

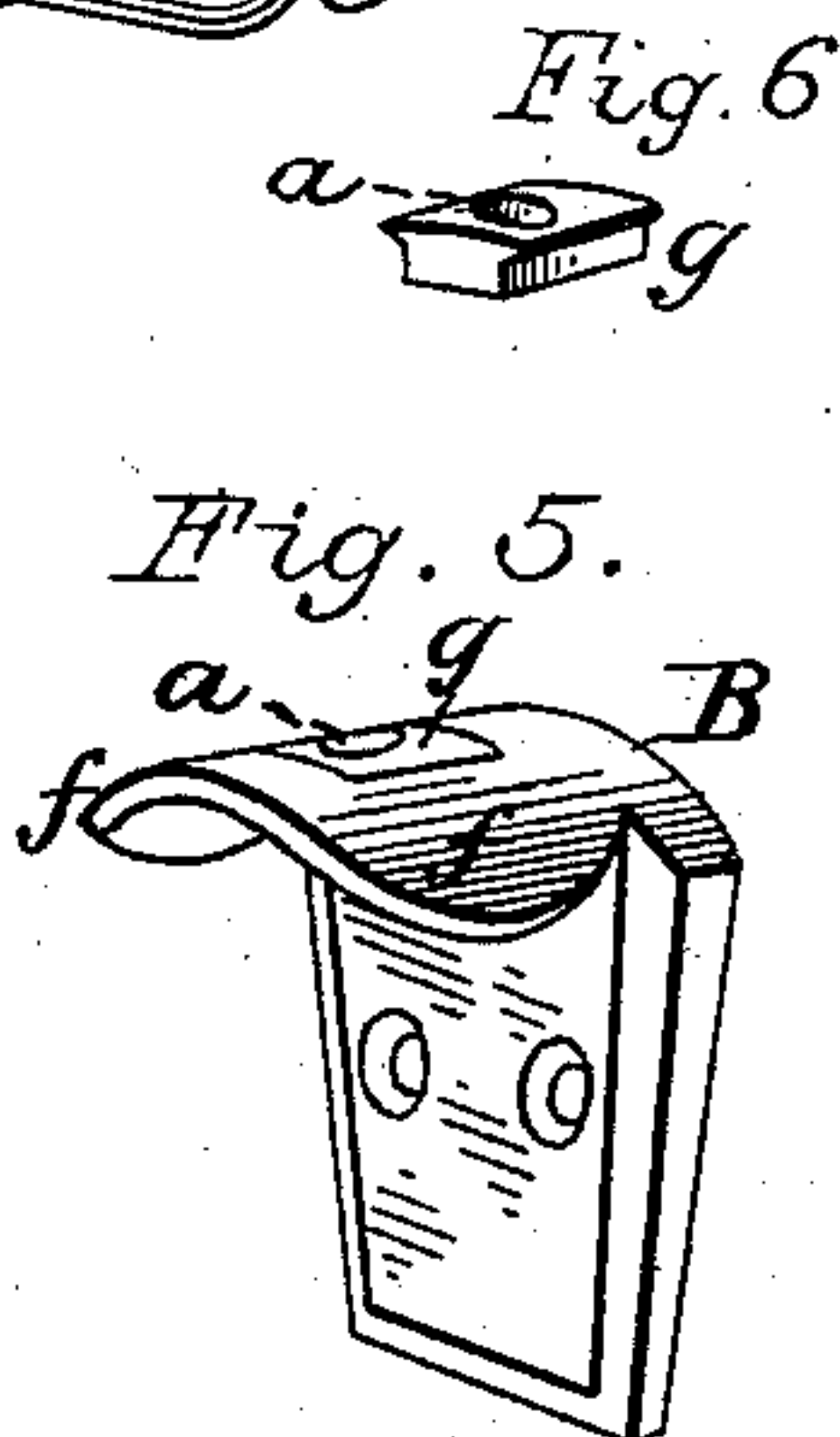
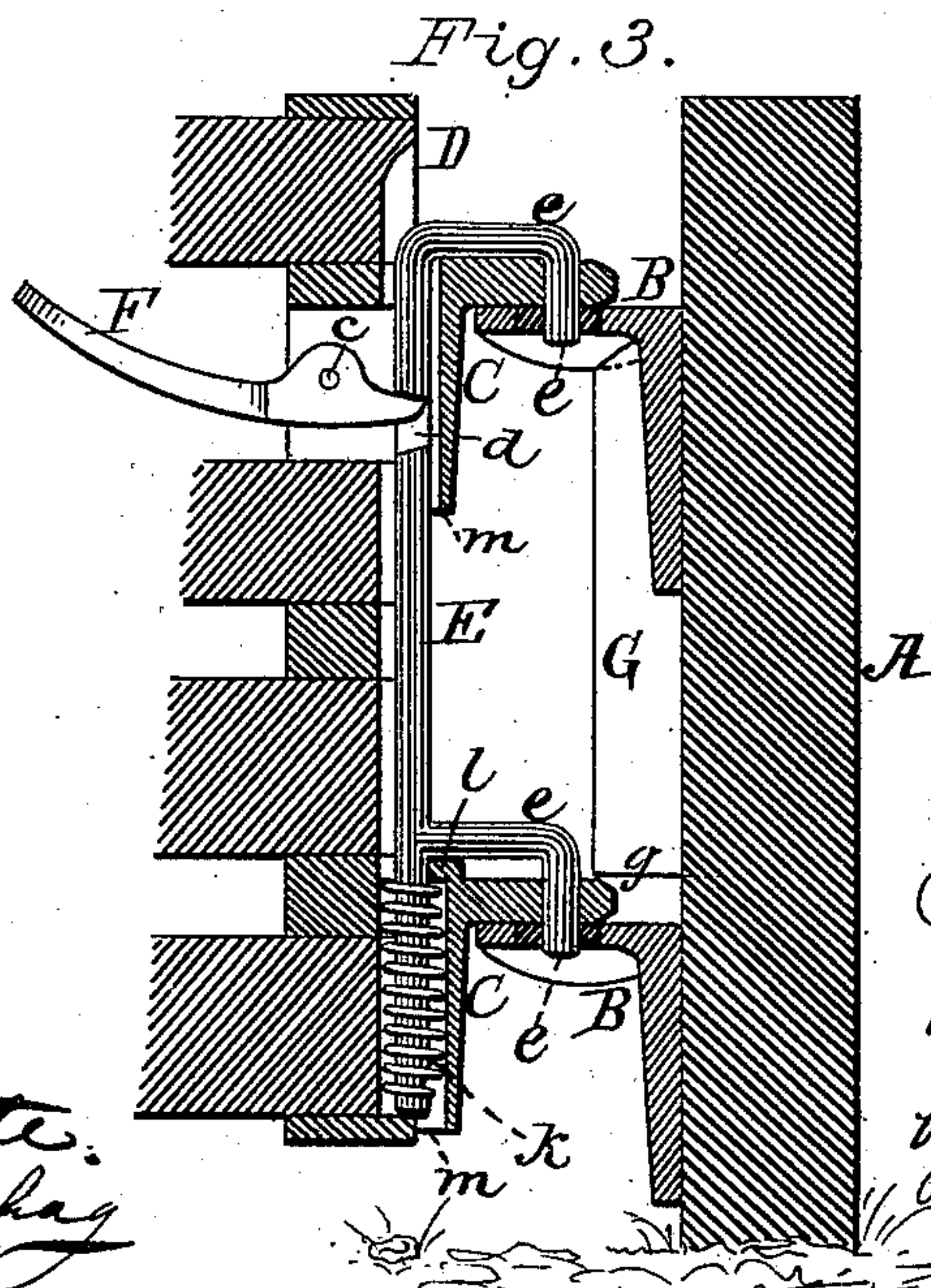
