

No. 708,790.

Patented Sept. 9, 1902.

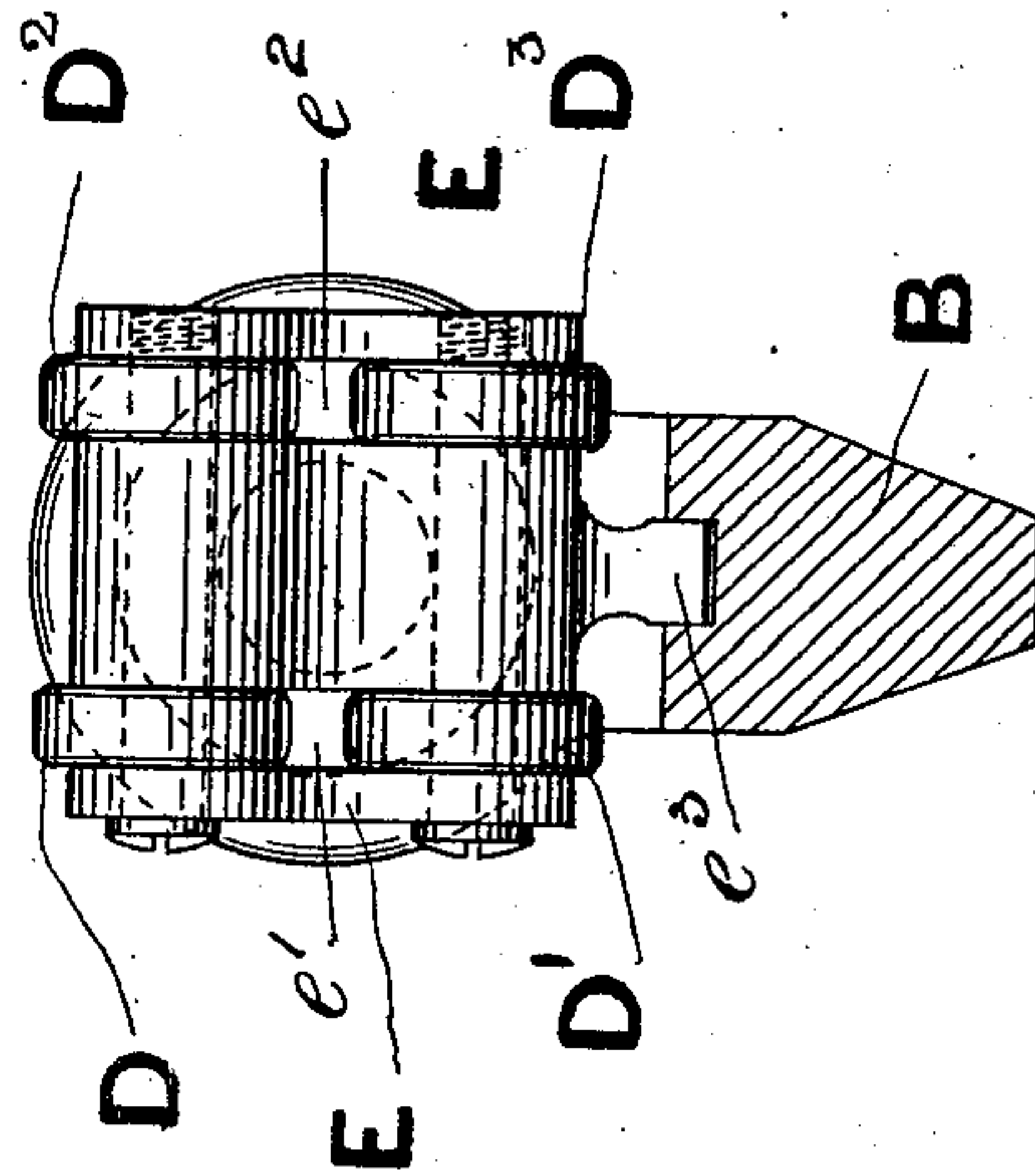
