

J. WRIGHT.
HINGE.

APPLICATION FILED MAR. 26, 1910.

975,097.

Patented Nov. 8, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

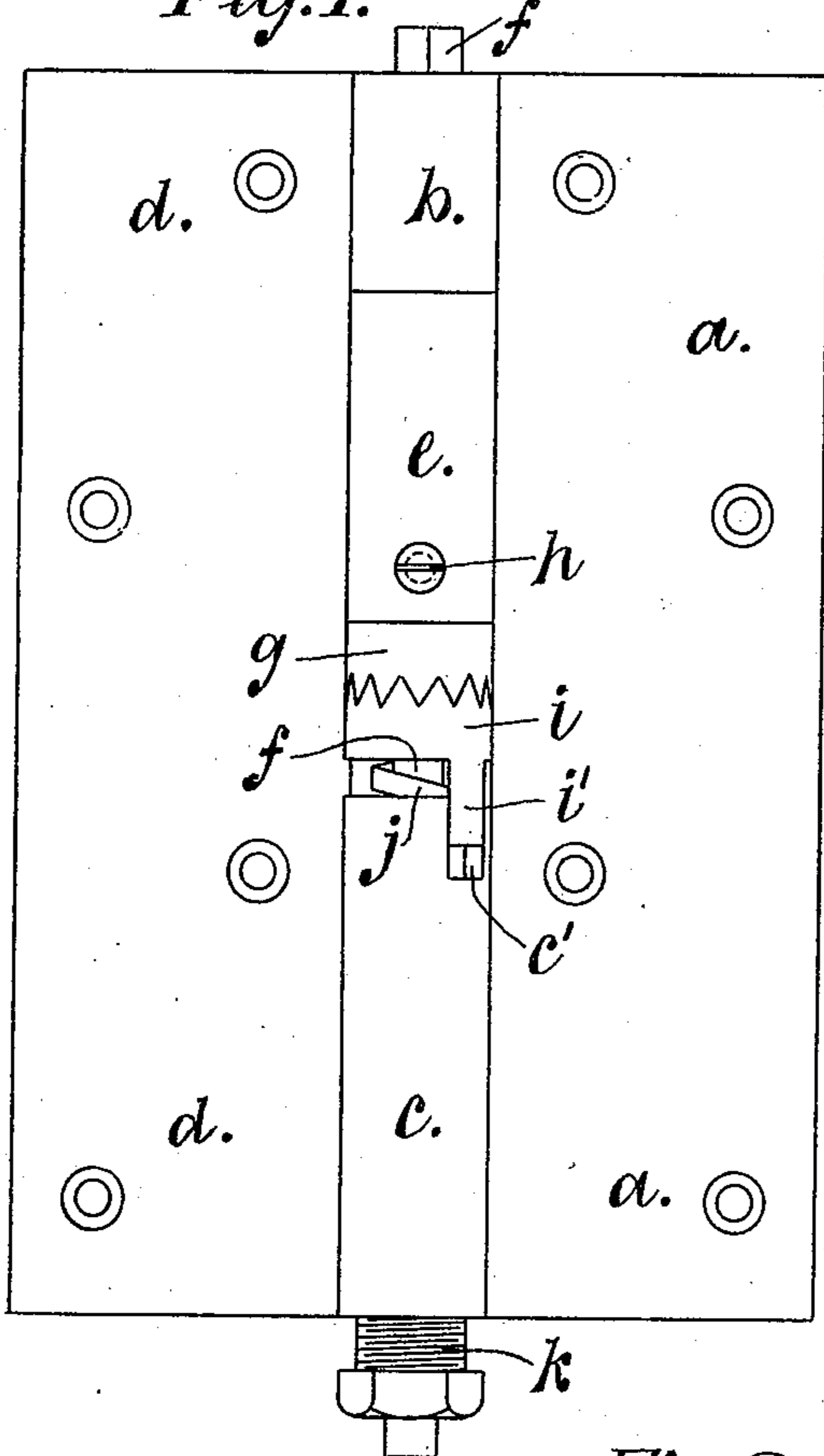


Fig. 3.

