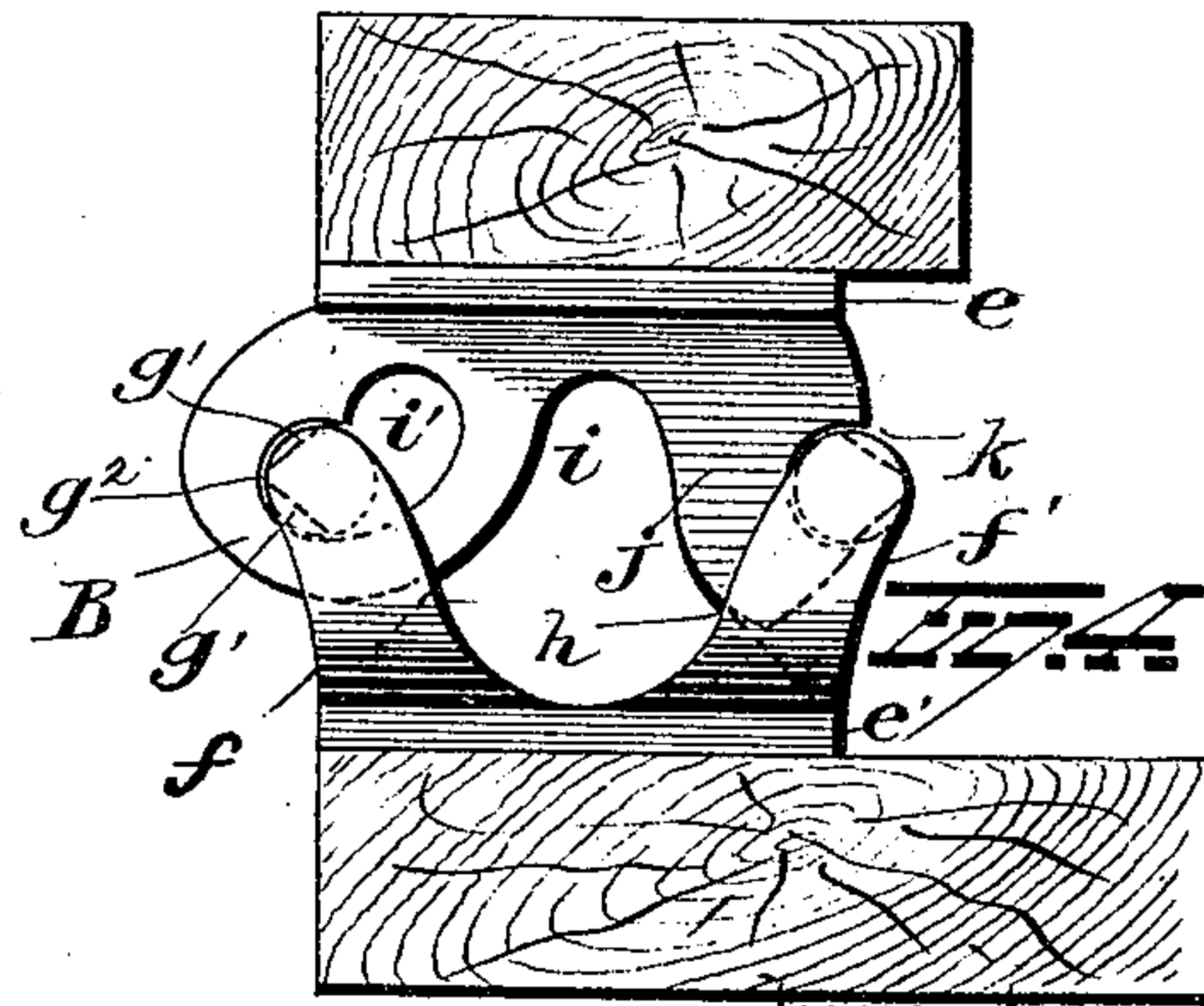
