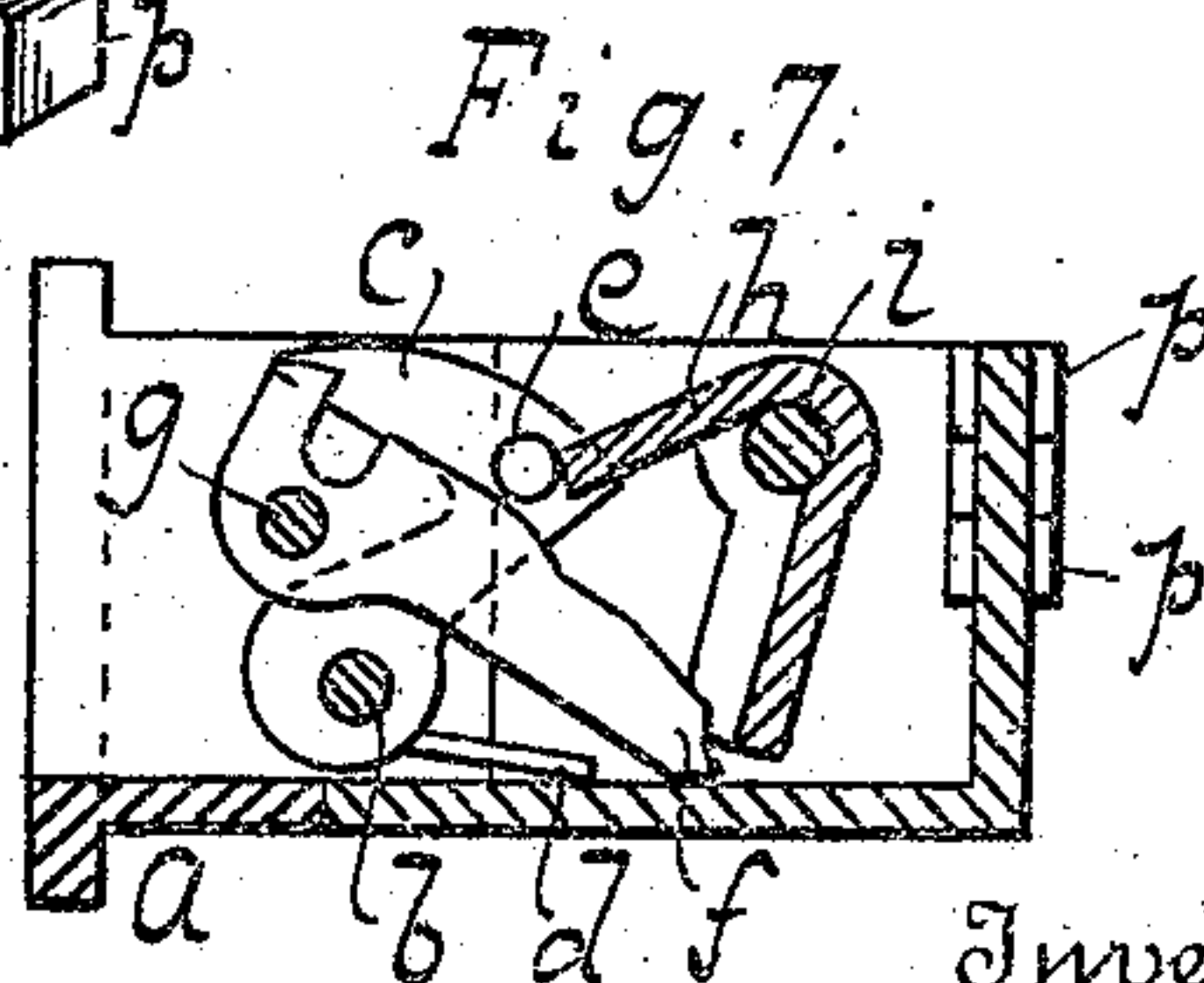
