

(No Model.)

W. S. HAMM.  
BICYCLE LAMP SUPPORT.

No. 584,176.

Patented June 8, 1897.

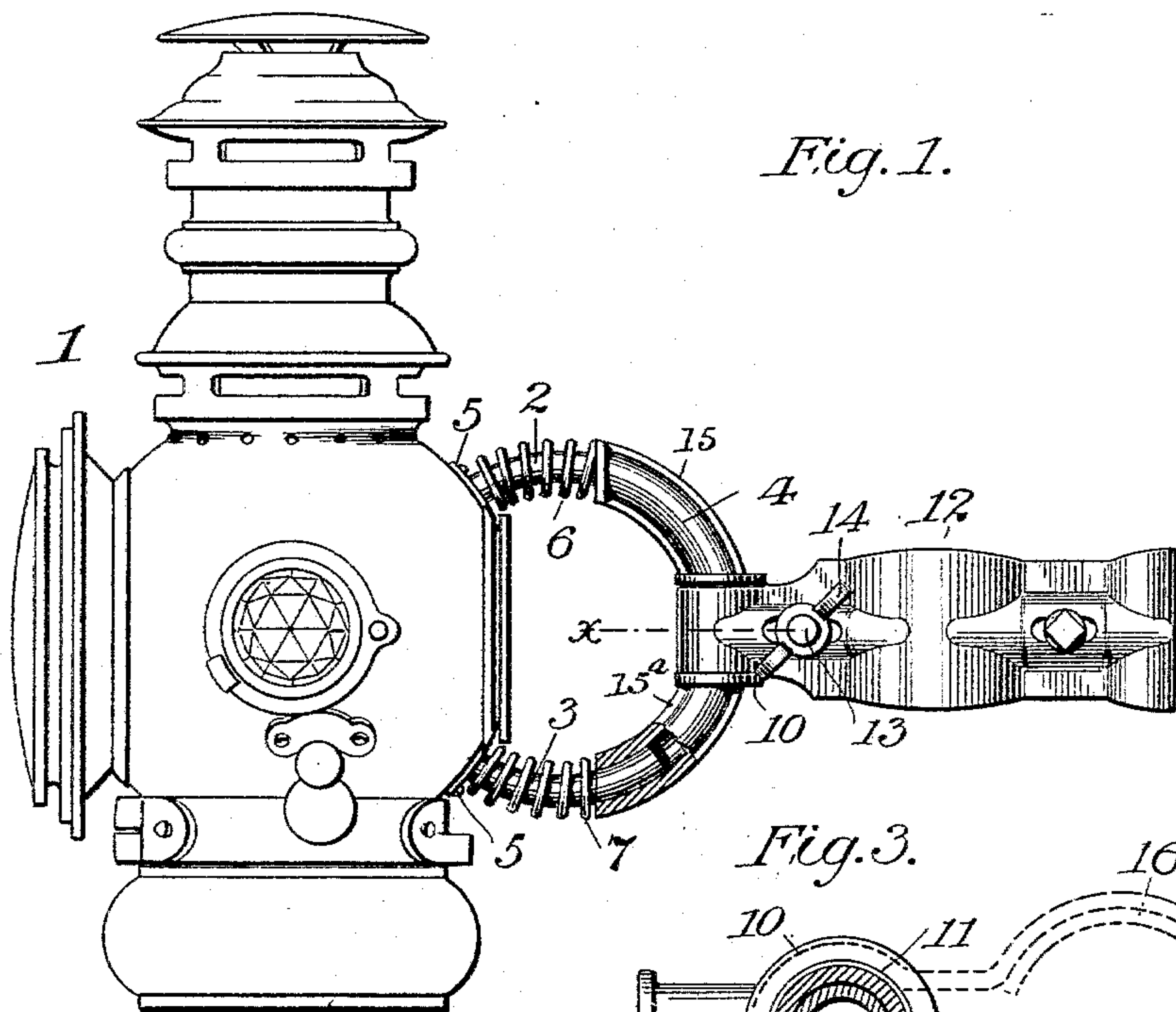


Fig. 1.

