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2,777,348

JAW FACE ATTACHING MEANS FOR WRENCH JAW CONSTRUCTIONS

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This invention relates to wrenches. Gripping jaws of these tools are sometimes fitted with separate gripping plates which are replaceable and which have been fixed by various methods, but on account of the heavy strain placed on the plates when the wrench is in use, the plates become loose. Screwed pins passing through the plates have been used but such screws have been found to become damaged and broken. Pins have been used to bear on the back of a gripping plate, but as the plate only beds on the screw, lateral movement takes place under heavy duty.

The object of this invention is to provide a wrench in which a separate plate is detachably and firmly fixed without any liability of lateral or other movement under heavy strain.

Referring to the drawings:

Figure 1 is a perspective view of a wrench fitted with gripping plates according to this invention.

Figure 2 is a side elevation of the adjustable jaw.

Figure 3 is a section on line III—III of Figure 2.

Figure 4 is a front elevation of the jaw shown by Figure 2.

Figure 5 is an end view of a dowel pin.

Figure 6 is a side elevation, and

Figure 7 is a face view of a gripping plate.

According to a convenient embodiment of this invention, the wrench comprises a handle part 1 having a gripping jaw 2 and a part 3 adjustable on the part 4 pivoted on the handle part 1 and having a gripping jaw 5. The adjustable jaw of the wrench has a groove 6 transversely thereacross which is dove-tailed on one side and receives a separate insert plate 7 of hardened steel having a serrated or other gripping face. The insert is firmly locked against lateral movement in the groove 6 and firmly anchored on the bed of the groove 6 by means of a dowel pin 8 formed of a round pin having grooves 9 in opposite sides to form a dove-tail. Registering grooves 10 and 11 are formed in the jaw 5 and plate 7 longitudinally thereof, the groove 11 in the insert being dove-tail in cross section and the groove 10 in the body of the jaw being part cylindrical. This latter groove is more than a semi-circle in cross section and the cylindrical portion of the dowel pin is more than a semi-circle in cross section, so that the dowel is held in the body of the jaw against lateral movement and holds the plate 7 bedded in the groove in the jaw, the shoulders 12 formed by the grooves in the dowel lying flat or parallel with the bed

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of the groove. The dowel pin passes through a hole 13 in front of the jaw forming one side of the transverse groove 6 for the insert and into a hole 14 in the wall forming the other side of the groove. An insert plate thus fixed is very firmly combined with the gripping jaw or working face of the tool and will not be displaced laterally in the groove or in any direction by heavy duty.

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

1. A wrench having gripping jaws, a groove transversely from side to side across the width of a jaw, a separate gripping plate mounted in the groove with the front and rear edges of said plate lying against the sides of the groove, a dowel pin receiving groove in the bottom of said plate receiving groove which runs longitudinally of the jaw and at right angles to said groove passing transversely across the jaw and is part circular in cross section with its centre on the outer side of the mouth of the dowel pin receiving groove, circular holes in the jaw at the side walls of the first mentioned groove and co-axial with said dowel pin receiving groove, a dove-tailed groove in the bottom of said gripping plate and in register with said dowel pin receiving groove and a dowel pin having notches in each side to form a dove-tail longitudinal projection and a part cylindrical portion of more than a half-circle in circumference so that the dowel pin is constrained to have axial movement only in the said dowel engaging grooves and thereby locks the gripping plate bedded on the bottom of said plate engaging groove, the dowel pin also engaging in said circular holes in each side of said plate engaging groove.

2. A wrench having gripping jaws, a groove transversely from side to side across the width of a jaw, a separate gripping plate mounted in the groove with the front and rear edges of said plate lying against the sides of the groove, a dowel pin receiving groove in the bottom of said plate receiving groove which runs longitudinally of the jaw and at right angles to said groove passing transversely across the jaw and is part circular in cross section, circular holes in the jaw at the side walls of the first mentioned groove and co-axial with said dowel pin receiving groove, a dove-tailed groove in the bottom of said gripping plate and in register with said dowel pin receiving groove and a dowel pin having notches in each side to form a dove-tail longitudinal projection and a part cylindrical portion of more than a half-circle in circumference so that the dowel pin is constrained to have axial movement only in the said dowel engaging grooves and thereby locks the gripping plate bedded on the bottom of said plate engaging groove, the dowel pin also engaging in said circular holes in each side of said plate engaging groove.

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