

No. 749,991.

PATENTED JAN. 19, 1904.

W. E. HOYT.
SHAFT SUPPORTER.

APPLICATION FILED AUG. 30, 1902.

NO MODEL.

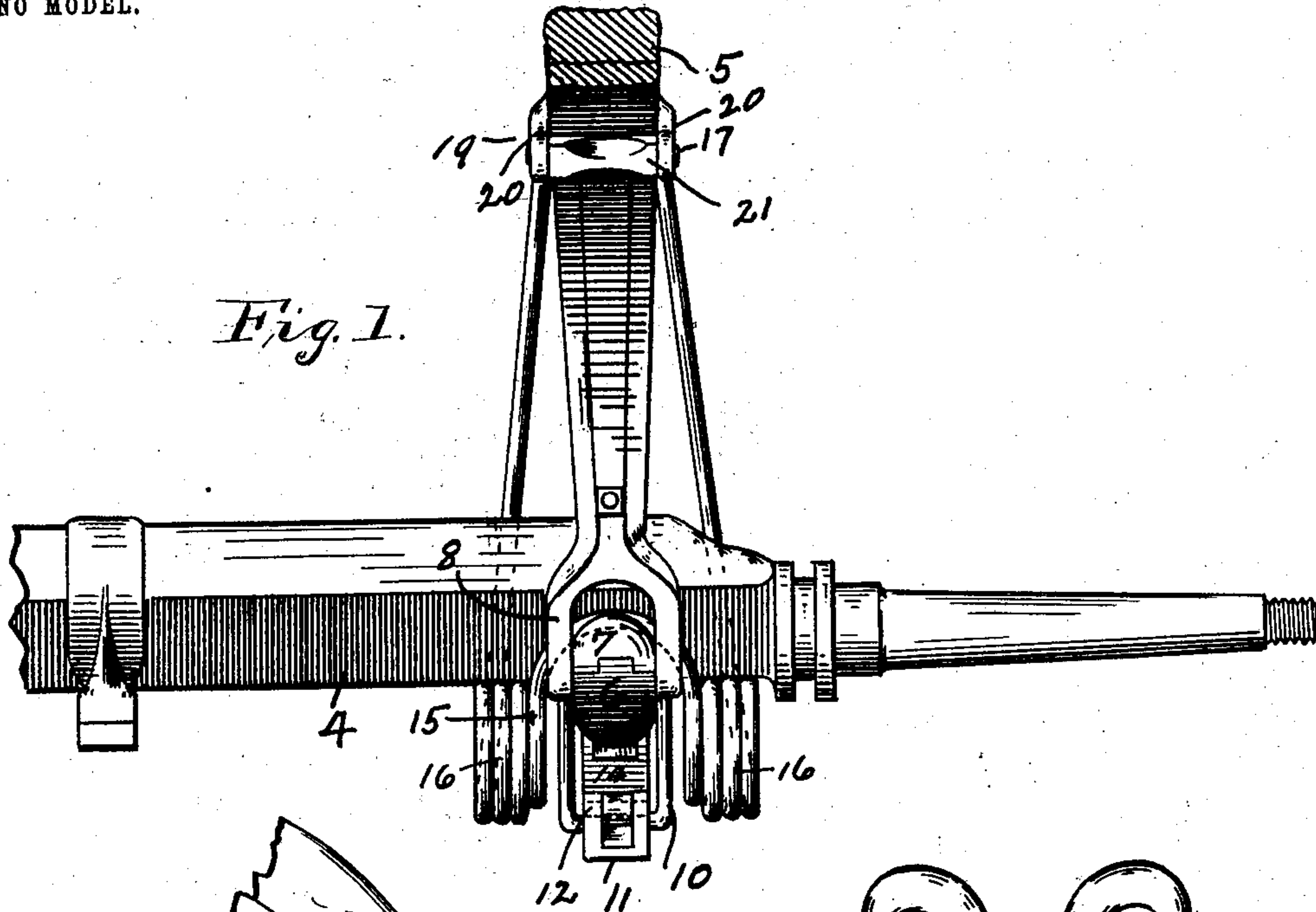


Fig. 1.

