

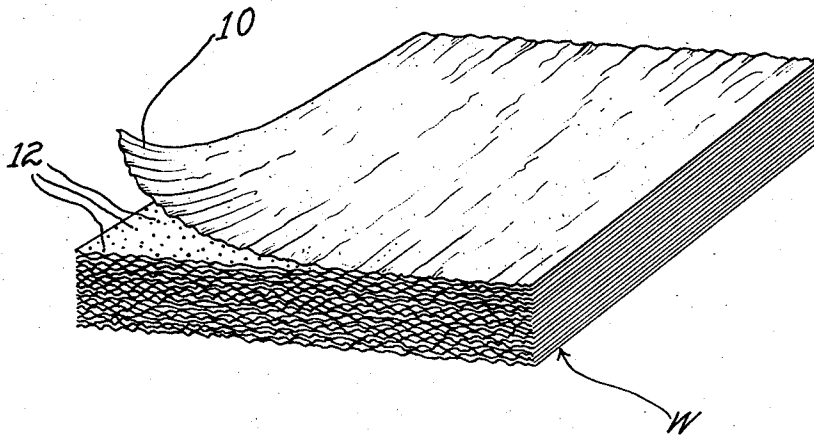
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PAPER WADDING

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PAPER WADDING

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My invention relates to paper wadding, and
contemplates more particularly an improved
fluffy wadding formed of a plurality of plies of
relatively thin paper, such as creped tissue paper
or the like.

An object of my invention is to provide ma-
terial of the type referred to in which the sheets
are secured together without any sacrifice to the
fluffiness and lightness of the wadding.

A further object is to provide a waterproof or
non-absorbent wadding of the type referred to.

Various other objects and advantages will be-
come apparent as the description proceeds.

The accompanying drawing forms a part of
this specification and illustrates a preferred em-
bodiment of my invention.

In the ordinary manufacture of crepe-paper
wadding, the tissue paper is removed from the
drier by means of a doctor blade and drawn in an
endless web to a reel where it is wound up to the
desired thickness. The mat thus formed is then
cut longitudinally of the reel and the blanket thus
obtained is drawn off and cut into a plurality of
strips of the desired width.

Such wadding is used for a large number of
purposes, for example, as padding in upholster-
ing automobile seats, furniture, and the like.
When so used, it has been customary in the past
to compress or emboss the padding, but, as a re-
sult, the enclosing fabric has been caused to
wrinkle and produce an unsightly article. While
attempts have been made heretofore to apply ad-
hesive to the tissue sheets, this practice has re-
sulted in a loss of fluffiness, consequently of bulk,
in the wadding, due to the large amount of water
and adhesive which it has been considered neces-
sary to use. Therefore, such material has fallen
far short of the fluffy, resilient padding which
one might hope to obtain, in view of the initial
material.

In accordance with my invention, liquid adhe-
sive is applied to one surface of the creped tissue
sheet or web 10 in a plurality of relatively minute
and spaced droplets 12 before it is wound upon
the reel to form a blanket. The adhesive may
be of any suitable type and of any desired vis-
cosity. My preferred adhesive solution is one
made from starch hydrolized with caustic soda
with the addition of a small quantity of sodium
fluoride so as to prevent its being eaten by mice
or insects. The process otherwise may be similar
to that described above. I preferably use a very
thin grade of creped tissue paper. It will be ob-
vious that, as the web is rolled upon itself on the
reel, the layers of tissue paper will adhere to each

other by reason of the presence of adhesive.
Hence, when the material is cut and removed
from the reel, the blanket or wadding W, instead
of consisting of loose sheets, will be substantially
integral.

One manner of applying the adhesive to the
paper sheet or web is by picking up a quantity of
liquid adhesive on a brush or the like and then
flinging it onto the sheet. The adhesive will thus
spatter onto the sheet in a plurality of spaced
droplets.

An important advantage of my improved proc-
ess is that no further additional drying step is
required after applying the adhesive. On the
other hand, where adhesive is applied in other
ways, the material must be subjected to a special
drying operation because of the large amount
of liquid carrying the adhesive. This, of course,
necessitates additional time and fuel and the use
of apparatus, thus raising the cost of production.

A preferred form of my invention has to do
with the preparation of an improved material
which may be used in various relations, particu-
larly in the packing of goods for shipment, where
fluffiness and moisture insulation are desired. It
is highly desirable that such insulating material
be substantially non-moisture-absorbent, espe-
cially where the insulating material is formed of
tissue sheets as in the present case, since such
material loses its fluffy nature to a large extent
in the presence of moisture, and thus largely loses
its value as packing. Hence, moisture insulation
is an important requisite in packing goods for
water transportation.

In the manufacture of my improved insulating
material, I treat the fibers in such a manner as
to render the resultant paper water repellent. I
prepare a stock as in the usual preparation of
creped tissue paper, preferably using sulphite
fibers or a mixture of groundwood and sulphite.
Various substances may be employed to render
the fibers water repellent, but I prefer to use a
rosin size, which I preferably apply as a rosin sus-
pension in rosin soap (a common size) and alumi-
num sulphate (the usual papermaker's alum). I
preferably introduce these substances in the beat-
er in the manner usually practiced by paper-
makers in sizing paper, but they may be applied
at other stages of the process, as in the Jordan
engine.

I proceed with the manufacture of a very thin
creped tissue paper sheet 10 in the usual manner,
which is well-known to those skilled in the art,
and then may apply adhesive thereto in fine
spaced droplets 12, in the manner described above,

to form a wadding W consisting of a plurality of sheets of sized creped tissue paper secured together by the spaced droplets 12 of adhesive.

The material thus formed is excellently adapted for use as packing, and is of particular advantage because of its extreme lightness. The very small quantity of adhesive used naturally adds little to the weight of the material. The wadding lends itself advantageously to the packing of materials for water transportation, since because of its non-hygroscopic property, it will withstand high humidity.

It is also found that, by reason of the presence of size in the paper, the droplets of adhesive remain on the surface of the tissue sheets to a much greater extent than in the case of unsized paper and, hence, smaller quantities of adhesive are required than where it is, to a large extent, absorbed and diffused by the paper, as in the case of unsized paper.

Various modifications and variations coming within the spirit of my invention will doubtless

suggest themselves to those skilled in the art. Hence, I do not wish to be restricted to the specific embodiments disclosed herein or uses mentioned, except to the extent indicated by the appended claims, which are to be interpreted as broadly as the state of the art will permit.

I claim as my invention:

1. Stuffing wadding comprising a plurality of superimposed sheets of creped woodpulp tissue paper sized to render the same moisture-repellent and secured together by means of adhesive disposed on said sheets in a plurality of spaced droplets to form a fluffy mat.

2. A material as defined in claim 1, wherein the paper comprises sulphite fiber.

3. A material as defined in claim 1, wherein the paper comprises a mixture of sulphite and ground wood fiber.

4. A material as defined in claim 1, wherein the material has been rendered moisture-repellent by means of a rosin size.

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