

No. 625,549.

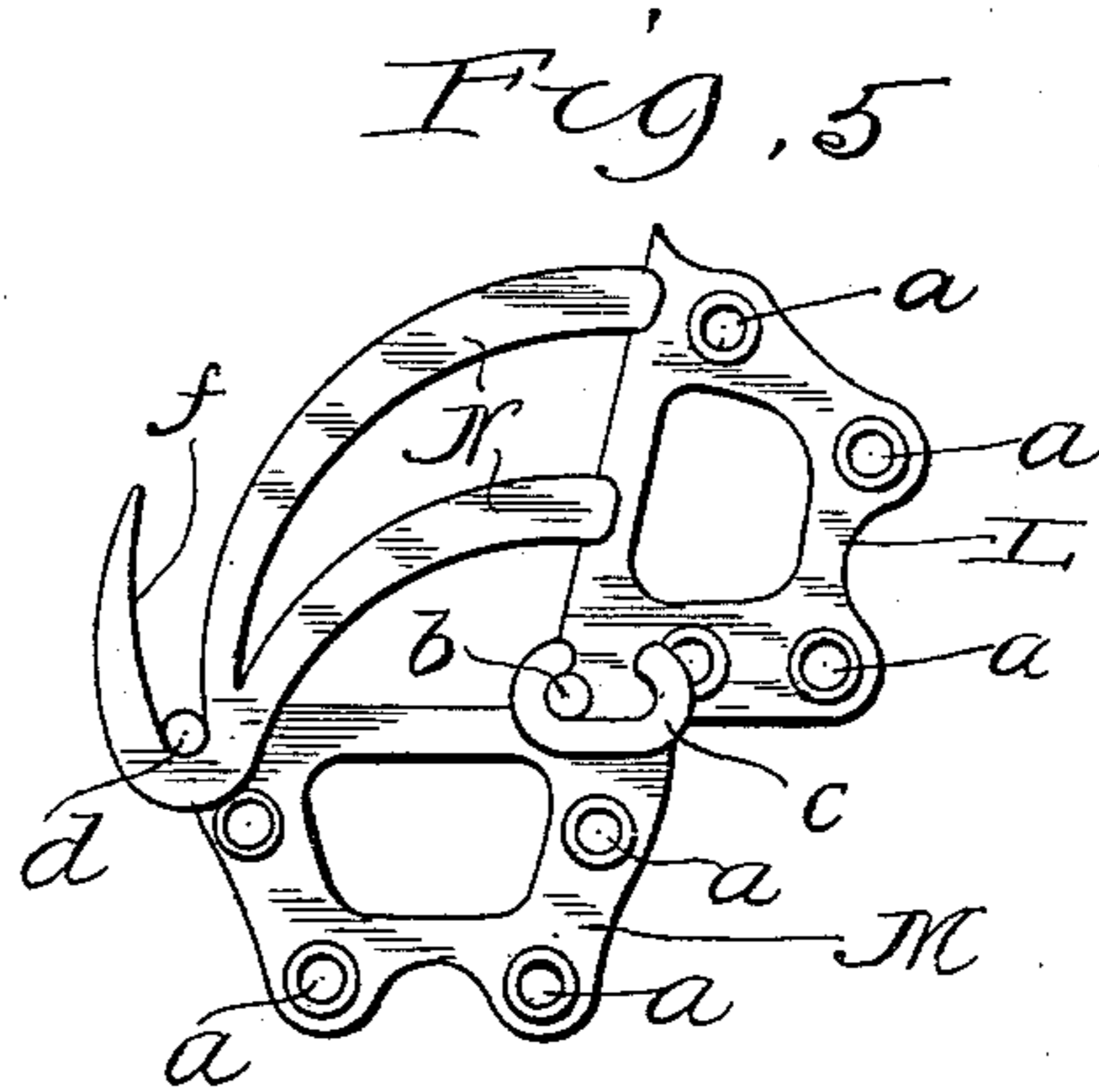
