(No Model.)

C. L. MORSE.

VALVE RESEATING MACHINE.

No. 429,939. Patented June 10, 1890.

Fig. 1.

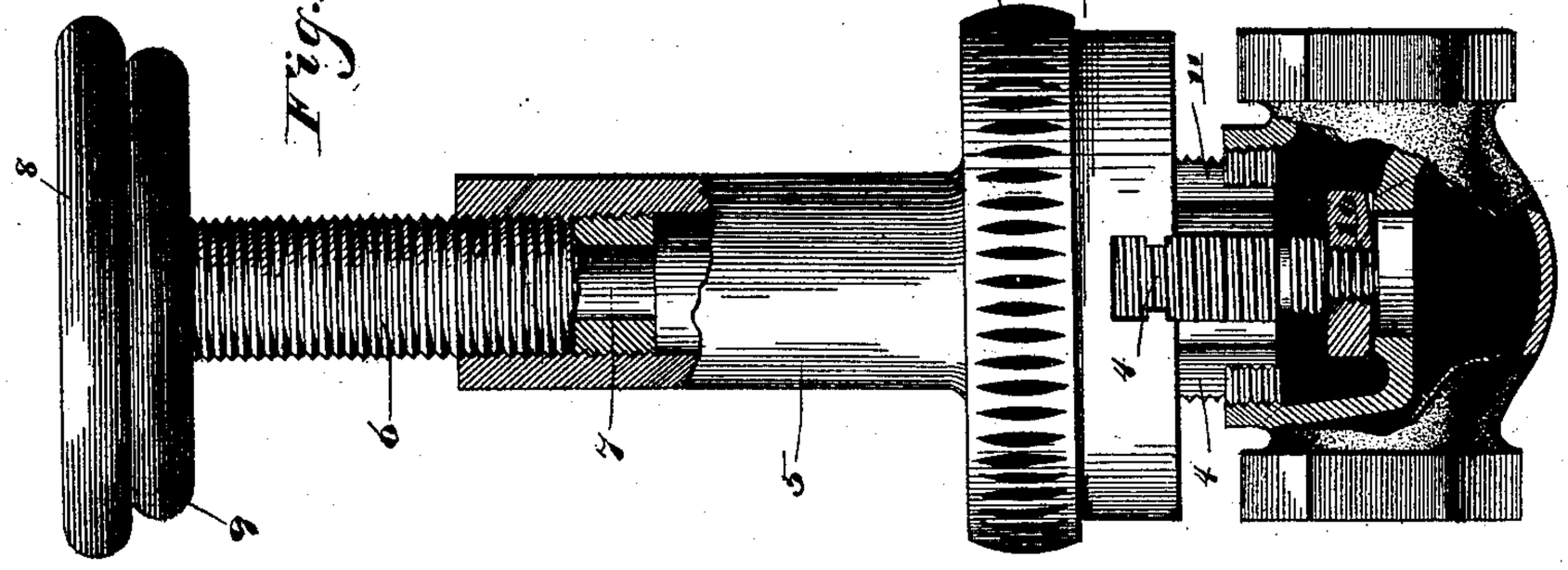


Fig. 2.

