

No. 681,325.

Patented Aug. 27, 1901.

J. HULLT.  
HANDLE BAR.

(Application filed May 28, 1901.)

(No Model.)

Fig. 1.

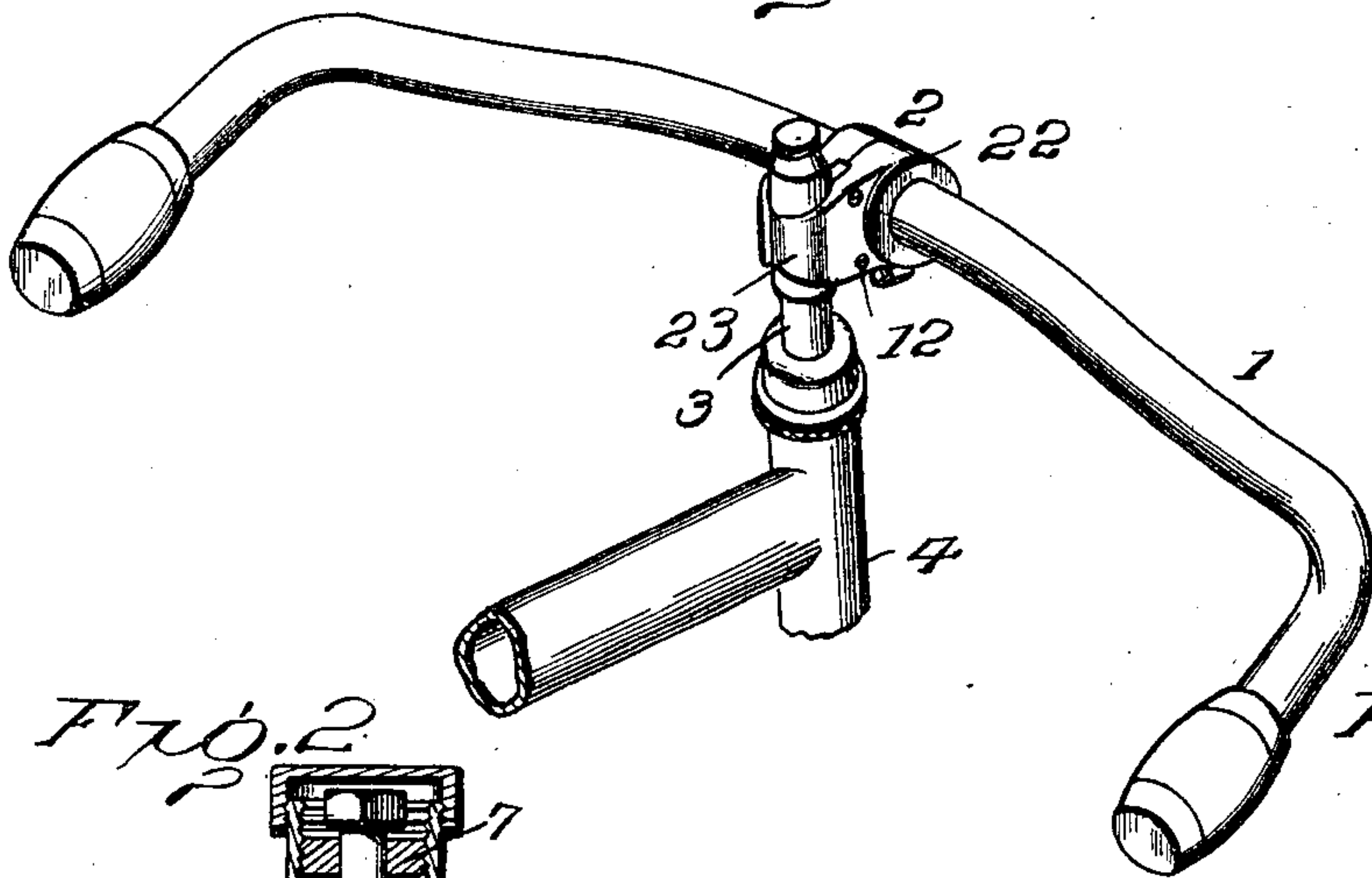


Fig. 2.

