

(No Model.)

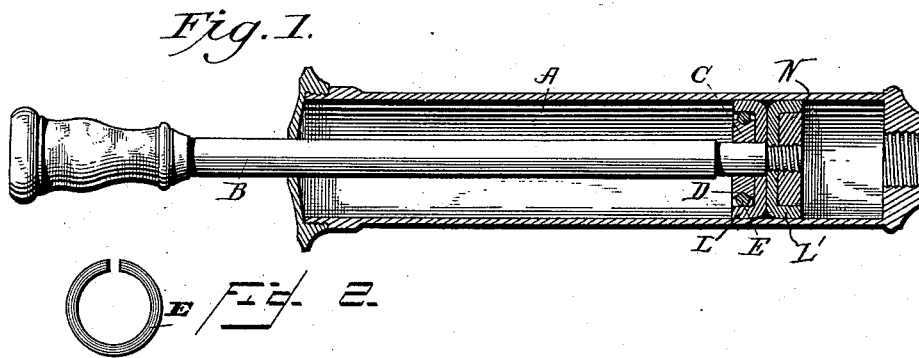
A. W. BRINKERHOFF, Dec'd.

M. H. & W. C. BRINKERHOFF, Executors.

SYRINGE.

No. 383,940.

Patented June 5, 1888.



WITNESSES.

D. Fugitt,
P. C. Masi.

INVENTOR.

A. W. Brinkerhoff,
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ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALEXANDER W. BRINKERHOFF, OF UPPER SANDUSKY, OHIO; MILFORD H. BRINKERHOFF AND WILLIE C. BRINKERHOFF EXECUTORS OF SAID ALEXANDER W. BRINKERHOFF, DECEASED.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 383,940, dated June 5, 1888.

Application filed November 16, 1886. Serial No. 219,055. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER W. BRINKERHOFF, a citizen of the United States, and a resident of Upper Sandusky, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Syringes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 is a longitudinal sectional view showing the piston-rod in full lines, and Fig. 2 is a view of the open metallic yielding ring employed in this construction.

The invention relates to syringes; and it consists in the construction and novel combination of parts, as hereinafter set forth and claimed.

It is well known that syringes, as usually constructed, after considerable use, become comparatively worthless, for the reason that the rubber collar which is designed to force the leather valve outward becomes worn or loses its elasticity. To provide against this difficulty, I have arranged a groove in the rubber collar and have placed therein an open yielding metal ring, which, when it becomes worn or otherwise becomes inoperative, may be replaced by another.

Referring by letter to the accompanying drawings, A designates the barrel of a syringe. B is the piston, and C a collar in which an en-

circling groove, D, is made. In this groove D, I place an open yielding metal ring, E, which provides for the requisite resiliency between the leather L and the collar C, and automatically forces the leather L outwardly against the inner periphery of the barrel of the syringe. The collar C is slipped on the shouldered end of the piston-rod B, and the inner end of the piston-rod is shouldered and threaded to receive a circular nut, N, which nut secures the collar C and leathers L L' in place.

It is obvious that in case the metal ring E becomes worn or loses its elasticity by prolonged use a new ring can be substituted therefor, and thereby the syringe may be made operative again at a trifling expense.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In a syringe, the combination, with the barrel A, of the piston-rod having the shouldered and threaded inner end, the collar C, having an encircling groove, the open yielding metal ring E within the encircling groove, the leathers L and L', and the circular locking-nut on the threaded inner end of the piston-rod, substantially as specified.

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

ALEXANDER W. BRINKERHOFF.

Witnesses:

M. H. BRINKERHOFF,
W. F. POOL.