

No. 725,712.

PATENTED APR. 21, 1903.

R. W. HUBBARD.  
HINGE.

APPLICATION FILED JULY 28, 1902.

NO MODEL.

Fig. 1.

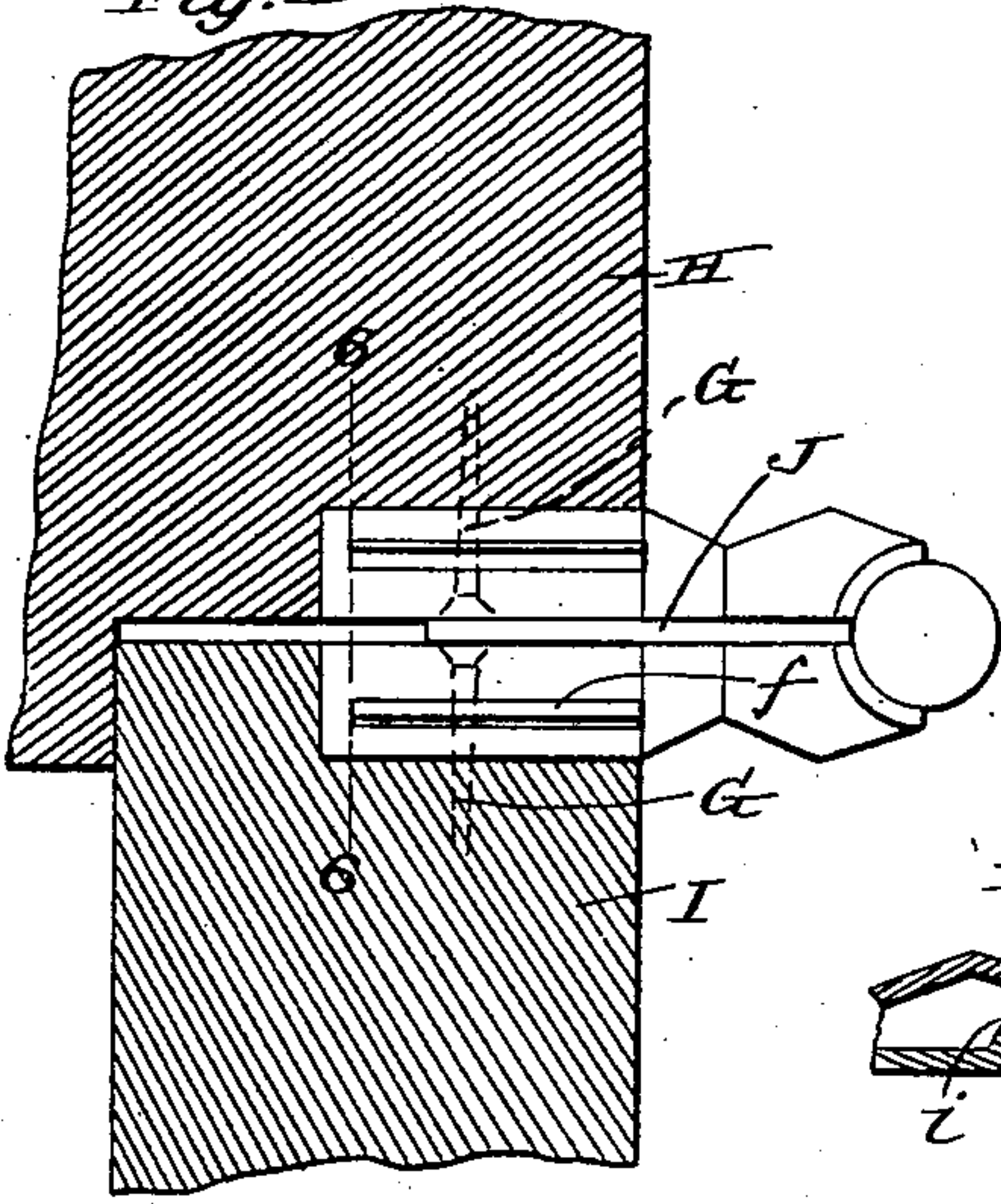


Fig. 5.

