

1,044,808.

H. W. OSTER.
DIE STOCK.
APPLICATION FILED JAN. 27, 1911.

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Fig. 1.

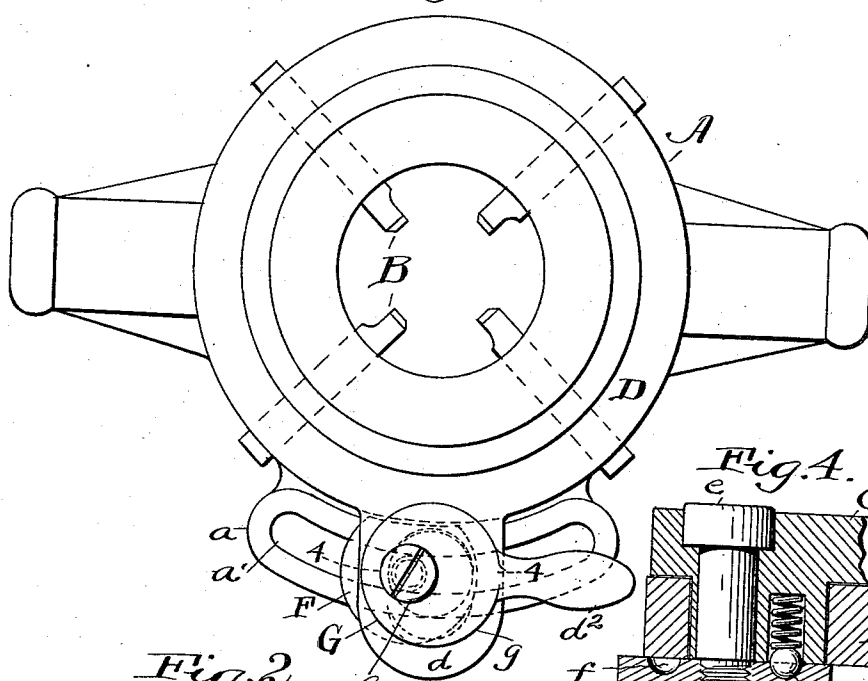


Fig. 2.

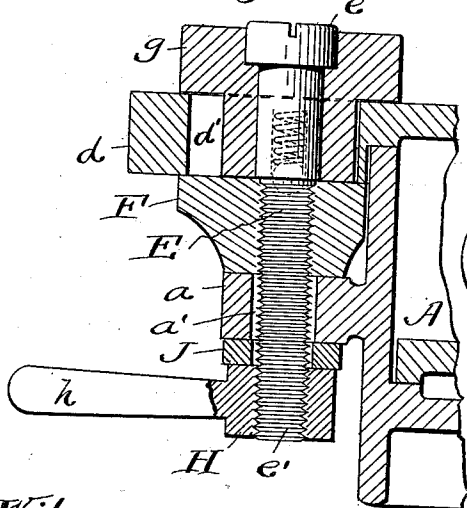


Fig. 4.

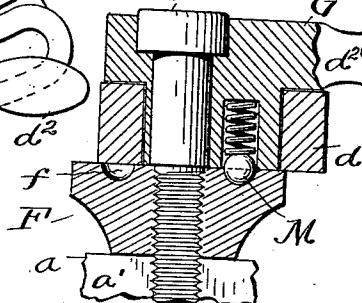
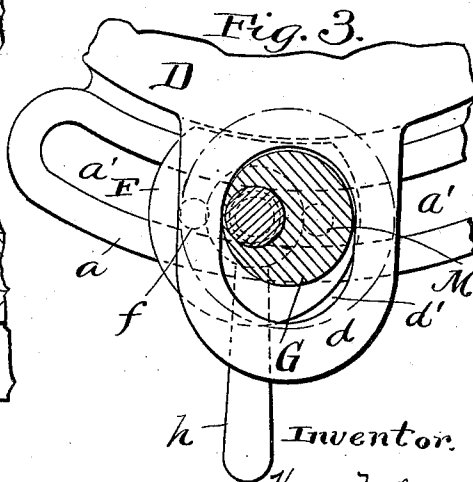


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

HERMAN W. OSTER, OF CLEVELAND, OHIO, ASSIGNOR TO THE OSTER MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

DIE-STOCK.

1,044,808.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HERMAN W. OSTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Die-Stocks, of which the following is a full, clear, and exact description.

This invention is an improvement on the mechanism which forms the subject matter of the Oster Patent No. 977,541, granted December 6, 1910. The tool shown in that patent is open to criticism for two reasons, viz: (1) There are no means provided therein to prevent the eccentric from accidentally turning in the slot in the cam plate ear; and, as a matter of fact, it does sometimes turn while the tool is being handled, and thereby the cam plate and dies are moved from the position in which it is desired to hold them; (2) chips and other foreign particles may get into the slot in the ear of the cam plate and thereby prevent the operation, or, at least, the accurate operation of said cam plate. It is to correct these two defects that the present invention is designed.

In the drawing, Figure 1 is an end view of a die stock in which the invention is embodied. Fig. 2 is a longitudinal section through that side of the die stock which carries the novel features of the invention. Fig. 3 is an end view of the parts shown in Fig. 2, with the flange on the eccentric cut away, but indicated by dotted lines. Fig. 4 is a sectional view on line 4—4 of Fig. 1.

