March 17, 1925. 1,529,701

F. L. HEWITT

COMPOSITE FABRIC

Filed April 24, 1924

Fig. 1.

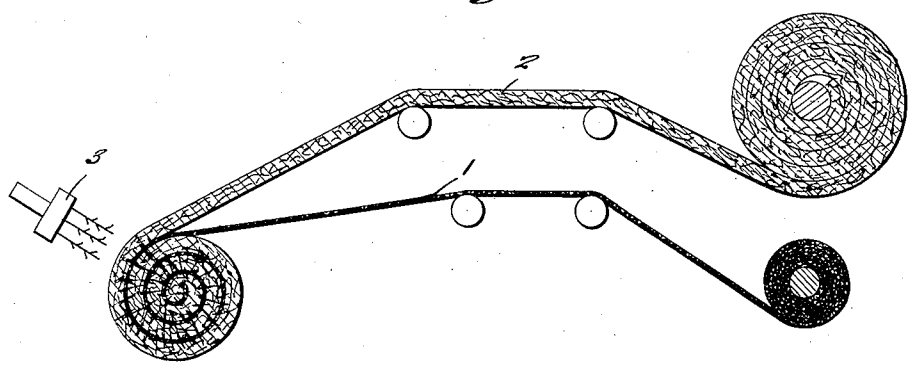


Fig. 2.

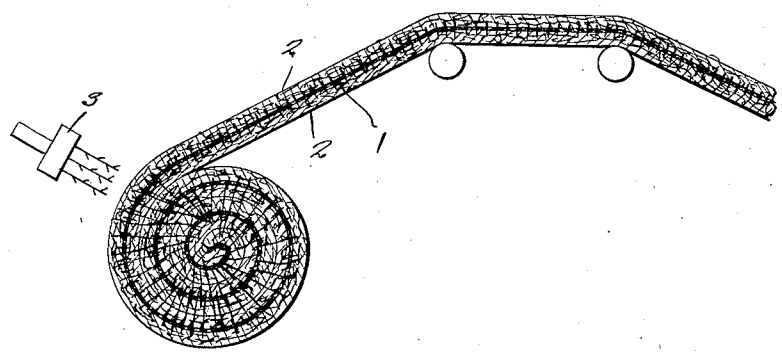
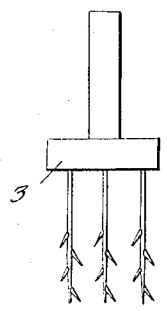


Fig. 3.



Inventor

Fred L. Hewitt

By Spear, Middleton, Donaldson, Hall

Attorney

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UNITED STATES PATENT OFFICE.

FRED L. HEWITT, OF PETERBORO, NEW HAMPSHIRE, ASSIGNOR TO PURITY WOOL PREPARING COMPANY, OF PETERBORO, NEW HAMPSHIRE, A CORPORATION OF MASSACHUSETTS.

COMPOSITE FABRIC.

Application filed April 24, 1924. Serial No. 708,759.

To all whom it may concern:

Be it known that I, FRED L. HEWITT, a citizen of the United States, and resident of Peterboro, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Composite Fabrics, of which the following is a specification.

My present invention relates to a device which includes a series of layers of woven fabrics or the like to which has been felted bats or tufts of wool, hair, or other felting fibres so that the felted fibres are felted through the interstices between the threads or strands comprising the woven fabric.

An important object of my invention is the utilization of such a composite material in the form of a built-up pad or rolled wheel which may be used for buffing or polishing purposes.

I have illustrated in the accompanying drawings a preferred embodiment of the invention which shows the built-up material in a diagrammatic manner, although obviously I do not wish to be limited to material so built up.

In these drawings:—

Figure 1 is a diagrammatic side elevation of one form of building up the roll.

Fig. 2 is a modified form.

Fig. 3 is a side elevation of a form of needle used to felt the fabric.

Referring more particularly to these drawings, I have illustrated a woven or knitted fabric at 1, which may be of any desired character or material, it being only necessary that there be sufficient spaces between the fibres, threads, or strands going to make up said material, to allow the felting fibres to project into or therethrough. A layer of such felting fibres is indicated at 2, and these fibres may consist of tufts or bats or individual particles of wool, hair, or other material which may be felted.

In some instances it will be desirable to compose the composite pad of built-up layers of alternating sheets of fabric and felted material, as shown, the felting fibres or bats felted to each other through said fabric as by means of a puncturing needle 3 reciprocated in any desired manner.

In case a buffing or polishing wheel is desired, it will be seen that this may be produced by rolling or winding such a sheet of material upon itself. In this way each layer of felted fibre lies between two sheets of fabric, and is secured or felted thereinto, which retains the same in its desired position and makes a substantially unitary article not capable of ready separation, or vice versa, each sheet of fabric lies between two felted bats.

This invention contemplates any method of alternating a woven or knitted fabric with bats or tufts of felted fibres so that the felting fibres felt together and to each other in and through the woven fabric. Obviously this may be done in a number of ways, such as by allowing the fibres to lay against each other through holes made in the fabric where such interstices do not naturally occur; through loosely woven fabric with interstices naturally occurring therein; or by pushing the felting fibres through the weave of the woven fabric from one bat or tuft to the other; or the article produced thereby.

Obviously a sheet of fabric having fibres felted thereto on both sides, may be likewise rolled upon itself and then felted together from center to circumference, as by needle 3, this modification merely increasing the thickness of the fibre layer over that existing on the fabric before rolling.

Having thus described my invention, what I claim is:—

1. As a new article of manufacture, a buffing or polishing wheel consisting of a sheet of fabric with felting fibres on one side, said sheet being rolled upon itself, and needled from circumferences to center in and through the woven fabric.

2. A method of producing a built-up buffing wheel, which includes the steps of felting fibres to a fabric, rolling said composite sheet upon itself, and needling said rolled up article throughout.

3. As a new article of manufacture, a buffing or polishing wheel consisting of a sheet of fabric having fibres felted to each side thereof, and needled from circumference to center.

In testimony whereof, I affix my signature.

FRED L. HEWITT.