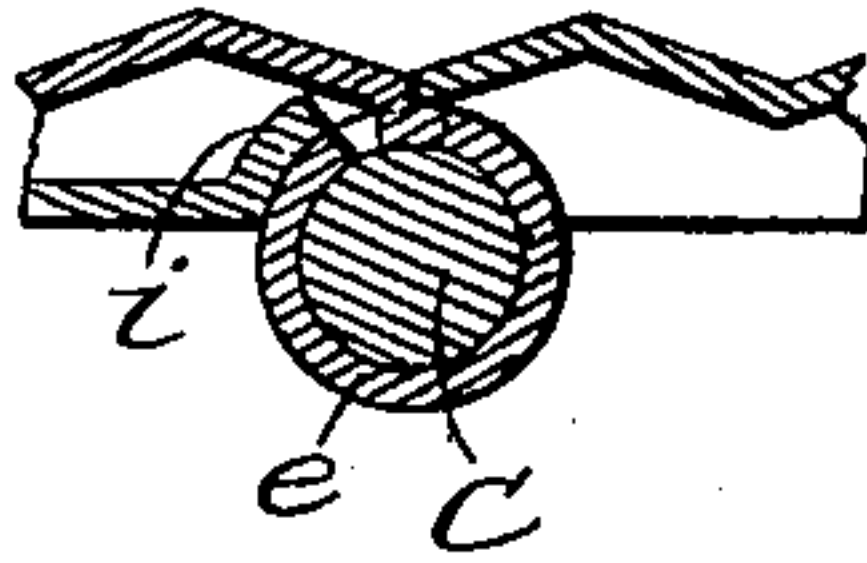


Fig. 2.

