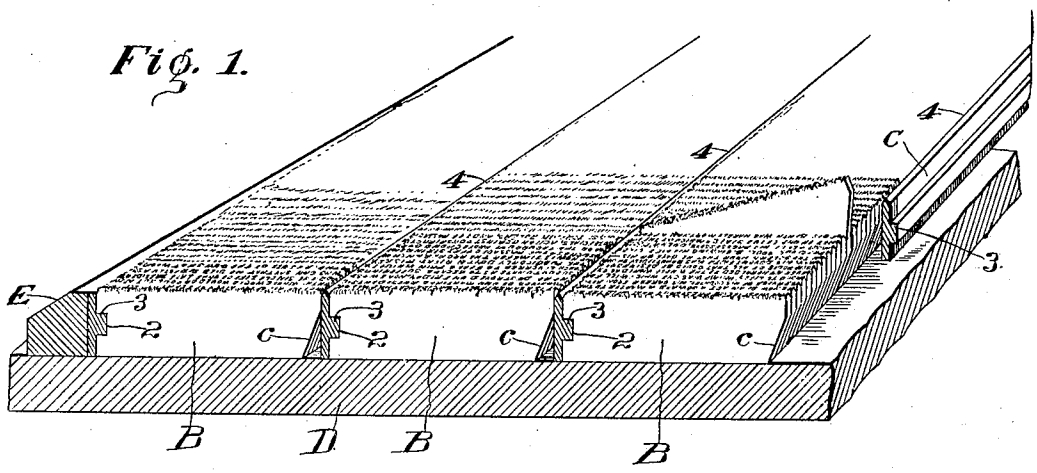
F. H. RICHARDS.

TYPE BAR AND TYPOGRAPHIC FORM.

APPLICATION FILED SEPT. 21, 1901.

962,857. **Patented June 28, 1910.**

Fig. 1.



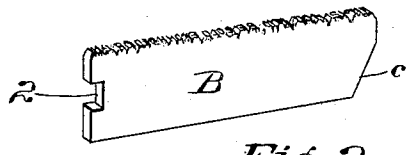


Fig. 2.

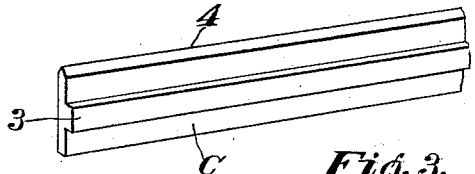


Fig. 3.

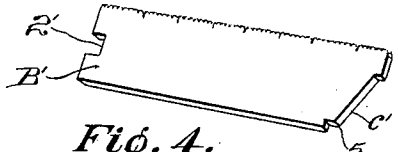


Fig. 4.

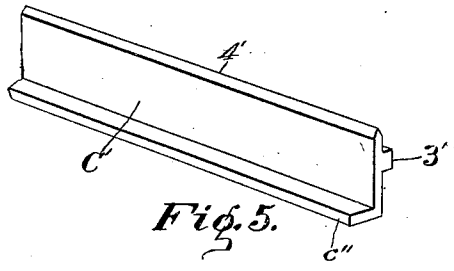


Fig. 5.

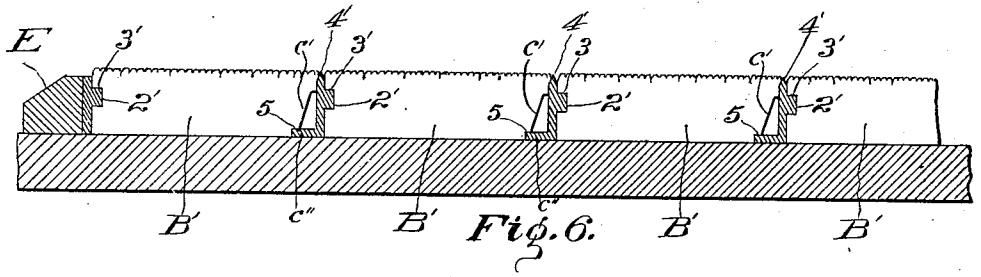


Fig. 6.

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TYPE-BAR AND TYPOGRAPHIC FORM.

