I. & C. M. Morris,

Nut Wrench.

No. 57,547. Patented Aug. 28, 1866.

Fig. 2

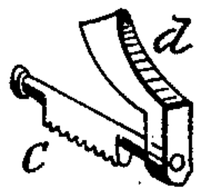
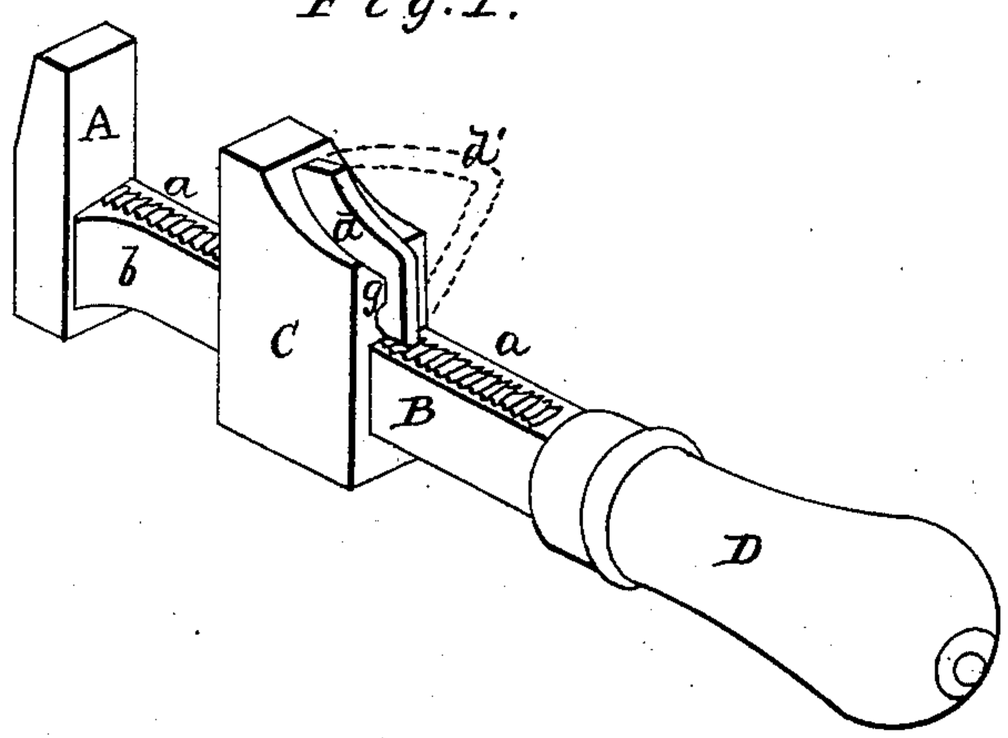


Fig. 1.



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ISAAC MORRIS AND C. M. MORRIS, OF FAIR HAVEN, CONNECTICUT.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **57,547**, dated August 28, 1866.

To all whom it may concern:

Be it known that we, ISAAC MORRIS and CHARLES M. MORRIS, both of Fair Haven, in county of New Haven and State of Connecticut, have invented a new and useful Improvement in Wrenches; and we do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1 is a perspective view of the wrench complete, showing the enlargement of the bar at the stationary jaw, the longitudinal stationary rack, and indicating the supplementary or vibrating rack. Fig. 2 is a perspective view of the small or vibrating rack by means of which the movable jaw is to be secured in the required position.

Our improvement consists in making an enlargement of the bar of the wrench at the stationary jaw, whereby its strength is much increased where it is most needed, and in making a suitable rack for the whole length where the movable jaw works, and in inserting in a slot or space in the movable jaw a small vibrating rack, which, when vibrated by a lever, will be thrown into or out of gear with the other rack, so that the movable jaw may be secured or released instantly.

We make the stationary jaw A and main bar B essentially in the common form, as shown in Fig. 1, except that we enlarge the bar where it is united with the stationary jaw by a curved or inclined enlargement, as shown at *b*, for the purpose of giving increased strength to that part of the bar B which must sustain the greatest strain when used, and also excepting that we make on one side or edge of the bar B, for the whole extent over which the movable jaw is to be adjusted, a concave rack, as shown at *a a*, Fig. 1, with its teeth or projections made of a suitable size to insure its firmness when used.

We make the movable jaw C similar in its general appearance to others now in use, but suited to the enlargement at *b*, except the lever *d*, Figs. 1 and 2, which works the rolling or vibrating rack *c*, Fig. 2, to throw it into and out of gear with the main rack *a a*. This vibrating or supplemental rack *c*, Fig. 2, works in a slot or space in the movable jaw C, as indicated at *g*, Fig. 1, so as to be concealed when the wrench is fitted up for use.

Having made the several parts as before described, we place the vibrating rack *c*, Fig. 2, in the slot or space in the movable jaw, (indicated at *g*, Fig. 1,) with the vibrating lever *d* turned down, as indicated by dots at *d'*. We slide the movable jaw C onto the bar B, and put on a suitable handle, as D, Fig. 1, when the wrench will be complete, as appears in Fig. 1.

To use this wrench we adjust the movable jaw C to the required position on the bar B, and turn up the lever *d* to the position shown in Fig. 1, when the jaw C will be perfectly secured in its position for use.

The principal advantages of our improvement consist in the manner of strengthening the bar at or near the stationary jaw, as at *b*, and in the use of the vibrating rack, by which we may secure or release the movable jaw so readily and so easily, as it may be done by one finger and in a part of one second.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of the movable jaw and vibrating rack with the main rack, and enlargement of the bar near the stationary jaw, when the whole is constructed and fitted for use substantially as herein described and set forth.

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