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MAT HOLDER COMPOSING STICK

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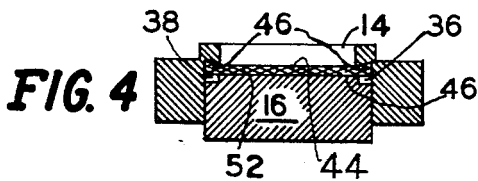
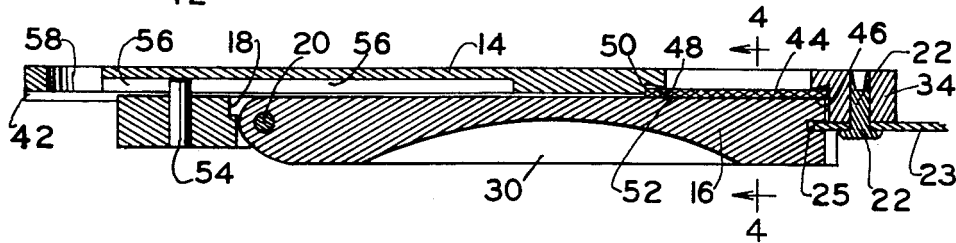
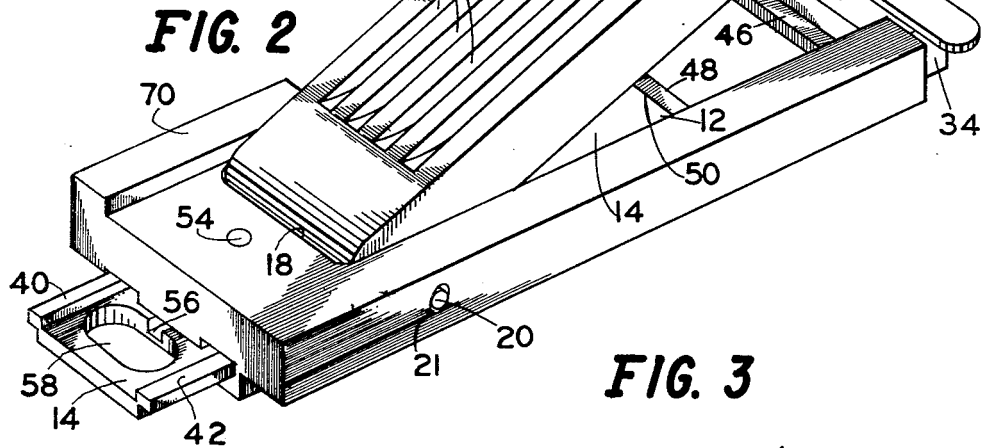
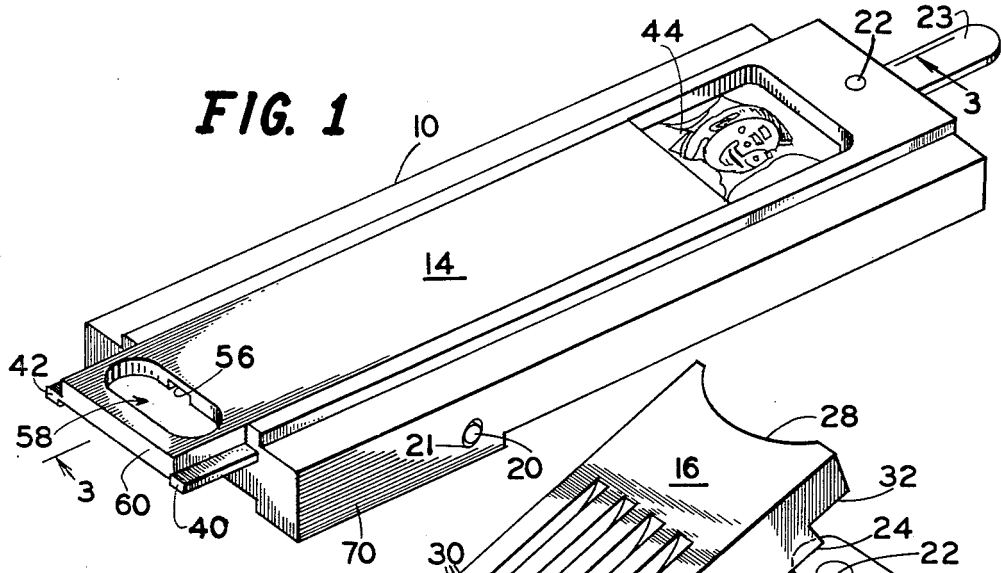


