A. W. HAMAKER.

ATTACHMENT FOR TYPE CASTING MACHINES.

APPLICATION FILED MAR. 1, 1909.

971,040.

Patented Sept. 27, 1910.

Fig. 1

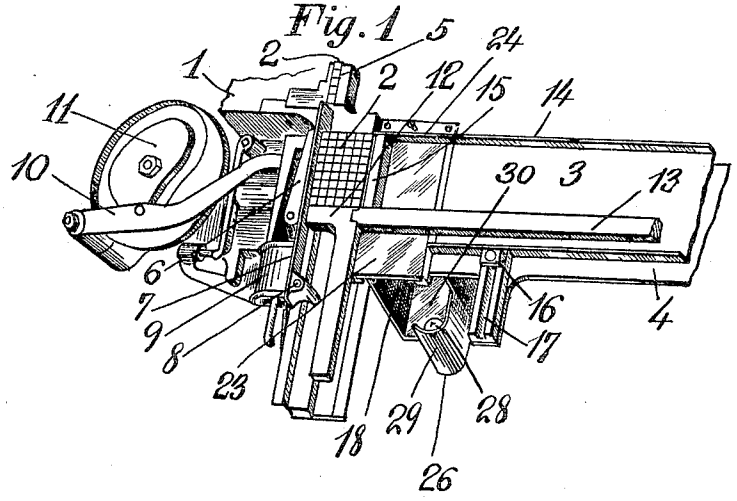


Fig. 2

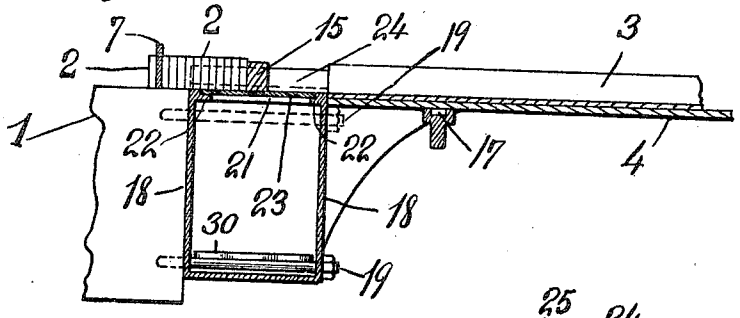


Fig. 3

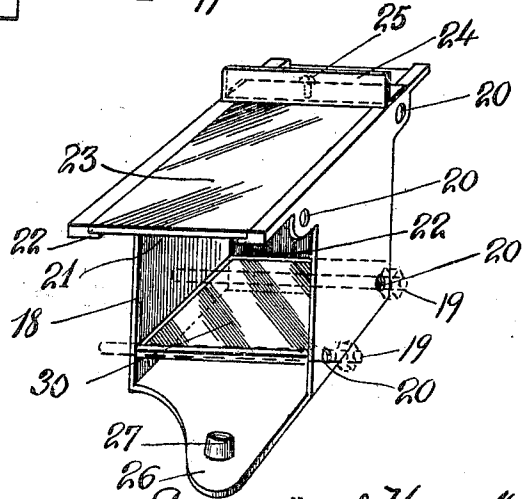
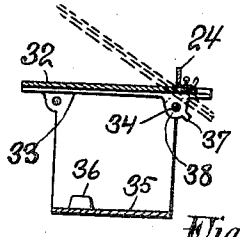


Fig. 4



Witnesses

Jacob J. Reporter

H. W. Dean Brittenden

Aaron Ward Hamaker Inventor

By Attorney Charles R. Robinson.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

AARON WOOD HAMAKER, OF NEW YORK, N. Y.

ATTACHMENT FOR TYPE-CASTING MACHINES.

971,040. Specification of Letters Patent. **Patented Sept. 27, 1910.**

Application filed March 1, 1909. Serial No. 480,761.

To all whom it may concern:

Be it known that I, AARON WOOD HAMAKER, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Attachment for Type-Casting Machines, of which the following is a specification.

This invention relates to type casting machines and has particular reference to means for discovering bad types before they leave the machine.

In the usual form of type casting machines, the finished type is delivered in column width on a type galley, and the column of type is removed by the operator in convenient lengths. Before the plate, however, is ready to be put on the printing press the types pass through seven or eight operations and it is only after the completion of these operations that the bad types can be finally picked out and the plate finished. This picking out of the bad types or the fixing of the plate requires much skilled handwork and close inspection causing much delay, annoyance and loss of time, hence the importance of this invention will become apparent.

In order to carry out my invention I provide means whereby the operator of the type casting machine can discover when the machine casts badly. He then adjusts such mechanisms, notably the one feeding the lead into the type molds, as will remedy the fault. In this manner the loss and delay caused by bad type is reduced to a minimum.

To this end my invention comprises an attachment by means of which the operator is enabled to inspect the bottoms of the types as these latter slowly move forward on the type galley and consists of a suitable framework adapted to support a piece of glass upon which the types move, below this glass the framework supports a mirror or other reflector in which the operator can see the bottoms of the types and means are also provided for illuminating the space between the glass and the mirror.

In the following specification my invention is set forth in detail while reference is had to the accompanying drawings in which—

Figure 1 is a perspective view of a portion of a type casting machine equipped with my invention, Fig. 2 is a longitudinal section through the type galley. Fig. 3 is a detail view of the attachment and Fig. 4 is a detail view showing a modification.

