Sept. 6, 1949. A. R. BONE 2,481,191

DEVICE FOR DETACHING TYPE PLATES FROM MAGNETIC CHASES

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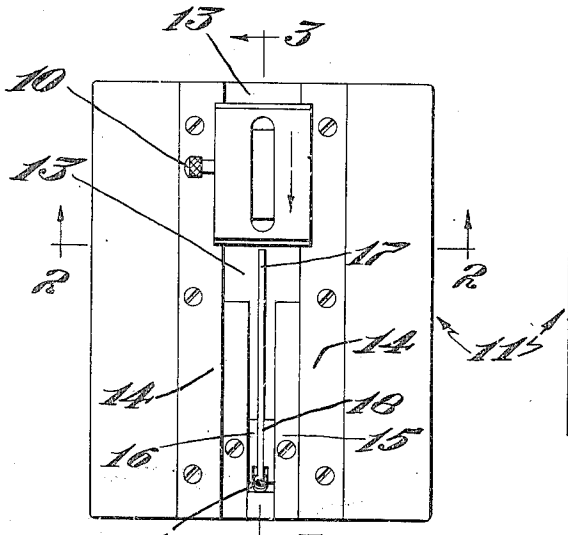


Fig. 1

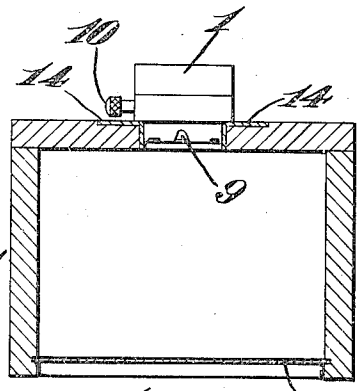


Fig. 2

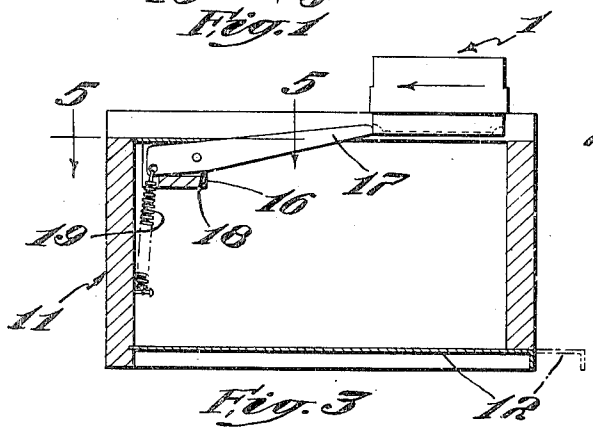


Fig. 3

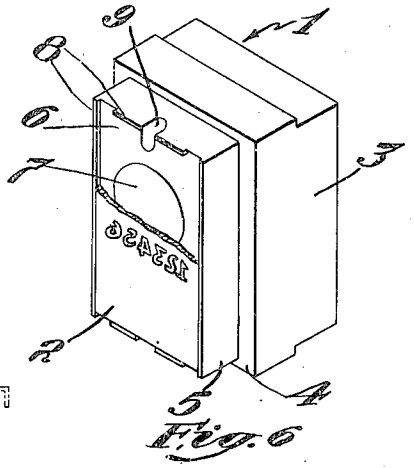


Fig. 6

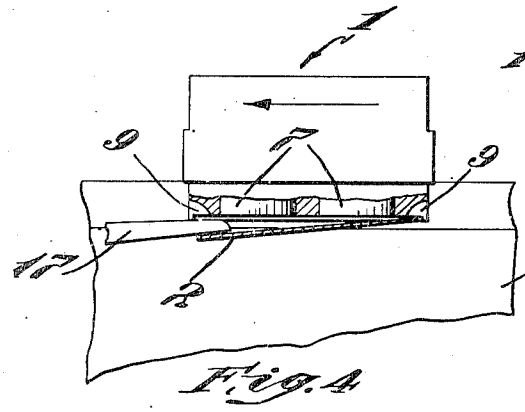


Fig. 4

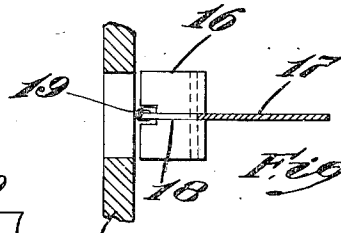


Fig. 5

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DEVICE FOR DETACHING TYPE PLATES FROM MAGNETIC CHASES

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6 Claims. (Cl. 101—382)

