

(No Model.)

J. H. NORTHROP.
THREAD GUIDE.

No. 605,062.

Patented May 31, 1898.

Fig. 1.

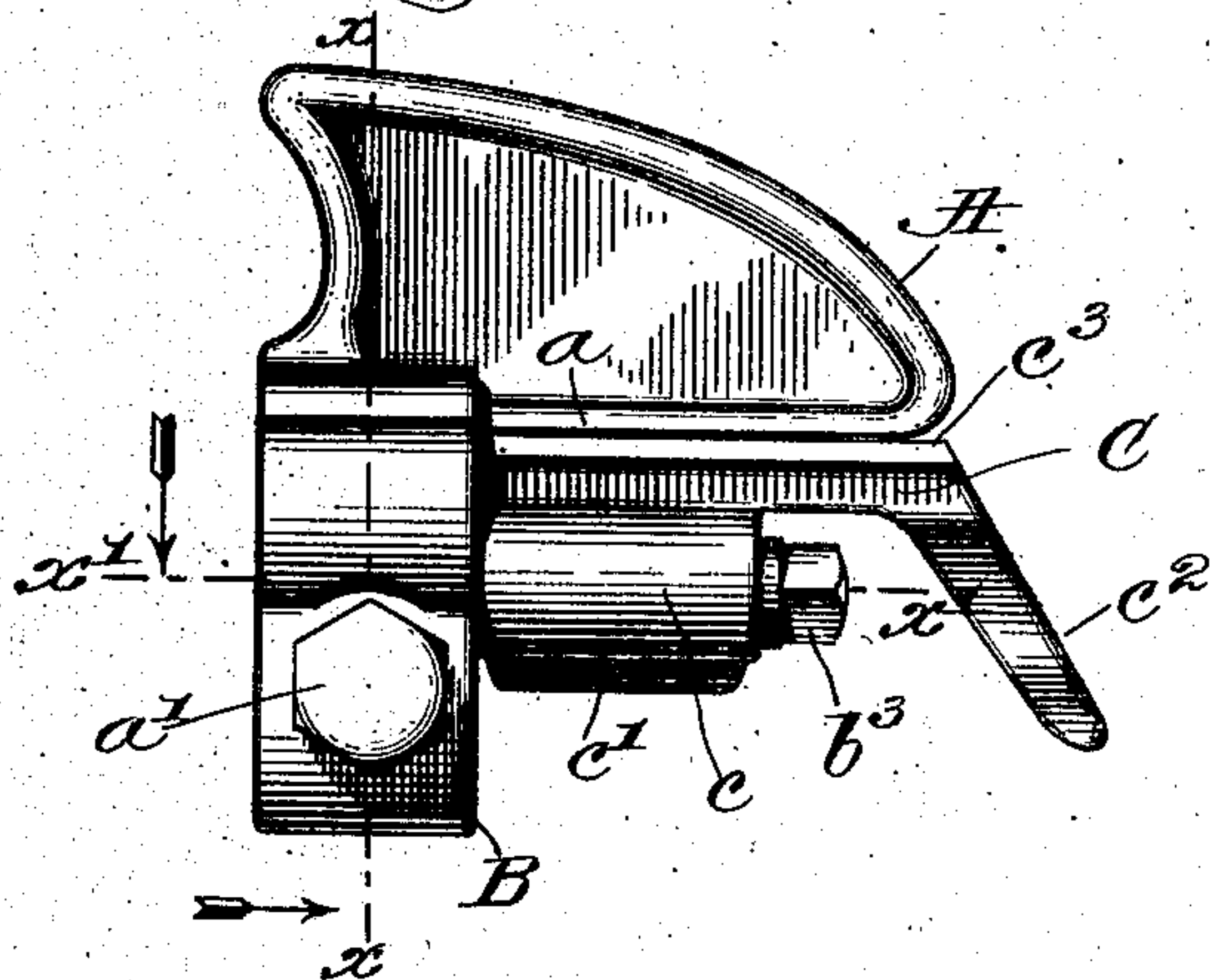


Fig. 2.

