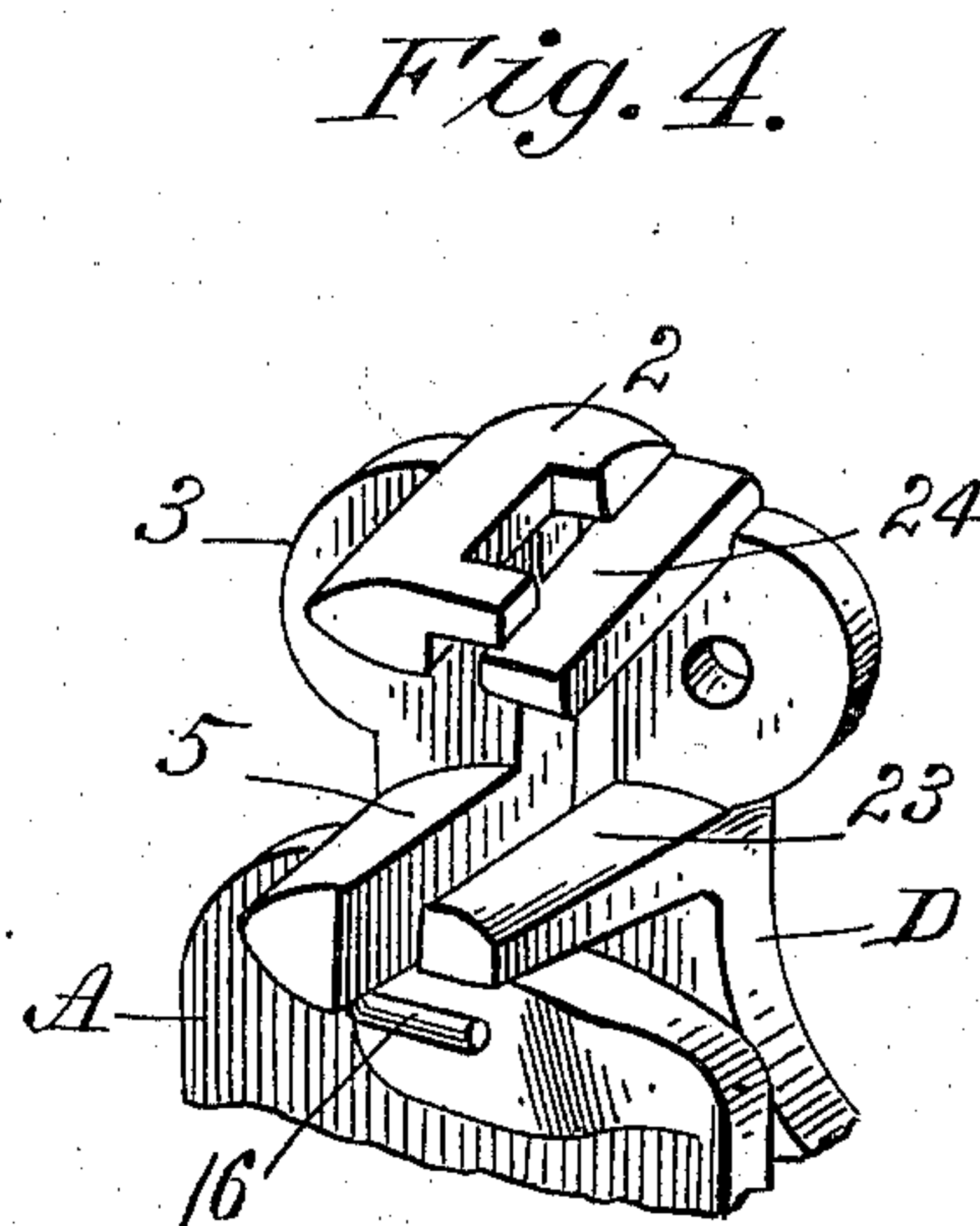
