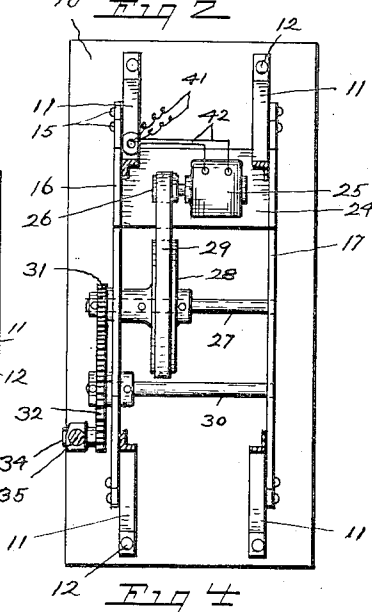
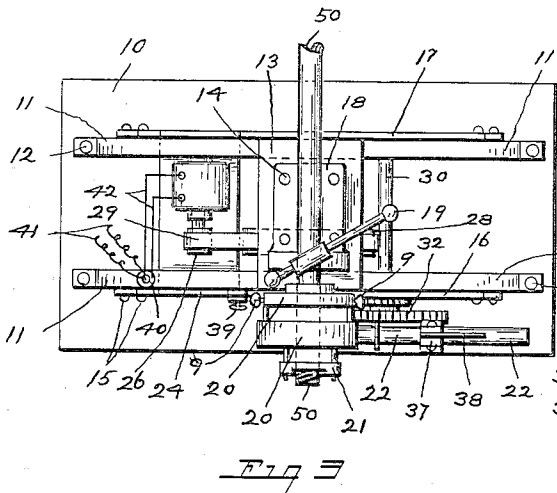
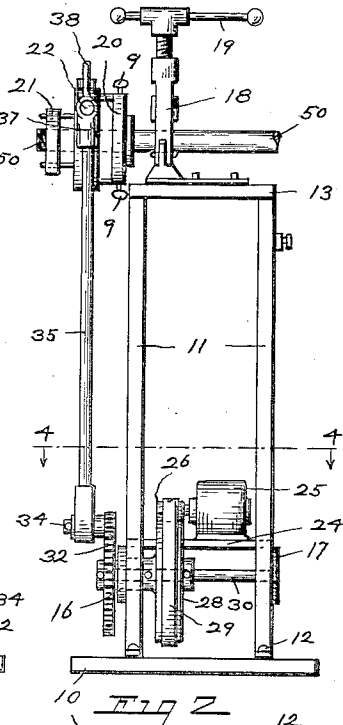
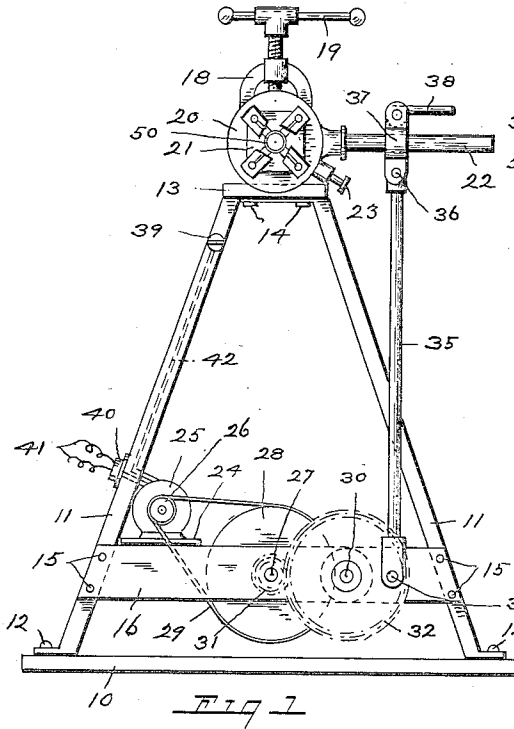


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THREAD CUTTING MACHINE

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THREAD CUTTING MACHINE

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2 Claims. (Cl. 10—89)

This invention relates to a pipe threading machine, and more particularly to a power actuated device for operating the usual ratchet type of thread cutting die stock, although the device may also be used for operating a pipe or tube cutter of the rotary ratchet type.

While we have herein illustrated our invention in the form of a self-contained unit, it is to be understood that the same may be mounted on a bench or upon a truck or other suitable support and operated in other suitable ways.

The object of the invention, is to provide a simple, compact and durable mechanism whereby the usual type of ratchet operated pipe threading die stock or head may be rotated by a power driven device.

Another object of our invention, is to provide means whereby the speed at which the die head is rotated may be adjusted to vary such speed of rotation, depending upon the size of pipe to be threaded and other conditions.

Another object of the invention is to provide means whereby the threaded end of the pipe may be internally reamed during the operation of threading.

