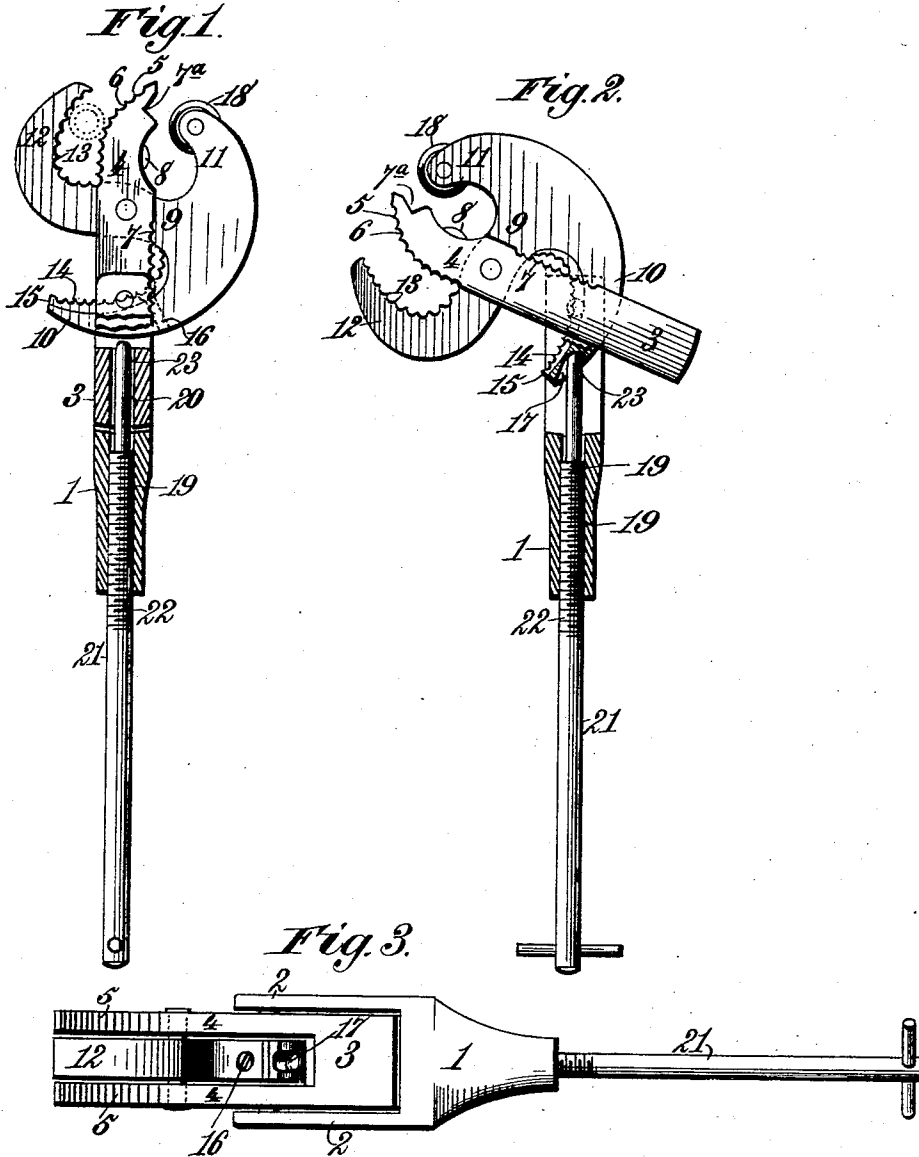


(No Model.)

H. C. ATKINSON.
COMBINED PIPE WRENCH AND CUTTER.

No. 569,533.

Patented Oct. 13, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

HERBERT C. ATKINSON, OF AUBURN, KENTUCKY, ASSIGNOR OF ONE-HALF
TO AARON F. COGHILL, OF SAME PLACE.

COMBINED PIPE WRENCH AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 569,583, dated October 13, 1896.

