

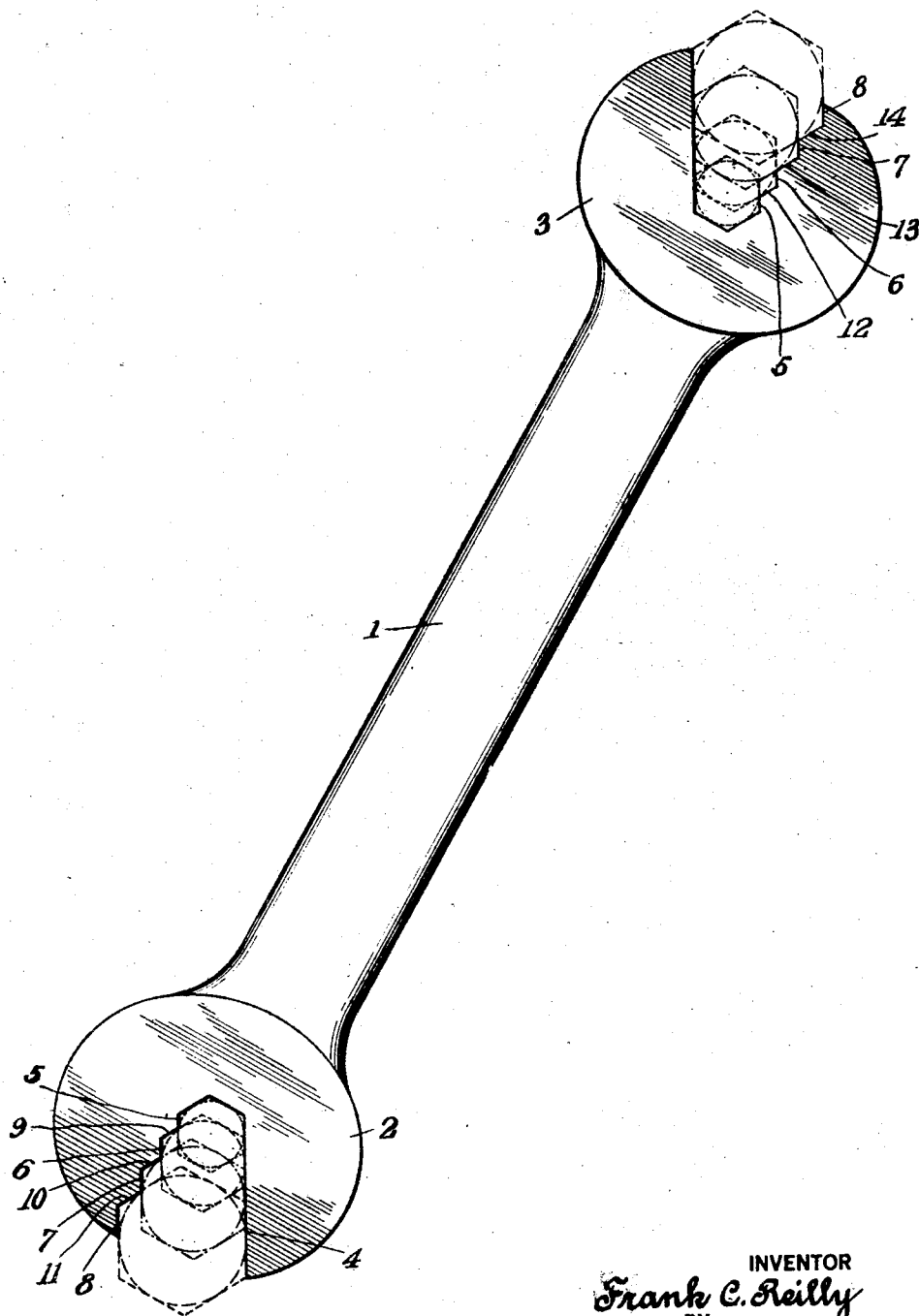
April 12, 1927.

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1,624,508

WRENCH

Filed Oct. 2, 1925



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WRENCH.

Application filed October 2, 1925. Serial No. 60,002.

This invention relates particularly to spanner wrenches of the fixed jaw type.

Special objects of the invention are to provide a ratcheting wrench of the fixed jaw type which will hold nuts or bolts of various sizes without slipping or marring the corners of the bolts or nuts, which will combine the features of firm grip and easy ratcheting action and which will be strong, simple, inexpensive and entirely practical.

These objects are attained by a novel construction, arrangement, proportion and relation of parts, one of the commercial embodiments of which is illustrated in the accompanying drawing.

The single figure is a face view of a double ended spanner wrench having the invention embodied therein.

The shank or handle of the wrench is designated 1 and is shown as having heads 2 and 3 at the opposite ends of the same.

Both these heads have jaws for holding a plurality of hexagonal nuts or bolts and comprising in each instance a single straight jaw face 4 and a plurality of stepped or offset jaw faces 5, 6, 7, 8, parallel to the straight jaw face.

The steps or echelons 9, 10, 11, connecting the offset jaws of the first head 2 are made of substantially equal length to the jaw faces 6, 7 and 8 respectively so as to grip both sides of the hexagonal bolts or nuts substantially equally.

On the other head 3 the echelons or steps 12, 13, 14, increase in length toward the end of the wrench so as to obtain proportionately greater hold on the bolts or nuts of larger sizes. The jaw faces 5, 6, 7, 8, however, in this form are of substantially equal length.

Each form of jaw head has its advantages. The jaws of the first head, 2, where the jaw faces and echelons are of substantially equal length and both increase toward the larger sizes, have more secure and greater holding power; whereas the jaws of the head 3, where the steps are of increasing length toward the larger sizes, have on easier ratcheting action. Where both forms of wrench heads are combined in the one wrench therefore, the wrench may be turned end for end

and used, one head or the other, to suit the work in hand. In both forms the ratcheting is easily and naturally effected and the possibility of slippage is reduced to a minimum as a relatively light endwise pressure serves to hold the jaws interlocked with the companion bolts or nuts.

The endwise pressure is specially effective to hold the wrench firmly engaged with the nut or bolt head in the illustration by arranging the stepped side of the wrench substantially in a direct line with the length of the wrench. Thus in the structure shown a straight line touching the tips of the stepped jaw faces will be substantially parallel to the longitudinal axis of the wrench. This means that simple endwise pressure on the wrench handle will always have a tendency to force the wrench the more firmly into engagement with the nut or bolt head and the wrench may be engaged or disengaged by a simple endwise movement. This novel structure and arrangement practically eliminates slippage because in the use of the wrench the natural pressure is endwise and hence the user is automatically counter-acting slippage tendencies at all times.

What is claimed is:

1. A fixed jaw ratcheting wrench comprising a straight jaw face and stepped jaw faces opposite and parallel to said straight jaw face, said stepped jaw faces being spaced from the straight jaw face to accommodate a series of nuts of increasing size and the steps connecting said jaw faces being of successively increasing length toward the end of the wrench accommodating the nuts of larger size.

2. A fixed jaw ratcheting wrench comprising a straight jaw face, stepped jaw faces parallel and opposite thereto, said stepped jaw faces and the steps connecting the same being of substantially equal length for each size nut accommodated by the wrench and both being of increased length toward the larger open end of the wrench.

In witness whereof, I have hereunto set my hand this 18th day of September, 1925.

FRANK C. REILLY.