

No. 781,208.

PATENTED JAN. 31, 1905.

W. JOHNSON.
SPRING HINGE.

APPLICATION FILED MAR. 24, 1904.

Fig. 1.

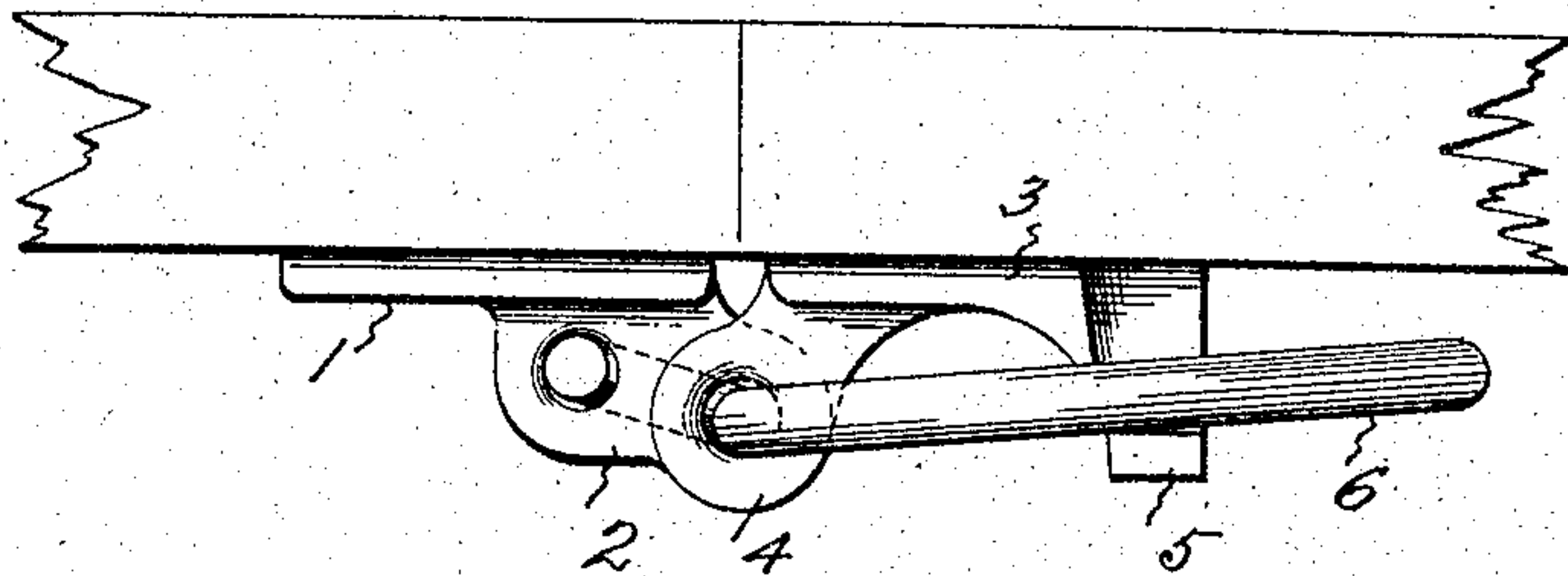


Fig. 2.

