

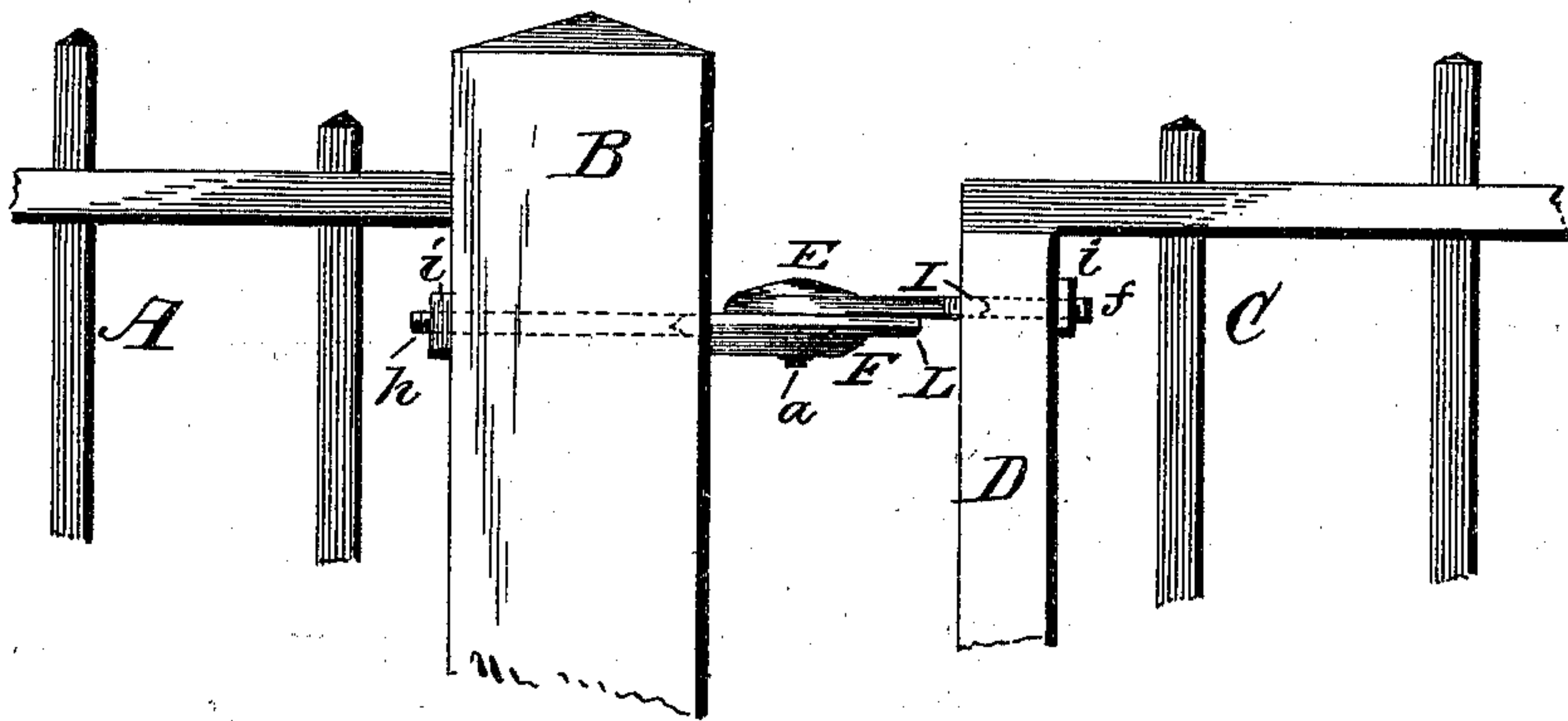
(No Model.)

