J. W. SULLIVAN.

WRENCH.

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944,923.

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Fig. 1.

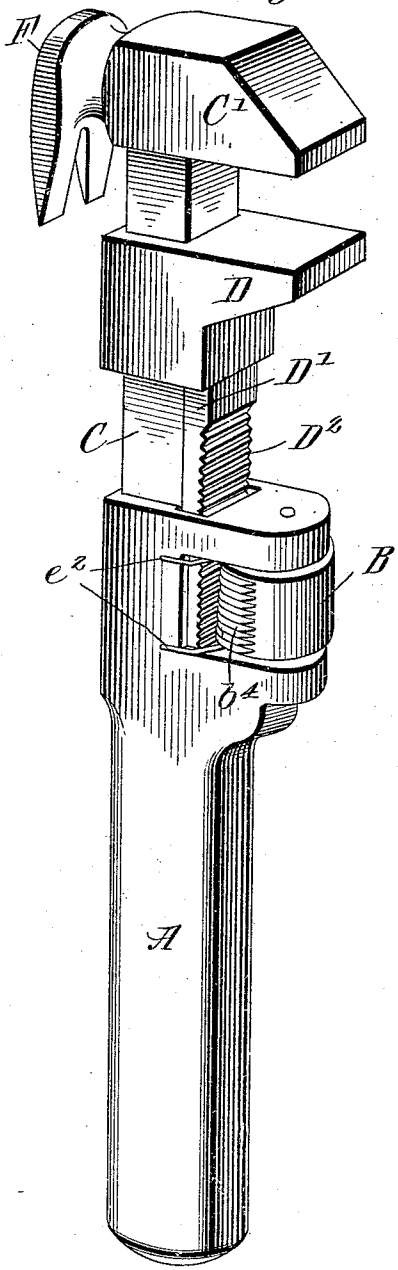


Fig. 2.

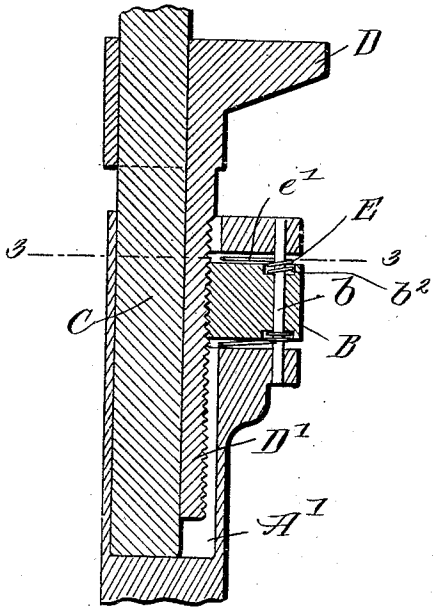


Fig. 3.

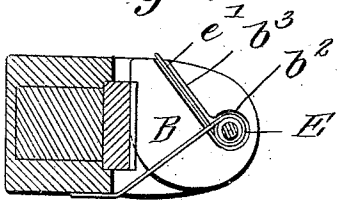
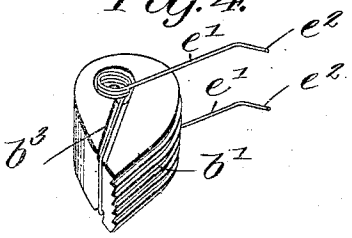


Fig. 4.



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WRENCH.

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To all whom it may concern:

Be it known that I, JOHN WALTER SULLIVAN, a subject of the King of Great Britain, and a resident of Edmonton, in the Province of Alberta and Dominion of Canada, have made certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches in which a sliding and a stationary jaw is used, and has for its object to produce a wrench which shall consist of few parts is easily and quickly manipulated and which will have positive gripping action.

My invention therefore consists in making a wrench with a main body portion having a rigid jaw at one end, a sliding jaw having an extension rack and a spring controlled cam pawl having a rubber face engaging the extension rack.

