June 4, 1940.

A. W. ALTVATER

2,202,809

DIE HOLDER

Original Filed March 1, 1937

Fig. 1.

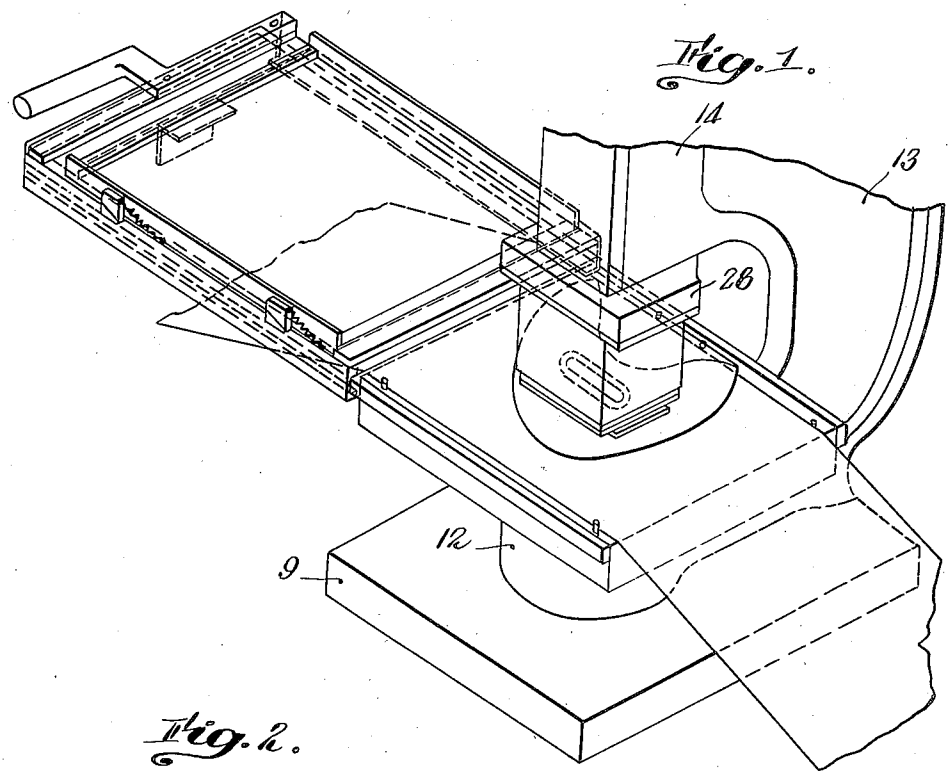


Fig. 2.

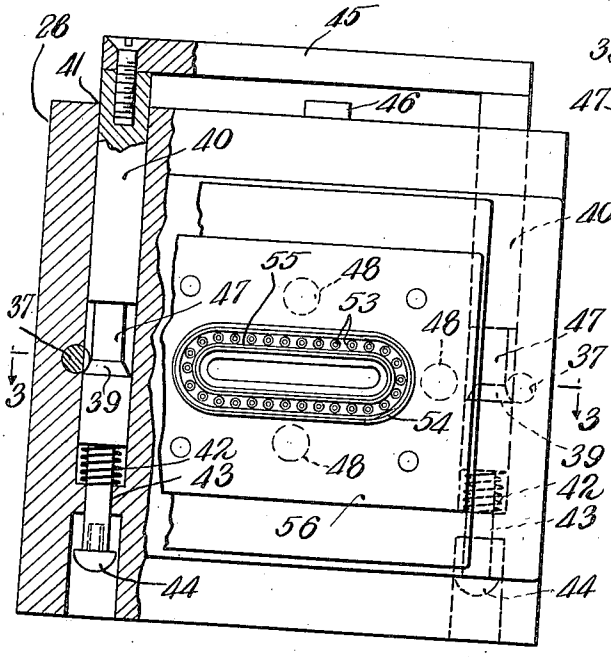
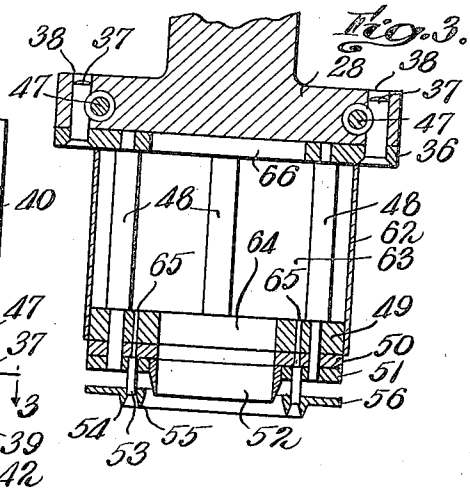


Fig. 3.



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UNITED STATES PATENT OFFICE

2,202,809

DIE HOLDER

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Original application March 1, 1937, Serial No. 128,314. Divided and this application April 16, 1938, Serial No. 202,509

2 Claims. (Cl. 164—118)

The present invention relates to shoe machines and more particularly to die holders for use in a machine for performing a combined ink-marking and perforating operation.

For purposes of disclosure the various features of the present invention are illustrated and described as embodied in the Model R machine manufactured by Western Supplies Company, under my prior patents, Nos. 1,834,919 and 1,938,678, which machine has a wide use in the manufacture of shoes to perform many different operations.

