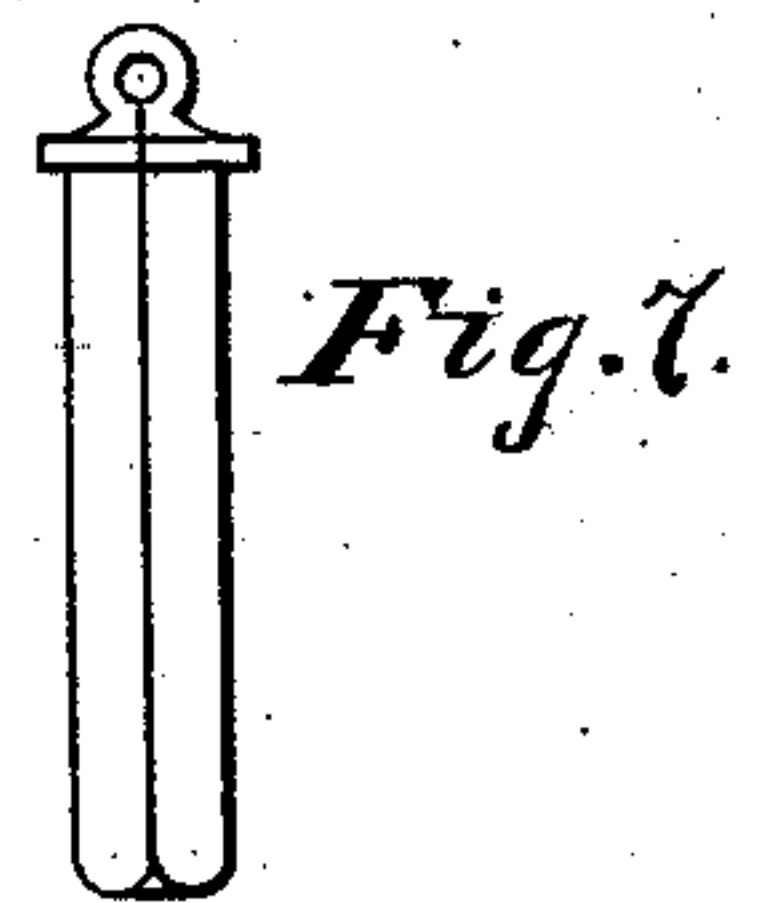
