

H. E. HOKE.  
HINGE.

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925,910.

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Fig. 1.

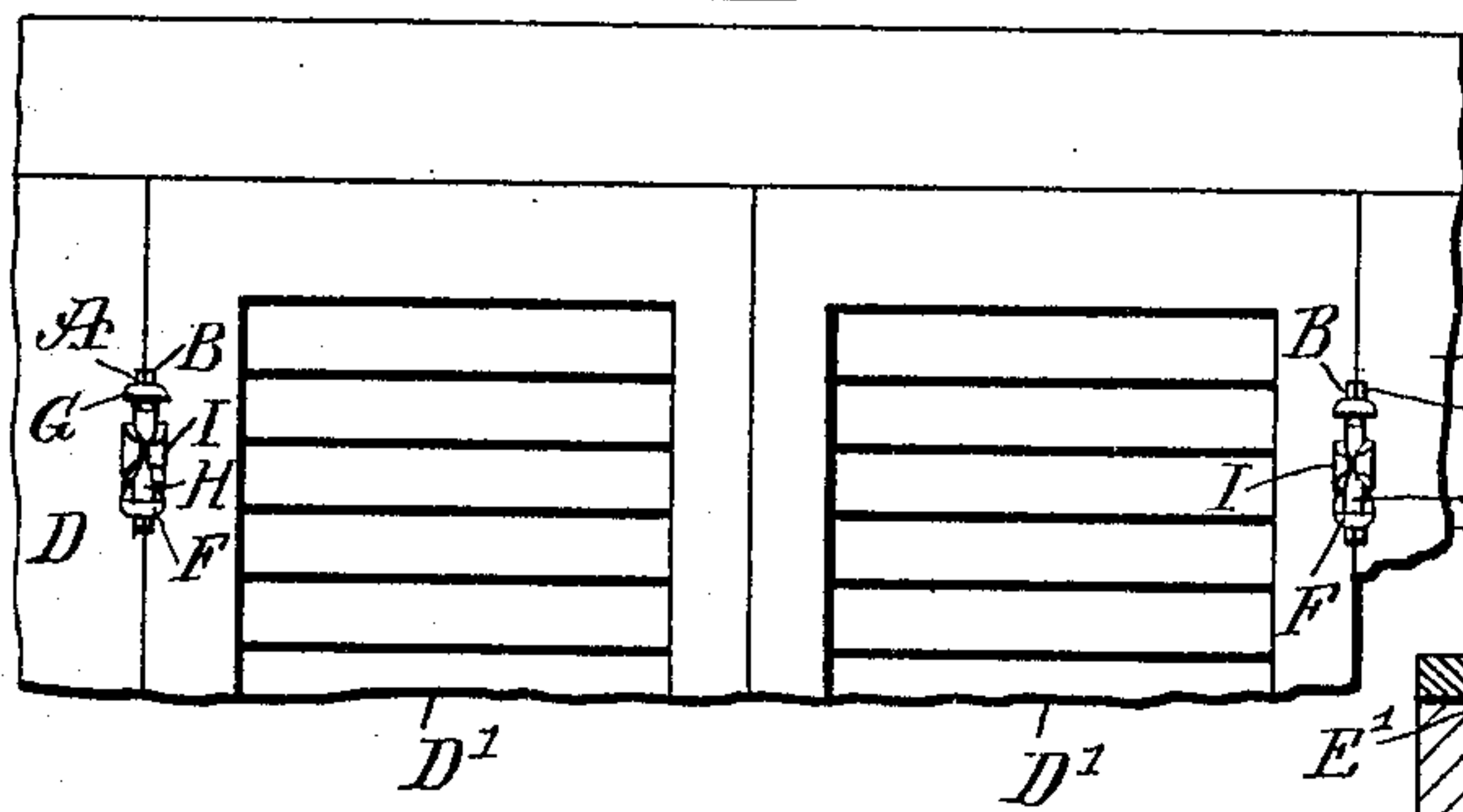


Fig. 2.

