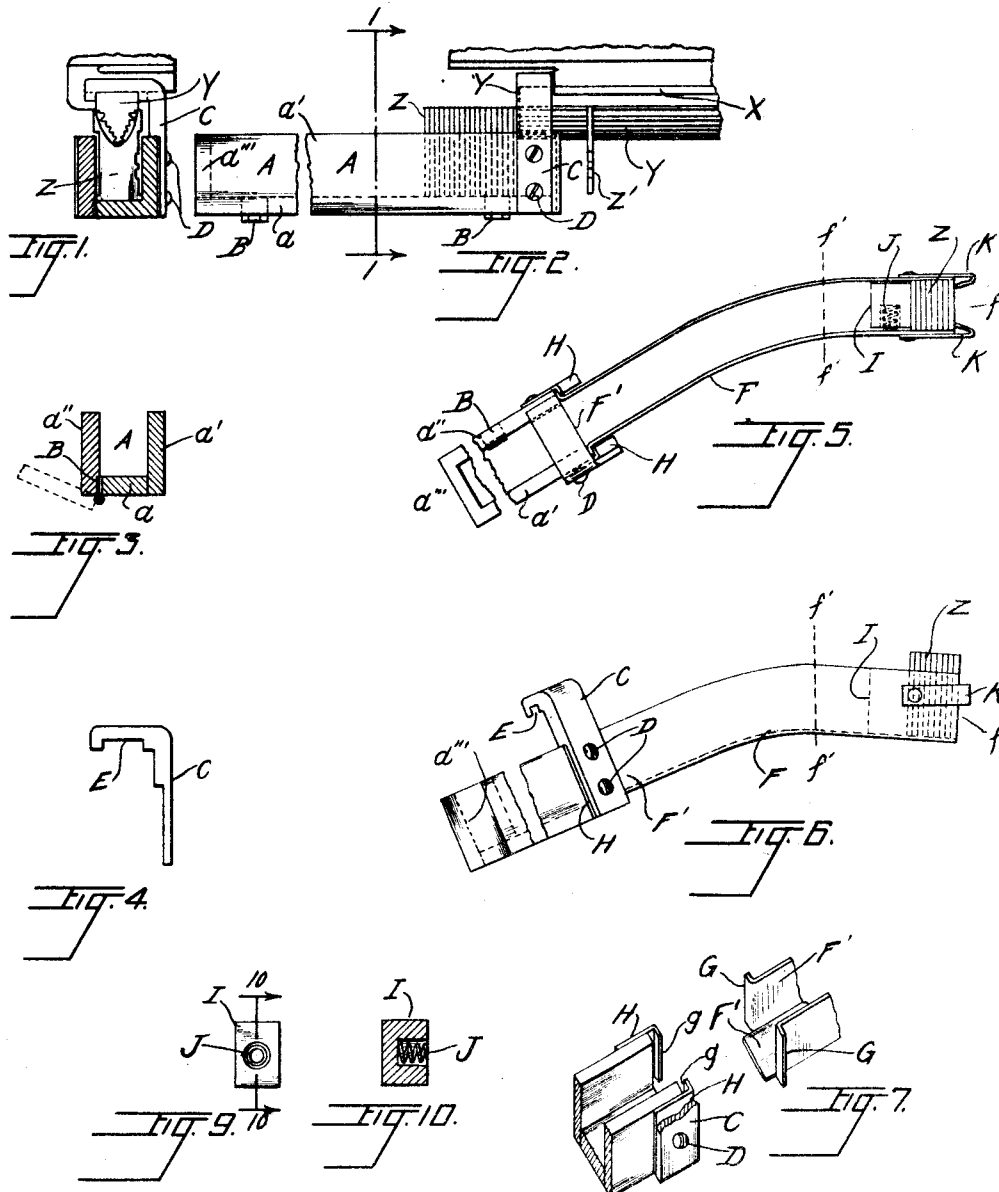


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 MATRIX CHANGING DEVICE FOR MERGENTHALER LINOTYPES.
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WITNESSES:

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MATRIX-CHANGING DEVICE FOR MERGENTHALER LINOTYPES.

