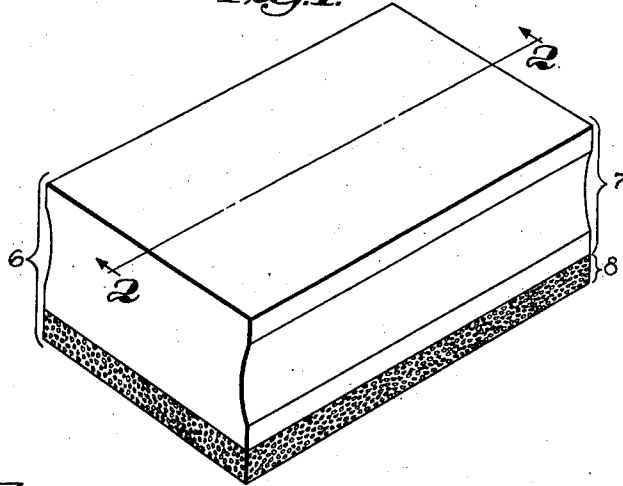


April 10, 1934.

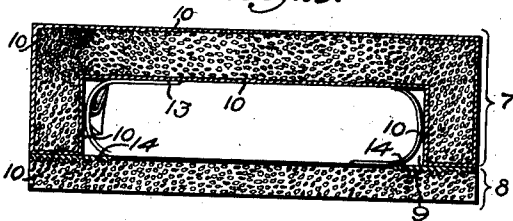
J. R. MATHES  
CLEANING IMPLEMENT  
Filed Feb. 2, 1933

1,954,641

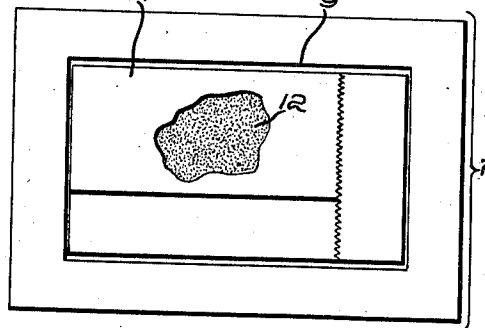
*Fig. 1.*



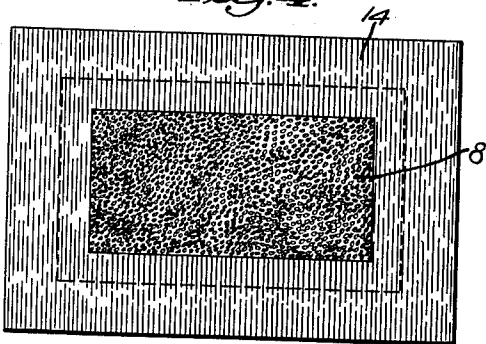
*Fig. 2.*



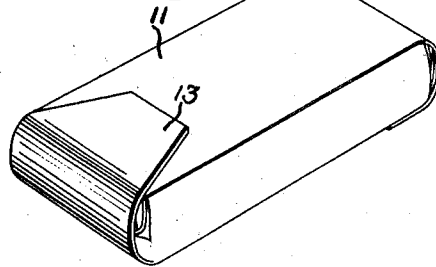
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Inventor:*  
**John B. Mathes,**  
*by* *Clary, Smith, Tamm & Johnson*  
**Attys**

# UNITED STATES PATENT OFFICE

1,954,641

## CLEANING IMPLEMENT

John E. Mathes, Dover, N. H., assignor to The Expello Corporation, Dover, N. H., a corporation of New Hampshire

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6 Claims. (Cl. 15—122)

This invention relates to a novel and improved cleaning implement, comprising a container which contains a supply of cleaning powder, the container having a portion which is pervious to allow water to seep or percolate into the interior of the container, where it will mix with the powder, after which the mixture can be applied to the surface to be cleaned by rubbing the pervious portion of the container over the surface. One feature of the invention is an inner container for the powder to prevent accidental escape of the latter during shipment and handling, prior to actual use, the inner container being made of material capable of disintegrating when wet, and also capable of being ruptured by sufficiently severe bending of the outer container. Another feature of the invention relates to means for predetermining the effective area of the pervious portion of the outer container to correspond with its degree of perviousness.

The invention will best be understood by reference to the following description, when taken in connection with the accompanying drawing of one specific embodiment thereof, while its scope will be pointed out more particularly in the appended claims.

In the drawing:

Fig. 1 is a perspective view of a cleaning implement embodying the invention;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a bottom plan of the upper portion of the outer and inner containers, a portion of the inner container being broken away to show the powder;

Fig. 4 is a plan of the closure for the chamber in the outer container; and

Fig. 5 is a perspective view of the inner container.

