POLARIZED LIGHT.

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VI.

SUGGESTIONS IN DECORATIVE ART.

Occasionally, evidences of the use of the microscope in decorative art are seen, and every microscopist knows that there are thousands of beautiful forms lost

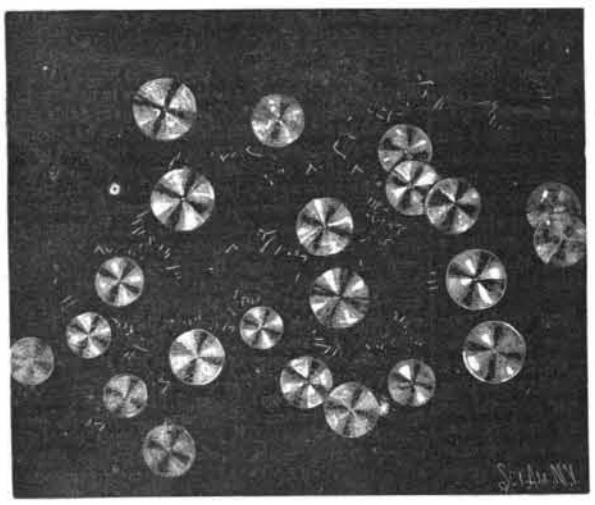

Fig. 1.—SALICINE CRYSTALS.

to unaided human vision which are revealed only to the user of the microscope. These minute forms are always exquisite in their construction and finish, often symmetrical and graceful in form, and quite as often finely colored. All this is true of microscopic objects in general, but it is especially true of polariscopic microscope objects. Some of these are, to a certain extent, artificial. The crystals, for example, are the result of manipulation, but the laws of crystallization are

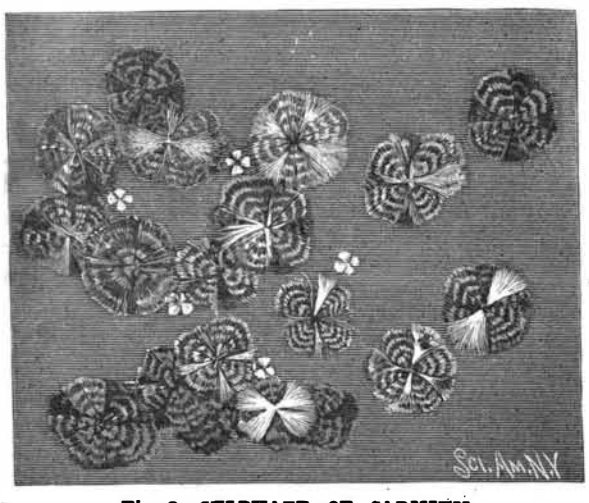

Fig. 2.—SULPHATE OF CADMIUM.

natural, so that, after all, we are indebted to nature even for these objects.

In the present instance, a few striking examples of crystallization have been selected as the basis of some suggestions in decorative art. These crystals, as exhibited by polarized light in the microscope, are shown in the annexed engravings, necessarily divested of their principal charm—that of color. The forms only are shown. The reader can imagine these figures invested with the most gorgeous colors of the spectrum combined in a perfectly harmonious way. In respect to color, the polariscope never errs. Whatever colors are presented are correctly related to each other. This feature alone is of great value to the designer and colorist. The circular crystals of salicine, shown in Fig. 1, are always interesting. The play of the radial bands of color as the polarizer or analyzer is revolved

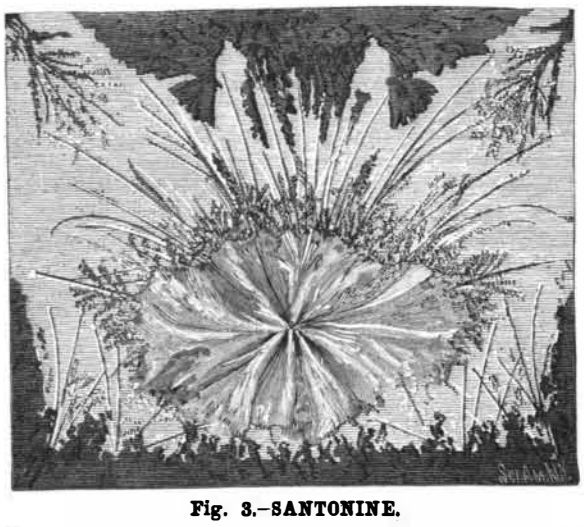

Fig. 3.—SANTONINE.

gives each disk the appearance of having an actual rotation of its own.

In Fig. 2 are shown the delicate, feathery crystals of sulphate of cadmium, in which the coloring, as exhibited by polarized light, is scarcely more beautiful than the exquisite forms. The shapes of the different crystals vary somewhat, but there is a characteristic feature pervading them all.

