

No. 622,938.

Patented Apr. 11, 1899.

J. ALEXANDER.
ADJUSTABLE HANDLE BAR FOR BICYCLES.

(Application filed Apr. 11, 1898.)

(No Model.)

Fig. 1.

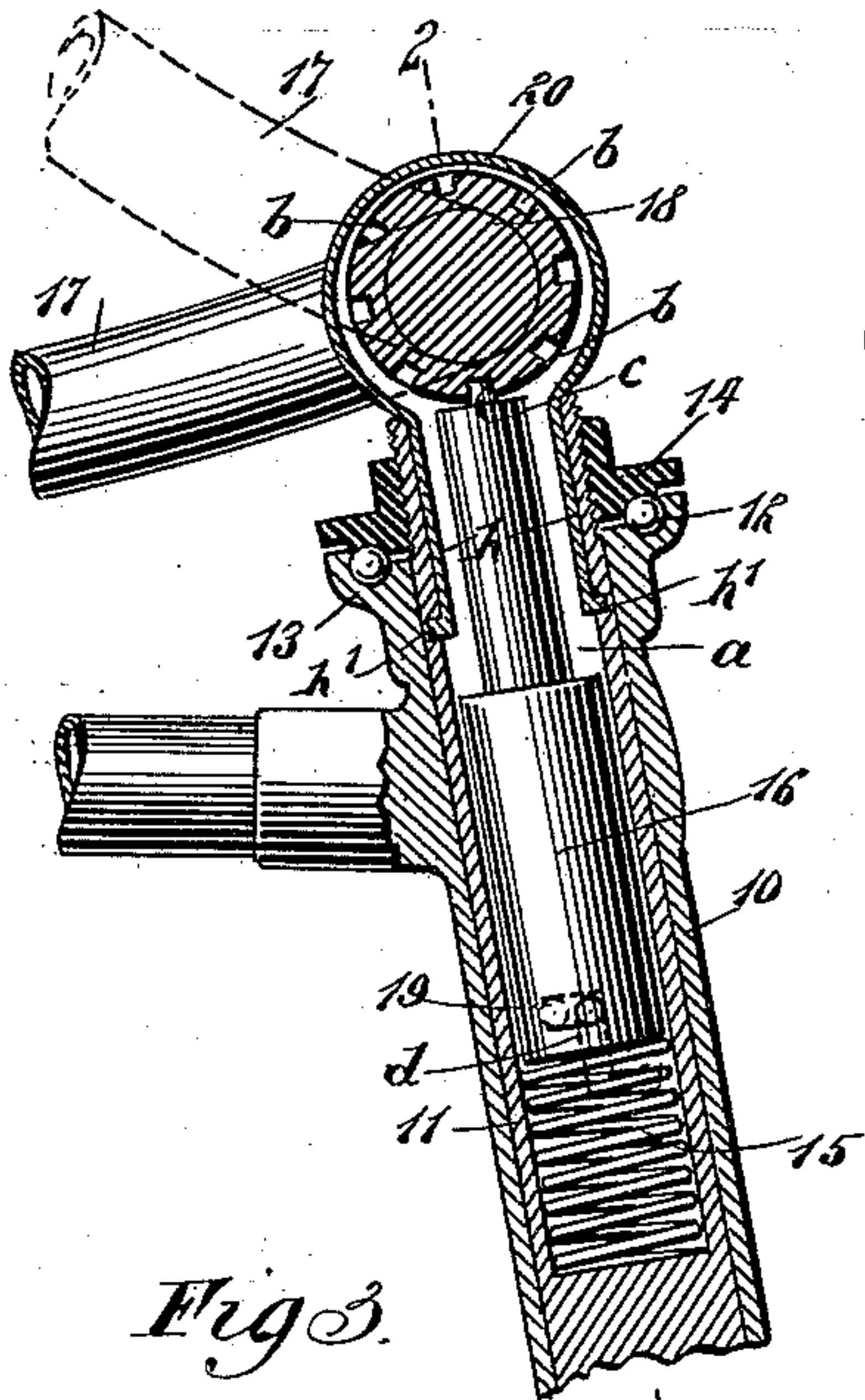


Fig. 2.