1,053,167.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD FJELLANDER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Matrix-Changing Devices for Mergenthaler Linotypes, of which the following is a specification.

To those skilled in the art it is known that different fonts of matrices may be used in the Mergenthaler linotype machine, and that heretofore what are termed removable magazines which are independent of the escapement mechanism of the device, have been in use, each of the magazines containing a font of matrices.

The object of this invention is to provide a storage receptacle for matrices; means to easily load said storage receptacles with matrices from the linotype machine and means to unload said receptacles of the matrices contained therein and to discharge them onto the notched bar of the matrix elevator of said linotype, so that said matrices may be distributed from said elevator into the magazine of the linotype.

A number of receptacles embodying this invention may be used to contain the matrices comprised in a font, so that the weight of any one of the receptacles and matrices therein will not be excessive. By providing a sufficient number of the receptacles forming the principal element of the device embodying this invention, the matrices of a number of fonts may be continuously stored therein when said fonts are not in use in the magazine of a linotype machine.

In the drawing Figure 1 is an end elevation of the matrix elevator of a Mergenthaler linotype machine in its elevated position, with a vertical section of a matrix receptacle forming an element of this invention in place thereon and a side elevation of a matrix contained in said receptacle, said figure being taken on line 1—1 of Fig. 2, viewed in the direction indicated by the arrows. Fig. 2 is a side elevation of a receptacle forming an element of this device positioned at one end of the matrix elevator, showing said matrix elevator in front elevation. Fig. 3 is a vertical section of a receptacle forming an element of a device em-

bodying this invention. Fig. 4 is a side elevation or edge view of a holder which is attached to one end of the receptacle of the device. Fig. 5 is a top plan view of a runway forming an element of the device embodying the invention. Fig. 6 is a side elevation of the runway illustrated in Fig. 5. Fig. 7 is a perspective view of one end of the runway illustrated in Figs. 5 and 6. Fig. 8 is a perspective view of the end of the matrix receptacle which is removably joined to the end of the runway illustrated in Fig. 7. Fig. 9 is a side elevation of a removable base fitting in the matrix receptacle and Fig. 10 is a vertical section on line 10—10 of Fig. 9, viewed in direction indicated by the arrows.

Similar letters refer to similar parts throughout the several views.

X, Fig. 2 represents a portion of the matrix elevator of a Mergenthaler linotype machine and Y, (Figs. 1 and 2), represents the notched bar of elevator X.

Z represents matrices.

Z' is a matrix suspended on the notched bar of elevator X.

A is a matrix receptacle comprising the bottom *a*, the side *a'*, which is rigidly secured to bottom *a*, the side *a''* which is attached by hinges B to base *a*, and the end *a'''*.

C is a holder attached to one end of the receptacle A, by screws D.

E is a groove on the under side of the horizontal limb of holder C. Groove E fits over the end of the notched bar Y of matrix elevator X and holds the end of receptacle A in proper relation to said bar so that matrices contained in said receptacle may be slid therefrom onto the bar. The other end of the receptacle is easily held in proper position by the operator while the matrices are being slid therefrom.

F is a runway into which matrices are deposited from the conveyer belt of a linotype machine when the receiving end of said runway is presented to the linotype in place of the assembler, and from which matrices are delivered to the matrix receptacle A, when said runway and receptacle are attached together as hereinafter described.

It will be observed from inspection of Figs. 5 and 6, that from the receiving end f

of the runway the floor of said runway rises for a short distance, and commencing a short distance from the receiving end, at about the point indicated by broken lines f' , Figs. 5 and 6, the sides of the runway curve outward and the bottom curves downward, so that the open end of the receptacle A may be presented to the discharge end (F') of said runway.