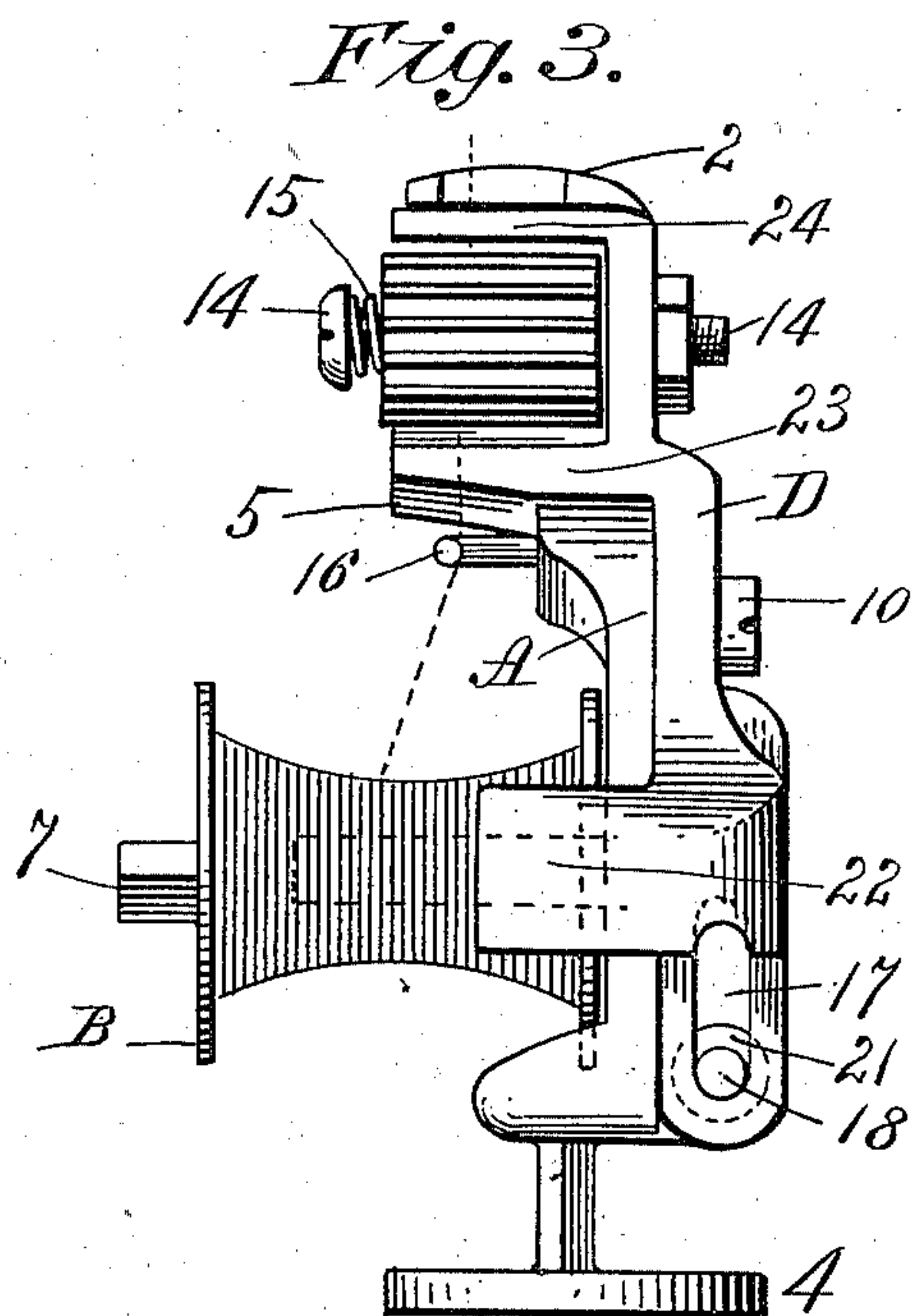
