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PATENTED JULY 23, 1907.

H. F. GRIBBLE.

PROCESS FOR PRODUCING FACSIMILES OF OIL PAINTINGS.

APPLICATION FILED JULY 21, 1906.

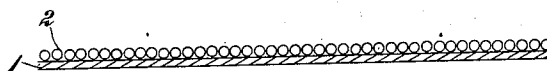


Fig. 1.

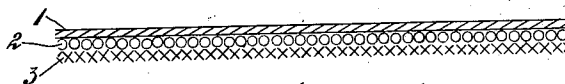


Fig. 2.

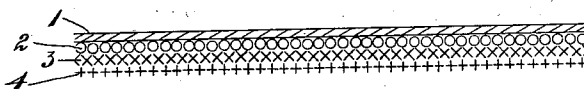


Fig. 3.

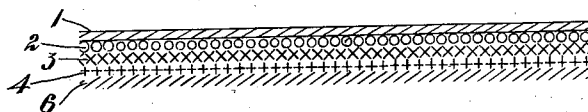


Fig. 4.

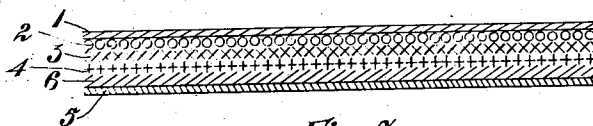


Fig. 5.

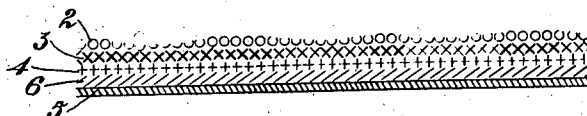


Fig. 6.

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UNITED STATES PATENT OFFICE.

HERBERT FREDERICK GRIBBLE, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF
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PROCESS FOR PRODUCING FACSIMILES OF OIL-PAINTINGS.

No. 861,025.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed July 21, 1906. Serial No. 327,237.

To all whom it may concern:

Be it known that I, HERBERT FREDERICK GRIBBLE, a subject of the King of Great Britain, residing in the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented a new and useful Process for Producing Facsimiles of Oil-Paintings; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to a process for producing facsimiles of oil paintings and the object of the invention is to reproduce oil paintings by lithographic process so that the production closely resembles the original painting and may be washed and treated in the same manner, and it consists essentially of the various steps as described in detail in the following specification and illustrated in the accompanying drawings forming part of the same.

In the drawings Figure 1 is a diagrammatic representation of the flexible holding having a gummed surface. Fig. 2 represents the flexible holding inverted and the color applied to the gummed surface. Fig. 3 shows the ground or backing applied to the face of the color. Fig. 4 shows the adhesive substance applied to the surface of the backing. Fig. 5 shows the whole composite sheet applied to the canvas. Fig. 6 shows the composite sheet with the flexible holding removed.

Like numerals of reference indicate corresponding parts in each figure.

The process is carried out in the following manner. Referring to the drawings 1 is a flexible holding formed preferably of a soft absorbent paper. One surface of the flexible holding 1 is completely coated or covered over with a clear solvent substance 2 such as gum arabic, though it must be understood that any clear solvent substance, suitable for the purpose, may be applied. The prepared sheet is then set aside to dry. When the prepared surface of the flexible holding is sufficiently solidified the said holding is applied with the solvent surface downward to a lithograph stone on which the design of the painting has been made and upon which a coating of ink has been placed. The sheet is then subjected to pressure in the usual manner by the action of the press and the ink 3 transferred to the prepared surface. The design is drawn upon the stone in the usual lithographic manner, though worked out in the reverse manner from the ordinary lithographic process for printing direct on the paper.

