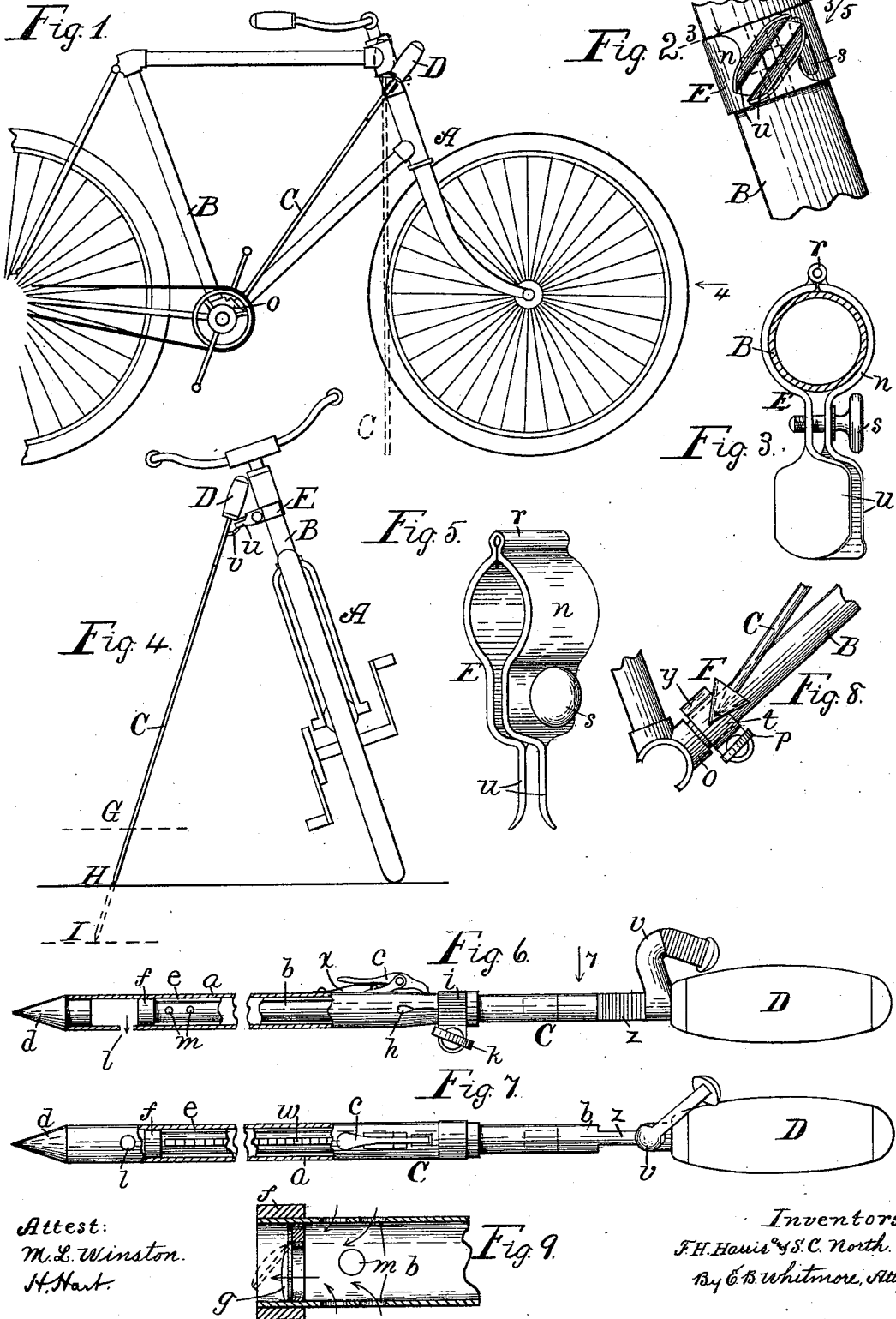


(No Model.)

F. H. HARRIS & S. C. NORTH.
BICYCLE PROP AND PUMP.

No. 583,573.

Patented June 1, 1897.



