E. Tracy,

Wrench.

No. 14,424. Patented Mar. 11, 1856.

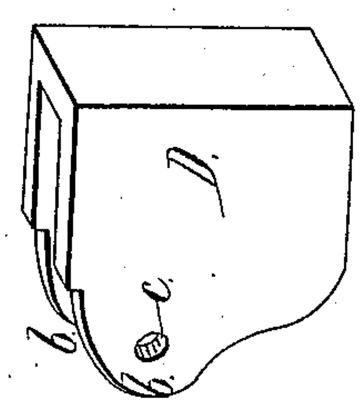

Fig 2.

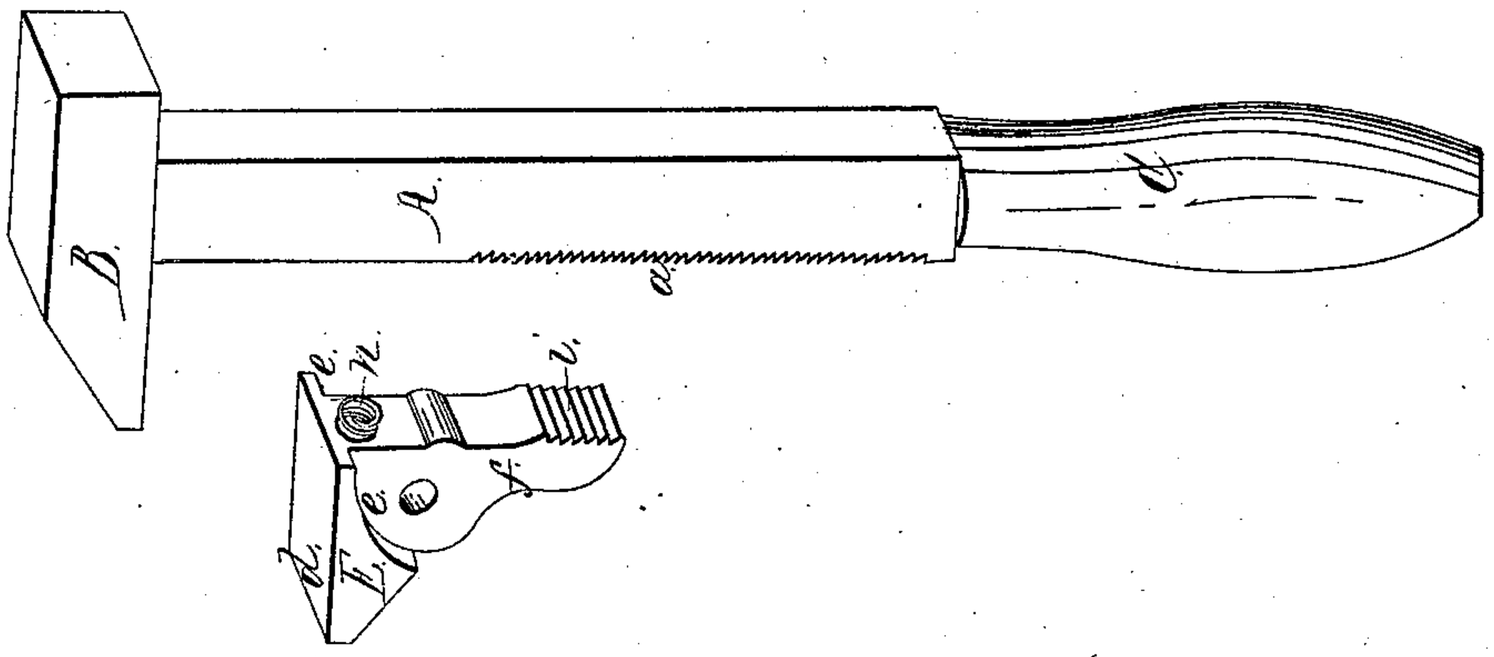

Fig 1.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERASTUS TRACY, OF TROY, NEW YORK.

