Jan. 12, 1926. 1,569,638

T. F. STEELE

VALVE OPERATING TOOL

Filed Oct. 13, 1924

Fig. 1

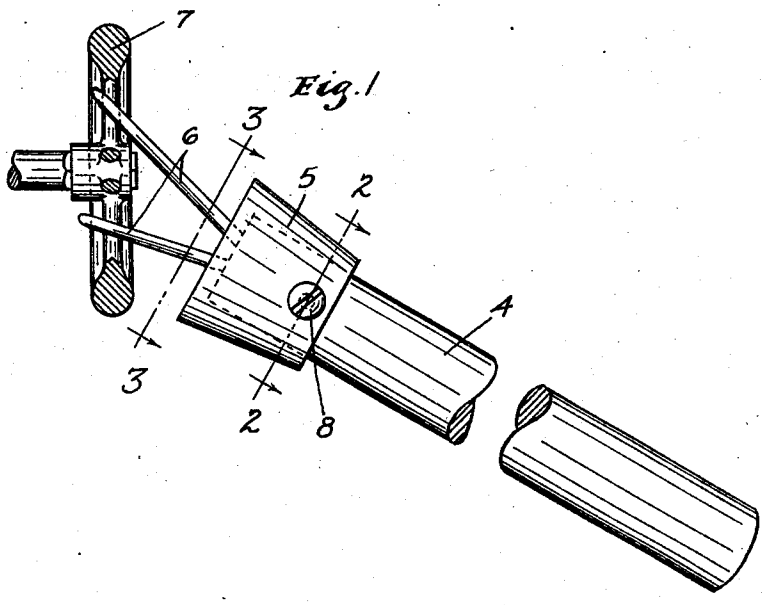


Fig. 3

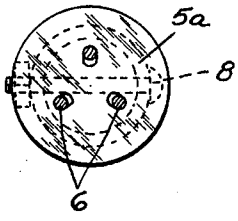
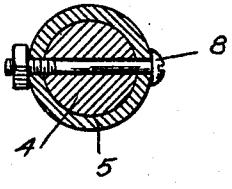


Fig. 2



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UNITED STATES PATENT OFFICE.

THOMAS F. STEELE, OF MINNEAPOLIS, MINNESOTA.

VALVE-OPERATING TOOL.

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To all whom it may concern:

Be it known that I, THOMAS F. STEELE, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Valve-Operating Tools; and I do hereby 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.

This invention has for its object to provide an extremely simple but highly efficient hand tool for operating machine valves located in inaccessible places.

More specifically, it is the object of the invention to provide an elongated pole provided at one end with efficient means for readily engaging the handle of a valve for rotation of the same when the tool is held either at an angle to or in alinement with the axis of the valve.

It is a further object in such a device to provide means whereby the valve handles of different types may be efficiently manipulated.

An additional object of the invention is to provide a valve operating tool comprising few parts and capable of being manufactured at little cost.

These and other objects of the invention will be apparent from the following description made in connection with the accompanying drawings wherein like references refer to similar parts throughout the several views, and in which,

Fig. 1 is a side elevation of the tool applied to a standard form of valve handle, some parts being broken away and others shown in section;

Fig. 2 is a cross section taken on the line 2—2 of Fig. 1; and

Fig. 3 is a cross section taken on the line 3—3 of Fig. 1.

Referring to the drawings, an elongated handling pole, preferably of some light construction, is designated by the numeral 4, to one end of which a cast socket head 5 is secured, preferably by means of a transverse nut-equipped bolt 8. The socket head 5 has a flat surface or outer end 5^a in which, during casting, are inserted, or otherwise rigidly secured in triangular and diverging arrangement, three engaging prongs 6 extending longitudinally from said handling pole, preferably constructed of steel wire or some other slightly malleable metal. One of these prongs 6 is somewhat longer than the others so that a plane passing through the extremities of the three prongs will lie at an angle to the axis of the handling pole 4. Obviously, the prongs 6 may be readily inserted through the apertures in the web portion of the usual wheel handle valve 7. The prongs being of malleable material may be slightly bent to increase or decrease their distance apart, according to the size of the valve handles on which they are to be applied.

It will, moreover, be noted that, due to the fact that one of the prongs is longer than the others, the operator may stand considerably above or below the valve and, nevertheless, turn the same with the axis of the handling pole at an angle to the axis of the valve stem. The operator may thus readily engage one aperture of a valve with the longest prong, thereby supporting the outer end of the tool and turn the handle slightly until the other prongs engage their respective apertures.

The diverging prongs, moreover, tend to prevent the tool from slipping out of engagement with the valve handle during rotation of the same. In operation, the tool is thrust outwardly after engaging the apertured portions of the valve until the inner sides of the prongs tightly engage the inner side of the valve handle, thereby making a firm connection with the valve handle and permitting the tool to efficiently engage a variety of sizes of valves.

While the tool is especially designed for operation on a valve handle having the apertured web central portion it may, nevertheless, be used to turn a valve equipped with a straight handle, two of the prongs being adapted to span one end of a straight handle while the third prong will bear against one side of the opposite portion of the handle, whereby rotation thereof may be effected. Likewise, the tool may be employed for use on a valve equipped with a wheel handle where the web portion is imperforate, if a single hole be made to admit the longest prong, one of the other prongs being adapted to engage against the outer rim of the handle whereby the same may be rotated.

Extensive actual usage of the device has proven it to be highly successful for the purposes enumerated. Valve handles may

be turned with its use from a considerable angle thereto.

As has been shown, the malleable prongs permit considerable adjustment in the triangular span at the extremities thereof.

The device is especially valuable for use around boilers where often in emergency such as the breakage of the glass in the water column, or bursting of a pipe, it is necessary to shut off the valve immediately. A fireman may, with this tool, quickly engage the wheel valves and shut them off without endangering himself by the hot leaking water.

The tool is also of great utility in the inspection of public baths and showers where an attendant is required to go along and test each valve, individually, several times a day. The use of this device makes it possible for the attendant to turn the shower valves on and off without getting wet from the sprayed water.

The invention, of course, is obviously applicable for any number of other uses, but is found especially valuable in the above noted instances. It will be understood that changes may be made in the form, details and arrangement of the parts without departing from the scope of the invention.

What is claimed is:

1. A tool adapted to be supported and manipulated by hand for operating valves having apertured handles, comprising an elongated handle and a plurality of prongs mounted on the outer end of said handle in spaced diverging arrangement, extending substantially longitudinally thereof and adapted to engage the apertured portions of a valve handle to rotate the same.

2. The structure set forth in claim 1, and said prongs being constructed of semi-rigid material and adapted to be bent to vary the spaced relation thereof.

3. A tool adapted to be supported and manipulated by hand for operating valves having apertured handles, comprising an elongated handle and three prongs secured at one end substantially longitudinally thereof and in triangular relation, adapted to engage the handle of a valve for rotation of the same, one of said prongs being longer than the others.

In testimony whereof I affix my signature.

THOMAS F. STEELE.