

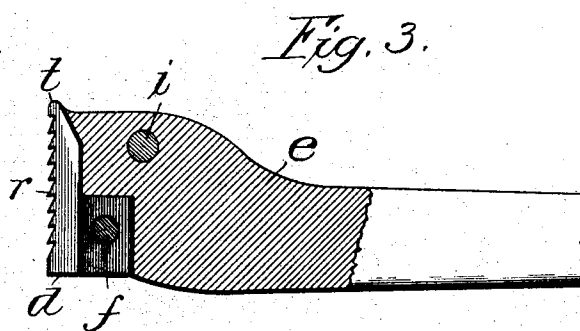
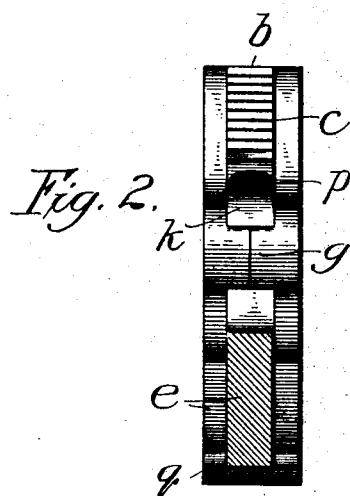
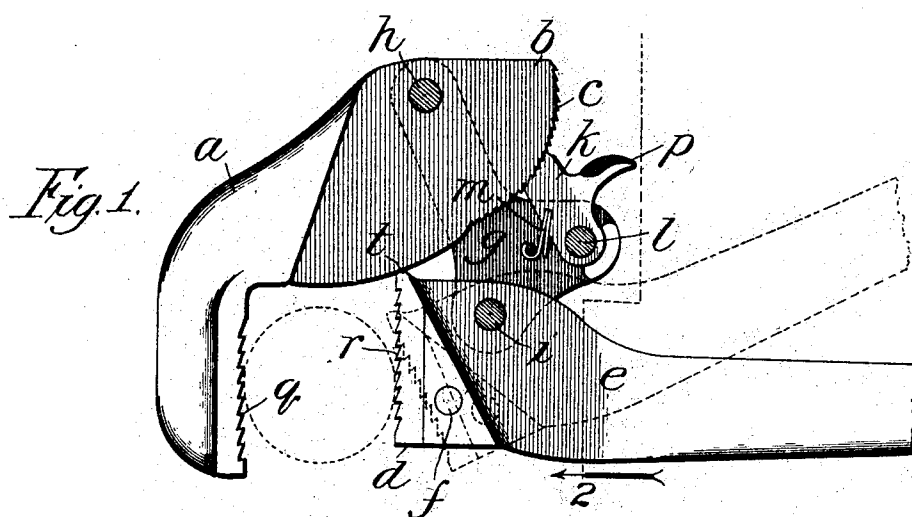
No. 765,007.

PATENTED JULY 12, 1904.

F. A. HEADSON.
PIPE WRENCH.

APPLICATION FILED OCT. 18, 1903.

NO MODEL.



UNITED STATES PATENT OFFICE.

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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 765,007, dated July 12, 1904.

Application filed October 16, 1903. Serial No. 177,305. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. HEADSON, a citizen of the United States, residing at Lafayette, in the county of Tippecanoe and State of Indiana, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

This invention relates to that class of wrenches which are used for the purpose of gripping pipe and placing it in or removing it from position, and particularly to the means by which the different parts of the wrench are connected together, all of which will more fully hereinafter appear.

The principal object of the invention is to provide a simple, economical, and efficient pipe-wrench.

The invention consists principally in a pipe-wrench in which there are combined a main jaw, a movable jaw, a link pivotally connecting the main and movable jaws, and means for preventing backward while permitting a forward movement of the link and movable jaw.

The invention consists, further and finally, in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a pipe-wrench, showing a portion of the handle as it appears when constructed in accordance with these improvements and with the connecting-link shown partly in section; Fig. 2, a sectional elevation taken on line 2 of Fig. 1 looking in the direction of the arrow, and Fig. 3 a sectional elevation of a movable jaw and attached handle.