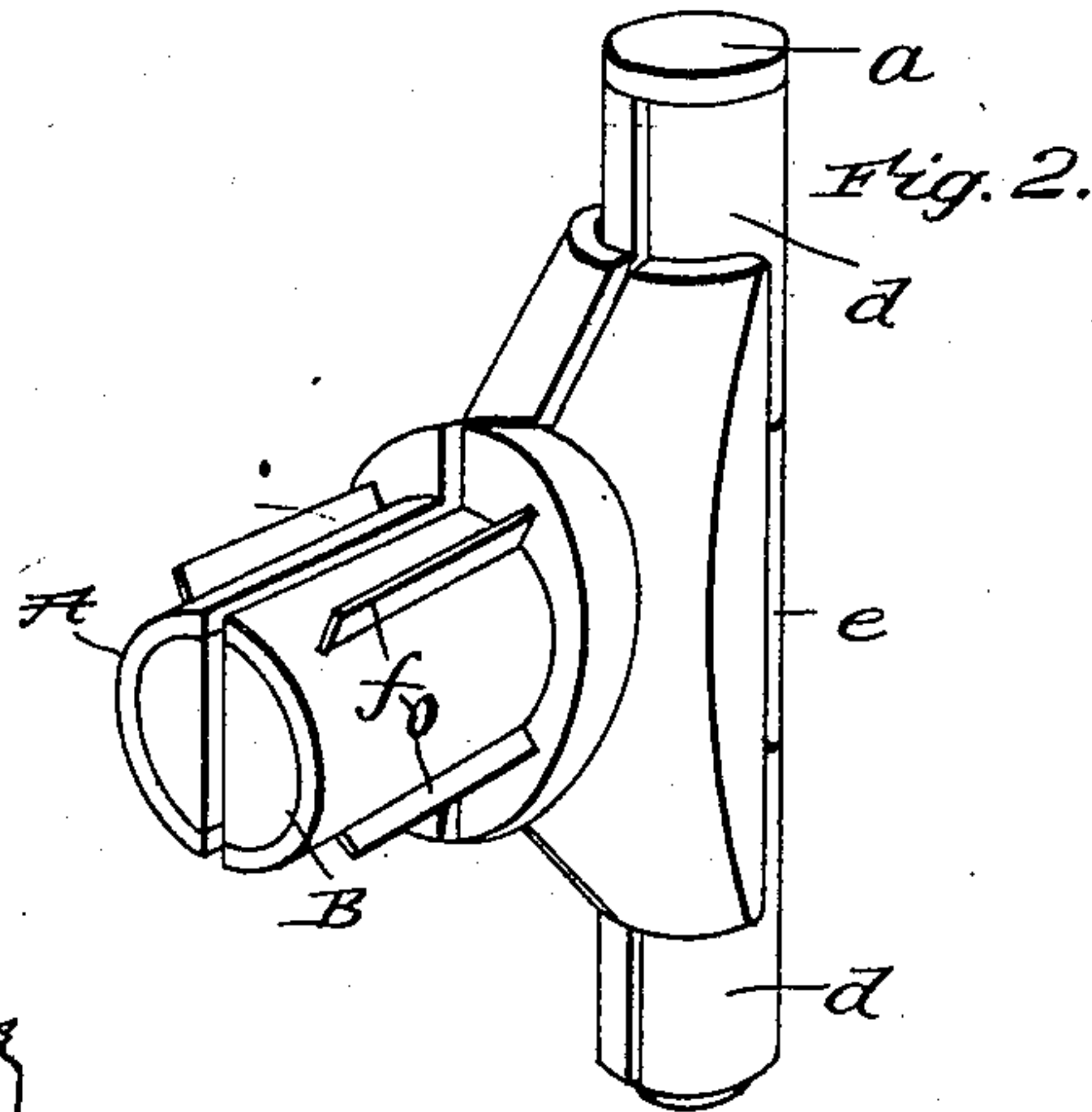


Fig. 4.

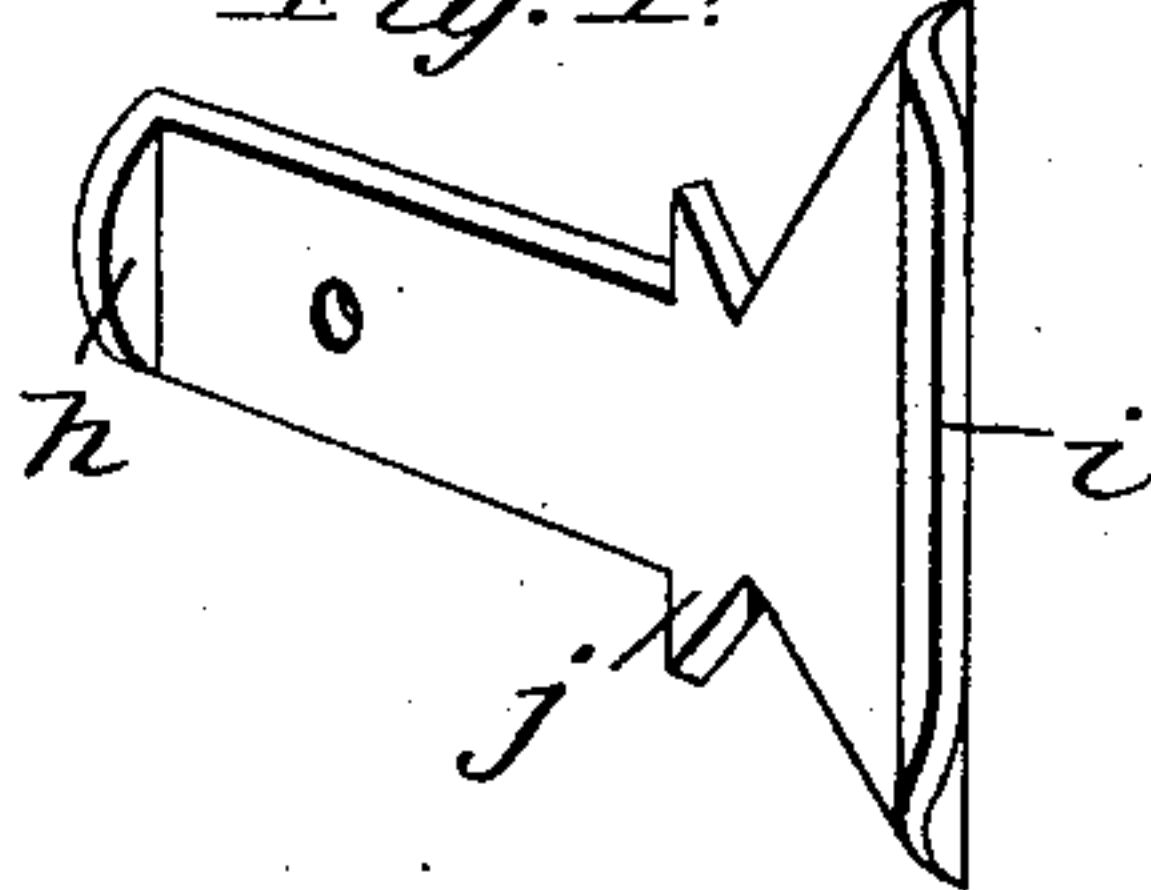


Fig. 3.

