

No. 653,587.

Patented July 10, 1900.

W. C. NEWELL.
CRUCIBLE TONGS.

(Application filed Mar. 22, 1900.)

(No Model.)

FIG. 1.

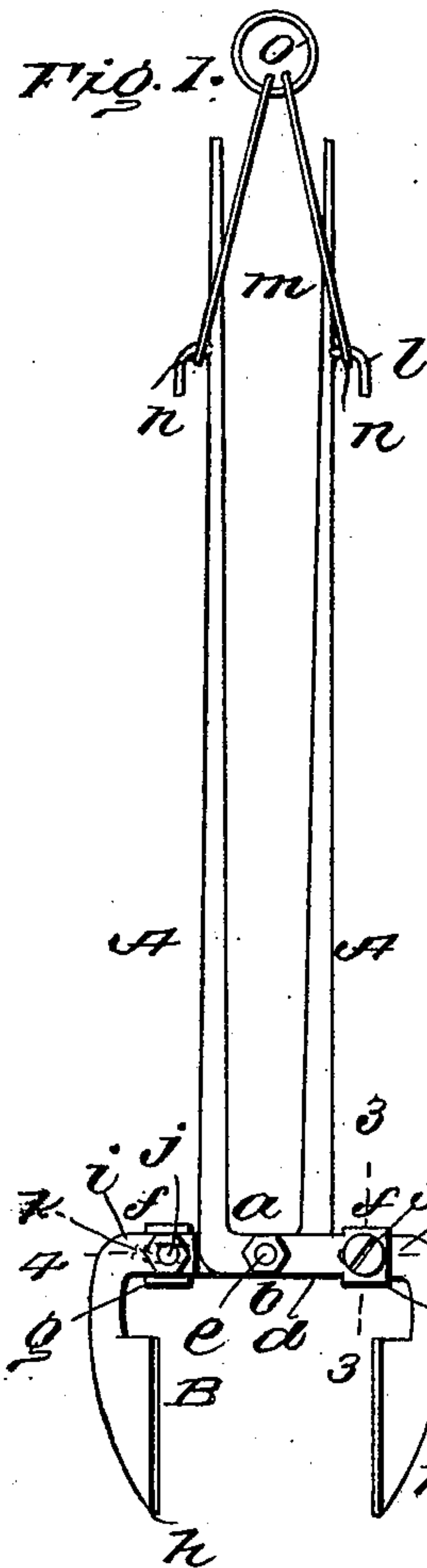


FIG. 2.

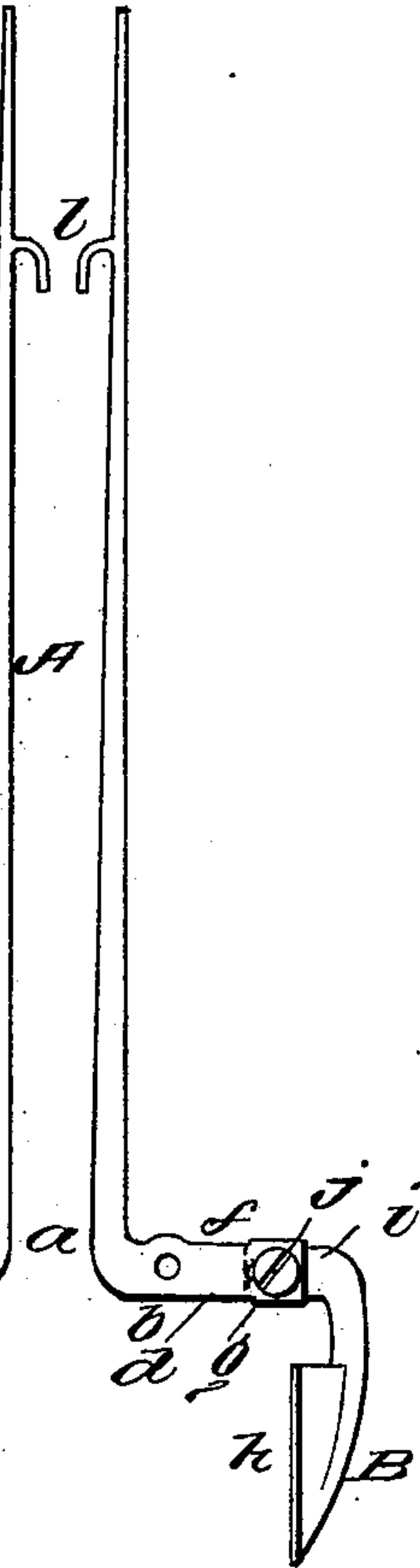


FIG. 3.

