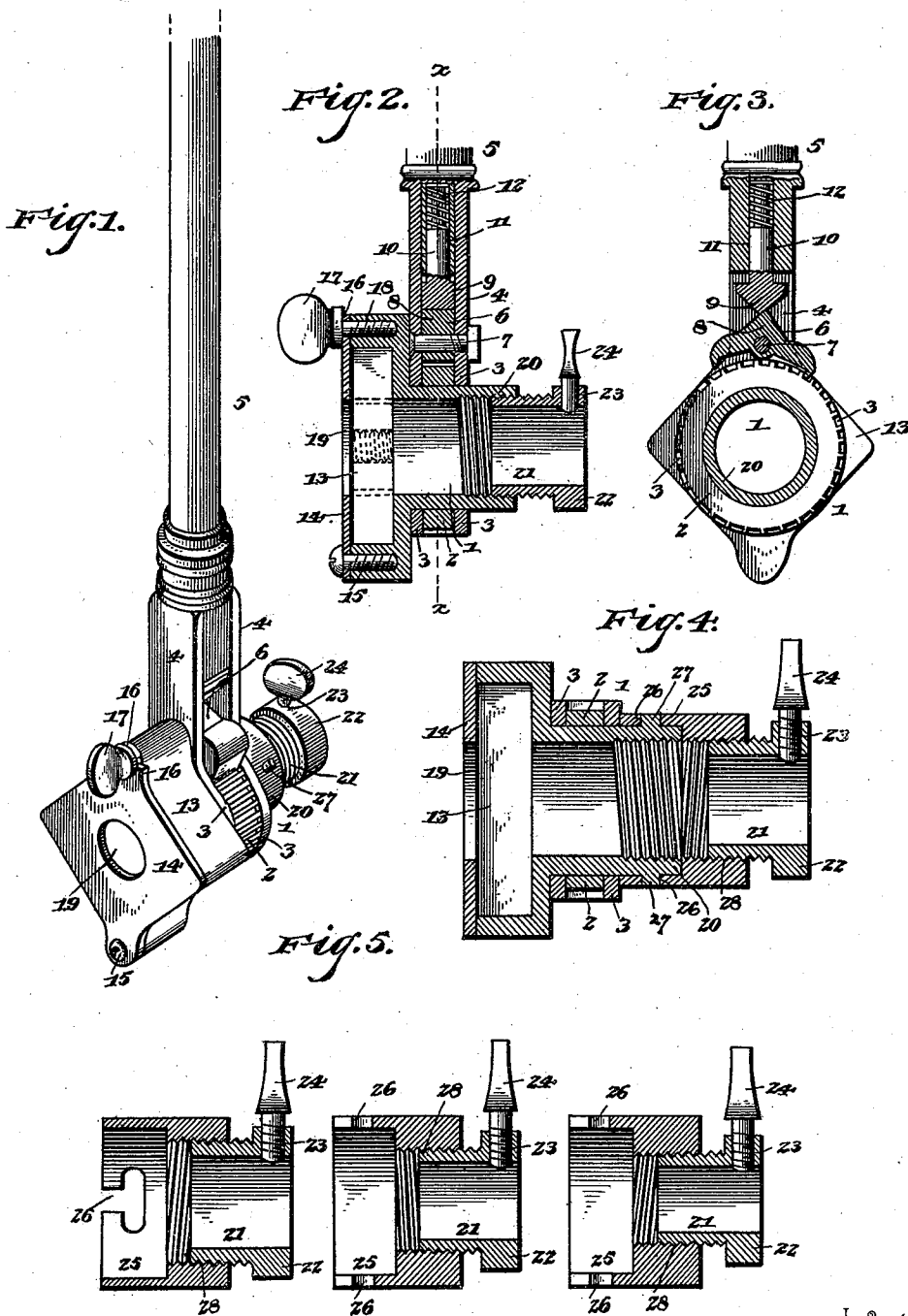


(No Model.)

J. C. CAVANAUGH.
PIPE THREAD CUTTER.

No. 548,180.

Patented Oct. 22, 1895.



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JOHN C. CAVANAUGH, OF DAVENPORT, IOWA.

PIPE-THREAD CUTTER.

SPECIFICATION forming part of Letters Patent No. 548,180, dated October 22, 1895.

Application filed July 10, 1894. Serial No. 517,123. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. CAVANAUGH, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Pipe-Thread Cutter, of which the following is a specification.

This invention relates to pipe-thread cutters; and it has for its object to provide a new and useful tool of this character having new and simple means for cutting a right or left hand thread on iron or other pipes in whatever position the same may be located.

To this end the main and primary object of the present invention is to effect certain improvements in tools of this character, whereby the same will operate without any undue force or labor and can be easily and readily adjusted and manipulated.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a pipe-thread cutter constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view thereof. Fig. 3 is a transverse sectional view on the line $x-x$ of Fig. 2. Fig. 4 is a longitudinal sectional view of the revolving tool-stock, with one of the removable feed attachments connected thereto. Fig. 5 is a series of sectional views showing different sizes of feed attachments for threading different-sized pipes.