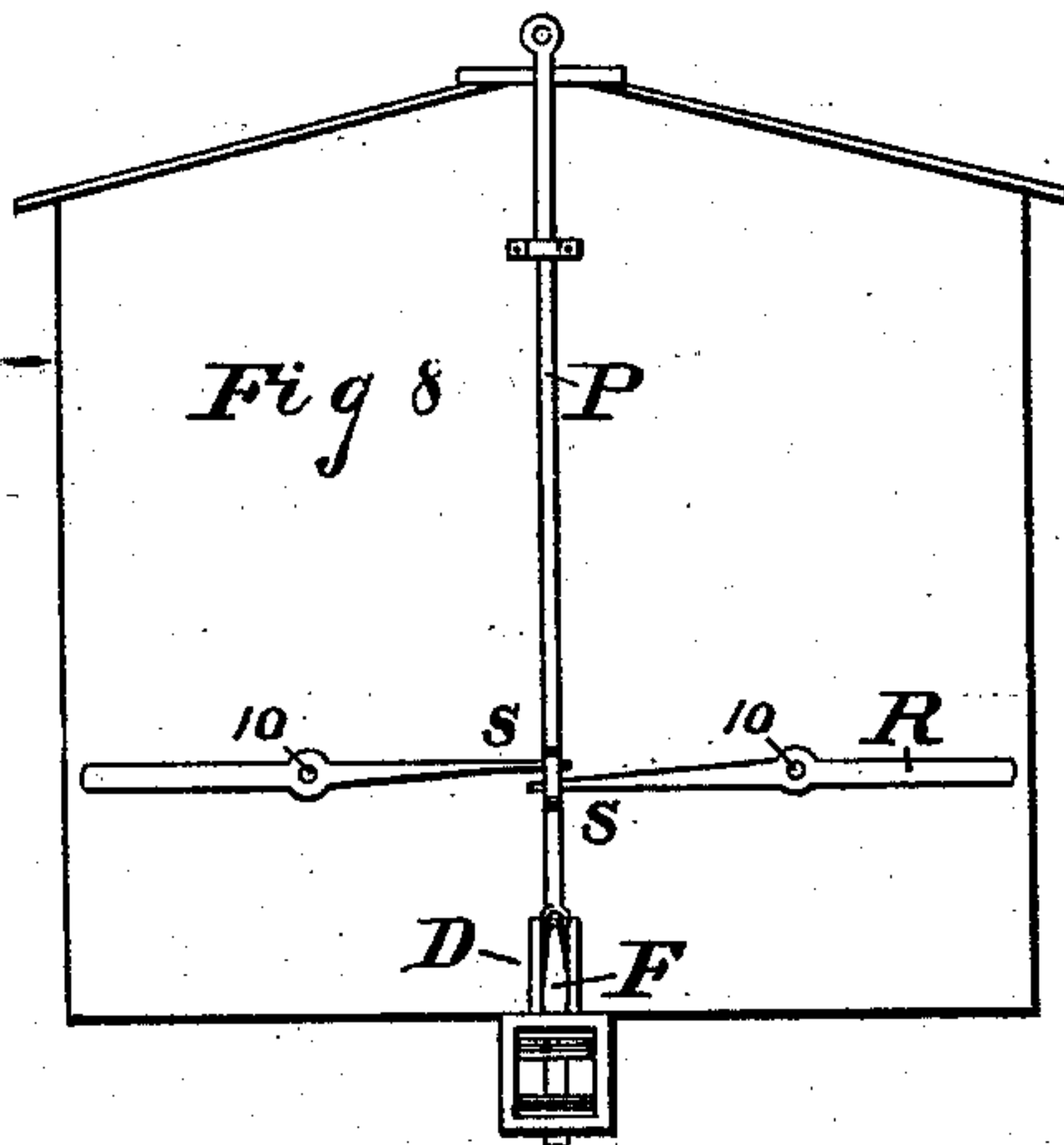
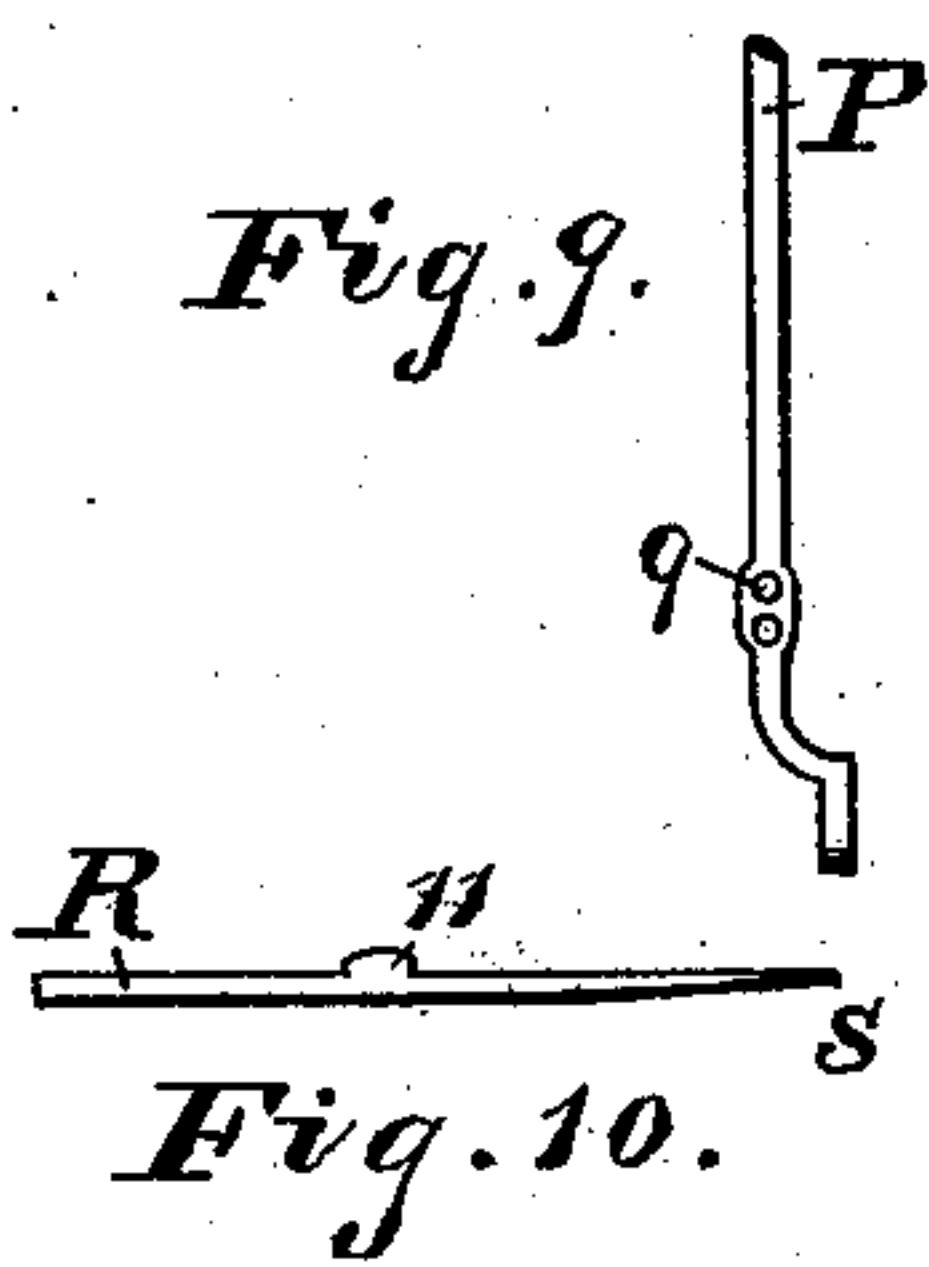
