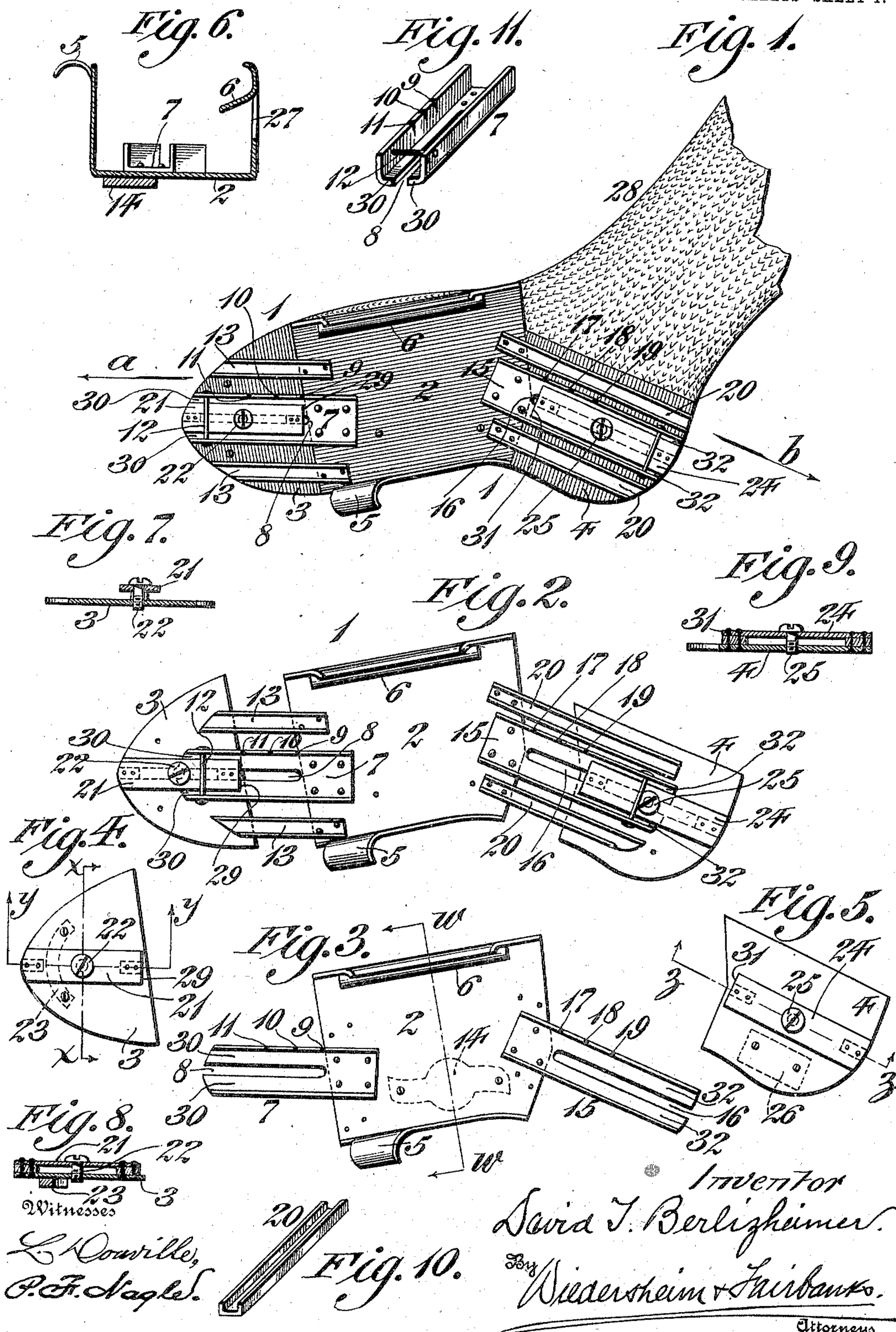


D. T. BERLIZHEIMER.  
EXPANDING DIE OR STAMP.  
APPLICATION FILED MAR. 1, 1909.

951,589.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 12.