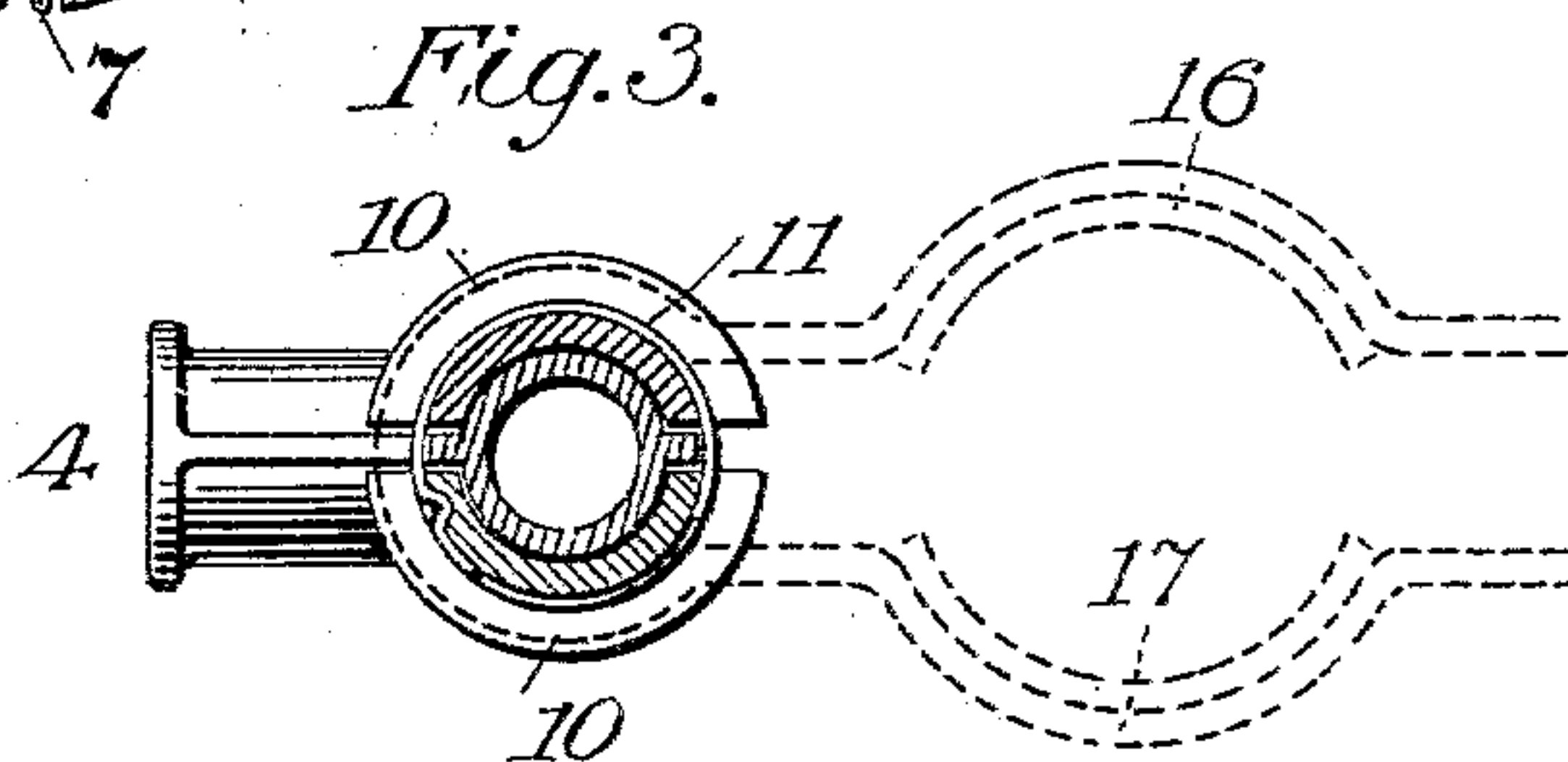


Fig. 3.

