

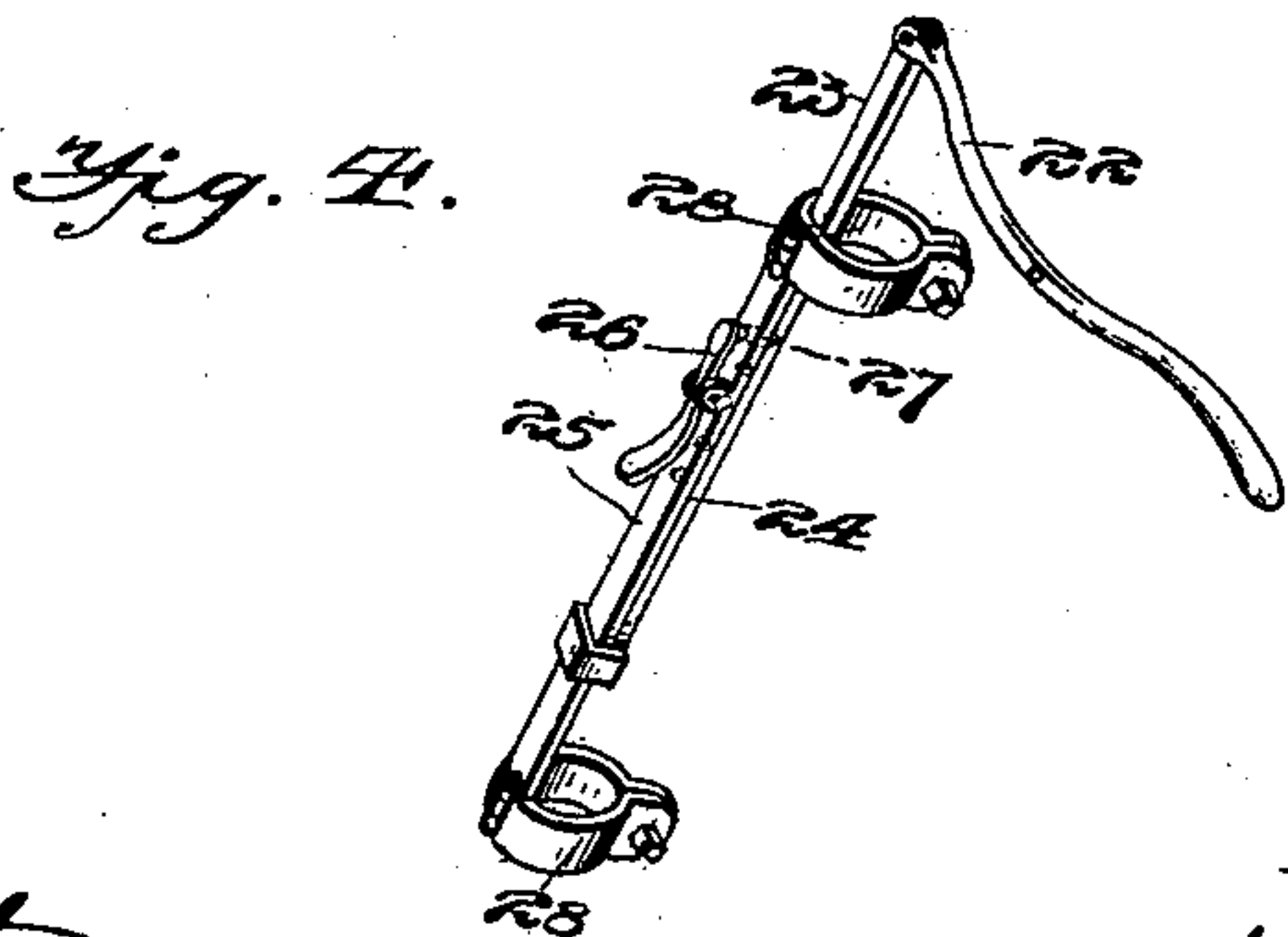
