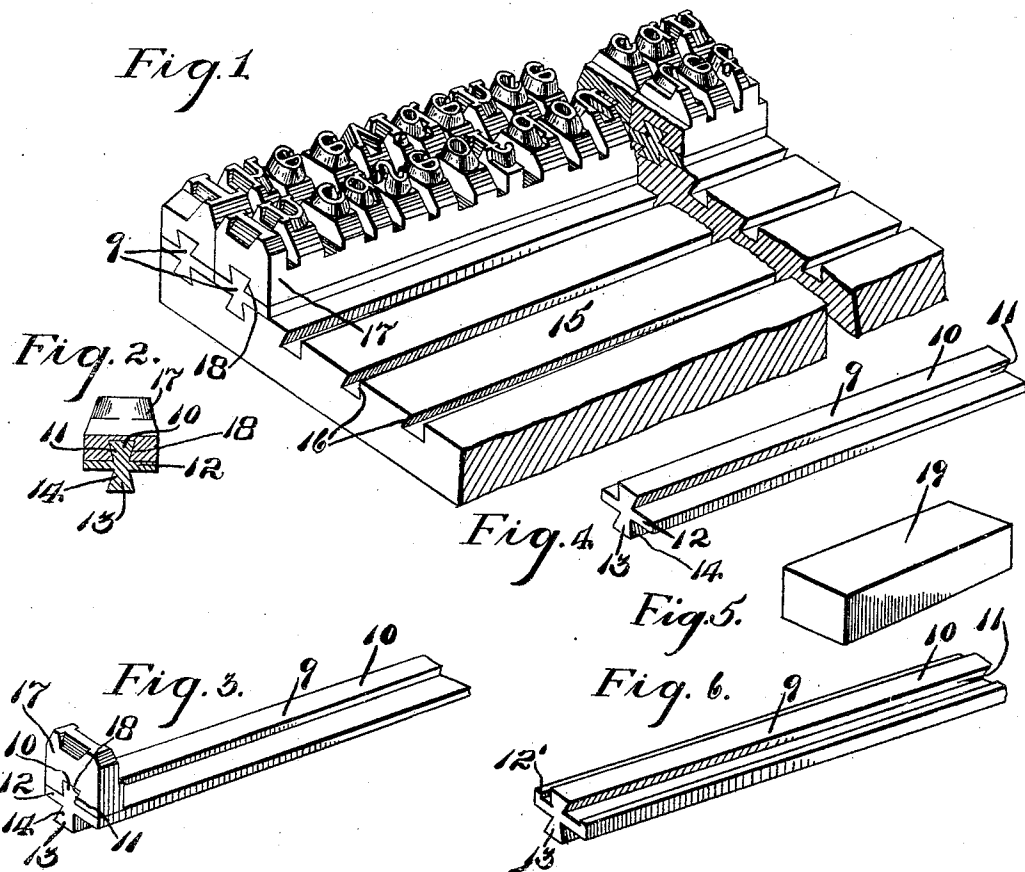


F. H. RICHARDS.
MANUFACTURE OF TYPE BARS,
APPLICATION FILED DEC. 6, 1902.

940,404.

Patented Nov. 16, 1909.



Witnesses.

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MANUFACTURE OF TYPE-BARS.

940,404.

Specification of Letters Patent.

Patented Nov. 16, 1909.

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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 Manufacture of Type-Bars, of which the following is a specification.

This invention relates to the manufacture of that class of type bars which are of composite construction, that is, in which the type, logotype or line of type is made up or built up from separate and distinct parts, and it includes a typographic form embodying types, logotypes or lines of type of such composite nature.