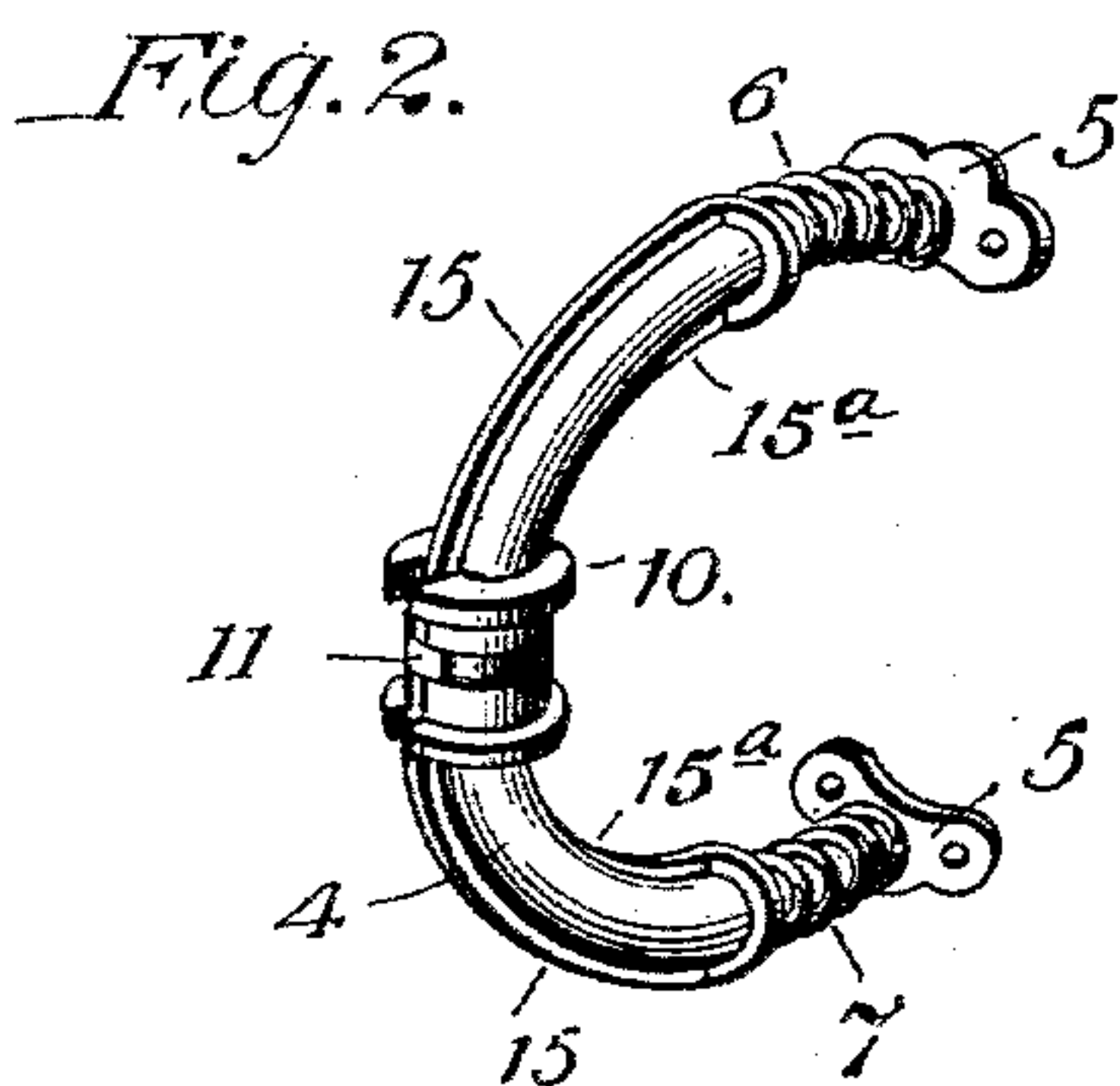


Fig. 2.