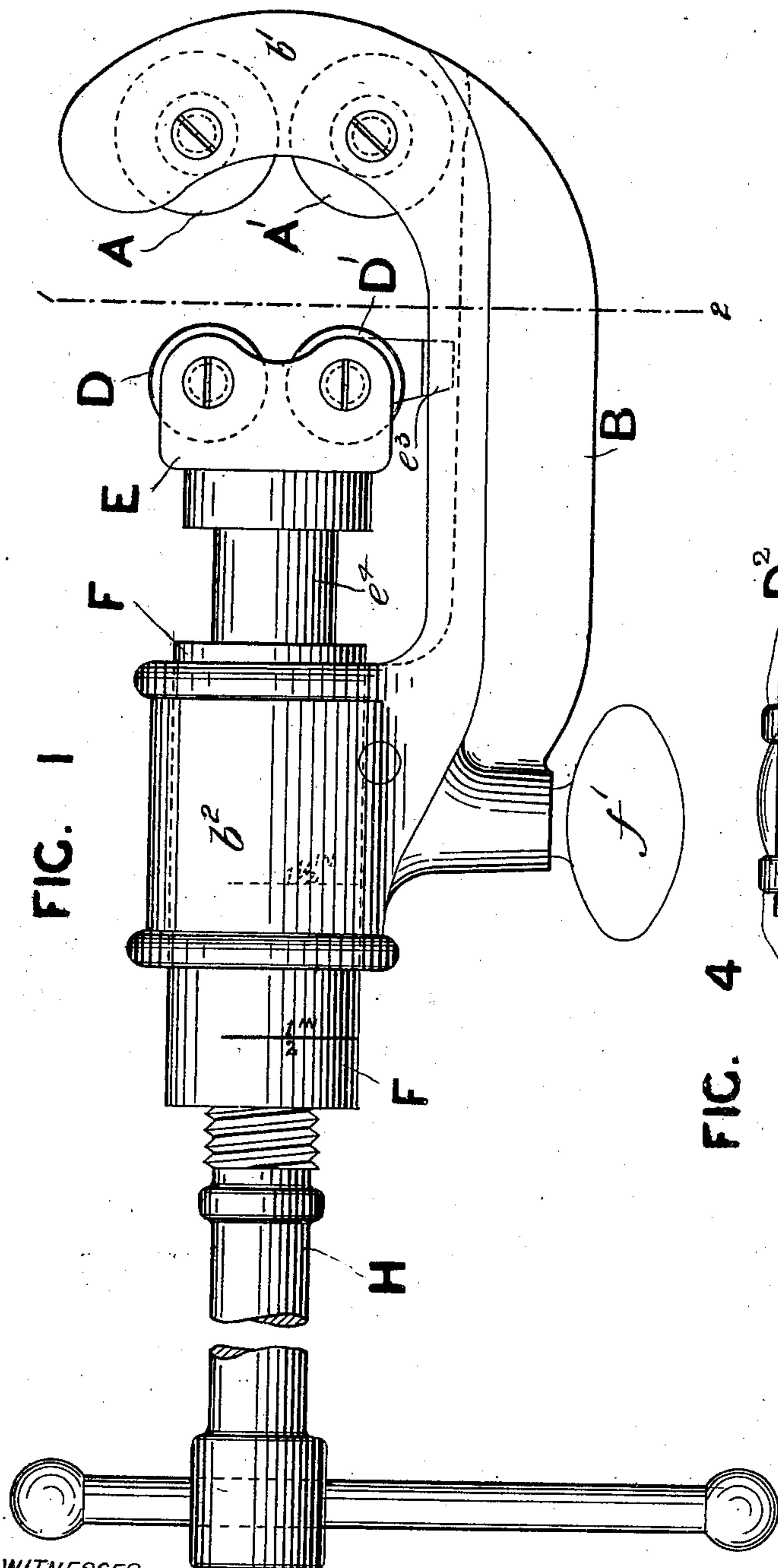
P. WINN.

