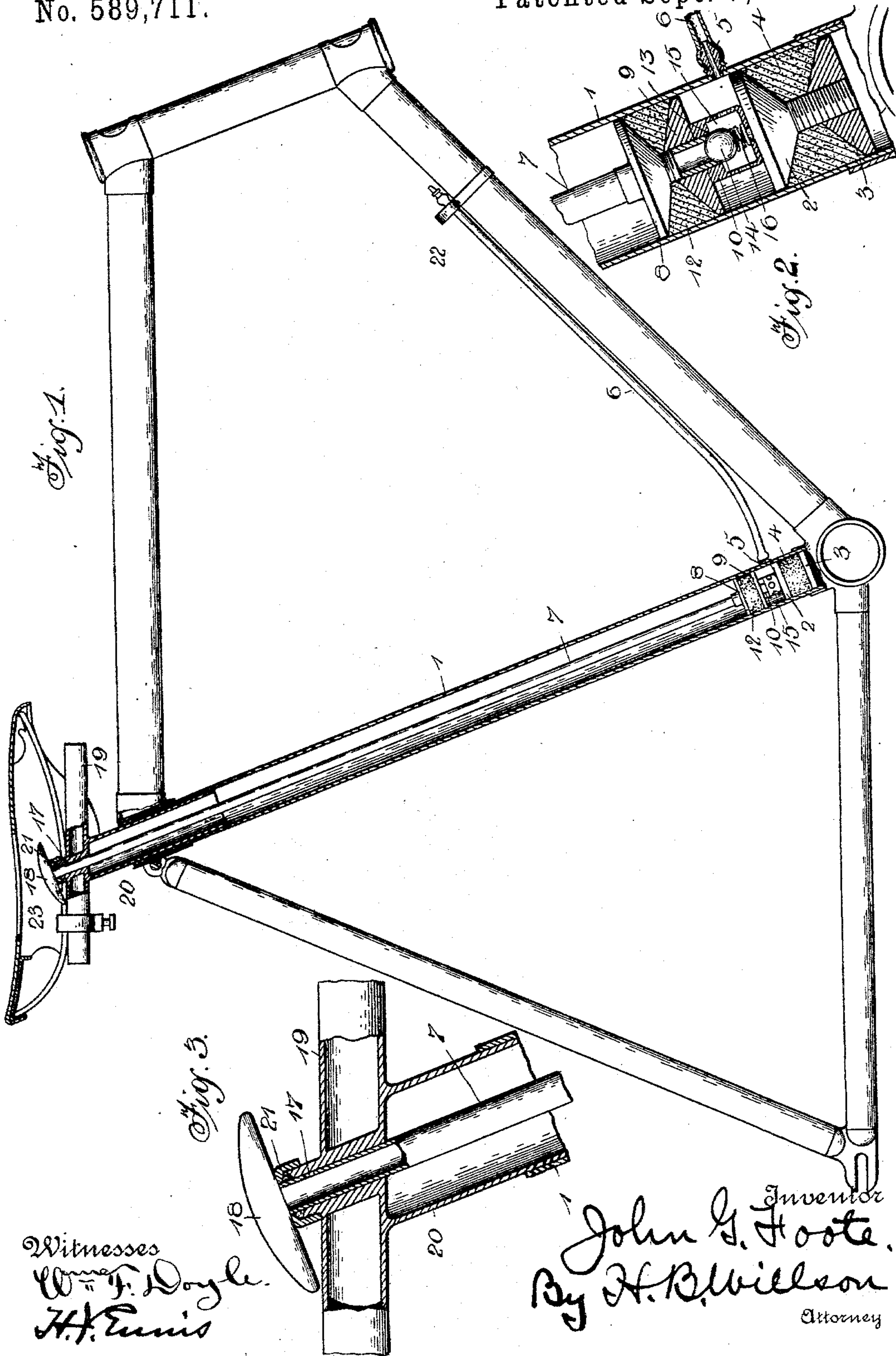


(No Model.)