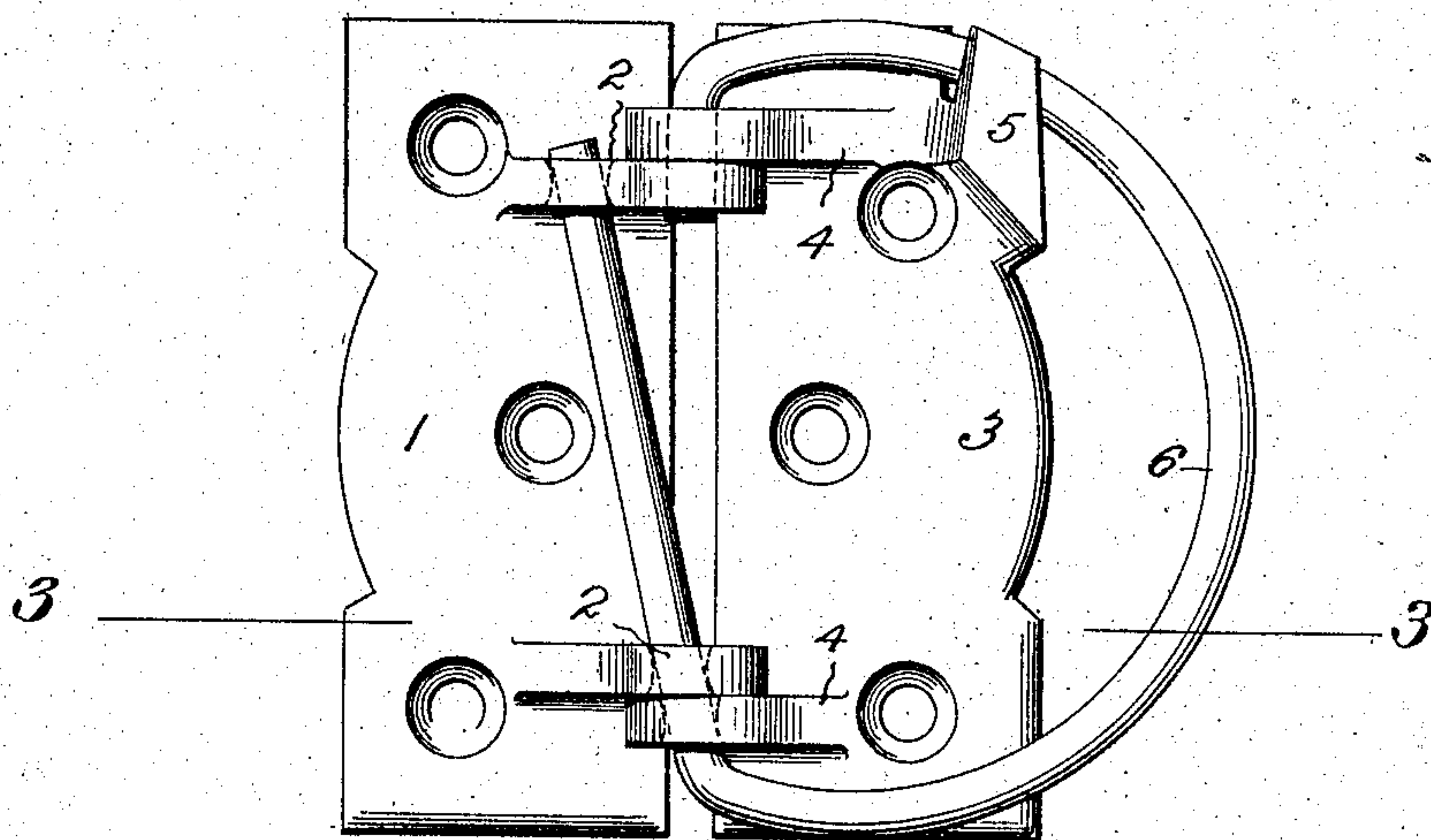


Fig. 3.

