May 24, 1932. H. S. NEALE 1,859,747

WALL PAPER CLEANER

Filed Feb. 9, 1931

Fig. 1.

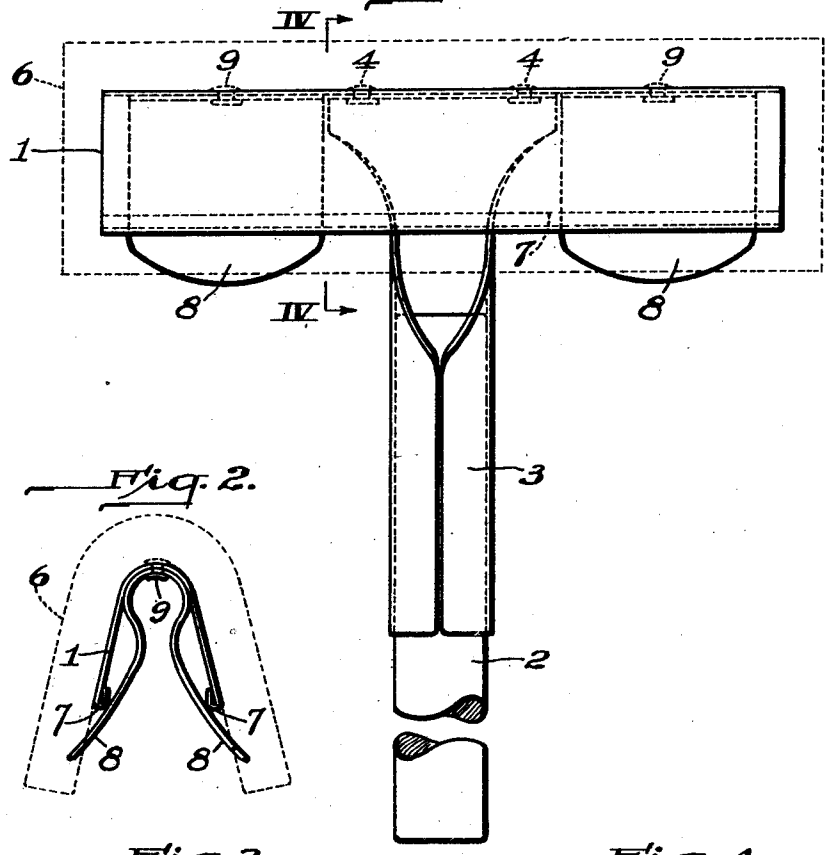


Fig. 2.

Fig. 3.

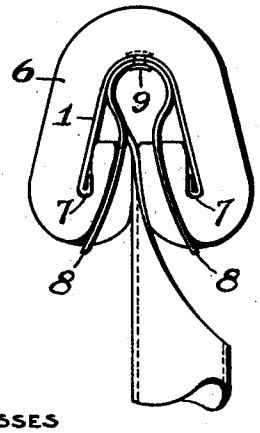
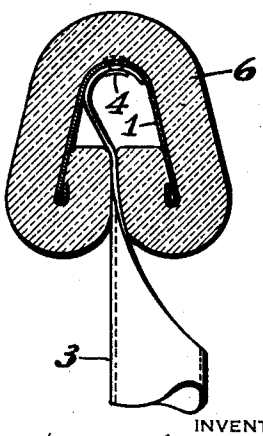


Fig. 4.



WITNESSES

A. B. Wallace.

W. D. O'Connor

INVENTOR

Herbert S. Neale

by Brown & Critchlow

his attorneys

Patented May 24, 1932

1,859,747

UNITED STATES PATENT OFFICE

HERBERT S. NEALE, OF PITTSBURGH, PENNSYLVANIA

WALL PAPER CLEANER

Application filed February 9, 1931. Serial No. 514,383.

My invention relates to cleaning devices and particularly to devices suitable for cleaning wall paper and the like.

An object of my invention is to provide a device for holding a cleaning element such as a sheet of sponge rubber in such manner that the rubber may conveniently be utilized for cleaning purposes. Another object of the invention is to provide a holder for a rubber cleaning element that may be readily released to permit removal of the rubber without danger of injuring it.

To accomplish these objects I provide a holding device comprising a bar about which a flat strip of sponge rubber may be wrapped. To hold the rubber in place the edges of the strip are folded over the edges of the holding bar and secured by spring clips that clamp the rubber against the bar. After the cleaner has been used, the rubber strip may be readily removed for cleaning it by releasing the spring clips, and it may be replaced without difficulty and without danger of tearing the rubber.

The foregoing and other objects of my invention may be achieved by devices in the nature of the specific structure described in this specification and illustrated in the accompanying drawings in which Fig. 1 is a view in elevation of a holder for wall cleaning material, the cleaning material being indicated in broken lines; Fig. 2 is a partial end view of the holder showing the cleaning element folded over the holding device preparatory to being clamped in position; Fig. 3 is an end view of the cleaning device with the cleaning element clamped in operating position; and Fig. 4 is a view in cross section taken on a plane represented by the line IV—IV of Fig. 1 and showing the cleaning element in its operating position.

