

(No Model.)

C. P. WEISS.

DEVICE FOR RESEATING VALVES.

No. 379,351.

Patented Mar. 13, 1888.

fig. 1

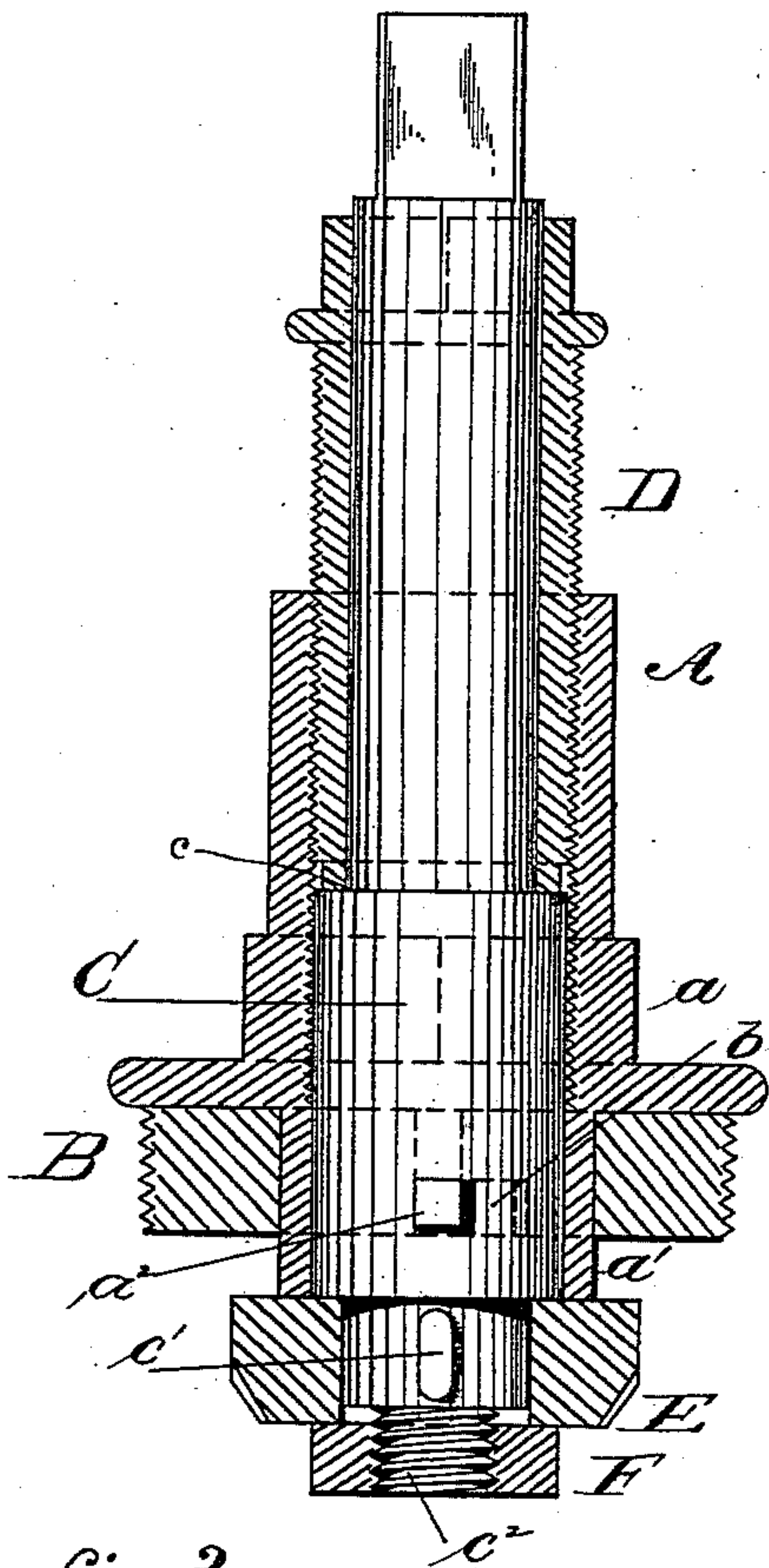


fig. 2

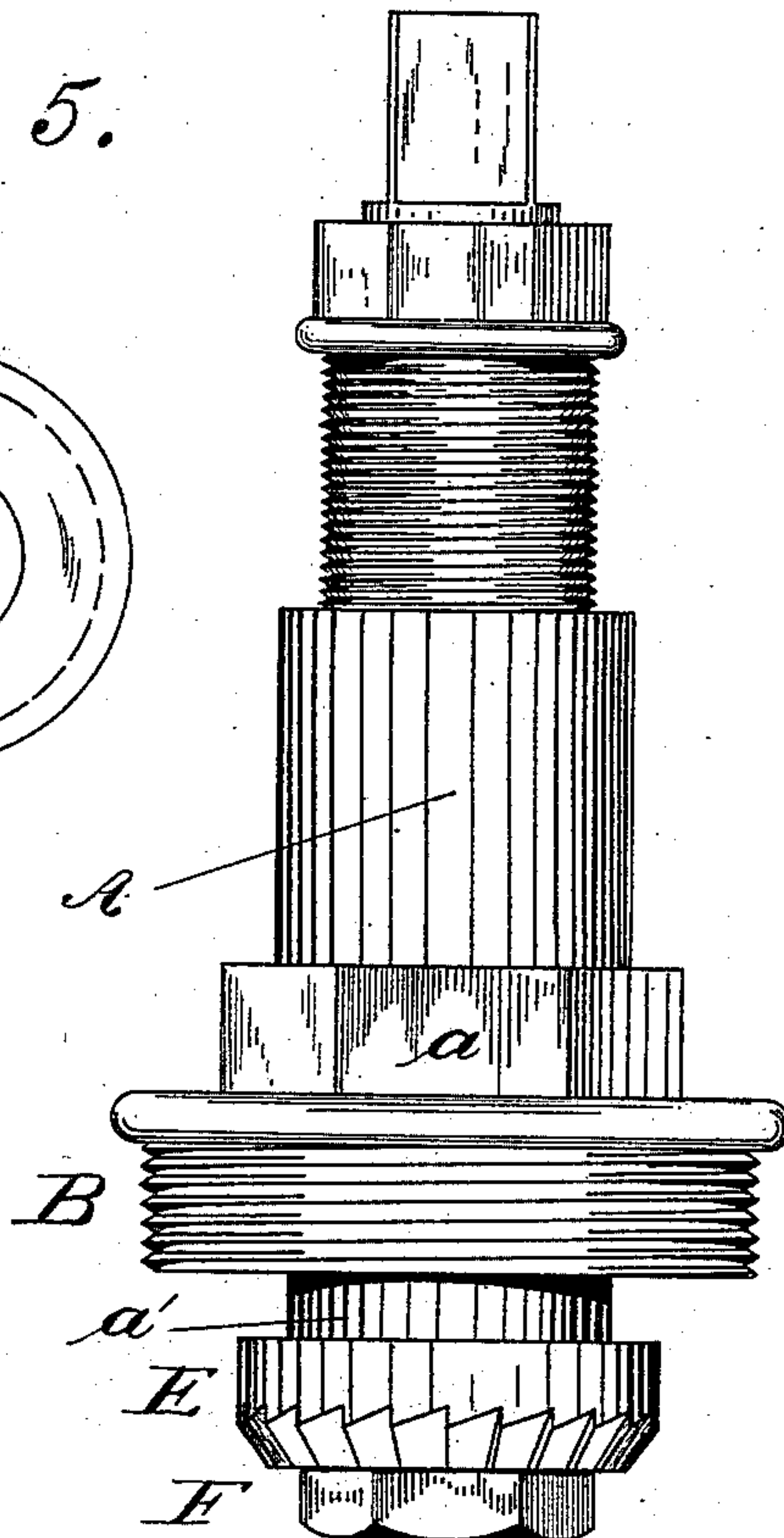


fig. 5.