Referring to the parts by letters, A represents the stock which carries radially movable cutters or chasers B, B, and on which is mounted a cam plate D for causing the simultaneous inward or outward movement of the cutters or chasers. Projecting laterally from the die stock is a short flange *a*, in which is an arcual slot *a'*. A stud E is adjustably secured in this slot and extends out through an ellipsoidal slot *d'* in an ear *d* on the cam plate; and an eccentric G rotatably mounted on said stud lies also in this ellipsoidal slot. In the respects specified the construction shown in the drawing is generically like that which forms the subject matter of the above mentioned patent. The eccentric G, however, is provided at its outer end with a flanged head *g*, the diameter of which is such that it will cover the

ellipsoidal slot *d'* under all conditions. The length of the eccentric is substantially equal to the thickness of the ear *d* in which it lies, wherefore this flange will bear lightly against the outer face of said ear. A clamping member F bears against the inner face of said ear; and the end of said member which does so bear is of such size that it also covers the ellipsoidal slot under all conditions. One side of this clamping member is cut away following the contour of the external wall of the stock, so that this clamping member will be prevented from turning by engaging with the stock. The stud E is a long screw, the head *e* of which sets into a countersunk hole in the outer end of the eccentric. This head and the part of the screw passing through the eccentric is unthreaded. Behind this unthreaded portion is a threaded shank *e'* of reduced diameter, which screws through the clamping member, and then passes loosely through the arcual slot *a'* and has screwed onto its end a clamping nut H provided with a convenient operating handle *h*. A washer J lies between this nut and the under face of the flange. The parts are so proportioned that when, by turning the nut, the washer and the clamping member are caused to bind tightly against the flange, the outer face of the clamping member will engage lightly with the under face of the ear, and the under face of the flange of the eccentric will engage lightly with the outer face of said ear. For convenience an operating handle *d²* is formed on the flanged eccentric.

In order to adjust the device for use, the nut H is loosened, and the screw stud E and the parts carried thereby are moved along the arcual slot to the proper position, and the eccentric is turned a trifle past the cutter so that the cam plate adjuster will hold the cutters in as far as they will go, and will effectually resist their tendency to move outward as the result of the out-thrust of the work on the cutters. When the cutters have been properly adjusted, the nut H is tightened, and the device is ready for use. When the thread has been cut on the work, the operator taking hold of the handle *d²* of the eccentric will swing it around, and this will move the cam plate adjuster in the direction to withdraw the cutters far enough to clear the work.

In the eccentric is a spring actuated plun-

ger M, specifically in the form of a ball; and in the outer face of the clamping member F are two shallow spot holes into which the ball is thrust when the eccentric is at the ends of its throw. The engagement of this ball plunger in said holes will prevent any accidental movement of the eccentric, but will not offer any material resistance to the desired movements thereof.

10 Having described my invention, I claim:

1. The combination of a die stock carrying cutters, and having a laterally extended flange in which is an arcual slot, a cam plate adjuster mounted on the die stock for adjusting the cutters, said adjuster having a laterally extended ear in which is a slot, a screw stud passing through the arcual slot in the flange on the die stock and having an unthreaded portion which passes also through the slot in the cam plate ear, a non-rotatable clamping member upon the screw stud lying and fitting between the flange on the die stock and the ear on the cam plate, the outer face of said clamping member being of such size as to completely cover the slot in the ear of the cam plate, a clamping nut screwing onto the lower end of said stud, and an eccentric rotatably mounted on the unthreaded part of the screw stud and lying in the slot in the ear of the cam plate, and having a flanged head arranged to engage the outer face of said ear, said flanged head being of such size as to completely cover the slot therein.

35 2. The combination of a die stock carrying movable cutters and having a laterally extended flange, a cam plate adjuster mounted on the die stock in engagement with the cutters for adjusting them, said ad-

juster having a laterally extended ear in which is a slot, a stud fixed to said flange and passing through the slot in said ear, an eccentric rotatably mounted upon said stud and lying in said slot, a non-rotatable member F carried by the stud and lying between said flange and ear, one of the last mentioned parts having in that face which is adjacent to the other part two spot holes, and the other member carrying a spring plunger for engagement in said spot holes.

3. The combination of a die stock carrying movable cutters and having a laterally extended flange in which is an arcual slot, a cam plate adjuster mounted on the die stock in engagement with the cutters for adjusting them, said adjuster having a laterally extended ear in which is a slot, a stud having a threaded portion which passes through said arcual slot, a non-rotatable clamping member embracing the stud and lying between the flange in which said arcual slot is formed and the ear of the cam plate, a nut screwing onto the threaded end of the stud whereby said flange may be clamped between said nut and clamping member, an eccentric rotatably mounted upon said stud and lying in the slot in said ear, one end of said eccentric lying close to the end of said clamping member, a spring plunger carried by one of the last two mentioned members, and the other member having in its face two spot holes for the reception of said plunger.

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

HERMAN W. OSTER.

Witnesses:

R. B. TEWKSBURY,
H. R. SULLIVAN.