

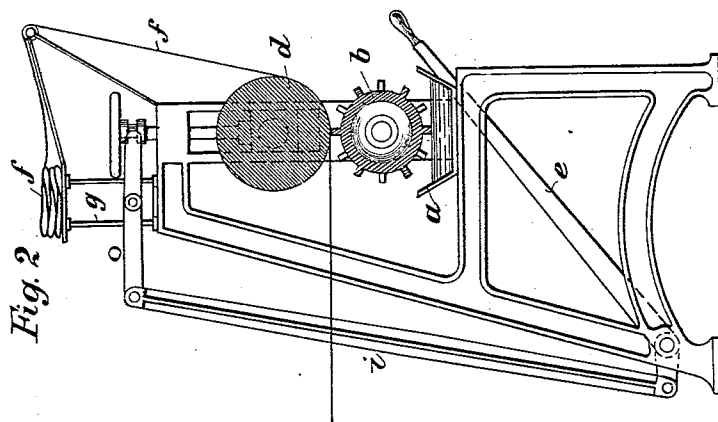
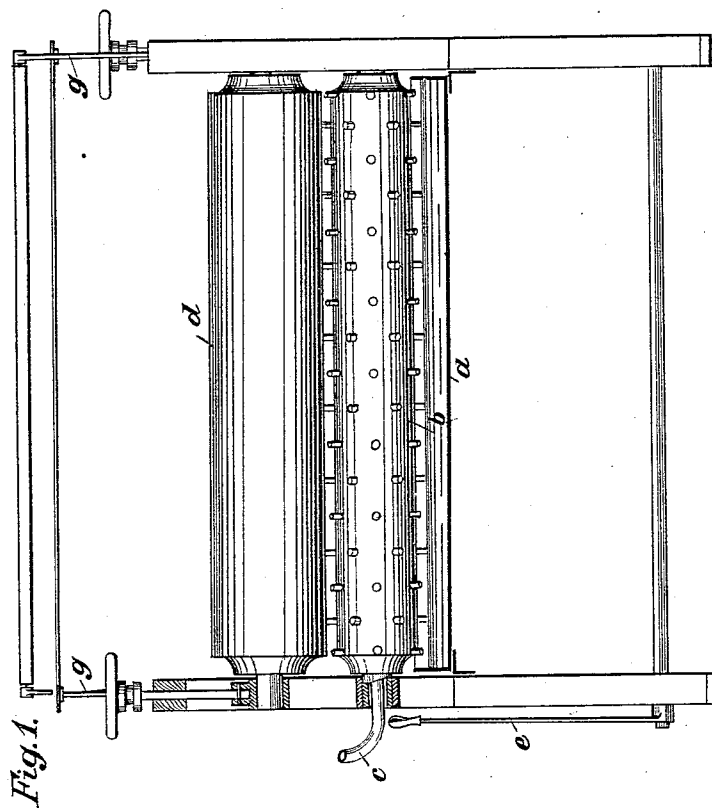
(No Model.)

H. BOTSCHEN.

PRINTING VELVET, &c., WITH METAL OR BRONZE COLORS.

No. 559,967.

Patented May 12, 1896



Witnesses.
Jas. T. Flynn
J. Brown Marlow

Inventor,
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UNITED STATES PATENT OFFICE.

HUGO BOTSCHEN, OF VIENNA, AUSTRIA-HUNGARY.

PRINTING VELVET, &c., WITH METAL OR BRONZE COLORS.

SPECIFICATION forming part of Letters Patent No. 559,967, dated May 12, 1896.

Application filed June 22, 1894. Serial No. 515,423. (No model.)

To all whom it may concern:

Be it known that I, HUGO BOTSCHEN, a subject of the Emperor of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented certain new and useful Improvements in the Printing of Velvet, Stuffs, Furniture, Cloth, Felt, Ribbons, Paper, Leather, and Tapestry with Metal or Bronze Colors, of which the following is a full, clear, and exact specification.

My invention relates to a process and the machine therefor for printing with metal or bronze colors directly and permanently in a humid and hot way continuously-varied patterns or designs on velvet, stuffs, furniture, cloth, felt, ribbons, paper, leather, and tapestry.

By the methods of printing with metal or bronze colors employed at present the pattern or design is previously imprinted on the stuff with an adhesive medium, and the pulverized color is afterward put on, so that it adheres only in places where the said pattern or design is applied. It is obvious that this method is expensive in regard to time and labor and that a great waste of color is incurred, and, furthermore, that the outlines of the pattern or design can never be sharply impressed on the stuffs.

My invention relates to an improved method for printing with metal or bronze colors directly and continuously on the stuffs, whereby the designs or patterns are always sharply outlined and permanently impressed on the goods treated.

Referring to the drawings which form a part of this specification, Figure 1 is an elevation view, and Fig. 2 a cross-section view, of the machine employed according to my method.

In the accompanying drawings, in which like letters designate like parts, *a* is a trough in which the dissolved color is put.

b is the roller carrying the design.

c is the gas-tube; *d*, the impression-roller; *e*, a lever for regulating the pressure of the said roller on the design-roller through the connecting-rod *i* and pivoted lever *o*.

f is the stuff carried between the two rollers, and *g* the rest for the stuff.

The framework may be of the construction here shown or any other that may be preferred, and in it are journaled the vertically-adjust-

able solid pressure-roller *d* and the hollow pattern-roller *b*. Extending into the pattern-roller at one end is a tube *c*, through which passes the gas by which the roller is heated to any desired degree. Upon this roller *b* is formed the pattern in relief, and as the roller revolves these raised portions which form the pattern have their outer ends to dip in the dissolved color placed in the pan *a*. The material *f*, which is to have the pattern imprinted thereon, is placed upon the support *g*, passes over a suitable guide, and is drawn through between the rollers as they are made to revolve in the usual manner. Pivoted in the lower portion of the frame is the lever *e*, and loosely connected to the lever at its lower end is the vertical connecting-rod *i*, which has its upper end connected to the rear end of the lever *o*, pivoted upon the top of the frame. There is a similar mechanism at each end of the frame, so as to operate both of the levers *o* at the same time, though but one mechanism is shown here. The front ends of the levers are connected to the vertically-moving rods *l*, which pass down through the frame and are connected to the boxes of the roller *d* in any suitable manner.

The operation is a continuous one, and the roller imprints the design on the stuff in the measure as it is carried between the rollers.

For carrying out the process it is only necessary to put the color in the trough, to pass the stuffs between the rollers, to regulate the pressure of the impression-roller on the design-roller according to the thickness and nature of the stuff to be imprinted, and to put the machine in motion, after which the operation is a continuous one for securing sharp outlines of the design on the stuff. The design-roller must only touch the coloring material in passing the trough.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a machine for printing fabrics, a suitable framework, a rest *g* placed upon the top thereof, a guide for the fabric as it leaves the rest, a hollow printing-roller journaled in the frame and provided with a raised pattern, and a vertically-adjustable pressure-roller for pressing the fabric against the pattern; combined with the lever *e*, connecting-rods *i*, le-

vers *o*, upon the top of the machine; rods connected to the ends of the levers and to the boxes of the pressure-roller; and a removable trough in which the liquid is placed, and in
5 which the raised pattern is dipped as the hollow roller revolves, substantially as shown.

In testimony that I claim the foregoing I

have hereunto set my hand this 31st day of May, 1894.

HUGO BOTSCHEN.

Witnesses:

PETER DABORICH,
HARRY BELMONT.