H. O. HARRISON.

FOOT PUMP.

APPLICATION FILED JUNE 28, 1909.

956,703. Patented May 3, 1910.

Fig. 1.

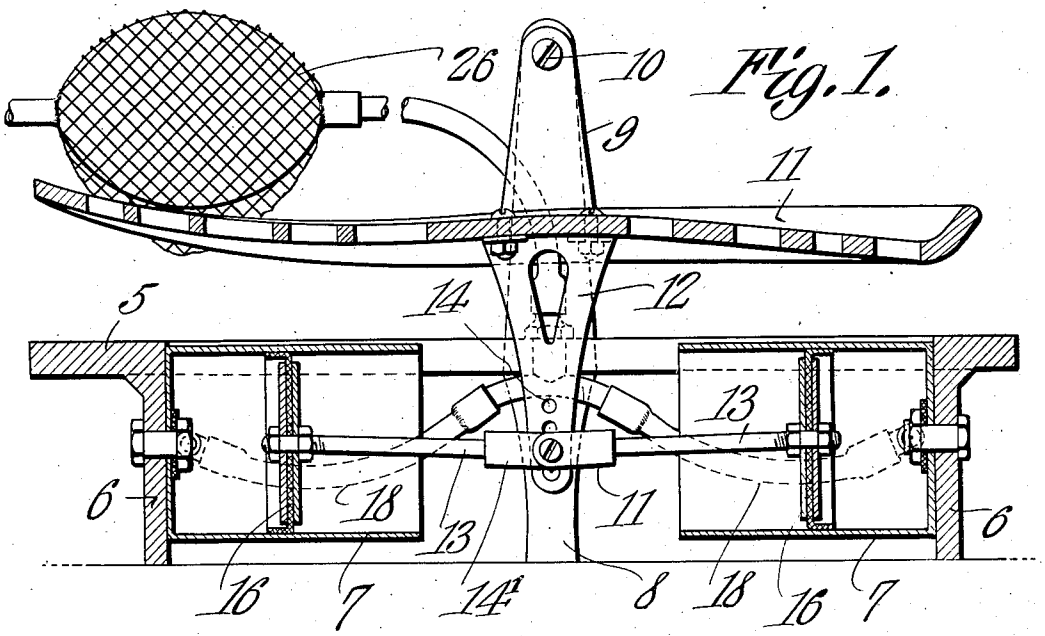


Fig. 2.

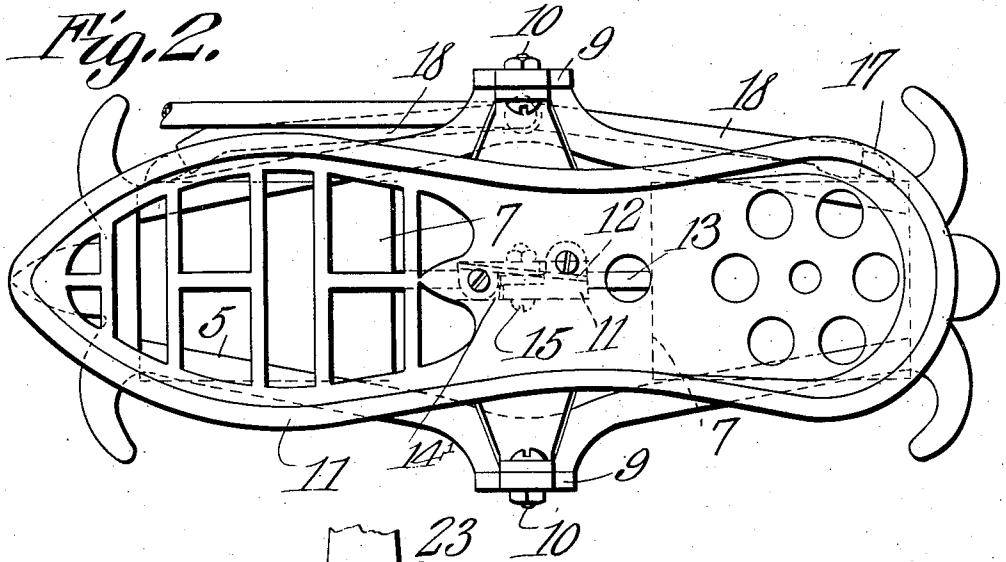
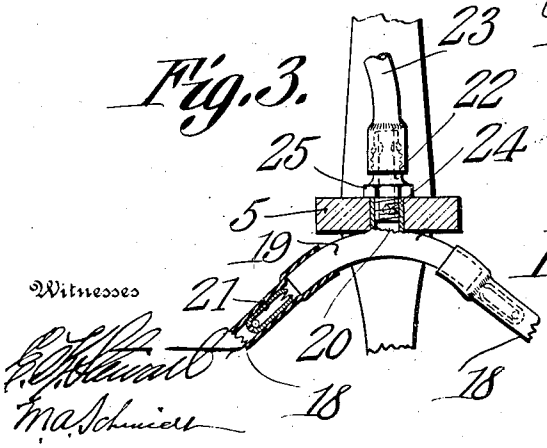


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HARRY OLIVER HARRISON, OF WICHITA, KANSAS.