The prepared surface of the flexible holding is applied to the various stones upon which the drawings for the various colors contained in the picture are drawn, and the colors printed thereon, each color being

printed successively as each preceding color is dry, the process following exactly the ordinary lithographic process in this respect until all the colors have been transferred from the various stones to the solvent surface of the flexible holding. The ink of the last color printed upon the prepared surface of the flexible holding is allowed to dry thoroughly and then a coating 4 composed of flake white and lithographic varnish is spread over the whole printed surface of the flexible holding, forming a white ground completely covering all the colors that have been printed upon the solvent surface of the said flexible holding. The preparation used for the said ground adheres to the ink of the colors previously printed and forms a solid binder to hold the colors together. The said coating may be applied in any suitable manner but is preferably applied to the sheet in the same manner as the various colors are applied, that is, by passing the sheets through the lithograph printing press, the rollers of which are covered with the preparation previously mentioned. The sheet is then set aside and allowed to dry thoroughly, the white ground forming a backing to the colors.

The use of the white ground previously described is the preferable method of covering the colors of the picture and is distinctly for the purpose of forming a pure white ground to the colors, such as is given in the printing of the picture upon the white paper, so that the thin delicate colors and tints in the picture, will, in the finished picture, show in their proper colors and not be influenced by the darker color of the canvas backing on which the picture finally rests. The white ground is not absolutely required as a binder, though it is preferable for the maintenance of the proper tints. As a binder for holding, it is not necessary to the transferring of the picture because the colors are held on the flexible holding 1.

The sheet of canvas or textile fabric 5 on which it is desired to place the picture is prepared in the usual manner necessary for artists use, the surface being primed in order to form a proper surface to receive the paint or color. When the flexible holding, upon which the colors have been printed, and which has been covered with the white backing, as previously described, is thoroughly dry, a coating 6 of an adhesive material, preferably composed of Canada balsam and lithograph varnish is spread over the whole surface of the white ground. The adhesive coating 6 may be applied in any suitable manner but it is found preferable to apply it by passing the sheet through a hand press, the roller of which is covered with the said preparation.

The flexible holding 1 is taken from the press after

having the coating of adhesive material 6 applied to the surface of the white ground 4 and placed upon the surface of the canvas 5, or other material which has been previously primed, with the adhesive surface in contact with the primed surface of the said fabric. The composition of Canada balsam and lithographic varnish forms a very strong adhesive and the flexible holding is placed upon the canvas while the adhesive preparation is still in a sticky or tacky condition. The composite sheet 7 composed of the sheet of textile fabric 5 and the flexible holding 1 having the colors 3 printed upon the gummed surface thereof is then subjected to pressure. The pressure applied to the composite sheet presses the surface which is covered with the preparation 6 of Canada balsam and lithographic varnish thoroughly down to the primed surface of the textile fabric thereby causing the adhesive coating to partly permeate the texture of the fabric uniting the two sheets. In applying pressure to the composite sheet to thoroughly unite the canvas and color portion, the pigment forming the colors will be pressed into the texture or grain of the canvas and as the adhesive covers all portions of the back of the color it will be thoroughly united in the numerous indentations in the surface of the said canvas and cannot blister or loosen therefrom in any manner and as the composition of lithographic varnish and Canada balsam is perfectly flexible it will not harden the canvas nor will it make the color liable to chip off but will really unite the color to the priming of the canvas at all points. The flexible holding is then dampened on the back or unprepared surface and as the said flexible holding is composed of a soft absorbent paper, the moisture will readily pass through the paper and dissolve the surface of the solvent coating of gum adhering to the other side thereof. The flexible holding may then be stripped off, the moisture having permeated the said holding and loosened the solvent coating from the under surface, leaving the colors printed upon the said solvent surface thereof firmly attached to the surface of the white ground or backing.

The moisture passing through the flexible holding loosens the gum from the under surface and a certain amount of the gum will remain adhering to the face of the picture, this gum may be removed or not as desired. It has been found in practice that a greater quantity of gum remains adhering to the surface of the picture over the darker portions of the same thus accomplishing a result which artists, making original paintings accomplish by gumming the shadows and darker portions of the picture.

The adhesive substance forming the last coating spread over the surface of the flexible holding firmly secures the white backing to the canvas or other fabric and the moisture contained in the substance evaporates through the said fabric. By mixing Canada balsam with lithographic varnish a very strong and peculiar adhesive is obtained which securely cements the white ground, formed by the lithographic varnish and flake white, to the surface of the canvas, and when dry is perfectly flexible and will not crack. It also seems to permeate the texture of the fabric in the manner very similar to the body colors used in making an oil painting thereby giving the same result.