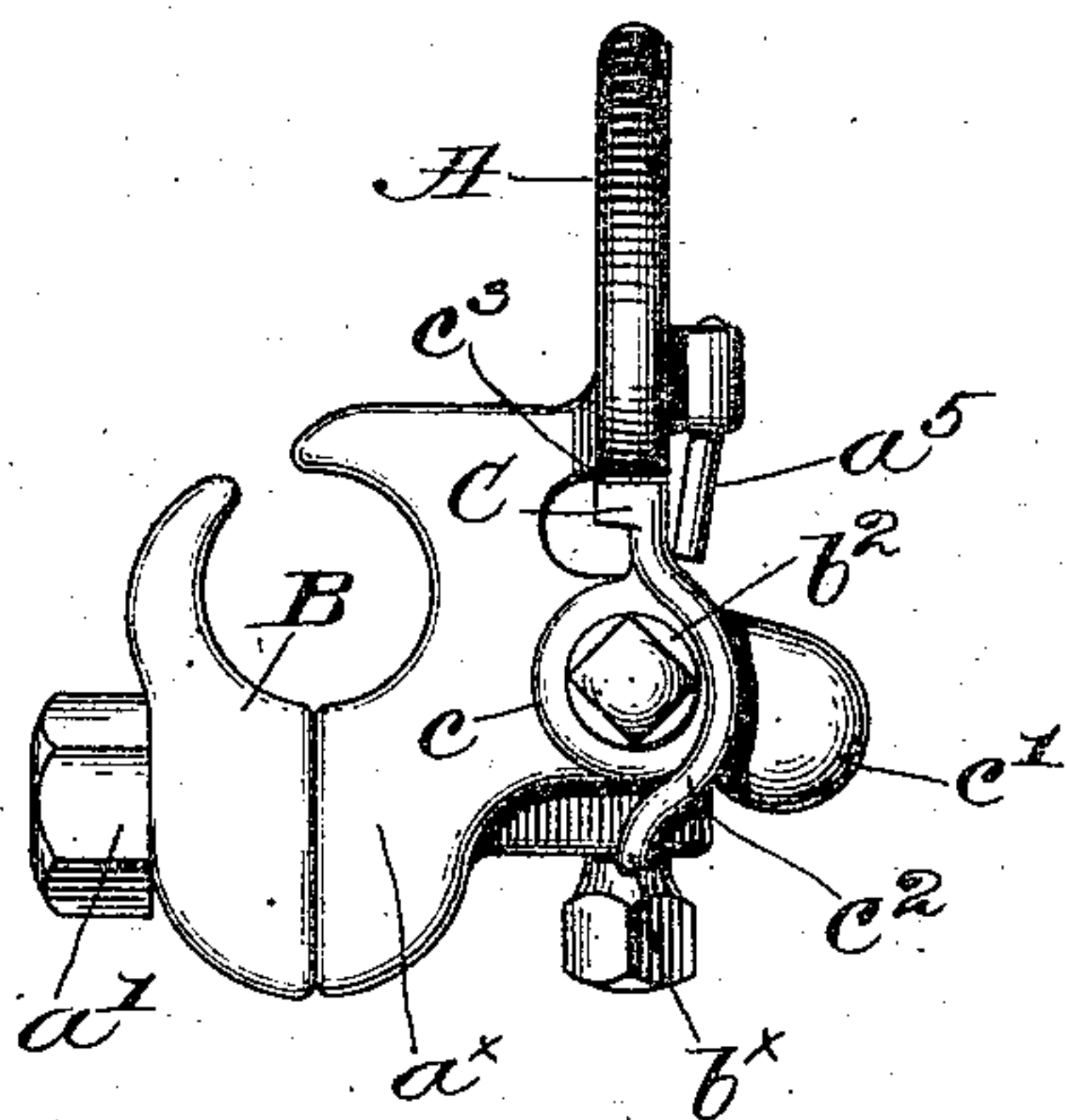


Fig. 3.

