(No Model.)

T. O'BRIEN.

BICYCLE.

No. 413,415. Patented Oct. 22, 1889.

FIG. 1.

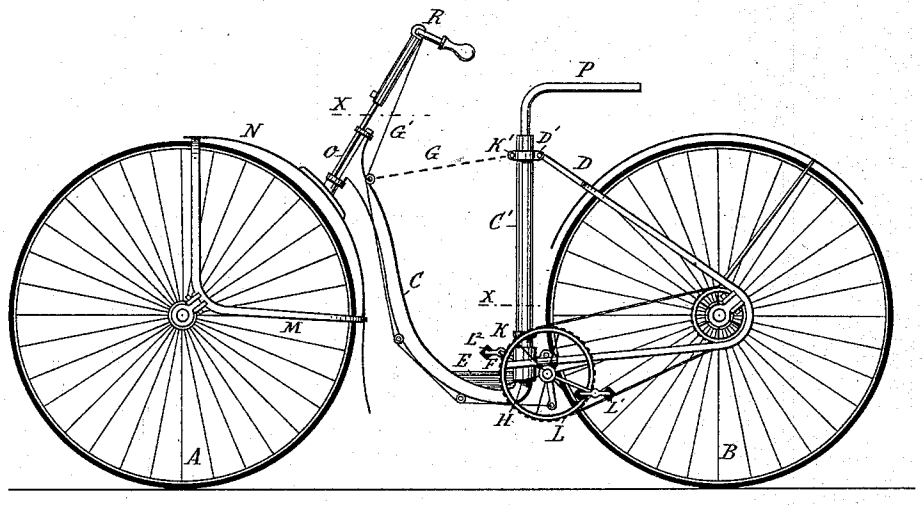
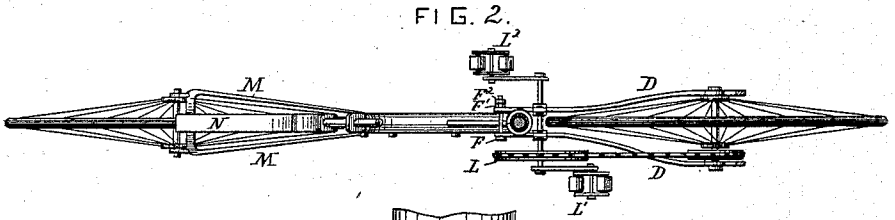


FIG. 2.



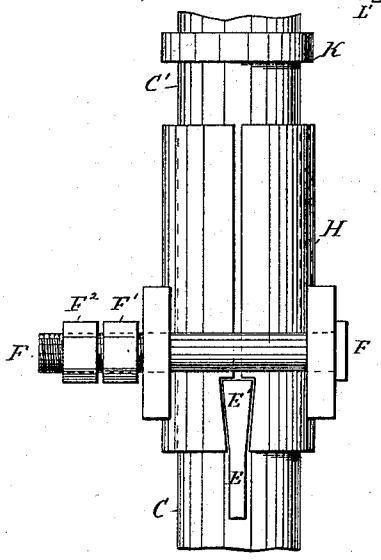


FIG. 3.

WITNESSES

Wm. A. Lowe

Thomas J. Hart

INVENTOR

Thomas O'Brien

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UNITED STATES PATENT OFFICE.

THOMAS O'BRIEN, OF NEW YORK, N. Y.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 413,415, dated October 22, 1889.

Application filed August 20, 1889. Serial No. 321,431. (No model.)

To all whom it may concern:

Be it known that I, THOMAS O'BRIEN, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Bicycles, of which the following is a specification.

My invention relates to the construction of the connecting frame or spine of a velocipede on which a lady can ride.

Figure 1 of the accompanying drawings is a side elevation with the saddle removed. Fig. 2 is a plan thereof below the dotted lines *x x;* and Fig. 3, in full size, is a front or rear view of the locking device when said device is in front or rear of the vertical tube C′.

The wheels A B, their axles and bearings, the chain and chain-wheels, and the cranks and pedals may be of any desired construction. The spine C C′ is preferably made of one piece of tubing, or the vertical part C′ of tubing and the curved part C of sheet-steel either single or in two pieces, and when the latter they are united and received within the bottom of the tube C′ and riveted thereto. They are spread apart in the middle, and are again united at the upper end and forged to the pin G′, forming a solid necking. In either form of the spine C C′ the piece E of sheet-steel is forged thereon to strengthen the part, and a dovetail E′ is formed thereon and is received between the split parts of the split clamping-sleeve H, (see Fig. 3,) and to the said split sleeve H the lower ends of the forks D D are forged, and these ends project sufficiently forward to allow the bolt F to pass clear of said sleeve, and the said bolt F has a screw-thread cut thereon, to which is fitted the nuts F′ F², and when said nuts are screwed up the split sleeve H is pressed tightly against the dovetail E′, and so held rigidly.

When it is desired to fold the machine, the nuts F′ F² are turned backwardly, and the split sleeve H, being freed of the pressure, opens sufficiently to allow the dovetail E′ and tube C′ to drop below the sleeve H until the fast ring K rests on top of said split sleeve, and the nut of the clamping-ring K′ is also turned backwardly, and the machine is ready to be folded to the right-hand side. The forks M of the steering-wheel A are made of or in one piece of sheet-steel, and the forks D of the wheel B are made of or in two pieces, and may be of sheet-steel or steel of a crescent or angle section.

When the dovetail is on the rear of the spine C C′, the split in the clamping-sleeve H is also in the rear, and the bolt F, which carries the brake, is made tubular, and an inner bolt passes through F, on which the chain-wheel L and pedals L′ L² are mounted.

The dotted line G is an adjustable brace, which is put in for a heavy male rider.

The handle-bar R and the saddle-rod P are adjustable in the usual manner.

The mud-guard N, which carries the steering-standard and to which the neck of the spine C is connected, has been claimed by me in Patent No. 394,287, dated December 11, 1888.

I claim as my invention—

1. The combination, in a bicycle, with wheels A B, of the backbone or spine C C′, the split clamping-sleeve H, formed to receive the dovetail E′, the strengthening-piece E, the dovetail E′, the forks D D, forged to the clamping-sleeve H, and the fast ring K as a stop, substantially as specified.

2. The combination, in a bicycle, with the wheels A B, of the tube C′, which is received within the clamping-sleeve H, the forks D D, the bolt F, the nuts F′ F², the dovetail E′, and curved spine C, substantially as specified.

3. The combination, in a bicycle, with the wheels A B and connecting-frame, of the forks M, made of or in one piece, to which the mud-guard N is secured, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 22d day of April, 1889.

THOMAS O'BRIEN.

Witnesses:
WM. A. LOWE,
THOMAS J. HART.