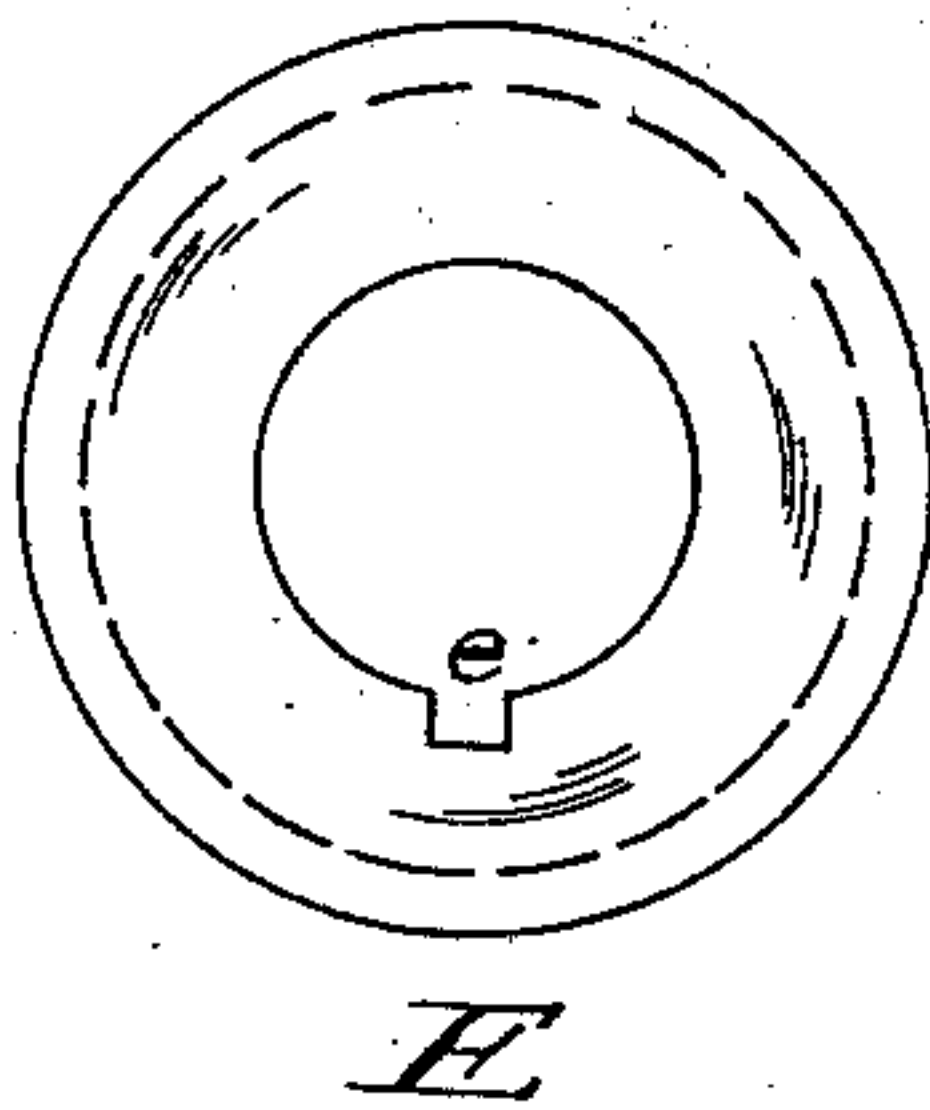


