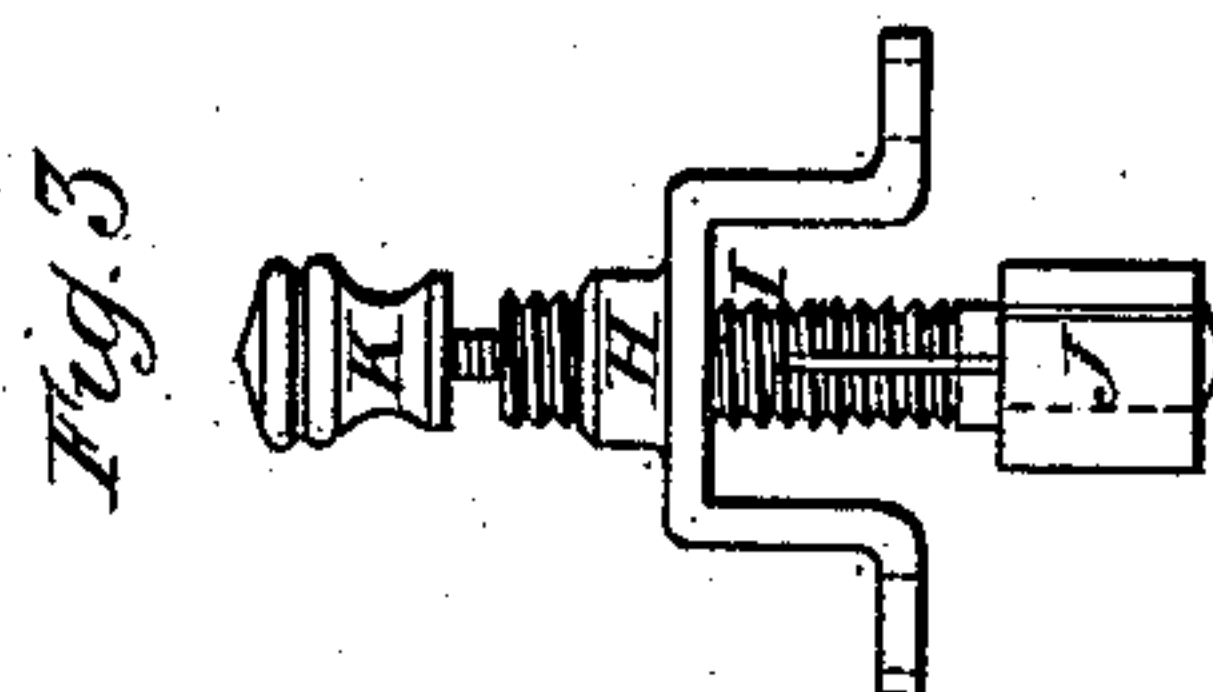
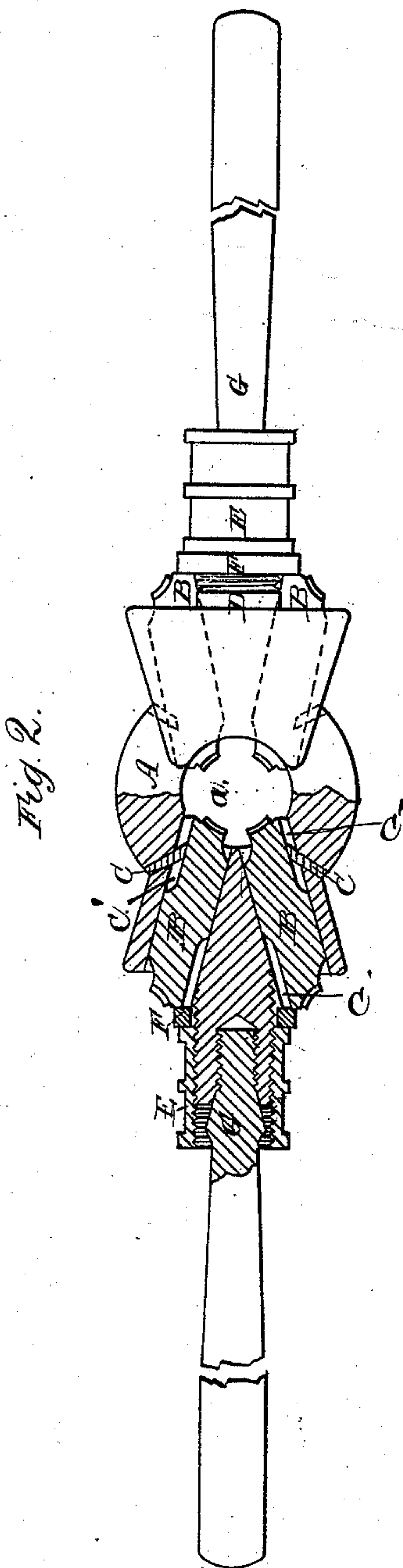
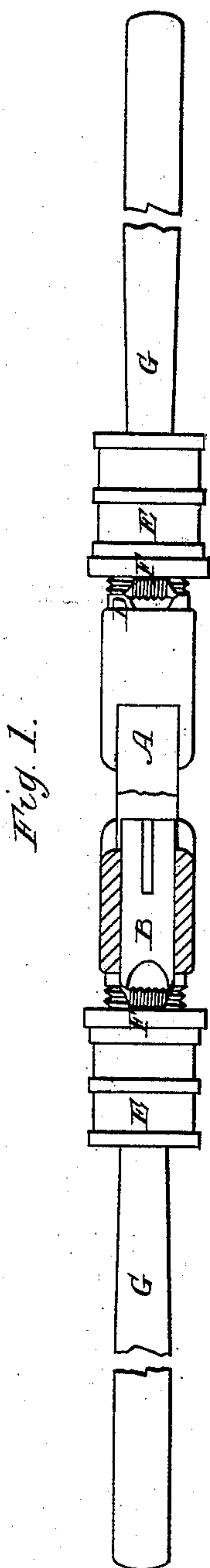


W. J. McCORMACK:  
Screw Cutting Die.

No. 232,533.