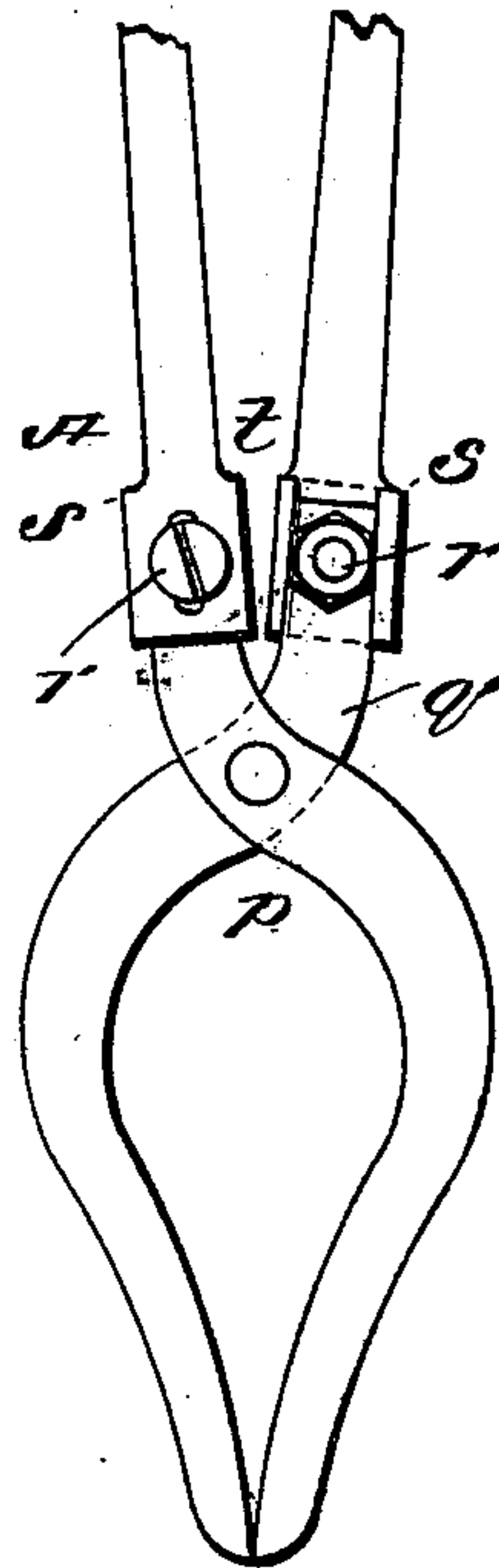


FIG. 4.