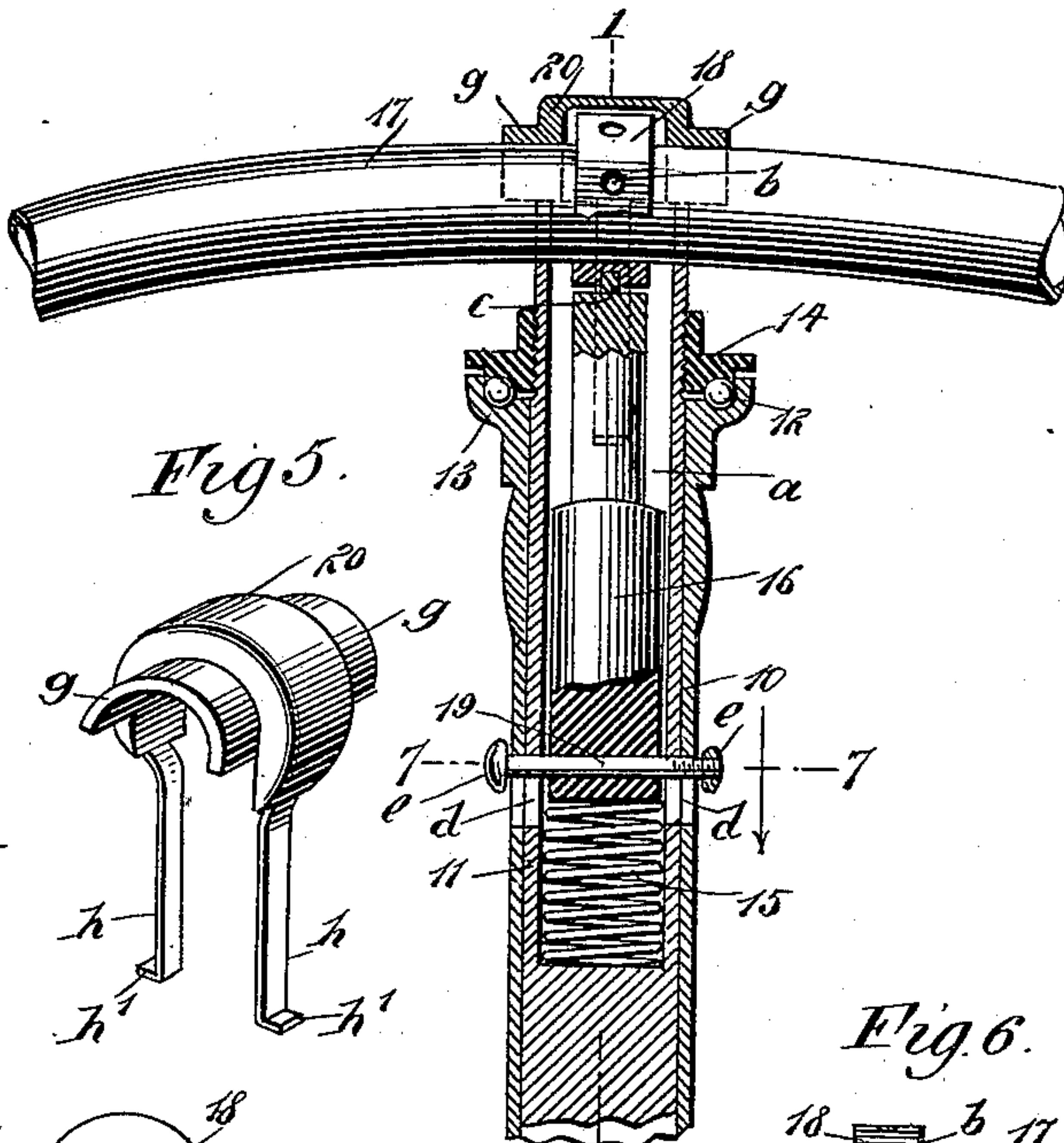


Fig. 5.

