

(No Model.)

P. T. DODGE.
LINOTYPE MACHINE.

No. 538,100.

Patented Apr. 23, 1895.

Fig. 1.

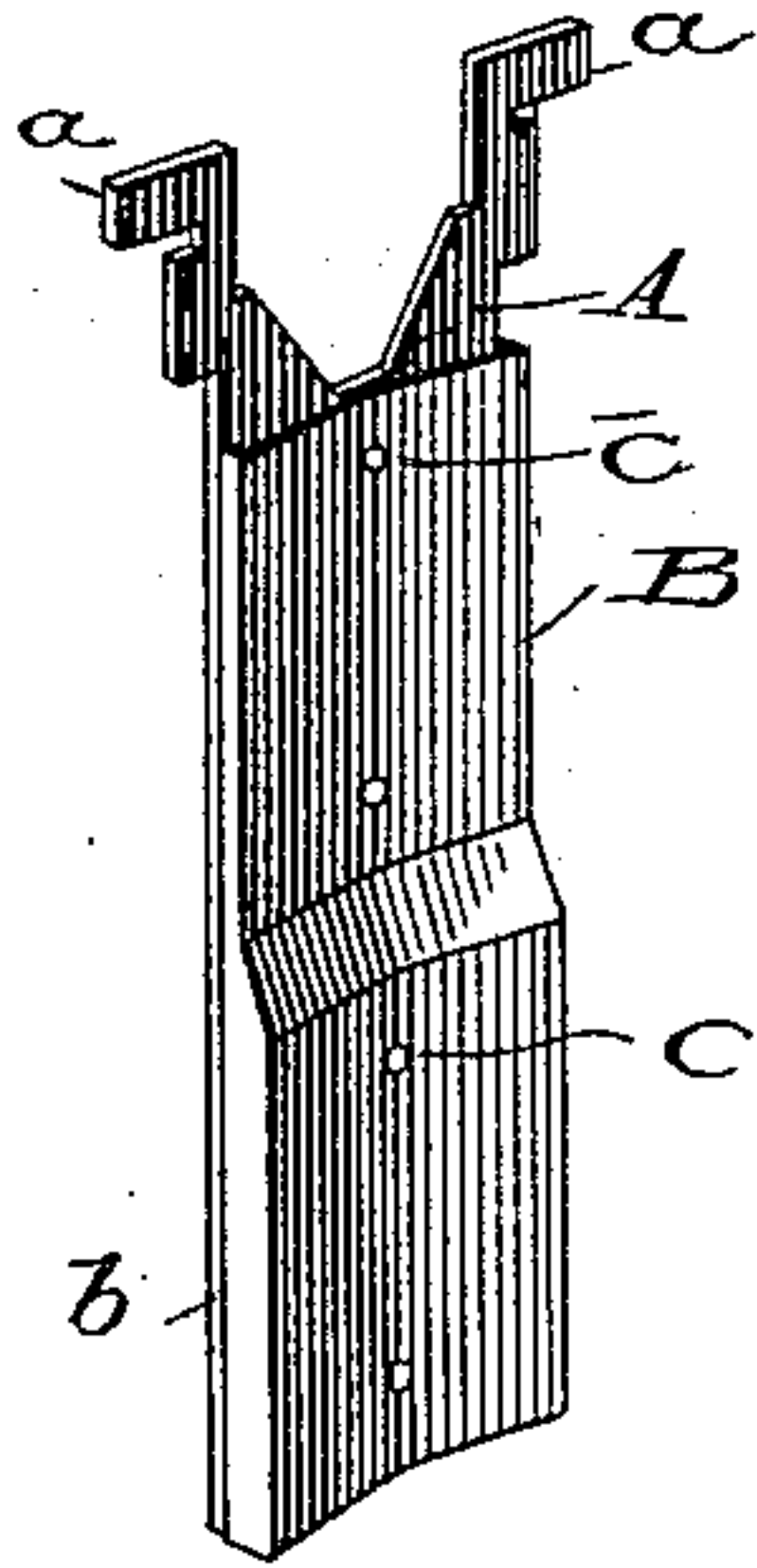


Fig. 2.