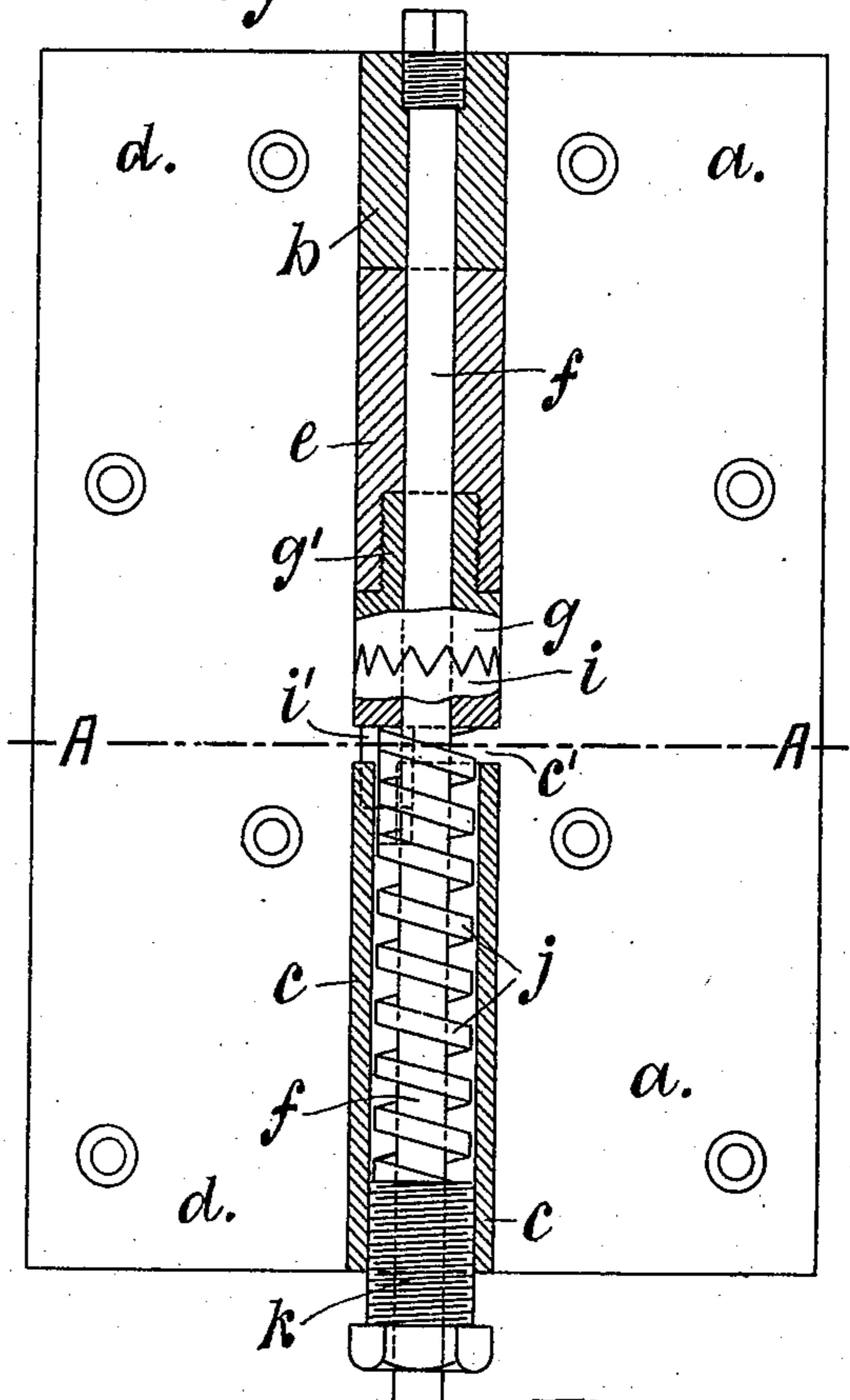


Fig. 2.

