June 28, 1966 R. D. DUSKINS 3,257,679

CHALKBOARD CLEANING DEVICE

Filed Oct. 18, 1965

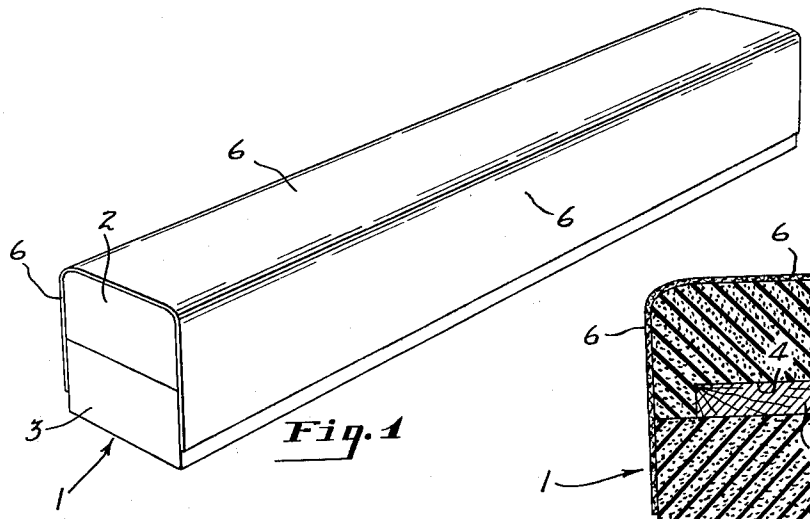


Fig. 1

Fig. 3

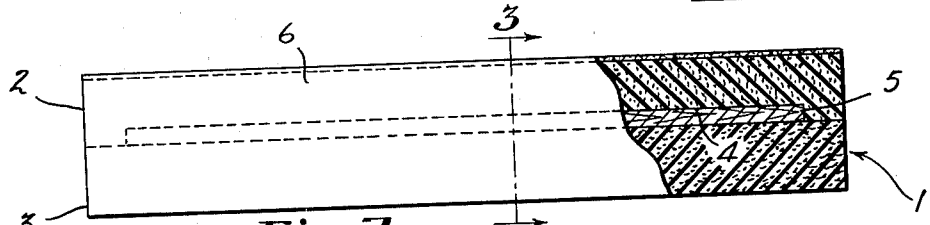


Fig. 2

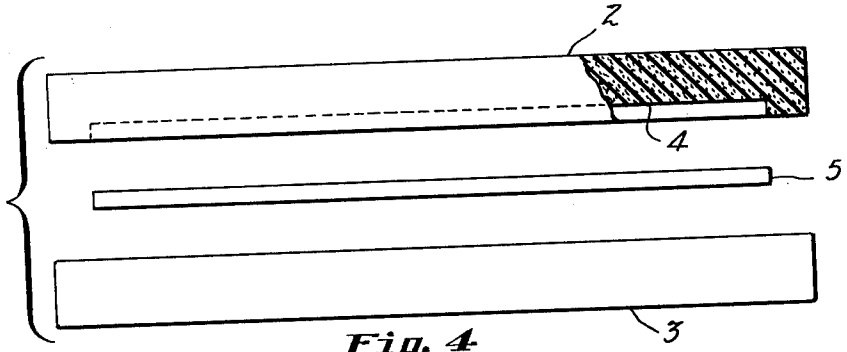


Fig. 4

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United States Patent Office 3,257,679 Patented June 28, 1966

3,257,679

CHALKBOARD CLEANING DEVICE

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Filed Oct. 18, 1965, Ser. No. 502,765
5 Claims. (Cl. 15—118)

This application is a continuation-in-part of my co-pending application Serial No. 410,804, filed November 12, 1964.

The present invention relates to improvements in erasers for removing chalk marks and dust from chalkboards and more particularly to a chalkboard eraser formed of an elongated block of sponge rubber of generally square cross section and having a wide leather cover layer providing three wide wiping faces at the top and sides of the block.

Prior to this invention, chalkboard erasers have been made of sponge rubber covered with a soft leather as shown, for example, in the U.S. Patent to Oxley, No. 2,249,912. However, these have been inconvenient to use and the rigid holders could be dangerous and cause injury should it strike another child.

The cleaning device of the present invention eliminates the necessity for a handle to provide stiffening, permits the use of a longer block of material for the body of the cleaner and provides a stiffener which is embedded entirely within the foam rubber or other cellular latex material to protect against possible injury should the device be thrown.

The novel chalkboard eraser of the present invention has a body formed in two elongated rectangular sections, one of which has a rectangular recess adapted to receive a rigid stiffener formed of wood and having a width several times its thickness.

The stiffener is located in the recess with its top surface flush with the adjacent surface of the section. The second section is then adhered to the first and to the exposed surface of the stiffener. This provides a rigid stiffener which is embedded entirely within the eraser block and cushioned on all sides. A suitable soft flexible leather material, such as suede lambskin, is then adhered to one face of the block with its sides extending across the two adjacent longitudinal faces. The stiffener prevents buckling of the block during cleaning and permits the pressure applied to the block by the user to be uniformly distributed throughout the entire length of the block.

The rectangular sheet of suede lambskin covers the entire top and side faces of the upper foam rubber section and the major portion of each side face of the lower section, the side edges of said sheet preferably being located near the bottom face of the rubber block (see FIGURES 1 and 3). The suede sheet therefore provides three leather faces for wiping chalk particles from the chalkboard after such particles have been loosened by the bottom foam rubber face of the eraser. This makes it possible to clean the chalkboard more thoroughly than would be the case if only one leather face were available for wiping. Also the eraser may be used much longer before the suede surfaces are cleaned.

