No. 847,617. PATENTED MAR. 19, 1907.

W. S. STAPLEY.

MODE OF ATTACHING PUMP TUBES TO BASES.

APPLICATION FILED DEC. 13, 1906.

Fig. 1.

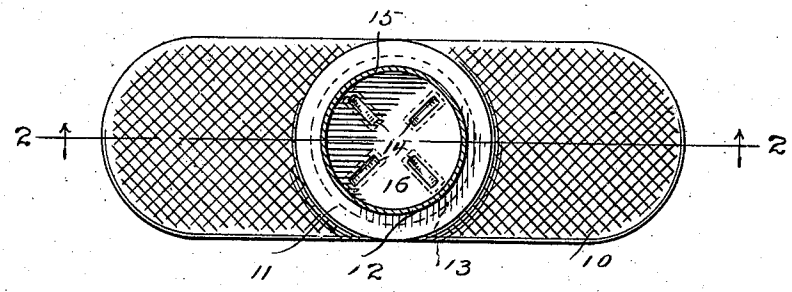
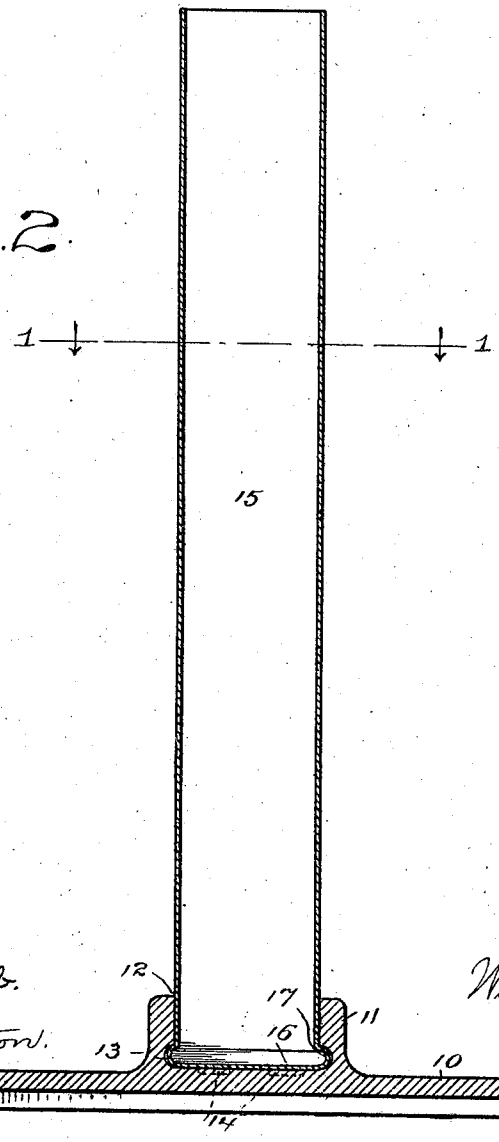


Fig. 2.



WITNESSES

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WILLIAM S. STAPLEY, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO BRIDGEPORT BRASS COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

MODE OF ATTACHING PUMP-TUBES TO BASES.

No. 847,617. Specification of Letters Patent. Patented March 19, 1907.

Application filed December 13, 1906. Serial No. 347,640.

To all whom it may concern:

Be it known that I, WILLIAM S. STAPLEY, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Mode of Attaching Pump-Tubes to Bases, of which the following is a specification.

This invention relates to the manufacture of tire-pumps, and has for its object to provide a mode of attaching the tubes to bases which will leave the lower ends of the tubes closed by means of integral solid metal, thus preserving the full strength of the metal, avoiding threading and providing a much cheaper and stronger attachment than any heretofore known and one which cannot leak under any circumstances.

With these and other objects in view I have devised the simple and novel mode of attaching pump-tubes to bases which I will now describe, referring to the accompanying drawing, forming a part of this specification, and using reference characters to indicate the several parts.

Figure 1 is a plan view of a pump-base with a tube attached thereto in accordance with my present invention, the tube being in section; and Fig. 2 is a longitudinal section of both tube and base on the line 2 2 in Fig. 1.

10 denotes the base, which is provided with a central hub 11, having a socket 12 to receive the end of the tube. 13 denotes a groove in the hub, (shown as circular,) which communicates with the socket, said groove being, in fact, an undercut circumferential enlargement of the socket.

14 denotes depressions in the bottom of the socket. These depressions may be of any preferred shape, size, or number.

15 denotes the tube, the peculiarity of which is that one end thereof is left closed by a solid metal head, (indicated by 16)—that is to say, the tube is drawn with a solid metal head which has always heretofore been removed, but which I utilize as a means of making an air-tight connection of the tube to the base. This attachment of the tube to the base is effected by means of a suitable expanding tool or tools operated within the tube.

The operation of the expanding-tool is to flange the metal of the tube outward, as at 17, into groove 13 in the base and also to force the metal of the head downward into depressions 14 in the bottom of the socket. By thus flanging the metal of the tube outward into the groove in the base and indenting the metal of the head into the depressions in the base I provide a mode of attachment of tube to base which leaves said parts perfectly rigid. The indenting of the metal of the head into the depressions in the base renders any rotary movement of the base and tube relative to each other impossible, and the engagement of flange 17, formed from the metal of the tube, with the groove in the base locks the tube in the base against the possibility of removal, avoids the cutting of screw-threads on tube and base, renders leakage impossible, and provides a connection that is not only stronger and better in every way than any heretofore produced, but is much less expensive to make.

Having thus described my invention, I claim—

1. The combination with a base having a socket and an undercut groove communicating therewith, of a tube closed at one end and flanged outward into the groove, whereby the tube is rigidly secured to the base.

2. The combination with a base having a socket, an undercut groove communicating therewith and depressions in the bottom of the socket, of a tube closed at one end and flanged outward into the groove and indented into the depressions in the base, substantially as described, for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM S. STAPLEY.

Witnesses:
ANKERS LYHNE,
ARTHUR H. MOORE.