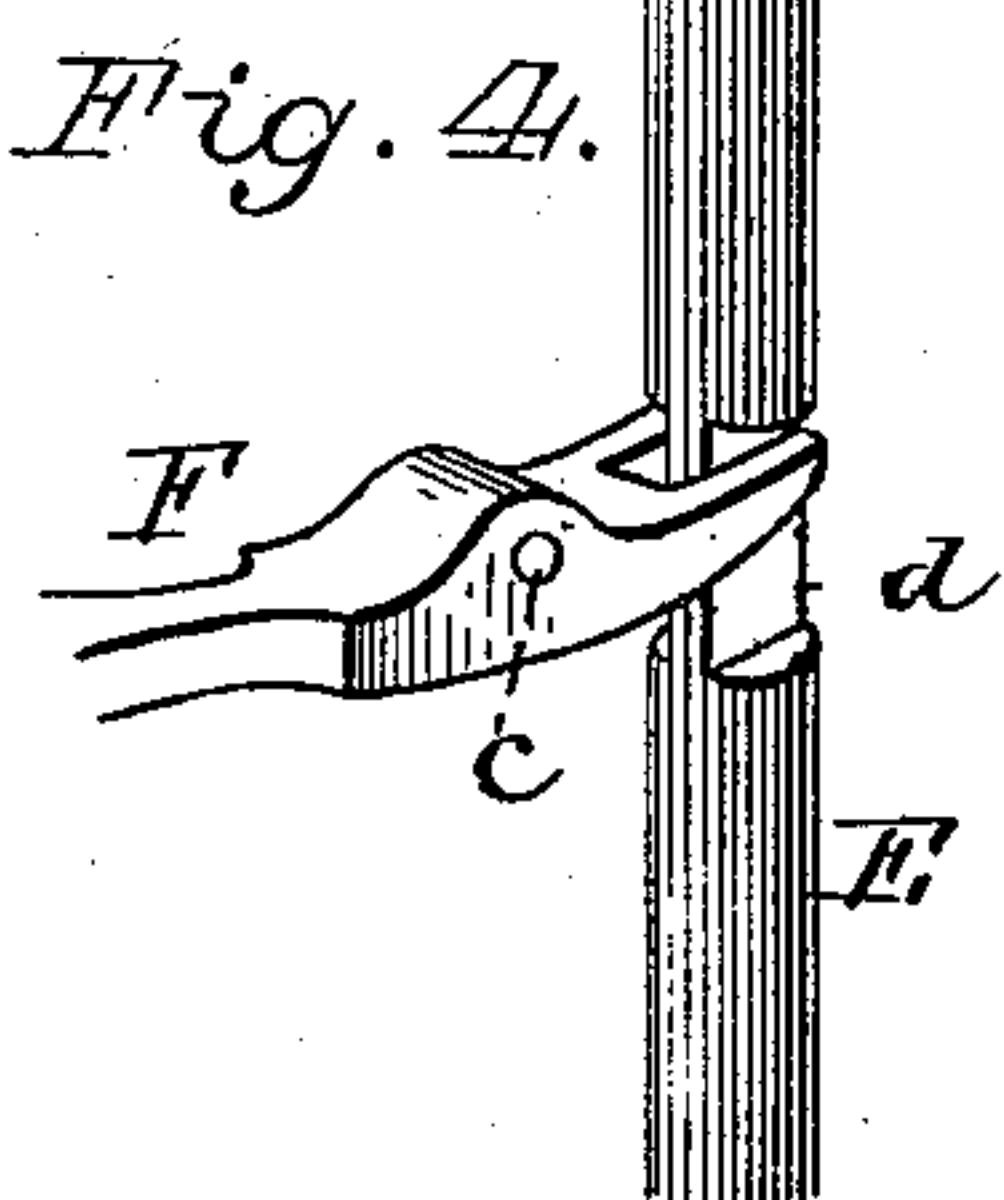