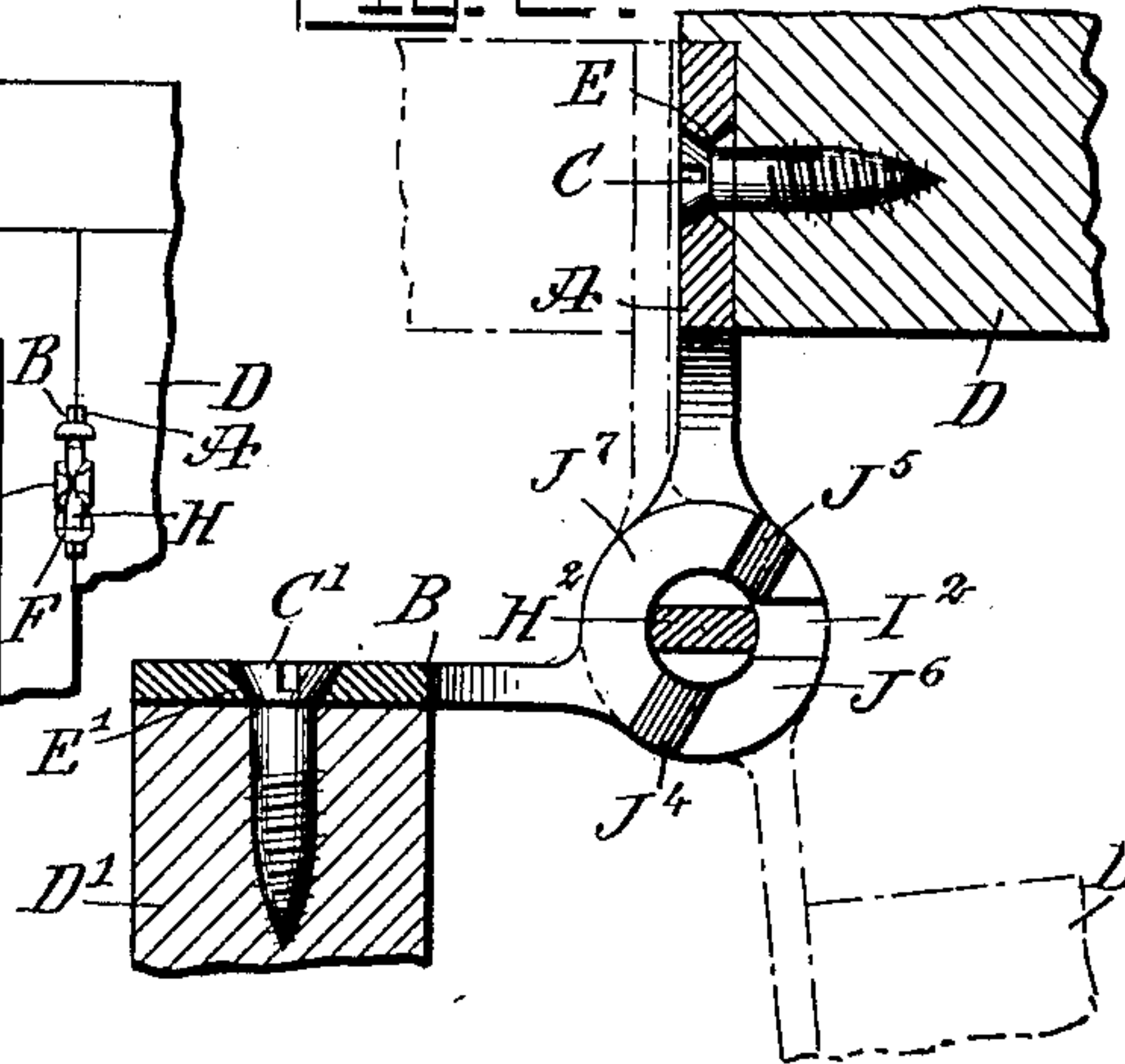


Fig. 3.

