

No. 657,039.

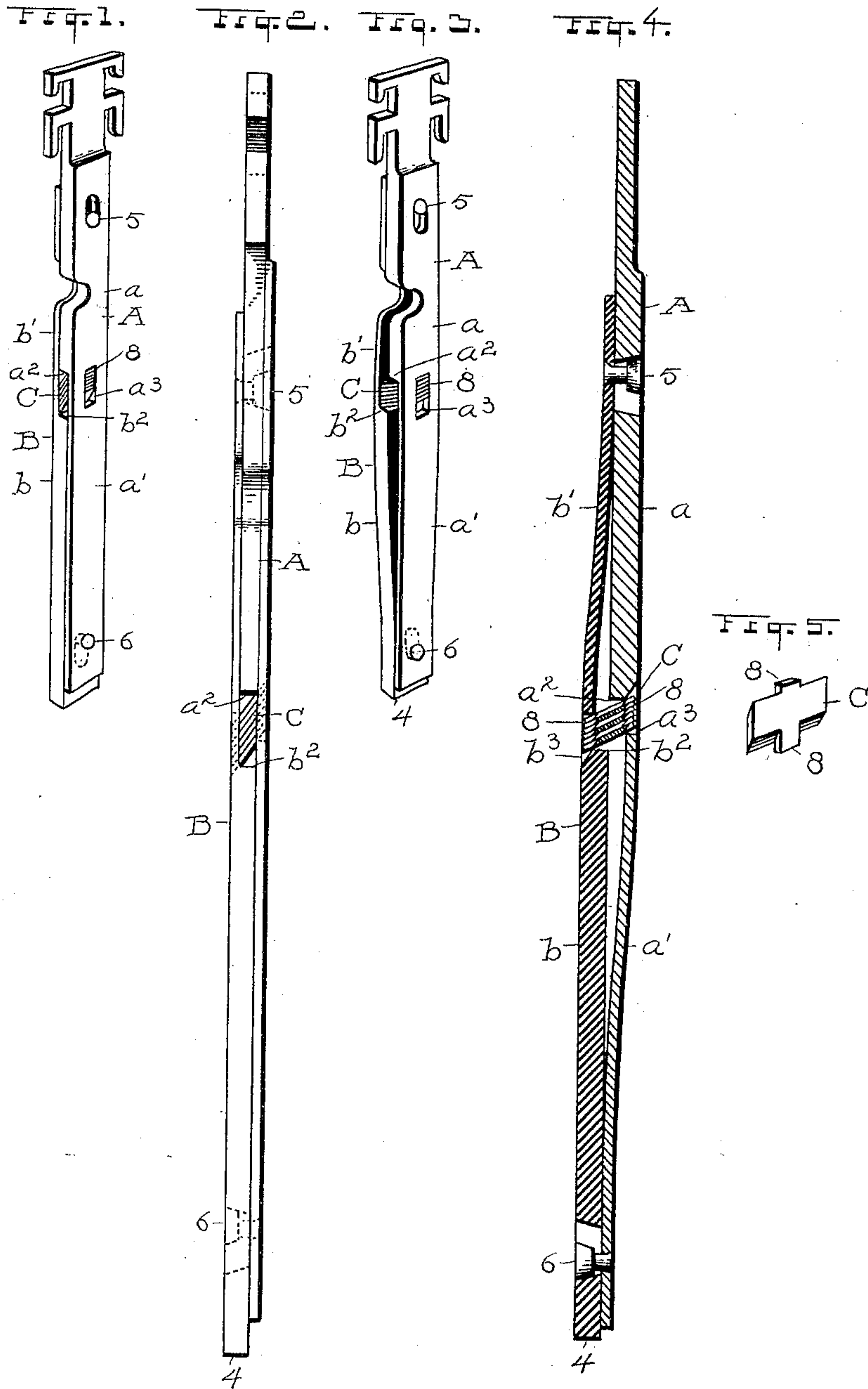
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R. H. ST. JOHN.

SPACING OR JUSTIFYING DEVICE FOR TYPE BAR OR MATRIX MACHINES.

(Application filed July 30, 1896.)

(No Model.)



ATTEST

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SPACING OR JUSTIFYING DEVICE FOR TYPE-BAR OR MATRIX MACHINES.

SPECIFICATION forming part of Letters Patent No. 657,039, dated August 28, 1900.

Application filed July 30, 1896. Serial No. 601,051. (No model.)

