

C. MUEHLEISEN.
DISTRIBUTING MECHANISM OF LINE CASTING MACHINES.
APPLICATION FILED JAN. 23, 1911.

992,032.

Patented May 9, 1911.

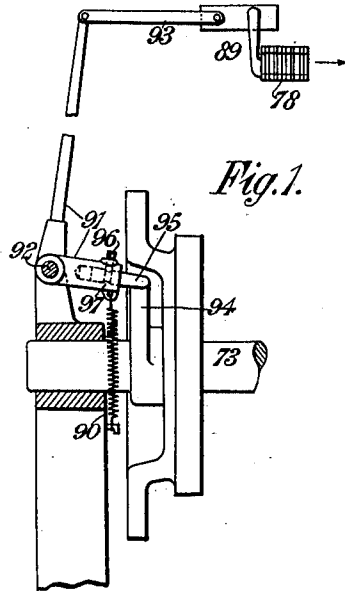


Fig. 1.

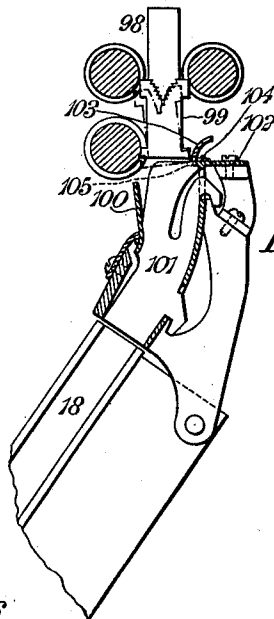


Fig. 2.

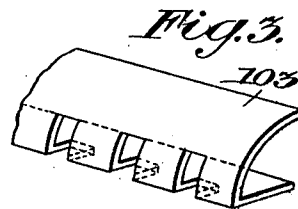


Fig. 3.

Witnesses
L. P. Harrison
Frank S. Ober

Inventor
Carl Muehleisen
per *Philip F. Dray* Attorney

UNITED STATES PATENT OFFICE.

CARL MUEHLEISEN, OF BERLIN, GERMANY, ASSIGNOR TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW YORK.

DISTRIBUTING MECHANISM OF LINE-CASTING MACHINES.

992,032.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed January 23, 1911. Serial No. 604,048.

To all whom it may concern:

Be it known that I, CARL MUEHLEISEN, a citizen of the United States of America, residing at 88 Chausseestrasse, Berlin, N. 4, in the Empire of Germany, have invented new and useful Improvements in the Distributing Mechanism of Line-Casting Machines, of which the following is a specification.

The present invention consists of improvements in the distributing mechanism of the line-casting machines known commercially under the trade mark "Linotype," and the accompanying figures illustrate preferred constructional forms of it.

Figure 1 is a sectional side elevation of the improved means for retracting the pusher that pushes the matrices or type dies of the composed line, off the second elevator into their distributor; and Fig. 2, a sectional side elevation of the improvement in connection with the device for opening the distributor clutch. Fig. 3 is a perspective view showing the notches in the front edge of the guard plate.

Referring to Fig. 1, in the machine as hitherto constructed, the matrices or type dies 78 were pushed off the second elevator (not included in the figure) in the direction indicated by the arrow and into their distributor, by the pusher 89 operated by a bell-crank lever 91 fulcrumed at 92 on the frame and connected to the said pusher by a link 93. The bell crank lever was in turn actuated by a cam 94 fast on the cam shaft 73 and engaging the short arm of the lever 91 and acting to retract the said pusher. In actual practice, there is a spring 90 pulling from a fixed point on the machine frame upon the said short arm to actuate the pusher in opposition to the cam. In that arrangement the said short arm was in direct contact with the cam 94 and, consequently, sooner or later, had a flat surface worn upon it, the consequence of which was that the cam 94 would fail to retract the pusher 89 fully. The improvement consists in providing said short arm with a cam contact finger or feeler 95, so mounted on the arm, that the finger may be set in different positions, so in the event of wear on one part of the finger, a new surface may be presented to contact with the cam; whereby the throw of the lever actuated by the cam will be uniform and unvaried. To effect this object the short arm 91 is provided in its end

with a socket which receives the inner end of the finger, the latter being formed with an annular groove 97, in which engages the inner end of the clamping screw 96 extending through the side of the socket. By loosening the screw the pin may be turned in the socket to present a fresh surface to engage the cam, after which, by tightening up the screw and pin will be held firmly in the socket.