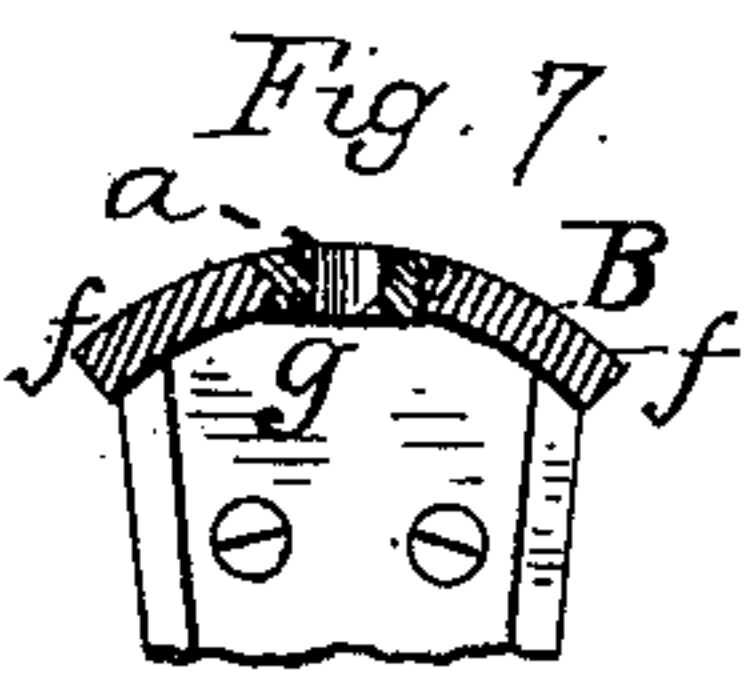
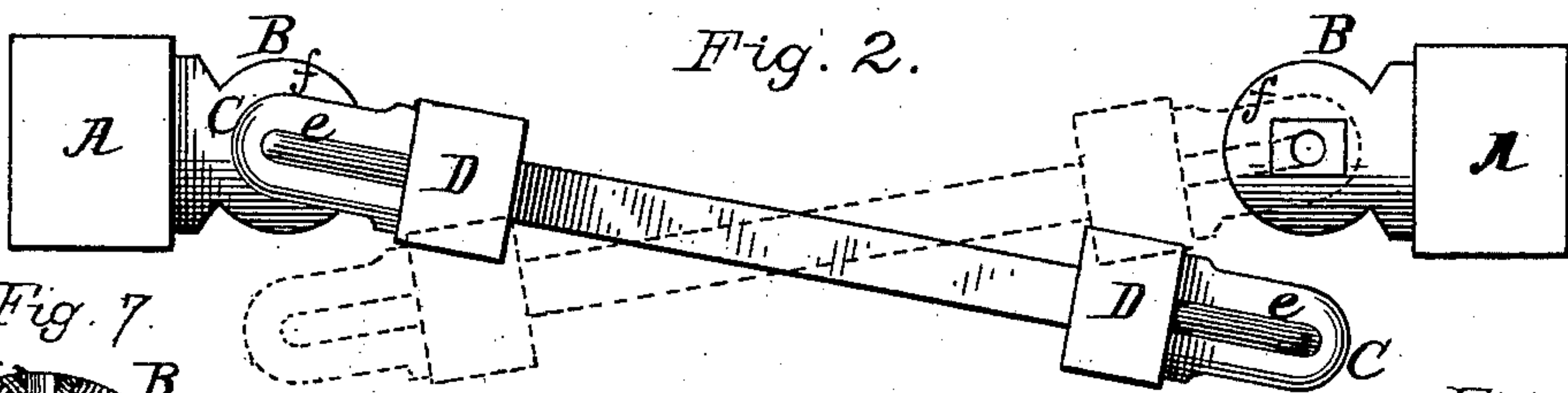
