

G. E. CORDEAU.
HAND AIR PUMP.
APPLICATION FILED FEB. 17, 1904.

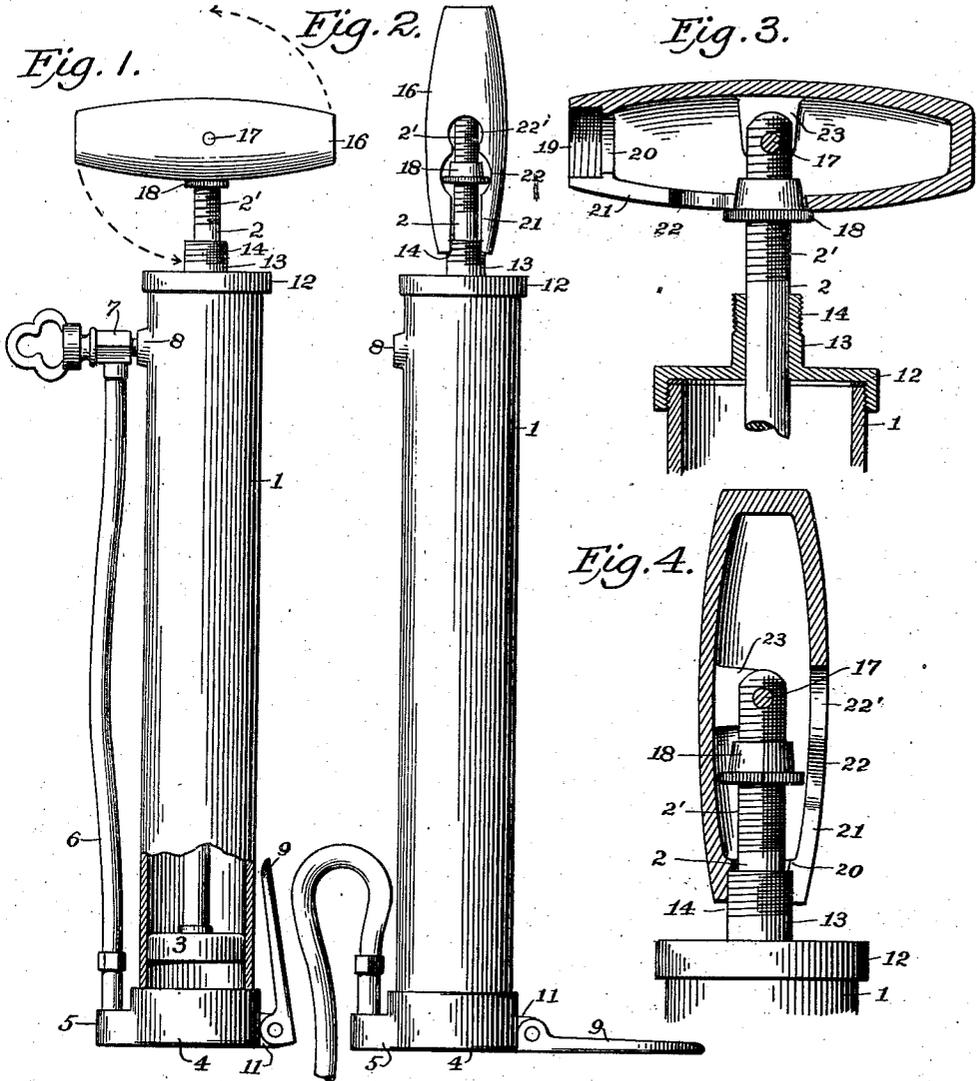
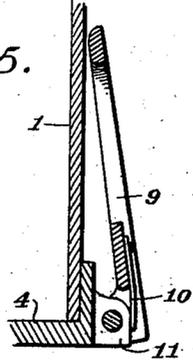


Fig. 5.

WITNESSES:

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HAND AIR-PUMP.

SPECIFICATION forming part of Letters Patent No. 785,154, dated March 21, 1905.

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To all whom it may concern:

Be it known that I, GASTON E. CORDEAU, a citizen of the United States, and a resident of New York city, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hand Air-Pumps, of which the following is a specification.

My invention relates to hand-pumps for inflating pneumatic tires of wagons, automobiles, and the like, the object being to produce a compact pump which will occupy a small space when folded or closed.