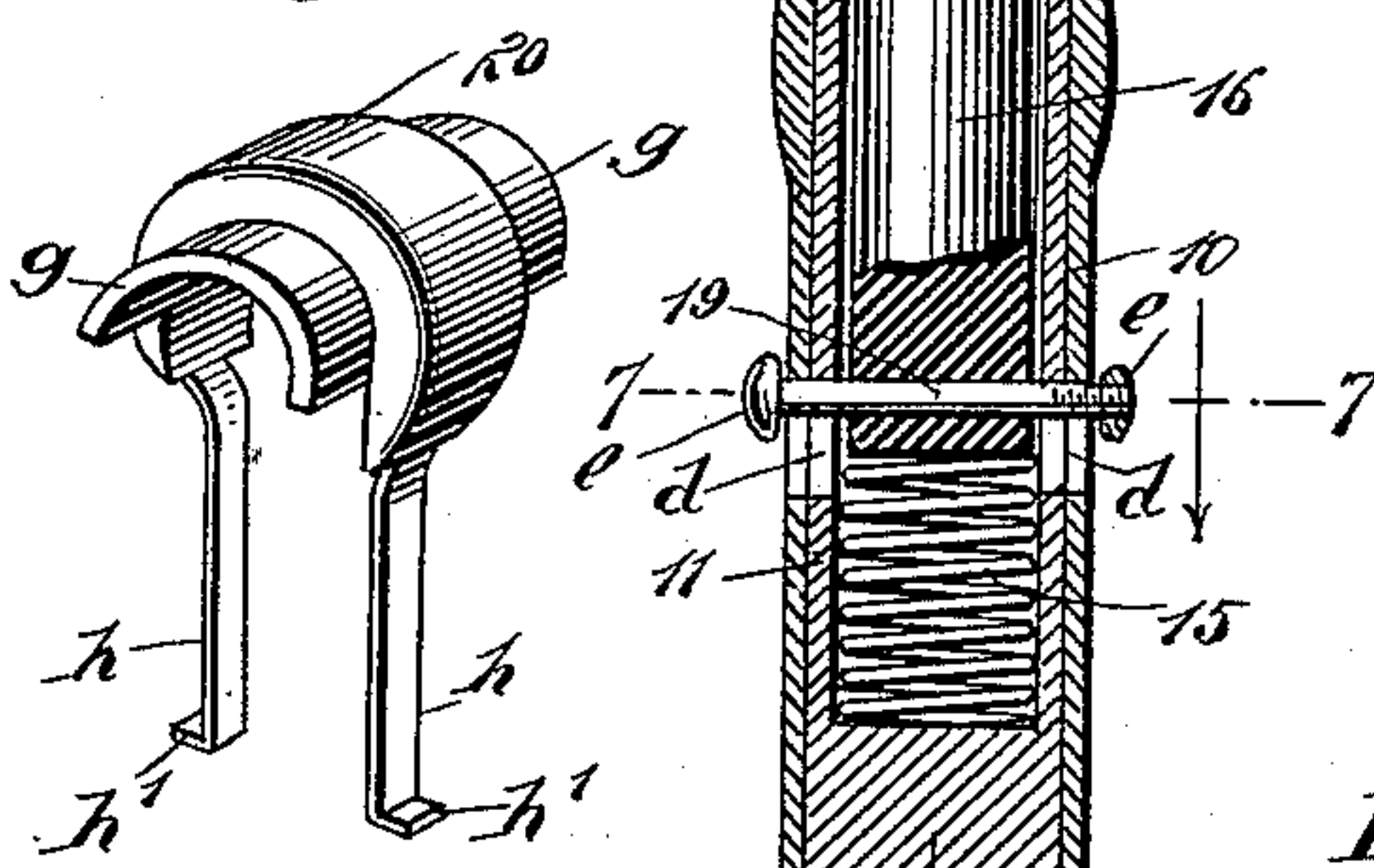


Fig. 3.