Patented Sept. 21, 1880.



Witnesses:  
Penn Halsted,  
W. Halsted & Co.

Inventor:  
William John McCormack,  
by John J. Halsted, Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM J. McCORMACK, OF PAIGNTON, ENGLAND.

## SCREW-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 232,533, dated September 21, 1880.

Application filed April 23, 1880. (No model.) Patented in England May 30, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM JOHN McCORMACK, of Paignton, in the county of Devon, England, have invented certain Improvements in Screw-Cutting Apparatus, (patented in England May 30, 1879, and sealed August 29, 1879,) of which the following is a specification.

This invention relates to improvements in the construction of stocks and dies chiefly applicable for cutting screw-threads on pipes, and my improved apparatus or tackle being very portable is especially useful for jobbing purposes; but to make my invention better understood, I will proceed to describe the same by reference to the accompanying drawings, in which—

Figure 1 is a side view, partly in section, of my improved stock and dies; Fig. 2, plan of same, partly in section; Fig. 3, view of an attachment employed with the stock and dies when screwing light brass tubes.

In Figs. 1 and 2, A represents the stock or die-plate, which is formed with a central hole, *a*, into which open-four holes or openings passing edgewise through the stock A from the ends, and in a nearly-radial direction with the center of the hole in the stock, as shown in Fig. 2.

B B are the dies or bits, which are provided with threads or teeth at both ends, so that they may be reversed, and they are preferably formed of round steel, which is a great advantage. The said dies B pass into the hereinbefore-described radial holes, and when the dies B are made of round metal the said holes are severally provided with a key, C, which is passed into such hole through the stock A, and the dies are made with a longitudinal groove or keyway, C', into which the inner ends of such keys project, so that the dies B are held perfectly firm, and the grooves permit the adjustment of the dies to any desired position, however minute or delicate. The dies, however, may be made, of other shape in their cross-section, of steel, the radial holes in the stock corresponding in shape, and in this case no key or keyway will be required.

Each end of the stock or die-plate A is formed with a screw-threaded projection, D, on which screws a collar or ferrule, E, by turning which in one or the other direction by means of a suitable key the dies B are forced

inward and held to the desired position, or relieved from such hold, a loose collar, F, of brass or other suitable metal, being placed between the ends of the dies and the screw-ferrule, as shown. Into the ends of the said projections D of the stock are screwed the handles G, for operating the apparatus, and these handles being removable render the apparatus very portable. The placing of the dies radially, or nearly so, and their being reversible, allows of screwing with each end of the dies two or more different-sized pipes with each tool and without the aid of other dies.

When screwing light brass tubes of the larger sizes I employ the movable attachment or device shown in Fig. 3. This attachment consists of a saddle-plate, H, through the center of which passes an expanding tubular core, I, tapered inside and slotted at the lower end, and provided on top with a set-screw, K, which, when turned, forces down a conical-pointed pin, whereby an expanding movement is obtained. The lower end is also provided with a movable collar, J, of box-wood or other suitable material, turned to fit the interior diameter of the various sizes of tube.

To fix the attachment, the saddle-plate H is attached centrally on the top of the stock A by means of two set-screws; then, by turning the thumb-screw K, as hereinbefore described, the core I will be expanded and will expand the collar J tightly in the tube to be screwed, and the core I and saddle-plate H, being provided with the ordinary gas-pipe thread, the dies are propelled and steadied, thus insuring true threads on tubes of large diameter.

Having thus described my said invention, and the manner of performing the same, I wish it to be understood that I do not confine myself to the precise details herein laid down and shown in the drawings, as the same may be varied without departing from the peculiar character of my invention; but

What I do claim is—

1. The screw-cutter stock A, constructed as described, to wit, having at each end a projection, D, screw-threaded on its exterior, adapting it to receive a threaded sleeve, and screw-threaded on its interior to receive a removable handle, and provided at each end with two bit-holes, located, respectively, at each



side of such projection, and extending entirely through the stock, all as shown and described.

2. The screw-cutting device, consisting of the stock or die-plate A, constructed as described, with the four nearly-radial holes, all extending through the ends of the same, and having at each of these ends a projection, D, screw-threaded on its exterior and interior, and of the reversible dies, loose collars F, and exterior ferrules E, serving to hold such bits to place.

3. The device or attachment constructed as

shown in Fig. 3 of the drawings, and arranged and operating in the manner and for the purposes hereinbefore described.

4. In a screw-stock or die-plate constructed as hereinbefore described, reversible dies made of round steel and provided with longitudinal keyways or grooves combined with holding-keys C, as shown and described.

WILLIAM JOHN McCORMACK.

Witnesses:

W. B. BEYNON,

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