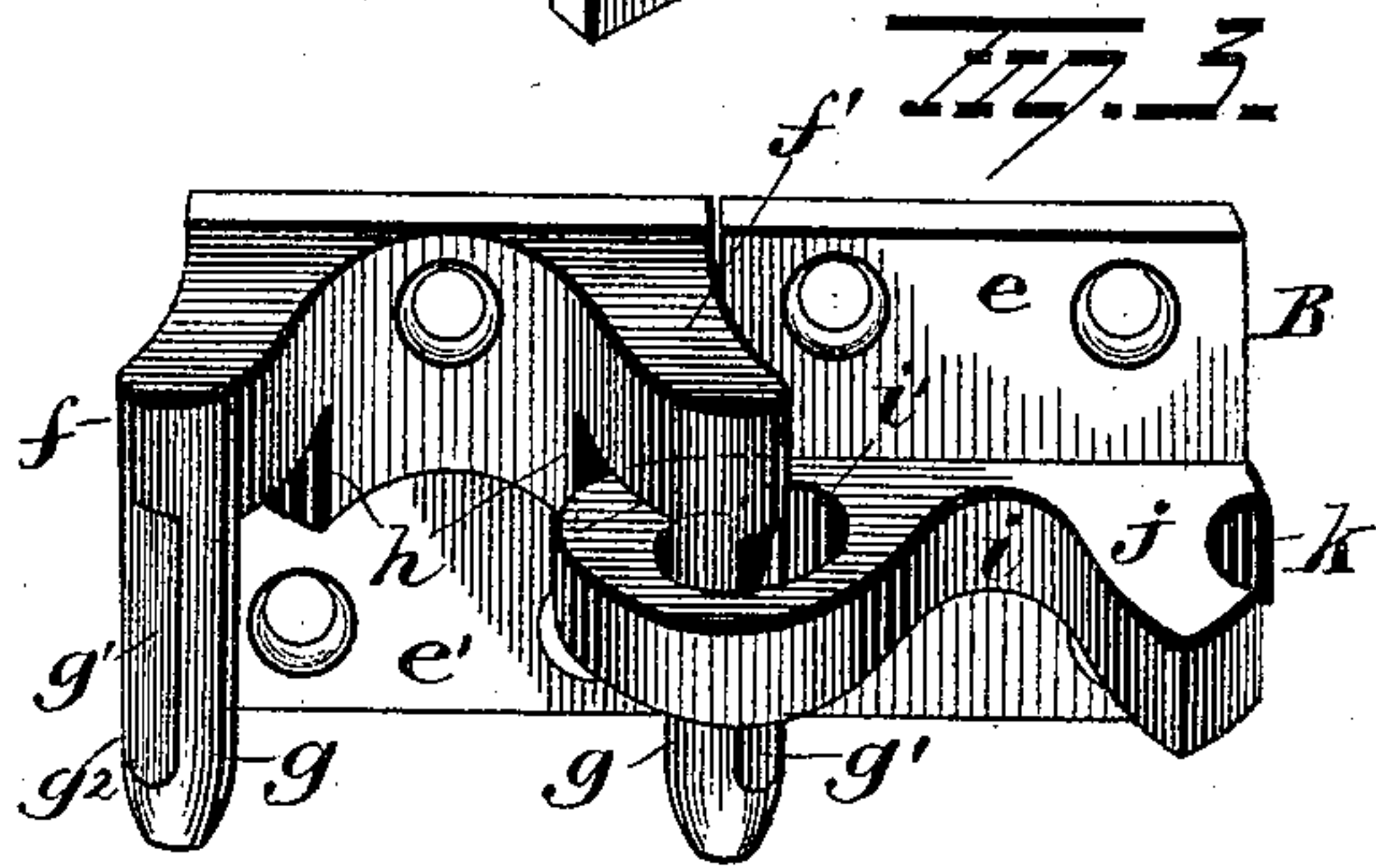
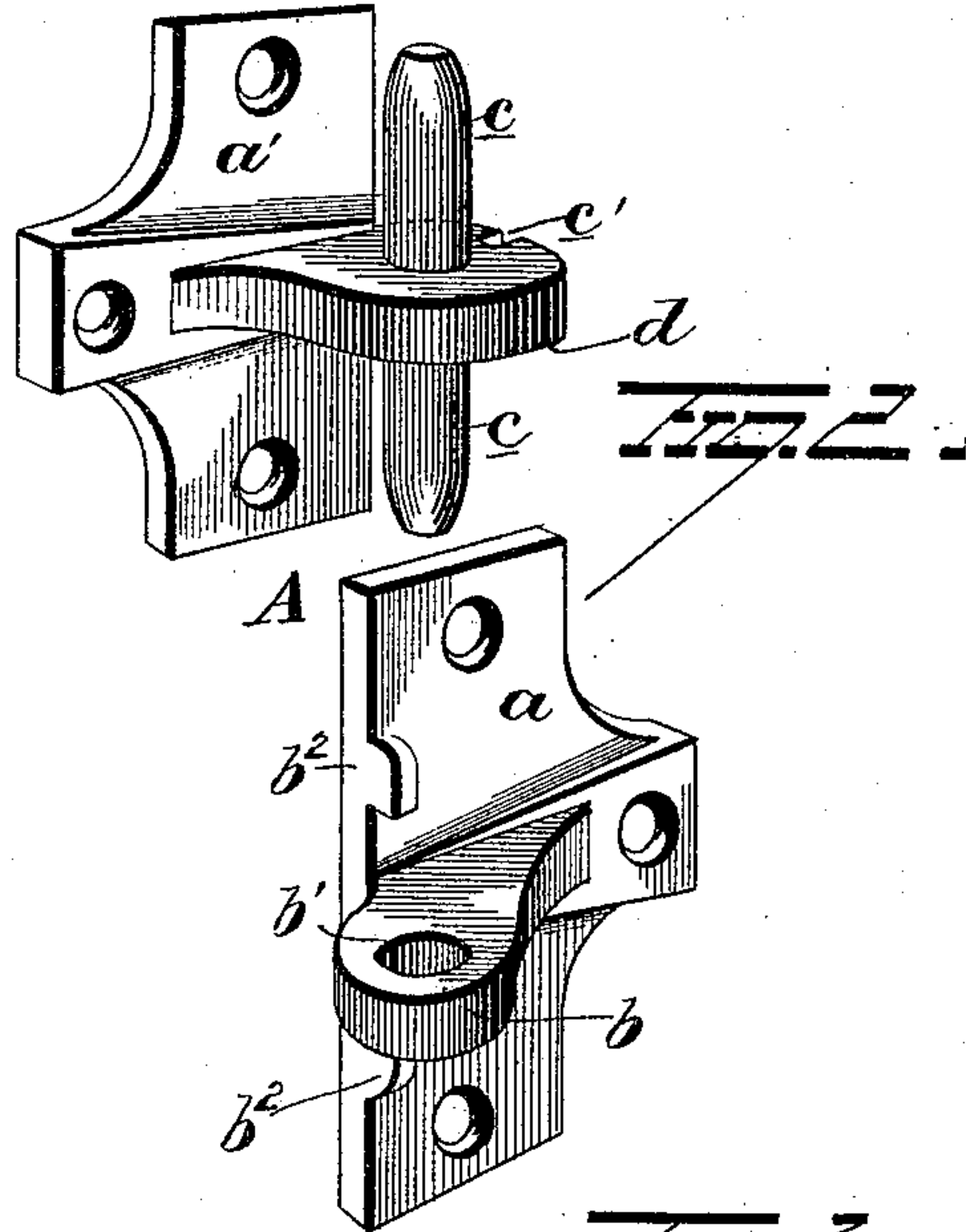