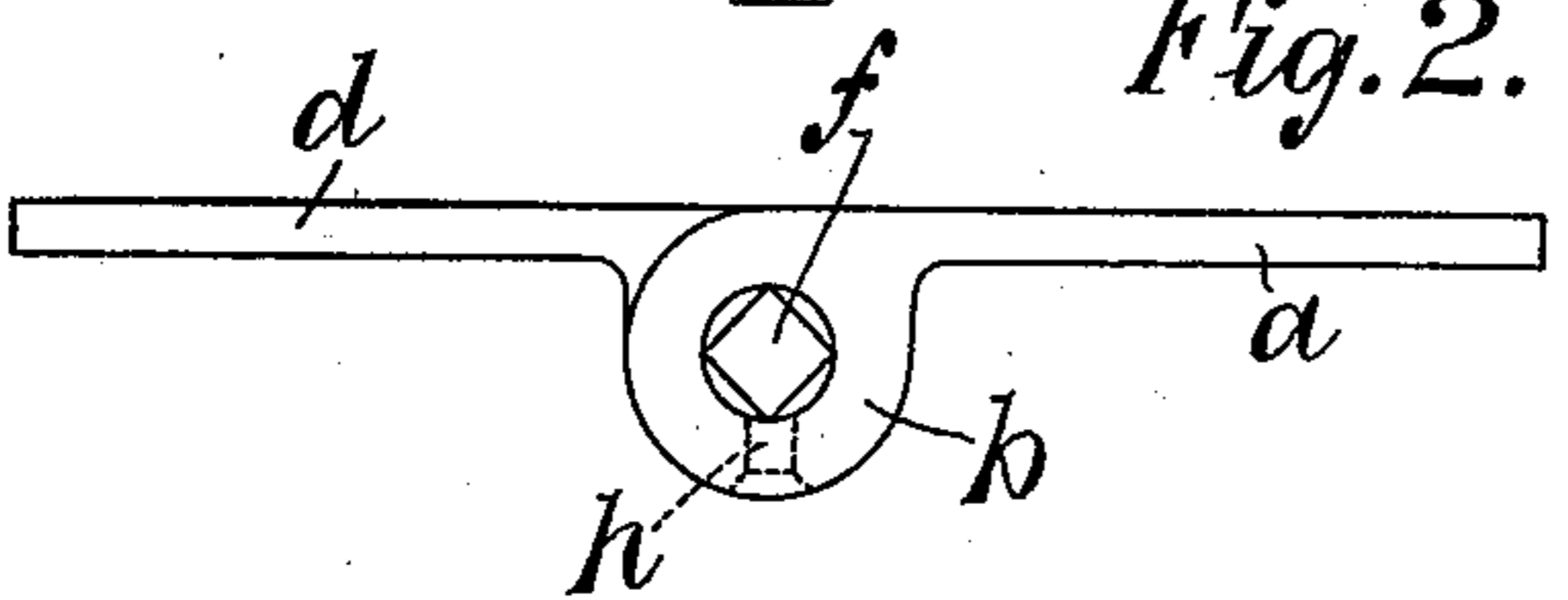


Fig. 4.

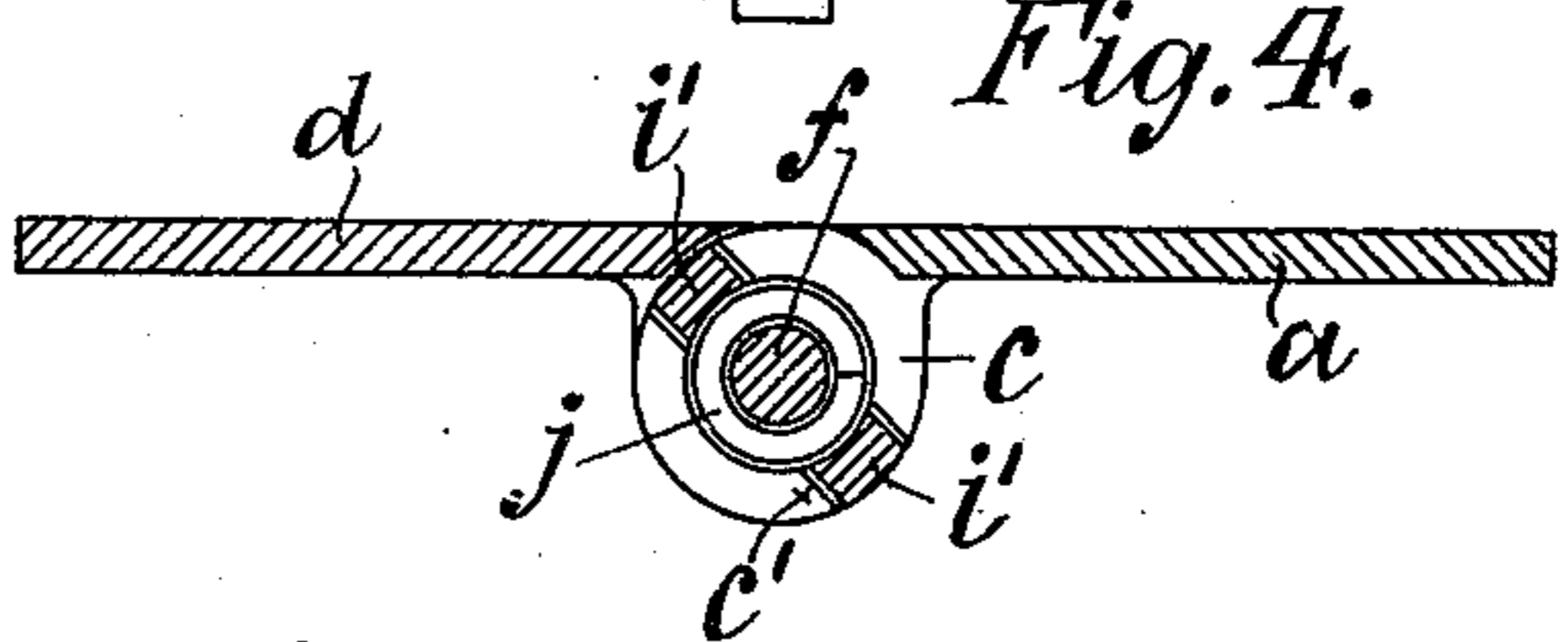


Fig. 10.

