

(No Model.)

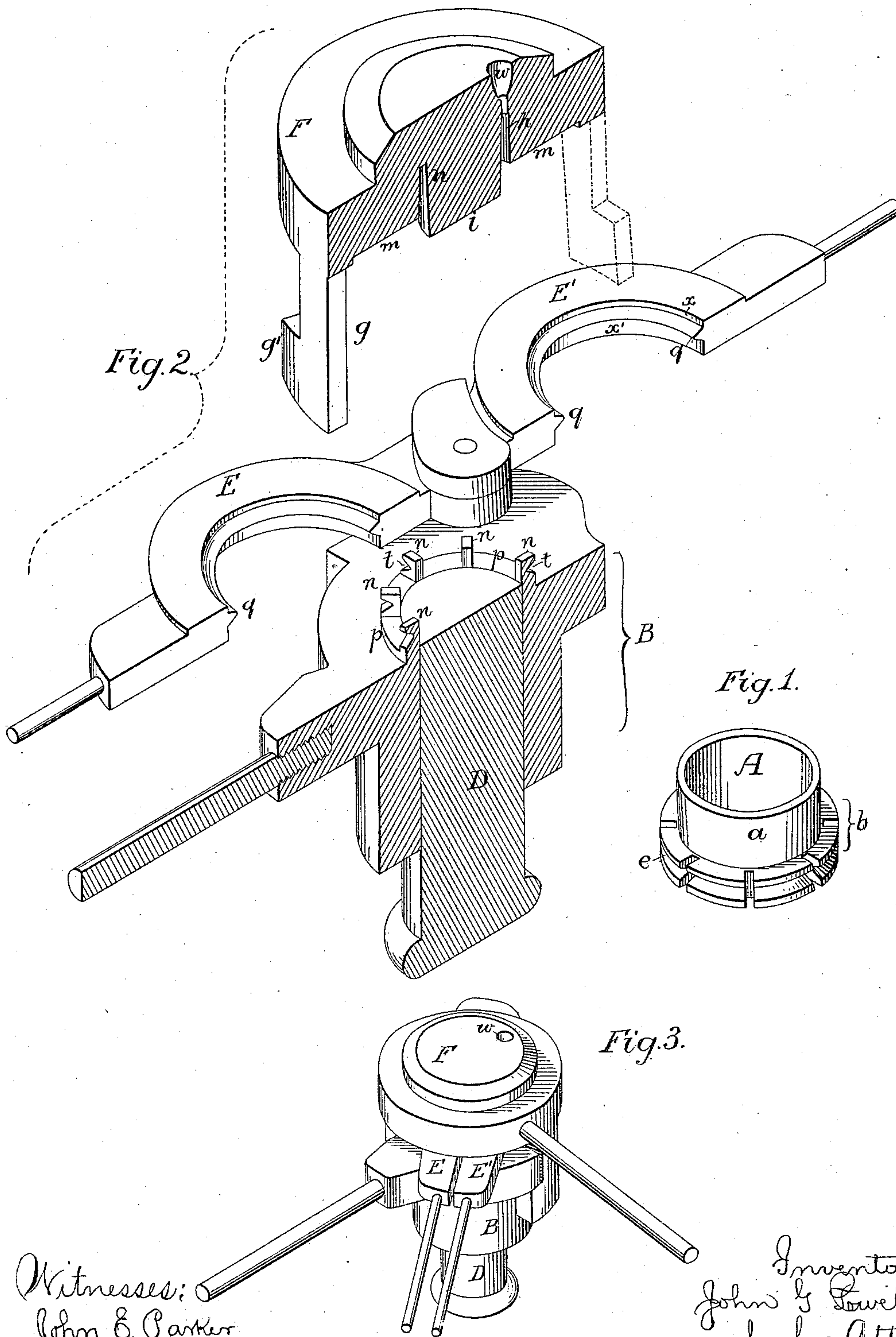
3 Sheets—Sheet 1.

J. G. POWELL.

MOLD FOR UMBRELLA NOTCHES AND RUNNERS.

No. 314,395.

Patented Mar. 24, 1885.



Witnesses:
John B. Parker
James J. Tobin

Inventor
John G. Powell
by his Attys
Hawson & Sons

(No Model.)

