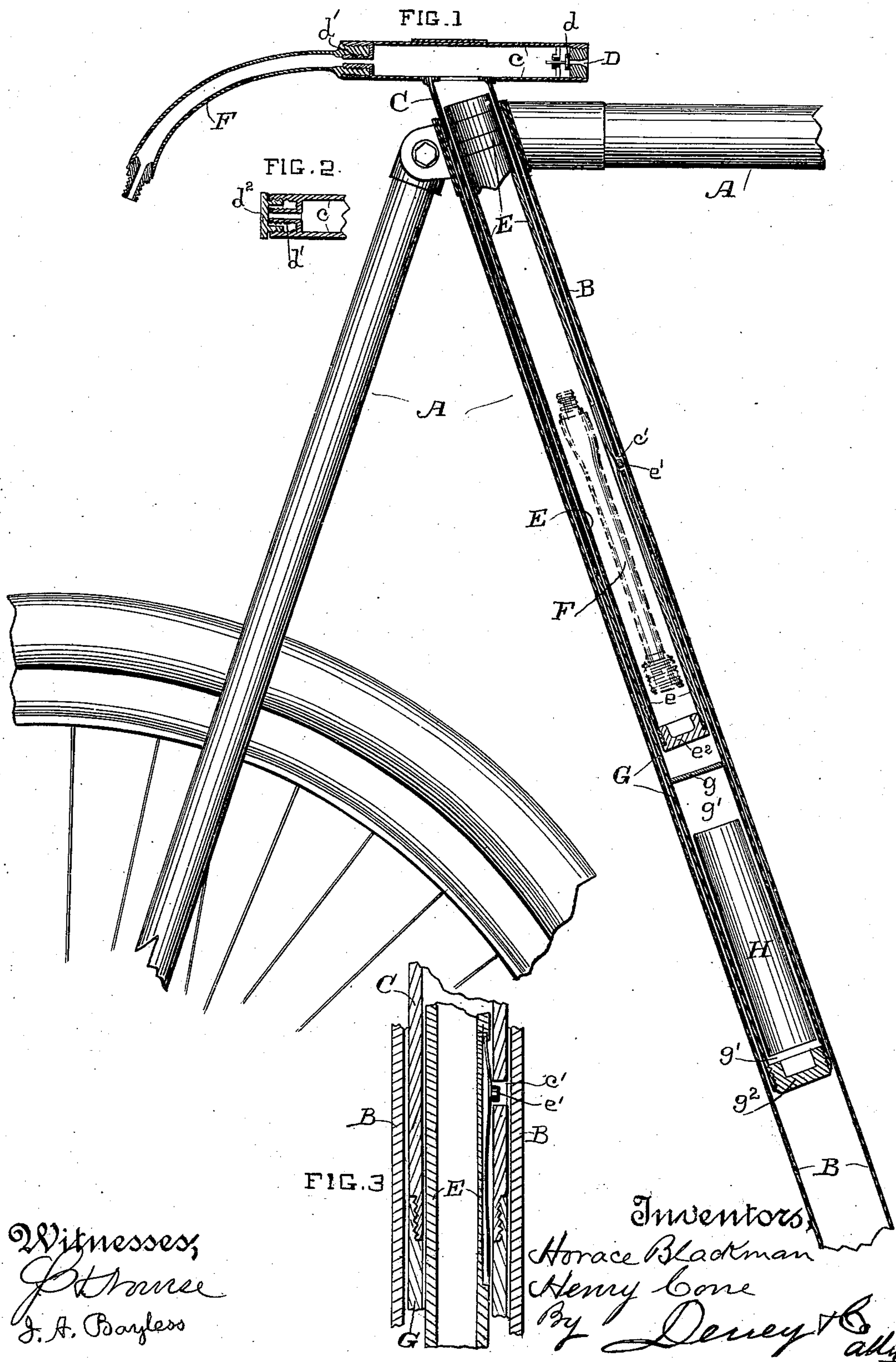


(No Model.)

