

(No Model.)

J. R. TRIGWELL.

VELOCIPÈDE.

No. 366,046.

Patented July 5, 1887.

Fig. 3.

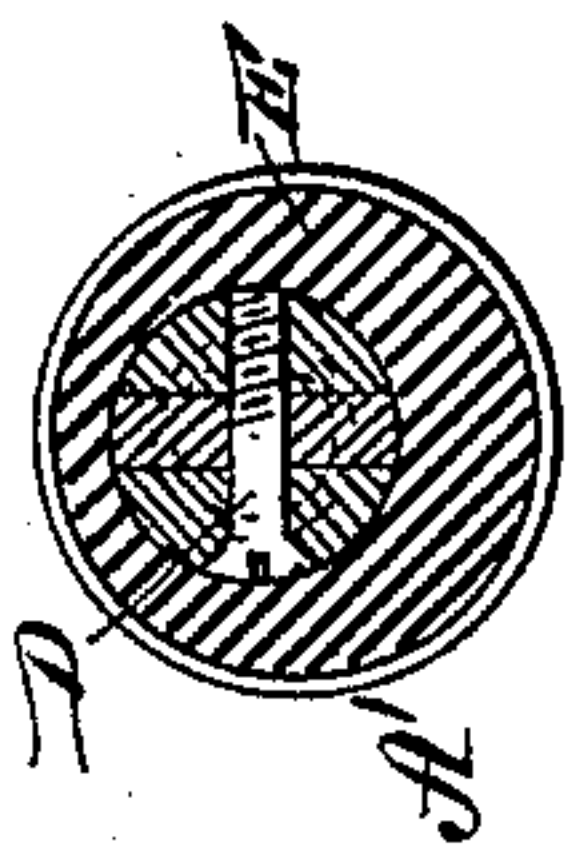


Fig. 4.

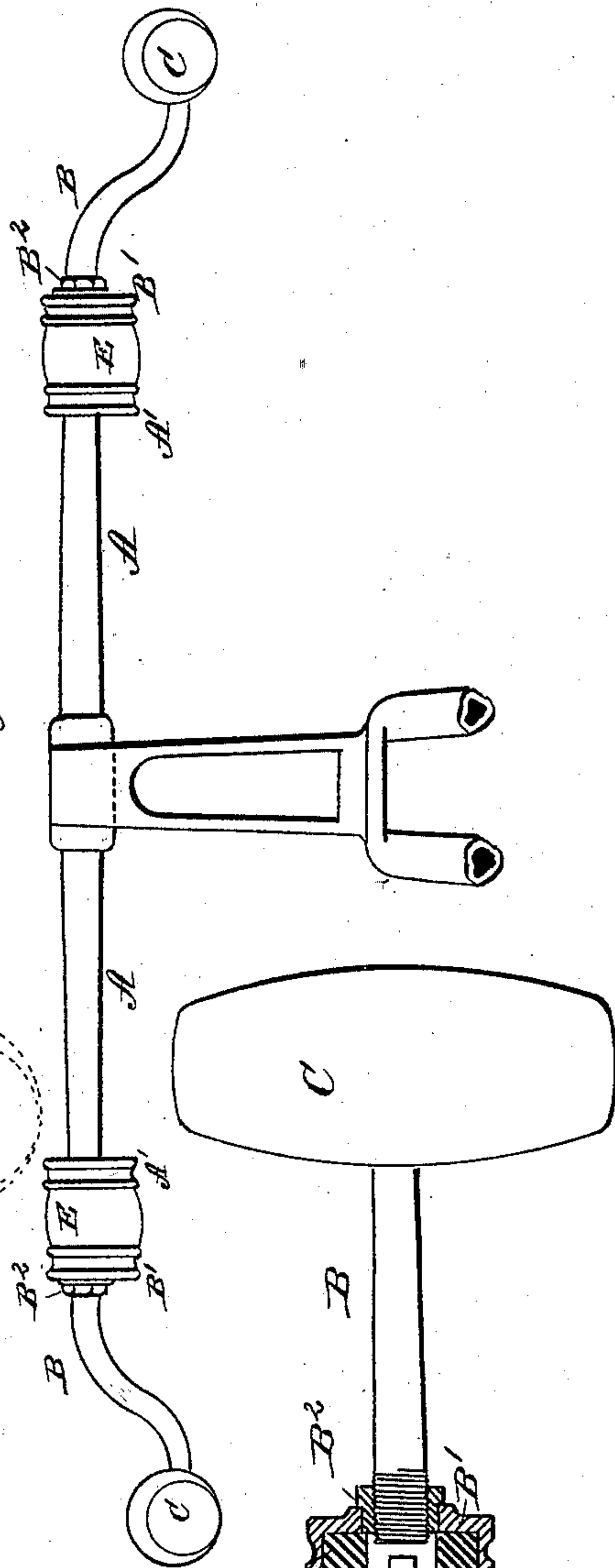


Fig. 1.