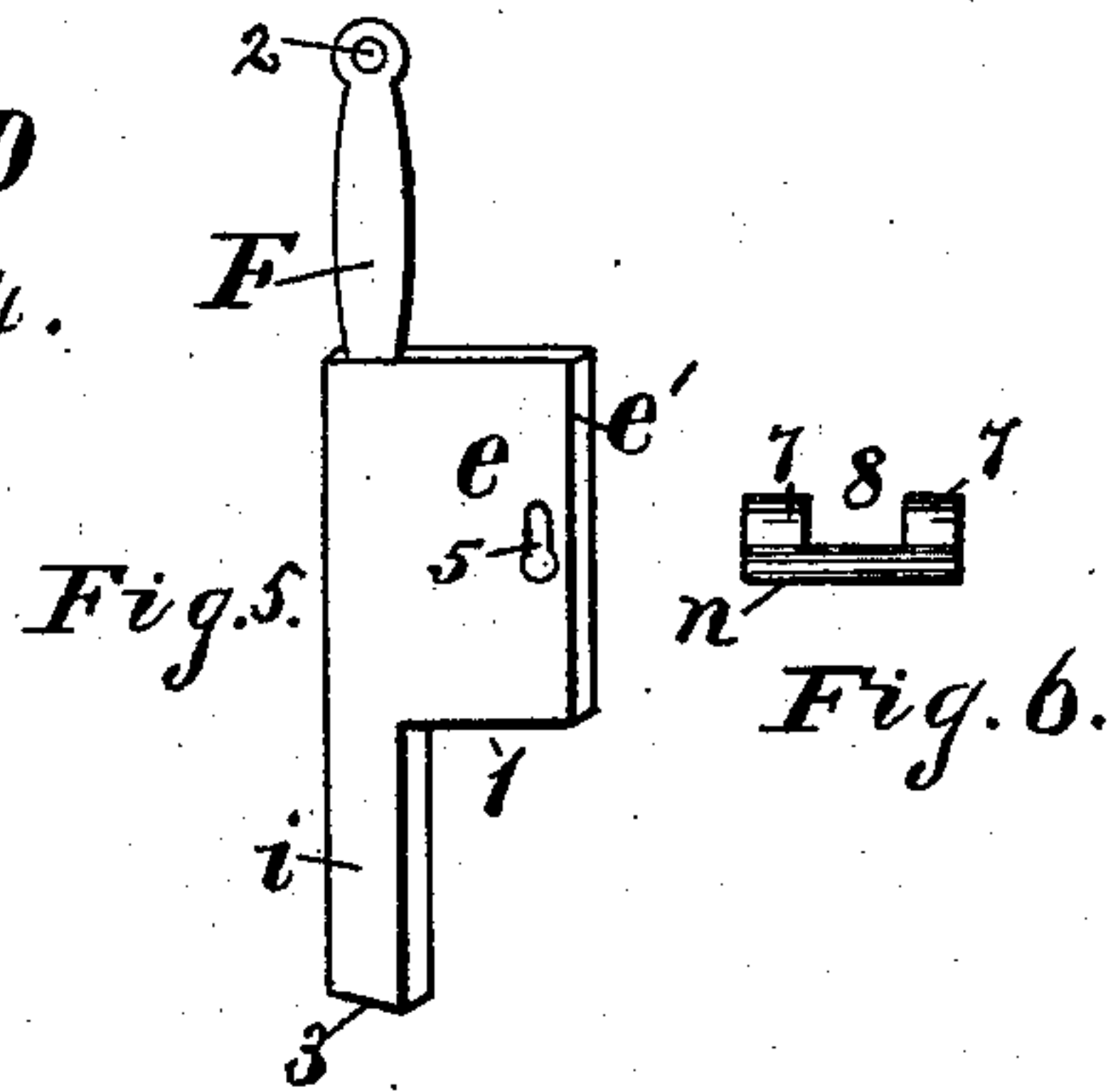