H. BLACKMAN & H. CONE.  
COMBINED PUMP AND SADDLE POST FOR BICYCLES.

No. 549,308

Patented Nov. 5, 1895.



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# UNITED STATES PATENT OFFICE.

HORACE BLACKMAN AND HENRY CONE, OF SAN FRANCISCO, CALIFORNIA.

## COMBINED PUMP AND SADDLE-POST FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 549,308, dated November 5, 1895.

Application filed July 8, 1895. Serial No. 555,317. (No model.)

*To all whom it may concern:*

Be it known that we, HORACE BLACKMAN and HENRY CONE, citizens of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in a Combined Pump and Saddle-Post for Bicycles; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to bicycles; and it consists in a novel removable saddle-post so constructed as to serve the additional function of an air-pump for inflating the pneumatic tires of the machine.

Our invention also consists in certain details of construction and arrangement with regard to the pump, which we shall hereinafter fully describe and specifically claim.

The object of our invention is to provide a simple and serviceable pump for inflating the tires, said pump being so constructed, arranged, and located as to dispense with the necessity of carrying a separate pump, as is usually done, which result is arrived at by making the saddle-post serve the double function of a saddle-post and a pump.

Another object of our invention is to provide such a construction of pump as will adapt any tubular portion of or attachment to the machine for use as the cylinder of the pump, and by an extension thereof to provide a reservoir or receptacle for a repair-kit.

Referring to the accompanying drawings, Figure 1 is a vertical section of my combined pump and saddle-post, the flexible connection F being shown in both its position for use and in dotted lines as housed in the piston-handle when not in use. Fig. 2 is a detail section of the outlet-coupling. Fig. 3 is an enlarged section showing the connection of the tubular extension G with the saddle-post.

A represents a portion of the frame of a bicycle, of which B is the vertical tube which receives the saddle-post.

C is the saddle-post, consisting of a tubular piece or stem and a suitably constructed or shaped top, which said top is here shown in the shape of a cross-tube *c*, thus making of the saddle-post what is commonly known as a "T-post." This shape, though common, is not essential to my invention, as it will be

understood that the top of the post may be a tube of other shapes—as, for instance, gooseneck or a single turn-back shape.

In one end of the top is made the inlet-port D, which is controlled by a check-valve *d*, and in the other end of the top is made the screw-coupling *d'*, by which the connection with the nipple of the pneumatic tire is made. As these constructions at the ends of the saddle-post top are naturally exposed to view, we have withdrawn them from sight as much as possible by making the inlet-port flush with the end of the top and by making the coupling countersunk or recessed in the other end of the top, so that its end does not project beyond the end of said top, and when not in use a removable cap *d''* may be screwed on over it to protect it from dust and also to present a good appearance.

Within the hollow post is mounted the piston E, the stem or handle *e* of which extends outwardly beyond the bottom of the post, so that it can be grasped and operated.

In the normal position and use of the saddle-post the stem or handle of the piston hangs downwardly within the tube B of the frame, and in order to prevent it from falling down therein we have a small automatic spring-catch *e'*, adapted to enter a socket *c'* in the post.

The post is clamped in its tubular seat B by the usual means of a bolt and nut or is set therein by a screw, as is common in some cases.

To use the pump, it is only necessary to release the post and remove it wholly from its seat, and with the saddle still clamped to its top to place said saddle on the ground and use it as a rest for the pump. A connection with the nipple of the tire is then made, either directly in some instances or by means of the intervening flexible tube F, as is quite common.

When the connection is made, the handle of the piston is grasped and the piston operated, so that the air is drawn in through the inlet-port and check-valve and is forced out through the coupling and nipple connection into the tire.

When the tire is inflated, the saddle-post is returned to its seat. Now in order to conveniently carry the flexible connection F we



make the handle or stem of the piston hollow, thus forming a recess or chamber to receive the flexible tube F when not in use, and said tube may be held in place by a cap of any  
5 suitable character—such, for example, as the plug  $e^2$ , screwed into the end of the hollow stem.