962,857. Specification of Letters Patent. **Patented June 28, 1910.**

Application filed September 21, 1901. Serial No. 76,033.

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Bars and Typographic Forms, of which the following is a specification.

This invention pertains to the manufacture of typebars, sometimes designated as linotypes, and to typographic forms, and it has for an object to provide a construction for typebars enabling them to be readily locked into a typographic form when a number of bars are assembled to make up such a form.

The present invention is closely related to that disclosed in United States Letters Patent No. 862,511, issued to me August 6, 1907, but differing from that therein disclosed in that in the present case the construction of the several typebars is such as to enable a bar to be readily withdrawn from its position in the assembled column of composition. In the construction set forth in that patent each typebar is so formed at its ends as to permit it to be engaged with locking strips or members located one at each side of the column of bars. In the present case, however, an analogous construction is provided at but one end of each typebar while the opposite end is so formed as to enable the bar to be swung upward about its engaging end and thereby permit its withdrawal.

In the drawing accompanying the present specification, Figure 1 is a perspective view of a number of columns of composition each comprising a series of individual typebars disposed side by side and locked, the several mars in a column with each other, by a locking member or strip, this view also showing one of the bars partly withdrawn from its position in the column. Fig. 2 is a perspective view of a typebar so constructed at one end as to enable the same to be connected or locked to other bars in the column of which it constitutes a member, while the opposite end thereof is so formed as to permit the bar to be readily disengaged and taken out. Fig. 3 is a similar view of a locking member or strip for connecting the several typebars of a column together. Fig. 4 is a perspective view of a modified form of typebar. Fig. 5 is a similar view of a locking member or strip differing somewhat in construction from that set forth in Fig. 3. Fig. 6 is a cross-sectional view through a series of columns, showing in elevation typebars of the construction illustrated in Fig. 4 with intervening locking members or strips whose form corresponds to that indicated in Fig. 5.

Similar characters of reference designate corresponding parts in all figures.

For the purpose of enabling a typebar to be connected with other typebars in the column of assembled bars, I so form each bar, in carrying the present improvements into practice, as to render it capable of being engaged by a properly formed locking member insertible into place, and when so inserted extending transversely of the line of length of the individual bars at the side of the column thereof. This interlocking of the bars one with the other is therefore effected by providing a suitably formed locking-strip which extends from end to end of the column at the ends of the assembled bars and engaging with the suitably formed end portion of each bar. This engagement of the bars may obviously be effected in various ways by varying the construction of the locking member and correspondingly varying the counterpart construction of the bars. In the present case, as distinguished from the invention set forth in my hereinbeforementioned application, such locking engagement with a locking member or strip is effected at one side of the column of bars only instead of at both sides thereof, while the opposite end of each bar has at its lower portion an inwardly sloping face to permit the bar to be tilted about its other or engaging end and thus allow it to be removed from its assembled position. This inwardly sloping face will be produced in some suitable manner, the bar having the appearance of the corner having been removed or cut away.

In the construction set forth in Figs. 1, 2, and 3, and in which figures the typebars are designated in a general way by B, each bar is provided with a transverse notch or slot in its end, such for instance as 2, and the

locking piece C is provided with a rib or tongue 3 of corresponding cross-sectional outline adapting the tongue or rib to enter the notch in each bar. Shoulders are thus formed when a series of separate bars are locked together precluding the movement of the engaging end of any one of the bars upwardly from the face of the form and also preventing its dropping out of place when the form is lifted up. Constructed in this manner, it is evident that when the bars are assembled side by side in building up a column with their notches in alinement, the locking member or strip may be slid into place lengthwise of the column with the locking tongue in engagement with such notches. At the end opposite the notched or slotted end the typebar has an inwardly leveled face, its corner portion being beveled or removed (see *c*.) Thus enabling the bar when that end is lifted upward to freely clear the adjacent locking strip, the construction at the other or engaging end of the bar being such as to enable the bar to be so moved.