J. G. FOOTE.
AIR PUMP FOR BICYCLES.

No. 589,711.

Patented Sept. 7, 1897.



Witnesses
Wm. F. Doyle.
H. H. Ennis

Inventor
John G. Foote.
By H. B. Willson.
Attorney

UNITED STATES PATENT OFFICE.

JOHN G. FOOTE, OF KENNETT SQUARE, PENNSYLVANIA.

AIR-PUMP FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 589,711, dated September 7, 1897.

Application filed October 28, 1896. Serial No. 610,350. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. FOOTE, a citizen of the United States, residing at Kennett Square, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Air-Pumps for Bicycles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in pumps for inflating the pneumatic tires of bicycles, and more particularly to that class of pumps which are permanently fixed to the machine, and the object is to provide a simple, durable, and effective device of this kind.

To this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described and particularly pointed out in the claim.

In the accompanying drawings the same figures of reference indicate the same parts of the invention.

Figure 1 is a side elevation, partly in section, of a bicycle-frame with my improved pump combined therewith. Fig. 2 is an enlarged sectional detail of the lower end of the tubular piston-rod, and Fig. 3 is a similar view of the upper end of the seat-post tube.

1 represents the ordinary seat-post tube, the lower end of which is closed by a screw-plug 2, the threaded stem of which enters a nut 3, and between the contiguous beveled faces of the plug and the nut is inserted any suitable packing 4, which is laterally expanded in the tube to make an air-tight joint at this point when the plug is screwed into the nut.

5 is a nipple communicating with the tube 1, and its outer end receives one end of the flexible pipe 6.

7 represents the tubular piston-rod, the lower end of which is externally screw-threaded to receive the beveled face-piston 8, also the beveled face-follower 9 and the jam-nut 10.

12 represents suitable packing secured between the contiguous beveled faces of the piston and its follower.

13 represents a conical valve-seat in the lower end of the piston-rod, and 14 is a ball-

valve secured within the perforated screw-cap 15 and held in place against the valve-seat by a spiral spring 16. The upper end of the tubular piston-rod is provided with an air-inlet orifice 17, and its immediate end is closed by a transverse handle 18.

The piston-rod passes snugly through vertical orifices in the seat-bar bracket 19 and the adjustable seat-bar 20, the bracket 19 being provided with a stuffing box and gland 21 to insure an air-tight joint around the piston-rod. When the handle 18 is pressed down to its full limit and not in use, the air-inlet 17 is closed by the gland 21, and consequently all grit and dirt are excluded.

When the pump is not in use, the end of the inflating-pipe 6 is conveniently held in place by a spring-clamp 22, as shown.

The operation of the device is very simple, for when occasion requires the inflation of either of the tires the free end of the inflating-pipe 6 is removed from the clamp 22 and connected to the nipple on the tire and the handle 18 is drawn upwardly through the opening 23 in the saddle. As the piston is drawn up the air enters through the inlet 17 in the tubular rod 7, passing down below the piston through the ball-valve 14, thereby filling the space in the seat-post tube between the plug 2 and the piston, and as the piston descends this air is forced through the nipple 5 and pipe 6 into the tire.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

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

A bicycle-pump, comprising the seat-post tube 1, the plug 2 adjustably secured in the lower end of said tube, the tubular piston-rod 7, the beveled-faced piston 8, the beveled-faced follower 9 adjustably secured on the lower threaded end of said piston-rod, the packing 12 secured in place on the rod between the contiguous beveled faces of the pis-

ton and follower, and the jam-nut 10 adjustably secured on the immediate end of the piston-rod to lock the follower on said rod, the perforated cap 15, formed integral with
5 said nut and the ball-valve 14 located within said perforated cap, substantially as shown and described.

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

JOHN G. FOOTE.

Witnesses:

R. ERVIN FOOTE,

H. J. ENNIS.