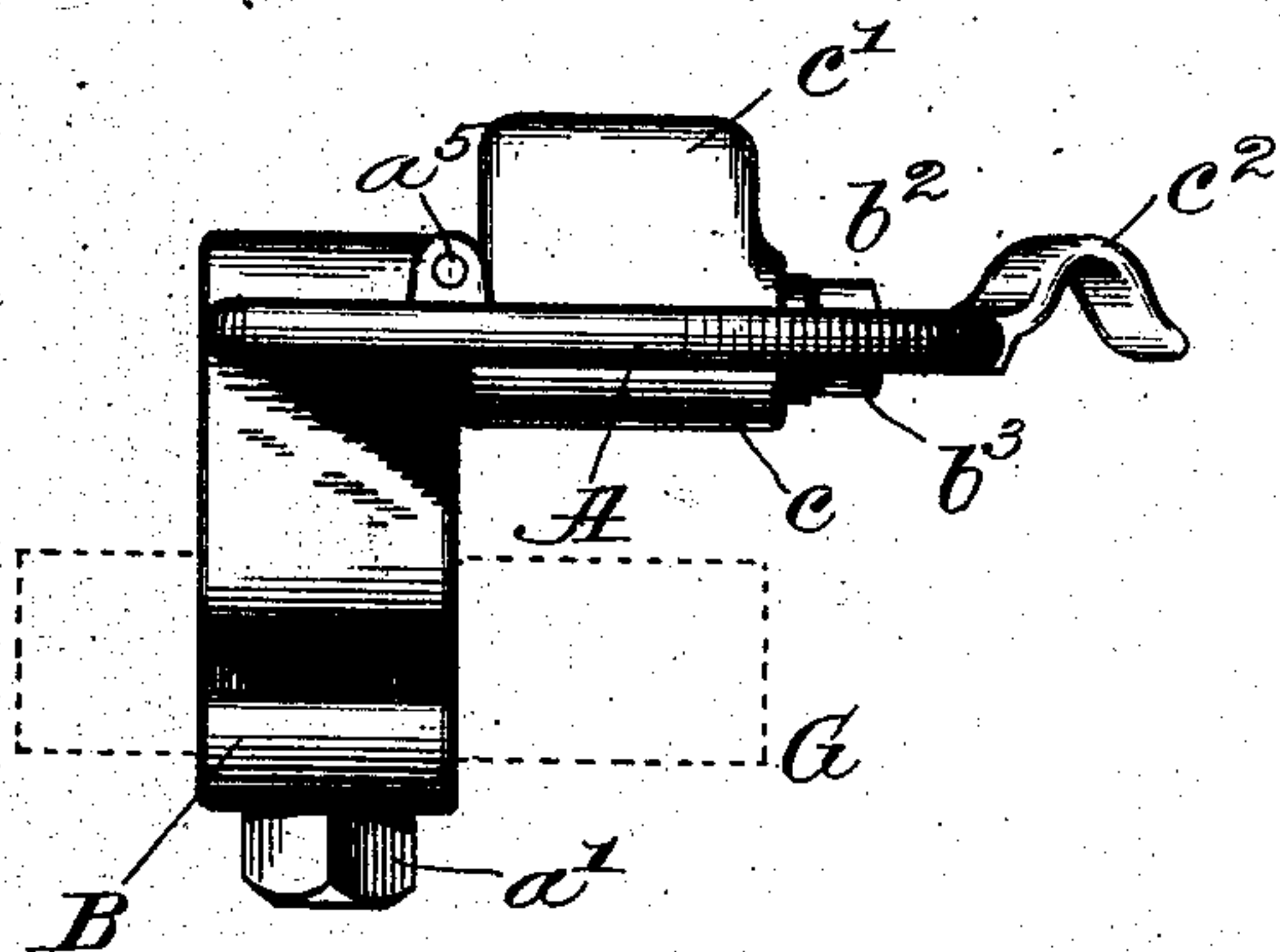


Fig. 4.

