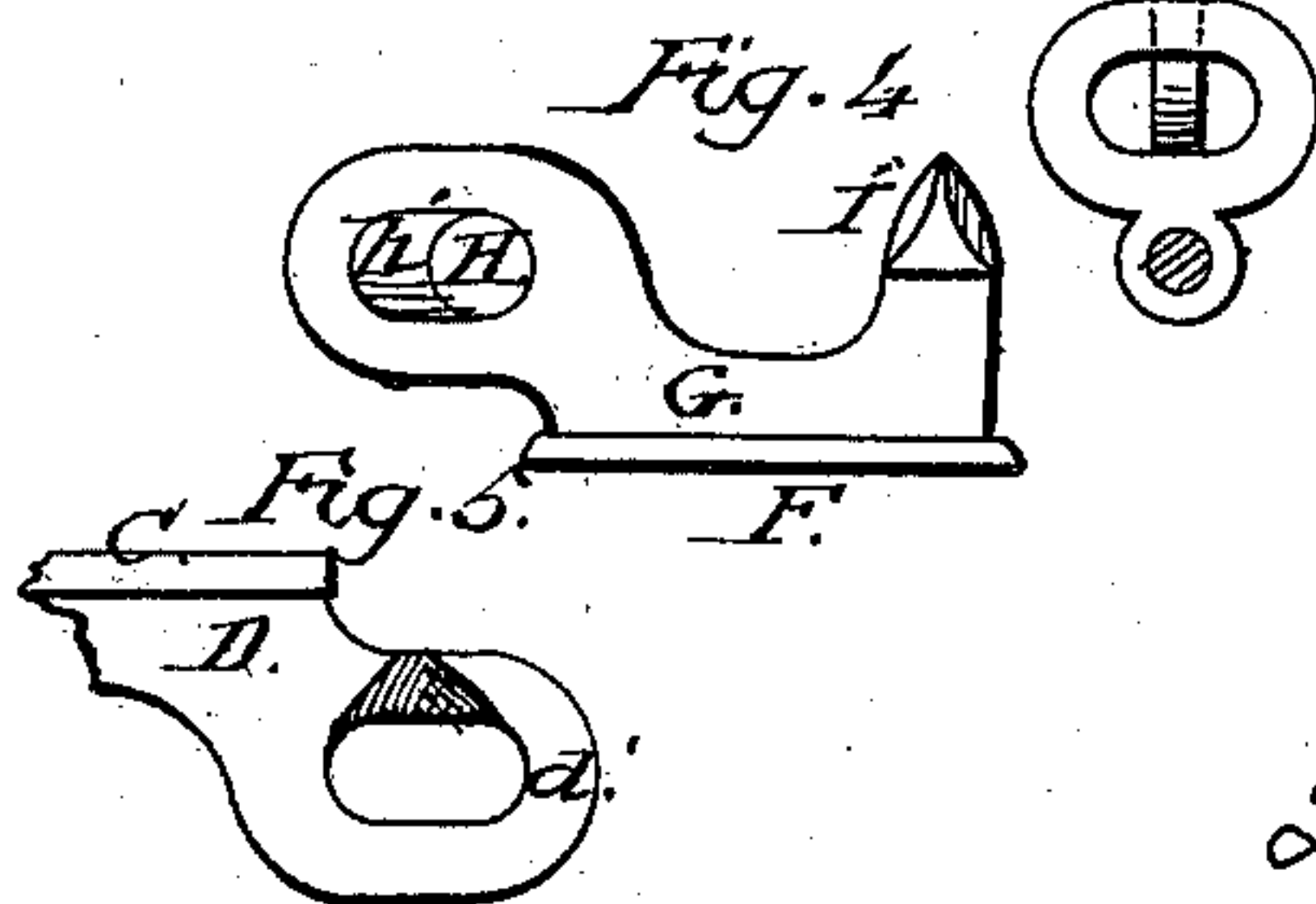