FIG. 3

FIG. 4

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MAT HOLDER COMPOSING STICK

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6 Claims. (Cl. 199—63)

This invention relates to a mat holder composing stick and more particularly, to a stick which is especially designed for use with paper mats.

A conventional slug-casting machine in common use today utilizes individual metallic molds or mats, usually made of brass, which are set in a frame or stick. The stick is then placed in the casting machine and molten metal is brought into contact with the mold. The end product is a slug incorporating the material from the brass mold or matrix which is used in the conventional fashion.

The metal molds or mats used in such an arrangement represent a substantial investment and it is an object of this invention to provide a composing stick which is particularly adapted for use with disposable paper mats rather than reusable metallic mats.

A further object is to provide a composing stick of the character described which is adapted to receive mats or varying lengths, a ready adjustment being provided to adapt the stick to a mat of selected length.

Still another object of the invention is to provide a stick of the general nature described which positively locks the paper mat in place in the precise position desired for accurate casting of the slug.

A further object of the invention is to provide a stick of the character described which is relatively simple in construction and yet sufficiently positive in its action that it permits the use of paper mats rather than metallic mats, thus accomplishing a very substantial saving in operational costs and permitting the stocking of a wider variety of mats for job printing operations.

Further objects and advantages of this invention will become evident as the description proceeds and from an examination of the accompanying drawing which illustrates one embodiment of the invention and in which similar numerals refer to similar parts throughout the several views.

In the drawings:

FIGURE 1 is a perspective view of one form of the device showing a mat in place in the composing stick ready for casting after insertion in the typesetting machine.

FIGURE 2 is a perspective view of the device shown in FIGURE 1 taken from the opposite side and with the pivotal base member being shown in the partially open position.

FIGURE 3 is a longitudinal cross-sectional view of the device taken along the line 3—3 of FIGURE 1, the mat being shown in position for casting.

FIGURE 4 is a cross-sectional view of a portion of the device shown in FIGURE 3, the section being taken along the line 4—4 of that figure.

As best shown in FIGURES 1 and 2, the stick is provided with a main body portion 10, substantially in the form of a frame, having a longitudinal central opening 12. A slide member 14, which is in slidable engagement with the main body portion 10, is adapted to vary the size of the opening 12 in the upper surface of the stick. A base member 16 is pivotally mounted to the main body portion 10 at one end 18 of the opening 12 in such a manner that when secured in position it will close the bottom of the opening 12, as shown in FIGURE 3.

For the purposes of such pivotal mounting, a pin 20, which is in snug engagement with the base member 16, extends outwardly from the base member and into an

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elongate pivot hole 21 in the main body portion 10. The pivot hole 21 is sufficiently large that the pin 20 is free to rotate therein. Furthermore, since the hole 21 is elongated, the pin 20 is also free to move slightly in a vertical direction to compensate for mats of varying thickness which may be placed in the stick. It will be understood that the pin 20 extends through the base member 16 and cooperates with another hole like the hole 21 on the other side of the main body portion 10.