I have also shown in the present instance as in my mentioned application the locking strip C as being adapted to the purpose of the so-called column rule, the upper edge of the strip being beveled (see 4) and terminating substantially in the plane of the impression face of the assembled typebars. Of course the thickness of the locking strip C may be varied, depending upon the desired proximity of the columns one to the other. The usual supporting or bed-plate is designated by D, while the series of columns constituting the so-called "large form", may, if desired, be inclosed in a chase or frame, indicated in Fig. 1 and designated by E.

In the construction set forth in Figs. 4, 5, and 6 the locking strip C′ is provided with a laterally extending base *c*″, while each bar B′ is provided as before with a transverse notch 2′, and has its corner portion (see *c*′) beveled or removed, and which corner terminates in a shoulder 5, for engaging with the edge of the base portion of the locking strip. If desired the depth of each typebar may be such as to cause its contact only with the edge of such base, and the upper surface of the locking tongue or rib 3′ at the opposite ends of the bars otherwise the support for each bar may extend the entire length thereof, contact with the base-plate being had along the entire lower edge of the bar.

When constructed in the manner set forth a convenient means is provided whereby the various members may be securely connected together and to a chase (as more fully described in my mentioned application) to constitute a form by simply sliding the locking strip into place when the columns have been assembled and placed in position, yet which provides a construction enabling any typebar to be readily withdrawn from its assembled position without withdrawing the locking member or other bars.

Having described my invention, I claim—

1. The combination with a typebar, of a locking strip at one end thereof, a support at the opposite end of the bar, and means for preventing the lengthwise movement of the bar away from the locking strip, one end of the bar engaging with the locking strip and the other end being adapted to be swung upward about its engaged end as a center.

2. The combination with a typebar having a notch at one end, of a locking strip having a rib engaging with the notch in the bar, a support for the opposite end of the bar, and means for preventing the lengthwise movement of the bar away from the locking strip, the end of the bar opposite to its said notched end being adapted to be swung upward about the locking strip as a center.

3. A typebar constructed at one end to engage with a locking strip, and at the opposite end having its corner removed.

4. A typebar having a notch in one end, and having the corner of its opposite end removed.

5. In a typographic form, the combination with a series of typebars forming a column, of a locking strip disposed at one side of the column, a support for the opposite side of the column, and means for preventing the lengthwise movement of the bars away from the locking strip, the locking strip constituting one member and the typebars another member, one of such members having a channel and the other member having a tongue or rib engaging with the channel, and the ends of the bars opposite to their engaged ends being adapted to be swung upward about the locking strip.

6. In a typographic form, the combination with a series of typebars forming a column, of a locking strip disposed at one side of the column, the locking strip constituting one member and the typebars another member, and one of the members having notches or channels and the other member having a tongue or rib engaging with the notches, and the ends of the typebars not adjacent to the said locking member having their lower corner portions removed.

7. In a typographic form, the combination with a series of typebars forming a column, of a combined column rule and locking strip disposed at one side of the column, a support for the opposite side of the column, and means for preventing the lengthwise movement of the bars away from the locking strip, said combined column rule and locking strip having a rib on one side face and also having its opposite side face plane, those ends of the typebars adjacent to the

plane side face of the combined column rule and locking strip being adapted to be swung upward about their opposite ends.

8. In a typographic form, the combination with a series of typebars forming a column, of a combined column rule and locking strip disposed at one side of the column, the locking strip constituting one member and the typebars another member, and one of the members having a channel and the other member a tongue or rib engaging with the channel and the ends of the typebars not adjacent to the said locking member having their lower corner portions removed.

9. In a typographic form, the combination with a series of typebars forming a column, of an L-shaped combined column rule and locking strip disclosed at one side of the column, a support for the opposite side of the column, and means for preventing the lengthwise movement of the bars away from the locking strip, said combined column rule and locking strip having a rib on one side and also having its opposite side face plane, those ends of the typebars adjacent to the plane side face of the combined column rule and locking strip being adapted to be swung upward about their opposite ends.

10. In a typographic form, the combination with a series of typebars forming a column, of an L-shaped combined column rule and locking strip disposed at one side of the column, the locking strip constituting one member and the typebars another member, and one of the members having a channel and the other member a tongue or rib engaging with the channel and the ends of the typebars not adjacent to the said locking strip having their lower corner portions removed.

