

UNITED STATES PATENT OFFICE.

CHARLES JOSEPH METTAIS, OF NEW YORK, N. Y., ASSIGNOR TO GUERNSEY SACKETT, OF SAME PLACE.

IMPROVEMENT IN COLORING PICTURES.

Specification forming part of Letters Patent No. 134,693, dated January 7, 1873.

To all whom it may concern:

Be it known that I, CHARLES JOSEPH METTAIS, a citizen of the Republic of France, and now a resident of the city, county, and State of New York, have invented a new and Improved Mode of Making Portraits and Pictures in Crayon, Charcoal, Pastel, and Dry Colors.

My invention consists in employing, in connection with the usual crayons, pastels, charcoal, or dry colors, prior to or at the time of their application, a suitable medium, of a character hereafter more fully described, whereby the several colors as they are laid are caused to adhere to the foundation of the picture. By this means I am able to practically produce results possessing many or all of the pleasing and desirable characteristics of the "dry-color" system, and which also have greater durability and many of the desirable characteristics of oil paintings; and I do hereby declare that the following specification is a clear and true description of my invention, and a desirable and practicable manner of applying the same.

While the finish and effect of charcoal, crayon, and pastel portraits have always been greatly admired by the public, it is only the artist whose vocation requires him to produce a faithful and enlarged likeness from the small and faded *carte* or daguerreotype of a deceased person who can fully appreciate their great value, the ease and rapidity with which, in working with them, an expression may be changed or a feature modified, enabling the artist to give almost immediate effect to the suggestions of those familiar with the original when the imperfect guide fails to give satisfaction, while, if a mistake should occur, it can be readily erased without danger of disturbing and losing the foundation of the portrait beneath. Indeed, this class of artist work is seldom executed in any other way than in dry colors. The impossibility of carrying out a suggestion in oil or water colors with sufficient rapidity, the continued necessity of erasure from mistaken criticisms, and the danger attending it owing to the adhesive properties of the oil, causes nearly all artists now to decline even an attempt to make an enlarged likeness in oil or water color, es-

pecially where the guide is at all defective. Such portraits, therefore, are now almost exclusively made in charcoal, crayon, pastels, or the like, and upon solar prints enlarged from the original. The effects produced by these dry colors are undoubtedly fine, but when brought in comparison with either water colors or oil painting their disadvantages are apparent. They possess neither the brilliancy and vividness of the oil, nor the exquisite delicacy of the water-color. They are at all times liable to be lost by accidental rubbing; and the pastels not unfrequently lose their colors, and even crumble away.

My invention enables portraits made by its use, in either crayon, charcoal, pastel, or dry color, to be done with the same, if not greater, ease and rapidity, with equal susceptibility of change in execution, without injury to the photographic or other base, and at the same time combines the more desirable qualities of oil and water color in permanency, durability, and finish.

I will further premise my description by saying that the process may be applied to any kind of paper used for drawing, and also to albumenized, salted, or other paper used for photographic or solar printing; also, in making portraits or drawings with or without a photographic foundation. My description, however, will refer principally to portraits made on photographic or solar prints, such as are usually employed by artists in making crayon or pastel pictures; and I leave the style of printing to be made in accordance with the taste of the artist using the process, it applying equally to all, stating, however, that I prefer in all cases to have the print light, in order that it may be completely covered by the artist and depend for its effects solely upon the color applied, and not upon the photographic print, which should be taken as a guide only.

When the photographic or solar print has been strained or mounted ready to be worked upon by the artist I take a small quantity of the hard "fatty matter," substantially of the character herein described, and rub it well over and into the surface of the picture, or wherever it is designed that the artist shall work, until it is entirely covered, and yet leaving no

surplus on the surface which the ordinary rubbing in with the hand would remove.

In practice, I have found that hard clarified fat of mutton is well adapted to the uses herein specified. I am aware, however, that stearine, and many other substances of a practically analogous character, can be used with at least closely approximate results, among which pure paraffine or so-called "paraffine wax" stands very high, owing to the fact that it is chemically unalterable through exposure to the light and air, to the fumes of chlorine and acid, and the direct contact with alkalies; it is also peculiarly adapted thereto by reason of its being semi-transparent.

Owing to these qualities, many artists will consider it preferable to mutton-fat, or to compounds containing true fat or "oleine," especially on pictures which are not to be absolutely protected; it is, however, more difficult to work than mutton-fat.

Wherever I use the term "fatty matter" herein I refer thereby broadly to the material employed by me as a base for the reception of the coloring matter, without regard as to whether or not true fat or solidified oleine be a component part thereof.

It will be practicable to use (specially prepared by molding and compression) rolls of proper and convenient size, composed of desired coloring-matter, and any suitable fatty matter which can be applied with equal facility. When the portrait or other picture has been thus treated with the fatty matter, it can then be worked up in crayon or charcoal by the artist in the usual way and by the ordinary means; but if the background be stumped in with charcoal slightly mixed with the fatty matter, it will be found to give very effective shades, the lights being produced by scraping off the crayon, charcoal, or other color, by the use of a knife, eraser, or other similar instrument, to the extent required in producing a desired effect. In working with pastels, I use the same coating of fatty matter, and when employing the stump, mix with the powdered or dry color a small quantity of the said fatty matter in the same way as provided for the powdered charcoal.

The mixture of the fatty matter with the dry colors, crayon, charcoal, and pastel, applied to the picture, will be found to produce a hard surface, but little, if any, more liable to injury by rubbing than an oil painting. They will never crumble, and they possess a brilliancy and depth of tone similar to an oil painting not otherwise attainable with dry

colors; and, should it be desirable, the picture can readily be varnished soon after it is completed, without in any manner disturbing the color applied in finishing it, and in the same manner as an oil painting. The fatty matter to be used should always be in its hard state, as the soft fats and oils are apt to change the appearance of the paper, making it semi-transparent.

A very beautiful effect may also be produced in water-colors by rubbing the picture with the fatty matter, as hereinbefore described, after the water-color has first been applied to the paper for the base of the picture; and then using crayon, charcoal, or other dry color, mixed slightly with the fatty matter, in finishing the picture, the lights thereof will be scraped in, as before described. Water-color drawings finished in this manner possess to a very great extent the depth of tone and brilliancy of an oil painting, united with the delicacy of water-colors; and I desire to have it understood that my improvement is applicable to pictures without reference to whether or not they consist entirely of drawing, or have a photographic base, or a base of water-colors applied in the usual manner, before the application of the fatty matter.

Pictures executed by my process are readily distinguishable from pictures of the dry-color system as heretofore practiced, for they possess to a marked degree the light, open characteristics of the dry colors or crayons, and a surface solidity approximating closely to the oil-colors; and it is also by reason of this latter peculiarity that they can easily be distinguished from water-color pictures.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The process, substantially as described, of coloring and finishing portraits or pictures by combining and applying, with crayon, pastel, charcoal, or similar dry colors, a solid fatty matter of the character described, as and for the purposes specified.

2. As a new production in the art, and constituting a new article of manufacture, a picture or portrait executed in whole or in part with crayon, pastel, charcoal, or dry colors, applied thereto in combination with a solid fatty matter, of the character substantially as herein described.

CHARLES JOSEPH METTAIS.

Witnesses:

FRANK ROMER,
ROBERT D. BERTINE.