

F. G. CRANE,
PAPER TOWEL.
APPLICATION FILED OCT. 28, 1914.

1,201,701.

Patented Oct. 17, 1916.

Fig. 1.

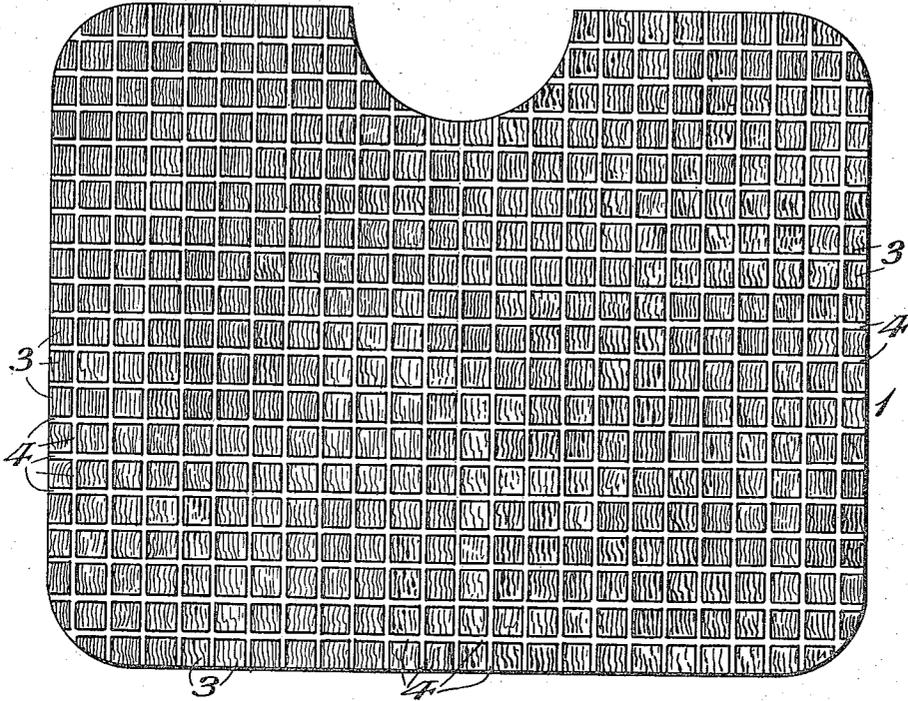


Fig. 2.



Fig. 3.



WITNESSES

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PAPER TOWEL.

1,201,701.

Specification of Letters Patent.

Patented Oct. 17, 1916.

Application filed October 28, 1914. Serial No. 869,011.

To all whom it may concern:

Be it known that I, FRANK G. CRANE, a citizen of the United States, residing at West Collingswood, in the county of Camden, State of New Jersey, have invented a new and useful Paper Towel, of which the following is a specification.

In my prior Patent No. 1,033,992, granted to me of the 30th day of July 1912, I have described and broadly claimed a novel paper towel in which the body portion thereof is composed of soft absorbent paper intersected by narrow depressions of greatly compressed and sized paper.

The use of this towel is somewhat limited owing to the fact that the material absorbed by the towel is liable to stain or discolor the material on which it is laid, and it is the purpose of my present invention to devise a paper towel which has one or more absorbent surfaces and a water-proof or non-absorbent surface, so that the liquid absorbed by the towel cannot pass to the undersurface thereof to stain, discolor or destroy the material over which it has been placed.