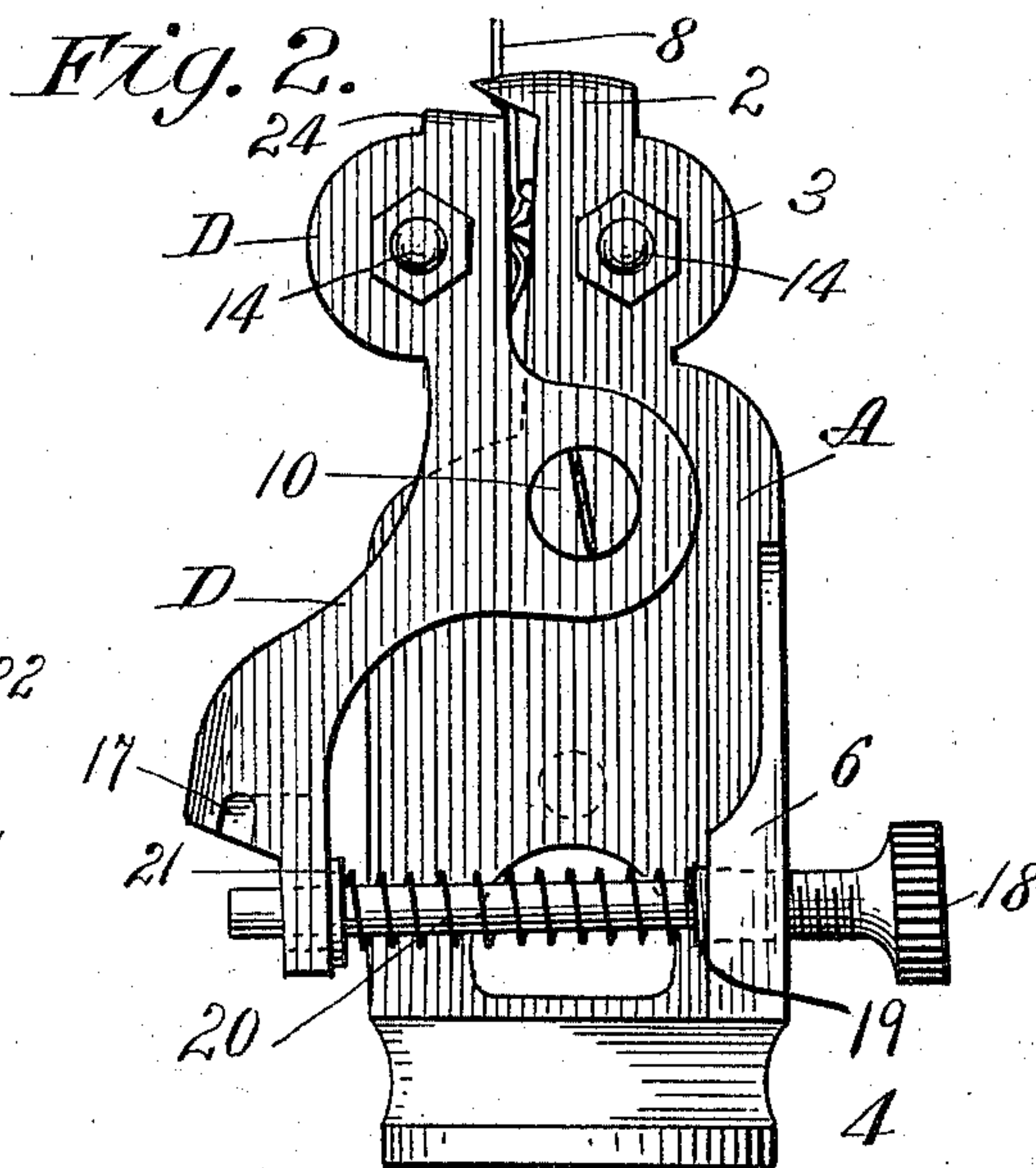