To all whom it may concern:

Be it known that I, ROSWELL H. ST. JOHN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Spacing or Justifying Devices for Type-Bar or Matrix Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention has reference to spacing or justifying devices for type-bar or matrix machines and usually known as "spaces" or "space-bars;" and the invention consists in the construction and combination of parts, substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved spacer closed; and Fig. 2 is an enlarged edge elevation thereof, showing the parts the same as in Fig. 1. Fig. 3 is a perspective view of the spacer shown in Fig. 1 open, and Fig. 4 is an enlarged sectional edge elevation corresponding to Fig. 2 and also open or distended as in use. Fig. 5 is a perspective detail of one of the "spreading-plates" or "toggle-links," so called.

The device shown here is composed, primarily, of two members A and B. The member A is in this instance the main or supporting member, constructed at its top to carry the device from place to place, and B is the operating member proper. These members have a sliding relation to each other, a short flush rivet 5 working in a slot in part A near its top and a similar rivet 6 working in a slot in part B near its bottom, said rivets or their equivalents serving in both cases to keep parts A and B closely united. Said parts have each a heavy or thick half and a light or thin spring half, indicated by a and a' , respectively, in part A, and b and b' , respectively, in part B, terminating in part A in a shoulder a^2 and in part B in a shoulder b^2 . These shoulders a^2 and b^2 are diagonally opposite one another, and below and above said shoulders, respectively, are vertical slots a^3 and b^3 through the

thin portions of parts A and B. Between said parts at this point are arranged a series of two or more spreaders, preferably called "toggle" plates or links C and shown singly and enlarged in Fig. 5. These plates are designed to be very thin, so that several may be placed together, as shown, and have each two tongues 8, adapted to occupy and to work in the slots a^3 and b^3 . These tongues are no deeper than the thin portions of the spacer in which they engage, so that in no case will they extend beyond the surface thereof, but are designed to remain substantially flush with said surface.

The operation is obvious from the description and drawings. Thus suppose a wedge or other lifting medium to be placed under the end 4 of part B when the part A is held against upward movement. In such case the parts would spread from the relation in Fig. 2 to the relation in Fig. 4 or more or less nearly to that relation as more or less room were found in the assembled matrices for the spacers to fill. These spacers of course come between the words which are represented by the matrices, as well as at the ends of the lines, as they are needed to take up idle space, and hence in some lines all the spacers might require a wide expansion and in others a very slight or little expansion. This spacer is adapted to work equally well in either extreme as well as in all intermediate positions. The relation of the plates C to their slots and the shoulders at either side, furthermore, is such that they cannot work out of place, and they are as truly confined as if their ends were mechanically connected by pivots or the like to the parts A and B.

When the spacers are released in the machine, the weight of part B will immediately drop by gravity to position, as seen in Figs. 1 and 2, and the spacer will be closed. Any suitable means for suspending and carrying the spacer may be employed.

The part A is held from upward movement by the mechanism which engages the matrices and has a notch in its edge wherein engagement is made. In practice the corresponding notch in part B is made large enough to accommodate itself to such movement as it may

require in this connection, which at best is not much.

What I claim as new, and desire to secure by Letters Patent, is—

- 5 1. The spacer consisting of two loosely-connected sections and a spring portion on each, at opposite sides and ends respectively, and loose spreaders intermediate of said sections, substantially as described.
- 10 2. A spacer formed of two sections connected to slide longitudinally in respect to each other and having each a spring portion overlapping a rigid portion of the opposite section, and a spreader arranged at an incli-
15 nation transversely between said sections, substantially as described.
3. A compound spacer consisting of two sections slidably connected near their ends, and a plurality of spreaders loosely engaged be-
20 tween said sections at or near their middle and adapted to spread the sections when either one is moved longitudinally, substantially as described.
4. A spacer for type-bars consisting of two

sections longitudinally adjustable on each 25 other and each section having a rigid and a spring portion, and a set of spreaders engaged between the opposite adjacent ends of the spring portions of said sections, substantially as described.

5. A spacer for type-bar machines, consist- 30 ing of two substantially-equal sections having each a rigid portion overlapped by a spring portion of the opposite section, a recess between the adjacent ends of the rigid 35 portions, and a loose spreader engaged in said recess, substantially as described.

6. A spacer for type-bar machines formed in two sections longitudinally, and a set of loose spreaders between said sections having 40 projections on opposite edges engaged in said sections, substantially as described.

Witness my hand to the foregoing specification on this 23d day of March, 1896.

ROSWELL H. ST. JOHN.

Witnesses:

H. T. FISHER,
RICHARD B. MOSER.