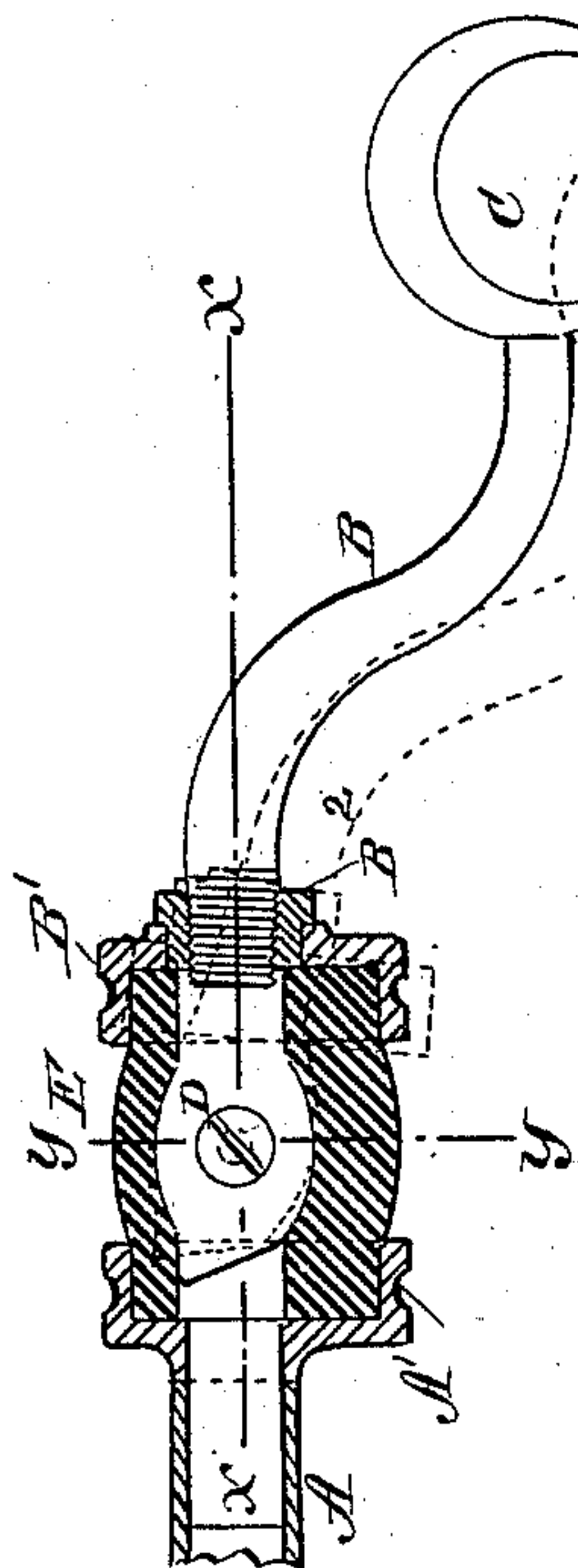
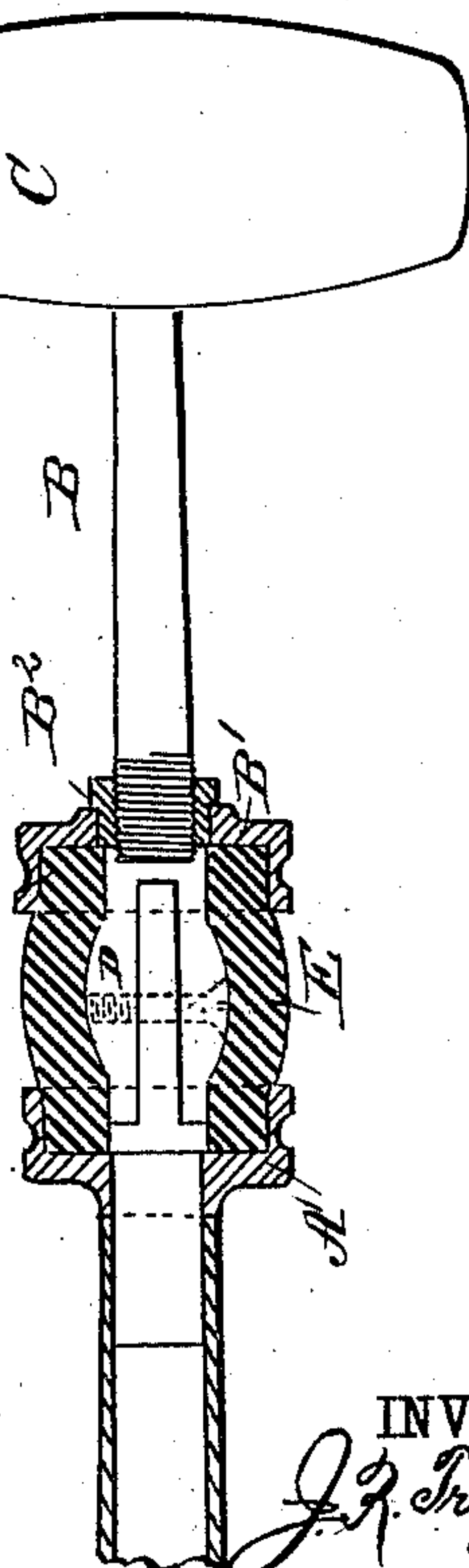