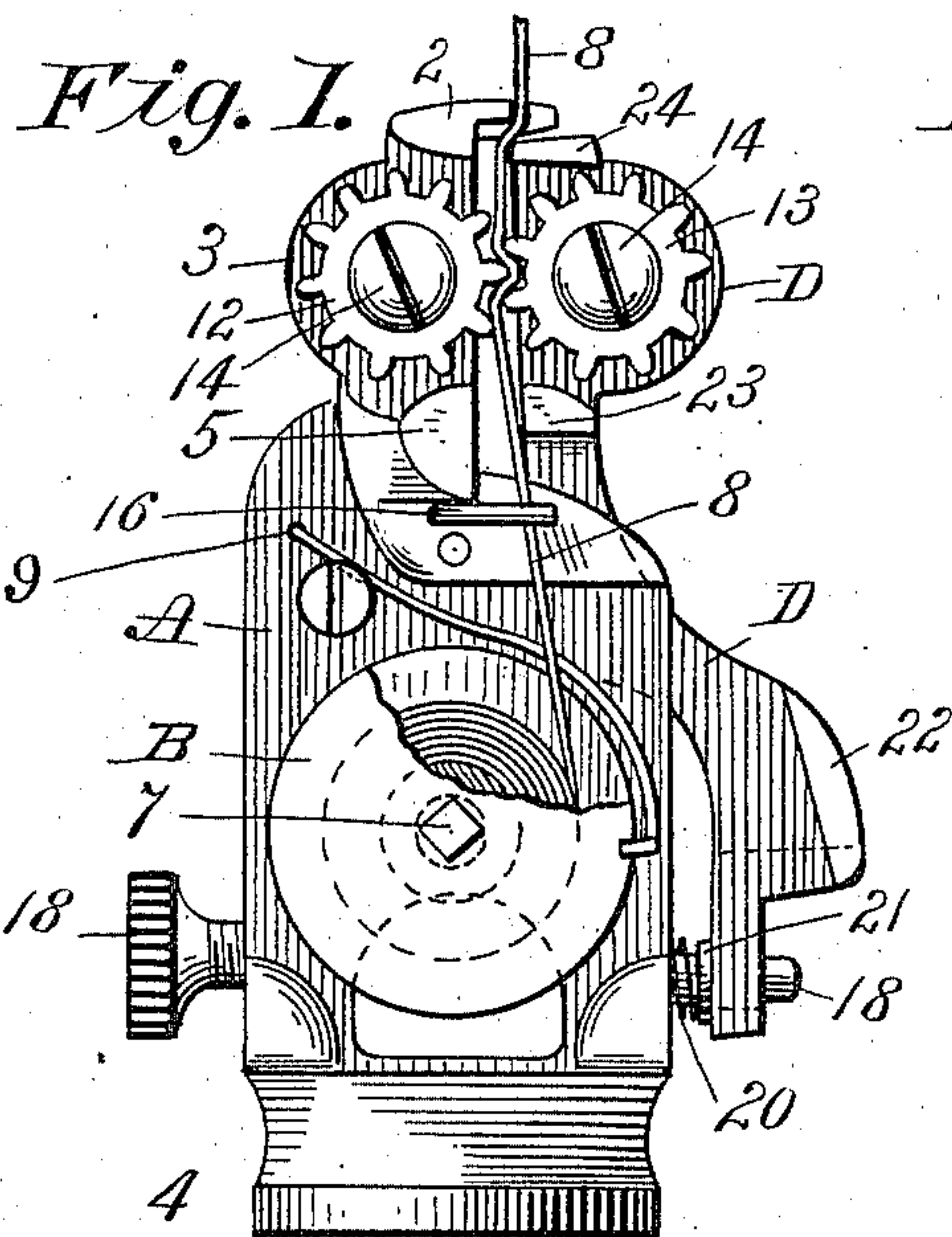