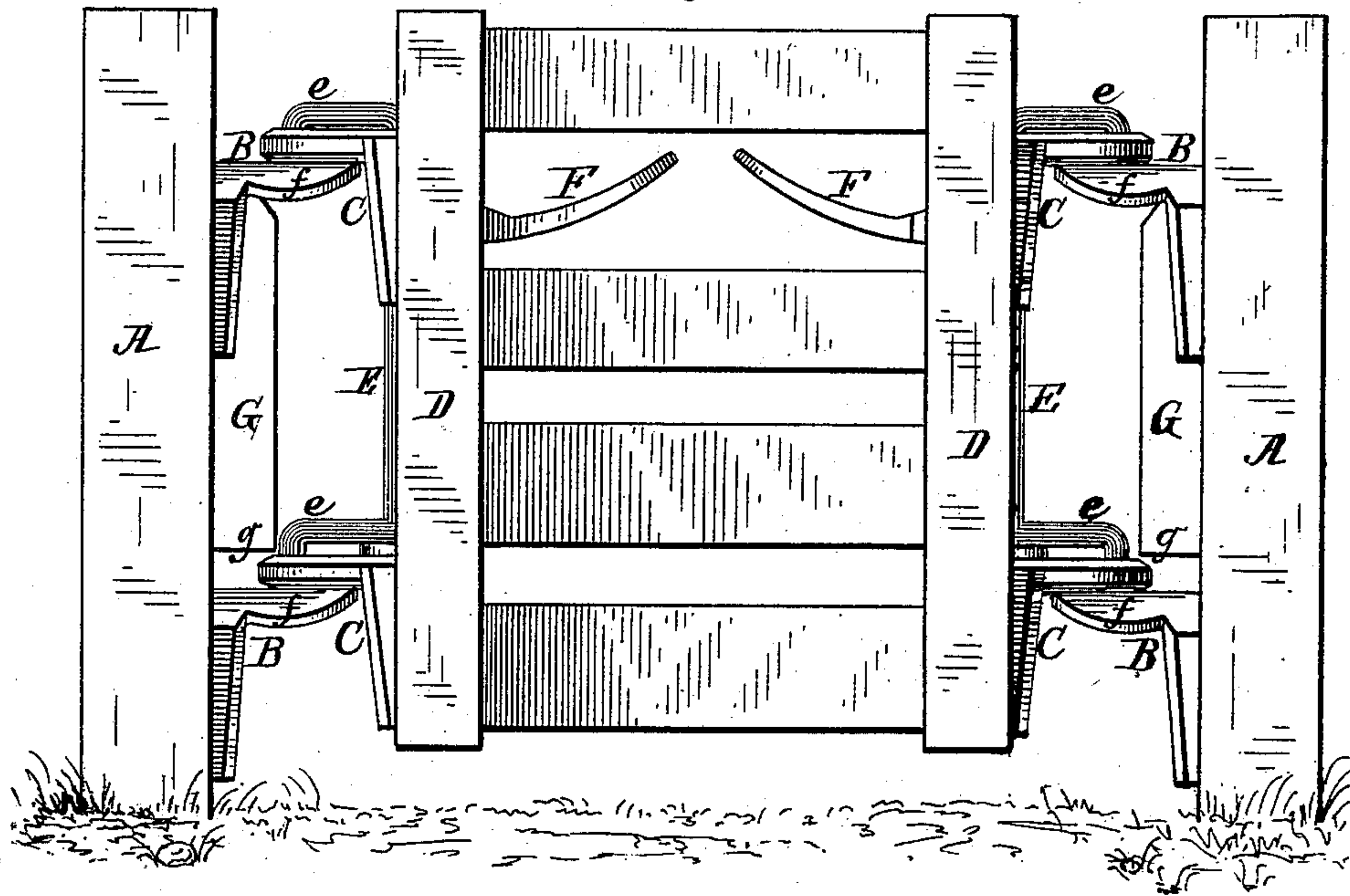
(No Model.)

