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L. BRILES

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PIPE WRENCH

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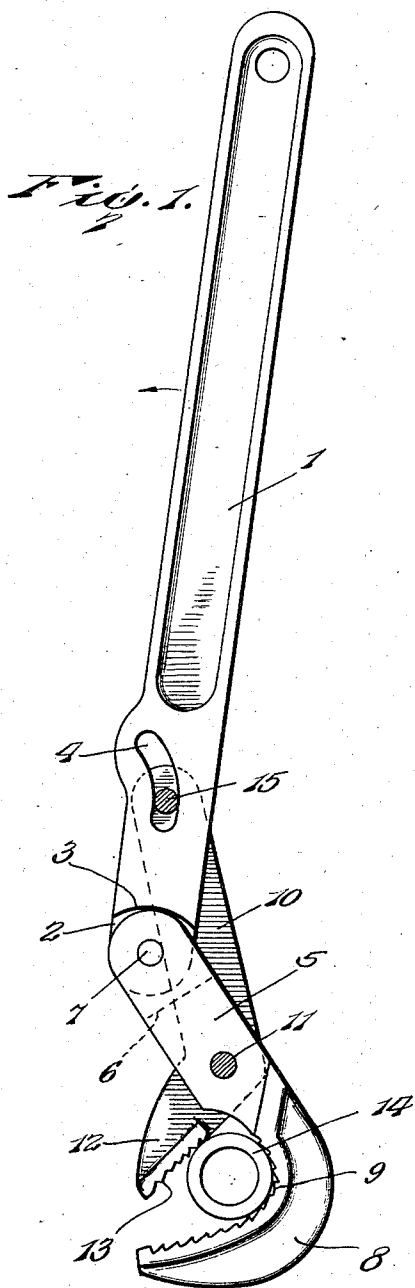
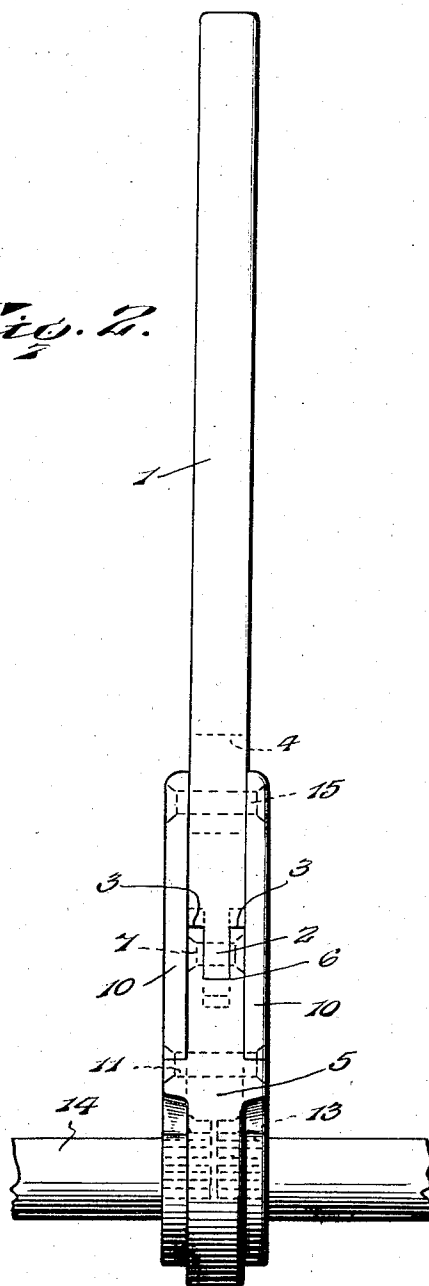


Fig. 2.



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PIPE WRENCH

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1 Claim. (Cl. 81—91)

This invention relates to wrenches and more particularly to pipe wrenches and has for its object the provision of a simple and inexpensive tool by which a pipe or rod may be easily engaged and turned to be removed from a threaded connection or secured in such a connection. The invention is illustrated in the accompanying drawing and will be hereinafter fully described, the novel features being defined in the appended claim.

In the drawing,

Figure 1 is a side elevation of a pipe wrench embodying the present invention,

Figure 2 is an edge elevation of the same.