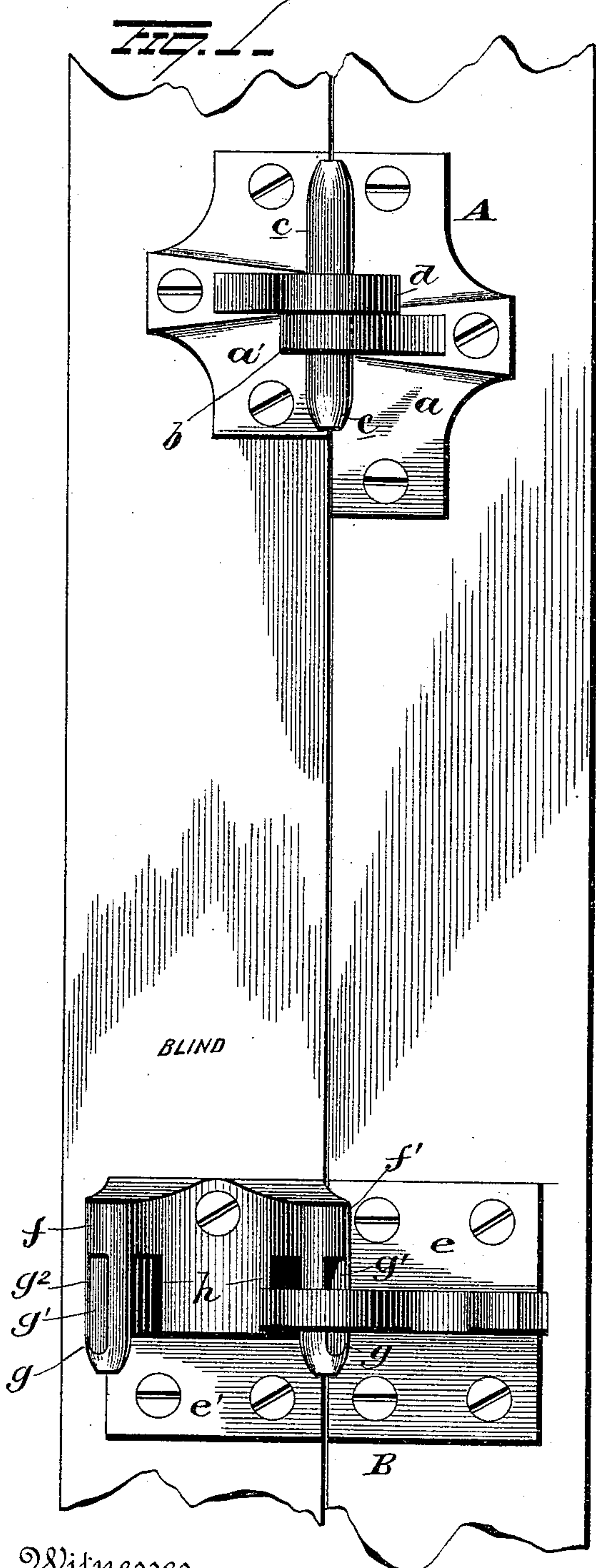


