

No. 719,137.

PATENTED JAN. 27, 1903.

A. E. PRESTON.

HINGE.

APPLICATION FILED MAY 24, 1902.

NO MODEL.

Fig. 1.

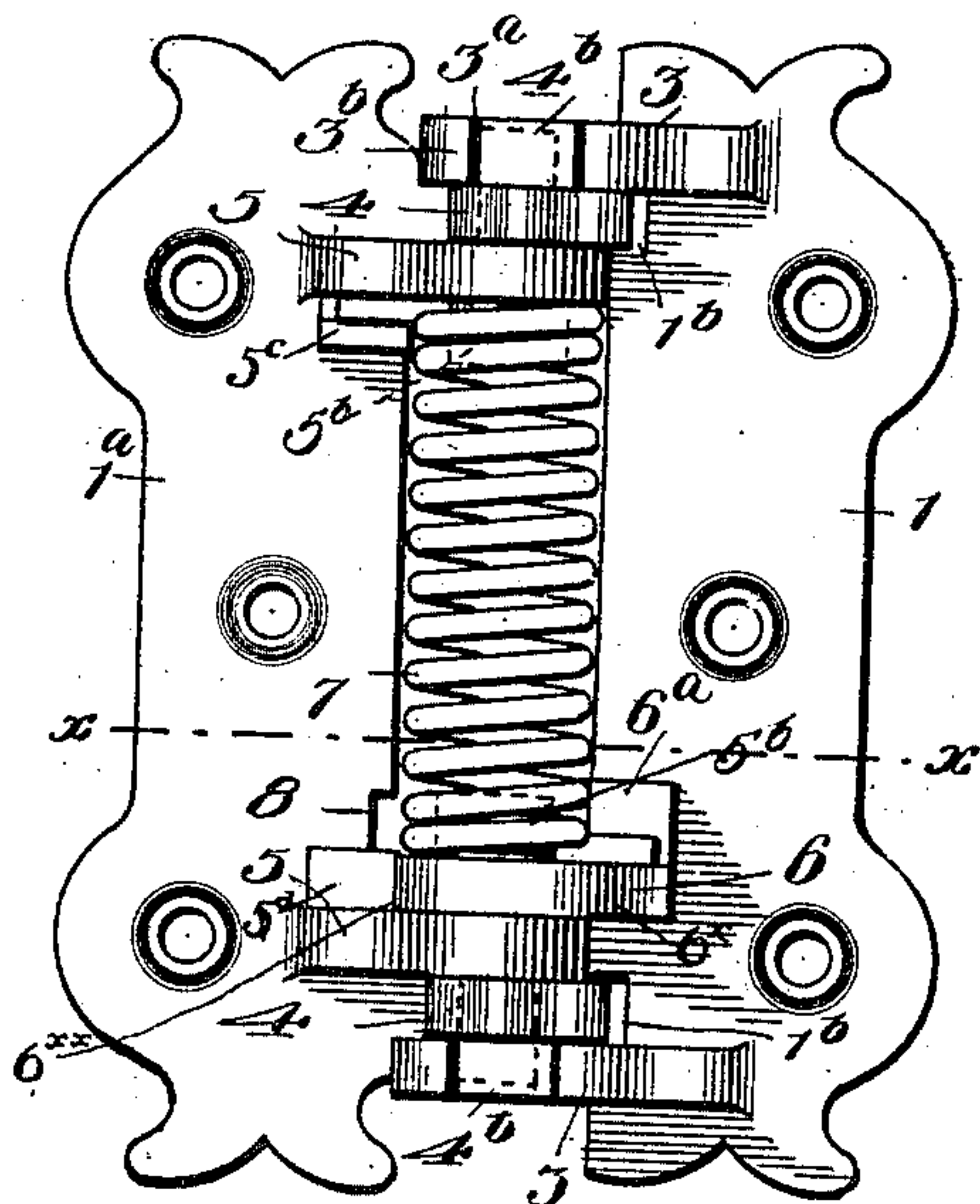


Fig. 2.

