

(No Model.)

F. BECK.
PRINTING BLOCK OR ROLLER.

No. 490,061.

Patented Jan. 17, 1893.

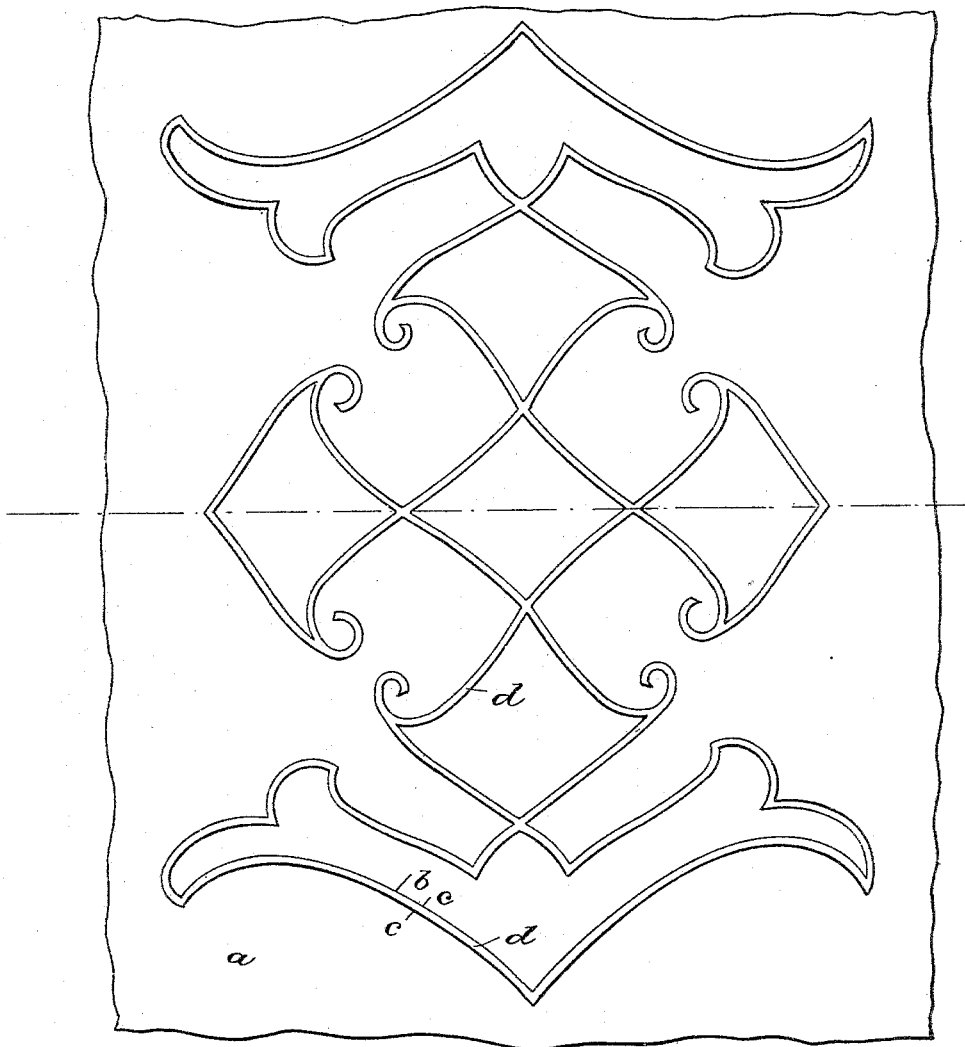


Fig. 1.

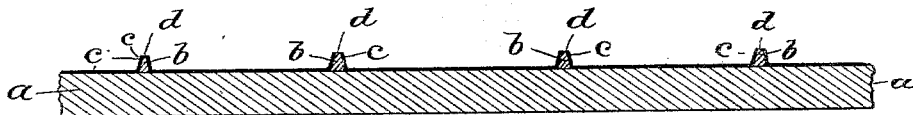


Fig. 2.

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UNITED STATES PATENT OFFICE.

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PRINTING BLOCK OR ROLLER.

SPECIFICATION forming part of Letters Patent No. 490,061, dated January 17, 1893.

Application filed October 31, 1891. Serial No. 410,450. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BECK, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Printing Blocks or Rollers, of which the following is a specification.

