(No Model.)

E. HARRIS.

WRENCH.

No. 326,868. Patented Sept. 22, 1885.

Fig. 1.

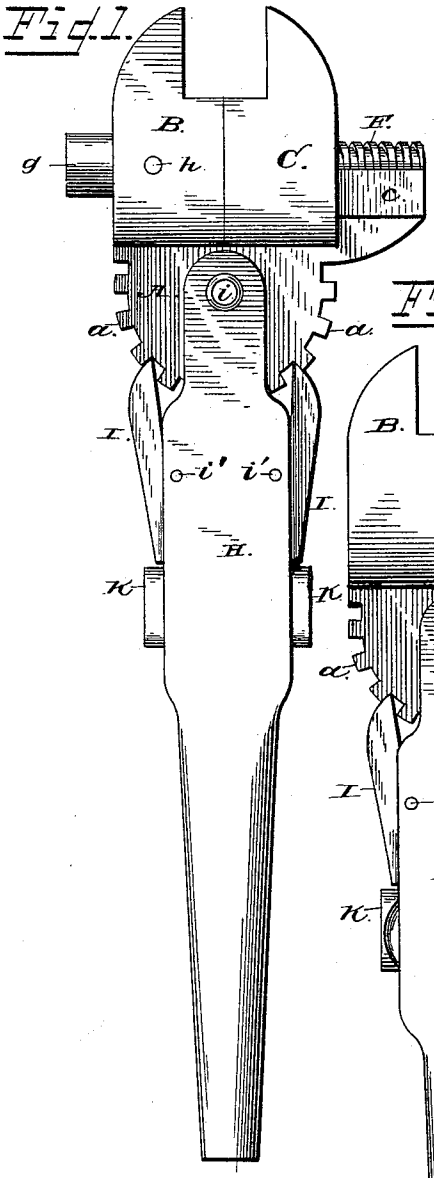


Fig. 4.

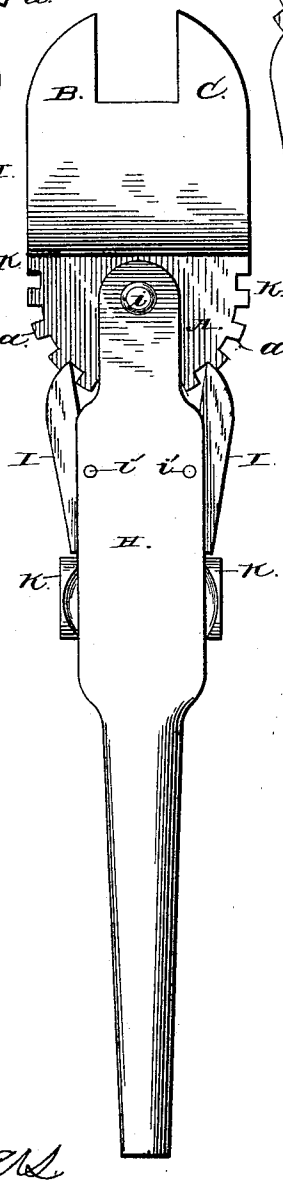


Fig. 2.

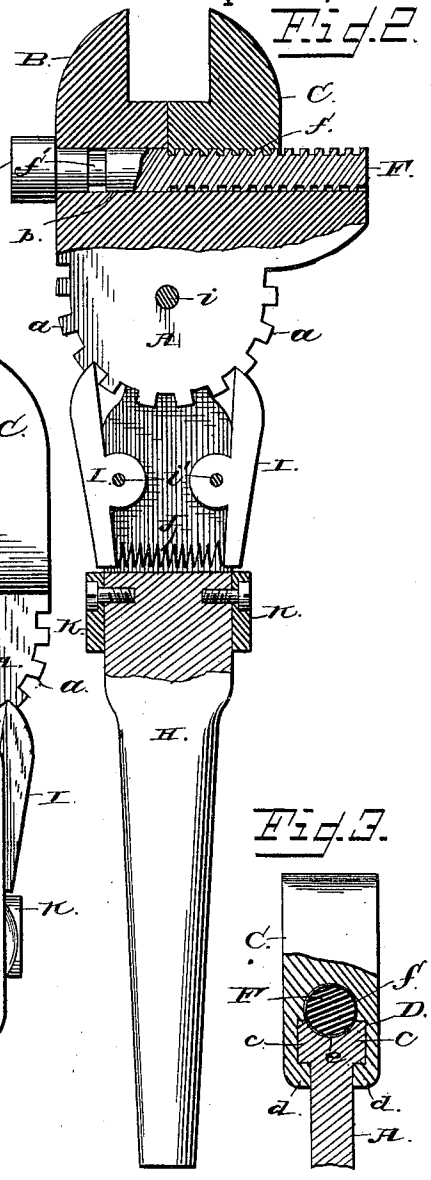


Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

ENOCH HARRIS, OF QUINCY, ILLINOIS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 326,868, dated September 22, 1885.