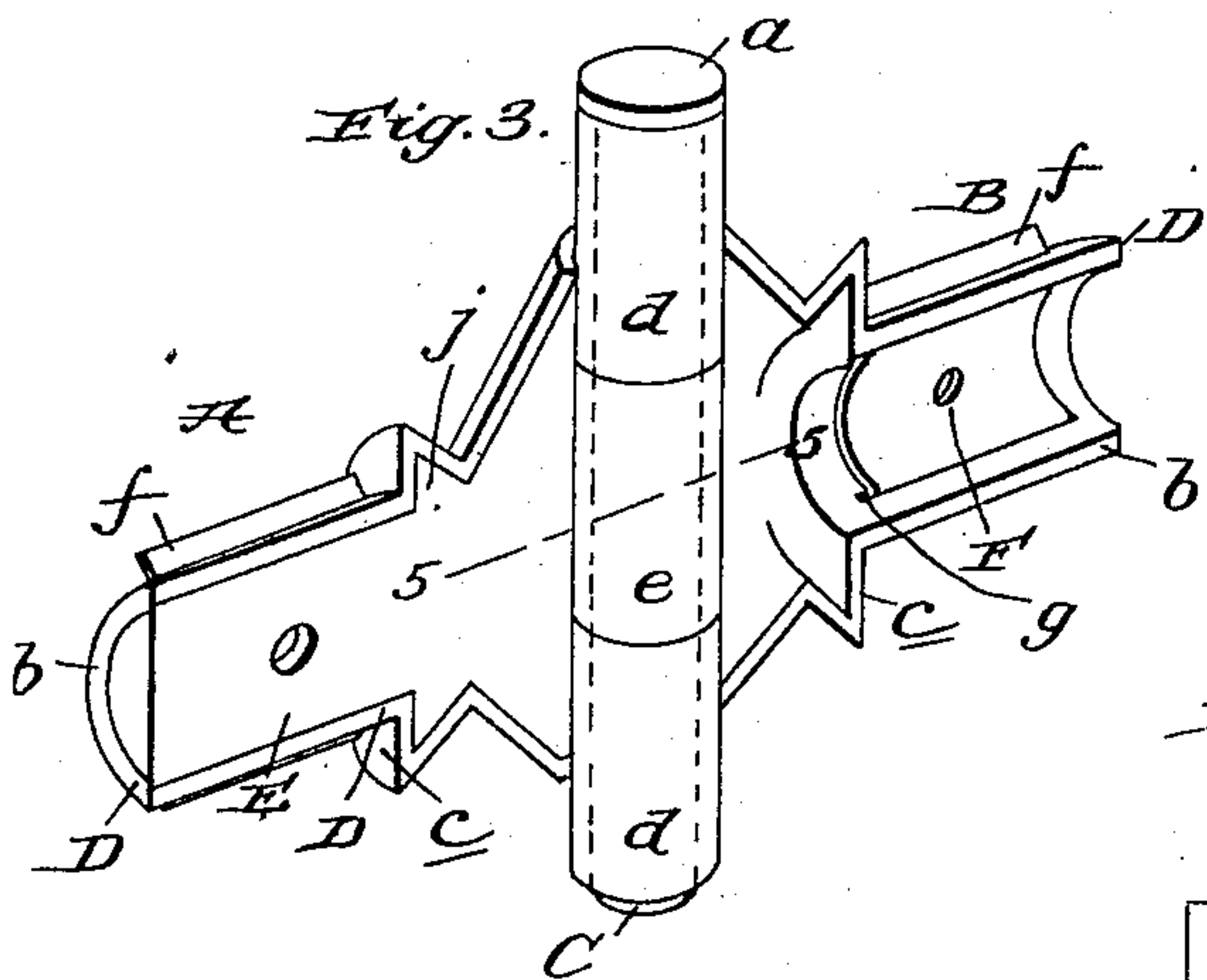


Fig. 6.