Application filed January 29, 1896. Serial No. 577,278. (No model.)

To all whom it may concern:

Be it known that I, HERBERT C. ATKINSON, a citizen of the United States, residing at Auburn, in the county of Logan and State of Kentucky, have invented new and useful Improvements in a Combined Pipe Wrench and Cutter, of which the following is a specification.

This invention relates to a combined pipe wrench and cutter, and has for its object to provide a wrench of the character described that shall be capable, within certain limits, of automatically grasping pipes of every size; to provide improved means for cutting off the pipe, and to improve and render more efficient this class of wrenches generally.

To these ends my invention consists in the features and in the construction, arrangement, or combination of parts hereinafter described, and pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a side elevation of my improved device, showing the same arranged for operation as a pipe-wrench. Fig. 2 is a similar view showing the parts arranged for operation as a pipe-cutter, and Fig. 3 is a bottom plan view of the device.

Referring to the drawings, the numeral 1 indicates the stock of the wrench, between the bifurcated ends 2 of which is pivoted a forked block 3, forming two jaws 4. The free ends of said jaws are curved or rounded, as shown, and are provided with teeth 5, which have oppositely-concaved sides 6. The upper edges of the jaws 4 are also provided with similar teeth 7, and said upper edges, near the ends of the jaws, are provided with a plurality of grooves or recesses 7^a, adapted for the reception of a pipe, as hereinafter described, and antifriction-rollers 8 may, if desired, be journaled in said grooves or recesses to reduce the friction between the jaws and pipe. Pivoted between the forked jaws 4 is a jaw-head 9, provided with three curved jaws 10, 11, and 12, the jaws 10 and 11 being approximately segments of the same circle and the jaw 12 being a segment of a much smaller circle. The inner face of the jaw 12

is provided with teeth 13, similar to the teeth before described, and the inner face of the jaw 10 is provided with like teeth 14. If desired, the teeth 14 may be formed on a detachable plate 15, formed to conform to the curvature of the jaw 10 and detachably secured thereto by a screw 16. In the end of the outer edge of the jaw 10 is formed a socket 17, for the purpose hereinafter set forth. The end of the jaw 11 is bifurcated or slotted, and journaled therein is a rotary cutter 18. Formed in the rear end of the stock 1 is a threaded aperture 19, and an aperture 20 is also formed in the rear end of the forked block 3, that is adapted to register with the aperture 19 in the stock. A handle 21 is adapted to be fitted in said apertures and is screw-threaded, as at 22, for engagement with the threads of the aperture 19. The inner end 23 of said handle is chilled, and by turning said handle in the proper direction the end 23 may be caused to impinge against the peripheries of the jaws 10 or 11 and hold the latter stationary, or may be caused to enter the socket 17 of the jaw 10 for the purpose hereinafter described.

The operation of my improved wrench is as follows: When it is to be used as a pipe-wrench, the handle is screwed into the stock 1 so as to project into the forked block 3, but not through the latter. The pipe to be held or turned may be grasped in four different ways, as follows: By placing the toothed jaw 10 on the underside of the pipe and the toothed ends of the jaws 4 on the upper side thereof and by exerting an upward pull upon the handle 21 said jaws automatically grasp the pipe with great firmness and tenacity, or by turning the jaw-head 9 in the proper direction the pipe may be grasped between the jaws 4 and 12 in the manner before described, or the pipe may in like manner be grasped between the teeth 7 on the upper edges of the jaws 4 and the jaws 10 or 12. It will be thus seen that the pipe may be grasped in four different ways, whereby a pipe of any size from the smallest to the largest in ordinary use may be grasped. By screwing in the handle so as to cause its end to impinge against the outer surface of either of the jaws 10, 11, 100

or 12 the jaws are held stationary to form a "set-wrench," the jaws being set in any position desired.