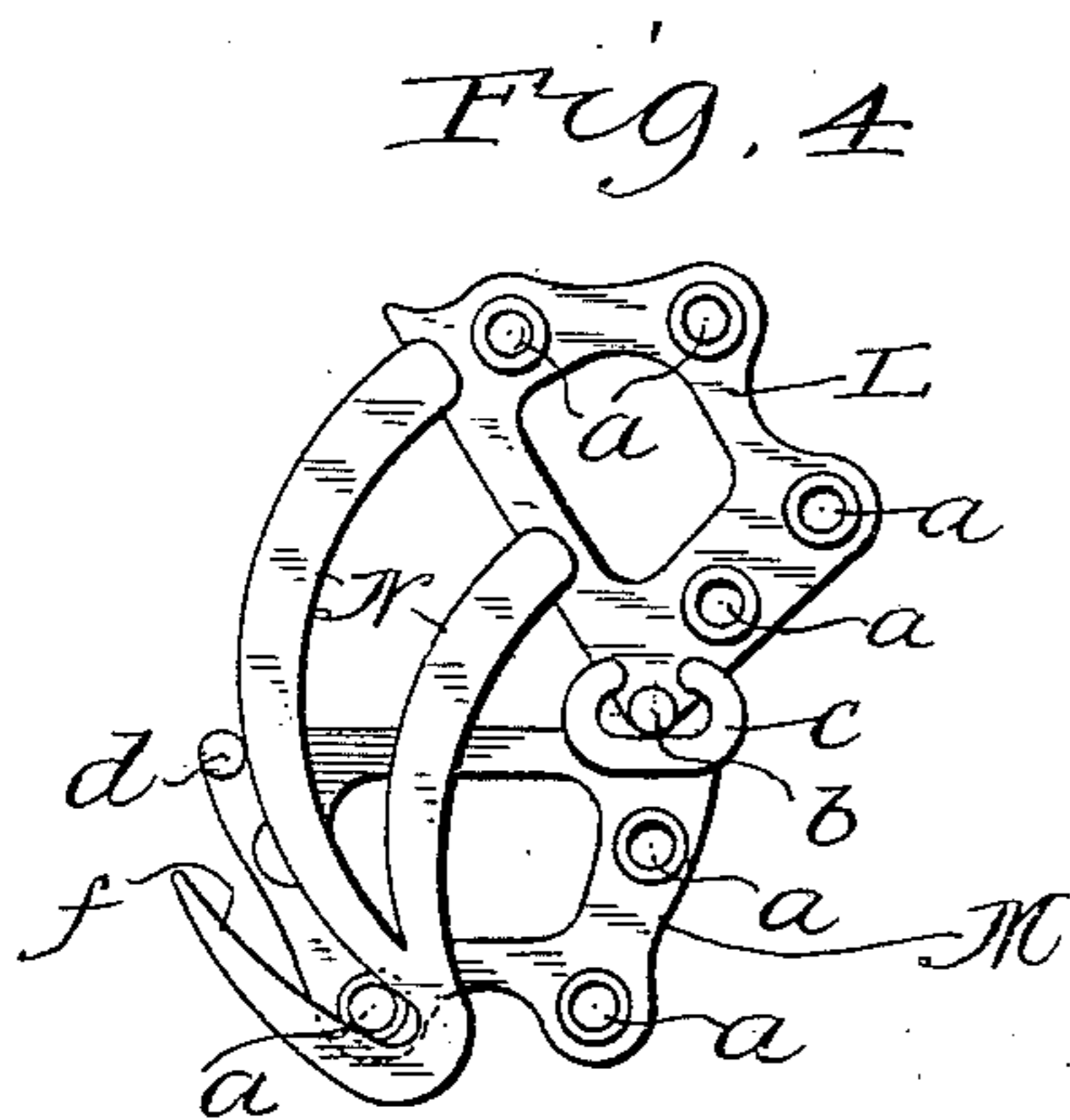
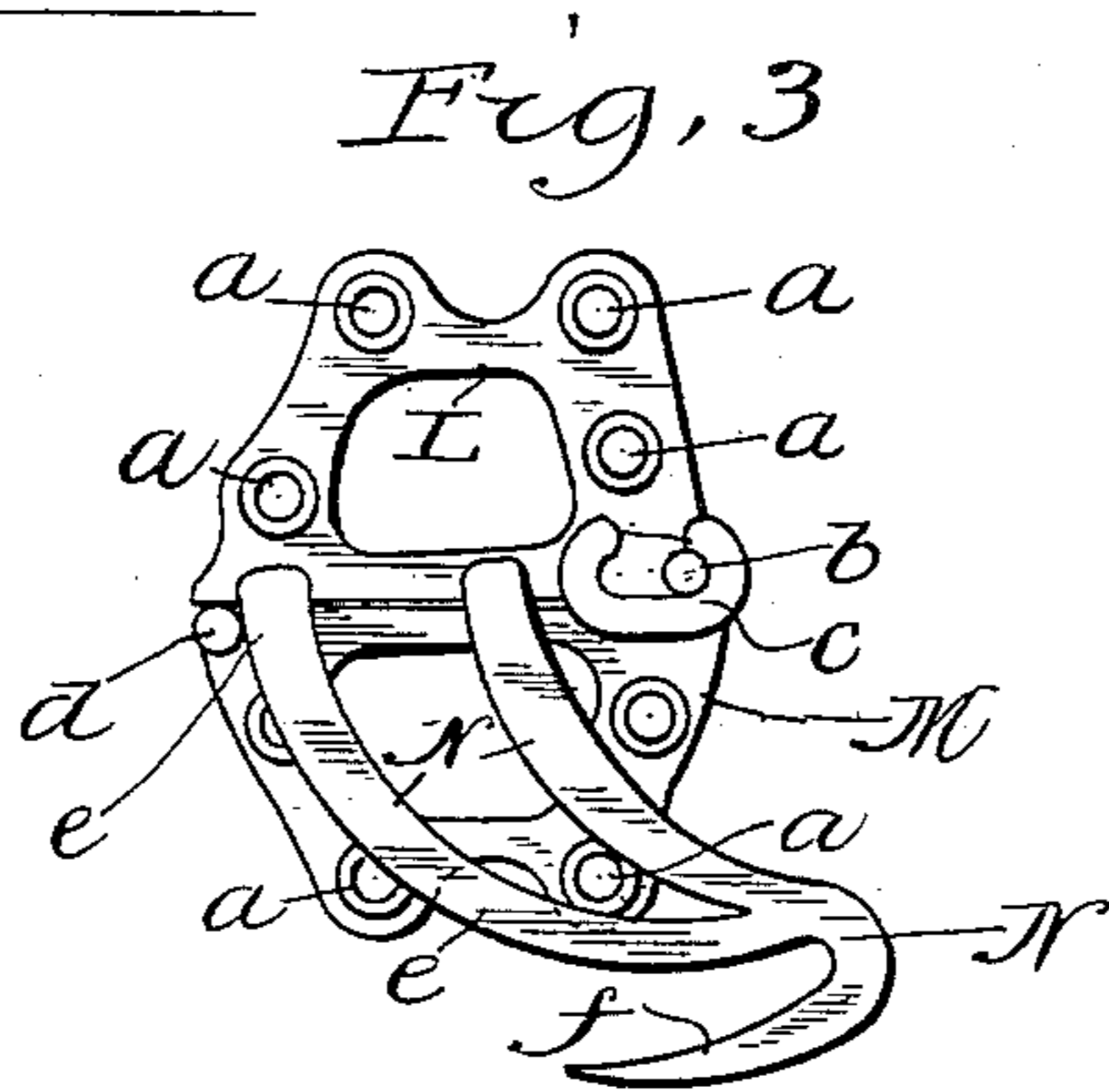