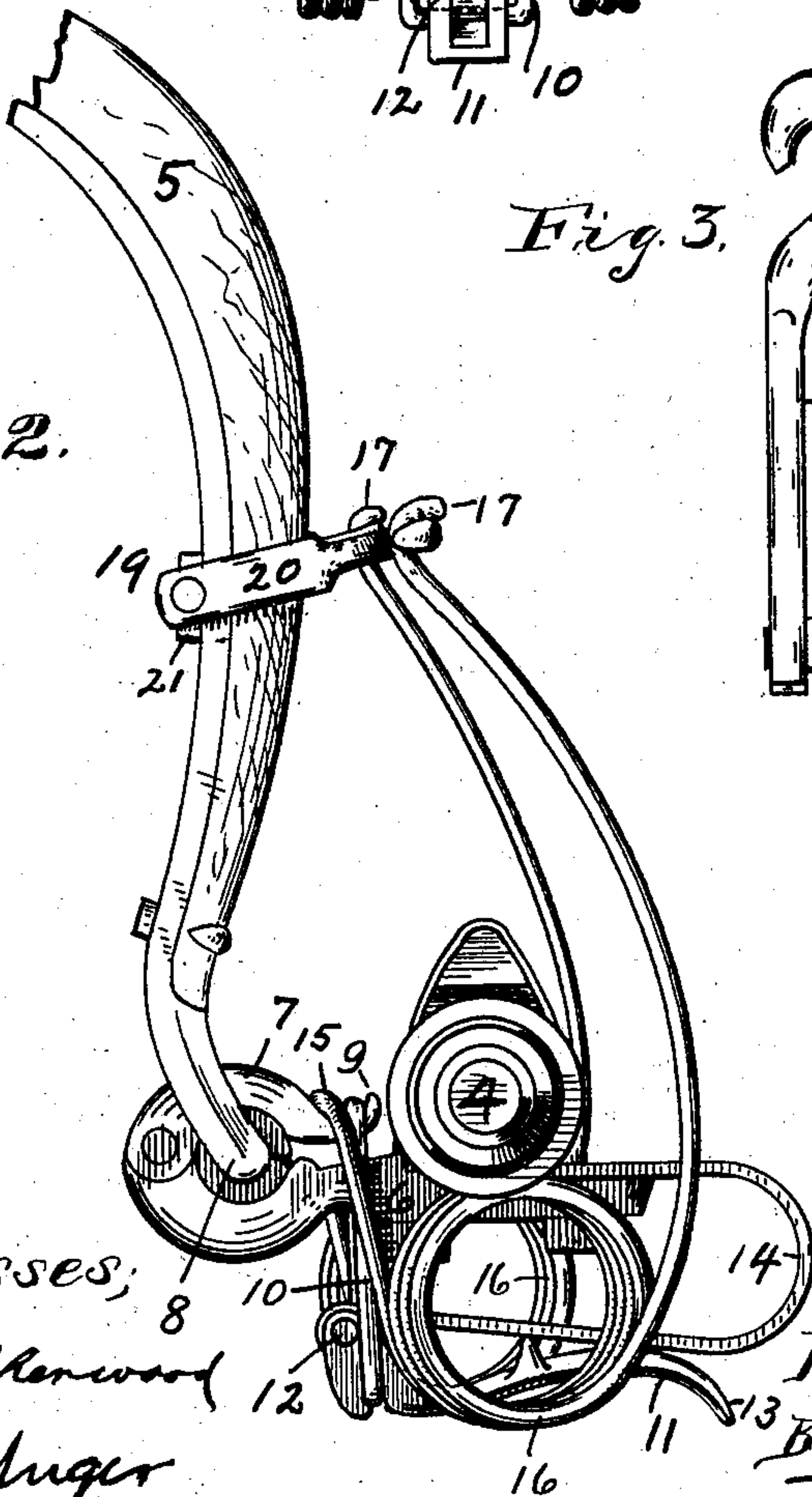


Fig. 2.

