COMBINATION BAR FOR THE INTERMEDIATE FRAMES IN JUSTIFYING STRIP PERFORATING MACHINES OF THE MONOTYPE TYPESetting MACHINE SYSTEM

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In using the different founts of type of the monotype system, it is necessary to punch different combinations of holes in the paper band for the same letters, in order to ensure the letters occupying the proper position in the standard line. Up to the present, this has entailed the use of different intermediate frames.

The invention enables a single intermediate frame to be used for all founts of type, inasmuch as it renders possible a change of position of the combination-bar strikers that effect the opening of the air valve, said strikers being, according to the invention, adjustable in the longitudinal direction of the bar.

This results in economy because only one single intermediate frame is now required whereas it was necessary heretofore to keep a large stock of intermediate frames.

Various devices may be employed for carrying out the invention, some embodiments of which are illustrated, by way of example, on the accompanying drawings to which reference will now be made.

Fig. 1 is a perspective view of the usual intermediate frame of the monotype machine;

Figs. 2–4, 5–7, 8–10 and 11–14 show different ways of attaching the strikers.

In Fig. 1, a denotes the key knob which is struck by the compositor in order to punch the hole in the justifying strip for a letter. The stroke turns the key lever on the pivot b so as to make contact with the nose c of the combination bar d. This causes the bar d to slide and the strikers g to actuate the rocking levers e, f, which are pivoted at e'. The movement of these rocking levers e, f actuates the valve rods h, k, through the cross bars i, and applies pressure to the air valves j, whereby air is admitted from an air chamber to the piston, which therewith forces the proper punches through the paper.

According to the present invention, said strikers g can be moved into different positions, that is to say, they are adjustably arranged in the longitudinal direction of the bar d, so as to enable the strikers to be readily adapted to the different founts of type at any time, without requiring the insertion of a new intermediate frame.

In the embodiment according to Figs. 2–4 (of which Fig. 2 is a perspective view of the combination bar on a much enlarged scale, Fig. 3 a side elevation of the striker, and Fig. 4 a vertical section through said striker) the striker g is provided with an extension web g' adapted to be inserted into milled dovetail slots d' in the combination bar d. In order to afford the striker a secure hold, its web g' is slightly dented at g'' and the slots d' are provided with holes d'' so that, when the web g' is slipped into one of the slots d', the projection g'' is able to snap into the corresponding hole d'', thus producing a kind of press-button fastening that prevents the striker from getting loose by accident. To give a still further hold to the striker, a slight bulge is produced on the web g' at the point g''' the ends of which bulge set up a clamping action between the web and the edges of the dovetail.

In the embodiment according to Figs. 5–7 (of which Fig. 5 is a perspective view of part of the combination bar on a much enlarged scale, Fig. 6 a side elevation of the striker, and Fig. 7 a section) the striker g is connected, by means of an integral web g'' with an extension disc g''' which is about double the thickness of said web g'', the latter being of the same thickness as the striker proper. Gaps d'' and d''', corresponding respectively to the web g'' and disc g''', are cut in the bar d, so that the striker, as shown in Fig. 7, fits into the bar and lies flush with the same on both sides.

Another embodiment is illustrated in Figs. 8–10, of which Fig. 8 shows a perspective view of a portion of the combination bar on an enlarged scale, Fig. 9 a perspective view of the striker, and Fig. 10 a cross section through the bar and striker. In this case the striker g has a thin extension strip g'', to which is attached a bracket member g''', so as to form a U or stirrup and thereby enable the striker to be slipped on to the bar d from below and ride thereon. To prevent the striker from slipping down off the bar, a press-button type of catch d'', d''', similar to that of the embodiment according to Figs. 2–4, is provided on both sides.

Still another embodiment is shown by Figs. 11–14, of which Fig. 11 is a perspective view (partly in section) of a portion of the combination bar, Fig. 12 a plan of the bar, Fig. 13 a view of same from below, and Fig. 14 a cross section. The combination bar d is hollow in this instance, so that the
striker $g$ can be adjustably arranged in the resulting cavity and adapted to be secured at the desired points. As shown, the nose $g$ has an extension $m$ in the form of a guide block. The upper face of the bar $d$ is provided with holes $o'$, and the under side of the bar is provided with wider and narrower slots $s$, $s'$, the wider ones $s$ being to accommodate the striker. On the top of the block $m$ is arranged a lug $o$ corresponding to the previously mentioned holes $o'$ in the bar $d$. A flat spring $n$ is arranged on the base of the block $m$, for the purpose of holding the striker when it is slipped into place.

In order to adjust the striker $g$ and secure it again, all that is needed is to pry the sides of the bar $d$ apart by means, for example, of a tool inserted in the slot $s'$, whereupon, after pushing down the lug $o$, the striker $g$ can be detached and inserted in another of the slots $s$, the lug $o$ fitting into the corresponding hole $o'$ in the bar $d$, thus supporting the striker on all sides.

I claim:

1. A combination bar for the intermediate frames in justifying-strip perforating machines of the monotype typesetting machine system, comprising a bar proper and individual strikers adapted to be attached by means for forming a combination bar to said bar.

2. A combination bar for the intermediate frames in justifying-strip perforating machines of the monotype typesetting machine system, comprising a bar proper and individual strikers adapted to be attached singly to said bar.

3. A combination bar for the intermediate frames in justifying-strip perforating machines of the monotype typesetting machine system, comprising a bar proper and individual strikers adapted to be attached singly at any one of a plurality of positions along said bar.

4. A combination bar for the intermediate frames in justifying-strip perforating machines of the monotype typesetting machine system, comprising a bar proper and individual strikers adapted to be detachably connected at any one of a plurality of positions arranged longitudinally upon said bar.

5. The combination with the intermediate frames of monotype typesetting machines having a combination bar, of strikers for said bar and means for detachably connecting said strikers at predetermined points upon said bar.

6. The combination with the intermediate frames of monotype typesetting machines having a combination bar, of strikers for said bar and means for detachably connecting said strikers at predetermined points upon said bar, said strikers each comprising a body portion and an extension and means for connecting said extension to said bar.

7. The combination with the intermediate frames of monotype typesetting machines having a combination bar provided with recesses therein, strikers for said bar, extensions formed with said strikers and means whereby said extensions may be secured within said recesses to said bar.

In witness whereof I have hereunto set my hand.

AUGUST GROOTE.