

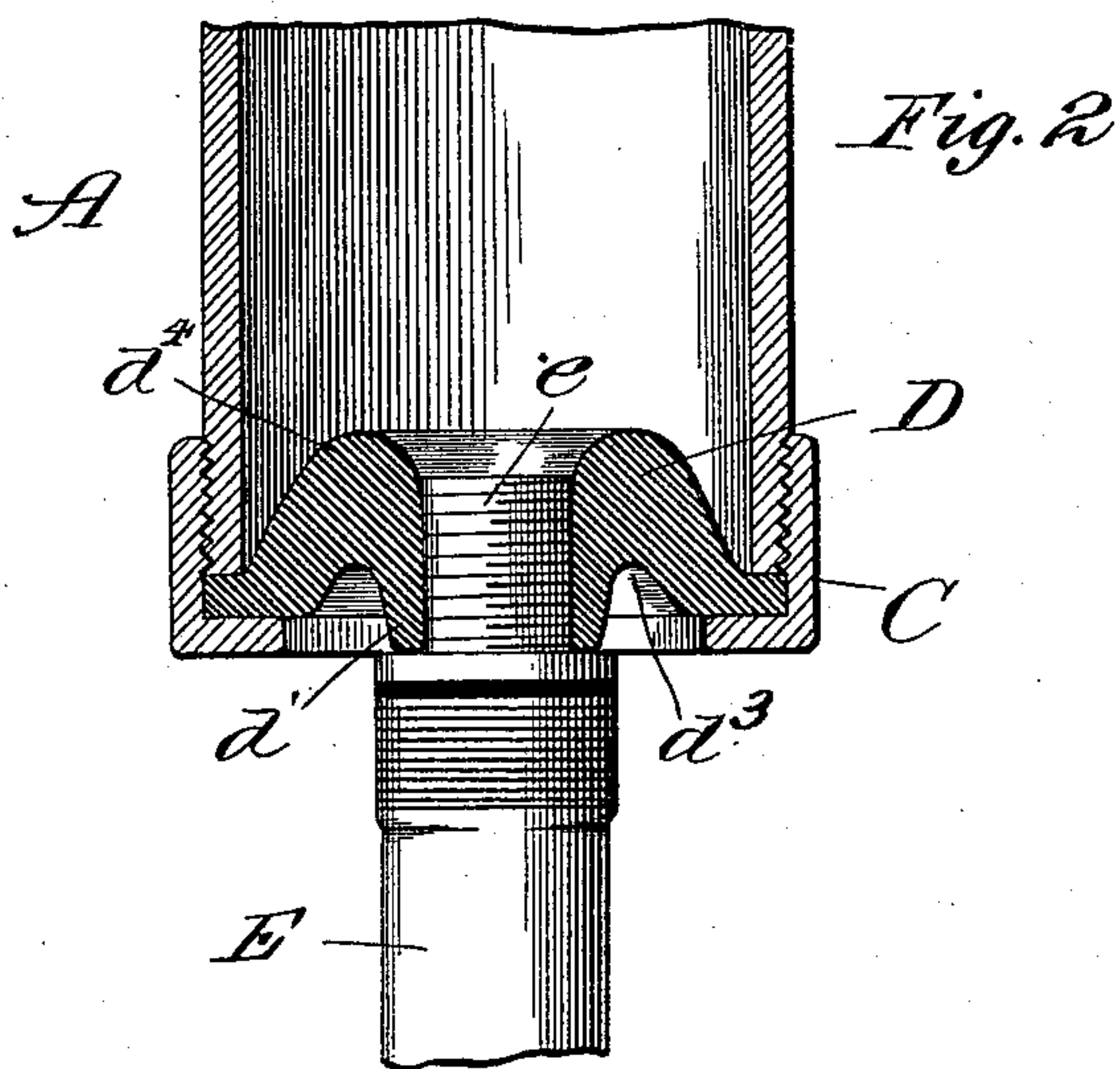
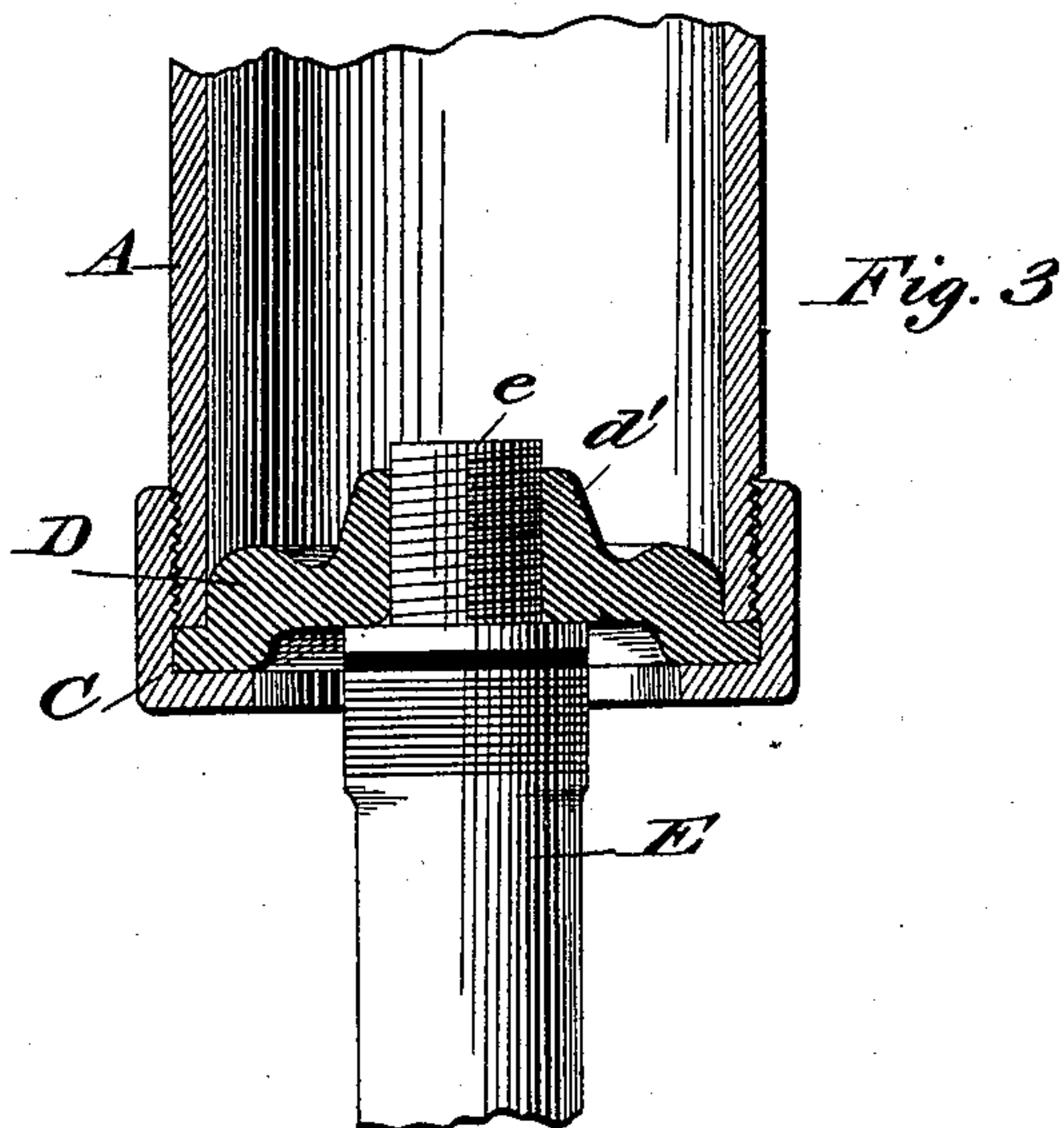