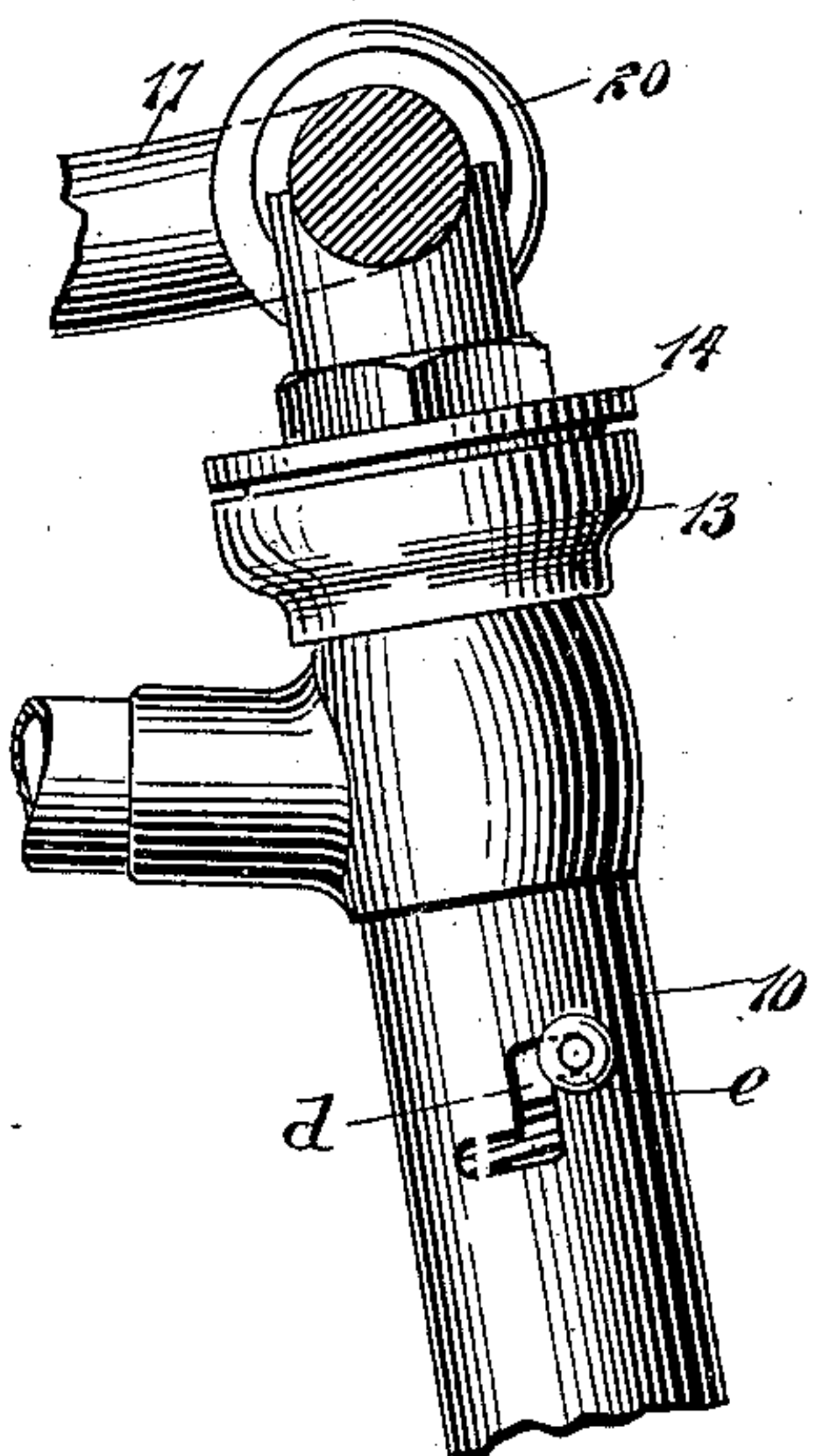


Fig. 4.