fig. 3

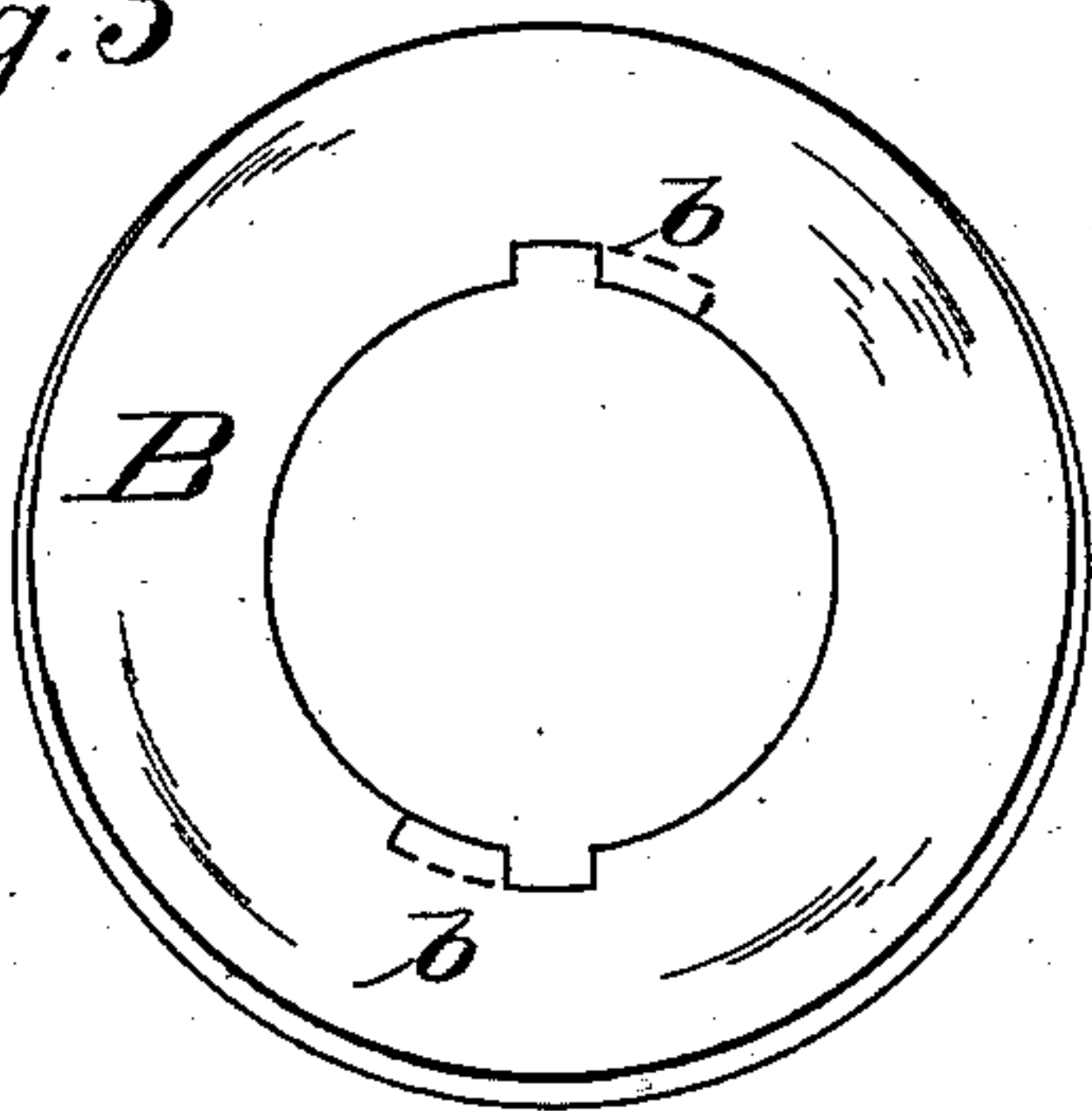
