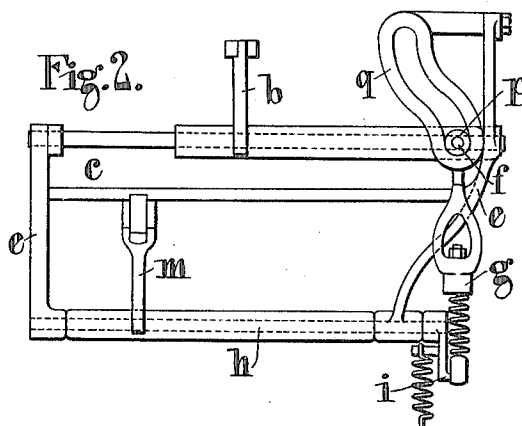
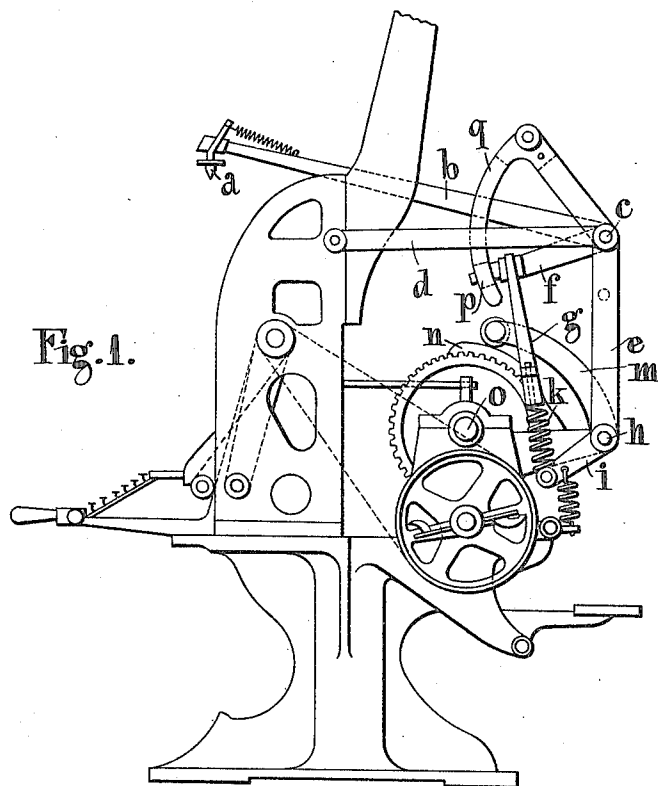


C. MUEHLEISEN.
 TYPOGRAPHICAL COMPOSING AND CASTING MACHINE.
 APPLICATION FILED MAY 12, 1914.

1,137,013.

Patented Apr. 27, 1915.



Witnesses
L. E. Morrison
M. R. Manning

Inventor
Carl Muehleisen
per Rogers, Kennedy & Campbell.
 Attorneys.

UNITED STATES PATENT OFFICE.

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

TYPOGRAPHICAL COMPOSING AND CASTING MACHINE.

1,137,013.

Specification of Letters Patent.

Patented Apr. 27, 1915.

Application filed May 12, 1914. Serial No. 837,980.

To all whom it may concern:

Be it known that I, CARL MUEHLEISEN, a citizen of the United States of America, at present residing at Chausseestrasse 23, Berlin, N. 4, in the Empire of Germany, have invented new and useful Improvements in Typographical Composing and Casting Machines, of which the following is a specification.

The invention relates to improvements in typographical composing and casting machines such as those known commercially under the trade mark "Linotype" and kindred machines, and of these machines it relates particularly to the mechanism for raising the composed lines of matrices, or it may be, lines of type dies, for the purpose of delivering them to the distributor.

In machines of a certain class there is employed a plurality of stationary magazines containing different fonts of matrices, a distributor for each magazine, and a so-called "primary" distributor which separates the matrices of the composed line according to font and delivers them to the distributor of the proper magazine. In such machines, the second elevator, which carries the composed line to the primary distributor, is compelled to travel a greater distance than in the more common class of machines employing a single magazine. For this reason I propose to mount the long arm of the elevator so that it may turn about an axis located above that about which its connected cam operated lever turns. Further, instead of having the elevator move vertically in a straight path I propose to shift it laterally or axially as it is raised and lowered, and thus allow the primary distributor to be located farther to the right of the machine, as is desirable in machines of the class mentioned.

The term "matrices" as hereinafter used, is intended to include both matrices and type dies.

The drawing shows a constructional form of the invention, Figure 1 being a side elevation of a machine embodying the said invention, and Fig. 2 a front view of a part of Fig. 1, drawn to a slightly larger scale.

The matrices are raised in the known manner by the second elevator matrix carrier bar *a*, and the second elevator long lever *b*, pivotally carrying the bar *a*, according to the present invention, is free to move

angularly about the axis of a horizontal shaft *c* supported in rigid bracket arms *d* and *e*. Upon the shaft *c* there is also provided a second lever *f* which is connected by means of a connecting link *g* to a lever *i* fast on a horizontal shaft *h*. A compression spring *k* interposed between the link *g* and the lever *i* serves as a buffer. Upon the shaft *h* there is also provided, a second elevator cam lever *m* operated in the known manner by the second elevator cam *n* on the known cam shaft *o* of the machine, this cam, in accordance with the present invention, serving to actuate the second elevator long lever *b* through intermediate power-transmission devices. The lever *b* may also be movable laterally by making it together with its boss and the lever *f*, all as a single entity, slidable upon the shaft *c*, and providing on the lever *f*, a roller *p* which engages with a stationary slotted cam *q* so that the lever *b* will be moved laterally in opposite directions at the same time as it is rocked upward and downward.

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

1. In a typographical composing and casting machine, the combination with a matrix carrier bar, a second elevator long lever to which that bar is pivoted, a shaft about the axis of which the said lever is capable of turning, and a lever arm operatively fast to that lever and located to one side thereof, of a cam-operated lever fast to another shaft parallel with the first-named shaft, the said shaft, a lever arm fast to this shaft, and devices elastically connecting the two lever arms together.

2. In a typographical composing and casting machine, the combination with a matrix carrier bar, a second elevator long lever to which that bar is pivoted, a shaft about the axis of which the said lever is capable of turning, and along which shaft it is capable of moving axially, and a lever arm fast to that lever, of a stationary cam engaging the lever arm so as to cause it and the lever to move axially, a cam-operated lever fast to another shaft parallel with the first-named shaft, the said shaft, a lever arm fast to this shaft, and devices elastically connecting the two lever arms together.

3. In a typographical machine, the combination of a matrix carrier, an operating

lever therefor, and a cam operated lever, a shaft upon which it is mounted, a lever arm also mounted on the shaft and located to one side of the cam operated lever and operatively connected therewith, and connections between the lever arm and the operating lever for the matrix carrier.

4. In a typographical machine, the combination of a matrix carrier, its operating lever mounted to turn about a transverse axis, a cam operated lever mounted to turn about a different transverse axis and operatively connected to the operating lever, and means for shifting the operating lever axially in its turning movements.

5. In a typographical machine, the combination of a matrix carrier, a vertically movable operating lever therefor mounted to turn about a transverse axis, an arm fast to said lever, and a slotted cam wherein the said arm engages and acting to shift the operating lever axially in opposite directions as it is raised and lowered.

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

CARL MUEHLEISEN.

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."