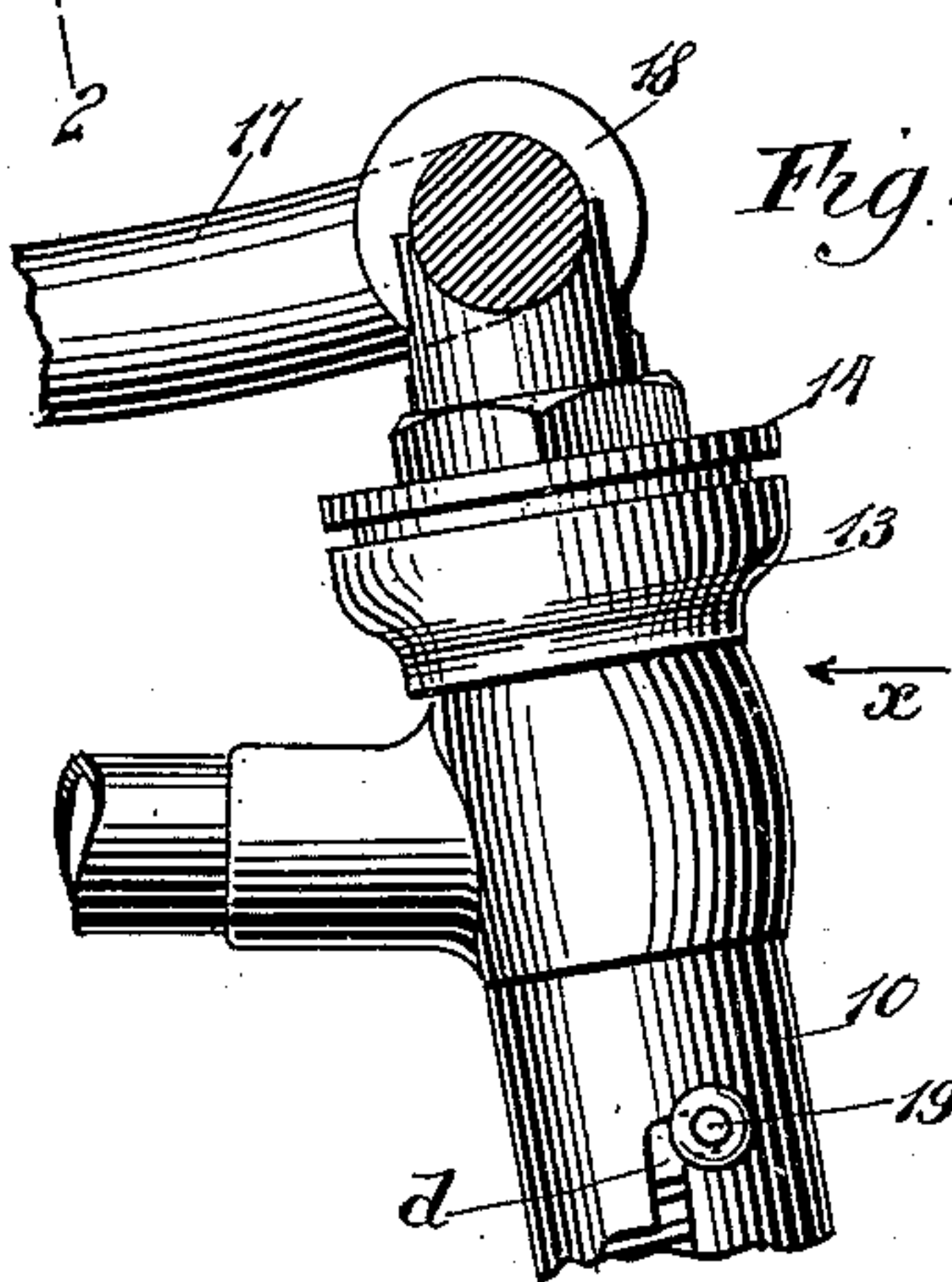


Fig. 6.