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In certain processes of printing a plate carrying raised letters or other characters is attached to a block of suitable shape for mounting in a printing machine, and ink is applied to the raised characters during the printing process. After printing the block is removed from the machine and the inked plate is detached from the block. For example, in printing price tags or the like in small lots a rectangular plate of inexpensive sheet metal is embossed with price and descriptive indicia by a rapid stamping device and placed within the positioning lips of a chase block which holds the plate flush with the positioning lips but so that the raised figures extend outside the lips. The block is placed in a printing machine and the tickets are printed. The block is then removed, the ink printing plate detached and a new printing plate attached. This method of printing is particularly suited for use in department stores, mail order houses and similar establishments.

A desirable type of chase block for holding the printing plate contains a small permanent magnet with sufficient force to hold the printing plate firmly to the face of the block within the positioning lips around the face. However, with such a magnetic chase block it has been found troublesome and time consuming to detach the inked printing plate owing to the force with which the magnet holds the plate on the face of the block and the fact that the positioning lips prevent the plate from being slid from the face. Furthermore, if the plate is removed manually, ink will stain the hands of the operator.

Objects of the present invention are to provide a device for detaching a printing plate from a magnetic chase block such as that described which is simple and quick in operation, which removes and disposes of the plate without inking the hands of the operator, and which is simple and economical to manufacture.

The present invention concerns a device for detaching a printing plate magnetically held on the face of a chase block having a space which opens at both said face and also at one end of the block, the device comprising a support which has a track along which the chase block may slide face down, and a finger located relative to the track so that as the chase block is moved along the track in the direction opposite to the direction the finger points, with said end of the block foremost, the finger is in the path traversed by the space, whereby the printing plate is stripped from the chase block. The space on the chase block may be a notch in the edge formed

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by the face and one end of the chase block, a groove in the face of the chase block running from one end of the block to the other, or any other space which opens at the end of the chase block allowing the finger to enter, and so formed that it admits the finger between the chase block and the printing plate as the chase block is moved along the track with said end of the track foremost toward the finger. The support may be any fixed or portable hollow container, or the surface of a work bench or the printing machine. Preferably the under surface of the finger intersects the path of the plate obliquely to remove the plate with a wedging action. In the preferred embodiment the aforesaid finger is movably mounted beneath the track to move from a retracted position to an operative position in which the free end of the finger projects obliquely through the slot into the path of the aforementioned space as the chase block is moved along the track with said end of the block foremost, and means are provided yieldingly to hold the finger in said operative position, whereby as the chase block is moved along the track the finger is inserted between the plate and the chase block and the plate is stripped from the chase block.

For the purpose of illustration a typical embodiment of the invention is shown in the accompanying drawing in which

Fig. 1 is a plan view of the plate detacher;

Figs. 2 and 3 are sections on lines 2 and 3 of Fig. 1, parts being broken away;

Fig. 4 is an enlarged view of section 3;

Fig. 5 is a section on line 5 of Fig. 3, parts being broken away; and

Fig. 6 is a perspective view of the chase block with printing plate attached.

In the illustration the chase block 1 (Fig. 6) comprises an upper portion 3 and a lower portion 5 of reduced cross-sectional dimensions with a shoulder 4 between the two portions. The block consists of non-magnetic material molded around a U-magnet 7 (Fig. 4). The lower face 6 of the block is surrounded by positioning lips 8 within which the printing plate 2 fits, being held on the face by the magnet. Notches 9 are located at the ends of the portion 5, interrupting the lips 8 at the ends of the face 6. As shown in Figs. 1 and 2, the chase block carries a fixed handle 10. The notches permit manual or mechanical insertion of a pointed instrument between the face of the block and the printing plate, and preferably are located in the middle of the ends, although any opening at the end of the face which allows

insertion of an instrument between the plate and the face is sufficient.