W. J. CRANFORD.
GATE HINGE.

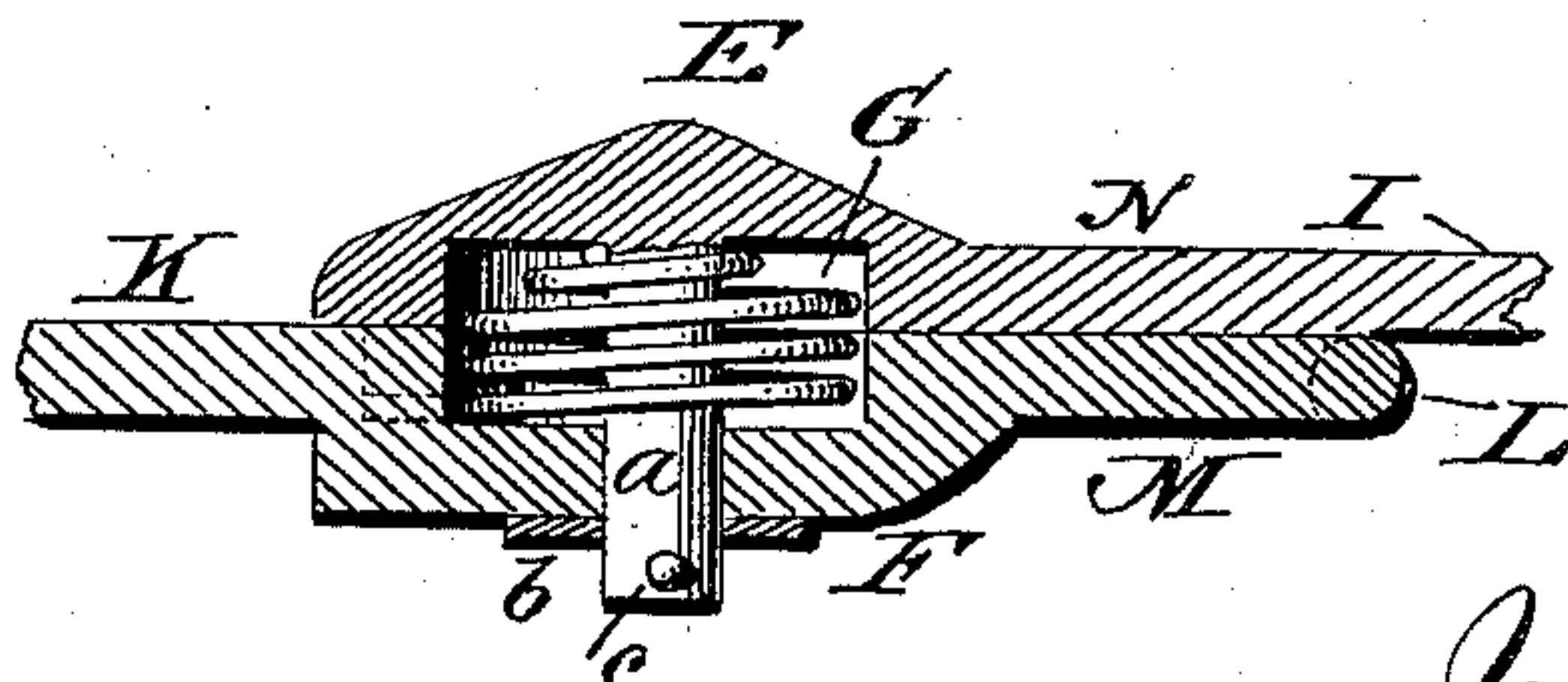