Referring to Fig. 2, 18 is a part of the magazine; 98, the matrix distributor; 99, one of the matrices traversing the distributor over the magazine entrance 100; 101, one of the series of webs that divides the magazine entrance into channels, one for each character in the font; and 102 a plate notched along its front edge to receive the top rear corners of the webs 101. The webs 101 are not rigidly held in the magazine entrance and the plate 102 is capable of movement in the direction of its length. The action of the above is as follows. If a matrix 99 drops vertically from the distributor 98, it will enter the respective channel in the magazine entrance 100. If it drops in the direction indicated by the dotted lines, it will jam in the magazine entrance and be pressed against the web 101 in front of it, thereby moving it forward and carrying the plate 102 with it, the motion of the latter acting through suitable devices to stop the distributor 98. In addition to the parts just enumerated, there has been a guard, such as 103, extended along the rear edge of the top of the magazine entrance 100 and fixed to the magazine entrance so as to guide the dropping matrices fairly thereinto.

The present invention consists in rigidly attaching the guard 103 to the endwise movable plate 102 for example as indicated by rivets or screws 104, so that there will be no movement, of an improperly placed matrix, relative to the guard plate, as the matrix is advanced by the screws against the web in front of it, but the guard will move with the matrix as the latter shifts the web. The guard 103 is preferably made in one piece and of drawn or rolled sheet metal, with a horizontal foot portion seated on and secured to the plate 102 as described, and with an upwardly extending guard portion proper. The principal feature of the present invention resides in the fact that the guard 103 is rigidly attached to the plate

102 and is movable endwise with it, instead of being attached to the magazine entrance as heretofore. The front edge of the plate 102 has the usual comb teeth 105, between
 5 which the upper portions of the webs or division plates 101 are inserted, and if desired there may be corresponding notches in the guard 103 to receive the upper portions of the division plates.

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

1. In a line casting machine, a distributor-shifter mechanism comprising in combination,
 15 a pusher, a bell crank lever operatively connected therewith, an operating cam 94, a feeler pin engaging the cam and adjustably mounted on the bell crank lever in such manner that different portions of the pin
 20 may be engaged with the cam without causing any variation in the throw of the bell crank lever, and a spring acting to hold the pin in contact with the cam.

2. In a line casting machine, a distributor-shifter mechanism comprising in combination,
 25 a pusher, a lever operatively connected therewith, an operating cam, and a member engaged by the cam and adjustably connected with the lever in such manner that
 30 different portions of said member may be engaged with the cam without causing any variation in the throw of the lever.

3. In a line casting machine, a distributor-shifter mechanism comprising in combination,
 35 a pusher, an operating cam, and suitably connecting devices between the pusher and cam including a part engaged by the cam and adjustable to compensate for wear between the cam and said part; whereby the
 40 successive movements of the pusher will be uniform and unvaried.

4. In a line casting machine, a distributor-shifter mechanism comprising in combination, a pusher, a bell crank lever operatively
 45 connected therewith and provided with a socket, an operating cam, and a feeler pin seated in the socket and engaging the cam, and adjustable around an axis extending longitudinally of the pin.

5. In a line casting machine and in combination with a magazine, movable division
 50 plates in the entrance thereof, a plate 102 movable with the division plates, and an upwardly extending guard plate fixed to the plate 102 and movable endwise with the
 55 same.

6. In a line casting machine and in combination with a magazine, an endwise movable plate 102 at the entrance of the same,
 60 a guard plate fixed to the plate 102 and provided with notches, and division plates in the magazine entrance engaged in the notches in the guard plate.

7. In a line casting machine and in combination with a magazine, movable division
 65 plates in the entrance of the same, a plate 102 movable endwise with the division plates, and a guard plate having a horizontal foot portion seated on and secured to plate 102, and having a guard portion proper extending
 70 upwardly from the foot portion.

8. In a line casting machine and in combination with a magazine, movable division
 75 plates in the entrance thereof, and a guard plate at the magazine entrance movable endwise with the division plates.

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

CARL MUEHLEISEN.

Witnesses:

WOLDEMAR HAUPT,
 HENRY HASPER.