

No. 824,704.

PATENTED JULY 3, 1906.

J. B. BELL.
MOLD FOR LINOTYPE MACHINES.

APPLICATION FILED DEC. 12, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

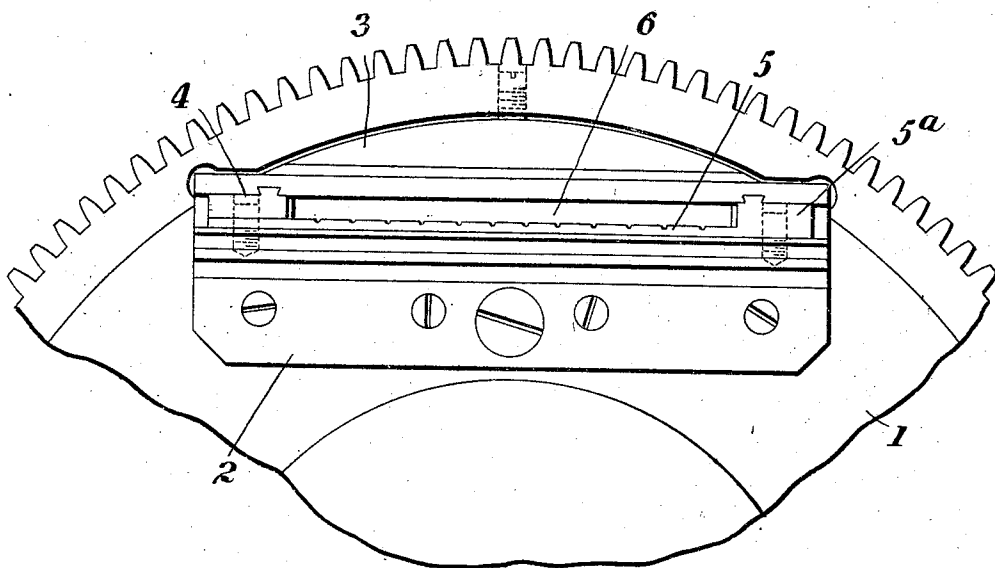


Fig. 2.

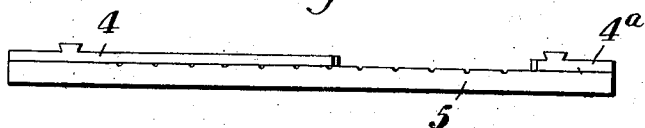


Fig. 3.

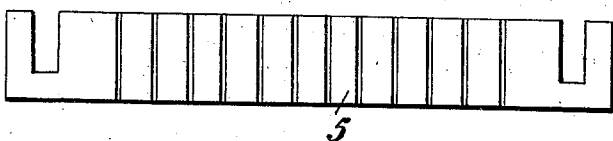
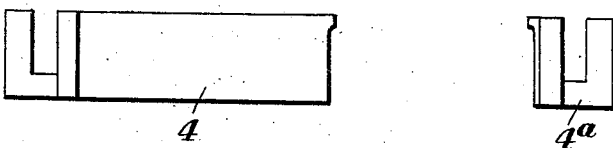


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

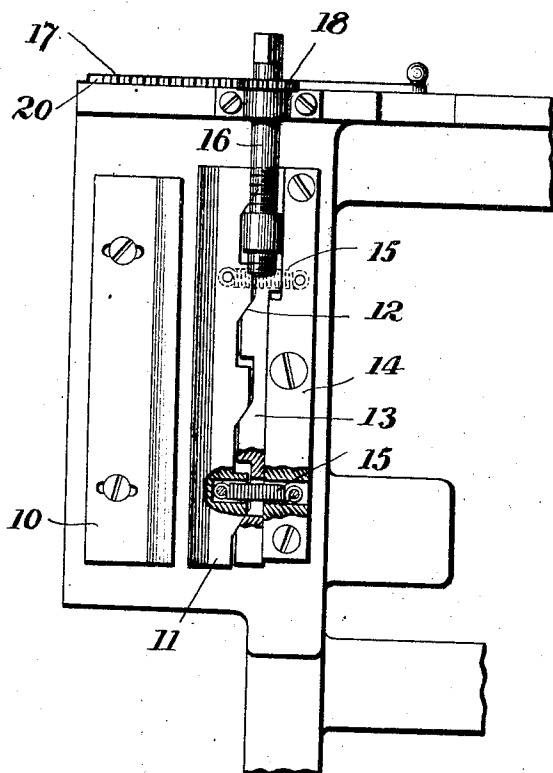


Fig. 6.

