

(No Model.)

2 Sheets—Sheet 1.

H. F. MEISTRELL.

TRIMMING ATTACHMENT FOR LINOTYPE MACHINES.

No. 578,065.

Patented Mar. 2, 1897.

Fig. 1.

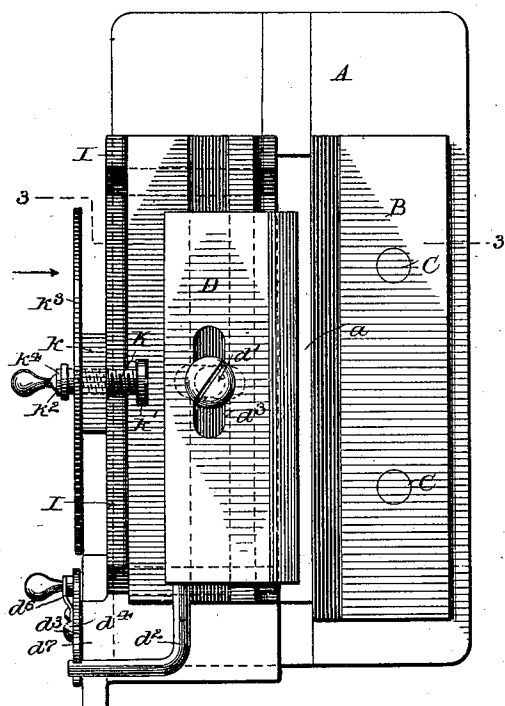


Fig. 2.

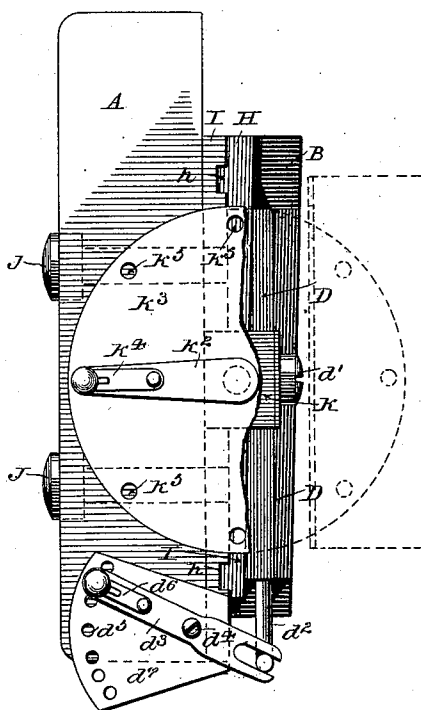


Fig. 3.
On-line 33
of Fig. 1.

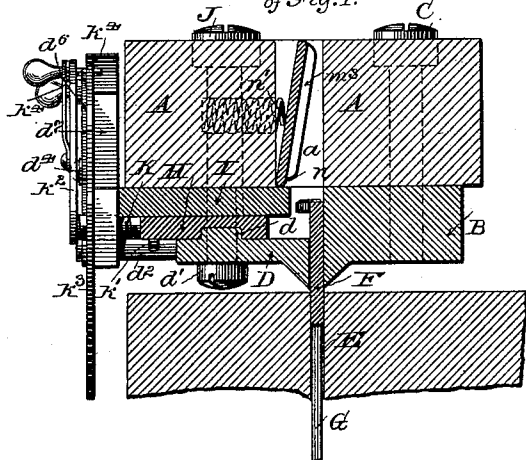
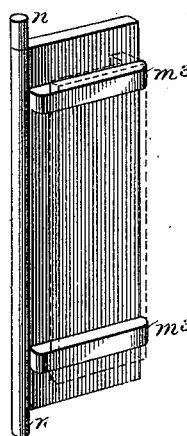


Fig. 4.



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Fig. 5.

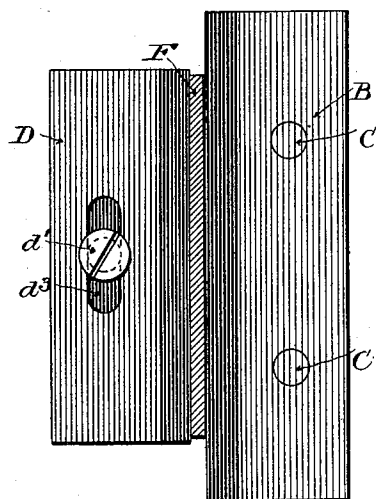


Fig. 7.

