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TOWEL

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This invention relates to an improvement in towels and more particularly to a towel comprising an absorbent paper having a detergent solution associated therewith. The towel is especially adaptable for cleaning surfaces, windows and the like without the necessity for the separate provision of water.

Heretofore it has been known to provide towels carrying detergent compositions, but such as have heretofore been produced have in use required the provision of water from an outside source. Thus, for example, the patent to Jackson No. 1,526,149 and the patent to Christman No. 1,628,229 disclose cloths impregnated with soap solution, but in their use water must be provided. Again, the Washburn Patent No. 1,868,862 discloses a cloth only slightly impregnated with soap solution and having its surfaces free from any appreciably visible soap solution. The Washburn towel in use requires water from an outside source. The prior art has not, so far as it is known, contemplated the use of absorbent paper in connection with a towel of the type contemplated here.

Now in accordance with this invention a towel formed from absorbent paper, as an ordinary paper towel, is fully impregnated with a soap solution including sufficient water, relatively high or relatively low in amount, to enable use of the towel for cleaning surfaces without the necessity for the provision of any water from an outside source, and at the same time of such a character as to act to dry a surface when cleaned.

The towel in accordance with this invention will be inexpensive to produce and will be found convenient for cleaning various surfaces, as painted or varnished surfaces, and in particular for cleaning window glass. In use the towel will be efficient for cleaning without the provision separately of soap, or other cleaning composition, and water. The towel will be efficient not only for cleaning surfaces, but will leave a surface upon which it is used in a dry and finished condition. Where the towel is used for cleaning glass, as for example, window glass, it will operate not only to clean and dry the glass, but will effect a polish.

The towel in accordance with this invention may comprise any suitable absorbent paper; however, it will be understood that paper such as is used for forming the widely used paper towels will be preferable. The detergent may be associated with the towel either by being impregnated into the towel or applied as a coating to one or both surfaces thereof, or by both impregnating and coating.

The detergent for use in forming the towel in accordance with this invention will contain essentially pine oil, soap and water. Various other ingredients for giving the detergent desired characteristics may be included. Thus, for example,

glycerine, a water soluble silicate, or other ingredients desirable in a detergent composition may be included. The detergent may contain the essential ingredients pine oil, soap and water in varying proportions and likewise other ingredients which may be included in varying amounts, depending upon their function. The water content, however, while it may be relatively low or relatively high, will be sufficient to enable the towel to function without necessity for the provision of any water from an external source.

As illustrative, the detergent will preferably contain pine oil in amount within about the range 3-10 parts and soap on the basis of anhydrous soap in amount within about the range 0.3-0.6 parts. The water content may be within, say, about the range 20-95%. Where other ingredients are added as, for example, glycerin and/or a soluble silicate, glycerin may, for example, be added in amount say within about the range 1-5 parts and/or soluble silicate in amount within about the range 0.1-1.0 parts.

In making up the detergent the essential ingredients, pine oil and soap on an anhydrous base, alone, or together with such other ingredients as may be added, will be mixed with water sufficient to make up 100 parts by weight.

The pine oil ingredient of the detergent may be the ordinary pine oil of commerce, such as is obtained in connection with the extraction of turpentine and rosin from pine stump wood. The soap may be of any usual type, as for example, sodium or potassium oleate, stearate, etc., etc.

For the production of towels in accordance with this invention the detergent as more particularly described above, containing essentially pine oil, soap and water, and containing such other ingredients as may be desirably added, will be coated on, and/or impregnated into a paper towel. The detergent may be applied to the towel by, for example, spraying, or the towel may be dipped into or soaked with the detergent composition. It will be appreciated that with the usual type of paper towel the detergent composition will be more or less impregnated into and coated on the towel.

After application of the detergent composition to the towel, excess detergent will be removed in any suitable manner, as, for example, by passing the surface of the towel through a wringer. The towels will then be packaged in air-tight containers in order to prevent drying out prior to use. The towels may be packed in any usual form of container, as, for example, a sealed can, an air and moisture tight envelope, etc.

As illustrative of the production of towels in accordance with this invention, for example, any

ordinary form of paper towel may be soaked in a mixture having the following formula:

	Parts
5 Pine oil.....	5
Sodium oleate (dry basis).....	0.5
Glycerin.....	2
Soluble silicate.....	0.5
Water.....	92

- 10 After the towel has been soaked in the above composition a sufficient length of time for it to become thoroughly impregnated therewith, the towel is passed through a wringer to remove excess detergent composition and then packed in an air-tight container until ready for use.

- 15 The towel as prepared will be impregnated with a composition including pine oil, soap, glycerin, soluble silicate and water and will be found efficient and economic for the cleaning, for example, of window glass, painted or varnished surfaces, etc. The water content of the finished towel will be maintained by packaging the towel in an air-tight container until desired for use which will also insure maintenance of the pine oil content of the detergent composition. The water content of the towel will be sufficient to enable the towel to function to clean a surface without the necessity for the provision of additional water.

- 30 As further demonstrative, towels in accordance with this invention may be made up by impregnating ordinary paper towels with detergent compositions made up on the following formula:

	No. 1	No. 2
	Percent	Percent
35 Pine oil.....	72	50
Soap (as sodium oleate).....	8	6
40 Water.....	20	44

To the above formulae small amounts of glycerin,

soluble silicate, or other desired ingredient may be added.

In making up towels with use of the above formulae, the procedure heretofore outlined may be followed, the towels being packed in air and moisture proof containers after removal of excess of detergent solution.

The towels made up with use of the above formulae will contain sufficient water to function without provision of additional water from an outside source and will on rubbing over a surface first clean the surface and finally dry and polish it.

It will be noted that where the towel as prepared is intended for use on painted or varnished surfaces, the detergent composition will desirably not contain in excess of about six parts of pine oil.

The towel in accordance with this invention will, as has been indicated, be found to be highly efficient for the purpose intended and will be so inexpensive to produce as to render its use with discard after use economic over the methods of cleaning involving the use of soap, or other cleaning composition, or prior towels carrying detergent compositions, and water.

What I claim and desire to protect by Letters Patent is:

1. A towel for cleaning surfaces comprising a paper towel carrying a detergent composition including pine oil about 3-10 parts, a soap about 0.3-0.6 parts and water about 85-95 parts.

2. A paper towel for cleaning surfaces carrying a detergent composition including as ingredients pine oil about 5 parts, soap about 0.5 parts, glycerin about 2 parts, soluble silicate about 0.5 parts and about 92 parts of water.

3. A paper towel for cleaning surfaces carrying a detergent composition including as ingredients pine oil about 5 parts, soap about 0.5 parts and about 92 parts of water.

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