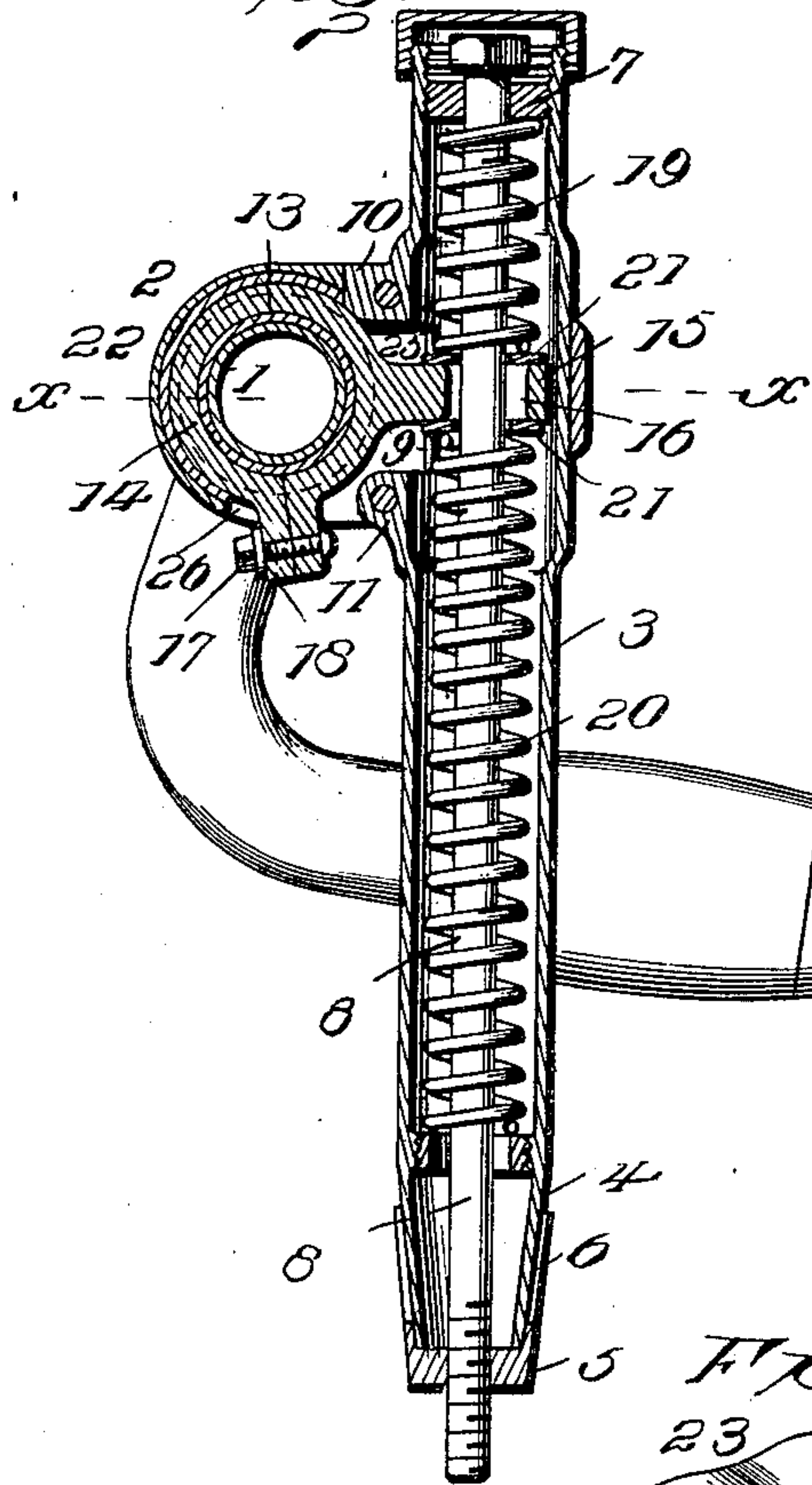


Fig. 4.

