E. H. HANEY.

AUTOMOBILE PUMP.

APPLICATION FILED JAN. 13, 1912.

1,040,980. Patented Oct. 8, 1912.

Fig. 1

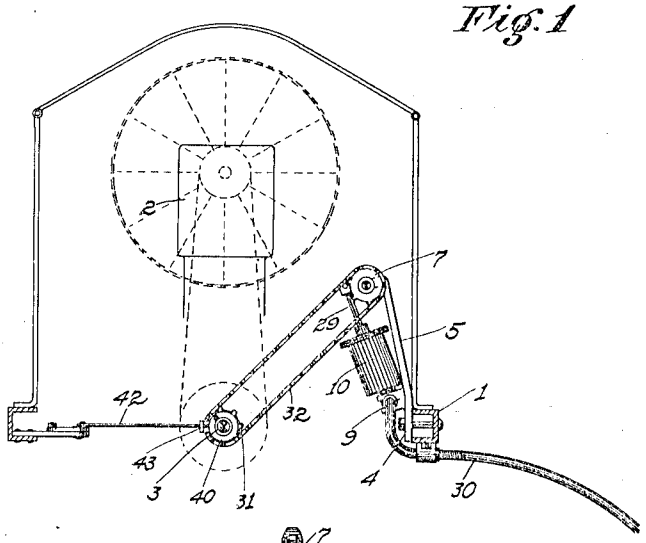


Fig. 2

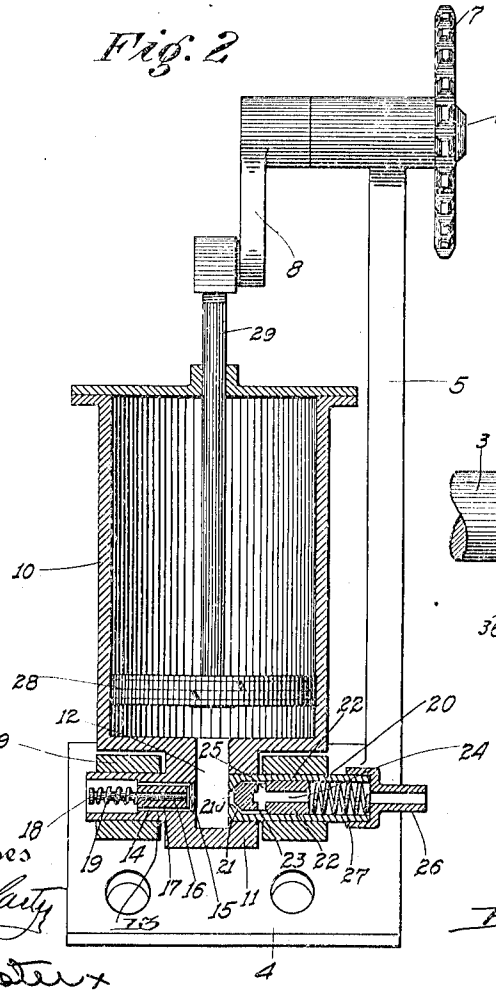


Fig. 4

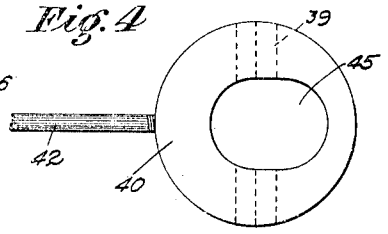
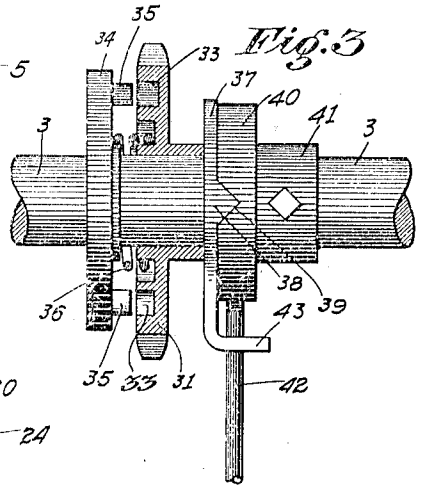


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

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AUTOMOBILE-PUMP.

1,040,980. Specification of Letters Patent. Patented Oct. 8, 1912.

Application filed January 13, 1912. Serial No. 671,017.

To all whom it may concern:

Be it known that I, EDWIN H. HANEY, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Automobile-Pumps; and I do declare the following to be a clear, full, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in motor vehicles and particularly to a pump adapted to be applied to such vehicle and used to inflate the pneumatic tires on said vehicle.

A further object of the invention is to produce a simple and inexpensive device, and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a diagrammatic view of the frame and engine of a motor showing my improved pump, installed therein. Fig. 2 is a sectional view of the pump. Fig. 3 is a detached view, partly in section, of a clutch mechanism. Fig. 4 is a front elevation of a shifting disk, for a clutch mechanism.

Referring now more particularly to the characters of reference on the drawings 1 designates the main frame of the vehicle and 2 an outline of the engine thereon and 3 designates the crank shaft of the engine.