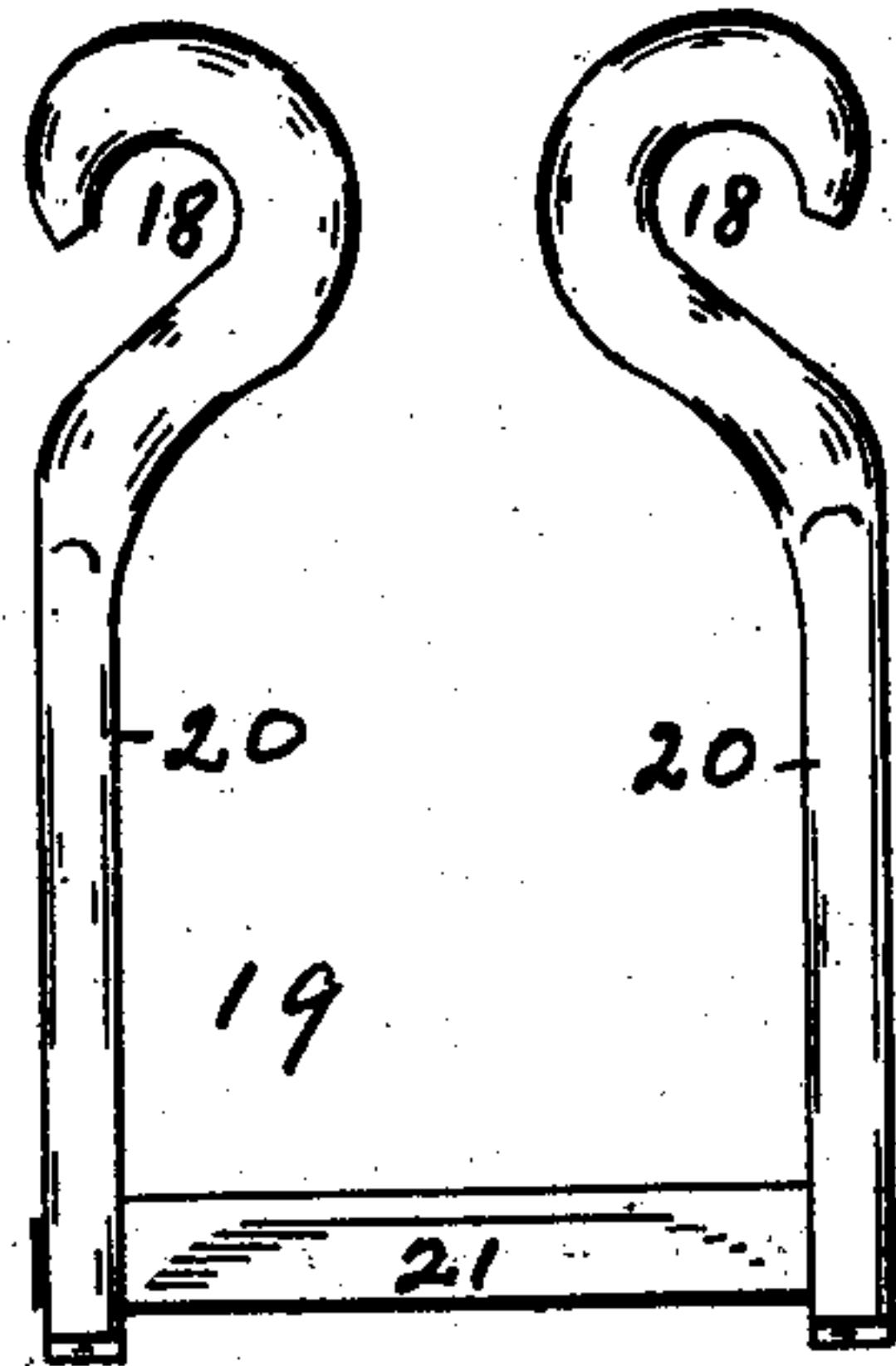


Fig. 3.

Witnesses;
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UNITED STATES PATENT OFFICE.

WILLIAM E. HOYT, OF NEW YORK, N. Y.

SHAFT-SUPPORTER.

SPECIFICATION forming part of Letters Patent No. 749,991, dated January 19, 1904.

Application filed August 30, 1902. Serial No. 121,600. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. HOYT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Shaft-Supporters, of which the following is a specification.

This invention is an improvement in vehicle-shaft couplings and shaft-supporters; and the object of the invention is to take the weight of the shafts off of the horse's back or when the horse is removed from the vehicle to support the shafts at any desired angle.

The further object is to provide a shaft-supporter which can be readily applied to and used with shaft and pole couplings having a two-part hinged eye—such, for example, as the coupling commonly known as the "Bradley," in which the hinged portion of the eye is held closed by means of a spring-pressed loop; and my object is to provide an attachment which will assist in keeping the loop from unhooking.