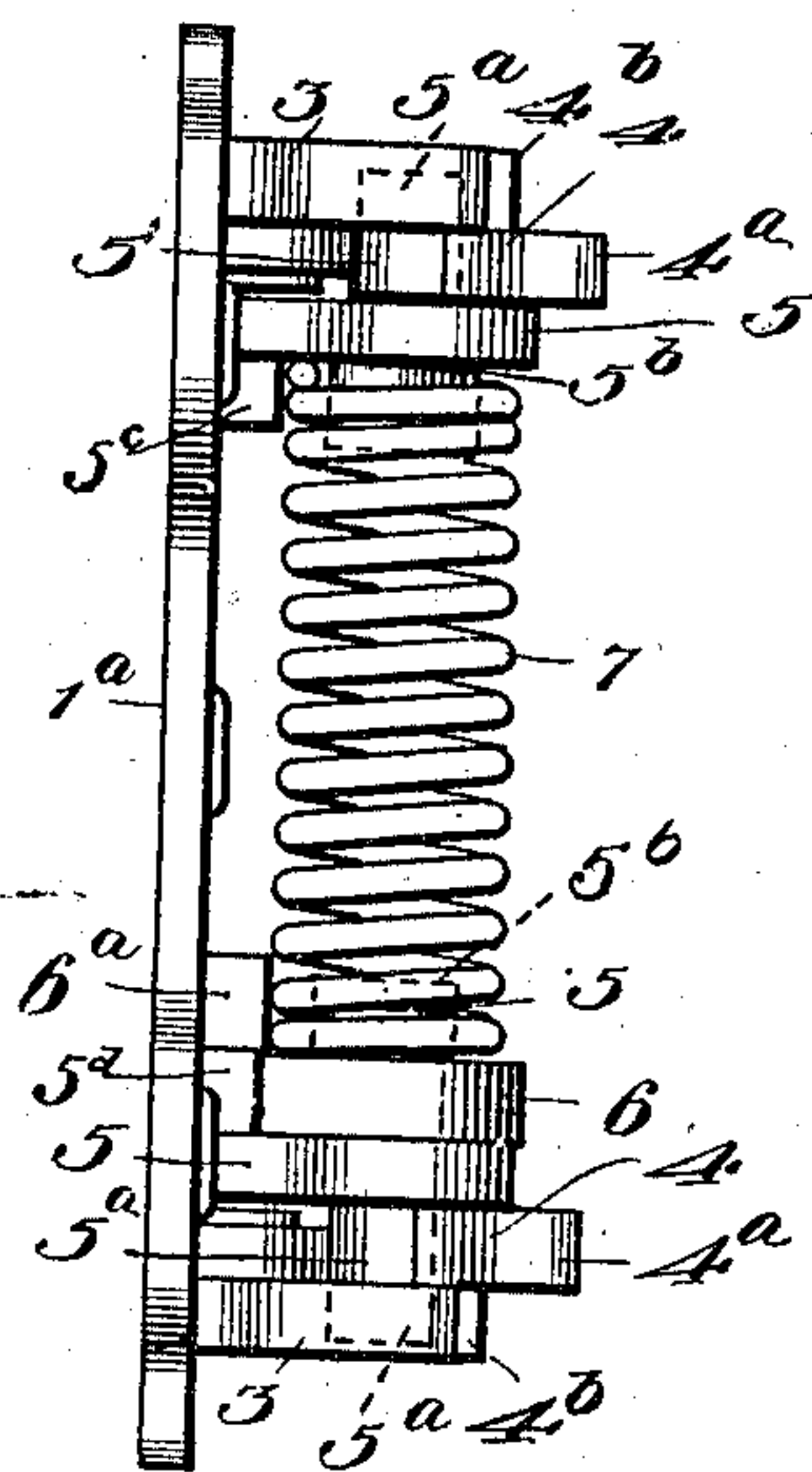


Fig. 3.