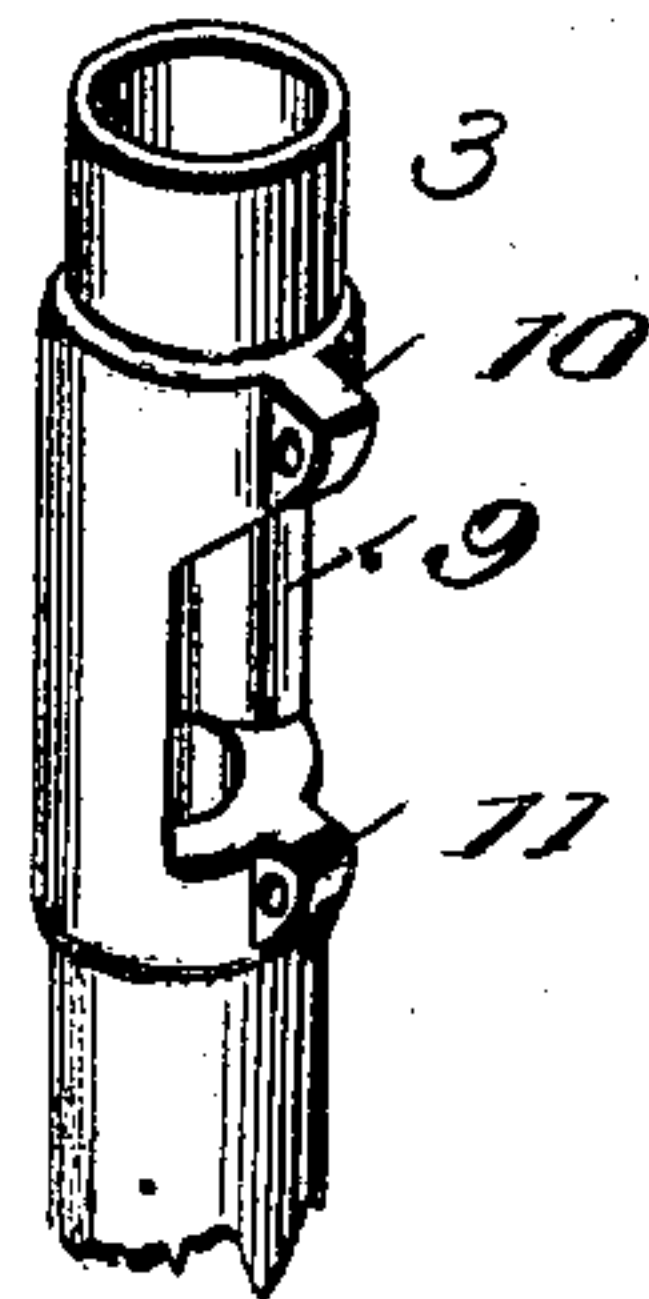


Fig. 3.

