J. A. STEINMETZ.

CAP FLANGE FOR CYLINDERS.

APPLICATION FILED OCT. 8, 1919.

1,413,502. Patented Apr. 18, 1922.

FIG. 1.

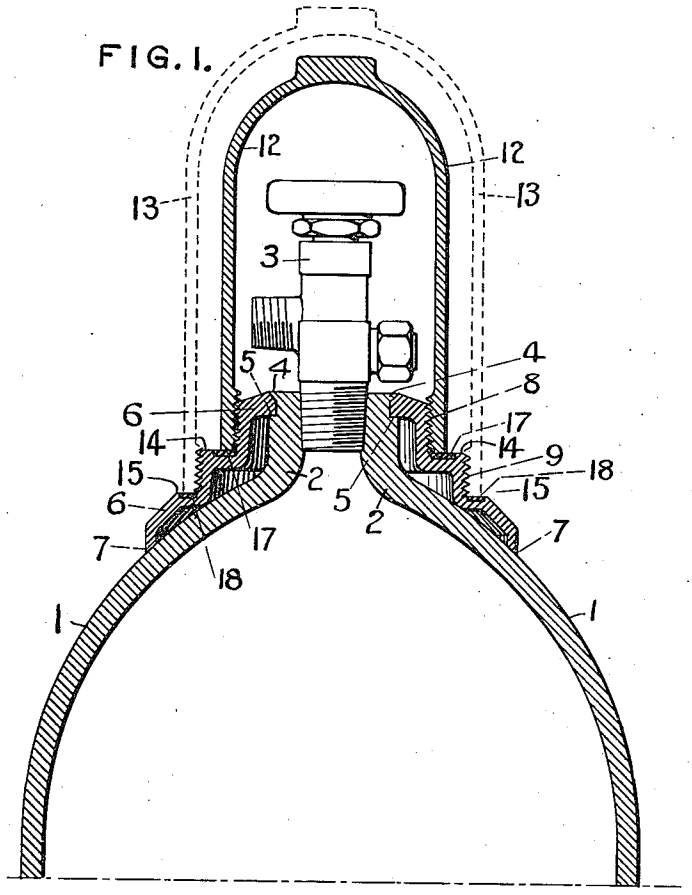
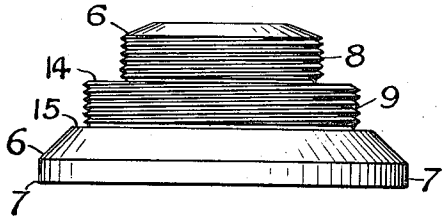


FIG. 2.



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CAP FLANGE FOR CYLINDERS.

1,413,502. Specification of Letters Patent. Patented Apr. 18, 1922.

Application filed October 8, 1919. Serial No. 329,321.

To all whom it may concern:

Be it known that I, JOSEPH A. STEINMETZ, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in a Cap Flange for Cylinders, of which the following is a specification.

My invention relates to a cap flange and particularly relates to a cap flange for cylinders used as containers for oxygen, nitrogen and acetylene gases and the like.

The object of my invention is to provide a cap flange for cylinders which is adapted to receive two different sizes of caps so that the caps may be interchangeable; and a further object of my invention is to provide a cap flange with two cylindrical portions of different diameters having screw threads formed thereon and also having shoulders formed at the bottom of each screw threaded portion against which either size cap may be tightly screwed.

At the present time two different sizes of valves are used upon the cylinders, according to the kind of gas contained therein, and these valves must be protected, in shipment, by metal caps which are screwed upon the cap flange of the cylinder. There are now in use and on the market a large number of caps of both the small and large size and the smaller caps will not fit over the larger valves. The cap flanges on the cylinders are now made either for the large or small size caps, but not for both sizes, therefore the caps are not interchangeable.

With my improved cap flange either size cap and valve may be used on any cylinder so provided with my new cap flange; thus saving the loss which would be otherwise involved if all the smaller caps were discarded and only the larger ones used.

Referring to the accompanying drawing; Fig. 1, is a longitudinal section of the upper portion of a cylinder showing my improved cap flange thereon and showing the small cap in full lines and the large cap in dotted lines; and Fig. 2, is a side elevation of my improved cap flange.

In the accompanying drawing, in which like reference characters refer to like parts, 1 represents one end of a metal cylinder, having a neck 2, provided with a threaded aperture for the attachment of a valve 3.

A cap flange 6 is secured upon the outside of the cylinder. The cap flange 6 has a central opening which permits the flange 6 to fit over the neck 2 of the cylinder. The portion 4 of the neck 2 is riveted over upon the conical surface of the flange 6, thus securely holding the flange 6 upon the shoulder 5, formed on the neck 2, and also holding the outer circular edge 7, of the flange 6, tightly upon the body of the cylinder.

The cap flange 6 is provided with two cylindrical portions 8 and 9, having screw threads formed thereon. The said cylindrical portions 8 and 9 are of different diameters and form nipples to receive the caps 12 and 13, respectively. At the base portion of the nipples 8 and 9 are formed shoulders 14 and 15 against which the caps may be screwed to hold them tightly upon the cap flange 6.

Heretofore cap flanges have been made with but one threaded portion to receive one cap only. By providing a cap flange with two threaded portions of different diameters either a large size or a small size cap may be used upon the same cylinder, thus providing a new unitary result.

With my improved cap flange both caps may be placed on the cylinder at the same time, when the small size valve is used, to form additional protection to the valve against breakage.

A seal may be formed by the use of resilient gaskets 17 and 18 upon the shoulders 14 and 15 against which the caps are screwed. This feature of using two caps is of great advantage when the tanks are used for shipping poisonous gases, as a defective valve may leak and cause loss of life. The inner cap only may be sealed and made gas tight and the outer cap used as a protection against the breakage of the inner cap and the valve. By providing means for the use of two caps, one or both being sealed, additional protection is provided.

Having thus described my invention I claim and desire to secure by Letters Patent:

A metal cylinder having a neck formed thereon provided with a threaded aperture adapted to receive the threaded shank of valves of various sizes, a cap flange secured upon and embracing the neck of the cylinder, said flange having two concentric cylindrical portions of different diameters, and said portions arranged in different planes and provided with screw threads forming nipples adapted to receive caps corresponding in size with either of said nipples.

In testimony whereof I affix my signature.

JOSEPH A. STEINMETZ.