March 10, 1925. 1,528,819

F. ENGEL

COMBINED DIE AND MARKER

Filed Feb. 8, 1924

Fig. 1.

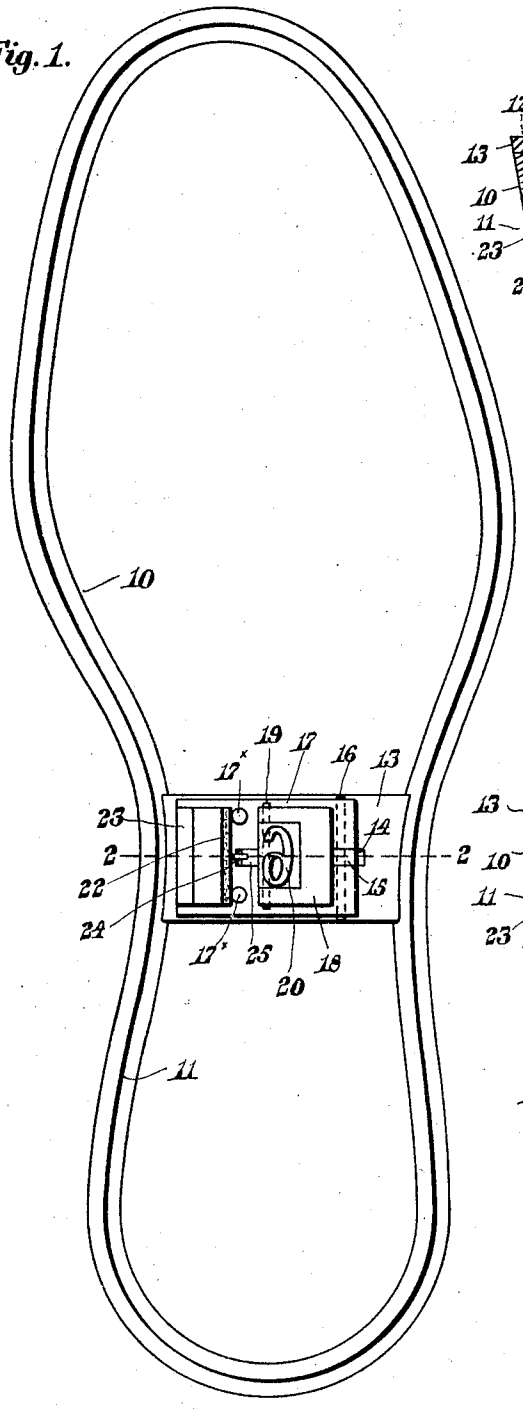



Fig. 2.

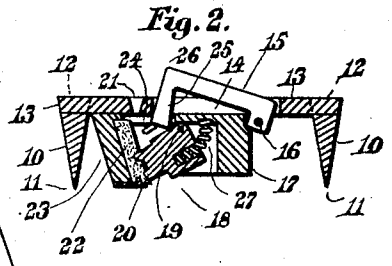



Fig. 3.

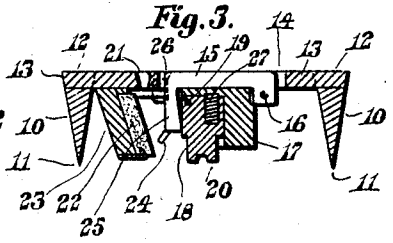
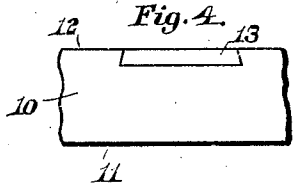



Fig. 4.




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# UNITED STATES PATENT OFFICE.

FRANK ENGEL, OF LITTLE FALLS, NEW YORK, ASSIGNOR TO LITTLE FALLS FELT SHOE COMPANY, OF LITTLE FALLS, NEW YORK, A CORPORATION OF NEW YORK.

## COMBINED DIE AND MARKER.

Application filed February 8, 1924. Serial No. 691,525.

*To all whom it may concern:*

Be it known that I, FRANK ENGEL, a citizen of the United States of America, and a resident of Little Falls, in the county of Herkimer and in the State of New York, have invented certain new and useful Improvements in Combined Dies and Markers, of which the following is a specification.

This invention relates to dies and particularly to devices of this character adapted to cut from sheets of material blanks to be used in the manufacture of boots and shoes.

Obviously blanks of this character must be of different sizes according to the sizes of the boots or shoes to be manufactured therefrom and it is necessary that such blanks be marked properly to indicate the size of the boot or shoe in the manufacture of which they are designed to be used.

The object of the present invention is to provide each die with a marking device permanently attached thereto which will mark the size of the blank at the same time said blank is being cut from a sheet of material.

The invention consists primarily in providing each cutting die with a cross bar on which is mounted a marking device so constructed as to operate during the cutting of a blank by said die.

The invention further consists in certain novel features of construction and arrangement of parts which will be understood readily by reference to the description of the drawings and to the claims to be hereinafter given.

For the purpose of illustrating the invention, one preferred form thereof is illustated in the drawings, this form having been found to give satisfactory and reliable results although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized and the invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described except as required by the scope of the appended claims.

Of the drawings—

Figure 1 represents an inverted plan of a cutting die provided with a marker and embodying the principles of the present invention.

Figure 2 represents a transverse section on line 2, 2 on Fig. 1 showing the various elements of the marking device in their normal position,

Figure 3 represents a transverse section on line 2, 2, on Fig. 1, showing the various elements in position to mark a blank at the same time that it is being cut, and

Figure 4 represents an elevation of a portion of one side of the die showing the means for securing the crossbar on bridge to the die.