FOOT-PUMP.

956,703. Specification of Letters Patent. Patented May 3, 1910.

Application filed June 28, 1909. Serial No. 504,838.

To all whom it may concern:

Be it known that I, HARRY O. HARRISON, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented a new and useful Foot-Pump, of which the following is a specification.

This invention has for its object to provide a foot-operated pump for supplying air to a blow-pipe, atomizer, or other air-blast device, and furthermore to provide a pump of this kind which is simple in structure, and easy to operate, and which will produce a continuous current of air.

With these objects in view the invention consists in a novel construction and arrangement of parts, to be hereinafter described and claimed, reference being had to the drawing hereto annexed, in which:—

Figure 1 is a side elevation of the pump, partly in section. Fig. 2 is a plan view. Fig. 3 is a sectional detail on the line 3—3 of Fig. 2.

In the drawing 5 denotes a base on which the pump mechanism is mounted. The base is of skeleton form, and has at its ends depending flanges 6, to which the pump cylinders 7 are bolted or otherwise rigidly secured. Intermediate its ends, the base is formed with feet 8, on which it is supported a suitable distance above the floor, so that the cylinders may clear the same. The flanges 6 also serve to support the base.

From the base, on opposite sides thereof, rise standards 9, to which is pivoted at 10 a treadle 11. To the bottom of the treadle is bolted or otherwise fastened, a depending bracket arm 12, which is connected at its lower end to the piston rod 13, there being a series of openings 14 in the arm for the purpose of adjustment. The outer ends of the piston rods are fitted with heads 14′, which are halved, the arm 12 being received therebetween and secured by a bolt 15 extending transversely through said halved portions and through one of the openings 14′. The rods 13 are connected to pistons 16 working in the respective cylinders 7, the front ends of the cylinders being open and facing each other.

Upon operating the treadle 11 the bracket arm 12 is oscillated, and, by reason of its connection with the piston rods, the pistons will be reciprocated in the cylinders, one piston making a suction stroke, while the other piston is expelling the air.

The outlet from the cylinders is by nipples 17 fitted thereto and connected by flexible tubes 18 to the two branches 19 of a pipe 20. In the tubes 18 are check valves 21. The pipe 20 is connected to the casing of another check valve 22, from which a tube 23 leads to a reservoir.

The check-valves 21 are short metal tubes containing a ball valve, said tubes being open at both ends, one end being the seat of the ball, and the other end being contracted to prevent the ball from coming out of the tube, there being side openings in the last mentioned end through which the air escapes. The tubes 18 are preferably of rubber, and the valves 21 fit snugly therein, they being held in place by frictional contact with the inner surface of said tubes.

The valve 22 is mounted in an opening made in the base 5 and has at one of its ends a screw-threaded portion 24 which screws into the pipe 20, and at its opposite end is a nipple whereby connection with the tube 23 is made, the latter also being of rubber. Intermediate these points the valve casing has an enlargement 25, which is engageable with the top of the base 5 when said valve is in place. The outer surface of this enlargement is angular, in order that it may be readily taken hold of to screw the valve into the pipe 20. It will be noted that the check valve 22 is located ahead of the check valve 21 or between said check valve 21 and the reservoir, whereby a return flow of the air is prevented.

The reservoir may be a rubber bulb 26, covered with a netting to limit the extent of its inflation, and the reservoir is connected by means of a pipe or tubing to the blow-pipe, atomizer, or other air-blast device.

What is claimed is:—

An air pump comprising a base having depending flanges at its ends whereby it is supported above the floor, axially alined cylinders secured to the flanges, a piston working in each cylinder, rods connected to the

pistons, standards rising from the base intermediate its ends, a treadle mounted between the standards, and pivotally connected thereto, a depending bracket arm on the treadle, and a connection between the said bracket arm and the outer ends of the piston rods.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY OLIVER HARRISON.

Witnesses:
L. W. MINICK,
D. S. GARDNER.