

(No Model.)

P. GROEBER.
PRINTING BLOCK OR ROLLER.

No. 466,677.

Patented Jan. 5, 1892.

Fig. 1.

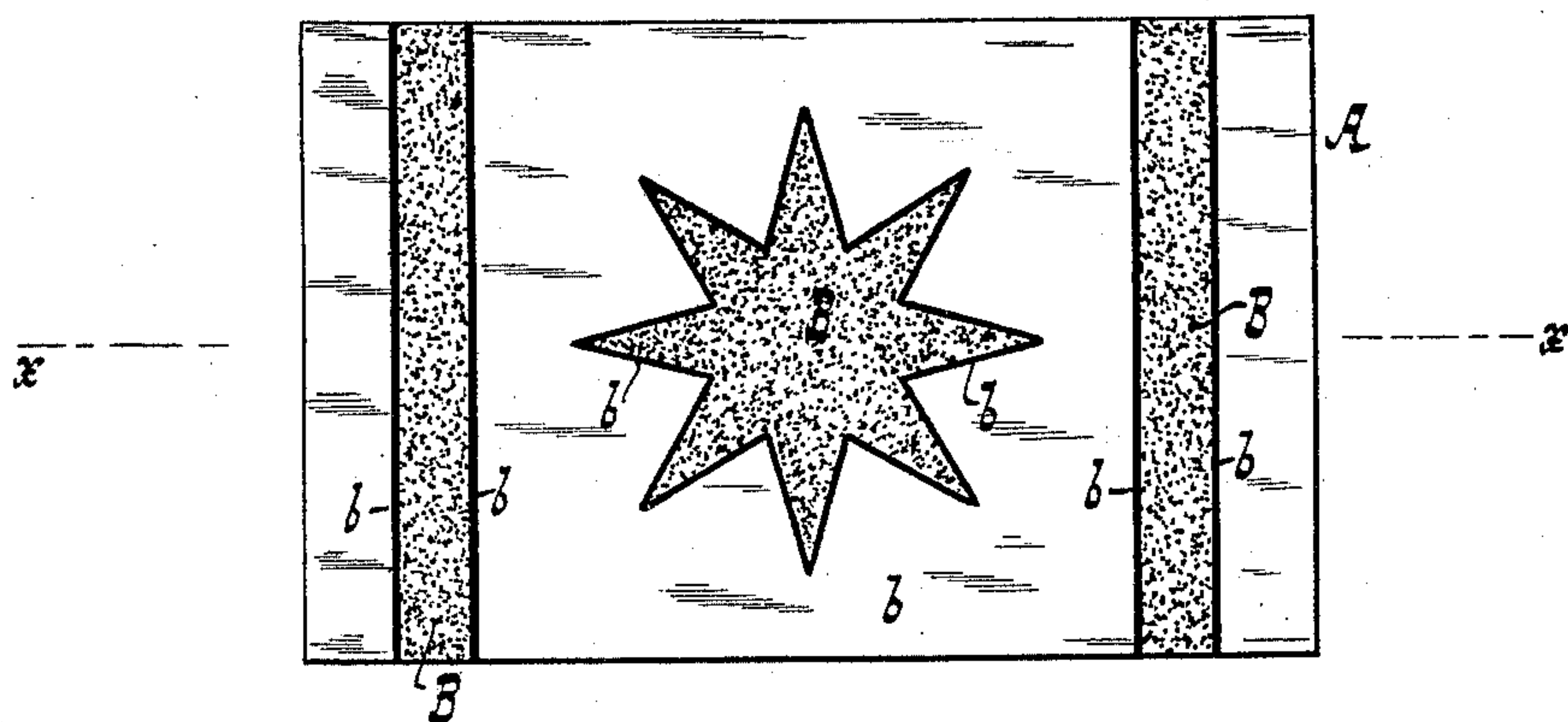
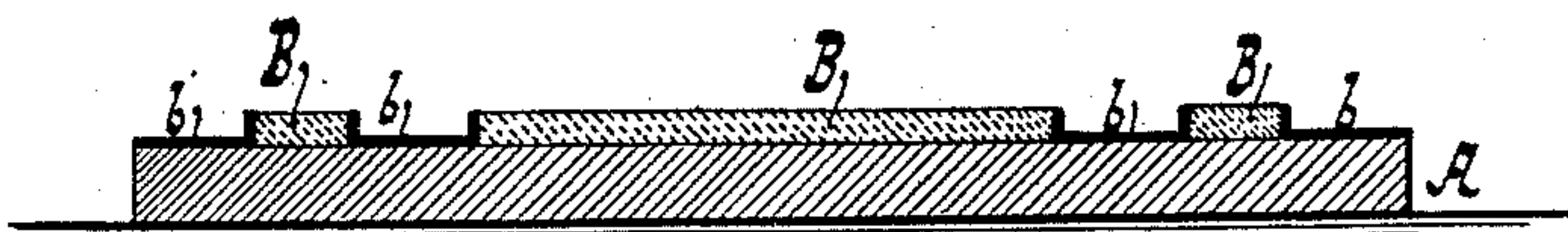