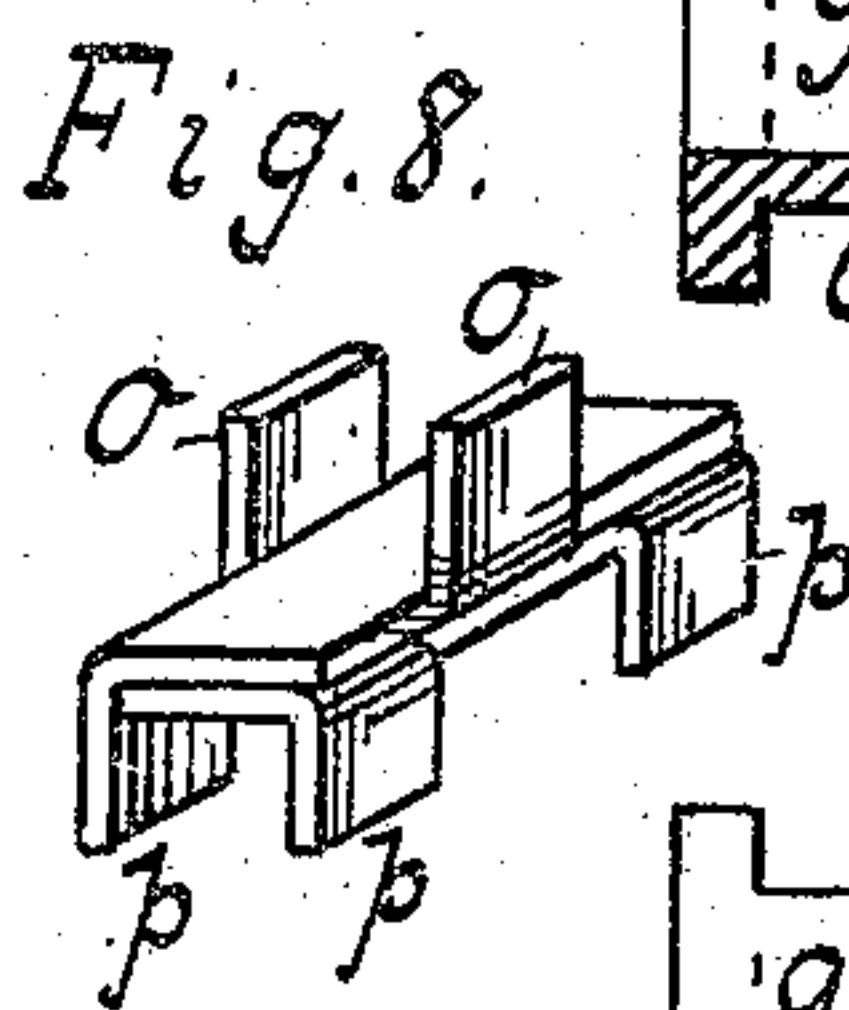