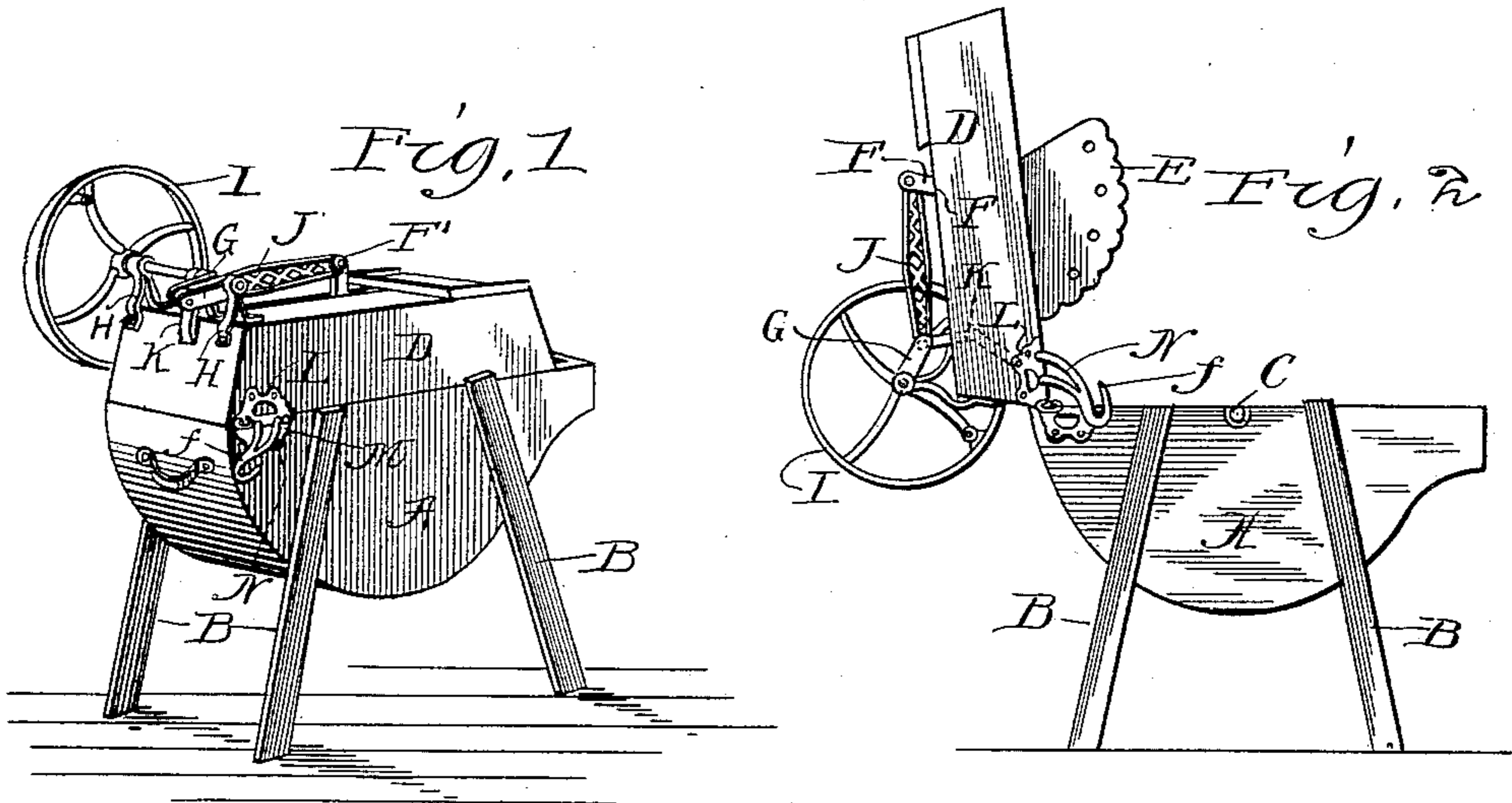
Patented May 23, 1899.

