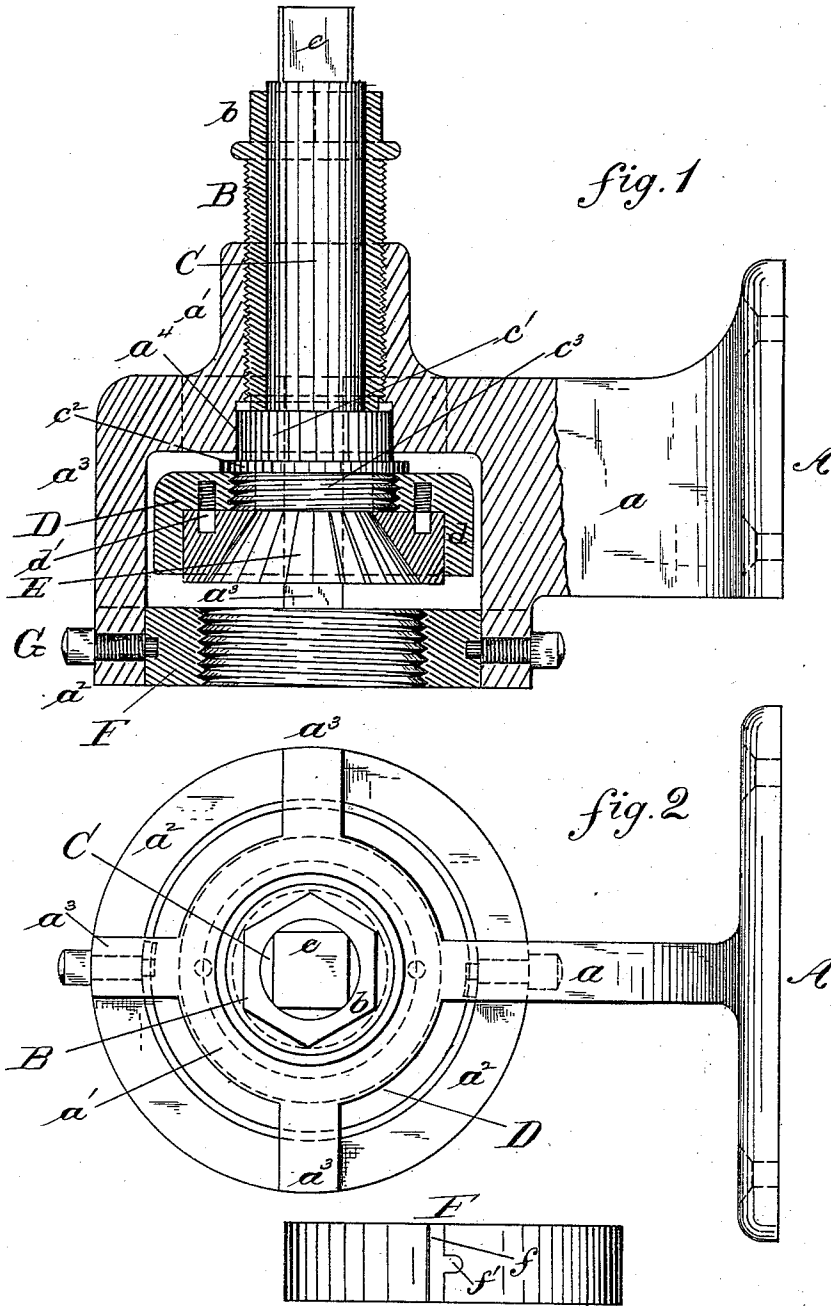


(No Model.)

C. P. WEISS.
VALVE FACING DEVICE.

No. 379,297.

Patented Mar. 13, 1888.



Witnesses;
Robinson White,
C. E. Dravard,

fig. 3

Inventor;
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UNITED STATES PATENT OFFICE.

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VALVE-FACING DEVICE.

SPECIFICATION forming part of Letters Patent No. 379,297, dated March 13, 1888.

Application filed October 19, 1887. Serial No. 252,830. (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-Facing 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 portable tools for repairing globe-valves; and its object is to improve the tool which serves to dress or reface the face of the valve proper.