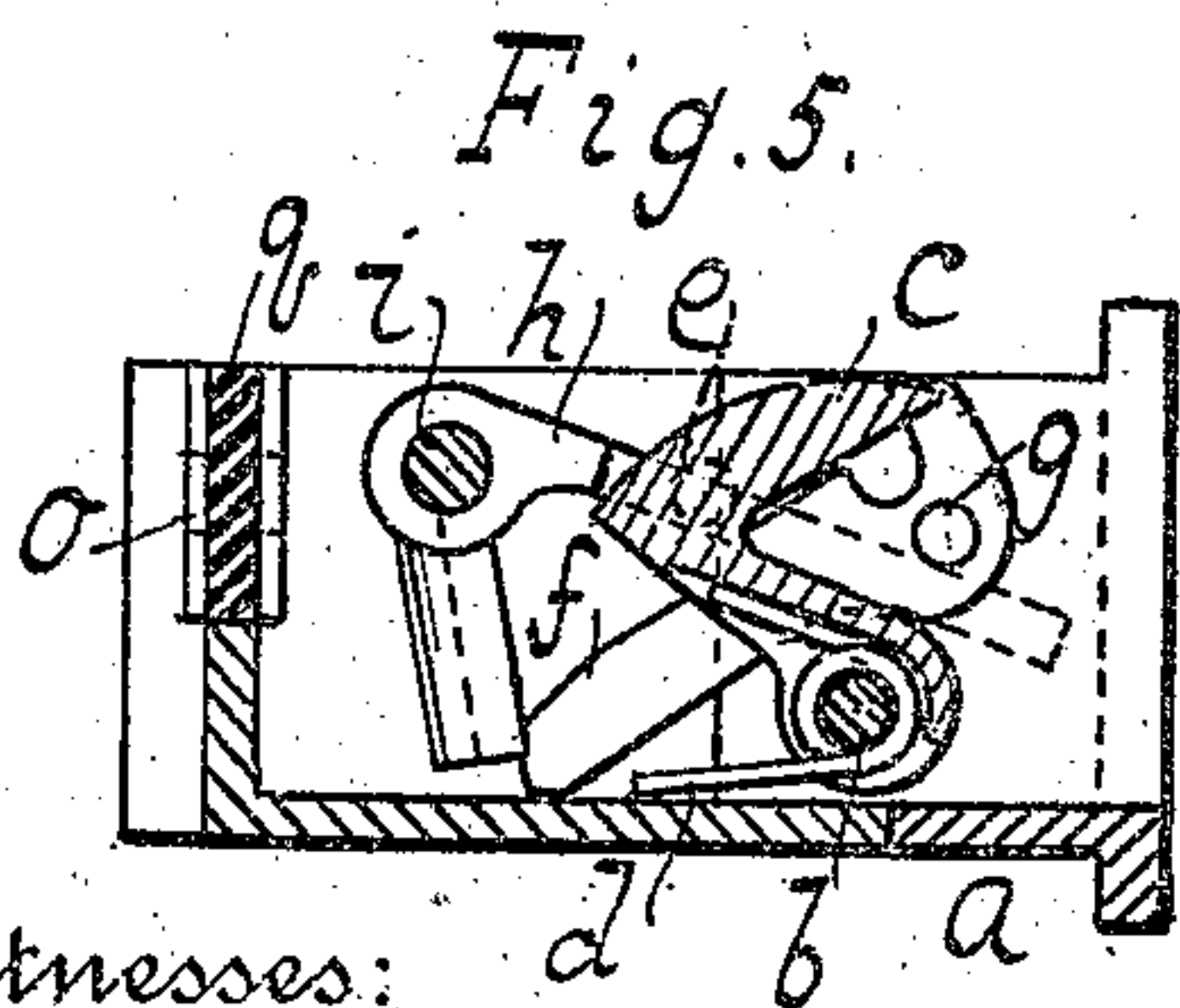