In carrying out the invention, there is provided a handle bar or lever 1 which is a metal bar of any desired length having a longitudinally projecting tongue 2 at one end, said tongue being centrally disposed whereby shoulders 3 are produced at opposite sides of the tongue. The handle bar or lever is also provided adjacent the end having the tongue with an obliquely extending slot 4, the purpose of which will presently appear. A jaw 5 is also provided and this jaw is formed from a single bar of metal or other suitable material having one end bifurcated, as shown at 6, to span the tongue 2 and be pivoted thereto by a rivet or pivot pin 7. The free end of the jaw 5 is formed into a semi-circular hook 8 adapted to engage around a pipe or rod of circular cross section, and upon the inner concave edge of this hook are formed work-holding teeth 9, as clearly shown in Figure 1. The wrench also includes a pair of jaws 10 which are disposed at opposite sides of the handle bar and the first-mentioned jaw, it being noted, upon reference to Figure 2, that the handle bar and the jaw are of the same width so that the side jaws 10 may be formed on straight lines and lie close to the handle bar and the central jaw. The jaws 10 are pivoted between their ends to the central jaw by a pin or rivet 11 at a point beyond the bifurcation of the central jaw, as shown in the drawing, and the forward ends of the jaws 10 are disposed obliquely relative to the edges of the jaws to form an obtuse angle therewith, as shown at 12, and are provided with work-holding teeth 13 cooperating with the teeth 9 to clamp a pipe or rod, such as indicated at 14. The rear ends of the jaws 10 carry a pin 15 which passes through the slot 4 and is adapted to slide therein, it being noted particularly upon reference to Figure 1 that this slot extends in the same general direction as the jaw 5 when said jaw is engaged with work.

It is thought the operation of the tool will be readily understood from the foregoing description taken in connection with the accompanying drawing. The cooperating jaws may be easily pushed apart at their free or working ends to be engaged around a pipe or rod and, if the handle bar or lever be then swung in the direction indicated by the arrow in Figure 1, the pin 15 will be engaged by the forward end of the slot 4 and the pull exerted upon said pin will then tend to swing the central hook jaw into alignment with the handle bar so that the jaw will be caused to firmly clamp the work against the ends of the side jaws 10. Continued movement of the handle bar or lever in the indicated direction will cause the rod or pipe to turn so that it may be quickly released from or engaged in a threaded joint. If the tool be reversed and operated in the described manner, the pipe or rod will, of course, be turned in the opposite direction so that the tool is equally well adapted to withdraw a rod or pipe or to secure the same. The tool is very compact and inexpensive and may be very readily engaged around the work by merely engaging the end of the hook jaw under the work and then swinging the lever in the direction in which it is to operate. The work will be firmly clamped between the jaws and may be operated in a corner or other restricted space. The obliquely disposed slot 4, cooperating with the pin 15, causes the side jaws to readily move toward the hook jaw and engage the work, and also accommodates the angular movement of the pin when the work is to be released.

Having thus described the invention, I claim: 35

A pipe wrench comprising a handle bar having its forward end portion reduced in thickness to form a tongue and concave shoulders at opposite sides of inner ends of the tongue, the handle having a portion spaced rearwardly from the tongue widened to form a side extension, the handle being formed with a curved slot extending longitudinally thereof with one end portion extending into the side extension, a center jaw having a curved bill and a shank of less width than the bill, the portions of the bill projecting from opposite side faces of the shank forming abutment shoulders extending diagonally across the forward end of the shank, the rear end of the shank being formed with ears engaging opposite faces of the tongue and terminating in arcuate ends engaging the shoulders of the handle, a pivot pin passing through the ears and tongue, side faces of the shank being flush with side faces of the handle, side jaws each having a flat shank 55

bearing against a side face of the shank of the center jaw and a bill extending diagonally from its shank and having its free forward end portion formed with a pipe engaging flange projecting from its inner side face in overlapping relation to the bill of the center jaw, a pivot pin

extending through the shank of the center jaw and through the side jaws at the junction of their bills and shanks, and a pin connecting rear ends of the shanks of the side jaws and slidably engaged through the slot of the handle.

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