

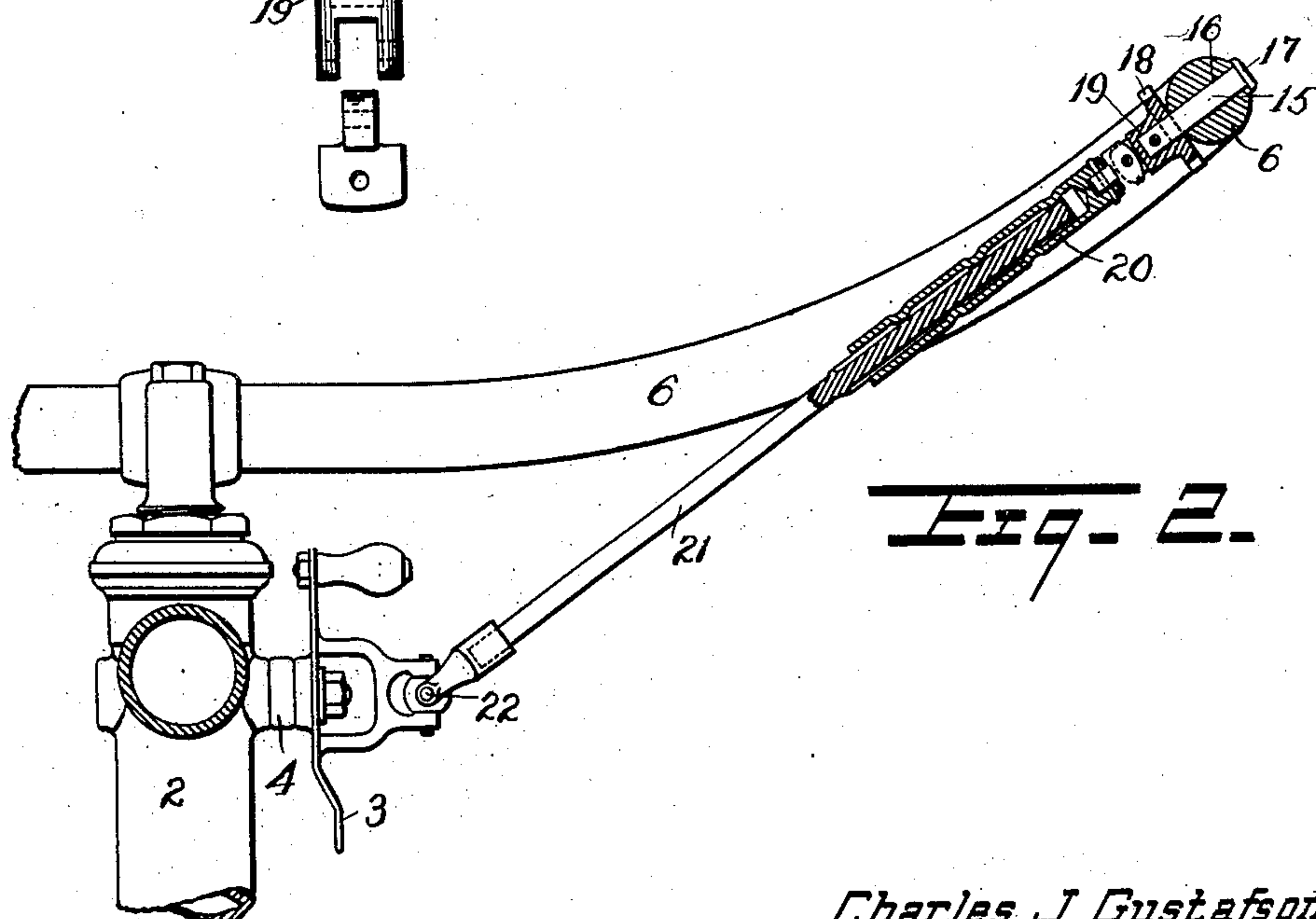
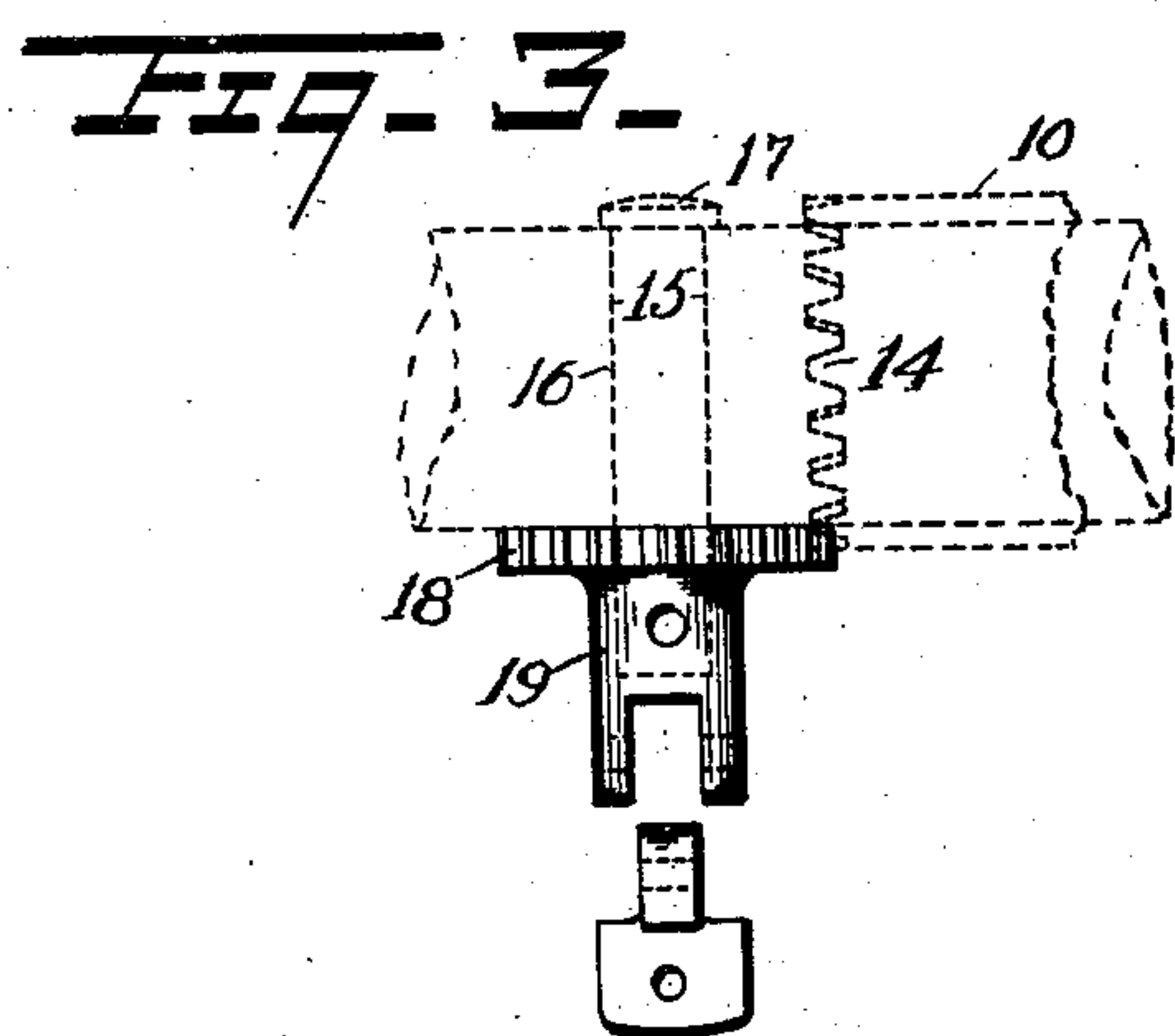