In Fig. 3 are shown crystals of santonine in a variety of forms—some like spears of grass, others resembling heads of grain, and still others like ferns and various leaves, while the larger crystals or aggregation of crystals has a radial arrangement.

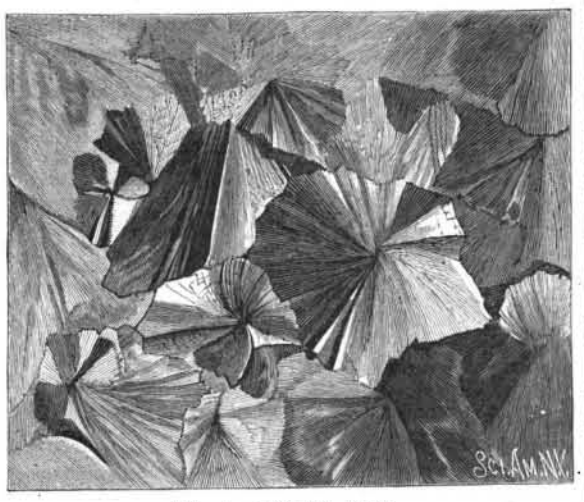

Fig. 4.—LITHIC ACID.

In Fig. 4 are shown crystals of lithic acid, which adjoin each other, and form a solid field, having strongly contrasting bands of light and dark color.

Fig. 5 will be recognized as a part of a dado, frieze, or border, formed of lithic acid as a ground, crystals of platino-cyanide of barium as the division of the panels, and crystals of sulphate of cadmium as rosettes upon the centers of the panels.

Fig. 6 shows a panel formed in part of the same

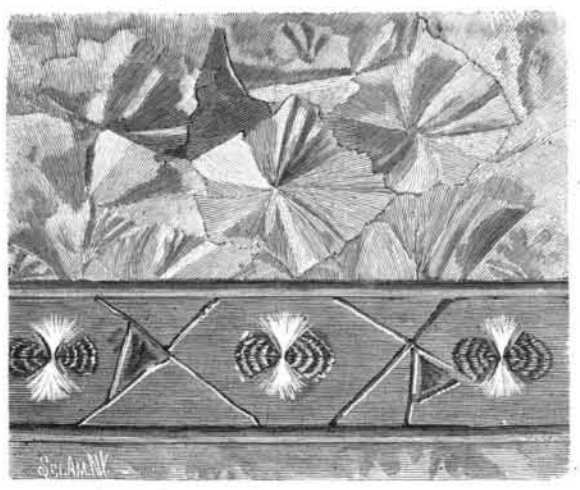

Fig. 5.—BORDER DADO OR FRIEZE.

crystals, with a crystal of salicine planted at the intersection of two of the slender platino-cyanide of barium crystals, and small crystals of kinate of quinia forming flowers.

In Fig. 7 is shown a border formed of crystals of santonine, arranged on a ground of neutral tint, with a row of circular crystals of sulphate of copper and mag-

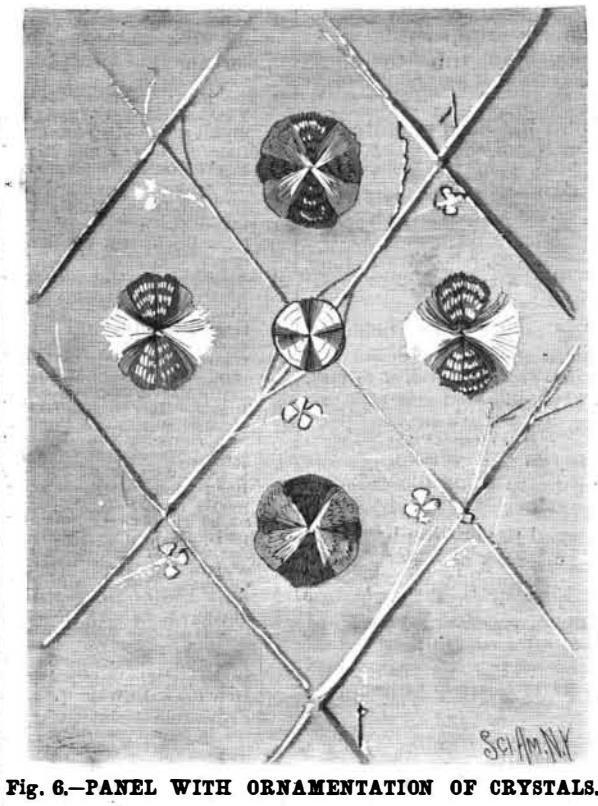

Fig. 6.—PANEL WITH ORNAMENTATION OF CRYSTALS.

nesia above a row of crystals of kinate of quinia, arranged on a dark ground.

Fig. 8 shows a pattern having a background of stearic acid, branches of platino-cyanide of barium, leaves of platino-cyanide of magnesium, and flowers of salicine.