The present invention has for an object to increase the stability of the printing line transversely to its line of length and to furthermore provide means for securely holding the types in position. These results I accomplish in the present instance by providing a supporting or base piece for the type bodies, whether such bodies be separate and distinct from one another or whether they be integrally connected with others associated with them in the logotype, etc., and in order to connect this base or supporting piece with the type bodies the two may be so formed as to interlock with each other. A construction may be adopted for attaching the base piece or pieces to the form plate similar to that employed for connecting the type bodies with such base piece.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective showing a form of my invention, wherein two strips are shown having types formed thereon and the strips mounted upon a plate; Fig. 2 is an end view of one of the strips having type impressed thereon; Fig. 3 is a perspective with part of the type portion or head removed from the carrier; Fig. 4 is a form of carrier; Fig. 5 is a blank; and Fig. 6 is a modified form of carrier.

In producing types upon strips of metal it is found practicable to employ a strip of metal which as it is fed to the type-forming dies is comparatively soft and easily workable by the dies. The process of forming the types has a tendency to compact the working face of the types sufficiently to render them efficient for the purposes for which they are intended. It is, however,

desirable if comparatively thin strips of metal are to be employed, to provide a carrier of stiffer material at the back of the strip to prevent distortion thereof in the machine and its bending subsequent to its removal therefrom, and also to prevent the undue flowage of the metal while undergoing the forming operation, which carrier or backing furnishes a bearing surface on which the type strip may rest upon a plate or support and furnish a "cut off" for preventing the metal of the type head from flowing down too far over the rib or central part of the wire or strip, and may also be made in such a form that it will afford a suitable fastening device for locking the typebars or types upon the plate of a printing or other press.

A convenient form of carrier 9 is shown herein, which comprises a carrier wire or rib 10 having undercut faces 11 and a plate or side wing 12, and below which may be a rib 13 having undercut faces 14 for securement to a plate 15 of the printing or other press having undercut channels 16 therein. The side wings may be turned up, forming wings 12'. In practice, the backing or strip 9 will be made of a comparatively hard body of some composition of which the comparatively soft type-receiving face or head 17 is made, which type-receiving face may be assembled with the base strip in any convenient manner; it may be fed into the machine which is to form the impressions thereon and the engagement between such metal and the die will force the soft metal down over the rib 10 and it will engage and flow below the undercut faces 11, forming, as it were, a dovetail connection or channel 18. The strips may be cut into suitable lengths and mounted upon a plate, and after they have been used the entire strip may be melted up and reduced to wire 19, such as shown in Fig. 5, for reconstruction either into the type-receiving faces or into the carrier strips.

Although the invention has been shown applied to strips of types, type mounted upon strips of special formation held on a mating base, and special machinery has been shown for constructing that form, yet it will be apparent that various modifications may be had as the requirements of practice may demand.

Having thus described my invention, I claim—

1. A typebar having two portions of similar metal one of these being a hardened back and the other a face of sufficient softness to receive type thereon by impress of dies, and means dovetailing one into the other.

2. A typebar comprising two portions of similar metal one of these having a back of sufficient hardness to hold the bar in shape and the other a face of sufficient softness to receive die impressions, and means dovetailing one into the other.

3. In a composite typebar, the combination with a series of type heads, of a hardened base strip said base strip having means for engaging with a form plate.

4. In a composite typebar, the combination with a series of type heads, of a hardened base strip having means on one of its faces for locking said heads to the strip and holding means on another face thereof.

5. A composite typebar, comprising in combination a series of type heads and a hardened base strip whose width is substantially equal to the width of the type heads, said strip having a longitudinal rib on one of its faces engaging with the type heads and holding means on the opposite side thereof.

6. A composite typebar comprising in combination a series of type heads and a hardened base strip whose width is substantially equal to the width of the type heads, said strip having a longitudinal undercut rib on one of its faces engaging with the type heads and holding means on the opposite side thereof.

7. In a composite typebar, the combination with a series of type heads, of a hardened base strip having an undercut rib upon one of its faces engaging with the type heads, and a rib on its opposite face for attaching the typebar to a typographic form plate.

8. A typographic form made up from a plurality of typebars each comprising a series of type heads and a hardened base strip interposed between each line of type and a typographic form plate and having oppositely extending ribs engaging with the line of type and the plate.

