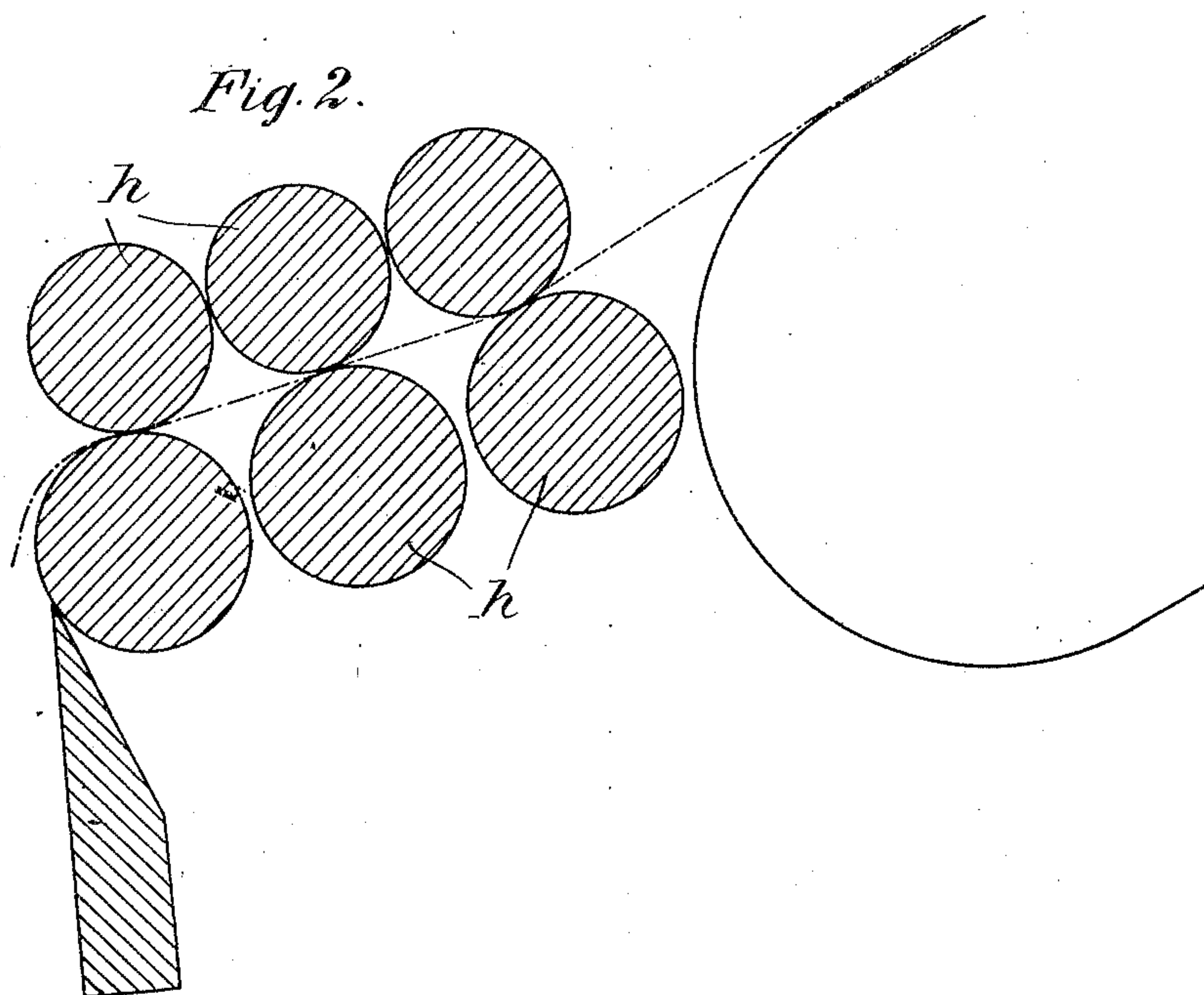
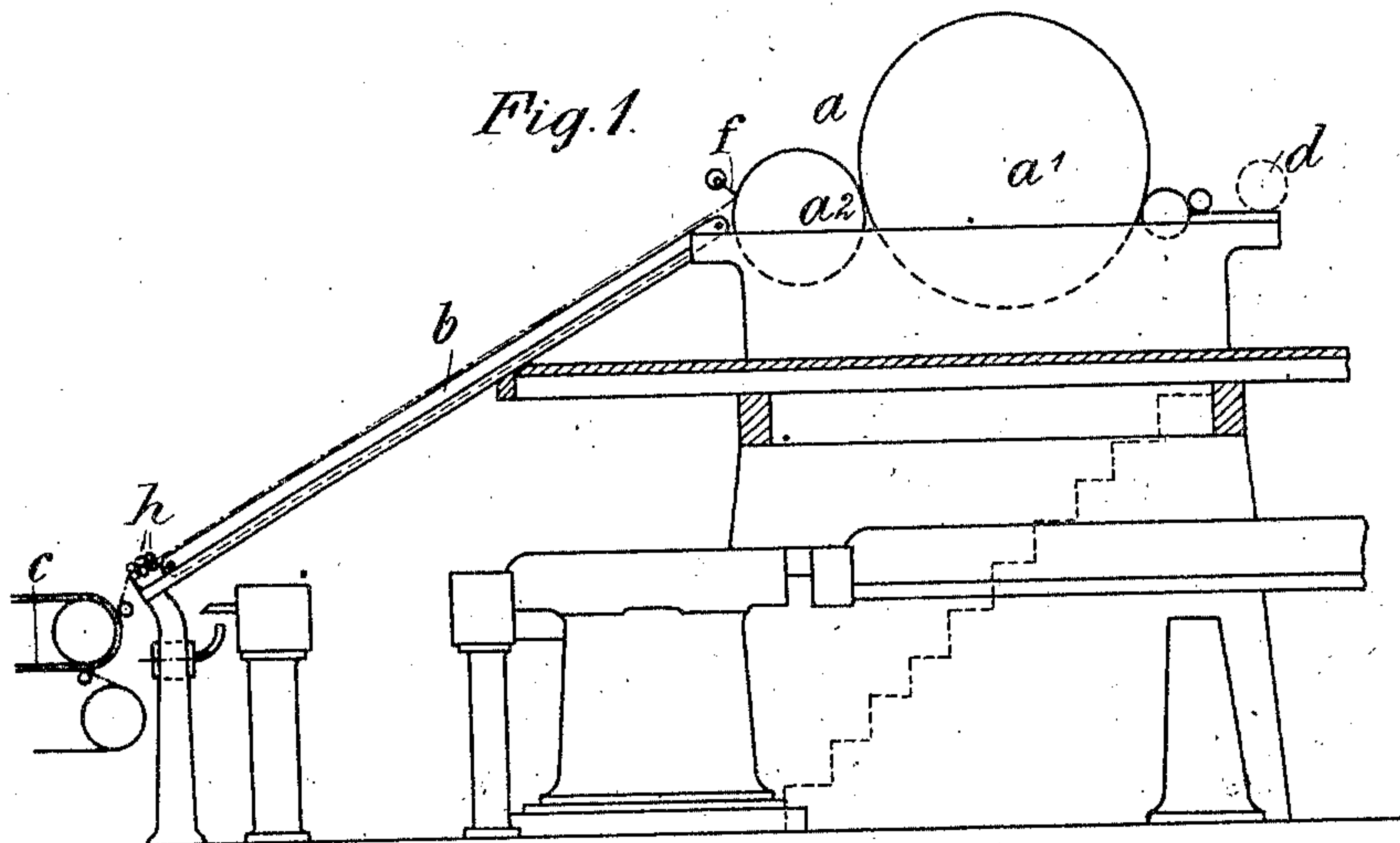


