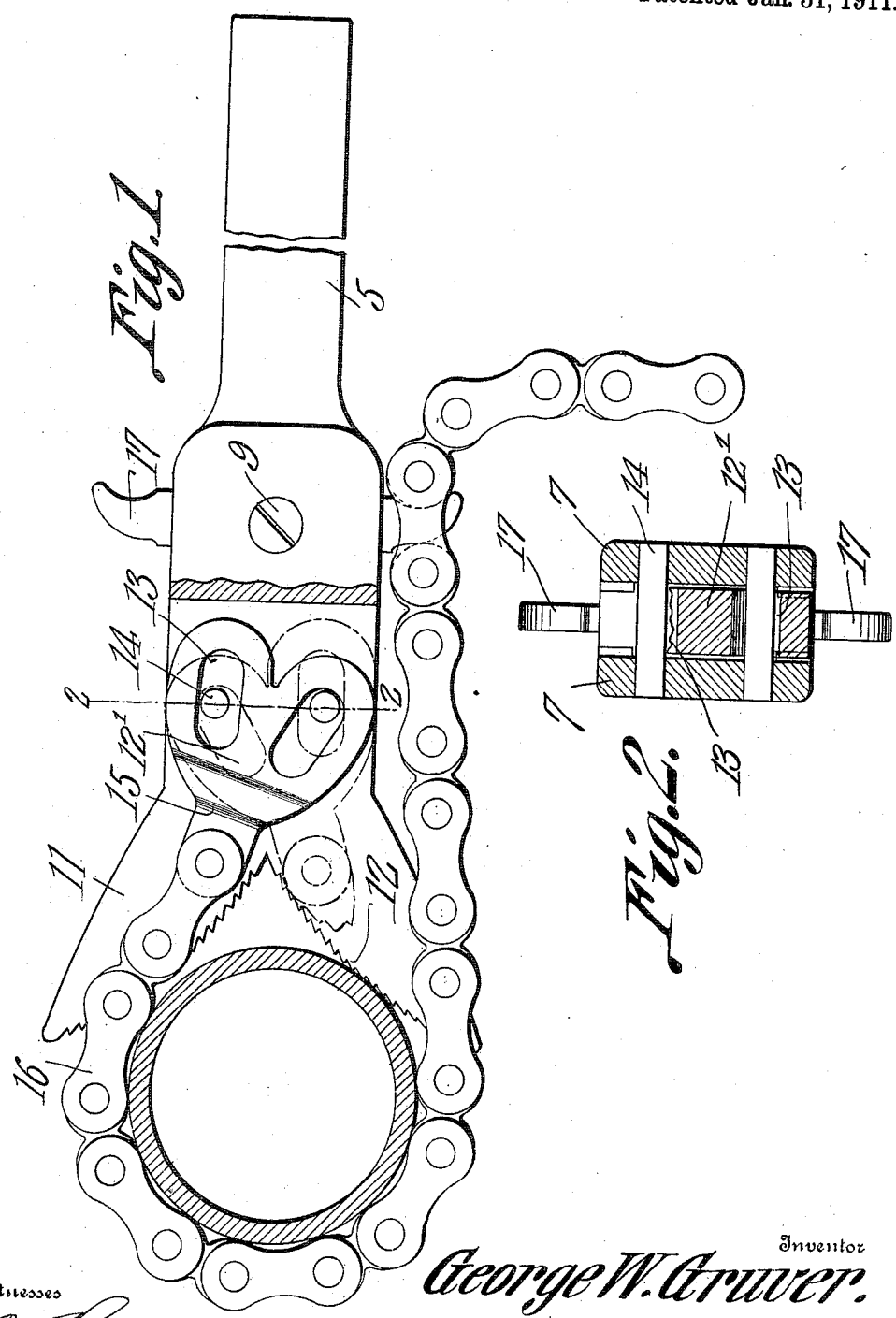


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 WRENCH.
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982,951.

Patented Jan. 31, 1911.



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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON GRUVER, OF MONTEREY, CALIFORNIA.

WRENCH.

982,951.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE W. GRUVER, a citizen of the United States, residing at Monterey, in the county of Monterey and State of California, have invented a new and useful Wrench, of which the following is a specification.

