

(No Model.)

W. BERRI.

SPACE BAR FOR TYPE SETTING MACHINES.

No. 557,540.

Patented Apr. 7, 1896.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 7.

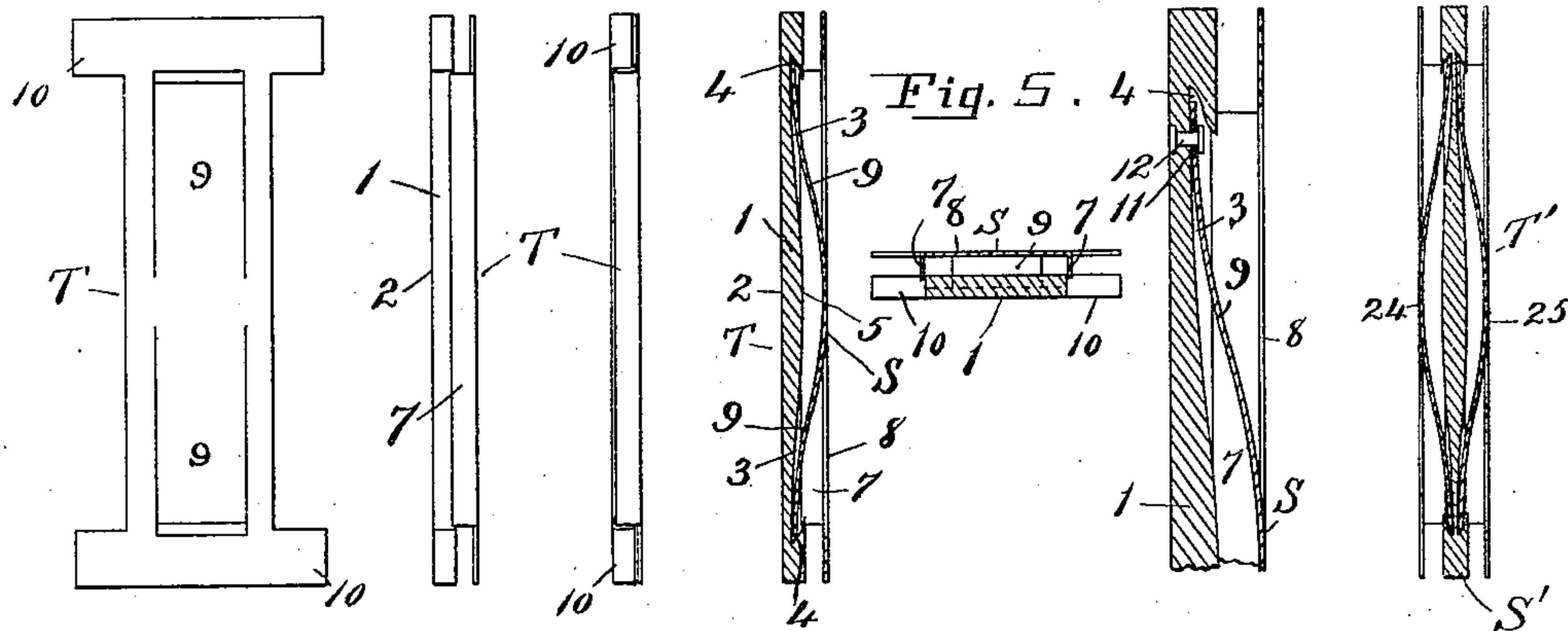
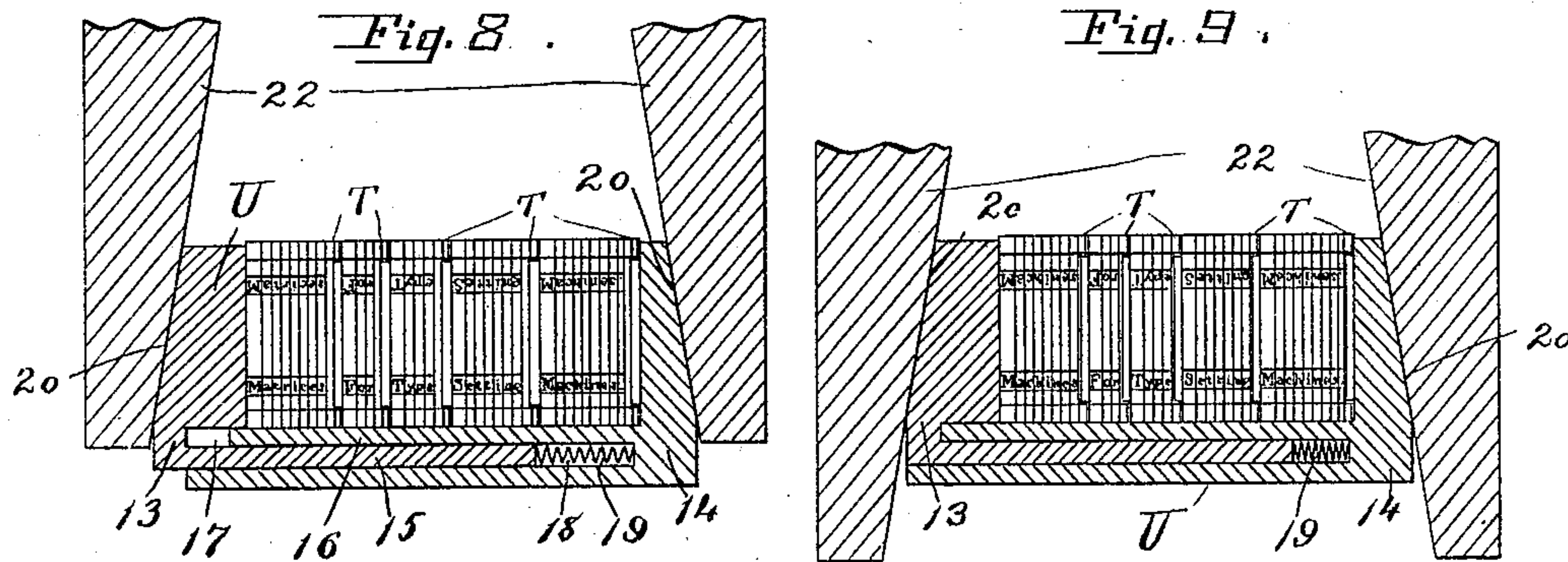


Fig. 8.