G is a tubular extension fitted, as by means of screwing, onto the lower end of the saddle-  
10 post. This extends down into the tube B as far as may be desired, and it has a diaphragm  $g$  across it at the end of the post. Below this diaphragm a chamber  $g'$  is formed, guarded by a removable cap  $g^2$  at the lower end, and  
15 this chamber is adapted to receive a repair-kit of suitable description, such as is represented by H, and is here shown as consisting of a casing fitting within said chamber.

The details of construction relating to the  
20 pump—namely, the provision of the valved air-inlet at one side of the upper portion of the tubular post which forms the cylinder and the coupling-outlet at the other side, the handled piston extending downwardly, the  
25 automatic catch for holding it in place, and the chambered extension of the tubular portion which forms the cylinder—are all features which may relate to a pump constructed of the removable tubular part of or attach-  
30 ment to any other portion of the machine, and as far as these parts, therefore, are concerned we do not confine ourselves to their employment in connection with the saddle-  
35 post, as there are other removable tubular stems and portions to which they could be applied.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

40 1. In a bicycle, a removable hollow saddle-post having at one side of its upper portion, a valved inlet, and at the opposite side an outlet coupling for the connection with the nipple of the pneumatic tire, and a piston  
45 fitted within said hollow saddle-post and having a handle projecting from its lower end.

2. In a bicycle, the removable hollow T-shaped saddle-post, the hollow stem of which forms the cylinder of a pump, a valved inlet  
50 in the end of one of the arms of the T and an outlet coupling in the end of the other arm, and a piston fitted and adapted to operate within the hollow stem of the saddle-post, said piston having a handle projecting below  
55 the lower end of said post.

3. In a bicycle, the removably seated T-shaped saddle-post having a hollow stem, the recessed coupling in one end of the top of said post and the valved inlet port in the  
60 other end, and the piston fitted and adapted to operate within the hollow stem of the saddle-post, said piston having a handle projecting below the lower end of said post.

4. In a bicycle, a removable hollow portion

of the machine, having at one side of its up- 65 per end a valved inlet, and at the other side of said end an outlet coupling for connecting with the nipple of the pneumatic tire, and a piston operating within said hollow portion as a cylinder, and having a handle project- 70 ing below whereby said piston may be operated when the hollow portion is removed from the machine.

5. In a bicycle, a removable hollow portion of the machine having a suitable valved inlet 75 and an outlet coupling for connecting with the nipple of the pneumatic tire, a piston operating within said hollow portion as a cylinder, and having a handle projecting below whereby the piston may be operated, and a 80 catch at the lower end of the handle engaging a socket in the hollow portion for holding the piston up.

6. In a bicycle, a removable hollow portion of the machine having a suitable valved inlet 85 and an outlet coupling for connecting with the nipple of the pneumatic tire, a piston operating within said hollow portion and having a handle projecting below whereby the piston may be operated, and a tubular or 90 chambered extension on the lower end of said hollow portion.

7. In a bicycle, a removable hollow saddle-post having a valved inlet and an outlet coupling for the flexible tube connection to the 95 nipple, and a piston within the hollow saddle-post and having a handle extending down through it, said handle being socketed or chambered to receive and house the flexible tube connection to the nipple. 100

8. In a bicycle, a removable hollow portion of the machine having a valved inlet and an outlet coupling, a flexible tube adapted to be fitted upon said coupling whereby said con- 105 nection is made with the nipple of the pneumatic tire, and a piston within the hollow portion, said piston having a handle with a recess adapted to receive and house the flexible tube when out of use.

9. The combined removable saddle-post 110 and pump, herein described, consisting of the tubular stem having the tubular top portion, the valved inlet in one end of said top portion, and the outlet coupling at the other end, the piston within the tubular stem, the 115 handle of said piston having a socket or chamber made in it, the flexible tube connection with the outlet coupling, adapted when out of use, to be housed in the chambered handle of the piston, and the chambered ex- 120 tension on the lower end of said hollow stem.

In witness whereof we have hereunto set our hands.

HORACE BLACKMAN.  
HENRY CONE.

Witnesses:

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