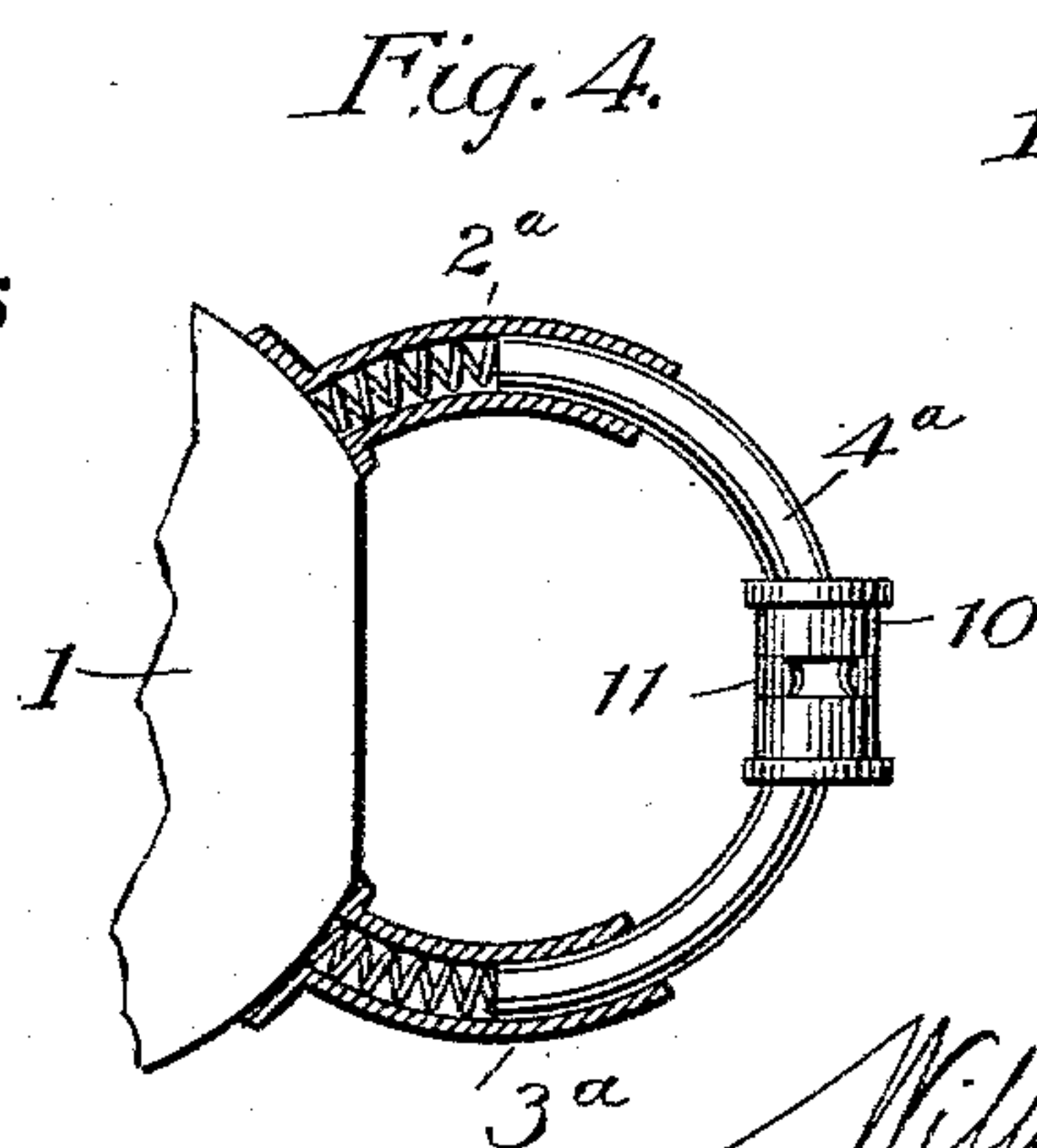


Fig. 4.