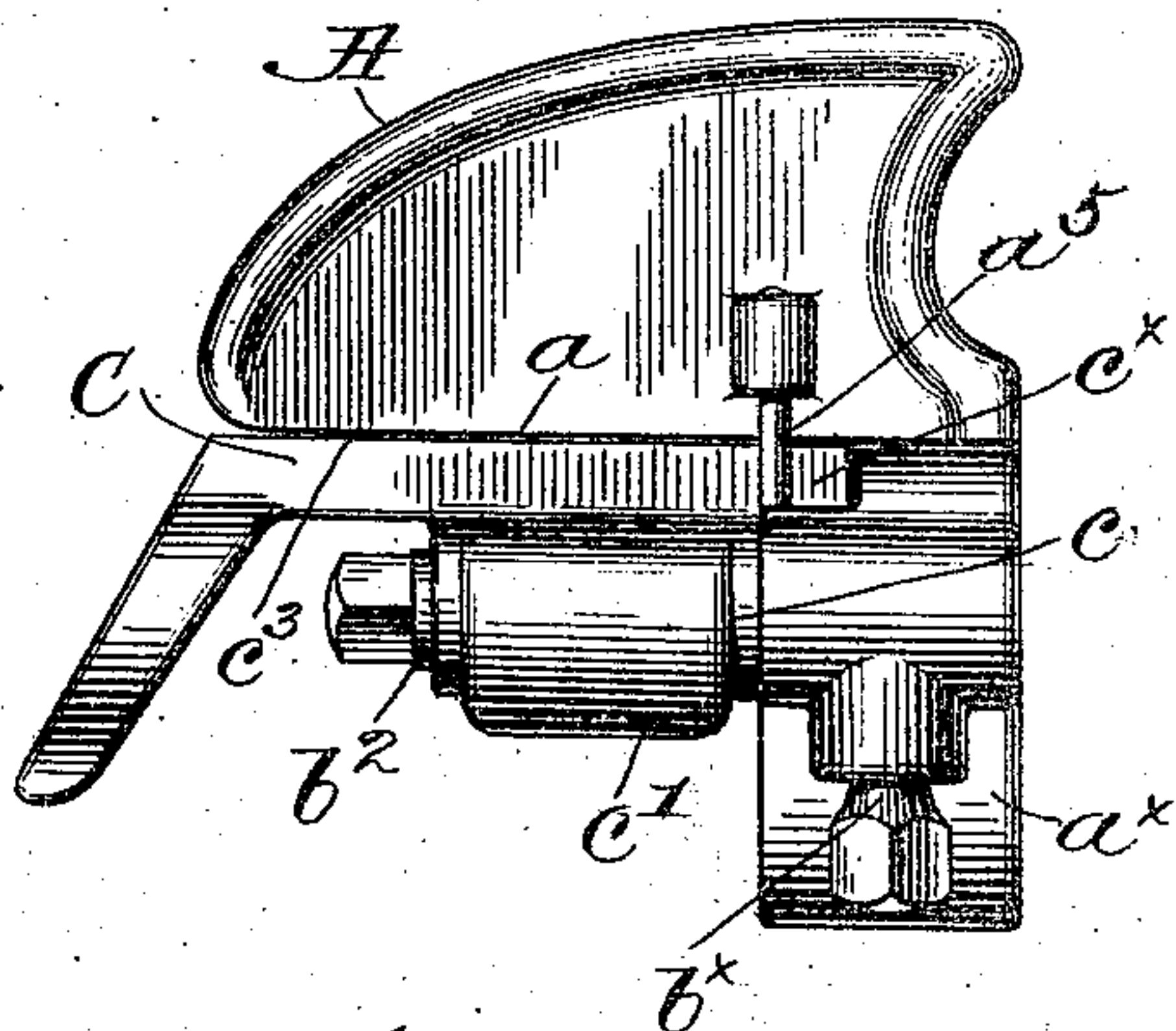


Fig. 5.