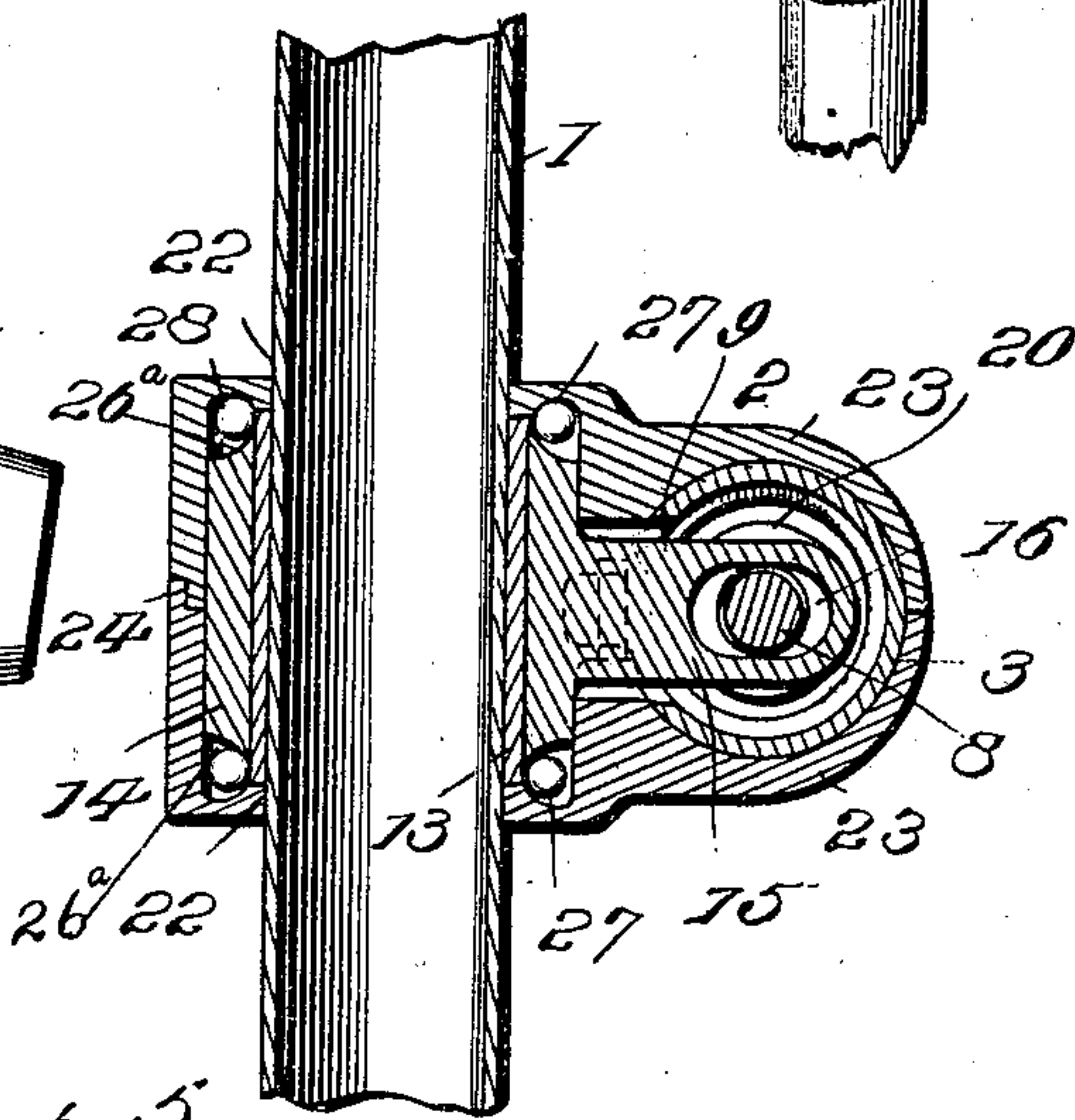
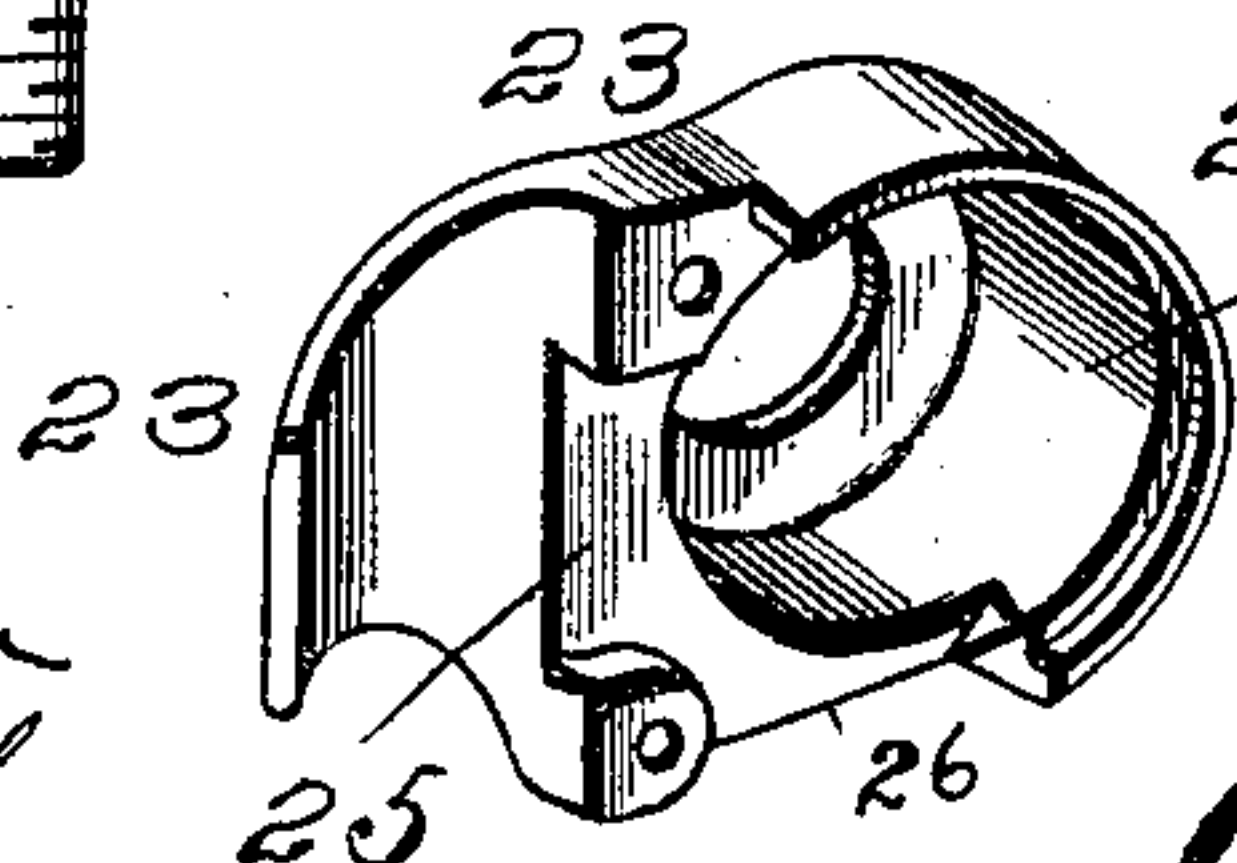