Similar characters indicate like parts throughout the several figures of the drawings.

In the dawings 10 is a cutting die of a shape to cut out a sole to be used in the manufacture of boots and shoes or an inner sole to be used in the completed shoes, said die having a knife edge 11 at the bottom, and a flat portion 12 at the top thereof against which the beam of a press is adapted to coact to force the die through the material from which the soles are to be cut.

It is essential that the soles cut by the die should be suitably marked to designate the size of shoe in which they are to be used.

Obviously it is of great advantage to cut the sole and mark it at the same time, thereby saving both time and labor and reducing the cost of the finished articles.

The cutting die 10 has dovetailed into its opposite sides a bridge or crossbar 13 having an opening 14 therein through which extends an L-shaped member 15 pivoted at 16 to a block 17 secured to the under face of said bridge 13 by means of screws 17×.

The block 17 has a walled recess in its lower end in which is positioned a member 18 pivoted at 19 to said block and provided with a size number 20 or other designating character.

This member 18 is pivoted at 19 to said block 17 and is adapted to be moved about its pivot to bring the marker or size number 20 into contact with an ink pad 22, the rear end of which is embedded in a recess in the portion 23 of said block 17.

The bridge 13 has an opening 21 therein through which the ink pad 22 may be supplied with ink.

The L-shaped member 15 has a stop pin 24 extending from the arm 25 thereof which is adapted to limit the outward movement of said member about its pivot 16 by contacting with the under face of the bridge or crossbar 13.

The normal position of said L-shaped member 15 is as shown in Fig. 2 of the drawings with the corner 26 considerably above the upper face of said bridge 13. When in this position the marking member 18 is forced about its pivot 19 by the spring 27 and the size number 20 is thus retained in contact with the ink pad 22.

When the cutting die 10 is placed upon a sheet of material upon a suitable bed and the beam of a press is moved downwardly thereon to effect the cutting of a blank, said beam will first contact with the corner 26 of the L-shaped member 15 and the continued movement of the beam will move said L-shaped member downwardly about its pivot 16, the lower inner corner of the arm 25 during this operation bearing against the side of the marking member 18 and moving it about its pivot 19 into the position shown in Fig. 3.

At this time the upper faces of the bridge 13 and member 15 are alined and the further downward movement of the press beam will force the knife edge 11 of the die 10 through the material and at the same time cause the marker 20 to impress the size number upon the blank cut from the material.

By having the marker 20 permanently attached to each die 10 no mistakes are possible for the correct size number will always be impressed upon the blank.

Another advantage of combining the marker with the die is that several blanks cannot be cut from the die at the same time for only one of the blanks would be marked and a left blank cannot be cut with a right die as the blank would be marked on the wrong side.

It is obvious therefore that when this device is used better results will be obtained inasmuch as each blank must be cut separately with the proper side of the blank cut provided with the correct size number.

With this explanation it is believed that the operation and many advantages will be apparent.

Having thus described my invention, I claim—

1. A cutting die having an endless knife edge and provided with a marking means positioned between two opposed portions thereof and operable during the cutting operation.

2. A cutting die having an endless knife edge and a cross bar extending between two opposed portions thereof, said bar having mounted thereon means for marking the blank cut by said die and operable during the cutting operation.

3. The combination of a cutting die; a cross bar thereon; and pivoted means on said bar for marking the blank cut by said die.

4. The combination of a cutting die; a cross bar thereon; an ink pad on the under face of said bar; and a marker normally contacting with said pad and adapted to be moved into position to mark a blank being cut by said die.

5. The combination of a cutting die; a cross bar thereon; an ink pad on the under face of said bar; and a pivoted marker normally contacting with said pad and adapted to be moved into position to mark a blank being cut by said die.

6. The combination of a cutting die; a cross bar thereon; an ink pad secured to the under face of said bar; a member pivoted to said bar; pivoted means coacting with said member and having a portion thereof normally above said bar; and a marker on said member in contact with said pad when said pivoted means is in its normal position.

7. The combination of a cutting die; a cross bar thereon; a block secured to the under face of said bar and provided with a walled recess; a member pivotally mounted in said recess; a spring actuated marker on the outer end of said member; an ink pad positioned to coact with said marker when the marker member is moved about its pivot; and means for limiting the movement of said member.

8. The combination of a cutting die; a cross bar thereon; a block secured to the under face of said bar; a member pivotally mounted thereon; a spring actuated marker on the outer end of said member; an ink pad positioned to coact with said marker when the marker member is moved about its pivot; and means for limiting the movement of said member.

9. The combination of a cutting die; a cross bar thereon; a block secured to the under face of said bar and provided with a walled recess; a member pivotally mounted in said recess; a spring actuated marker on the outer end of said member; an ink pad positioned to coact with said marker when the marker member is moved about its pivot; and a pivoted L-shaped arm for limiting the movement of said member.

10. The combination of a cutting die; a cross bar thereon; a block secured to the under face of said bar and provided with a walled recess; a member pivotally mounted in said recess; a spring actuated marker on the outer end of said member; an ink pad positioned to coact with said marker when the marker member is moved about its pivot; and a spring controlled L-shaped arm for limiting the movement of said member.

Signed by me at Little Falls, N. Y., this 24th day of January, 1924.

FRANK ENGEL.

Witnesses:
W. K. URQUHART,
FRANK M. SIMPSON.