(No Model.)

G. N. HUPP.

RATCHET WRENCH.

No. 487,072. Patented Nov. 29, 1892.

Fig. 1.

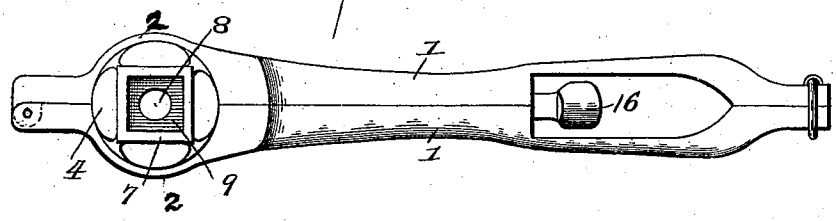

Fig. 2.

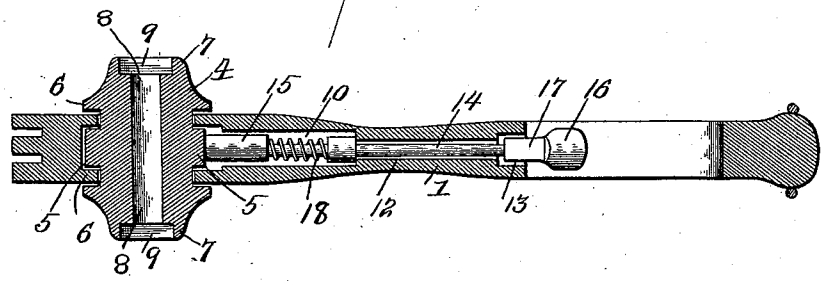

Fig. 4.

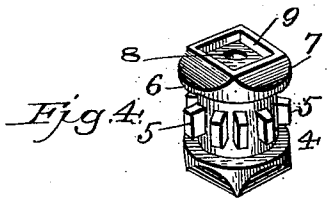

Fig. 3.

Fig. 5.

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UNITED STATES PATENT OFFICE.

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RATCHET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 487,072, dated November 29, 1892.

Application filed May 28, 1892. Serial No. 434,766. (No model.)

To all whom it may concern:

Be it known that I, GEORGE N. HUPP, a citizen of the United States, and a resident of Bourbon, in the county of Marshall and State of Indiana, have invented certain new and useful Improvements in Ratchet-Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to ratchet-wrenches; and the object is to provide an improved construction whereby I obtain superior advantages with respect to utility and efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of a wrench constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a view of one of the handle-sections detached. Figs. 4 and 5 are detail views, respectively, of the burr and the beveled block.

In the said drawings, the reference-numeral 1 denotes the handle made in two sections, hinged together and provided at their free ends with a clamping or locking device. At the ends where the handle-sections are hinged together they are formed with semicircular portions 2, provided with slots 3, to receive a burr 4, consisting of a block having a series of peripheral teeth or cogs 5 at the center, with a groove 6 at each side thereof, and an angular head 7 at each end. This burr is provided with a central cylindrical aperture 8, passing through the same, and the heads 7 are formed with angular recesses 9, to engage with a nut or other object to be rotated. These recesses may be of different sizes to fit different sizes of nuts. Each of the handle-sections is provided with a groove 10, a similar but smaller groove 12, and an angular recess 13, to receive a locking device consisting of a rod 14, having a cylindrical block 15, beveled upon its outer end, and a head 16, at its opposite end, provided with an angular portion 17. At the rear of this head 16 the handle-sections are recessed upon their inner sides, so that said head is accessible in order to disengage the beveled end of the rod from the teeth or cogs of the burr, as will hereinafter more fully appear. The rod 14 is provided with a coiled spring 18, the tendency of which is to throw the said beveled end into engagement with the ratchet-teeth.

To insert or place a burr in place, the handle-sections are unlocked and turned upon their hinge. A burr is now placed in one of the semicircular portions 2 and the two sections brought together and locked. The ratchet-teeth now project in the groove 6, so that they will be engaged by the beveled end of the block 16. By engaging a nut with one of the recesses 9 in the head 7 and turning the handle the nuts will be rotated by reason of said beveled end engaging therewith, while by turning the handle in the opposite direction the burr will remain stationary, as in ordinary wrenches of this character.

The object of making the handle in sections and hinging them together is to allow a burr to be readily removed and replaced by another when desired. The circular block 15 rests in the grooves 10 in the handle-sections, while the rod 14 and angular portion 17 of the head 16 rest in the recess 13, and by means of the latter the rod is prevented from rotating, so that the beveled end of the block will always be in proper position to engage with the ratchet-teeth. The object of the recesses in the rear portion of the handle-sections is to allow the head 16 to be seized and pulled backward in order to release the burr when so desired.

Having thus described my invention, what I claim is—

In a ratchet-wrench, the combination, with the handle-sections hinged together, having semicircular end portions provided with slots, intermediate grooves 10 and 12 on their inner sides and recesses 13, of the burr 4, seated in said semicircular portions and having periph-

eral teeth 5, the rod 14, seated in said grooves, having beveled block 15 at one end, adapted to engage with said teeth, the head 16 at the opposite end, the angular portion 17, seated in recesses 13, and the coiled spring 18, substantially as described.

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

GEORGE N. HUPP.

Witnesses:
S. W. JACKSON,
I. N. PLANT.