3 Sheets—Sheet 2.

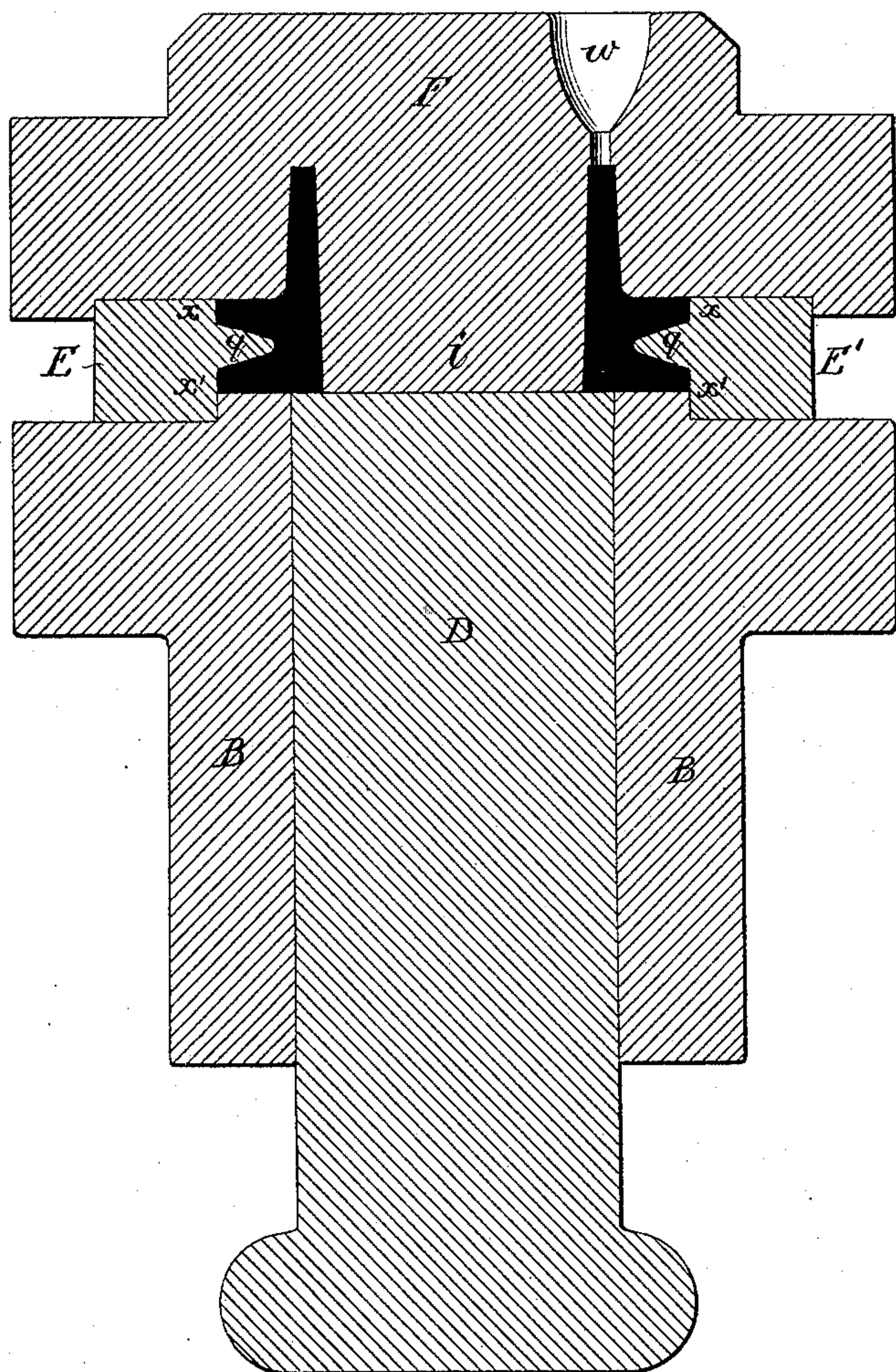
J. G. POWELL.

MOLD FOR UMBRELLA NOTCHES AND RUNNERS.

No. 314,395.

Patented Mar. 24, 1885.

Fig. 4.



Witnesses

John E. Parker
James J. Tobin

Inventor
John G. Powell
by his attys
Howson & Sons

(No Model.)

3 Sheets—Sheet 3.

J. G. POWELL.

MOLD FOR UMBRELLA NOTCHES AND RUNNERS.

No. 314,395.

Patented Mar. 24, 1885.