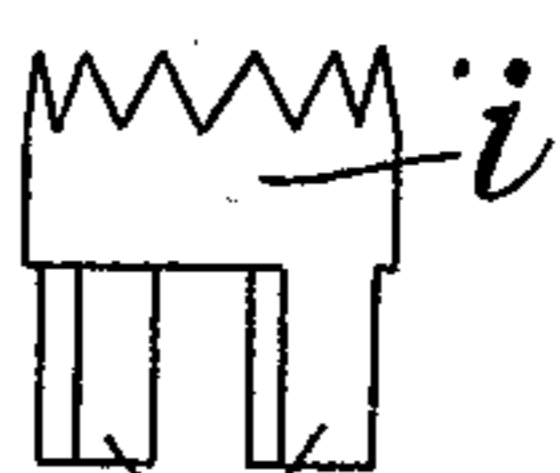
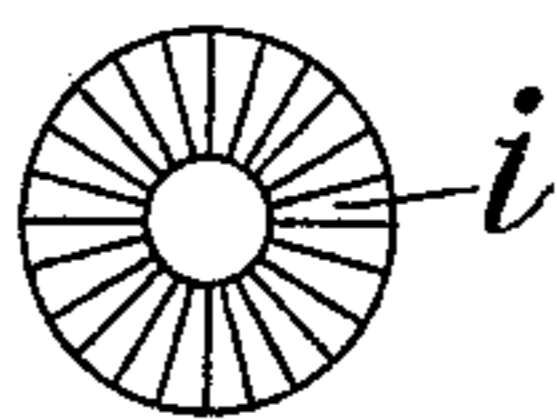


Fig. 11.



