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PROCESS OF MAKING DRAWINGS, CUTS FOR PRINTING,
ETC., AND APPARATUS THEREFOR
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1,721,933

Fig. 1.

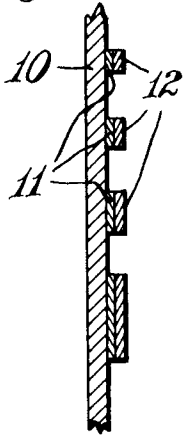


Fig. 2.

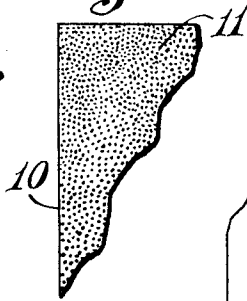


Fig. 3.



Fig. 4.



Fig. 6.



Fig. 5.

13,



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PROCESS OF MAKING DRAWINGS, CUTS FOR PRINTING, ETC., AND APPARATUS THEREFOR.

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The object of my present invention is to provide apparatus and an improved process for facilitating the production of illustrative drawings which may be then used either as exhibit drawings or as a basis for the production of a printing element by means of which reproduction may be made. My invention comprises, primarily a plurality of sheets of paper or other suitable material each carrying a print in the form of an ornamental back-ground and may also comprise a plurality of sheets carrying pictorial illustrations of such character as to be somewhat generally useful in building up desired illustrations.

These sheets are in the nature of decalcomanias in that the printed back-ground or pictorial illustration is intended to be transferred from the carrying sheet to another sheet, the transferable portion thereof, however, being of such character that, after application to the receiving surface, desired portions may be readily scraped from the receiving surface without marring such receiving surface.

The accompanying drawings illustrate my invention. Fig. 1 is a section, highly magnified, of one of my carrying sheets. Fig. 2 a face view of a small portion of one of the back-ground sheets; Fig. 3 a face elevation of a portion of one of the pictorial sheets; Fig. 4 a view showing the transfer of a portion of Fig. 3 onto a receiving sheet and the association therewith of special additional illustrative portions; Fig. 5, Fig. 4 with Fig. 2 added thereto, and Fig. 6, Fig. 5 with portions of Fig. 2 scraped therefrom to produce the completed drawing which may then itself be used as an illustrative drawing or, primarily, be used for photograph reproduction in the usual further process of making zinc etchings, etc.

In the drawings 10 indicates a sheet of glassine, or other similar paper upon which the desired figure, be it pictorial illustration or ornamental back-ground, is printed, as indicated at 11, by an ordinary impression process with an ink which, while it will adhere to the paper as a result of ordinary impression methods, will have sufficient body to be, when dried, separable therefrom in the manner hereafter described.

A satisfactory ink for this purpose may be made by mixing: 20 pounds of linseed oil

varnish, 20 pounds of dammar varnish, 28 pounds of rosin varnish, 8 pounds of japan drier, 10 pounds Prussian blue and sufficient carbon black to make a very stiff ink which will produce a thoroughly black line suitable for photographic reproduction. Of course it will be understood that if a line other than a black line were desired, there would be a proper modification of the pigment elements of the above mixture.

The proportions specified above may be very considerably modified without departing from my invention.

When the printing has been accomplished and while the impression is still tacky, I sprinkle over the printed face of the sheet a fine powder 12 composed of 96 per cent rosin and 4 per cent of sugar which is allowed to stand until the ink is dry, whereupon the surplus, opposite the unprinted portions of the sheets, is brushed off. The resulting product is of such character that the printed portions are such that, by placing the printed face upon a suitable receiving sheet 13, such as paper ordinarily used for the making of drawings, and thereupon applying a light heat to the upper surface of the inverted sheet, as by an electrically heated iron, the powdered rosin and sugar will be melted and caused to stick to the receiving surface. whereupon the glassine sheet may be peeled away, leaving the figure adhering to the receiving surface. The powder composed of rosin and sugar as specified is of such character that, when subjected to heat, as herein-after described, and thereby caused to adhere to the receiving sheet, it will be of such character, first, that it will adhere to the surface of the receiving sheet, with such tenacity as to drag with it the pigment which, on the stock sheet lay between it and the surface of the stock sheet; second, will adhere to the face of the receiving sheet in such manner that it, and the pigment which is carried with it, may be readily scraped from the face of the receiving sheet without damage to that face of such character as to affect a photographic plate when the receiving sheet is photographically exposed thereto. and third, that, if as a result of the application of heat to the stock sheet, and the adherence to the receiving sheet as a result of the application of such heat, portions thereof spread out beyond the pigment of the design, the exposed por-

tions of the melted powder adhered to the receiving sheet beyond the confines of the pigment will not affect such photographic plate.