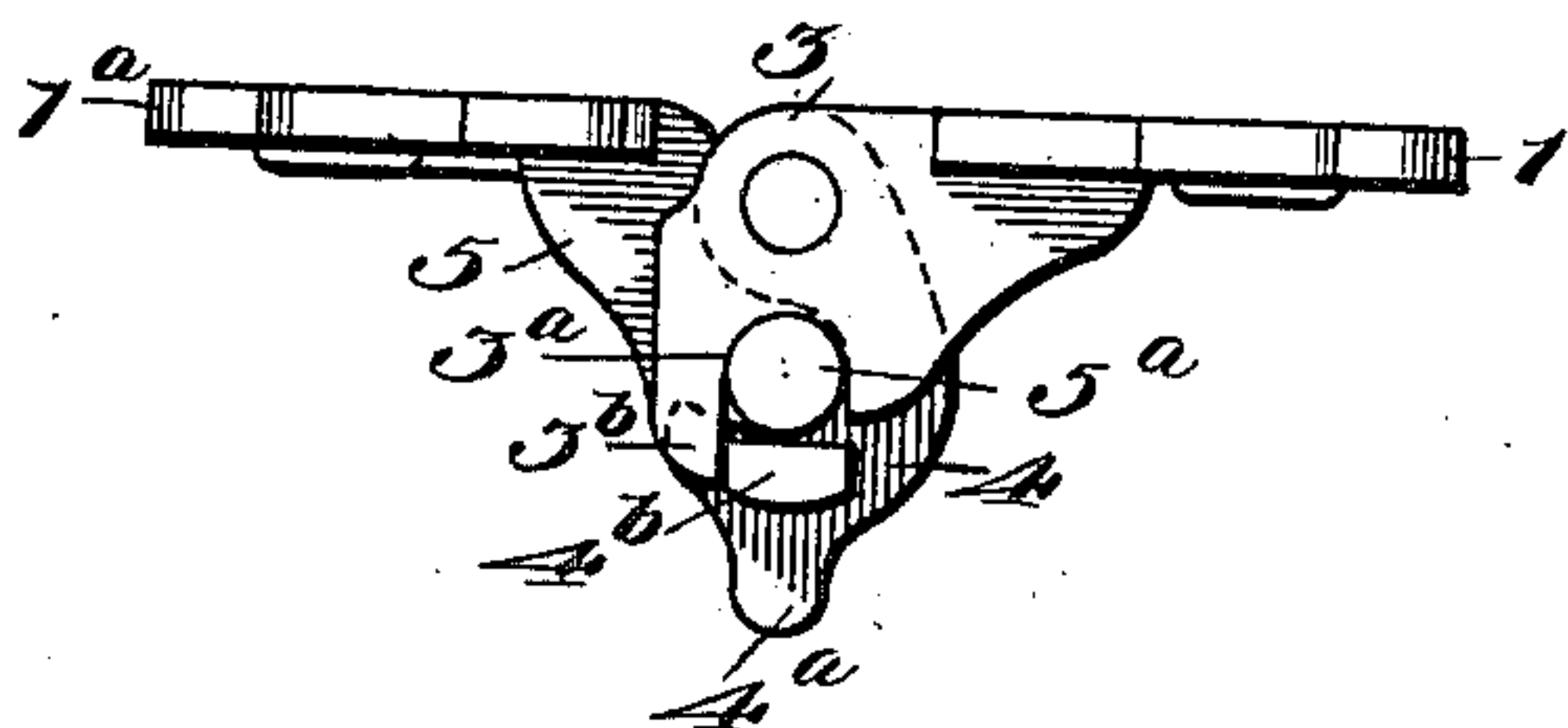


Fig. 4.