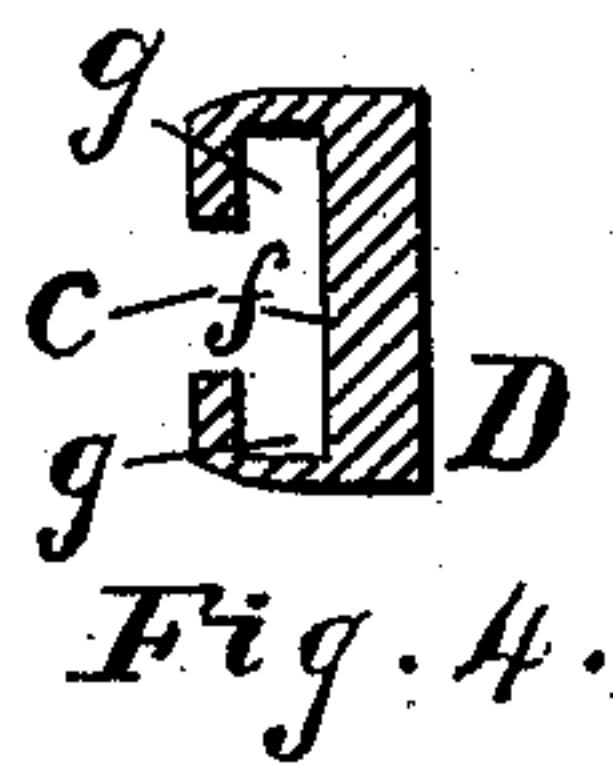