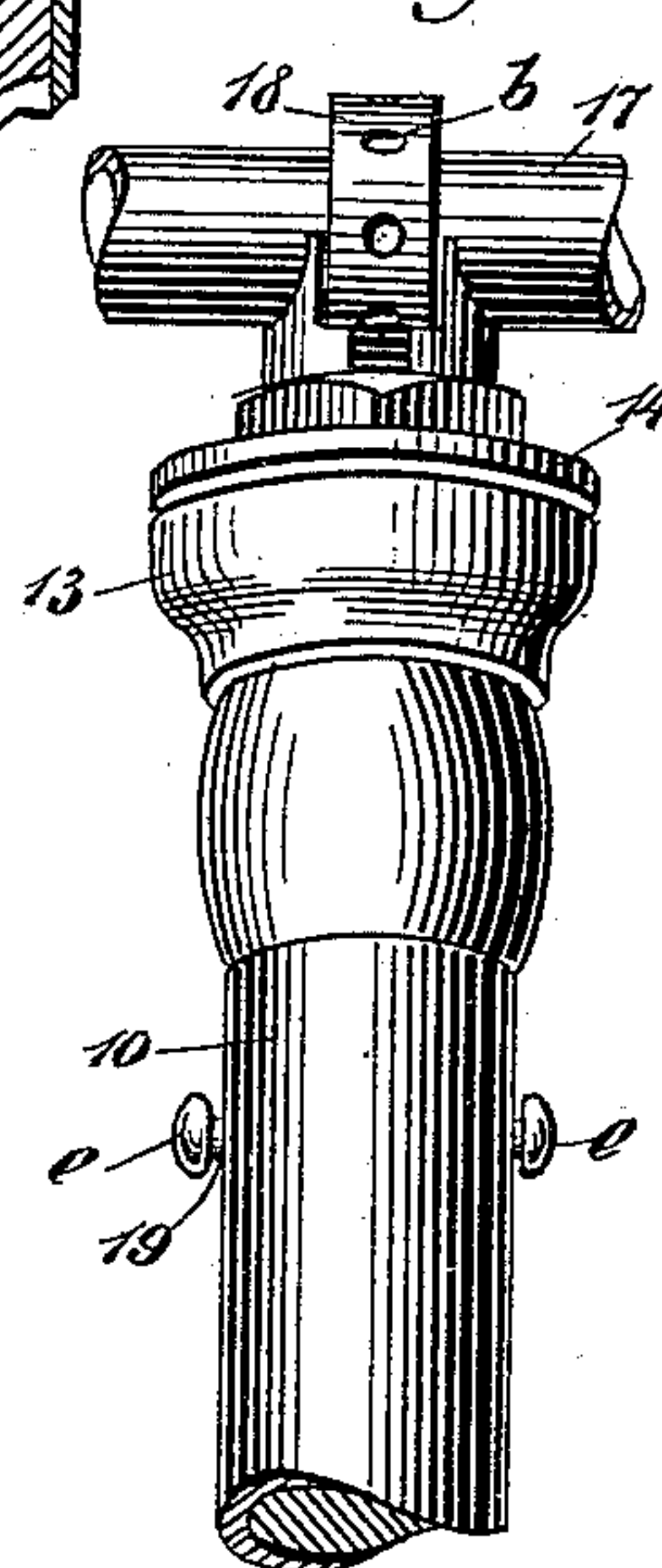
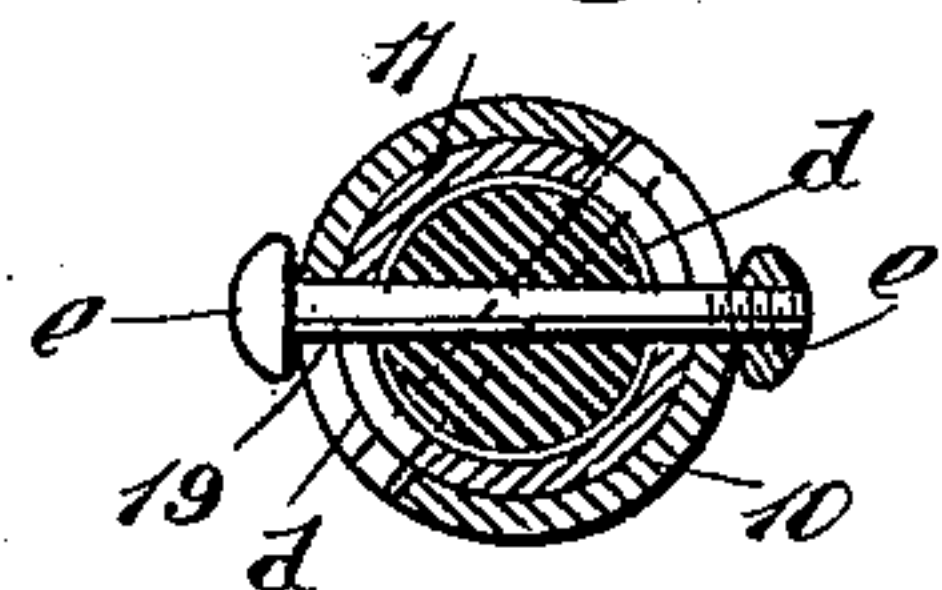


