

(No Model.)

F. A. REICHARDT.

SYRINGE FOR HYPODERMIC INJECTIONS.

No. 330,621.

Patented Nov. 17, 1885.

Fig. 1.

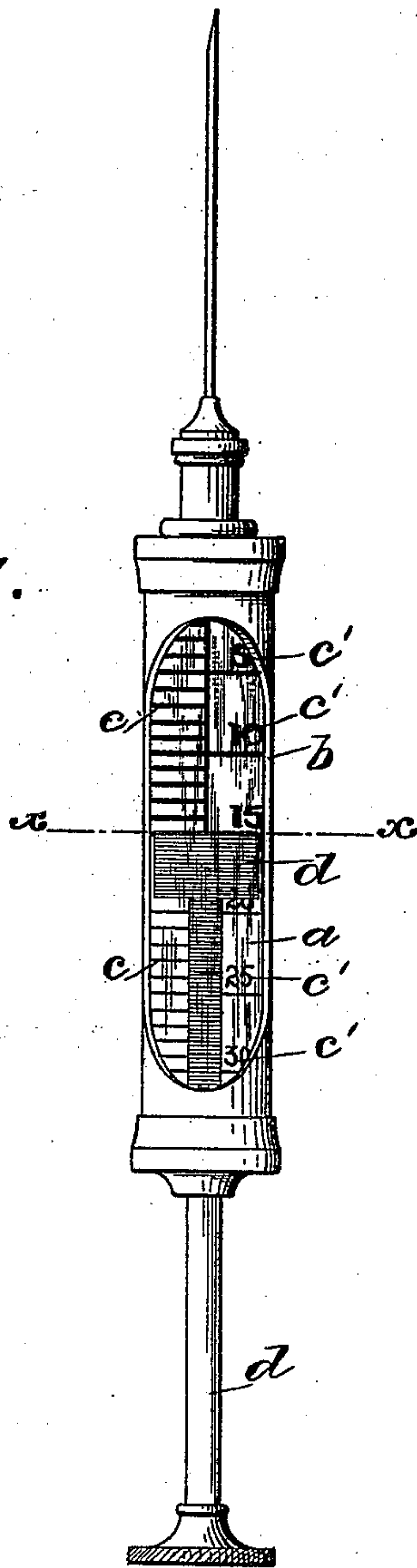
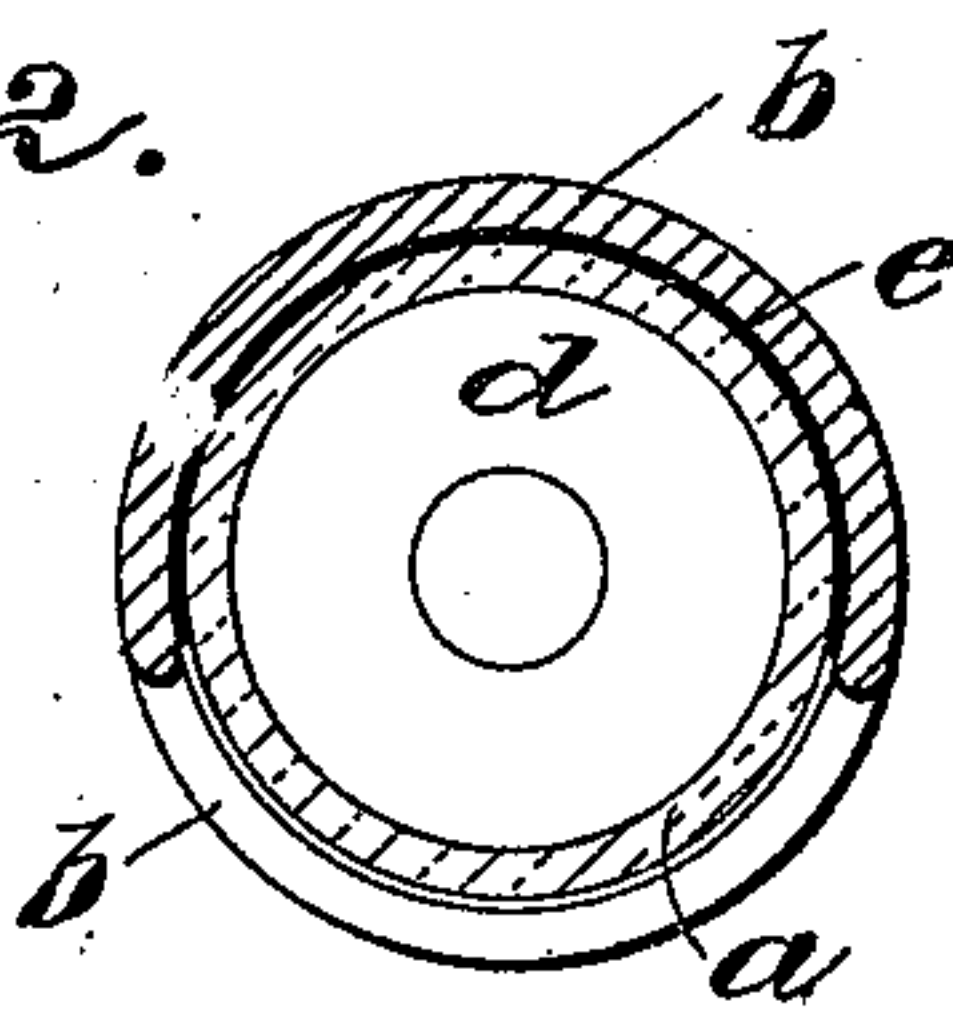