(No Model.)

O. E. MOORE.  
BRAIDING MACHINE RACER.

No. 575,428.

Patented Jan. 19, 1897.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

ORLAND E. MOORE, OF WESTFIELD, MASSACHUSETTS.

## BRAIDING-MACHINE RACER.

SPECIFICATION forming part of Letters Patent No. 575,428, dated January 19, 1897.

Application filed October 29, 1896. Serial No. 610,492. (No model.)

*To all whom it may concern:*

Be it known that I, ORLAND E. MOORE, a citizen of the United States of America, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Braiding-Machine Racers, of which the following is a specification.

This invention relates to braiding-machines, and particularly to racers for use in such machines, the object being to provide a racer of improved construction and particularly in relation to the tension devices thereon which act upon the strips of material which are drawn from the racer in the formation of a braided whip-lash or other braided fabric; and the invention consists in the peculiar construction and arrangement of various parts of the device, all as hereinafter fully described, and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figures 1, 2, and 3 are respectively front, rear, and edge elevations of a racer embodying my improvements. Fig. 4 illustrates detail parts of the device hereinafter described.

Referring to the drawings, A indicates the frame or body of the racer, which is preferably cast in one piece, and the integral parts thereof comprise the upper and lower fixed jaws, respectively, (indicated by 2 and 5,) the fixed support 3 for one of the tension-rollers, the foot 4 of the racer, and the tension-screw boss or stud 6. To said frame or body are attached the below-described operative parts of the racer. A suitable stud or spindle (indicated in dotted lines in Fig. 3) is fixed to the front side of said body A, projecting therefrom at right angles, on which a spool or bobbin B is hung for substantially free rotary movement, induced by drawing a strip of material therefrom, as below set forth. Said bobbin is provided with a projecting stud 7 on its front end, to which may be applied any suitable device for turning the same to wind a strip 8 of braiding material thereupon, or a central rectangular socket may be made in said front end to receive the shank of a winding-crank. A retarding-spring 9, Fig. 1, having one end fixed to said frame A, has its free end bearing frictionally against

the periphery of one head of said spool in order to maintain a certain degree of tension upon said braiding material while it is being drawn from said bobbin, as below set forth, thereby preventing the material from becoming loose and displaced thereon. A vibratory tension-roller support D is pivotally hung on said frame or body A upon a suitable bolt or screw 10, the upper extremity of which terminates opposite said fixed roller-supporting part 3 of frame A, and upon said fixed part and said extremity of said support D are journaled two fluted or corrugated tension-rollers 12 and 13 having suitable broken surfaces for gripping purposes, which rotate upon suitable pivotal axes or the screws 14. Between the under sides of the heads of said screws 14 and the outer ends of said tension-rollers are placed coil or other springs 15 for frictional action against the ends of said rollers, whereby they are restrained from rotation excepting by the action of a strip of said braiding material 8, while the latter is drawn between them, as aforesaid. A guide-hook 16 for said material 8 is fixed in the frame A just below said fixed jaw 5. The said tension-roller support has its lower extremity extending downward opposite said fixed stud 6 on the frame A and has a slot 17 therethrough, Fig. 3. A thumb-screw 18 has a screw engagement with said stud 6 on the frame A and has a shoulder 19 thereon, forming an abutment for one end of a coil-spring 20 on said screw, the opposite end of which spring bears against the lower end of said roller-support D, a loose washer 21 being placed between one end of said spring 20 and the adjoining side of said support to form a proper abutting surface for that end of the spring. By means of said thumb-screw 18 and spring 20 the desired gripping pressure against the strip of material 8 as it is drawn between the said two rollers 12 and 13 in the operation of braiding is properly regulated. A forwardly-projecting arm 22 is provided on said roller-support D, preferably integral therewith, to provide for the convenient manipulation of said support in swinging the same to move the roller 13 away from the opposite roller 12 and free the strip 8 from the grip of said rollers. A jaw 23, similar to said opposite jaw 5, is provided on the said support D, said two jaws serving to guide said



braiding-strip 8. A second jaw 24 is provided on said support D, so arranged that one edge thereof shuts more or less under said jaw 2 on the frame A, (see Figs. 1 and 4,) thereby imparting a certain degree of tension to said strip 8 in addition to that derived from said rollers 12 and 13.