Fig. 5.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN HULLT, OF HOOD RIVER, OREGON.

## HANDLE-BAR.

SPECIFICATION forming part of Letters Patent No. 681,325, dated August 27, 1901.

Application filed May 28, 1901. Serial No. 62,279. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HULLT, a citizen of the United States, residing at Hood River, in the county of Wasco and State of Oregon, have invented certain new and useful Improvements in Handle-Bars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
10 pertains to make and use the same.

This invention relates to handle-bars for velocipedes, bicycles, and machines of kindred nature, and has for its object to provide novel means for compensating for jar and  
15 vibration incident to traveling over rough roads and uneven surfaces, whereby the fatigue on a long journey is reduced to a minimum amount and soreness of the arms in a measure obviated.

20 The invention deals more particularly with the class of handle-bars provided with a spring disposed to take up vibration and appertains to the mountings and connections, which hereinafter will be more particularly set forth,  
25 illustrated, and finally claimed.

In the drawings, Figure 1 is a perspective view of a handle-bar embodying the invention. Fig. 2 is a vertical central section. Fig. 3 is a horizontal section on the line X X of  
30 Fig. 2. Fig. 4 is a perspective view of the upper end portion of the handle-bar stem. Fig. 5 is a perspective view of the bearing-clamp.

Corresponding and like parts are referred  
35 to in the following description and indicated in all the views of the drawings by the same reference characters.

The handle-bar 1 may be of any design or pattern and is mounted for oscillation in a  
40 bearing-clamp 2, applied to the stem 3, which is secured within the head-tube 4 of the frame of a bicycle, velocipede, or like machine. The stem 3 is tubular, and its lower end 4 is made conical for coöperation with  
45 an expanding-nut 5, by means of which the stem is secured within the head-tube 4 in an adjusted position. The expanding-nut 5 is formed with a flaring rim 6 to embrace the conical end 4 of the stem, so as to be spread  
50 thereby, the rim being slotted to admit of the separated parts being moved outward and

clamped against the inner walls of the head-tube 4 in the usual manner. The washer 7 closes the upper end of the stem 3 and is apertured for the passage therethrough of the  
55 tie-rod 8, by means of which the expanding-nut is tightened and loosened. An opening 9 is formed in a side of the stem near its upper end, and lugs 10 and 11 project laterally from the stem in line with the opening 9 and  
60 at the ends thereof. These lugs are transversely apertured for the passage of the machine screws, bolts, or fastenings 12, by means of which the parts of the bearing-clamp are secured in place.