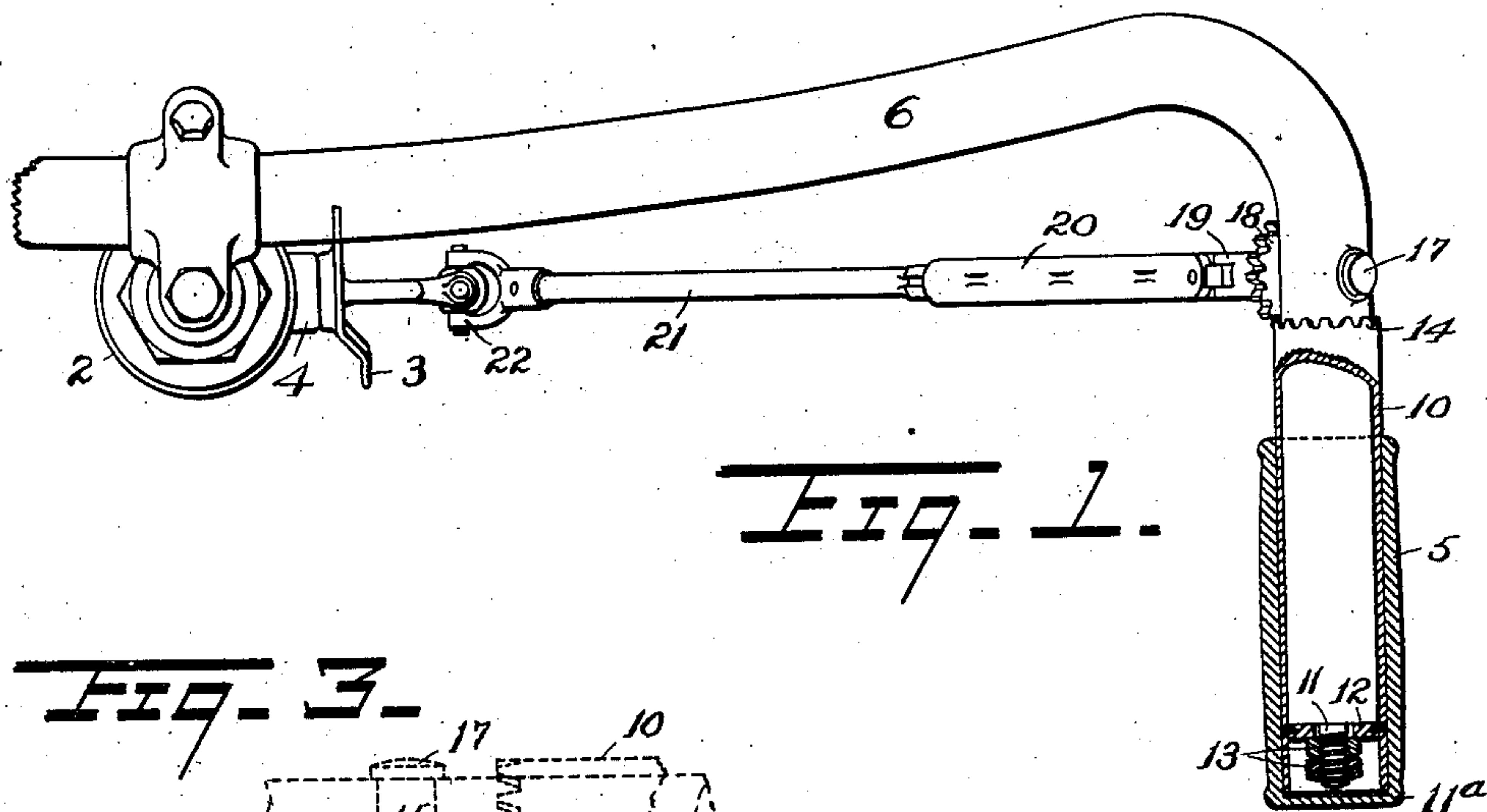
No. 862,817.