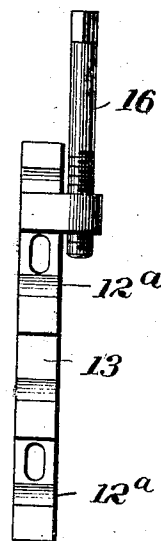
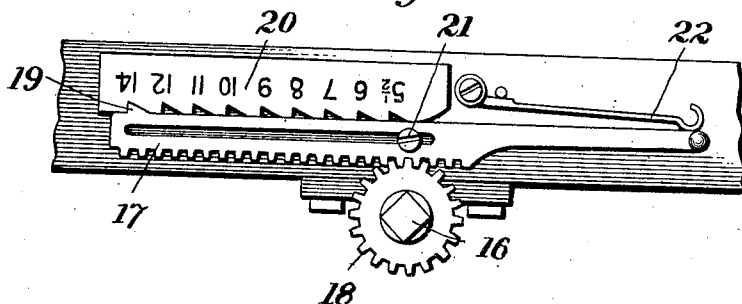


Fig. 7.



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UNITED STATES PATENT OFFICE.

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MOLD FOR LINOTYPE-MACHINES.

No. 824,704.

Specification of Letters Patent.

Patented July 3, 1906.

Application filed December 12, 1905. Serial No. 291,475.

To all whom it may concern:

Be it known that I, JEROME B. BELL, a citizen of the United States, and a resident of Wilmington, Newcastle county, and State of Delaware, have invented certain new and useful Improvements in Molds for Linotype-Machines, of which the following is a specification.

This invention relates particularly to improvements in molds and cutters of linotype-machines. In machines of this class as at present constructed the molds are mounted in rotatable mold-wheels and the inner face or wall of each mold is stationary with respect to the wheel, the outer face being adjustable to produce lines of different thicknesses. On account of the inner or body face of the mold being non-adjustable the lower edges of type of different sizes cast on the machine will not aline or register. For instance, if a slug of brevier type be alined with a slug of small-pica it will be found that the lower edges of the small-pica faces will be lower than the corresponding edges of the brevier faces. In composition it is desirable that the lower edges of the type of different sizes should aline, and my invention provides means whereby type of different sizes cast on a linotype-machine will aline at their lower edges.

The invention also comprises a modification of the trimming-knives to adapt them to the modified mold.

The invention will be described in connection with the accompanying drawings, in which—

Figure 1 is a face view of a portion of a mold-wheel, illustrating my invention. Fig. 2 is an edge view of a body-plate and liners removed from the mold. Fig. 3 is a plan view of the body-plate shown in Fig. 2. Fig. 4 is a plan view of the liners shown in Fig. 2. Fig. 5 is a rear view of the trimming-knives. Fig. 6 is a detail of the adjusting means for the trimming-knives, and Fig. 7 is a plan view of the means for indicating the adjustment.

Referring to Figs. 1 to 4, inclusive, 1 indicates the mold-wheel, which, as usual, is in the form of a gear having a toothed periphery. The mold proper comprises a body part 2, a cap 3, an interchangeable liner 4, and an interchangeable body-plate 5, which may be a combined body-plate and liner. In linotype-molds as heretofore constructed

the mold-opening 6 has been varied in width by adjusting the cap, the mold-body 2 being fixed relatively to the mold-wheel. According to my invention I provide for changing the thickness of the mold-opening by adjusting that wall or side of the mold against which is cast the upper face of the type-bar or slug—that is, the face of the bar adjacent to the tops of the type-faces. In applying the invention to a linotype-machine having a rotary mold wheel or carrier the inner mold-wall—that is, the one nearer the axis of the mold-wheel—is made adjustable instead of the outer wall, as heretofore. I shall refer hereinafter to the mold-wall against which is cast the upper face of the type-bar as the “upper” wall and to the opposing wall as the “lower” wall regardless of the particular position in which the mold may be set. In the accompanying drawings, for instance, the inner mold-wall is the upper wall. I adjust the upper face of the mold by providing what may be termed “body-plates” 5 of different thicknesses, which plates are interchangeable and adapted to be seated upon the mold-body. Thus in Fig. 1 is shown a thin body-plate having a permanent liner 5^a combined with a thick short liner 4. This provides a mold-opening for, say, thirty ems of fourteen-point type, while in Fig. 2 the body-plate 5 is thicker and the liner 4 thinner and longer, thus providing a mold-opening for, say, thirteen ems of six-point type. It will be seen that by the use of interchangeable body-plates, together with complementary liners, the mold may be adjusted to bring all type-faces in position on the type-bar or slug to effect a lining or registry at the bottom of the type-faces. Instead of combining the right liner with the body-plate, as shown in Fig. 1, it may be made separate, as shown at 4^a in Fig. 2. In my invention the mold-body and the cap always bear a fixed relation to each other, the distance between them being equal to the combined thickness of each body-plate and its complementary liners.