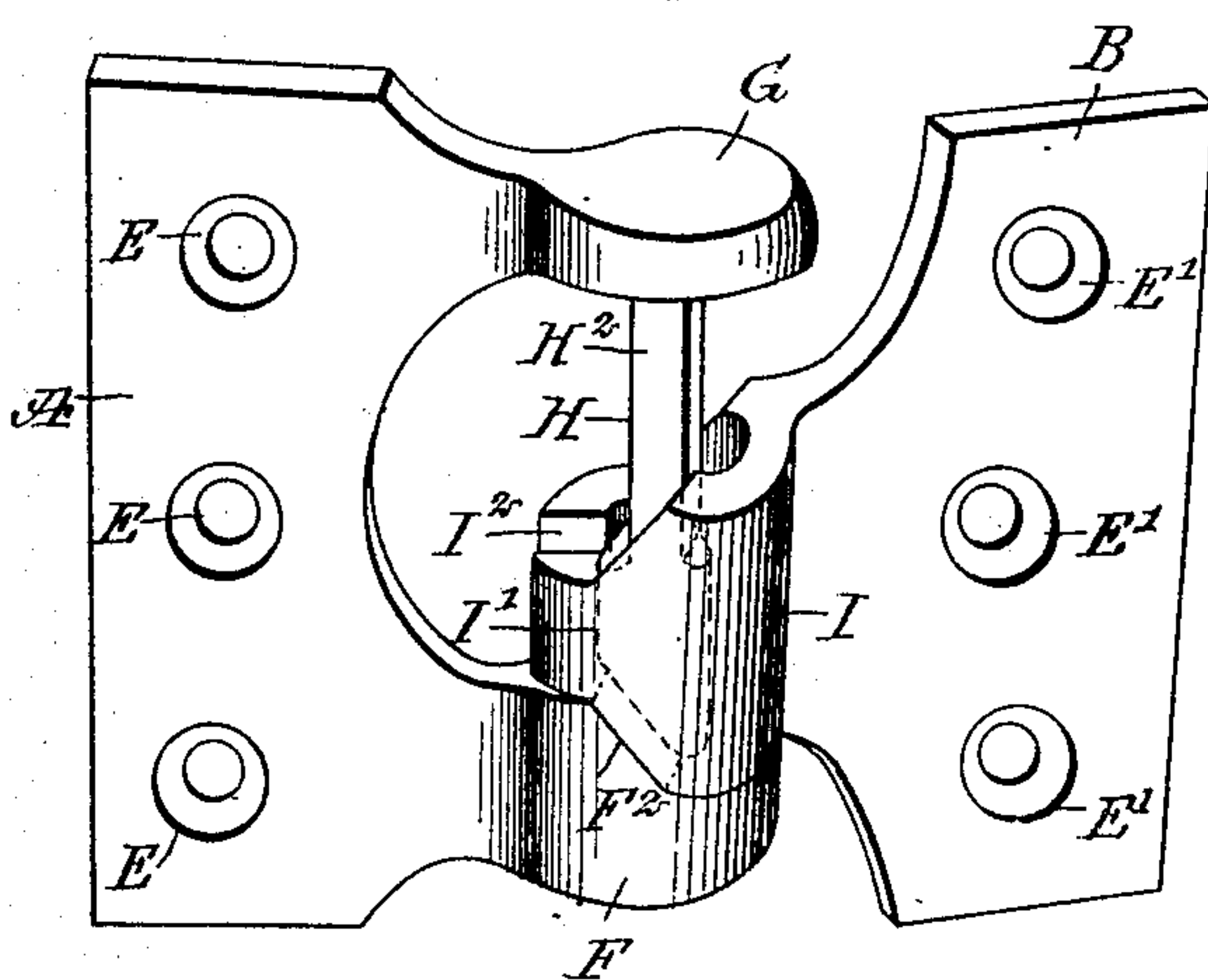


Fig. 4.

