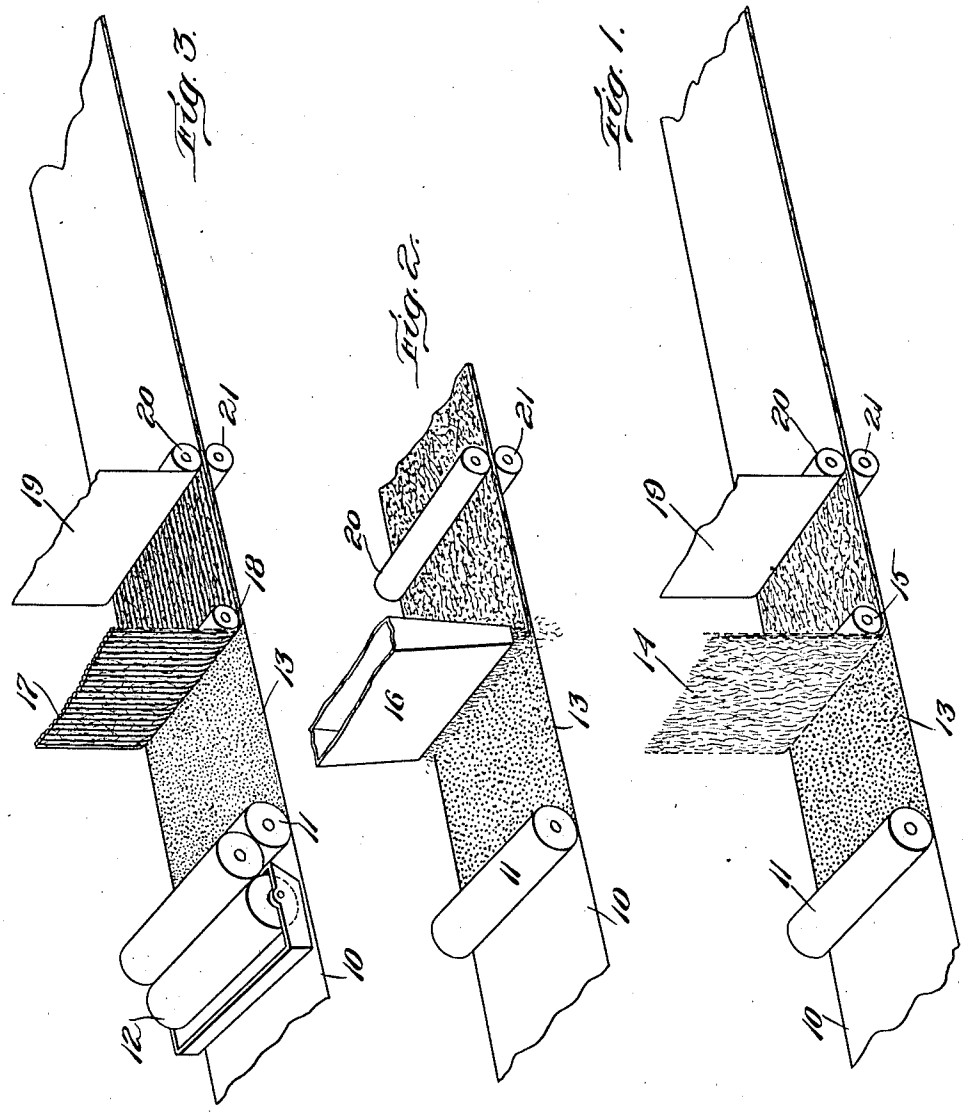
A. F. SCHENKELBERGER.

REINFORCED IMPERVIOUS PAPER AND METHOD OF MAKING SAME.

APPLICATION FILED JULY 18, 1914.

1,270,250. Patented June 18, 1918.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT F. SCHENKELBERGER, OF QUINCY, MASSACHUSETTS, ASSIGNOR TO SAFEPACK PAPER MILLS, OF BROCKTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

REINFORCED IMPERVIOUS PAPER AND METHOD OF MAKING SAME.

1,270,250. Specification of Letters Patent. Patented June 18, 1918.

Application filed July 18, 1914. Serial No. 851,701.