In applying my improved pump I first apply a supporting plate 4 to the said frame 1 which plate has an upwardly projecting arm 5 having journaled on its upper end a shaft 6 carrying a sprocket wheel 7 on one end and a crank 8 on the other end. Secured as a component part of the plate 4 are two journals 9.

Numeral 10 designates a pump cylinder having a downwardly projecting lug 11 having internal passage ways 12, communicating with said cylinder 10. Said lug has an outwardly projecting sleeve 13 on one side journaled in one of the members 9. This sleeve 13 has two or more passage ways 14 and communicating with the passage way 12, there being a valve 15 forming a normal closure for said passage ways 14 such valve having a pin 16 projecting through a solid portion 17 in the sleeve 13 and having a cross head 18 on its outer end. A spring 19 interposed between the cross head 18 and the solid portion 17 maintains the valve 15 in normal closed position. On the other side of the member 11 is a sleeve 20 screwed into the said member 11 and provided with a valve seat 21 provided with an opening 21^a and communicating with passage way 12. Within the sleeve 20 is a small piston 22 forming a normal closure for the opening 21^a by fitting against the valve seat 21. Within the sides of this piston 22 are small ports 23 adapted to communicate with the opening 21^a when the piston 22 moves away from the seat 21 in a manner as will appear. Communicating from the ports 23 to a passage way 24 within the piston 22 are small ports 25. Disposed over the nut of the sleeve 20 is a nipple 26, and 27 is a spring interposed between said nipple and said piston 22, which spring holds said piston in its normal position. Within the cylinder 10 is a piston 28 having a piston rod 29 communicating with its upper end with a crank 8.

With the operation of the piston 28 the suction caused by its upper stroke opens the valve 15 and sucks in a quantity of air through the ports 14 and passage way 12. Then with its downward stroke the pressure of said air closes the valve 15 and moves the piston 22 away from its seat 21 and the air then passes through the opening 21^a, ports 23, passage ways 25, passage way 24 through the nipple 26 and to a hose 30 where it may be connected with the tires to be inflated.

The piston 28 is operated by the following mechanism to wit: On the crank shaft 3 is a sprocket wheel 31 and a chain 32 connects said sprocket wheel 31 with the sprocket wheel 7, said sprocket wheel 31 is loosely mounted on said shaft 3 and applied with recesses 33 in its face. Keyed onto said shaft 3 is a disk 34 having lugs 35 adapted to take into said recesses 33, a spring 36 is interposed between the disk 34 and the sprocket wheel 31. Mounted on said

shaft 3 and leaning against said sprocket wheel 31 is a collar 37 having a V-shaped outwardly projecting lug 38 on its surface, said lug 38 fitting into a recess 39 on a shifting disk 40 mounted on the shaft 3 and being held against longitudinal movement therein by a collar 41 fixed on said shaft 3. The disk 40 has a projecting operating handle 42 projecting through a slotted guide 43 on the collar 37. Normally the spring 36 holds the sprocket wheel 31 out of engagement with the lugs 35. Then when it is desired to operate the pump the disk 40 is shifted by pulling on handle 43. The disk 40 has a rectangular internal orifice 45 which then permits of its being pulled transversely across the shaft 3. When it is so shifted it bears against the lugs 38 forcing the collar 37 to force the gear 31 into connection with the lugs 35. This causes the motion of the shaft 3 to be transmitted to the gear 7 and shaft 6 which drives the piston 28 as will readily appear. The feature of the sleeves 13 and 20 being in the members 9 permits of the piston 10 rocking back and forth to compensate for the different positions assumed by the crank 8.

From the foregoing description it will readily appear that I have produced such a device as will substantially fulfil the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention.

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

1. A device of the character described comprising the combination with a frame of a motor vehicle of a plate secured to said frame and provided with two bearings spaced apart, a cylinder having a downwardly projecting lug on its lower end provided with a central recess, a sleeve on each side of said lug such sleeves being journaled in said spaced bearings, a passage and the passage way in each of said sleeves, a spring pressed valve forming a normal closure for each passage way between each passage way in said lug, a nipple secured on one of said sleeves, a piston in said cylinder and means for operating said piston as described.

2. A device of the character described comprising the combination with a frame of a motor vehicle, of a plate secured to said frame, two bearings on said plate and spaced apart, a cylinder, a depending lug on the bottom of said cylinder such lug having a central passage way, a sleeve on each side of said lug, such sleeves being journaled in said spaced bearings, one of said sleeves having a plurality of passage ways communicating with said passage way in said lug, a valve forming a normal closure for said passage ways, a spring pressed pin on said valve, a spring pressed piston mountable in the other of said sleeves, such other sleeve having a valve communicating with the passage way in said lug, such piston forming a normal closure for said valve, ports in side of said piston adapted to communicate with said valve when it is opened, said piston having a central recess communicating with said ports, a piston in said cylinder and means for operating said piston as described.

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

EDWIN H. HANEY.

Witnesses:

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