Heretofore Western Supplies Company performed the combined ink-marking and perforating operation upon the well-known Western cut-out machine.

The principal objects of the present invention are to produce a simple, inexpensive and efficient die holder for a combined ink-marking and perforating machine, particularly in the form of an attachment to the Model R machine, and to simplify and improve the die holder, particularly, with respect to the securing of the chips cut out of the work by the die and the discharge of the die holder for ready insertion in and removal from the machine of the retained chips.

To the accomplishment of these objects, and such others as may appear hereinafter, the various features of the present invention reside in certain devices, combinations and arrangements of parts hereinafter described and then set forth broadly and in detail in the appended claims which possess advantages readily apparent to those skilled in the art.

The various features of the present invention will be readily understood from an inspection of the accompanying drawing illustrating the best form of the invention at present known to the inventor, in which

Figure 1 is a detail view in perspective of sufficient portions of the combined ink-marking and perforating machine to identify it;

Fig. 2 is a detail view partly in section in underside plan of the die, the die holder plate, the plunger plate and the means for securing these plates together, and

Fig. 3 is a detail view in sectional elevation on the line 3—3, Fig. 2.

In the embodiment of the invention illustrated in the drawing, the frame of the machine is shown as including a base 9, (Fig. 1). Integrally formed with the base is an irregularly shaped boss 12 constituting the work supporting bed. An overhanging arm is integrally cast with the base 9 and includes the standard 13, (Fig. 1), and the overhanging head 14. A die carrier in the form of a rectangular sliding block 28 is mounted in the lower part of the head 14 in axial alignment with the plunger, (not shown), as described more fully in my application Serial No. 128,314 of which this is a division. The connection between the plunger and the die carrier is generally the same in construction and mode of operation as the connection shown in my prior Patent No. 1,938,678, so that it is unnecessary to repeat that description.

The bottom face of the die carrier 28 is flat, (Fig. 3), to receive flatwise one face of a plate 36 provided with a pair of mutilated pins 37 which enter vertical sockets 38 formed in the die carrier 28. The plate 36 is secured to the die carrier 28 by frusto-conical surfaces 39, (Fig. 2), which engage the mutilated portions of the pins 37, respectively. The surfaces 39 are formed on elongated pins 40 mounted to slide in horizontal openings 41 formed in the die carrier 28. Each surface 39 is held in engagement with the mutilated portion of one of the pins 37 by a spring 42 coiled about a reduced portion of the pin 40 and interposed between the pin 40 and a web 43 of the die carrier 28, a screw 44 carried by the end of the pin 40 acting by engagement with the web 43 as a stop for limiting the movement of the pin under the influence of the spring. Both pins 40 are connected to a common handle 45 for operating them to release the pins 37, there being a stop 46 on the die carrier 28 for limiting the inward movement of the handle. The pins 40, adjacent the surfaces 39, are provided with a cylindrical portion 47 of reduced diameter to permit the pins 37 to be readily withdrawn from the sockets 38 when the handle 45 is pushed inwardly.

The plate 36 is riveted to the reduced upper ends of four posts 48, the lower reduced ends of which pass through a die block 49, a die rest plate 50, and a die holding plate 51, the lower ends of the posts 48 being riveted to the plate 51. The dies held by the plate 51 comprise a cut-out die 52 and a plurality of perforating tubes 53. The ink-marking die is provided with two continuous marking edges 54 and 55 formed upon a yieldingly supported stripper plate 56.

The space between the plate 36 and the block 49 is enclosed by a rectangular sheet metal wall 62 the bottom of which is secured to the four edges of the block 49 and the top of which is secured to the two narrow edges of the plate 36. The wall 62 forms a chamber 63 for retaining the chips or pills formed by the cut-out die 52 and the perforating tubes which work up from the dies into

the chamber 63 through inlet passages 64 and 65, respectively.

The plate 36 is provided with an outlet 66 which is normally closed by the bottom of the die carrier 28. To clear the chamber 63 of chips the handle 45 is pressed inwardly to release the pins 37, thus permitting the plate 36 and the die structure assembled therewith to be withdrawn from the die carrier 28. After the plate 36 has been separated from the bottom of the die carrier 28, the die structure may be turned into an upside down position whereupon the chips or pills in the chamber 63 may be shaken out through the outlet 66.

What is claimed as new, is:

1. A perforating machine having, in combination, a die carrier having sockets, a die carrier engaging plate having mutilated pins received in the sockets, respectively, and means for locking the plate and carrier together comprising frusto-conical surfaces, one for each pin carried by the die carrier, springs for pressing the surfaces into engagement with the mutilated portion of the pins, and a common operating handle for moving the surfaces to disengage the pins.

2. A perforating machine having, in combination, a die carrier having sockets, a die carrier engaging plate having mutilated pins received in the sockets, respectively, and means for locking the plate and carrier together comprising frusto-conical surfaces, one for each pin carried by the die carrier, springs for pressing the surfaces into engagement with the mutilated portion of the pins, a common operating handle for moving the surfaces to disengage the pins, and stops for limiting the movement of the handle in both directions.

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