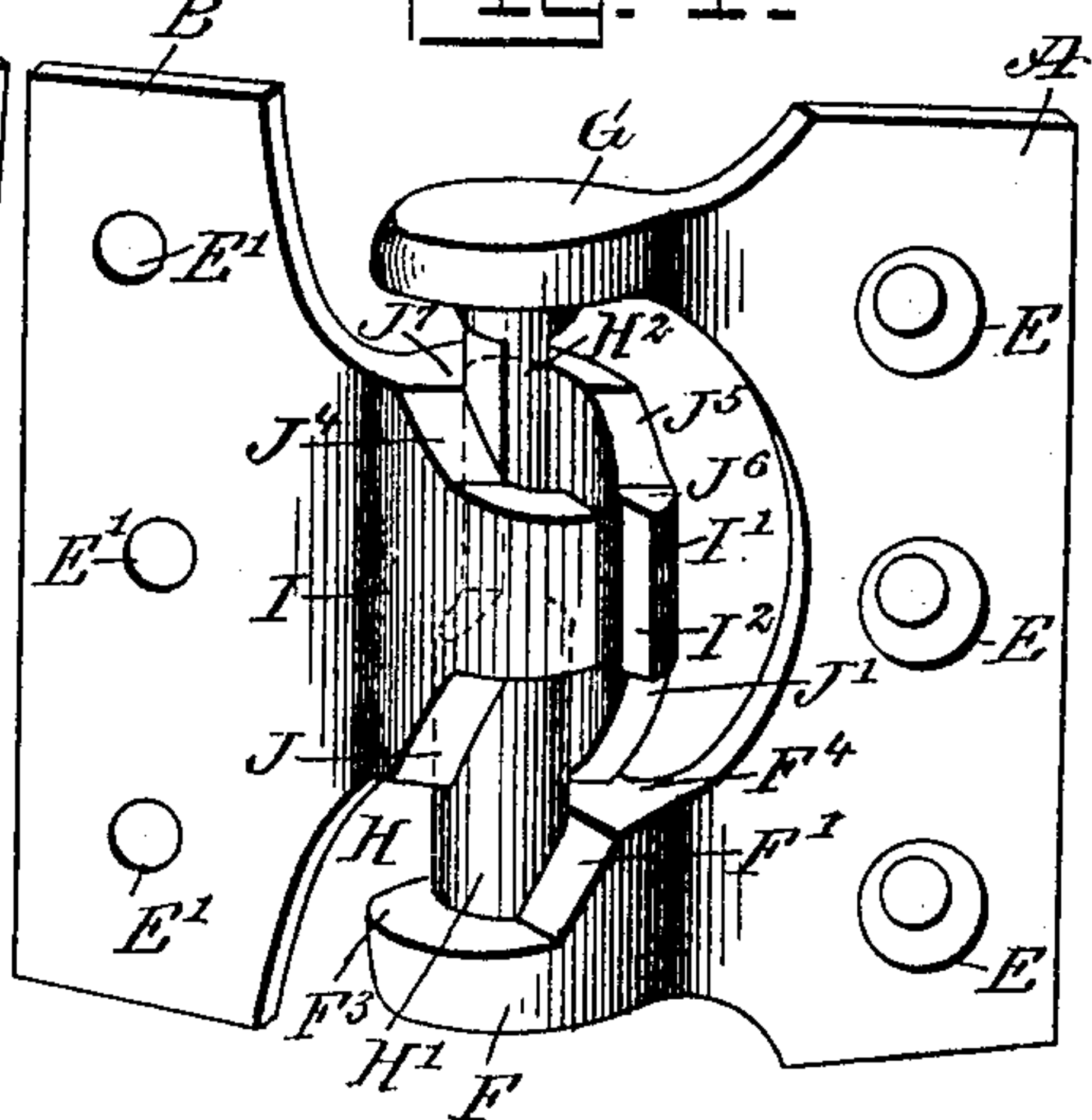