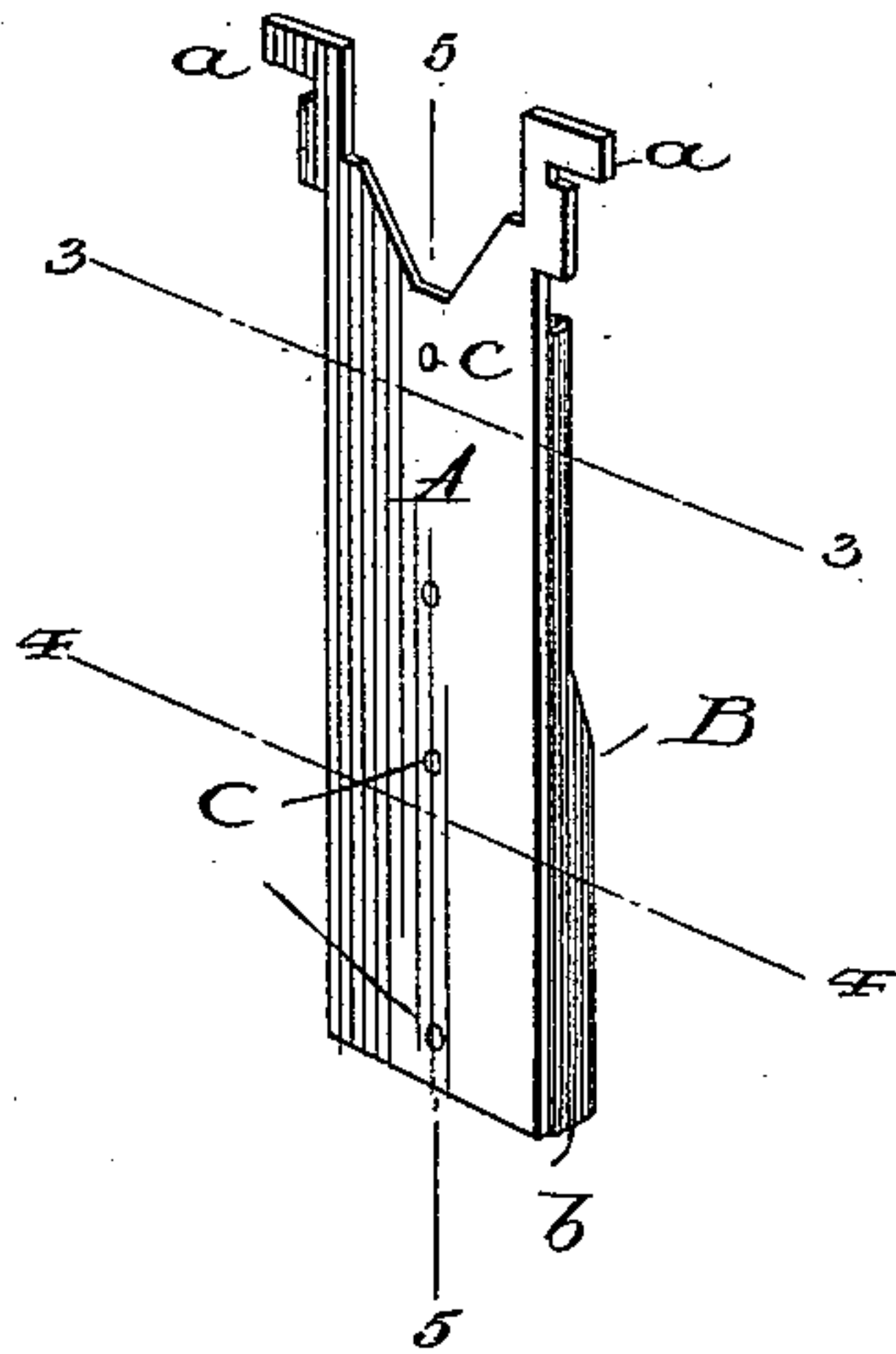


Fig. 5.
on line 5-5.

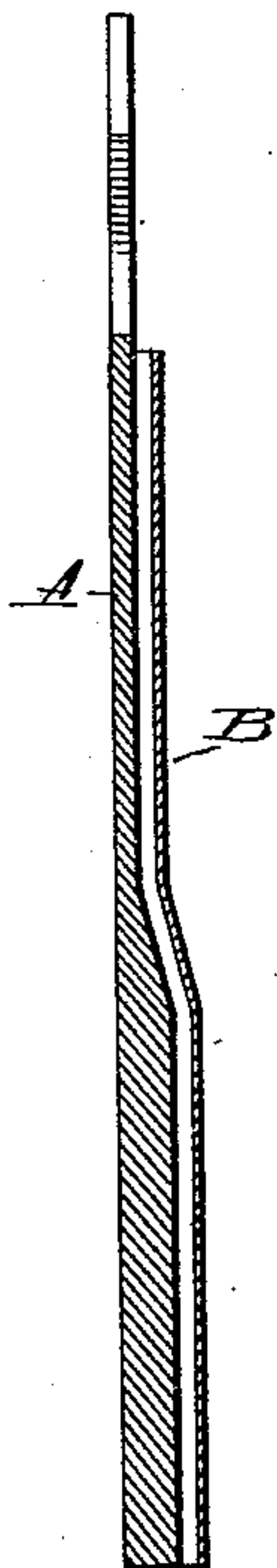


Fig. 3.
on line 3-3.