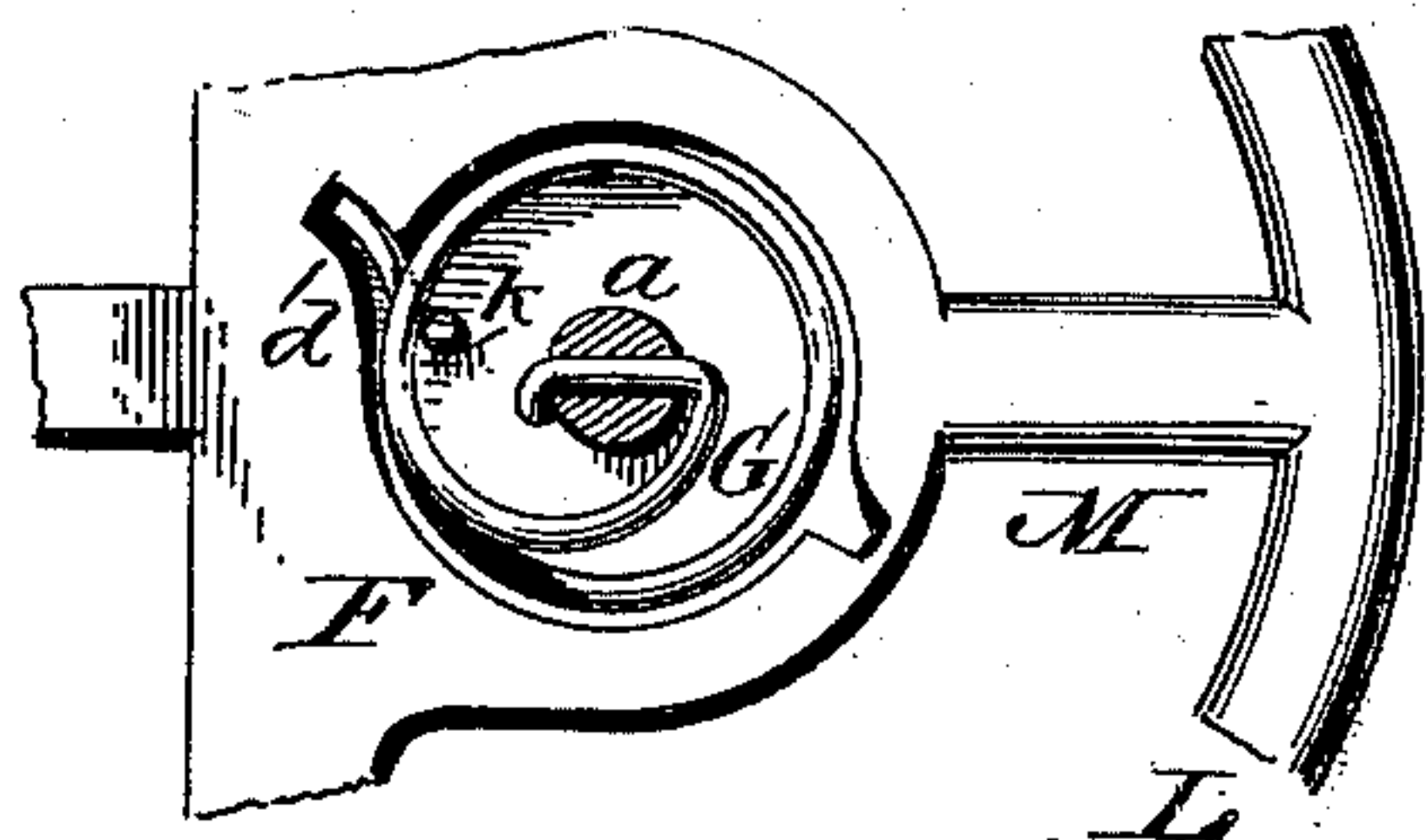