In constructing a pipe-wrench in accordance with these improvements I make a main L-shaped jaw portion *a* of any desired material, preferring steel for that purpose. This main L-shaped jaw is provided with a segmental ratchet *b*, bearing rack-teeth *c* thereon. To complete the wrench, I provide what I prefer to term in contradistinction to the main jaw a "movable" jaw *d*, having a handle portion *e* attached thereto in any convenient manner, preferably by means of a pin or rivet *f*. To secure these jaws together and permit the de-

sired operation of the same, a bifurcated connecting-link portion *g* is provided, pivotally secured at *h* to the main jaw and at *i* to the movable jaw or handle portion. This link is provided with a pawl portion *k*, pivotally secured therein at *l* and bearing teeth portions adapted to be held in engagement with the rack-teeth of the segmental ratchet by means of a spring *m*. This pawl is provided with a knurled lug *p*, which the operator may press outwardly so as to disengage it entirely from the segmental ratchet.

In operation the jaws, (main and movable,) bearing the usual gripping-teeth *q* and *r*, are placed in engagement with the desired piece of pipe by holding the main jaw in engagement therewith and pressing down on the extreme outer end of the handle portion. The link, with its spring-pressed pawl, permits the movable jaw to move forwardly or toward the main jaw, while the pawl being held in engagement with the rack-teeth prevents the free backward movement thereof, but at the same time permits any desired forward and oscillating movements of the movable jaw. When the operator has tightened or released the pipe, as the case may be, all that is necessary to do to release the wrench from the pipe is to raise up on the outer side of the handle. If it be desired to grasp a larger piece of pipe, the wrench may be opened to permit such operation by the operator pressing on the knurled lug of the spring-pressed pawl, which releases the same and returns it to its reengagement when desired. It will also be noticed from an inspection of Fig. 1 that the heel of the movable jaw, as at *t*, contacts with the curved surface of the fixed jaw, so that when the parts are in operation—that is, when the jaws are gripping the pipe—it comes in contact with the said surface and prevents crushing of the pipe.

The principal advantages resulting from the use of a wrench constructed in accordance with these improvements is that it may be quickly and efficiently adjusted to any desired size and, further, that it is economical to con-

struct and repair and very efficient in operation, all of which will be understood and appreciated by those skilled in the art.

I claim—

5 1. In a pipe-wrench, the combination of a main jaw, a movable jaw, a link pivotally connected to the main and movable jaws, and means for preventing backward movement while permitting a forward movement of the link and thereby of the movable jaw, substantially as described.

10 2. In a pipe-wrench, the combination of a main jaw having a segmental ratchet, a movable jaw, link mechanism pivotally connecting the main and movable jaws together, and pawl mechanism engaging with the link and segmental ratchet to prevent free backward and permit free forward movement of the link and thereby the movable jaw, substantially as described.

15 3. In a pipe-wrench, the combination of a main jaw, a segmental ratchet bearing rack-teeth thereon, a movable jaw, a handle portion connected therewith, link mechanism pivotally connecting the main and movable jaws together, and a toothed spring-pressed pawl pivotally engaging the link mechanism and with its teeth arranged to engage the teeth of the segmental ratchet to prevent free backward and permit free forward movement of the link and thereby the movable jaw, substantially as described.

4. In a pipe-wrench, the combination of a main L-shaped jaw provided with a segmental rack-toothed ratchet, a movable jaw, a handle portion connected therewith, a bifurcated link pivotally connecting the main and movable jaws together, a pawl pivotally engaging the bifurcated link and provided with teeth engaging the teeth of the segmental ratchet, a spring for normally holding the pawl in engagement with the segmental ratchet so as to prevent free backward rotation of the link and permit free forward rotation of the same and thereby the movable jaw, substantially as described.

5. In a pipe-wrench, the combination of a main jaw provided with a segmental ratchet, a movable jaw, the inner edge of which is arranged to contact the curved surface of the main jaw, a handle portion connected therewith, a link pivotally securing the main and movable jaws together, and a pawl portion pivotally secured to the link and contacting with the ratchet portion so as to prevent free backward movement of the link and permit free forward movement of the same and thereby of the movable jaw, substantially as described.

FRANK A. HEADSON.

Witnesses:

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