What has been shown in the engravings constitutes only a hint of what may be done in this direction. The number of beautiful crystals and other polariscope objects available for this purpose is very large.

Flavoring Extracts.

Cooks, confectioners, and others engaged in the

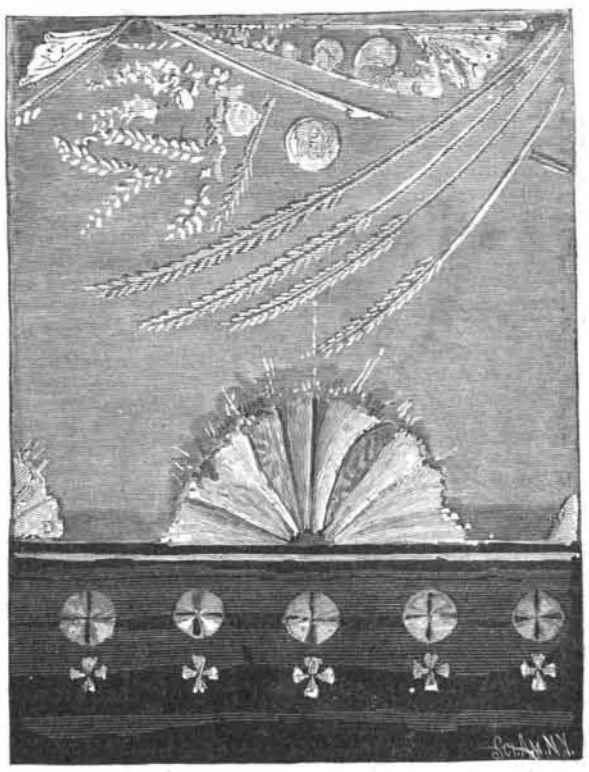

Fig. 7.—A COMPOSITE BORDER.

preparation of foods and drinks are in the habit of using various artificial perfumes, which in chemical language are such bodies as amylic valerianate, amylic butyrate, ethylic butyrate, propylic ether, and caprylic alcohol. The odor and flavor of the apple, the pear, the pineapple, the strawberry, and the raspberry can thus be imitated. The imitations not only remove the necessity for the use of the natural fruits, but are less expensive, and, besides having perfect similitude with them, give the appropriate flavor in a more accentuated form.

MM. Poincare and Vallois have sought to ascertain whether these artificially prepared perfumes possess poisonous properties by injecting them under the skin of animals, as well as introducing them into the stomach. Dogs and guinea-pigs can withstand even large doses of these substances when injected under the skin; but these animals can be poisoned by sufficiently large doses, and then the symptoms set in rapidly. The most constant toxic symptom was great prostration, which was followed in a variable time by coma. These phenomena were less marked in the dog than the guinea-pig. All the animals were troubled with violent nasal irritation and sneezing, and distressed breathing was always evidenced by over-action of the respiratory muscles. An excessive secretion of mucus from the bronchial tubes was also noticed. Notwithstanding the gravity of the symptoms, the majority of the animals recovered. The practical outcome of these experiments is to sanction the use of infinitesimal doses, such as are already employed for artificial flavoring of aliments.—*Zymotechnic Magazine.*

Simple Method of Distinguishing the Terminals of a Dynamo.

To the two binding screws or to wires leading therefrom, lead wires are connected. This simple voltame-

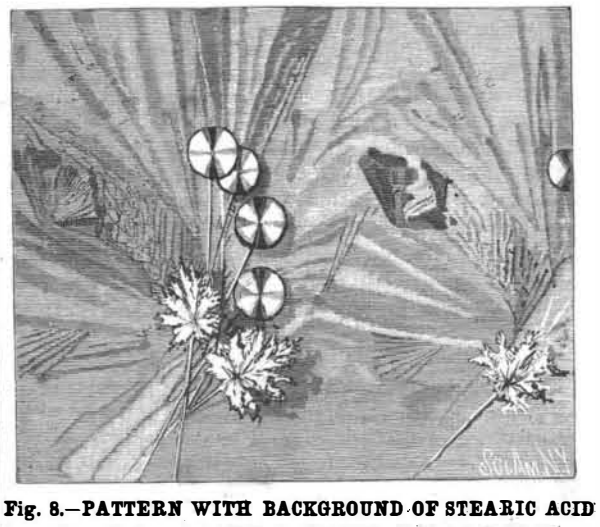

Fig. 8.—PATTERN WITH BACKGROUND OF STEARIC ACID AND CRYSTAL LEAVES, STALKS, AND FLOWERS.

ter is immersed in sulphuric acid. After a few seconds the positive electrode becomes covered with a brown coating of peroxide of lead, while the negative electrode becomes white and metallic in appearance.—*L'Elettricita.*