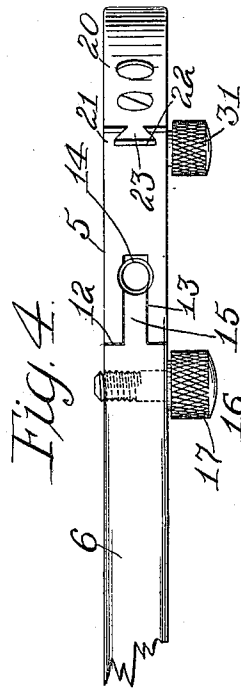
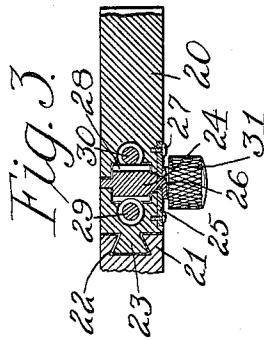
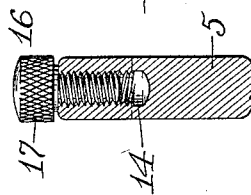
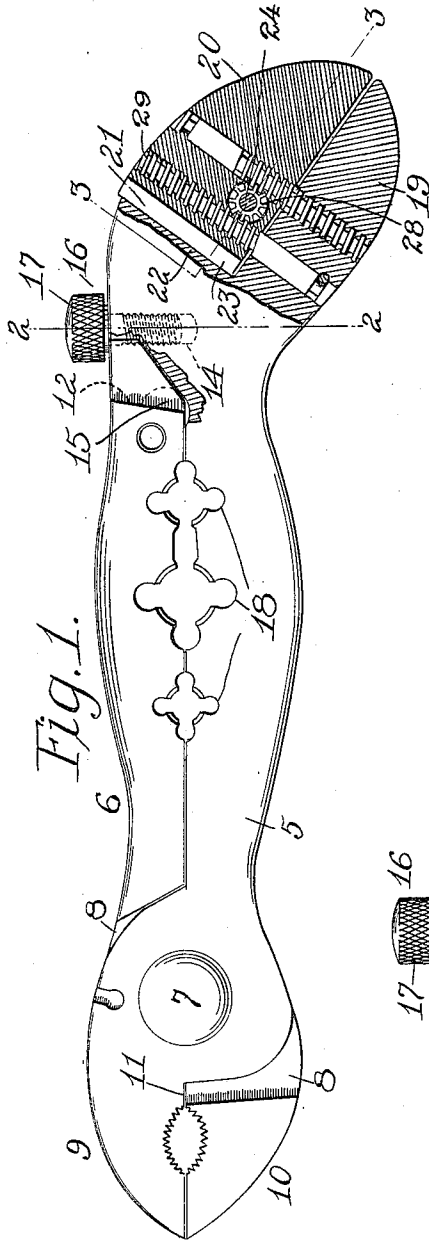


J. W. CHAMBERLAIN.
COMBINATION TOOL.
APPLICATION FILED JULY 22, 1911.

1,042,318.

Patented Oct. 22, 1912.



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JOHN W. CHAMBERLAIN, OF BISMARCK, NORTH DAKOTA.

COMBINATION-TOOL.

1,042,318.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed July 22, 1911. Serial No. 639,949.

To all whom it may concern:

Be it known that I, JOHN W. CHAMBERLAIN, a citizen of the United States, residing at Bismarck, in the county of Burleigh and State of North Dakota, have invented new and useful Improvements in Combination-Tools, of which the following is a specification.

The object of the invention is to combine pipe threading and wrench structures with the ordinary combined wire stretchers and pliers.

Other objects will appear and be better understood from the following description taken in connection with the accompanying drawings, in which,

Figure 1 is a side elevation of the device partly in section. Fig. 2 is a section end view on the line 2—2 of Fig. 1. Fig. 3 is a similar view on the line 3—3 of Fig. 1. Fig. 4 is a detail plan with the locking member harbored in one of the handle members.

The handle members 5 and 6 are pivoted together as shown at 7 and are recessed as at 8 so as to interfit the recessed portions being enlarged and comprising plier jaws 9 and 10 which in addition to being adapted to clamp a non-cylindrical object are further adapted to clamp a cylindrical object such as a wire extending at right angles to the pivot or a rod extending parallel to the pivot 7. The said jaws further having wire receiving recesses 11, the walls of which co-operate to form a shear-cut on a wire in the ordinary manner.

The handle member 5 has a shoulder 12 provided with a mortise 13 the floor of which has a screw threaded opening 14. The mortise receives a tenon 15 at the end of the handle member 6 and an adjustable locking member such as a headed screw 16 screws into the opening 14 and its head 17 contacts with the tenon 15 and serves to prevent upward movement of the same from the mortise the latter serving to prevent lateral movement of the handle member 6. With this construction it will be seen that when the jaws 9 and 10 clamp the wire therebetween, the said jaws may be locked by means of the locking member and the device connected to one end of a rope and pulled the same as the ordinary wire stretcher.

The inner surfaces of the handle members 5 and 6 are each formed with the elements of pipe threading dies. These elements

align when the handle members are brought together whereby the usual pipe threading dies are provided each of which is adapted to operate on a pipe end in the ordinary manner. Referring to Fig. 1 it will be seen that the dies 18 are of different sizes in order to thread various diameters of pipes.

With the structure thus far described it will be seen that when the handle members are locked by means of the locking member or screw 16 the tool may be turned as the ordinary stock and die tool employed for threading pipes, studs, and the like.

That end of the handle 5 remote from the jaw 9 is provided with a wrench which consists of a stationary jaw 19 and a jaw 20 adapted to slide in a shoulder 21 on the handle 5. Any preferred construction may be employed to carry out this sliding movement such as forming a dove-tail groove 22 in the shoulder 21 and providing a movable jaw 20 with a dove-tail rib 23 at one end. A shaft 24 extends transversely of the sliding jaw 20 and is retained therein in any preferred manner such as by means of oppositely disposed plates 25 the inner ends of which are adapted to enter the groove 26 in the shaft 24, the plates being secured to the jaw 20 in any preferred manner such as by screws 27. The shaft 24 when turned is adapted to move the sliding jaw 20 and any preferred connection may be employed between the shaft 24 and jaw 20 such as a worm gear and pinion. In the present instance the worm wheel 28 is shown as secured to the shaft 24, and meshes with the worms 29 and 30 extending through transverse openings in the stationary and movable jaws and secured respectively at one end to one of said jaws. The shaft 24 may be turned in any preferred manner such as by a milled nut 31 secured thereto. With this construction and assuming that the parts are arranged as shown, it will be seen that a right-hand turn imparted to the nut 31 will move the sliding jaw away from the stationary jaw whereby the said jaws may be adjusted to the size of the object to be turned.

Although I have shown and described one embodiment of the invention it is to be understood that I am not to be limited to the specific structure herein shown and described nor to the particular arrangement of parts, since it will be seen that various changes may be made, in the scope of the

appended claim, without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim as new is:

- 5 In a device of the character described, the combination with a handle member provided with a stationary jaw and a grooved shoulder; of a jaw member having a ribbed portion slidingly fitted in said grooved shoulder,
10 der, a shaft having a worm wheel mounted

thereon extending transversely of said sliding jaw, and worms extending through said sliding jaw at right angles to said shaft and on opposite sides thereof.

In testimony whereof I affix my signature 15 in presence of two witnesses.

JOHN W. CHAMBERLAIN.

Witnesses:

M. G. HAGEN,

R. H. THISTLETHWAITE.

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