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FRANK H. HARRIS AND STANLEY C. NORTH, OF CANANDAIGUA, NEW YORK,
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NORTH ASSIGNOR OF THIRTEEN ONE-HUNDREDTHS OF THE ENTIRE
RIGHT TO SAID HARRIS.

BICYCLE PROP AND PUMP.

SPECIFICATION forming part of Letters Patent No. 583,573, dated June 1, 1897.

Application filed February 28, 1896. Serial No. 581,173. (No model.)

To all whom it may concern:

Be it known that we, FRANK H. HARRIS and STANLEY C. NORTH, of Canandaigua, in the county of Ontario and State of New York, have invented a new and useful Improvement in Bicycle Props and Pumps, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

Our invention is a combined prop and pump for bicycles adapted to be held by and carried upon the frame of the bicycle.

This invention has four uses: First, it serves as a staff for the rider of the wheel to hold in his hand and press the ground at his side for the purpose of making a temporary stop without dismounting; second, it serves as a prop to hold the bicycle substantially in an upright position when left for a time in the street or other place; third, it serves as a weapon of defense—as, for instance, against the attacks of troublesome dogs—and, fourth, it serves as an air-pump for inflating the tires.

The invention is hereinafter fully described and more particularly pointed out.

Referring to the drawings, Figure 1 is a side elevation of the main parts of an ordinary bicycle, showing the invention in place. Fig. 2 is a view of a part of the frame, showing the lock for the prop. Fig. 3 is a cross-section on the dotted line 3 3 in Fig. 2. Fig. 4 is a front view in outline of the bicycle indicated by arrow 4 in Fig. 1, showing it inclined against the prop. Fig. 5 is a perspective view of the lock indicated by arrow 5 in Fig. 2. Fig. 6 is a view of the invention condensed as to length and in part longitudinally sectioned. Fig. 7 is a view of the same indicated by arrow 7 in Fig. 6. Fig. 8 shows the holder for the lower end of the prop. Fig. 9 shows the pump-valve. Figs. 2, 3, and 5 to 9, inclusive, are drawn to various scales larger than that of Figs. 1 and 4.

Referring to the parts shown, A, Figs. 1 and 4, is a bicycle of common construction, B being the frame.

C is our improved prop and pump, clearly shown in Figs. 6 and 7, consisting of a barrel or tubular part *a* and inclosed rod *b*, provided with handle D. The barrel *a* is preferably formed of light sheet metal, as brass

tubing, with an iron or hardened steel point *d*, inserted at the lower end. The rod *b*, which is also tubular, is smaller in diameter than the barrel *a*, leaving an annular space *e* between them.

f is a ring or band of fibrous material, as leather, placed upon the inner end of the rod, constituting a piston or plunger for the pump, said ring closely fitting the interior of the barrel. The rod is also formed with an ordinary valve *g*, Fig. 9, opening downward to complete the construction of an air-pump.

At its upper end the barrel is split longitudinally for a short distance on various sides, and formed with openings *h*, Fig. 6, in through which air is taken when the device is used as a pump and also render the perforated portions of the barrel more flexible for being clamped around the inner sections. A circular band or clamp *i*, controlled by a thumb-screw *k*, serves to reduce the upper end of the barrel and close it upon the rod, so as to form a sliding bearing for the rod in the barrel when the device is used as a pump, or to clamp the parts rigidly together when the device is used as a prop.

The barrel is formed with an opening *l*, out through which the air is forced into the tires of the wheels when the device is used as a pump, a simple flexible tube (not shown) being employed to connect the barrel with the tire. The air taken in through the openings *h* passes through openings *m*, Fig. 6, into the interior of the hollow rod *b*, thence out through the valve *g* and the opening *l*.

This combined prop and pump is held upon the frame of the bicycle by means of a lock or holder E, Figs. 2, 3, and 5, for its upper end, and a suitable rest or receptacle F, Fig. 8, for its lower end, the lock being secured to the upper forward part of the frame and the rest secured to the lower part of the frame. This rest may be any suitable cup-shaped device or ring, formed so the point of the prop may be readily inserted within it. As shown, it is conical, with a jointed clamp *t* to encircle the frame near the coupling *o*, a thumb-screw *p* serving to secure it rigidly to the frame. The clamp is formed with a hinge-joint *y*, so that it may be opened to place it upon the frame.