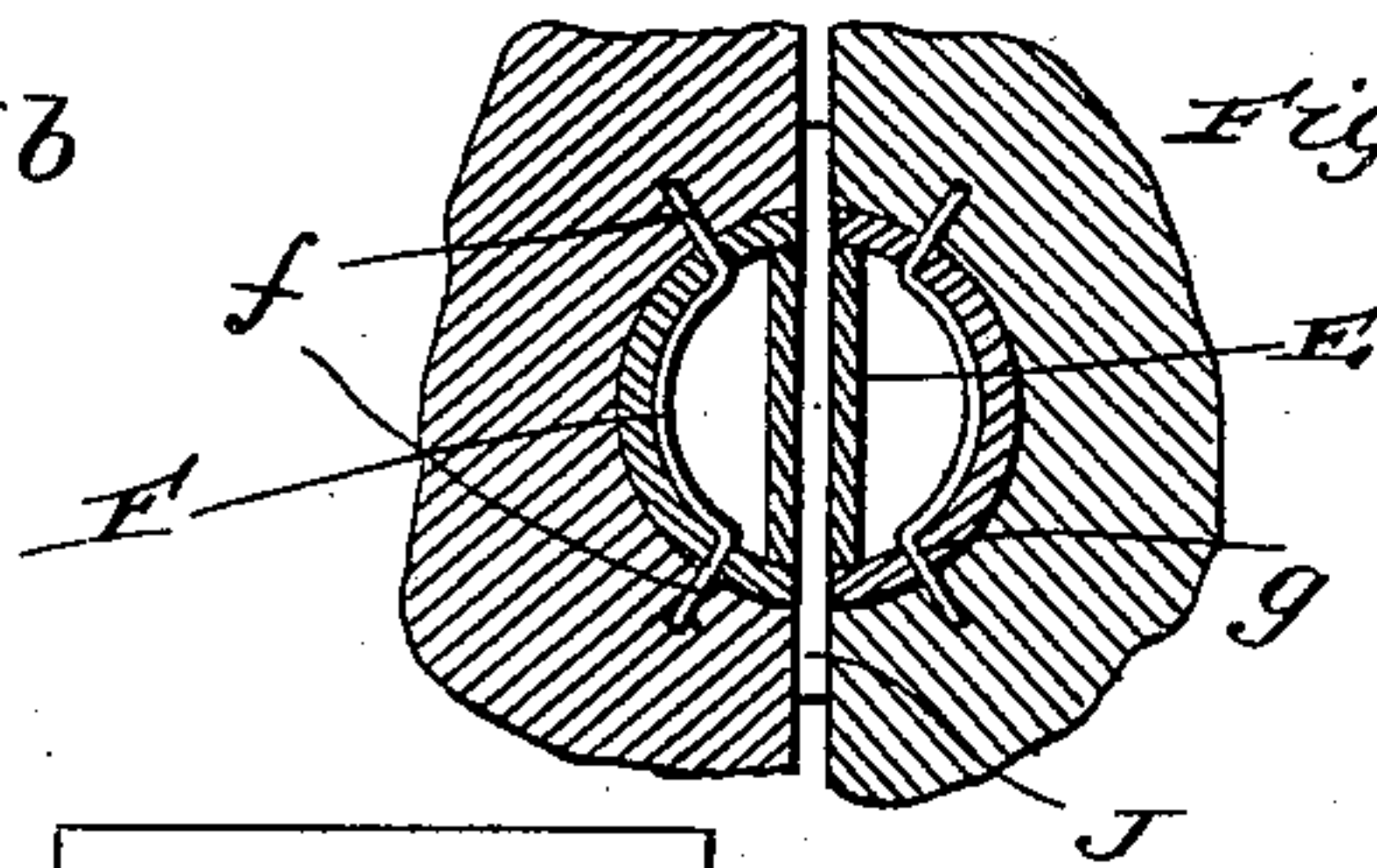


Fig. 7.