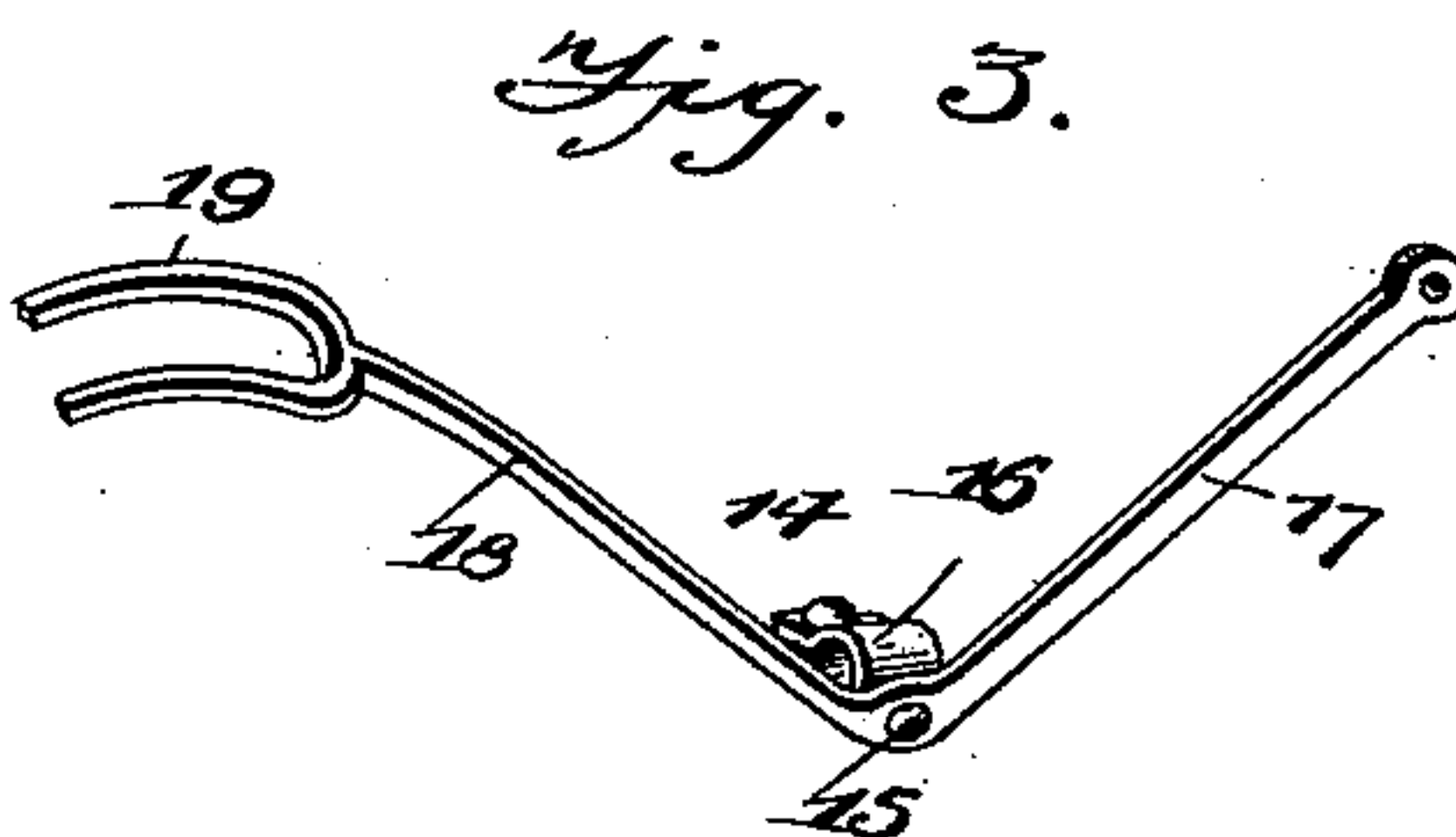
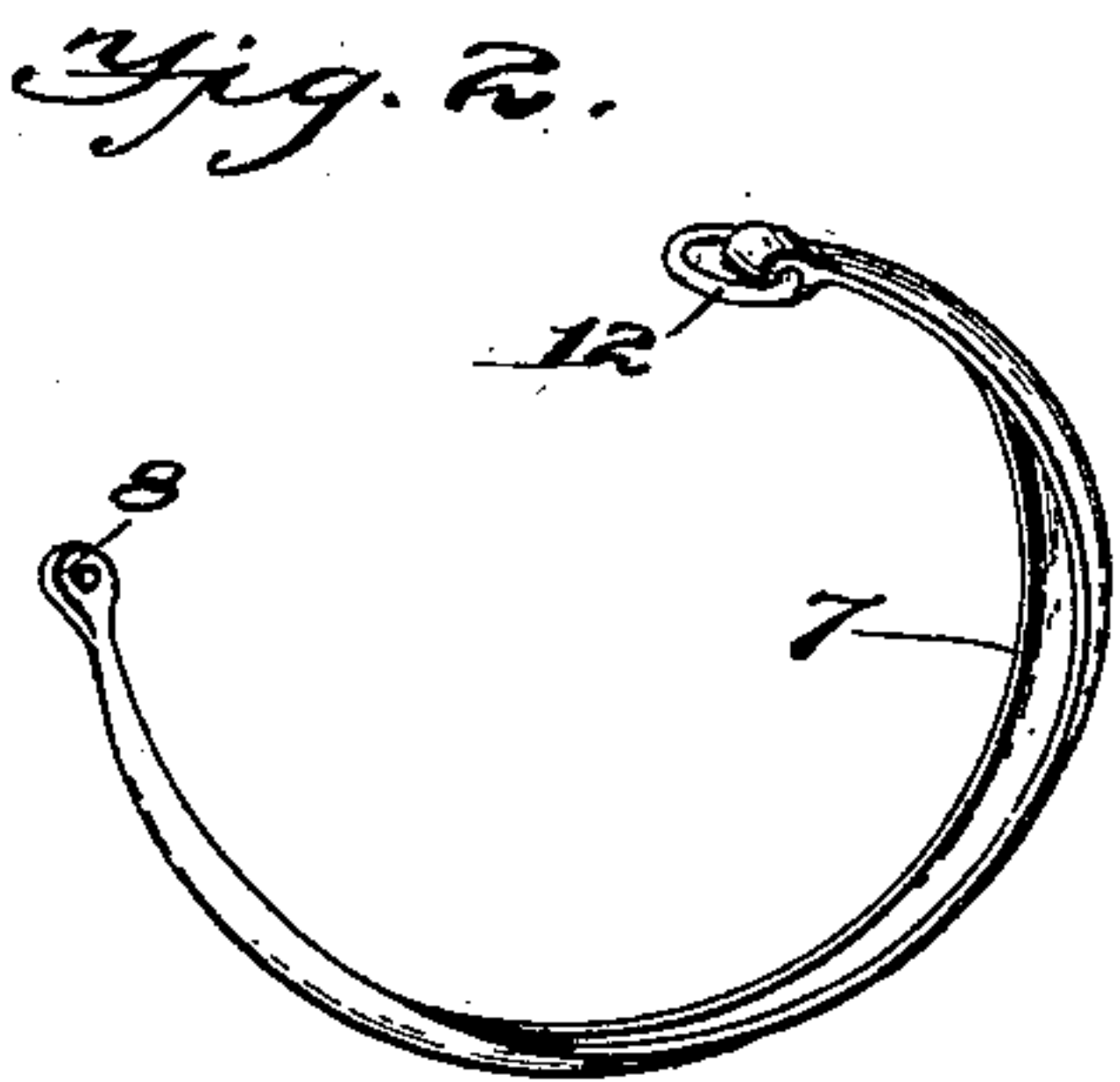
