

Jan. 31, 1961

G. S. RUDES

2,969,626

DISPOSABLE CLEANSER PADS

Filed March 25, 1960

Fig. 1.

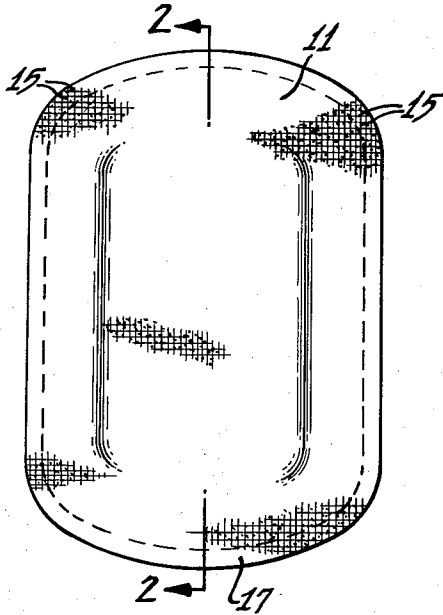


Fig. 2.

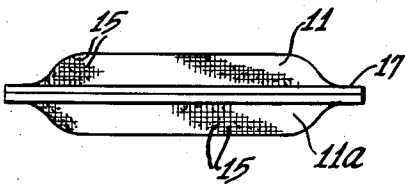
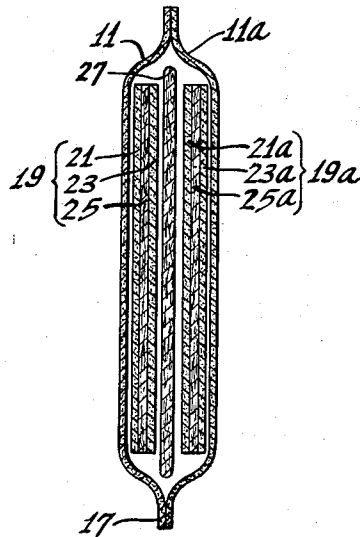


Fig. 3.

INVENTOR.

BY *George S. Rudes*

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2,969,626

DISPOSABLE CLEANSER PADS

George S. Rudes, 2125 Shaaron Drive, Lancaster, Pa.

Filed Mar. 25, 1960, Ser. No. 17,555

4 Claims. (Cl. 51—185)

This invention relates to disposable cleanser pads which provide cheap and simple means for cleaning bath tubs, wash bowls, kitchen sinks and ceramic tile.

Previously proposed disposable pads are comprised generally of a unitary structure of porous paper layers impregnated with soap. Such previous pads have been useful to a limited extent but are in need of improvement for use in the cleaning of sanitary structures and fixtures, particularly in an improved cleansing composition, and in a stronger, more rigid pad which would allow the effective use of the composition.

An object of this invention is to provide improved, sanitary, disposable cleanser pads which may be discarded after one use.

A further object is to provide improved cleanser pad structures which may be manufactured at low cost.

In general, the cleanser pads of the invention include a porous outer jacket comprising two substantially identical reinforced absorbent tissue web pieces joined together around the edges thereof and forming a chamber therebetween. A pair of absorbent multilayer inner elements are positioned within the chamber. Each element comprises two layers of absorbent tissue and a layer of matted paper filler therebetween. A semi-rigid, water-resistant paper sheet is positioned in the chamber, preferably between the inner elements. A dry composition resides in the pores of the outer jacket and the inner elements, said composition comprising a detergent, abrasive particles such as pumice, and a compound which upon contact with water releases chlorine.

By the use of the foregoing composition, the cleansing action of a detergent and an abrasive together with the bleaching and sterilizing action of chlorine are provided. In addition, the particular pad structure provides an adequate supply of the composition in readily available form in a structure having the strength and rigidity required to make effective use of the composition.

In the drawing, Figure 1, is a plan view of an embodiment of a cleanser pad of the invention.

Figure 2 is a sectional view of the embodiment of Figure 1 viewed through section lines 2—2 of Figure 1, and

Figure 3 is a side elevational view of the embodiment of Figure 1.

Figures 1, 2 and 3 illustrate a preferred cleanser pad of the invention. The pad is comprised of a porous outer jacket in two pieces 11 and 11a, which are joined together at the edges thereof to form a closed chamber therebetween. A pair of absorbent multilayer inner elements 19 and 19a, and a semi-rigid, water-resistant sheet 27 are contained within the outer jacket pieces 11 and 11a. The pad has impregnated therein a composition comprising a detergent and a chlorine type bleach cleanser. The overall size of the pad is about 3½ inches long, about 3 inches wide and about ⅜ inch thick.

The preferred embodiment may be prepared in the following steps. A paper sheet of filler material, having about the texture of matted cotton, is placed between two sheets of absorbent tissue paper to produce a composite

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three layer sheet. The composite sheet is then cut, punched, or otherwise formed into multilayer elements 19 and 19a about 2¾ inches by 2½ inches with rounded or square corners. Each element 19 is comprised of a layer 25 or 25a of paper filler material between two layers 21 and 23, or 21a and 23a, of paper tissue. The filler and tissue materials which comprise the multilayer elements 25 and 25a are standard production type papers available commercially from sources such as Kimberly Clark Corp., Neenah, Wisconsin and Scott Paper Co., Chester, Pennsylvania.

A sheet of semi-rigid, water-resistant material, such as treated manila paper is cut, punched, or otherwise formed into pieces 27 having the same configuration as, but slightly larger than, the multilayer element 19. The semi-rigid pieces 27 are preferably a standard production type paper having the stiffness of a medium type of wrapping paper, so chosen for its natural resistance to water without further treatment with such materials as oil, wax, etc. The semi-rigid pieces 27 must finally become limp to conform to the disposable condition of the pad. Water-proof paper produced for example by treating paper with oil or wax, far outlives its usefulness in the cleanser pads herein, by remaining intact in a stiff condition after the other parts of the cleanser pads have advanced to uselessness. The material for the semi-rigid pieces 27 may be obtained from the same sources as the filler and tissue materials may be obtained.