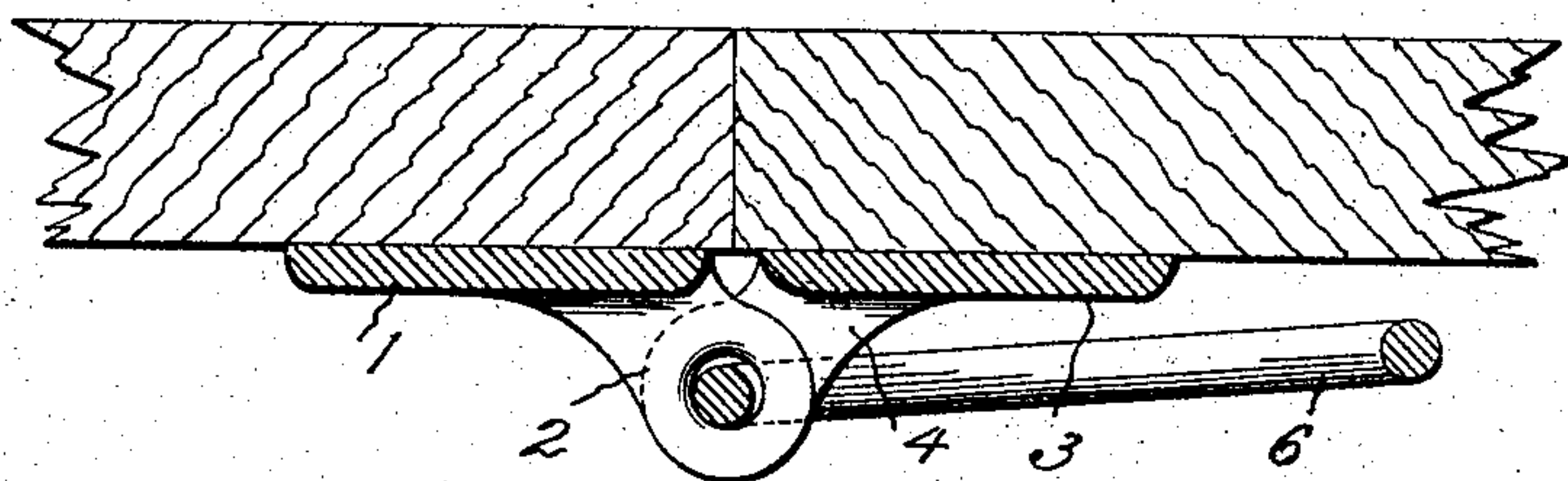
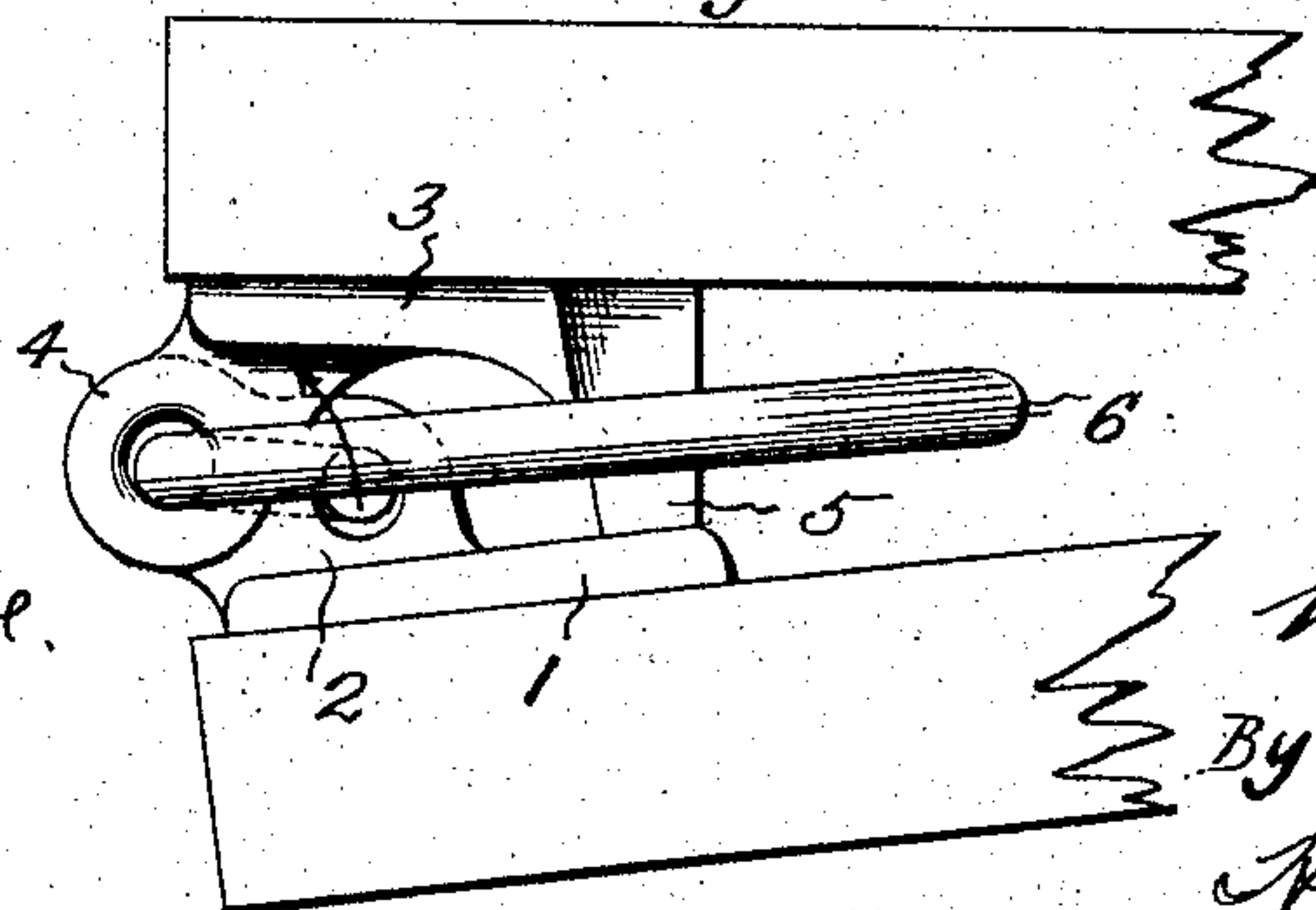


