No. 856,886. PATENTED JUNE 11, 1907.

C. F. KÜBLER.

METHOD OF APPLYING SMALL QUANTITIES OF FLUIDS ON FABRICS.

APPLICATION FILED SEPT. 18, 1906.

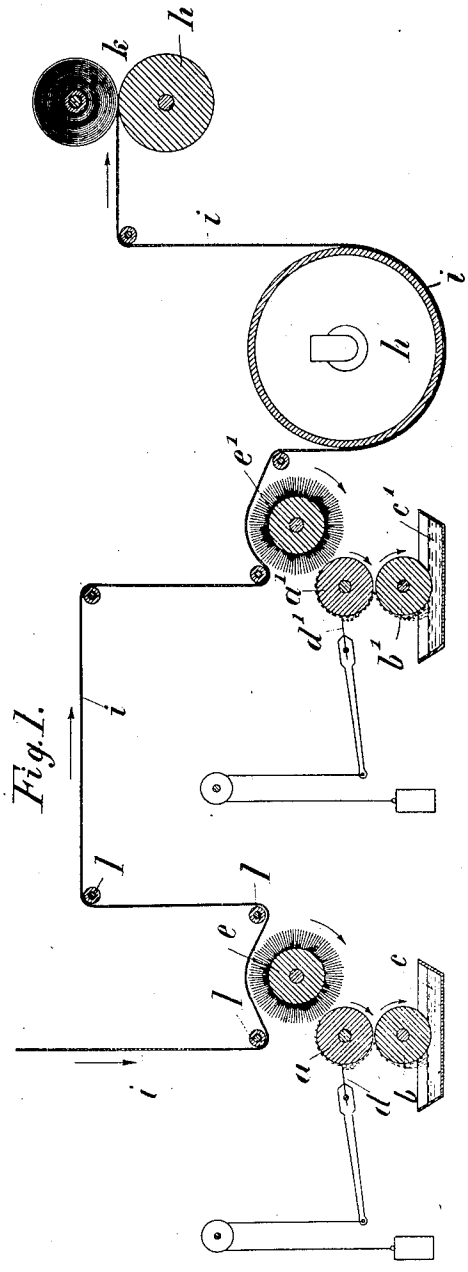


Fig. 1.

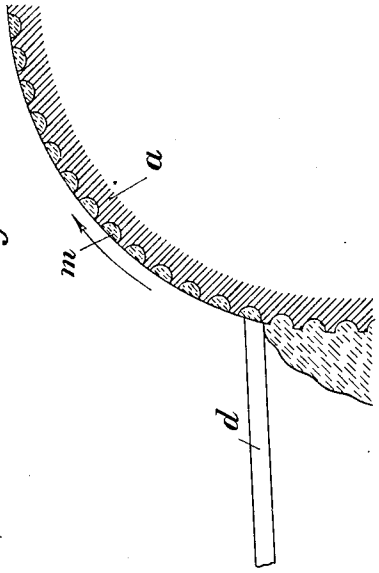


Fig. 2.

Witnesses.

Jesse N. Sutton

B. Sommers

Inventor.

Carl F. Kübler.

by Henry Orth Jr. Atty

UNITED STATES PATENT OFFICE.

CARL F. KÜBLER, OF DÜSSELDORF, GERMANY.

METHOD OF APPLYING SMALL QUANTITIES OF FLUIDS ON FABRICS.

No. 856,886. Specification of Letters Patent. Patented June 11, 1907.

Application filed September 18, 1906. Serial No. 335,137.

To all whom it may concern:

Be it known that I, CARL F. KÜBLER, a subject of the Emperor of Germany, residing at Düsseldorf, in the Province of Rhineland and Kingdom of Prussia, Germany, have invented a certain new and useful Method of Applying Small Quantities of Fluids on Fabrics, of which the following is a specification.

My invention refers to a method of applying small quantities of fluids on fabrics and the object of it is to apply such small quantities of fluids in perfect equal distribution.

Heretofore it was only possible to apply fluids in equal distribution on fabrics when large amounts of fluids were used. None of the heretofore known means such as sprinkling-device, picot-printing, pad- or slide-printing and so on could be used for applying a small quantity on surfaces of fabrics in equal distribution, they all had more or less defects, such as unevennesses, sprinkling-spots, stroke or stripes and the like. In printing or applying small quantities of liquid it is generally the aim to produce shiny or glossy shot-effects, whereby merely the foundation of the fabric is supposed to shine through.

According to my invention I obtain the desired equalness in applying small quantities of liquor such as color, dye, or the like to fabrics by distributing the liquid evenly first on a soft close brush and from this on the fabric.

In order to produce especial beautiful effects two or more extremely thin layers of fluids may be put on, it being preferable to first use an impregnating means and then one or more solutions of a dye or color. These colored layers may be of the same color or tint or they may differ at will.

In Figure 1 of the drawing an apparatus is shown in sectional elevation by which the method may be carried out. Fig. 2 shows part of a roll engraved and a scraper to distribute a small amount of liquor, on the roll. The first distribution of the liquid is brought about as equal as possible by the engraved roll *a*, such as is generally used in printing calico. The liquid, either impregnatin liquid such as a mordant or a dressing-, etching- or bleaching fluid or color, is fed from a trough *c* by a rotating brush *b*, the surplus being held back by a scraping implement, scraping-knife or the like. The small amount of color, which remains in the engravings and passes the scraping knife is brought to the brush. The quantity of color or other liquid is determined by the depth and breadth of the engravings and it is equally distributed over the complete surface of the roll by the scraping knife. The roll *a* contacts with a brush *e*, which is also rotative and consists of bunches of soft hair and which takes up the color in a very equal and thin layer and also transmits the same by a quick rotation to the fabric in passing it. According to the speed of the said parts *b*, *a*, *e* more or less fluid is transmitted. The fabric which may be led over guiding rollers when provided with impregnating liquid by the brush *e* may pass one or more similar apparatus such as c^1, b^1, d^1, a^1, e^1 to be provided with one or more layers of color in equal and regular distribution. When the last brush e^1 is passed the fabric may be led over a heating drum *h* on a winding-up device.

From Fig. 2 it will be seen that the scraping-knife *d* takes away the surplus of liquid from the smooth part of the surface, so that as is said above color is left merely in the engravings *m* to an amount according to the section of these channels.

I claim:

1. A method of applying fluids to the surface of a fabric which consists in applying the liquid to an intaglio or recessed surface, wiping the surface and brushing the liquid contained in the intaglio recesses onto the fabric.

2. A method of applying fluids to the surface of a fabric which consists in applying the liquid to an intaglio or recessed surface, wiping the surface and brushing the liquid contained in the intaglio recesses onto a stretched fabric unbacked at the point of brushing.

CARL F. KÜBLER.

Witnesses:

WILLIAM ESSENWEIN,

ALFRED POHLMEYER.