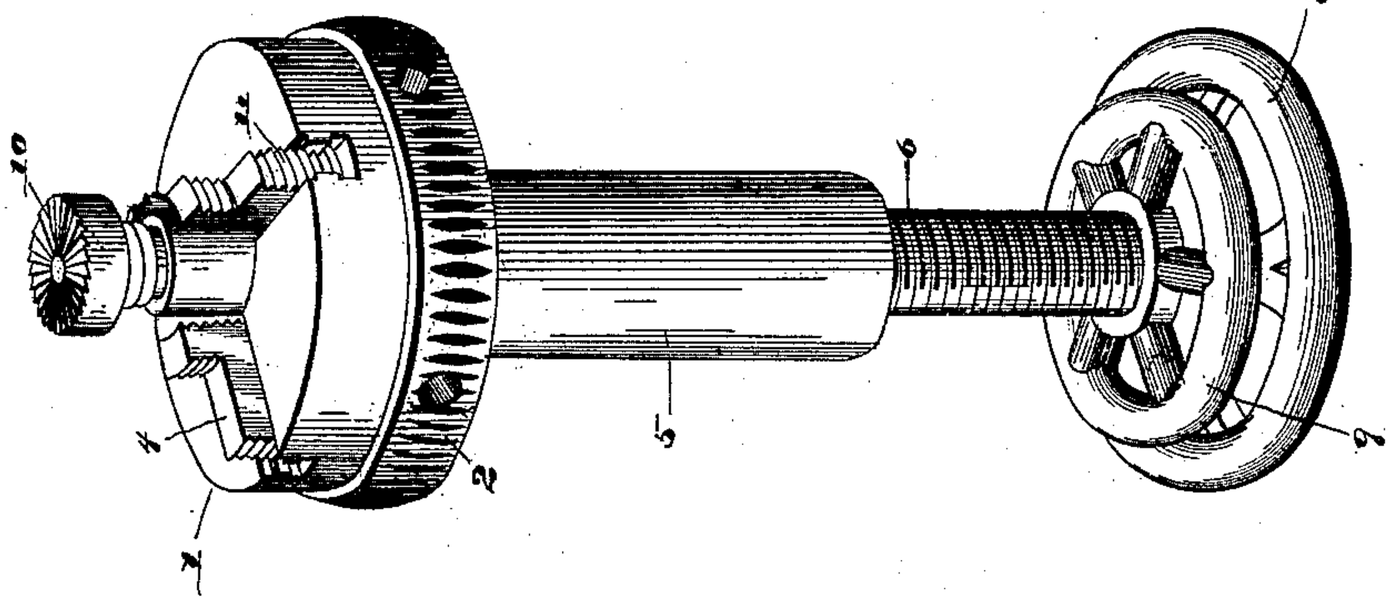


Fig. 3.

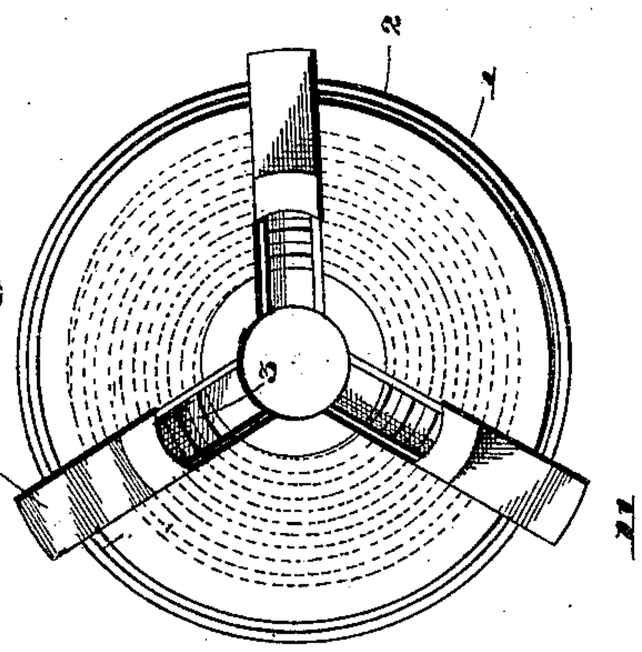
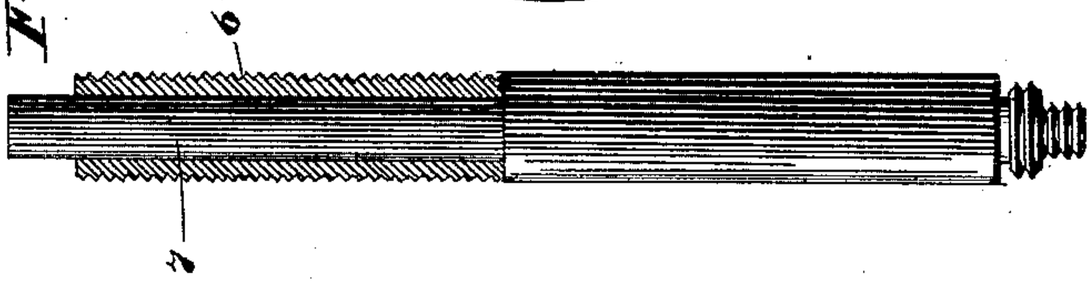


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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VALVE-RESEATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 429,939, dated June 10, 1890.

Application filed March 15, 1890. Serial No. 344,005. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. MORSE, a citizen of the United States, residing at Athol, in the county of Worcester and State of Massachusetts, have invented a new and useful Valve-Reseating Machine, of which the following is a specification.

This invention relates to machines for dressing and resurfacing the valve-seats of globe-valves, faucets, and the like; and it has for its object to construct a machine of this class by means of which the valve-seats may be resurfaced in an absolutely perfect and true manner, thus enabling the valves to fit as closely and tightly as when new.

