

May 22, 1934.

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1,960,192

COMPOSITE CLEANING AND POLISHING PAPER

Filed Dec. 29, 1931

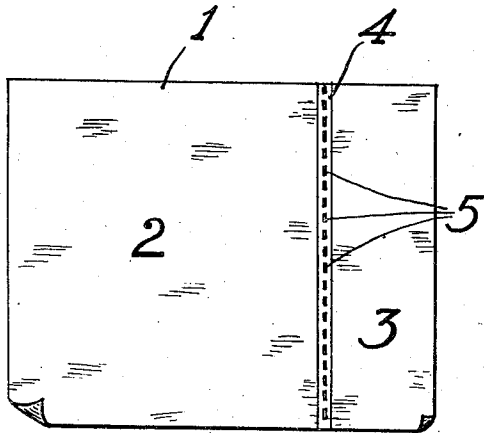


Fig. - 1

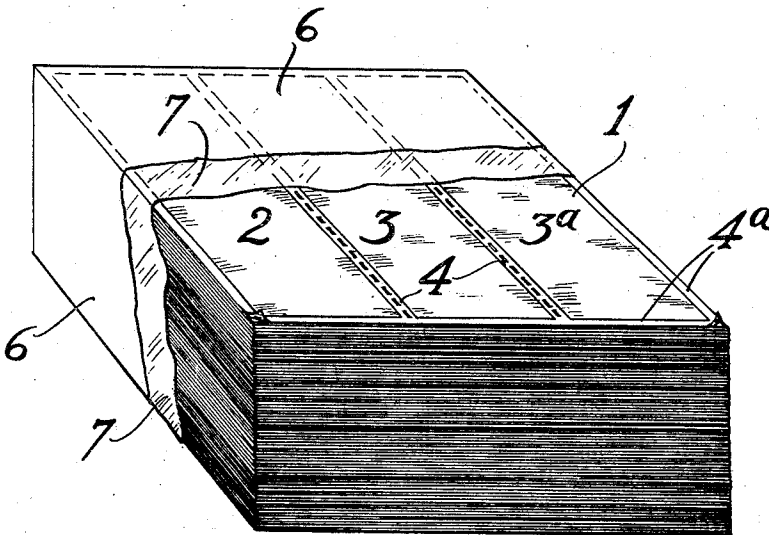


Fig. - 2

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1,960,192

COMPOSITE CLEANING AND POLISHING
PAPERFrank A. Howard, Elizabeth, N. J., assignor to
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Application December 29, 1931, Serial No. 583,701

13 Claims. (Cl. 15-209)

The present invention relates to an article of manufacture suitable for cleaning and polishing and, more specifically, to a composite sheet of paper containing an oily polishing medium in only a portion thereof, and with the remainder of the sheet free from such oily material, or containing other materials of the same character, and means for preventing the capillary flow of the impregnating material over the entire sheet.

My invention will be fully understood from the following description and the drawing which illustrates a form of my improved polishing paper.

In the drawing Fig. 1 illustrates a sheet of absorbent paper indicating the area saturated with the oily material, an area free from the same, and means for preventing capillary flow; and

Fig. 2 indicates a similar application of my invention in which the sheets are shown in a convenient package with means for preventing capillary flow from the several separate areas into one another, and likewise into the package wrapper.

Referring to the drawing, in Fig. 1 the reference character 1 designates a sheet of paper, preferably of soft, uncalendered, unsized or glazed type capable of absorbing a considerable quantity of a suitable liquid. For this purpose I may use a material similar to that from which the ordinary blotting papers are made, but preferably I prefer a thinner, stronger and more fibrous stock such as is used for the manufacture of paper towels. The sheet is divided into two areas marked generally 2 and 3 by a narrow band, or zone 4. The areas may be equal or unequal, and may be of any suitable shape, although it is most convenient that the sheet be divided by a straight line passing across its face. The narrow band, or zone 4 is suitably treated so as to greatly reduce its capillarity and to prevent capillary flow of a liquid material from one portion of the sheet across the band into the other portion. This may be done in a variety of different ways; for example, the narrow band is treated with a suitable sizing material. As sizes glue solutions are perhaps the most satisfactory, but gelatinous, inorganic materials such as aluminum hydroxide, chromic or ferric hydroxides can also be used. If desired, a glue solution may be used and it may be rendered substantially insoluble by treatment with a small amount of formaldehyde or paraldehyde. Rosin or other resins either natural or synthetic such as paracoumarones, and condensation products of phenols and aldehydes may also be used. They are preferably applied by means of solvents such as alcohols, naphtha, and the

like which do not perceptibly wet paper. Thick soap solutions may be used also for this purpose. The capillarity of the paper in the narrow, separating zone may be reduced by impregnation with other suitable materials which are difficultly soluble in the fluids to be used and which are themselves incapable of capillary flow. Paraffin wax may serve this purpose, and preferably the higher melting point grades are used which are also less soluble in oily compounds. Paraffin waxes with a melting point of say 110 or preferably 120° F., or higher, are suitable for this purpose. Japan wax is likewise suitable, or carnauba, or candelilla, or beeswax, or suitable mixtures of these materials with each other, or other ingredients which may be added to produce a readily flexible material which will be substantially solid at ordinary temperatures and which will saturate paper in a relatively narrow portion and render it unable to conduct liquid materials from one area into the other. Perforations indicated at 5 may be provided through the zone 4 in order to assist in the tearing of the sheet.