The lock E for the prop consists in part of a band or clamp *n*, to encircle the front part or head of the frame, and held to place by a clamp-screw *s*, Figs. 2, 3, and 5. It is formed with a hinge *r*, by means of which it may be opened when placing it upon the frame. The free ends or jaws *u* of the lock are flared at their outer ends and formed to receive the upper part of the prop. The latter is formed with a reduced flat part *z*, Figs. 6 and 7, to enter the jaws *u*, when the device is put to place upon the frame, its lower end being first inserted in the rest F.

The lock E is made of an elastic material, as spring-steel, so the jaws will spring apart when the prop is forced between them, the flared ends of the jaws rendering it easy to insert the prop.

When the prop is in place on the bicycle and in position to be carried by the latter, it appears substantially as in Fig. 1, drawn in simple outline to a small scale, the handle D being in convenient reach of the rider upon the seat. Now should the rider of the wheel wish at any time to stop for a few minutes—as, for example, to converse with another wheelman met upon the way—he slacks his speed and, without dismounting, takes the prop from its bearings on the frame with either hand and presses the point against the ground at his side. Inclining his weight against the prop in his hand he is enabled to maintain his place upon the wheel and be ready to start again whenever he wishes. After starting on his way the prop is readily inserted in the holders.

Furthermore, should a wheelman at any time wish to leave his wheel for a time in the street or other place, he, after dismounting, takes the prop and places it in position, as shown in Fig. 4. For this purpose the prop is provided with a branch *v*, Figs. 4, 6, and 7, to be inserted in the jaws *u* of the lock, as shown, the branch being so inclined that the prop when thus slanting will occupy substantially a vertical plane, as indicated by dotted lines in Fig. 1.

The prop is extendible on account of the adaptation of the main parts *a* and *b* to telescope together, and it may be regulated as to length to support the bicycle where the ground is uneven. For example, the ground or the body pressed by the point of the prop may be higher on a level with or lower than the place where the wheel rests, as indicated at G H I, respectively, in Fig. 4. If the wheel stands in the gutter of the street, for example, and the prop rests upon the higher curb, the point of the prop would be as at G in the figure, or should the wheel stand upon

the curb and the point of the prop be placed in the gutter the prop would be lengthened to bear as at I. In every case where the prop is adjusted as to length the clamp *i* is firmly set to prevent relative motion for the parts *a b*.

In addition to the clamp *i* it is sometimes desirable to provide a pawl *c*, Figs. 6 and 7, for the barrel in position to engage a ratchet *w* on the rod. The pawl is actuated by a spring *x*, and with the ratchet is adapted to hold the parts of the prop from sliding together after the rod is pulled out in any case to lengthen the prop. When it is desired to shorten the prop at any time, the finger or thumb is pressed against the pawl in a manner to disengage it from the ratchet.

When the pawl and the clamp *i* are both used, the function of the latter is simply to contract the divided end of the barrel to an easy bearing against the rod, or the clamp may be dispensed with altogether, if thought best.

It is clear that the form of the lock E and the particular form of the prop where it engages with the lock are not essential to our invention. It is preferable to have the prop substantially straight from the handle to the point, as in this form it will be better adapted to serve the purposes as a prop and staff. If made thus straight, the lock must be shaped accordingly, and also the form of the lock must be adapted to the style or form of the bicycle-frame to which it is applied. It is shown applied to what is known as the "diamond" frame.

What we claim as our invention is—

1. In combination with a bicycle provided with fixed points of attachment, of a support detachably secured thereto, the upper end of said support being branched, whereby one branch may be secured at one of the points in one position, and the other branch secured at the same point in another position, substantially as set forth.

2. The combination, with a bicycle, of two locks secured thereto, one of the locks having flaring elastic jaws, a support detachably secured in said locks, the upper end of which is provided with a handle and is branched, the support and the branch being reduced to fit between the jaws, substantially as set forth.

In witness whereof we have hereunto set our hands, this 24th day of February, 1896, in the presence of two subscribing witnesses.

FRANK H. HARRIS.
STANLEY C. NORTH.

Witnesses:

S. K. BRAWKEN,
NANCY DEMPSEY.