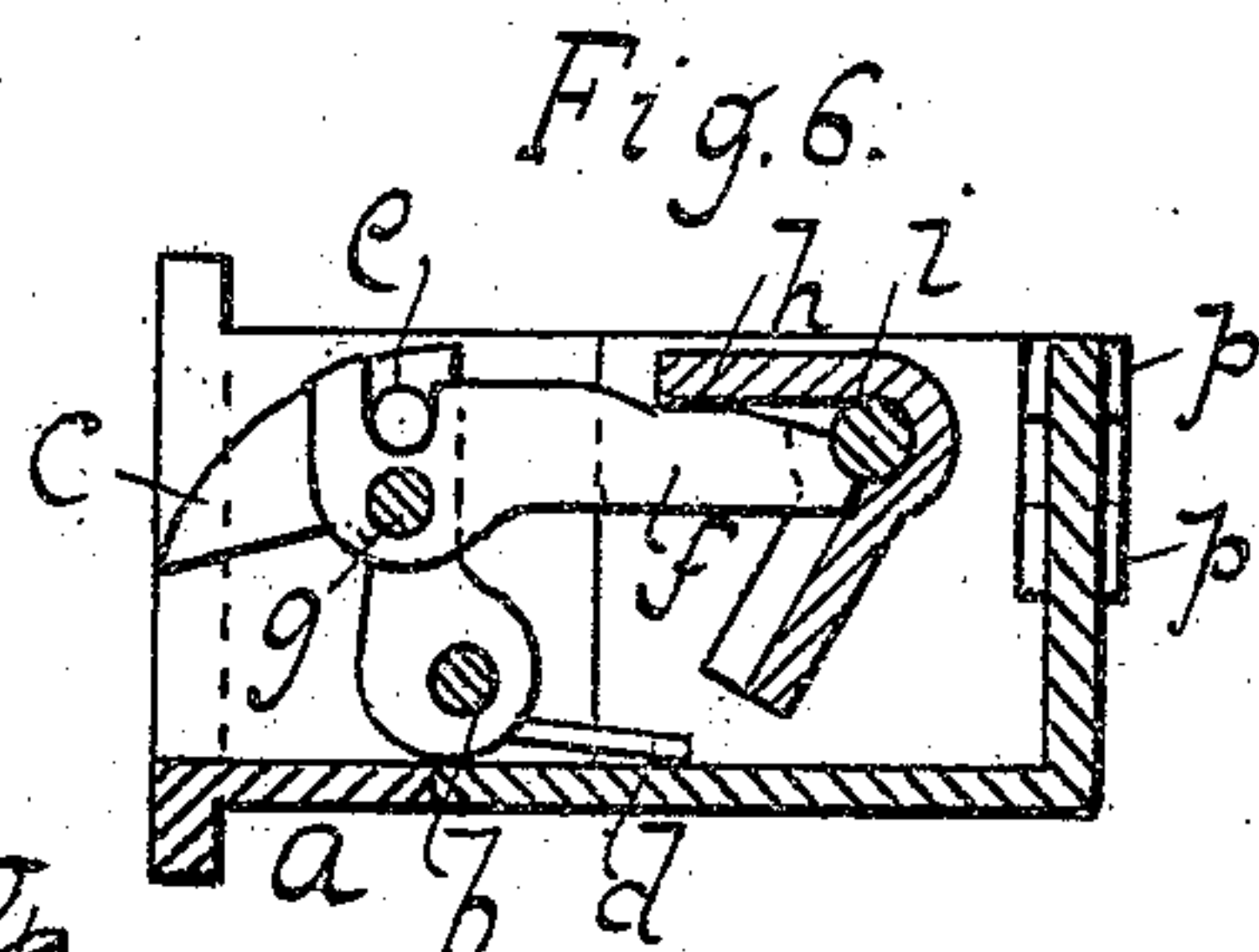
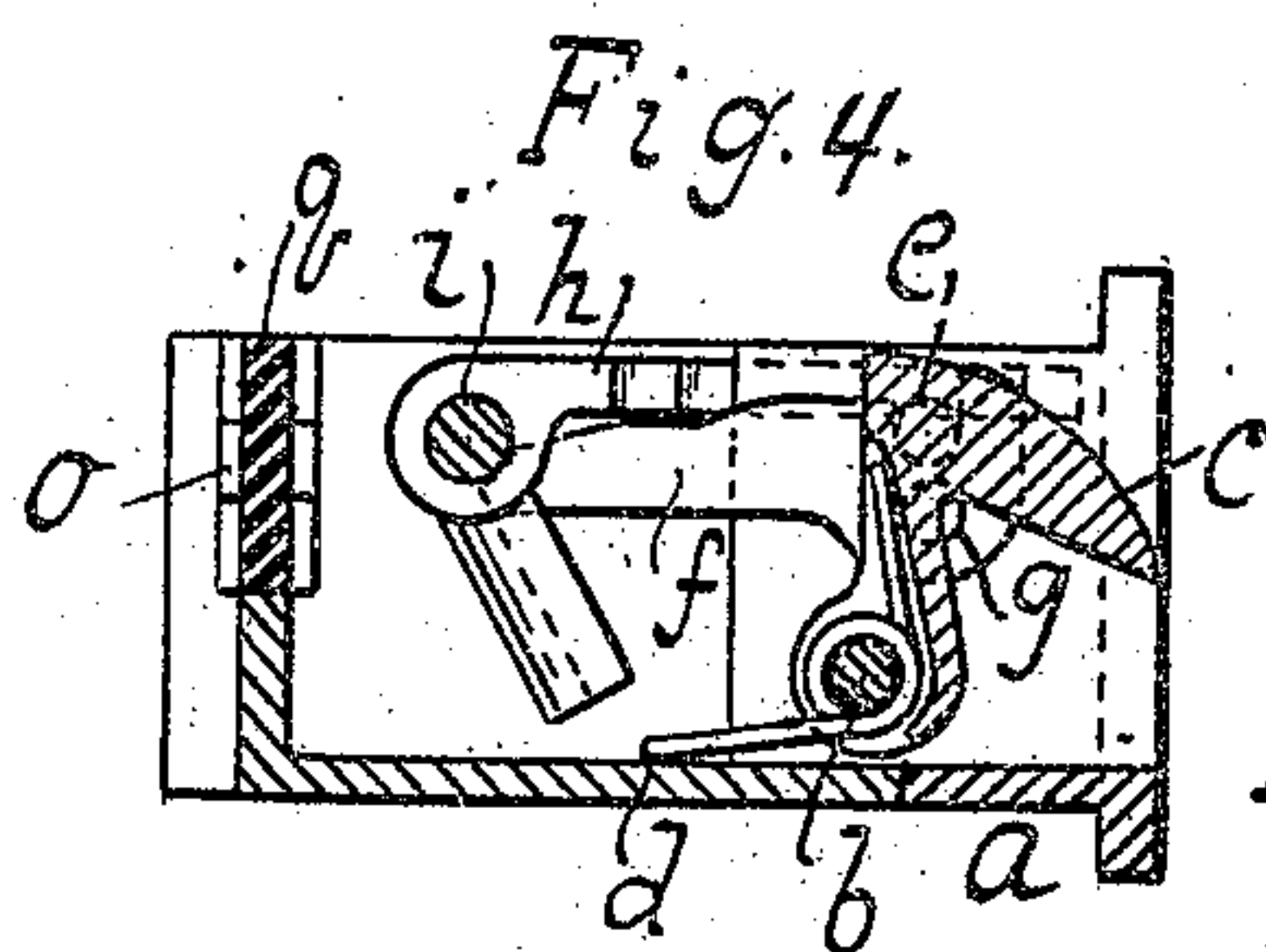