Fig. 7.



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JESSE ALEXANDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
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ADJUSTABLE HANDLE-BAR FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 622,938, dated April 11, 1899.

Application filed April 11, 1898. Serial No. 677,189. (No model.)

To all whom it may concern:

Be it known that I, JESSE ALEXANDER, of the city of New York, borough of Manhattan, in the county and State of New York, have
5 invented new and useful Improvements in Adjustable Handle-Bars for Bicycles, of which the following is a full, clear, and exact description.

This invention relates to means for adjusting the handle-bar of a bicycle to raise or lower it, and has for its object to provide a novel simple handle-bar attachment which will enable the rider of the vehicle to readily adjust the handle-bar to any desired position
15 while on the wheel and secure the same in a reliable manner.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended
20 claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

25 Figure 1 is a sectional side elevation of the upper portion of the front frame-fork, the steering-rod therein, a portion of the handle-bar, and the improvements in position for locking the handle-bar at any desired point, the section being taken substantially on the line 1 1 in Fig. 2. Fig. 2 is a partly-sectional front elevation substantially on the line 2 2 in Fig. 1. Fig. 3 is a side view of the upper portion of the front frame-post of a bicycle, the handle-bar broken away in section, and features of the improvement in connection with said parts. Fig. 4 is a view similar to Fig. 3, with the exception that a guard-cap forming a feature of the invention is removed
35 from over the handle-bar to expose another novel detail of construction. Fig. 5 is a detached perspective view of the guard-cap. Fig. 6 is a front elevation of the upper portion of the post, the middle portion of the handle-bar, and novel details seen in the direction of the arrow x in Fig. 4. Fig. 7 is a transverse sectional view substantially on the line 7 7 in Fig. 2.

In the drawings showing the application of
50 the invention, 10 indicates the upper portion

of the front frame-post of a bicycle, and 11 the upper portion of the steering-rod that is rotatable in said tubular frame-post.

A ball-bearing 12 is introduced between the flange 13, which projects from the upper end
55 of the frame-post 10, and an adjustable collar 14 on the steering-rod 11, as clearly shown in Figs. 1 and 2, this being a well-known appliance for reducing friction between the frame-post and steering-rod. The upper end of the
60 steering-rod shown is rendered solid at a proper distance from the upper extremity thereof, and above the solid portion the rod is tubular, thus affording a chamber a for the reception of a spring 15 and the cylindrical
65 plug 16. The spring 15 is seated in the bottom of the chamber a , and on said spring is imposed the lower end of the plug 16, which fits loosely in the chamber.

The handle-bar 17 may be solid or tubular,
70 it being preferably curved to project the handled ends (not shown) toward the rear of the bicycle. At the longitudinal center of the handle-bar 17 a circular enlargement 18 is formed or secured, and preferably this part
75 is in the form of a secured collar, which is peripherally concentric with the axis of the handle-bar, as indicated in Figs. 1 and 4. The collar 18 is perforated at spaced intervals in its periphery, as shown at b in the drawings,
80 these orifices being in the form of sockets that are of equal depth and extend toward the center of the handle-bar 17.

The cylindrical body of the plug 16 is reduced for a portion of its length from the upper end downwardly, for a purpose to be hereinafter explained, and at the upper extremity thereof a short nipple c is produced, which may enter and fit loosely in any one of the sockets b , as represented in Figs. 1 and 2.
85 The plug 16 is transversely perforated near the lower end of the same, and opposite slots d , essentially in Z shape, are formed in the walls of the tubular portion of the steering-rod 11 and also of the front frame-post 10,
90 with which the perforation of the plug registers.

