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UNITED STATES PATENT OFFICE.

RICHARD BLUME, OF MAGDEBURG, GERMANY.

PROCESS OF MANUFACTURING VARNISH SUBSTITUTES.

SPECIFICATION forming part of Letters Patent No. 750,575, dated January 26, 1904.

Application filed July 9, 1903. Serial No. 164,767. (No specimens.)

To all whom it may concern:

Be it known that I, RICHARD BLUME, merchant, a subject of the King of Prussia, Emperor of Germany, residing at 46ª Kaiserstrasse, in the city of Magdeburg, Kingdom of Prussia, German Empire, have invented a certain new and useful Process of Manufacturing a Varnish Substitute from Rosin-Oil, of which the following is a specification.

This invention has reference to a process for the manufacture of a varnish substitute from rosin-oil, the said product being distinguished by great elasticity and uniform drying qualities. Varnishes and varnish substitutes as manufactured heretofore by the employment of rosin-oil presented the inconvenience of being difficult to dry and of becoming sticky after a short time upon the action of heat. Furthermore, surface coatings made from a mixture with rosin-oil and coloring-matter were liable to crack by the action of changes of temperature. These inconveniences are avoided in my invention by adding to rosin-oil a slowly or very difficultly drying non-resinifying oil mixture and rosin-pitch—that is to say, the pitch-like residue remaining in the still in the distillation of the volatile oils from colophony or rosin or similar resinous products, such residue, which is usually known by the name of "brewer's pitch," usually still retaining varying percentages of the volatile constituents of the resin. The constituents of the mixture are intimately incorporated by boiling, and thereby also made capable of subsequent oxidation and resinification. By the addition of the oil mixture this oxidation and resinification, respectively, of the rosin-oil is caused to go on slowly and very uniformly in consequence thereof, so that after the coating has once become dry it will not become sticky again. Besides, the presence of non-resinifying oils, of which the so-called "difficultly-drying" fatty oils or any difficultly-drying oil mixture of fatty and mineral oils may, for instance, be used, has the effect of keeping the dried coating elastic and prevents it from becoming brittle. The oxidation and resinification, respectively, may be accelerated in the well-known manner by the addition of the so-called "artificial driers."

The process may, for instance, be carried out by treating an excess of, say, seventy-five per cent. of rosin-oil with a mixture of difficultly-drying fatty oils—such as castor-oil or almond-oil, for instance—to which a very small quantity of linseed-oil or of other oils may be added for the purpose of regulating the drying properties, besides mineral oil or the like and rosin-pitch, ordinarily known as "brewer's" pitch.

The following examples may serve as an illustration of my invention:

First example: Two hundred parts of castor-oil and fifty parts brewer's pitch, as above set forth, are heated, with constant stirring, to 150° centigrade. The light having been removed twenty parts almond-oil are added to the hot mass and agitated. Ten parts of this mixture, which I will briefly call "fundamental substance," are then mixed with eighty parts refined rosin-oil and are gradually heated up to 120° centigrade. To the hot liquid mass are added gradually two and one-half parts of resinate of manganese and seven and one-half parts of resinate of lead while the temperature is raised up to 160° centigrade. Instead of resinates of manganese and lead any other artificial driers may be used.

Second example: Two hundred parts castor-oil are mixed in the cold with twenty parts of mineral oil, and fifty parts brewer's pitch are added to the mixture. The mass is then heated up to about 140° to 150° centigrade until the compound has acquired a light-yellow linseed-oil-like coloration. I then allow the said mixture, which constitutes the fundamental substance above mentioned, to cool, and mix ten parts of the same with eighty parts of rosin-oil, heat slowly up to about 120° centigrade, and then add to the hot oil mixture gradually two and one-half parts of resinate of maganese and seven and one-half parts resinate of lead while raising the temperature up to 160° centigrade.

If it is desired to impart a darker coloration to the varnish, the mixture of rosin-oil, fundamental substance, and drier is exposed

to the action of a still higher temperature. It acquires thereby the appearance of a lacquer or japan.

Drying tests made with the compound by coating a number of carefully-cleaned glass plates with it show the coating to become dry within twenty-four hours, and after thirty-six hours exposure they have become perfectly hard and dry. The dried coating possesses a japan-like gloss and considerable hardness, so that though drying somewhat slower than ordinary linseed-oil varnish the compound is in other respects superior to it. By the addition of other suitable artificial driers the time for the drying of the compound may still be decreased. By proceeding in the manner above described the objectionable qualities of rosin-oil containing varnishes of becoming sticky are entirely eliminated.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The process of manufacturing a varnish substitute which consists in mixing rosin-oil with non-drying oils and rosin-pitch until a uniform mixture is obtained.

2. The process of manufacturing a varnish substitute for rosin-oil which consists in mixing a non-drying oil with rosin-pitch, heating the mixture until a uniform mixture and dissolution is obtained and then adding and incorporating rosin-oil with the mixture.

3. The process of manufacturing a varnish substitute which consists in preparing a mixture of non-drying oils with rosin-pitch, and then adding and incorporating rosin-oil and driers with the mixture and heating the mixture until the desired uniform consistence is obtained.

4. The process of manufacturing a varnish substitute which consists in preparing an intimate mixture of castor-oil, rosin-pitch and almond-oil, mixing the same with rosin-oil and drier and heating the mixture to a suitable temperature.

5. The herein-described varnish substitute which consists of non-drying oil, rosin-oil and rosin-pitch, substantially as described.

6. The process herein described of manufacturing a varnish substitute which consists in mixing at a suitable temperature, rosin-pitch, and non-drying and drying oils with rosin-oil, the latter being largely in excess of the entire amount of the other constituents.

7. The herein-described composition of matter which consists of rosin-pitch, drying and non-drying oil, and an amount of rosin-oil largely in excess of the total amount of the other constituents.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

RICHARD BLUME.

Witnesses:
SARAH C. MCKILLIP,
JAMES L. A. BURRELL.