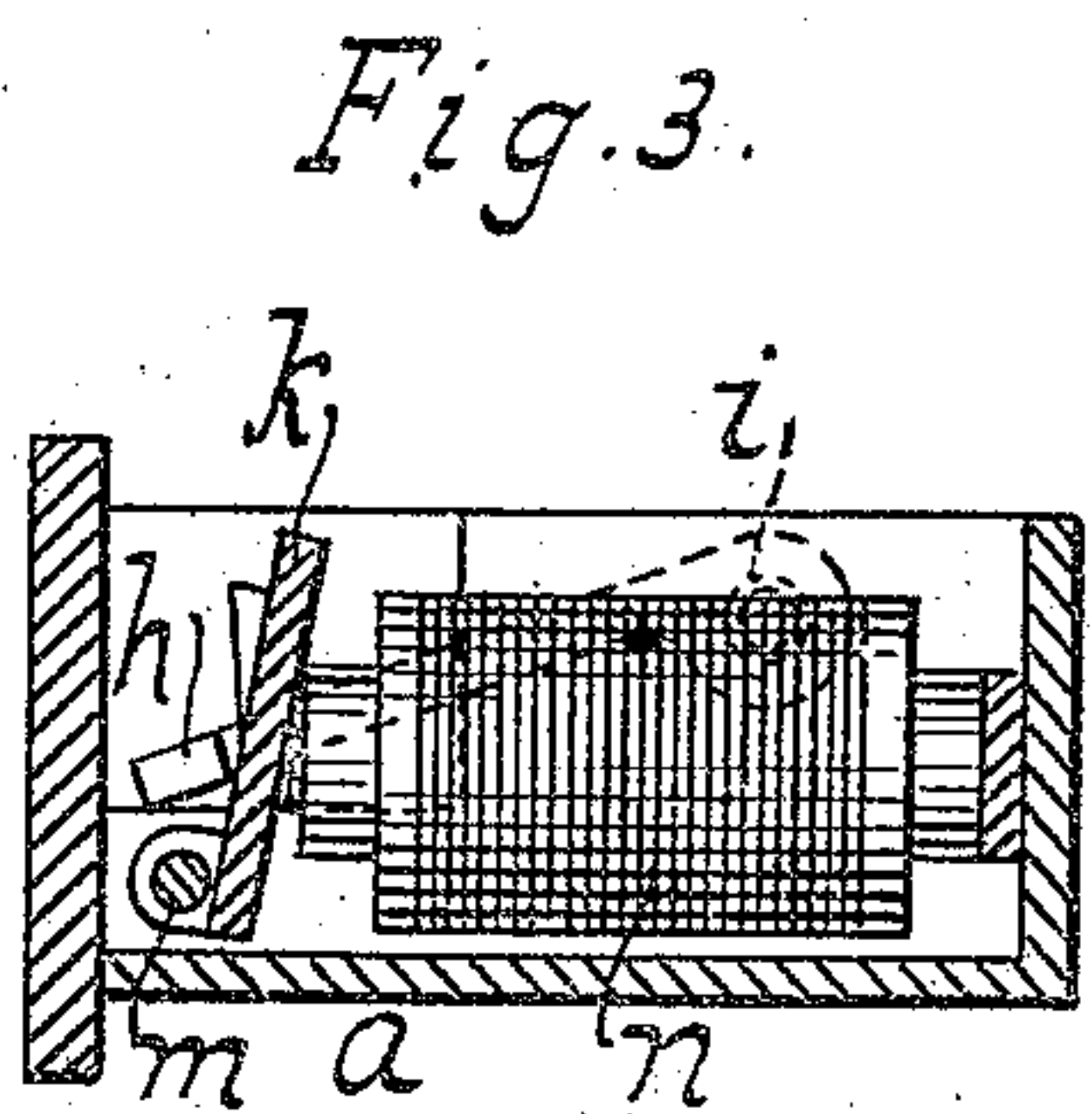
