B. F. O'BRIEN.

FLANGE UNION WRENCH.

APPLICATION FILED JAN. 26, 1916.

1,209,012. Patented Dec. 19, 1916.

Fig. 1.

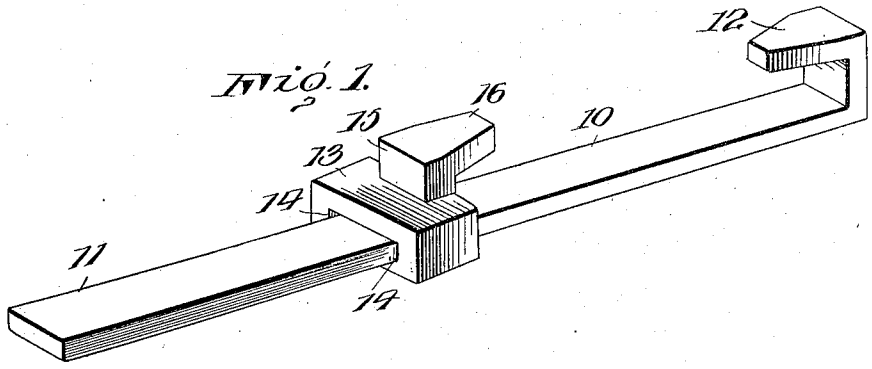


Fig. 2.

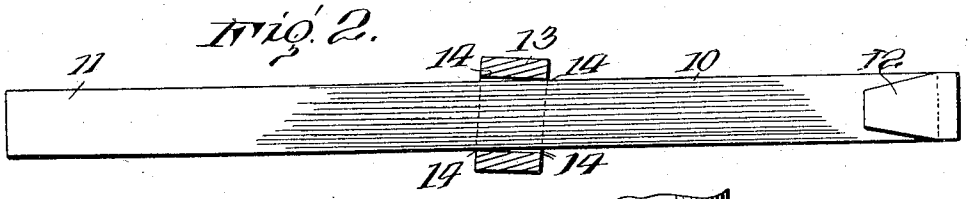


Fig. 3.

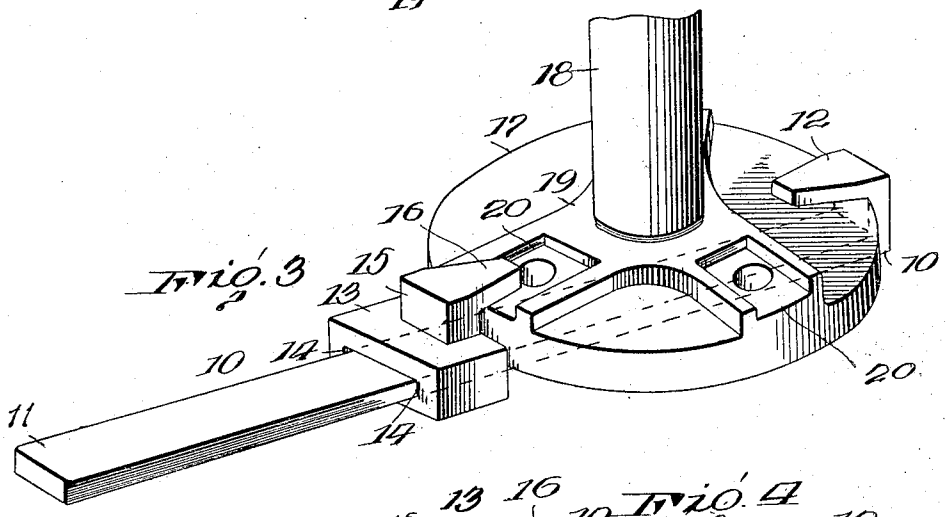
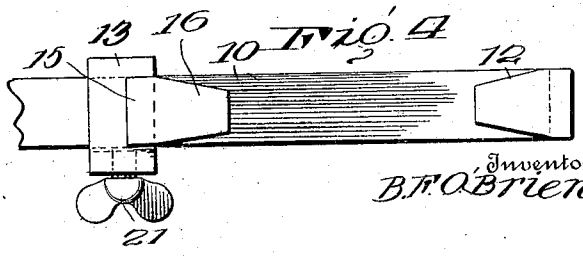


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FLANGE-UNION WRENCH.

1,209,012. Specification of Letters Patent. Patented Dec. 19, 1916.

Application filed January 26, 1916. Serial No. 74,389.