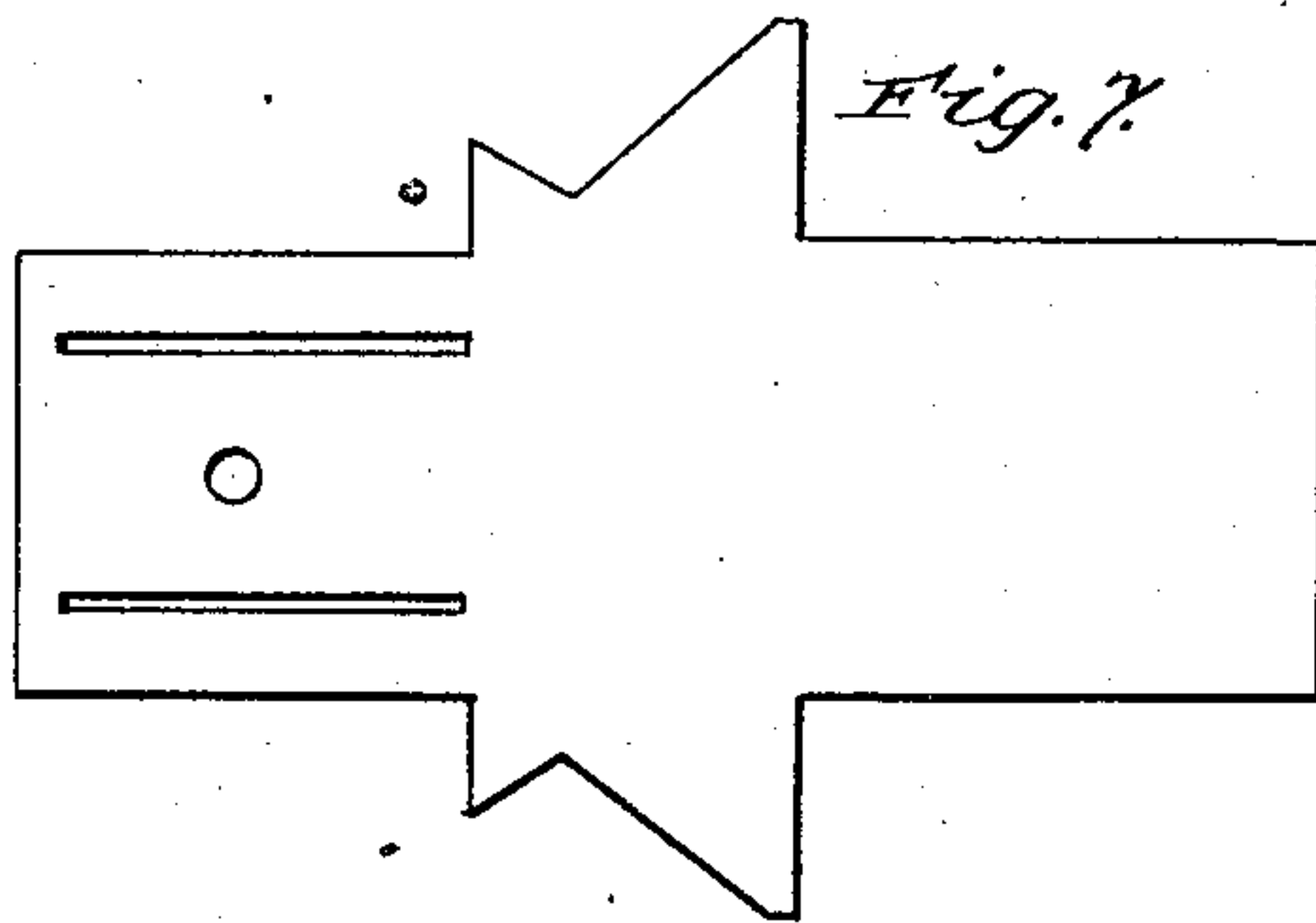
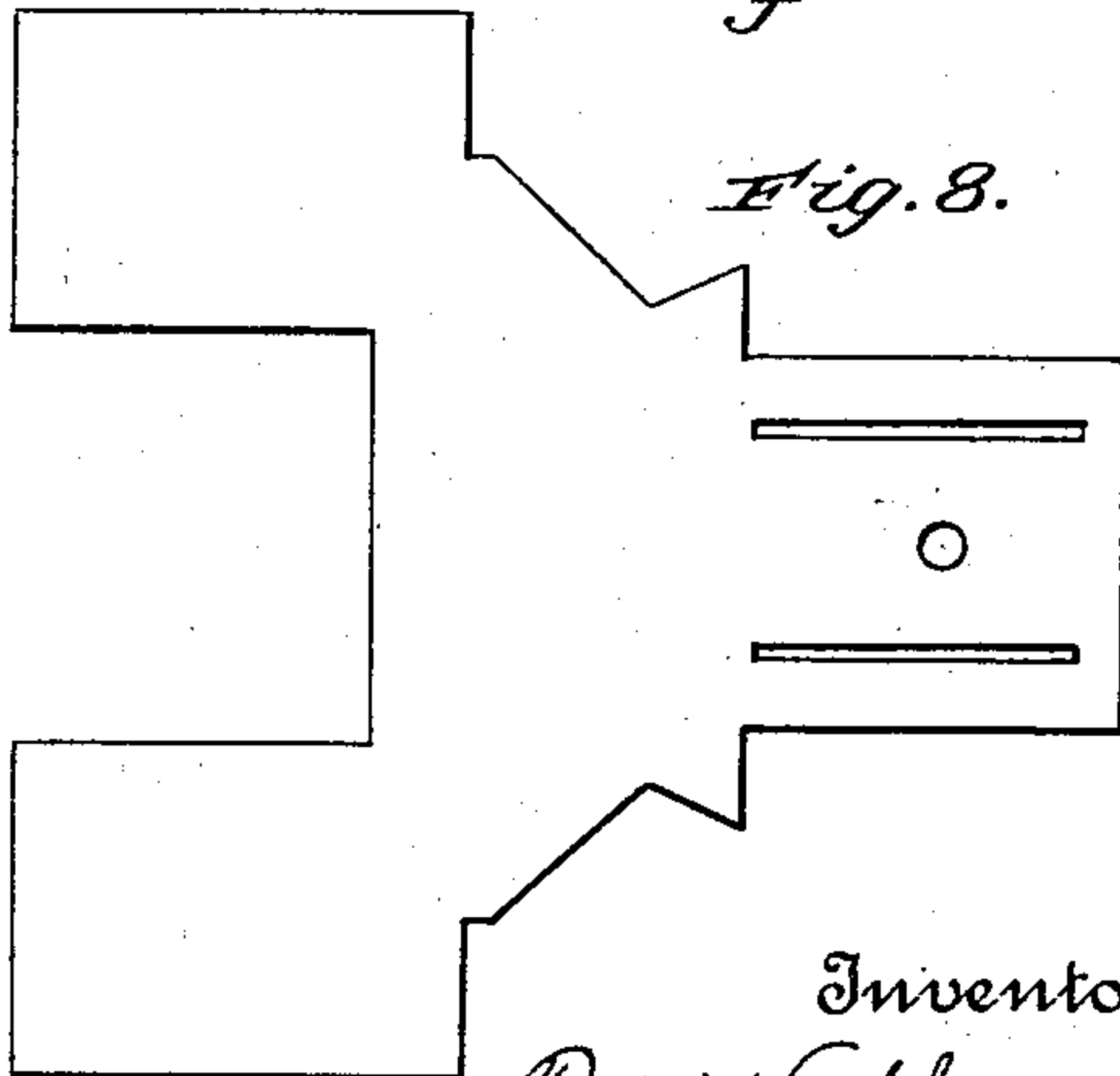