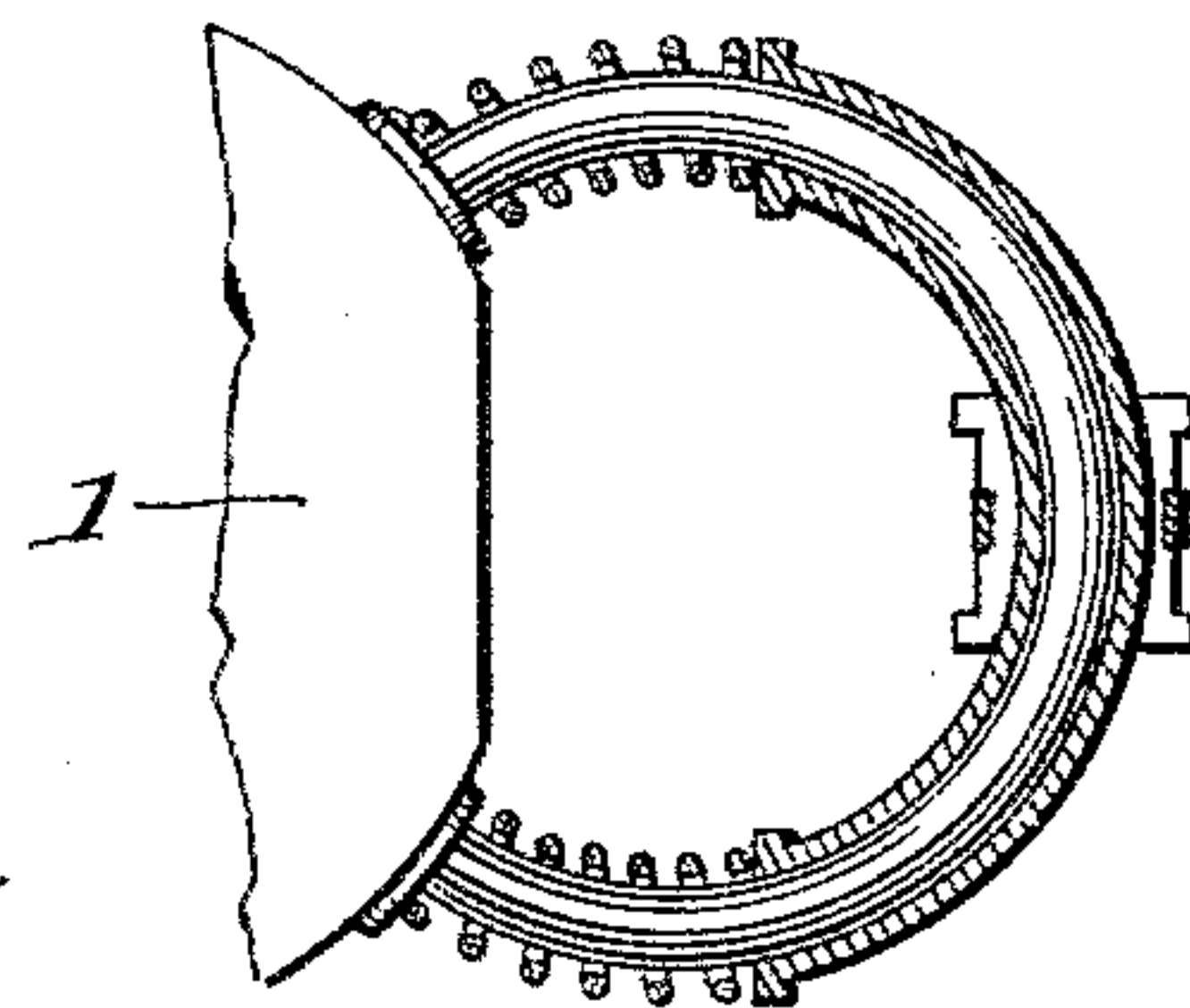


Fig. 5.