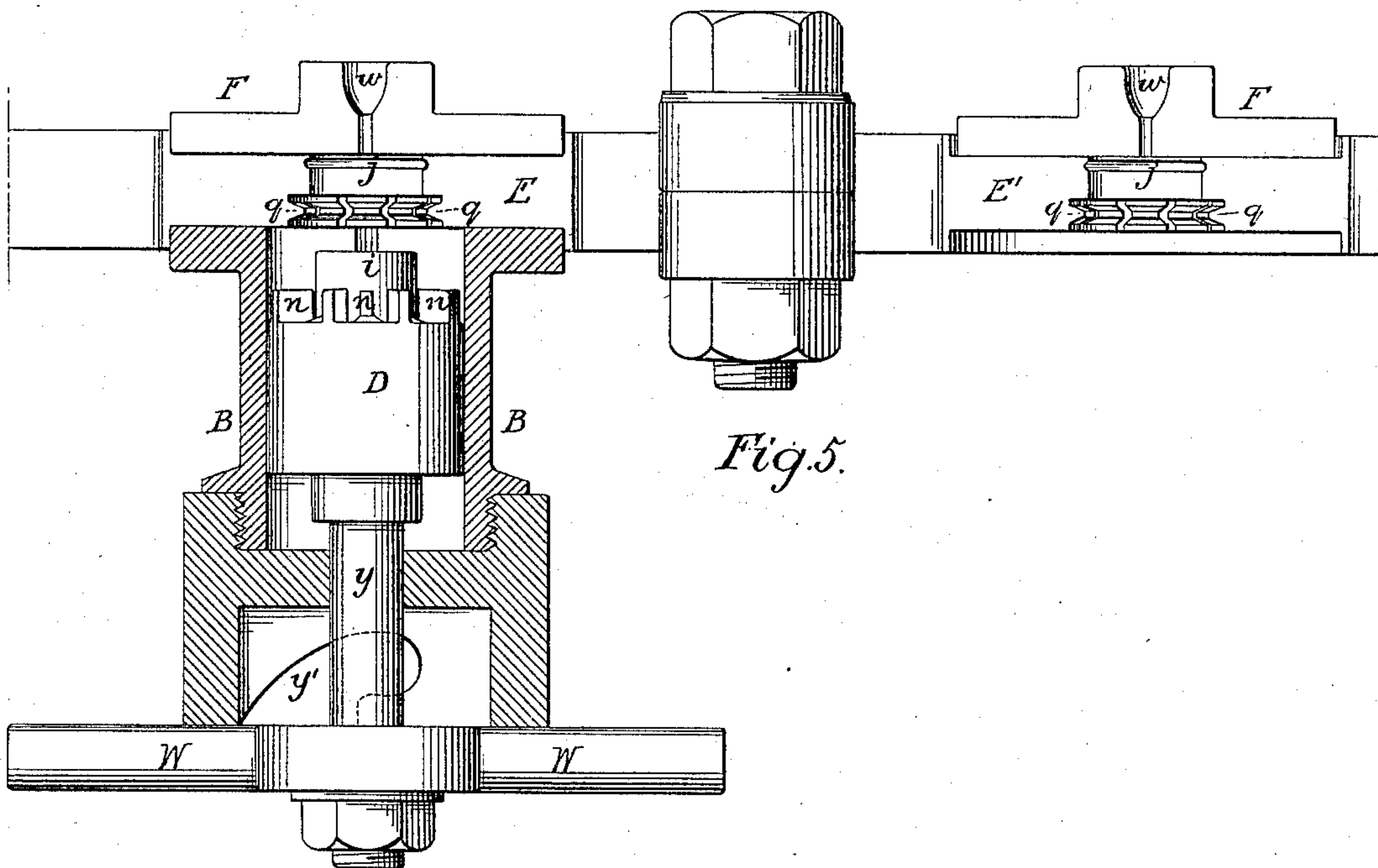


Fig. 5.

