

UNITED STATES PATENT OFFICE

2,066,296

METHOD OF FINISHING FLOORS

Frank H. Lyons, Memphis, Tenn., assignor to E. L. Bruce Company, Memphis, Tenn., a corporation of Delaware

No Drawing. Application April 6, 1932,
Serial No. 603,683

8 Claims. (Cl. 91-68)

My invention relates particularly to a wood floor finish and has in view to provide a composition that can be applied to new floors or can be used for refinishing old floors.

Most of the floor finishes that are now used provide only a surface protection to wood and when a worn spot is refinished in part, it shows the laps. With my finish, however, worn spots can be refinished with ordinary labor and without showing laps.

My finish, instead of being merely a surface protection, penetrates the wood, hardens the surface and the finish and the wood wear together.

In the preparation of the finish, I first prepare a composition of the following ingredients preferably in the approximate proportions indicated.

Linseed oil	313 Gallons
China-wood oil	94 Gallons
A mixture consisting of 60% limed rosin and 40% varnish makers and painters naphtha	130 Gallons
Paraffin wax	724 Pounds
Zinc stearate	50 Pounds
Varnish makers and painters naphtha	365 Gallons

To this basic composition I add about 50% of xylol to get the wax into solution at ordinary room temperature.

The linseed oil and China-wood oil, when they dry out, form a skin. Zinc stearate acts as an oxygen carrier into the linseed oil and thus accelerates the solidification of drying of the skin.

As the skin of linseed oil and China-wood oil forms, the zinc stearate begins to crystallize and the fine pores in the skin are closed with the crystals of zinc stearate, thus strengthening the skin.

When the paraffin wax is dissolved in the solvent, together with the skin forming oils, the wax will be deposited first and on top will be the substantially pore proof skin. The paraffin wax usually crystallizes in needle crystals but the presence of the gloss oil produces an amorphous wax. The gloss oil used contains 60% of limed rosin and 40% varnish makers and painters naphtha. The gumlike characteristics of the rosin prevents the crystallization of the wax and produces a substantially continuous amorphous film.

Other waxes, particularly Japan wax and ceresin wax, could be used instead of paraffin wax.

Other gums could be used for the rosin in the gloss oil such as kauri, Congo, dammar and Zanzibar gums.

Other solvents could be used such as oleum spirits, benzol, toluol, turpentine, etc.

Other oils could be used in place of linseed oil

and China-wood oil such as the drying oils and so called semi-drying oils.

In place of zinc stearate, I can use aluminum oleate, lead stearate, lead oleate and zinc palmitate.

The mixture of linseed oil and China-wood oil can be varied within wide limits, so long as no more than 75% of the oil mixture is China-wood oil. The proportions of these oils used is largely determined by their relative market price.

In the indicated formula the amount of linseed oil can vary from 90-400 gallons and the same variation can be made with China-wood oil. Gloss oil can vary from 60-180 gallons.

The amount of wax in the completed formula can vary from 1-10%. Below one percent, no polishing effect can be obtained and in excess of 10%, the gumminess and stickiness is increased to an unfavorable extent.

The zinc stearate can be varied in the formula from 20-100 pounds.

The naphtha can be varied within a very wide range of from zero to 600 gallons.

While the floor finish is particularly adapted for wood floors, it can also be used on terrazzo and linoleum.

From the above description, it will be seen that I provide a floor finish that contains a skin forming oil, a wax, a crystallizable salt and volatile solvent that will keep these ingredients in solution at room temperatures while applying to the floor.

In finishing new floors, the floor should be first scraped or machine sanded and a filler applied. The finish may then be applied with a rag or waste and allowed to set 15 minutes. The excess should then be wiped off and the floor left to dry for at least 12 hours or until the finish is thoroughly dry. The floor can then be polished and a wax finish added if desired.

I claim:

1. The method of finishing wood floors by applying to the surface of the floor a penetrating floor finish comprising as a base substantially

Linseed oil	313 Gallons
China-wood oil	94 Gallons
A mixture consisting of 60% limed rosin and 40% varnish makers' and painters naphtha	130 Gallons
Paraffin wax	724 Pounds
Zinc stearate	50 Pounds
Varnish markers and painters naphtha	365 Gallons
By volume of xylol	50 %

2. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient, a smaller quantity of a wax in an

amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin and a solvent mixture of a character and in an amount that will keep all of the ingredients in solution during application.

3. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient, a smaller quantity of a wax in an amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin and a solvent mixture of a character and in an amount that will keep all the ingredients in solution during application, the amount of wax being not less than 1% nor more than 10% of the completed formula, all of the ingredients being in solution.

4. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient and containing linseed oil, a smaller quantity of a wax in an amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin and a solvent mixture of a character and in an amount that will keep all of the ingredients in solution during application.

5. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient and containing linseed oil, a smaller quantity of a wax in an amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin and a solvent mixture of a character and in an amount that will keep all of the in-

redients in solution during application, the amount of wax being not less than 1% nor more than 10% of the completed formula.

6. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient and containing linseed oil, a smaller quantity of a wax in an amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin, a metallic salt of a fatty acid and a solvent mixture of a character and in an amount that will keep all of the ingredients in solution during application.

7. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finish comprising skin forming drying oil as a base and major ingredient and containing linseed oil, a smaller quantity of a wax in an amount sufficient to substantially increase the moisture resistance of the skin, a smaller quantity of a resin in an amount sufficient to prevent crystallization of the wax and produce a substantially continuous amorphous skin, a metallic salt of a fatty acid and a solvent mixture of a character and in an amount that will keep all the ingredients in solution during application, the amount of wax being not less than 1% nor more than 10% of the completed formula.

8. The method of finishing wood floors by applying to the surface of the floor, at room temperatures, a penetrating floor finishing composition in substantially the following proportions: 90-400 gallons of skin forming drying oil and containing linseed oil; China-wood oil in an amount not in excess of 75% of the combined amount of linseed oil and China-wood oil; 60-180 gallons of a mixture containing 60% limed rosin and varnish makers' and painters' naphtha; wax in an amount from about 1-10% of the completed formula; zinc stearate from 20-100 lbs.; naphtha from 0-600 gallons; and about 50% of xylol by volume of the above ingredients.

FRANK H. LYONS.