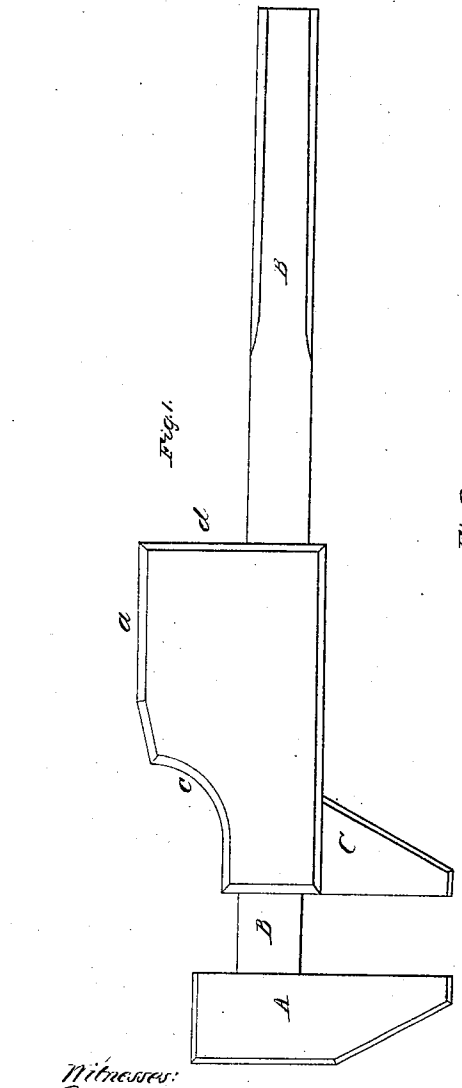
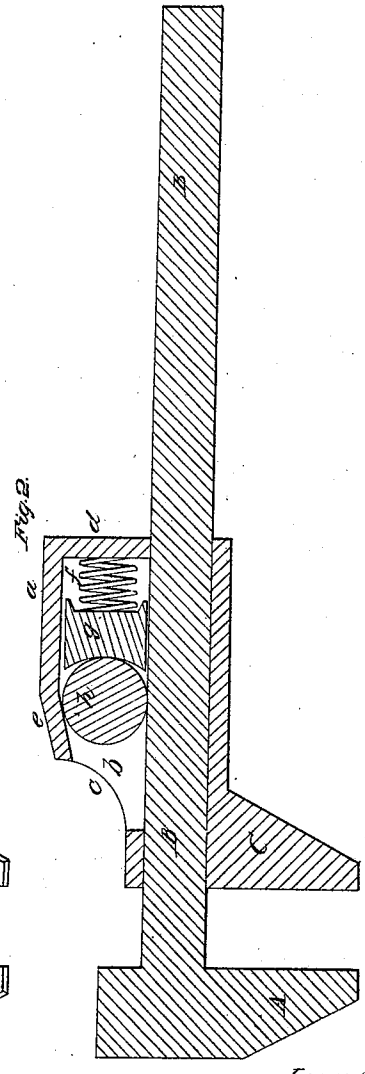
G. W. Griswold,

Nut Wrench.

No. 41,768. Patented Mar. 1, 1864.





Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

GEORGE W. GRISWOLD, OF ABINGTON, PENNSYLVANIA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **41,768**, dated March 1, 1864.

To all whom it may concern:

Be it known that I, GEORGE W. GRISWOLD, of Abington, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a side view of the wrench with the handle omitted. Fig. 2 represents a section through the same.

My invention consists in combining with the stationary portion of the wrench a movable jaw that is free to move toward the nut or other thing to be clamped or held between the jaws at all times, while it is prevented from moving therefrom by a roller, follower, and spring, said roller taking against an incline in the roof, and against the shank of the stationary jaw.

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 represents a stationary jaw, and B a shank attached thereto, on the end of which a handle may be placed in the usual well-known manner.

The movable jaw C has cast or wrought upon it a roof or top piece, *a*, which leaves a chamber or space, *b*, between it and the shank B, said roof or frame being open at *c* and closed in the rear, as at *d*. A portion of the interior of this roof, as at *e*, is inclined for a purpose to be hereinafter explained.

In the chamber or space *b* is placed a spring, *f*, which may bear against the closed end *d*, and in front of this spring is a follower, *g*, which may be of wood or any other material, and in front of the follower there is a metal roller, *h*, which, when clamped between the incline *e* and the shank B, prevents the jaw *c* from slipping upon the shank.

The entire wrench, with the exception of the spring and follower, may be of cast-iron, properly annealed or made malleable, and indeed the follower may be cast, too, but a lighter material will answer the purpose, as its function is simply to keep the roller *h*, through the action of the spring *f*, up against the plane or incline *e*, to prevent any slip or backlash. When power is applied to the wrench, it may, however, be of wrought-iron.

It will be perceived that there is no actual necessity of connecting the spring, follower, and roller to any part of the wrench. They may all lie in the chamber, and maintain their positions without any fittings whatever, the roller alone bearing against the incline, and the shank B prevents the jaw C from slipping away or yielding from the thing held between the jaws, the spring and follower simply keeping the roller up to its clamping position.

When the jaw C is to be run back on the shank B, the finger may be inserted into the opening *c* and the roller *h* slightly pressed back. The jaw and its connections will then move back freely. The roller may then be released, and the jaw C will move forward without clamping. When the jaw C is run up against the nut, or other thing held between it and the stationary jaw A, and power is applied to the wrench, the roller *h* instantly clamps between the incline *e* and the shank B, and the greater the strain the more tightly it holds the jaw C from slipping. The jaw C, having a long bearing on the shank B, will move freely and easily thereon when not clamped by the roller *h*. And the whole wrench may be cheaply made, while it is very strong, easily managed, and very efficient, having no delicate parts to operate or get broken or disarranged. Besides, the jaws come up and hold square on a nut.

Having thus fully described my inventon, what I claim is—

In combination with the shank of the stationary jaw and with the movable jaw of a wrench, the incline *e* and loose roller *h*, for holding the movable jaw from slipping back, while it is always free to be moved forward, said roller being held up in place by a spring, substantially in the manner and for the purpose described.

GEORGE W. GRISWOLD.

Witnesses:

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