It consists of certain combinations of devices, which will be hereinafter described, and more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of my improved tool. Fig. 2 is a plan view. Fig. 3 is a side elevation of the threaded collar for holding the valve.

The same reference-letters apply to like parts in all the figures.

The body of my tool consists of a foot or base plate, A, by which it may be temporarily fastened to a bench or other firm support, an arm, *a*, projecting from the foot and provided with a threaded neck, *a'*, and a ring, *a''*, united to the neck by suitable legs, *a'''*. Screwed into the neck *a'* is a threaded sleeve, B, which serves as a feed-screw, having an angular head, *b*, by which it may be turned. The interior of the sleeve is smooth and cylindrical, and fitted to turn within it is the spindle C, which has a head, *c*, for a wrench, a collar, *c'*, against which bears the end of the feed-screw B, a second larger collar, *c''*, below the collar *c'*, and a threaded end, *c'''*, below the collar *c''*. The collar *c'* may be fitted to turn in a cylindrical opening, *a''*, in the lower portion of the neck *a'*. The spindle C is, however, mainly supported and guided by the feed-screw B.

A cutter-holder, D, is screwed upon the threaded end of the spindle C and against the collar *c''*. It consists of a flat ring having a projecting flange, *d*, which forms a shallow cup to

receive the removable cutter E. This consists of a ring the inner surface of which is formed to match the shape of the valve to be dressed, and is cut into fine teeth of any suitable design. Two or more pins, *d'*, projecting from the face of the cutter-holder D, enter holes in the cutter E and lock the cutter and the holder together.

The ring *a''* is for the purpose of receiving one of the interchangeable threaded collars F, into which the gland of the valve is screwed. By having them interchangeable and of different inside diameters the collars will suit different-sized valves. The cutters E are likewise interchangeable for the same purpose.

In the edge of the collar F are two or more transverse grooves, *f*. At about the middle of each of these grooves is a short groove, *f'*, at right angles with the groove *f*.

Through the ring *a''* are screwed two or more screws, G, with stud-like ends projecting beyond the inner face of the ring *a''*.

The collar F is inserted into the ring *a''*, so that the grooves *f* engage the ends of the screws G. When the latter reach the grooves *f'*, a slight turn of the collar carries the screw ends into said grooves *f'*, and the collar is thus firmly secured in place.

The tool is used as follows: The gland of the valve is unscrewed, and with it the valve and valve-stem. The collar F suitable for the valve to be faced is selected and inserted into place in ring *a''*. The gland is then screwed into the collar F until it shoulders firmly. The stem of the valve is then screwed outwardly until the back of the valve is firmly jammed against the inner end of the gland, which prevents it from revolving when acted upon by the cutter. The hollow screw B is then fed in, bringing the cutter E in contact with the face of the valve, in which position it is ready for the operation of facing. This is done by turning the spindle C with a wrench or a crank and feeding the cutter E against the valve-face by turning the hollow screw B.

The threaded end *c'''* of the spindle is preferably cupped to allow the projecting end of the valve to enter freely, so as not to prevent the cutter from coming in contact with the valve-face.

Having thus described my invention, what I

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

1. The combination, with the foot A, having the arm a and the threaded neck a' , of the feed-screw B, the spindle C, having the collar c' , and the cutter-holder D, attached to the spindle and carrying the removable cutter E, substantially as and for the purpose set forth.
2. The combination, with the feed-screw B, of the spindle C, having the collar c' , the annular cutter-holder D, having the flange d and the pins d' , and the removable cutter E, seated in the holder D and locked by the pins d' , substantially as described.
3. In a globe-valve-refacing tool, the combination, with the body and the cutter supported thereby, of a removable threaded collar for receiving and holding the gland of the valve, substantially as described.
4. The combination, with the body having

a ring, a^2 , of the screws G and the threaded collar F, provided with the grooves $f f'$, substantially as described.

5. The combination, with the foot A, having the arm a , the threaded neck a' , the ring a^2 , and the legs a^3 , of the screw B, the spindle C, having collar c' , the cutter-holder D, and removable cutter E, and the threaded collar F, removably secured in the ring a^2 , substantially as described.

6. In a globe-valve-refacing tool, the combination, with a spindle, of the cutter-holder D, consisting of a flat ring having a projecting flange, d , 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.