J. FORNEY.

COMBINED GATE LATCH AND HINGE.

No. 273,501.

Fig. 1. Patented Mar. 6, 1883.



Attest:
Howell Bartlett
Edmund Brooks

Joseph Forney
Inventor:
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Attys

UNITED STATES PATENT OFFICE.

JOSEPH FORNEY, OF CANFIELD, OHIO.

COMBINED GATE LATCH AND HINGE.

SPECIFICATION forming part of Letters Patent No. 273,501, dated March 6, 1883.

Application filed October 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FORNEY, a citizen of the United States, residing at Canfield, in the county of Mahoning and State of Ohio, have invented new and useful Improvements in a Combined Gate Latch and Hinge, of which the following is a specification.

The invention relates to gates provided with devices at each end combining the functions of latches and hinges, whereby the gate may be opened in either direction and at either end with equal facility, so that should sagging occur at one end of the gate the other end may be used until it shall have begun to sag in the other direction, and so that it may be opened at either end from either side in case obstructions of any sort should prevent operating the gate in the ordinary manner, or for the convenience of persons on either side of the road.

My improvements are directed to an improved construction of latch and hinge for this purpose, as will be hereinafter more particularly described, and illustrated in the accompanying drawings, in which latter—

Figure 1 represents an elevation of a farm-gate embracing my improvements; Fig. 2, a top view, showing the gate opened at one end in full lines and by dotted lines as opened at the other end; Fig. 3, a vertical section through one of the end bars of the gate, the latch-hinge devices, and adjacent gate-post; Fig. 4, a detail in perspective of one of the levers, showing its connection with the latching-rod; Fig. 5, a detail in perspective of one of the socket-irons which are attached to the posts to receive the latching-rod; Fig. 6, a detail of the removable socket-plug, and Fig. 7 a detail section of the removable socket-plug.