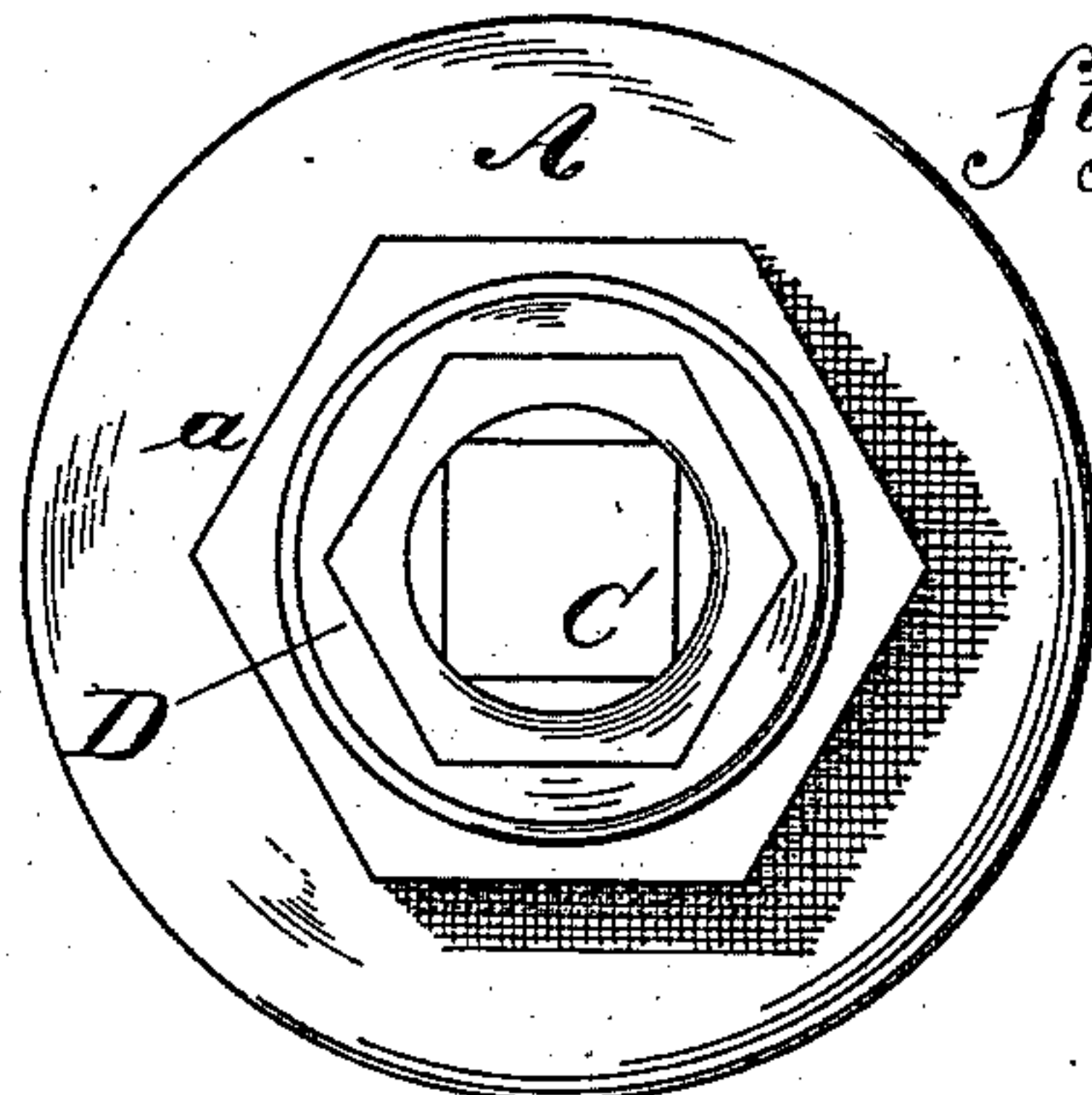