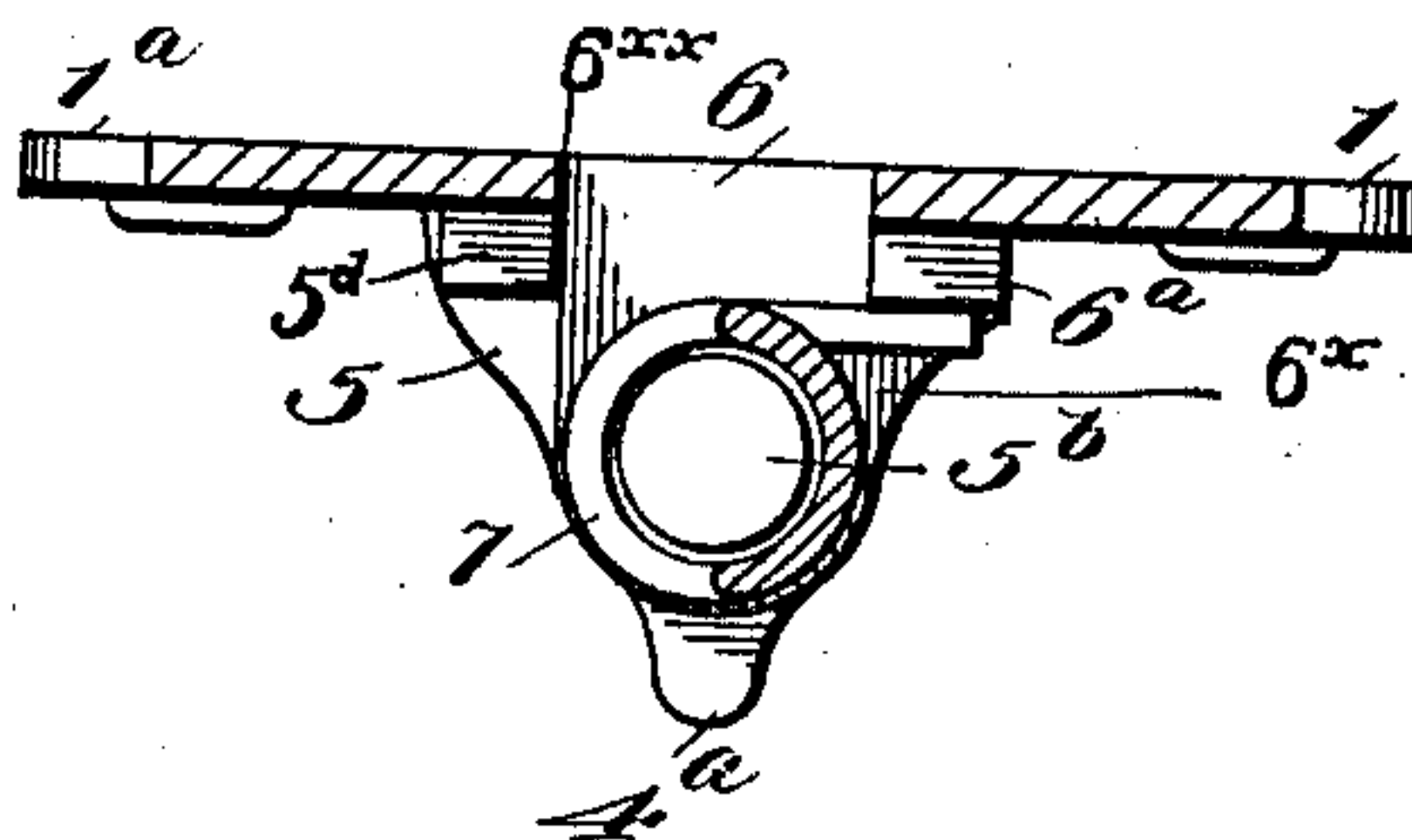
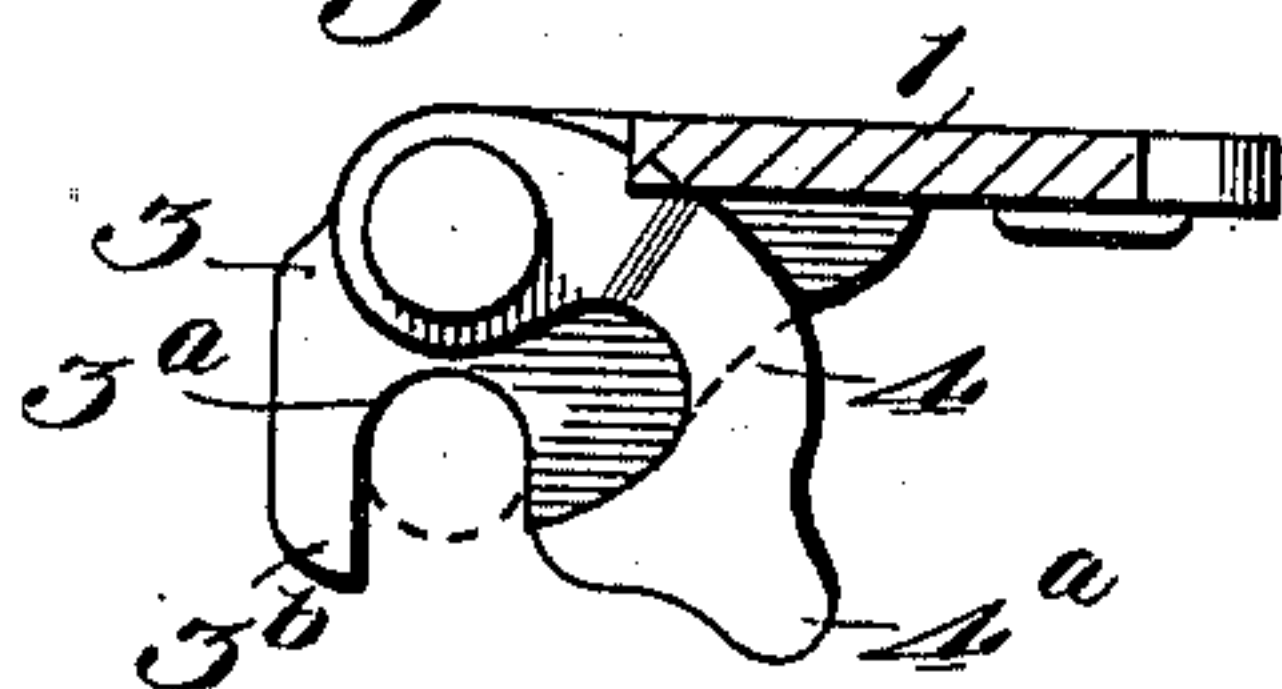