Fig. 9.



WITNESSES:

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SPACE-BAR FOR TYPE-SETTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 557,540, dated April 7, 1896.

Application filed January 13, 1893. Serial No. 458,265. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BERRI, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Space-Bars for Type-Setting Machines, of which the following is a specification.

My invention relates to space-bars for use in machine type-setting and of that type wherein the space-bar is compressible. In using space-bars of this kind the line is originally overset, (the space-bars being inserted in the line and not yet compressed,) and the line is justified by compression and reduction to the width of a column.

My said space-bar consists, in effect, of two plates, so connected by a spring that the bearing-faces of the plates remain substantially in parallelism at all stages of compression of the spring. The said parallelism of the two plates is attained by the form of the spring, the same resembling a carriage-spring, and such a spring tending to equal deflection of the two ends of the spring under circumstances such as those arising in the justification of a type-line. Combined with such form of spring I use guides, which also tend to produce the said parallelism. When the jaws of the assembling-block, which are more particularly hereinafter referred to and which are arranged to move parallel, compress a type-line containing my space-bars, the pressure of the jaws is transmitted to the springs of the space-bars in such a manner that the springs compress equally at top and bottom, and the two plates of the space-bars remain parallel at all degrees of compression of the springs. Since the space-bars take their position once for all in the type-line when the matrices are being assembled, and the wear is solely against the bearing-faces of the space-bars, and the compression of any one space-bar is very little, the durability of the bars is great, the wear and tear being small. Moreover, I have devised cheap and simple constructions which lessen the cost of the space-bars.

Referring to the drawings which accompany the specification to aid the description, Figure 1 is a face view of the space-bar. Fig.

2 is an edge view of the space-bar open. Fig. 3 is a similar view, but with the space-bar closed. Fig. 4 is a longitudinal section of the space-bar open. Fig. 5 is a cross-section of the same. Fig. 6 is an enlarged broken sectional view to show how the springs may be fastened. Fig. 7 is a longitudinal section of a space-bar with a double spring. Figs. 8 and 9 are views illustrating the manner of justifying the type-line and respectively showing the line just as the justification is beginning and when it is complete.

My space-bar (shown in preferred form in Figs. 1 to 6, inclusive) consists of the body 1, having the true plane back bearing-surface 2 and the recess 3 3 in its face, said recess deepening toward the end of the bar and having an undercut transverse groove 4 at each end, and also leaving the middle of the bar, as at 5, full thickness for a backing to the spring S. Said spring S is readily stamped out of sheet metal and has the sides 7 7 and top 8, with tongues 9 9, that form the spring proper, the said tongues being given the desired spring shape and the sides 7 7 being spaced to just span the width of the body 1 between the end shoulders 10 10. The ends of the tongues 9 9 are caught in the grooves 4 4, as seen in Fig. 4, and the spring may be additionally secured by the slot and bolt 11 12 near each end, as seen.

The operation is as follows: The matrices and space-bar are fed by any of the known and suitable means in proper order into the assembling-block U, which must be formed so as to permit of varying its length. In the drawings I show it made of two parts 13 14, having tongued and slotted connection with each other, 15 16 being tongues and 17 18 slots, and the two parts of the block being normally separated to a greater length than the length of the type-line by the spring 19. Now the matrices and space-bars being fed, as stated, into the block U until the same is full, the block goes to the casting-box. (Not shown, because it is no part of my present invention.) Before the casting begins the block U, which has the beveled surfaces 20 21, is received by the beveled jaws 22 of a justifying-head, and the block U is compressed to the exact length of the type-line, as seen in Fig. 14, the springs

of the space-bars compressing to permit the justification of the line.

In Fig. 7 I show a space-bar S', formed with two spring-plates 24 25, one on either bearing-
5 face of the space-bar. Each of these plates is substantially similar to the single plate and spring of the space-bar shown in Figs. 1 to 6. This space-bar with two springs-plates
10 admits of great range of compression. Its construction and arrangement will be evident from the foregoing description without further explanation.

Now, having described my improvement, I claim as my invention—

15 1. A space-bar consisting of two parallel bearing-plates, a spring connecting the said two plates, and the one of said plates being recessed in its edges, and the other of said plates being provided with flanges which work
20 in said recesses, and prevent the spreading

of molten metal at the time of casting, substantially as described.

2. A space-bar consisting of the following elements: a body-plate 1 having a plane bearing-surface and provided with a backing 5 for
25 a spring, a second plate 8 parallel to the said plate 1, a spring S connecting said plates 1 and 8 together so that said plates are parallel at all degrees of compression of the springs,
30 recesses in the edges of the plate 1 and flanges on the plate 8 working in said recesses, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of January, 1893. 35

WILLIAM BERRI.

Witnesses:

GEO. T. MUSSON,
ARTHUR L. KENT.