Application filed March 25, 1885. (No model.)

To all whom it may concern:

Be it known that I, ENOCH HARRIS, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented a new and useful Improvement in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to wrenches; and it has for its object to provide the same with an improved construction of handle, which may be adjusted and held in position at any desired angle.

A further object of the invention is to provide improved means for operating the jaws of the wrench to open and close the same, and to provide a wrench which shall possess superior advantages in point of simplicity, durability, and general efficiency.

The invention consists in the details of construction and combinations of parts hereinafter fully described, and pointed out in the claim.

In the drawings, Figure 1 is a front elevation of a wrench constructed in accordance with my invention. Fig. 2 is a vertical section taken longitudinally through the jaws. Fig. 3 is a transverse section through the movable jaw, and Fig. 4 is a modification.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents a plate, which is preferably segmental in form, and is provided on its peripheral edge with a series of teeth, *a*.

Upon the upper side of the segmental plate A, at one end thereof, is provided an upwardly-extending rigid jaw, B, said jaw being preferably formed integral with the plate A, and is provided with a longitudinal passage or opening, *b*.

At the upper end of the segmental plate A are provided outwardly-extending flanges *c*, which form a guide or track for a movable jaw, C, which has an opening, D, to receive said flanges, and inwardly-extending ears *d*, to bear against the under sides of the same, thus preventing the vertical movement of the movable jaw C.

The upper edge or face of the segmental plate is provided with a groove or channel, *e*, and fitting in the opening *b* of the jaw B and the groove or channel is a feed-screw, F, one end of which engages a threaded opening, *f*, in the movable jaw, while its other end is formed with a thumb-piece or head, *g*, to facilitate turning the same.

An annular groove or channel, *f'*, is provided in the feed-screw F near the head *g*, said portion of the feed-screw being plain.

Located in a transverse opening or passage in the stationary jaw B is a pin, *h*, which fits in the groove or channel *f'*, thus allowing the feed-screw to be turned, but preventing its longitudinal movement. By this construction when the feed-screw is turned it will cause the movable jaw to travel to or from the stationary jaw, depending of course upon the direction in which the said screw is turned.

H represents a handle formed with a divided upper end, which fits over the segmental plate A, and is pivoted centrally thereto by a transverse pin or bolt, *i*.

I represents pawls located on each side of the handle in the recessed end of the same, said pawls being pivoted by pins *i'*, and having their ends so located as to engage the teeth upon the segmental plate A. The pawls I are held in engagement with the teeth of said plate by a spiral spring, *j*, which bears against the inner lower ends of the same.

Pivoted to the sides of the handle H, adjacent to the lower ends of the pawls, are buttons K, having cam-faces, which buttons when turned to engage the pawls bear against their lower ends, and remove their upper ends from engagement with the teeth of the segmental plate, and allow the handle to be turned to any desired point, where it will be held as soon as the pawls are released to engage the teeth of plate A.

In the modification shown in Fig. 4 the segmental plate A is provided with two jaws, B C, which in this case are both rigid or stationary.

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

In a wrench, the handle bifurcated or slotted at its forward end, in combination with the toothed plate A, carrying the jaws and pivoted in the slotted portion of the handle,

pawls also pivoted in the slotted end of the handle at an intermediate point of their length, springs acting against the pawls, and eccentrically-pivoted buttons K, attached to the outside of the handle on a line with the pawls, so that said buttons may be turned or swung around to bear upon the inner ends of the pawls, and throw their outer ends out of engagement with the teeth of the plate, and allow the swinging of the latter on its pivot, as set forth.

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

ENOCH HARRIS.

Witnesses:
MICHAEL PIGGOTT,
JAS. T. BAKER.