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

WALTER JOHNSON, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR OF ONE-HALF TO ANDREW N. SHEPARD, OF PORTLAND, CONNECTICUT.

SPRING-HINGE.

SPECIFICATION forming part of Letters Patent No. 781,208, dated January 31, 1905.

Application filed March 24, 1904. Serial No. 199,667.

To all whom it may concern:

Be it known that I, WALTER JOHNSON, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Spring-Hinges, of which the following is a specification.

This invention relates to a hinge which is designed for screen and other light doors which it is desired shall close and remain closed after having been opened.

The object of this invention is to provide a very simple and cheap hinge which is effective in action and durable in use and which will close a door and keep it closed unless it is opened widely, in which case it will hold the door open.

The hinge which is illustrated as embodying the invention is composed of two butts and a stiff wire which is bent so as to pass through ears for hinging the butts together and for throwing them either one way or the other, depending upon the amount the butts are opened from each other.

Figure 1 of the accompanying drawings shows a top view of the hinge with the parts in the positions occupied when a door is shut. Fig. 2 shows an elevation of a hinge. Fig. 3 shows a section on the plane indicated by line 3-3 on Fig. 2. Fig. 4 shows a top view with the parts in the positions occupied when a door is open.

The butts are desirably cast to shape, although they may be stamped, if desired. The butt 1, which may be termed the "jamb-butt," for it is preferred to fasten that butt to the jamb of the door, has a pair of ears 2, the lower having one hole and the upper two holes. The stile-butt 3, which it is preferred to attach to the door-stile, has two ears 4 and a lug 5, each ear having one hole and the lug having a notch. The wire 6 is preferably formed of spring-brass, but may be formed of other material. This wire is bent so that one end extends downwardly through the adjacent upper ears on the stile and jamb butts and after curving around through the notch back of the lug extends upwardly through the adjacent lower ears on the stile and jamb butts for the purpose of hinging the butts

together and then extends diagonally and through the second hole in the upper ear on the jamb-butt for the purpose of forming the spring. The holes through the ears which receive the pivot-sections of the wire are in line, so that the butts will open and close on these sections; but the hole for the spring end of the wire is at one side of the line of the pivot-holes, so that the end of the wire stands obliquely, and any tendency to open the butts is resisted by the spring end of the wire until the butts are open so that the spring end is carried past the center. The holes through the ears preferably are but little larger than the wire, so that the butts will be held together firmly; but, as indicated in the drawings, the walls of the openings through the two lower ears and through the upper ear for the end of the spring are rounded to permit the butts to turn on the wire without binding. When the spring end of the wire is on one side of the center, it tends to open the butts and when on the other side it tends to close the butts—that is, the spring end causes the door to which the butts are secured to close and remain closed unless the door is opened to such a degree that the end is carried past the center. Then it allows the door to stand open.

This hinge is very simple to make, and the three pieces—the two butts and the pivot and spring-wire—are easily assembled. It acts very powerfully and is so arranged that the spring is not liable to break nor lose its elasticity.

The invention claimed is—

A spring-hinge having two butts, each butt having perforated ears and one butt having a notched lug, and a wire with sections extending through the holes in the adjacent ears for pivoting the butts together and extending through the notch back of the lug on one butt and projecting into a hole in an ear on the other butt for providing the spring, substantially as specified.

WALTER JOHNSON.

Witnesses:

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