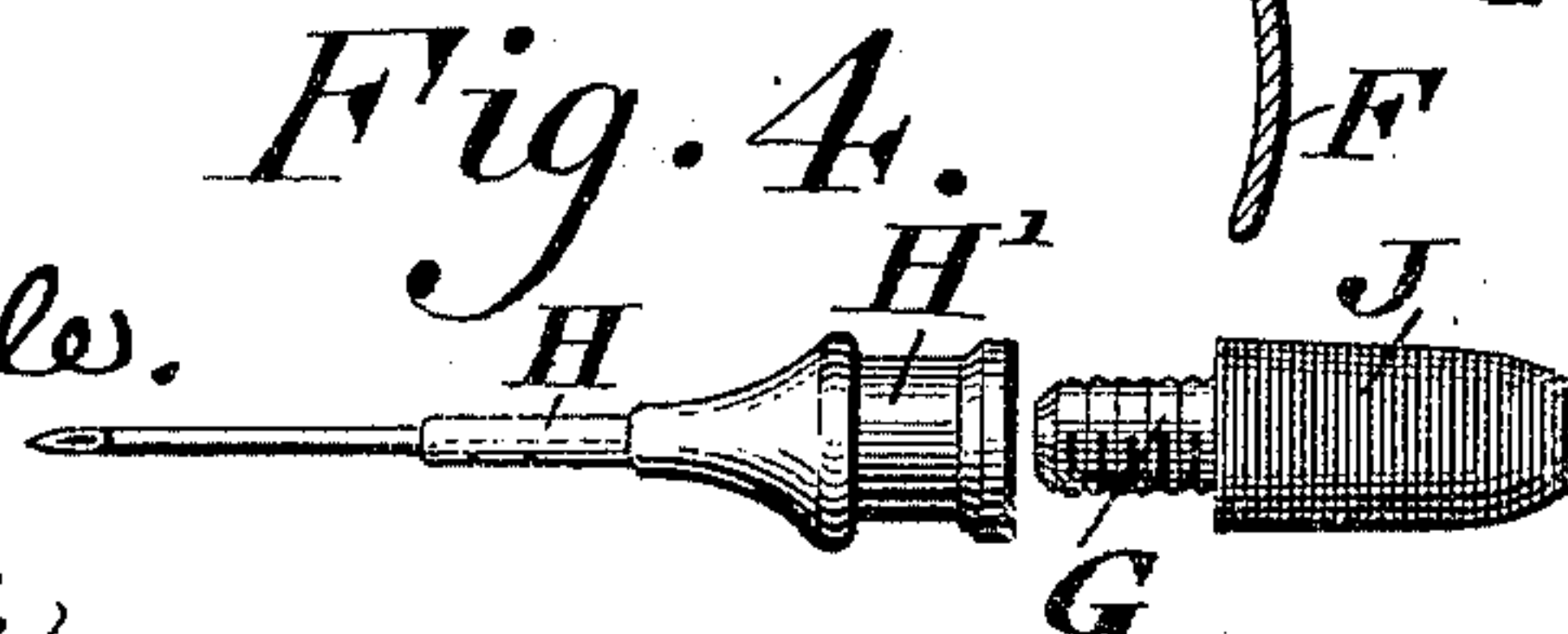
