July 1, 1941. H. G. HENRY 2,247,727

SURFACE GRIPPING DEVICE

Filed July 25, 1939

Fig. 1.

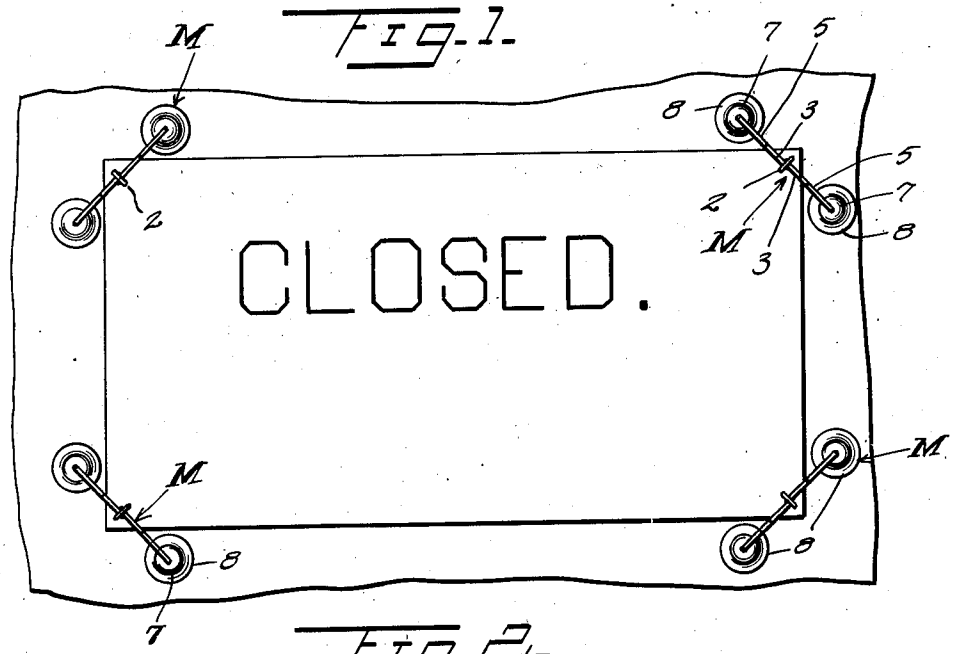


Fig. 2.

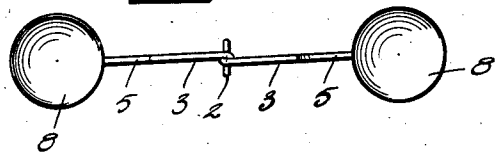
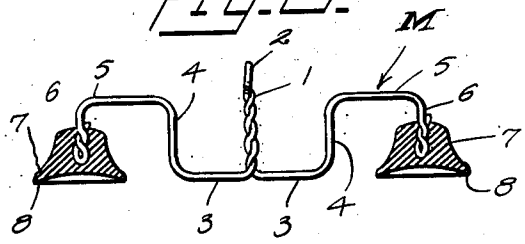


Fig. 3.



Inventor

H. G. Henry

By Watson E. Coleman

Attorney

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SURFACE GRIPPING DEVICE

Harold G. Henry, King City, Calif., assignor of one-half to William C. Barry, Soledad, Calif.

Application July 25, 1939, Serial No. 286,469

1 Claim. (Cl. 248—362)

This invention relates to a surface gripping device, and it is an object of the invention to provide a device of this kind particularly designed and adapted for use to hold posters, placards, cards, etc. on windows or other hard surfaces where ordinarily such posters, etc. must be held in place by an adhesive.

Another object of the invention is to provide a device of this kind including vacuum cups for holding contact with a glass or other hard surface and wherein means are provided for clamping a poster, placard or the like to such surface.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved surface gripping device whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in elevation showing a plurality of my improved gripping devices in applied or working position;

Figure 2 is a view in bottom plan of one of the devices as herein comprised;

Figure 3 is a view partly in side elevation and partly in section of one of the devices as herein set forth.

As disclosed in the accompanying drawing, my improved gripping device comprises a member M formed from a single length of wire of requisite gauge. This member M in the present embodiment of my invention includes a central shank or handle member 1 which is formed by twisting one around the other return strands of wire with the folded portions of such strands formed to provide an eye or loop 2 to facilitate the use of the shank 1 as an operating handle and also to permit the device to be readily suspended if so desired when not in use. The extremities of the twisted strands of wire as comprised in the shank 1 are continued in opposite directions to provide gripping arms 3 of desired length. These arms 3 have their outer extremities continued by the upstanding arms 4. These arms 3 are substantially straight and in alignment and preferably substantially at right angles to the shank or handle member 1. These arms 3 may be considered as a single arm. The upper end of each of these arms 4 is continued by the outwardly directed arm 5 terminating in a depending arm 6. These arms 6 comprise twisted strands of the wire stock to provide means whereby these arms 6 may be effectively and securely engaged within the backs 7 of the vacuum cups 8.

Normally the marginal portions of the cups 8 are substantially coplanar with the outer or working edges of the arms 3 so that when the cups 8 are pressed into contact with a glass surface or the like the resultant compression of the cups 8 will assure the arms 3 having effective gripping or clamping action upon a corner portion of the poster, placard or the like desired to be held to the surface with which the cups 8 are engaged.

It is believed to be obvious that with the use of my improved devices posters, placards and the like can be effectively mounted upon a window or other hard surface without requiring the use of an adhesive and for which reason my improved devices are particularly adaptable for use in offices, schools, libraries, banks, stores, etc.

From the foregoing description it is thought to be obvious that a surface gripping device constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and used, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

A surface gripping device comprising a central elongated shank constituting a handle member, laterally disposed arms at one end of said shank, said arms being disposed in opposite directions and substantially alined, angularly related arms at the outer ends of the first-named arms and disposed in the same direction as the shank, arms extending outwardly from the outer ends of the second arms and in the same general direction as the first-named arms, arms carried by the outer extremities of the third-named arms and disposed substantially parallel with the shank and toward the end of the shank having the first-named arms, and suction cups carried by the last-named arms, the first-named arms being substantially straight and constituting clamping members, the marginal portions of the cups and the contacting surfaces of the first-named arms, when the cups are free of pressure, being substantially coplanar, the several arms being resilient.

HAROLD G. HENRY.