PATENTED AUG. 6, 1907.

C. J. GUSTAFSON.

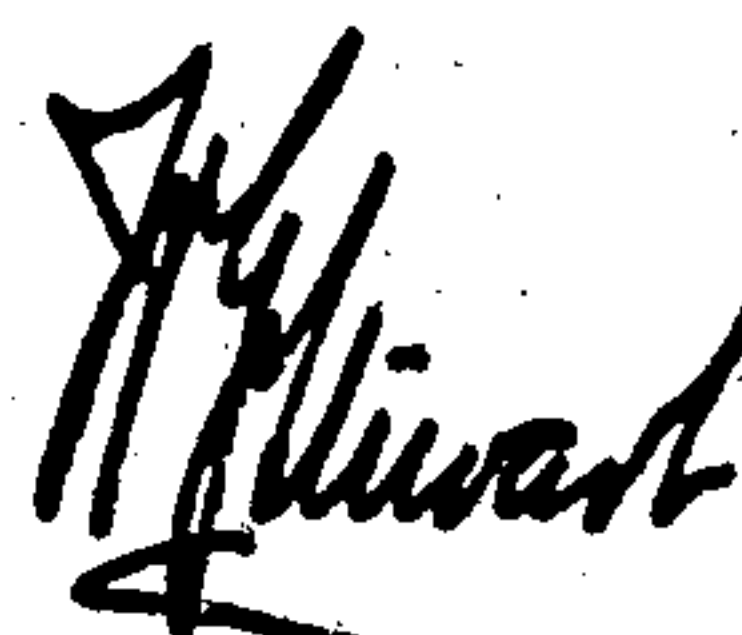
GRIP OPERATED CONTROLLING MECHANISM FOR MOTOR CYCLES.

APPLICATION FILED DEC. 15, 1906.



Charles J Gustafson,  
Inventor.

Witnesses  
D. M. Stewart  
Caleb J. Pieber.

By   
Attorney



# UNITED STATES PATENT OFFICE.

CHARLES J. GUSTAFSON, OF READING, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO READING STANDARD COMPANY, A CORPORATION OF PENNSYLVANIA.

## GRIP-OPERATED CONTROLLING MECHANISM FOR MOTOR-CYCLES.

No. 862,817.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed December 15, 1906. Serial No. 347,933.

