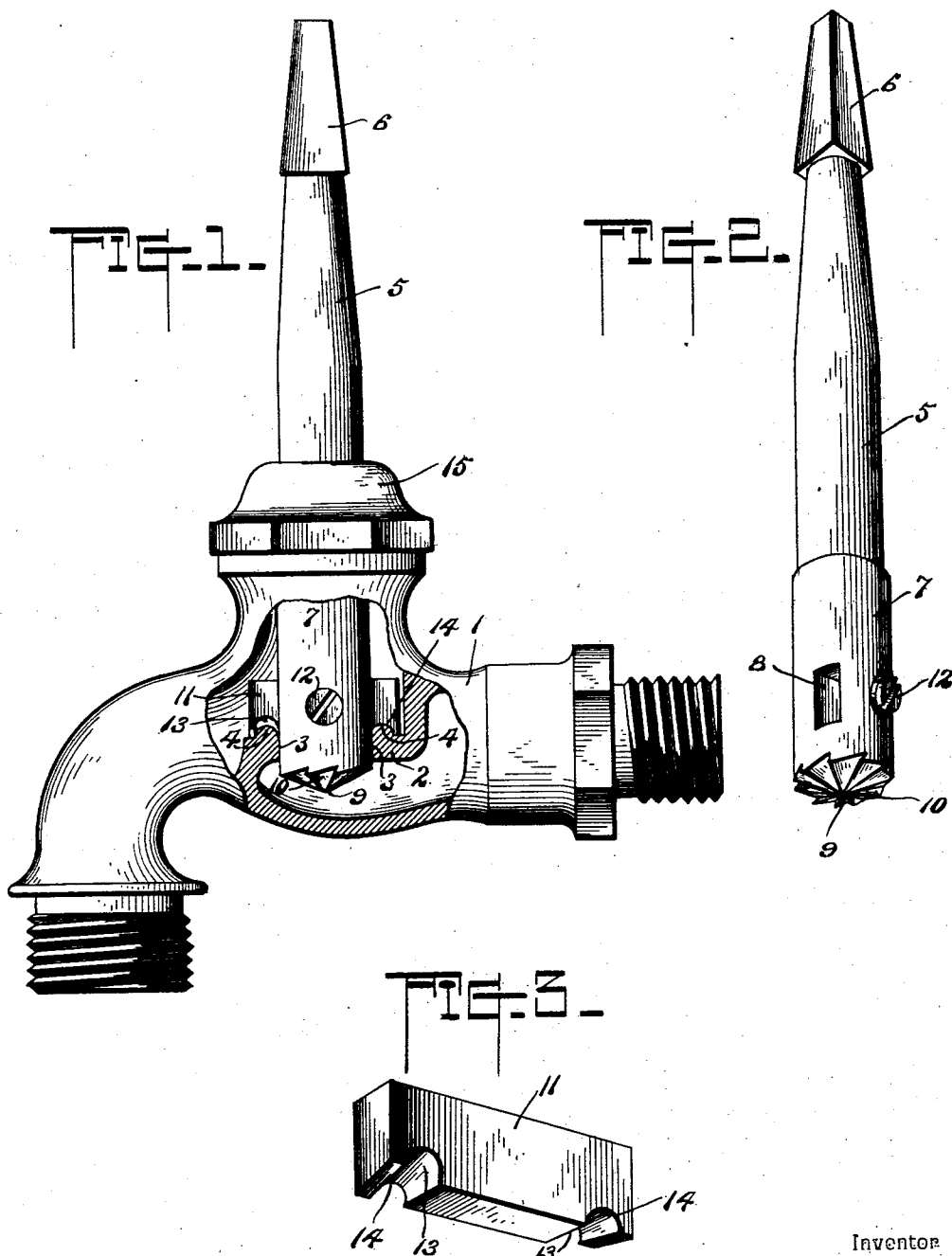


(No Model.)

A. F. RICKERT.
RECUTTING TOOL FOR VALVE SEATS.

No. 586,395.

Patented July 13, 1897.



Witnesses

A. M. Poperton.
S. D. Hollander.

By *H. S.* Attorneys,

Inventor

Alphenus F. Rickert,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ALPHENUS F. RICKERT, OF SCRANTON, PENNSYLVANIA.

RE CUTTING-TOOL FOR VALVE-SEATS.

SPECIFICATION forming part of Letters Patent No. 586,395, dated July 13, 1897.