A sheet of absorbent paper having yarn reinforcement therein is cut, punched, or otherwise formed into outer jacket parts 11 and 11a for example, of the same configuration as, but larger than, the semi-rigid pieces 27. The size of the outer jacket parts 11 is about 3½ by 3 inches. The reinforcement is in the form of nylon yarn 15 woven in a rectangular mesh pattern with 8 meshes to the inch in each direction. The function of the reinforcement is to maintain the pad in its shape and to give strength to the pad during its manufacture and during its subsequent use in a cleaning operation. The reinforcement may be of other material, such as rayon yarn, and may be woven in other patterns with coarser or finer meshes. The material for the outer jacket is also a standard production type paper product commercially available from the above mentioned sources.

The various structures are assembled by placing the semi-rigid piece 27 between two of the inner multilayer elements 19 and 19a. It has been found desirable to spot glue on both sides of the semi-rigid piece 27 to hold the multilayer elements 19 and 19a together. The assembly comprising the multilayer elements 19 and 19a and the semi-rigid piece 27 is then placed between two of the outer jacket parts 11 and 11a. The outer jacket parts 11 and 11a extend about ¼ inch beyond the other structures. The two jacket parts 11 and 11a are joined together at the edges thereof in the region of this extension. The jacket parts may be joined by any convenient process, as by the use of an adhesive. The preferred process is to provide in the sheet material of the jacket parts 11 and 11a a heat sealing adhesive. The adhesive may be incorporated, for example, in the yarn, or in any other way known to art. Where a heat sealing adhesive has been incorporated, the edges of the jacket parts 11 and 11a may be joined or sealed by applying heat to the edges of the parts 11 and 11a and, at the same time, pressing them together.

A paste is now prepared by mixing together a liquid detergent and a chlorine type bleach cleanser. A typical formulation is:

2 parts liquid detergent
3 parts pumice or cleanser in about a 1% aqueous solution of chlorine

1 part water—to properly liquify above solutions for saturation ability factor

This formulation may be varied by the change of proportion and the addition, removal or substitution of other ingredients. The essential ingredients are a detergent, a fine particle abrasive, and a compound which releases chlorine upon contact with water. The detergent serves as the binder for the abrasive particles and subsequently is one of the ingredients active in the cleansing action. The abrasive particles aid in the subsequent cleansing action when the pad is rubbed on an article to be cleaned. The chlorine type compound aids chemically in the subsequent cleansing action and additionally bleaches certain undesirable colors and also kills harmful bacteria.

The paste is applied to the outer surface of the outer jacket parts 11 and 11a in quantities sufficient to impregnate the entire assembled cleanser pad. The pad is dried and then individually heat sealed in cellophane. Such an operation allows for the ingredients of the dried paste to remain stable over a substantial period of time. It is desirable to wrap individually the dried pad to protect the pad during storage and shipping from handling and from the adverse effects of moisture in the air.

In order to use the novel cleanser pad, the pad is wetted with water and then rubbed upon the surface of the article to be cleaned. The cleansing action takes place by detergent action, by abrasive action, and by chemical action which in combination is especially effective against the dirt accumulating on bathroom floors, walls and fixtures.

The advantages of the novel cleanser pad of the invention are that it may be produced and sold at low cost, it is disposable, it is sanitary and provides a sanitizing action, and it is convenient and easy to use.

What is claimed is:

1. A disposable cleanser pad including a porous outer jacket comprising two substantially identical fiber reinforced absorbent tissue web pieces joined together around the edges thereof forming a chamber therein; a pair of absorbent multilayer inner elements within said chamber, each element comprising two layers of absorbent tissue and a layer of matted paper filler therebetween; a semi-rigid, water-resistant paper sheet within said chamber

adjacent said elements; and a composition in the pores of said outer layer and said inner elements; said composition comprising a detergent, abrasive particles, and a compound which upon contact with water releases free chlorine.

2. A disposable cleanser pad comprising a pair of substantially equally sized and shaped pieces of reinforced absorbent tissue web material in face to face relation and sealed around the periphery thereof to form a chamber therein; a pair of porous elements within said chamber in face to face relation, each element comprising a matted paper web filler between two sheets of absorbent tissue; and a semi-rigid, water-resistant paper layer in said chamber, said pad being impregnated with a composition of matter including a detergent and a chlorine type cleanser.

3. A disposable cleanser pad comprising a pair of substantially equally sized and shaped pieces of reinforced absorbent tissue web material in face to face relation and heat sealed around the periphery thereof to form a chamber therein; a pair of porous elements within said chamber in face to face relation, each element comprising a matted paper web filler between two sheets of absorbent tissue; and a semi-rigid, water-resistant paper layer in said chamber, said pad being impregnated after having been sealed with a composition of matter including a detergent and a chlorine type cleanser.

4. A disposable cleanser pad comprising a pair of substantially equally sized and shaped pieces of reinforced absorbent tissue web material about 3½ inches long, 3 inches wide and ⅜ inch thick, said tissue web material including nylon yarn in mesh pattern with about 8 meshes to the inch in each direction, said pieces of tissue web material being in face to face relation and heat sealed around the periphery thereof to form a chamber therein; a pair of porous elements within said chamber in face to face relation, each element comprising a matted paper web filler between two sheets of absorbent tissue, and a semi-rigid, water-resistant paper layer in said chamber, said pad being impregnated after having been sealed with a composition of matter including a detergent and a chlorine type cleanser.

No references cited.