It further consists in certain novel features of construction arrangement and combination of parts as will be hereinafter fully described and pointed out in the claims, reference being had to the accompanying drawings in which—

Figure 1 is a perspective view of my improved wrench, Fig. 2 is a vertical section of a portion of the wrench, Fig. 3 is a transverse horizontal section on line 3—3 of Fig. 2, and Fig. 4 is a perspective view of the locking cam pawl and spring for controlling same.

In carrying out my invention I use a handle A, which is a malleable casting having in its upper portion an elongated rectangular recess or socket A′ while projecting laterally from said handle at its upper end are the spaced ears A^2 A^2 between which is held the cam pawl B by means of the pin *b* passing through both ears and upon which said pawl may swing. Within the socket A^2 is placed a rectangular shank C having at its outer end the integral jaw C′; the shank C fits snugly within the socket A′ on three of its sides, but between its fourth face and the inner wall of the socket A′ a space is left within which fits slidably the extension of the sliding jaw D; said extension is indicated by D; the sliding jaw D has a vertical rectangular opening through the same which fits slidably on the shank C; the front face of the extension D′ is serrated as shown at D^2 constituting D rack.

One face of the cam pawl B, namely the face adjacent to the extension rack, is provided with serrations *b′* similar to the serrations on the rack D^2 in size and pitch; the serrated face of the cam pawl B is normally held in engagement with rack extension D by spring pressure, such pressure being secured by springs E which are formed of wire coiled around the pin *b* just below the upper ear A^2 and just above the lower ear A^2, the coils lying in circular depressions b^2 surrounding the pivot hole through the pawl B; the spring wire is then crossed in opposite directions and has extensions *e* and e^1 the extension *e* lying in a disagree groove b^3 in the upper and lower jaws of the pawl, while the extension *e′* projects beyond the cam B and has its end bent as at e^2 to lie against the side face of the handle of the wrench.

The outer vertical face of the pawl is preferably rounded as shown, and said pawl on its straight sides does not extend beyond the ears A^2. As stated the pawl is normally held in engagement with the rack extension D. Now to operate the wrench the pawl B is swung on its pivot by the fingers of one hand of the operator throwing the serrated face out of engagement with the rack D^2 on extension D^1, while the jaw D is slid along with the other hand into engagement with the nut or other object to be gripped which will be held between the stationary jaw C′ and said jaw D; the pawl is now released whereupon the springs E throw the serrated face of the same into engagement with the rack D′ and securely hold the jaw in its adjusted position. Owing to the number of serrations on the pawl and the pressure of the springs, the sliding jaw will be prevented from accidentally slipping, and the condition may be rendered more certain by holding the cam against the rack extension D′ by means of the hand of the operator grasping the wrench at this point. The stationary jaw of the wrench may be provided with an integral claw F for withdrawing tacks, nails, &c.

It will thus be seen that I provide a simple, cheap and efficient wrench, that will be positive in its gripping action, and one which can be quickly adjusted to varying sizes of objects.

I claim:—

1. A wrench consisting of a handle, a rigid jaw having a flat faced shank fitting within said handle, spaced ears projecting from said handle, a spring actuated pawl

pivotally mounted between said ears, said pawl having one of its longitudinal faces ribbed or serrated, a movable jaw slidably mounted on the flat faced shank of the rigid jaw, an extension projecting downwardly from said movable jaw, one face of said extension being flat and adapted to lie against the flat face of the rigid jaw shank, and the opposite face of the extension having ribs or serrations corresponding to the ribs or serrations of the pivoted pawl and lying adjacent to the serrated face of the pawl.

2. A wrench consisting of a handle member having a socket in its upper end, a rigid jaw member having a shank fitting within said socket, a movable jaw member slidably mounted on said shank, a serrated extension extending downwardly into said socket and alongside the shank of the rigid jaw, spaced ears projecting from the handle member, a pawl pivotally mounted between said ears and having a serrated vertical face adapted to engage the serrated extension of the movable jaw, and coiled springs seated within the pawl and engaging said pawl and the handle respectively.

JOHN WALTER SULLIVAN.

Witnesses:
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