11. In a typographic form, the combination with typebars forming columns, of a column rule disposed between contiguous columns, said rule interlockingly engaging with the typebars on one side and being free from interlocking engagement with the typebars on the opposite side.

12. The combination with a type-bar having a transverse parallel sided notch in one end thereof and a plane face on the other end thereof, of a pair of locking strips, one having a correspondingly formed rib adapted to engage with the notch on one end of the type-bar, and the other having a comparatively plane face adapted to abut said plane face on the other end of the type-bar.

13. In a typographic form, the combination with typebars arranged in columns, of a column rule disposed between the contiguous columns, said typebars and rule interlocking together at one side and at the other side having faces located in position for and being in engagement at two non-coincident separated parallel planes and free from engagement at the region between said faces.

14. In a typographic form, the combination with type-bars forming columns, of a column rule disposed between the contiguous columns, said rule interlocking on one side only with the typebars and on the non-interlocking side presenting two plane faces at an angle one to the other and one of these at an angle to the side face of the column rule.

15. In a typographic form the combination with type-bars forming columns; of a column rule disposed between the contiguous columns; said type-bars and interlocking rule having an L-shaped foot on one side; said foot projecting from its lower edge in a direction opposite to its interlocking side; said type-bars each having faces on the end thereof opposite the interlocking end for abutting against the two faces of the L-shaped rule and having the corner between said abutting faces cut away.

16. The combination with a type-bar having a transverse notch in one end thereof, a plane face on the other end thereof, said plane face being substantially normal to the length of the bar and a notch in the end having the plane face, and having the corner between the plane face and the notch cut away, of a pair of locking strips, one having a correspondingly formed rib adapted to engage the transverse notch in one end of the type-bar, and the other locking strip having a comparatively plane face adapted to engage the plane face at the other end of the type-bar and having an L-shaped foot adapted to engage the notch in the bottom of the other end of the type-bar.

17. A typebar having locking means at one end to engage a locking strip and at the opposite end having a face at its type carrying edge for engaging the column rule and at its lower edge with a face for occupying a position out of engagement with the column rule engaged by the said face.

18. A typebar having a notch at one end the opposite end having a face at the type carrying edge for engaging the column rule and at its lower edge a face for occupying a position out of engagement with the column rule engaged by the said face.

19. A typebar having locking means at one end, and at its opposite end at its type carrying edge having a normal face for abutting a column rule and at its lower edge having a face extending inwardly from such normal face and constructed and adapted to be free from engagement with said rule.

20. A typebar having an end face substantially perpendicular to the printing face, a locking notch in such face, and the other end of said bar having the portion thereof adjacent to the printing face substantially parallel to the face upon the other end of the bar, and the lower portion of said face beveled inwardly.

21. A typebar having at one end a pair of faces substantially perpendicular to the printing face and disposed in different planes longitudinally of the bar and connected by a sloping face.

22. A typebar having at one end a lock face and a portion of the other end adjacent to the printing face being substantially parallel to the locking face and the lower portion of said end being beveled.

23. A typographic form embodying a pair of locking strips, one having a rib in its face and the other having a laterally projecting foot, and a number of typebars each provided at one end with a notch for engaging said rib, and at the top and bottom portions of its other end with faces for abutting the other of said strips, said faces being disposed in different planes longitudinally of the bar, and a bevel face connecting the same.

24. In a typographic form the combination with typebars forming columns, of a column rule disposed between the contiguous columns, said rule interlocking with the typebars on one side, and the rule having an L-shaped foot on the other side, said foot projecting from its lower edge in a direction opposite to its interlocking side, said typebars each having faces on the end thereof opposite the interlocking end for abutting against the two faces of the L-shaped rule and having a beveled face between said abutting faces.

25. In a typographic form, the combination with a series of typebars forming a column, of a locking strip disposed at one side of the column, the locking strip constituting one member and the typebars another member, and one of the members having notches or channels and the other member having a tongue or rib engaging with the notches, and the ends of the typebars not adjacent to the said locking member having their lower corners beveled.

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