T. A. GALT.

BOX HINGE.

(Application filed Apr. 20, 1898.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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BOX-HINGE.

SPECIFICATION forming part of Letters Patent No. 625,549, dated May 23, 1899.

Application filed April 20, 1898. Serial No. 678,216. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. GALT, a citizen of the United States of America, residing at Sterling, in the county of Whiteside, in the State of Illinois, have invented certain new and useful Improvements in Hinges, of which the following is a description.

Referring to the accompanying drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is a perspective view of a washing-machine provided with my improved hinges and having the hinged top closed. Fig. 2 is a side elevation of the same with the hinged top or lid thrown upward and backward to its limit of movement. Fig. 3 is an enlarged view of my improved hinge, showing the same in a closed position. Fig. 4 is a similar view showing the hinge partly open, in which position the two members may be separated from one another; and Fig. 5 shows my improved hinge open to its limit and in a position similar to that shown in Fig. 2.

The object of my invention is to provide a simple and efficient hinge which will serve to effectively secure the two parts of a box or other device together either when closed or when opened to its limit, but in which at some point during the process of opening or closing the hinge the two parts may be easily separated from one another at will.

To this end my invention consists in the novel construction and combination of the parts herein set forth and described and more particularly pointed out in the claims.

In the drawings, A represents the body or suds-box of a washing-machine, supported on legs B.