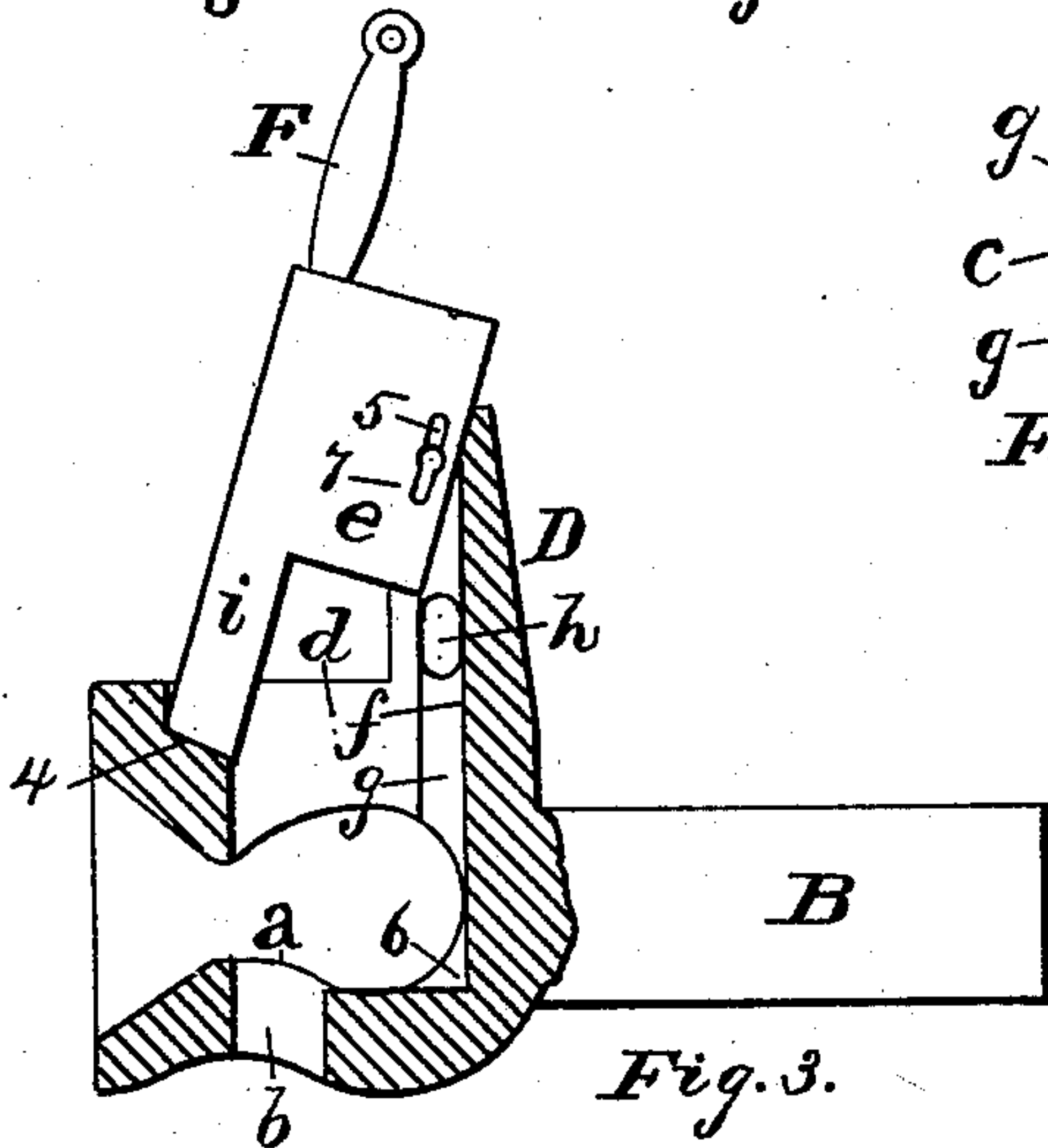
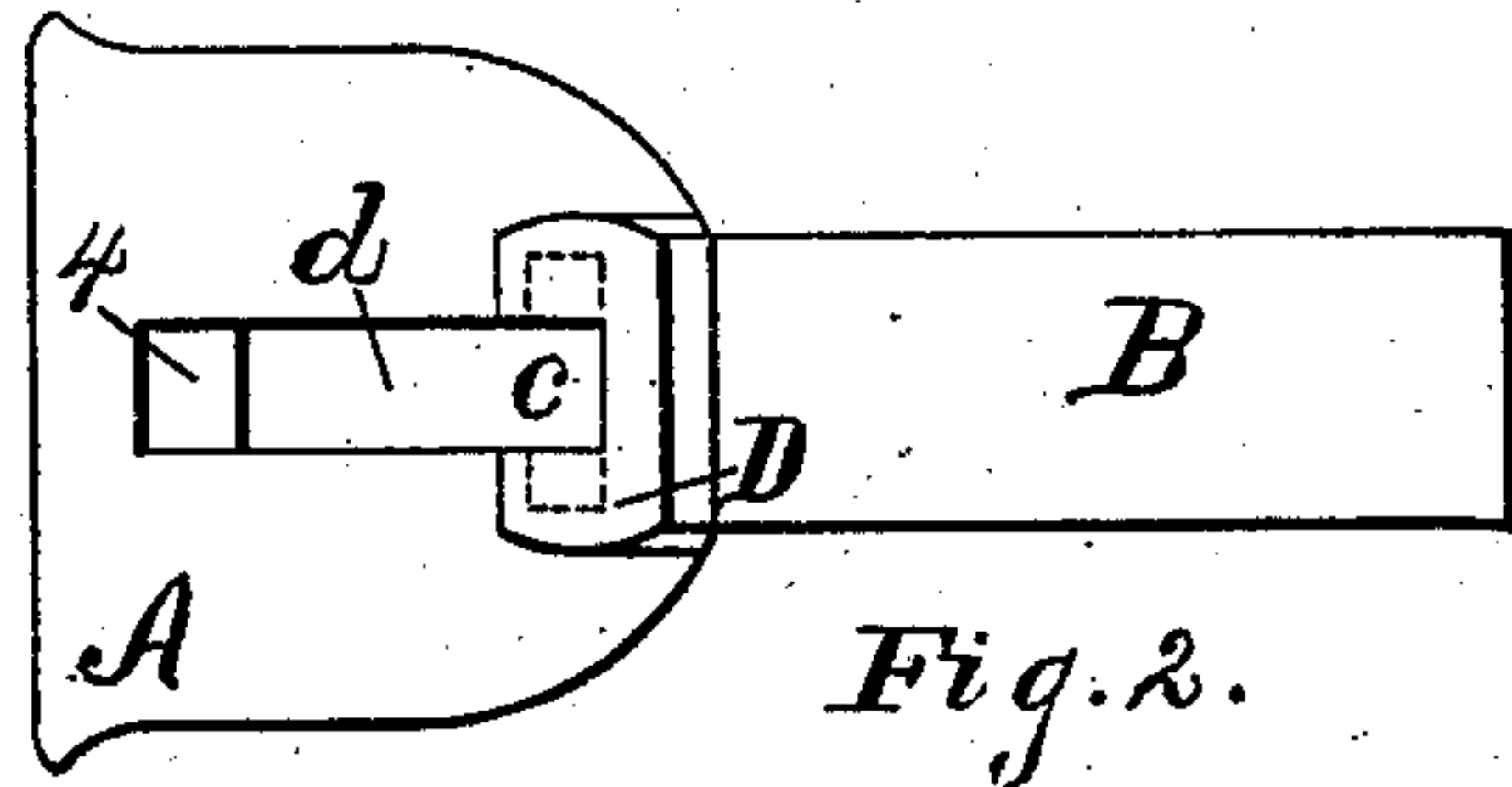