It is the object of the present invention to provide an improved pipe wrench which will be extremely simple in its general construction, highly efficient in action, and not liable to break under strain.

Primarily, the invention aims to so construct the wrench that it will grip the pipe being turned, with a degree of firmness in proportion to the force to be exerted upon it, and further to so construct this means that it will enable the wrench to be employed in connection with pipes of various sizes to which the wrench could not otherwise be applied. In other words, the wrench is of that type embodying a V-shaped jaw and a chain adapted to engage about the pipe to be turned which chain is adapted to have its links engaged interchangeably with a projection upon the body of the wrench and in which the engagement of one link of the chain with the projection might render the space between the chain and the jaw too small to receive the pipe and the engagement of the next adjacent link might render it too large for such reception. The means above mentioned provides for automatic adjustment between these two extremes.

In the accompanying drawings,—Figure 1 is a side view, partly broken away, of a wrench constructed in accordance with the present invention, the said figure illustrating in full lines the positions assumed by the various parts when the wrench is to be used to turn a pipe in one direction and in dotted lines, the positions assumed when the pipe is turned in the opposite direction. Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

In the drawings, the wrench is illustrated as embodying a stock, which is indicated by the numeral 5, and disposed against the opposite faces of the stock at this end are cheek plates 7. A securing bolt 9 is passed through the said cheek plates and the said end of the stock, and serves to secure the cheek plates upon the stock with their portions which lie beyond the end of the stock, in parallel planes. As will be observed from inspection of Fig. 1 of the drawings, the outer end portions of the plates are formed

with angularly disposed jaws, which are indicated by the numeral 11 and are serrated, as at 12.

A block 12' is fitted between the cheek plates 7 and is formed with slots 13 which are two in number and diverge in the direction of the inner end of the block. Pins 14 are engaged at their ends in openings in the said cheek plates and engage one through each of the slots in the said block, it being understood that the said block is in this manner held between the cheek plates for limited movement. The block is formed with a projecting lug 15, and to this lug is connected one end of a chain of the sprocket type, the links of the chain being indicated by the numeral 16. The stock 5 is formed at its rabbeted end at each lateral edge with a tooth, indicated by the numeral 17, the said teeth projecting directly laterally from the said edges and being slightly curved in the manner of a hook. These teeth 17 are of such dimensions as to permit of the engagement of any one of the several links 16 of the chain therewith, the blocks of the links being received in the concavities of the teeth. Normally, the block 12' lies in such position that the pins 14 will be received in the upper ends of the slots 13 and the projection 15 will then assume a position between the full and dotted line positions illustrated in Fig. 1 of the drawings, or in other words, it will assume a position coincident with the longitudinal axis of the wrench.

Where the wrench is to be employed in turning a pipe to the right (as in Fig. 1) the chain is engaged at the proper one of its links 16 with the lower one of the teeth 17 in the same Fig. 1 of the drawings, it having been first engaged about the pipe to be turned, as will be readily understood. The stock of the wrench is then swung over to the right with the lower jaw (in Fig. 1) in engagement with the pipe. This movement of the wrench stock will cause the lower one of the pins 14 to seat in the inner end of the lower slot in the block 12' and will further result in a tilting or canting of this block so that the upper pin will be about midway between the ends of the upper slot. This canting of the block will cause the chain to firmly bind about the pipe and it will be understood that by providing two of the teeth 17 the wrench is adapted for engagement with pipes to be turned either to the right or the left.

What is claimed is:

1. In a tool of the class described, a stock having spaced jaws, a block disposed between the jaws, said block being formed with slots, pins engaging through the jaws and through the slots, a chain connected at one end to the block, and a tooth upon the stock engageable by the links of the chain interchangeably.
2. In a tool of the class described, a stock having spaced jaws, a block mounted between the jaws and formed with slots, pins engaged through the jaws and through the slots in the block, the said block being formed with a lug projecting in a line between the slots, a tooth upon the stock, and a chain connected to the lug of the block and engageable with the said tooth.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE WASHINGTON GRUVER.

Witnesses:

H. R. BICSFORD,
FRANK KRIDLER.