Referring to the drawing, and to the embodiment of the invention selected for illustration, there is shown a cleaning implement comprising a container 6, which in the present example comprises two parts 7 and 8, which, together, form a chamber 9, the latter being formed as a recess in the part 7, and the recess being covered by the part 8, which is in the nature of a closure appropriately secured to the part 7, as by cementing the same in place.

The part 7, as shown, is conveniently made of sponge rubber, molded to provide an impervious surface 10 throughout. It is a property of sponge rubber that, when molded, its surface has what is known as a rind which is smooth and impervious, and gives no indication of the cellular character of the rubber beneath the rind. This

fact is made use of to provide a receptacle whose body portion 7 (the upper part) is impervious throughout, so that the top and sides will not absorb and exude moisture. This avoids wastage of the cleaning material, and soiling of the hands of the user.

The part 8, which constitutes a closure for the chamber is conveniently made of sponge rubber, having no rind,—that is to say, the rind has been cut away at least on the top and bottom, and herein on the sides as well, so that water will seep or percolate through its cellular structure to the chamber 9, where it will mix with a portion of the cleaning powder. The resultant mixture will be retained by the cellular structure until the porous face of the implement is applied to the surface to be cleaned, whereupon the rubbing action or pressure, or both, causes the mixture to exude from the cells, and to be applied to the surface. None of the material can escape from the surfaces which are grasped by the hand of the user. The implement can, therefore, be used without wetting or soiling the hands.

In the present example, the cleaning implement comprises also an inner container, herein a bag 11, made of material capable of disintegrating when wet, and also capable of being ruptured by sufficient bending of the outer container. The material employed in the present instance is a thin paper, such as toilet paper, which has the characteristics just mentioned. The bag is filled with cleaning powder 12, such as feldspar, and may include also a small quantity of powdered soap. After introducing the powder, the bag is closed and sealed by means of a flap 13, with which it is provided.

The inner container is introduced into the chamber 9, and the closure 8 is then applied to and cemented to the body of the outer container, as by a marginal band of rubber cement 14. It has been found in practice that sponge rubber varies somewhat in perviousness, and that the degree of perviousness will affect the operation of the implement. If the perviousness be slight, satisfactory results are had by making the width of the band 14 of rubber cement the same as the thickness of the wall about the chamber 9; but if the perviousness be great, it is desirable to reduce the effective area of the closure 8 to correspond with the degree of perviousness. This is conveniently accomplished in the present example by making the band 14 of rubber cement wider than the thickness of the wall surrounding the chamber 10. That portion of the band which

extends inwardly beyond the wall fills the pores of the closure sufficiently to reduce the effective area, as shown for example in Fig. 4.

5 In manufacture, the width of the band is varied in accordance with the degree of perviousness of the closure, and is conveniently accomplished by laying upon the closure a sheet of metal or other appropriate material of the required dimensions to serve as a shield for the area which is not to be coated, and then coating the surrounding margin of the closure with a rubber cement, which is allowed to dry sufficiently to become tacky, after which the closure is applied to the body of the outer container, and is thus cemented to the wall about the chamber 9. That portion of the band which extends inwardly from the surrounding wall reduces the effective area of the closure, as stated, and predetermines the area which is exposed to the entrance of water and the escape of the paste-like mixture after the paper has become disintegrated or ruptured.

15 Having thus described one embodiment of the invention, but without limiting myself thereto, what I claim and desire by Letters Patent to secure is:

25 1. In a cleaning implement, the combination of an outer container which is pervious to powder as well as to water, an inner, flexible container which is impervious to powder and which is capable of disintegrating when wet, and a powder in loose form contained within said inner container.

30 2. In a cleaning implement, the combination of an outer container which is pervious to powder

as well as to water, an inner, flexible container which is impervious to powder and which is capable of being ruptured by bending said outer container, and a powder in loose form contained within said inner container.

3. In a cleaning implement, the combination of an outer container which is pervious to powder as well as to water, an inner, flexible container which is impervious to powder and which is capable of being ruptured by bending said outer container, and which is also capable of disintegrating when wet, and a powder in loose form contained within said inner container.

4. In a cleaning implement, the combination of an outer container which is pervious to powder as well as to water, a soft, flexible, inner container which is normally self-sustaining and which is capable of disintegrating when wet, and a powder in loose form contained within said inner container.

5. In a cleaning implement, the combination of an outer container which is pervious to powder as well as to water, a soft, flexible, inner container which is capable of disintegrating when wet, and a powder which is substantially uncom-

6. In a cleaning implement, the combination of an outer container which is pervious to powder as well as to water, an inner container which is insoluble but which is capable of disintegrating when wet, and a powder in loose form contained within said inner container.

JOHN R. MATHES.

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