

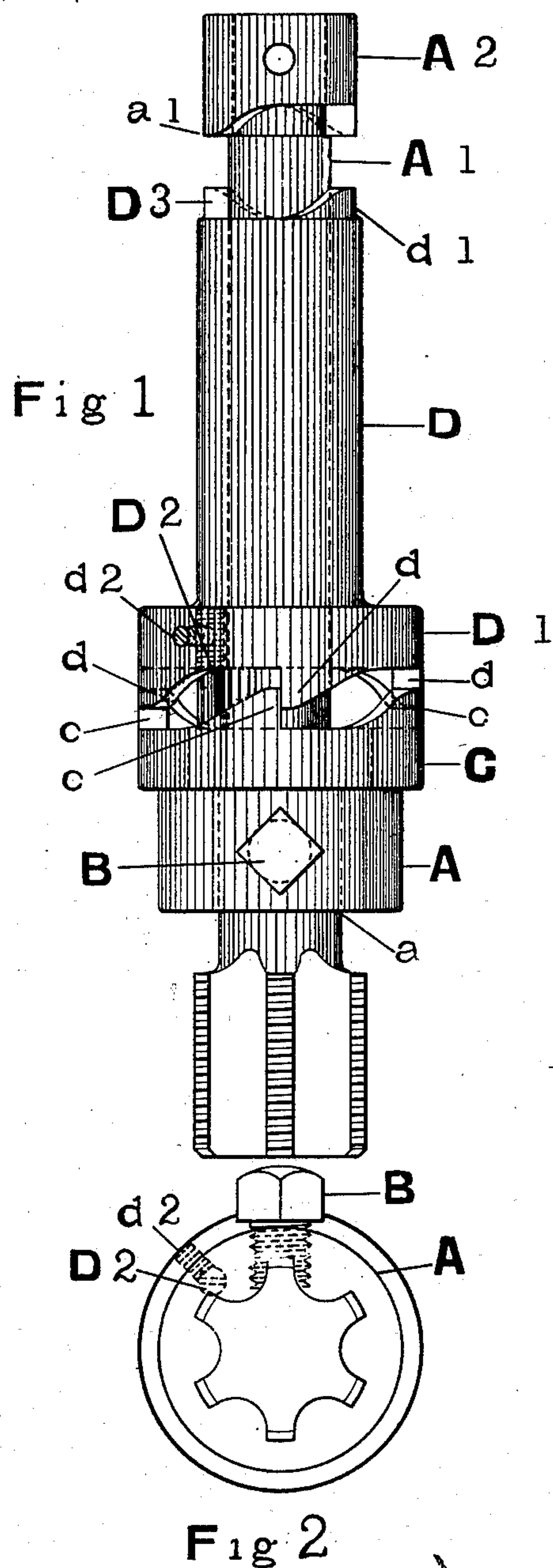
No. 664,513.

Patented Dec. 25, 1900.

J. B. WALLACE.  
TAP AND DIE HOLDER.

(Application filed May 15, 1900.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JACOB B. WALLACE, OF ERIE, PENNSYLVANIA.

## TAP AND DIE HOLDER.

SPECIFICATION forming part of Letters Patent No. 664,513, dated December 25, 1900.

Application filed May 15, 1900. Serial No. 16,821. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB B. WALLACE, 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 Tap and Die Holders; 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.

This invention relates to tap and die holders; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows a plan of the device. Fig. 2 shows an end elevation of the device.

A marks the head. This is provided with the socket *a*, in which the tap or die may be secured by means of the set-screw B. Arranged on the inner face of the head is a clutch-plate C. Extending from the head is the shank A', and arranged on this shank is the turret piece or sleeve D. The outer end of this sleeve is provided with a clutch-plate D', and projecting from the face of the plate D' are the clutch-lugs *d*, which are arranged to engage the clutch-lug *c* of the plate C when the head is moved into engagement with the turret-piece. The rear end of the turret-piece is provided with the clutch-plate D<sup>2</sup>, having the clutch-lug *d'*. Keyed on the shank A' opposite to the plate D<sup>2</sup> is the clutch-ring A<sup>2</sup>, having the clutch-lug *a'* in position to engage the clutch-lug *d'*. These plates are not unlike to those now in use.

The operation of the device is as follows:

The turret-piece D is secured in the turret, and as the holder is fed onto the work the head A is pressed back, bringing the clutch formed by the plates C and D' into engagement. This holds the head from revolving. When the thread has reached nearly the desired length, the forward movement of the turret is stopped, and the feed effected by the thread draws the head A with it until the clutch-lugs *c* are moved out of engagement with the lugs *d*. The head is then free to rotate in the turret-piece D. The machine then reverses, and the turret passes on its backward stroke and carries with it the turret-piece D. This brings the clutch-plate D<sup>2</sup>

into engagement with the clutch-ring A<sup>2</sup>, and this again locks the head against rotation, so that the die is carried off the work by means of the feed effected by the thread.

In all of these devices a great deal of wear is put upon the clutch-lugs *c* and *d*. It is necessary to keep their faces in such planes as to insure positive engagement of the clutch when the clutch-lug of one is brought into the path of the other. The tendency of the device is to wear off the faces of the clutch-lugs, so that they are apt to miss a positive engagement at the desired time. The outer surfaces of the lugs are ground off, and in devices heretofore made the detents between the lugs are deepened, so as to leave the lugs of the same depth. This requires a considerable expenditure of labor. With my device I initially make these detents of sufficient depth to give the lugs a greater length than that required by the operation of the machine. I utilize only such depth of the lugs as is necessary to effect engagement. Where the machine is used for making short screws, this engagement must of course be very slight. To prevent the lugs passing by one another to greater extent than is necessary to make the engagement, I have provided the stop D<sup>2</sup>, which is provided with a screw. This is adjustable and may be locked in position by means of the screw *d'*. With this device when it is desired to give to the clutch-lug a new engaging surface it is only necessary to grind off the outer surfaces of the lugs and to readjust the stop or lug D<sup>2</sup>.

What I claim as new is—

1. In a tap or die holder, the combination of the head, having a clutch-face provided with the clutch-lugs; a turret-piece having a clutch-face, provided with the clutch-lugs; and a stop for limiting the depth of engagement of said lugs.

2. In a tap and die holder, the combination of the head, having a clutch-face, provided with clutch-lugs; a turret-piece having a clutch-face, provided with clutch-lugs; and an adjustable stop for limiting the depth of engagement of said lugs.

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

JACOB B. WALLACE.

Witnesses:

R. F. LANZA,  
H. C. LORD.