A typical operation would be as follows, the illustrator desiring to produce an illustration for a given purpose will go through his stock of pictorial sheets and select one bearing a figure such as he desires to have. This may be a part or all of the particular stock sheet. He transfers the desired part to the receiving sheet 13, as indicated at 14 in Fig. 4, and if there are any undesired portions he scrapes them from the receiving sheet 13 without leaving a trace. He adds, with pen and ink, such additional portions 15 as may be desired. He then selects a suitable back-ground sheet from his stock and applies that to the receiving sheet 13 as described above, as indicated at 16, Fig. 5. He then removes from the receiving sheet 13 such portions of the applied back-ground as may be undesired as indicated at 17 in Fig. 6.

It will be readily understood that various portions of various stock pictorial sheets and various portions of various stock back-ground sheets may be combined upon the receiving sheet 13, portions of the stock sheet being first removed if desired or removed after application to the receiving sheet, which ever is most convenient and efficient in the particular instance.

It has been found by experience that the production of illustrative drawings such as are commonly used by department stores, etc., in preparing advertisements, may be very substantially sped up and the cost therefor substantially reduced by utilizing my apparatus and practicing my method.

I claim as my invention:

1. The method of producing illustrative drawings which consists in transferring from a stock sheet bearing printed characters composed in part of a normally tacky material which, when applied to a receiving sheet and subjected to heat will adhere to the receiving sheet and carry with it from the stock sheet the printed characters so heated, said normally non-tacky material being of such character that it may be readily scraped from the surface of the receiving sheet without seriously marring said receiving sheet, and then scraping from the receiving sheet, such transferred matter as is not required.

2. The method defined in claim 1 wherein portions of a plurality of such stock sheets are associated together upon the receiving sheet to produce a composite figure.

3. As an article of manufacture, a sheet of material bearing upon its face a printed character surmounted by a normally non-tacky material adhesive at temperatures somewhat above normal atmospheric temperatures, the character material being of such character as to be unaffected by such applied heat and

the surmounting material of such character that, when the surmounting material is caused to adhere to a receiving surface by applied heat, the carrying sheet may be stripped therefrom, leaving the applied character adhered to the receiving sheet, the adhesion between the receiving sheet and the transferred character, through the medium of the normally non-tacky material, being of such character that the transferred character, or any desired portion thereof may be readily removed from the receiving sheet without so affecting the receiving sheet as that the said removal will be apparent in a photographic reproduction.

4. As a step in the method of producing illustrative drawings and the like, the application to a carrying sheet, of a desired character composed of an initially tacky material separable when dry from the carrying sheet, the application to said character while tacky of a normally non-tacky comminuted material capable of being rendered tacky by heat somewhat greater than normal atmospheric temperature but less than the temperature injuriously affecting the character material, said normally non-tacky material being of such character that, when so heated, it will be so associated with the character material that, when the heated non-tacky material adheres to a receiving sheet, it will retain with it the character material upon removal of the carrying sheet, said normally non-tacky material being of such character that, when adhered to the receiving sheet, it may be readily scraped from said receiving sheet without injuriously affecting said receiving sheet for photographic reproduction of the remaining portions of the transferred character.

5. As an article of manufacture a carrying sheet bearing on its surface a printed character composed of a pigment layer and a superposed transfer layer, the pigment layer having the greater heat resistivity and of such character as to be bodily separable from the carrying sheet, the transfer layer of such character as, when applied to a receiving sheet, will adhere thereto in such manner as to be readily scraped therefrom without affecting said receiving sheet so far as subsequent photographic reproduction is concerned, and the pigment layer and transfer layer being of such character as that, when transferred to a receiving sheet by the application of heat, the pigment layer and transfer layer will be so intimately associated with each other that the carrying sheet may be separated from the pigment layer.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 8th day of June, A. D. one thousand nine hundred and twenty-seven.

CECIL R. SWAIM.