Fig. 14.



Fig. 13.



Fig. 18.

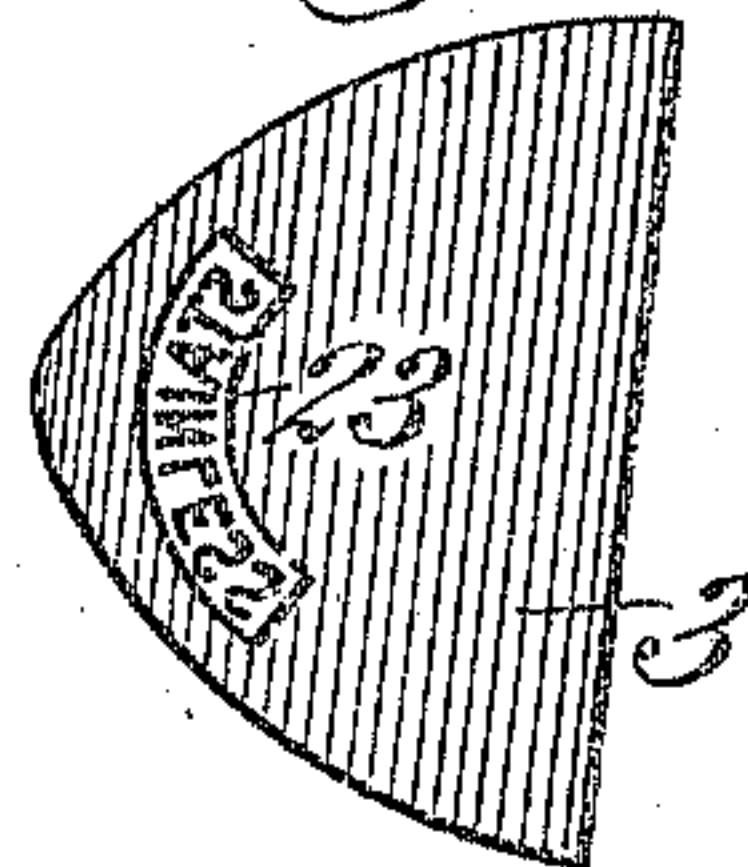


Fig. 15.



Fig. 16.



Fig. 17.