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

ALMON E. PRESTON, OF BATTLECREEK, MICHIGAN.

HINGE.

SPECIFICATION forming part of Letters Patent No. 719,137, dated January 27, 1903.

Application filed May 24, 1902. Serial No. 108,838. (No model.)

To all whom it may concern:

Be it known that I, ALMON E. PRESTON, a citizen of the United States, residing at Battlecreek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Hinges; 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 to improvements in hinges.

The object of the present invention is to provide a hinge especially designed for use on doors which are detached at certain seasons of the year. This necessity more frequently arises during certain seasons of the year in the mounting and removal of storm-doors, screen-doors, &c.

The present invention is designed to provide a hinge which will facilitate the mounting and removal of doors and screens, such as hereinbefore indicated.

The nature of my invention consists of one of the leaves of the hinge provided with ears or lugs having recesses and pivoted hooks or clasps and the opposite leaf having ears which are provided with pintles adapted to be received by the aforesaid recesses and held therein by said hooks or clasps.

It further consists of a plate pivoted to one of the leaves and a spring connected at one end to the leaf carrying said plate and at the opposite end to the plate, said plate adapted to be turned by the opposite leaf to cause the spring to exert its tension to retain the leaves in their normal position and to be held by the leaf to which it is pivoted when the opposite leaf is removed to retain the plate in its normal position and to prevent the uncoiling of the spring.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is an elevation of my improved hinge. Fig. 2 is a side view thereof. Fig. 3 is a plan view, and Fig. 4 is a cross-section on the line $x-x$ of Fig. 1. Fig. 5 is a sectional view showing more particularly one of the clasps.

Referring more particularly to the drawings, 1 1^a represent the leaves, which are preferably provided with holes 2, through

which means for fastening the hinge in position may be passed. The leaf 1 is provided with ears or lugs 3, having recesses or sockets 3^a, with their outer walls preferably extending beyond the inner wall, as at 3^b. To these ears are pivoted hooks or clasps 4, the purpose of which will be as hereinafter described. Each of these hooks or clasps is preferably provided with an outward extension 4^a, adapted for use as a finger-piece or handle in moving the hook, and a laterally-projecting lug 4^b, the purpose of which is to engage the upward extension 3^b of each ear, and thereby limit the movement of said hooks or clasps. The leaf 1 has upon its inner edge notches or recesses 1^b to receive the hooks or lugs when they are swung back. The opposite leaf 1^a has lugs or ears 5, provided with inwardly and outwardly projecting pintles 5^a 5^b, arranged on opposite sides thereof. The pintles 5^a on the outer side of the ears or lugs, which act as pivots for the hinge, are adapted to be received by the recesses in the ears 3 and to be held therein by the hooks or clasps 4.