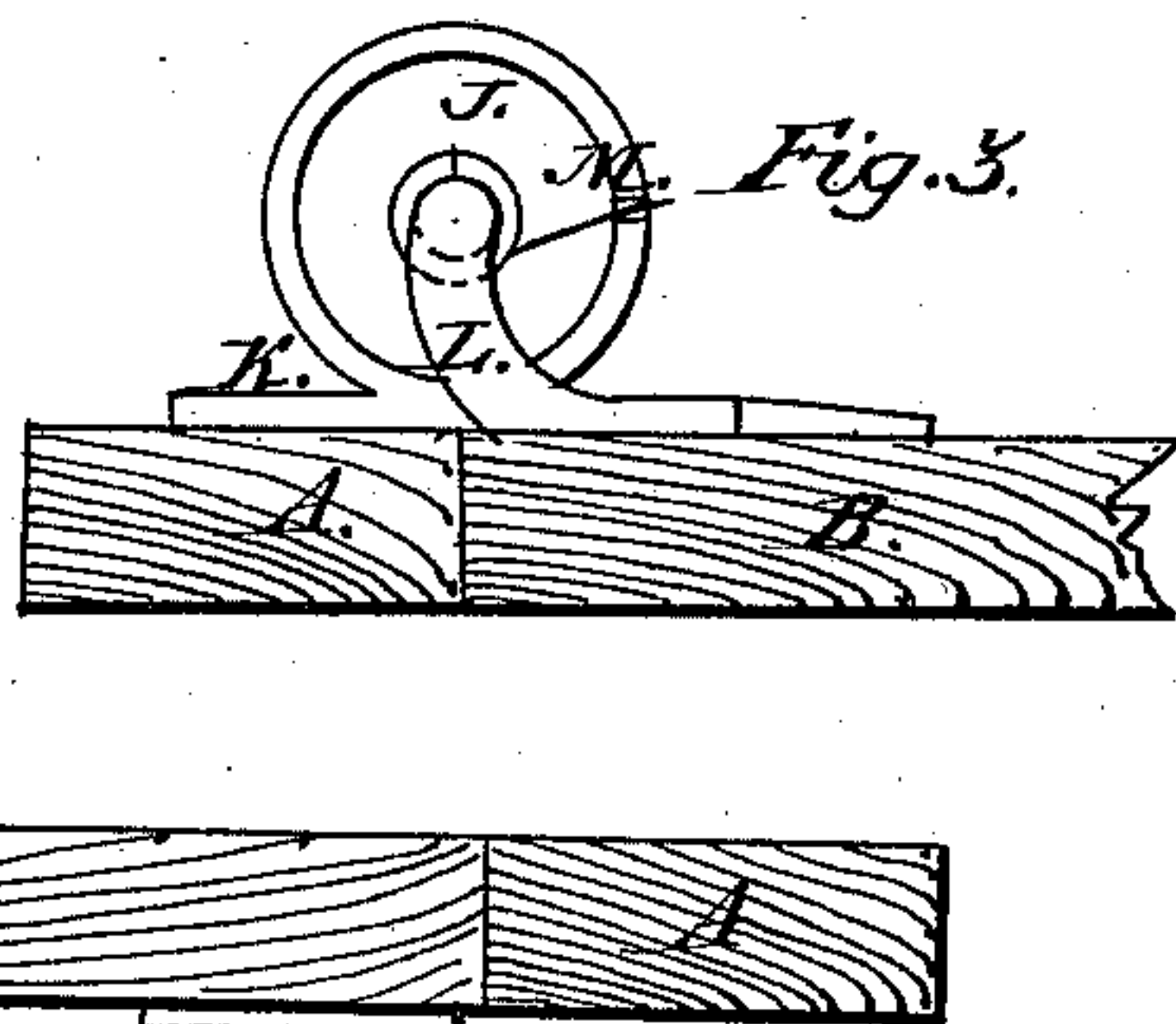