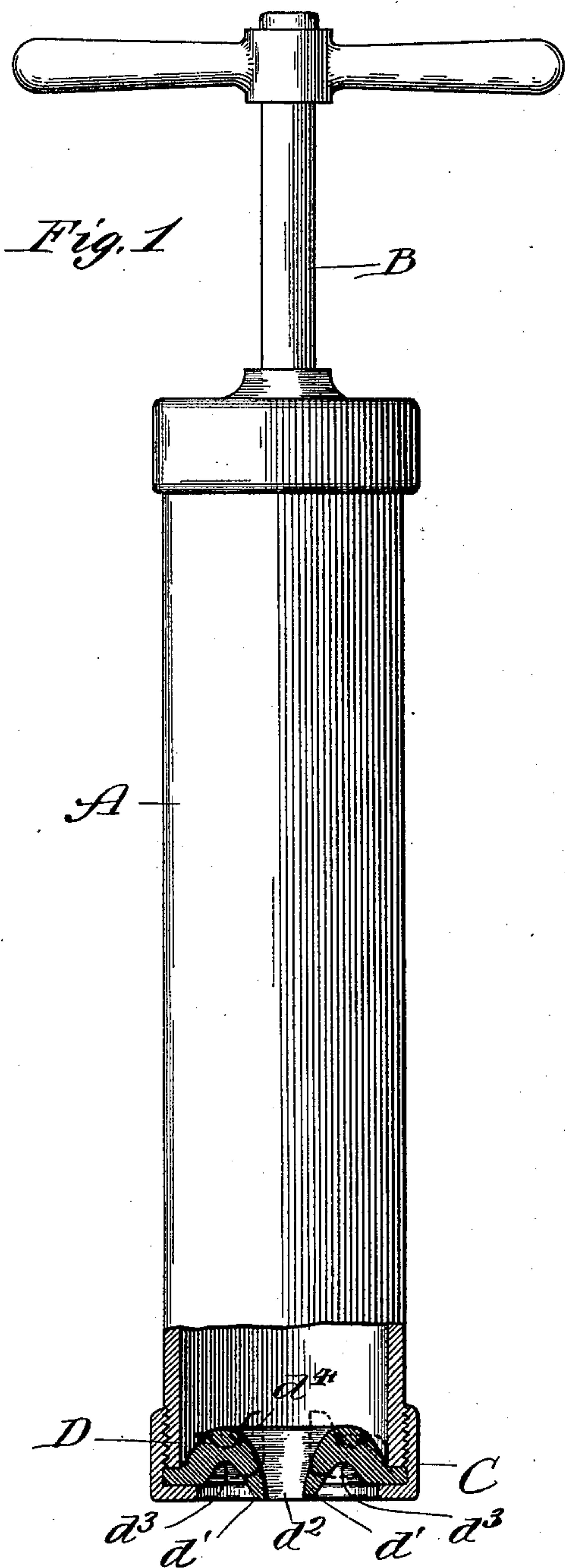
(No Model.)