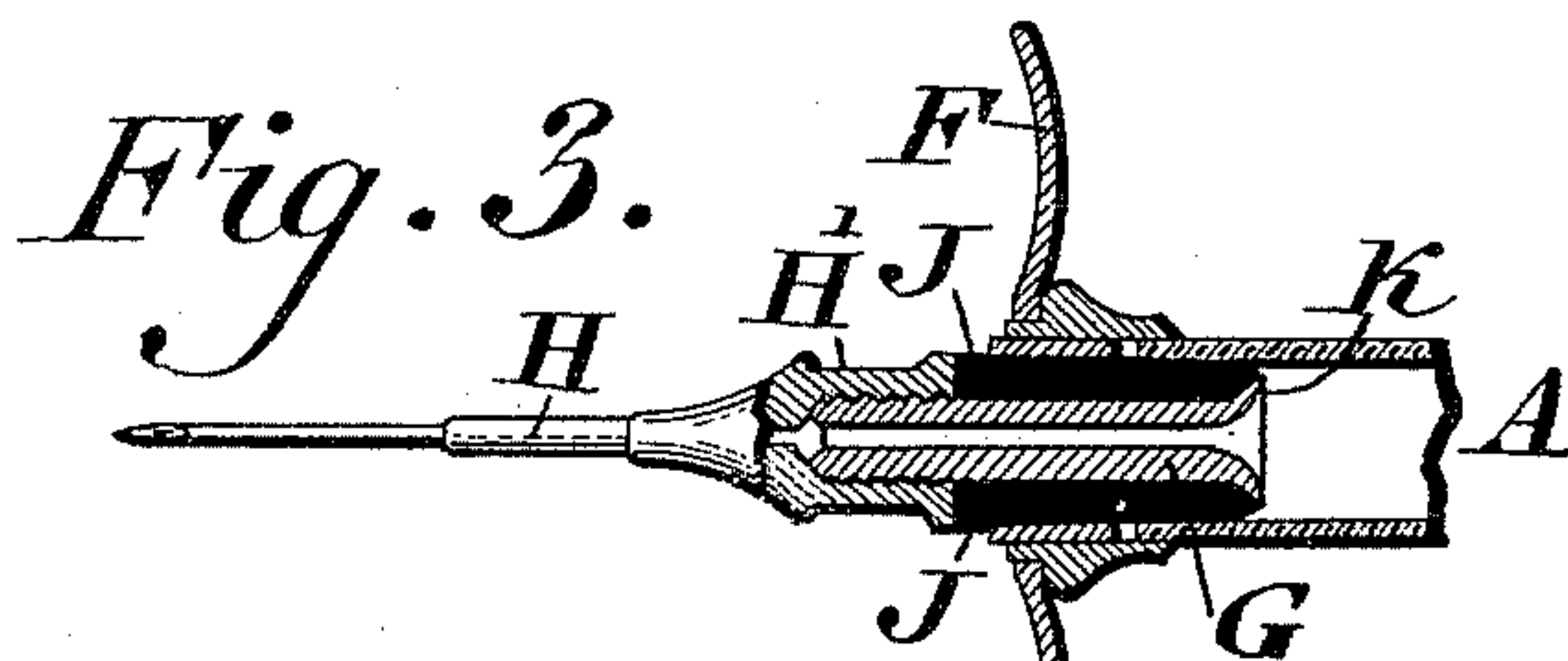
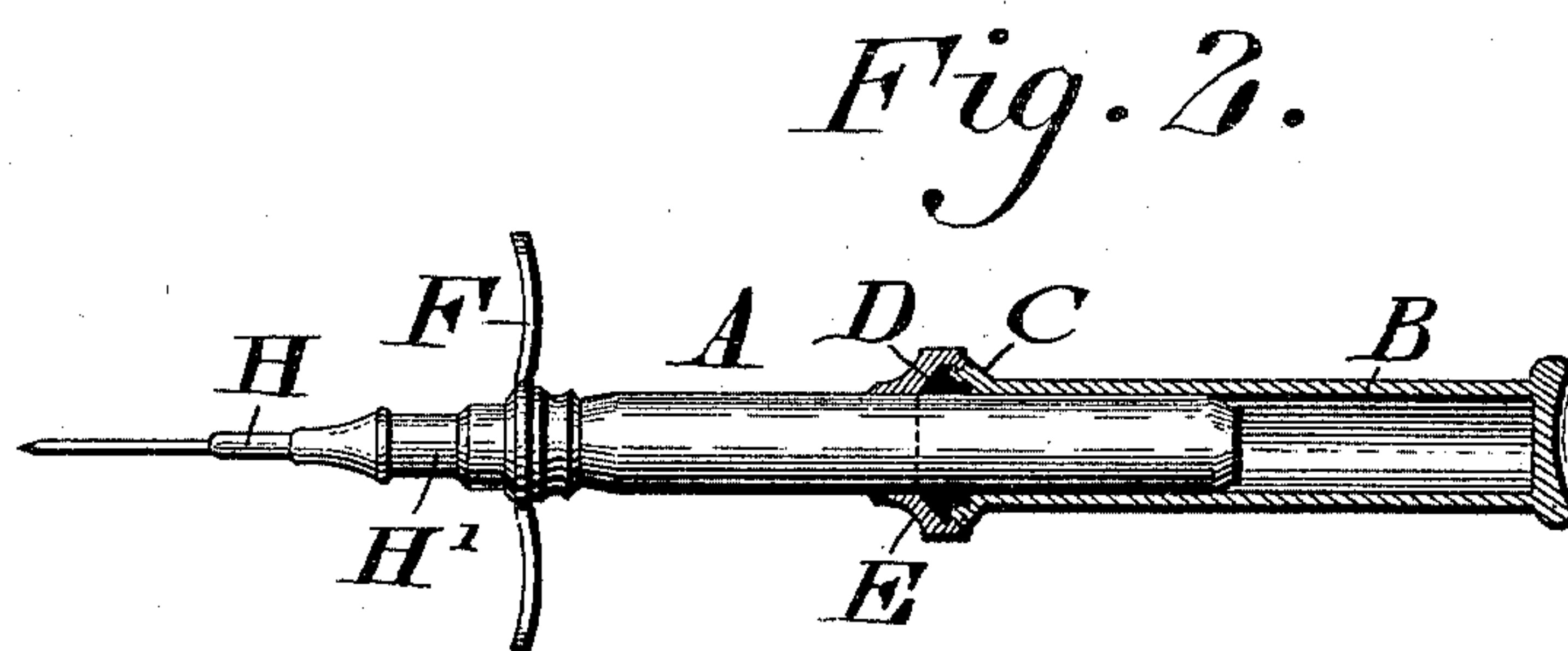