The within-described racer provides a strong construction particularly adapted to machines for braiding whip-lashes, window and other similar cords of textile material, and contains tension-controlling devices particularly adapted to such manufacture, and is a simple and inexpensive machine. In using the within-described racer on a certain or regular grade of braided work adjustable gripping devices, including the screw 18 and spring 20, are not required. Therefore a spring, as 20, or other suitable constant-tension spring engaging by one end a part of the frame, directly or indirectly, and by its opposite end the lower end of the support D may be used, and in that case said screw may be omitted.

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

1. A braiding-machine racer comprising a body, two jaws and a tension-screw-supporting stud on said body, combined with a rough-faced tension-roller journaled on said body between said jaws, a tension-roller support pivotally hung on said body having jaws thereon, a rough-faced tension-roller journaled on said support opposite said first-named roller, tension devices supported on said stud and engaging one end of said support, whereby the position of one of said tension-rollers is made variable relative to the other, and a bobbin for braiding material supported revolubly on said body, substantially as set forth.

2. A braiding-machine racer comprising a body, two jaws and a tension-screw-supporting stud on said body, combined with a rough-faced tension-roller journaled on said body between said jaws, a roller-support pivotally hung on said body having jaws thereon, a rough-faced tension-roller journaled on said support between the jaws thereon and opposite said first-named roller, a tension-spring and screw acting between said stud and engaging one end of said support, whereby one of said tension-rollers is moved toward and from the other, and a bobbin for braiding material supported revolubly on said body, substantially as set forth.

3. A braiding-machine racer comprising a body, two jaws and a tension-screw-support-

ing stud, said jaws and stud being integral with said body, combined with a grooved tension-roller journaled on said body between said jaws, a tension-roller support pivotally hung on said body having jaws thereon, and a slotted lower extremity, a grooved tension-roller journaled on said support between the said jaws thereon, and opposite said first-named roller, a tension-screw engaging said stud and extending through said slotted lower extremity of said roller-support, a spring on said screw compressible by the latter against said support, whereby the latter is vibrated and one of said tension-rollers is adjusted toward and from the opposite roller, a bobbin for braiding material supported revolubly on said body, and a restraining-spring for frictional contact with said bobbin, substantially as set forth.

4. A braiding-machine racer comprising a body A, two jaws 3 and 5, and a tension-screw stud 6, combined with a tension-roller support D, pivotally journaled on said body and having the jaws 23, and 24, thereon, a slotted lower extremity opposite said stud, and the arm 22, two longitudinally-grooved tension-rollers 12 and 13, journaled respectively on said body, and on said support D, the tension-screw 18, engaging said stud 6, and extending through the slot in said pivotally-hung support, a spring 20, on said screw compressible by the latter against the lower extremity of said support, whereby the latter is vibrated and one of said fluted rollers is moved toward and from the other, a bobbin B, for braiding material supported revolubly on said body, and a restraining-spring for frictional contact with said bobbin, substantially as set forth.

5. A braiding-machine racer, comprising a body having one or more jaws thereon, combined with a rough-faced tension-roller journaled on said body near said jaw or jaws, a tension-roller support pivotally hung on said body having one or more jaws thereon, a rough-faced tension-roller journaled on said support opposite said first-named roller, a spring between a fixed part of said body and one end of said roller-support, whereby the said roller on the latter is forced constantly toward said body-supported roller, and a bobbin for braiding material supported revolubly on said body, substantially as set forth.

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Witnesses:

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