Fig. 2.



WITNESSES:

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PAUL GROEBER, OF RUTHERFORD, NEW JERSEY.

PRINTING BLOCK OR ROLLER.

SPECIFICATION forming part of Letters Patent No. 466,677, dated January 5, 1892.

Application filed April 20, 1891. Serial No. 389,614. (No model.)

To all whom it may concern:

Be it known that I, PAUL GROEBER, a citizen of the United States, residing at Rutherford, in the county of Bergen and State of New Jersey, have invented new and useful Improvements in Printing Blocks or Rollers, of which the following is a specification.

My invention relates to an improvement in printing blocks or rollers of that class which are used for printing cloths, oil-cloths, wall-papers, and other like manufactures. Such blocks and rollers have been heretofore made with the design raised in relief on the face of the block or roller, which I term hereinafter the "base," it being either carved in relief or the desired relief being outlined, with pieces or strips of brass or copper set edge-wise into the base and projecting above its surface, one strip on each side of the relief, and then an impression being taken from the upper edges of the pieces of copper or brass. Pieces of wood or felt of the sizes and shapes indicated by the impression are cut out to conform to the spaces between or inclosed by the strips, which are then carefully and accurately cemented into the said inclosed spaces surrounded by the copper or brass strips. The metallic strips are used to laterally sustain and hold in place the contours of the relief and to protect them from injury under the action of the press. Instead of securing the strengthening or side sustaining-strips in the body of the base said strips have been produced by electro-deposition; but in all cases known to me the metallic strengthening-strips are rigid and unyielding, and they cannot be used with advantage in combination with reliefs formed of an elastic material. Furthermore, great care must be taken to protect the metallic strengthening-strips against the corroding action of the coloring-fluids.

The printing block or roller prepared according to my invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a face view. Fig. 2 is a section in the plane $x x$, Fig. 1.

In the drawings, the letter A designates the base. To the surface of the base I apply a coating or layer of an elastic and absorbent material suitable for receiving and transmitting the color to the fabric being printed and at the same time sufficiently elastic to adapt

itself to the surface being printed. The material which I have used with advantage for this purpose is prepared by mixing ground cork with oxidized oil. This coating or layer may have the thickness of, say, one-eighth of an inch, although it may be more or less, as desired, and upon it I trace or otherwise produce the design which I desire to print from it, and I then cut out from this coating with a sharp knife or other instrument the design which I have traced or otherwise produced on the layer, thus projecting the design B in relief. I then apply to the surface of the base and to the lateral walls of the design B a layer b of a bituminous substance, such as a solution of asphalt in benzine or any other suitable solvent. This layer protects the base A against the action of the coloring-fluids, and it also forms strengthening-strips for the lateral walls of the design B, said strengthening-strips being of such a nature that they can yield during the operation of printing, so as to allow the face of the design B to adapt itself to the surface being printed without causing injury or displacement to the strengthening-strips.

If desired, the base and the lateral walls of the design B may be coated with a solution of shellac in alcohol before the bituminous layer b is applied. The object of this coat of shellac is to cause the bituminous solution to cling firmly to the base and to the lateral walls of the design B; but the coat of shellac is not absolutely necessary to produce the desired result.

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

As an improved article of manufacture, a printing block or roller consisting of a rigid base having a printing-surface in relief composed of a layer of elastic and absorbent material and a bituminous coating which covers the spaces between the printing-surface and also covers the elastic and absorbent lateral walls of the relief to form yielding strengthening-strips therefor, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PAUL GROEBER.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.