To all whom it may concern:

Be it known that I, BENJIMAN F. O'BRIEN, a citizen of the United States, residing at Hastings, in the county of Adams and State of Nebraska, have invented certain new and useful Improvements in Flange-Union Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches, more particularly to wrenches employed for removing members from threaded objects to which an ordinary wrench is not applicable, such, for instance, as flanged unions from pipes or tubes, and has for one of its objects to improve and simplify the construction and increase the efficiency and utility of a device of this character.

Another object of the invention is to provide a device of this character of simple construction and comprising two parts only, and which does not necessarily require the employment of clamp screws or other like holding devices.

Another object of the invention is to provide a device of this character which may be readily adjusted to engage objects of various sizes without removing any of the parts.

With these and other objects in view, the invention consists in certain novel features of construction, as hereinafter shown and described and then specifically pointed out in the claims; and in the drawings illustrative of the preferred embodiment of the invention Figure 1 is a perspective view of the improved implement; Fig. 2 is a plan view with the combined sleeve and grip device in section; Fig. 3 is a perspective view of the improved implement applied; Fig. 4 is a detail plan view illustrating a modification in the construction.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The improved device comprises a stock or shank 10 of any suitable size and of any suitable material but preferably in the form of a flat rectangular bar with the sides extending in parallel relation. At one end the member 10 is extended into a handle 11 and is provided with a holding element at the opposite end preferably in hook-like form, as shown at 12, extending inwardly over the adjacent portion of the stock and spaced from the same, as shown. Slidably disposed upon the stock 10 is a sleeve, represented as a whole at 13, and bearing closely against the flat sides of the stock but with its opening of greater length than the width of the stock, so that the sleeve is free to be tilted to a limited extent upon the stock. The terminals of the opening through the sleeve 13 are relatively sharp, as represented at 14, the object to be hereafter explained.

Rising from the sleeve 13 is a stud 15 having its outer portion extending in advance of the sleeve, as illustrated at 16, the portion 16 overhanging the stock 10 and spaced therefrom. The portions 12—16 of the improved implement thus form holding devices to engage the object to which the wrench is applied, as illustrated in Fig. 3. As before stated the improved implement is designed more particularly for removing the disk members of flanged unions from the pipe, one of the flanges being represented at 17, and a portion of the pipe upon which it is threaded at 18. The devices 17 are usually provided with radial strengthening ribs 19 having nut receiving recesses 20, and when the implement is applied one of the holding members 12 or 16, as the case may be, is preferably so arranged that one of the holding members will bear against a portion of the rib 19 or in one of the recesses 20. When thus applied and lateral strain exerted upon the handle 11 the projecting portion 16 of the lug 15 will engage the projecting portion 19 of the flange and thus tilt the sleeve 13 upon the stock 10 into the position shown in Fig. 2 and cause the diagonally opposite sharp corners 14 to firmly grip the contiguous edges of the stock and thus lock the sleeve firmly to the stock and prevent movement thereof longitudinally of the stock. The sleeve 13, as before stated, being loose upon the stock 10 may be adjusted longitudinally thereof when the pressure is removed, but will be immediately locked to the stock when lateral pressure is applied in either direction to the projecting portion 16 of the member 15.

If preferred a set screw 21 may be applied to the sleeve 13, as illustrated in Fig. 4.

The parts will preferably be constructed of steel of sufficient strength to withstand the pressure to which they will be subjected when in use, and may be of any required size.

Having thus described the invention, what is claimed as new is:—

1. A wrench comprising a stock having its faces extending in parallel relation and

unobstructed throughout, said stock being provided with a holding device at one end, a sleeve slidable upon the stock with its opening of greater length than the width of the stock, the terminals of the opening being relatively sharp to cause them to grip the stock and lock the sleeve thereto when strain is applied to the sleeve obliquely to its line of movement upon the stock, and an opposing holding device extending from the sleeve.

2. A wrench comprising a stock having its faces extending in parallel relation and unobstructed throughout, said stock having a holding device at one end overhanging the stock, a sleeve slidable upon the stock with its opening of greater length than the width of the stock, the terminals of the opening being relatively sharp to cause them to grip the stock and lock the sleeve thereto when strain is applied to the sleeve obliquely to its line of movement upon the stock, and an opposing holding device extending from the sleeve and overhanging the stock.

In testimony whereof I affix my signature.

BENJIMAN F. O'BRIEN. [L. S.]

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