Fig. 4.

on line 4-4.

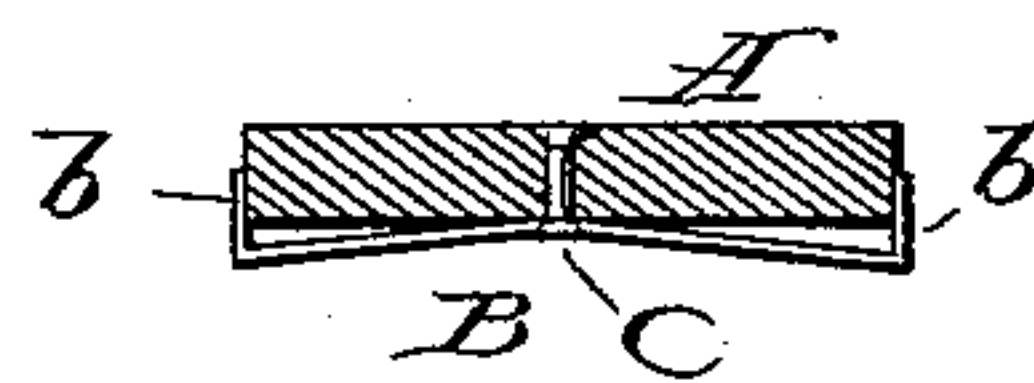
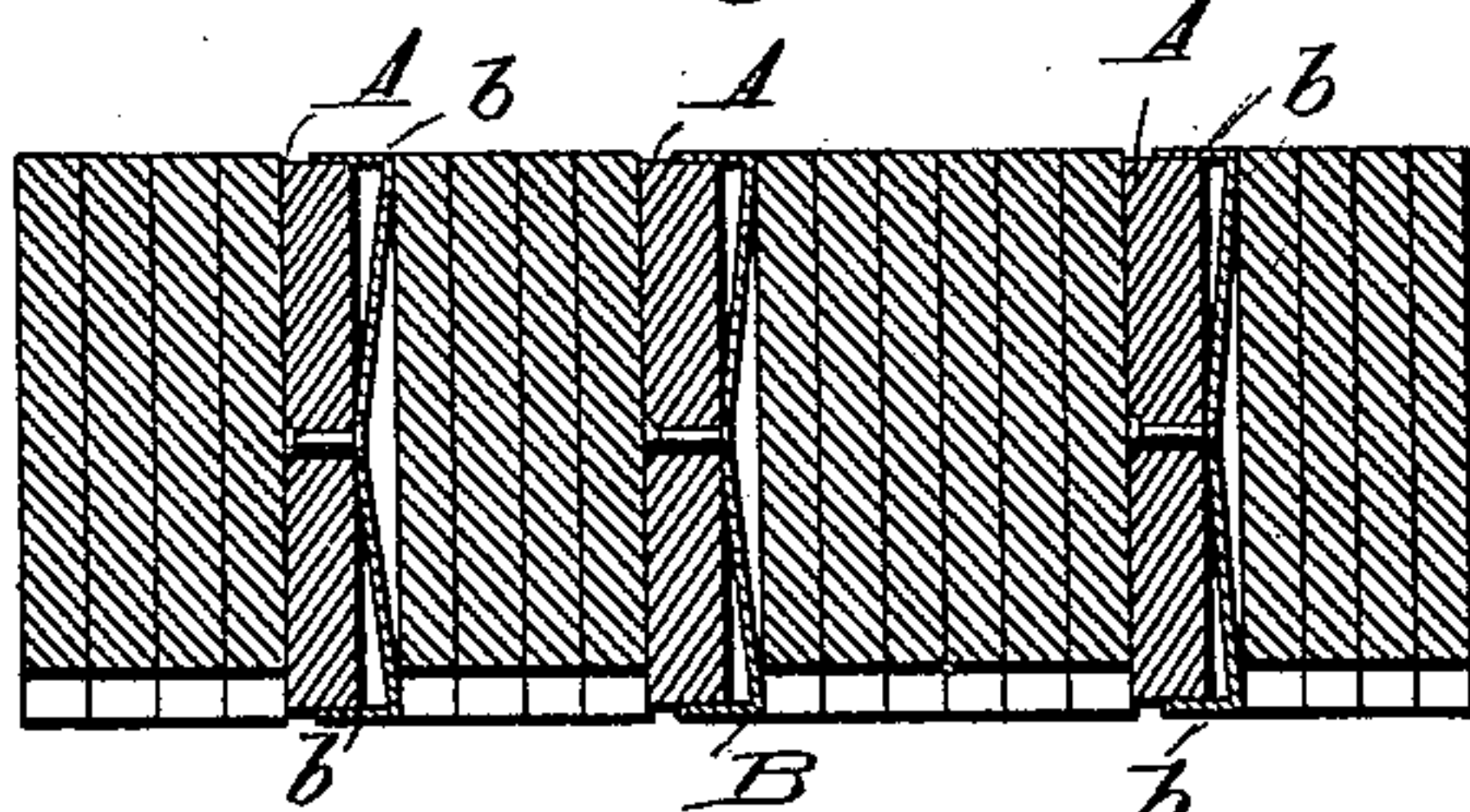