O. B. JACKSON.

AUTOMATIC ENGAGING NIPPLE FOR PNEUMATIC PUMPS.

No. 582,425.

Patented May 11, 1897.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

OLIVER B. JACKSON, OF CHICAGO, ILLINOIS.

## AUTOMATIC ENGAGING NIPPLE FOR PNEUMATIC PUMPS.

SPECIFICATION forming part of Letters Patent No. 582,425, dated May 11, 1897.

Application filed July 25, 1896. Serial No. 600,484. (No model.)

*To all whom it may concern:*

Be it known that I, OLIVER B. JACKSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Engaging Nipples for Pneumatic Pumps, of which the following is a specification.

My invention relates particularly to that class of nipples that are adapted to be used on air-pumps for inflating the pneumatic tires of bicycles, tricycles, and similar vehicles.

The object of my invention is to provide a simple, economical, and efficient nipple for air-pumps; and the invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of an air-pump with a portion broken away, showing my improved nipple in position; Fig. 2, an enlarged sectional detail of the lower portion of the pump, showing the nipple in engagement with the valve of a pneumatic bicycle-tire; and Fig. 3, an enlarged sectional detail of the lower part of the pump, showing the nipple in its reversed engaging position.

In the art to which this invention relates it is well known that considerable difficulty is encountered owing to the fact that the different makers of pneumatic tires use different sizes and styles of "inflating-valves," so that the user of the tires cannot always find an air-pump that will fit the inflating-valve of his tire. To overcome this objection and provide an air-pump with a simple, efficient, and economical engaging nipple, one that will engage any size or style of inflating-valve, is the particular object of my invention.

In constructing an air-pump in accordance with my improvement I make a cylinder portion A of the desired size and shape and provide it with a reciprocating plunger or piston of the usual size, having its rod B extending out of one end of the pump-cylinder and provided with a handle portion b at the end thereof. I provide the other end of the pump-cylinder—the end opposite the projecting piston-rod—with a flanged cap portion C, and between such cap and the cylinder portion I insert and secure my engaging nipple D, which is constructed as follows:

The engaging nipple is formed, preferably, of rubber or similar cushioning material and is provided with an annular flange d and outer

projecting engaging portion d', which is provided with an axial perforation or opening d<sup>2</sup>. An annular recess d<sup>3</sup> surrounds the outer projecting portion for the purpose of giving greater elasticity to such projecting portion and enabling it to expand and grasp an inflating-valve. The inner side d<sup>4</sup> of the engaging nipple is preferably shaped like a convex annulus for the purpose of permitting an inward flexible elastic movement of the valve or reversal of the projection when forced into engagement with an inflating-valve of large size, as shown in Fig. 3.

In Fig. 2 I show an inflating-valve E of a bicycle-tire, having its nipple portion e engaged by the outer projecting portion of my improved engaging nipple.

The advantages of my improvement are that I have provided a nipple that will automatically engage with any size or shape of inflating-valve within reasonable limits, and from experimental tests which I have made I find resists disengagement with an inflating-valve under very high pressure, due, as I think, largely to the peculiar construction of the valve and the outer central projecting portion.

I claim—

1. In an air-pump, the combination of a cylinder provided with a reciprocating piston, and an engaging nipple formed of rubber or similar material and provided with an outwardly-projecting central engaging portion and an annular recess surrounding the same, substantially as described.

2. In an air-pump, the combination of a cylinder portion provided with a reciprocating piston, and an engaging nipple formed of rubber or similar material and provided with an outwardly-projecting engaging portion, an annular substantially concaved recess surrounding the same and an inner convex annular surface, substantially as described.

3. In an air-pump, the combination of a cylinder provided with a reciprocating piston, and an engaging nipple formed of rubber or similar material having an outer projecting engaging portion adapted to be inverted and reversed when applied to use, substantially as described.

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