When it is desired to use the implement as a pipe-cutter, the handle 21 is unscrewed to withdraw it from engagement with the forked block 3 and the stock 1 is swung about its pivot at an angle to said block. The handle is then screwed in until its end enters the socket 17 in the jaw 10. Then by placing the notched or recessed end of the jaws 4 on the pipe and screwing in the handle the rotary cutter is caused to impinge upon the pipe, and by oscillating or turning the implement about the pipe as a center the cutter cuts its way thereinto, and as the cutting operation progresses the cutter is advanced up to its work by screwing in the handle, thus causing the jaw-plate carrying the cutter to partially rotate on its pivot and thus force the cutter toward the jaw 4 until the pipe has been cut entirely through.

It will be evident that the wrench may be used as a monkey-wrench for turning nuts, the nut being grasped in the same manner as a pipe.

I have shown the teeth on the jaws as having oppositely-concaved sides, and experiment has demonstrated that such teeth grasp the pipes with great firmness and tenacity, but some or all of the teeth may, if desired, consist of the ordinary serrated teeth commonly employed in tools of this nature.

Having described my invention, what I claim is—

1. In a pipe-wrench, the combination with the bifurcated stock 1, and forked block 3 pivoted in said stock and having parallel jaws 4 provided with teeth 6 and 7, of the rotatable plate 9 pivoted between the jaws 4 and provided with jaws 10, 11 and 12, and a threaded handle 21 movable in the said stock and pivotal block to engage the rotatable jaw-plate and hold the same stationary, substantially as described.

2. In a pipe-wrench, the combination with the bifurcated stock 1 having a threaded aperture 19, of the forked block 3 pivoted in said stock and provided with two parallel jaws 4 having curved toothed ends 5, a rotatable jaw-plate pivoted between the jaws 4 and provided with toothed jaws 10 and 12, and a threaded handle 21 fitted into the threaded aperture in the stock 1 and adapted to be projected through a corresponding aperture in

the forked block 3 to engage the jaw-plate and hold the latter stationary, substantially as described.

3. In a pipe-wrench, the combination with the bifurcated stock 1, of the forked block 3 pivoted in said stock and provided with two parallel jaws 4 having curved toothed ends 5, a rotatable jaw-plate pivoted between the jaws 4 and provided with toothed jaws 10 and 12, and means for locking the stock, forked block and jaw-plate immovably relative one to the other, substantially as described.

4. In a pipe-cutter, the combination with the bifurcated stock 1 having a threaded aperture 19, of the forked block 3 pivoted in said stock and provided with two parallel jaws 4 having a plurality of recesses 7^a adapted for the reception of a pipe, a rotatable jaw-plate pivoted between the jaws 4 and provided with a jaw 11, a rotary cutter journaled in the end of the jaw 11, a socket 17 formed in said jaw-plate, and a threaded handle 21 fitted in the threaded aperture in the stock and adapted to be projected into the socket 17 and turn the jaw-plate on its pivot to advance the cutter to its work, substantially as described.

5. In a combined pipe wrench and cutter, the combination with the bifurcated stock 1 having a threaded aperture 19, of the forked block 3 pivoted between the ends of said stock and provided at one end with parallel jaws 4 having curved toothed ends 5 and having at its other end an aperture 20 adapted to register with the threaded aperture 19 in the stock, a rotatable jaw-plate pivoted between the jaws and provided with toothed jaws 10 and 12, and a jaw 11 carrying a rotary cutter, a plurality of recesses 7^a formed in the jaws 4 adapted to receive a pipe, teeth 7 formed in said jaws in rear of said recesses, a socket 17 formed in the jaw 10, and a threaded handle fitted in the threaded aperture in the stock and adapted to be projected into the socket 17, or through the aperture 20 in the forked block into engagement with the jaw-plate, substantially as described, and for the purpose specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HERBERT C. ATKINSON.

Witnesses:

C. H. WILSON,

C. MAYES.