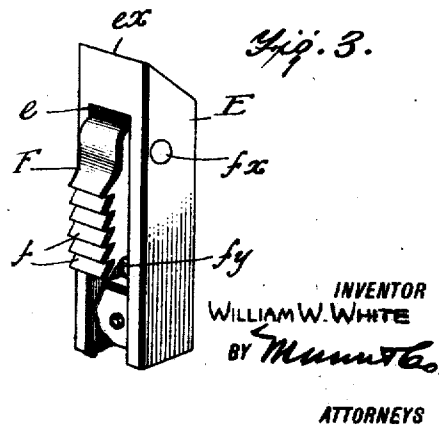
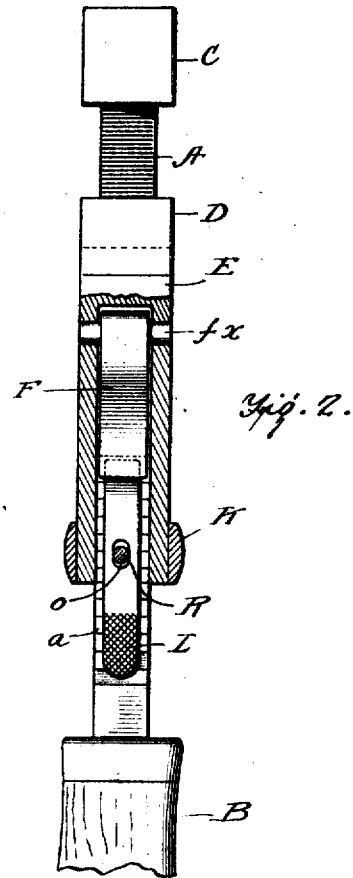
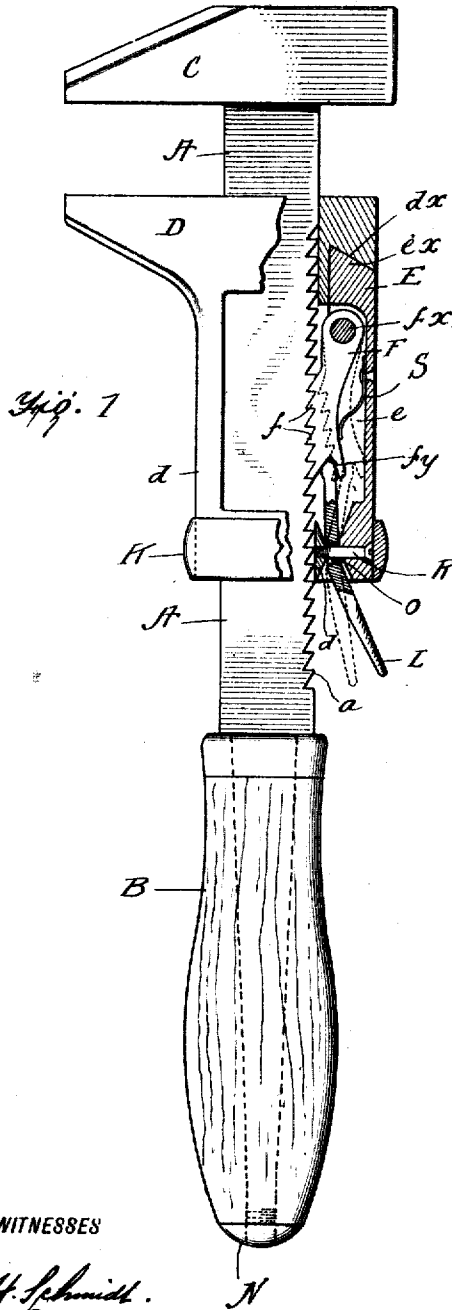


W. W. WHITE.
WRENCH.

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1,012,491.

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UNITED STATES PATENT OFFICE.

WILLIAM W. WHITE, OF HUTTONSVILLE, WEST VIRGINIA.

WRENCH.

1,012,491.

Specification of Letters Patent.

Patented Dec. 19, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM W. WHITE, a citizen of the United States, and a resident of Huttonsville, in the county of Randolph and State of West Virginia, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

My invention relates to improvements in wrenches, and it consists in the combinations, constructions and arrangements herein described and claimed.

