F. H. RICHARDS.

TYPE BAR AND TYPOGRAPHIC FORM.

APPLICATION FILED AUG. 24, 1901. RENEWED OCT. 23, 1909.

952,579.

Patented Mar. 22, 1910.

Fig. 1.

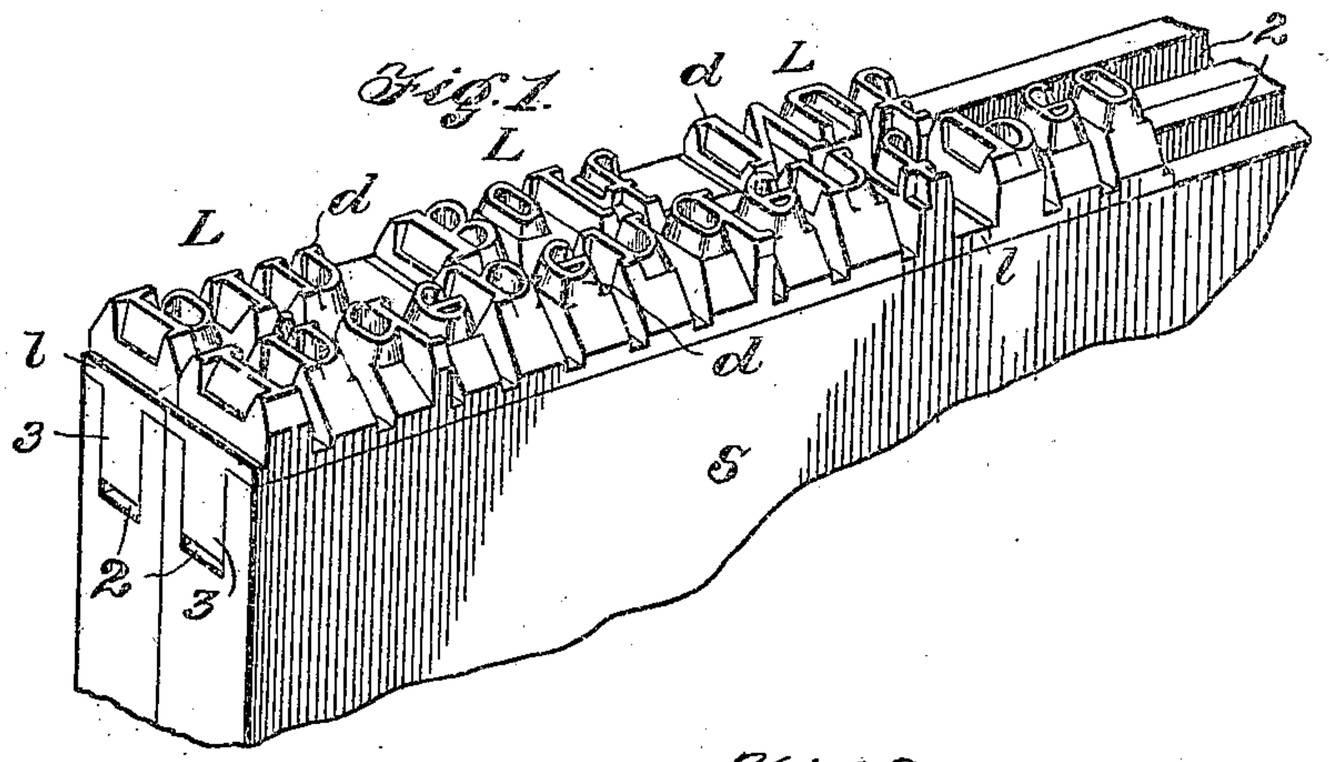


Fig. 2.

