

No. 749,243.

PATENTED JAN. 12, 1904.

L. H. VOLD.

CONTROLLER OR STOP BAR FOR CENTERING MECHANISMS.

APPLICATION FILED MAY 20, 1903.

NO MODEL.

Fig. 1.

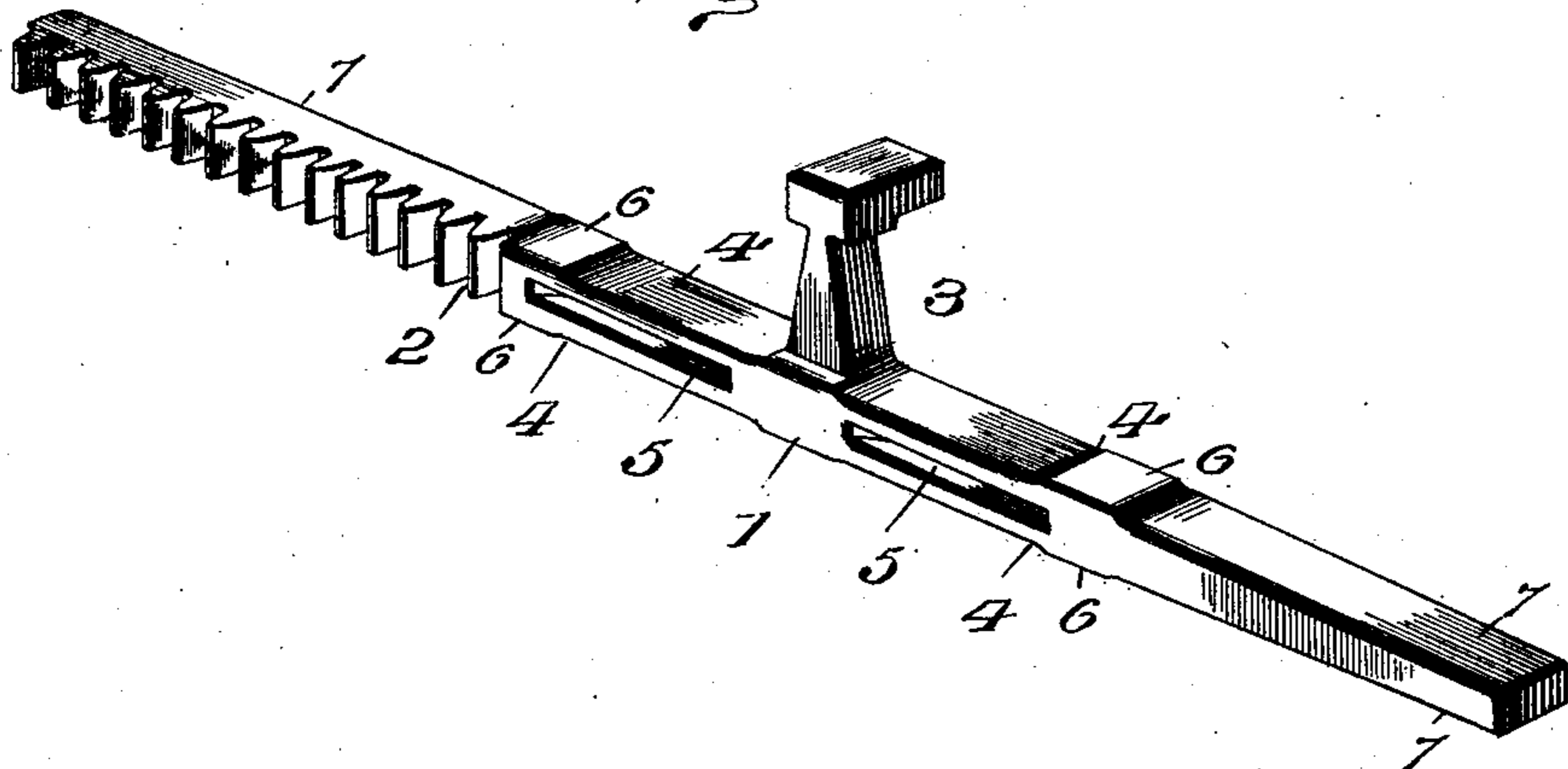


Fig. 2.

