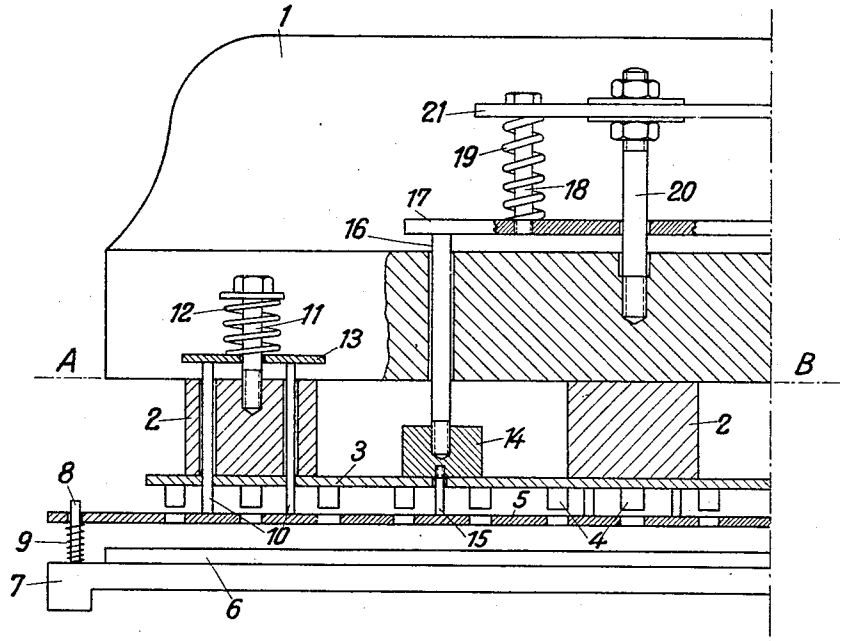
Dec. 10, 1929. A. ZSIGMONDY 1,739,200

STAMPING DEVICE, ESPECIALLY FOR STAMPING PIECES OUT OF PLATES OF ARTIFICIAL HORN

Filed Oct. 29, 1928

Fig. 1.



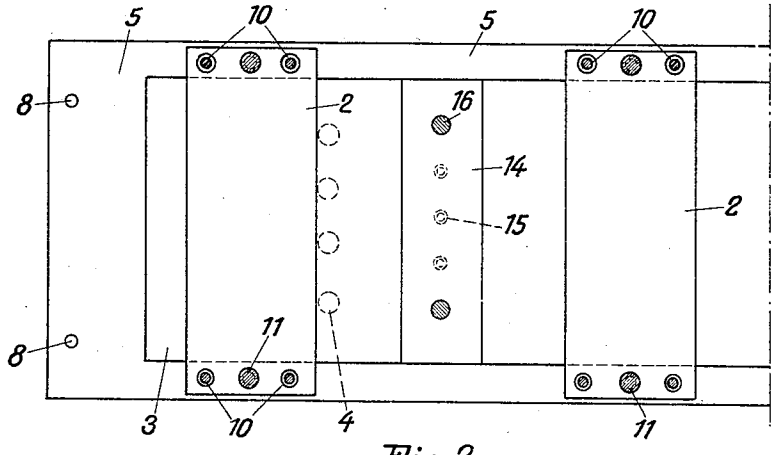


Fig. 2.

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UNITED STATES PATENT OFFICE

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STAMPING DEVICE, ESPECIALLY FOR STAMPING PIECES OUT OF PLATES OF ARTIFICIAL HORN

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The present invention relates to a stamping device intended chiefly for the stamping of pieces out of plates of artificial horn, and being provided with means preventing parts of the material from adhering at the punches of the device. This effect is obtained with the aid of a stripping plate which is subjected to the pressure of springs that are put under tension while the stamping takes place, as hereinafter fully described.

The invention is illustrated diagrammatically and by way of example on the accompanying drawing on which Figure 1 is a vertical longitudinal section, partly in side-view, of one half of a stamping device designed according to this invention, and Figure 2 is a horizontal section in the plane A—B of Fig. 1.