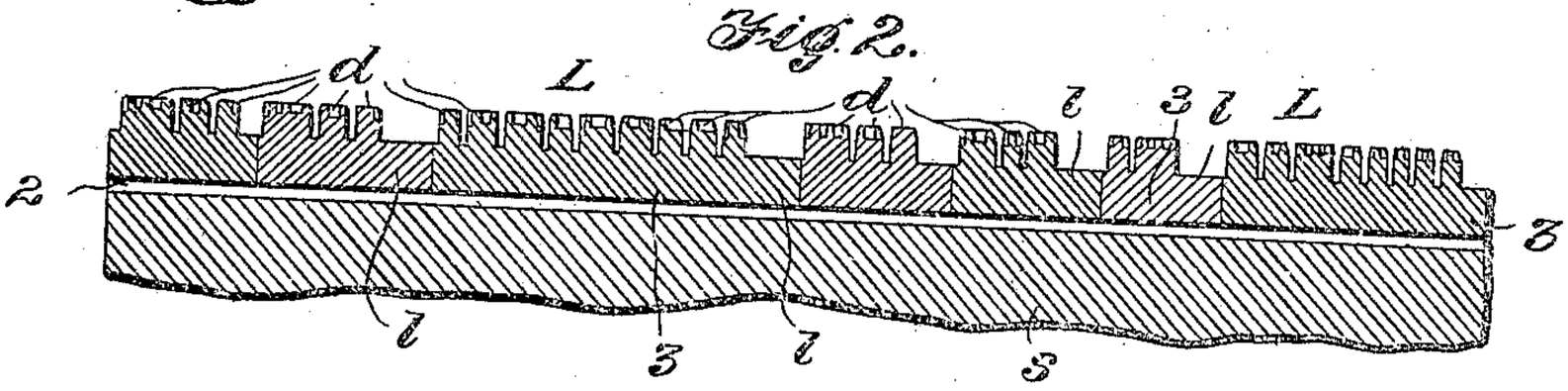


Fig. 4.

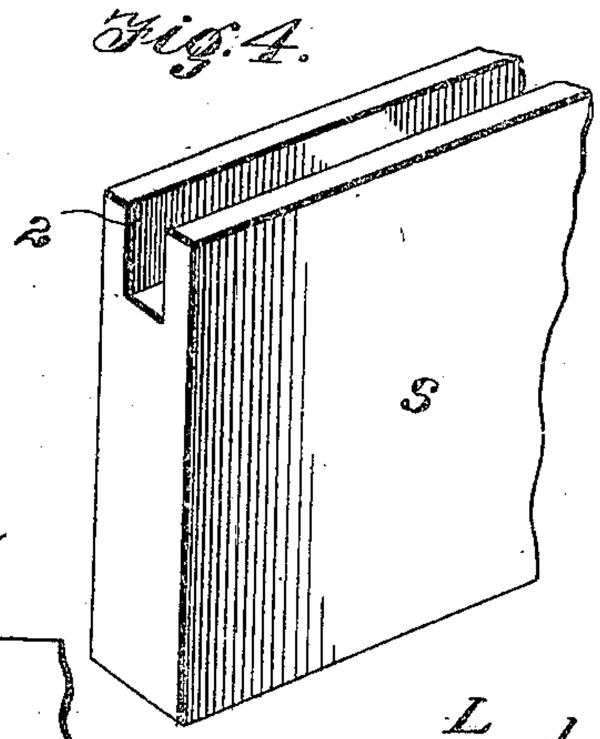


Fig. 5.

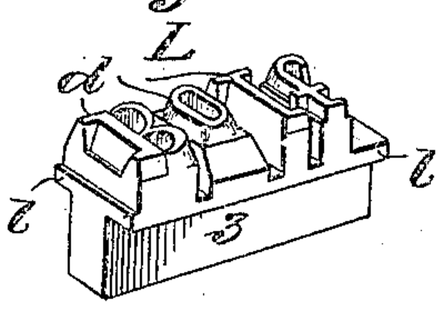


Fig. 6.

