

P. T. DODGE.
LINO TYPE MACHINE.
APPLICATION FILED OCT. 20, 1906.

Fig. 2.

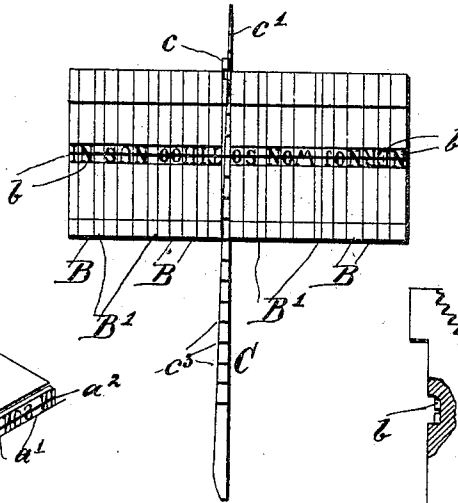


Fig. 1.

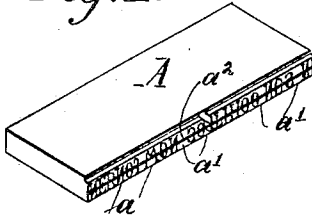


Fig. 5.

Fig. 6.

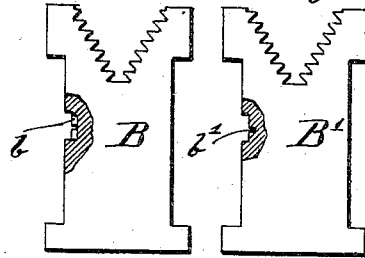


Fig. 3.

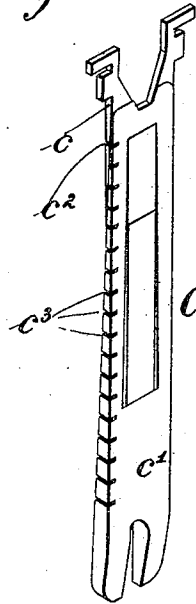


Fig. 4.



Witnesses
F. J. DeLuca
A. R. Kennedy

Inventor
P. T. Dodge

UNITED STATES PATENT OFFICE.

PHILIP T. DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
TO MERGENTHALER LINOTYPE COMPANY, A CORPORATION OF NEW
YORK.

LINOTYPE-MACHINE.

No. 838,609.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed October 20, 1906. Serial No. 339,770.

To all whom it may concern:

Be it known that I, PHILIP T. DODGE, of Washington, District of Columbia, have invented a new and useful Improvement in
5 Linotype-Machines, of which the following is a specification.

My invention has reference to machines for producing slugs or linotypes which bear on the edge, suitably spaced and justified,
10 the characters to print a line.

The aim of the invention is to adapt these machines for the production of slugs having a continuous printing rule or line extending through the type characters and also across
15 the spaces between the words, so that the line printed therefrom will present a series of characters and a continuous cancellation-line.

To this end the invention consists in a
20 wedge or spacer for justifying the line of matrices provided with a series of transverse grooves any one of which may be brought into alinement with similar grooves in the adjacent matrices, the matrices and spacers
25 presenting a continuous groove to form the rule or rib on the slug.

Referring to the drawings, Figure 1 is a slug or linotype such as it is the object of my invention to produce. Fig. 2 is a front elevation of a composed line of matrices with
30 my combined spacer and matrix therein. Fig. 3 is a perspective view of a double-wedge spacer, such as shown in the preceding figure. Fig. 4 is a perspective view of the spacer in alternative form. Figs. 5 and 6
35 are sectional views illustrating the matrices with which the spacer is used.

Referring to Fig. 1, A represents a printing slug or linotype provided at its forward
40 edge with a series of raised type characters a , the intervening blank spaces a' , and a continuous longitudinal rib or rule a^2 , extending transversely across the type characters and also across the intervening spaces flush with
45 the printing-surface. My devices are designed to produce slugs of this character.

Referring to Fig. 2, B B represent a series of matrices such as are commonly used in machines described in Letters Patent of the
50 United States No. 436,532 and kindred machines. Each of these matrices has in its forward edge an intaglio character b and a groove extending transversely through the same. $B' B'$ are space-matrices designed to

separate the words. They are made of the
55 same general form as the other matrices and contain each a transverse groove b' , arranged to aline with and form a continuation of the grooves in the adjacent matrices. C represents my improved wedge-spacer or justifier.
60 It comprises two oppositely-tapered wedges c and c' , connected by a sliding joint, so that while the upper wedge is held in line between the matrices the lower and longer wedge may be moved upward through the line in order
65 to elongate and justify the latter, the construction and arrangement, so far as described, being essentially the same as that of the well-known Shuckers spacers now in general use.
70

In applying my improvement I provide the short stationary wedge with a transverse groove c^2 , in position to aline with the grooves in the matrices, and also provide the longer wedge c' with a series of corresponding
75 grooves c^3 , any one of which may be brought into alinement with the groove c^2 , as shown in Fig. 2, so that the groove in the two members of the spacer will form a continuation of the grooves in the adjacent
80 matrices. When the matrices and spacer are combined in one line, as shown, they will produce on the slug a series of type characters and a continuous printing rib or rule extending not only through the characters,
85 but also across the intermediate spaces.

The series of grooves c^3 are employed for the reason that the composed lines require more or less movement of the spacer to effect their justification.
90

As the taper of the wedge is very gradual and as the line is slightly compressible, it is possible to effect the justification of the line and at the same time set the wedge c' in such position that one or another of the grooves
95 c^3 will register with the groove c^2 .

The two wedges constitute jointly a grooved matrix which is expansive or variable in thickness. In other words, they constitute a matrix adapted to produce on the
100 slug between the adjacent type characters an intervening rib of greater or less length, as the occasion may require.

While I prefer to employ the spacer composed of two wedges, I may employ a
105 spacer formed in one piece, as shown in Fig. 4, increasing the thickness step by step in a manner well known in the art. When this

stepped spacer or wedge is used, I provide each step or section with a transverse matrix-groove c^4 . In use the spacer will be adjusted in the line in such manner that one or another of these grooves will register with the grooves in the matrices.

It will be understood that the notches in the two cooperating members of my spacer are, in fact, matrices or matrix-cavities for forming the rules. These cavities may be varied in form. For leader-work I propose to put in the thinner member a single dot or leader and in the other member at different points in its length two, three, or more leaders, so that a line of leaders may be made up of any suitable length.

Having described my invention, what I claim is—

1. An expanding spacer consisting of two cooperating members, one containing a single matrix-cavity and the other a series of cavities to cooperate singly with the first.

2. In a linotype-machine, a spacer adapted to expand the composed line and provided at different points in its length with transverse matrix-cavities, substantially as shown.

3. The spacer consisting of two cooperating wedges, provided with cooperating rule-forming cavities.

4. In a linotype-machine, the combination of grooved matrices adapted to form canceled type characters, and an intermediate spacer adapted to expand the line and provided with a series of rule-forming cavities or grooves adapted to cooperate with the grooves in the adjacent matrices; whereby a slug may be produced with characters for printing a number of words, and with a cancellation-line extending continuously through said words and across the intervening spaces.

5. The spacer consisting of wedge c , containing a groove or matrix, c^2 , and the cooperating wedge c' , provided with a series of grooves or matrices, c^3 .

In testimony whereof I hereunto set my hand, this 18th day of October, 1906, in the presence of two attesting witnesses.

PHILIP T. DODGE.

Witnesses:

E. J. LAMB,

DAVID PETRI-PALMEDO.