To all whom it may concern:

Be it known that I, CHARLES J. GUSTAFSON, a subject of the King of Sweden, and a resident of the city of Reading, in the county of Berks, State of Pennsylvania, have invented certain new and useful Improvements in Grip-Operated Controlling Mechanism for Motor-Cycles, of which the following is a specification.

My invention consists in certain improvements in grip-operated controlling mechanism for motor-cycles as fully described in connection with the accompanying drawing and specifically pointed out in the claims.

Figure 1 is a partly sectional plan view of a portion of a handle-bar of a motor-cycle having my invention applied thereto; the controlling lever only of the motor with which the cycle is provided being indicated. Fig. 2 is a partly sectional elevation of the same. Fig. 3 is a separate view of the connecting-shaft portions located adjacent to the rotating grip.

Only the head 2 of a motor-cycle frame is shown in the drawings; the motor controlling lever or member 3 through which the required movements may be conveyed to the motor, being mounted, as indicated, upon a bearing pin 4 on said frame head, so as to be rocked thereon by the rotation of the hand grip 5 upon the rearwardly bent end of the swinging handle-bar 6 fixed as usual to the steering fork in the frame head.

My invention relates particularly to that type of operating mechanism for the motor-controlling lever 3, in which a rotary connecting shaft is employed between the rotary grip and said lever. In my improved mechanism, as shown, the operating connection between the grip and said lever-connecting rotary shaft, is arranged exteriorly of the handle-bar so that the latter may be made either of tubular or solid material as preferred. A grip-sleeve 10, rotatably fitted upon the rearwardly bent end portion of said bar, is adjustably retained upon the latter, as shown, by means of a screw-threaded end-piece 11 at the extremity of said bar, the sleeve being provided with a retaining collar 12 through which said end piece passes, and being adjustable lengthwise upon the bar by nuts 13 upon the projecting end piece. To improve the appearance of the grip this end piece and the nuts thereon are preferably inclosed by the rearwardly extended grip-sheath 11<sup>a</sup> as shown. The inner end of the grip sleeve 10 is provided with a toothed edge forming a face-wheel 14 around the handle-bar.

The rotary shaft extending to the motor-controlling lever 3, is made up of several parts forming an approximately straight-line shaft substantially at right angles to the axis of the grip bearing portion of the handle bar.

It comprises a journal-piece 15 which extends through a transverse opening 16 in the handle bar, adjacent the toothed end 14 of the grip-sleeve; said journal-piece as shown being formed with an exterior head 17, and having fixed to its inner end a cog-wheel-and-joint piece 18, 19; the cog-wheel 18 being arranged in mesh with the properly adjusted face-wheel 14 of the grip-sleeve, while the joint end 19 is pivotally connected to a shaft section 20 arranged in telescoping engagement with a shaft section 21 extending to the motor controlling lever 3, to which latter it is pivotally connected at 22. The headed journal-piece 15 of the shaft, thus mounted transversely in the handle-bar with its cog-wheel 18 located close against the inner side of the bar, is rotated by the toothed grip-sleeve in a most simple and positive manner, and transmits this rotary movement in like manner, in all positions of the handle bar, through its telescoping pivoted extensions to the motor-controlling lever. Both the grip engagement with the shaft, entirely outside of the handle bar, and the shaft connection to the motor controlling lever, are very simple and advantageous in construction and operation, and present a very neat appearance.

What I claim is:—

1. In a grip-operated controlling mechanism for motor cycles, the combination with a handle-bar provided with a transverse shaft bearing, and a motor-controlling lever, of an operating shaft for the latter having its opposite end mounted in said transverse shaft bearing and provided with a cog-wheel adjacent the handle-bar, and a rotatable grip-sleeve on the latter having a face-wheel on its inner end arranged in mesh with said cog-wheel.

2. In a grip-operated controlling mechanism for motor cycles, the combination with a handle-bar provided with a transverse shaft bearing, and a motor controlling lever, of an operating shaft for the latter comprising a headed journal-piece mounted in said transverse bearing, a cog-wheel and joint piece fixed to said end-piece, and telescope-sections pivotally connected to said joint-piece and controlling lever respectively, and a rotatable grip-sleeve having a face-wheel on its inner end arranged in mesh with said cog-wheel.

3. In a grip-operated controlling mechanism for motor cycles, the combination with a motor-controlling lever, an operating shaft therefor, and a handle-bar having a screw-threaded end-piece, of a shaft-operating grip-sleeve on said bar having a retaining collar strung upon said end-piece, adjusting nuts upon the latter, and a gripping sheath upon said sleeve extending beyond said end-piece to inclose the same, substantially as set forth.

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

CHARLES J. GUSTAFSON.

Witnesses:

ELLA JOHNSTON,  
D. M. STEWART.