WRENCH.

Specification of Letters Patent No. 14,424, dated March 11, 1856.

To all whom it may concern:

Be it known that I, ERASTUS TRACY, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Hand-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the manner of making the same and of the difference between it and other known wrenches, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1, represents a side view of the wrench. Fig. 2, represents a perspective view of the wrench, with the movable jaw taken apart and separated from the shank, to show more clearly its particular construction and operation.

Similar letters where they occur in the two figures denote like parts.

The nature of my invention relates solely to the manner of making the movable jaw, for the triple purpose of cheaping the first cost of the wrench,—removing the jaw from the shank without taking off the handle, and making the longated heel of the movable jaw, the dog or fastening to hold said jaw from slipping backward on the shank, when holding on to a nut, while it is readily run forward by the same hand with which it is operated.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A, is the shank, B, the fixed jaw, and C, the handle of a wrench, constructed in any of the usual well known ways. The handle C, may be permanently attached to the shank by riveting, as it is not necessary, owing to the peculiar construction of the movable jaw, to remove the handle to place the said jaw on the shank. On the underside of the shank, are cut the ratchet teeth *a*, *a*, into which the rear portion of the under section of the jaw takes, to hold it from slipping back on the shank.

The movable jaw is composed of two sections or pieces viz: an upper one D, and a lower one E, the two being held together when on the shank by a pin F, passing through the two sections. The upper section D, is like a saddle and sits over the shank B, and has lugs *b* upon it through which holes *c*, are made for the pin F. This section D, is dressed out by a bur, after being wrought, or cast, to something near its finished form, which alone is an immense saving over the finishing up of a mortise, as ordinarily used. The lower section E, has wrought upon it the jaw part *d*, and in rear of the jaw proper an elongated heel *f*, which is reduced from the shoulders *e* backward, so that said part *f*, will snugly fit between the lugs *b*, of the upper section D. The rear part of the heel *f*, is provided with ratchet teeth *i*, inclined in a contrary direction from those *a*, on the underside of the shank A, so as to catch into those on the shank when the tendency of the jaw is to run back, but which will readily slip over each other when the jaw is to be run forward. The shoulders *e*, on the lower section, form with the lugs *b*, of the upper one, a "rule-joint," so that the pin F, is a pivoting point without receiving the whole strain of the wrench.

In the front upper edge of the lower section E, is made a countersink, in which is placed a spiral spring *n*, said spring, holding the front of the section away from the shank, and forcing or throwing the teeth *i*, on the rear, into action with those *a* on the shank. When the movable jaw is to be run forward, the spring *n*, is compressed which disengages the teeth, and it will then readily move on the shank. Let the spring go, and the teeth immediately engage with each other, and firmly hold the jaw. The shoulders *e*, on the lower section may curve in the segment of a circle, so that they also, may be dressed out with a bur, thus simplifying the whole construction of the movable jaw, and having no part of it so constructed as that a file or bur, may not be readily used in finishing it up; and the whole jaw may be made at less expense, than the dressing out of a single mortise (such as ordinarily used) costs.

An auxiliary jaw, has been used in connection with the movable jaw, but a simple inspection of the two, will show the difference of construction and operation, for in my wrench the jaw itself is the gripper and clutch both, without any auxiliary or independent connections to it, except what the shank affords.

Having thus fully described the nature of my invention, I would state that, I am aware an auxiliary jaw or gripper applied to, or inserted within either the movable or stationary jaw of a hand or screw wrench,

has been used. This I do not claim, it being too expensive in construction, and inefficient in its operation, to come into general use, but

What I do claim as new and desire to secure by Letters Patent is—

Making the movable jaw in two sections pivoted together—one of which sections embraces the shank, and the other forms the clutch by which the whole jaw is held to the shank, and both sections made, united, and operating in the manner, and for the purpose set forth.

ERASTUS TRACY.

Witnesses:
E. Bell,
Jesse Moore.