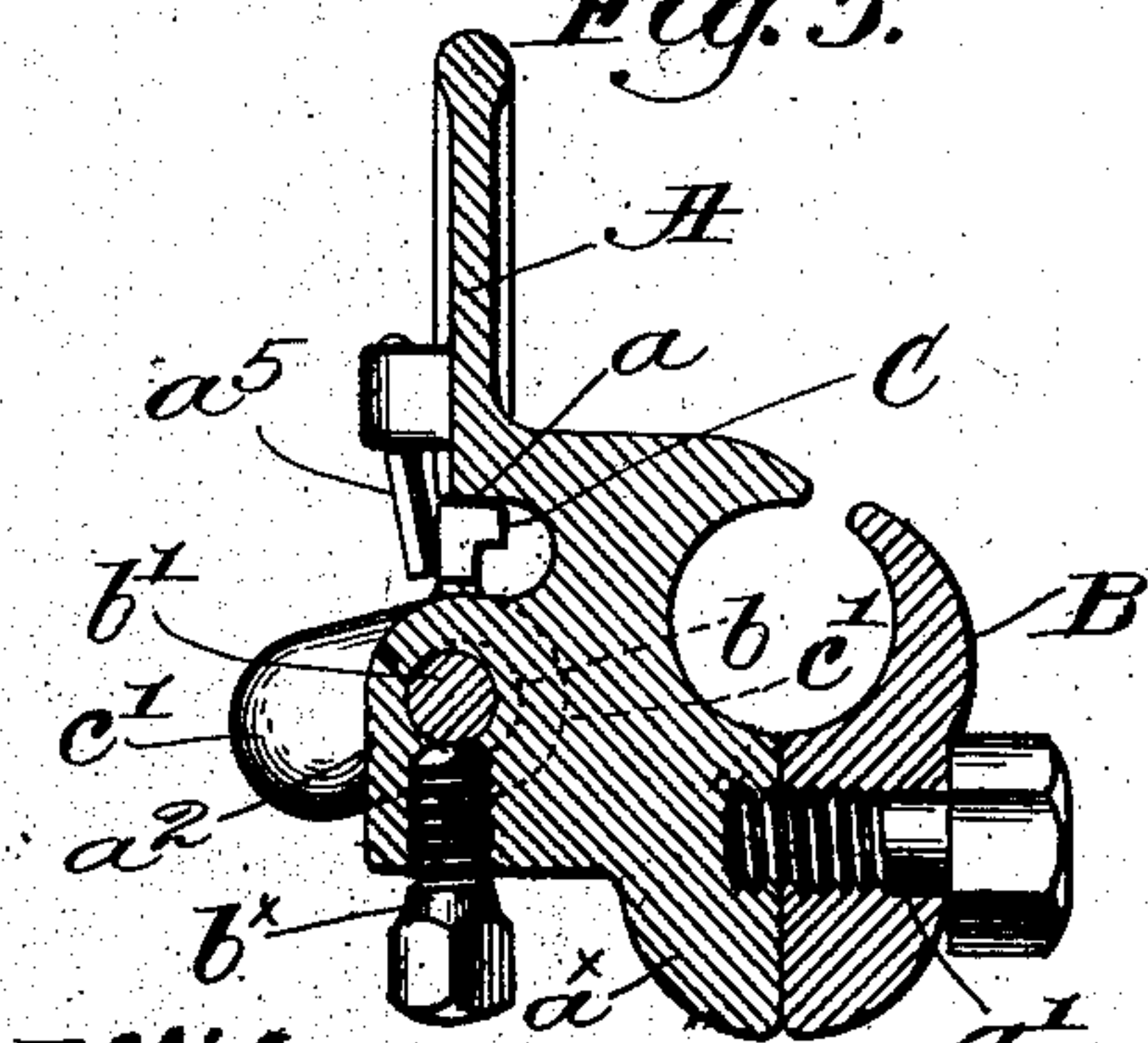


Fig. 6.

