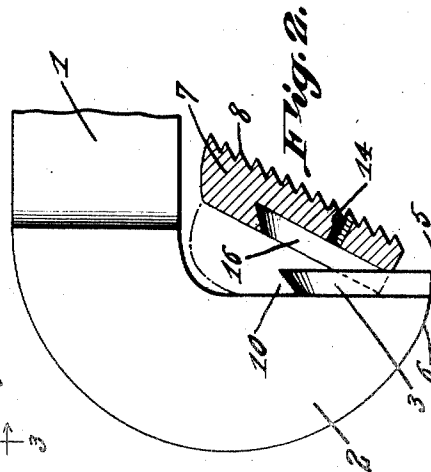
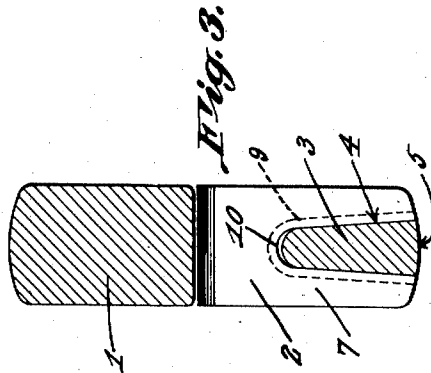
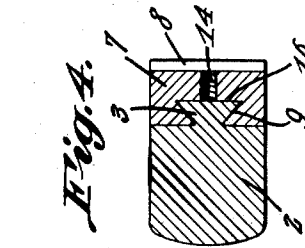
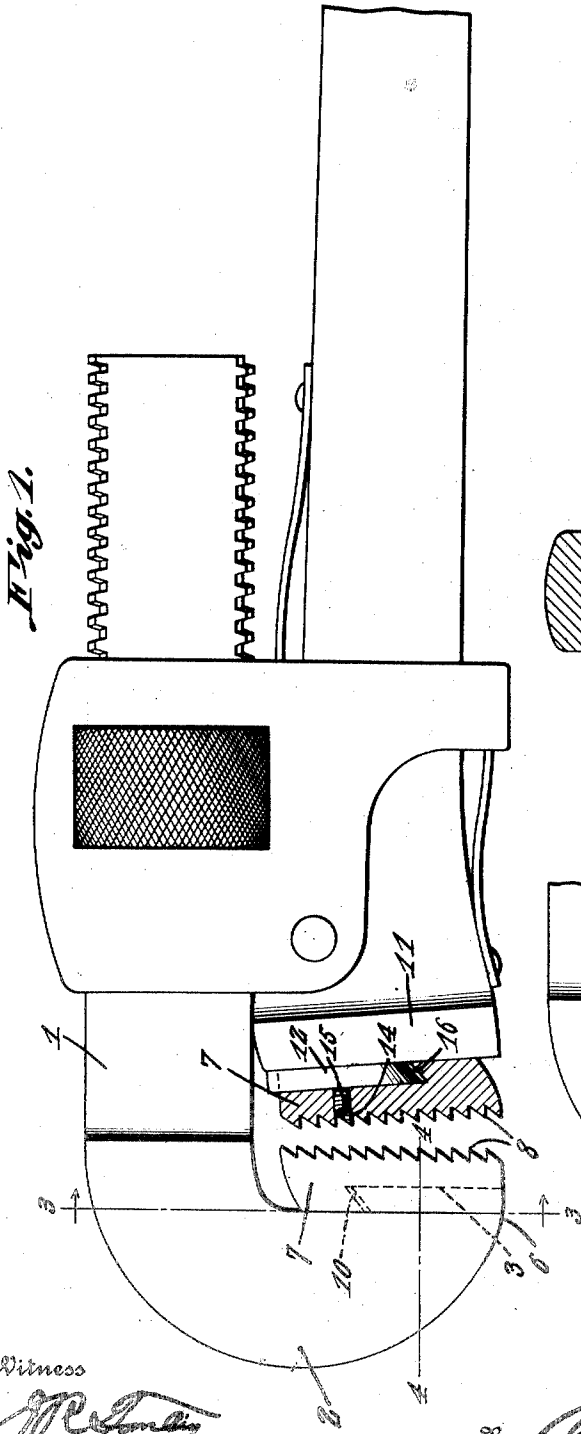


J. H. A. CARR.
WRENCH.

APPLICATION FILED JUNE 23, 1920.

1,360,176.

Patented Nov. 23, 1920.



J. H. A. Carr, Inventor

Witness

[Signature]

By

Cashow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

JAMES H. A. CARR, OF McKEES ROCKS, PENNSYLVANIA.

WRENCH.

1,360,176.

Specification of Letters Patent. Patented Nov. 23, 1920.

Application filed June 23, 1920. Serial No. 391,109.