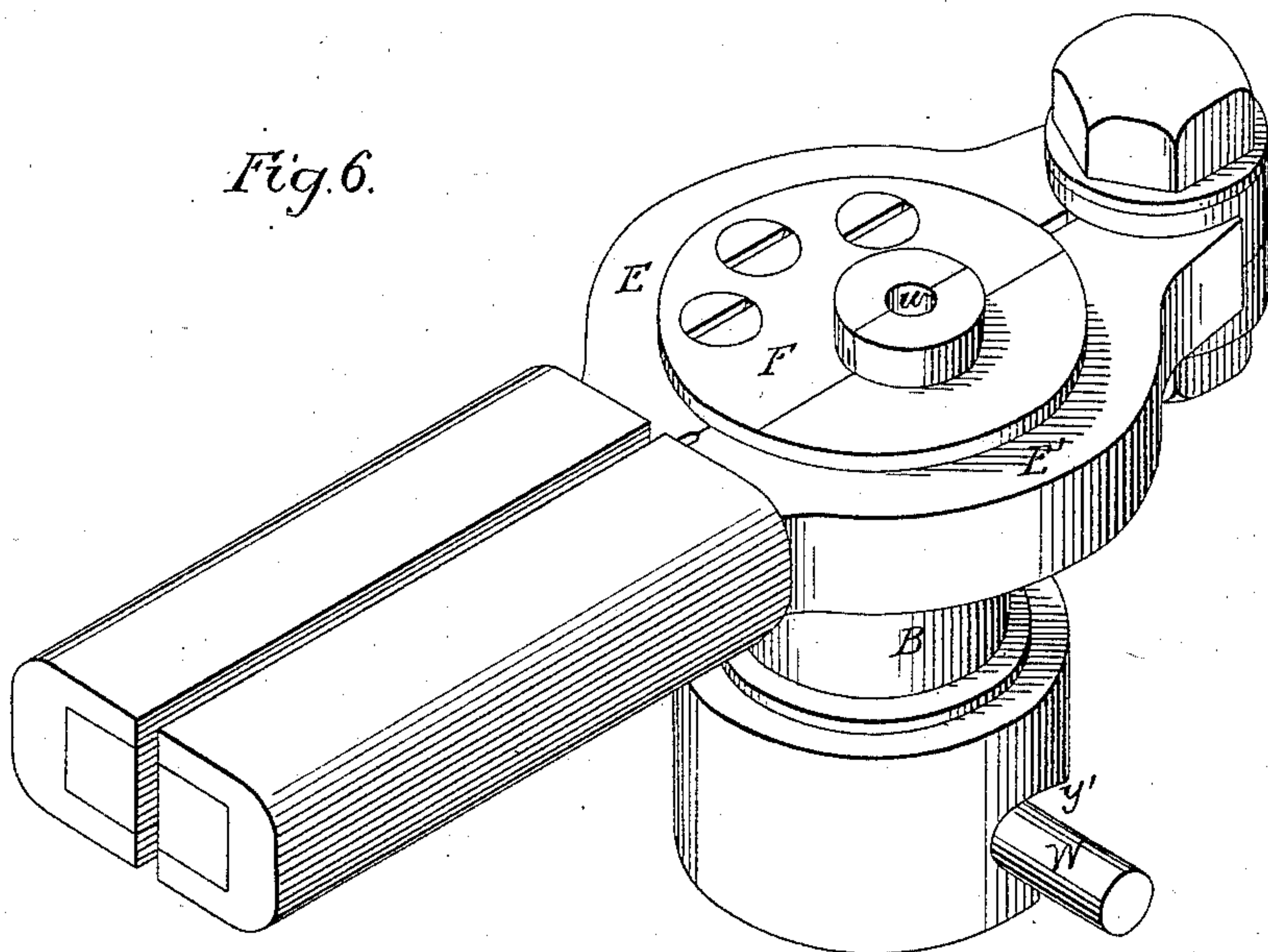


Fig. 6.

Witnesses
John E. Parker
James I. Johns

Inventor
John G. Powell
by his Attys
Howson & Sons

UNITED STATES PATENT OFFICE.

JOHN G. POWELL, OF PHILADELPHIA, PENNSYLVANIA.

MOLD FOR UMBRELLA NOTCHES AND RUNNERS.

SPECIFICATION forming part of Letters Patent No. 314,395, dated March 24, 1885.

Application filed November 30, 1883. Renewed January 19, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. POWELL, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in the Manufacture of Molds for Umbrella Notches and Runners, of which the following is a specification.

My invention consists of a metal mold wherein to cast, under pressure, notches and runners for umbrellas and parasols, the mold being constructed substantially in the manner described hereinafter, so that the notch or runner will be complete and finished ready for use on leaving the said mold.

In the accompanying drawings, Figure 1, Sheet 1, is a perspective view of a finished umbrella-notch; Fig. 2, a sectional perspective of the mold for producing the same as it appears when the cap is detached from the body and parts of the mold open; Fig. 3, an exterior perspective view of the mold; Fig. 4, Sheet 2, a vertical section, on an enlarged scale, of the mold as it appears when closed and containing an umbrella-notch; Fig. 5, Sheet 3, a sectional view illustrating a section of a modified mold; and Fig. 6, a perspective view of the same.

