

No. 624,079.

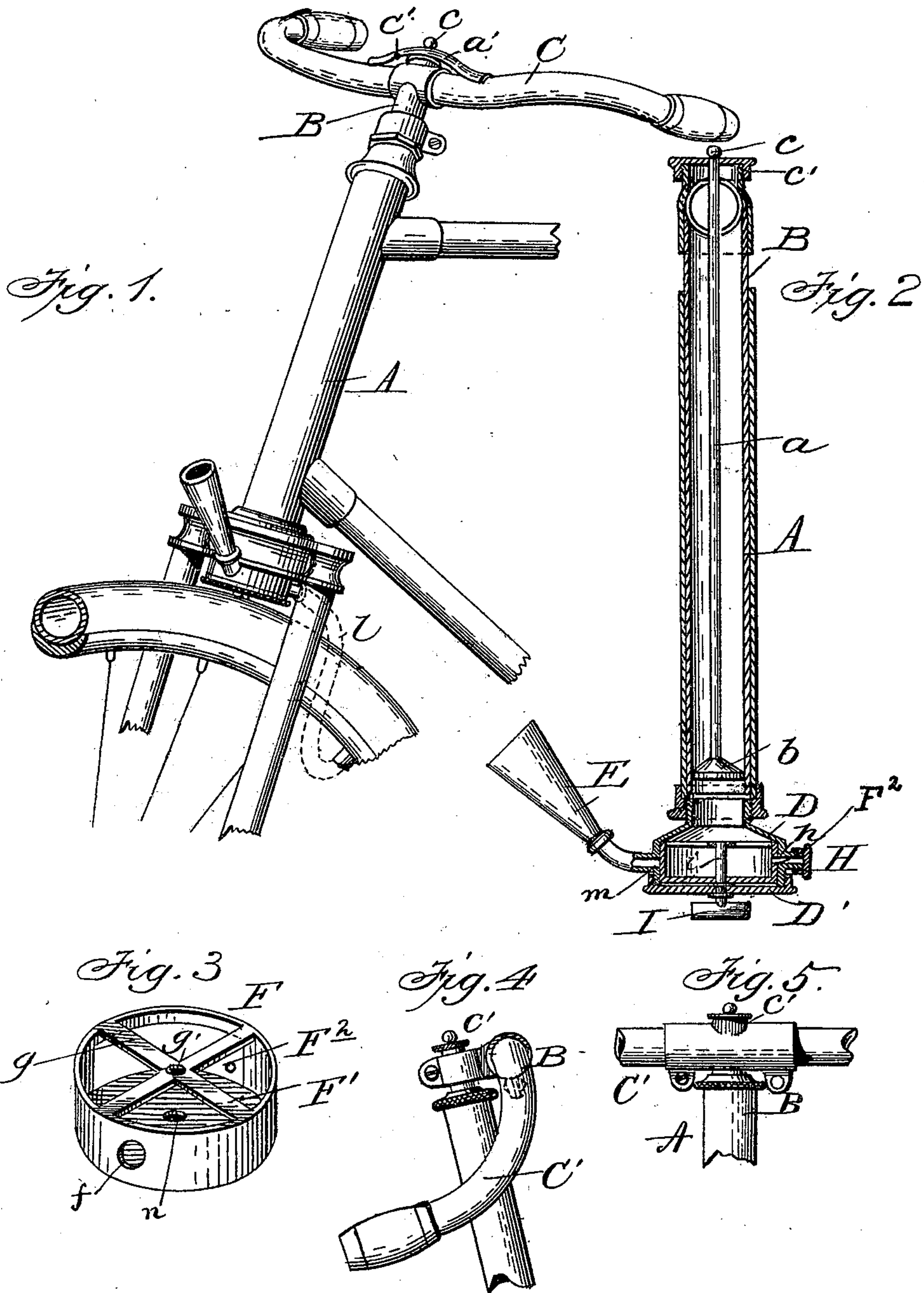
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H. H. PATTEE.

SIGNALING AND TIRE INFLATING MEANS FOR BICYCLES.

(Application filed July 6, 1897.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

HERBERT H. PATTEE, OF WASHINGTON, DISTRICT OF COLUMBIA.

SIGNALING AND TIRE-INFLATING MEANS FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 624,079, dated May 2, 1899.

Application filed July 6, 1897. Serial No. 643,580. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT H. PATTEE, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Signaling and Tire-Inflating Means for Bicycles; and I do hereby 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.

This invention relates to an improvement in the construction of bicycle-frames, whereby the same may be provided with self-contained means for inflating the tire, and also with signaling means adapted to be operated by the said inflating means, the whole arranged with a view to simplicity, accessibility, and convenience of location, substantially as will be hereinafter described and claimed.

In the annexed drawings, Figure 1 is a perspective view of my improved pumping and whistling appliance for bicycles. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged perspective view of the valve for the whistle. Fig. 4 is a side view showing the application of my invention to a bicycle having a reversible handle. Fig. 5 is a front view of the same.

