

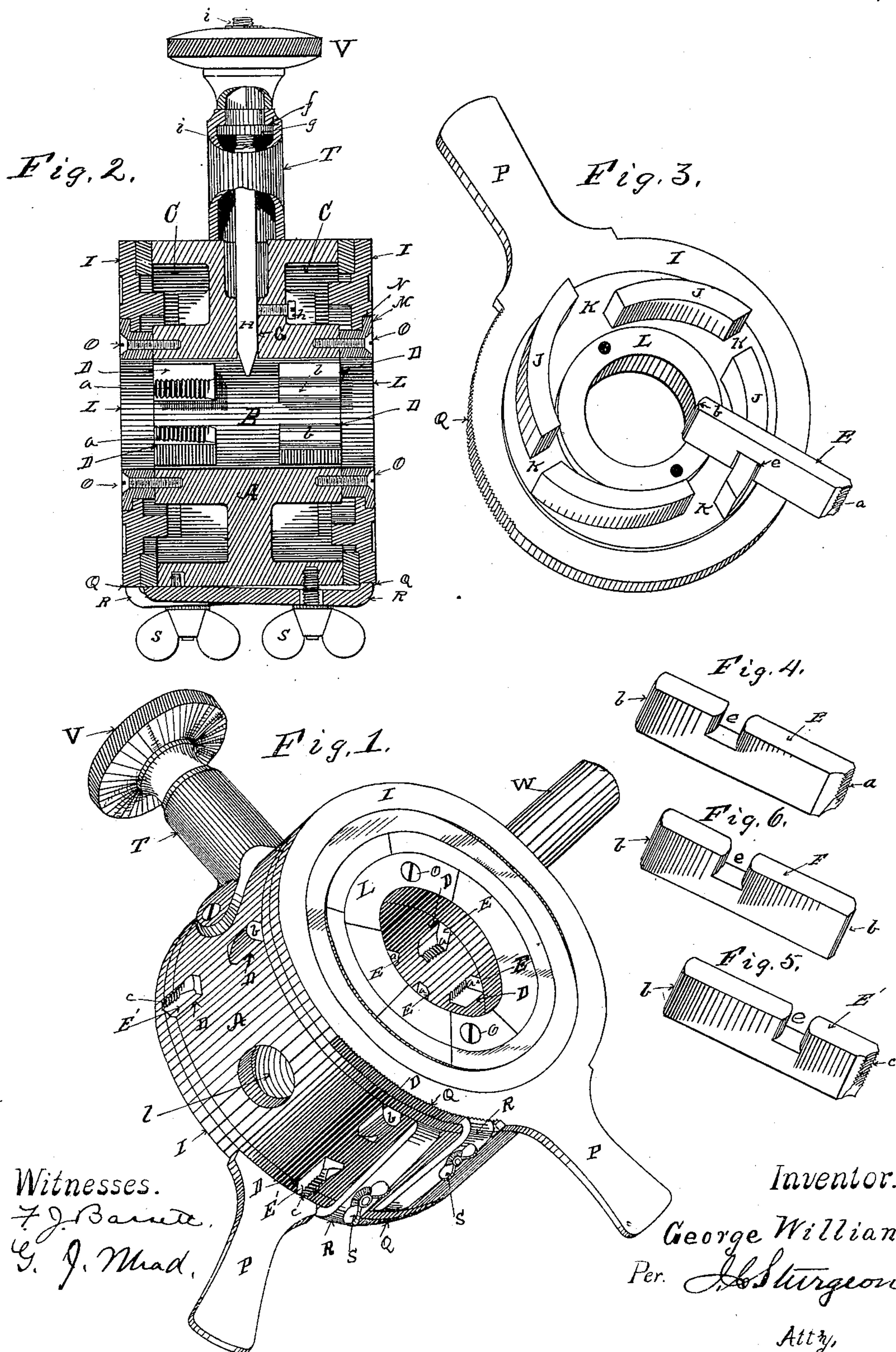
(No Model.)

G. WILLIAMS.

DIE FOR THREADING AND CUTTING PIPES.

No. 379,624.

Patented Mar. 20, 1888.



UNITED STATES PATENT OFFICE.

GEORGE WILLIAMS, OF ERIE, PENNSYLVANIA.

DIE FOR THREADING AND CUTTING PIPES.

SPECIFICATION forming part of Letters Patent No. 379,624, dated March 20, 1888.