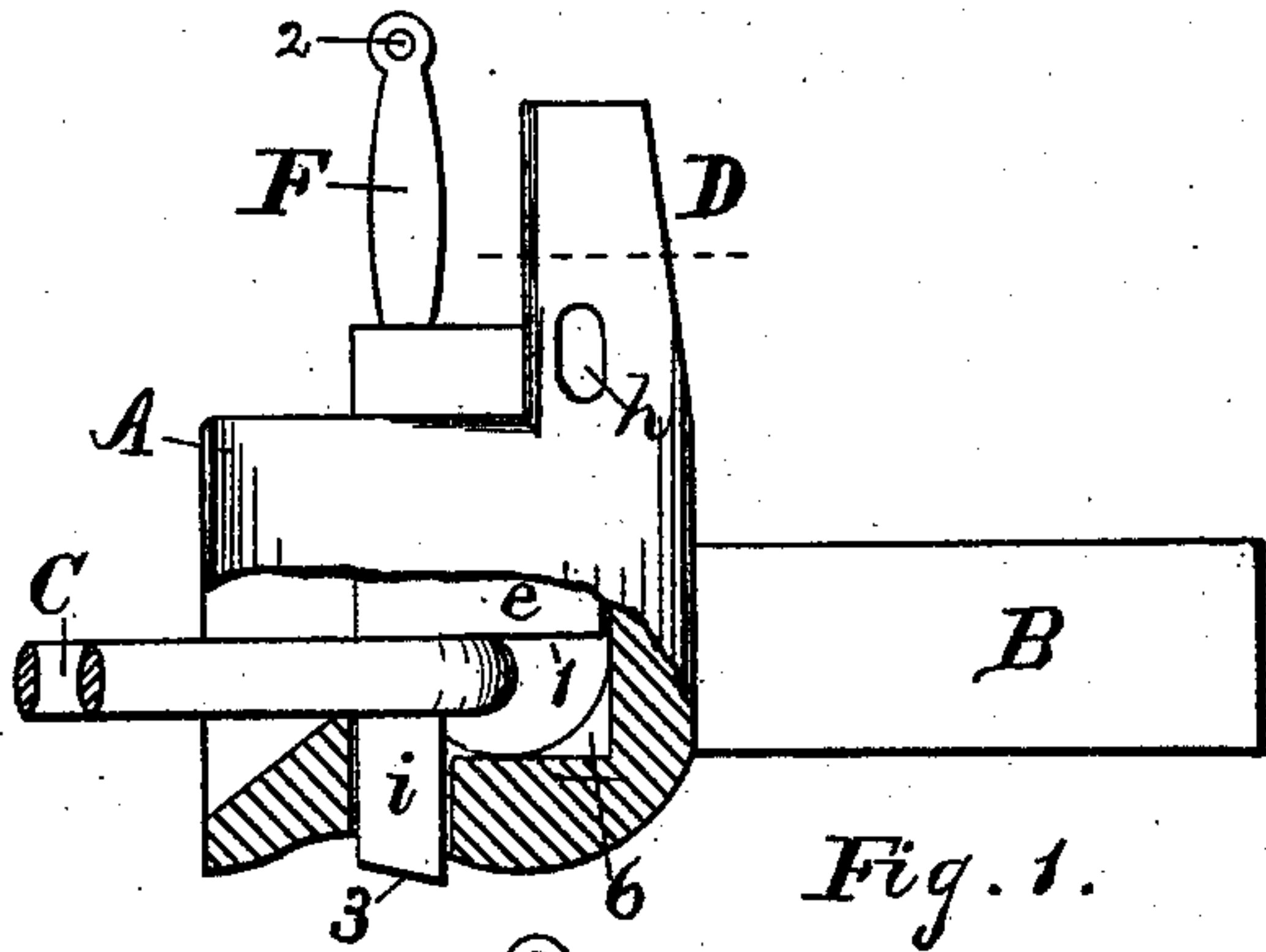


