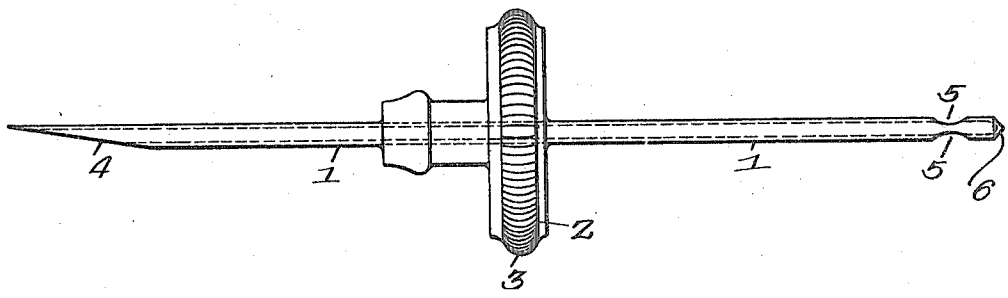
H. K. MULFORD.

HYPODERMIC NEEDLE.

APPLICATION FILED JULY 28, 1914.

1,263,793. Patented Apr. 23, 1918.




Witnesses.—
Willis A. Burrows.
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# UNITED STATES PATENT OFFICE.

HARRY K. MULFORD, OF WAYNE, PENNSYLVANIA, ASSIGNOR TO H. K. MULFORD COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## HYPODERMIC NEEDLE.

1,263,793. Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed July 28, 1914. Serial No. 853,588.

*To all whom it may concern:*

Be it known that I, HARRY K. MULFORD, a citizen of the United States, residing in Wayne, Delaware county, State of Pennsylvania, have invented certain Improvements in Hypodermic Needles, of which the following is a specification.

One object of my invention is to provide a novel form of hypodermic needle particularly of the type employed in connection with the administration of antitoxin or other serums, which shall be of such construction as to permit of its being easily cleaned and at the same time have its parts so formed as to minimize the likelihood of its wrong end being accidentally inserted in the serum or other container in which it is used.

These objects and other advantageous ends I secure as hereinafter set forth, reference being had to the accompanying drawings, in which:

The figure is a side elevation of a hypodermic needle constructed according to my invention.

In the above drawings 1 represents the tubular body of the needle which at or adjacent its central portion is provided with an enlarged disk-like flange 2 having a milled peripheral portion 3 to facilitate its being grasped and held. One end of the needle is cut off at a relatively acute angle to form a sharply beveled point 4, while the opposite end is closed, although adjacent it the needle has two oppositely placed side openings 5. It is noted that the closed end is formed with a relatively blunt extremity 6 and under conditions of use is designed for insertion through the stopper or sealed end of a serum or other container, the needle being forced through the stopper for a sufficient distance to permit the side openings 5—5 to open within the container and receive the liquid therefrom when this is forced out.

In using the needle it is grasped by its central enlargement 2 and its relatively blunt end is forced through the stopper in one of the closed or sealed ends of a container from which the serum or other liquid is forced, either by a piston or by air under pressure, out through the needle whose pointed end is designed to be inserted in the patient in the well known manner.

The form of my invention shown possesses the advantage that the small piece of material punched from the stopper or seal by the insertion of the needle cannot enter the passage of the latter owing to the disposition of the openings in the side, and while the extremity 6 is shown as bluntly pointed, it obviously may be rounded or made in some other blunt form without departing from my invention.

I claim;—

A hypodermic needle in the form of a tube pointed at one end and relatively blunt at the opposite end, said blunt end being formed with two oppositely disposed outwardly flaring depressions opening into the channel of the needle adjacent its blunt extremity.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HARRY K. MULFORD.

Witnesses:
ARTHUR J. PURSSELL,
WILLIAM E. BRADLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."