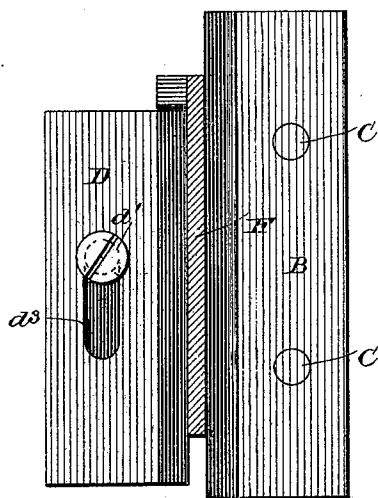
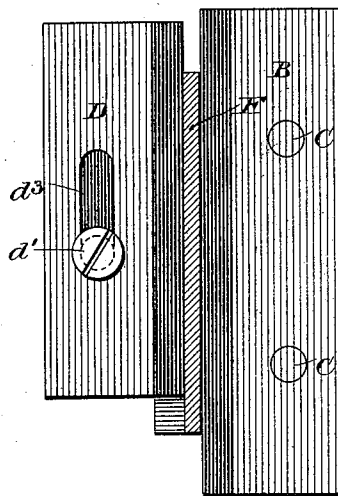


Fig. 6.



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TRIMMING ATTACHMENT FOR LINOTYPE-MACHINES.

SPECIFICATION forming part of Letters Patent No. 578,065, dated March 2, 1897.

Application filed October 30, 1895. Serial No. 567,394. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. MEISTRELL, a citizen of the United States, residing at Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Trimming-Knives for Linotype-Machines, of which the following is a specification.

In linotype-machines, such, for example, as that represented in Letters Patent to Ottmar Mergenthaler, No. 436,532, dated September 16, 1890, slugs or linotypes cast in a mold and bearing type-characters on their edges are ejected from the mold and driven forward between two parallel trimming-knives, which serve to give the opposite sides of the slug smooth parallel surfaces. Ordinarily the type-characters are confined to the edge of the slug, so that the latter may be passed bodily between stationary knives to trim the slug throughout its length from one end to the other. Occasionally, however, it is desirable to cast the slug with one or more large overhanging characters at the front or the rear end in the manner represented in Letters Patent to Ottmar Mergenthaler, No. 551,981, dated December 24, 1895. Obviously the slugs with these overhanging characters cannot be passed between the ordinary knives, as the latter would act to cut away the overhanging portion.

The first part of my invention consists in mounting one of the trimming-knives so that it is adjustable endwise in the direction of the length of the slug, so that its end may be carried out of the path of the overhanging character while it continues to trim the remainder of the slug. By thus adjusting the knife endwise the two-line characters may be permitted to pass freely, whether they are on the front or the rear ends of the slug.

The second part of my invention has reference to the speedy adjustment of the knives in order to vary the distance between them, so that they may be caused to trim slugs of various thicknesses, such as agate, nonpareil, &c.

In the drawings I have shown only such parts of the machine as are necessary to an understanding of my invention. All other parts may be of the ordinary construction.

Figure 1 is a view looking against the inner face of my trimming devices in the direction in which the slug is delivered between them. Fig. 2 is a view of the same 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. Fig. 4 is a perspective view of one of the details. Figs. 5, 6, and 7 are diagrams illustrating respective actions of the adjustable knife on an ordinary slug of uniform thickness, a slug with an overhanging character at the front, and a slug with an overhanging character at the rear end.

Referring to the drawings, A represents a stationary part of the ordinary machine-frame, known as the "knife-block," and consisting simply of a metal block with a vertical slot or opening *a* therethrough for the passage of the slug.

B is one of the vertical trimming-knives, secured by bolts C rigidly to the knife-block along one side of the slot in the usual manner for the purpose of dressing the slugs on one side.

D represents the adjustable knife, sustained as hereinafter described, its edge standing opposite to and parallel with that of knife B in order to trim the opposite side of the slug.

E represents the mold-slot in which the linotype F is cast and from which it is ejected by a reciprocating ejector-blade G, as usual. At the moment of ejection the mold stands in front of and in line with the knives, so that the outgoing slug is guided by the mold between the knives, as plainly shown in Fig. 3, this being the usual action in the Mergenthaler machine.