Witnesses:  
Arthur Garner  
Mark Webster

Inventor:  
William S. Hamm,  
by W. W. I. [Signature]



# UNITED STATES PATENT OFFICE.

WILLIAM S. HAMM, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ADAMS & WESTLAKE COMPANY, OF ILLINOIS.

## BICYCLE-LAMP SUPPORT.

SPECIFICATION forming part of Letters Patent No. 584,176, dated June 8, 1897

Application filed March 11, 1897. Serial No. 627,019. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. HAMM, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bicycle-Lamp Supports, of which the following is a specification, reference being had to the accompanying drawings and to the numerals of reference marked thereon.

My invention relates to a lamp or lantern of the class used by bicycle-riders, more especially to the support therefor, by means of which the lamp is attached to the head, fork, or other suitable part of the vehicle.

The object of my invention is to provide a support for a lamp or lantern which shall be strong, cheap, and simple in construction, and, while having the stability of a rigid support, shall also possess the required degree of flexibility to take up shocks which would otherwise be transmitted to the lamp and render unsteady or extinguish the light.

So far as I am aware in the various flexible lamp-supports now in use the attached lamp swings on pivoted links, rising and falling bodily in an upright or vertical position, it being held in equilibrium by a spring or springs suitably attached thereto. This rising-and-falling motion has been found objectionable in practice by bicycle-riders, as tending to make the light unsteady or cause it to be extinguished. Another disadvantage in prior constructions has been found to result from the excessive number of parts and the wear on the pivots of the links, causing the lamp in time to become shaky and to rattle disagreeably. In another form of support the lamp is connected rigidly to the vehicle, the elasticity of the pneumatic tire being depended upon to absorb shocks and jars. In such constructions if the tire be inflated too tightly or insufficiently inflated the elasticity depended upon will be decreased and the greater probability of interfering with or extinguishing the light ensue. To obviate these objections, I have devised a lamp-support which shall be elastically supported to the vehicle in such a manner as to permit the lamp to have a rocking instead of a rising-and-falling movement, as heretofore, and which shall be stable and free from numerous wearing parts.

Referring to the drawings, Figure 1 is a side elevation of a bicycle-lamp with my invention attached thereto. Fig. 2 is a perspective view of my improved lamp-support detached from the lamp. Fig. 3 is a cross-section on the line *x x* of Fig. 1. Figs. 4 and 5 show modifications.

Similar numerals of reference indicate similar parts in the respective figures.

A lamp-body 1 has fixed to its back near its top an outwardly and downwardly curved arm 2, while a second arm 3, curved outwardly and upwardly, is also fixed to the lamp-body, but nearer its base, the two arms forming a part of a true circle. These arms 2 3 are each provided at the inner end with a foot-plate 5, secured to the lamp-body by rivets or other suitable means. The outer free ends of the arms 2 3 project into the respective ends of a curved tubular segment 4, having the same radius as that of the arms 2 3, the segments forming a guide for the arms.

Surrounding each arm 2 3 is a spiral spring 6 or 7, one end of each spring bearing against a foot-plate 5, while the opposite end presses upon the end of the tubular segment 4, into which the arm enters. The springs thus arranged serve as cushions or buffers for the lamp upon shock occurring, resulting from any irregular movement of the vehicle to which the lamp is attached.

Embracing the tubular segment 4 is a flanged sleeve 10, divided through its longitudinal center, the two parts being slightly separated and held in place on the segment 4 by a curved plate-spring 11. The tubular segment 4 is adapted to move through the sleeve 10 and to be held therein by the clamp 12 and screw 13, they being in all respects similar to those described in an application filed by me and William H. Tufford March 6, 1897, Serial No. 626,224.

