(No Model.)

F. PETERHANSL.

LINOTYPE MACHINE.

No. 556,517. Patented Mar. 17, 1896.

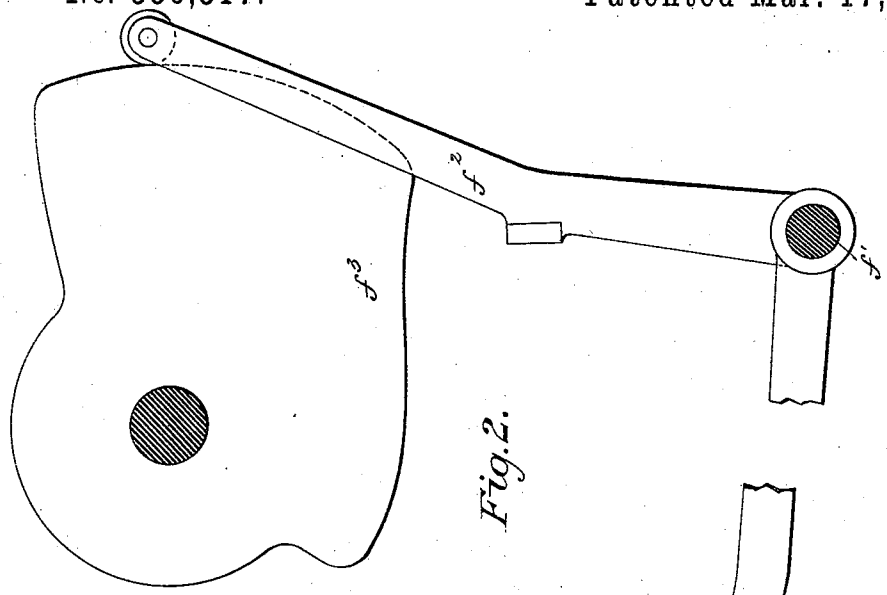
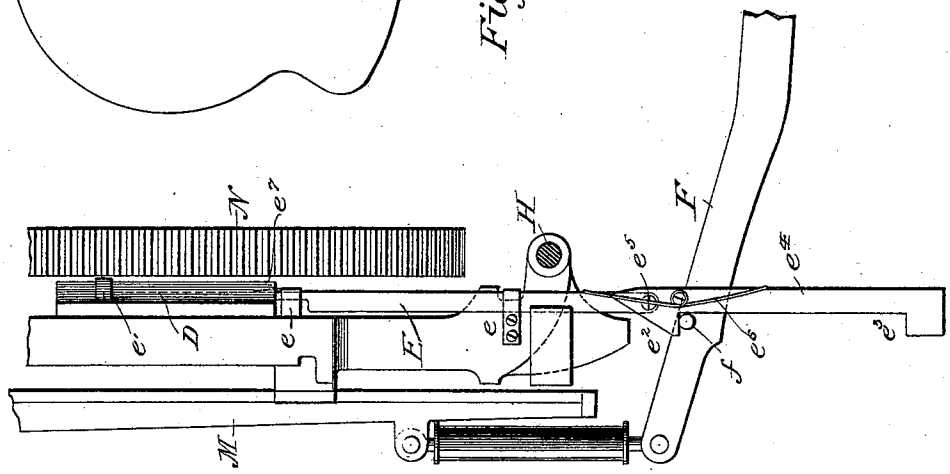


Fig. 2.



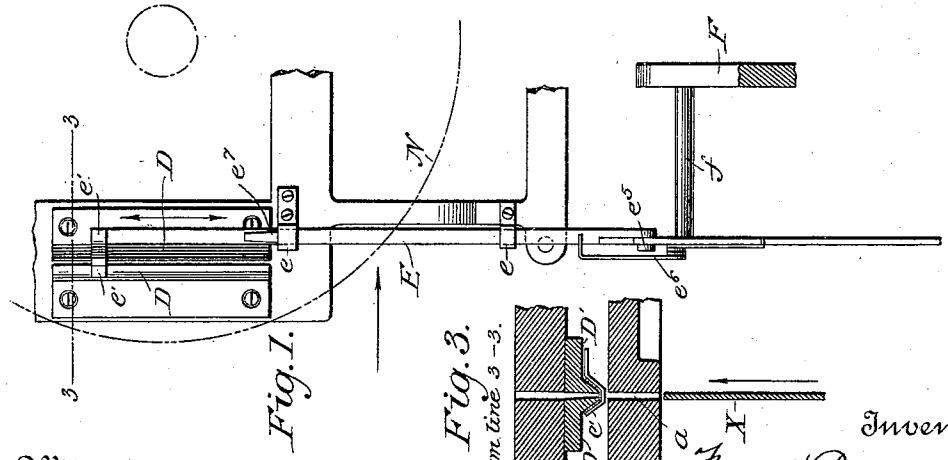


Fig. 1.

Fig. 3.
on line 3-3.

Witnesses
Raymond H. Barnes.
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Frank Peterhansl
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UNITED STATES PATENT OFFICE.

FRANK PETERHANSL, OF NEW YORK, N. Y., ASSIGNOR TO THE MERGENTHALER LINOTYPE COMPANY, OF SAME PLACE.

LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 556,517, dated March 17, 1896.

Application filed April 25, 1892. Serial No. 430,596. (No model.)

To all whom it may concern:

Be it known that I, FRANK PETERHANSL, of New York, county of New York, and State of New York, have invented a new and useful Improvement in Linotype-Machines, of which the following is a specification.