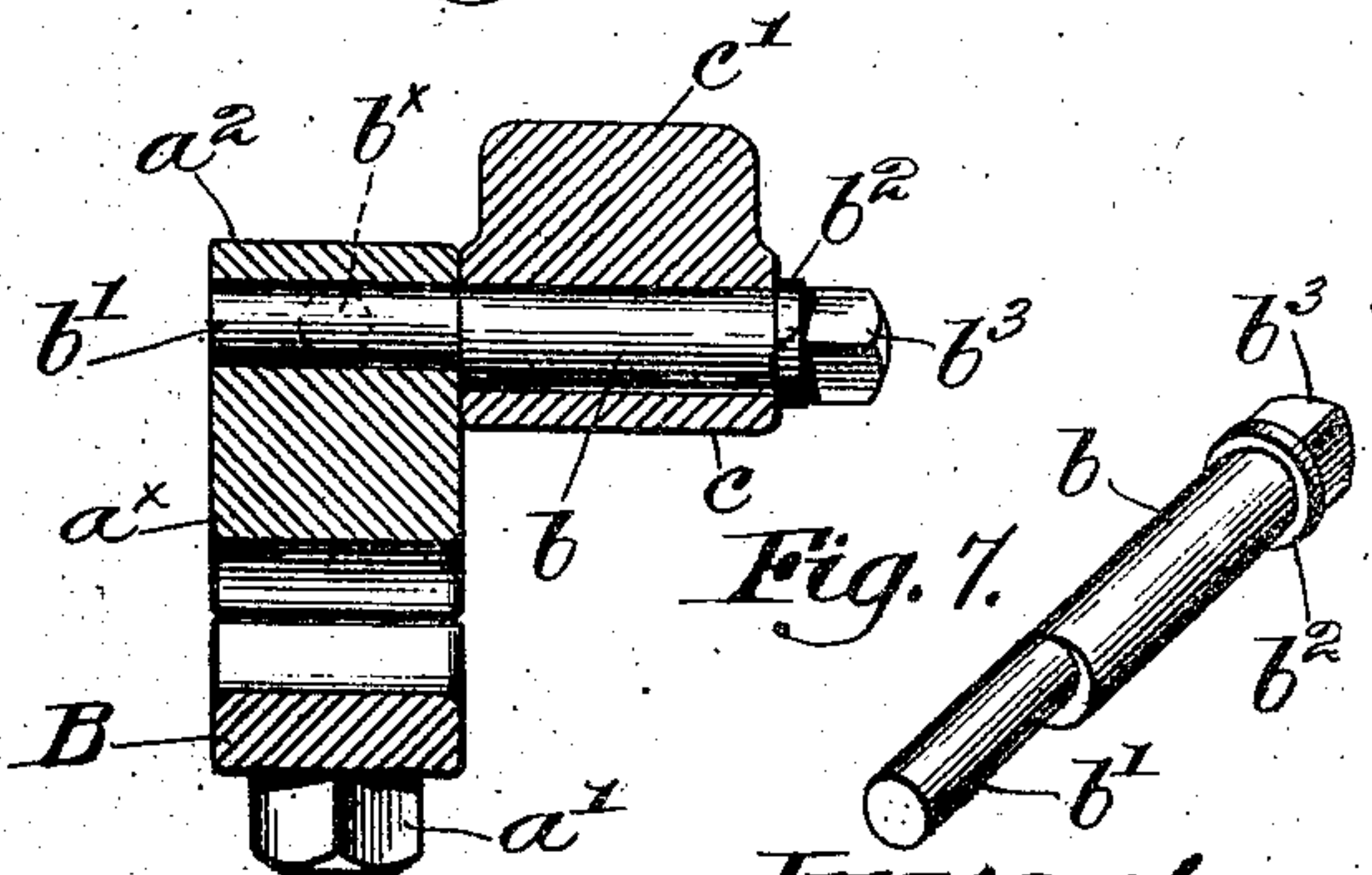
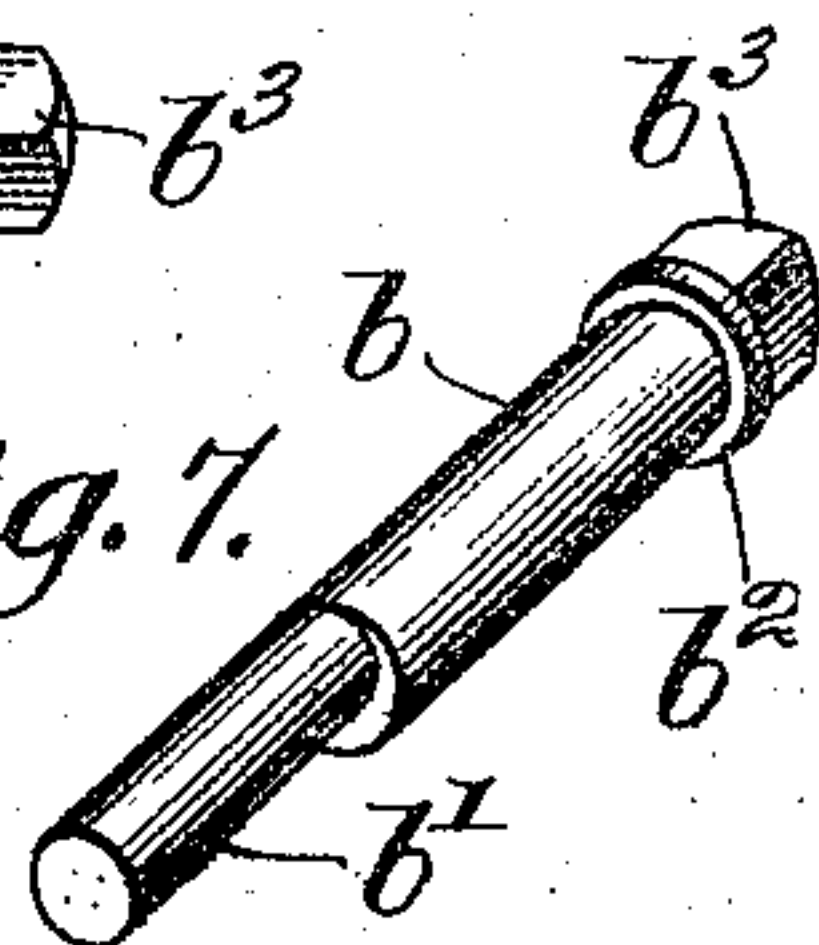