D is the hinged top or lid, which is connected to the box A on its left-hand or rear end by my improved hinges. These hinges are of the character known as "right" and "left" hinges, the one upon the left-hand side of the machine being shown in Figs. 1 and 2, while the one on the opposite side of the machine is shown in the enlarged detail views in Figs. 3, 4, and 5. Referring to the latter views, it will be seen that the hinge is composed of an upper plate L, provided with suitable screw-holes *a* or other means for attachment to the side of the lid D, and a lower plate M, similarly provided with means

for attachment to the side of the box A. The plate L is provided on its lower rear corner with an outwardly-projecting stud or pintle *b*, which normally rests in an elongated open bearing *c*, formed upon the upper rear corner of the plate M. The plate L also has formed integral with the upper face of its lower edge a double-cam device, of which the depending part or hook N lies against or immediately adjacent the outer face of the lower plate M and is adapted to cooperate with the stud *d* upon the upper forward corner of the plate M.

It will be understood from the foregoing description that the stud *b*, resting in the open bearing *c*, constitutes the axis or pintle of the hinge, upon which the lid may be swung upward and backward to the position shown in Figs. 2 and 5, and that in such position the engagement of the hook N with the stud *d* will limit the movement of the parts and hold them in the position shown in Fig. 2. It will also be seen that when the lid is swung upward only part way to the position indicated by the hinge in Fig. 4 the upper plate L of the hinge is free to be disconnected or separated from the lower plate M at will by simply lifting its stud *b* out of the open bearing *c* on the plate M, so that, the other portions of the washing-machine being disconnected, the lid D and the parts carried by it may be entirely removed, leaving simply the suds-box A, supported upon the legs B.

While the two parts of the hinge are made separable from each other, as above explained, it is nevertheless desirable that they be securely connected both when the lid is in closed position, as in Figs. 1 and 3, and when in an open position, as in Figs. 2 and 5, and to insure such secure connection of the two parts of the hinge at such times the following means, operating automatically for the purpose, are employed: It will be noticed that when the lid is in closed position (see Fig. 3) the stud *b* upon the upper plate of the hinge is positioned or seated in the rear end of the elongated bearing *c* and is locked in such position by the engagement of the forward cam edge *e* of the hook N with the rear side of the stud *d* upon the lower plate M of the hinge and that when the lid is thrown upward and backward, as in Figs. 2 and 5, the stud *b* is shifted forward in the bearing *c* and is seated

in the forward end thereof and is locked in such position by the engagement of the rearward cam edge *f* of the hook N with the front side of the stud *d*. The curved surfaces *e* or *f* of the hook N are so constructed with relation to the stud *b* as to produce an eccentric or cam action coöperating with the stud *d* on the lower plate M. Thus with the hinge in the position shown in Fig. 4 if the lid be closed the forward curved or inclined edge *e* of the hook N will ride downward against the stud *d* and force the lid and upper plate of the hinge rearward and seat the stud *b* in the rear part of the bearing *c*, as shown in Fig. 3, and lock it in that position, while if the lid be swung upward and backward from the position shown in Fig. 4 to the position shown in Figs. 2 and 5 the curved or inclined edge *f* of the hook N will ride upward against the forward side of the stud *d* and force the lid and upper plate of the hook forward, seating the stud *b* in the forward end of the bearing *c*, and lock it in that position. In this manner the opening and closing of the lid serves to shift the stud *b* backward and forward in the bearing and lock it in either position, while permitting it to be readily disconnected from the bearing *c* when in an intermediate position, as heretofore explained. I do not wish to be understood as limiting myself to the exact form of hinge hereshown, the broad idea of my invention consisting in providing one member of the hinge with an open elongated bearing for the pintle of the hinge and the other member with a double-

acting cam or its mechanical equivalent for the purpose adapted to engage with a part of the first member to seat and lock the pintle at different points in the bearing when the hinge is closed or open to its limit, but at an intermediate point leaving the two parts forming the hinge detachable from each other.

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

1. A hinge consisting of one member provided with an open elongated bearing and means to coact with a double cam, in combination with a second member provided with a pintle, located in the elongated bearing and a double-cam device, whereby operating the hinge shifts the position of the pintle in the bearing, and upon closing the hinge or opening it to its limit, the cam device locks the two parts of the hinge together, but at a point intermediate to the closing or opening to its limit the two parts may be disconnected, substantially as described.

2. The herein-described separable hinge, composed of the plate M provided with the stud *d* and the open bearing *c*, and the plate L provided with the stud *b* fitting in the bearing *c*, and with the hook N projecting from its side over an adjacent face of the plate M and coöperating with the stud *d* in the latter plate.

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