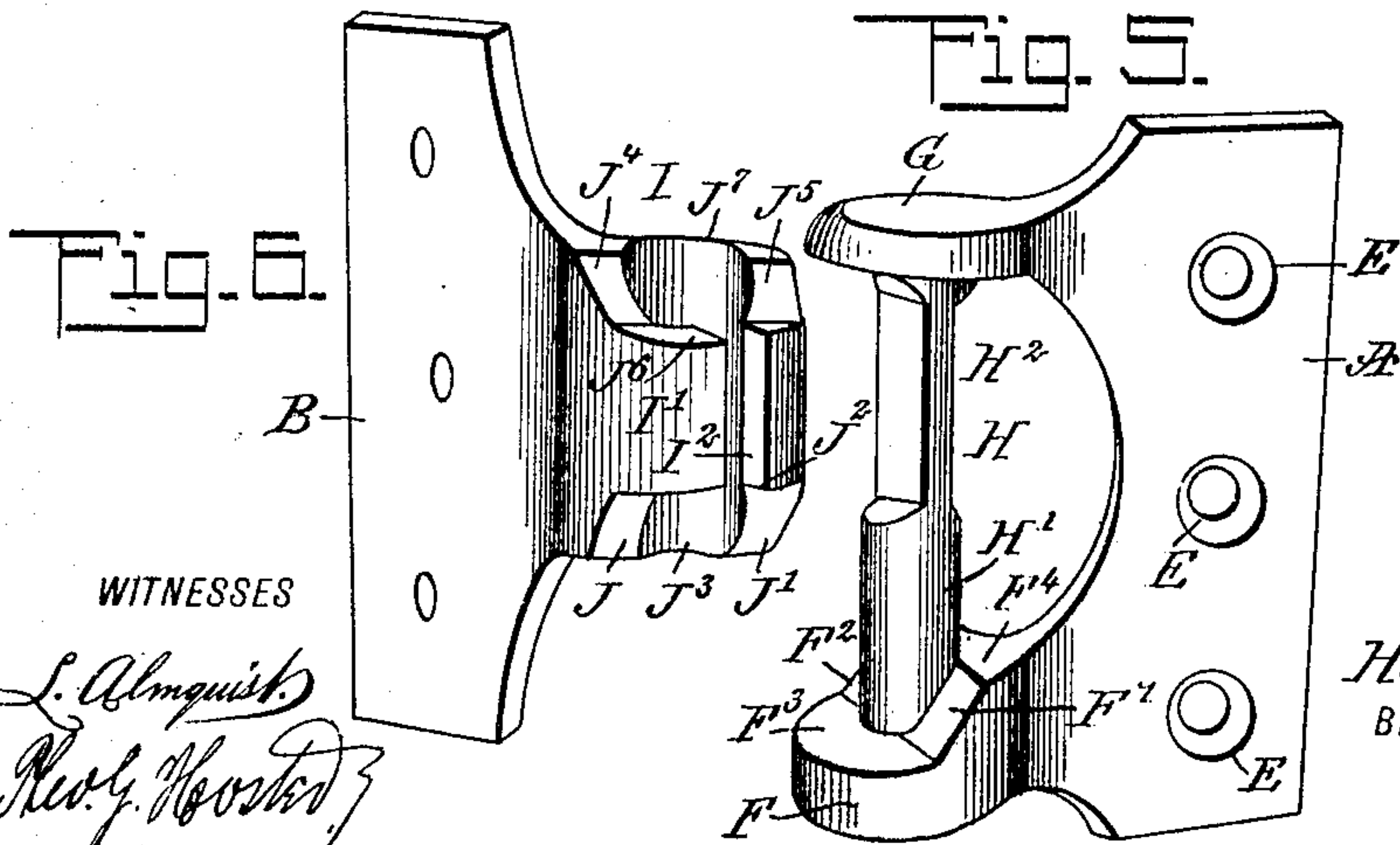