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2 SHEETS—SHEET 2.

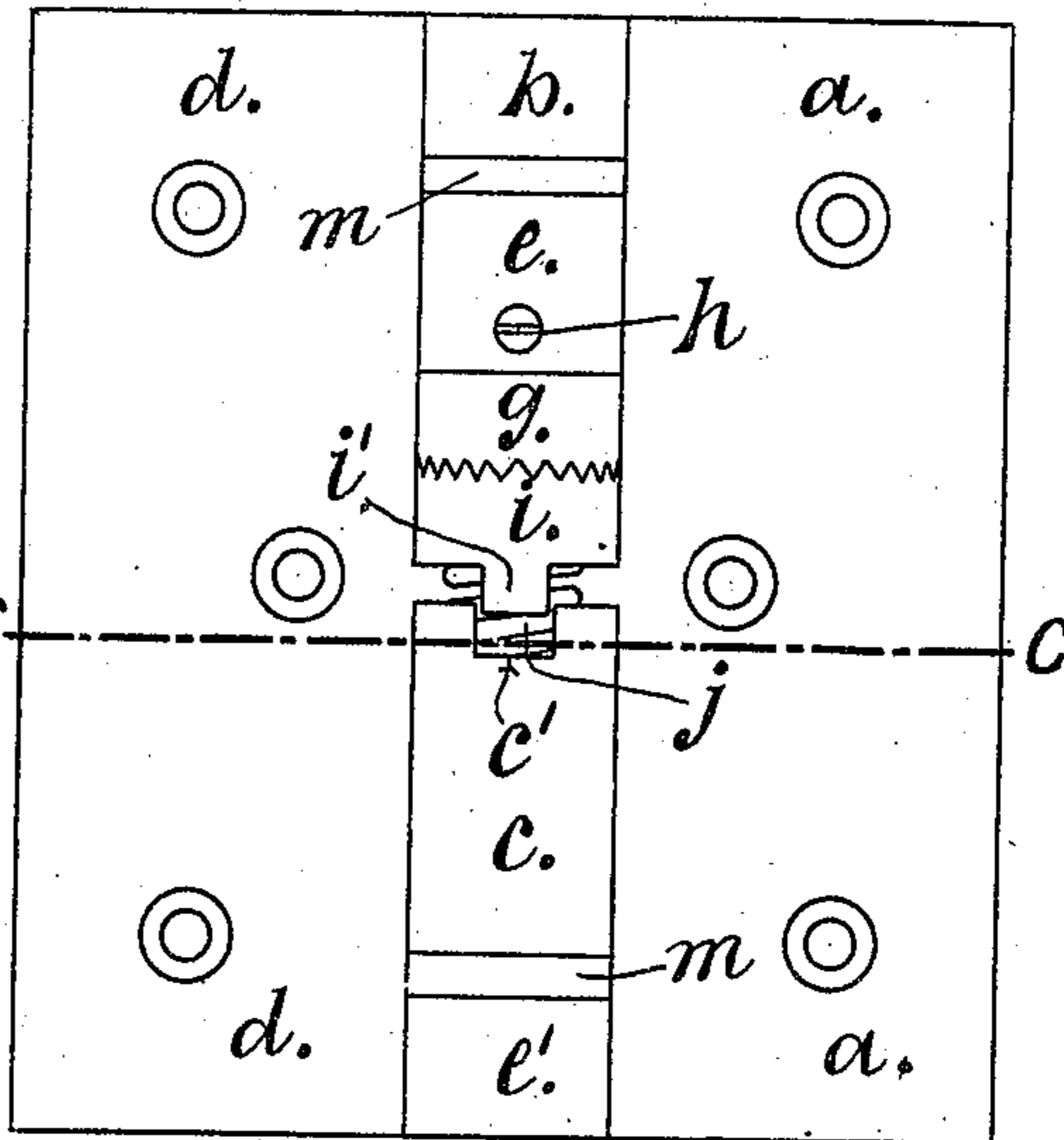
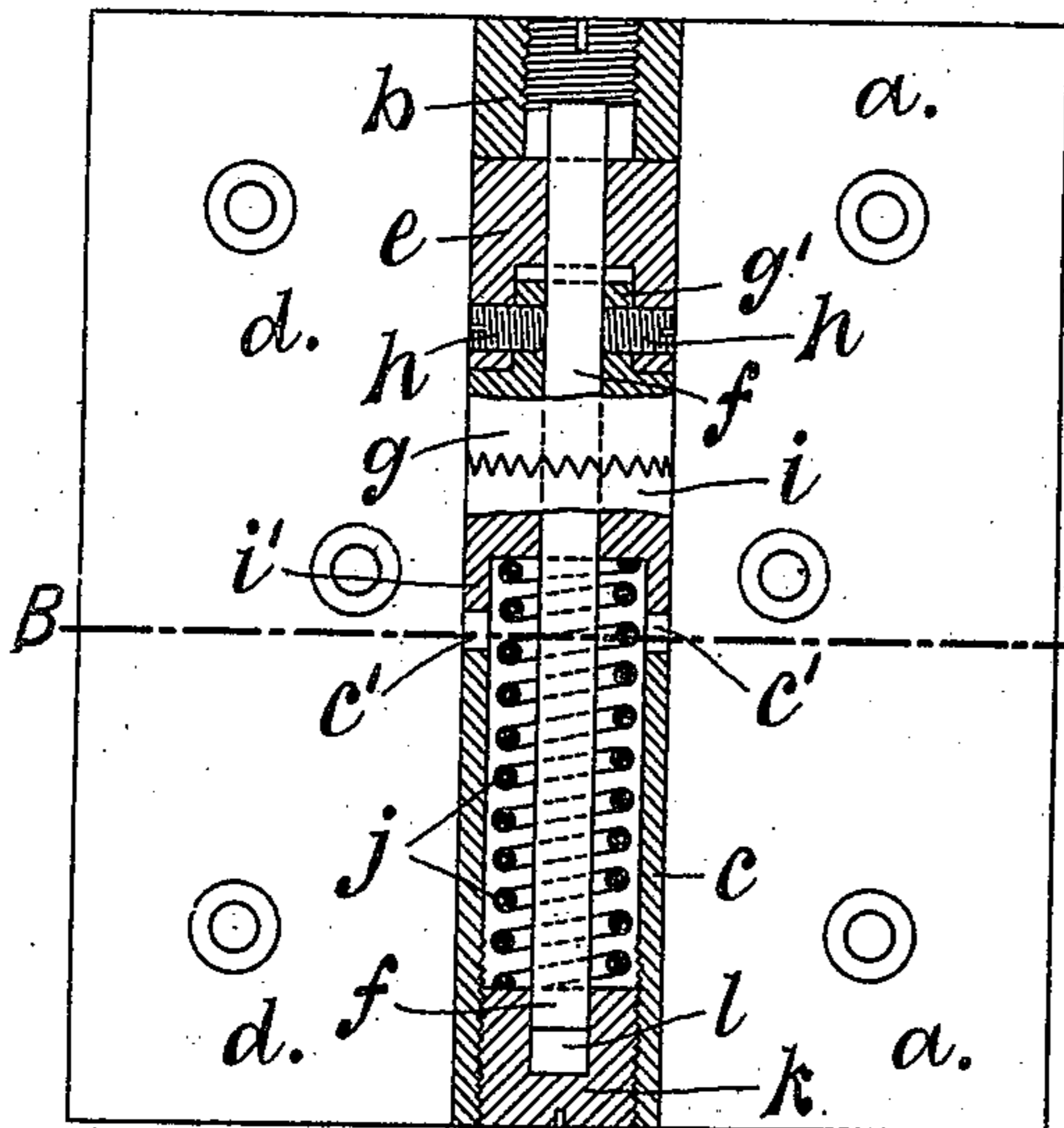