(No Model.)

J. C. BLOCHER.
CAR COUPLING.

No. 258,848.

Patented May 30, 1882.



Witnesses:
W. L. Langley
A. C. Eader

Inventor:
John C. Blocher
By his Atty
Chas B. Mann

UNITED STATES PATENT OFFICE.

JOHN C. BLOCHER, OF LIMA, OHIO, ASSIGNOR OF THREE-FOURTHS TO
GEORGE W. JAMES, BYRON BOWERS, AND JAMES IRVINE, OF SAME
PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 258,848, dated May 30, 1882.

Application filed February 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BLOCHER, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have
5 invented certain new and useful Improvements in Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements
10 in car-couplings, and will first be described, and then designated in the claims.

In the drawings hereto annexed, Figure 1 is a side view of the draw-head, a portion being broken away to show the link and pin resting
15 on the link. Fig. 2 is a top view of the draw-head; Fig. 3, a vertical longitudinal section of the draw-head, showing the pin elevated ready to couple. Fig. 4 is a horizontal cross-section of the boss on top of draw-head. Fig. 5 is a
20 side view of the pin. Fig. 6 is a view of the key for the pin. Fig. 7 shows an ordinary pin, which may be used with this draw-head. Fig. 8 shows the end of a car with rod and levers for operating the pin to adjust and guide the
25 coupling-link. Fig. 9 is a transverse side view of the rod on the end of the car. Fig. 10 is a top view of the lever.

The letter A designates the draw-head; B, the draw-bar, which connects under the car-
30 body, and C the ordinary coupling-link. The mouth of the draw-head has such shape as to facilitate the ready entrance of the link. The bearing *a*, upon which the link rests, commences about on a line with the front edge of the pin-
35 hole *b* through the bottom, and said bearing extends back with a very slight pitch or declivity, whereby the link, when in position for coupling, will be poised normally with its outer end on a line with the center of the draw-head.
40 The interior of the mouth is ovoidal, as shown in Fig. 3.

Upon the top and rear part of the draw-head is an upward-projecting boss, D, the front side of which has a vertical slot, *c*, and the top of
45 the draw-head has a slot, *d*, for the coupling-pin F. The rear of the said slot *d* intersects the vertical slot *c*, and the rear projection, *e*, on the pin has position in and slides up and down within the vertical slot. The rear wall, *f*,

of the slot is vertical, and serves as a guide or
50 bearing, against which the edge *e'* of the pin slides. Within the vertical slot *c*, and upon each side, is a vertical groove, *g*, flush with the rear wall, *f*. These side grooves, which are
55 plainly shown in Fig. 4, do not extend clear to the top of the boss; but each is closed at its upper end, as shown in Fig. 2, where the grooves are indicated by broken lines. Each side of the boss is provided with a hole, *h*, which enters one of the grooves and serves to admit
60 the key hereinafter described.

The coupling-pin F engages with the link by its lower straight part, *i*, as seen in Fig. 1, while the lower edge, *l*, of the rectangular-shaped rear projection, *e*, rests upon the inner end of
65 the links, where it remains all the while the link is in the draw-head. In order to carry out the design of the invention, the weight of the pin should be such that when resting upon the link it will balance the latter on its bearing *a*. The
70 upper end, F, of the pin projects up above the rectangular-shaped part in a direct line with the lower part, *i*, and when in use extends above the draw-head and serves as a hand-hold, by which the pin may be grasped to adjust and
75 guide the link when about to couple. A hole, 2, in the upper end of the hand-grasp part is for the attachment of a rod hereinafter described. The lower extremity of the coupling-pin slants off downward, as at 3, from front to
80 rear, which facilitates its dislodgment from the notch 4 in the upper part of the draw-head at the front end of the slot *d*, where the lower end of the pin rests, ready to couple with the link when the latter enters the draw-head. A
85 slot, 5, is formed in the rear projecting part of the pin, near its edge *e'*, for the key. The bottom end of the slot is enlarged by being bored out. A key with a round shank, *n*, of size to fit the bored-out part of the slot has at each
90 end a thin wing or plate, 7, both attached in line with each other; but with a space, 8, on the shank between. When the key is in position in the slot 5 that part of the shank designated 8 may turn to invert the wings.

