

(No Model.)

A. TROUT & C. H. ORTLIP.

PIPE THREAD CUTTING STOCK.

No. 318,222.

Patented May 19, 1885.

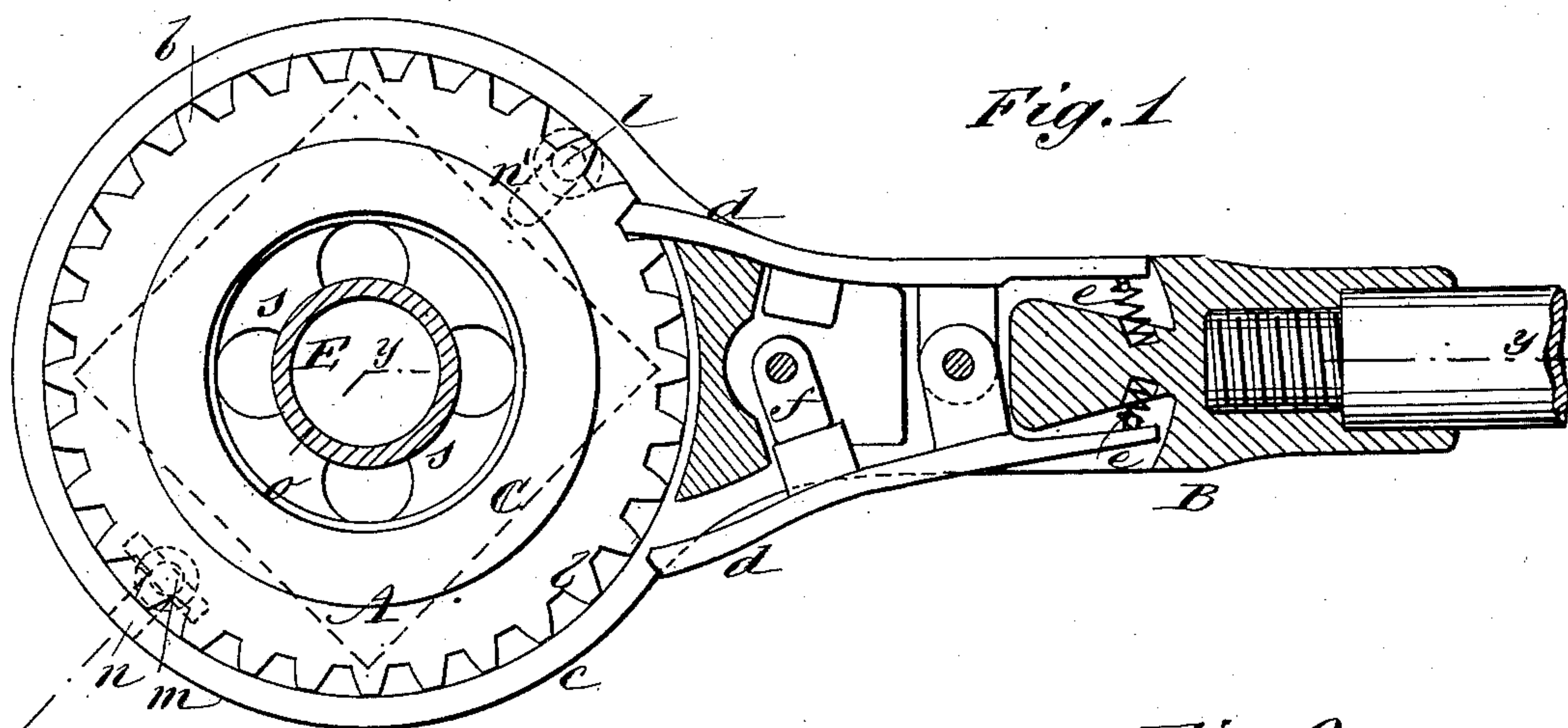


Fig. 1

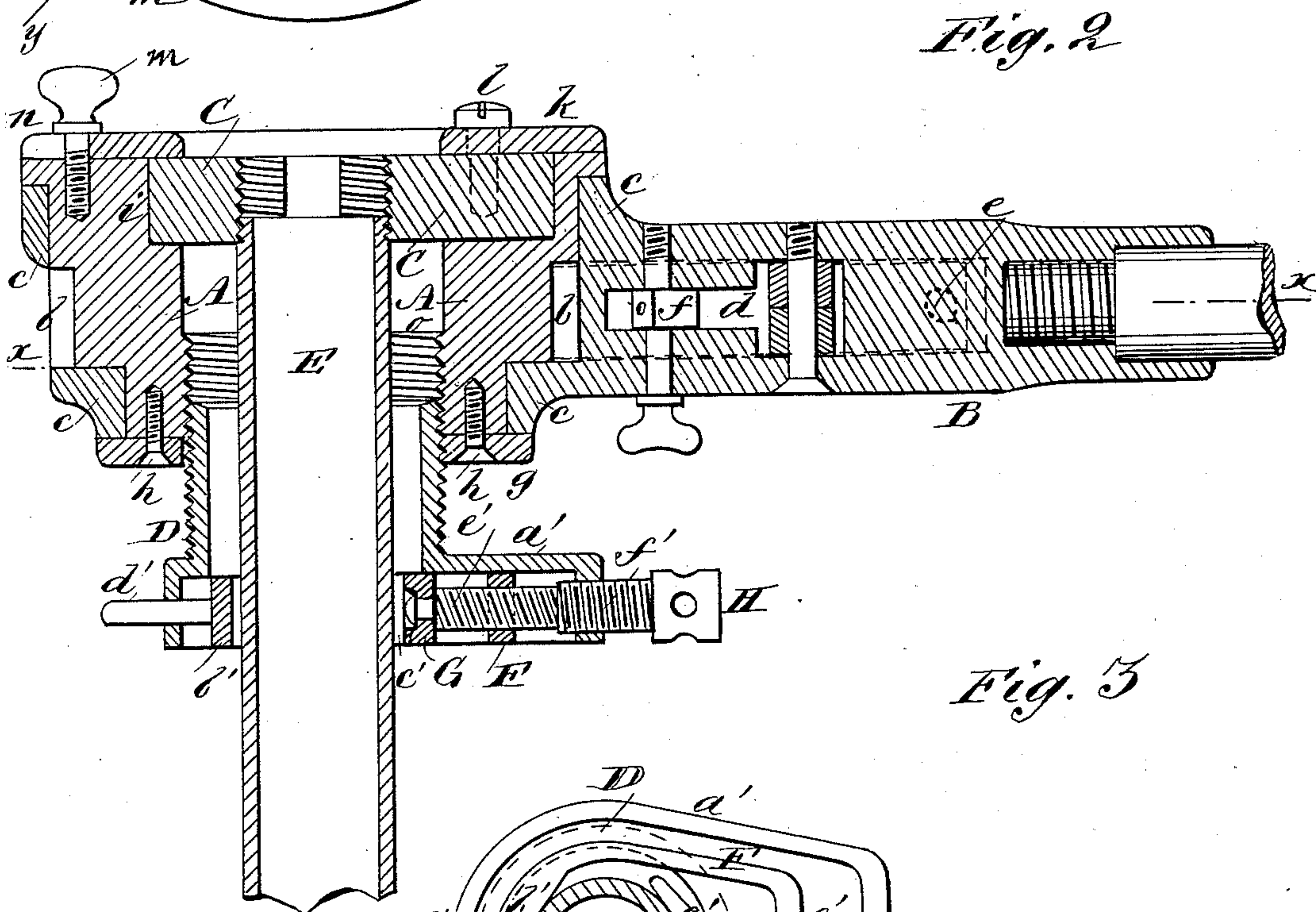


Fig. 2

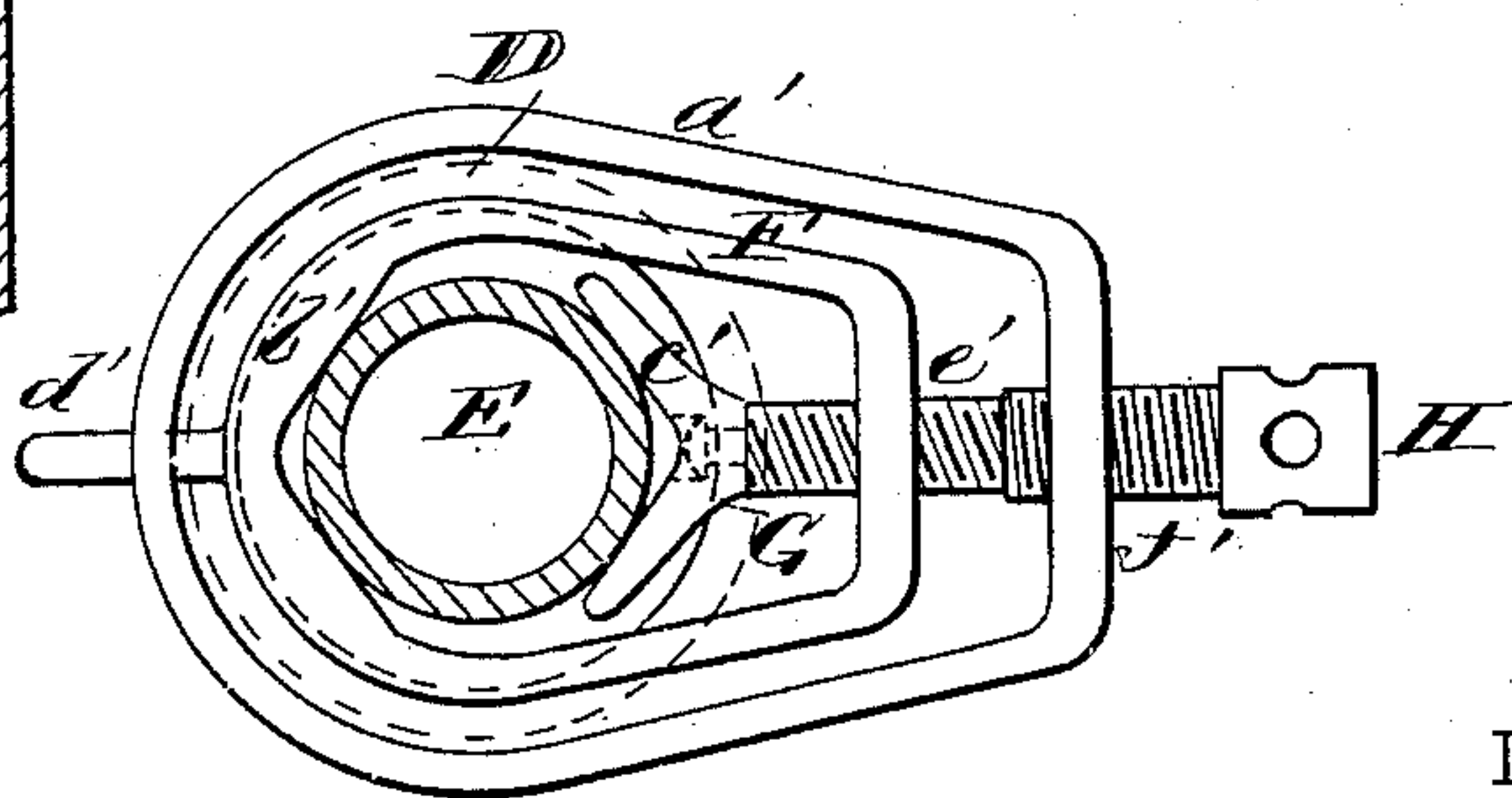


Fig. 3

WITNESSES:

C. Neveu

C. Sedgwick

INVENTOR:

A. French
Ortlip.

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

AMOS TROUT AND CHARLES HENRY ORTLIP, OF PHILADELPHIA, PA.

PIPE-THREAD-CUTTING STOCK.

SPECIFICATION forming part of Letters Patent No. 318,222, dated May 19, 1885.

Application filed January 22, 1885. (No model.)

To all whom it may concern:

Be it known that we, AMOS TROUT and CHARLES HENRY ORTLIP, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Thread-Cutting Stocks, of which the following is a full, clear, and exact description.

This invention relates to stocks for cutting screw-threads on pipes, rods, and other articles, but more especially pipes, and more particularly relates to stocks for such purpose which are of a reversible ratchet construction; and the invention consists in certain novel constructions and combinations of parts, including a screw-threaded feeding or starting tube connected with the die-carrier of the stock, receiving the pipe or article to be threaded through it, and provided with adjustable and guiding jaws of special construction for centering said pipe or articles, substantially as hereinafter described.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figures 1 and 2 represent longitudinal sectional views in planes at right angles with each other on the lines $x x$ and $y y$, respectively, of a pipe-thread-cutting stock embodying our invention and shown as applied to cutting a screw-thread on a pipe. Fig. 3 is an inner face view of the jaw-holding frame and jaws of the tool with the pipe in position therein.

