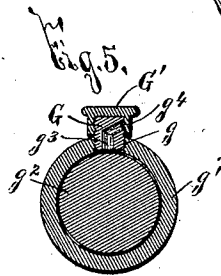
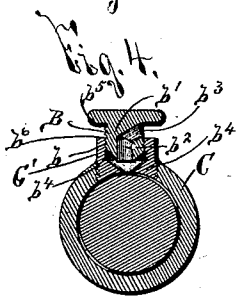
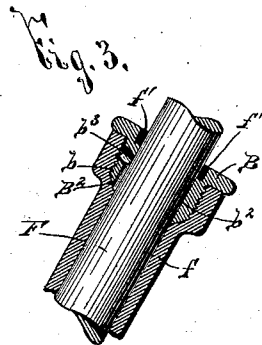
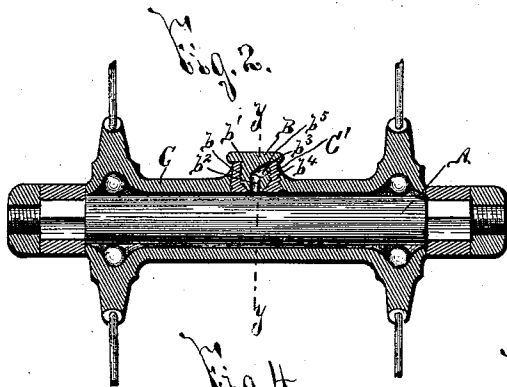
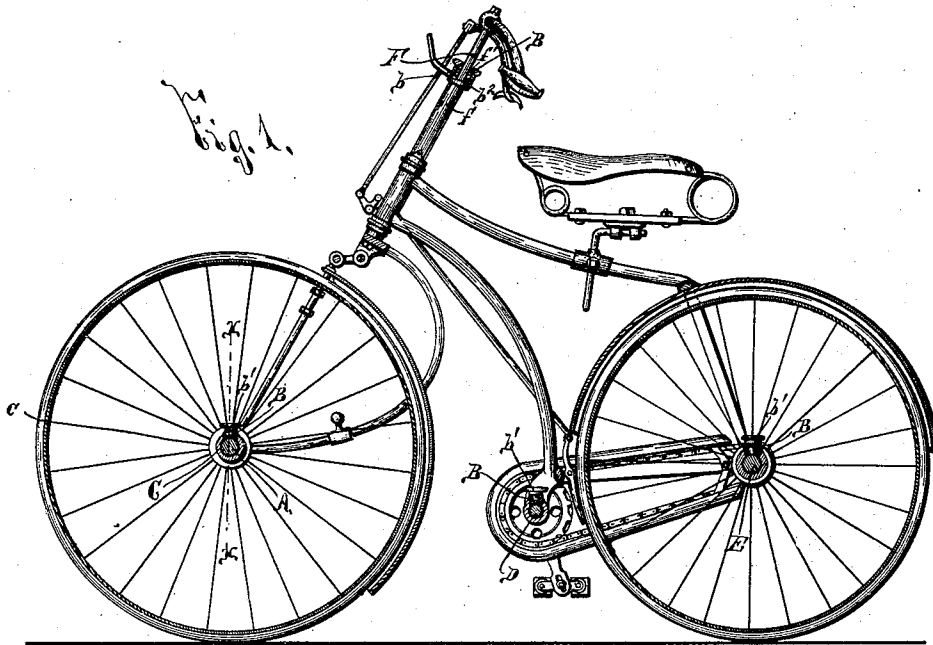


(No Model.)

T. WHEATLEY.  
OIL CUP FOR BICYCLES.

No. 472,837.

Patented Apr. 12, 1892.



WITNESSES:  
*H. C. Chase,*  
*W. H. Randall,*

INVENTOR.  
*Thomas Wheatley*  
BY  
*Wm. Wilkinson & Parsons*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

THOMAS WHEATLEY, OF SYRACUSE, NEW YORK.

## OIL-CUP FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 472,837, dated April 12, 1892.

Application filed June 8, 1891. Serial No. 395,455. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS WHEATLEY, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Oil-Cups for Bicycles, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to improvements in oil-cups for bicycles, and has for its object the production of a simple and effective device whereby oil may be readily and quickly supplied to the wearing parts without the slightest liability of the entrance of dust and dirt when the oil-cup is in its normal condition; and to this end the invention consists, essentially, in a frame, a rod or bar within the frame, a socket extending from the frame, and a plug in said socket provided with a central feeding-passage and a laterally-extending passage opening to the outside of the plug and adapted when in its normal position to abut against the wall of the socket for closing the same and preventing the entrance of dust, &c.

The invention furthermore consists in the detail construction and arrangement of the parts, all as hereinafter more particularly described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 represents an elevation of a "Safety bicycle," partly in section, illustrating four of my improved oil-cups in operative position. Fig. 2 is an enlarged transverse vertical sectional view taken on line *xx*, Fig. 1, illustrating the oil-cup for supplying oil to the front axle. Fig. 3 is an enlarged vertical sectional view representing the oil-cup for supplying oil to the steering-rod. Fig. 4 is an enlarged transverse vertical sectional view taken on line *yy*, Fig. 2, the plug containing the oil-feeding passage being shown as in position for receiving the oil; and Fig. 5 is a similar view to Fig. 4 of a modified form of the oil-cup.