The vertically movable body 1 is guided by vertical guides (not shown) and is moved up and down by any suitable known driving means, for instance an eccentric or the like. Attached to the bottom face of the body 1 are some transverse blocks 2, to which is affixed a plate 3 provided with the punches 4 by which correspondingly shaped parts are to be stamped out of the plate 6 consisting generally of artificial horn. This plate is supported on a base plate 7 from which project upwardly some pins 8 serving as guide members for a stripping plate 5 normally supported by helical springs 9 surrounding the bolts 8 and keeping the plate 5 in raised position in which it is located just below the punches 4. The plate 5 is provided with perforations, the size and shape, and the location and arrangement of which, corresponds exactly to the size and shape, as well as to the location and arrangement, of the punches, the size of the perforations being, of course, such that the punches can pass therethrough.

From each end of the stripping plate 5 extend upwardly pins 10 passing through bores of the respective transverse blocks 2, and between said bores extend upwardly from said blocks bolts 11 passing through a transverse plate 13 which is subjected to the pressure of helical springs 12 surrounding said bolts and being held by them in proper position. The bottom face of the plate 13 contacts with the upper ends of the pins 10.

Between the two transverse blocks 2 at each end of the stamping device is a smaller transverse block 14 arranged upon the plate 3. From this block extend downwardly through bores of the plate 3 pins 15 which bear upon the plate 5, and upwardly extend from the block 14 pins 16 which pass through bores of the body 1 and contact at their upper ends with a longitudinal plate 17 guided by bolts 20 screwed into the body and supporting at their upper ends another longitudinal plate 21 serving as abutment member for the upper ends of helical springs 19 surrounding pins 18 extending upwardly from the plate 17 and being guided in the plate 21, all as shown in Fig. 1.

The manner of operation of the device is as follows:

The plate 6 of artificial horn or the like is placed upon the ground plate 7. At the commencement of the operation the body 1 with all parts it carries is in a somewhat higher position than that shown in Fig. 1, and on its downward movement first the pins 10 and 15 contact with the stripping plate 5, the parts being then in the position shown in Fig. 1. During the further downward movement of the body 1 the pins 10 and 15 press the plate 5 down upon the plate 6 to be stamped, and as from this moment no further downward movement of the plate 5 is possible, said pins come to a standstill, in consequence whereof the springs 12 and 19 are compressed, since also the plates 13 and 17 have come to a standstill, but the bolts 11 and the bolts 20 with the plate 21 have not.

When now the body 1 proceeds in its downward movement, the punches 4 penetrate through the plate 6 and stamp out of it the pieces required which then fall down through suitable apertures of the plate 7. The stamping procedure being, thus, finished, the body 1 is withdrawn, that is to say, moved upwardly, together with the plate 3, but the plate 5 is retained upon the plate 6 by the springs 12 and 19. The plate 5 is retained until the punches 4 have left the plate 5. Finally, the pins 10 and 15 are so much lifted that the springs 9 can lift the plate 5 so

that now another plate of artificial horn or the like can be put upon the plate 7.

Finally I emphasize the features that the pins 15 are arranged in rows, as shown in Fig. 2, and that the pins 10 are arranged just over the rims of the stripping plate, also as shown in Fig. 2.

I claim:

1. A stamping device, especially for stamping pieces out of plates of artificial horn, comprising, in combination, a support adapted to receive a blank; a vertically movable body, blocks attached to the bottom of said body, a punching plate attached to said blocks, and punches upon this plate; a stripping plate arranged between the punching plate and the blank support, and means for holding said stripping plate at some distance over the support provided for the blank; vertically movable pins attached to the stripping-plate and extending upwardly through said blocks, and springs arranged over said pins and being adapted to be compressed when the punching plate descends, said springs being also adapted to retain the stamped plate depressed until the punches have left it.

2. A stamping device, especially for stamping pieces out of plates of artificial horn, comprising, in combination, a support adapted to receive a blank; a vertically movable body, blocks attached to the bottom of said body, a punching plate attached to said blocks, and punches upon this plate; a stripping plate arranged between the punching plate and the blank support, and means for holding said stripping plate at some distance over the support provided for the blank; vertically movable pins extending upwardly through said blocks from the stripping plate, transverse plates located upon said pins and springs bearing upon said transverse plates, said springs being adapted to be compressed when the stamping operation proceeds, said springs being also adapted to retain the stamped plate depressed until the punches have left it.

In testimony whereof I affix my signature.

ADALBERT ZSIGMONDY.