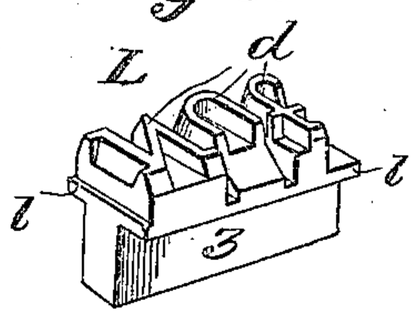


Fig. 7.

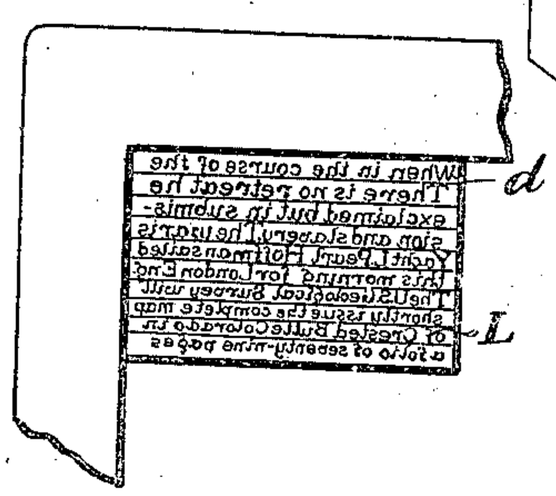
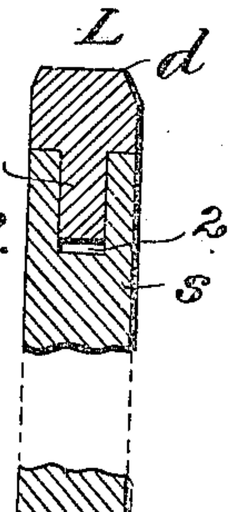


Fig. 3.



Witnesses:

F. G. Campbell.

R. W. Pittman

Inventor:

F. H. Richards.

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANCIS H. RICHARDS, OF HARTFORD, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO AMERICAN TYPOGRAPHIC CORPORATION, A CORPORATION OF ARIZONA TERRITORY.

TYPE-BAR AND TYPOGRAPHIC FORM.

952,579. Specification of Letters Patent. Patented Mar. 22, 1910.

Application filed August 24, 1901, Serial No. 73,126. Renewed October 23, 1909. Serial No. 524,231.

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 is closely related to the invention disclosed in an application for United States Letters Patent on a type-bar and typographic form filed by me on June 20, 1901, Serial No. 65,307, renewed August 7th, 1909, Serial No. 513,350, and has for an object, like the invention set forth in that application, to provide a typebar of a composite structure embodying, in combination with a support or typebar body, a series of type-heads in the form of word-types or logotypes adjustably engaged with the edge of such body, the invention embracing also as a further feature a typographic form in whose construction there is comprised a plurality of such typebars.

The typebar of the present invention differs from that shown, described and claimed in my mentioned application in that in the present case each logotype or analogous member is provided at one or both ends with an extension, preferably an integral one and of a width measured lengthwise of the type-head substantially equal to the width of the minimum word-space of the composition which the assembled logotypes are adapted to print.

In the manufacture of a typebar according to the present improvement, the type-heads, whether the same comprise but a single type or include a plurality thereof, are made by some suitable method to form integral heads so formed with relation to the edge of a suitable support or typebar body as to be engageable therewith in a manner to permit the movement of the individual heads lengthwise of the body for the purpose of effecting the regulation or justification of the total length of the line of type-heads comprised in the typebar. When a typographic form, moreover, is made up from such bars, or at least some of its matter is composed thereof, particular advantages exist and are common to the actual practice of the two inventions in that in both of them not only does there exist capacity for effecting the justification and regulation of the matter on the edge of each typebar body; but it is also possible to alter the appearance of the form as a whole after being set up, as will appear more clearly hereinafter.

