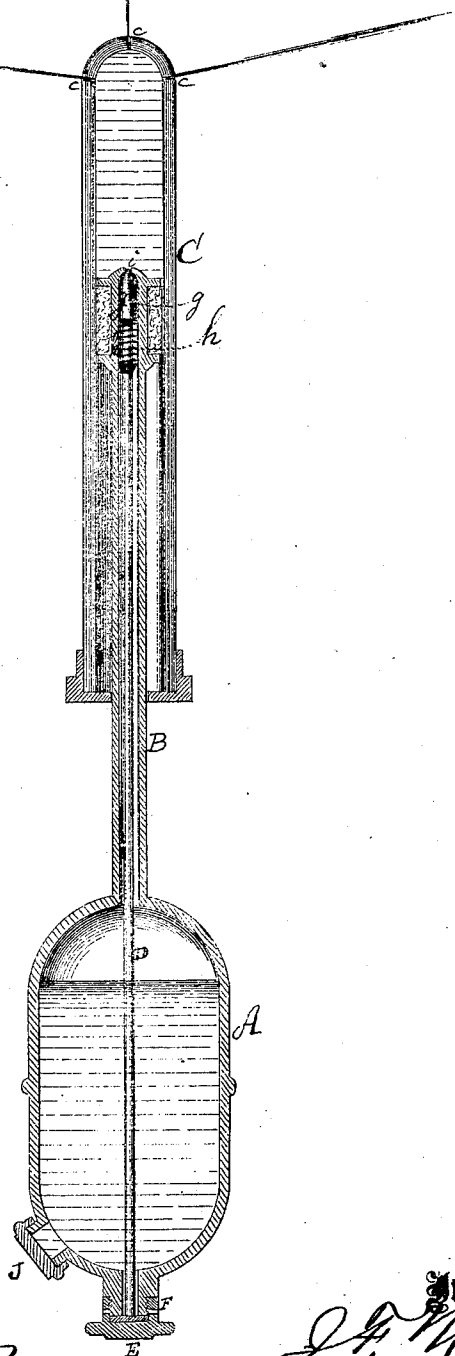


J. F. M^c Millen. Syringe.

Nº 94328

PATENTED
AUG 31 1869



Witnesses:

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United States Patent Office.

JAMES F. McMILLEN, OF MANSFIELD, OHIO.

Letters Patent No. 94,328, dated August 31, 1869.

IMPROVED SYRINGE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES F. McMILLEN, of Mansfield, in the county of Richland, and State of Ohio, have invented a new and useful Improvement in Syringes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to a new and useful improvement in syringes, to be used in the practice of medicine and surgery; and consists in the method of filling the barrel of the syringe, and so constructing the instrument, that while the barrel may be supplied with the liquid from a reservoir, by means of a tubular plunger, the syringe may be used for receiving and discharging the liquid, the same as an ordinary plunger-syringe.

The accompanying drawing represents a longitudinal section of a syringe constructed according to my invention.

Similar letters of reference indicate corresponding parts.

The syringe may be made of either metal or vulcanized rubber, or of any other suitable material, and the feature which distinguishes it from the common plunger-syringe is the reservoir A, which forms the handle of the plunger.

B is the plunger-rod, which is a tube, with a suitably-packed head on its end, so that it works air-tight in the barrel.

C is the barrel or discharge-tube of the syringe.

This barrel is pierced with any desired number of small orifices for the discharge of the liquid, or for admitting the liquid when it is used, like the common plunger-syringe, as seen at c.

D is a rod, with a head, E, on its end, which screws into the end of the plunger-handle, as seen at F, the same being provided with elastic or other suitable packing, for making a tight joint, when the head is screwed in.

There are air-holes through this head, which will admit air when the head is partially unscrewed or drawn back.

At the other end of the rod there is a loose valve, g, which closes the aperture through the tubular plunger-rod B, when the rod is screwed in.

Behind the valve g is a spiral spring, h, which bears against the valve at one end, and against a collar or shoulder on the rod, which spring serves to force the valve forward, so as to close the aperture i, at the end of the plunger-tube.

The elasticity of the valve should be but slight, so that when the rod is partially unscrewed the valve will be drawn back from i.

The liquid being introduced into the reservoir A, through the orifice J, will, when the rod D is unscrewed or drawn back, allow air to enter the reservoir through the holes in the head E.

The liquid thus placed in communication with the atmosphere, and subject to atmospheric pressure, will be forced through the tubular plunger D into the barrel C, from whence it may be discharged by operating the plunger in the ordinary manner, the rod being first screwed in, so as to close the orifice i in the plunger.

By this arrangement any desired injecting liquid may be placed in the reservoir, sufficient in quantity for many applications, while the syringe is at all times in readiness to be used as an ordinary plunger-syringe.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

In combination with a plunger-syringe, the reservoir A, the tubular plunger-rod B, and rod D, with the valve g, and spring h, arranged and operating substantially as described, for the purposes set forth.

The above specification of my invention signed by me, this 15th day of June, 1869.

J. F. McMILLEN.

Witnesses:

FRANK BLOCKLEY,
ALEX. F. ROBERTS.