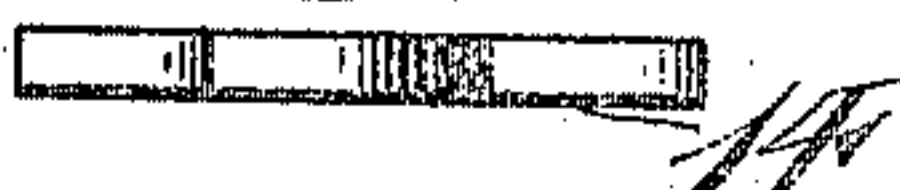
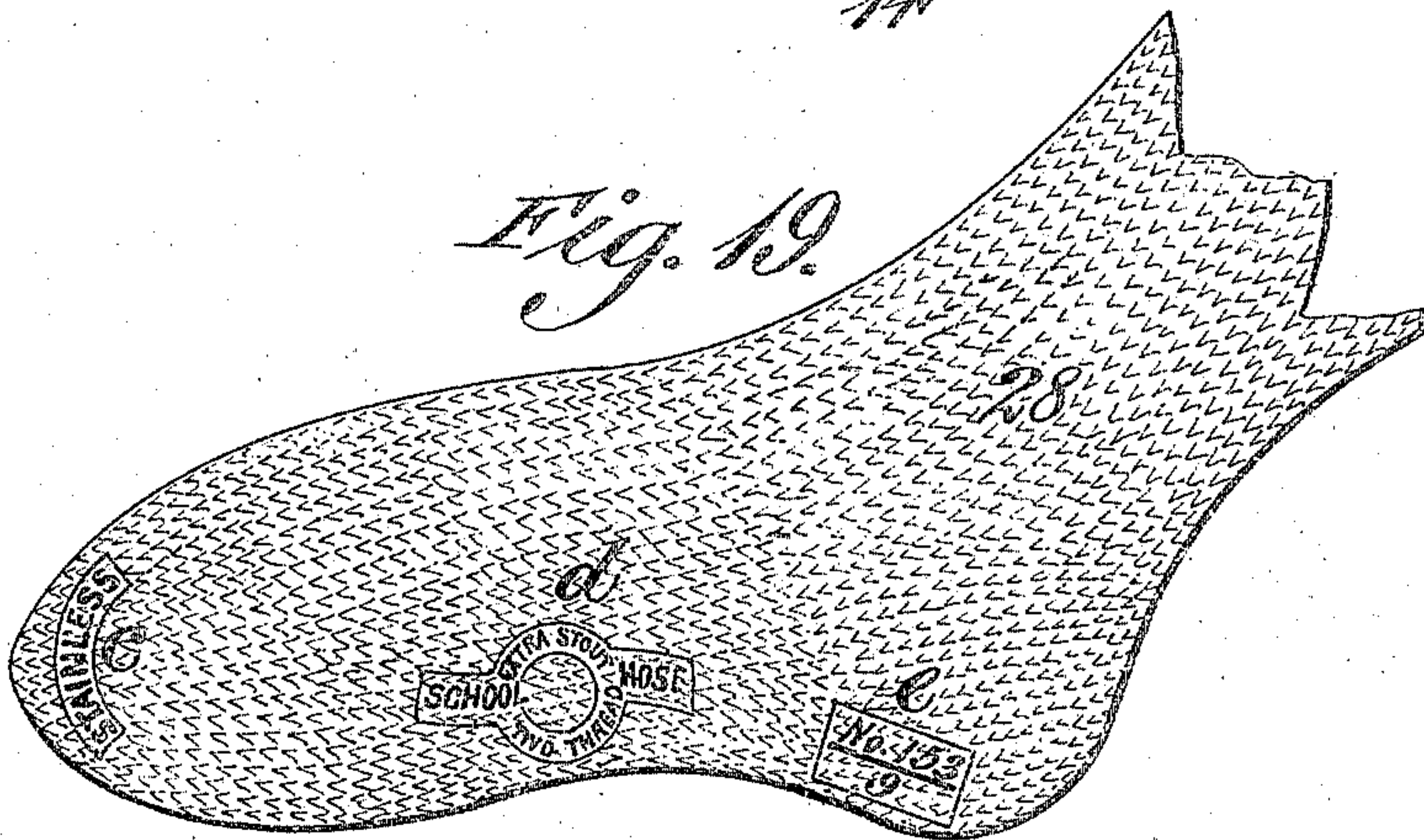


Fig. 19.



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# UNITED STATES PATENT OFFICE.

DAVID T. BERLIZHEIMER, OF PHILADELPHIA, PENNSYLVANIA.

EXPANDING DIE OR STAMP.

951,589.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed March 1, 1909. Serial No. 480,562.

*To all whom it may concern:*

Be it known that I, DAVID T. BERLIZHEIMER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Expanding Dies or Stamps, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to expanding die or stamp die for applying descriptive matter, designs and other characters on articles, and more particularly stockings, to be stamped.

It also consists of means for adjusting this expanding die or stamp, whereby the same is adapted to properly locate the characters to be applied to the articles by bringing said characters nearer to each other or else moving them farther apart according to requirements.

It further consists of means for firmly retaining the movable parts of the die in their proper or adjusted positions.