The clamp 12 consists of an approximately-U-shaped plate, the loop or bend thereof embracing the flanged divided sleeve 10, which clamp, in connection with the screw 13 and its thumb-nut 14, forms the means of fastening the flanged sleeve to the tubular segment 4. The two arms 16 17 of the clamp 12 extend backward from the loop in lines substantially parallel to each other and are



shaped and provided with means whereby the clamp may be attached to different parts of the frame of the bicycle.

The flanged sleeve 10 differs somewhat from that shown in the application above referred to. In the form herein exhibited a circumferential recess is made around the central part of the sleeve, within which is seated the curved plate-spring 11, hereinbefore referred to, for the purpose of retaining the two parts of the sleeve on the tubular segment 4 when the clamp 12 is removed. Ribs 15 15<sup>a</sup> on the concave and convex surfaces of the tubular segment 4 prevent the sleeve 10 from being turned thereon, but permit the free movement of the segment endwise of the sleeve.

The parts being arranged as above described jar, shock, or irregular movement imparted thereto by the movement of the vehicle to which the lamp is attached will be absorbed by the springs 6 7, the lamp rocking or tipping slightly around the center of the arc described by the arms 2 3 and the tubular segment 4. Under this construction rubber packing and coiled springs as heretofore used are dispensed with. A positive advantage is that the lamp has a direct action on the ends of the springs, thus adding considerably to the life and durability of the springs and providing a cushion for the lamp to strike against. In other constructions using coiled springs in the hangers an auxiliary spring has been employed to break the force of the jolting and relieve the tension on the coiled springs, but under my invention such auxiliary spring is dispensed with. A desideratum in constructions of this character is to obtain as nearly a rigid support for the lamp as is feasible, providing just enough spring and elasticity to prevent the flame from being extinguished when the vehicle is passing over rough roads. It is to be observed that under my invention the lamp has a novel action when subjected to jolting, the motion being of a rocking nature rather than a swinging motion.

While I have shown and described my preferred form of lamp-support, the parts may be varied in any manner suggested to the skilled mechanic, provided the principle is retained of holding the lamp so that it may rock in its support. Thus in Fig. 4 is shown a modification which consists in making the curved arms 2<sup>a</sup> 3<sup>a</sup> tubular and the segment

4<sup>a</sup> of such size and form as to enable it to pass within the arms, the buffer-springs against which the ends of the segment abut being confined within said arms. Instead of the separate arms 2 3 a loop consisting of a single piece, as illustrated in Fig. 5, may be used.

Having described my invention, I claim—

1. In a lamp-support, the combination of a lamp-body, curved arms secured thereto, a segment having the same radius as the curved arms and telescopically connected thereto, and elastic bearings between the ends of the segment and the lamp-body, substantially as set forth.

2. In a lamp-support, the combination of a lamp-body, curved arms fixed thereto, a tubular segment, having the same radius as the curved arms, and springs between the ends of the segment and the lamp-body, substantially as set forth.

3. In a lamp-support, the combination of a lamp-body, a support therefor consisting of an inner curved section and an outer curved section, the two sections being fitted together telescopically, and an adjustable clamping device for embracing the outer section and securing the lamp to a part of a vehicle-frame, substantially as set forth.

4. In a lamp-support, the combination of a lamp-body, and a curved elastic telescopic support therefor, the construction being such that the lamp is adapted to vibrate in a curved path about the axis of the segment, substantially as set forth.

5. In a lamp-support, the combination of a lamp-body and a curved elastic double telescopic support therefor, the construction being such that the lamp is adapted to vibrate in a curved path about the axis of the segment, substantially as set forth.

6. In a lamp-support, the combination of a lamp-body, curved arms fixed thereto, a segment telescopically connected to the said arms, elastic buffers between the ends of the segment and the lamp, and means for attaching the lamp to a bicycle, substantially as set forth.

In testimony whereof I have hereunto set my hand and affixed my seal, at the said city of Chicago, this 19th day of February, 1897.

WILLIAM S. HAMM. [L. S.]

Witnesses:

HENRY O. MILLER,  
G. D. WALTERS.