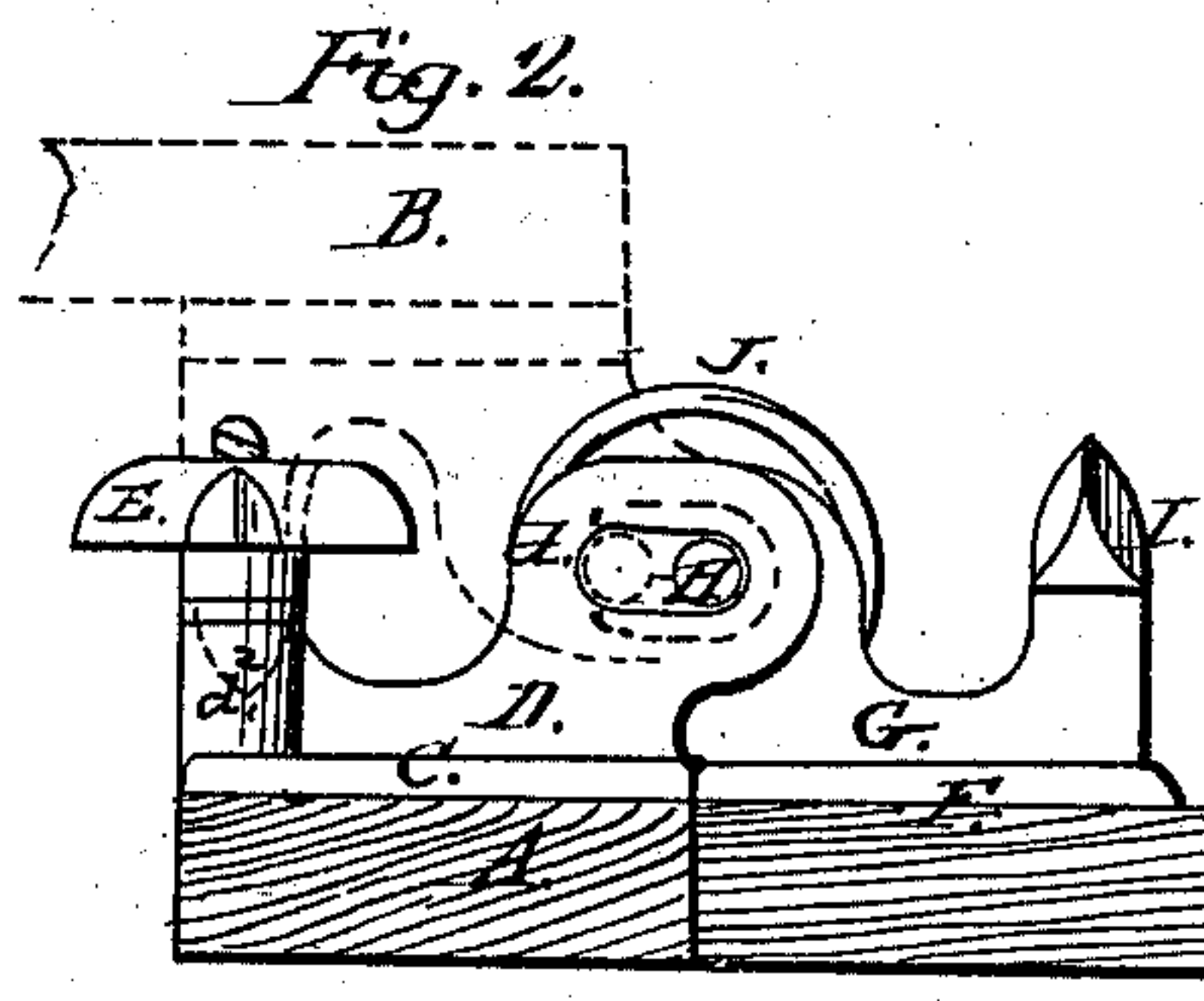