fig. 4



Witnesses;
Robinson White.

C. P. Weiss.

Inventor;

Charles P. Weiss.
By his Attorneys
Whittelsey Wright,

UNITED STATES PATENT OFFICE.

CHARLES P. WEISS, OF SUSQUEHANNA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO CHARLES M. MORSE, OF BUFFALO, NEW YORK.

DEVICE FOR RESEATING VALVES.

SPECIFICATION forming part of Letters Patent No. 379,351, dated March 13, 1888.

Application filed October 19, 1887. Serial No. 252,829. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. WEISS, a citizen of the United States, residing at Susquehanna, in the county of Susquehanna and State of Pennsylvania, have invented certain new and useful Improvements in Globe-Valve-Reseating Tools; and I do 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 use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to tools for repairing globe-valves, more especially the seat of the valve; and it consists in certain combinations of devices for dressing or refacing the valve-seat without removing the body of the valve from the pipes with which it is united. After having been used for some time the face of a globe-valve and the seat with which it comes in contact when closed become worn out of truth, besides being more or less cut by the action of the matter passing through the valve. It is usually inconvenient, if not impossible, to remove the entire valve from the pipes and take it to the shop for repairs, so that portable tools by which the valve and its seat can be dressed or refaced without removal from the pipes have been found extremely useful.

In the accompanying drawings, Figure 1 is a vertical section of my improved tool. Fig. 2 is an elevation of the same. Fig. 3 is a plan view of the removable threaded ring. Fig. 4 is a plan of the whole tool. Fig. 5 is a plan of the cutter.

Similar letters refer to corresponding parts in all the views.

The tool is intended to be screwed into the valve-body after the gland and valve-stem have been removed. Accordingly the body A is constructed with a polygonal portion, a , for a wrench, and with a neck, a' , to enter the neck of the valve-body. In order to render the tool applicable to valves of different sizes, the neck a' is provided with a removable threaded ring, B. By having several of these rings of different outside diameter the tool is rendered applicable to valve-bodies having necks of different sizes. The ring is preferably united to

the body of the tool by a bayonet-joint composed of two or more lugs, a^2 , on the outside of the neck a' , which engage with L-shaped grooves b in the inner face of the ring B. When the ring has been slipped on, as shown in Fig. 1, a slight turn to the left will carry the horizontal part of the groove b over the lug a^2 , and the ring will be securely attached to the neck a' .

The body A has a cylindrical hole extending through it, which is threaded from the upper end down to the neck a' . In this hole is fitted a round spindle, C, the upper part of which is reduced in diameter, forming a shoulder, c , against which bears the end of a threaded sleeve, D, which snugly fits the spindle C, and engages with the threads on the interior of the body A, thus constituting a feed-screw for the spindle. The sleeve is also carried up to the upper end of the spindle to support and guide it. Both the sleeve and the spindle are provided with angular heads for the application of a wrench to turn them. The lower end of the spindle is reduced in diameter, as shown in Fig. 1, and is provided with a feather or spline, c' .

The cutter E is annular, and is made removable to facilitate sharpening, and so that a set of them may be used of different outside diameters and conformations to suit valve-seats of different diameters and shapes. Its periphery is provided with suitable fine teeth, as shown. The inside diameter of the cutter E is made to fit the end of the spindle C, and in the inner face of the annular cutter is cut a groove, e , to engage with the spline c' on the spindle. A nut, F, screwed upon a threaded neck, e^2 , holds the cutter firmly in place, while the spline c' compels it to rotate with the spindle.

The manner of using the tool is as follows: The gland and valve-stem are removed from the valve-body and the tool is substituted for them, the ring B enabling it to be screwed firmly into place. The feed-screw D is then turned until the cutter E comes in contact with the valve-seat in the diaphragm of the globe-valve. The spindle C is then rotated by a wrench or crank-handle, which results in rapidly and accurately dressing the valve-seat.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In a valve-seat-refacing tool, the combination, with the body A, having the neck a' and lugs a^2 , of the removable threaded ring B, having the L-shaped slots b , substantially as described.

2. The combination, with the body A, of the spindle C, fitted into said body and having the shoulder c and spline c' , the threaded sleeve

D, for supporting, guiding, and feeding the spindle, and the removable cutter E, having the groove e , substantially as described.

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

CHARLES P. WEISS.

Witnesses:

CHARLES R. BANGS,
C. H. SMITH.