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CLICHÉ AND OTHER SURFACE FOR PRINTING PURPOSES.
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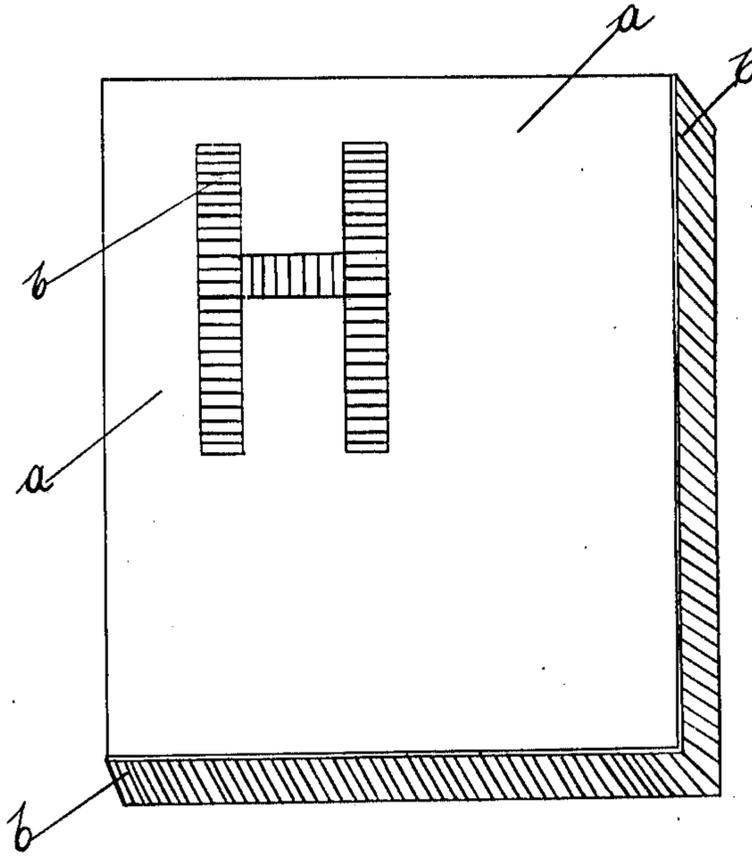


Fig. 1.

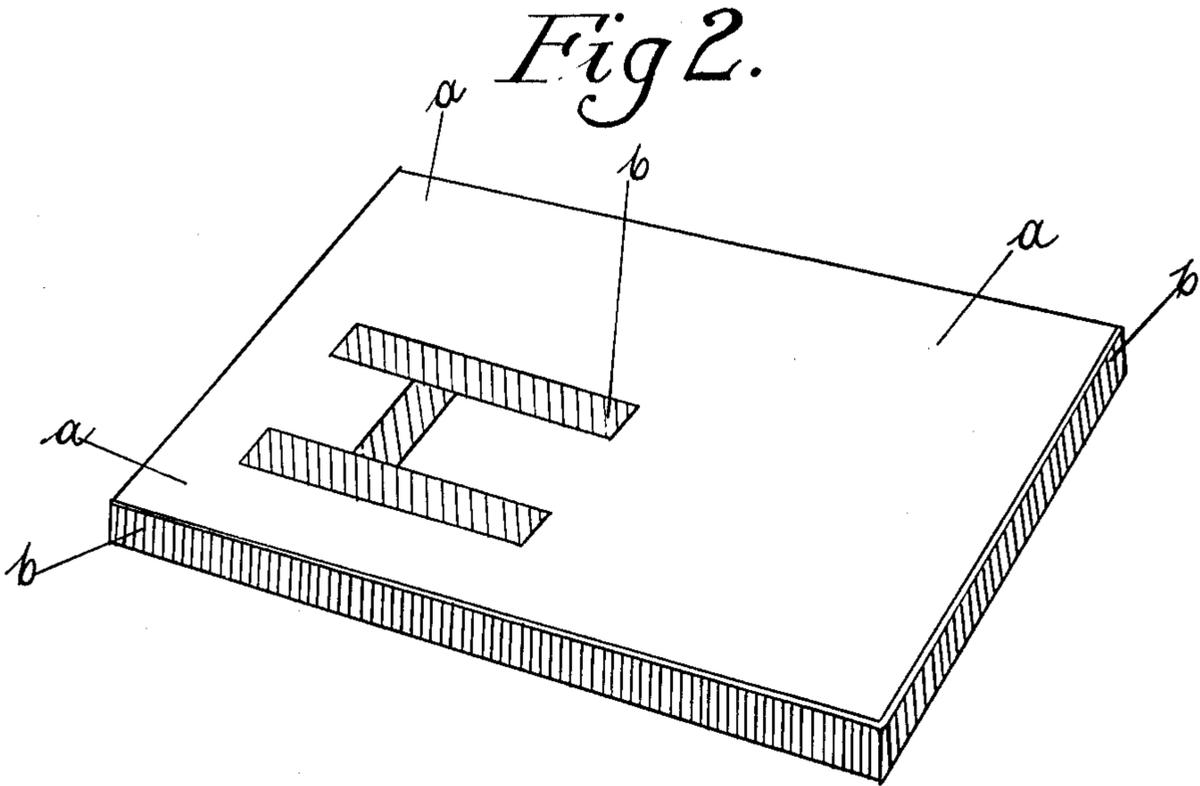


Fig. 2.