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

PHILIP T. DODGE, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO
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LINOTYPE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 538,100, dated April 23, 1895.

Application filed April 11, 1893. Serial No. 469,926. (No model.)

To all whom it may concern:

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

This invention relates to means for spacing out or justifying lines of type matrices or type dies, more particularly the former. It is intended, more especially, for use in the well known Mergenthaler linotype machine, in which a line of matrices temporarily assembled, and bearing the characters required in a line of print, are presented in connection with intervening spaces, against the face of a mold, into which the type metal slug or linotype is cast against them.

The invention has in view the twofold object of spreading out the line to the required length and of closing the mold at the point where the spaces occur, so as to prevent the leakage of metal into the line between the matrices.

To this end it consists in a compressible stepped space, that is to say, a space of two or more thicknesses at different points in its length, constructed in a peculiar manner. Approximate but not exact justification may be effected by thrusting the spaces endwise through the line, so as to bring their thicker or thinner portions into the line. The expansion and contraction is designed to provide for that slight space or variation in length which is not provided for by the step.

Figure 1, is a perspective view of my space as constructed with two steps; Fig. 2, a perspective view of the same from the opposite side; Fig. 3, a cross-section on the line 3—3; Fig. 4, a cross-section on the line 4—4; Fig. 5, a vertical section on the line 5—5; Fig. 6, a horizontal section on a larger scale, illustrating the manner in which the space co-operates with the mold and matrices.

A represents the body of the space, consisting of a bar or strip of metal of a width corresponding with the matrices with which it is to be used and having the supporting ears *a* at the upper end. The upper portion of the body is comparatively thin and has

parallel opposite faces, while the lower end is of considerable thickness and also with parallel faces.

B represents an elastic metal plate, connected to the body A by centrally located rivets C or any other suitable fastening. This spring plate is bent outward away from the body A, toward its outer edges, but has its forward edge turned sharply inward in the form of a lip *b*, to overlap the front edge of the body. The lower portion of the spring plate B has its edge lip made of greater width than the lip along the upper portion.

It will be observed that the lip bridges over the space between the edge of the body and the edge of the spring plate, so that when the space is seated between the matrices and its forward edge presented with the matrices to the molds, as shown in Fig. 6, the lip prevents the metal from flowing in between the body and the spring plate. The space thus constructed is, it will be observed, compressible, so that it may be crowded into a narrow space, when narrow spacing is required in the line, and that, on the other hand, it will expand so as to fill out a wider space when the line is unusually short and requires excessive elongation. Obviously, the space must not be permitted to expand to such extent as to permit the lip to leave the edge of the body and expose the intermediate opening. It is for this reason that I make the space of two or more thicknesses, the thin end serving for variable spacing within moderate limits and the thick end serving for spaces of greater width.

The present invention is restricted to the stepped space, having the peculiarities specified in the following claims, and does not include a compressible stepped space of the character represented in Letters Patent No. 444,337, issued to me on the 6th day of January, 1891.

Having thus described my invention, what I claim is—

1. A compressible stepped space consisting of a body plate and a resilient side plate having a lip to cover the edge of the body plate, the two plates formed and united through-

out their length in such manner that the resilience of the side plate effects the expansion of the space.

- 5 2. A stepped variable space composed of two metallic plates, united at or near the middle one bent, and provided with a lip overlapping the edge of the other.

In testimony whereof I hereunto set my hand, this 14th day of March, 1893, in the presence of two attesting witnesses.

PHILIP T. DODGE.

Witnesses:

THOS. KILVERT,

RAYMONA F. BARNES.