Referring to Figs. 5, 6, and 7, 10 indicates the knife which is adapted to trim the outer face of the slug as it is ejected from the mold—that is, the face which is farther away from the axis of the mold-wheel—and 11 is the knife which is adapted to trim the inner or upper face of the slug. The knife 11 is made adjustable to and from the knife 10 to

correspond with the adjustment of the inner mold-face by means of the body-plates. For this purpose the knife 11 is provided with inclines 12, which coöperate with corresponding inclines 12^a upon a movable wedge-piece 13, which slides between the knife 11 and a track 14. The knife 11 is held in contact with the wedge-piece 13 by means of springs 15. The wedge-piece 13 is adjusted vertically by means of a screw 16, which, as shown, is squared at its upper end so that it may be turned by a wrench. In order to gage the adjustment of the knife 11, I preferably provide an indicator. As shown, the indicator comprises a rack 17, which is in mesh with the pinion 18 on the screw 16. The rack is provided with a tooth 19, which is adapted to fit any one of a series of notches in an indicator-plate 20, these notches corresponding to the different thicknesses of slugs—as, for instance, six-point, seven-point, &c. The rack 17 is arranged to rock and slide upon a pin 21, and it is normally held in engagement with the indicator-plate 20 by means of a spring 22. When it is desired to adjust the mold, the rack is rocked to disengage the tooth 19 from the indicator-plate, and the wedge 13 is then moved by means of a screw 16, the adjustment being continued until the tooth 19 registers with the proper notch in the plate 20.

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

1. In a linotype-machine, the combination with a mold-carrier, of a mold having its wall against which the upper face of the type-bar is cast adjustable, whereby the alinement of the bottom edges of different type-faces may be effected.

2. In a linotype-machine, the combination with a mold-carrier, of a mold having its wall against which the upper face of the type-bar is cast adjustable and its opposing wall non-adjustable, whereby the alinement of the bottom edges of different type-faces may be effected.

3. In a linotype-machine, the combination with a mold-carrier, of a mold having a fixed body, interchangeable body-plates of different thicknesses adapted to be seated upon said body to vary the position of the wall of the mold against which the upper face of the

type-bar is cast, and a cap forming the opposing wall of the mold.

4. In a linotype-machine, the combination with a mold-carrier, of a mold-body, a series of interchangeable body-plates of different thicknesses, a series of independent liners of different thicknesses complementary to the thicknesses of their respective body-plates, and a suitable cap forming the outer wall of the mold.

5. In a linotype-machine, the combination with a mold-carrier, of a mold comprising a mold-body connected with the mold-carrier, a removable body-plate upon said mold-body and forming the wall of the mold against which the upper face of the type-bar is cast, suitable liners, and a cap forming the opposing wall of the mold.

6. In a linotype-machine, the combination with a mold having its wall against which the upper face of the type-bar is cast adjustable, of trimming-knives, and means for adjusting the trimming-knife which is adapted to shave the upper face of the type-bar.

7. In a linotype-machine, a mold comprising a mold-body and a cap, having a fixed relation one to the other, interchangeable body-plates with complementary liners capable of being assembled in such manner as to produce a mold-opening having its wall against which the upper face of the type-bar is cast adjustable and its opposing wall non-adjustable.

8. In a linotype-machine, the combination with a mold-carrier, of a mold-body upon the carrier, a mold-cap, a series of body-plates, and a series of complementary liners, the combined thickness of each body-plate and its liners being uniform throughout the series.

9. In a linotype-machine, the combination with a mold-carrier, of a mold-body upon the carrier, a mold-cap, a series of body-plates, and a series of complementary liners, the mold-body and mold-cap being always in fixed relation to each other and to the carrier.

In testimony whereof I affix my signature in presence of two witnesses.

JEROME B. BELL.

Witnesses:

JOSEPH H. MARTIN,
JAMES F. McIVOR.