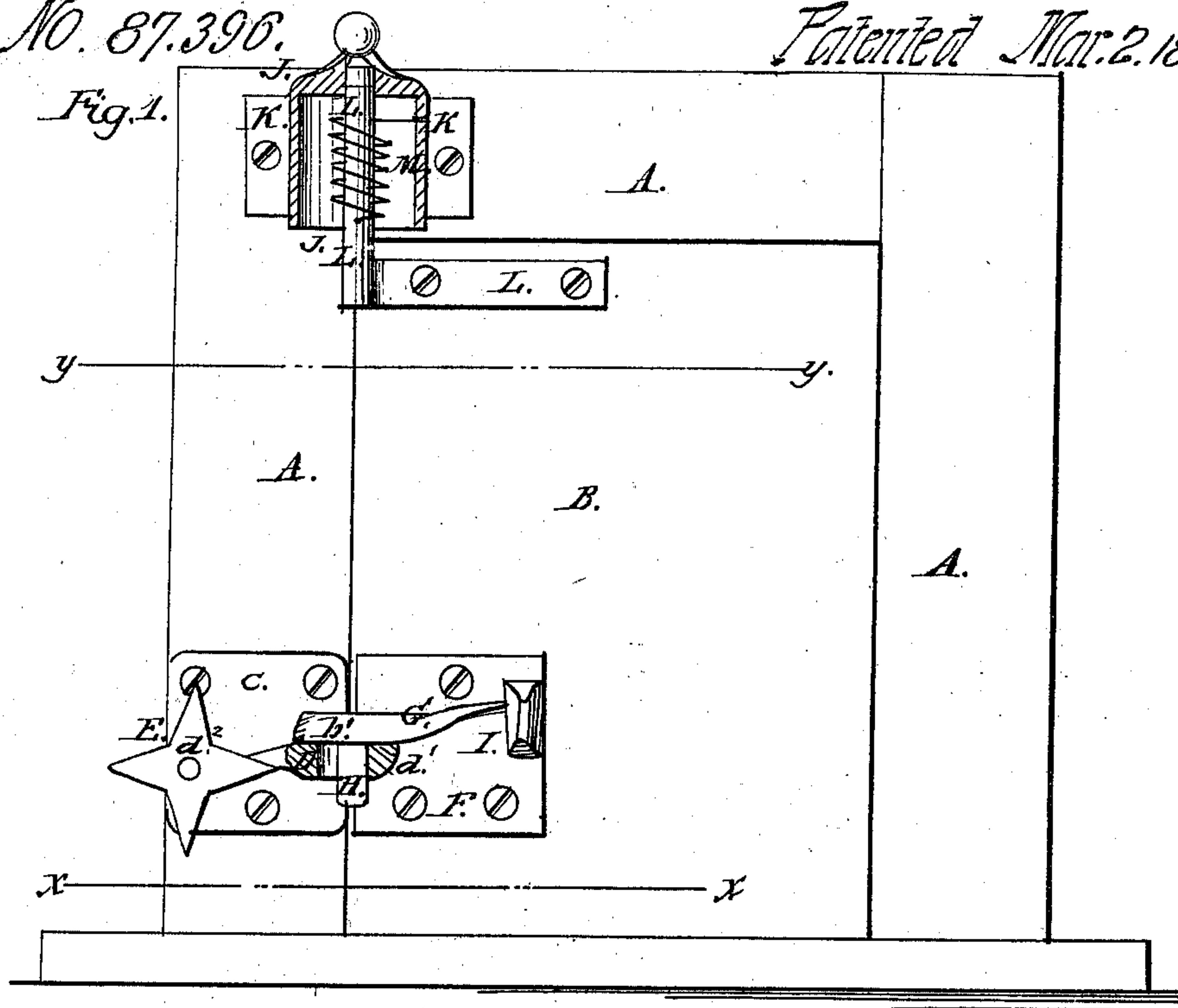