Fig. 5.

Fig. 7.

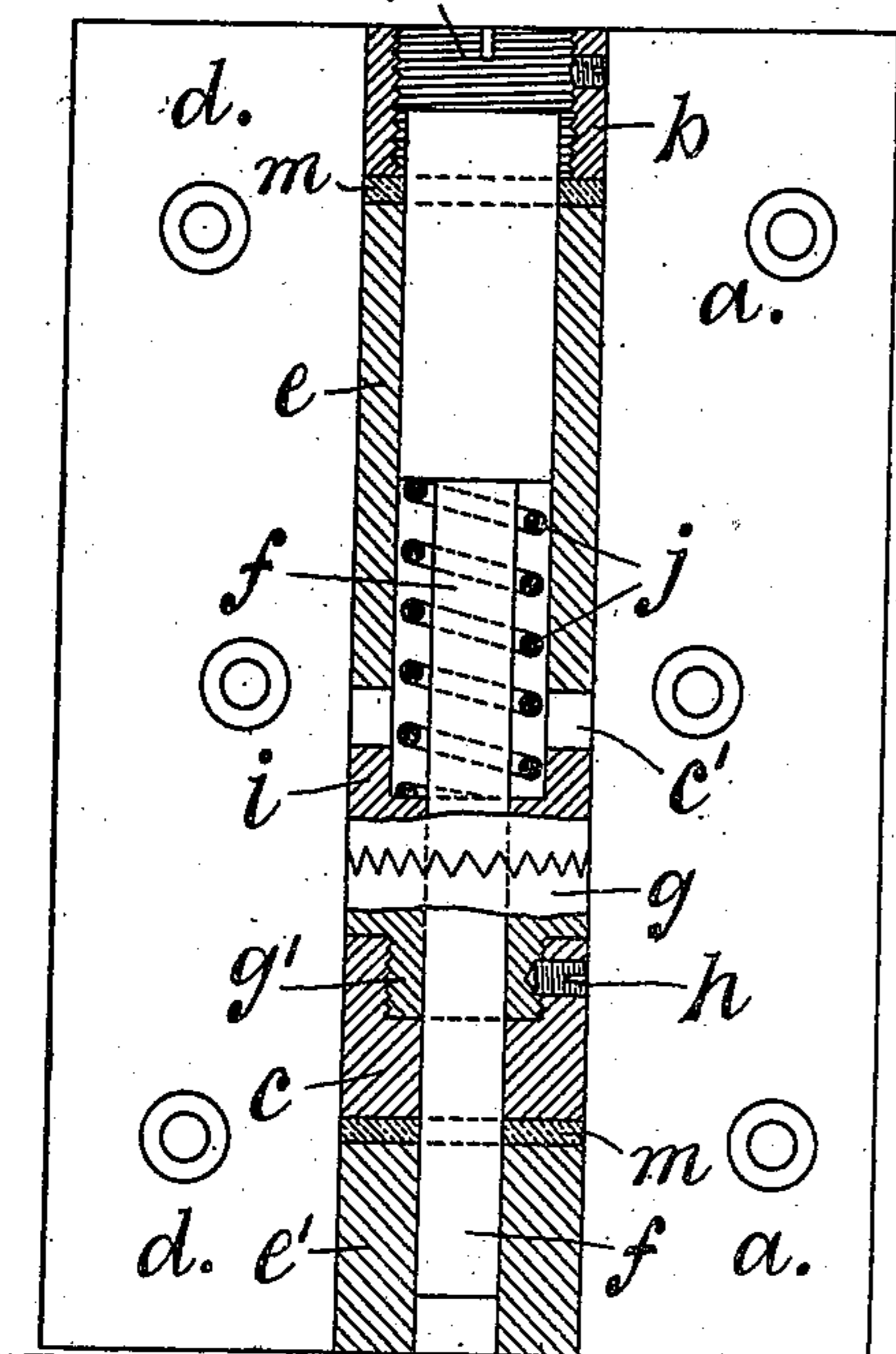