An object of the invention is to provide a simple, inexpensive chalkboard eraser having a leather layer which is more effective and can be used for longer periods of time before the excess chalk particles are removed.

A further object of the invention is to provide an eraser having greater cleaning area and larger size but which is safe for use by children who may throw the eraser.

Another object is to provide a chalkboard eraser with flat leather side faces which match the top cleaning face of the eraser.

These and other objects, uses and advantages of the invention will become apparent from the following description and claims and from the drawings, wherein:

FIGURE 1 is a perspective view of a chalkboard cleaning device embodying the present invention;

FIGURE 2 is a front elevation of the chalkboard cleaning device of FIGURE 1 with parts broken away and shown in section;

FIGURE 3 is a transverse sectional view taken on the line 3—3 of FIGURE 2;

FIGURE 4 is an exploded front elevational view of the block portion of the chalkboard cleaning device of FIGURE 1.

Referring more particularly to the drawings, which are drawn to scale, there is shown an improved chalkboard cleaning device embodying the present invention. The device comprises an elongated rectangular block broadly indicated by the numeral 1 formed of two sections 2 and 3 of a conventional elastomeric foam material made of natural rubber or a synthetic polymer, such as a polyetherurethane or a polyesterurethane. The foam or sponge may, for example, be made by beating air into a liquid latex it acquires a foaming consistency, and water curing the resulting product.

The rubber block preferably has a substantially square cross section and a length many times its width. Typical dimensions of the block may be about 2" x 2" x 12".

The upper section 2 of the block 1 has a rectangular recess 4 formed in one longitudinal face thereof which is of a size adapted to receive an elongated stiffening member 5 formed of a suitable rigid reinforcing material such as wood, plastic, etc. The stiffening member 5 preferably extends along most of the length of the block 1 so as to provide effective stiffening over most of the erasing and cleaning surfaces. Suffiicent cellular material is provided around the stiffener, however, to provide effective cushioning for the ends and sides thereof. Suitable dimensions for the stiffening block may be about ¼" x 1¼" x 10⅞".

The assembled block 1 has one face covered by a thin layer 6 of soft leather material such as suede lambskin with the nap exposed. The lambskin may be replaced by a chamois or other suedelike material such as a synthetic leather. Portions of the leather layer extend over parts of the two adjacent longitudinal faces of the block as best shown in FIGURES 1 and 3 to cover the major portion of each side face of the lower rubber section 3. This provides three leather faces of the block suitable for cleaning chalk dust from a chalkboard or black board after the initial rough erasure with the bottom foam rubber face. The top leather face extends the full width of the block. Each of the side leather faces has a width at least ¾ the width of the top leather face and may extend the full height of the block.

In the assembly of the device, the sections 2 and 3 are first molded using methods and equipment well-known in the art, the section 2 having the rectangular recess 4 formed therein. The stiffening member 5 which is cut to size before assembly, is placed in the recess 4 and the surface formed by the stiffening member 5 and the adjacent portions of the section 2 coated with cement. The botton section 3 is also coated with cement on one face and then adhered to the section 2 and the stiffener 5 to form the assembled block 1. Many types of glue or cement may be used in this assembly as will be apparent to those skilled in the art. The leather layer 6 is then adhered to the block, as shown in FIGURE 3.

In the operation of the device, the surface marked with chalk is first erased using the cellular rubber surface of the block 1 until the chalk lines are substantially obliterated. The increased length of the device, due

to the integral stiffener, enables the user to erase a large surface area with one motion. This operation leaves a thin film of chalk dust over the board, which makes it difficult to make additional well-defined markings thereon. This film may be removed by wiping the entire surface with one or all of the three leather covered faces of the block. The dust may be removed from the cleaning surfaces of the device when desired by rubbing the surfaces of the block with a rough terry cloth or a soft brush.

It will be understood that the above description is by way of illustration rather than limitation and that, in accordance with the provisions of the patent laws, variations and modifications of the specific device herein shown and described may be made without departing from the spirit of the invention.

Having described my invention, I claim:

1. A chalkboard eraser comprising an upper section and a matching lower section, said sections being formed of elastomeric foam material and being joined together in superposed relation to form a long block of substantially square cross section with rounded upper side edges and flat top and bottom faces, said upper section having a wide central shallow recess formed in its interior face which terminates near the opposite ends of said block, an elongated rigid wooden slab filling said recess and adhesively bonded between said sections to provide longitudinal stiffening, said slab covering the major portion of the upper face of said lower section and being spaced from the side faces of said block, and a thin continuous layer of a soft suedelike leathery material adhesively secured to the top and side faces of said block and terminating near the bottom portion of said lower section, whereby the bottom face of said foam material block may be wiped across a wide path on a flat chalkboard to loosen chalk particles thereon and each of the three leather faces may be wiped over said loosened chalk particles to remove them from said chalkboard.

2. A chalkboard eraser as defined in claim **1** wherein each of the side leather faces has a width at least three-fourths the width of the top leather face, and said thin layer is formed from a rectangular sheet of suede lambskin.

3. A chalkboard eraser as defined in claim **2** wherein each foam section is a rectangular block with a length greater than ten times its thickness and is formed of a natural rubber foam.

4. A chalkboard eraser as defined in claim **2** wherein said elastomeric foam block has a width in the neighborhood of 2 inches, a height in the neighborhood of 2 inches, and a length at least six times its width.

5. A chalkboard eraser as defined in claim **4** wherein said stiffening block has a thickness of no more than one-quarter inch and a width about one inch greater than its thickness.

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