Application filed September 28, 1896. Serial No. 607,235. (No model.)

To all whom it may concern:

Be it known that I, ALPHENUS F. RICKERT, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented a new and useful Recutting-Tool for Valve-Seats, of which the following is a specification.

This invention relates to recutting or dressing tools for valve-seats that have become worn by use, and while especially adapted for recutting or dressing the valve-seats of ordinary faucets is at the same time equally as well adapted for use in connection with tank valve-seats for closets, washbowls, bath-tubs, and, in fact, in connection with any valve-seat on which works a valve having a rubber or pressed-paper washer.

To this end the invention contemplates a tool of the character described possessing simple and efficient means for trimming or cutting down to a smooth level the working surfaces of valve-seats in ordinary water-faucets and the like.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the drawings, Figure 1 is a side elevation of a valve-seat-recutting tool constructed in accordance with this invention and shown in its applied position for use in connection with an ordinary valve-seat of a water-faucet. Fig. 2 is a perspective view of the tool with the transverse or cross-cutting bit removed. Fig. 3 is a detail in perspective of the transverse or cross-cutting bit of the tool.

Referring to the accompanying drawings, the numeral 1 designates the casing of an ordinary water-faucet having the interior valve-seat 2, provided with the usual valve-opening 3 therethrough and the usual rounded bead 4 on its upper surface, which forms the seat proper, against which the washer of the valve is forced in the usual manner. This construction of valve-seat is that in connection with which the recutting or dressing tool is especially designed for use, and this tool essentially comprises a straight stem 5, provided at one end with a squared tapered attaching-shank 6, adapted to be secured, preferably,

in the socket of an ordinary ratchet-brace, such as employed by carpenters, and which affords convenient means for turning the tool in the faucet-casing to provide for recutting or dressing the valve-seat.

The straight tool-stem 5 of the tool is provided at the end opposite the attaching-shank 6 with a cylindrical head portion 7, having therein a squared transverse bit-opening 8 and a conical boring end 9, formed with a continuous series of converging beveled cutting-teeth 10, forming a conical cutting-rose at one end of the tool-shank. The transverse squared bit-opening 8 is adapted to detachably receive therein the rectangular cutting bit-plate 11, which is securely and detachably fastened in place by a set-screw 12, working in an opening in one side of the head 7 of the tool-stem and adapted to impinge against one side of the bit-plate 11. The bit-plate 11 projects beyond opposite sides of the head 7 of the tool-stem and has formed in one side edge of the projecting portions at opposite sides of the tool-stem the rounded bead-receiving notches 13, beveled to cutting edges 14, and said notches 13 are beveled in reverse directions, so as to cut or trim the valve-seat as the tool-stem is rotated.

In using the recutting or dressing tool, whether the faucet is or is not detached from the pipe, the cap 15 of the faucet-casing is removed to permit the valve and valve-stem of the faucet to be taken out of the casing, after which the cutting end of the tool is inserted in the valve-casing and the cap 15 replaced, so as to hold the tool-stem in a proper position for rotation. By now attaching the ratchet-brace or other handle to the shank of the tool-stem the valve-seat 2 may be quickly or uniformly recut or dressed. The rose-cutting end 9 of the tool-stem passes into the valve-opening 3 and not only cleans out such opening, but will cut its way therethrough in the event of it being a trifle too large for the end of the tool-stem, it being understood that in some makes of faucets there is a slight difference or variation in the size of the valve-openings therein. After the rose-cutting end of the tool-stem passes through the valve-opening the notches 13 of the bit-plate 11 drop into registering engagement with the valve-seat bead 4, and by a turning of the

tool-stem the cutting edges 14 of the bit-plate will quickly trim down or true the said valve-seat bead, as will be readily apparent.

It will be observed that the portion of the stem between the cutting-rose and the bit-plate 11 forms a bearing for the tool while in operation.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

A valve-seat-recutting tool, comprising a stem having a conical boring end formed with a cutting-rose which facilitates the insertion of said end through the valve-opening of a valve-seat, and a bit-plate 11, detachably fitted in a transverse opening through the stem

and projecting beyond opposite sides thereof, said bit-plate being provided in one edge at opposite sides of the stem with rounded beveled notches having cutting edges, the portion of the stem between said cutting-rose and the cutting edge of the bit-plate forming a bearing for the tool while in operation, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALPHENUS F. RICKERT.

Witnesses:

EMIL BONN,

CHARLES J. MIRTZ.