The base member 16 is secured in position to the main body portion 10 by means of a lock which comprises a locking arm 23 pivotally mounted upon an end 34 of the main body portion 10 by a bolt or rivet 22. In FIGURE 2 the locking arm 23 is shown in the position to which it is rotated to release the base member 16. The base member 16 is locked into position to close the bottom of the opening 12 by rotating locking arm 23 whereby the elongate end 24 of said arm extends into a groove 25 in the free end 28 of the base member 16, as best shown in FIGURE 3. If desired the upper portion of the elongate end 24 of the locking arm 23 which engages the groove 25 may be beveled to assist cooperative engagement between the arm 23 and groove 25.

As best shown in FIGURES 2 and 3, the base member 16 may be provided with a plurality of suitable slots 30 to increase the heat dissipation in this base member 16. The free end 28 of the base member 16 is provided with a step 32 which is adapted to cooperate with and rest upon the end 34 of the frame 10 when the base 16 is moved into position to close the bottom of the opening 12, as best shown in FIGURE 3. The lateral edges of the base member 16, which are moved into close association with the base of the slide member 14 when the base member is secured in the position shown in FIGURE 3, have steps 36 and 38 provided therein, as best shown in FIGURE 4. The lateral edges of the slide member 14 have complementary shoulders 42 and 40 formed therein which are adapted to be received within the steps 36 and 38, respectively, when the base member 16 is in the position shown in FIGURE 3.

As best shown in FIGURE 2, the slide member 14 and the frame or main body portion 10 form a frame for the paper mat 44, which is shown in place in FIGURES 1, 3 and 4. The periphery of the frame thus formed is slightly dished out, as shown in FIGURE 2, so that relatively sharp edges are presented by these elements to the upper surface of the base member 16. The base member portion 10 presents three of the sharp edges 46 and the slide member 14 presents the other sharp edge 48. These sharp edges, as best shown in FIGURES 3 and 4, are adapted to grip the periphery of the mat 44 when the base member 16 is secured in the operating position, as shown in FIGURES 3 and 4. The leading edge of the slide member 14 is provided with a small shoulder 50 in slightly spaced relation to the sharp edge 48, as best shown in FIGURES 2 and 3. The shoulder 50 is adapted to be brought into abutment with one side of the mat 44, the opposite side of the mat being in abutment with the end portion 34 of the frame 10. This positioning of the mat 44 with respect to the slide 14 and the frame member 10 is normally carried out prior to the seating of the base member 16. When the base member is brought into the position shown in FIGURE 3, the edges of the mat 44 are compressed between the upper surface 52 of the base member 16 and the sharp edges 46 and 48, as best shown in FIGURES 3 and 4. The four edges of the mat 44 are thus sealed when the locking arm is rotated to secure base member 16 in place, as shown in FIGURE 3. Once base member 16 is locked in position slide member 14 is likewise prevented from moving.

A pin 54 may be provided in the frame 10, one end of which is adapted to be received in the slot 56 provided in the underside of the slide member 14, as shown in FIGURE 3. The pin thus acts both as a guide for the slide 14 and a stop to prevent its complete removal from the frame member 10. A suitable opening 58 may be provided in the projecting extremity 60 of the slide member 14 to permit the slide 14 to be more readily grasped by the fingers of the user and adjusted to its proper position.

As indicated, after the mat 44 has been put in proper position in the stick and the base member 16 locked into position, the stick is inserted in the conventional typecasting machine adapted to receive sticks of this general nature, such as the Ludlow Typecasting Machine. The shoulder piece 70 is provided on the frame member 10 as a trip member for the safety mechanism on such a machine since the molten lead cannot flow into the cavity unless this safety mechanism is released. The stick is locked in proper position in the machine so that a seal is formed around the mold cavity in the stick. The mat 44 is the base of the mold cavity in the stick and because it is sealed therein in the manner described hereinbefore, molten lead will not leak from the mold cavity. Upon cooling of the metal which has been poured into the mold, the stick is removed from association with the typecasting machine. The slug formed with the image of the mat thereon may then be removed from association with the stick and used in the conventional manner.

