

J. GEARY.
 TOOL FOR CUTTING AND THREADING PIPE.
 APPLICATION FILED APR. 4, 1911.

1,003,961.

Patented Sept. 19, 1911.

Fig. 1.

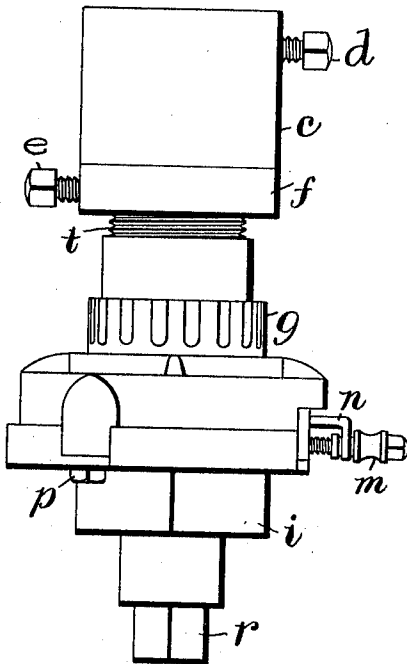


Fig. 3.

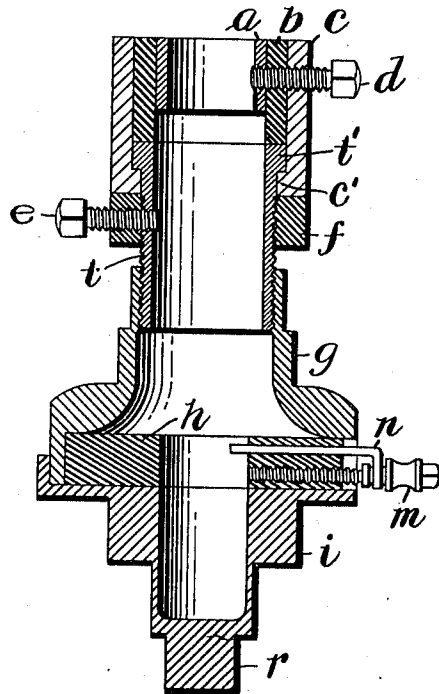
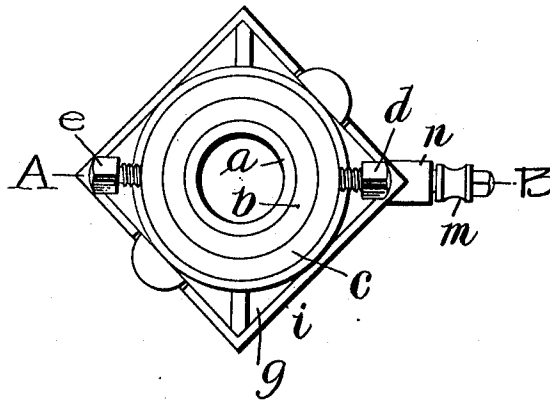


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN GEARY, OF LEOMINSTER, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
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TOOL FOR CUTTING AND THREADING PIPE.

1,003,961.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed April 4, 1911. Serial No. 618,808.

To all whom it may concern:

Be it known that I, JOHN GEARY, a citizen of the United States, residing at Leominster, in the county of Worcester and State of Massachusetts, have invented a new and useful Tool for Cutting and Threading Pipe, of which the following is a specification.

This relates to a tool for cutting off the end of a pipe and threading it when the pipe is located in a wall or in or near other obstructions.

The principal objects of the invention are to provide a simple and convenient tool for this purpose which can be operated directly at the end at a point substantially in axial alinement with the pipe, by a ratchet wrench or other tool of that character, so that it can be applied in places where ordinary tools of this character would be practically useless; to provide simple and convenient means whereby the tool can be supported on the pipe when the end is to be cut off and whereby the connection with the pipe can be very easily and conveniently changed when the thread is to be cut; and to provide mechanism and details of construction as will appear hereinafter.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a side view of a tool constructed in accordance with this invention with a cutting off tool mounted thereon. Fig. 2 is an end view of the same, and Fig. 3 is a longitudinal central sectional view on the line A—B of Fig. 2.

The tool is shown as having a reducing bushing *a* adapted to go over the end of the pipe which is to be cut off and threaded. It will be understood of course, that this bushing is used only when necessary and is dispensed with when the pipe to be operated upon is of proper size to go in a second bushing *b*. Outside this bushing is an outer casing *c* and passing through the same and through both the bushings is a set screw *d*. This screw secures the outside casing, the bushing *b*, and the reducing bushing *a* together and secures all three on the pipe that is to be cut off.

