

**No. 697,099.**

**Patented Apr. 8, 1902.**

**R. L. MORGAN.**  
**PUMP FOR VEHICLES.**

(Application filed Jan. 16, 1902.)

(No Model.)

WITNESSES:

INVENTOR.

T. L. Morgan  
By Redding, Kiddle & Greeley  
attys.



# UNITED STATES PATENT OFFICE.

RALPH L. MORGAN, OF TOLEDO, OHIO, ASSIGNOR TO AMERICAN BICYCLE COMPANY, OF JERSEY CITY, NEW JERSEY, AND NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## PUMP FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 697,099, dated April 8, 1902.

Application filed January 16, 1902. Serial No. 89,965. (No model.)

*To all whom it may concern:*

Be it known that I, RALPH L. MORGAN, a citizen of the United States, residing at Toledo, in the State of Ohio, have invented certain new and useful Improvements in Pumps for Vehicles, of which the following is a specification.

The invention relates particularly to improvements in pumps for mechanically-propelled vehicles requiring the transmission of liquids from one part of the vehicle to the other; and the invention consists in the new and novel features of construction and combination of parts hereinafter set forth.

In the accompanying drawings, Figure 1 represents a side elevation, partly in section on the line  $y y$  and  $x' x'$  of Fig. 2, of a construction embodying the invention. Fig. 2 represents an end elevation of the same construction on the line  $x x$  of Fig. 1. Fig. 3 represents a vertical section of the steering-post.

The steering-post A of the vehicle may be connected with the steering-gear (not shown) in any well-known manner and is rotated by means of a handle B. Said steering-handle is pivoted, as at  $c$ , to a bracket C, that is rigidly secured to the steering-post in any suitable manner whereby the steering-handle may have an independent vertical or pumping movement. The upper part of the steering-post is recessed to form a pump barrel or cylinder D, and the pump plunger or piston E, which reciprocates therein, is actuated by the steering-handle, being connected therewith by the link or spear  $e$ .

The steering-post is rotatable in a stationary casing F, that may be secured to the vehicle-body by a flange  $f$ . Said casing is provided with a suitable passage or chamber G, that communicates with the pump-barrel by means of a segmental opening or openings H of sufficient width to maintain the communication whatever the position of the steering-post, and is also connected with an inlet-pipe I and an outlet-pipe J. Each of said pipes is provided with a valve  $i$  and  $j$ , respectively, the valve  $i$  in the inlet-pipe being arranged so that it can be opened only by the suction on the liquid entering the chamber and the

outlet-valve being arranged so that it can be opened only from pressure exerted in said cylinder. Preferably each of said valves is normally held closed by means of a spring M. The liquid is prevented from escaping between the casing and the cylinder by means of two rings of packing N, arranged above and below the chamber, which are held a suitable distance apart by any suitable means, as the gage O.

The pump operates in the usual manner, the liquid being drawn into the chamber through the inlet-valve by suction and thence into the pump-barrel when the pump-piston is raised and being expelled through the outlet-pipe when the pump-piston is depressed. Both valves are closed by the spring when the pump is not in use and are operated automatically by the pressure or suction to permit the flow of the liquid into or from the pump-barrel. It will be noted that since the chamber G is stationary both the inlet and the outlet pipes may be made of metal or any other suitable non-yielding material. It is obvious also that by making suitable connections the pump can be used for any desired purpose other than for pumping liquid from one part of the vehicle to the other.

I claim as my invention—

1. The combination of a steering-post provided with a pump-barrel, a pump-piston therein, a steering-handle for actuating said steering-post and pump-piston, and stationary valve-controlled inlet and outlet pipes communicating with said pump-barrel, substantially as described.

2. The combination of a steering-post provided with a pump-barrel, a pump-piston therein, a steering-handle for actuating said steering-post and pump-piston, a stationary casing provided with a chamber communicating with the pump-barrel, and valve-controlled inlet and outlet pipes communicating with said chamber.

3. The combination of a steering-post provided with a pump-barrel, a pump-piston therein, a steering-handle for actuating said steering-post and pump-piston, a stationary casing provided with a chamber communicating with the pump-barrel, an inlet-pipe

and an outlet-pipe communicating with said chamber, a valve in each of said pipes, and means for normally closing each of said valves, substantially as described.

- 5 4. The combination of a rotatable steering-post provided with a pump-barrel, a pump-piston therein, a steering-handle for actuating said steering-post and pump-piston, a stationary casing for the steering-post hav-  
10 ing valve-controlled inlet and outlet pipes

therein, and means for maintaining communication between said pipes when the steering-post is rotated, substantially as described.

In testimony whereof I sign this application, in the presence of two witnesses, this 6th 15 day of January, 1902.

RALPH L. MORGAN.

Witnesses:

J. E. TALTY,

W. F. LEYMAN.