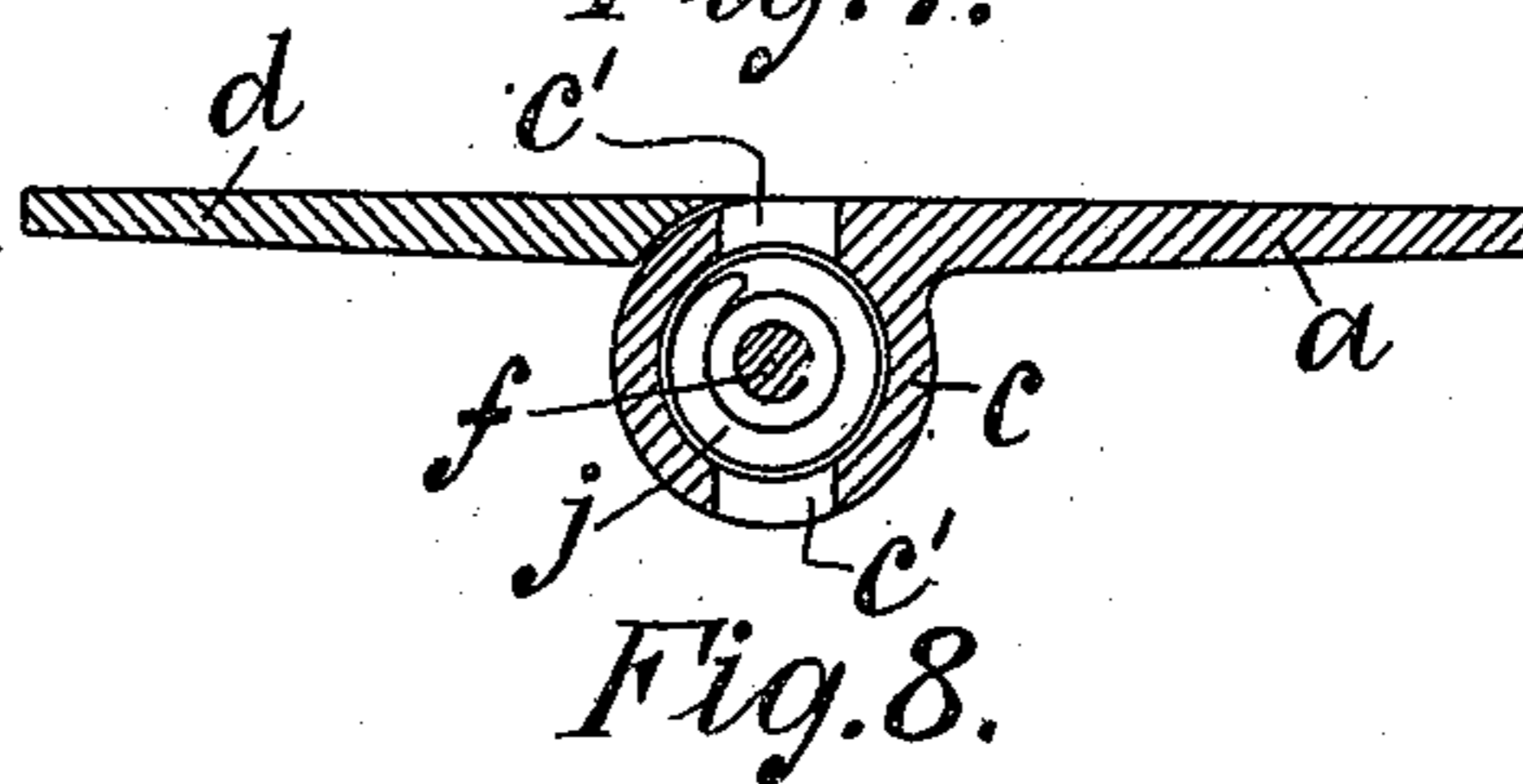
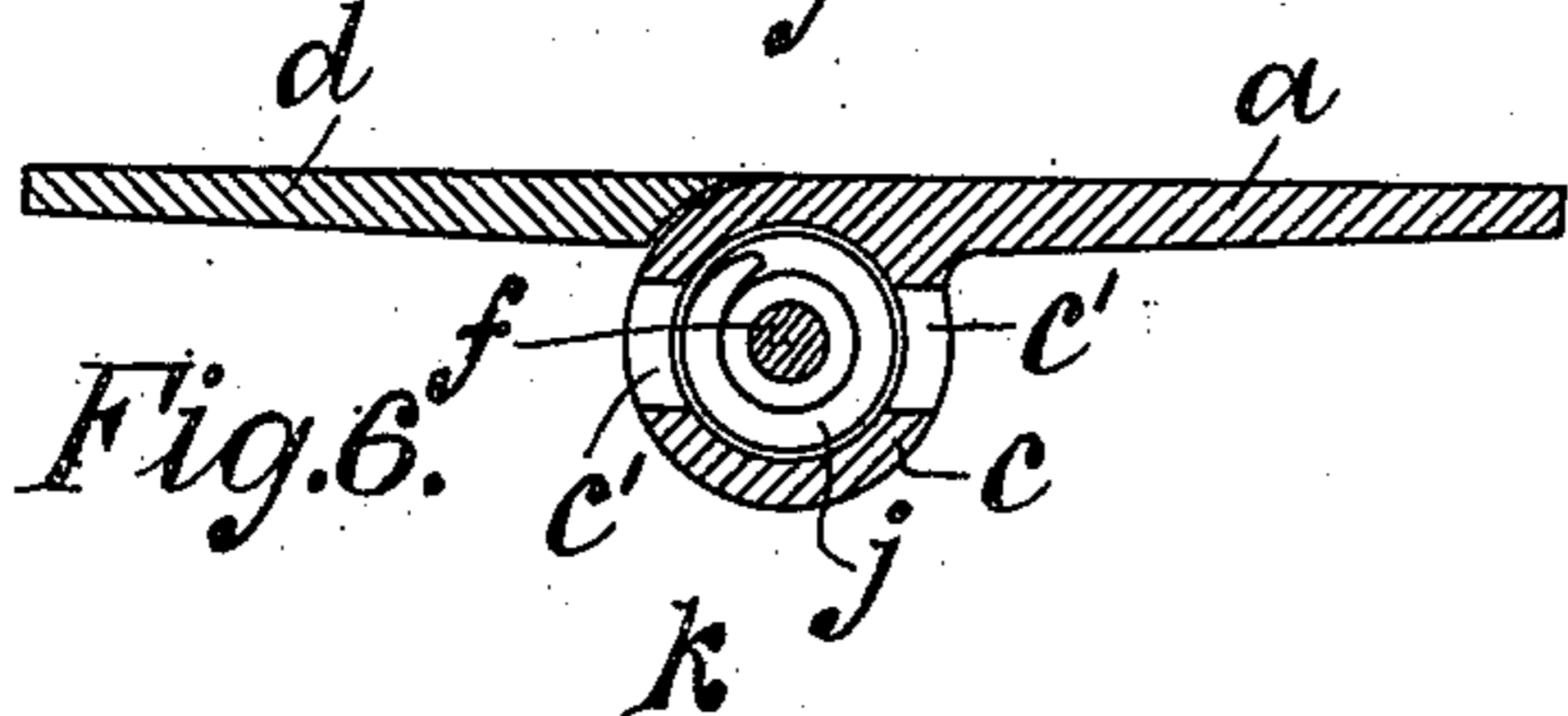


