(No Model.)

J. B. CRANE.

PAPER.

No. 283,701. Patented Aug. 21, 1883.

Fig. 1

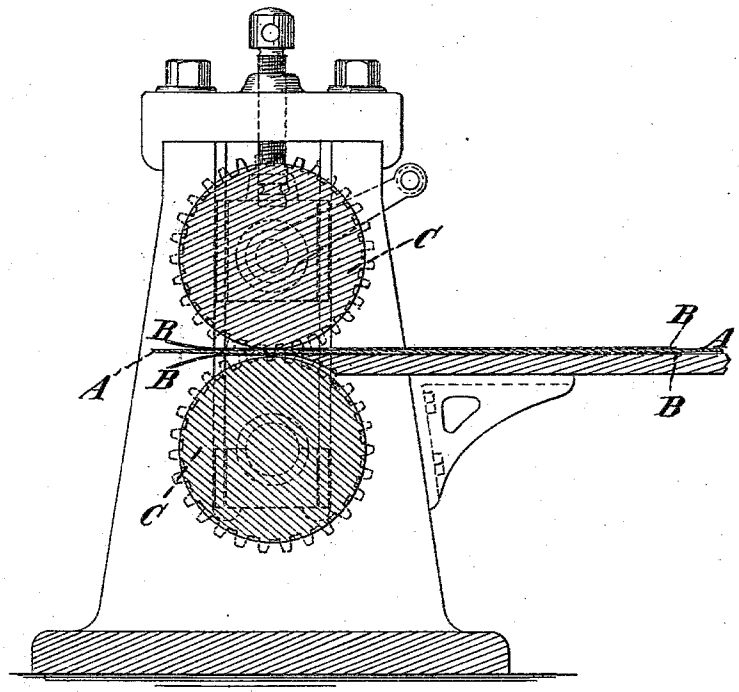
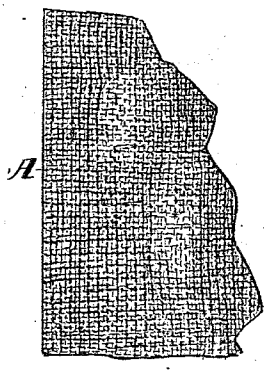


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES B. CRANE, OF DALTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF, ZENAS M. CRANE, AND WINTHROP M. CRANE, ALL OF SAME PLACE.

PAPER.

SPECIFICATION forming part of Letters Patent No. 283,701, dated August 21, 1883.

Application filed April 7, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. CRANE, of Dalton, in the county of Berkshire and State of Massachusetts, have invented a certain new and useful Improvement in Paper, of which the following is a specification.

The object of my improvement is to afford a simple and inexpensive means of producing a cloth-finish to paper.

The improvement consists in the novel method of producing a cloth-finish on paper, consisting in applying to or laying upon opposite surfaces of the paper pieces of cloth, in subsequently subjecting the cloth and paper to pressure between smooth surfaces, and in finally removing the cloth from the paper.

In the accompanying drawings, Figure 1 is a diagram illustrating a manner in which paper may have a cloth-finish imparted to it, and Fig. 2 is a face view of a piece of the finished paper.

A designates a piece of paper, and B designates pieces of cloth, which are laid against opposite sides thereof. C designates rollers having smooth surfaces, between which the pieces of paper and cloth are passed. Suitable devices will be applied to these rollers, or to one of them, for the purpose of causing them to exert a great pressure upon the pieces of paper and cloth as the latter passes between them. The meshes and other projections and hollows of the cloth will thus be impressed into the surfaces of the paper. After being subjected to pressure the cloth is removed, leaving its impression on the paper.

The paper or the cloth may, if desirable, be moistened to facilitate the impress of the surface of the cloth into the paper; but this will not be necessary.

The impress of the surface of the cloth into the paper may be done, in the manner described, either before calendering or after calendering the paper, or even during the process of calendering.

A name or designating-mark or ornament may be produced in the paper by delineating it upon the cloth by stitching, or in any other manner which will give it the necessary projection, and then subjecting the paper to pressure while in contact with the cloth, as explained.

The use of cloth and plain surface rollers, instead of rollers having their surfaces etched or engraved in imitation of cloth, is advantageous, because it obviates the expense of etching or engraving the rollers, and enables surfaces resembling different textures of cloth to be very readily produced, to say nothing of the facility with which the lines of the cloth may be made to extend in different directions across the paper.

I do not wish to confine myself to producing the pressure by rollers, as I may do it between smooth surfaces in any suitable manner. For instance, by piling a number of pieces of paper and cloth together and subjecting them to a hydraulic press.

The pressure may also be produced in a plating-machine.

What I claim as my invention, and desire to secure by Letters Patent, is—

The process of producing a cloth-finish on paper, consisting in applying to or laying upon opposite surfaces of the paper pieces of cloth, in subsequently subjecting the cloth and paper to pressure between smooth surfaces, and in finally removing the cloth from the paper, substantially as specified.

JAMES B. CRANE.

Witnesses:
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