Like letters of reference designate like parts.

In carrying out my invention I utilize as a pump barrel or cylinder the front tubular stem, to which the handle-bar is fastened, which tubular stem commonly swivels within the front crown-tube that is secured rigidly upon the front fork of the frame.

C denotes an example of handle-bar, fastened to the hollow tube B, that fits within the front crown-tube A.

The design of my invention is to locate a piston *b*, properly washered, within the tube B, said piston having a rod *a* projecting through the cap *c'* on the upper end of tube B, where it is provided with a knob *c* or a handle *a'*, or both, in order that the upper end of the piston-rod may be situated centrally of the handle, in a position where it can easily be grasped by the user of the wheel for the purpose of actuating the piston *b* within the tube B. It will be evident that I am not to be restricted to any specific arrangement of tube or tubes,

a wide variation being permissible. The generic idea will, however, be carried out, in that the front handle-supporting tube will be employed to contain the pump-piston. The handle-bar may be of the form C, as in Fig. 1, like C' in Figs. 4 and 5, or any other form. With a solid instead of a tubular frame it will of course be necessary to bore out the part B. If the part B is very short relatively to the length of part A the piston *b* may conceivably play within the part A; but the result will be the same.

D denotes the hollow crown-piece at the head of the front fork of the frame of the machine, and to this crown the tube A is ordinarily secured. The hollow crown or casing D is perforated on one side of a point where a horn, whistle, or other signal E is attached. From the opposite side of casing D projects a nipple *h*, which is closed by a screw-cap H. A short flexible tube, as shown at *l* in Fig. 1, is employed to connect the nipple *h* with the usual opening in the tire. Within the crown-casing D is an easy-fitting circular valve F, (see Fig. 3,) having a closed bottom F', with a screw-threaded perforation *n*, and a skeleton top consisting of cross-pieces *g*, at the intersection of which is a bearing *g'* for the shank or pin of the operating or turning handle I. In the side of the valve F is an orifice *f*, which is calculated when the valve is properly adjusted to register with the opening *m* in the casing where the whistle E is attached, and also valve F has an opening F<sup>2</sup>, which connects with the opening at nipple *h*. The bottom of the crown or casing D if made open, as usual, is closed by a screw-cap D'.

I denotes a handle beneath the casing D, whose shank *i* has its bearings in the bearings *n* and *g'* and is thereby attached to the valve F, the upper end of shank *i* being fastened in the opening *g'* already referred to. Thus it will be seen that by manipulating the handle I either the whistle E or the nipple *h* may at pleasure be permitted to receive (through the valve-apertures F<sup>2</sup> and *f*) the air which is supplied to casing D under pressure by the air-pump. When the closed wall of the valve registers with the opening *m* and the valve-opening F<sup>2</sup> registers with the nipple *h*, the whistle E will be cut off, and if the piston *b* be actuated air may be supplied through the opening



F<sup>2</sup> and nipple *h* through the tube *l* to the tire and the latter inflated. When the orifice *f* registers with the whistle-opening, then the outlet to the tire will be cut off and the whistle  
 5 consequently caused to blow under the air-pressure transmitted thereto by the working of the piston.

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

1. In a bicycle, the combination with the handle-bar-supporting tube, of the crown-tube receiving it, a pump-piston within the tube, a piston-rod extending through the tubes  
 15 and projecting through an aperture in the handle-bar, a hollow casing at lower end of crown-tube, perforated at a point in its vertical wall, means to secure an air-tube in said aperture a cup-valve within said crown-tube  
 20 casing, a handle extending upward through the casing and secured to the valve, the latter having an aperture in its vertical wall adapted to register with the perforation in the casing when said valve is rotated; said parts being  
 25 constructed, combined and arranged so that a force-pump for discharging air into the flexible tire is permanently connected with and forms a part of the head of the bicycle-frame; substantially as described.

30 2. In combination with the crown-tube, its crown-casing, a piston and rod, a cup-valve F,

rotatable in the crown-casing, perforations in the walls of the valve and crown-casing adapted to be brought into register, a nozzle in the casing-perforation, an air-tube secured to the  
 35 nozzle, and an operating-handle whose shank or shaft extends through the casing and is secured to the valve, whereby the latter may be rotated to bring the perforations into register, substantially as described. 40

3. In a bicycle, the combination with the handle-bar-supporting tube, of the crown-tube receiving it, a piston within the tubes whose piston-rod projects through and above the handle-bar, a hollow casing secured to the  
 45 lower end of the crown-tube, an annular rotatable cup-valve within said casing and provided with opposite perforations in its upright walls, an external operating-handle whose shaft or shank extends through the casing 50 and is secured to the valve, a tube or nozzle penetrating the wall of said casing, a flexible tube attached thereto, a similar nozzle or opening at an opposite point in the wall of the casing, and a whistle attached to said nozzle; 55 substantially as described.

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

HERBERT H. PATTEE.

Witnesses:

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