Referring to the accompanying drawings, 1 designates a cylindrical revolving tool-stock that has fitted thereon at an intermediate point the ratchet-wheel 2, on both sides of which are loosely mounted the yoke-rings 3, extended at one side into the handle-strap 4, between which is secured one end of a suitable operating-handle 5. The said ratchet-wheel 2 is adapted to be engaged by the double catch-pawl 6, that is pivotally mounted between the handle-straps 4 on the pivot-bolt 7, and on one side of the point of pivot the said catch-pawl is provided with a V or wedge shaped boss 8, with which normally contacts the V-shaped adjusting-head 9. The V-shaped

adjusting-head 9 is mounted to slide between the handle-straps 4 up to and beyond the attached end of the handle 5 and is provided with a guide-stem 10, which works in the socket 11, formed in the said attached end of the handle, and said stem is encircled by a spring 12, that normally projects the head 9 beyond the adjacent handle end and into contact with one of the beveled sides of the V-shaped boss 8. By pressing the said V-shaped adjusting-head 9 against the adjacent end of the handle it will be obvious that either point of the double catch-pawl may be engaged with the ratchet-wheel 2, and by then allowing the said adjusting-head to spring outward, one of the beveled sides thereof will contact with one of the beveled sides of the boss 8, so as to hold the engaged point of the pawl on the ratchet-wheel to ride freely thereover in one direction and engage the same in an opposite direction. By means of this construction the catch-pawl 6 may be quickly reversed to reverse the rotation of the cylindrical tool-stock 1 when necessary.

The cylindrical revolving tool-stock 1 is enlarged at one end into an integral squared die-box 13, in which is adapted to be fitted a set of ordinary thread-cutting dies, illustrated in dotted lines in the drawings, but which form no part of the present invention. The said die-box 13 is squared or made rectangular in shape to provide for properly accommodating the dies that are placed therein, and after the dies are fitted in said box the same are held firmly in place therein by means of the hinged cap-plate 14. The hinged cap-plate 14 is squared or rectangular in shape to correspond with the shape of the box 13, so as to inclose the same, and said cap-plate is hinged or pivoted at one corner to one corner of the box 13 on the pivot-screw 15, and at its diagonally-opposite corner the said cap-plate is provided with an integral hook 16, that is adapted to be engaged over the shank of a clamp thumb-screw 17, mounted to work in a threaded opening or socket 18, formed at one corner of the box 13. By tightening the screw 17 onto the hook end of the cap-plate 14 the same will be held tightly positioned over the outer open end of the box 13, and by loosening the said clamp-

screw the said cap-plate may be swung aside for the purpose of gaining access to the interior of the die-holding box.

The hinged cap-plate 14, arranged at the box end of the revolving cylindrical tool-stock, is provided with a central pipe-opening 19, that is adapted to be aligned with the central bore of the stock in order to accommodate the end of the pipe operated upon, and at its end opposite the box 13 the said cylindrical tool-stock is extended beyond one side of the ratchet-wheel thereon into an interiorly-threaded feed-neck 20, that is adapted to receive an exteriorly-threaded feed-collar 21. The exteriorly-threaded feed-collar 21 is provided at its outer end with a stop-collar 22, that is adapted to contact with the neck end of the stock to limit the feed of the tool, and said stop-collar is provided with a threaded opening 23, in which works a thumb-screw 24, which is adapted to clamp the feed-collar tight onto the end of the pipe to be threaded. In using the tool it is therefore simply necessary after placing the dies in position to start the feed-collar in the feed-neck of the stock and then slip the said collar over the pipe end to be threaded and clamp the same tight thereon. By then working the handle 5 back and forth to operate the ratchet-wheel the tool-stock will automatically feed itself on the feed-collar and will advance the cutting of the threads on the end of the pipe.

In order to provide for threading all sizes of pipe, from the smallest to one inch in diameter, and also to make provision for cutting the pipe with left-hand threads as well as right, a removable attachment feed-cap 25 is employed. The attachment feed-cap 25 is adapted to fit over the feed-neck 20 of the tool-stock and is provided in diametrically-opposite sides of the socket end thereof with the T-shaped slots 26, that are adapted to be slipped over and turned into locking engagement with the diametrically-opposite lock-studs 27, projected integrally from diametrically-opposite sides of the neck of the revolving tool-stock. The said attachment feed-cap 25 is provided with an outer interiorly-threaded end 28, that is adapted to receive an

exteriorly-threaded collar 21 in the same manner as the feed-neck 20 itself; but it will be understood that by the employment of an attachment-cap 25 the interior threads thereof may be either right-hand or left-hand to correspond with the threads of the feed-collar mounted to work therein, and the feed-collar may be made in different sizes to fit different pipes, so that all conditions of work are provided for in the herein-described tool.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a pipe thread cutter, the combination of a tool stock provided at one end with a die holder, and extended at its opposite end to form an interiorly threaded feed neck, an attachment feed cap adapted to be removably fitted on said feed neck and provided with an interiorly threaded outer end, and an exteriorly threaded feed collar carrying a clamp screw, substantially as set forth.

2. In a pipe thread cutter, the combination of a pawl and ratchet operated cylindrical tool stock provided at one end with a die holder and extended at its opposite end to form a feed neck having diametrically opposite exterior lock studs, a removable attachment feed cap adapted to be fitted over said feed neck and provided at one edge with diametrically opposite T-slots adapted to interlock with the lock studs of the feed neck, and with an interiorly threaded outer end, and an exteriorly threaded feed collar carrying a clamp screw and adapted to work in the interiorly threaded outer end of the feed cap, substantially as set forth.

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

JOHN C. CAVANAUGH.

Witnesses:

MICHAEL J. FEENEY,
E. M. SHARON,
OTTO F. BELTER.