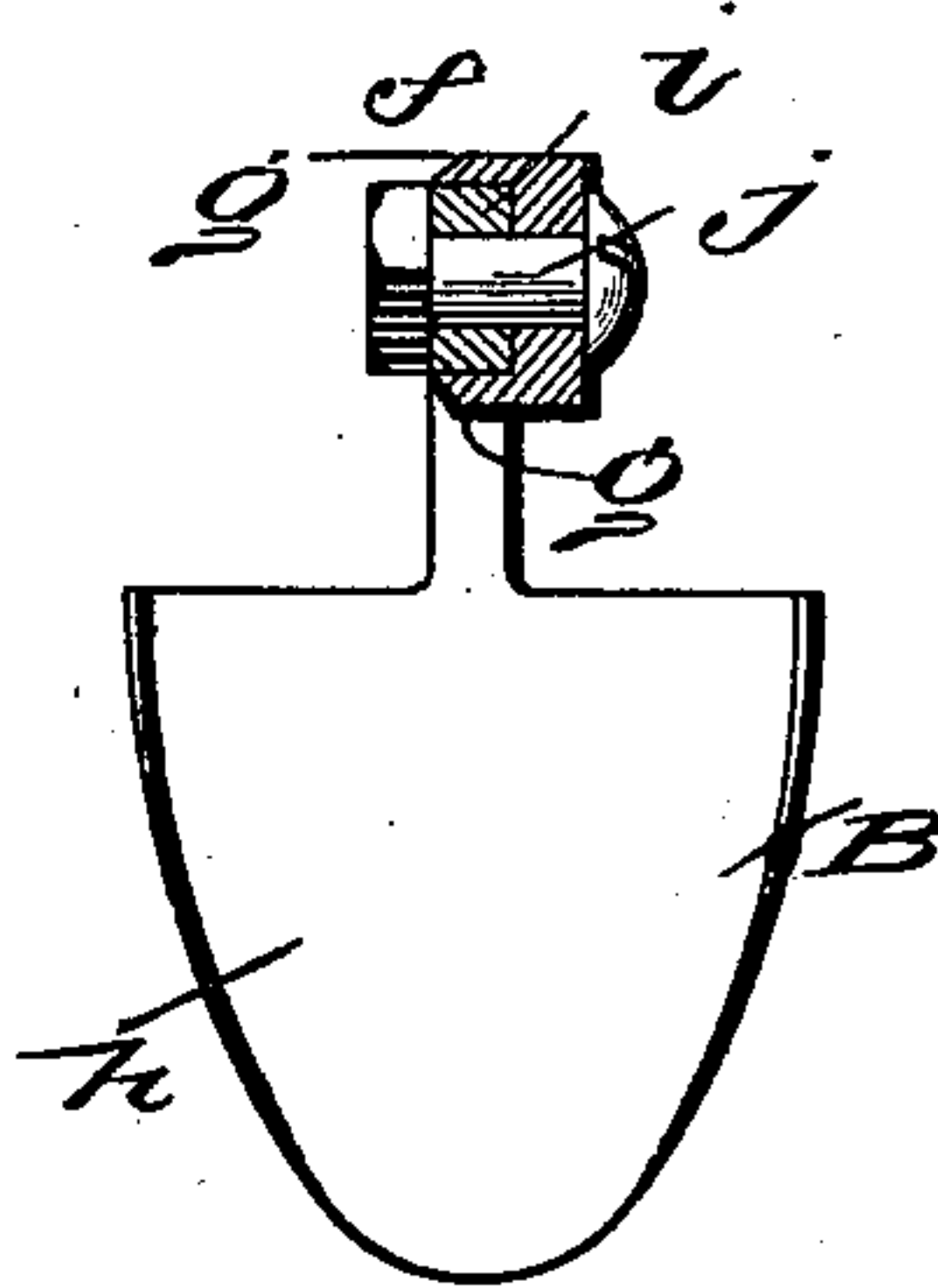
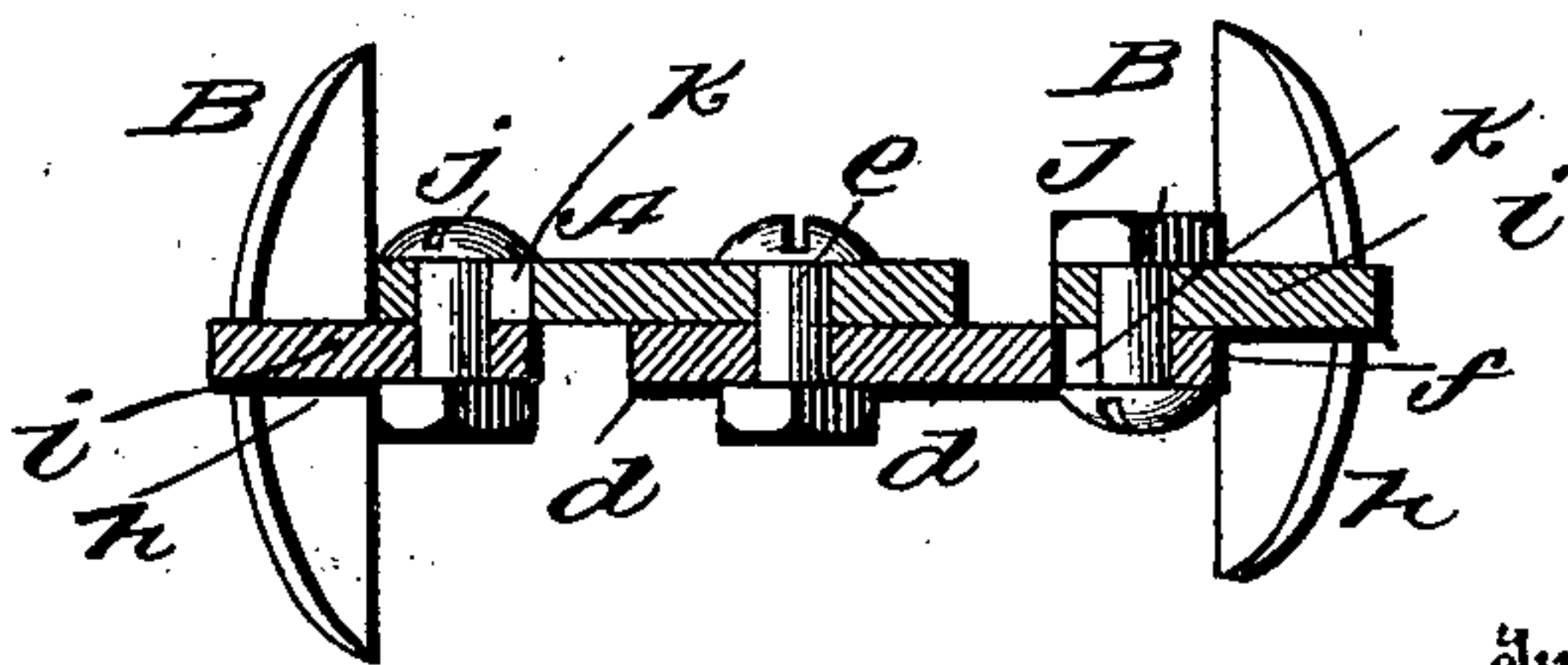


FIG. 5.