The invention consists of a rotary tool for dressing the valve-seat, combined with mechanism for feeding the same tool, for holding it steady during operation, and for clamping it onto the casing of the valve or faucet the seat of which is to be operated upon.

Specifically the invention consists in the construction and arrangement of details, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of my machine, showing it applied in position, with the valve-casing and a portion of the standard partly in section. Fig. 2 is a perspective view of the machine removed from the valve-casing. Fig. 3 is a sectional view of the chuck. Fig. 4 is a sectional view of the feed-spindle.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates a chuck having a peripheral ring 2, provided on its under side with a spiral flange or worm 3, adapted to engage the radially-adjustable jaws 4 which, by turning the said peripheral ring may be simultaneously adjusted toward or from the center of the chuck. Suitably secured upon the upper side of said chuck is a standard 5, having a bearing for a vertically-adjustable screw-threaded sleeve 6, within which is journaled the spindle 7. The latter is provided at its upper end with a handle 8, by means of which it may be rotated, and the screw-threaded sleeve 6 is likewise provided with a handle 9, by which it may be manipulated to adjust the spindle and the cutting-tool 10, which is mounted at the lower end thereof. The said cutting-tool consists of a circular disk, the under side of which is provided with a series of beveled radial grooves forming cutting-edges, all of which are in the same horizontal plane. The clamping-jaws 4 are provided on their inner as well as on their outer sides with screw-threads, as shown at 11, thereby adapting them to engage either an interiorly-threaded bushing—such as that of a globe-valve—or an exteriorly-threaded shank, such as that of an ordinary faucet. The cutting-tool 10 is secured detachably to the lower end of the spring or spindle 7, in order to enable tools of different sizes to be readily adjusted in position for operation, as occasion may require.

It will be readily seen how by the radial adjustment of the jaws the machine may be applied in operative position to valves or faucets of different sizes.

The operation of my invention and its advantages will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

To adjust the machine in position for operation upon an ordinary globe-valve, the sliding jaws are inserted in the bushing of the valve and expanded until they engage the interiorly-threaded wall of said bushing, thus holding the machine securely in position and in such a manner as to absolutely prevent it from tilting. By manipulating the handle 9 of the screw-threaded sleeve 7 the latter may now be moved in a forward or downward direction until the cutting-tool 10 comes in contact with the valve-seat, which latter may then by simply manipulating the handle 8 of the spindle 7 be quickly and accurately resurfaced. This having been done, the machine may be quickly removed by simply manipulating the ring 2 of the chuck to disengage the clamping-jaws from the valve-casing.

It will be seen that by my improved machine the cutting-tool is held with absolute security while being manipulated, thus insuring accuracy.

The clamping-jaws shown in the drawings hereto annexed, and which I prefer to employ, are of the ordinary L-shaped kind, thereby enabling the machine to be adjusted upon valve-casings of many different sizes. The cutting-tool, as has been stated, is also de-

tachable, so that it may be quickly exchanged for one of a different size.

Having thus described my invention, I claim—

1. In a machine for dressing valve-seats, the combination of a chuck having adjustable jaws adapted to be clamped upon the valve-casing, and a revolving spindle carrying a cutting-tool, substantially as set forth.

2. In a machine for dressing valve-seats, the combination of a chuck having radially-adjustable jaws screw-threaded on their inner and outer sides, a tubular standard mounted upon the said chuck, a screw-threaded sleeve mounted in said standard, and a spindle journaled in said sleeve and having a cutting-tool at its lower end, substantially as set forth.

3. In a machine for dressing valve-seats, the combination, with a chuck having radially-adjustable jaws screw-threaded upon their inner and outer sides, of a revolving spindle having a handle at its upper end, a cutting-tool mounted detachably at the lower end of said spindle, and mechanism for feeding the latter in a forward or downward direction, substantially as set forth.

4. In a machine for reseating valves, the combination of a chuck having radially-adjustable jaws screw-threaded at their inner and outer ends, a tubular standard secured upon the upper side of said chuck, an exteriorly screw-threaded sleeve mounted in said standard and having a handle at its upper end, a stem or spindle journaled in said sleeve and having a handle at its upper end, and a cutting-tool mounted detachably at the lower end of said spindle, substantially as and for the purpose set forth.

5. In a machine for dressing valve-seats, the chuck having radially-adjustable jaws to engage the valve-casing, the revolving spindle carrying the cutting-tool, and the feeding mechanism to feed the spindle in a forward or downward direction, as set forth.

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

CHAS. L. MORSE.

Witnesses:
OSCAR A. SCOTT,
ANDREW J. HAMILTON.