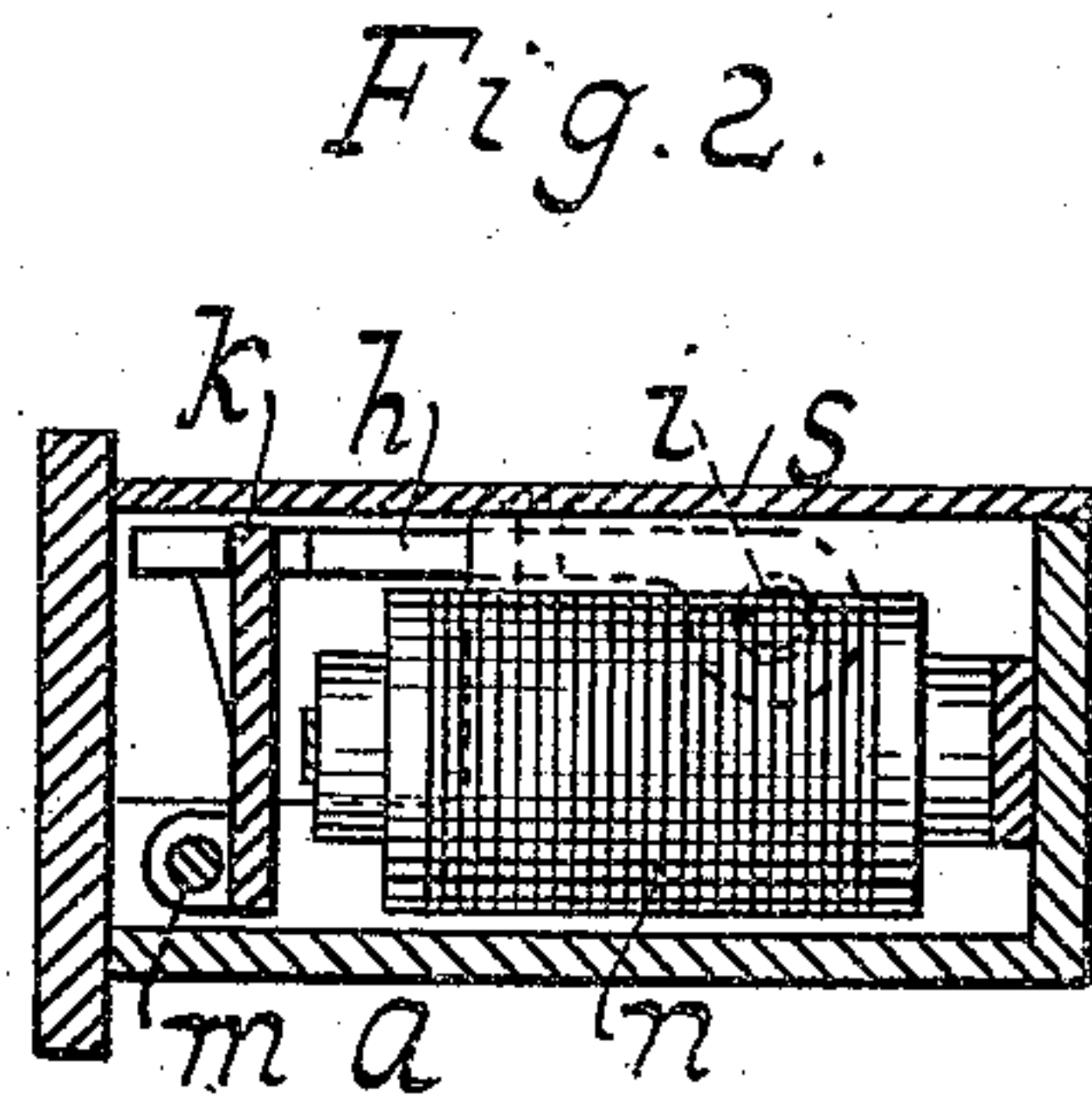