Fig. 5.



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# UNITED STATES PATENT OFFICE.

HENRY EYSTER HOKE, OF HANOVER, PENNSYLVANIA.

## HINGE.

No. 925,910.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed December 14, 1908. Serial No. 467,376.

*To all whom it may concern:*

Be it known that I, HENRY EYSTER HOKE, a citizen of the United States, and a resident of Hanover, in the county of York and State of Pennsylvania, have invented a new and Improved Hinge, of which the following is a full, clear, and exact description.

The invention relates to hinges for shutters and doors, and particularly such as hold the shutter or door locked in an open position, to prevent accidental closing.

The object of the invention is to provide a new and improved hinge, more especially designed for use on either the right or left shutter, and arranged to permit convenient hanging of the shutter; to prevent the shutter from falling off on an upward pull when closing the shutter; and to hold the shutter against accidental closing when in an open position. To attain these objects use is made of a pintle leaf arranged for right or left-hand attachment to the window casing or other support, and a movable leaf mounted to swing on the said pintle leaf and arranged for reversible attachment to the shutter by inversion.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of a pair of shutters in a closed position and provided with my improved hinges; Fig. 2 is an enlarged sectional plan view of the improvement as applied and showing the hinge partly open; Fig. 3 is a perspective view of the improvement; Fig. 4 is a similar view from the reverse side; and Fig. 5 is a like view of the same showing the hinge leaves separated from each other.

Of the two leaves A and B of the hinge, the leaf A is the fixed or pintle leaf, and is secured by screws or like fastening devices C to the window casing, door casing or other support D, the said pintle leaf A being provided with apertures E for the passage of the screws C, and the apertures E being countersunk on both faces of the pintle leaf, to allow the attachment of the pintle leaf to either the right or the left side of the support D.

The pintle leaf A is provided with integral bottom and top knuckles F and G, integrally connected with each other by a pintle H, having a lower cylindrical portion H' and an upper flattened portion H<sup>2</sup> arranged at right

angles to the face of the leaf A. The lower knuckle F is provided with two inclines F', F<sup>2</sup> located diametrically opposite the pintle H and connecting the horizontal portions F<sup>3</sup>, F<sup>4</sup> of the knuckle F with each other, as plainly indicated in the drawings.

The leaf B is a movable leaf and is provided with apertures E' countersunk on one face of the leaf B, and through the apertures E' pass screws C' or other fastening means, for securing the leaf B to either the right or left shutter D', as indicated in Figs. 1 and 2. The movable leaf B is provided with a knuckle I, mounted to turn on the pintle H, and having a reduced middle portion I', provided with a vertically disposed slit I<sup>2</sup>, for engagement with the flattened portion H<sup>2</sup> of the pintle H, to allow of engaging the knuckle I with the pintle H, it being understood that when the knuckle I is engaged with the flattened portion H<sup>2</sup> of the pintle H, and the leaf B and with it the shutter D' is dropped, then the knuckle I swings on the lower cylindrical portion H' of the pintle H. The knuckle I is provided on one end of the middle portion I' with a set of diametrically oppositely disposed inclines J and J', connecting the horizontal portions J<sup>2</sup> and J<sup>3</sup> with each other, and the other end of the middle portion I' of the knuckle I is provided with a set of similarly-disposed inclines J<sup>4</sup>, J<sup>5</sup>, connecting the horizontal portions J<sup>6</sup>, J<sup>7</sup>, with each other. By the arrangement described the movable leaf B is made reversible by inversion; that is, can be used on either the right or the left shutter by placing the leaf B in an upside down position, to bring either set of inclines J, J' or J<sup>4</sup>, J<sup>5</sup> into active position relative to the inclines F', F<sup>2</sup> of the knuckle F previously described. Thus from the foregoing it will be seen that the two leaves A and B are reversible, but the leaf A is reversible from right to left while the leaf B is reversible by inversion, and hence the same hinge can be used for upper and lower hinges on both shutters D'.