With the above in view my present invention consists of a novel paper towel one or more surfaces of which are absorbent and cooperate with a non-absorbent portion.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawing those forms thereof which are at present preferred by me, since the same will give in practice satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a plan view of a paper towel embodying my invention. Fig. 2 represents a sectional view thereof. Fig. 3 represents a sectional view of another embodiment of my invention wherein the outer portions of the towel are of absorbent material.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, referring first to Figs. 1 and 2, 1 designates the absorbent layer of the towel which is connected with

the water-proof layer or backing 2. The absorbent layer of the towel consists of the portions 3 which are of soft, absorbent paper. The towel is intersected by a series of lines 4 of condensed material running throughout the towel and increasing the strength thereof. These intersecting lines of condensed material may run in any desired manner to form the design or pattern and are depressed below the surface of the towel, as will be understood by reference to Fig. 2. The lines of condensed material are sized and preferably finished so as to be but slightly effected by water or other liquid. The layer 2 of water-proof paper may consist of a sheet of paper which has been water-proofed in any desired manner such as, for example, by waxing or oiling, and it is secured to the absorbent sheet of paper in any desired manner but preferably by sizing during the process of making the towel. The sizing only binds on the depressed or condensed lines at which points only the two sheets are secured together.

In the process of making the towel the stock will pass through rolls one of said rolls having small pockets or depressions in which the pulp can lie and narrow raised lines between the pockets to compress and condense the material where the strengthening lines are to be formed between the portions intended to project and be absorbent. The other roll has a smooth surface and it will be understood that the absorbent layer 1 and the water-proof layer 2 are run between the rolls together so that during such operation the condensed line 4 will be formed and the sizing will cause the absorbent paper to adhere to the water-proof paper, so that the resultant product has the appearance of a single sheet of paper. It is also within the scope of my invention to form the outer portions of the towel absorbent and provide an intermediate water-proof portion, as will be understood by reference to Fig. 3. In this embodiment, 5 and 6 designate the outer absorbent portions intermediately of which is the water-proof portion 7 and during the rolling operation the narrow depressions 8 and 9, respectively, are greatly compressed and sized paper is formed and the different sheets are secured together by the sizing or other adhesive material, if desired.

While I have described my invention as

consisting of a paper towel this term is not to be construed as limiting the same to a towel used for wiping or drying purposes, since my invention is designed to be employed as a substitute for absorbent and water-proof material and can be used for medical purposes and dentistry and other arts and can be used as a substitute for towels, napkins, table-cloths, doilies and other purposes too numerous to mention.

Owing to the low cost of manufacture my novel towel may be placed on the market at a lower cost than the cost of laundrying towels made of linen or cotton or similar material. After the paper towels have been used they may be burned or otherwise disposed of.

It will be seen that the depressions preferably do not extend into the water-proof portion 2 so that the outer face of the latter forms a substantially plain surface. It will also be seen that the absorbent surface is formed in such a manner that the absorption is localized and a multiplicity of absorbent portions are formed on the face of the towel.

It will now be apparent that I have devised a novel and useful paper towel which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance shown and described the preferred embodiments thereof which will give in practice satisfactory and reliable results, it is to be understood that the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

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

1. A device of the character stated, com-

prising a body of soft absorbent paper intersected by depressions of greatly compressed and sized paper, and a water-proof backing secured to said body portion only along said depressions. 45

2. A device of the character stated, comprising a sheet of soft absorbent paper intersected by narrow depressions of greatly compressed and sized paper, and a sheet of non-absorbent paper secured to said sheet of absorbent paper only at the narrow depressions to form a unitary structure therewith. 50 55

3. A device of the character stated, comprising a sheet of soft absorbent paper intersected by narrow depressions of greatly compressed and sized paper, and a sheet of water-proof paper secured to said sheet of absorbent paper only at the narrow depressions to form a unitary structure therewith. 60

4. A device of the character stated, having its outer portions consisting of soft absorbent paper, intersected by depressions of greatly compressed and sized paper, and a sheet of waterproof paper intermediate said portions. 65

5. A device of the character stated, comprising a sheet of absorbent paper intersected by compressed and sized depressions, and a sheet of oiled paper secured to the sheet of absorbent paper. 70

6. A paper sheet composed of two outer layers of absorbent paper and a central layer of non-absorbent material to which said outer layers are affixed so as to be relatively, substantially immovable throughout their extent. 75

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Witnesses:

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