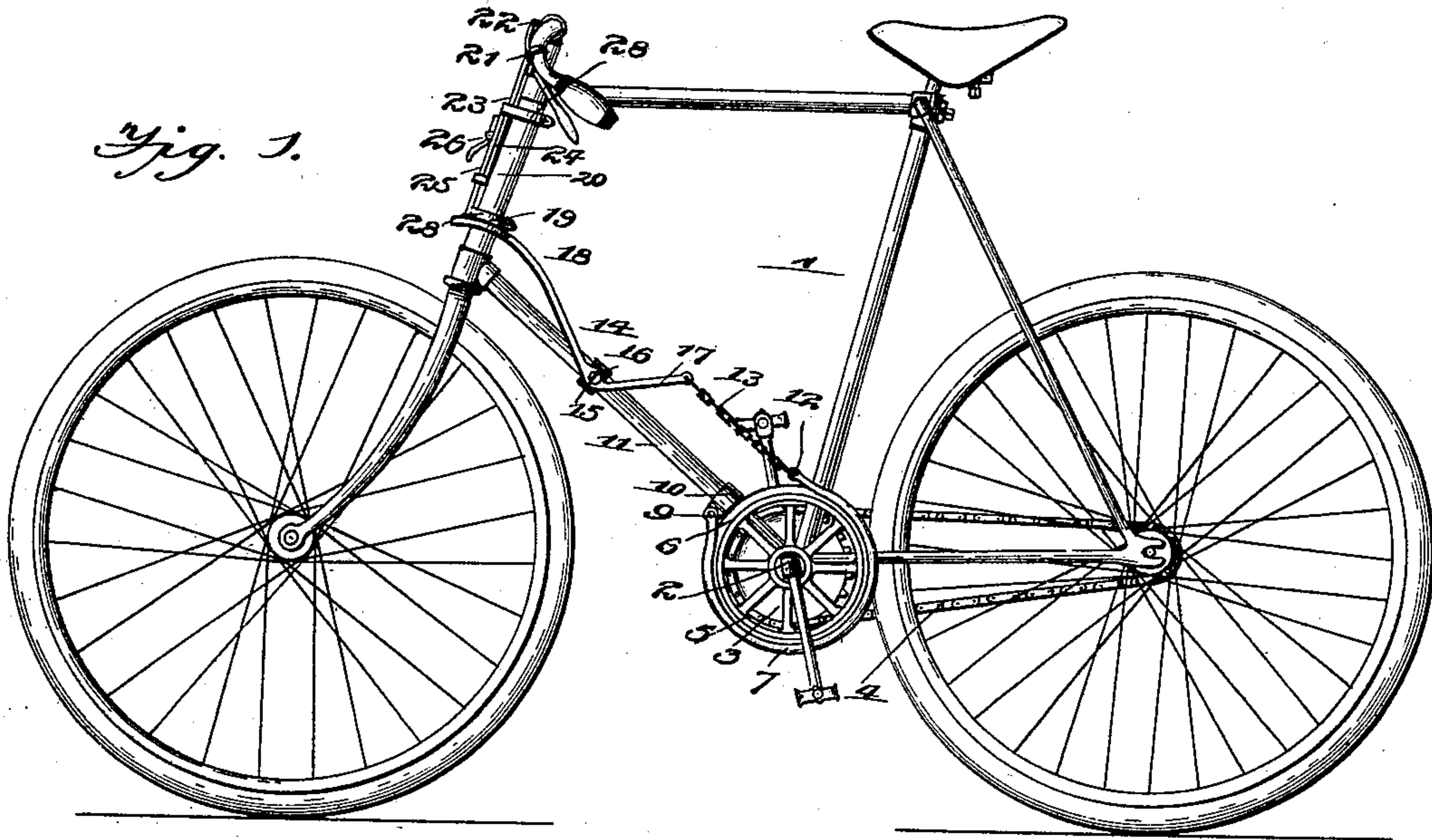
No. 614,676.

