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GUMMED PAPER PRODUCT

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8 Claims. (Cl. 91—68)

This invention relates to gummed paper products and is particularly useful in connection with re-moistening adhesive tape. This application constitutes an improvement upon my pending application Serial No. 726,796 for Gummed paper products.

An object of the invention is to provide a gummed tape of great flexibility which is extremely quick in re-moistening and which is able to take care of excess amount of moisture. Other specific objects and advantages will appear as the specification proceeds.

In the practice of my invention, any suitable kraft paper may be selected for gumming. To one side of the paper is applied a thin layer of adhesive material such as dextrine, starch or inferior glue or any of the above in combination. Vegetable glue is useful in that it produces with the paper a readily flexible tape. To the top surface of the first layer or strata of adhesive, I apply a powdered animal glue. The animal glue and vegetable glue may be applied in different relative quantities depending upon the quality of the finished tape required. A good quality product can be obtained by applying one-half the total weight of adhesive in the first layer of dextrine, starch, inferior glue, etc., and one-half of the total weight of adhesive in the higher quality adhesive or animal glue.

I prefer to prepare the powdered animal glue in the following manner. The animal glue is caused to foam by thoroughly removing the grease therefrom or by incorporating chemicals to induce foaming. When the foam is well developed, the glue liquor is passed over a hot drum to evaporate the moisture. The finely divided glue is then scraped off and after being subjected to further pulverizing the product is found not to clog or become lumped.

Any suitable material for causing the animal glue to foam may be employed. As an example calcium citrate and sodium silicofluoride may be used. Also, if desired, the grease may be removed and at the same time the foaming agents added.

The powdered glue obtained as above described is sifted or dusted preferably by mechanical means, over the freshly gummed or moistened surface and is permanently bonded to this surface. The layer of dusted glue tends to remove moisture from the lower strata and become slightly embedded in the lower strata. The tape with the two layers is then passed between high pressure rolls so as to embed further quantities of the dried adhesive into the first layer. At the same time, the rolls impart a high glossy finish to the glue. As the heat is applied, the opacity of the dried glue is substantially reduced and it begins to take on more of its original translucent appearance.

The application of the powdered animal glue produces at least two new results. In the first place, it represents a considerable saving in the drying operation and makes the glue much easier to handle. In the second place, the broken outer surface of the final product has much greater ability to re-moisten. At the same time, if excessive moisture is applied it is carried at once to the more soluble layer below which is able to absorb the moisture.

By causing the animal glue to foam before applying it to the hot roller I find that it is possible to finely divide the glue to a greater extent than has been heretofore possible. The operation is accomplished in a very brief interval and at very slight expense. At the same time, the product lends itself readily to further pulverizing and exhibits no tendency to clog or lump, thus making it extremely easy to handle. I found that the drying operation with respect to the forming of the gum tape is reduced less than half because the powdered glue quickly absorbs any excess moisture in the lower layer.

The powdered adhesive on the top surface of the resulting blended layers presents a rather broken or cracked appearance that enables moisture to pass readily through the top layer and also enables the top layer to be more readily re-moistened.

While in the foregoing specification I have set forth certain specific materials and steps, it will be understood that these may both be varied considerably without departing from the scope of my invention.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

I claim:

1. A re-moistening tape of the character set forth comprising: a paper strip, a water-pervious layer of adhesive consisting mainly of vegetable adhesive covering said paper, and a layer of powdered animal glue embedded in said first layer.

2. A re-moistening tape of the character set forth comprising: a paper strip, a water-pervious layer of vegetable adhesive covering said paper,

and a layer of powdered water-soluble animal glue extending over said first mentioned layer and being partially embedded therein.

3. A re-moistening tape of the character set forth comprising: a paper strip, a layer of vegetable adhesive thereon, and a layer of powdered animal glue on said first mentioned layer, said vegetable adhesive and animal glue being in substantially equal proportions.

4. A re-moistening tape of the character set forth comprising: a paper strip, a vegetable adhesive thereon, and a layer of powdered adhesive applied to the top surface thereof, said powdered adhesive presenting a top surface which is broken in character and responds readily to re-moistening.

5. A re-moistening tape of the character set forth comprising: a paper strip, a layer of vegetable adhesive covering said paper, and a layer of powdered animal glue embedded within said vegetable adhesive and providing a broken top surface through which moisture may readily pass.

6. In a process for preparing a gummed tape, the steps of applying a vegetable glue to a paper surface, and applying to said vegetable glue an animal glue which has been foamed, dried, and pulverized.

7. In a process for preparing a gummed tape, the steps of applying a vegetable glue to a paper surface, applying to said vegetable glue an animal glue which has been foamed, dried, and pulverized, and pressing said animal glue so as to embed it in said vegetable glue.

8. In a process for preparing a gummed tape, applying vegetable glue to a surface, applying to said vegetable glue a pulverized animal glue, and applying heat and pressure to the surface of said pulverized glue to embed it within said vegetable glue.

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