On the inner sides of the posts A A, at top and bottom, are fastened angle-castings B B, having curved riding-surfaces *f*, while adjacent to these parts are similar angle-castings, C C, on the end bars, D D, of the gate, having flat bearing-wings. The castings B and C are both provided with holes *a* and *b*, one of which is formed in a removable socket, for a purpose to be presently set forth, and the latter castings, C, overlap the former in such manner as to bring these holes coincident. The end bars, D, of the gate are slotted or grooved, as shown,

to receive and guide the latch-rods E E, which are operated by levers F F, fulcrumed in said end bars at *c c*, as shown, and engaging in side recesses, *d*, in said latch-rods to lift them as the lever is depressed. The shape of the projecting surface of the castings B on the posts is such as to permit the pintle-projections *e e* of the latch-rods to strike upon and glide over to the holes in the act of closing the gate to fasten it, as by a convex surface, *f*, or bevels forming the wings or curved riding-surfaces. In order to provide for possible disarrangement from sagging, I supply plugs of metal, *g*, having a hole, *a*, therein, to be inserted in a seat-opening in the casting B, as shown. These plugs may be turned in position or replaced by new ones, as the case may be, when the sagging is such that the hole of one casting, B, is not coincident with that of the other, C, in overlapping position when the gate is closed. The curve of the convex surface or the bevel in said castings is decided and sufficient to receive the pintle ends of the latch-rods and carry them to the point where they drop through the coincident holes. Depressing either lever unlocks the gate, and it may be pushed open from either side. The latch-rod is impelled automatically to lock the gate and to hold it so by a spiral spring, *k*, fastened to the bottom of said rod and bearing upon a stop-shoulder, *l*, as shown in Fig. 3, at the top of the lower casting. The lower castings, C, are provided with a groove, *m*, to accommodate the rod and spring coiled thereon. The flat projecting part of the casting C and the curved projection of the casting B allow the gate to be closed by pushing it, and the overlapping flat plate will ride upon the curved one in closing the gate, the tension of the spring being only sufficient to force and hold the latch-pintles down, and thus reduce the wear upon the pintle ends. The spaces between the ends of the gate and the posts are filled by bars G G, the lower ends of which extend over the ends of the lower flat wings of the castings C, and thus these bars also serve as stops to prevent the gate from being lifted and unhinged when closed. The said bars do not extend to the top of the curved wings, but terminate above them, so as to leave a space between the lower end, *g'*, and the

curved surface of the wing-casting. The bars G G therefore serve the purpose of preventing the gate from being unhinged, when closed, by cattle or hogs; and with a hinge of lapping wings this locking function of the bars is important in a gate adapted to be opened from either end.

It will be understood the plugs are of oblong form, and fit into corresponding seats or openings in the curved wings of the castings B, so that they may be removed to adapt the oblong holes or openings in said castings to receive the pintles of the latches whenever the gate sags. For this purpose the holes in the plugs are of circular form and the holes in the said castings B are oblong, and were it not for this capacity of accommodating the pintles to the sag of the gate it would be practically useless with the hinges and latches combined, as shown and described. In this connection it will be understood that the gate will swell and shrink, and the latch-pintles in such case will fail to enter the holes in the castings B, and in such case the plugs at one end of the gate are removed to allow the pintles to work in the oblong slots of said castings, the plugs at the other end of the gate being left in to hold the gate in proper position to swing. These removable plugs are provided in the four hinges, and whenever the gate-latches will not work

with them they are removed from one side, the plugs on the other side forming the hinges. To remove all the plugs the gate would have too much room in the hinges and would not work. It would drop down and drag on the ground when opened.

I claim—

1. The combination, with the gate, of the pintle latch-rods E e, the angle-castings B B of the gate having flat wings, the castings C C of the posts having curved wings and provided with oblong seats or openings, and the removable plugs g, having circular holes and adapted to fit within the oblong seats or openings in the said curved wings, substantially as shown and described, and for the purpose specified.

2. In combination, the gate having the castings C C (formed with flat projections) on each end, the posts having the curved projecting castings B B, the pintle latch-rods E e, the vertical bars G G, and the levers F F, all constructed and arranged as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH FORNEY.

Witnesses:

M. V. B. KING,

J. R. JOHNSTON.