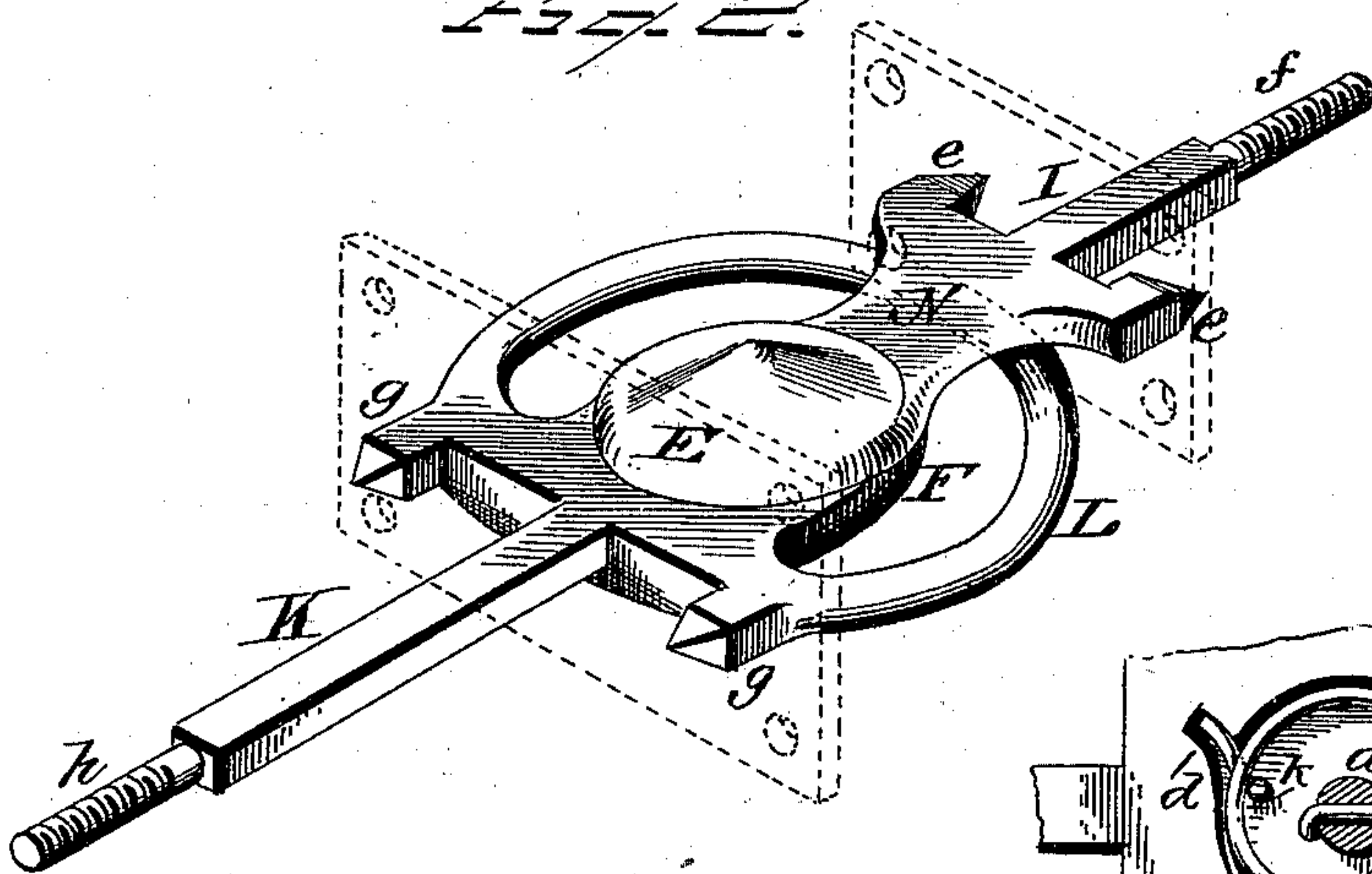
No. 561,494.

