R. S. HESTAND.

RATCHET PIPE CUTTER.

APPLICATION FILED FEB. 10, 1919.

1,304,770. Patented May 27, 1919.

Fig. 1

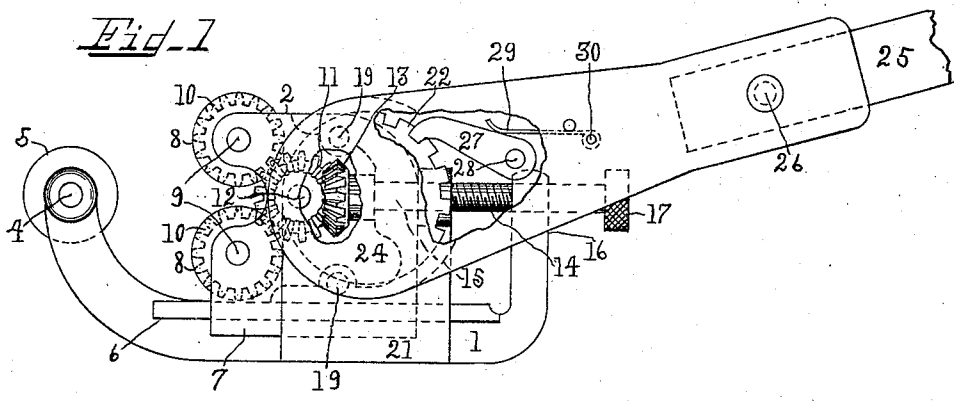


Fig. 2

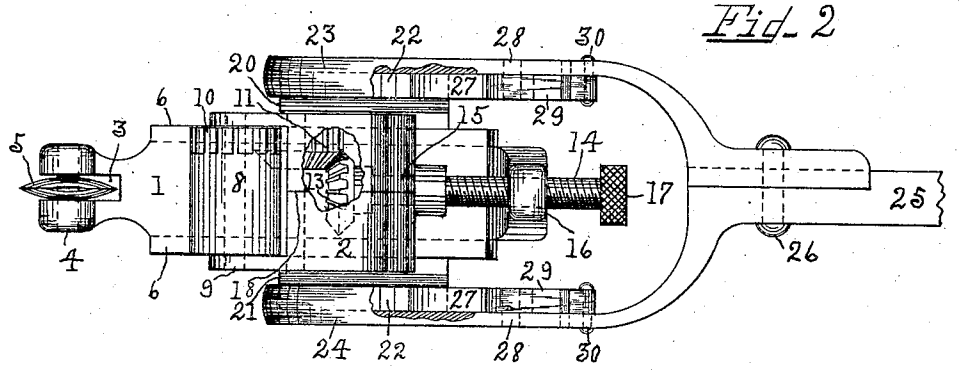
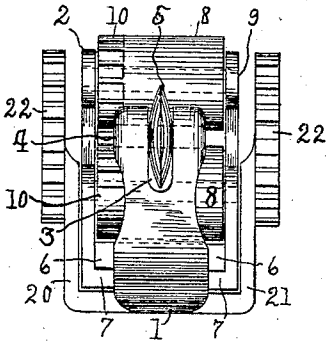


Fig. 3



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UNITED STATES PATENT OFFICE.

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RATCHET PIPE-CUTTER.

1,304,770. Specification of Letters Patent. Patented May 27, 1919.

Application filed February 10, 1919. Serial No. 275,982.

To all whom it may concern:

Be it known that I, RUE S. HESTAND, a citizen of the United States, residing at Howe, in the county of Grayson and State of Texas, have invented certain new and useful Improvements in Ratchet Pipe-Cutters, of which the following is a specification.

This invention pertains to ratchet pipe cutters and relates particularly to mechanism whereby the sliding roll block thereof may be approximately quickly adjusted to different sizes of pipe and subsequently automatically moved toward the cutting roller in the process of cutting the pipe.

By the special construction of parts hereinafter described and claimed, as well as by the general combination, arrangement and coöperation of the elements entering into the mechanism as a whole, a strong, compact, simple and efficient self feed pipe cutter is obtained.

In the accompanying drawings, Figure 1 is a longitudinal side view of a pipe cutter constructed according to my invention; Fig. 2 is a plan view of the same, small portions in each view being broken away to show more important features; and Fig. 3 is an end view of Fig. 1.

Referring now to the drawings, it will be seen that my improved pipe cutter comprises, essentially, a fixed frame 1 and a roll block 2. The roll block being mounted for sliding movement longitudinally of the frame, adapting it in practice to coöperate therewith for operating upon a pipe or the like. In the laterally extended front end of the frame 1 is provided a slot 3, intersected by alining apertures in which is a pin 4, carrying a cutting roller 5 pivotally mounted thereon, and confined within the slot. Upon the upper edge sides of the frame 1, and extending longitudinally thereof are guides 6, adapted to engage guide members 7 formed upon the inner faces of the roll block 2. At the front end of the block 2, rollers 8 are transversely and pivotally mounted on pins 9. The rolls 8, at corresponding ends have a short section of spur gear teeth 10 formed therein, they engage and drive a combined spur and miter gear 11, carried by transverse pin 12. The gear 11 drives a miter gear 13 that is carried by a shaft 14, one end of which is journaled at 15 in the roll block, the remaining portion of the shaft being screw threaded to engage corresponding threads in the upward turned end 16 of the frame 1.

The function of the toothed rolls, gears and threaded shaft is to automatically and gradually force the pipe to be cut against the cutting roller, when the rolls 8, by means of the screw 14 and knurled disk 17 are appropriately adjusted for that purpose. For convenience in assembling the several parts, the roll block 2 is divided horizontally along the line 18 (Fig. 2) into two parts, and securely joined in the assembled device by rivets 19.

Integrally formed, and extending laterally and upwardly from the sides of the frame 1, are brackets 20 and 21 respectively, each terminating in ratchet disks 22. Housings 23 and 24 encircle the disks, extend rearwardly and converge to connect with a handle 25, which is formed integrally with the housing 24, while 23 is secured to the handle by rivet 26. Pawls 27 are pivoted on pins 28 to the inner sides of the housings 23 and 24 respectively, the free portion of the pawls projecting out upon the periphery of the disks. The numeral 29 designates springs which are connected to the housings at 30, the opposite active end of each bearing against the pawls, and the toes of the pawls are adapted to engage with the circumferentially disposed teeth of the disks, when the handle 25 is oscillated.

Having now set forth the object and nature of my invention and a form of apparatus embodying the same, and having described the construction, function, and mode of operation thereof, what I claim as new and desire to secure by Letters Patent of the United States, is—

1. In a ratchet pipe cutter of the class described, the combination of a fixed frame having a cutting roller mounted thereon, a roll block slidably mounted on said frame, rollers having toothed sections carried by said roll block, gears carried by said roll block, and a screw threaded shaft carried by one of said gears for moving said roll block to an adjusted position on the frame and also to move the block from a set position, whereupon the rollers therein will move toward the cutting roller.

2. A pipe cutter of the class described comprising a frame having a cutting roller

mounted thereon, a movable roll block slidable on the frame and provided with rollers having toothed sections at corresponding ends thereof, gears actuated by the toothed roller sections, a screw threaded shaft actuated by said gears for movement of said roll block, ratchet disks positioned at either side of the frame adjacent the roll block, housings encircling the disks and connecting with a handle, and pawls pivotally mounted in the housings for engaging the ratchet teeth.

In testimony whereof I affix my signature.

RUE S. HESTAND.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."