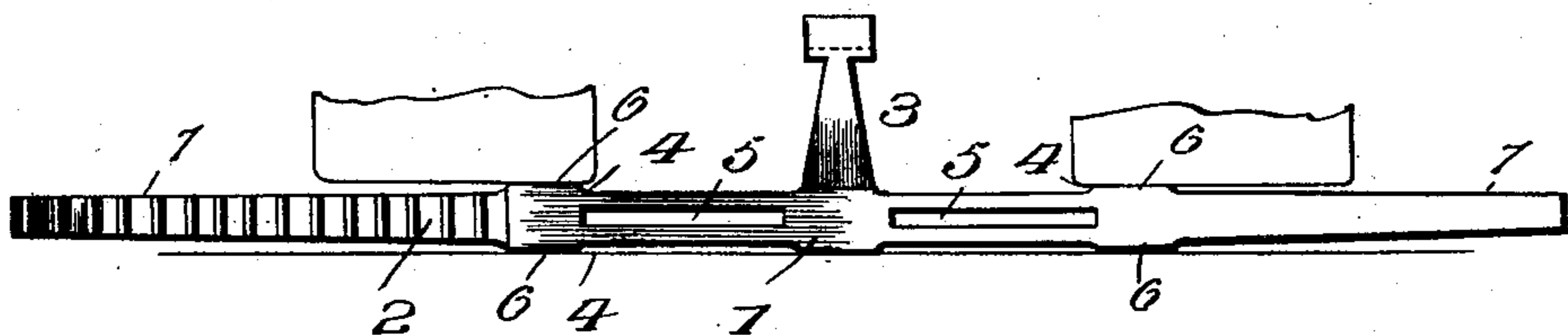
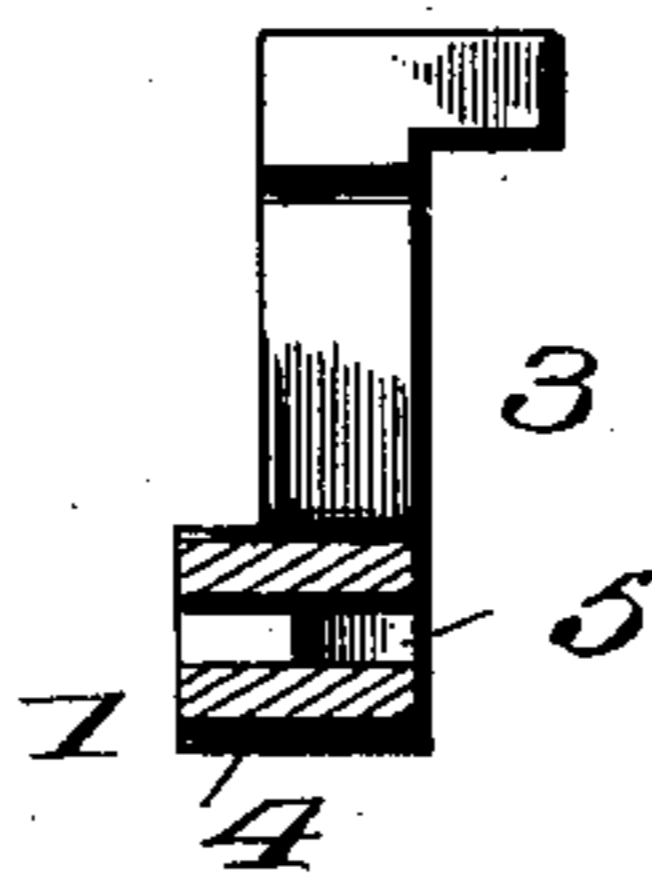


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## CONTROLLER OR STOP-BAR FOR CENTERING MECHANISMS.

SPECIFICATION forming part of Letters Patent No. 749,243, dated January 12, 1904.

Application filed May 20, 1903. Serial No. 158,005. (No model.)

*To all whom it may concern:*

Be it known that I, LARS H. VOLD, of Philadelphia, in the county of Philadelphia, State of Pennsylvania, have invented certain new  
5 and useful Improvements in Controllers or Stop-Bars for Centering Mechanisms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying draw-  
10 ings, forming a part of this specification, and to the figures of reference marked thereon.

This invention relates to improvements in that part of the type casting and composing machine of Patent No. 625,998, therein designated  
15 the "secondary controller" and popularly known as the "stop-bar" for the positioning jaws or tongues of the die-case-centering mechanism; and it has for its object to preserve the life of this element by materially  
20 diminishing its tendency to fracture under conditions of use; to which end the invention consists in so constructing the supporting and guiding bar carrying the stop element that it will be supported on opposite sides of and in  
25 proximity to the point of attachment of the latter, leaving the opposite ends free to vibrate when the section carrying the stop yields under the impact of the jaws.

