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TEXTILE CRAYON PROCESS

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This invention relates to colored crayons and has for its objects the production of special colored crayons for use by artists in drawing colored designs, particularly on textile materials, and a process for "fixing" the colored designs upon the cloth so that they will be washable.

Briefly described my invention comprises crayons made preferably of a soluble body or carrier incorporated in which is a portion of a substantive dye, or dyes, the amount of dye or dyes being proportioned so as to provide a series of crayons of all colors and shades necessary for artistic work of drawing designs or pictures in colors on fabrics with the crayons, and of setting the colored picture in the fibers of the fabric, generally by steaming the material with a hot iron, a heavy damp cloth being laid against the fabric before pressing with the iron. After the above treatment the fabric may be washed to remove all traces of the soluble crayon body without injury to the picture.

As a body for my crayons and carrier for the dye or dyes I prefer to use a soap toughened or strengthened (physically) to adapt it for use as a crayon when shaped into sticks.

As a soap for the purpose I find shaving soap, or linseed oil soap to work very well, tho rosin soap has also given good results.

As an agent to give the soap the necessary strength for use as a crayon I find gum tragacanth, sodium silicate, wax, bassorin, and glycerine to be satisfactory, the particular agent used depending on the nature of the soap used, sometimes several of the agents are combined for best results. Glycerine, though a liquid, has a hardening and toughening action on some soaps, and its use is also beneficial in preventing the crayon bodies from drying out and becoming too brittle.

As suitable dyes for incorporating in the crayon bodies may be mentioned:

Brilliant congo, diamine orange, erie green, dianil violet, dianil black, direct pink, mikado yellow, chicago blue, para brown, fast gray, chlorantine fast brown BRL, carbide black GEx (Schultz-Julius 462), chlorantine fast violet RL, triazol fast red B (S. J. 319), chlorantine fast orange 2RL.

The above are the names under which the dyes are sold in trade, some being given the dyes by the CIBA concern (Society of Chemical Industry in Basle, Switzerland).

The list of soaps, strengthening agents and dyes given is not to be considered restrictive, but only as representative of the classes of material found useful by me in the manufacture of my crayons.

In making my crayons I incorporate the ingredients in any suitable manner, preferably by grinding the soap, dye, and strengthening agent or agents in a mill, all preferably heated to about 60 degrees centigrade, followed by rolling or molding under pressure, or forcing through an orifice, to form the crayon sticks.

As a sample mixture for a yellow crayon I take—

Colgate's cup shaving soap, 15 grams; chlorantine fast yellow RL (British color index 394), 1½ grams; glycerine, 1½ c. c.; 2½% aqueous solution gum tragacanth, 2 c. c.

Another formula which gave good results was—

Dye stuff desired, 5 to 10 parts (depending on intensity of color desired); linseed oil soap, 85 parts; glycerine, 4 parts; sodium silicate, 2 parts.

Note.—The Colgate's soap given in the formula above is found to be a mixture of sodium and potassium oleates and palmitates, with a preponderance of the latter. In fact a pure sodium palmitate was used in place of the shaving soap and found very effective.

The crayons were permitted to cool and stand several days to gain strength, and were then subjected to a quick blast of steam by passing through the steam one by one for a few seconds' exposure thereto, the steam treatment serving to glaze the exteriors and increase their strength, while at the same time sealing their pores against too rapid a drying out.

In some cases I wrap the crayons either before or after glazing with waterproof paper or metal foil to further strengthen and preserve their physical characteristics, and if desired they may be encased in wood like a common pencil.

The proportions of the ingredients will vary for different soaps, dyes and intensity of color desired, but when properly carried out the result is a crayon which will readily mark on cloth so that without special experience an artist can execute a design or picture on cloth in any color or combination of shades just as he would draw a design on paper with ordinary crayons. If the fabric is dampened slightly and evenly before drawing upon it with the crayons it helps toward a more brilliant result.

To set the design or picture so as to make it washable, the fabric is pressed between cloth with a hot iron at ordinary ironing temperature, a damp cloth being first laid against the back of the fabric so as to force hot steam therethrough.

After the above treatment the fabric may be rinsed to remove the soluble soap of the crayon and dried, though most of the soap will have been dissolved out by the steam into the ironing cloths.

The crayon and process of application above described puts greater power in the hands of the artist or decorator of textiles, for as far as is known all colored pictures or designs now executed by hand on fabrics are accomplished with liquid dyes and brushes, a matter requiring great skill on account of the absorptive qualities of fabrics and the difficulty of applying even tints of colored liquids with a brush to such surfaces, whereas with my crayons any apt child can execute beautiful and washable designs on cloth, and this with simple inexpensive material, without any mussiness or danger of spilling common to liquid dye paints as heretofore used for this purpose.

My crayons have been tried out with success on various kinds of textile materials such as linen, cotton, silk, rayon, woolen mixtures and even paper.

I claim:

1. The method of designing on textile fabrics which comprises drawing on the fabric with a substantive dye crayon, and subsequently setting the dye image in the fiber of the material.

2. The method of designing on textile fabrics which comprises drawing on the fabric with a substantive dye crayon, and subsequently setting the dye image in the fiber of the material by steaming the same.

3. The method of designing on textile fabrics which comprises drawing on the fabric with a substantive dye crayon, and subsequently setting the dye image in the fiber of the material by steaming the same by passage of a hot iron thereover while in contact with a moist cloth.

4. The method of designing on textile fabrics which comprises drawing on the fabric with a water soluble body crayon carrying a substantive dye, and subsequently steaming the same to dissolve the crayon body and set the dye image in the fiber of the material.

5. The method of designing on textile fabrics which comprises drawing on the fabric with a water soluble body crayon carrying a substantive dye, and subsequently setting the dye image in the fiber of the material by steaming the same and finally washing out the soluble crayon body material from the fabric with water.

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