

UNITED STATES PATENT OFFICE.

ALLSTON ADAMS AND ARTHUR BOTT, OF ALBANY, NEW YORK.

IMPROVEMENT IN PROCESSES OF ORNAMENTING CARD-BOARD.

Specification forming part of Letters Patent No. **190,997**, dated May 22, 1877; application filed April 9, 1877.

To all whom it may concern:

Be it known that we, ALLSTON ADAMS and ARTHUR BOTT, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in the Process of Producing Ornamental Card-Boards, of which the following is a full and exact description:

The object of our invention is to produce, at a trifling cost, ornamental card-boards possessing all the beautiful effects of the embossed card-boards whose manufacture is attended with great expense.

The common and usual method of making the embossed card-board and paper is as follows: The design for the ornamentation is produced in raised lines upon a cylinder or roller by engraving or other suitable means. The material to be embossed or ornamented is then placed upon a plate having a polished surface and passed beneath the cylinder, to which sufficient pressure is applied to compress the texture of the material to such a degree that the surface upon which the raised lines of the cylinder bear will become glazed, so as to change the tint a shade darker than that of the uncompressed portion of it.

The cost of producing these rollers is very great, rendering the cost of the card-boards too great for general use.

This class of ornamental card-boards is open to the further objection that its indented surface renders it undesirable for lithographic impressions, for the reason that the lines are broken up by the indentations of the surface.

By our invention we succeed in producing an article having all the æsthetic qualities of the more costly embossed one at a trifling expense, and one that is adapted to receiving lithographic impressions without destroying the lines thereof.

To carry our invention into effect, we print, with a lithographic or other printing press, an ornamental design, preferably one closely resembling the embossed card-boards, upon card-board or paper having a plain-colored, tinted, or white surface. For the purpose of making this impression we substitute for the ink commonly used a transparent varnish, which, when it is laid upon the surface, does

not destroy the color of the surface, but simply deepens the tint to a sufficient degree to clearly define the design, producing the exact effect of the embossed surface without indenting the surface or producing any other unevenness thereon.

By using varnish instead of ink we are enabled to print the design upon cards of various colors without being obliged to use different-colored inks corresponding with the color of the surface of the card-board.

In order, when preferred, to deodorize the varnish, to prevent it from imparting to the card-boards any disagreeable smell, we mix with it a portion of any of the essential oils, or the preparations produced therefrom.

When we wish to produce a finer or more highly-finished article of card-board we provide the same with a coating of blanc fixe, Cremnitz white, and glue, or like substances used for enameling of card-board; then subject it to a pressure between plates or rollers to smooth the surface for the desired impression; and after the ornamental design, with a transparent or semi-transparent varnish, has been impressed, and to obtain the delicate velvety finish so desirable for fine printing, and before it is dry, we subject it to the action of rapidly-moving brushes, and thereby obtain a highly-polished surface.

We are aware that paper has been printed with designs in size, gum, or other adhesive material for the purpose of being afterward flocked or dusted with metallic powder or dry colors, and such we do not claim, broadly; but

What we do claim is—

1. The process herein described of ornamenting card-board in imitation of the embossed card-board of commerce, consisting in printing thereon any desired design with a transparent or semi-transparent varnish in lieu of the colors or inks usually employed, substantially as and for the purpose specified.

2. The process of producing ornamental designs on card-board, consisting in first providing the surface or surfaces with a coating composed, essentially, of blanc fixe, Cremnitz white, and glue, or their equivalents, then printing the desired design in a transparent

or semi-transparent varnish, and, finally, subjecting the surface so printed to the action of polishing-brushes, substantially as described.

3. As a new article of manufacture, ornamental card-board of any desired tint or ground color, having a design on its surface printed with a transparent or semi-transparent varnish in representation and imitation

of embossing, substantially as described and shown.

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Witnesses:

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