Fig. 7.



Witnesses:

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Inventor.

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UNITED STATES PATENT OFFICE.

JAMES H. NORTHROP, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO THE
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THREAD-GUIDE.

SPECIFICATION forming part of Letters Patent No. 605,062, dated May 31, 1898.

Application filed October 18, 1897. Serial No. 655,563. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. NORTHROP, of Hopedale, county of Worcester, and State of Massachusetts, have invented an Improvement in Thread-Guides, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a new and improved thread or yarn guide or cleaver of cheap and simple structure, capable of easy and accurate adjustment, and which can be cleaned with ease and without injury to the various parts of the guide.

My invention consists, essentially, in a fixed jaw, a movable jaw, and a pivotal connection between them serving also to adjust the space between the jaws.

Yarn-guides heretofore have been cleaned by inserting a thin piece of metal between and scraping the jaws, rapidly wearing away and roughening their faces; but in my present invention I have overcome the difficulty of cleaning by so mounting the movable jaw that it may be instantly moved to expose its face, so that the attendant can with a single movement of the hand effectually clean the jaw.

In my present invention the means for clamping the guide on the guide-rod is entirely independent of the means for adjusting the jaws, so that when the latter are adjusted there is no tendency whatever to disarrange or loosen the guide on the guide-rod.

Figure 1 is a rear elevation of my improved thread or yarn guide. Fig. 2 is a right-hand end elevation thereof. Fig. 3 is a top or plan view of the guide. Fig. 4 is a front elevation thereof. Fig. 5 is a vertical transverse section of the guide on the line xx , Fig. 1, looking toward the right. Fig. 6 is a horizontal longitudinal section taken on the line $x'x'$, Fig. 1; and Fig. 7 is a detached perspective view of the adjusting pivot-stud for the movable jaw.

I have herein shown my invention as comprising a fixed upper jaw A, having a flat face a and a projection a^x , properly recessed to receive the guide-rod G, (see dotted lines, Fig. 3,) a clamping-jaw B being connecte with

the fixed jaw by means of a suitable screw a' . The projection a^x is enlarged at a^2 below the jaw A and provided with a longitudinal hole to receive snugly the reduced end b' of a pivot-stud, the body portion b thereof being eccentric to the shank or end b' , as clearly shown in Fig. 7, the stud being herein shown as provided with a shoulder b^2 at its outer end and preferably with a polygonal head b^3 .

The movable jaw C is pivotally mounted on the eccentric body of the stud and held in place thereon by the shoulder b^2 , the stud extending through a hub c on and beneath the jaw, a weighted extension c' on the front side of the hub normally acting to hold a shoulder c^x on the jaw C, abutting against a stop a^5 on the outer side of the fixed jaw. In such position the fixed and movable jaws are held in alinement, as shown clearly in Figs. 2, 3, and 5.

