

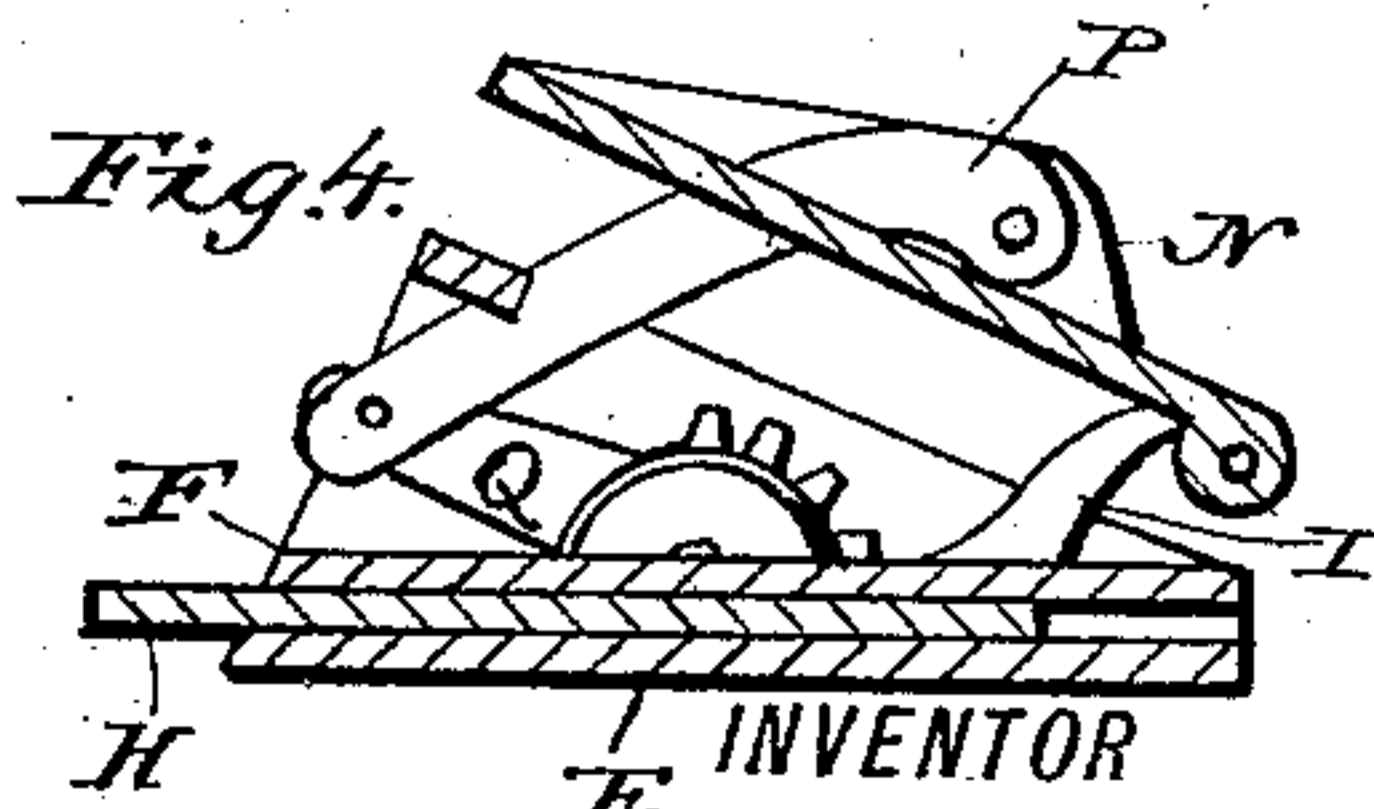