(No Model.)

L. PORTER.
HINGE.

No. 447,971.

Patented Mar. 10. 1891.



Witnesses
E. J. Nottingham
G. F. Downing

Inventor
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By his Attorney
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UNITED STATES PATENT OFFICE.

LANSING PORTER, OF AUBURN, NEW YORK.

HINGE.

SPECIFICATION forming part of Letters Patent No. 447,971, dated March 10, 1891.

Application filed November 8, 1890. Serial No. 370,734. (No model.)

To all whom it may concern:

Be it known that I, LANSING PORTER, of Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in lock-hinges adapted more particularly for window-blinds; and it consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a window-blind having my improved hinges applied thereto. Fig. 2 is a separate view of the upper hinge. Fig. 3 is a separate view of the lower hinge, and Fig. 4 is a plan view of the lower hinge.

A represents the upper hinge, and B the lower hinge. The upper hinge A comprises two leaves $a a'$, the leaf a being adapted to be secured to the window-frame, and is provided with an arm or disk b , which projects at right angles from the face thereof and slightly forward therefrom. The arm or disk b is provided with a perforation b' for the reception of one or the other of two pintles $c c$, which project in opposite directions from a disk or arm d , made integral with the leaf a' of the hinge, which leaf a' is secured to the blind. The leaf a is provided at each side of the arm b with lugs or projections b^2 , adapted when the parts of the hinge are put together to pass through a notch or recess c' , and thus prevent the separation of the parts of the hinge. By this construction it will be seen that a hinge will be produced which will be reversible and one which is particularly adapted for the upper hinge of a blind.