9. A typographic form made up from a plurality of type heads each comprising a series of type heads and a hardened base strip interposed between each line of type and a typographic form plate and having oppositely extending undercut ribs engaging with the line of type and the plate.

10. The combination with a form plate, of a type-bar consisting of portions composed of similar metal, one portion comprising an unhardened impression receiving head and the other portion comprising a hardened

base for interlocking the head with the said plate.

11. The combination with a form plate having dove-tailed channels upon it, of a type-bar having a dove-tailed channel and an impression receiving portion, and an interlocking member of material similar to that of said head for entering the dove-tails in the head and plate respectively.

12. The combination with a form plate, of an unhardened metal impression receiving type head and a hardened base for said head of similar metal having dove-tailed ribs to engage the dove-tails in said head and plate respectively and interlock the same together.

13. The combination with a form plate of a type bar consisting of portions composed of similar metal, one portion comprising an impression receiving head and the other portion comprising a harder base for interlocking with the head and with the said plate.

14. The combination with a form plate having dove-tailed channels upon it, of a typebar having a dovetailed channel and an impression receiving portion, and an interlocking member of material similar to that of said head but of a harder condition for entering the dovetails in the head and plate respectively.

15. The composite typebar comprising in combination a series of type heads and a harder base strip whose width is substantially equal to the width of the type heads, said strip having a longitudinal undercut rib on one of its faces engaging with type heads.

16. In a composite typebar, the combination with a series of type heads, of a base strip of similar but harder metal having an undercut rib upon one of its faces engaging with the type heads and a rib on its opposite face for attaching the typebar to a typographic form plate.

17. A typographic form made up from a plurality of typebars, each comprising a series of type heads, and a base strip of a harder quality of the same metal interposed between each line of type and a typographic form plate having oppositely extending ribs engaging with the lines of type and the plate, and said form plate.

18. A form made up from a plurality of types each comprising a series of heads and a base strip of a different degree of hardness of the same metal interposed between each line and a typographic form plate and having oppositely disposed undercut ribs engaging with the lines of type and the plate, and said form plate.

19. A typographic form made up of a plurality of lines of type heads, each comprising a series of heads of comparatively soft type metal and a base strip of comparatively hard type metal interposed between each line of heads and typographic form

plate, and having oppositely disposed ribs engaging with these respectively, and said form plate.

20. A typographic form comprising a plurality of typeheads arranged into a series of lines of composition, each of said heads having lock engaging faces disposed in line with said lines of composition, a base plate having lock engaging faces disposed in line with the said lines of composition, and a lock for each type line of heads and having engaging faces for those on the head and for those on the base plate respectively.

21. In a composite typebar, the combination with a series of type heads, of a typographic form plate, a supporting or base strip having an undercut rib upon one of its faces engaging with the series of type heads, and a rib on its opposite face for attaching the typebar to the typographic form plate.

22. A typographic form made up from a plurality of typebars each comprising a series of type heads, a typographic form plate, and a supporting or base strip interposed between each line of type heads and the typographic form plate and having oppositely-extending ribs engaging with the heads of a line of type and the plate.

23. A typographic form made up from a plurality of typebars each comprising a se-

ries of type heads, a typographic form plate, and a supporting or base strip interposed between all the heads of each line of type and the typographic form plate and having oppositely-extending undercut ribs engaging with the heads of the line of type and the plate.

24. In a composite typebar, the combination with a base provided with parallelly arranged undercut grooves, of a series of type heads provided with undercut grooves, and an interlocking strip for each groove having an upper and a lower bead insertible in the respective grooves whereby to lock the heads to the base.

25. A typographic form comprising a base having a series of locking-member receiving grooves, of a series of type heads each having a locking-member receiving groove, and a series of locking members having means of connection with the grooves of the heads, and parallel with the means of connection with the heads, means of connection with the grooves of the base.

Signed at Nos. 9-15 Murray street, New York, N. Y., this 5th day of December, 1902.

FRANCIS H. RICHARDS.

Witnesses:

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