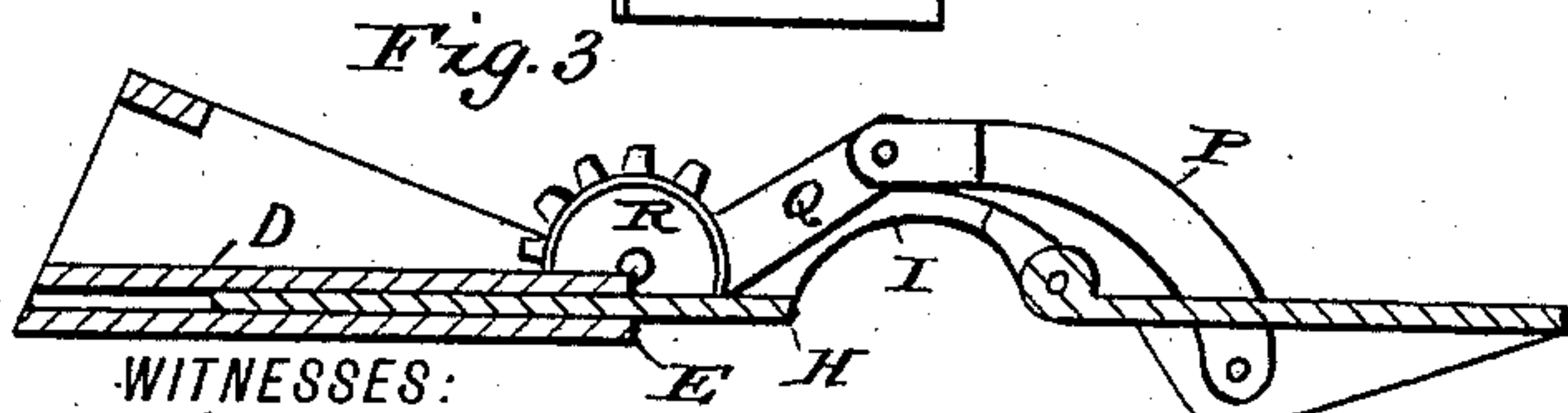
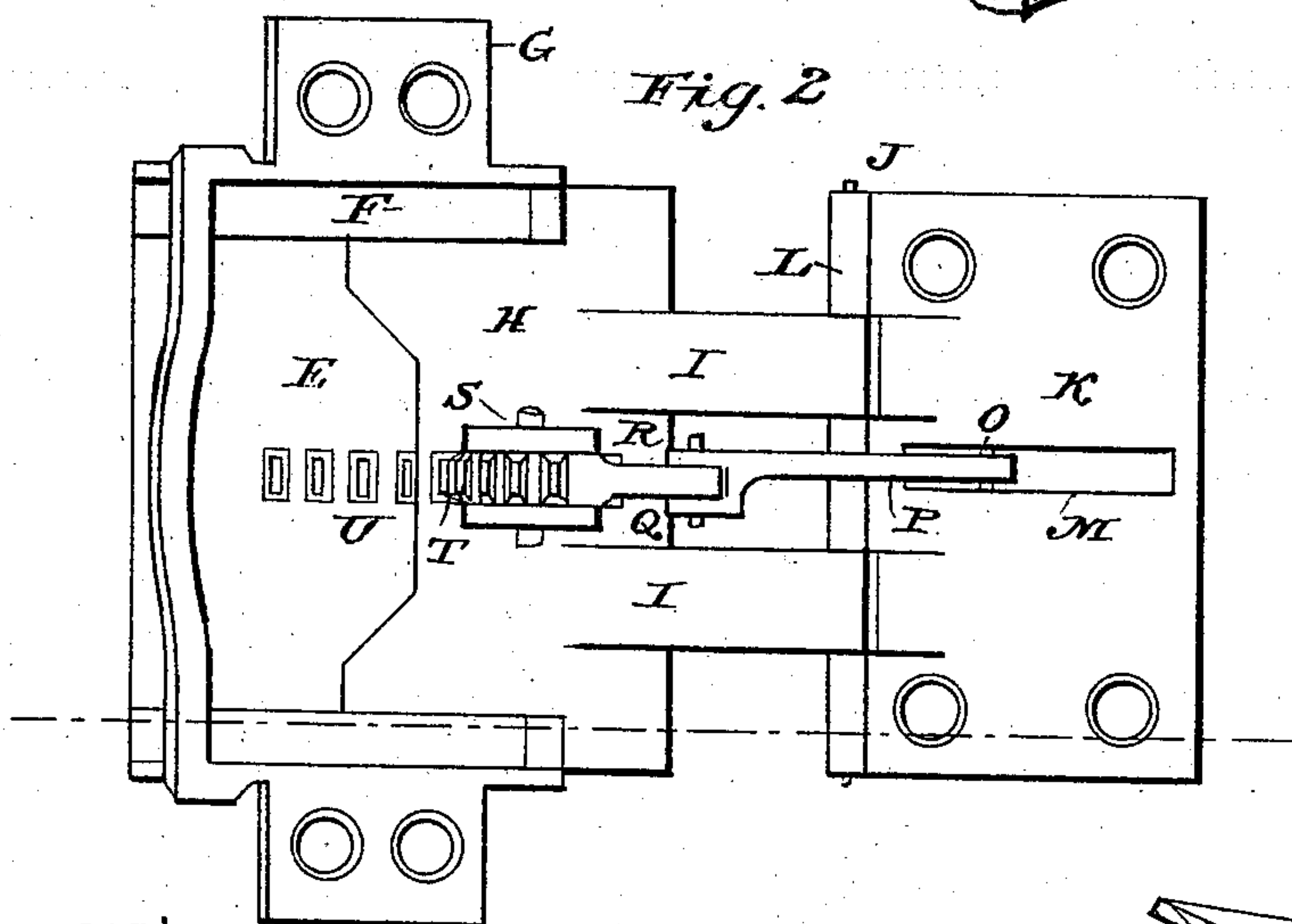