In the accompanying drawings, illustrating  
30 a preferred form of embodiment of the invention, Figure 1 is a perspective view of the stop-bar or controller. Fig. 2 is a side elevation, and Fig. 3 a transverse section, of the same.

35 Similar numerals in the several figures indicate like parts.

The secondary controller or stop-bar of the patent mentioned is a separable element complete in itself and one of a number of stand-  
40 ard supply parts pertaining to the machine. As it receives the impact of the primary positioning-jaws when shifted to position and after being locked in place serves as a fixed abutment against which the secondary posi-  
45 tioning-jaws close when positioning the die-case, the strains to which it is subjected are

varied and violent, especially when the machine is operated at a high rate of speed. Under those conditions it not infrequently happens that the stop-bar is fractured or other-  
50 wise rendered inoperative, the fracture usually occurring in the vicinity of the stop or of the positioning-teeth by which the stop-bar is retained in final position while the jaws of the secondary positioning mechanism are closing  
55 upon it to bring the die-case to place. Numerous attempts have been made to remedy this defect, and among others it has been proposed to reduce the cross-sectional area of the supporting and guiding bar in the immediate  
60 vicinity of the stop, so as to render the bar flexible at these points, and thus permit a slight yielding of the stop under the impact of the jaws, as set forth in the application of John Sellers Bancroft, filed May 20, 1903, Se-  
65 rial No. 157,978; but experience has demonstrated that the remedy thus proposed, while partially effective in that it diminishes the number of breakages, is susceptible of further improvement, as will presently appear. 70

As represented in the drawings, the controller or stop-bar consists of a base or guiding portion 1 with positioning-teeth 2 on one side and a central offset or projection 3, constituting the stop element. The base 1 is re-  
75 duced in cross-section on opposite sides of the point of connection of stop 3 either by cutting away the upper and lower faces, as at 4, or forming transverse openings 5, or both, thus rendering it flexible at these points, so  
80 that when the stop is struck by the jaws it may yield slightly under the impact of the blow without becoming permanently flexed, the spring-action occurring in the base rather than in the stop itself. 85

In the prior controllers the end portions beyond the reduced section were formed with parallel upper and lower bearing-surfaces which engaged the guideways, so that the spring-action was localized or confined within  
90 the reduced section, the ends being rigidly supported, and it was extremely difficult to

so proportion the parts as to secure the desired degree of flexibility during impact without permanent distortion and still preserve the requisite rigidity for accurate positioning of the die-case. This difficulty has been almost if not entirely eliminated by reducing the end sections of the base, so as to present upper and lower bearing-surfaces in proximity to the reduced or elastic sections, leaving the ends free to yield or vibrate as the bar is flexed under the action of the jaws upon the stop. In accomplishing this both the upper and lower faces of the end sections beyond the bearings are preferably removed (so that either or both ends may vibrate slightly in opposite directions vertically) and on opposite inclines, the end sections tapering toward their extremities, thus preserving long side bearings, while securing flexible end sections.

It is found in practice that controllers possessing these features are much less liable to become fractured in use, owing to their superior flexibility, while at the same time possessing the requisite degree of rigidity to serve as the controlling elements in positioning the die-case.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A controller for centering mechanisms such as described comprising a stop element supported upon a base or guiding section, the latter furnished with separated upper bearings located intermediate its opposite ends and the point of attachment of the stop.

2. A controller for centering mechanisms such as described comprising a stop element and a supporting-base or guiding-section, the latter provided on its lower surface with separated bearings located intermediate the oppo-

site ends and the point of attachment of the stop.

3. A controller for centering mechanisms such as described, comprising a stop element supported upon a base or guiding section, the latter provided with separated bearings on opposite faces located intermediate the ends and the point of attachment of the stop.

4. A controller for centering mechanisms such as described comprising a base or guiding section provided with a reduced or flexible section intermediate its ends, a laterally-projecting arm or stop connected to said flexible section, said base-section being also provided with top and bottom bearings located in proximity to the flexible section and remote from the ends of the base-section.

5. A controller for centering mechanisms such as described provided with a base or guiding portion comprising a central flexible section and vertically-reduced end section, with upper and lower bearing-surfaces at or near the junction of the end and central sections, and a stop or lateral projection attached to said flexible central section.

6. A controller for centering mechanisms such as described consisting of a base or guiding portion having opposite faces cut away to form a central elastic section and guiding-bearings intermediate said elastic section and the ends of the base-section, and a stop-piece projecting laterally from said elastic section.

7. A controller for centering mechanisms such as described comprising a rigid stop element and a flexible base or guiding section provided with bearing-surfaces located at points remote from the ends of said base.

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Witnesses:

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