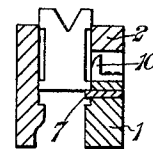
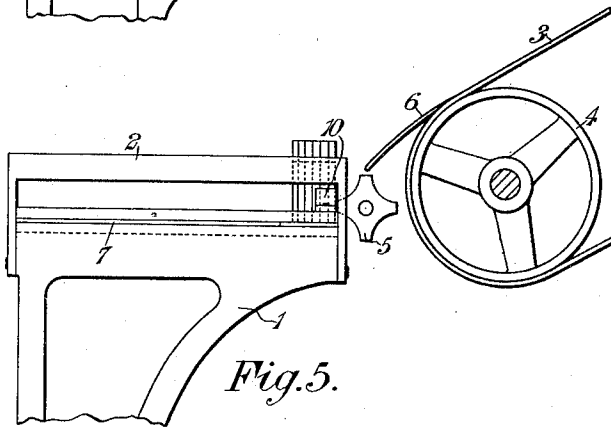
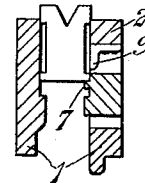
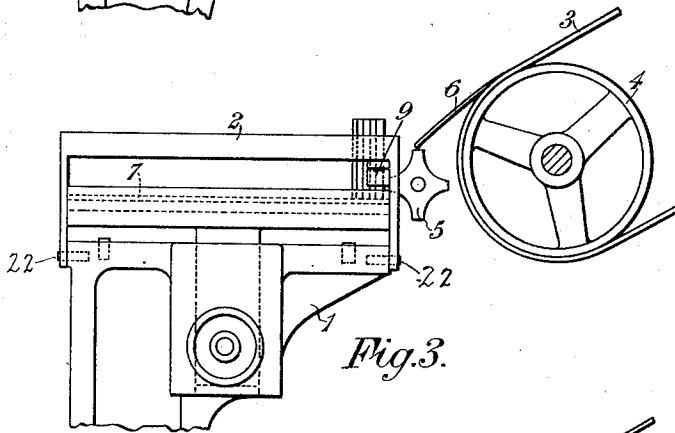
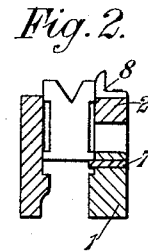
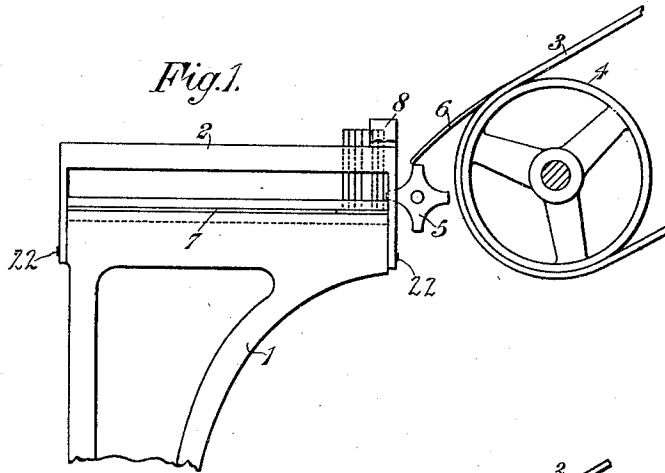


H. DEGENER.
 TYPOGRAPHICAL LINE COMPOSING AND CASTING MACHINE.
 APPLICATION FILED JUNE 27, 1911.

1,006,444.

Patented Oct. 17, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

HEINRICH DEGENER, OF BERLIN, GERMANY, ASSIGNOR TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

TYPOGRAPHICAL LINE COMPOSING AND CASTING MACHINE.

1,006,444.

Specification of Letters Patent.

Patented Oct. 17, 1911.

Application filed June 27, 1911. Serial No. 635,595.

To all whom it may concern:

Be it known that I, HEINRICH DEGENER, a subject of the German Emperor, residing at 26 Hollmannstrasse, Berlin, in the German Empire, have invented new and useful Improvements in Typographical Line Composing and Casting Machines, of which the following is a specification.