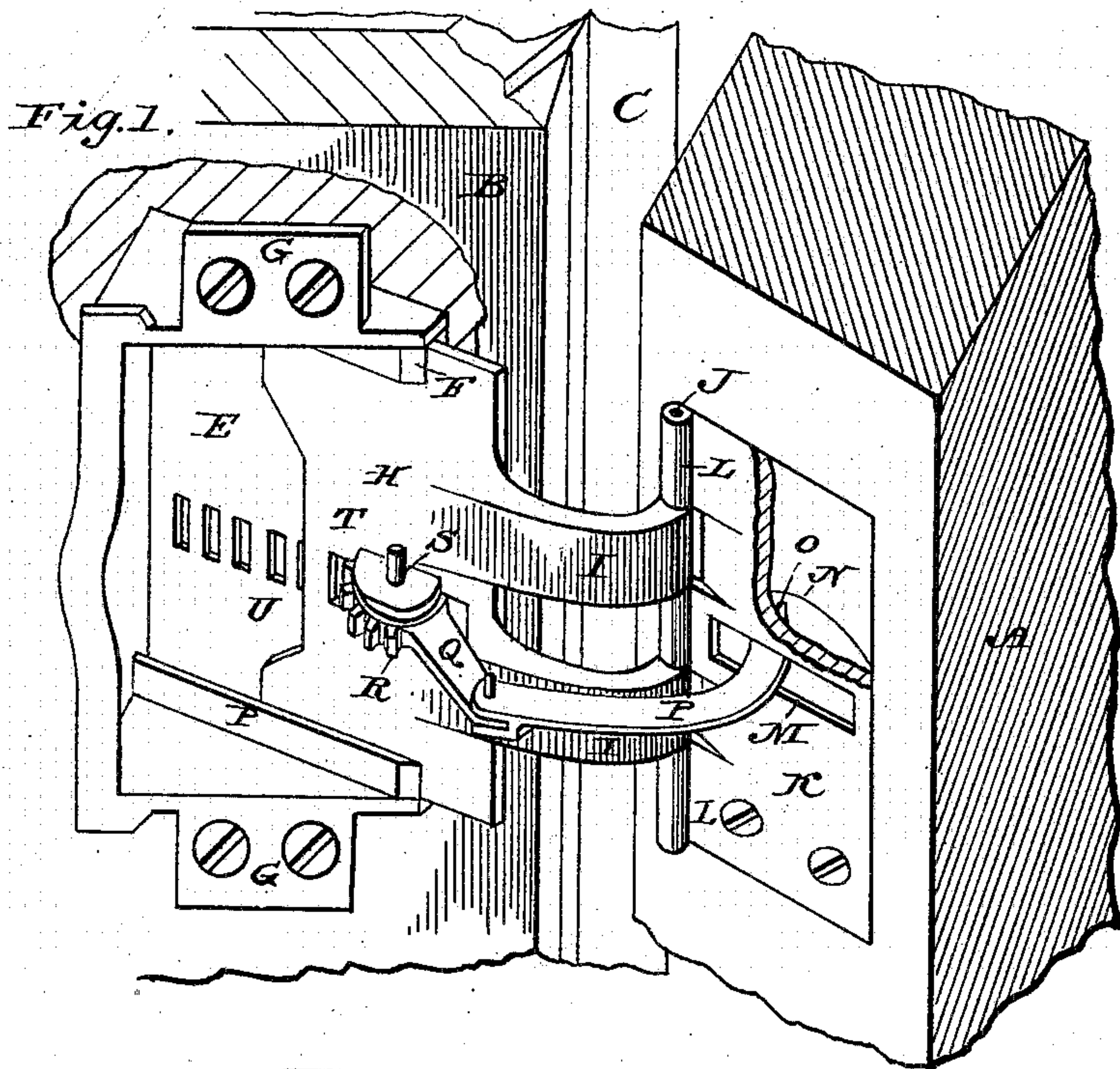
(Model.)