Referring more specifically to the details of construction shown in the drawings, the holding member of the cleaning device comprises a suitable frame or backing bar 1 of thin metal such as a plate of sheet steel folded on itself in substantially V-shape with a rounded valley of relatively large radius. The backing bar 1 is carried on the end of a suitable staff or handle 2 that may be of any convenient length. The handle 2 is connected at right angles to the backing bar at the mid-length thereof by means of a suitable ferrule 3 having a cylindrical portion for engaging the end of the handle. Formed integrally with the cylindrical portion of the ferrule is a flattened web portion that extends into the valley of the backing plate substantially along its longitudinal mid-plane. The end of the flattened portion of the ferrule 3 is curved in arcuate shape to conform with the rounded valley of the backing bar 1 and is rigidly secured thereto by suitable fastening means such as rivets 4.

As shown, the cleaning element of the device comprises a normally flat plate or strip 6 of suitable cleaning material such as sponge rubber. The rubber strip 6, mounted on the holding device as shown in Fig. 2, is wrapped around the backing bar 1 in such manner that the rubber conforms to the outer surface of the bar and extends beyond its ends. The edges of the rubber strip are folded inwardly around the edges of the backing bar as shown in Figs. 3 and 4. To prevent injury to the rubber strip along the lines on which it engages the extreme edges of the backing bar 1, the lips of the bar are curved or inturned upon the main portion thereof to constitute rounded or rolled edges 7 that are adapted to engage the rubber without cutting or tearing it.

For retaining the rubber strip 6 in its operating position I provide a plurality of spring clips 8 that engage the strip near its edges and clamp it against the edges 7 of the backing bar 1. As shown in Fig. 1, a clip 8 is provided near each end of the backing bar in such manner that the rubber strip 6 is held at four positions. Each of the clips 8 is made of suitable thin metal such as spring steel that is bent at its mid-portion to substantially tubular shape of radius equal to the radius of the arcuate portion of the backing bar. At the bottom of the valley of the backing bar the spring elements 8 engage the inner surface thereof through an arc nearly equal to a semicircle, and are rigidly fastened by rivets 9 in a manner simi-

lar to the way in which the ferrule 3 is attached. From the lines of last contact with the inner surface of the bar the spring elements 8 extend inwardly toward the longitudinal mid-plane of the backing bar 1 substantially along continuations of their arcs of curvature. From points near the mid-plane the ends of the clamping members 8 are bent sharply outward and extend beyond the edges 7 of the backing bar 1 in diverging planes inclined at a greater angle to the mid-plane than are the diverging planes occupied by the outer plane surfaces of the backing bar. In this manner clamping jaws are provided between each edge 7 of the stationary clamping plate 1 and each end portion of the spring clips 8.

In applying the rubber strip 6 to the holder one side of each spring clip 8 is held away from its cooperating edge 7 of the backing plate and one end of the rubber strip inserted in the opening thus provided. Upon releasing the spring clips the rubber is firmly gripped and compressed between the clip and the edge of the backing plate. As shown, the extreme edge of the rubber plate remains in substantially fully expanded condition in the spaces provided between the clips and the inner surface of the bar. The rubber strip 6 may then be wrapped around the backing bar 1 and its other end inserted between the other sides of the spring clips 8 and the cooperating lip 7 of the backing bar in the same manner.

When the holding member is thus covered by the rubber strip it is guarded at its sides and ends from contact with the surface being cleaned and cannot scratch or otherwise injure the surface. The sponge rubber in the strip 6 is of such fine quality that it acts much like an absorbent in taking up dirt and cleans effectively upon being simply drawn over the surface being cleaned.

After the rubber cleaning element 6 has become ladened with dirt, it may be readily removed from the holder by releasing the gripping action of the spring clips 8. This may be easily accomplished by simply grasping the ends of the clips and pressing them towards each other to permit the ends of the rubber strip to be withdrawn. The rubber strip may then be reversed to expose its unused surface, and replaced in the manner already described, or, if both surfaces have been used, it may be easily cleaned by washing.

From the foregoing description of the wall cleaning device invented by me, it is evident that I have provided a rugged and efficient holder for a cleaning element that may be readily and easily manipulated to remove or replace the cleaning element without danger of tearing or otherwise injuring it.

Although I have described in considerable detail the specific embodiment of my invention that is shown in the drawings, it is to be understood that the terminology used is for the purpose of description only, and that the spirit and scope of the invention, as defined in the appended claims, is not limited by the description.

I claim:

1. A wall cleaning device comprising a substantially V-shaped backing bar, a ferrule rigidly secured to the mid-portion of the bar in the valley formed by its converging sides, substantially V-shaped plate spring clips rigidly secured in said valley to the bar near each end and projecting beyond the lips thereof to form finger grips, and a cleaning element adapted to be wrapped around the bar and to have its edges clamped between the spring clips and the adjacent edges of the bar.

2. A wall cleaning device comprising a substantially V-shaped sheet-metal backing bar, a sheet-metal ferrule rigidly secured to the mid-portion of the bar in the valley formed by its converging sides, substantially V-shaped plate spring clips rigidly secured in said valley to the bar near each end and projecting beyond the lips thereof to form finger grips, and a cleaning element adapted to be wrapped around the bar with its edges clamped between the spring clips and the respective edges of the bar.

In testimony whereof, I sign my name.

HERBERT S. NEALE.