The lower hinge B comprises two leaves $e e'$, the leaf e , which is secured to the edge of the window-frame, being provided with an arm or projection i , having an eccentric slot i' therein for a purpose presently explained. At the opposite end of the leaf e an arm j projects from the face thereof, said arm being preferably made bevel at its end and provided with a recess to produce a hook or catch k in its outer edge. The leaf e' , which is se-

cured to the blind, is provided with two arms $f f'$ at each end, which terminate in downwardly-projecting pintles or posts g and between said pintles or posts and the leaf shoulders h are made to project from said leaf. The pintles g are each provided with two flat faces g' to produce an angle g^2 , and one of said pintles is adapted to enter the slot i' in the arm i of leaf e . From this construction it will be seen that as the blind is opened one of the shoulders h will ride upon the cam-edge of the arm or projection i and the angular portion of the pintle made to engage the inwardly-projecting wall of the eccentric slot i' . Thus the pintle in the slot i' will be forced to the other end of said slot as the blind is opened, and when the blind is nearly open the other pintle g will engage the beveled end of the arm j , after passing which the latter-mentioned post or pintle will be made to enter the hook k by the gravitation of the blind and the other pintle made to assume its normal position in the slot i' , whereupon the hinge B will be locked. It will be seen that the two shoulders act interchangeably as guides around the knuckle i of the other leaf, and that said shoulders also interchangeably serve as a bearing for the leaf e (as a lever) against the end of arm j (as the fulcrum of the lever) for the purpose of disengaging the pintle and of throwing the two leaves in parallel lines, and thus permitting the gravitation of the blind to cause the pintle to engage the hook, as previously explained. When it is desired to close the blind, it is simply necessary to force it slightly laterally to disengage the pintle from the hook k .

In securing the hinges in place they are so located that the entire weight of the blind is brought upon the upper hinge, and the lower hinge serves as a guide and lock. By this arrangement the blind will be suspended from the upper hinge and horizontal bearings in the lower hinge will be avoided, thus reducing friction in the lower hinge to a minimum.

It is evident that slight changes in the details of construction might be made without departing from the spirit of my invention without limiting its scope. Hence I do not wish to limit myself to precise details of construction herein set forth; but,

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

1. The combination, with a shutter, door, or
5 analogous device and support therefor, of an upper hinge for supporting the shutter or other device and a lower hinge consisting of two sections, one of which is provided with two
10 pintles of approximately the same size and the other section with a slot to receive one of the pintles and a catch to engage the other pintle, substantially as set forth.

2. The combination, with a window-blind and a window-frame, of an upper reversible
15 hinge for sustaining the weight of the blind and a lower reversible lock-hinge having no horizontal bearings, substantially as set forth.

3. In a reversible lock-hinge, the combination of a leaf having two pintles and a leaf
20 having an elongated slot for the reception of one of the pintles and an open recess or notch in which the other pintle rests when the two leaves of the hinge are in open adjustment, substantially as set forth.

4. In a lock-hinge, the combination, with a
25 leaf having two pintles of approximately the same size, of a leaf having an arm or knuckle provided with an elongated slot eccentric to the axis of the device carried by the hinges to receive one of said pintles and a catch to
30 receive the other pintle, substantially as set forth.

5. In a lock-hinge, the combination, with a
leaf having two pintles of approximately the
35 same size thereon and a shoulder in rear of each pintle, of a leaf having an arm provided with an eccentric slot to receive one of said pintles and a catch adapted to engage the other pintle, said catch and arm being guided
40 by the shoulders on the first-mentioned leaf, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

LANSING PORTER.

Witnesses:

R. S. FERGUSON,
S. G. NOTTINGHAM.