My invention is shown in the accompanying illustrations, in which—

Figure 1 is an elevation of my improved pump, partly in section, showing the stirrup folded. Fig. 2 is a similar view, the handle being folded and the stirrup open. Fig. 3 is a central sectional detailed view of the handle at right angles to pump-rod ready for pumping. Fig. 4 is a similar view, the handle being folded and screwed down on the pump-cap. Fig. 5 is a detailed view, in central section, of the stirrup folded up against the pump.

Similar reference-numbers refer to similar parts in the several views.

The pump consists of the usual cylinder 1, rod 2, and plunger 3. The base 4 has a boss 5, having a passage therethrough which connects with the tube 6.

7 is the usual male nipple, which is screwed into the tire-valve. (Not shown.)

For convenience and compactness I provide a socket 8 near the upper end of the cylinder, into which the nipple 7 is screwed when the pump is not in use. Diametrically opposite the boss 5 of the base is a folding stirrup 9, which is hinged near the lower end. A flat spring 10 is fastened on the stirrup, the free end pressing against the socket 11, on which the stirrup articulates. When folded, the spring presses against the outer vertical flat side of the socket, thus keeping the stirrup against the pump by its pressure, and when the stirrup is moved down or opened the spring presses against the bottom of the socket, and thereby keeps the stirrup open and ready to receive the foot, by which the pump is held during the period of pumping.

The cap 12, which screws on the pump-cylinder, is provided with an integral nipple 13, having a male thread 14 at its upper end. The rod 2 slides in the center of the nipple. The rod is provided with a thread 2' at its upper end. 17 is a bolt to fasten rod to handle 16.

18 is a knurled bushing tapered outside toward the top, which bushing is screwed up or down on the rod 2 for the purpose more fully hereinafter explained.

The handle 16 is preferably cast hollow, the core being so arranged that two oppositely-placed projections 23 extend centrally some distance within the handle. One end of the handle is provided with a female thread 19, adapted to screw on the cap-nipple 14.

20 is a shoulder to act as a stop when handle is screwed down on the nipple.

On the inner or under side of the handle is a slot 21, extending at first parallel from the screw end, then widening out into a circular opening 22, and then ending in another circular opening 22', the latter being somewhat smaller in diameter than the former, as shown in Fig. 2. The object of these connecting-openings is seen in the several drawings and is explained as follows: When the handle is open, as shown in Fig. 3 in detail, and it is desired to fold it, the knurled bushing is screwed down on the rod just sufficiently so that when the handle is folded or pivoted on the rod the knurled edge of the bushing will pass through the opening 22 and permit the open end of the handle to be screwed into place on the cap-nipple. (See Fig. 2.) The taper part of the bushing is screwed up into the opening 22', when the handle is opened and the pump is ready for operation.

The operation, which has been partly described hereinbefore, is as follows: To use the pump, unscrew the handle from nipple 13, turn it to a position at right angles to the rod, and advance bushing 18 to hold handle in place, unfold stirrup, unscrew the male nipple 7 from its socket, connect it with the wagon-tire valve, (not shown,) and operate the sliding plunger-rod by means of the handle, as usual. When a sufficient pressure is had in the tire, unscrew nipple, replace it in the socket 8, back off the bushing 18, fold

handle, and when it is central or on a line with the rod screw it down on the cap-nipple. Fold up the foot-stirrup, and the pump can be laid at the back of the seat under the cushion, or it will lie in any corner without occupying much more room than the cylinder of the pump would.

The securing of the handle in the position shown in Fig. 2 not only renders the pump more compact, but prevents the rod 2 from being accidentally drawn out when the pump is not in use, and this feature is of importance, as if the rod should be accidentally drawn out or jarred out, so as to project from the cylinder, it would be in danger of being bent, thus rendering the pump useless.

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

1. In an air-pressure pump, a folding handle pivotally mounted on the plunger-rod, said handle being appropriately slotted on its lower side, and an adjustable bushing mounted on said plunger-rod to engage said handle, all constructed substantially as described.

2. In an air-pump the combination with a cylinder having a threaded nipple on its cap, of a piston-rod, and a handle pivotally attached to the piston-rod, and formed with a screw-threaded opening on one end adapted to engage said nipple.

3. In a pump the combination of a cylinder a piston-rod and piston, a handle pivotally attached to the piston-rod, means for securing the handle in a position at right angles to the rod, and means for attaching the handle to the cylinder when the handle is arranged in alignment with the rod.

4. In a pump, the combination with a cylinder, a piston and piston-rod, of a handle secured to the piston-rod and means for attaching the handle to the cylinder.

Signed at New York, in the county of New York, and State of New York, this 28th day of January, A. D. 1904.

GASTON E. CORDEAU.

Witnesses:

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