Fig. 2.



WITNESSES:

J. D. Garfield  
C. Sedgwick

INVENTOR:

J. R. Trigwell

BY

Mumford

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JAMES RICHARD TRIGWELL, OF BRIXTON, COUNTY OF SURREY, ASSIGNOR  
TO GEORGE WATSON, OF MIDDLESEX, ENGLAND.

## VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 366,046, dated July 5, 1887.

Application filed January 5, 1887. Serial No. 223,483. (No model.) Patented in England August 22, 1885, No. 9,990.

*To all whom it may concern:*

Be it known that I, JAMES RICHARD TRIGWELL, of Brixton, in the county of Surrey, England, have invented certain new and useful Improvements in Velocipedes, of which the following is a full, clear, and exact description.

My invention relates to the handle-bars of bicycles and other velocipedes in which the steering is controlled by a transverse handle-bar; and it has for its object the complete isolation of the vibration caused by traveling over rough roads from the hands and arms of the rider.

The invention consists in the construction and combination of parts of the non-vibrating handle-bar, as hereinafter fully described, and particularly pointed out in the claims.

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

Figure 1 is a sectional elevation showing the construction of one joint of the handle-bar.

Fig. 2 is a sectional plan view of the same on the line *xx*, Fig. 1. Fig. 3 is a cross-section of the joint on the line *yy*, Fig. 1. Fig. 4 is a front view showing the complete handle-bar applied to a bicycle-head.

A denotes the center section of the handle-bar fixed to the head of the bicycle in the usual or any approved way. B are the end sections, provided with the handles C, of any convenient form, and connected to the center section, A, by knuckle-joints D, so that the end sections will be allowed a free movement downward, but will be kept rigid with the center section in all other directions.

To keep the end sections of the handle-bar in position and to control their movements, springs E (in the present case of rubber) are placed around the joints D, and are each inclosed between cap-plates A' B', held on the handle-bar sections A B. The cap-plates A' are fixed upon the center section, A, while the cap-plates B' are preferably mounted loosely

on nuts B<sup>2</sup>, screwing on the end sections, B, so that the tension of the springs E may be adjusted to give the required amount of elasticity.

By constructing the bar in three sections, jointed as described, the joints being located at a distance from the head, the strain on and hence liability to breakage of the same are not so great, while the vibration is perfectly isolated from the handles.

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

1. In a handle bar for velocipedes, the combination, with the sections A B, connected by a vertically flexible joint, of a stiffening-spring forcing the outer section upward with a yielding pressure, substantially as herein shown and described.

2. In a handle-bar for velocipedes, the combination, with the sections A B, connected by a vertically flexible joint, of a stiffening-spring encircling the joint, substantially as shown and described.

3. In a handle-bar for a velocipede, the combination, with the jointed sections A B, of a spring for stiffening the joint, and an adjusting device for regulating the tension of the spring, substantially as shown and described.

4. In a handle-bar for a velocipede, the combination, with the jointed sections A B, of a spring encircling the joint, plates between which the spring is held, and a nut for moving one of the plates, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 8th day of November, 1886.

JAMES RICHARD TRIGWELL.

Witnesses:

JOHN DE LANNOY WATSON,  
17 Josephine Avenue, Brixton, London, S. W.

HARRY JOHN JONES,  
71 Mansfield Road, Kentish Town, London, N. W.