A is the head or die-carrier of the tool, of circular construction on its exterior, and having its body portion toothed externally, as at b , to provide for the back-and-forth movement around it of the eye portion c of the lever or handle part B of the tool and rotation of the head or die-carrier in either direction to cut the thread or to work the tool from off the threaded pipe, accordingly as either one of two lever-pawls, $d d$, controlled by springs $e e$, and set into or out of working position by an adjustable cam, f , is made to engage with the teeth b of the head, as in the case of certain reversible ratchet-wrenches; or the reversible ratchet portion of the tool may be of any other suitable construction. An inner end plate, g , secured by screws h , may be used to keep the eye portion c of the lever part of the tool to

its place on the die-carrier A. The outer or opposite end of the said die-carrier has a square or other angularly-shaped recess, i , in it for reception of the screw-thread-cutting die C, which externally is of corresponding configuration, and which is or may be held to its place in the recess by an outer end or face plate, k . This plate k may be attached to the die-carrier A by a pivot screw-pin, l , and set-screw m , fitted to pass through slots $n n'$ in the plate, to provide, by loosening the set-screw, for sliding back and swinging the plate laterally, to admit of the removal or insertion of the die C.

The inner end portion of the die-carrier A has a screw-thread, o , cut in it, corresponding, or nearly so, to the pitch of the thread-cutting screw portions s of the die, but of greater diameter. Fitted to enter within this screw-thread o of the die-carrier is an externally-screw-threaded feeding or starting tube, D, of suitable interior diameter to receive loosely or freely through it the work or pipe E, on which the thread is required to be cut. The outer end of this tube D is constructed to form a hollow frame or box, a' , in which are arranged adjustable and guiding jaws F G, of reverse angular or V shape at $b' c'$ on opposite sides of the pipe E, to center the pipe in relation with the die or the latter in relation with the pipe, and so that the tool will be restrained from tipping or tilting laterally out of line with the pipe. The one jaw, F, is fitted to slide at its bearing end on the pipe by a guide-pin, d' , through the one end of the frame a' of the tube D, and is constructed to engage at its opposite end with a double-speed thread, e' , on a screw, H, which has pivoted on its inner end the other jaw, G, and which, furthermore, is fitted to work by a single-speed thread, f' , through the frame a' of the tube D, so that as said screw is turned in a given direction it will work both V-shaped jaws F G in reverse directions and at a like speed up against opposite sides of the pipe E, and when the screw is reversed will cause the two jaws to move simultaneously away from the pipe.

On commencing to cut the pipe the two jaws F G are set up to firmly grip it, and so to make the tube D stationary in common with the pipe, and as the longitudinal axis of said tube is coincident with the axial line of

the die the tool will be properly centered to the pipe, and as the lever portion B of the tool is worked to rotate the die the die-carrier A of the tool will be worked along the screw-thread of the tube D, thus starting and feeding the die C over the pipe. After the thread on the pipe has been fully started, however, then, if desired, the screw H may be turned to relax the grip of the jaws F G on the pipe, so that they will simply serve as a guide for the tool on the pipe, the tube D and its attached jaws then turning with the rest of the tool.

The same starting, feeding, and guiding devices will answer for pipes of like or nearly like pitch, but of different diameters, up to a certain limit, at least, thus only necessitating the change of the die and the turning of a single screw, H, to adapt the same tool to different-sized pipes. By means of these devices, too, there will be no straining to start the thread on the pipe, and no necessity to taper off by filing the entering end of the pipe. Furthermore, the reverse angular or V-shaped jaws F G will much more effectually hold and center the pipe and adapt the gripping and guiding devices to pipes of different sizes than would a single V-guide on the one side of the pipe and set-screws on the other, besides saving much time and labor.

Reversible pipe-thread-cutting stocks constructed substantially as herein described may be used for cutting all kinds of pipe-threads, and may even be used in connection with

sockets for cutting screw-threads or short nipples. The tool may be applied to pipes held in a vise either on the center or end of a workbench, or for threading a pipe to make connections in or against a wall or underground for steam or gas fittings, without breaking a joint or removing a length of pipe, and will be found especially serviceable, saving much time and labor, on bent pipe connections of locomotive-engines. The leverage-power of the tool will likewise be used to the best advantage in every instance.

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

1. The combination, with the toothed die-carrier A, of the starting or feeding and centering or guiding screw-threaded tube D, the adjustable reverse angular or V-shaped jaws F G, and the vibrating lever B, having reversing-pawls *d d*, substantially as shown and described.

2. In combination with the screw-threaded tube D of the die-carrier, the reverse angular or V-shaped jaws F G and the screw H, having double-speed and single-speed threads *e' f'* on it for simultaneously operating said jaws, essentially as described.

AMOS TROUT.

CHARLES HENRY ORTLIP.

Witnesses:

ROBT. P. CAULFIELD,

EDW. MCEUEN.