It is well known that at present great difficulty is experienced in preventing the entrance of dust to the working parts of bicycles and at the same time supplying means

for lubricating the same. My invention is designed to effect this desirable result, and owing to its peculiar construction protrudes but a minimum distance beyond the bearing or frame to which it is attached, and thus does not perceptibly deteriorate the appearance of the bicycle, as would be the case were such an oil-cup used as would project a considerable distance beyond the journal-bearing.

A represents the axle or rod to which the oil is supplied by my improved cup B, and C is the frame surrounding said rod and supporting the oil-cup and preferably forming part thereof.

In the drawings at Fig. 1 I have shown this cup as applied to the front axle A, the main driving-axle D, the rear axle E, and the steering-rod F, and, as will be readily understood, it is evident that the same is equally applicable to all of these axles and their respective bearings or encircling frames, as the wheel-hubs revoluble thereon, requiring no change in construction of the oil-cup for use on any of said parts save the one for supplying oil to the steering-rod, as will be presently described.

As seen at Fig. 2, which is a vertical sectional view of the front axle, the cup B is disposed midway between the frame or hub C of the front wheel *c* and consists of a socket *b* and a plug *b'* in said socket formed with an oil-feeding passage *b<sup>2</sup>*, having a laterally-extending arm *b<sup>3</sup>*, extending to the outside wall or periphery of said plug and adapted to be closed by engagement with an outside shoulder when in normal position and to be opened at will for receiving the oil. As here illustrated, the socket *b* is formed in a revoluble hub or sleeve *b<sup>4</sup>*, secured to the frame C, and the plug is formed with its inner extremity of less diameter than its outer, thus forming a top shoulder *b<sup>5</sup>*, adapted to rest on the top face *b<sup>6</sup>* of the projecting boss C', formed on the frame or sleeve C for increasing the depth of the socket *b*. Both the socket *b* and the inner end of the plug *b'* are screw-threaded, and, as illustrated at Fig. 2, when the top face *b<sup>5</sup>* of the plug is screwed firmly against the adjacent face of the boss C' the entrance of dust, &c., is absolutely prevented, and when, as shown at Fig. 4, the plug is screwed outwardly the outer extremity of the lateral arm

$b^3$  is exposed, and the oil-can may then be readily registered therewith for admitting the desired amount of oil, whereupon the plug is screwed inwardly, the oil prevented from escape, and dust and dirt from entrance to the oil. It will also be noted that the outer extremity of the plug projects but very little above the outer face or periphery of the sleeve C, and consequently is scarcely perceptible, which is a feature of great advantage, since the parts of a bicycle must necessarily be neat and workmanlike in appearance.

At Fig. 3 I have shown a modified form of socket  $b$ , produced by an enlargement in the journal-bearing  $f$  for the steering-rod, and a modified form of plug B, in which the central passage  $b^2$  encircles the steering-rod and is provided at its outer face with a packing-ring  $f'$ . It will be evident that this construction of oil-cup is not materially different from that previously described, the only difference being the large size of the passage  $B^2$  in relation to the lateral arm  $b^3$  and the addition of the packing-ring  $f' f'$ .

At Fig. 5 I have shown a modified form of oil-cup, in which a stationary plug G is secured to a socket  $g$  in the frame  $g'$ , encircling the axle or shaft  $g^2$ , and is provided with a central passage  $g^3$  and a lateral arm  $g^4$ , extending to the outside periphery of said plug, which thus becomes a nipple projecting outwardly from said bearing  $g'$ . Encircling this nipple is a cap  $G'$ , adapted when in its normal position to close the inlet of the passage  $g^4$ .

The operation of my invention will be readily perceived from the foregoing description and upon reference to the drawings, and it is evident that its parts are simple in construction and operation, are readily and cheaply produced and affixed to any desired construction of bicycle, and when in operative position possesses cheapness, efficiency, and con-

venience. It is evident, however, that my improved oil-cup may be used to lubricate axles and shafts other than those used in bicycles, and that its construction may be somewhat varied from that shown and described without departing from the spirit of my invention.

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

1. In combination, a sleeve or journal-bearing, a rod or shaft movable within said bearing, a socket in the sleeve opening to its journal-bearing, a bushing mounted in said socket and formed with a central opening leading to the journal-bearing of the sleeve, a plug movably mounted within said bushing and formed with a central passage  $b^2$ , opening from the lower face thereof, and with an angular passage  $b^3$ , opening from the upper extremity of said plug to its upper periphery, substantially as and for the purpose set forth.

2. In combination, a journal-bearing having a socket at its end, a shaft or rod journaled in the bearing and projecting beyond the socket, a plug formed with a central passage surrounding the rod, and a laterally extending passage opening to the outside of the plug and adapted to be closed by the adjacent wall of the socket when the plug is in its normal position, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 28th day of May, 1891.

THOMAS WHEATLEY.

Witnesses:

CLARK H. NORTON  
S. M. BAXTER.