Application filed November 16, 1887. Serial No. 255,356. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WILLIAMS, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Screw-Plates and Pipe-Cutters and Reversible Dies and Guides therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

My invention consists in the improvements in screw-plates and pipe-cutters and reversible dies and guides therefor hereinafter set forth and explained, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved screw-plate and pipe-cutter, the handles thereof being detached therefrom. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a perspective view of the cam mechanism for operating the dies and guides of the same. Figs. 4 and 5 show improved reversible dies and guides used in my improved screw-plate and pipe-cutter. Fig. 6 shows an improved reversible guide used in my screw-plate when cutting off pipe.

Like letters refer to like parts in all the figures.

In constructing my improved screw-plate and pipe-cutter I make the body A preferably of cast metal, having therein a central opening, B, and having annular chambers C C cast therein to lighten it, the central opening, B, being preferably bored out smooth. In each end of the body A, I mill out radial slots D D to receive the reversible and interchangeable dies and guides E, E', and F, Figs. 4, 5, and 6. I also cast in one side of the center of the body A a radial slot, G, through which a pipe-cutting blade, H, operates, an adjusting-screw, *h*, being inserted from one of the chambers C into one side of the slot G, so that it can be used to take up any play the blade H may have sidewise in the slot G.

The cam-plates I, Fig. 3, of my improved screw-plate and pipe-cutter are provided on

their inner surfaces with cams J, operating in the slots *e* in the reversible dies and guides E, E', and F, and moving them in and out to and from a common center, radial openings K being left between the ends of the cams J, so that the dies and guides can be withdrawn and reversed and replaced. These cam-plates I are provided with washers L, by means of which they are secured to the ends of the body A, and upon which washers L the cam-plates I rotate, the washers L being provided with annular flanges M, which fit into corresponding grooves, N, in the outside faces of the cam-plates I, and are secured to the ends of the body A by means of screws O O.

The cam-plates I are provided with handles P for rotating them, and also provided with segmental racks Q on the edges thereof, into which racks the toothed arms R operate, said arms being adjustably secured to the body A by means of thumb-screws S, so that the cam-plates I can be rotated and secured at any point desired.

It will be observed that both ends of my improved screw-plate and pipe-cutter are alike, each being provided with a like set of reversible dies and guides and a cam-plate for operating them, so that threads can be cut with either end of the plate with equal facility, one set of the reversible dies and guides being inserted so as to operate as guides at one end of the plate, and the other set being inserted so as to operate as dies at the other end of the plate, and so vice versa when a different-sized thread is desired, each of the dies E being provided with a like thread-cutting die, *a*, of one size at one end, and a rounded surface, *b*, operating as a guide at its opposite end, while each of the dies E' is provided with a like thread-cutting die, *c*, of another size at one end and a rounded surface, *b*, operating as a guide at its opposite end.

In Fig. 6 I show a reversible guide, F. This form of guide is inserted in place of one of the sets of reversible dies and guides E E' when cutting pipe, so as to have like guides bearing on the pipe being cut on each side of the cutting-blade H, so as to furnish an equal support for the plate on each side of the blade H and prevent the wobbling of the plate.

To the side of the body A, over the slot G,

I secure a radially-projecting sleeve, T, the upper end of which is provided with an inwardly-projecting collar, *f*, under which collar *f*, I secure a washer, *g*, to the end of the thumb-nut V. The upper portion, *i*, of the cutting-blade H is screw-threaded where it passes through the thumb-nut V, so that by turning the nut V the blade H is moved radially in and out to and from the center of the body A, as may be required in cutting different sizes of pipe. The body A is provided with operating-handles W, (a portion of one only being shown,) which are inserted in screw-threaded holes *l* in opposite sides of the central part of the body A.

The operation of my improved screw-plate and pipe-cutter is obvious from the description heretofore given.

Therefore, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, in a screw-plate and pipe-cutter, of like radial slots and cam-plates at each end of the body thereof, with like reversible dies and guides operated in said slots by cam-plates, substantially as and for the purpose set forth.

2. The combination, in a screw-plate and pipe-cutter, of like cam-plates and reversible radial dies and guides at each end thereof, with a pipe-cutting blade fixed to the body of the plate and operating centrally between the guides, substantially as and for the purpose set forth.

3. The combination, in a screw-plate and pipe-cutter, of guides at each end of the plate, with the pipe-cutting blade H, operating in the slot G midway between the guides at the ends of the plate, substantially as and for the purpose set forth.

4. The combination, in a screw-plate and pipe-cutter, of reversible radially-moving bars E and E', having screw-cutting dies *a* and *c* on one end thereof and rounded ends *b* at the other, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE WILLIAMS.

Witnesses:

D. McMAHON,
J. C. STURGEON.