(No Model.)

N. JENSEN.

CLEANER FOR SLATES, BLACKBOARDS, &c.

No. 395,905. Patented Jan. 8, 1889.

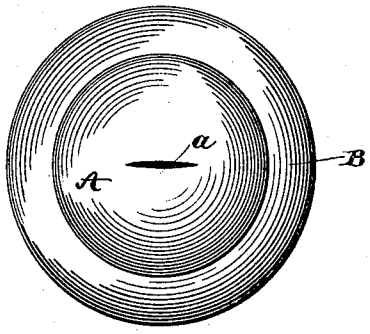


Fig. 1

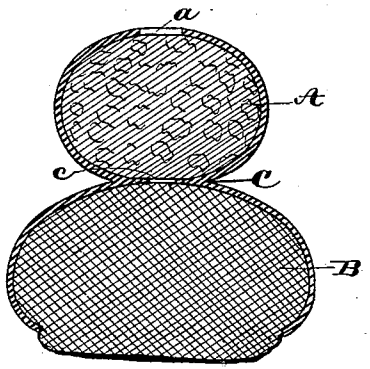


Fig. 2

Fig. 3

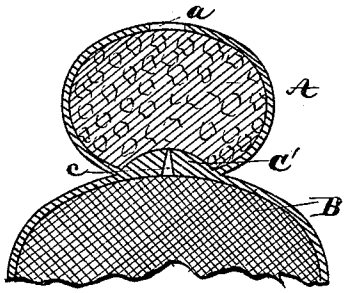
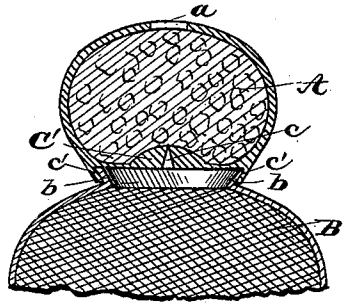


Fig. 4



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UNITED STATES PATENT OFFICE.

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CLEANER FOR SLATES, BLACKBOARDS, &c.

SPECIFICATION forming part of Letters Patent No. 395,905, dated January 8, 1889.

Application filed June 2, 1888. Serial No. 275,853. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAY JENSEN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Cleaners for Slates, Blackboards, Glass, &c.; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to cleaning devices for slates, blackboards, glass, and like articles; and it consists of certain features of construction, which will be hereinafter more fully described.

I have illustrated different forms in which I have contemplated embodying my invention in the accompanying drawings, and said invention is fully disclosed in the following specification and claims.

In the drawings, Figure 1 is a top view of my improved cleaning device. Fig. 2 is a vertical section of the same. Fig. 3 is a similar view of a slightly-different species of cleaner embodying my invention. Fig. 4 is a sectional view of still another species of my improved cleaning device.

In the form shown in Figs. 1, 2, and 3 my improved cleaning device is preferably made of rubber or other elastic material which will hold its shape, and consists of the two receptacles or chambers A and B, united by a short neck, C. The neck is provided with a narrow slit or perforation, *c*, connecting the chambers A and B, which is normally held in a closed or nearly closed position. This aperture may be distended by drawing the side walls of chamber B in opposite directions to permit the insertion of some absorbent material, preferably sponge, which is forced through the distended opening. When the material has been introduced into chamber A, the tension of the rubber will draw the sides of the slit together, thus closing the aperture. I prefer to provide the chamber A with a thicker portion, C′, as shown in Fig. 3, and form therein a wedge-shaped slit or perforation, or a cone-shaped opening, having its greatest diameter at its lower end. By this means, when the slit is distended, the inclined sides will guide the absorbent material through the opening, or it may be forced through in any desired way. The compartment B is open at its lower extremity, and is filled with some soft drying material, as cloth rags, felt, cotton waste, or dry sponge, as desired. The compartment A is also provided with a slit or aperture, *a*, or a series of such slits or apertures. I prefer to employ a single slit or series of slits running in the same direction, which will be normally held in a closed position by the tension of the rubber. I may, however, employ a series of round or other shaped apertures.

The operation is as follows: The side walls of chamber A are subjected to a slight compression sufficient to cause the slit *a* to open, and the upper portion of the device immersed in water or other cleaning-fluid. The liquid will enter the aperture *a* and saturate the sponge or other absorbent material. When this is effected, the device is removed from the fluid and the pressure released, when the slit will close, thus forming an air-tight receptacle for the sponge and preventing the evaporation of the liquid. When it is desired to employ the device for cleaning slates, blackboards, glass, or other article, the compartment A is inverted over the article and subjected to slight lateral pressure, which will cause the slit *a* to open and allow a few drops of water to fall upon the article. The device is then returned to its normal position and the soft material in compartment B brought into contact with the article, effectually cleaning and drying the same. The operation may be repeated as often as desired until the liquid in the sponge is exhausted, when it may be refilled, as before described.