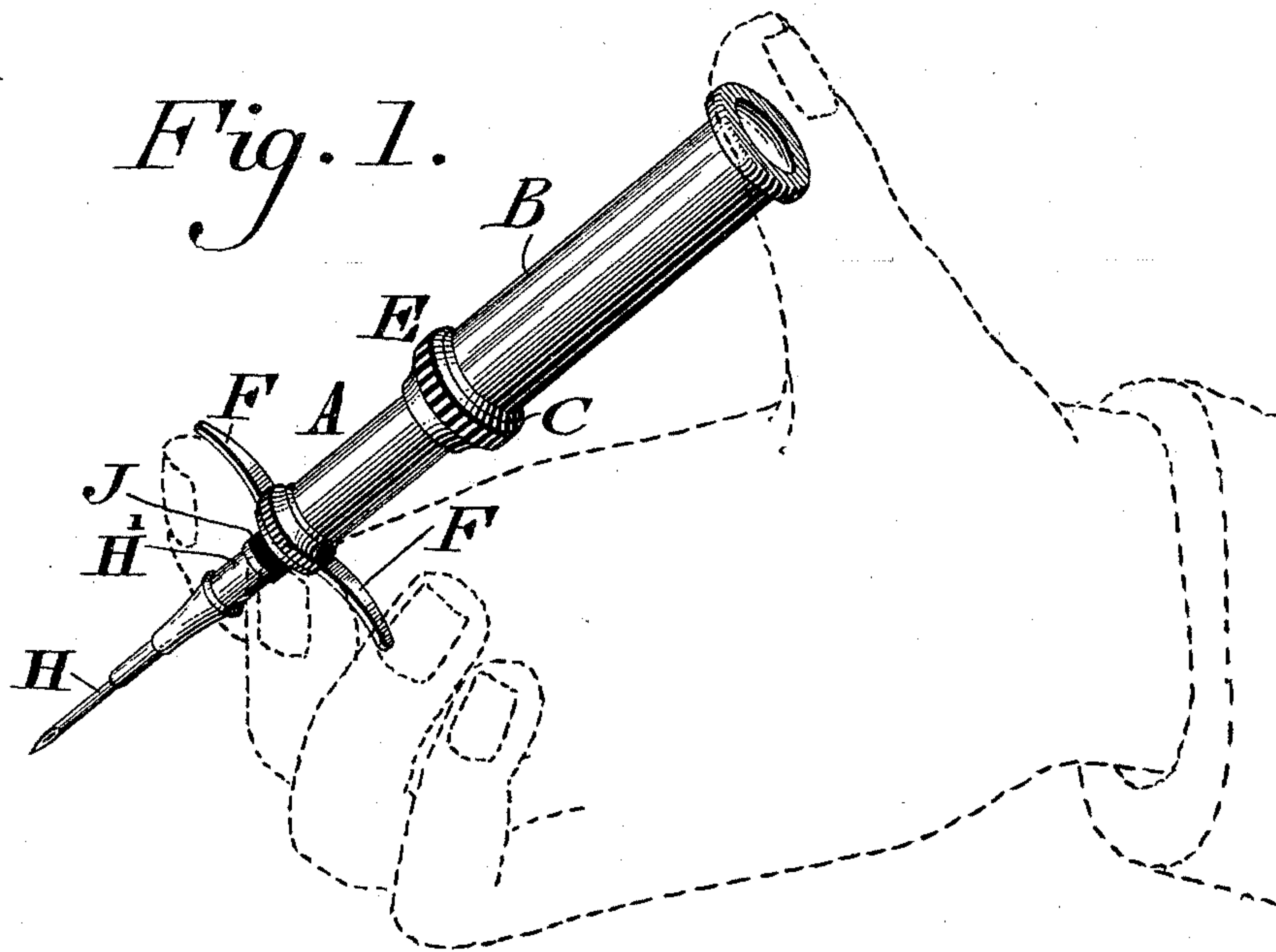