I have, in the present instance, illustrated this device as adapted to stamp or apply certain characters to hosiery, but I do not limit its use to this particular class of articles since said device may be adapted to stamp articles other than that illustrated in the drawings.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 is a plan view of the device and a portion of a stocking to be stamped. Fig. 2 is a plan view of the device seen in Fig. 1 with certain of the parts in different positions from those of the corresponding parts seen in said Fig. 1. Fig. 3 is a plan view of the center plate. Fig. 4 is a plan view of the toe plate. Fig. 5 is a plan view of the heel plate. Fig. 6 is a vertical section on line *w—w* in Fig. 3. Fig. 7 is a vertical section on line *x—x* in Fig. 4. Fig. 8 is a vertical section on line *y—y* in Fig. 4. Fig. 9 is a vertical section on line *z—z* in Fig. 5. Figs. 10 and 11 are perspective views of certain detached portions of the device. Fig. 12 is a plan view of a block, adapted to be secured to the toe plate seen in Fig. 4 and provided with characters that apply the color thereon to the toe portion of a stocking. Fig. 13 is a side elevation of the block, seen in Fig. 12. Fig. 14 is a plan view of a block, adapted to be secured to the heel plate, seen

in Fig. 5, and provided with characters that apply the color thereon to the heel portion of a stocking. Fig. 15 is a side elevation of the block, seen in Fig. 14. Fig. 16 is a plan view of a block, adapted to be secured to the center plate seen in Fig. 3, and provided with characters that apply the color thereon to the central portion of the foot of a stocking. Fig. 17 is a side elevation of the block seen in Fig. 16. Fig. 18 is a plan view of the underside of the toe plate, seen in Fig. 4, with the block seen in Fig. 12 secured thereto. Fig. 19 is a plan view of a portion of a stocking with the characters stamped thereon by the device illustrated, more particularly in Fig. 1.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Similar characters of reference indicate corresponding parts in the figures.

Referring to the drawings:—In the manufacture of hosiery it is the custom to imprint on each stocking various subject matter, for example, the size of the stocking, a name indicating the character of the stocking and a word or symbol to give some idea as to the make, this being done by three separate dies requiring three operations by hand. In consequence, these marks are often improperly located on the stocking or placed at different positions thereon, which is unsightly. My invention is designed to overcome these defects and I provide a single die adjustable for various size stockings, whereby a single imprint will place the three marks at the proper place on each stocking. The construction shown in the drawings I have found in practice operates successfully, but it is evident that various changes may be made in the construction, other instrumentalities may be employed and the arrangement of the parts may be varied without departing from the spirit of my invention and I do not therefore desire to be limited in



every instance to the exact form as herein shown and described but desire to make such changes as may be necessary.

1 designates a stamping die consisting of a central plate or body portion 2, a toe plate 3 and a heel plate 4.

The plate 2 is provided with a thumb piece 5 and an inwardly projecting member 6 whereby said stamping device 1 may be readily manipulated. The plate 2 is provided with a forwardly projecting member 7 which in the present instance is in the shape of a channel bar in which is a slot 8 and graduations 9, 10 and 11. The forward portion of the projecting member 7 is preferably braced by a rod 12. The plate 2 is also provided with the forwardly projecting members or braces 13, the object of which is hereinafter described. The plate 2 has secured to the underside thereof in any desirable manner a block 14 provided with characters as will be understood from Figs. 3 and 16. The plate 2 is provided with the rearwardly projecting member 15 in which is a slot 16 and the graduations 17, 18 and 19 and the rearwardly projecting members or braces 20, the object of all of which is hereinafter described.

The toe plate 3 has secured thereto a spring plate 21 through which is passed a clamping member or screw 22 the lower extremity of which is in screw threaded engagement with the toe plate 3 as will be understood from Figs. 7 and 8 and for a purpose hereinafter described. The underside of the toe plate 3 has secured thereto in any desired manner a block 23 provided with characters as will be understood from Fig. 12, see also Figs. 4 and 8.

The heel plate 4 has secured thereto a spring plate 24 through which is passed a clamping screw 25, the lower extremity of which is in screw threaded engagement with said heel plate 4, as will be understood from Fig. 9. The underside of the heel plate 4 has secured thereto in any desired manner a block 26 provided with characters, as will be understood from Fig. 14, see also Fig. 5.