Arranged between the lugs 5 and centered by the inwardly-projecting pintles 5^b is a coil-spring 7, which has its upper end extended to bear preferably upon a stop 5^c, raised on the leaf 1^a at its juncture with the upper lug 5. Upon the lower inwardly-projecting pintle 5^b, between the spring 7 and the lug 5, is seated a plate 6, which is preferably provided with a lateral lug 6^a and upon which bears the oppositely-extended end of the spring 7. To cause the spring to exert its tension to return the leaves to their normal position, the plate 6 has that portion 6^x thereof from which projects the lug 6^a reaching out over and bearing upon the upper face of the leaf 1, so that when the leaves are moved with relation to each other the plate 6 will be turned, thereby coiling the spring and bringing it into operation. To prevent the plate from turning when the leaves are separated from the position which it normally occupies when the members are assembled and to keep the spring from uncoiling, said plate has its edge at 6^{xx} adapted to abut against a stop 5^d on the plate 1^a at its juncture with the lower lug 5. Adjacent to this stop 5^d in the inner edge of the leaf 1^a and not above the lower inwardly-projecting pintle is a recess 8 to

allow the plate to be turned to increase the tension of the spring when said plate is brought opposite said recess by sliding it upon its pintle.

5 From the foregoing description it is obvious that the leaves of the hinge may be readily detached one from the other by releasing the hooks or clasps, and as the spring forms a portion of one of the sections it will always upon
10 joining the leaves be brought into operative position. It is also obvious that this invention may be employed in hinges in which a spring is not used; also, that there may be a single pintle extending from one bearing to
15 the other instead of separate pintles.

I am aware that changes in the construction herein shown as the preferred embodiment of my invention may be made without departing from the spirit or sacrificing the
20 advantages thereof—as, for example, in lieu of the form of the recess herein shown an eye or socket may be made in one of the ears—and I therefore reserve the right to make such changes as fairly fall within the scope of my
25 invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hinge comprising a leaf having ears
30 provided with pintles, a second leaf having one ear provided with means to receive one of said pintles and another ear having a recess to receive the other pintle, and a hook or clasp adapted to retain said pintle in said
35 recess.

2. A hinge comprising a leaf having ears provided with pintles, a leaf having ears provided with recesses adapted to receive said

pintles, and hooks or clasps adapted to retain said pintles in said recesses, substantially as
40 set forth.

3. A hinge comprising a leaf having ears provided with pintles, a leaf having ears each provided with a recess, to receive said pintles and hooks or clasps adapted to retain said
45 pintles in said recess and each provided with a suitable stop, substantially as set forth.

4. A hinge comprising a leaf having ears provided with pintles, a leaf having ears each provided with a recess having extended outer
50 walls, adapted to receive said pintles and pivoted hooks or clasps adapted to retain said pintles in said recesses and each provided with a lug adapted to abut against said extended walls of said recesses, substantially as set
55 forth.

5. In a hinge, the combination of a leaf, a plate pivoted to said leaf and adapted to have its movement limited by a stop thereon, a
60 spring held at one end to said leaf and at the opposite end to said plate and a second leaf pivoted to the aforesaid leaf and adapted to turn said plate.

6. In a hinge, the combination of a leaf, a pivoted plate adapted to have its movement
65 limited by a stop on said leaf and to be moved out of alinement with said stop, a spring held at one end to said leaf and at its opposite end to said plate, and a second leaf pivoted to the aforesaid leaf adapted to turn said plate.
70

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

ALMON E. PRESTON.

Witnesses:

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JOSIAH W. FREEMAN.