(No Model.)

C. J. PILLING & A. J. McKEE.  
HYPODERMIC SYRINGE.

No. 509,676.

Patented Nov. 28, 1893.



WITNESSES:

P. H. Bagley.  
L. Douville

INVENTORS.  
Charles J. Pilling.  
Albert J. McKee.  
BY  
J. A. Diersheim.  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

CHARLES J. PILLING, OF PHILADELPHIA, AND ALBERT J. MCKEE, OF MOORE,  
PENNSYLVANIA.

## HYPODERMIC SYRINGE.

SPECIFICATION forming part of Letters Patent No. 509,676, dated November 28, 1893.

Application filed June 15, 1893. Serial No. 477,637. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES J. PILLING, residing in the city and county of Philadelphia, and ALBERT J. MCKEE, residing at Moore, in the county of Delaware, State of Pennsylvania, citizens of the United States, have invented a new and useful Improvement in Hypodermic, Aspirating, and other Syringes, which improvement is fully set forth in the following specification and accompanying drawings.

Our invention consists of a syringe formed of a barrel, and an exterior suction cylinder which is movable thereon, whereby an interior plunger is dispensed with, together with packing and novel means for holding and compressing the same so as to form a tight joint between the parts, as will be hereinafter set forth.

It further consists of novel means for firmly attaching a pipe, tube or needle to the barrel, as will be hereinafter set forth.

Figure 1 represents a perspective view of a syringe embodying our invention. Fig. 2 represents a partial longitudinal section and partial side elevation thereof. Fig. 3 represents a partial section and partial side elevation of a portion on an enlarged scale. Fig. 4 represents a side elevation of detached portions on the scale of Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a barrel, and B designates a suction cylinder which is fitted on the exterior thereof. At the forward end of said cylinder is a recessed shoulder C, in which is placed packing D, and screwed to said shoulder is a recessed cap or sleeve E, which when tightened on the shoulder, compresses the packing and forces it against the barrel A, thus providing a tight joint between the barrel and cylinder, and preventing leakage thereat. Connected with the front end of the barrel are projecting arms F upon which the fingers are rested while the syringe is being operated. Within said end is a tubular plug G which forms a communication between

the hollow or tubular needle H, and the interior of the barrel, said needle being screwed to the plug, and having its head or collar H' bearing against the packing J, which is interposed between the plug and barrel, the rear end of the plug being flaring or having a shoulder K, which abuts against said packing J, and is thus prevented from slipping therethrough. It will be seen that when the needle is tightened against the packing, the latter is compressed against the barrel and plug, thus forming a tight joint at said parts, and preventing leakage thereat.

The operation is as follows: The cylinder is pulled out, whereby the fluid is drawn through the needle H, and so enters the barrel. The needle is now located and when the cylinder is returned, the fluid is thereby forced through the barrel into the place intended, it being evident that the syringe may be easily operated, and if desired held in one hand and manipulated by the same, as will be seen in Fig. 1.

When the packing D requires renewing, the sleeve E is unscrewed, said packing removed and new packing applied, after which the sleeve is again secured to the shoulder C and the packing is retained in position and compressed, while it is entirely concealed by the shoulder and sleeve which encircle the same.

The barrel A is preferably formed of glass or other transparent material, so that the contents of the same may be readily seen, it being also noticed that the interior of the barrel and cylinder is left free and clear for the reception of a medicament, which may be in either fluid or powder form, and that in lieu of the needle H I may employ a pipe or tube according to the service required, whether for medical, surgical, dental, veterinary or other purposes.

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

1. A syringe having a barrel, a suction cylinder movable on said barrel, and having a shoulder at its forward end, a sleeve on

said barrel and adjustably secured to said shoulder, and packing between said sleeve and shoulder, said parts being combined substantially as described.

- 5 2. A syringe having a barrel, a tubular plug within said barrel, packing between said plug and barrel, and a needle with a collar secured on said plug and bearing against the

front end of said packing, said parts being combined substantially as described.

CHARLES J. PILLING.  
ALBERT J. McKEE.

Witnesses:

JOHN A. WIEDERSHEIM,  
A. P. JENNINGS.