To all whom it may concern:

Be it known that I, ALBERT F. SCHENKELBERGER, a citizen of the United States, and resident of Quincy, county of Norfolk, Commonwealth of Massachusetts, have invented an Improvement in Reinforced Impervious Paper and Methods of Making Same, 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 wrapping, lining, or sheathing material composed of paper coated or impregnated with composition to render it waterproof or impervious and with a reinforcing element of textile fiber applied to and embedded in the material with which the paper is coated or impregnated. The invention also has to do with an improved method for producing such wrapping and like material cheaply, and preferably to a large extent from material that would otherwise be waste. In accordance with my invention I treat the paper with a composition that leaves a temporarily sticky surface, this composition when it is desired to make the wrapping impervious, being preferably asphaltum or like pitch. To this sticky surface I apply unspun textile fiber, preferably cotton or flax fiber as it leaves the carding machine, or loose waste fiber. In some cases another sheet of paper may be laid upon the fiber covered surface, thus forming a two-ply paper with the reinforcing fiber between. The invention will be better understood from the following detailed description taken in connection with the accompanying drawings and will be thereafter pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a diagrammatic perspective showing one way in which my invention may be carried out;

Fig. 2 is a similar view showing another form of the invention; and

Fig. 3 is a similar view showing still another embodiment thereof.

A paper web 10 as it is fed along in any desired manner (not shown) is treated with an application of impregnating and coating material such as asphaltum pitch by suitable means shown as a roll 11 which through an intermediate roll is supplied from a pitch pot 12. The sticky coated surface of the material indicated at 13 then has the loose unspun fiber, such as carded cotton fiber applied thereto. As seen in Fig. 1 this fiber is applied in a thin gauzy web 14 for instance as it comes from the doffer drum of a carding machine and it may pass under and be pressed on to the sticky surface of the paper by a roll 15. In the form of the invention shown in Fig. 2 the fiber applied to the sticky surface of the paper is loose waste fiber which may be blown on to the surface by an air blast from a blower mouth 16. It will be understood that while the thin sliver web 14 in the one case and the light filmy fibers blown upon the material in the other case, are apparently weak and unsubstantial, still when these are embedded in the sticky surface of the paper, the full tensile strength of each individual fiber is obtained, and these fibers are distributed more evenly in every direction than would be the case with spun and woven fiber. In Fig. 3 I show a web 17 composed of assembled ribbons or slivers of unspun fiber which is pressed on to the sticky surface by a roll 18. This of course has considerably more body than the fiber applications of the two preceding forms and is suitable for use in making heavier wrappings. The application of fiber as described in each form of the invention is desirable not only in that it reinforces and strengthens the paper, but also when only one paper layer is employed, in partially covering and protecting the sticky surface so that it will not smear or be otherwise objectionable. According to the showing in Figs. 1 and 3 a second layer of paper is added to make a two-play wrapping, a supply web being indicated at 19 and pressed on to the treated surface of the first paper by passing under a roll 20 with which coöperates an opposite roll 21. It will be understood that the foregoing are merely illustrative modes of carrying out the invention which comprises the application of loose or unspun fiber to a sticky paper surface for the purpose of reinforcing the paper and protecting the sticky surface. I therefore refer to the appended claims rather than to the foregoing description to indicate the scope of the invention.

Having described my invention, what I

claim as new and desire to secure by Letters Patent is:

1. The herein described method which consists in treating paper with a composition to produce a sticky surface, applying loose unspun textile fiber upon such surface to reinforce the paper and protect said surface, and applying a second layer of sheet material to said surface to make a two ply wrapping.

2. The herein described method which consists in treating paper with a pitch composition to render the same impervious with a sticky surface, applying loose unspun cotton fiber upon such sticky surface to reinforce the paper and protect said surface and applying a second layer of sheet material to said surface to make a two ply wrapping.

3. The herein described method which consists in treating paper with composition to render it waterproof with a sticky surface, applying carded unspun textile fiber to said surface, and applying a second layer of paper to said surface to make a two-ply wrapping.

4. A wrapping or like material composed of two layers of paper with an intermediate filling of sticky composition to render the same waterproof, and loose disconnected textile fiber filaments embedded in said sticky composition for the purpose stated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT F. SCHENKELBERGER.

Witnesses:
LOUISE A. JORDAN,
CLYDE L. ROGERS.