The process herein described produces a picture upon canvas or other textile or absorbent material, forming a remarkably close resemblance to an original oil painting and overcomes the many difficulties hitherto met with in attempting to print colors directly upon a textile fabric.

What I claim as my invention is:—

1. The herein described process of producing fac-similes of oil paintings and the like, consisting in first coating a sheet of absorbent paper material with a soluble gummy substance, then printing the colors on said gummy coating subsequent to the drying thereof and showing the picture inverted thereon, then applying to said colors subsequent to the thorough drying thereof a coating of adhesive substance, then bringing said adhesive substance in a tacky condition into contact with a prepared sheet of suitable material and exerting pressure to drive said adhesive into the pores of said material, and finally dampening the aforesaid sheet of paper material and thereby loosening it and a part of the gummy substance from the face of the colorings of the picture for the purpose of removal therefrom as specified.

2. The herein described process of producing fac-similes of oil paintings and the like, consisting in first coating a sheet of absorbent paper material with a soluble gummy substance, then printing the colors on said gummy coating subsequent to the drying thereof and showing the picture inverted thereon, then applying to said picture subsequent to the thorough drying thereof a coating of adhesive substance which is flexible, transparent and insoluble when dry, then bringing said adhesive in its tacky condition into contact with a prepared sheet of suitable material and exerting pressure to drive said adhesive into the pores of said prepared material, and finally dampening the aforesaid sheet of paper material and thereby loosening it and a part of the gummy substance from the colorings of the picture for the purpose of removal therefrom, as specified.

3. The herein described process of producing fac-similes of oil paintings and the like, consisting in first coating a sheet of absorbent paper material with a solution of gum arabic and allowing the same to dry, then printing the colors of the picture inverted on said gummed surface and allowing them to dry thoroughly, then covering the picture with a pure white coating and allowing it to dry thoroughly, then applying to said white coating a coating of adhesive substance which is flexible, transparent and insoluble when dry, then applying the adhesive surface in a tacky condition to the surface of a prepared sheet of suitable absorbent material and exerting pressure to drive said adhesive into the pores of said prepared material, and finally dampening the aforesaid sheet of paper material sufficiently to loosen it and a part of the gum from the surface of the color of the picture for the purpose of removal therefrom as specified.

4. The herein described process of producing fac-similes of oil paintings and the like, consisting in first coating a sheet of absorbent paper material with a solution of gum arabic and allowing the same to dry, then printing the colors of the picture inverted on said gummed surface and allowing them to dry thoroughly, then applying to said colors a coating of adhesive substance which is flexible, transparent and insoluble when dry, then coating a sheet of canvas or other textile fabric with a suitable priming and allowing the same to dry, then applying the adhesive surface of the printed sheet in a tacky condition to the primed surface of the canvas, then passing the composite sheet between suitable rollers under pressure and forcing said adhesive into the pores of the primed sheet, and finally dampening the aforesaid sheet of paper material sufficiently to loosen it and a part of the gum from the surface of the pigment of the picture and removing the same as specified.

5. The herein described process of producing fac-similes of oil paintings and the like, consisting in first coating a sheet of absorbent paper material with a solution of gum arabic and allowing the same to dry, then printing the

colors of the picture inverted on said gummed surface and allowing them to dry thoroughly, then passing the printed sheet through a press and applying to the colored surface an adhesive coating of a mixture of lithograph varnish and
5 Canada balsam, then applying said adhesive surface in a tacky condition to the surface of a primed sheet of canvas, then subjecting the composite sheet to pressure and forcing the adhesive into the pores of the canvas and depressing the pigments into the grain of the canvas, then
10 dampening the back of the absorbent paper material, and

finally removing said paper material and a portion of the gum from the surface of the picture, as specified.

Signed at the city of Toronto, in the county of York, Province of Ontario, in the Dominion of Canada, this 9th day of July, 1906.

HERBERT FREDERICK GRIBBLE.

Witnesses:

H. DENNISON,

E. WILKIN.