The present drawing illustrates a typebar and an assemblage of the same embodying the present improvement, and in this drawing, Figure 1 is a perspective view upon an enlarged scale of a portion of a number of assembled and partially completed typebars constructed according to the present invention. Fig. 2 is a longitudinal section of the present typebar. Fig. 3 is a cross-section of the same, the plane of the section being transverse to the line of length of the bar, and the portion thereof intermediate the top and bottom edges of the bar being omitted. Fig. 4 is a perspective view of a portion of a typebar body or support adapted to form one of the component parts of the present composite bar. Figs. 5 and 6 are perspective views of different word-types or logotypes, which are so constructed as to adapt them to be slidably engaged with the support shown in Fig. 4; and Fig. 7 is a plan view of a number of assembled typebars constituting a typographic form.

Similar characters of reference designate corresponding parts in all figures.

In manufacturing the word-types or logotypes forming components of the present bar, and designated generally and without preference herein by L, the same mode or mechanism may be employed as used for the corresponding purpose in manufacturing the analogous members of my hereinbefore-referred to invention. Any appropriate mechanism may be utilized for this purpose. By whatever mechanism or in whatever manner the logotypes are made they will usually be formed from a suitable blank of type-metal and embody one or more types *d* integrally connected with the material of the logotype-head to form a series of types adapted to make, in general, a word impression in the typographical art. While I do not confine myself to any particular method of forming the composed types embodied in each logotype, such may be readily and satisfactorily produced, however, by the compression of a proper blank by a series of selectively-located dies, which, as they are

successively brought into engagement with the successive portions of the blank, form each respective type as the result of a relative subsidiary motion imparted to the type-making members during the advance of the die into the material of the blank. Such a method of producing types is set forth in United States Letters Patent No. 919,220, issued to me on April 25, 1909. The logotypes may, moreover, be formed consecutively from a continuous and proper blank which is severed into appropriate lengths to make logotypes engaged with the support.

The typebar body or support, designated in a general way herein by S, is of proper dimension and material, and one edge thereof will be constructed to be engaged by the series of logotype-heads. In the form of typebar illustrated in the drawing attached to the present specification, the support S is shown as provided with a longitudinal, substantially parallel-sided slot or groove 2 formed in one of its longitudinal edges and extending lengthwise thereof. When the support is so constructed, each head is most advantageously provided with a corresponding parallel-sided tongue 3 adapted to fit into the slot 2 and thus permit the engagement of the logotypes with the support. When engaged with each other in this manner, a logotype may be readily disengaged from the support and lifted out of the slot, thus allowing a logotype to be removed from any portion of the line of type-heads without disturbing the form, as in effecting author's corrections, for instance. When slidably engaged, as contemplated in the present typebar, the logotypes may be conveniently adjusted along the support by suitable mechanism, and the spaces regulated to secure a proper justification or filling out of the series of logotypes comprised in the bar.

It will be seen by reference to the drawing that the type-bar body or support in its solid or unslotted portion occupies the major portion of the height of the bars when these are made up with the logotypes in position and that the head portion or types *d* are of relatively small height compared with the height of the body. This construction is of value when the bars are locked up in the large form and the pressure of locking is applied longitudinally of the columns according to the present prevailing practice especially in newspaper work. Pressure of the sides of the bars against one another, due to the fact of being locked up, will, in the present instance, be largely received upon the solid portions of the type-bar bodies or supports. The pressure at the upper edges at the portion slotted or grooved will, of course, be sufficient to clamp the tongues 3, and hold the logotypes in their justified positions. But there will be sufficient solid metal below the groove or slotted portion of the support to prevent any distortion of the lines.