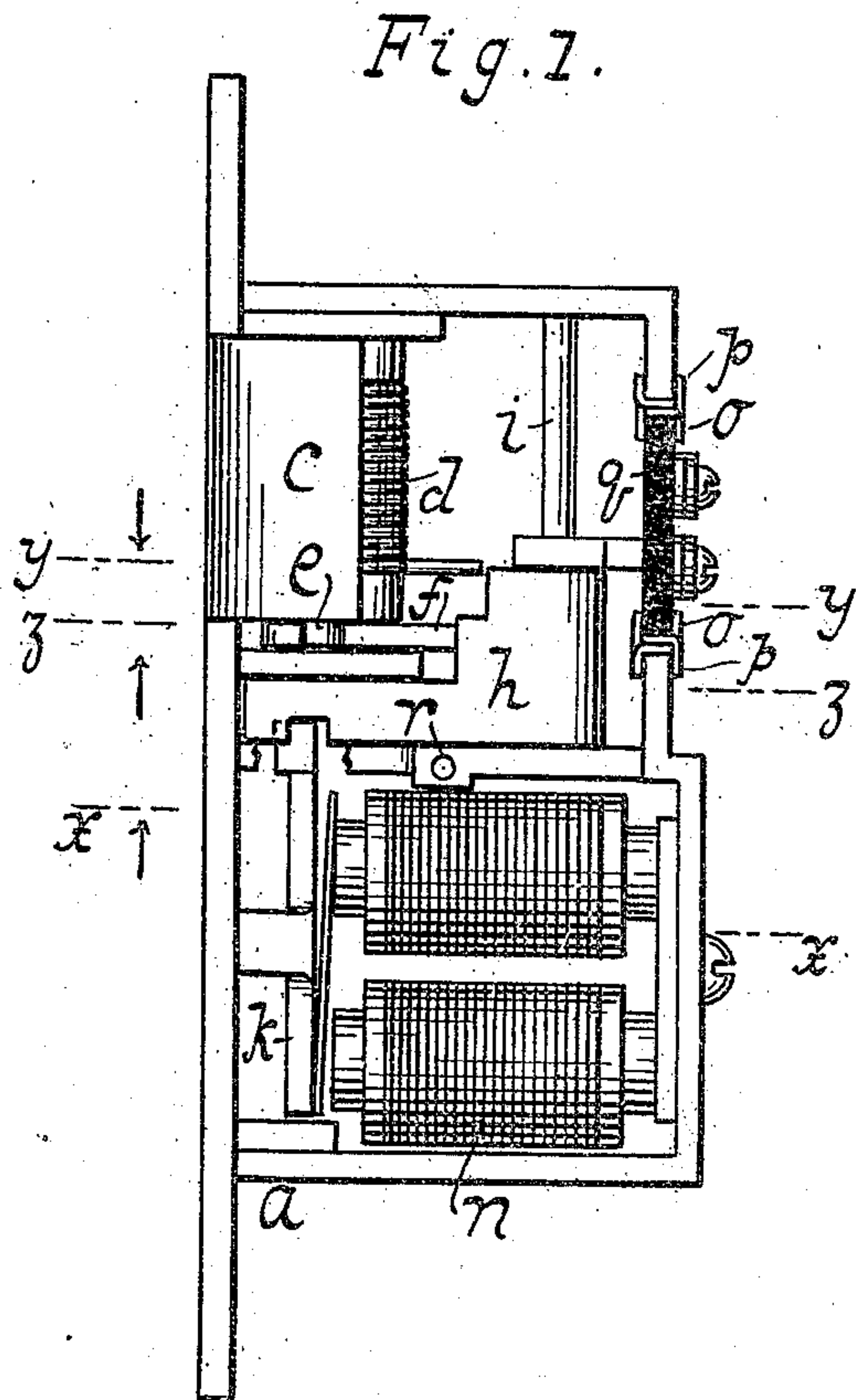


