July 8, 1924. 1,500,893

J. ROBERTS

RADIATOR WRENCH

Filed June 19, 1923

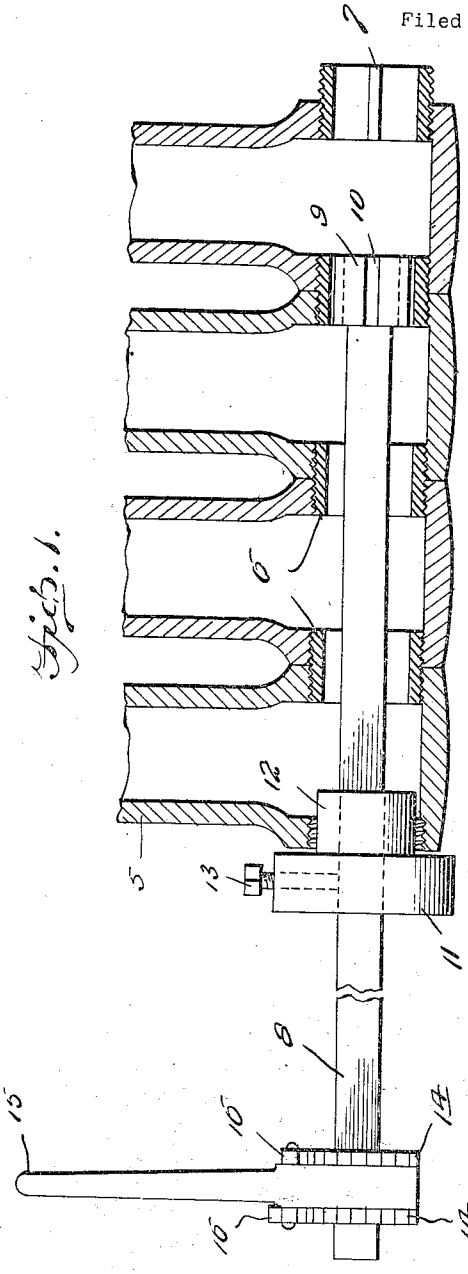


Fig. 1.

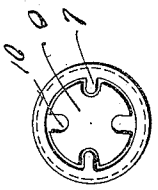


Fig. 4.

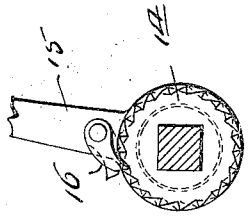


Fig. 3.

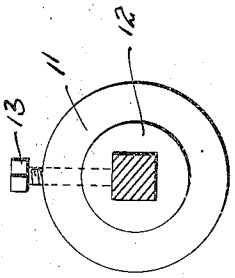


Fig. 2



Fig. 5.

Witnesses:

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Patented July 8, 1924. 1,500,893

UNITED STATES PATENT OFFICE.

JOHN ROBERTS, OF BOWLING GREEN, KENTUCKY.

RADIATOR WRENCH.

Application filed June 19, 1923. Serial No. 646,344.

To all whom it may concern:

Be it known that I, JOHN ROBERTS, a citizen of the United States, residing at Bowling Green, in the county of Warren and State of Kentucky, have invented certain new and useful Improvements in Radiator Wrenches, of which the following is a specification.

In carrying out the present invention it is my purpose to provide an invention that is specifically adapted for use in the assembling or dissembling of the radiators of house heating systems.

The primary object of this invention resides in the provision of such a wrench that is extremely simple in construction and that includes a means whereby the usual locking bushings between the sections of the radiators may be removed or applied.

A further object is to provide such a tool that may be used in a simple and expeditious manner by even those unskilled in the art.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination, and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:—

Figure 1 is a detailed sectional view through the lower end of the conventional form of radiator showing in side elevation my improved wrench as engaged therethrough for the removal of the interlocking bushings.

Figures 2 and 3 are detailed cross sections through different points of my improved wrench for disclosing more clearly certain of the elements included therein.

Figure 4 is an elevation of one end of the wrench formed with a bushing engaging head, and

Figure 5 is a side elevation of one of the bushings that is now used in coupling together the different sections of the radiator.

Now having reference to the drawing, and particularly to Figure 1, 5 designates the usual hollow sections of a steam or hot water radiator, the lower ends thereof being provided with alined openings in the opposite side walls that are formed with screw threads extending in opposite directions, that is, the threads of one opening being left hand, while the threads of the other opening are right hand. As shown in Figure 1, these sections are adapted to have their lower ends in close contact with each other and are joined together with hollow bushings 6, that are formed with external right and left hand screw threads shown in Figure 5, whereby a turning movement of these bushings in one direction will bring the sections 5 in close relation to each other and a reversal of movement will separate the same. These bushings 6 are interiorly formed with longitudinally extending spaced bosses or ridges 7.

My invention per se embodies the provision of a relatively elongated bar 8, that is preferably square in cross section, and is formed at one end with a circular head 9 upon the periphery of which are longitudinally extending spaced grooves or channels 10 for the reception of said bosses 7 of the bushings 6 when the tool is in operation, and it is desired to remove or insert said bushings.

Slidably upon the rod 8 is an abutment collar 11 that is formed at its side adjacent the head 9 with a bearing collar 12 that is of course also slidable upon the rod, whereby in the operation of my tool the said collars 11 and 12 may be so positioned upon the rod as to engage the bearing collar 12 within the opening of the outermost radiator section 5 for thereby providing a guide during the removal or insertion of any one of the bushings 6. The collar 11 has close contact with the adjacent radiator section for thereby limiting the movement of the rod within the radiator sections. As a means for maintaining these collars in adjusted positions upon said rod a set screw 13 is provided.

Keyed upon the rod 8 at a point adjacent the end thereof opposite from the end that carries the head 9 is a pair of spaced ratchet wheels 14, the teeth of which extend in opposite directions, and freely rotatable upon said rod 8 between the ratchet wheels 14 is a hand lever 15 that carries upon opposite sides thereof pivoted dogs 16, which also extend in opposite directions. It is of course apparent that either one of these dogs may be engaged with its respective ratchet wheel whereby a rotation of the rod 8 in opposite directions may be had for the removal or

insertion of anyone of the radiator bushings 6.

In view of the above description when considered in connection with the accompanying drawing, the operation and advantages of a tool of this character can be readily appreciated by those skilled in the art, and even though I have herein set forth the most practical embodiment of the present invention, it is nevertheless to be understood that minor changes may be made therein, without departing from the spirit and scope of the invention as claimed.

Having thus described the invention, what I claim as new, and desire to secure by Letters-Patent, is:

In a tool for removing the securing bushings between radiator sections, wherein said bushings are formed with longitudinally extending bosses, a rod adapted for projecting through said bushings, a head formed upon one end of said rod and formed with longitudinal channels for the reception of said bushing bosses, means for rotating said rod in opposite directions for the insertion or removal of the bushing, and means for limiting the inward movement of the rod with respect to the radiator sections, said means being adjustable.

In testimony whereof I affix my signature.

JOHN ROBERTS.