L. R. Chapman,

Hinge.

No. 87,396.

Patented Mar. 2. 1869.



Witnesses:
W. C. Ashkettle
Wm. A. Morgan

Inventor:
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by Munroe & Co.
Attorneys

United States Patent Office.

L. R. CHAPMAN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO HIMSELF, GEORGE H. TRAXSBURY, AND ELBERT WARD.

Letters Patent No. 87,396, dated March 2, 1869; antedated February 26, 1869.

IMPROVEMENT IN HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, L. R. CHAPMAN, of Grand Rapids, in the county of Kent, and State of Michigan, have invented a new and useful Improvement in Window-Blind and Door-Hinges; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a side view of a window-shutter, to which my improved hinges have been attached, parts being broken away to show the construction.

Figure 2 is a detail sectional view of the same, taken through the line *x-x*, fig. 1, looking upward.

Figure 3 is a detail sectional view of the same, taken through the line *y y*, fig. 1, looking upward.

Figure 4 is a detail under-side view of the catch-arm.

Figure 5 is a detail top view of the eye-arm.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish a neat, simple, convenient, and reliable self-adjusting hinge, for doors, window-blinds, &c., which shall be so constructed and arranged as to hold the blind, or door, securely locked, when swung open, in such a way as to not only hold it securely, but also prevent rattling; and

It consists in the construction and combination of the various parts, as hereinafter more fully described.

A represents the casing of a window, and

B represents the blind, or shutter.

C is a plate, securely attached to the casing A.

D is an arm, formed solidly upon or securely attached to the plate C.

Through the forward end, *d*¹, of the arm D, is formed a slot, or elongated hole, for the reception of the ear, or pivoting-pin, of the hinge, the rear side of said hole, or slot, being bevelled, as shown in fig. 5, to accommodate the cam, or incline, formed upon said pin.

Upon the other end of the arm D is formed a projecting pin, or bolt, *d*², having a screw-thread cut upon its outer end, upon which is screwed a star-shaped catch-nut, E, several washers being interposed between the catch-nut E and the shoulder of the bolt *d*², so that the said nut may be easily adjusted to hold the blind close up against the wall, and prevent rattling.

F is a plate, screwed fast to the blind, B, and hav-

ing an arm, G, formed solidly upon or securely attached to it.

Upon one end of the arm, or flange G, is formed the ear, or pivoting-pin H, of the hinge, upon one side of which pin is formed a cam, or incline *h*¹, the effect of which is, when the blind is left free, to force the said pin to that end of the slot in the arm D which is opposite to the said cam, or incline, and which, when the blind is pushed or drawn against said incline, causes the blind to rise, while moving toward the other end of the slot, so as to free the catch from the catch-nut E.

Upon the other end of the arm, or flange G, is formed a catch, I, which, when the blind is pushed or swung open, catches upon an arm of the catch-nut E, and locks the blind open.

J is a cup-shaped socket, securely attached to a plate, K, or having ears formed upon it, by means of which it is secured to the upper part of the casing, just above the rear upper corner of the blind, B.

L is an arm, one end of which is screwed fast to the blind, B, and the other end, which forms the pivoting-pin of the hinge, passes up into the cup-shaped socket J, and enters a recess formed in the bottom of said cup-shaped socket.

M is a coiled-wire spring, one end of which is attached to the upwardly-projecting part of the arm L, around which the said spring is coiled, and its other end is secured to the socket J, by being passed through a slit or slot formed in said socket, or in any other convenient manner.

The upwardly-projecting part of the arm L, and the recess in which it works, should be so constructed that the said arm may have a little play longitudinally, to allow the lower hinge to work freely.

I claim as new, and desire to secure by Letters Patent—

The combination of the plate C, arm D, having an eye, or slot, formed in one end, and a bolt, *d*², formed upon the other end, star-shaped catch-nut E, plate F, and arm G, having a catch, I, formed upon one end, and having upon its other end an ear or pivoting-pin, H, with an incline, *h*¹, formed upon its side, with each other, substantially as herein shown and described, and for the purpose set forth.

L. R. CHAPMAN.

Witnesses:

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