An object of my invention is to provide a wrench of that type in which the jaws may be quickly closed by a single movement, and will remain closed, due to the engagement of a spring-pressed pawl with a series of rack teeth on the main bar.

A further object of my invention is to locate the pawl-releasing means on the side opposite the jaws in convenient reach of the operator.

A further object of my invention is to provide a novel form of housing for the pivoted pawl and release lever.

Other objects and advantages will appear in the following specification, and the novel features of the device will be particularly pointed out in the appended claim.

As stated above, an object of the invention is to provide a pawl and release lever on the side of the wrench opposite the jaws. I have found that where these parts are located on the same side with the jaws, the lever is very apt to be broken in the use of the wrench, especially where the lever is placed between parts that are apt to come in contact with the lever while attempting to place the jaws over a nut.

My invention is illustrated in the accompanying drawings forming part of this application in which—

Figure 1 is a side view of a wrench showing one embodiment of my invention, the housing being shown in section; Fig. 2 is a plan view of a portion of the wrench, a portion of the housing being shown in section for the sake of clearness; and Fig. 3 is a perspective view of a portion of the housing and of the spring-pressed pawl.

In carrying out my invention I provide a main bar or shank A, one end of which bears a handle B, the other end bearing the stationary jaw C. One side of the bar A is provided with a series of rack teeth *a*. A sliding jaw D is provided, having the exten-

sion *d* for the purpose of guiding the jaw in its movements. A portion of the jaw D and of the extension *d* is cut away to receive a housing member E, shown in Fig. 3. This housing member E is provided with a recess *e* in which is pivoted a pawl F having a series of teeth *f* arranged to mesh with the teeth *a* on the shank A. The pawl F is pivoted at *f*^x and is held by a leaf-spring S normally in engagement with the teeth *a*. The end of the pawl F is provided with a V-shaped recess *f*^y. A release lever L is pivotally mounted on a screw R which passes through the housing E and into the extension *d*. The end of the housing member E is beveled as shown at *e*^x.

From the foregoing description of the various parts of the device the operation thereof may be readily understood. In assembling the device the sliding jaw D is placed over the shank A and is moved toward the jaw C. The handle B is then put on the end of the shank A and is secured in position by the nut N. The housing member E with the pivoted pawl is then placed with its beveled end *e*^x in the recess *d*^x. The lever L is inserted in place and the screw R is passed through the opening *o* in the lever and screwed into the extension *d*. A ferrule, or strengthening band, K is then placed over the end of the extension *d* and of the housing E.

The operation of the wrench is similar to others of its type, that is, the jaws are placed about the object to be turned and the sliding jaw D is pushed toward the jaw C until it contacts with the side of the object, the teeth of the pawl riding idly over the rack teeth. Any attempt, however, to open the jaws is resisted by the pawl so that the wrench may be used in the ordinary manner. Now when it is desired to release the sliding jaw D the lever L is pressed by the thumb, thereby raising the pawl out of engagement with the teeth on the shank and permitting the jaw D to slide toward the handle.

It will be noted that the lever L is out of the way, *i. e.* it is on the side of the wrench opposite the jaws. Owing to the construction of the housing, the latter, instead of making a bulky portion, adds very little to the thickness of the slidable part. The pawl, spring and the inner portion of the lever are all incased, and the end of the lever is immediately adjacent the handle, and may be operated by the thumb while all the fingers are

employed in grasping the handle itself. It will be noted that the screw R serves not only to secure the housing member E to the slidable jaw, but also serves as a pivot pin
5 for the lever.

In case any of the operating parts should be broken, it is only necessary to remove the ferrule K, withdraw the screw R, when the housing member E can be taken off.

10 I claim:--

In a wrench, a shank having a stationary jaw secured at one end and being provided with a series of rack teeth on the side opposite the jaw, a slidable jaw carried by said
15 shank having an angular recess, and being provided with an extension, a housing having a beveled end arranged to enter said angular recess and being provided with a

recess, a spring pressed pawl carried within the recess in said housing, and being normally in engagement with the teeth of the rack, a lever having one end in engagement with said pawl, and being provided with an opening, and a screw arranged to extend through the housing, through the opening in the lever and into the extension of the jaw, said screw serving as a means of securing said housing to said jaw extension and also as a pivot for the lever.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

WILLIAM W. WHITE.

Witnesses:

L. A. STANLEY,
SOLOMON C. KEMON.