Fig. 8.



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# UNITED STATES PATENT OFFICE.

RICHARD W. HUBBARD, OF ASHTABULA, OHIO.

## HINGE.

SPECIFICATION forming part of Letters Patent No. 725,712, dated April 21, 1903.

Application filed July 28, 1902. Serial No. 117,345. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD W. HUBBARD, a citizen of the United States, residing at Ashtabula, in the county of Ashtabula and State of Ohio, have invented new and useful Improvements in Hinges, of which the following is a specification.

My invention relates to improvements in hinges, more particularly the kind disclosed in my Letters Patent No. 586,663, of July 20, 1897; and it consists in the peculiar and advantageous hinge hereinafter described and claimed, the sections or members of which are formed entirely of sheet metal.

In the accompanying drawings, Figure 1 is a horizontal section taken through a door and door-jamb and illustrating my improved hinge as properly connected thereto. Fig. 2 is a perspective view of the hinge removed. Fig. 3 is a perspective view of the hinge as it appears when open and with the inner part of one section or member removed. Fig. 4 is a perspective view of said inner part. Fig. 5 is a detail transverse section taken in the plane indicated by the broken line 5 5 of Fig. 3. Fig. 6 is a transverse section taken in the plane indicated by the broken line 6 6 of Fig. 1. Fig. 7 is a view of the sheet-metal blank from which the outer part of one section or member of the improved hinge is formed, and Fig. 8 is a view of the sheet-metal blank from which the outer part of the other section or member of the improved hinge is formed.