Patented June 2, 1896.

SECRET



FILE



Witnesses
G. Williamson
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Inventor
William J. Crawford,
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UNITED STATES PATENT OFFICE.

WILLIAM JULIUS CRANFORD, OF SPOKANE, WASHINGTON, ASSIGNOR TO
JOHN R. PRICE, OF SAME PLACE.

GATE-HINGE.

SPECIFICATION forming part of Letters Patent No. 561,494, dated June 2, 1896.

Application filed August 28, 1895. Serial No. 560,720. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JULIUS CRANFORD, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Gate-Hinges; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

The present invention has for its object to provide a spring-hinge for gates that will be simple in construction and possess the necessary strength and durability and may be readily and conveniently attached to any gate and gate-post.

The invention consists in a gate-hinge constructed substantially as shown in the drawings and hereinafter described and claimed.

Figure 1 of the drawings represents a portion of a fence and post and the upper portion of a gate, showing the application of my improved hinge thereto; Fig. 2, a perspective view, on an enlarged scale, of the hinge, showing the two plates in dotted lines; Fig. 3, a longitudinal vertical section through the central portion of the hinge to show the position of the coiled spring. Fig. 4, an inner plan view of that portion of the hinge which is designed to be attached to the post of the fence, showing the coiled spring in position and the pin to which it is attached in section.

In the accompanying drawings, A represents the upper portion of one end of a fence, and B the post thereof, and C the gate connected thereto by my improved hinge, which is secured to the post of the fence and to the end bar D of the gate.

The hinge consists of two recessed sections E F, the recesses therein when together forming a chamber for containing a coiled spring G.

The upper section E of the hinge is formed with a central pin *a*, which extends down through a hole in the lower section F, and the two sections are held together by a washer *b* and suitable key *c*, or by any other suitable and well-known means found best adapted to the purpose.

Any desirable means may be employed for

holding the two hinge-sections E F together, and also admit of their being separated when found necessary to remove the gate from the fence-post. One end of the coiled spring G is suitably attached to the pin *a*, and the opposite or free end of the spring is made to engage with a depression *d*, extending from the recess in the hinge-section F, as shown in Fig. 4 of the drawings. The hinge-section E has flat-sided spurs *e*, and located between these spurs is a central flat-sided arm I, which terminates in a screw-threaded shank *f*. The hinge-section F is provided with the same means of attachment, consisting of the flat-sided spurs *g* and the central arm K, which terminates in a screw-threaded shank *h*, the arm in the present instance being somewhat longer than the arm on the section E, so as to pass through the fence-post B. The spurs on the hinge-sections enter the post B and the end bar D of the gate, respectively, and hold said sections horizontal and prevent them from turning on their axes.

Any suitable form of spurs may be used in place of those shown and any suitable form of arms may be employed.

The arms of the hinge-sections extend into the fence-post B and the end bar D of the gate, respectively, and the screw-threaded shanks of the arms pass through the post and end bar and project from the opposite sides thereof, nuts *i* engaging the screw-threaded shanks to hold them to the post and end bar, respectively. The screw-shanks of the arms I K and the nuts engaging therewith enable the hinge-sections to be attached to fence-posts and end bars of gates, which vary in thickness and also enable the hinge-sections to be adjusted as circumstances require. A short stud *k* in the recess of the hinge-section F forms a bearing for the end of the coiled spring G and prevents the end thereof from being disengaged from the depression *d*.

If desired, plates may be used in securing the hinge-sections in place, as indicated in dotted lines of Fig. 2, although this is left entirely with the person hanging the gate.

An essential feature of the invention is the segmental support L upon the hinge-section F, which sustains the neck N of the upper hinge-section E, thus retaining the two hinge-

sections in proper relative position and taking the strain off the central pin *a*. The central portion of the segmental support L is connected with the hinge-section F by means
5 of a transverse brace M, so that the support will have the necessary sustaining strength to support the weight of the gate.

The segmental support L extends some distance from the section F and conforms to the
10 arc the gate will describe when swinging in or out, as the case may be.

The bearing-surface of the support L is formed convex, so as to present as little frictional surface as possible to the neck N of the
15 section E, thereby rendering the gate easier in its movement.

A hinge of the character above described may be manufactured at a comparatively small cost and will possess the necessary
20 strength and durability in supporting gates of varying weights and sizes and may be applied in hanging the gate with very little trouble.

Having now fully described my invention,

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

1. In a gate-hinge, two recessed sections pivotally connected together, suitable means for attaching the sections to the fence and gate respectively, the upper section formed
30 with a bearing-neck and the lower section having a segmental support with a convex bearing-surface, substantially as and for the purpose set forth.

2. In a gate-hinge, two recessed sections
35 pivotally connected together, means for attaching the sections to the fence and gate respectively, consisting of double spurs and a central arm upon each section, said arms terminating in screw-threaded shanks, substantially as and for the purpose described.
40

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM JULIUS CRANFORD.

Witnesses:

G. W. STOCKER,
JOHN R. PRICE.