The operation of the device is as follows:—Assuming the several parts of the device to be in the relative positions seen in Fig. 1, the operator places his or her thumb under the thumb piece 5 and inserts the ends of his fingers through the opening 27 so as to grasp the inwardly projecting member 6, as will be understood from Fig. 6, after which the device is readily manipulated. The operator then brings the stamping device 1 in such a position that the characters in the blocks 14, 23 and 26 dip into a printing composition, after which said device is placed upon the foot of a stocking 28, as illustrated in Fig. 1 and when removed from said stocking, leaves the impressions or characters indicated at *c*, *d* and *e* stamped

or printed thereon. When it is desired to stamp or mark a stocking of a larger size than that seen in Fig. 1, the operator loosens the screws 22 and 25 and moves the toe plate 3 in the direction indicated by the arrow *a* in Fig. 1 until the rear edge 29 of the spring plate 21 coincides with the desired graduation mark 10 or 11, depending upon the size of the stocking to be marked, after which said screw 22 is tightened and clamps the spring plate 21 firmly against the horizontal portions 30 of the projecting member 7 whereupon the toe plate 3 is securely retained in its adjusted position. It is apparent that the slot 8 in the member 7 permits the toe plate 3 and its adjuncts to move in and out relatively to the center plate 2 and that the members 13 steady or prevent improper movement of said toe plate so as to relieve the screw 22 from undue strain. The heel plate 4 is moved in the direction indicated by the arrow *b* until the rear edge 31 of the spring plate 24 coincides with the desired graduation mark 18 or 19, after which the screw 25 is tightened and firmly clamps the spring plate 24 against the horizontal portions 32 of the member 15 and thus retains the heel plate 4 securely in its adjusted position relatively to the center plate 2. The projecting members 20 steady the heel plate 4 and thus relieve the screw 25 from undue strain. The slot 16 in the member 15 permits the heel plate 4 and its adjuncts to move in and out with respect to the center plate 2.

It will be noted that the members 7 and 15 extend at the proper angles from the plate 2 so that the adjusted positions of the toe plate 3 and heel plate 4 are in proper relation to the plate 2 and the toe and heel of the stocking to be printed in order that the impressions will be properly positioned on the stocking.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In an expanding die or stamp, a body portion, a die member thereon adapted to be adjusted upwardly and away from said body portion and at an angle to the longitudinal axis of the body portion, and a second die member thereon adapted to be adjusted downwardly and away from said body portion and at an angle to the longitudinal axis of the body portion.

2. In an expanding die or stamp, a body portion, a fixed member thereon extending forwardly from the body and upwardly at an angle thereto, a fixed member thereon extending rearwardly from the body and downwardly at an angle thereto and dies suitably mounted on each of said members and adjusted thereon.

3. In an expanding die or stamp, a body portion, a member thereon extending for-



wardly and upwardly at an angle to said body portion, a member thereon extending rearwardly and downwardly at an angle to said body portion, and a plate adjustably mounted on each of said members.

4. In an expanding die or stamp, a body portion, a member thereon extending forwardly and upwardly at an angle to said body portion, a member thereon extending rearwardly and downwardly at an angle to said body portion, a plate carried by each member and movable thereon, and means for locking said plates in their adjusted position.

5. In an expanding die or stamp, a body portion, a member extending forwardly and upwardly at an angle to said body portion, a member extending rearwardly and downwardly at an angle to said body portion, a plate carried by each member movable thereon, means for locking said plates in their adjusted position, and a brace for said plates.

6. In an expanding die or stamp, a body portion, a member extending forwardly and upwardly at an angle to said body portion, a member extending rearwardly and downwardly at an angle to said body portion, a plate carried by each member and movable

thereon, means for locking said plates in their adjusted position, braces on said body portion for said plates and gripping means on said plate.

7. In an expanding die or stamp, a body portion, plates carried by said body portion one of said plates being adjustable forwardly and upwardly at an angle to said body portion and the other plate being adjustable rearwardly and downwardly with respect to said body portion, means for locking said plates in their adjusted position, and means for indicating the position at which said plates are to be placed.

8. In an expanding die or stamp, a body portion, extensions on said body portion, one of said extensions projecting forwardly and upwardly with respect to said body portion and the other extending rearwardly and downwardly with respect to said body portion, plates movably mounted on said extensions and screws for locking said plates on said extensions.

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