APPARATUS FOR CUTTING PIPES, RODS, &c.

(Application filed Oct. 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Isabella Kaldron  
Adelaide Plaine Pearson

INVENTOR  
Philip Winn.  
BY  
Richardson  
ATTORNEYS

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2 Sheets—Sheet 2.

FIG. 3

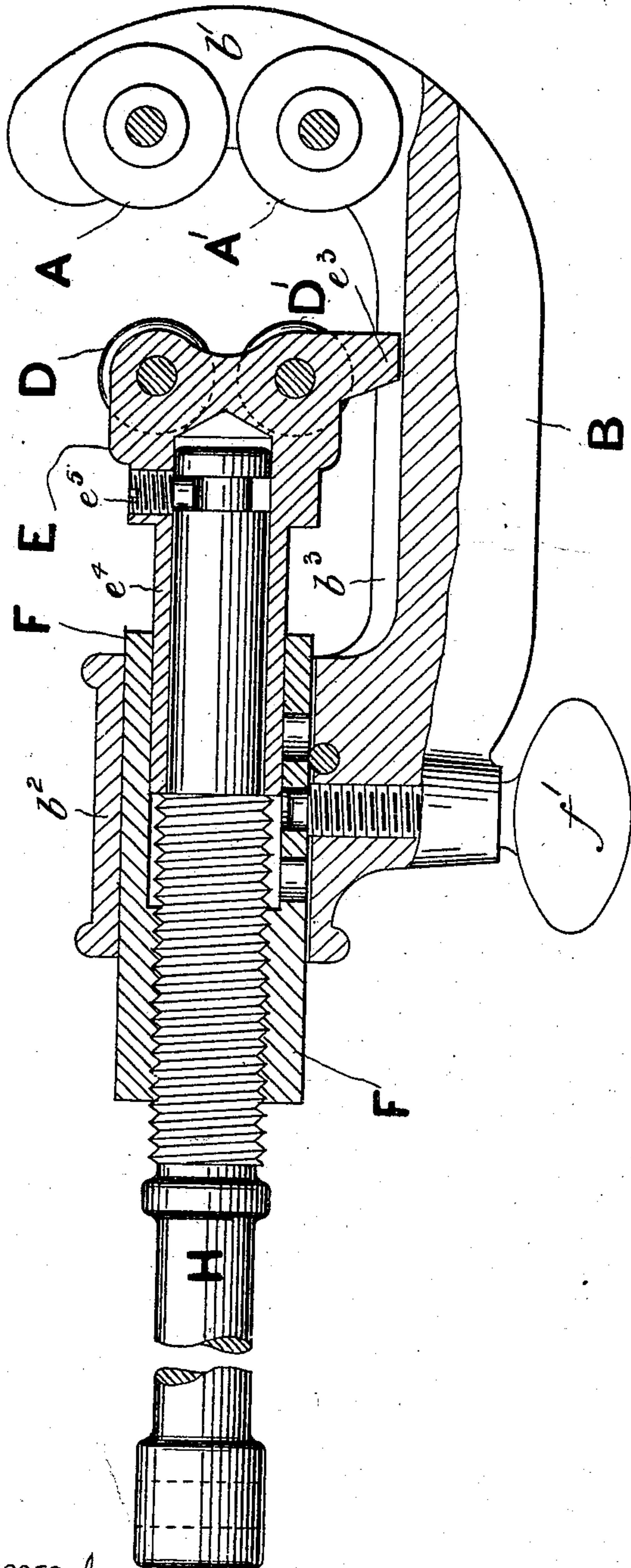
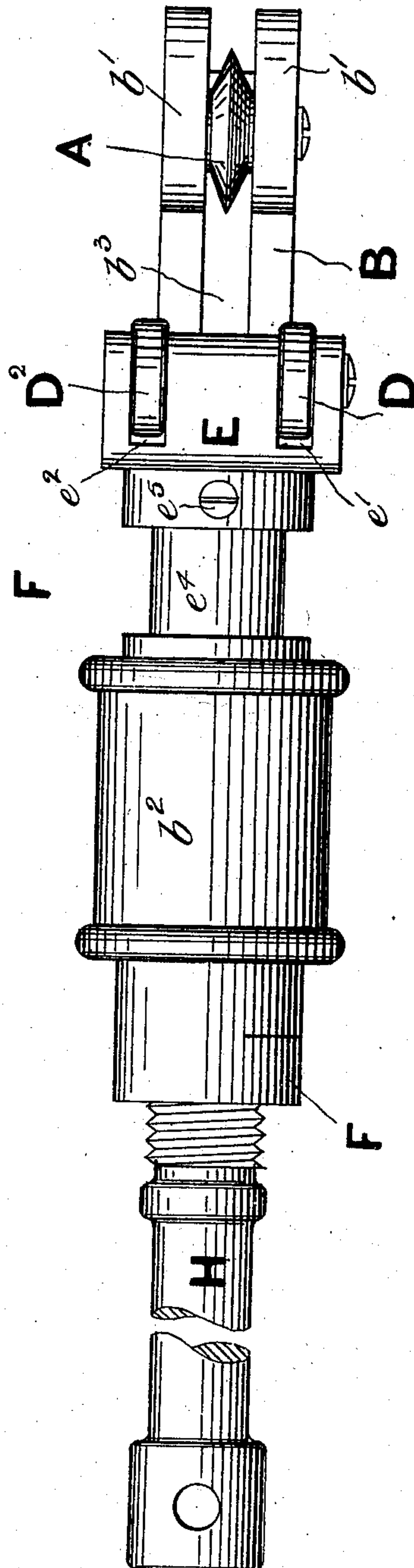


FIG. 2



WITNESSES:  
*Isabella Kaldron*  
*Adelaide Claire Gleason*

INVENTOR.  
*Philip Winn*  
BY *Richardson*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

PHILIP WINN, OF BIRMINGHAM, ENGLAND.

## APPARATUS FOR CUTTING PIPES, RODS, &c.

SPECIFICATION forming part of Letters Patent No. 708,790, dated September 9, 1902.