In the particular embodiment of the invention chosen for the purposes of illustration the plate-detaching device comprises a wood box 11 having a sheet metal sliding bottom 12 and a slot 13 extending longitudinally in the top. Mounted along the edges of the slot 13 are metal angles 14 which are spaced apart sufficiently to allow the lower portion 5 of the chase block to fit between them and which serve as a track for sliding the chase block along the slot. Below the slot, integrally joined with the angles and extending from one end partway along the slot, are two inwardly directed metal flanges 15 (Fig. 1) which serve as a mount for a pivot block 16 below the slot. A finger 17 centered in the slot 13 is pivotally mounted in a recess 18 in the block 16. A spring 19 is connected between one end of the finger 17 and an end wall of the box, holding the said end of the finger against the bottom of the recess 18, so that the free end of the finger is raised to operative position. In the operative position the free end of the finger is slightly above the path which is followed by the printing plate 2 as the chase block 1 is slid along the angles so that the straight under edge of the finger intersects that path and the rounded end of the upper edge intercepts the notch 9 at the foremost end of the chase block.

In operation the chase block 1 with the plate 2 attached is placed in the track formed by the angles 14 at the end of the slot 13 opposite the finger 17. The chase block is then slid along the track toward the finger. The finger enters the notch 9 and its end is cammed downward by the curved back wall of the notch, forcing the printing plate down from the face of the chase block so that the finger enters between the face and the plate and strips the plate from the block retracting below the slot as the block passes over the end of the finger. When the block passes beyond the end of the finger, the latter returns to the operative position.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. For detaching a printing plate magnetically held on the face of a chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block and a finger in the path traversed by said space as the block is moved along the track, whereby as the block is moved along the track in the direction opposite to the direction the finger points, with said end of the block foremost, the plate is stripped from the block.

2. For detaching a printing plate magnetically held on the face of a chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block with a slot extending longitudinally therein and a finger in the path of said space as the block is moved along the track, the under surface of the finger intersecting the path of the plate obliquely, whereby as the block is moved along said track in the direction opposite to the direction the finger points with said end of the block foremost, the plate is stripped from the block.

3. For detaching a printing plate magnetically held on the face of a chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block with a slot extending longitudinally therein, a finger movably mounted beneath the track to move from a retracted position to an operative position in which the free end of the finger projects obliquely through the slot into the path of said space as the block is moved along the track, and means yieldingly to hold the finger in said operative position, whereby as the block is moved along said track in the direction opposite to the direction of the finger, with said end of the block foremost, the plate is stripped from the chase block.

4. For detaching a printing plate magnetically held on the face of a chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block with a slot extending longitudinally therein, a finger, whose upper edge curves downward at the free end, pivotally mounted beneath the track in an operative position in which the free end projects obliquely through the slot into the path of said space as the block is moved along the track, and means yieldingly to hold the finger in said operative position, whereby as the block is moved along the track in the direction opposite to the direction the finger points, with said end of the block foremost, the finger is cammed downward to a retracted position completely below the track, and the plate is stripped from the chase block.

5. For detaching a printing plate magnetically held on the face of a chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block, a finger in the path traversed by said space as the block is moved along the track and a receiver for the plate disposed adjacent the track, whereby as the block is moved along the track in the direction opposite to the direction the finger points, with said end of the block foremost, the plate is stripped from the block into the receiver.

6. For detaching a printing plate magnetically held on the face of the chase block having a space opening at the face and one end of the block, a device comprising a support having a track for said block with a slot extending longitudinally therein, a finger in the path of said space as the block is moved along the track, the under surface of the finger intersecting the path of the plate obliquely, and a receiver for the plate disposed below the finger, whereby as the block is moved along the said track in the direction opposite to the direction the finger points, with said end of the block foremost, the plate is stripped from the block into the receiver.

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