(No Model.)

H. A. RUETER.

WRENCH.

No. 307,413. Patented Oct. 28, 1884.

Fig. 1.

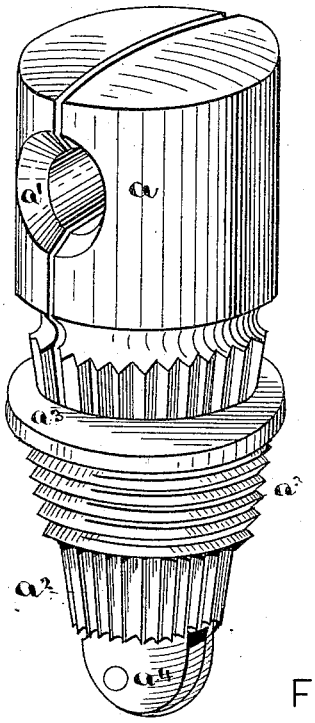


Fig. 2.

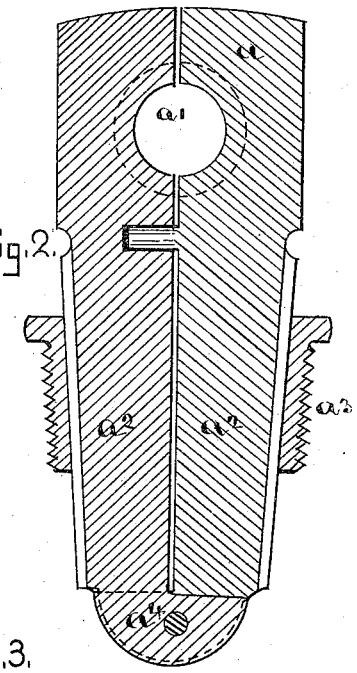
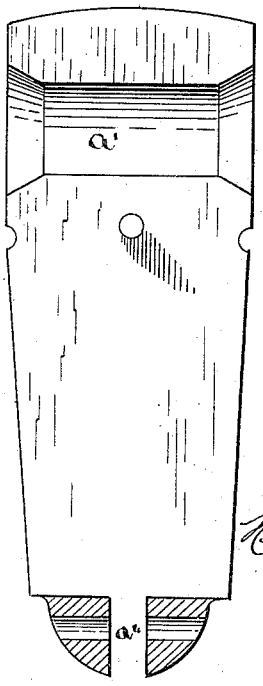


Fig. 3.



Witnesses.

C. W. Houghton

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HENRY ARNOLD RUETER, OF BOSTON, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 307,413, dated October 28, 1884.

Application filed April 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY ARNOLD RUETER, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented a new and useful implement, which I call a "Wrench," for setting metallic bushings in bung-holes and tap-holes in casks, of which the following is a specification.

My invention relates to the form and construction of the wrench, the object of it being to provide a convenient, cheap, and efficient implement for setting metallic bushings in the bung-holes and tap-holes in casks; and it consists in a metallic plug with a cylindrical head and a tapering body divided longitudinally through its center, hinged together at its smaller end, and having a hole transversely through the head on the line of division of the two parts to admit an actuating-lever.

In the drawings annexed, Figure 1 shows a perspective of the wrench and a metallic bushing, the wrench being in position in the bushing. Fig. 2 is a longitudinal sectional view of the wrench and a bushing. Fig. 3 is a front longitudinal view of one of the parts of the wrench.

a is the cylindrical head of the wrench. *a'* is the hole though the cylindrical head for the actuating-lever. a^2 is the tapering body of the wrench, which enters and engages the bushing, so that it can be screwed into the wood of the cask. a^3 is the metallic bushing, which has a screw-thread on its outer surface, which is forced by turning the bushing around with the wrench and its lever into the substance of the wood. a^4 is the hinge at the smaller end of the wrench, by which the two parts are connected, and on which they swing apart when the lever in the hole *a'* is actuated.

The tapering body of the wrench a^2 is shown in Fig. 1 with longitudinal corrugations or ridges, with sharp corners standing out radially from its axial line, to come in contact with and engage the inside of the bushing; but the wrench may be made without such corrugations and be effectual for the purpose of turning the bushing to its place.

In Fig. 3 there is shown a dowel-pin set in one of the two parts of the wrench to enter an opening made for it in the other of the parts; but this is not essential in the construction of the wrench, and may be used or not. The hole *a'* is made of a diameter which will take in an iron rod of sufficient strength to turn the wrench without bending, three-quarters of an inch to one inch in diameter being generally sufficient. The inside diameter of the hole in the cask in which the metallic bushing is to be set will be equal to the outside diameter of the metallic bushing at the bottom of the screw-thread on it, and slightly tapering to nearly correspond with the taper of the bushing.

When the bushing is to be set in a cask, it is started into the hole in the cask far enough for the first and second threads on it to engage the wood. The wrench is then set into it. An iron rod of convenient length, generally about three feet, is placed in the hole *a'* through the head of the wrench. A pull upon the lever swings the two sides of the wrench apart, so that the outer surface of the body of the wrench engages the inner surface of the bushing with such force that by carrying the lever around, the wrench carries the bushing, running its screw-threads into the wood of the cask, until the flange at the outer end is brought to its place at the surface of the wood.

It is obvious that the movement of the lever to turn the wrench around will throw the two parts of it away from each other and against the inner surface of the bushing, and the greater the force exerted on the lever the more securely the wrench engages the inner surface of the bushing, and when the force on the lever ceases the lever is loose in the hole in the wrench and the wrench is loose in the bushing.

The mass of metal in the parts of the wrench is such that the movement of the lever opens them equally, and the ridges on the outside of the wrench, or the surface, if there are no ridges, presses against the inner surface of the bushing equally on all the inside of it except at the line of opening of the wrench.

The outer ends of the hole through the head of the wrench are made flaring, so that the lever will have a short bearing or fulcrumage near the axial line of the wrench, and consequently engage the outer surface of the wrench with the inner surface of the bushing with greater force and certainty of holding.

Having thus described my invention and the manner of using it, I claim—

The above-described improved wrench for inserting metallic bushings in bung-holes and tap-holes in casks, consisting of the tapering metallic plug a^2, divided longitudinally and having the hole a' in the line of the division of the parts, and the hinge a^1, all substantially as described, for the purpose specified.

HENRY ARNOLD RUETER.

Witnesses:
CHS. HOUGHTON,
F. L. HOUGHTON.