My further object is to provide a simple, inexpensive, and neat-appearing device which will be inconspicuous on the vehicle.

I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the end of the front axle of a vehicle, showing the shaft attached thereto and both equipped with my invention; Fig. 2, a view in side elevation of same; and Fig. 3, a view, on a larger scale, of the shaft-hooks or stirrup by which the supporting-springs are made fast to the shaft.

Like characters of reference indicate like parts throughout the several views of the drawings.

4 is the front axle of a vehicle, and 5 the shaft, both of usual and well-known construction.

6 is a bar clipped to the under side of the axle transversely thereto and having an eye on its front end. The upper half 7 of the eye is in a separate piece from the lower portion and is hinged at its outer end thereto. The heel of the shaft 5 has the eye 8. To connect the shaft to the axle, the hinged part 7 is opened and the eye 8 of the shaft passed over

it, whereupon the part 7 is closed and its hooked end 9 held by slipping the loop 10 over it in the manner shown in Fig. 2. The loop 10 is pivotally connected with the lever 11 between the fulcrum 12 of said lever and its power end 13 and adjacent to said fulcrum. The lever 11 is fulcrumed to the spring 14, and when the parts are in the positions shown in the drawings the loop 10 is drawn by the spring in a direction to close the hinged eye part 7. By moving the lever 11 away from the spring the loop begins to raise after passing the fulcrum and the part 7 is released.

The above mechanism is substantially the Bradley coupling in common use, and one of the serious objections to it is that the loop is liable to work off of the hooked end of the hinged eyepiece, thereby releasing the shaft. To prevent this and at the same time to provide a most convenient, simple, cheap, and effective shaft-supporter, I provide an auxiliary loop 15, which is placed in front of loop 10, as shown in Fig. 2, and is passed thence to the rear of loop 10 outside of said loop. This loop 15 is made out of spring-wire and merges into the coiled springs 16 16 on either side of bar 6 and lever 11. Each end of the spring-coil is then brought up over the axle in a sweep, as shown, and the hooked ends 17 17 are caught under the respective hooked ends 18 18 of the stirrup or shackle 19. The stirrup 19 goes around the under side of the shaft. It is preferably constructed of the two side bars 20 20, between which is pivotally secured the plate 21. The latter may remain in a stationary position against the shaft, while allowing the sides 20 20 to swing with the raising and lowering of the shafts and avoiding the scratching and marring of the shafts by the sliding thereon of the stirrup. The coils 16 16 bear upwardly against the under side of the axle, and the tendency of the spring construction to uncoil or straighten out draws the loop 15 down to assist in holding the part 7 closed, and the attachment to the shaft at the opposite ends draws the shafts in an upward direction.

The drawings illustrate the construction and operation so thoroughly that further description is deemed unnecessary.

It is obvious that my construction takes the place of the loop 10 and spring 14 and renders unnecessary those parts, and therefore of lever 11, and in the construction of a new coupling for vehicles with my invention the above-named parts may be dispensed with, if desired.

Having thus fully described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

10 1. In a shaft coupling and supporter the combination of the coupling device attached to the axle and having an eye on its forward portion to receive the shaft-pivot, the upper portion of said eye being hinged to the lower
15 portion and formed with a hook on its rearwardly-extending end, a loop for securing said hinged portion adapted to engage over said hook, and a spring looped over said hook outside of said loop and passing down under
20 and around the axle and engaged with the top of the vehicle-shaft, whereby said loop is prevented from accidentally working off said

hook and the shaft is supported, substantially as set forth.

2. In a shaft-supporter, the combination of 25 the coupling secured to the axle having an eye to receive the shaft-pivot, said eye being formed with an upper portion hinged to the lower portion, the shaft with its pivot mounted in said eye, a spring engaging a rearwardly- 30 extending end of said hinged portion and having a coil formed in each branch thereof and its ends extending around and over the top of said axle and connected with a stirrup which is pivoted to a pivot-plate on the under side 35 of said shaft, and said stirrup, substantially as set forth.

In witness whereof I have hereunto set my hand and seal at New York city this 25th day of August, A. D. 1902.

WILLIAM E. HOYT. [L. s.]

Witnesses:

T. M. BLEAKLEY,

J. R. SMITH