J. LOCH.
ELECTRIC DOOR OPENER.
APPLICATION FILED JUNE 22, 1909.

956,379.

Patented Apr. 26, 1910.



Witnesses:
William Miller
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UNITED STATES PATENT OFFICE.

JOSEPH LOCH, OF BROOKLYN, NEW YORK.

ELECTRIC DOOR-OPENER.

956,379.

Specification of Letters Patent.

Patented Apr. 26, 1910.

Application filed June 22, 1909. Serial No. 503,714.

To all whom it may concern:

Be it known that I, JOSEPH LOCH, a citizen of the United States, residing at Brooklyn, county of Kings, State of New York, have invented new and useful Improvements in Electric Door-Openers, of which the following is a specification.

This invention relates to an electric door opener and its arrangements of levers is such that in spite of strong pressure which may be exerted against the bolt but slight electric energy is required to move the armature to position for releasing the levers and the bolt.

This invention is set forth in the following specification and claim and illustrated in the annexed drawing in which—

Figure 1 shows a face view of an electric door opener embodying this invention. Fig. 2 is a section along the line $x x$ Fig. 1, showing the armature in engaging position. Fig. 3 is a view like Fig. 2 showing the armature in releasing position. Fig. 4 is a section along line $y y$, Fig. 1 showing the bolt forward or in engaging position. Fig. 5 is a view like Fig. 4 showing the bolt swung back or clear. Fig. 6 is a section along the line $z z$, Fig. 1, showing the lever mechanism in position to hold the bolt forward. Fig. 7 is a view like Fig. 6 showing the lever mechanism and bolt swung back. Fig. 8 is a detail view showing the fiber holder in perspective.

In this drawing is shown a case a . A pivot is shown at b in which can swing the bolt c . The bolt is normally swung forward or to engaging position by means of a spring d coiled about the bolt pivot b . The dog f is shown engaging the bolt c . A practical engagement between the bolt and the dog is made by a round pivot e which can be driven into the bolt c .

The dog f is shown pivoted or fulcrumed at g . The farther or free end of the dog f is shown engaged by the keeper h . This keeper h is shown as comprising the two arms placed at an angle to one another. One of the arms of the keeper extends from the fulcrum or pivot point i in approximately horizontal position while the other arm of the keeper is placed somewhat at an angle to the first mentioned arm. The free end of the dog f extends to a point practi-

cally underneath the fulcrum i and into the depending arm of the keeper which is shown somewhat recessed. When the keeper has its horizontal arm resting upon the armature k the dog f is held against movement by the keeper and the bolt c is prevented from swinging back or to opening position.

The armature k is shown pivoted at m and when the armature is attracted by the electro-magnet n the free end of the keeper h is released. When a push or pressure is now exerted against the bolt c the same can swing backward and by its engagement at point e carries the free end of dog f and swings the keeper h to position as indicated in Figs. 3 and 5. On releasing the bolt the spring d carries the parts back for the keeper h to be held on the armature k .

As noted in Fig. 6 the points e , g , b are practically in line with one another and the free end of dog f is practically under the pivot i .

The position of the parts or levers is such that great pressure on the bolt c will produce but slight effect upon the levers f , h and but slight electric energy is necessary to sufficiently vitalize the magnet n and attract the armature k for allowing the bolt c to be pressed to opening position.

The wires for the electric magnet are led as usual through a piece of fiber or insulating material q . The fiber or insulation q is held in place in the case by suitable clips or fasteners. Each clip or fastening is composed of two counter-parts each comprising a shank o and branches p . These counter-parts o , p are adapted to mutually interlock and to have their shanks and branches bent to respectively engage the fiber and the adjacent wall of the case or of the cut formed in the case to receive the fiber. The case can be closed by a cover-plate. The screw for securing said cover-plate s can be inserted into the hole r suitably tapped for the purpose.

I claim:

In a device of the kind described a pivoted bolt with fulcrumed dog engaging one another and having the pivot, fulcrum and engaging points practically in the same right line, a keeper comprising main and depending arms arranged at an angle to one another and pivoted at said angle, said depend-

ing arm engaging the free end of the dog at the pivot point on the keeper, an armature made to engage the free end of the keeper, and a magnet for the armature, said depending arm being recessed to allow the free end of the dog to pass close to the pivot point of the keeper.

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

JOSEPH LOCH.

Witnesses:

CHRISTIAN ALMSTAEDT,
MAE A. McGOWAN.