(No Model.)

J. R. FRANCE.

METHOD OF MANUFACTURING PYROXYLIN COMPOUNDS IN IMITATION OF MARBLE.

No. 603,526. Patented May 3, 1898.

Fig. 1.

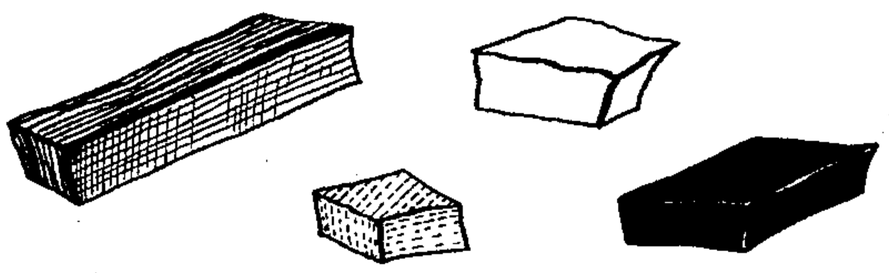


Fig. 2.

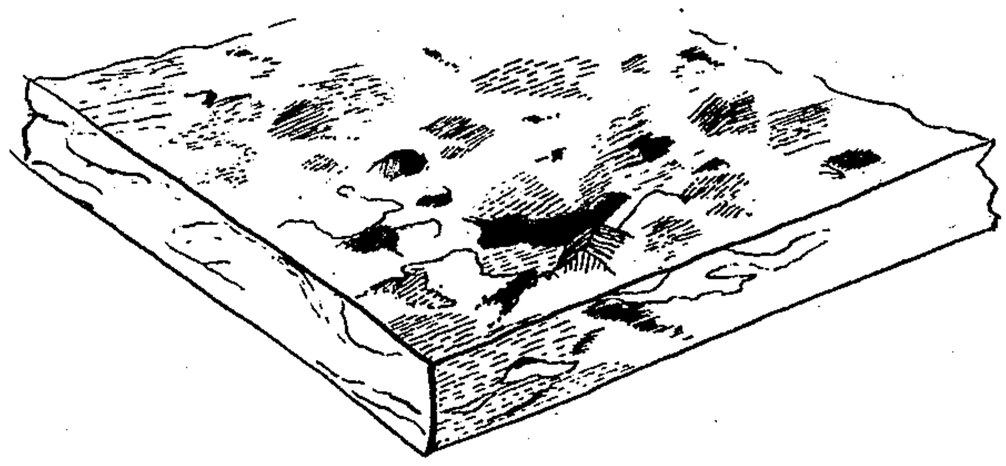
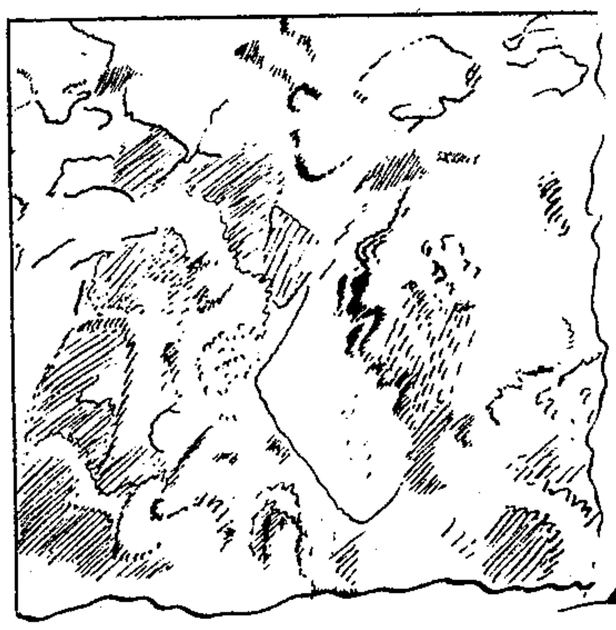


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOSEPH R. FRANCE, OF NEW YORK, N. Y., ASSIGNOR TO THE ARLINGTON MANUFACTURING COMPANY, OF SAME PLACE.

METHOD OF MANUFACTURING PYROXYLIN COMPOUNDS IN IMITATION OF MARBLE.

SPECIFICATION forming part of Letters Patent No. 603,526, dated May 3, 1898.

Application filed October 29, 1895. Serial No. 567,279. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEPH R. FRANCE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Methods of Manufacturing Pyroxylin Compounds in Imitation of Marble, of which the following is a specification.

My present invention relates to a novel method of manufacturing pyroxylin compounds in imitation of marble.