It will be seen by reference to the drawings that the tongues 3 are normally of less length than the depth of the groove 2. This will prevent the tongue from bottoming in the groove and will bring the support of the upper edges of the body portion well up under the type heads. In a construction where the upper edges of the support engage the lower surface of the type head and the lower edge of the tongue 3 engages the bottom of the groove 2, unless the parts were very nicely adjusted, some times it would happen that the tongue 3 would be a little deeper than the groove, or in case dirt or some other foreign matter got in the bottom of the groove, the logotype would then be supported on a central pivot as it were and this would have a tendency to bring its printing face out of the normal plane of the printing faces of the form. But by having the head of the logotype supported on each of its two sides, a construction is given where there will be no movement of the head, which will find a solid rest at each side.

The several logotypes illustrated in my first hereinbefore-mentioned application when adjusted along the bar will ordinarily be separated one from the other by spaces which will generally vary in width from a minimum distance to widths that are greater. According to the present invention, the logotypes are provided at one or both ends with an extension of the logotype-head, whose width, measured in line with the length of the logotype, will be, ordinarily, the width of the minimum word-space which exists in the composition. Such extension, designated without choice herein by *l*, will, of course, be less than the height of the logotype from the bottom surface thereof to the impression surface, thus enabling the portion occupied by such extension to form a space between consecutive logotypes, that is a word-space.

A slidable engagement of the logotypes with the respective typebar bodies or supports S affords a further advantage in that not only a capacity for the individual justification of the word-types in each typebar exists, but also there is present a possibility for effecting the shifting of the position of the logotypes on the typebar with relation to the logotypes on adjacent bars, thus enabling the type-setter to prevent the union or connection of the word-spaces or justified bars one with the other, thus permitting him in a very large measure to control the appearance of the printed impression derived from the form when such impression is viewed as a whole. This phase of the present improvement is especially intended for use in connection with the printing of books, magazines, etc., in which, in the endeavor to

produce an artistic effect, the appearance of a mass of printed matter upon the eye of the reader is especially important and constitutes a factor requiring consideration in seeking to produce fine effects in typographic composition. This is best illustrated in Fig. 7, in which a number of assembled bars are shown. It is evident that if such bars are constructed according to the present invention, that upon setting up the form and with or without the aid of the proof therefrom, such a readjustment of the word-types may be made as will render the texture of the resulting visual impression more thoroughly homogeneous and pleasing.

Having described my invention, I claim—

1. A type-bar composed of a type-bar body or support provided with a longitudinal groove in one of its longitudinal edges, the body or support below the bottom of such groove presenting a substantial body of metal, and a series of logotypes each having the tongue fitted into said groove, each of said logotypes being provided with a word space extension, the series of extensions embodying members differing in extent for effecting justification.

2. A type-bar composed of a type-bar body or support provided with a longitudinal groove in one of its longitudinal edges, the body or support below the bottom of such groove presenting a substantial body of metal, a series of logotypes each having the tongue fitted into said groove, and each of said logotypes having an integral word space extension, said word space extensions differing one from the other for the purpose of justification.

3. A type-bar composed of a body or support provided with a longitudinal groove in one of its edges, said support below the bottom of said groove presenting a substantial mass or body of metal, and a series of logotypes each having a head portion and a dependent tongue fitting in said groove and of less extension than the depth thereof, leaving a clearance space between the edge of the tongue and the bottom of the groove, each of said logotypes being provided with an integral word space extension.

4. A typebar composed of a body or support and a series of logotypes each having an integral word space or extension, one of said members, the support or the series of logotypes being provided with a longitudinal groove in one of its edges and the other being provided with a head and a dependent tongue fitting into said groove and of less extension than the depth thereof, leaving a clearance space between the edge of the tongue and the bottom of the groove, said groove carrying member comprising a substantial mass or body of metal.

5. A typebar comprised of a support and a series of logotypes, each of said logotypes being provided with a word space extension, the series of extensions embodying members differing in extent for effecting justification.

FRANCIS H. RICHARDS.

Witnesses:

FRED. J. DOLE,

JOHN O. SEIFERT.