The sponge or other absorbent material forms a reservoir for the retention of water, and the peculiar construction of compartment A prevents evaporation, so that the supply of water will last a long time without replenishing. When the material in chamber B has become soiled, or for any other reason it is desirable to change the same, it can be instantly withdrawn and the fresh material substituted. Should it become necessary to substitute a fresh sponge or absorbent material in compartment A, the same can be easily accom-

plished by first removing the material in compartment B and distending the opening *c* in the neck C. When the form of neck shown in Fig. 3 is employed, the water will be effectually prevented from entering chamber B by the form of the slit *c*.

The pressure exerted upon the side walls of receptacle A will cause the slit or aperture *c* to close more tightly, and no water will enter receptacle B. If by accidental pressure a quantity of the liquid be squeezed out of the sponge and settle in the bottom of the chamber A, the curved portion will cause the water to remain at the base of the same and will prevent it from entering receptacle B.

In Fig. 4 I have shown another species of my improved cleaning device, which will be found especially desirable in cleaning glass and in kindred uses. In this construction I provide the base portion B of harder material, such as glass or hard rubber or any other suitable material. This receptacle is open at its upper end, and is provided with a flange, *b*, which diverges outwardly from the point where it joins the chamber B.

The receptacle A is formed of flexible material in the manner already described, and is provided with a flange, *c'*, on its lower side, slightly smaller than the flange *b*. This flange, being elastic, may be expanded and placed over and in engagement with flange *b*, as shown in Fig. 4, and will retain the receptacle in position by the tension of the elastic material of which it is composed. If preferred or found desirable, the flanges *c* and *b* may be united by means of cement. The sponge may be inserted within the receptacle A before it is applied to the chamber B, or after, as preferred. I may prefer to form the chamber B with a solid top and place the sponge within it before applying it to the base portion, in which case I may dispense with the bottom of the receptacle A and construct the side walls of the same to engage the flange *b*.

The forms shown and described are my preferred forms and constitute a very efficient cleaning device for slates and blackboards, and by its peculiar form will rest upon a desk or table in the position shown in the drawings. The water, being held by the absorbent material in an air-tight receptacle, will not come in contact with the desk or table or any objects thereon, should the reservoir become accidentally inverted, and the shape of the base tends to keep the said reservoir in an upright position. I may provide the lower portion of chamber B with a flap or cover, which will prevent it when used on a desk or table from soiling the objects with which it comes in contact.

By constructing the parts of elastic material the device cannot be easily broken or rendered unfit for use, and hence is very durable, and the sponge, being protected from wear, will last indefinitely without renewal.

While I have shown the receptacles A and B as being integral and composed of elastic material, and again as being the one of elastic and the other of harder material, the parts being suitably connected, I may construct them both separately of soft rubber or other elastic substance and unite the parts in any suitable manner.

I have shown the receptacle A smaller than chamber B and above the same. I may, however, construct them of equal size and of any preferred form without departing from the spirit of my invention.

Having described my invention, what I claim, and desire to secure by Letters Patent, is:—

1. A cleaner for slates, blackboards, glass, and like articles, consisting of receptacles for containing a liquid-supply and for drying material, said liquid-receptacle being composed of elastic material and provided with an opening normally closed by the tension of said elastic material, substantially as described.

2. In a cleaner for slates, blackboards, glass, and like articles, the combination, with a liquid-receptacle for containing absorbent material and having an opening for the insertion of the same, of a receptacle adjacent to said liquid-receptacle, the liquid-receptacle being composed of elastic material and provided with a discharge-opening, both of said openings being normally closed by the tension of the elastic material, substantially as described.

3. In a cleaner for slates, blackboards, glass, and like articles, the combination, with a liquid-receptacle having a thickened bottom portion provided with an aperture the diameter of which is smallest at its top, of a receptacle for drying material, substantially as described.

4. In a cleaner for slates and other articles, the combination, with an elastic receptacle, complete in itself, of a receptacle for absorbent material, the said receptacles being separable, but connected end to end, substantially as described.

5. In a cleaner for slates, blackboards, glass, and like articles, the combination, with a liquid-receptacle composed wholly of elastic material and provided with an elastic flange, of a receptacle for drying material having rigid walls and provided with a diverging flange adapted to be engaged by said elastic flange, substantially as described.

6. In a cleaner for slates, blackboards, glass, and like articles, the combination, with a liquid-receptacle composed of elastic material and provided with a thickened bottom portion having an opening therein for the insertion of absorbent material, and being also provided with an elastic flange, of a receptacle for drying material having rigid walls and provided with a diverging flange adapted to be engaged by said elastic flange, substantially as described.

7. A cleaner for slates, blackboards, glass, and like articles, consisting of receptacles for

containing a liquid supply and for drying material, said liquid-receptacle being composed of elastic material and provided with absorbent material within the same, substantially as described.

8. A cleaner for slates, blackboards, glass, and like articles, consisting of a liquid-receptacle composed of elastic material and having an absorbent material wholly within the said liquid-receptacle, substantially as described.

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

NICHOLAY JENSEN.

Witnesses:
L. P. WHITAKER,
W. R. MACK.