A. E. CURRIER AND A. F. SCHENKELBERGER.

METHOD OF TREATING PAPER.

APPLICATION FILED MAY 14, 1918.

1,368,547.

Patented Feb. 15, 1921.

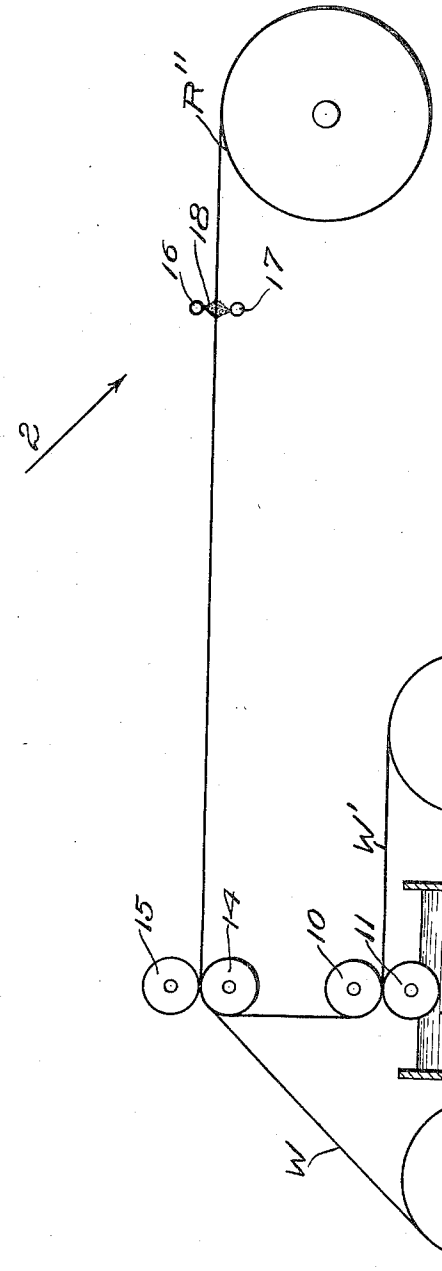


Fig. 1.

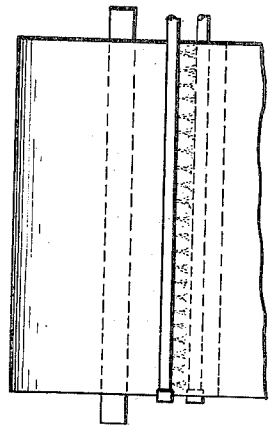


Fig. 2.

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UNITED STATES PATENT OFFICE.

ANDREW E. CURRIER, OF EAST WALPOLE, AND ALBERT F. SCHENKELBERGER, OF QUINCY, MASSACHUSETTS, ASSIGNORS TO SAFEPACK PAPER MILLS, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

METHOD OF TREATING PAPER.

1,368,547. Specification of Letters Patent. Patented Feb. 15, 1921.

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To all whom it may concern:

Be it known that we, ANDREW E. CURRIER and ALBERT F. SCHENKELBERGER, citizens of the United States, and residents, respectively, of East Walpole, in the county of Norfolk and Commonwealth of Massachusetts, and of Quincy, in the county of Norfolk and Commonwealth of Massachusetts, have invented an Improvement in Methods of Treating Paper, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in each of the several views.

This invention relates to an improved method for treating paper for wrapping, baling, case-lining and like uses and has for its principal object the provision of an improved method adapted to produce rapidly and cheaply wrapping or like paper that is moth-proof and vermin-proof, and also waterproof and damp-proof. A further object is to provide an improved method for producing wrapping material composed of a plurality of sheets or layers adhesively combined and having associated therewith means for treating the paper so as to render the same moth-proof by a continuing sequence of operations. The foregoing and other objects and advantages of the invention will more fully appear from the following detailed description, and the distinctive features of novelty will be pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a diagrammatic side elevation showing an apparatus embodying our invention; and

Fig. 2 is a partial elevation looking in the direction of arrow 2 of Fig. 1.

The invention is herein shown as employed for adhesively uniting two webs of paper W, W′ which are drawn from suitably mounted paper rolls R, R′, though the reference to paper as the material of the webs is merely illustrative and one of these webs for example might be a reinforcing cloth or textile netting web. One of the webs shown as the web W′ is passed between rolls 10, 11, the roll 11 being partly immersed in adhesive substance A held in a shallow tank or trough 12. The adhesive substance A may be in the nature of pitch or asphaltum to render the paper waterproof and in this case it may be heated to the requisite degree to render the same fluid for coating the paper by a system of heating coils 13; or this adhesive substance may be of a glue or paste nature for merely securing the webs adhesively together for certain uses. The side of the web W′ thus coated is passed upward around a roll 14 where the web W is engaged thereover and pressed thereagainst by a coöperatively mounted roll 15. Thence the composite sheet made up of the two layers of paper thus adhesively secured together, and still hot,—assuming the use of hot pitch as the coating material,—is drawn horizontally outward and wound on to a receiving roll R″. On its way to the winding-on roll R″ the paper is treated with substance to render the same moth-proof and vermin-proof, illustrative examples of such substances being oil of cedar or naphthalene. In accordance with our invention this moth-proofing substance is preferably applied to the paper web continuously and during its progress from the coating station to the winding-on station. As shown for this purpose we provide opposite pipes 16, 17 extending across the path of the web adjacent thereto at opposite sides and provide these pipes with apertures adapted to produce fine jet sprays 18 of the moth-proofing substance impinging against the web and preferably throughout the width thereof. These spray pipes are preferably located adjacent the take-on roll R″ and as the paper is thus wound on to said roll immediately after being treated by such spray, it results that the moth-proofing substance is thus caught into and disseminated thoroughly throughout the mass of the take-on roll and such substance caused to impregnate thoroughly the entire body of the paper in such roll, this action being furthered by the still relatively hot condition of the paper which has just been delivered from the coating station and with the hot pitch coating which is usually applied at a temperature of between 300 and 400° F. We are aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and we therefore desire the present embodiment to be considered in all respects as illustrative and not restrictive,

reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. The herein described method which consists in coating and impregnating continuously a paper web with adhesive waterproofing substance in the presence of heat to render said adhesive fluid and in applying moth-proofing substance continuously to the coated paper web while still hot to cause such substance to be disseminated through and impregnate the web and its coating.

2. The herein described method which consists in securing together continuously two paper webs with an interposed application of waterproofing pitch in the presence of heat to render said pitch fluid, and in spraying moth-proofing substance continuously upon the duplex web thus formed while it is still hot to cause the web to be permeated and impregnated by such moth-proofing substance.

In testimony whereof we have signed our names to this specification.

ANDREW E. CURRIER.
ALBERT F. SCHENKELBERGER.