

A. JOHNSON.
ADJUSTABLE DIE FOR PUNCH PRESSES.
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1,370,116.

Patented Mar. 1, 1921.

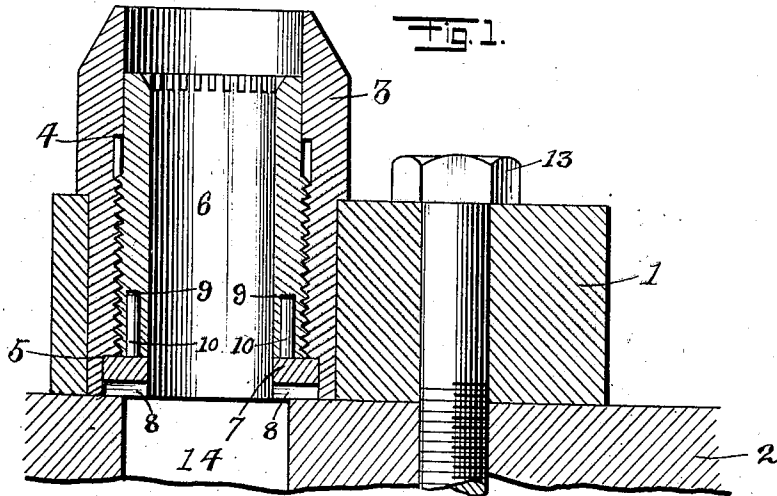


FIG. 2.

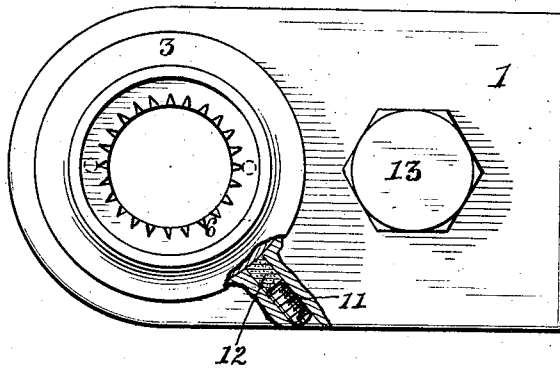
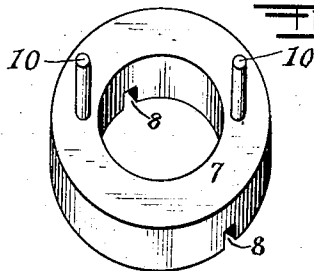


FIG. 3.



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ADJUSTABLE DIE FOR PUNCH-PRESSES.

1,370,116.

Specification of Letters Patent.

Patented Mar. 1, 1921.

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To all whom it may concern:

Be it known that I, ARON JOHNSON, a citizen of the United States, residing at the borough of Brooklyn, New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Adjustable Dies for Punch-Presses, of which the following is a specification.

My invention relates to dies for use in metal punching presses and it is my object to provide such dies with means for adjusting the same quickly and easily while in the press and to retain such adjustment after it is made.

I have shown my invention applied to a female die used in making crown caps for bottles and in the drawing Figure 1 is a sectional view of my improved die with the forming member at its lowermost limit of adjustment; Fig. 2 a top view of the die; and Fig. 3 a perspective view of the adjusting collar.

The die block 1 is secured to the bed 2 of the press and has the tubular cutting die 3 thereon. This cutting die is internally shouldered at 4 and 5 and the space between the shoulders is threaded as shown. The forming die 6 is externally threaded at its base and its upper end is turned down to fit the inside of the cutting die above the shoulder 4. An adjusting collar 7, provided with spanner slots 8—8 in its lower face, fits inside the base of the cutting die below the shoulder 5, its bottom being flush with the base of the die block.

The forming die 6 has two holes 9—9 bored into its base and the adjusting collar 7 has two pins 10—10 secured to its upper face which pins enter the holes 9—9 in the forming die.

A small set screw 11 passes through the side of the die block with a fiber plug 12 between its end and the outer face of the adjusting collar 7.

In use the die is assembled as shown in Fig. 1 with the set screw 11 turned in until the fiber plug 12 creates a holding friction on the adjusting collar. The die block is then secured to the press bed by the cap

screw 13 with the central opening in the cutting and forming dies in line with the opening 14 in the press bed. This opening 14 is of such diameter that about one half of the area of the adjusting collar rests on the bed and the other half projects over the opening. By passing a spanner wrench through the opening 14 from the back of the bed the adjusting collar may be turned which causes the forming die to move up or down in the cutting die until it is properly adjusted to meet the male die (not shown) due to the fact that the pin and hole connection between the adjusting collar and the forming die causes them to revolve together but leaving the forming die free to travel up or down the pins.

In this way exact adjustments of the forming die may be quickly and easily effected without removing the die block from the press bed and the frictional engagement of the adjusting collar and fiber plug hold the adjustment once it has been obtained.

I claim:—

1. An adjustable die for punch presses comprising a die block, an internally threaded, tubular member thereon, an externally threaded second member within said first member, an adjusting collar within the first member below the second member and means connecting the second member and adjusting collar whereby they revolve together but approach or recede one from the other during rotation.

2. An adjustable die for punch presses comprising a die block, an internally threaded cutting die thereon, an externally threaded forming die within the cutting die provided with pin holes at its base, an adjusting collar within the cutting die below the forming die and pins thereon entering the pin holes in the forming die.

3. An adjustable die for punch presses such as is defined in claim 2, provided with means on the die block for frictionally engaging the adjusting collar.

In testimony whereof I have affixed my signature.

ARON JOHNSON.