10 The sides of runway F at the discharge end F' thereof are turned out as at G, Figs. 5 and 7, and H are plates respectively secured to the sides of receptacle A and turned at right angles on the ends thereof
15 which extend beyond said sides, to obtain recesses g , (Fig. 8) in which recesses the turned out sides G, of runway F fit, to hold said end of receptacle A in proper position relative to the discharge end of said runway.
20 way.

I is a slug which fits and is movable in receptacle A and runway F, and J is a spring in slug I which creates friction as said slug is slid in said runway and receptacle.

25 K, K, are springs at the receiving end of runway F. The function of springs K and slug I is to hold the matrices which are adjacent thereto in the runway and receptacle in an upright position.
30 To operate the device to receive the matrices of a font which is contained in the magazine of a linotype machine the sides G of the runway F are slid into recesses g , the slug I is moved near to the receiving end of the runway, and said receiving end is held in position at the delivery point of the conveyer belt of the linotype. The keys of the linotype are then operated to effect
40 discharge of the matrices in the magazine onto the conveyer belt and from said conveyer belt the matrices are delivered into the runway F. As a matrix is forced into the runway the springs K yield to let it by, and return into position to prevent its falling out. As the number of matrices forced into the runway increase the slug I is forced back thereby. When a receptacle is filled it is disengaged from the runway and
50 an additional receptacle is attached thereto. To transfer a font of matrices from the receptacles A, said receptacles are successively placed in position with holder C on the end of the notched bar of the elevator of the linotype and the matrices are slid onto the bar. The ribs of the notched bar engage with the notches of the matrices during this operation in the ordinary way, and from this bar the matrices are moved
60 into the distributing box of the linotype machine and from thence onto the distributing rail.

I claim:—

1. The combination of a matrix receptacle and a matrix runway said receptacle

being provided at one end thereof with means both for attaching the same to said runway and to a linotype machine in line with the notched bar of said machine, and means to maintain matrices in said receptacle and runway in an upright position as the same are moved along therein.

2. The combination of a matrix receptacle and a matrix runway said receptacle being provided at one end thereof with means both for attaching the same to said runway and to a linotype machine in line with the notched bar of said machine, said runway comprising a spring arranged to retain a matrix from falling in one direction, and a body on the side of the matrix opposite to said spring to prevent the matrix from falling in the other direction.

3. The combination of a matrix receptacle and a holder, said holder attached to one end of the receptacle and arranged to detachably engage with the notched bar of a linotype machine and hold said receptacle to said notched bar with the notches thereon in axial line with the notches of the matrices which are contained in said receptacle.

4. A matrix receptacle comprising bars positioned to contact with a vertical and a horizontal edge of a linotype machine matrix and support said matrix, an additional bar movably attached to one of the first named bars, and means to maintain said receptacle in position with the notches of matrices which are contained therein in axial line with the notches on the notched bar of a linotype machine.

5. A matrix receptacle comprising bars positioned to contact with a vertical and a horizontal edge of a linotype machine matrix and support said matrix, an additional bar movably attached to one of the first named bars, means to maintain said receptacle in position with the notches of matrices which are contained therein in axial line with the notches on the notched bar of a linotype machine, in combination with a runway, the discharge end of said runway and the combined receiving and discharge end of the receptacle respectively provided with flanges and recesses fitting said flanges, the said runway being curved and the receiving end thereof provided with means to retain a matrix therein.

6. A matrix receptacle comprising bars positioned to contact with a vertical and a horizontal edge of a linotype machine matrix and support said matrix, an additional bar movably attached to one of the first named bars, means to maintain said receptacle in position with the notches of matrices which are contained therein in axial line with the notches on the notched bar of a linotype machine, in combination with a runway, the discharge end of said runway

and the combined receiving and discharge end of the receptacle respectively provided with flanges and recesses fitting said flanges, the floor of said runway ascending from the receiving end and then descending and curved outwardly, and the sides of said runway curved to correspond with the floor, and the receiving end of the runway provided with means to retain a matrix therein.

EDWARD FJELLANDER.

In the presence of—

CHARLES TURNER BROWN,
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