(No Model.)

J. M. PFLIEGER.

KEY LOCKING WRENCH.

No. 577,880. Patented Mar. 2, 1897.

Fig. 1.

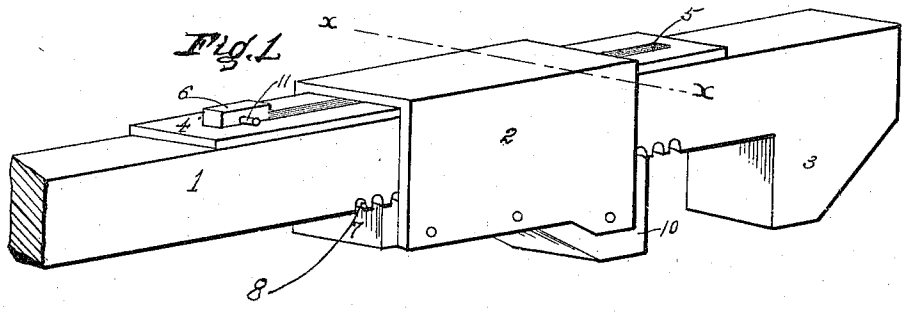


Fig. 2.

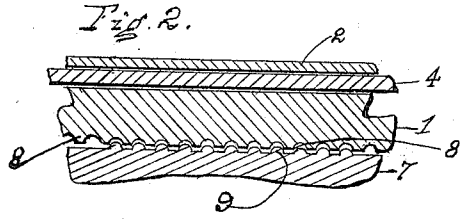
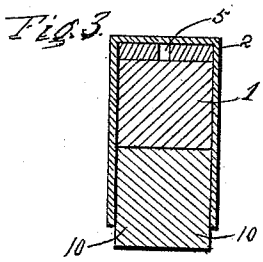


Fig. 3.



WITNESSES:

J. N. Duffin.

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UNITED STATES PATENT OFFICE.

JAMES M. PFLIEGER, OF PHILADELPHIA, PENNSYLVANIA.

KEY-LOCKING WRENCH.

SPECIFICATION forming part of Letters Patent No. 577,880, dated March 2, 1897.

Application filed March 26, 1896. Serial No. 584,967. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. PFLIEGER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Key-Locking Wrenches, of which the following is a description, reference being had to the annexed drawings, making part hereof.

The nature of my invention will appear from the following specification and claim.

In the drawings, Figure 1 is a perspective view of my device; Fig. 2, a broken longitudinal sectional view showing the locking mechanism; Fig. 3, a vertical transverse section on the line *x x* of Fig. 1.

1 is the shank or body of the wrench; 3, the front stationary jaw; 7, the shifting cog-rack block, provided with cog-teeth 9, which are adapted to engage with cog-teeth 8 of a corresponding elongated cog-rack in the lower surface of shank 1.

10 is part of the cog-rack block 7, moving with it, and forms the other or second jaw of the wrench.

2 is a hood fitting over the shank 1 and down against the sides of block 7, to which it is secured by pins or screws.

4 is a sliding key provided with a long slot 5.

6 is an elongated lug cast or set upon shank 1 and projecting upward through slot 5.

11 is a pin passing through a hole in lug 6, the projecting ends of which pin hold down the key against disengagement from the shank 1, while the elongated construction of lug 6 serves to guide said key 4, after its disengagement from hood 2, so as to direct it in a straight movement forward for reëngagement beneath the upper part of said hood.

In practice I construct the key 4 of a thickness very nearly equal to the depth of cuts or depressions between the adjoining cog-teeth of either rack.

The operation is as follows: If it is desired to decrease the distance between jaws 10 and 3, key 4 is withdrawn entirely out of the hood 2 and the latter is allowed to drop until it rests directly upon the upper surface of shank 1, the depth between the top of said hood and the upper surface of shank 1 being equal to the thickness of said key 4. The cog-teeth 9 of block 7 will then be disengaged from cog-teeth 8 of the shank 1. The rack or block 7 is then pushed forward until jaw 10 is in the desired position. Block 7 is then again raised until its teeth 9 enter into reëngagement with teeth 8, thus raising hood 2 again, and the key 4 is then pushed forward into the space between the top of shank 1 and the top of the hood. The shifting block 7 with its jaw 10 is thus locked in position.

It will be observed that the chief strain in my construction comes upon the bearing-teeth which engage with each other. The number and sizes of these teeth may be varied. As the teeth approach a greater degree of "fineness" of course a closer adjustment of the jaws 10 and 3 becomes possible.

The locking-key 4 is in form a parallelopipedon, all its oppositely-facing surfaces being parallel planes and its edge lines, where they meet, rectangular.

What I claim as new is—

In a key-locking wrench, the combination of shank 1, provided with its jaw 3, cog-teeth 8 and lug 6; sliding cog-toothed rack-block 7 provided with its jaw 10; enveloping-hood 2 arranged and secured substantially as shown; sliding key 4, provided with a long slot 5, through which lug 6 passes and pin 11, adapted to engage through a hole in said lug, substantially as described and for the purposes set forth.

In witness that the above is my invention I have hereunto set my hand.

JAMES M. PFLIEGER.

Witnesses:

GEORGE E. BUCKLEY,

J. H. DUFFIN.