The outer end of the jaw C is shown as provided with an inclined portion c^2 to form a handle, by pressing against which the jaw may be opened, exposing its face c^3 to be cleaned, said handle also serving as a guide to direct the yarn to the entrance between the jaws.

The recessed part of the fixed jaw A, adjacent the shoulder c^x of the movable jaw, prevents undue movement of the latter when opened, and the shoulder or projection c^x serves also to prevent the thread or yarn from getting out between the jaws at that end thereof.

I vary the space between the jaws, according to the size of the thread or yarn, by means of the adjusting-stud b , for when it is turned, its end b' resting snugly in the enlargement a^2 , the eccentricity of the body b will raise or lower the jaw C, thus varying the space between the faces of the two jaws. This is effected without disturbing in the least the clamp which holds the entire device in position.

A set-screw b^x holds the adjusting-stud b in adjusted position, and when the set-screw is loosened the stud can be rotated by a suitable key or wrench applied to its head b^3 .

To clean the faces of the jaws, it is only necessary to press the jaw C out of alinement with the opposing jaw, when both jaws can

be quickly and easily wiped off with a cloth or piece of waste. Upon removing the hand the weight *c'* causes the pivoted jaw to swing back to its proper position.

5 The advantages which I secure by my improved construction are numerous. By it I am enabled to quickly and easily wipe accumulations of lint and the like from the jaws, as described, without roughening the same by
10 scraping, and can accomplish this without in any way interfering with the adjustment of the jaws or with the clamp which fastens the device to the rod. I am also enabled to change the adjustment without in any way interfering
15 with the clamp.

Another important advantage of my construction is that it renders impossible the changing of the vertical distance between the planes of the opposing faces of the jaws by
20 the insertion of a match or other foreign substance, which is often done by the attendant in order that the knots may run through clear without breaking the thread or yarn, while it does at the same time permit the operator to move the pivoted jaw sufficiently to
25 keep the faces clean and smooth.

I have thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it
30 may be made or all the modes of its use.

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

35 1. In a yarn-guide, the combination with a fixed jaw, of a movable jaw, a pivotal connection between them, and means on said pivotal connection to adjust the movable jaw with relation to the fixed jaw.

40 2. In a yarn-guide the combination with a fixed jaw, of a movable jaw pivoted thereto by means of a rotatable stud, said stud being provided with means serving to adjust the pivoted jaw with relation to the fixed jaw.

45 3. In a yarn-guide, the combination with a fixed jaw, of an opposing jaw adapted to be moved transversely to said fixed jaw, and a

rotatable support upon which the movable jaw is pivotally mounted, rotation of said support varying the distance between the
50 jaws in a plane substantially perpendicular to the plane of said transverse movement.

4. In a yarn-guide, a fixed jaw, a movable jaw pivoted to move transversely thereto, means to attach the yarn-guide to its support,
55 independent means to move the movable jaw bodily toward or from the fixed jaw, the movable jaw having a shoulder to limit its outward movement, and means to keep the jaws normally in alignment with each other. 60

5. In a yarn-guide, a fixed jaw, an eccentric adjusting-stud, and a movable jaw pivoted on said stud.

6. In a yarn-guide, a fixed jaw, a movable jaw normally in alignment with the fixed jaw,
65 whereby movement of one jaw will not materially change the width of the space between the jaws while exposing the edge of the movable jaw to be readily cleaned, an eccentric pivot upon which the movable jaw is
70 mounted, and means to normally retain said jaws in alignment.

7. In a yarn-guide, a fixed jaw, an eccentric adjusting-stud mounted parallel thereto and provided with a shoulder, a weighted
75 movable jaw pivoted on said stud and held thereon by the said shoulder, and means to clamp the stud in adjusted position.

8. In a yarn-guide, two jaws, an eccentric pivotal support for one of them, whereby said
80 jaws have an operative relation to each other to present a slot of definite width between them by which to clean a strand of yarn passed therethrough, and means to permit a restricted movement of one relatively to the
85 other, without appreciably changing the width of the slot between them.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES H. NORTHROP.

Witnesses:

GEO. OTIS DRAHER,
HERBERT S. MANLEY.