This invention relates to an improvement in printing blocks and rollers intended to be used for printing ornamental designs upon wall papers, woven fabrics, oil cloths and other like manufactures. Such blocks and rollers have heretofore been made by carving in relief on the face of the block or roller in the material of which the surface is composed, the desired design, or by cutting out from suitable material the desired design and fastening the same by pins to the body of the block or roller; and such blocks or rollers have also been made by outlining the ornamental design upon the block or roller with pieces or strips of brass or copper set edgewise into the body of the block or roller and projecting above its surface, and filling in the outline with pieces of wood or felt of the size and shape to fit the spaces between the metal strips. There was also described in Letters Patent, No. 320,208, dated June 16, 1885, granted to me, a method for making such printing blocks or rollers, which consisted briefly in coating the body of the roller or block with a suitable substance such as an oxidized oil composition suitable for receiving and transmitting color in the operation of printing, cutting therein in relief the desired ornamental design, depositing upon the surface of the composition by electrical deposition a metal surface, and removing from the printing surface of the design by grinding, or otherwise, the metal surface, thus exposing an oxidized oil substance of the desired pattern and conformation suitable for printing and supported at every point by a continuous metal wall.

By my present improvement, I produce an ornamental printing surface which is so stiff as to be sufficiently durable for printing upon the fabrics mentioned above, and with great economy of time and expense in the production of the printing surface as compared with the method described in my said former patent.

In the accompanying drawings, Figure 1, represents a roller having in relief therein a desirable ornamental pattern which it is desired to print upon the fabric. It may be assumed that a section has been taken from the roller and spread out flat with the side bearing the design uppermost. The said figure may, therefore, be taken as representing either a section of a flattened roller or of a block. Fig. 2, represents a sectional view of the flattened section of a roller or of a block shown in Fig. 1.

A cylindrical base *a* is made of wood, metal, or any other suitable material, and is covered with a composition suitable for receiving and transferring color such as a composition consisting of oxidized linseed oil, bitumen stearine mixed with wood fiber, flock, ground cork or other similar material. A suitable compound material is described in Letters Patent, No. 447,412, dated March 3, 1891, granted to me, as assignee of James Stuart Palmer. The composition can be molded upon the base, and afterward cut, planed or molded down to the required thickness, or the composition having been made of the required thickness, may be applied to the base in sheets, the latter method of application being preferable, and is fixed to the base by a waterproof cement, such as varnish, bichromated gelatine or glue. The composition should be of that degree of hardness, whether molded upon the base or applied in sheets as that it may be cut readily with a knife, but so as to retain sharp edges. On the surface thus prepared, the desired ornamental design is transferred or drawn, and the superfluous material filling the lines of the design is cut away leaving only the forms *d* intended to be used as printing surfaces. The edges of the design should be cut with a bevel or slant from the top downward and outward, as illustrated in Fig. 2, making the base of each part of the design somewhat broader than the printing surface. The pattern which now appears in relief is covered with two or three coats of a suitable varnish *c* which, in part, remains upon the upper surface of the design, and in part falls down the sides of the design to the base, thus firmly holding the material of the design to the base and forming an unbroken film over the entire surface. The varnish also

strengthens and supports the material on the base against sidewise pressure, not only when the block is in use for printing, but also when the faae is being rubbed off as hereinafter described. The varnish should preferably be waterproof, if water colors are intended to be used in printing, and a suitable varnish is made of wood alcohol, and shellac. The face of the design is now rubbed off with pumice stone, or removed by any suitable method, thereby exposing a printing surface suitable for receiving, carrying and transferring colors. The application of the varnish not only firmly fixes the material of the design to the base, but acts as a strengthener or brace to the material, maintaining it in an upright position without a binding of metal, and at the same time permits the printing surface to retain its elasticity.

What I claim as new, and desire to secure by Letters Patent, is:—

1. As a new article of manufacture, a print-

ing roller or block having the printing surface projected above the surface of the base, in relief thereon, and the sides of the printing surface strengthened and supported by a coating of varnish or equivalent substance, substantially as described.

2. As a new article of manufacture a printing roller or block with the printing surface made of a composition consisting of oxidized linseed oil, bitumen stearine, mixed with wood fiber, flock, ground cork, or other similar material in relief upon the block or roller and strengthened and supported by a coating of varnish, or equivalent substance, substantially as described.

In witness whereof I have hereunto set my hand this 23d day of July, A. D. 1891.

FR. BECK.

Witnesses:

J. ROMANIE BROWN,
WM. W. STROUSE.