding-machine having applied thereto my device, some parts being broken away and some being sectioned and the lid thereof being shown in a closed position. Fig. 2 is a view similar to Fig. 1, but showing the lid in an open position; and Fig. 3 is a detail in plan, showing the yielding and extensible toggle for holding the lid either open or closed, according to the position in which it may be set.

The numeral 1 indicates the seedbox, having a lid or cover 2 hinged thereto at 3.

The numeral 4 indicates an arm-like bracket which is rigidly secured by nutted bolts 5 or other devices to the under side of the lid 2 and depends from the said lid and, as shown, is provided with a laterally-spaced supplemental arm 6.

The numeral 7 indicates a link which is pivotally attached at one end to a bearing-clip 8, that is bolted or otherwise rigidly secured to that side of the box 1 that is opposite to the hinge 3. At its free end the link 7 is formed with an elongated slot 9, that slides and works pivotally on a pin or bolt 10, passed through the ends of the bracket 4 and supplemental arm 6.

The numeral 11 indicates a coiled spring

which surrounds the intermediate portion of the link 7 and reacts against washers 12 and 13 on the said link. The washer 12 is by the spring 11 pressed against a stop-pin 14, that is inserted through one of the several holes 15 in said link. The washer 13 is by the spring 11 pressed against the round ends of the bracket 4 and arm 6. The spring 11 thus exerts a force that tends to lengthen out the extensible toggle made up of the link 7 and bracket or arm 4, and by inserting the stop-pin 14 in different members of the perforations 15 the tension of said spring may be varied.

By reference to Figs. 1 and 2 it will be noted that the toggle 4 11 under movements of the lid 2 from its open to its closed position, and vice versa, is moved from one side to the other of a dead-center, so that the spring 11 will tend to hold the said lid in either of its extreme positions in which it may be set. More specifically stated, in the position of the parts shown in Fig. 1 the line of strain of the spring 11 is below the axis of the hinge 3, and hence in such position will yieldingly hold the lid closed, and, on the other hand, in the position of the parts shown in Fig. 2 the line of strain of the spring 11 is above the axis of the lid-hinge 3, and hence in such position will yieldingly hold the lid in its open position. In this position, it will be noted, the extreme opening movement of the lid 2 is limited by engagement of the pin 10 with the outer extremity of the slot 9. It is also important to note that when the lid is closed all parts of the extensible spring-toggle is within the box, and hence concealed from view and out of the way, where it cannot be accidentally engaged and broken.

The device described, while extremely simple and of very small cost, has in practice been found extremely efficient for the purposes had in view. It is capable of general application to boxes or receptacles having hinged lids.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a box having a hinged lid, and an extensible thrust-acting spring-actuated toggle connecting said lid to that side of the box which is opposite to the lid-hinge, one of said toggle members being rigidly secured to the part to which it is applied, substantially as described.

2. The combination with a box having a hinged lid, of an arm-like bracket applied to

said lid, a link pivoted at one end to the box and connected for pivotal and sliding movements to said arm-like bracket, and a coiled spring on said link reacting against said link
5 and against the end of said arm-like bracket, and arranged to yieldingly hold the lid closed, substantially as described.

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

THOMAS BRENNAN, JR.

Witnesses:

E. R. BEEMAN,
E. R. HAYES.