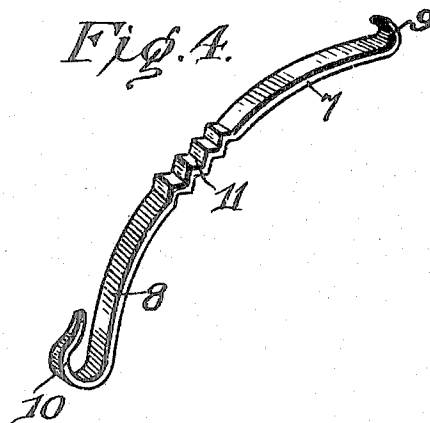
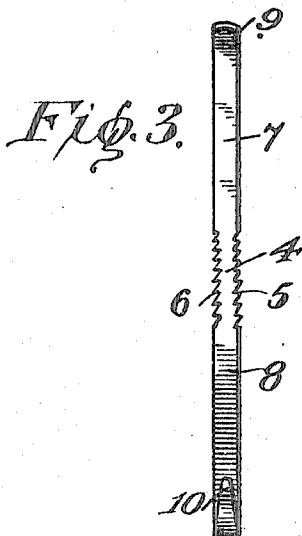
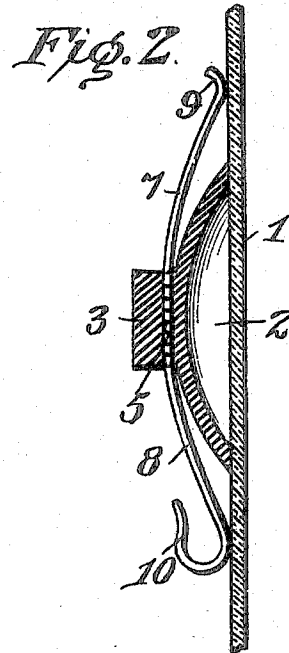
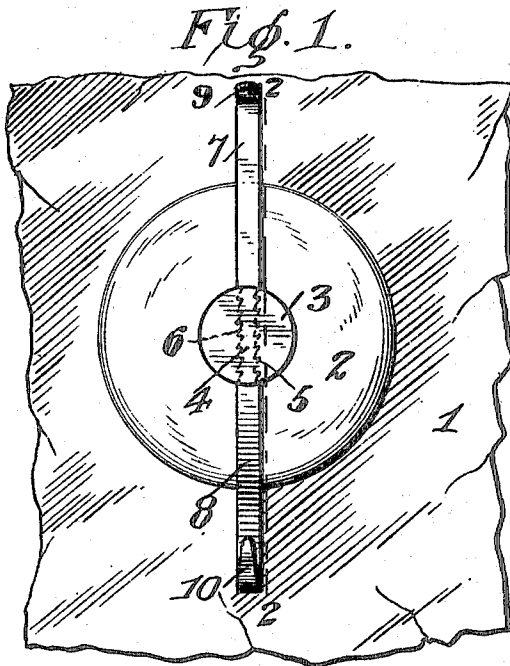


F. P. SCHROEDER.
VACUUM SUPPORTING DEVICE.
APPLICATION FILED JULY 15, 1909.

957,804.

Patented May 10, 1910.



Florence P. Schroeder Inventor

Witnesses

H. J. ...
Wm. L. McCallister

By *E. E. Swoman*,
Attorney.

UNITED STATES PATENT OFFICE.

FLORENCE P. SCHROEDER, OF BERKELEY, CALIFORNIA, ASSIGNOR TO VACO MANUFACTURING CO., A CORPORATION OF CALIFORNIA.

VACUUM-SUPPORTING DEVICE.

957,804.

Specification of Letters Patent. Patented May 10, 1910.

Application filed July 15, 1909. Serial No. 507,845.

To all whom it may concern:

Be it known that I, FLORENCE P. SCHROEDER, citizen of the United States, residing at Berkeley, in the county of Alameda and State of California, have invented certain new and useful Improvements in Vacuum-Supporting Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to vacuum supporting devices of the type set forth in the application of Ross Hazelrigg, filed March 6, 1909, Serial No. 481,855, wherein the cup-shaped body is provided with outwardly projecting spring arms which contact with the surface to which said body is attached to distend said body and thereby increase its suction area, said arms also serving as supports for articles.

20 The principal object of the invention is to provide for a firm and strong engagement between the said arms and the said body so that there will be no danger of said arms slipping relative to the body.

25 In said drawings, Figure 1 is a view in front elevation of the improved vacuum supporting device. Fig. 2 is a central vertical sectional view of the same taken on the line 2—2, Fig. 1. Fig. 3 is a detail front elevation of the spring arms used in connection with the vacuum supporting device. Fig. 4 is a detail perspective view of modified arms.

Referring to said drawings by numerals, 1 designates the supporting surface to which 35 the cup-shaped body 2 is attached in the usual manner. Said body is provided with a centrally located outstanding and preferably cylindrical head 3 which provides an efficient handgrip by means of which the said body may be manipulated in the operation of attaching to, or detaching from, a supporting surface.

The head 3 and body 2 are integral and formed of rubber, and in the process of molding the same a thin resilient flat strip of metal is embedded within said head, the central portion 4 of said strip which is embedded within said head having its longitudinal edges provided with teeth 5—6, the teeth of one edge projecting in an opposite direction to the teeth of the other edge so that when the article is finished, longitudinal slippage of said strip relative to said

head will be prevented. Said strip is bowed to provide the oppositely projecting arms 7 and 8 which project beyond the edge of the body 2 and have their outer ends rounded and adapted to contact with the surface to which the body is attached and by their resiliency exerting a lifting tension on said body so that it is expanded to increase its vacuum space. The outer end of the arms 7 is in the form of a clasp 9 for holding an article between it and the supporting surface in a manner similar to card racks and the like. The outer end of the arm 8 is upturned to form a hook 10 for suspending articles.

In Fig. 4 the central embedded portion of the strip is provided with a toothed portion formed by fluting or corrugating the same transversely as indicated at 11. In all other respects the form of the invention shown in Fig. 4 is similar to that disclosed in Figs. 1, 2 and 3.

In both the forms of the invention it will be obvious that the central toothed portion of the resilient strip assures a firm interlocking engagement between the same and the head so that said strip can not slip relative to said head.

What I claim as my invention is:—

1. A vacuum supporting device comprising a cup-shaped body formed of compressible material, a head integral therewith, and a thin flat resilient strip of metal having a central toothed portion molded within said head, the ends of said strip projecting beyond the edge of said body and adapted to contact with a supporting surface to increase the vacuum space of said body and also form supports for articles.

2. A supporting device comprising a vacuum cup, and a flat strip of resilient metal having a transversely toothed portion adapted to be embedded within said cup the ends of said strip projecting beyond said cup and adapted to contact with the surface to which the cup is attached to increase the vacuum space of said cup.

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

FLORENCE P. SCHROEDER.

Witnesses:

H. C. SCHROEDER,
ROSS HAZELRIGG.