Patented Nov. 22, 1898.

R. G. TUCKER.
BICYCLE BRAKE.

(Application filed Jan. 6, 1898.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

REUBEN GARRET TUCKER, OF LA GRANDE, OREGON.

BICYCLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 614,676, dated November 22, 1898.

Application filed January 6, 1898. Serial No. 665,834. (No model.)

To all whom it may concern:

Be it known that I, REUBEN GARRET TUCKER, a citizen of the United States, residing at La Grande, in the county of Union and State of Oregon, have invented certain new and useful Improvements in Bicycle-Brakes; 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 appertains to make and use the same.

This invention relates to bicycle-brakes, and while especially designed for use in connection with bicycles it will be apparent as the description proceeds that the improved brake may be used in connection with any chain-driven or foot-propelled vehicle.

The object of the present invention is to provide a simple, effective, and easily-applied brake designed to be applied to the crank-axle or the friction-wheel thereon, thus removing any strain or undue wear upon the tires of the machine. The improved brake is adapted to be operated by the ordinary hand-lever connected to the handle-bar of the machine, so that while the brake is being applied back pressure on the pedals may also be utilized for assisting in arresting the progress of the machine.

The detailed objects and advantages of the invention will appear in the course of the ensuing description.

The invention consists in a bicycle-brake embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claim hereto appended.