Fig. 9.

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UNITED STATES PATENT OFFICE.

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HINGE.

975,097.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed March 26, 1910. Serial No. 551,646.

To all whom it may concern:

Be it known that I, JOSEPH WRIGHT, a subject of the King of England, residing at Overton, Frodsham, in the county of Chester, England, have invented certain new and useful Improvements in and Relating to Hinges, of which the following is a specification.

This invention relates to hinges, and has for its object to provide a hinge whereby the movable element to which the hinge is applied, such, for instance, as a door, may be held stationary in any position, until willfully moved.

In the application of my invention to a door hinge, there is employed, as customary, two parts or leaves, one leaf being affixed to the door, and the other leaf affixed to the door frame, these parts being pivoted upon and held together by a suitable rod or pin which extends the full length of the hinge, and is disposed in the barrels or cylinders integral with the respective leaves.

Each part of the hinge carries one member of a clutch, the engaging faces of which are formed with rat trap teeth, proportioned according to the application of the hinge, one member of said clutch being secured to one part of the hinge, while the other member of the clutch is disposed within the other part of the hinge in such manner as to be capable of sufficient longitudinal movement to either fully engage with, or over-run the first clutch member.

A spring is provided which normally tends to maintain the second clutch member in engagement with the first clutch member, one end of said spring bearing against said second clutch member, while the other end is seated against an adjustable screw.

The clutch members, spring, and adjusting screw are all disposed concentric with the pivot pin. Normally, said clutch members are in engagement with each other, and the door is, in consequence, held stationary, but when the door is pushed or pulled with reasonable force, the clutch members over-run, to permit the door to be moved, reëntering into engagement under the action of the spring when the door becomes stationary again.

The sliding member of the clutch may be disposed on either the movable or stationary

part of the hinge, as may be found most convenient. Further, the sliding clutch member may be connected by means of a wire cable with a small arm on the door handle, so that when the handle is turned, said sliding clutch member is withdrawn from the fixed clutch member to permit of the door being moved; the two clutch members reëngaging when the handle is released.

The hinge, according to my invention, may, instead of taking the place of the usual door hinge, be employed as a check or lock, in which case, it will be fixed to the door independently of the ordinary hinges.

Drawings illustrating this invention, applied, by way of example, to a door, are annexed hereto, in which:—

Figure 1 is an elevation; Fig. 2 a plan view; Fig. 3 a longitudinal section; and Fig. 4 a sectional plan view, taken as on line A—A, Fig. 3, of one form of door hinge. Fig. 5 is a longitudinal section and Fig. 6 a cross section taken as on line B—B, Fig. 5 of a modified construction. Fig. 7 is a longitudinal section and Fig. 8 a cross section taken as on line C—C, Fig. 7 of a further modified construction. Fig. 9 is a section of a further modification. Figs. 10 and 11 are, respectively, elevation and plan view of the movable member of the clutch.

In the several views like letters of reference denote like or corresponding parts wherever they occur.

Referring now to the drawings, but first more particularly to Figs. 1 to 4:—*a* represents the stationary portion or leaf of the hinge provided with the cylindrical members or barrels *b c*; and *d* represents the movable portion or leaf of the hinge provided with cylindrical member or barrel *e* (in the constructions shown in Figs. 7 to 9 a second barrel *e*¹ is provided).

f is the pivot pin passing through barrels *b c* and *e* pivotally connecting the two parts of the hinge together.

g is one of the clutch members referred to, which is provided with an extension *g*¹ screwed into barrel *e* and prevented from rotation by means of the set screw *h*. *i* is the second clutch member provided with lugs or extensions *i*¹ fitting loosely within the slotted portions *c*¹ of barrel *c*. *j* is a spring disposed around the pivot pin *f* below said

clutch member *i*, against the lower face of which it bears; *k* is a screwed plug threaded over spindle *f* and screwed into the lower end of barrel *c*, by means of which plug, the pressure upon the spring *j* may be adjusted.

In use, when the door attached to leaf *d* is moved, the longitudinally movable clutch member *i* is forced downward against the resistance of spring *j* (but is prevented from rotation by the engagement of extensions *i*¹ within the slots *c*¹) and the teeth of clutch member *i* ride over those of clutch *g*. Then, when the door is stationary again, said teeth of clutch *i*, under the action of said spring *j* return into engagement with the teeth of clutch *g* until the door is wilfully moved again.

Referring now to the modifications illustrated in Figs. 5 and 6, the adjustment of spring *j* is effected by a screwed plug *k* within a recess *l* in which the lower end of the pivot pin *f* is disposed while the upper stationary clutch element is secured within barrel *e* solely by means of the two set pins *h*.

In the modification illustrated in Figs. 7 and 8, the slots provided in the barrel *c* are at right angles to those of the hinge shown in Figs. 5 and 6 and anti-friction washers *m* are fitted between barrels *b* and *c* and barrels *c* and *e*¹.

In the modification illustrated in Fig. 9, the longitudinally movable clutch member *i* is disposed above the stationary clutch member *g*; and the adjustment of the spring is effected by means of the screwed sleeve *k*.

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

1. In leaf and barrel hinges of the type herein described, a clutch element detachably secured to a barrel; a second clutch element in engagement with a second barrel, with freedom to move in the longitudinal plane; and a spring wholly disposed within said second barrel.

2. In leaf and barrel hinges of the type herein described, a clutch element detachably secured to a barrel; a second clutch element in engagement with a second barrel, with freedom to move in the longitudinal plane; a spring wholly disposed within said second barrel; and means for adjusting the spring.

3. In leaf and barrel hinges of the type herein described, a clutch element detachably secured to a barrel; a second clutch element provided with projections; a barrel provided with recesses within which said clutch projections are disposed; a spring wholly disposed within said second mentioned barrel adapted to normally maintain said clutch elements in engagement; and means for adjusting said spring.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH WRIGHT.

Witnesses:

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EMILY BURNETT.