Referring, in the first instance, to Figs. 1, 2, 3, and 4, A, Fig. 1, is an umbrella-notch which is made in the mold, and which differs from an ordinary notch in having throughout a uniform mold-finished surface, and in the alloy of which it is composed, ordinary notches being made of brass, while that shown in Fig. 1 is supposed to be an alloy which will melt at such a low temperature that it can be cast in a metal mold, but which, when cold, is as hard or nearly as hard as brass.

For this notch as an article of manufacture I have made a separate application for a patent.

The mold shown in Figs. 2, 3, and 4 is composed of the following parts, namely: the body B, the cylindrical plunger D, adapted to slide in a corresponding opening in the said body, the segments E E', which are in the present instance hinged to the body, and the cap F. The relation of these parts to each other when the mold is closed will be best understood by referring to Fig. 4. In the under side of the

cap is an annular recess, *h*, which determines the inner and outer diameters of the cylindrical portion *a* of the notch A, the central cylindrical portion, *i*, of the cap extending below the under surface, *m*, of the same. On the upper surface of the body B, and concentric with the central opening of this body, is an annular rib, *p*, on which are arranged as many projections *n* as there are radial slots in the notch A, the upper ends of these projections being in contact with the under surface of the cap when the mold is closed. Each of the segments E E' has a semi-annular rib, *q*, the ribs of the two segments, when closed, fitting into notches *t* in the projections *n*, and determining the annular groove *e* in the rim *b* of the notch A. When the mold is closed, as shown in Fig. 4, the space inclosed is of the exact shape of the complete notch A, the diameter of the rim *b* of the notch being determined by the portions *x x'* of the segments, the circumferential groove, as before remarked, by the semi-annular ribs *q* of the segments, the length of the cylindrical portion of the notch by the annular groove *h* in the cap, and the thickness of the grooved rim *b* of the notch partly by the cap and partly by the surface of the annular rib *p* of the body, which, when the mold is closed, is in the same plane as the upper end of the plunger D, which is in contact with the central projection, *i*, of the cap. After the metal has been forced through a gate, *w*, in the cap into the cavity of the mold, the cap is detached from the body, the segments are opened, and the plunger D is used as an ejector for pushing the finished notch from the projections *n*.

It will be seen on reference to Fig. 4 that when the mold is closed the segments bear against the edge of the annular rib *p* on the body, and that the cap overlaps the segments, which cannot, therefore, be opened until the cap is removed.

As regards the external shape of the mold, it may be altered without departing from my invention, and the cap may be confined to the body in different ways. In the present instance the cap has hooked arms *g g*, the lower ends, *g'*, of which catch on the under side of lugs on the body.

Referring to the modifications in the construction of the mold illustrated in Figs. 5 and 6, Sheet 3, it will be seen that there are the segments E E', the body B, and cap F, the annular rib *q* on each segment for forming the circumferential groove in the rim of the notch A, and the projections *n* for forming the radial slots in the said rim of the notch. These projections *n*, however, instead of being on the body of the mold, are on the top of the plunger D, which is arranged to slide in the body B, the projections being arranged, when the plunger is elevated, to enter slots in the segments E E', in which, when closed, is an annular recess corresponding with the rim of the notch A, the annular rib *q* for forming the circumferential groove in the rim being partly in one segment and partly in the other segment. The cap F in this case is in two parts, one carried by one segment and the other by the other segment.

When the mold has been closed—that is, when the straight edges of the segments are in contact with each other—and the plunger has been elevated until its upper surface is in contact with the under side of the segments, the mold will inclose a space corresponding exactly with the notch A, Fig. 1, a cylindrical projection, *i*, on the plunger, and a circular opening, *j*, made partly in one segment and partly in the other segment, determining the cylindrical portion of the notch. After the metal has

been introduced into the mold under pressure through the gate *w*, the mold may be opened first by depressing the plunger and then by opening the segments, when the casting consisting of a complete notch will be at liberty.

In order to depress the plunger D, I prefer to use a handle, W, which is arranged to turn freely on the stem *y* of the plunger, and which bears against inclined planes *y'* on the under side of the body.

In referring to umbrella “notches” in this specification it should be understood that the term is intended to include “runners,” which differ from notches only in the length of the cylindrical portion of the stem.

I claim as my invention—

A mold in which are combined the following elements, namely: first, the body B; second, the cylindrical plunger D, adapted to and arranged to slide in the said body; third, the radial projections *n*; fourth, the cylindrical projection or core *i*; fifth, the movable segments E E', each provided with an internal rib, *q*; and, sixth, a cap, F, all substantially as set forth.

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

JOHN G. POWELL.

Witnesses:

JOHN E. PARKER,
HARRY SMITH.