To fasten the coupling-pin by means of the key, first insert the pin until the slot 5 in the pin coincides with the key-hole *h* in the boss.

The key is then passed through the hole *h* and into the slot 5, with the wings 7 turned upward. The coupling-pin is then lowered, the ends of the key sliding down the side grooves, *g*, and when they pass out of the grooves and the key occupies the rear of the mouth of the draw-head the key may be inverted to turn the wings down, in which position the key cannot come out.

A horizontal seat for the lower edge, 1, of the coupling-pin is formed in the bottom of the mouth of the draw-head. This produces a right-angled notch, 6, at the point where the horizontal seat joins the lower end of the vertical slot *c*. By this arrangement, when the link is out the coupling-pin may set down, so that its greatest breadth, which is on a horizontal line drawn through the rear projection, *e*, may come opposite the mouth of the draw-head. In this position the edge *e'* of the pin rests directly against the wall of the vertical slot, and said pin cannot be bent or injured by the concussion of a link in the draw-head of another car. A rod, *P*, has its lower end attached to the coupling-pin at the hole 2, and extends up the end of the car. Two holes, 9, are formed in this rod. On each side of the rod a lever, *R*, is pivoted at 10 to the car. Each lever is provided with a boss, 11, projecting from one side, and said boss constitutes the pivot-point which bears against the car. This boss serves to accommodate the endwise motion of the draw-head, so that when the draw-head is pushed back the vertical rod will be moved nearer the car end, and the levers must correspondingly yield at their pivot-point. The end of each lever is pointed, as at *S*, or otherwise adapted to enter and pass entirely through one of the holes 9 in the vertical rod. The other end of each lever has position near the side of the car. By grasping the last-described end of either lever the coupling-pin may be raised; or the projected end of the link may, by the action of the coupling-pin, be adjusted or guided to enter another draw-head, and thus the levers obviate all necessity of a person passing between the bumpers to effect the coupling.

The arrangement of the end of each lever passing entirely through a separate hole in the vertical rod permits of the rod being raised or lowered, as each lever end has free play in its hole.

The arrangement of the notch 4 in the top and front of draw-head, the boss with side grooves closed at the top, and the coupling-pin with the ends of the key sliding in the grooves has the effect to place the lower end of the coupling-pin in the notch 4, ready to couple, as shown in Fig. 3, whenever the coupling-pin

is drawn up far enough for the ends of the key to strike against the closed upper end of the grooves.

I have not here laid claim to such an arrangement or construction of the levers for raising the coupling-pin as will permit them so to yield at their pivot-point that the endwise movement of the draw-head may be accommodated, and I desire to reserve the right to lay claim thereto in an application for a patent to be filed hereafter.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a car-coupling, a draw-head having upon its top and rear part a boss, *D*, which projects vertically above the draw-head, and said boss provided on its front side with a vertical slot, *c*, which has within it on each side a vertical groove, *g*, in combination with a coupling-pin having a lower straight end, *i*, to engage with the link, and provided above the lower straight end with a rear projecting part, *e*, to slide in the slot on the front-side of the boss, and said rear projecting part having a key whose ends slide in the vertical grooves, as set forth.

2. In a car-coupling, a draw-bar having an upward-projecting boss provided with a vertical slot, *c*, and within the slot on each side a vertical groove, *g*, closed at the upper end, and a key-hole, in combination with a coupling-pin provided with a rear projecting part to slide in the slot, and having a key whose ends slide in the groove, as set forth.

3. In a car-coupling, the combination and arrangement of a draw-head having a notch, 4, in its top adjoining the pin-hole, an upward-projecting boss provided with vertical side grooves closed at the top, and a coupling-pin provided with a key whose ends slide in the vertical grooves, as set forth.

4. In a car-coupling, a draw-head having in its top a slot, *d*, and at the rear end thereof an intersecting slot with a vertical wall, *f*, and in the bottom of its mouth a horizontal seat, which, with the vertical wall, forms a right-angled notch, 6, in combination with a coupling-pin having a rear projection provided with a lower horizontal edge, 1, and a rear vertical edge, *e'*, as set forth.

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

JOHN C. BLOCHER.

Witnesses:

FRIEDERICH K. KOCH,
WILLIAM A. RHODA.