The areas 2 and 3, or either of them, are then impregnated with a suitable fluid substance, preferably of an oily character if the purpose is for cleaning and polishing. Mineral oils such as spindle oils or the lighter grades of lubricating oil may be used, or animal oils such as neat's-foot oil or degrass, or vegetable oils such as linseed, castor and the like, or sulfonated oils of the type of Turkey red oil may serve my purpose.

If desired, both of the areas 2 and 3 may be impregnated with the same oil say in different degrees of saturation, for example, one of the areas may contain a relatively small amount of the oily material substantially less than is required to fully saturate the paper, and best adapted to gather dust from the furniture or other article to be polished. The other portion may be fully saturated with the same oil which is desirable for the most efficient polishing. Similarly, the two oils may be entirely different in their composition. For example, the dust-gathering oil may be a light spindle oil containing turpentine, while the polishing oil may be linseed oil with or without lubricating oil, or lubricating oil alone. Greases may be used instead of oils for one or more of these purposes and, if desired, other substances may be added to the oil or grease such as fine abrasives of the type of rotten stone, talc or bentonite. Similarly, wax may be used in very small amounts to give a high polish on a fine wood or lacquer surface. For this purpose

a relatively small amount of the softer greases or paraffin wax are to be preferred.

In Fig. 2 a package of sheets similar to those illustrated in Fig. 1 is shown with a part of the wrapper 6 torn away to show the sheets 1 which in this case are divided into areas 2, 3 and 3a by the narrow bands or zones 4, as indicated before. It will be understood that there may be as many different portions of the sheet as may be required for the particular purpose. These different areas are separated as indicated above by the narrow zones 4 in which the capillary power of the paper has been greatly reduced. These zones may also be continued around the outer edges of the sheet as indicated at 4a so as to prevent flow of the oily material from one or more of these impregnated areas into the wrapper 6. Glazed paper may be wrapped about the bundle of sheets, or a single glazed sheet may be placed on the top and bottom of the pile as indicated at 7.

When adapted for polishing furniture, or other fine wooden or lacquered surfaces, one area of the sheet will suitably contain a mixture of turpentine and a lubricating oil in relatively small amount, that is, the paper will not be fully saturated. This is found to be excellent in removing dust and dirt film and to prepare the surface for receiving a high polish. A relatively soft abrasive as indicated above could also be included. The other area would be substantially saturated with a polishing oil such as linseed oil, or mineral oil or a mixture of these two. A suitable composition for this purpose is as follows:

Cleaning area		Polishing area	
	Percent		Percent
Mineral oil (spindle).....	90	Mineral oil (spindle).....	90
Turpentine.....	10	Linseed oil.....	10

The cleaning paper contains about .012 cc. of the oil per sq. inch of paper while the polishing paper contains about .125 cc. The separating zone in this case is made by applying a solution of rosin in isopropyl alcohol to the paper.

My invention may be applied for other purposes, for example, it may be used in connection with cosmetics. In such case one portion of the sheet may contain cold cream, the other being unimpregnated. Three areas are suitably applied in this case, the third containing a free powder capable of easy removal.

My invention is not to be limited to any theory of the manner in which oily materials are kept in place and prevented from mixing, nor to any particular substance for impregnating the sheets, nor likewise to any specific material or method for reducing the capillarity of the paper in the narrow zones separating the various areas of the sheet. My invention is to be limited only by the following claims in which I wish to claim all novelty inherent in the prior art.

I claim:

1. A new article of manufacture comprising a sheet of absorbent paper divided into a plurality of areas by narrow zones wherein the paper is treated to greatly reduce its capillarity, and one

of said areas being impregnated with a cleaning compound.

2. An article of manufacture according to claim 1 in which perforations are provided along the narrow zones to assist tearing.

3. An article of manufacture comprising a sheet of absorbent paper divided into separate areas by a narrow zone wherein the paper is treated with a substance incapable of capillary flow and substantially insoluble in oily materials at ordinary temperatures and at least one of said areas being impregnated with an oily compound.

4. An article of manufacture according to claim 3 in which the narrow zone is sized with a gelatinous material insoluble in oils.

5. An article of manufacture according to claim 3 in which the narrow zone is impregnated with glue.

6. An article of manufacture according to claim 3 in which the narrow zone is impregnated with a wax which is substantially solid at ordinary temperatures and insoluble in oily materials at room temperature.

7. An article of manufacture according to claim 3 in which the narrow zone is impregnated with a material comprising paraffin wax melting above about 120° F.

8. An article of manufacture according to claim 3 in which the narrow zone is impregnated with a material comprising a resin.

9. An article of manufacture according to claim 3 in which the narrow zone is impregnated with a material comprising rosin applied in an alcoholic solution.

10. An article of manufacture comprising a sheet of soft, absorbent paper divided into separate areas by narrow zones in which the paper has been treated to substantially prevent capillary flow from one area to another, and impregnated with oily materials in said separate areas.

11. An article of manufacture according to claim 10 in which one of said areas is impregnated with a composition comprising an oily material in proportion materially less than required to saturate the paper, and the other with an oily material in proportion sufficient to substantially saturate the paper.

12. A composite cleaning and polishing paper comprising a sheet of soft, absorbent stock divided into separate areas by narrow zones in which the paper has been impregnated with paraffin wax, one of said areas being impregnated to a degree less than sufficient to fully saturate the paper with a compound of oily material adapted for dust collection and cleaning, and others of said areas being impregnated to a substantially higher degree of saturation with a compound comprising a viscous, oily material adapted for polishing.

13. A composite cosmetic cleaning paper, comprising a sheet of soft, absorbent stock divided into separate areas by narrow zones of reduced capillarity, one of the said areas being impregnated with an oily composition adapted for cleaning the skin.

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