To all whom it may concern:

Be it known that I, JAMES H. A. CARR, a citizen of the United States, residing at McKees Rocks, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Wrench, of which the following is a specification.

One object of this invention is to provide a facing for the jaw of a wrench, which can be removed and replaced when worn. Another object of the invention is to provide novel means whereby the facing is secured to the fixed jaw of the wrench, it being possible to make the facing a maximum length and still use the facing on a wrench the shank and jaw of which are integral, the facing being detachably interlocked with the jaw to resist the strain imposed on the facing when the wrench is in use.

But one form of the invention is shown in the accompanying drawings: nevertheless, it is to be understood that, within the scope of what is claimed, changes in the precise structure shown, may be made, and the device may be applied to many kinds of wrenches, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, a wrench whereunto the invention has been applied, parts appearing in section; Fig. 2 is a side elevation, fragmentary and diagrammatic in nature, illustrating the manner in which the facing is applied to the fixed jaw; Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1; and Fig. 4 is a fragmental section taken on the line 4—4 of Fig. 1.

The facing forming the subject matter of this application is adapted to be used with wrenches of widely different sorts. In the drawing, the facing is shown in connection with a Stillson wrench, but, of course, the facing can be employed on a wrench of a different construction from that referred to.

The numeral 1 denotes a shank carrying a fixed jaw 2 having a rib 3 which, as shown at 4, is wedge-shaped in plan, the wider end 5 of the rib being disposed toward the outer end 6 of the jaw 2. The numeral 7 designates a jaw facing having the usual teeth 8, or constructed otherwise, to retain a hold on the object to be turned. The facing 7 is provided with a wedge-shaped recess 16, extended part way through the facing 7, from one end thereof, the recess receiving the

rib 3. The rib 3 and the facing 7 are dovetailed together as shown at 9, the narrower end 10 of the rib 3 being disposed toward the shank 1 and being spaced from the shank.

The construction is such that the facing 7, as indicated in Fig. 2, may be mounted on the rib 3 by moving the outer end of the facing toward the outer end of the fixed jaw 2 and by swinging the inner end of the facing toward the fixed jaw, on a radius. When the wrench is in use, the thrust on the facing 7 is in an outward direction, and since the smaller end 10 of the rib 3 is disposed toward the shank 1, the hold of the facing on the rib will increase, as the strain on the facing increases.

Whatever be the form of the wrench, the same will include a jaw 11, which may be movable. The jaw 11 is provided with a rib 12 duplicating the rib 3 of the fixed jaw 2 in shape, but having its narrower end disposed toward and spaced from the outer end of the jaw 11. It is to be observed that, if desired, the facing 7 may be removed from the jaw 2 and be mounted on the jaw 11. Similarly, a facing may be shifted from the jaw 11 to the jaw 2. This operation permits the facings to be turned end for end and is especially desirable since it practically doubles the life of a facing, in view of the fact that when a facing is on the jaw 2, one part of the facing receives most of the wear, whereas, when the facing is on the jaw 11, another part of the facing receives the major portion of the wear.

If desired, a hole 14 may be formed in the facing 7, the hole being adapted to receive a screw 15, which, cooperating with the rib on the jaw, holds the facing in place. In connection with the facing on the rib 3 of the fixed jaw 2, there is but little occasion for the screw 15, and, generally, it is omitted. It may be desirable, however, to use the screw 15 in connection with the facing which is mounted on the rib 12 of the jaw 11. Very often, the facing will wedge on the rib 12 so firmly that the screw 15 may be omitted. The screw, however, is a useful element which may be employed or left out, as thought best. It is to be understood that if the screw 15 is used, the same carries none of the strain when the wrench is in use. This is true because the thrust of the facing is against the inner end of the rib

3 in the case of the jaw 2, and against the outer end of the rib 12, in the case of the jaw 11.

I claim:—

5 1. A wrench comprising a shank, and a fixed jaw having a rib which is wedge-shaped in plan, the wider end of the rib being disposed toward the outer end of the jaw; a facing having a wedge-shaped recess extended part way through the facing
10 from one end thereof to define a solid imperforate portion at the inner end of the facing, the recess receiving the rib, the rib and the facing being dove-tailed together,
15 the narrower end of the rib being spaced from the shank, whereby the facing may be mounted on the rib by moving the outer end of the facing toward the outer end of the

fixed jaw and by swinging the inner end of the facing toward the fixed jaw, on a radius; 20 and a movable jaw cooperating with the fixed jaw.

2. A wrench constructed as set forth in claim 1, and further characterized by the fact that the movable jaw is provided with 25 a rib duplicating the rib of the fixed jaw in shape but having its narrower end disposed toward and spaced from the outer end of the movable jaw, the facing being adapted for interchangeable mounting on 30 the ribs of the fixed and movable jaws.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

JAMES H. A. CARR.