Also while we have not illustrated or described any mechanism for the purpose, it is understood that the machine may be equipped with a suitable automatic oiling or lubrication compound feeding means for the cutters, and also a ratchet type of pipe cutter may be interchanged with the threading die, for cutting pipe, tubing, etc.

As the pipe vice which we employ as well as the ratchet operated thread cutting die head, are both of the standard type, we do not consider that it is necessary to describe these in detail, as others may be used in their place if desired.

With these and other objects in view, our invention consists in certain novel construction and combination of parts as will hereinafter be fully described and claimed, and illustrated in the accompanying drawing, in which like figures of reference refer to corresponding parts in all of the views, and it is understood that slight changes may be made therein, without departing from the spirit of the invention.

In the drawing:

Figure 1 is a front elevation of the device.

Figure 2 shows a side elevation of the same.

Figure 3 shows a top plan view.

Figure 4 shows a cross sectional view, taken on the line 4—4 of Figure 2.

Referring to the drawing, the machine comprises a base 10, to which are secured the four legs 11 of angle iron or other suitable material,

by the bolts 12; these legs 11 inclining inwardly and being secured to a top or table 13 by the bolts 14, while to the two front legs is secured by the bolts 15 a bearing plate 16; a corresponding plate 17 being secured to the two rear legs in like manner.

Mounted upon the table 13, is a pipe vice 18 of the usual style provided with the handle 19, and within this pipe vice 18 is held the pipe 50 to be threaded.

Upon the forward end of the pipe 50 is placed the threading head 20, which is formed with the ratchet part and the cutter or die 21; the ratchet part 20 being provided with the operating lever 22, and the control catch 23, all of which is of standard design.

To the side bearing plates 16 and 17 is secured a support 24 upon which is mounted the electric motor 25, which is supplied with the pulley 26.

Within the bearing plates 16 and 17 are journaled the shafts 27 and 30 in parallel relation with each other, and upon the shaft 27 is secured the belt pulley 28 which is driven by the belt 29 from the motor pulley 26, and the end of the shaft 27 projects from the plate 16 and has secured thereon a gear pinion 31, which is in mesh with and drives a gear wheel 32 secured upon the projecting end of the shaft 30.

This gear 32 is in the form of a disk or plate and carries a stud 34, upon which is pivoted the lower end of the connecting rod 35, the upper end of which is pivoted as at 36 to a clamp 37 mounted on the lever 22 in an adjustable manner by a cam lever 38 or other suitable device in such a manner that the stroke of the lever 22 may be varied to vary the speed of the cutter head.

The motor 25 is wired by the wires 42 to a switch 39 mounted on one of the legs 11, and a plug 40 also mounted on the leg 11, carries the service wires 41.

The operation of the device is as follows—

The pipe 50 to be threaded is clamped in the vice 19 by the screw handle 19; the threading head 20 is placed on the projecting end of the pipe with the cutter die 21 in contact therewith and the thumb screws 9 are tightened to hold the die in place; the clamp 37 is now secured in the desired position upon the lever 22 by the cam lever 38, and the switch 39 is turned to the on position.

The motor 25 through the pulley 26 belt 29 and pulley 28 will rotate the shaft 27, and the pinion gear 31 which in turn will rotate the gear 32 and shaft 30, causing the lower end of the connecting rod 35 to rotate with the gear 32, which will recip-

rotate the rod 25 and cause the lever 22 to be moved up and down, which will operate the ratchet mechanism of the threading head 20 to cut the threads.

5 As the operator does not have to give his attention to the operation of the cutter, he is free to keep the die lubricated during the act of cutting, and he may also be free to hold an internal reamer in the end of the pipe 50 to remove the
10 burr therefrom.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. In a pipe threading machine, in combination with a supporting frame having a pipe vice and a threading die mounted thereon, of means for rotating the threading die, comprising a rotatable shaft mounted in said frame and means for rotating the same, a pinion gear carried by said shaft, a second shaft rotatably mounted in said frame, a plate-gear carried by said shaft and in mesh with and driven by the pinion gear, an oscillating lever having operating connection with the die for rotating the latter a connecting rod having one end pivoted to said plate gear and the other end pivoted to the oscillating lever of the die head in an adjustable manner to vary the speed of the rotation of said die head.

lating lever having operating connection with the die for rotating the latter and a connecting rod pivoted to said gear-plate and to the oscillating lever of the threading die.

2. In a pipe threading machine, in combination with a supporting frame having a pipe vice and thread cutting die head mounted thereon, of means for rotating said die head comprising a shaft rotatably mounted in said frame and means for rotating the same, a pinion gear carried by said shaft, a second shaft rotatably mounted in said frame, a plate-gear carried thereby in mesh with and rotated by said pinion, an oscillating lever having operating connection with the die for rotating the latter a connecting rod having one end pivoted to said plate gear and the other end pivoted to the oscillating lever of the die head in an adjustable manner to vary the speed of the rotation of said die head.

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