This invention relates to typographical line composing and casting machines such as those known commercially under the trade mark "Linotype." In these machines the matrices to be composed into line, are stored in magazines from which they are released in order of composition by the depression of the respective keys of a keyboard. When so released, the matrices descend on to an inclined assembler belt which conveys them, in inclined position, downward and projects them to the front of a rapidly rotating star wheel, which latter serves to up-end them and feed them forward into what is known as an assembler elevator, wherein the said matrices, together with the necessary spacers, are assembled in order of composition. When the matrices are provided, each with only one face or formative cavity, the assembler elevator need be provided with only one shelf or pair of shelves for supporting the matrices therein at the single or so-called normal level appropriate to the height of those cavities on the said matrices, but when the matrices are provided each with two faces—normal and variant—then the assembler elevator is arranged so that the matrices can be supported therein at either the lower level, as when the normal face is to be cast from, or the higher level, as when the variant face is to be cast from. In the last-named arrangement the assembler elevator is generally provided with a shelf which is adjustable in a horizontal direction, but in some constructions of the apparatus, the said shelf is adjustable in a vertical direction. It sometimes happens, especially when the matrices are being assembled at the higher level, that the said matrices, on being projected from the assembler belt, become deflected from their normal path and their lugs engage either with the body of the assembler elevator beneath the gate or with the hinged gate thereof, with the result that the said matrices fail to reach their proper position in the assembling line

and for the time-being interfere with the further assembling of the line in course of composition.

The present invention has for its object to overcome these difficulties by providing one or more guides which shall cause any of the matrices which have been deflected as aforesaid, to return to their normal path and guide them into the respective positions which it is necessary for them occupy in the assembler elevator.

In the accompanying drawings, which represent three different ways of carrying the invention into practice:—Figure 1 is a front elevation of a portion of the assembler elevator and adjacent parts of the machine, embodying one arrangement according to the invention, and Fig. 2 is a transverse vertical section of Fig. 1; Figs. 3 and 4 are views respectively similar to Figs. 1 and 2, and Figs. 5 and 6 are likewise respectively similar to Figs. 1 and 2 of two other arrangements according to the present invention.

Throughout the several figures of the drawings like reference numerals are used for indicating like or corresponding parts of the apparatus.

The assembler elevator 1, the gate 2 hinged at 22 to the elevator, the assembler belt 3, the lower pulley 4 of such belt, the star wheel 5 and the guide plate 6 in each of the arrangements illustrated, are all of well-known construction; the arrangement shown in Figs. 3 and 4 in these known respects, however, differs from that shown in the other figures only in respect of the shelf 7 which, in Figs. 3 and 4 is adjustable in a vertical direction, whereas in each of the said other figures it is horizontally adjustable. As both of these arrangements are of ordinary construction and *per se*, constitute no separate part of the invention, no further description of them is herein deemed to be necessary.

So far as regards Figs. 1 and 2, the present invention consists in a guide 8 secured to the horizontal member or rail of the gate 2 with its guiding face beveled or curved toward its upper end and with its lower end flush with the inner face of the said rail, all as shown in Fig. 2. The guide 8 is secured to the gate 2 by means of a flange or foot preferably formed integral therewith, this guide, during the operation of the machine,

serving to prevent any matrices becoming engaged with, and suspended from the gate 2.

In the arrangement shown in Figs. 3 and 4, the guide 9—not curved like the guide 8—is secured to the underside of the aforesaid rail, and in the arrangement shown in Figs. 5 and 6, the guide 10—curved like the guide 8—is secured to the body of the assembler elevator 1, these guides in both examples extending into the space between the top of the elevator body and the aforesaid rail, and both serving to prevent any engagement of the matrices with that part of the said elevator.

It will be understood that the assembler elevator may be provided with any of the before-mentioned guides, either singly or in combination, according to the requirements, and that the specific form and arrangement thereof in themselves constitute no essential portion of my invention.

Having described my invention I declare that what I claim and desire to secure by Letters Patent is:—

1. In a typographical composing machine, the combination with the assembler elevator,

of a guide connected thereto to engage edgewise-displaced matrices and restore them to normal position.

2. In a typographical composing machine, the combination with the assembler elevator provided with a movable gate, of a guide connected to the gate to engage edgewise-displaced matrices and restore them to normal position.

3. In a typographical composing machine, the combination with the assembler elevator provided with a movable gate, of a guide connected to the gate and extending upwardly therefrom to engage edgewise-displaced matrices and restore them to normal position.

4. In a typographical composing machine, the combination with the assembler elevator, of a beveled guide connected thereto to engage edgewise-displaced matrices and restore them to normal position.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

HEINRICH DEGENER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."