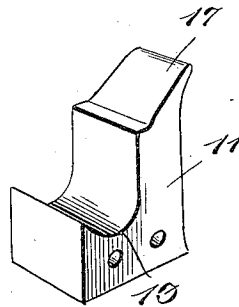
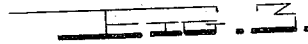
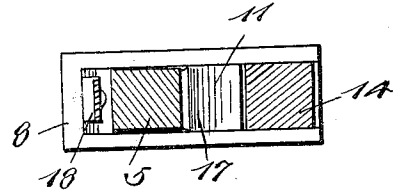
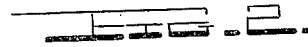
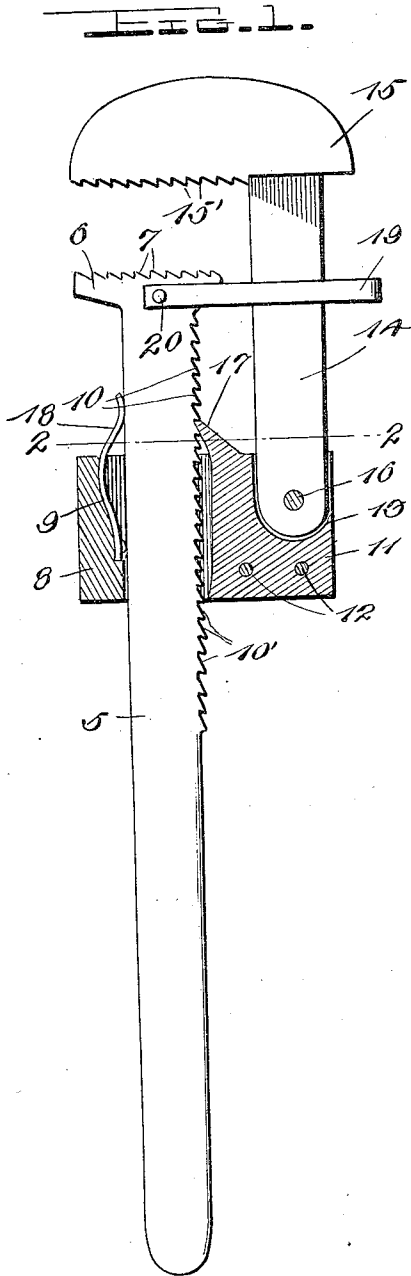


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WRENCH.

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WRENCH.

1,045,949.

Specification of Letters Patent.

Patented Dec. 3, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM LANCASTER COLEMAN, a citizen of the United States, residing at Barton, in the county of Pierce and State of North Dakota, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to wrenches and has for its primary object to provide a quick adjusting wrench which may be easily manipulated to space the wrench jaws for the reception of nuts or pipes of various sizes.

Another object of the invention is to provide a simple, strong and durable wrench which may be manufactured at a comparatively small cost.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a wrench embodying my improvements, the sliding yoke being shown in section; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a detail perspective view of the locking dog removed from the yoke.

Referring in detail to the drawing 5 designates the shank of the wrench which is provided upon one end with the stationary head 6 having the serrated face 7 for gripping engagement with a nut or the periphery of a pipe to which the wrench is applied. Upon the wrench shank 5 the U-shaped yoke bar 8 is loosely arranged, the inner face of the intermediate portion of said bar being beveled or inclined as indicated at 9. One edge of the wrench shank is provided with the teeth 10 having inclined faces 10'. Between the ends of the yoke bar 8 the holding dog 11 is arranged and rigidly secured by means of the rivets 12. One edge of this dog is recessed as at 13 to receive the lower rounded end of the shank 14 of the adjustable jaw 15 which is formed upon one end of said shank. A pivot pin 16 is disposed through the parallel arms of the yoke bar 8 and through the end of the shank 14, said shank being loosely mounted upon said pin. The dog 11 is provided with a single upwardly disposed

inclined tooth 17 for engagement with the ratchet teeth 10 on the edge of the main shank 5. This dog is normally held in locking engagement with the wrench shank by means of a leaf spring 18 which is fixed at one end to the inclined face 9 of the yoke bar and bears at its free end upon the opposite edge of the wrench shank 5 to that upon which the teeth 10 are formed. It will thus be seen that this spring tends to force the toothed edge of the shank toward the holding dog so that the tooth 17 of said dog engages the teeth 10 and prevents sliding movement of the yoke bar toward the stationary head 6.

A guide bar 19 is provided for the shank 14 of the adjustable jaw. This guide bar is of substantially U-shaped form and a rivet 20 secures the ends thereof to the opposite sides of the stationary head 6. The adjustable jaw 15 is also provided with a toothed or serrated face 15' and these teeth and the teeth 7 of the stationary jaw are inclined in opposite relative directions.

From the above description the operation of my improved wrench will be obvious. When it is desired to adjust the jaw 15, the operator simply presses with his thumb upon the central portion of the yoke bar 8 and forces the tooth 17 of the holding dog 11 away from the toothed edge of the shank 5. The bar 8 may now be moved along the wrench shank until the jaw 15 is spaced to the proper extent from the stationary head 6. Upon the release of pressure upon the bar 8, the spring 18 immediately returns the same to its normal position and engages the tooth 17 of the holding dog with the teeth 10 of the wrench shank. When the wrench is applied to the nut or pipe, the pressure exerted upon the wrench shank 5 in a longitudinal direction away from the adjustable jaw 15, tends to prevent the separation of the jaws. The wrench may, however, be easily and quickly removed by simply disengaging the holding tooth 17 from the teeth on the shank 5. It will also be seen that by pivotally connecting the movable jaw to the sliding bar 8, a better binding or gripping engagement of the teeth 15' upon the periphery of a pipe may be obtained in the circular movement of the tool. It will also be seen that the wrench comprises but few elements which are compactly arranged and of durable construction. In case the tooth 17

of the holding dog is broken, said dog may be readily removed from the yoke bar and replaced by another.

While I have shown and described the preferred construction and arrangement of the various parts, it will be understood that the device is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

The hereindescribed wrench comprising in combination the following elements to wit: a shank having a jaw on one end and a series of ratchet teeth on one face of said shank, a U shaped bar loosely embracing said shank, a holding dog rigidly fixed between the ends of the parallel arms of said bar and provided with a single inclined tooth projecting outwardly from the arms of the bar and toward the jaw for engagement with the teeth on said shank, the intermediate portion of the U shaped bar on the opposite side of the shank to said dog having an inclined inner wall, a leaf spring

fixed to said wall and provided with a bowed portion bearing against the same, one end of said spring projecting from between the arms of the U shaped bar in the same direction as the tooth of the holding dog and bearing against the edge of the shank to yieldingly hold the same in engagement with the tooth of the dog, an adjustable jaw having a shank pivotally mounted between the ends of the arms of said U shaped bar, said dog being provided with a recess to accommodate the end of said shank, said recess having a longitudinally extending wall against which the shank is adapted to abut to limit the pivotal movement of said shank toward the toothed shank, and a laterally extending guide member for the shank of the movable jaw fixed to said stationary jaw.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM LANCASTER COLEMAN.

Witnesses:

C. H. GILLMORE,
C. H. SIMUNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."