The casing *c* is provided with an inwardly extending annular shoulder *c'* at its end and in the end of this casing is held the end of the lead screw *t*. This lead screw is provided with a cylindrical head *t'* fitting back of the shoulder *c'* and filling the space be-

tween it and the bushing *b*. By this construction, the lead screw can be rotated in the casing *c* if desired.

The lead screw is provided with a set screw *e* for securing it to the pipe to be threaded. It is also provided with a screw collar *f* which acts as a check nut on the end of the outer casing *c* and is secured to the lead screw by the set screw.

Screwing on the lead screw is the stock *g* which has an enlargement for receiving the die *h*. This die sets into the stock from the side and is surmounted by a plate *i* which constitutes the end of the implement and is provided with an integral square or hexagonal head *r* serving as a nut for receiving a wrench or ratchet for operating the device. The plate *i* is secured to the stock by means of bolts *p*.

The die which is shown in position is for cutting off purposes and it is illustrated as provided with an adjusting screw *m* for operating the cutting off tool *n*. It will be understood, of course, that other forms of dies can be substituted for this one and that when the pipe is to be threaded an ordinary threading die will be inserted in place of it. Preferably the stock *g* is made to accommodate standard size solid dies, but it can be made otherwise if required by the particular conditions existing.

The operation of the device will be readily understood.

When the end of the pipe is to be cut off, this tool is passed over the pipe and the screw *d* fastened against the pipe so as to hold thereon the parts *b* and *c* (and *a* if used). The screw *e* is made loose so that it does not bind on the pipe, although it holds the collar *f* in position on the lead screw. The die *h* being in position, the cutting tool *m* is fed into position to engage the pipe and a ratchet or other wrench placed on the head *r*. The cutting operation is accomplished by turning the same continually in one direction, the tool *m* being fed up as conditions require. It will be seen that under these circumstances the parts *t*, *f*, *g*, *h* and *i* all rotate about the pipe.

On account of the construction specified and shown the tool can be applied to a pipe projecting downwardly, upwardly or horizontally from a wall or from any other object, and the tool can be operated in a

very small space, particularly if a ratchet wrench is used for that purpose. After the pipe is cut off the screw *e* is tightened up on the pipe. This holds the lead screw 5 firmly on the pipe and a threading die being substituted for the die *h* the stock *g* is turned up a few turns as before until the die is started well on the pipe; then the screw *e* is loosened and the threads made 10 by the die will form their own guide to finish the operation as the head and stock are turned up. In this case, of course, the parts *t* and *f* are stationary on the pipe, while the parts *g* and *i* and the die are 15 threaded up along the pipe during the rotation thereof. It will be seen, therefore, that this constitutes a very simple device for securing the desired objects and one which can be worked in a very small space, particularly with the use of a ratchet wrench 20 or like implement for turning the stock.

While I have illustrated and described a preferred embodiment of the invention I am aware that many modifications can be 25 made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to all the details of construction herein shown 30 and described, but

What I do claim is:—

1. In a pipe cutting and threading device, the combination of a casing adapted to be fixed to a pipe and having an inwardly 35 projecting annular shoulder on the end, a hollow lead screw rotatably mounted on the end of said casing and having a circular head fitting behind said shoulder, a screw collar on the lead screw abutting against 40 the edge of the casing constituting a check nut and having means by which the lead screw itself can be fixed to the pipe, a stock threaded on the lead screw and having

means for supporting a cutting off or threading die, and an end plate on the stock 45 having a non-circular end thereon arranged substantially in axial alinement with the axis of the lead screw and casing and beyond the end of the stock.

2. In a pipe cutting and threading device, 50 the combination of a casing adapted to be fixed to a pipe, and having an inwardly projecting annular shoulder on the end, a hollow lead screw rotatably mounted on the end of said casing and having a circular 55 head fitting behind said shoulder, a bushing in the casing abutting against the end of said head, a stock threaded on the lead screw and having means for supporting a cutting off or threading die, and an end plate on 60 the stock having a non-circular end thereon arranged in axial alinement with the axis of the lead screw and casing and beyond the end of the stock.

3. In a pipe cutting and threading device, 65 the combination of a casing adapted to be fixed to a pipe, and having an inwardly projecting annular shoulder on the end, a hollow lead screw rotatably mounted on the end of said casing and having a circular 70 head fitting behind said shoulder, means by which the lead screw itself can be fixed to the pipe, a bushing in the casing abutting against the end of said head, 75 a stock threaded on the lead screw and having means for supporting a cutting off or threading die, and an end plate on the stock for turning it

In testimony whereof I have hereunto set my hand, in the presence of two sub- 80 scribing witnesses.

JOHN GEARY.

Witnesses:

WILFRED J. WETHERBEE,
CHARLES G. BROWN.