TYPE HEAD ADAPTER FOR HOT STAMPING MACHINES

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Fig. 1

Fig. 2

Fig. 3

Fig. 4
My invention relates to type head adapters for hot stamping machines, such as shown in my previous Patent No. 2,047,373, which issued April 9, 1932. Included in the objects of my invention are:

First, to provide an adapter which is arranged for insertion in the type holder head in place of a multiple line type holder, and which is adapted to permit use of a single line type holder, or a smaller multiple line type holder, thereby to extend the range of use of the stamping machine.

Second, to provide an adapter of this class which utilizes the means employed to secure a multiple line type holder in the head of a hot stamping machine and which, in turn, carries means to facilitate insertion and removal of the smaller type holder.

Third, to provide an adapter of this class which is arranged to provide effective heat transfer from a heating means attached to the type holder head to the type holder contained within the adapter.

Other objects and advantages of this invention will be apparent from the following detailed description of a preferred embodiment thereof, as illustrated in the accompanying drawings in which:

Figure 1 is a side view of a hot stamping machine showing my adapter in position therein.

Figure 2 is an enlarged sectional view through 2—2 of Figure 1 showing the type holder head fragmentally and my adapter therein with a type holder fitted in my adapter.

Figure 3 is an end view thereof.

Figure 4 is a bottom view of the type holder head and adapter with portions thereof shown in section.

The hot stamping machine for which my adapter is intended comprises a flat base 1, from the rear side of which extends a goose neck member 2 overhanging the base 1. The extremity of the goose neck member is provided with a vertical guideway for a ram bar 3. The ram bar is reciprocated by a handle 4 and a rack and pinion drive means (not shown). Fitted to the lower end of the ram bar 3 is a transversely disposed type holder head 5.

Removably mounted under the goose neck 2 at the back side thereof is a foil supply reel 6 adapted to contain a ribbon of foil which is brought forwardly under the type holder head and is wound on a take-up drum 7 which is periodically advanced by means of a ratchet 8 and a pawl 9. The take-up drum and ratchet are supported in a frame 10 extending forwardly from the type holder head 5. The pawl means is fixed to the extremity of the frame 10 so that upon reciprocation of the type holder head the take-up drum is advanced to present new sections of foil under the type holder head.

The type holder head is provided with a heater 11, preferably in the form of an electrical element secured to the back side thereof and capable of reciprocation with the type holder head.

The base 1 supports a suitable table 12 or may be provided with work-holding fixtures (not shown) adapted to hold the work to be stamped in proper position under the type holder head.

The type holder head is provided with a transverse channel 13 with parallel side walls which normally receive a type holder (not shown) adapted to carry several lines of type. Secured to the underside of the type holder head in order to project laterally beyond one of the vertical walls of the channel is a retainer strip 14. The type holder is slipped sidewise into the channel 13 and is prevented from falling from the channel by the retainer strip 14.

The structure so far described may be considered as conventional and functions quite satisfactorily when a multiple line type holder is employed. However, when it is desired to hot stamp with a single line of type or with small size type, or in any case, with type having less lines than the maximum capacity afforded by the width of the channel 13, the excess space in the type holder must be filled with blank members. Thus, in changing the type, these blank members must be removed and reinserted, necessitating a substantial extra amount of labor and time. It is highly desirable, in the use of a machine of this type, that the type holders can be quickly removed and inserted and that the type can be changed frequently as it is often desired to make only a few, or even as little as one impression before the type is changed. This is particularly true when it is desired to print a single line, as, for example, a person's name, such as may be imprinted on personal articles, such as a pen or pencil.

My present invention seeks to solve this problem by the use of a special adapter designated generally by 21. The adapter is in the form of a channel member having parallel flanges 22, its external dimensions corresponding closely to the external dimensions of the multiple line type holder adapted to fit the channel 13. One of the flanges 22 is provided with a longitudinal notch 23 in order to ride over the retainer strip 14 and be retained thereby in the channel.

One axial end of the adapter is provided with a stop screw 24 projecting laterally so as to engage the corresponding end of the type holder head. The opposite end of the adapter is provided with a latch 25 in the form of a clip pivotally secured to the adapter and movable between a position within the boundaries of the adapter and the laterally extended position so as to engage the end of the type holder head as shown in Figure 3.

The flange opposite the one having the longitudinal notch 23 is provided with a retainer strip 26 similar to the retainer strip 14.

The channel formed by the adapter 21 is of such width as to receive a single line type holder 27 or a multiple line type holder of similar dimensions. In either case the type projects downwardly below the holder and adapter so as to engage the work placed on the table 12 and through the intervening foil.

In order to facilitate heat transfer from the heater 11 to the type, and to enable the adapter 21, as well as the type holder 27, to bear uniformly throughout the respective webs of the channels in the head 5 and adapter 21, yieldable lateral pressure is exerted against the adapter and type holder.

The adapter is provided with a longitudinal groove 29 in the outer side opposite from the heater. Secured by one end in the groove is a leaf spring 30 having a detent 31 at its extremity which is urged through a hole provided in the adapter so as to bear yieldably against one side of the type holder 27 and hold the other side thereof in good heat-conductive contact with the corresponding side of the adapter. The detent is substantially centered with respect to the vertical as well as longitudinal axis of the type holder 27.

The head 5 is provided with a pair of vertical channels 32 which receive leaf springs 33 anchored at their upper ends by screws and provided at their lower ends with detents 34 which project through suitable openings in the outer side wall opposite the heater to urge the correspond-
ing side of the adapter into good heat-conductive relation with the head 5. As it is desirable to have the detents 34 in a plane common with the detent 31, one of the detents 34 may bear against the head of the screw which holds the leaf spring 38, as shown in Figure 4.

The type holder is free to bear against the web of the adapter 21 and the adapter 21 is free to bear against the web of the head 5 when the type 28 engages a work piece.

It should be observed that the depth of the channel provided in the adapter 21 is identical to the depth of the channel 13 provided in the type holder head. This is accomplished by extending the adapter 21 below the type head a distance equal to the space taken up by the web of the adapter. This is essential for the reason that the same type is often used interchangeably in the multiple line type holder (not shown) and in the smaller or single line type holder 30. The type holder is inserted and removed by thrusting it laterally or end-wise through the channel formed by the adapter in the same manner that the multiple line type holder is inserted or removed from the channel 13 of the type holder head 5.

Having fully described my invention, it is to be understood that I do not wish to be limited to the details herein set forth, but my invention is of the full scope of the appended claims.

I claim:

1. In a hot stamping machine: a main type holder head in the form of a block of material having a transverse rectangular channel in its underside and a retainer clip projecting inwardly from an edge of said channel; a heater element in heat-conductive relation to said head; an adapter of inverted U-shaped cross section adapted to slide endwise in said channel and be held therein by said clip; said adapter having a top wall and side walls covered by and in heat-conductive contact with the walls of said channel when said adapter is therein; means on said head to urge said adapter laterally in a direction toward said heater and into heat-conductive contact with said head; said adapter being arranged to receive and support a type holder; and further means on said adapter to urge said type holder laterally therein in a direction toward said heater and into heat-conductive contact with said adapter.

2. A hot stamping machine as defined in claim 1 wherein said means on said head to urge said adapter laterally and said further means each comprise resiliently yieldable devices.

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