C. S. MYERS.

TIRE PUMP.

APPLICATION FILED SEPT. 14, 1909.

961,153. Patented June 14, 1910.

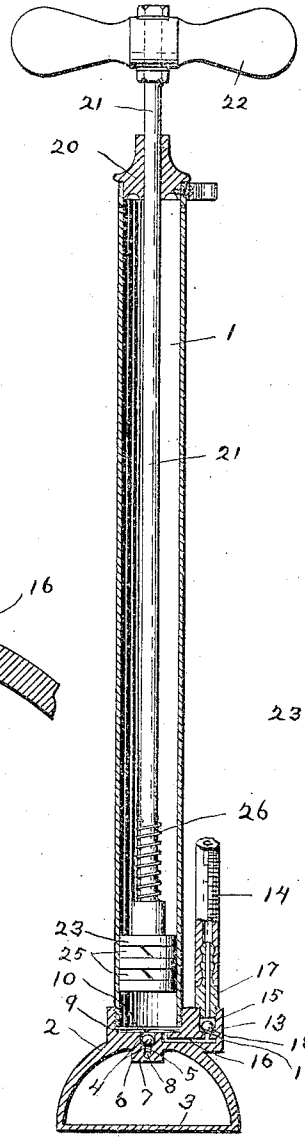


Fig 1

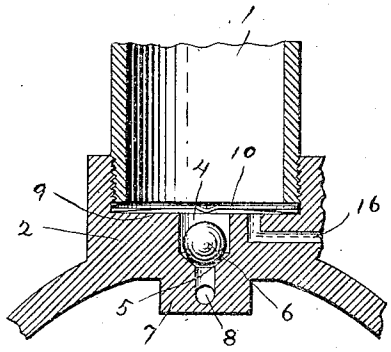


Fig 2

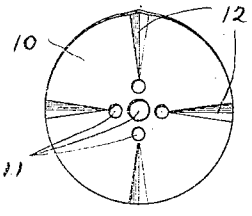


Fig 3

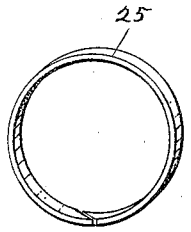


Fig 4

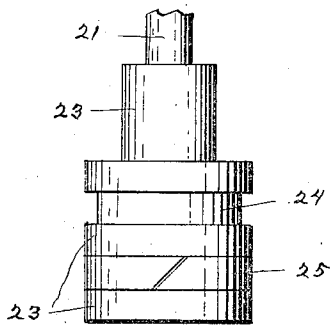


Fig 5

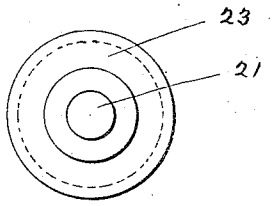


Fig 6

WITNESSES:

Mabel L. Lefevre.

Est. Kreider.

INVENTOR

Charles S. Myers.

BY

John J. Thompson

ATTORNEY

# UNITED STATES PATENT OFFICE.

CHARLES S. MYERS, OF COLUMBIA, PENNSYLVANIA.

## TIRE-PUMP.

961,153. Specification of Letters Patent. Patented June 14, 1910.

Application filed September 14, 1909. Serial No. 517,726.

*To all whom it may concern:*

Be it known that I, CHARLES S. MYERS, a citizen of the United States, residing at Columbia, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Tire-Pumps, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to air-pumps and more particularly to that class known as tire-pumps used for the purpose of inflating pneumatic tires, such as are used on automobiles.

The objects of the invention are to produce a pump of this class that will have few parts, be light, strong and very effective, developing great air pressure with little exertion on the part of the operator.

Another object of the invention is to produce a pump in which no washers are employed, the plunger packings being entirely of metal and requiring no adjustment or renewal.

With these and other objects in view my invention consists in certain construction and combination of parts as will hereinafter be fully described and claimed in the annexed specification and illustrated in the accompanying drawings, which form a part of this application, and in which like figures of reference refer to corresponding parts in all of the views; but it is fully understood that while I have herewith described my invention as illustrated, I do not confine myself to the exact design as shown, as slight changes may be made in the construction and combination of the several parts without departing from the spirit of the invention.

In the drawings:—Figure 1, is a vertical sectional view, showing the construction of the pump. Fig. 2, is a partial sectional detail view of the intake ball valve. Fig. 3, is a plan view of the plate. Fig. 4, is a perspective view of one of the plunger rings. Fig. 5, is a side elevation of the plunger with one of the rings removed. Fig. 6, is a top plan view of the same.

Referring to the drawings, 1, indicates a cylinder, to the bottom of which is secured the base 2, which is formed with the foot hold 3, and a central intake valve, which comprises a vertical orifice 4, reduced in diameter at 5, to form a seat for the ball 6, and extending downward into the boss 7, and communicating with the intake ports 8, which are formed in the side walls of the boss 7, to prevent sucking dirt from the ground, as would be the case if the orifice 4, extended directly downward through said boss 7. Above said orifice 4, and resting in the socket 9, in which the lower end of the cylinder 1, is screw-threaded, is placed a plate 10, which is provided with a central hole or holes 11, and a number of radial ribs 12, which serve to keep it from close contact with the bottom of said socket 9; it being retained in place by the end of the cylinder 1, and being for the purpose of retaining the ball 6, in place, and its ribs allowing the air to be drawn upward by the suction of the plunger. Upon one side of said base 2, is formed a boss 13, within which is formed an outlet ball valve to which is attached the hose 14, in the usual way.

The outlet ball valve comprises a vertical orifice 15, which is connected near the bottom thereof with the intake valve by the duct 16; while the upper part of said orifice 15, is internally screw-threaded for the reception of the bushing 17, which is screw-threaded therein and retains the ball 18, in place and normally resting upon the ball seat 19; while to the upper end of said bushing 17, is attached the hose 14.

Within the upper end of the cylinder 1, is secured a plug or cap 20, through which slides the plunger-rod 21, as actuated by the handle 22. A spring 26, is placed upon said rod to cushion its upward stroke. To the bottom of said plunger-rod 21, is secured the plunger, which is formed of a solid piece of metal, 23, of approximately the same outer diameter as the inner diameter of the cylinder 1, and which is formed with the encircling grooves 24, within which are placed the piston rings 25, which form a tight packing for the plunger, thus doing away with all washers and other leather packings now in use.

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

In a pump, in combination with a cylinder and a piston mounted within said cylinder and provided with expanding rings; a base secured upon the lower end of said cylinder, an intake ball check valve formed in said base and comprising a boss formed upon the bottom of said base and provided with horizontal air ducts extending through

the same, a vertical orifice formed in said base, reduced in diameter near its lower end to form a ball seat and communicating with said air ducts, a plate formed with perforations in the body thereof and radial ribs and secured to said base and over said vertical orifice.

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

CHARLES S. MYERS.

Witnesses:
WM. J. COULTER,
MABEL L. LEFEVRE.