In the manufacture of pyroxylin compounds—such as those known upon the market as "pyralin," "celluloid," &c.—there has been created a wide demand for such compounds in imitation of marble as well as other substances like cornelian, agate, and the like. There have been many references to this material as a substitute for marble and others of the substances named, but these substitutes have been produced either by calendering two or more distinct colorings together, such as imitations of cloudy amber or tortoise-shell, or by "laying up," as it is termed in the art, strips of various colors edgewise in the press in lines which are nearly straight or but slightly broken, so that when pressed into a solid block sheets cut from the latter show the striations and different colors. Until recently, however, there has been no production of a pyroxlin compound successfully imitating marbles or agates. Those skilled in the art will readily understand that if crude sheets of pyralin are run up in solid colors and then cut into small pieces and the pieces calendered together or calendered together in large sheets a fairly good imitation of marble may be obtained; but when the block is cut into sheets it lacks the fine pencilings and irregular markings, usually of a dark color, which are necessary in order to obtain a perfect imitation, but which have not as yet been produced by any known process of manufacture.

It is the purpose of my present invention to provide a novel process for the manufacture of pyroxylin compounds in perfect imitation of various species of marble, said invention comprising also the novel product of such process.

To enable those skilled in the art to which my invention pertains to fully understand and practice said invention, I will proceed to describe the same in detail, making reference for this purpose to the accompanying drawings, in which—

Figure 1 is a view showing several pieces of pyroxylin compounds of different body colors, part of said pieces being dyed upon the surface. Fig. 2 is a view showing a portion of a sheet formed from said pieces by calendering. Fig. 3 is a view of a portion of a sheet cut or planed from a block of pyroxylin produced from sheets similar to those in Fig. 2.

In practicing my invention I select pyroxylin compounds having solid colors corresponding with the tints of the marble I wish to imitate. These compounds are cut or otherwise formed in fragments or pieces of suitable size, each color being kept separate, and these fragments or pieces are placed in a sieve or other similar receptacle and dipped in a dye. This dye may be the same for each solid color of the pyroxylin compound, or different colors may be used, and the arrangement is such that the pieces within the sieve may be wholly immersed and then withdrawn to allow the dye to drain off quickly. I may dip all the pieces of each solid color in the same or in different dyes, or I may dip part only and leave more or less of said pieces without dyeing. In preparing the dye I use any solvent of pyroxylin, ethyl alcohol being preferred, and for coloring I prefer dyes which are soluble in alcohol, such as nigrosen, Bismarck brown, dragon's blood, and many others which will readily suggest themselves to an operator familiar with the art. When thus prepared, the pieces of pyroxylin compound will each be found to have an extremely thin film of coloring-matter over the entire surface, as may be seen by cutting away a small portion of one of the angles. When thus prepared, the pieces are ready for subsequent treatment, and they are immediately placed in the rolls and calendered until they are united in a homogeneous sheet. A number of these sheets are placed in the press and treated in the ordinary manner for cutting. When the latter operation is performed, it will be seen that the fine thin films of coloring-matter present the appearance of fine markings sep-

arating the different colors and running in many directions irregularly, disappearing at some points and again reappearing, the varied markings and the solid colors being mingled with all the infinite variety of blending seen in the most highly-prized variegated marbles. By a proper selection of tints in the dyes used and by varying the size of the pieces of pyroxylin compound the operator can readily produce the most perfect imitations of all the variegated marbles known.

It should be noted that the action of the solvents used in preparing the dyes in which the pieces are dipped leaves the latter in the very best condition for rolling, and the sheeting produced is of the best quality, being perfectly homogeneous throughout and without the slightest weakness or tendency to separate upon the lines of marking.

It should be noted that in the imitation of marbles having an alabaster-like base with more or less translucence, like many of the Phrygian marbles, it will be desirable to use a suitable quantity of pieces of pyroxylin which are free from color and without any dye applied to the surface. In some cases also it may be necessary to vary the degree of translucency, which can readily be effected by means perfectly familiar to every one skilled in the art of manufacturing compounds of pyroxylin.

This improvement largely increases the great variety of purposes for which pyralin and similar compounds can be used, and it supplies a want which has long been felt, but which has not hitherto been filled.

What I claim is—

1. The process described for manufacturing pyroxylin compounds in imitation of marble, said process consisting in forming pyroxylin compounds of suitable solid colors into fragments or pieces, dipping said pieces in a dye dissolved in a solvent of pyroxylin, and calendering the dipped fragments or pieces together to form sheeting, substantially as described.

2. The process described for manufacturing pyroxylin compounds in imitation of marble, said process consisting in producing pyroxylin compounds of different colors following the colors of the marble to be imitated, forming said compounds in fragments or pieces, dipping pieces of each solid color in a dye dissolved in a solvent of pyroxylin, calendering the whole number of pieces together to form a sheeting, compressing the sheeting into blocks and cutting the latter, substantially as described.

3. As a new article of manufacture a sheet of pyroxylin compound in imitation of marble consisting of fragments or pieces of pyroxylin compounds of one or more solid body colors following the colors of the marble to be imitated, said pieces having had applied to them an external coloring which when the pieces are blended together to form a sheet appear in irregular streaks and lines variously arranged and intermingled in the sheet and running through the body color or colors, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH R. FRANCE.

Witnesses:
R. J. SICKELS,
W. L. HEBBERD.