Application filed October 25, 1901. Serial No. 79,930. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP WINN, a subject of the King of Great Britain, and a resident of Birmingham, England, have invented certain new and useful Improvements in Apparatus for Cutting Pipes, Rods, &c., of which the following is a specification.

My invention has for its object an improved apparatus for cutting pipes, rods, and the like, whereby the operation of cutting is made easier of accomplishment and a better result always obtained.

In carrying my invention into practice I make use of two or more cutting-tools which may be either the ordinary disk cutters or parting-tools or a combination of the same or other suitable cutting-tools in conjunction with two double bearing or supporting rollers. The cutters are mounted in the hook or curved part of the frame of the apparatus, which is somewhat similar to that of an ordinary pipe-cutter, and the bearing or supporting rollers are mounted in a block upon the end of a screwed rod passing through a socket at the other end of the frame. This screwed rod serves to advance the bearing or supporting rollers, thus, in effect, feeding the cutters into the work, and as there are four or more points of support, provided the work is effectually embraced so that the action of feeding the cutters cannot displace it, and as the non-cutting points are rollers, friction to a large extent is eliminated, thus facilitating the cutting operation. As the friction-rollers are preferably made of hardened steel, all appreciable wear can be obviated, and consequently the efficiency of the apparatus maintained.

In order that my invention may be more clearly understood and easily carried into practical effect, I have appended hereunto a double-sized sheet of drawings upon which I have illustrated my apparatus for cutting tubes.

Figure 1 is a side view of my tube-cutting apparatus or tool. Fig. 2 is a front view of Fig. 1. Fig. 3 is a similar view to Fig. 1, showing the head of my tube-cutting apparatus or tool in part section. Fig. 4 is a cross-sectional view of the head of my tube-cutting apparatus or tool, taken on the line 1 2 of Fig. 1.

In carrying my invention into practice I use two or more cutters, which may be either the ordinary disk cutters or parting-tools or a combination of the same or other suitable cutters in conjunction with two double bearing or supporting rollers.

In the tube-cutting apparatus or tool illustrated on the accompanying drawings I have shown two disk cutters A A', mounted in the hook or curved part or jaw  $b'$  of the frame B, which is somewhat similar to that of an ordinary pipe-cutter. The bearing or supporting rollers D, D', D<sup>2</sup>, and D<sup>3</sup> are mounted sufficiently far apart to provide a support or steady on each side of the cut in the block E, which fits into the sleeve F on the screwed end of the rod H and passes through the socket  $b^2$  at the other end of the frame B. This block E is provided with the slots  $e'$   $e^2$ , in which the two sets of bearing or supporting rollers D D' and D<sup>2</sup> D<sup>3</sup> are mounted, each of which is free to turn independently of the other, and at the back of the block E the lug or projection  $e^3$  is formed, which fits into the slot or opening  $b^3$  in the frame B, so as to act as a guide or steady for the block when setting the tool. The screwed rod H, which passes up the hollow stem  $e^4$  of the block and is held therein by the pin  $e^5$ , serves to advance the bearing-rollers, thus, in effect, feeding the cutters onto the work, and as there are four or more points of support provided the work is effectually embraced, so that the action of feeding the cutters cannot displace it, and as the non-cutting points are rollers, friction to a large extent is eliminated, thus facilitating the cutting operation. The sleeve F, which is adjustable, is held in the socket or jaw  $b^2$  by the thumb-screw  $f'$ , as clearly shown by Fig. 3, to enable the tool to be rapidly adjusted, and on the outer surface of this sleeve I form a scale which indicates the distance the jaws of the tool are apart. By having two sets of bearing-surfaces support is provided on each side of the cut, while the clearance thus made possible immediately on the line of the cut saves the bur thrown up by the cutters being crushed back into the groove, as is the case in ordinary pipe-cutters; and, further, the arrangement of double bearing-surfaces serves for alining perfectly at right angles with the

work, which is most important, as by this means an inexperienced operator using my apparatus cannot help but have it squarely on the work when beginning to feed the cutters into the same.

What I claim, then, is—

1. In combination, a fixed jaw carrying four bearing-rollers, a sleeve movable toward and from the rollers with means for clamping it in any desired position, a movable jaw guided by said sleeve and means for operating the movable jaw, substantially as described.

2. In combination, the fixed jaw having bearing-rollers at one end and a tubular portion at the other, a sleeve slidably mounted

in said tubular portion, means for clamping it adjustably in the tubular portion, a movable jaw having a tubular shank extending into the sleeve and a projection engaging a groove in the fixed jaw, a cutter carried by the movable jaw and a screw threaded through the sleeve and having its end rotatably secured within the tubular portion of the movable jaw, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

PHILIP WINN.

Witnesses:

H. W. DENTON INGHAM,  
E. S. FRIEND.