

American Veterinary Medical History Society

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Vintage Veterinary Instrument #8

All Glass Syringe



This all glass syringe was first made approximately in the 1920s. Shown is an Ideal Lock all-glass 5-cc. hypodermic syringe produced by East Rutherford Syringes, Inc. of New Jersey, but that's not the whole story. The history of syringes goes back much further.



While the concept dated to Galen and even earlier, the modern syringe is thought to have originated in 15th-century Italy, although it took several centuries for the device to be developed.

In 1853, Scottish physician Alexander Wood (1817-1884) invented the first hypodermic needle that used a true syringe and hollow needle for subcutaneous injections. It was first used only for administering morphia and preparations of opium, but wider applications soon became obvious. At the same time, French orthopedic surgeon Charles Gabriel Pravaz (1791-1853) from Lyon also invented a hypodermic syringe which quickly came into use in many surgeries and was called the Pravaz Syringe. Thus, both doctors invented the hypodermic syringe independently about the same time.

Early syringes were made of metal or had metal parts, making this Wood syringe an amazing development for 1920 as it was completely made of glass. The barrel and plunger were carefully ground to make a perfect seal. This syringe was made to have an exact fit. A four-digit serial number identified each set produced.

Because these early syringes were reusable, it was necessary to disinfect them in a boiling water bath or steam autoclave after each use. Needles also would become dull over time and needed to be sharpened, often by rubbing on a cork stopper. Disposable items would not come into general use until the 1950s.

A Brief Timeline of Disposable Syringes

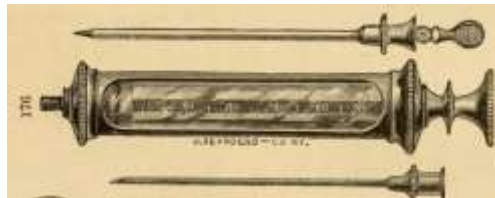
- Arthur E. Smith received eight US patents for disposable syringes in 1949 and 1950.
- In 1954, Becton, Dickinson and Company created the first mass-produced disposable syringe and needle produced in glass. It was developed for Dr. Jonas Salk's mass administration of the new Salk polio vaccine for one million American children.
- Roehr Products introduced a plastic disposable hypodermic syringe called the Monoject in 1955.
- Colin Murdoch, a pharmacist from Timaru, New Zealand, patented a plastic disposable syringe to replace the glass syringe in 1956. Murdoch patented a total of 46 inventions, including a silent burglar alarm, automatic syringes for vaccinating animals, the childproof bottle top, and the tranquilizer gun.
- In 1961, Becton Dickinson introduced its first plastic disposable syringe, the Plastipak.

Although initially developed for human use, veterinarians likely quickly adopted them for various purposes. For example, syringes were listed for sale in 19th century veterinary equipment catalogs, such as in 1881 (shown next).

Additional Reading:

Kravetz RE. Hypodermic syringe. *Am J Gastroenterol*. 2005 Dec;100(12):2614-5.

Van Itallie PH. History of syringes and injection therapy. *South Dakota J Med*. 1965 Jan;18:34-7. *Internet Archive*, <https://archive.org/details/southdakotajourn1819sout>



“Hypodermic syringe, glass barrel, covered with fenestrated metal protection, with one fine trocar and cannula, one needle, 1 vial; in morocco [leather] case. \$5.00” From: Veterinary instrument catalog of John Reynders & Co., New York City, 1881, Plate XV, pg.34.

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