G. JACKSON.

HINGE.

No. 368,921.

Patented Aug. 23, 1887.



WITNESSES:
W. G. McConnon
A. E. Sexton

George Jackson
BY
Robert Symmes
his ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE JACKSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN H. BOSWELL, OF SAME PLACE.

HINGE.

SPECIFICATION forming part of Letters Patent No. 368,921, dated August 23, 1887.

Application filed October 26, 1886. Serial No. 217,287. (Model.)

To all whom it may concern:

Be it known that I, GEORGE JACKSON, a subject of the Queen of Great Britain, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Hinges, of which the following is a specification.

My invention relates to that class of hinges which are concealed; and the object of my invention is to so construct a hinge that when it is applied to a door or other location it will, when the door or part is closed, be entirely concealed from view, and likewise protected from exterior interference. The difficulty experienced in constructing such a hinge is that, in the case of a door for instance, the door is often located within the jamb and door-casing, instead of being flush therewith, and when the door is opened the hinges which support it must be arranged to swing the door itself clear of the casing and the molding-pieces. With the ordinary folding-hinge a considerable portion extends outwardly beyond the casing, and hence when the door is opened it is moved outward, and thus clears the molding on the door-casing.

In my present device I accomplish the same result without having any portion of the hinge beyond the casing or in view.

In the accompanying drawings, which illustrate my invention, similar letters of reference indicate like parts.

Figure 1 is a perspective view from the front of the hinge attached to a door-jamb and door, and showing the door open. A part of the door-jamb is broken away to show the depth of the hinge-case, and a part of hinge-plate attached to the door is also broken away to show the point of attachment of the lever. Fig. 2 is a front view of the hinge wide open. Fig. 3 is a horizontal section on the line *xx* of Fig. 2. Fig. 4 is also a horizontal section on the same line, but showing the hinge closed.

In the drawings, A is the door, B the door casing or jamb, and C molding on the front of the door-casing. To apply the hinge the jamb B is cut out substantially to the shape of the metal hinge-case D, the bottom plate, E, of which is inclined from without inward and downward, and attached to and forming a part of the sides of the case are the guides F. When

the hinge-case is in position in the jamb, the face and surface fastening ends G G of the case are flush with the surface of the jamb.

Arranged to slide over the bottom plate, E, and below the guides F is a sliding hinge-plate, H, provided with the arms I I, which project beyond the plate and are bent slightly backward. The ends of the arms are bored to receive the pin J.

K is the strap or hinge-plate, which is fastened to the door, and on the side are the knuckles L, bored to receive the pin J. The surface of the plate is cut away opposite to where the arms I I connect with the knuckles L. This is to compensate for the bend in the arms I I when the hinge is closed. Through the center of the strap or plate is an oblong opening, M, and on either side of the opening on the under side of the plate are the webs N N. Through the web is bored a hole to receive a pin, O, which also passes through one end of the bent lever P. The other end of the bent lever is forked and is connected by a pin to the lever-arm Q, forming a part of the toothed wheel R. The wheel R, which is provided with teeth on a portion of its periphery, is supported in bearings S, forming a part of the sliding plate H. Through the plate H is cut the opening T, and below and on a line with this opening and corresponding with the teeth of the wheel are the openings U.

The operation of the device will be readily understood. When the door is closed, the parts are in the position and bear relation to each other as shown in Fig. 4. The plate H is well within the hinge-case and the arm Q well over to the left. When the door is opened, the bent lever P, its motion being slow, actuates the arm Q of the wheel, the teeth of which, bearing on the sides of the openings in the bottom plate, slowly move the plate H forward just far enough to carry the end of the door beyond the surface of the door-casing, so that it can be opened wide—that is, turned back parallel with the wall.

The hinge proper, it will be observed, is not fastened to the jamb, as it is with all other hinges, but slides freely in the hinge-case. The mechanism which moves the hinge-plate in and out is that which I now consider best adapted to the purpose. I, however, do not

wish to be limited to the particular mechanism shown, as modifications can be made therein which will serve the same purpose—*i. e.*, to move out and in the sliding plate as the door
5 is opened and shut—without departing from the intent of my invention.

I have described the hinge as applied to a door. It may, however, be used in any other locality to which it is adapted. I have also
10 made various modifications therein, such as the combination with a spring whereby the door will be automatically closed, &c., and which I reserve the right to make subjects of application to be hereafter filed.

15 I claim as my invention—

A hinge comprising a hinge-case, a sliding plate, a hinge-plate attached to the door and

united to the sliding plate by a knuckle-joint, a bent lever having its bearings in said hinge-plate upon the door, a toothed wheel having
20 its bearings in the sliding plate and provided with an arm connected to said bent lever, and said wheel adapted to gear into perforations in the bottom plate of the hinge-case, whereby
25 when the door is opened and shut the said sliding plate and the door is moved out and in, substantially as described.

In testimony whereof I have hereunto subscribed my name this 19th day of March, A. D. 1886.

GEORGE JACKSON.

Witnesses:

A. E. SEXTON,

GEO. H. BENJAMIN.