Inventor

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Witnesses
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UNITED STATES PATENT OFFICE.

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CLICHE AND OTHER SURFACE FOR PRINTING PURPOSES.

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To all whom it may concern:

Be it known that I, MICHAEL SANDMANN, a subject of the King of Saxony, residing at 60 Elisenstrasse, Dresden, Germany, have
5 invented certain new and useful Improvements in Cliches and other Surfaces for Printing Purposes, of which the following is a specification.

The present invention relates to cliches
10 and other surfaces for printing purposes, and has for its object the production of a printing surface which shall have sharp outlines, a capacity for printing a large number of copies, and produce in the printed
15 product a print of perfect clearness.

A further object of the invention is to produce a printing surface which shall be as efficient as an expensive and heavy metal
20 plate, and be cheaper to produce than the celluloid plates now in use.

A still further object of the invention is to produce a plate which shall possess elasticity, be easy to cut, stamp or engrave when producing the cliché or block, and yet avoid
25 the objectionable brittleness of the celluloid plate, the weight, difficulty in cutting and expense of the metallic plate, and the lack of clearness and sharpness in the printing edges of the linoleum plate.

A still further object of my invention is to produce a printing surface of celluloid or similar composition, by using only a thin layer of said celluloid or composition, as it
30 is a relatively expensive article, and to use a cheaper but more suitable material for a base in an underlying layer.

The weight of metallic plates may be a disadvantage in some cases, but their expense is always a matter of concern. Pure
40 celluloid plates are usually at least $\frac{3}{32}$ of an inch in thickness, as such a thickness is necessary to give clearness to the type or lines to be cut in it. Thin as this layer is, the expense of the composition, usually
45 composed of nitro-cellulose and camphor, is considerable with relation to the total expense of the entire process. Brittleness and lack of elasticity are disadvantageous characteristics of celluloid plates. The pure
50 celluloid has a further serious disadvantage in requiring to be either nailed, or fastened by an adhesive, to a wooden or other base, usually resulting in an insecure connection on account of their brittleness and thick-
55 ness. Cliches or blocks made of linoleum alone lack clearness of outline, and are in-

capable of the fineness of line which can be obtained with both metallic and celluloid plates.

With these and other objects in view the
60 present invention consists of a plate, block, cliché or printing surface, and the process for making the same, said plate having a base of linoleum or other substance possess-
65 ing the same or similar properties, strong yet easy to cut, and a thin surface of celluloid or other composition of similar surface material, capable of being cut, stamped or
70 engraved so as to give a well-defined, clear printing edge to each type or line, the two elements of base and surface material being perfectly united.

The process of making a plate or cliché in accordance with this invention is as follows: A sheet of linoleum, or any similar
75 easily cut substance, either pressed, woven or fibrous and treated with linseed or other oils with or without an admixture of powdered cork or similar binding element, is made smooth mechanically, by calendering
80 or other similar process, and is intimately combined with a thin layer of celluloid of the same size and of about 0.006 inch to 0.012 inch in thickness, or less. The linoleum base is usually from $\frac{1}{12}$ to $\frac{1}{6}$ of an
85 inch in thickness, but may be of any thickness necessary to provide the requisite depth for cutting or stamping and strength for use in printing. This fusion, uniting or
90 fastening of the base and surface sheets is accomplished by moistening evenly one surface of a sheet of celluloid with a heated liquid solution of 30 grams of camphor to a liter of spirit of 95% proof, and placing
95 said celluloid plate upon a sheet of prepared linoleum previously heated, so that the said moistened surface of the celluloid shall contact with the smoothed and heated surface of the linoleum. The two plates are then
100 firmly pressed together, preferably in a hydraulic press, whereby they are firmly united and a partial or complete fusion of the two is attained.

An alternative process consists in pouring
105 a thin layer of the celluloid in a heated liquid condition upon the prepared linoleum plate, thereby avoiding the necessity of pressure to attain the desired fusion.

The fusion, union, fastening, adhesion or connection which results from either of the
110 two above described methods is perfectly satisfactory and lasting, and the union of

the two plates or two compositions is complete and is partly or wholly a fusion.

The accompanying drawing will illustrate my invention.

5 Figure I is a top view of the cliché; Fig. II shows the vertical section of the same.

The letter *a* indicates the surface of celluloid; the letter *b* the base of linoleum.

10 Having now particularly described and ascertained the nature of my invention and the manner in which it is performed I do not broadly claim the method of coating an article with a soluble material, for this has been done before, but

15 What I desire to secure by Letters-Patent is:

1. As a new article of manufacture a plate for printing purposes, consisting of a thin upper layer of celluloid and a base of

linoleum intimately connected therewith 20 from which intimately connected layers the non-printing portions of the plate are removed.

2. A process for the production of a plate 25 for printing purposes consisting of a thin celluloid plate integrally mounted upon a linoleum base, comprising the process of first making smooth the linoleum base, then pressing the celluloid plate, the surface of which is moistened with a liquid solution of 30 camphor in alcohol, on the linoleum base.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL SANDMANN.

Witnesses:

PAUL ARRAS,
WILL. T. COOKE.