Fig. 2.



WITNESSES:

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SYRINGE FOR HYPODERMIC INJECTIONS.

SPECIFICATION forming part of Letters Patent No. 330,621, dated November 17, 1885.

Application filed December 12, 1884. Serial No. 150,181. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND A. REICHARDT, of Elizabeth, in the county of Union and State of New Jersey, have invented new and useful Improvements in Measuring-Syringes, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 represents a front elevation, and Fig. 2 a cross-section through the line *xx* of Fig. 1.

a in the accompanying drawings represents the tube of the syringe, of glass set in a metallic casing, *b*, one side of which casing being cut away, so as to expose to view the lines of graduation *c* and figures *c'* upon the transparent tube *a*, to be readily seen in using the instrument. The graduation-lines *c* and figures *c'* are placed in this construction at the back of the transparent tube *a*, and are covered by the outer casing, *b*, so that the figures *c'* appear separate and distinct from each other, and may be easily read; but the graduation-marks *c* are of sufficient length so that when the tube is filled or partially filled with liquid these lines below the piston-head *d*, magnified by the liquid and refracted, will appear as though they extended entirely around the transparent tubes to clearly and distinctly define the quantity of liquid being used. By this arrangement it will be understood that the lines of graduation below the piston-head

d will be magnified and appear to extend, as hereinbefore described, all the way around the transparent tube *a*, while the graduation-lines above the piston *d* will not be magnified and, not being refracted, will not appear as though extending entirely around the transparent tube *c*, behind or upon which they are placed or engraved. By incasing the glass tube *c* of this syringe in an outer metallic casing, *b*, having an opening through its front side, as represented in the drawings, and placing the graduating lines and figures at the back of the transparent tube *c*, the graduating lines and figures below, magnified by the liquid, are effectually cut off and separated by the piston-head *d* from the lines and figures above it, which are not magnified. This construction and arrangement are believed to be preferable, as it is of the highest importance to guard against errors in measurement in administering medicines in this manner.

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

As a new article of manufacture, a transparent syringe having lines of graduation and figures thereon placed at the back of the syringe, an outer casing, *b*, with an opening through which these graduating lines and figures may be seen, and the piston-head *d*, as and for the purposes herein set forth.

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Witnesses:

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