Inventor

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UNITED STATES PATENT OFFICE.

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CRUCIBLE-TONGS.

SPECIFICATION forming part of Letters Patent No. 653,587, dated July 10, 1900.

Application filed March 22, 1900. Serial No. 9,740. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. NEWELL, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain
5 new and useful Improvements in Crucible-Tongs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and
10 use the same.

This invention contemplates certain new and useful improvements in tongs, having special reference to such as are employed for gripping crucibles. It is well known that
15 tongs of this character are short-lived, since the intensity of the heat to which they are subjected soon renders them useless. When the engaging portions of the tongs are worn out the entire device is destroyed, resulting
20 in the loss of even those parts which have not been injured by the heat.

The primary object of my present invention is to enable the prongs or engaging portions of the tongs to be removed when worn
25 out, and new ones substituted, thus saving the rein portions, with the result that practically new tongs are obtained at about one-half the original cost.

The invention will be hereinafter fully set
30 forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation. Fig. 2 shows the two sections of the device detached. Figs. 3 and 4
35 are cross-sectional views on lines 3 3 and 4 4, respectively, Fig. 1. Fig. 5 shows the application of my improvement to a different form of tongs.

Aside from the fact that crucible-tongs
40 soon wear out, it has heretofore been necessary to keep near at hand tongs of different sizes—that is, tongs having prongs capable of accommodating themselves to different-sized crucibles. By means of my invention
45 not only may new prongs be substituted when the old ones wear out, but prongs of different sizes may be interchangeably used in connection with each pair of reins, and each pair of prongs is adjustable to fit crucibles of
50 different sizes.

Referring to the drawings, A A designate two reins, consisting of elongated rods *a*, bent

at *b* to form right-angular portions *d*. These right-angular portions *d* of the two reins are pivotally united by a nutted screw *e*, passed
55 through coincident openings in the angular portions of the reins. The outer end *f* of each angular portion is formed with upper and lower lateral flanges *g*, those of the two reins being extended in opposite directions. 60

B B designate the prongs, which are designed to engage the crucible, the body *h* of each prong being of concavo-convex formation, and from each body extends a right-angular arm *i*. These arms fit between the up-
65 per and lower flanges of the right-angular portions of the two reins. They are held within the spaces between these flanges by nutted screws *j*, passed through openings therein and coincident slots *k* in the ends of
70 the reins. By thus securing the prongs to the angular ends of the reins they are firmly and adjustably connected together. The lateral flanges prevent axial movement of the prong-arms on the nutted screws, while the
75 latter securely bind the prongs against the sides of the reins. By extending the lateral flanges of the two reins in opposite directions each upper flange forms a stop which limits the axial movement of the other rein—that
80 is, when the prongs are moved away from each other. Each rein is formed near its outer end with a hook *l* for engagement therewith of a clamp or coupling *m*, which preferably consists of two links *n* and a central ring *o*, by
85 which the tongs may be carried or suspended. The slots *k* permit each pair of prongs to be adjusted to fit pots of different sizes within certain limits.

It is obvious that in the event of injury to
90 the prongs or when those in use are inapplicable to the size of the crucible to which the tongs are to be applied it is only necessary to remove the nutted screws *j* in order to replace the prongs. 95

In Fig. 5 I have shown a pair of pick-up tongs composed of two pivotally-united jaws *p*, having extensions *q*, which are secured by nutted screws *r*, between lateral flanges *s*, to the reins *t*. It is obvious that in this form
100 the reins may be used in connection with different sets of jaws, it being necessary merely to remove the nutted screws in order to disengage the jaws and reins.

I claim as my invention—

1. A pair of tongs composed of two members pivotally united together, each member having two parts, a rein and an engaging portion, one of said parts having lateral flanges engaging the other part, and means for uniting both of said parts at the points of location of the flanges, substantially as set forth.

2. A pair of tongs composed of two reins pivotally united together, each rein having an angular portion formed with lateral flanges, prongs having arms fitted between said lateral flanges, and means for binding said arms against said angular portions, substantially as set forth.

3. A pair of tongs consisting of two reins pivotally united and having angular portions formed with upper and lower lateral flanges and slots intermediate of said flanges, prongs having angular arms located between said lat-

eral flanges, and nutted bolts passed through openings in said arms and the slots in said angular portions, substantially as set forth.

4. A pair of tongs composed of two reins having hooks thereon near their outer ends, and also having right-angular portions pivotally connected together, said angular portions having, on opposite sides, laterally-extended flanges, prongs having arms removably secured between said flanges, a clamp or coupling having links for engaging the hooks on said reins, and a ring for connecting said links, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM C. NEWELL.

Witnesses:

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WM. H. SELBECK.