

E. CUTTER.
Hypodermic Syringes.

No. 144,661.

Patented Nov. 18, 1873.

Fig. 1.

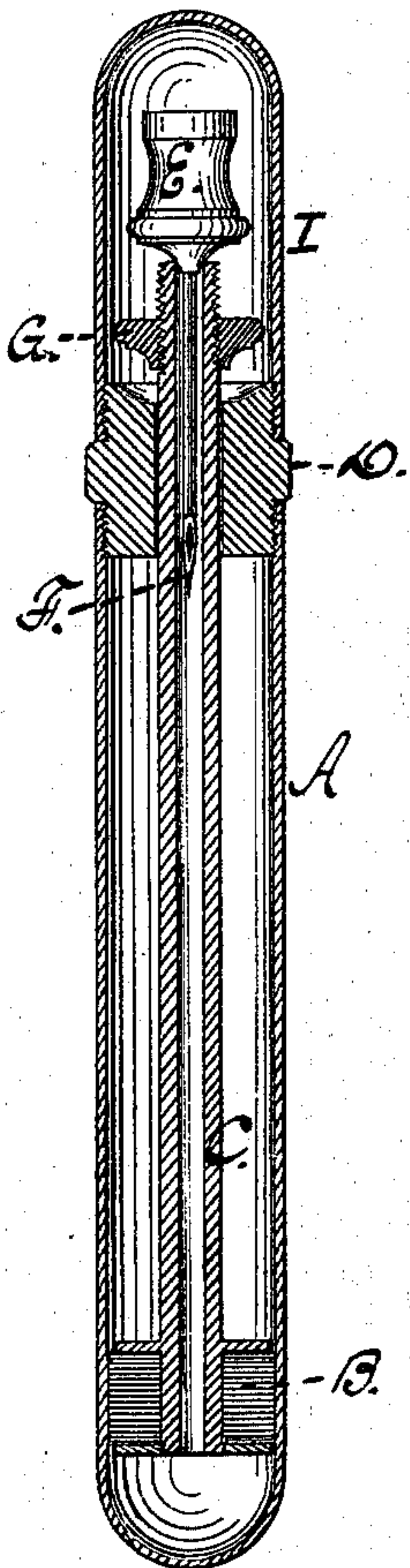
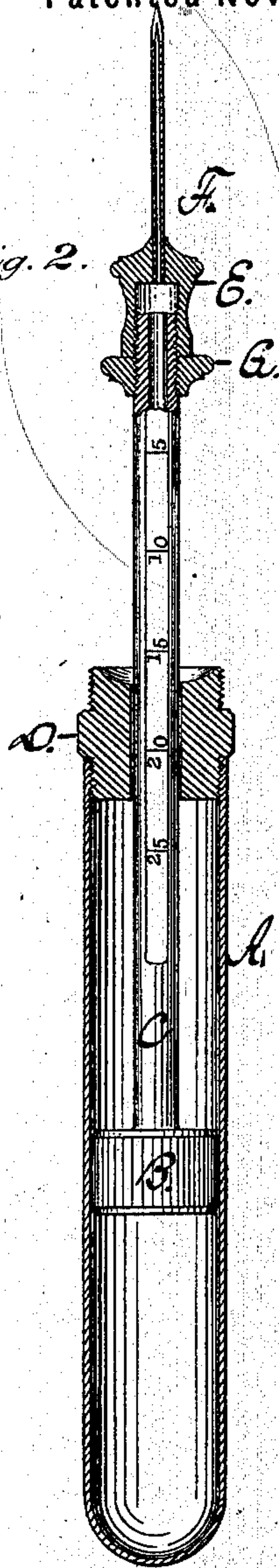


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

EPHRAIM CUTTER, OF WOBURN, MASSACHUSETTS.

IMPROVEMENT IN HYPODERMIC SYRINGES.

Specification forming part of Letters Patent No. **144,661**, dated November 18, 1873; application filed October 29, 1873.

To all whom it may concern:

Be it known that I, EPHRAIM CUTTER, of Woburn, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Hypodermic Syringes, of which the following is a specification:

This invention relates to an improvement in that class of syringes which are employed for subcutaneous injections in order to produce local anæsthesia, or generally, for injecting medicated liquids under the skin in the treatment of special diseases.

The invention further consists in making the probe or needle detachable from the piston-rod, so as to enable the same to be reversed and inserted into the hollow rod when the instrument is not in use, thus diminishing the length of the same, and enabling a short covering-cap to be applied to the syringe-barrel.

In the drawings, Figure 1 represents the syringe with the probe reversed and the covering-cap applied. Fig. 2 illustrates the parts of the syringe when ready for use.

The syringe barrel or cylinder, designated by the letter A, is generally of a non-oxidizable metal, or of glass, or other suitable material, and is closed at its lower end, as shown, differing, in this respect, from the syringe heretofore known, in which the barrel is perforated for the passage of the piston-rod. B represents the piston or plunger, fitted in the barrel A, and provided with a stem or rod, C, which passes through a perforated screw-threaded head, D, applied to the open end of the syringe-barrel. The piston is centrally perforated, and the rod or stem is made tubular for the passage of the liquid which is to be injected. The upper end of the piston-rod is provided with an external screw-thread for the application of the internally screw-threaded-socket or enlarged base E of the needle or probe F. The needle or probe is made tubular, and is provided with an opening near its point for the discharge of the liquid. A col-

lar, G, applied to the screw-threaded portion of the piston-rod, serves as a support for the needle or probe, as shown.

In practice, or when the syringe is in use, the barrel is partially filled with the medicinal solution or other agent to be injected, the piston being then drawn to the upper end of the barrel, as shown in Fig. 2, and the probe inserted under the skin of the patient. By sliding the barrel upon the piston-rod the liquid contained in the same will be projected in a regular stream, through the tubular rod and probe, into the areolar tissue beneath the skin, the quantity of the liquid injected being determined or measured by a graduated index or scale formed on the piston-rod.

When the syringe is not in use the probe is detached from the piston-rod, and it is then reversed and inserted into the bore of the rod, as shown in Fig. 1. A cap or closed ferrule, I, is then applied to the screw-threaded head of the piston-barrel, thus preventing the loss or injury of the probe, and enabling the instrument to be carried about the person; and especially adapted to be carried in the pocket-case of medicines, being designed to occupy the space of the ordinary vial carried in the case.

I claim as my invention—

1. A hypodermic syringe, composed of the barrel A, piston B, and tubular piston-rod C, carrying a hollow probe or needle, F, all combined, substantially as described, for the purpose set forth.

2. In combination with the barrel A and probe F, the covering-cap I, applied as shown, for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of October, 1873.

EPHRAIM CUTTER.

Witnesses:

FRANCIS P. CHUTE,
LEWIS L. WHITNEY.