The knife D, instead of being bolted in place, as usual, is provided on its under side with a vertical longitudinal rib *d*, seated in a corresponding groove in a supporting-plate H, so that the knife may slide upward and downward. It is secured in place by means of a screw *d'*, passing through a slot *d''* in the knife and through the corresponding horizontal slot in plate H into plate I.

The knife D stands normally in the position shown in Figs. 1 and 5, so that the outgoing slugs of ordinary form passing between the

knives will be trimmed from one end to the other on both surfaces. When the knife is raised, as in Fig. 6, its lower end is in position to permit the overhanging character on the front end of the slug to pass thereunder without interference. When the knife is lowered, as in Fig. 7, the overhanging character on the rear end of the slug can pass thereunder.

The endwise adjustment of the knife, as above described, may be effected by any suitable means, but I have illustrated in the drawings a construction which is found in practice to answer a good purpose.

The knife is provided on the lower end with an angular arm d^2 , extending horizontally through the slotted end of a lever d^3 , mounted on a fixed pivot d^4 , so that the operator by moving the lever can instantly adjust the knife. The lever overlies a fixed plate d^7 , having a series of holes d^5 to receive the spring-latch d^6 , by which the lever may be fastened in different positions.

The above description covers all that is necessary to the endwise adjustment of the knife.

Passing now to the adjustment of the knife D for slugs of different thicknesses, it is to be noted that the plate H, which carries the knife, is provided on its back with horizontal guiding-ribs h , seated in grooves in an underlying plate I, bolted fast to the knife-block, this arrangement permitting the plate H to be moved horizontally forward and backward in order to vary the distance between the edges of the knives, as may be required. The plate H is held to its place on plate I by means of the before-mentioned screw d' , and the plate I is held rigidly in position on the knife-block by bolts J.

In order to effect the speedy and accurate adjustment of the knife in a forward and backward direction and to hold it in its adjusted position, I provide a screw K, extended through a stationary gear k on the knife-block, and provide it at its inner end with an enlarged head k' , seated in the outer edge of the knife. At its outer end the screw is provided with a hand-crank k^2 , revolving over a fixed dial-plate k^3 and provided with a spring-latch k^4 to engage in the holes k^5 in said plate. By turning the handle the screw is caused to move the knife positively forward or backward, and by adjusting the crank to one or the other of the openings in the dial-plate the knife may be locked in the exact position required for trimming a slug or body of the thickness required. For convenience of ad-

justment the various holes may be marked with the names of the bodies, as "Agate," "Nonpareil," "Minion," &c., but this is not necessary.

It is manifest that the details of the devices for supporting and moving the knife longitudinally may be varied within the range of mechanical skill.

In order to assist in supporting and guiding the linotypes as they pass between the knives, it is customary to provide the machine with a plate hinged at n and pushed forward by a spring n' . In order that this plate may properly support and guide the slugs having the overhanging characters, I provide its surface with two horizontal ribs m^3 . These ribs will rest against the side face of the slug and guide the same, while the overhanging character on the slug is permitted to drop below the surface of the rib, as indicated in Fig. 4.

Having thus described my invention, what I claim is—

1. In a linotype-machine, a slug-trimming knife adjustable longitudinally in the direction of the length of the slug, whereby it will be caused to dress the slug for a greater or a less portion of its length.

2. In a linotype-machine, a slug-trimming knife adjustable toward and from the path of the slug, and also adjustable in the direction of the length of the slug.

3. In a linotype-machine, a slug-trimming knife mounted to move on guides in the direction of its length, in combination with means for effecting such movement and locking the knife in its adjusted position.

4. In a linotype-machine and in combination with the longitudinal sliding slug-trimming knife, the lever for moving the same, and locking devices to secure the parts.

5. In a linotype-machine, the combination of a supporting-plate movable horizontally, a slug-trimming knife mounted and movable vertically on said plate, and means for moving and securing said parts.

6. In a linotype-machine and in combination with slug-trimming knives, the yielding plate having transverse ribs to guide slugs having overhanging characters.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HENRY F. MEISTRELL.

Witnesses:

PAUL GOEPFEL,
GEO. W. JAEKEL.