My invention has reference, generally, to machines adapted to cast what are known in the art as "linotypes"—that is to say, slugs or type-bars, each having on one edge the type characters to print a line. In these machines it is customary to force the newly-formed linotypes edgewise out of the mold and past knives by which they are trimmed on their side faces to give them a uniform thickness. In practice it is found that the thin metal shavings are liable, particularly when the parts are warm, to adhere to the edges of the knives and to overlie the opening through which the linotypes are delivered. The shavings removed from one linotype are therefore liable to become embedded in or attached to the face of the next linotype, thereby destroying or impairing its characters, so that it is useless. The shavings also have a tendency to cause a deflection of the linotype in passing the knife or knives, so that they issue from the machine in irregular forms or of uneven thickness.

The present improvement is designed to overcome these difficulties; and it consists in a wiper arranged to travel lengthwise over the edge of the knife or knives and alternating in its action with the ejector or linotype delivering the device.

It also consists in certain details of construction and in special means for operating said knife.

I am aware that a brush has been heretofore attached to the rotary mold-disk of a linotype-machine to sweep across the trimming-knives, and therefore I do not claim broadly a brush which alternates in its action with the ejector.

In the accompanying drawings I have illustrated a form of wiper or cleaning device more particularly adapted for use on the Mergenthaler linotype-machine represented in Letters Patent of the United States, dated September 16, 1890, Nos. 436,531 and 436,532, and it is to be understood that as regards the casting mechanism, the ejecting devices, and other attendant parts, the machine may be in all respects identical with either of those above referred to.

In the accompanying drawings, Figure 1 is an elevation looking against the rear side of the mold-wheel with the trimming-knives in proper relation thereto. Fig. 2 is a side elevation of said parts, looking in the direction indicated by the arrow in Fig. 1. Fig. 3 is a horizontal section on the line 3 3 of the preceding figures, showing the relation of the mold, the ejector, the trimming-knives and the wiper.

Referring to the accompanying drawings, N represents the vertical mold-wheel of the Mergenthaler patent, No. 436,531, containing the slot or mold *a* in which the linotype, having letters or type on its front edge, is cast from type-metal in the manner and by the means set forth in said patent.

X represents the horizontal reciprocating ejector-blade, which advances through the mold from the rear side for the purpose of delivering linotypes therefrom, this action occurring after the mold-wheel has made a partial rotation to carry the linotype from the casting-point to the ejecting-point.

The above-named parts correspond with those designated by like letters in the Mergenthaler patent.

D and D′ represent two stationary knives arranged in front of the mold in such position that the linotype, driven between them by the ejector X, is dressed on one or both sides if it exceeds in the slightest degree the required thickness. It is on these knives that the shavings above referred to are liable to accumulate.

E represents the wiper or cleaning device forming the subject of the present invention. In the form here shown it consists of a vertical reciprocating bar or rod mounted in guides *e* on the frame, and provided at the upper end with a lateral lip *e′*, made of soft metal—such as copper—or of metal covered with leather or felt, or of a brush adapted to fit across the edges of the knives, so as to sweep lengthwise thereover. The lower end of this wiper is provided with two shoulders e^2 and e^3, which are acted upon by a stud *f* on the side of a vertically-vibrating lever F pivoted at *f′*, and having an angular arm f^2

operated by a cam f^3, so timed that the lever is caused to vibrate and to move the wiper E upward and downward across the knives during the time that the ejector-blade is out of action. This operating-lever F, as herein shown, is the lever used in the Mergenthaler patent for operating the vertical yoke or elevator N. It will of course be obvious to the skilled mechanic, however, that the lever may be operated in any other suitable manner, and that in place of the lever any other mechanism may be used to reciprocate the wiper. In the Mergenthaler machine that part of the frame to which the knives and the upper end of the wiper are attached is hinged at H, so that it may be swung away from the remainder of the frame to expose the knives to view. In order that this swinging action may occur without injuriously affecting the wiper, the latter has its lower end e^4 connected to the upper portion by a pivot e^5, the lower portion being held normally in operative position by a connecting-spring e^6. When the upper part of the frame is turned forward, the upper end of the wiper moving therewith turns on the pivot e^5, allowing the lower end, which would encounter other parts of the machine, to remain at rest or practically so.

While I have designated my cleaning device as a wiper, it is to be understood that it is not necessary that it should move in actual contact with the knives. It is sufficient if it moves in such close proximity thereto as to insure the removal of the adherent shavings. It is preferred, however, to have it actually ride upon the knives, as shown, and to have it held lightly in contact therewith by means of a pusher-spring e^7, as shown in Figs. 1 and 2.

Having described my invention, what I claim is—

1. In a linotype-machine, the combination of a mold for the linotypes, the ejector to deliver the linotypes therefrom, a trimming-knife to act on the outgoing linotype, and a wiper or cleaning device arranged to reciprocate lengthwise over the edge of the knife.

2. In a linotype-machine the combination of a trimming-knife, a wiper mounted to reciprocate lengthwise thereof and connections from the wiper to the power-driven parts of the machine, whereby said wiper is automatically operated.

3. The combination in a linotype-machine, of the mold, the ejector, the trimming-knives, the intermediate wiper-arm bent to conform to the knives, and power-driven devices substantially as described, for reciprocating said wiper.

4. In a linotype-machine the combination of the trimming-knives, the reciprocating wiper, its jointed actuating-arm, and the lever arranged to act upon said arm, substantially as described.

In testimony whereof I hereunto set my hand, this 1st day of April, 1892, in the presence of two attesting witnesses.

FRANK PETERHANSL.

Witnesses:
P. T. DODGE,
GEORGE T. MIATT.