Similar letters of reference designate corresponding parts in all of the several views of the drawings, referring to which—

A is one section or member of my improved hinge, B the other section or member, and C a pintle which pivotally connects the sections or members A and B and has a head or knob *a* at its upper end. The sections or members A B respectively comprise an outer part D, an inner part E, and an intermediate part F, all of which are suitably formed of sheet metal, the blank from which the part D of section A is produced being shown in Fig. 8 and that from which the part D of section B is produced being shown in Fig. 7. The parts D are alike in that they have outer end portions *b* of concavo-convex, preferably semi-circular, form in cross-section and shoulders

*c* at the inner ends of said portions *b*; but they differ in that while the part D of the section or member A has two barrels *d*, with a space between them, the part D of the section or member B has but a single barrel *e*, said barrel *e* being designed to be arranged between the barrel *d* and, together with the same, receive the pintle C. The intermediate parts F of the sections or members A B are arranged at the inner sides of and curved in conformity to the end portions *b* of parts D, and they have fins *f*, which extend through slots *g* in the portions *b*, Figs. 2 and 6. These fins are disposed as shown in order to enable them to cut into the wood diagonally across the grain when the hinge is driven into position, as presently described, this to prevent splitting of the wood and to hold the members A B in the wood incident to the driving of the hinge. The inner parts E of the sections or members A have angularly-disposed and rounded portions *h* at their outer ends designed to rest flush with the outer ends of the parts D, curved lips *i* at their inner ends designed to enter under and conform to the barrels of parts D, and lateral projections *j*, shaped to enter the recesses of the parts D back of the shoulders *c*. When the parts E are arranged in the parts D of the sections or members A B in the manner shown and described, it will be seen that they will rest flush with the inner edges of the parts D, and in consequence the sections or members A B will respectively present the appearance of being formed in one piece. It will also be observed that when screws G are passed through the coincident apertures in the parts E, F, and D and into a door and door-jamb to connect the sections or members A and B to said door and door-jamb said screws will serve the additional function of securing the parts E in the parts D.

When desirable, the parts E may be secured in the parts D by means other than the screws G—as, for instance, by brazing—without involving a departure from the scope of my invention.

In applying my improved hinge the door is fitted and placed in the position in which it is to hang, and a hole is bored partly in the door-jamb (indicated by H) and partly in the



door, (indicated by I,) the feed of the point of the auger-bit being started in the crack between the jamb and door. A centering-plate J, Fig. 1, is then placed between the sections A and B, and the hinge is driven into the hole by hammer-blows applied to the barrels, so that the fins *f* cut into the wood and hold the sections A B in place, after which the door is opened and the screws G driven home.

It will be appreciated from the foregoing that by reason of the sections A B being formed of pieces of sheet metal said sections are susceptible of being very easily and cheaply manufactured, also that the said sections are strong and well capable of withstanding the usage to which hinges are ordinarily subjected.

I have entered into a detailed description of the construction and relative arrangement of parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my claims.

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

1. As a new article of manufacture, a hinge section or member, formed of sheet metal, and comprising a slotted outer part, an inner part, and an intermediate part interposed between the outer and inner parts, and having one or more fins extending through the slot or slots of the outer part.

2. As a new article of manufacture, a hinge section or member comprising an outer, hollow part of sheet metal, and an inner part of

sheet metal, held in the hollow, outer part flush with the inner side thereof.

3. As a new article of manufacture, a hinge section or member comprising an outer, hollow part, formed of sheet metal, and having a barrel or barrels at one end, and an inner sheet-metal part held in the outer part, flush with the inner side thereof and having a lip at one end engaging the barrel or barrels of said outer part.

4. As a new article of manufacture, a hinge section or member comprising an outer, hollow part provided with a barrel or barrels, and also with longitudinal slots, an inner part held in the outer part flush with the inner side thereof, and a part interposed between the outer part and the inner part, and having fins extending through the slots in the former.

5. As a new article of manufacture, a hinge section or member comprising an outer, hollow part of sheet metal, having a barrel at one end, a forward portion of concavo-convex form in cross-section, and a shoulder in rear of said forward portion, and also having slots in said forward portion, an inner part of sheet metal arranged in the hollow outer part flush with the inner side thereof, and having the angular and rounded forward end, and also having a lip at its rear end engaging the barrel, and a sheet-metal part disposed between the outer and inner parts, and having fins extending through the slots in the outer part.

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

RICHARD W. HUBBARD.

Witnesses:

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E. C. HUBBARD.