A cylindric locking-bar 19 is inserted loosely through the slots d and firmly in the perforation of the plug 16, the length of said lock-
100

ing-bar permitting portions of the same to project a short distance outside of the frame-post 10, and enlargements or finger-holds *e* are preferably formed or secured on these portions of the locking-bar. The peculiar form of the slots *d* affords an upright portion and an oppositely-extended lateral portion at each end of the upright portion, so that the nipple *c* on the plug 16 when pressed into one of the sockets *b* by the spring 15 may be locked therein when the bar 19 is moved laterally by manual pressure, so as to locate it in the upper transverse members of the slots *d*, as indicated in Figs. 2 and 7.

The upper end wall of the hollow steering-rod 11 is transversely scalloped, so as to adapt it to fit upon the lower side of the handle-bar body at each side of the locking-collar 18, as represented in Figs. 3, 4, and 6, there being suitable notches formed oppositely in the upper end of said steering-rod at a right angle to the trend of the scallops to permit the collar 18 to work freely in the steering-rod.

A locking-cap 20 is provided to cover the upper portion of the collar 18, said cap being in the form of a bail that is chambered in the lower side of its looped portion and has the oppositely-projecting integral wings *g* formed at the sides of the loop, which wings are curved to fit upon the upper half of the cylindric handle-bar 17 when the cap 20 is in position thereon, the edges of the wings then impinging upon the upper edge of the steering-rod 11. From the opposite lower portions of the recessed loop of the cap 20 two similar spring-limbs *h* project downwardly in parallel planes, and on the lower end of each of said spring-limbs an outwardly-projecting toe *h'* is formed, as is clearly shown in Figs. 1 and 5.

The spring-limbs *h* are separated sufficiently to permit them to be slidably inserted in the open upper end of the chamber *a* in the steering-rod 11, said limbs being sprung toward each other slightly by the contact of their toes *h'* with the inner wall of said chamber, the reduced portion of the body of the plug 16 permitting the inward movement of the spring-limbs. At a suitable distance from the upper scalloped edge of the steering-bar 11 opposite indentations are formed in the wall of the chamber *a*, the relative position of said indentations adapting them to receive the toes *h'* of the limbs *h* when the cap 20 is manipulated to place it in position, and the

wings *g* of the cap-piece have a bearing on the handle-bar 17 and on the rod 11.

It will be seen that the chamber or recess in the looped portion of the cap 20 being of greater diameter than the locking-collar 18 permits a free rotatable movement of the handle-bar and collar when the nipple *c* of the plug 16 is retracted from the collar 18 to release the nipple from one of the sockets *b* in the collar, said cap also serving to hold the handle-bar in place on the steering-rod.

From the foregoing description it will be evident that a rider on a bicycle having the improvements may without dismounting therefrom readily release the handle-bar 17 from a locked engagement with the steering-bar 11 by a manipulation of the finger-holds *e* or the locking-bar 19, so as to release and depress said bar, and then rock the handle-bar into such changed position as may be desired, and if from any cause it is found essential that the nipple *c* be held depressed for a time this may be effected by moving the locking-bar into the lateral extensions of the slots *d* at the lower ends of the latter after the plug 16 has been depressed to compress the spring 15.

It is claimed for the improvement that it is simple, practical, and inexpensive and also very convenient in service, as it enables a rider of a bicycle having the improvements to effect any desired adjustment of the handle-bar above or below a horizontal plane while the bicycle is in motion, if this is desired.

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

The combination with a handle-bar, a collar thereon having teeth in its periphery, and a front frame-post, of a hollow steering-rod in said post, a plug slidable in the rod and also rotatable therein, said plug having a tooth adapted to mesh with the teeth of the collar, a spring pressing the plug toward the collar, and a locking-bar engaging in a transverse slot of the plug and also with opposite slots in the steering rod and post, to permit an adjustment of the plug, substantially as described.

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Witnesses:

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