In the drawings the reference numeral 1 denotes a portion of the general frame of a monotype machine; this type of machine being shown as an illustration only.

2 represents the types resting in the galley pan 3 on the galley pan support 4. The finished types are delivered by the usual mechanism, not shown, into the type channel 5. When a line of the column is finished the line hook 6 is operated to draw the line of types out along the rule 7 and into longitudinal alinement with the galley pan. Next the rule 7 is lifted by its lifting rod 8 and the column pusher 9 operated to push the line of type under the rule 7 and up against the column of types already in the galley pan. The line hook is operated by the line hook operating lever 10 from the galley cam 11. As soon as the single line of type has been added to the types in the galley pan 3, the rule 7 descends, the line hook returns to its initial position as shown and a new line of type is then formed. The width of the column is regulated in the galley pan by the stop slide 12 into which fits the one end of the galley bar 13, between which and the side 14 of the galley pan the types are pushed to the right. An end bar 15 is laid in front of the types and is moved along with the latter. The galley bar is kept in position by one or more clamps 16 movable in slots 17 on the galley pan support 4. Now ordinarily this galley pan support is bolted to the main frame immediately adjacent the stop slide 12, hence the bottom of the types 2 could never be observed by the operator until he began removing the types from the galley pan, when perhaps a whole column of types would be faulty by reason of the bottom of each type being irregularly or improperly cast.

It should here be noted that in the above description and in the drawing, only so much is stated and illustrated as will enable those skilled in the art to understand the operation and location of my invention, many details being omitted.

In order to carry out the purpose of my invention I remove the galley pan support 4 from the main frame and insert between this latter and the said support the frame or housing 18. In the case of a monotype machine the galley pan support is bolted to the

main frame by four short bolts. In this instance, however, I use the bolt holes in the support and provide four coincident holes 20 (Fig. 3) in each side of the housing 18 and through said holes long bolts 19 are passed to bolt the galley pan support and the housing 18 to the frame. In case of other makes of type casting machines the arrangement would be modified to suit those particular machines. In the top of the housing there is formed an aperture 21 and over the same is laid a piece of glass 23 resting on ledges 22, 22 on the sides. At the rear there is mounted a bracket 24 through which passes a set screw 25. The glass 23 is slid on the ledges 22 under the bracket 24 and by screwing the set screw down on the glass, the latter is kept in position. The bottom of the housing is projected in front at 26 for the support of an electric lamp socket 27 for an electric lamp 28 with a reflector 29 to throw the light into the housing and illuminate the bottoms of the types as the latter pass over the glass 23. After the housing is in place, the galley support and the housing is bolted to the machine, a mirror 30 is laid on the lower bolts. As the types are being moved slowly to the right in Figs. 1 and 2 the reflection of their bottoms can be seen in the mirror 30, hence the operator has a means of observing the result of the workings of the machine.

In Fig. 4 is shown a modification of the above. In this instance the mirror is omitted and the glass 32 is carried in hinged slides 33 hinged at 34. When it is desired to inspect the types the glass is lifted as shown in dotted lines and the operator looks directly through the glass at the type bottoms. In the bottom 35 a socket 36 may be provided as before for the reception of an incandescent lamp. A stop 37 on the hinged ear 38 of the silde 33 limits the lifting movement. This principle might of course be applied to the whole galley, and it might be made entirely of glass and hinged.

The above is thought to clearly set forth this invention and its operation, and while it is shown in connection with a monotype machine, it is adaptable to all classes of type casting machines where the types are placed in column form on a galley. The precise construction shown need not be followed and I claim such changes as may be made within the scope of the claims.

Therefore I claim:

1. In a type casting machine the combination of means for supporting the finished types, a transparent member supported flush with the upper surface of said supporting means and a reflecting member located beneath said transparent member for observing the lower ends of the finished types.

2. In a type casting machine the combination of means for feeding the finished types out of the machine, a housing, a glass in said housing and forming part of means for supporting the finished types as they are fed out, a mirror in said housing below the said glass for reflecting the bottoms of the types.

3. An attachment for type casting machines comprising supporting means, a transparent member carried thereby, a mirror located below said transparent member and means for affixing the said attachment to the said machines.

4. An attachment for type casting machines comprising a frame work, a transparent glass carried thereby, a mirror below said glass, illuminating means, the said attachment being adapted to be affixed to the said type casting machines near the galley pan thereof for the purpose of observing the unexposed bottoms of the finished types.

5. In a type casting machine the combination of a main frame, a galley pan supporting shelf, a galley pan on said shelf, a housing interposed between the said shelf and frame, means for attaching the said shelf and housing to the said frame, a transparent member carried by said housing flush with the bottom of the said galley pan, a mirror supported below said transparent member for reflecting the bottoms of the finished types and means for illuminating the interior of the said housing.

6. In a type casting machine the combination of means for feeding the finished type out of the machine with the type faces upward, a galley pan for receiving the said types, a transparent member inserted in said galley pan and forming part of the support for the finished types and reflecting means for observing the lower ends of the types as the latter pass into the said galley pan.

AARON WOOD HAMAKER.

Witnesses:
JACOB J. RUPERTUS,
H. WILSON CRITTENDEN.