

E. T. NEBEN.
METHOD OF MAKING MULTICOLOR PRINTED PAPER.
APPLICATION FILED AUG. 10, 1917.

1,308,098.

Patented July 1, 1919.

Fig. 2.

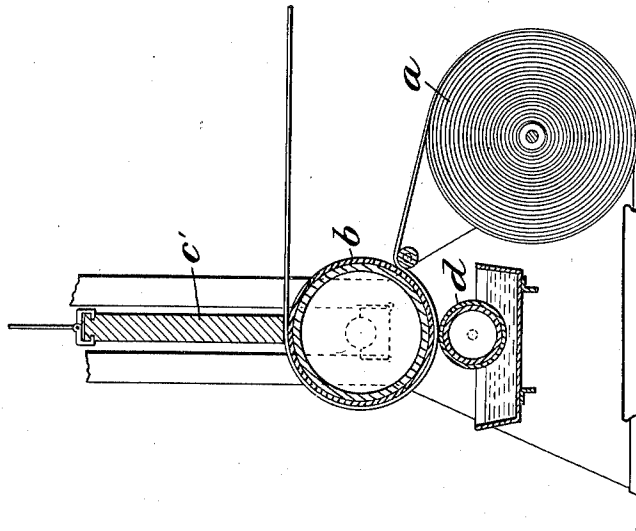
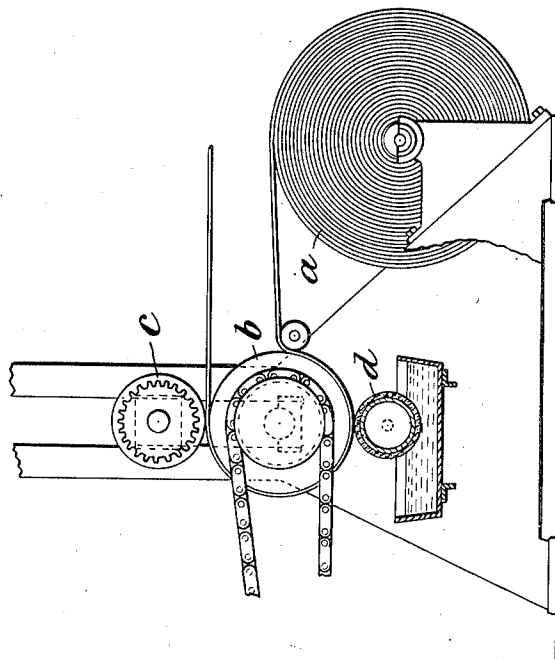


Fig. 1.



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METHOD OF MAKING MULTICOLOR-PRINTED PAPER.

1,308,098.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMIL T. NEBEN, a citizen of the United States, and residing in the town of Ridgewood and State of New Jersey, have invented certain new and useful Improvements in Method of Making Multicolor-Printed Paper, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The object of this invention is the production of a unique printed material, such as cloth or paper, which may be used for decorative purposes with highly pleasing effect and is capable of being produced in a great variety of designs. The method which is herein described is the method which may be practised with apparatus such as that described in Letters Patent of the United States, No. 1,199,709, dated September 26, 1916, and with such a printing roll as that described in Letters Patent No. 1,159,337, dated November 2, 1915, or with other apparatuses and printing surfaces, and the product herein described is such a product as that which might be produced with such apparatus and printing roll. In the accompanying drawings in which, for the purpose of enabling the invention to be understood more readily, are illustrated forms of apparatus similar to those shown in said Letters Patent No. 1,199,709,—

Figure 1 is a view in elevation, mainly in outline, showing one such form of apparatus; and

Fig. 2 is a similar view showing another form of such apparatus.

In practising the method which is herein sought to be covered, the cloth or paper or other material which is to have the novel printed surface, being suitably dampened, if necessary, is caused to slip or slide in contact with a printing surface charged with coloring matter in variegated shades or colors, whereby the material receives a printed surface, streaked longitudinally or waved in different colors which merge one into another without any hard line of division. Preferably the printing surface, which is charged with colors more or less irregularly arranged and intermingled, also receives movement, as well as the material which is being printed, but at a different rate of speed so that the printed design is not only somewhat streaked longitudinally

but has a somewhat marbled and waved effect with colors disposed somewhat irregularly as well as merged one into another without a hard line of separation.

In the apparatus illustrated in Fig. 1 as adapted for the practice of the method and for the production of the novel printed surface, the paper, cloth or other material is supposed to be supplied from a roll *a* and to be led therefrom about an impression roller *b* in contact with a printing roller *c* which, as described in said Letters Patent No. 1,159,337, may have its printing surface formed of a suitable composition which is charged irregularly with a soluble dye or pigment or coloring matter which gives up color to the paper, cloth or other material which slips or slides in contact with the surface of the roller, the paper, cloth or other material being suitably dampened, before it makes contact with the printing roller *c*, as by a suitable dampening roller *d*. The rollers *b* and *c* have different circumferential speeds so that the paper, cloth or other material, which has the same speed of travel as the circumferential speed of the impression roller *b* slips or slides in contact with the printing roller *c*, whereby the longitudinally streaked and variegated printed surface is produced.

It is preferable, for general purposes, that the printing surface travel in the same direction as the paper, cloth or other material which is being printed, although at a different rate of speed, but similar effects may be produced if the printing surface is stationary, as illustrated in Fig. 2, in which the printing block *c'* is stationary, but properly counterbalanced, the arrangement of the supply roll *a*, the impression roll *b* and the dampening device *d* being the same as shown in Fig. 1. Whether the printing surface is stationary or has a movement in the same direction as that of the travel of the printed sheet, it is necessary that the printed sheet shall have a relative movement with respect to the printing surface and shall slide in contact therewith. It is also necessary, in order to produce the variegated color effect desired, that the printing surface carry a plurality of colors or be made up of a variegated composition.

Reference has been made herein to a printing action, but it will be understood that the printing referred to is not a printing such as

is effected with the use of type or type-blocks, in which there is a relative movement of the printed surface and the type surface toward and from each other only, but an
5 action in which the printed surface slides in contact with the printing surface, whereby the product or the article of manufacture which is produced by the practice of the method is a material having a printed surface
10 of the character referred to, in which the plurality of colors are distributed in a longitudinally streaked effect with a merging of the different colors without hard lines of division.

15 I claim as my invention:

1. The method of producing a multicolor-

printed material which consists in dampening the material and causing it to slip or slide in contact with a printing surface charged with soluble pigment in variegated
20 colors.

2. The method of producing a multicolor-printed material which consists in dampening the material and causing it to travel in contact with a printing surface charged
25 with soluble pigment in variegated colors and traveling at a different rate.

This specification signed this 9th day of August A. D. 1917.

EMIL T. NEBEN.