In the drawing and specification, there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation. Changes in form and in the proportion of parts, as well as the substitution of equivalents are contemplated, as circumstances may suggest or render expedient, without departing from the spirit or scope of this invention as further defined in the following claims.

What is desired to be claimed and secured by Letters Patent of the United States is:

1. A stereotype mat holder composing stick comprising an elongated main body portion having an opening therethrough, a slide member in longitudinal slidable engagement with said main body portion and adapted to vary the size of said opening through said main body portion, said slide member and said main body portion adapted to receive a mat so that said mat covers said opening and overlaps the entire periphery thereof, a base member having one end pivotally mounted upon a pin which extends transversely from said base member, said pin cooperating with a hole in said main body portion, said hole being sufficiently large to permit rotation and vertical movement of said pin in said hole and locking means attached to said main body portion and adapted to engage the other end of said base member to secure said base member to said main body portion, whereby said stereotype mat so received is clamped in sealed relation to the edges of said opening and said slide member is locked in position.

2. A stereotype mat holder composing stick comprising a main body portion having a longitudinal opening therein, a slide member in sliding engagement with said main body portion and adapted to vary the length of said opening in said main body portion on one side thereof, a ridge extending around said opening on said main body portion and said slide member, the ridges of said main body portion and said slide member having relatively sharp edges upon which to receive a stereotype

mat so that said mat covers said opening and overlaps the entire periphery thereof, a base member having one end pivotally mounted to said main body portion on a transversely mounted pin, said pin cooperating with a hole in said main body portion to provide a pivotal connection between said base member and said main body portion, said hole in said main body portion being sufficiently large to permit vertical movement therein of said pin, the free end of said base member being adapted to be secured to said main body portion to clamp said mat against said ridges in said stick in sealed relation thereto.

3. A stereotype mat holder composing stick comprising a main body portion having a longitudinal opening therein, a slide member in sliding engagement with said main body portion and adapted to vary the length of said opening in said main body portion on one side thereof, a ridge extending around said opening on said main body portion and said slide member, the ridges of said main body portion and said slide member having relatively sharp edges upon which to receive a mat so that said mat covers said opening and overlaps the entire periphery thereof, a base member having one end pivotally mounted to said main body portion and having a free end adapted to be secured to said main body portion by locking means comprising a locking arm rotatably mounted upon said main body portion, said locking arm adapted to cooperate with a groove in the free end of said base member, to clamp said mat against said ridges in said stick in sealed relation thereto.

4. A stereotype mat holder composing stick comprising an elongated main body portion having a rectangular opening therethrough, a shelf-like peripheral edge on three sides of said opening adapted to support three sides of a stereotype mat received in said opening, a slide member disposed in sliding engagement with said main body portion in said rectangular opening to form an adjustable bottom therefor, said slide having a shelf-like edge provided on the end thereof that is normally within said opening, said slide being adapted to be selectively positioned so that said shelf-like edge thereof is adapted to support the remaining fourth side of said stereotype mat received in said opening and a base member adapted to substantially fill said opening having one end pivotally mounted in one end of said opening and a locking means adapted to secure the free end of said base member in the other end of said opening adjacent said slide member, so that the periphery of said stereotype mat is clamped thereby in sealed relation to said shelf-like edges of said opening and said slide member.

5. A stereotype mat holder composing stick of the form defined in claim 4 further characterized in that said one end of said base member pivotally mounted in one end of said opening is mounted by a pivot means which also permits a slight lateral shifting of said end so as to accommodate stereotype mats of varying thickness between said base member and said shelf-like edges.

6. A stereotype mat holder composing stick of the form defined in claim 4 further characterized in that said shelf-like peripheral edges on said opening and said slide member terminate at their outer extremities in a relatively sharp, raised corner adapted to cooperate with said stereotype mat to form a positive seal when said base member is secured in said opening.

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