(No Model.)

H. TREGELLAS.

WRENCH.

No. 265,188. Patented Sept. 26, 1882.

Fig. 1

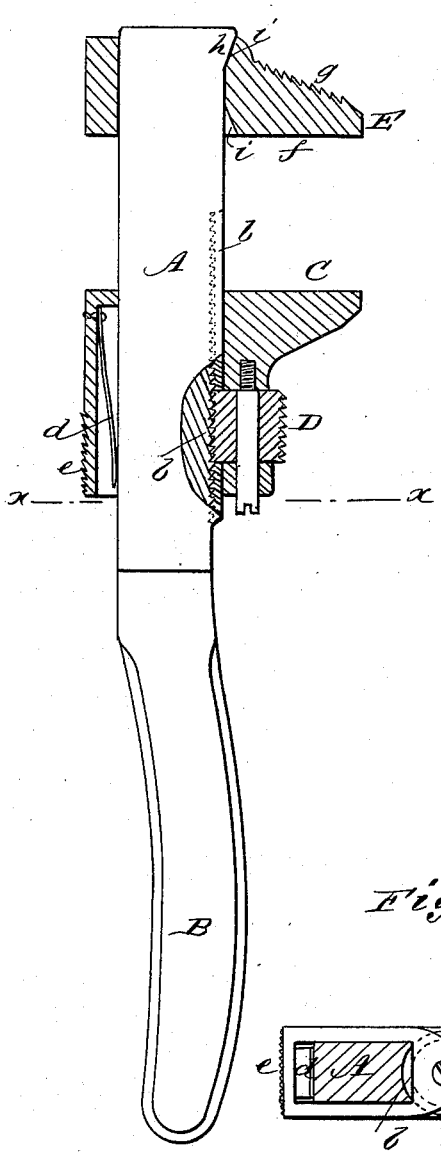

Fig. 2

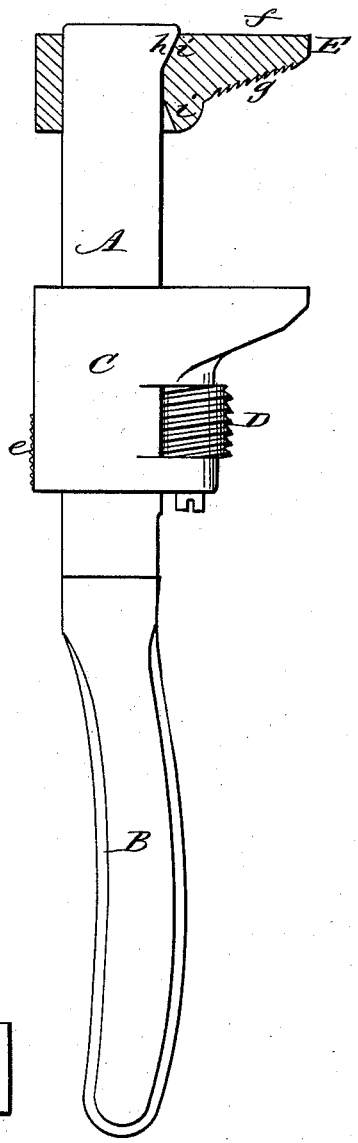

Fig. 3

WITNESSES:

C. Neveux

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UNITED STATES PATENT OFFICE.

HENRY TREGELLAS, OF DELAWARE MINE, MICHIGAN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 265,188, dated September 26, 1882.

Application filed July 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY TREGELLAS, of Delaware Mine, in the county of Keweenaw and State of Michigan, have invented a new and useful Improvement in Wrenches, of which the following is a full, clear, and exact description.

This invention consists in a combined nut and pipe wrench of novel construction, and which is provided with a reversible jaw to adapt it to both nut and pipe work, substantially as hereinafter described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a partially-sectional longitudinal view of my improved wrench with its reversible jaw arranged when using the instrument as a nut-wrench; and Fig. 2, a further partially-sectional longitudinal view of said wrench with its reversible jaw adapted to convert the implement into a pipe-wrench. Fig. 3 is a transverse section on the line *x x* in Fig. 1.

A is the bar portion or body of the wrench, terminating at its rear end in a curved skeleton handle, B, which provides for a firm hold of the implement by the hand, free from all liability to turn therein, and for the removal and replacement, when necessary, of the jaws of the wrench.

C is the movable jaw, which is fitted to slide on the bar A, and which is adjustable thereon or along by means of a screw, D, arranged for operation by the thumb of the hand which holds the wrench, and fitted to project through a slot in said jaw, and to engage with a spirally-toothed hollow rack, *b*, in the front side of the bar A. Said jaw C is also provided with a recess in its back, within which is a spring, *d*. This recess serves to protect the spring from injury by a blow or accident, while said spring holds the screw D in gear with the rack *b*, and also provides, by pressing with the thumb on a roughened rear portion, *e*, for throwing the screw D out of engagement with the rack, when or at the same time the jaw C can be pushed forward or backward by the thumb to adjust it rapidly and approximately to its work, so that only a slight turn of the screw D is afterward necessary to give the requisite grip. The same construction also provides for the rapid removal of the jaw C from off the bar A and over and off the skeleton handle B. When the wrench is in use the harder the strain which is thrown upon the jaw C the firmer will be the gear of the screw with the rack.

E is the stationary jaw, which is reversible on the bar A to oppose either its plain face *f* or tapering back *g*, which is serrated, to the movable jaw C, as shown in Figs. 1 and 2, accordingly as the implement is required to be used as a nut-wrench or as a pipe one. When set for a nut-wrench the face *f* of the jaw E stands at a right angle with the bar A, as in Fig. 1. When said jaw, however, is reversed, as in Fig. 2, then the serrated tapering back *g* is suitably positioned to grip a pipe or other round body. This jaw E is held in place on the bar A in both positions of its use by constructing said bar on its front side, at its outer end, with an inward-beveled nose or wedge, *h*, and the slot in the jaw, which provides for its fit on the bar, with correspondingly-beveled enlargements or portions *i*, adjoining its face *f* and back *g*, whereby a lock is established for the reversible jaw with the bar A.

The wrench can be changed from a nut to a pipe one, or vice versa, very rapidly by simply striking the end of the handle on a suitable hard surface, or striking said handle end slightly with a hammer, then slipping the movable jaw C back over the handle, and afterward slipping off the reversible jaw, when by merely turning over the reversible jaw so as to provide for entering it face or back foremost, and slipping it on over the handle again, and by a quick motion causing it to lock with the outer beveled end portion of the bar, said reversible jaw will be set as required, after which the movable jaw C is slid or adjusted to its place by passing it over the skeleton handle onto the bar. The skeleton handle forms an important factor in the use of the reversible jaw. By the term "skeleton handle" I mean a handle having no wooden mounting which is liable to split, but a handle formed of an extension of the bar of a size and shape that will allow of the jaws being slipped over it.

By thus combining two wrenches in one,

without a separate or detached piece to provide for the conversion of the tool, a great advantage is gained.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The reversible slotted jaw E, having its opposite gripping-surfaces, *f g*, made plain and serrated, respectively, and having the slot through the jaw formed with enlarged beveling terminations *i i* on its one side, in combination with the bar A, having a wedge-shaped side projection, *h*, at or near its outer end, essentially as described.

HENRY TREGELLAS.

Witnesses:
EDWIN HENWOOD,
EDWARD MITCHELL,
JOHN PEIFFER.