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MACHINE FOR MAKING A COMPOUND PAPER AND FIBER MATERIAL.
APPLICATION FILED JAN. 27, 1909.

983,266.

Patented Feb. 7, 1911.



Witnesses:
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UNITED STATES PATENT OFFICE.

EMIL CLAVIEZ, OF ADORF, GERMANY.

MACHINE FOR MAKING A COMPOUND PAPER AND FIBER MATERIAL.

983,266.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed January 27, 1909. Serial No. 474,595.

To all whom it may concern:

Be it known that I, EMIL CLAVIEZ, a subject of the King of Saxony, residing in the city of Adorf, in Vogtland, Kingdom of Saxony, German Empire, have invented new and useful Improvements in Machines for Making a Compound Paper and Fiber Material, of which the following is a specification.

This invention relates to a machine of novel construction for producing a material consisting of a layer of paper and of a fleece of textile fibers intimately united with the paper.

In the accompanying drawing: Figure 1 is a side elevation of my improved machine, and Fig. 2 is an enlarged cross section through the drawing rollers and adjoining parts.

The letter *a*, designates a carding machine comprising a pair of carding rollers *a'*, and *a''*, to which the fibrous material is presented by feed roller *d*. The fleece is stripped off roller *a''*, by a doffer *f*, to be delivered to a feed apron *b*. From the latter, the fleece passes between a series of suitably driven drawing rollers *h*, three pairs of such rollers being shown which are arranged in proximity to each other and are adapted to engage both sides of the fleece. These rollers are interposed between apron *b*, and the endless wire net *c*, carrying the paper stock or pulp web. As the latter is of a pappy consistency, the fleece will readily combine therewith. The fleece is preferably applied to that portion of the paper stock which contains the most water, so that it will intimately unite therewith, although the fleece may also be applied to the stock at any other point, provided the combination of both materials is effected before reaching the drying cylinders, (not shown).

The interpolation of the drawing rollers *h*, between the carding machine and the paper making machine has for its object to elongate the fleece before applying it to the pulp web, so that the fleece and paper will travel at about the same speed when meeting each other. This elongation of the fleece is rendered necessary because the carding machine runs at a considerably lower speed than the paper making machine. The speed of the drawing rollers may be regulated in suitable manner, (not shown), so that the thickness of the fleece applied to the pulp web may be varied. After the fleece and pulp web have been united in the manner described, the compound web is treated and finished in the paper machine, as usual in that class of machines.

It will be seen that the material produced on my improved machine comprises a surface layer of paper and a surface layer of fleece intimately united to the paper. The material is more particularly adapted to be cut up into strips and spun into threads, but it may also be used for other purposes.

I claim:

In a machine of the class described, the combination of a paper making machine having a traveling wire net adapted to carry a pulp web with a carding machine having carding rollers the surface speed of which is less than the speed of the wire net, a feed apron adapted to carry a textile fleece from said carding rollers toward the wire net, and a series of drawing rollers that transfer the fleece from the apron to the net and regulate the thickness of the fleece.

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Witnesses:

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