By reference to Fig. 2, it will be noticed that the knuckle I is slightly offset relative to the face of the leaf B, while the knuckles F and G are not, and the slot or slit I<sup>2</sup> is parallel to the face of the leaf B and in alinement with the flattened portion H<sup>2</sup>, at the time the shutter D' is in a half open position, so that the leaf B can be readily connected and disconnected to and from the leaf A at the time the leaf B is raised, to bring the slot I<sup>2</sup> opposite the flattened portion H<sup>2</sup> of the pintle H.



The inclines  $F'$ ,  $F^2$  stand at right angles to the face of the leaf A, while the sets of inclines J,  $J'$  and  $J^4$ ,  $J^5$  are arranged obliquely relative to the face of the leaf B, so that when the shutter is open, as shown in dotted lines in Fig. 2, then the shutter stands at a slight angle to the face of the support D, and the then lower inclines J,  $J'$  or  $J^4$ ,  $J^5$  are in contact with the inclines  $F'$ ,  $F^2$ , to hold the shutter against accidental movement while in an open position. It will also be noticed that when the shutter is open, the slit  $I^2$  is out of register with the flattened portion  $H^2$  of the pintle H, so that even lifting of the shutter does not cause accidental disconnection of the leaf B from the leaf A, as the leaf B can only be disconnected from the leaf A at the time the shutter  $D'$  is in a half open position, as shown in Fig. 2.

When the surface  $J^2$  (or  $J^7$ ) is resting on the surface  $F^4$ , the middle portion  $I'$  of the knuckle I is still in engagement with the cylindrical portion  $H'$  of the pintle H, so that when the shutter is closed or opened the knuckle I is not liable to become accidentally detached from the pintle  $H'$ , and when it is desired to place the shutter in position or to remove it for any cause whatsoever, then it is incumbent on the operator to raise the shutter sufficiently high and to place it into the angular position shown in Fig. 2, in order to locate the middle portion  $I'$  of the knuckle opposite the flattened portion  $H^2$  and above the cylindrical portion  $H'$  of the pintle H.

When the hinge is used on the right shutter  $D'$ , the leaves A and B are in the position shown in Figs. 2 and 3, that is, the inclines J,  $J'$  are in active position relative to the inclines  $F'$ ,  $F^2$ , and when the hinge is applied to the left shutter the leaf B is inverted, to bring the inclines  $J^4$ ,  $J^5$  into active position relative to the inclines  $F'$ ,  $F^2$ .

When the shutter is swung from an open into a closed position, then the corresponding incline J,  $J'$ ,  $J^4$  or  $J^5$  travels up the corresponding incline  $F'$  or  $F^2$ , so that finally the

surfaces  $J^3$  or  $J^7$  rest on the upper surface  $F^4$  of the knuckle F.

From the foregoing it will be seen that the shutter can be conveniently hung, and without danger of the shutter falling off on an upward pull when closing the shutter, and the shutter is held against accidental closing when in an open position, and the hinges can be used on the right or left shutter and at both the top and bottom thereof.

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

1. A hinge comprising a fixed leaf for attachment to a fixed support and having top and bottom knuckles, the bottom knuckle having diametrically opposite inclines, and a pintle integral with the said knuckles, the lower portion of the pintle being cylindrical and the upper portion being flattened, and a movable leaf for connection with a shutter or door, and having a knuckle provided with a central slit portion, sets of opposite inclines on the opposite ends of the central slit portion, the said sets of inclines being alike, and either being adapted for operative working with the inclines on the knuckle of the fixed leaf.

2. A hinge, comprising a stationary leaf having top and bottom knuckles and a pintle connecting the knuckles, the bottom knuckle having two inclines and the pintle having a flattened portion which is at right angles to the face of the leaf, and a removable leaf provided with an offset knuckle having a reduced and slotted middle portion, and inclined surfaces at each end, the slot being parallel to the face of the leaf and the inclined surfaces oblique thereto.

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

HENRY EYSTER HOKE.

Witnesses:

EDWARD A. MICHAEL,  
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