In the accompanying drawings, Figure 1 is a side elevation of a bicycle equipped with the improved brake. Fig. 2 is a detailed perspective view of the friction-strap, showing at one end the means whereby it is secured to the machine-frame and at the other end a chain. Fig. 3 is a detailed perspective view of the elbow-lever and its attaching-clip. Fig. 4 is a similar view of the hand-lever and sliding extensible connection which operates upon the elbow-lever, showing also the means whereby said connection may be extended.

Similar numerals of reference designate

corresponding parts in all the figures of the drawings.

Referring now to the drawings, 1 designates an ordinary safety-bicycle of the diamond-frame pattern, the same having the usual crank-axle 2, sprocket-wheel 3, and driving-chain 4.

For the purpose of carrying out the present invention a friction-wheel 5 is made fast upon the crank-axle 2 and is arranged, preferably, on the opposite end of the crank-axle from the sprocket-wheel 3 and near one of the cranks. The wheel 5 is preferably equipped with a rubber tire 6 for increasing the frictional action of the brake-shoe.

The brake-shoe is in the form of a curved metal band or strap 7, one end of which is rolled or provided with an eye, as indicated at 8, to receive the stud 9 of a clip 10, embracing the reach-bar 11 of the machine-frame. From the clip 10 the friction-strap 7 extends around the wheel 5 and is provided above the wheel 5 and at its free end with a bail-shaped eye 12, to which is connected one end of a chain 13. The strap 7 is preferably semicircular or crescent-shaped in cross-section, so as to partially embrace the tire 6 of the wheel 5 and prevent the strap from slipping laterally out of engagement therewith when applied thereto.

The elbow-lever 14 is pivotally mounted at its elbow on the outwardly-projecting stud 15 of a clip 16, similar in all respects to the clip 10, above described, and also mounted on the reach-bar 11. One arm 17 of the elbow-lever is connected to the chain 13, while the other arm 18 of the elbow-lever is forked or bifurcated, as at 19, so as to straddle the head-tube 20 of the machine-frame. The fork 19 is curved so as to present a rounded upper surface, the purpose of which will hereinafter appear.

Connected to the handle-bar by means of a clip 21 is a hand-lever 22 of the ordinary type, and connected at one end to said hand-lever is a rod or connection 23, which extends down alongside the head-tube 20 for operating the elbow-lever 14. The rod or connection 23 is extensible, consisting of two members 24 and 25, extending parallel to each other, one member, 25, having a spring-pressed thumb-piece

26, carrying a pin or bolt 27, which operates through an opening in the member 25 and enters any one of the series of openings in the member 24. By this means the rod or
5 connection 23 may be extended in length and adjusted to suit the size of the machine-frame and other conditions. Secured to the upper and lower ends of the bar 25 are rings or loops 28, which embrace the head-tube 20 for guid-
10 ing and steadying the movements of the rod 23. The rings 28 are preferably made in sections hinged together and suitably bolted, so that the connection 23 as a whole may be readily applied to and detached from the machine.
15 In operation the hand-lever 22 is operated in the usual manner, thus depressing the connection 23 and causing the lower ring or loop 28 to act upon the upper rounded surface of the fork 19. This depresses the forward arm
20 of the elbow-lever and rocks the rear arm thereof forward, thus drawing upon the chain 13 and causing the strap 7 to be wound tightly upon the tire of the wheel 5. The braking effect is powerful by reason of the extended
25 frictional contact between the wheel 5 and strap 7. The brake above described may be used in connection with and in addition to the resistance offered by back-pedaling on the part of the rider, and thus the machine
30 may be brought to a stop in a short distance. By applying the brake to the crank-axle all

strain and wear are removed from the tires of the machine.

The brake hereinabove described is of course not limited to its use upon bicycles, 35 but may with equal advantage be used upon polycycles and chain-driven or motor cycles of various types.

Having thus described the invention, what is claimed as new, and desired to be secured 40 by Letters Patent, is—

In a bicycle-brake, the combination with a friction-wheel fast on the crank-axle, of a friction-strap extending the greater portion of the distance around the same, an elbow-lever 45 fulcrumed on the frame and having one end connected to one end of the strap, one arm of said lever being bifurcated and straddling the head-tube and having the upper surface of its fork rounded, a hand-lever on the handle-bar, 50 an extensible rod connected to said hand-lever, and rings on said rod encircling the head-tube and composed of sections hinged together, and having provision whereby their free ends may be connected, substantially as 55 described.

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

REUBEN GARRET TUCKER.

Witnesses:

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