65 The handle-bar 1 is reinforced at a middle point by means of a sleeve 13, soldered or otherwise attached thereto, and a split collar 14 is clamped thereon and is formed with an offstanding arm 15, which projects into the  
70 stem 3 through the opening 9 and has its inner end formed with an elongated opening 16, through which the tie-rod 8 passes. This collar 14 is clamped to the reinforced part of the handle-bar by means of a bolt 17, passing  
75 through openings in the outturned ends 18 of the collar. By loosening the bolt or fastening 17 the offstanding ends of the collar will separate and release the handle-bar, which can be turned to any desired angular posi-  
80 tion, and after being adjusted a retightening of the bolt or fastening 17 secures the handle-bar against displacement. As previously intimated, the handle-bar is mounted for free  
85 oscillation in the members of the bearing-clamp, and it is held in a normal position by springs 19 and 20, located in the stem 3 above and below the arm 15 and mounted upon the  
90 rod 8. These springs are under tension and are of any desired strength. The arm 15 is held between the inner or proximal ends of the springs 19 and 20, washers 21 being interposed between the arm 15 and springs, so as to receive the end thrust of the said springs and prevent catching of their terminals in the  
95 opening 16. The arm 15 being held between the springs 19 and 20 and clamped to the handle-bar, which is mounted so as to oscillate freely, it is manifest that jar and vibration of the machine are compensated and taken up by  
100 the springs and prevented from being transmitted to the hands and arms of the rider,



which is a desideratum when passing over rough roads and especially when making a long run.

The bearing-clamp is composed of similar parts, each comprising a cup 22 and a jaw 23, the latter being formed so as to snugly embrace a side of the stem 3. The meeting edges of the cups are halved together, as shown at 24, and portions of the cups are cut away at 25 and 26 to admit of the passage of the projecting parts 15 and 18 of the clamp-collar. The part intermediate of the cup 22 and jaw 23 is transversely apertured for the passage of the fastenings 12, by means of which the complementary parts of the bearing-clamp are secured and gripped upon opposite sides of the stem 3. The ends of the clamp-collar are shaped to provide cones 26<sup>a</sup>, and the ends of the cups are channeled, as at 27, to form, with the cones 26<sup>a</sup>, races for the balls 28, by means of which the friction between the handle-bar and its bearings is reduced to the smallest amount possible. The parts of the bearing-clamp coming upon opposite sides of the stem 3, clamp-collar 14, and reinforcement 13 prevent lateral displacement of the handle-bar with reference to the stem and head 2, while admitting of the free oscillation of the handle-bar to permit the springs 19 and 20 to take up vibration and jolt and prevent transmission thereof to the hands and arms of the rider.

Having thus described the invention, what is claimed as new is—

1. In a spring handle-bar, a stem having a side opening, and offstanding lugs at the ends of the said opening and in line therewith, a compensating spring within the stem, a bearing-clamp composed of similar parts, fastenings for securing said parts together and to the said stem by passing through the offstanding lugs thereof, and a handle-bar mounted in the bearing-clamp and having a projecting part to enter the stem and coöperate with the compensating spring, substantially as and for the purpose set forth.

2. In a spring handle-bar, a stem, a compensating spring, a handle-bar having its middle portion reinforced, a clamp-collar fitted upon the handle-bar and having a projecting part for coöperation with the compensating spring, the ends of the clamp-collar being cone-shaped, and a bearing-clamp composed of similar parts, each consisting of a cup and a jaw, the jaws embracing opposite sides of the stem and the cups being halved at their meeting edges and embracing the ends of the clamp-collar and handle-bar reinforcement and grooved to provide raceways in conjunction with the cone-shaped ends of the clamp-collar for the reception of balls, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN HULLT. [L. S.]

Witnesses:

WALDEMAR SETON,  
JOHN NORELL.