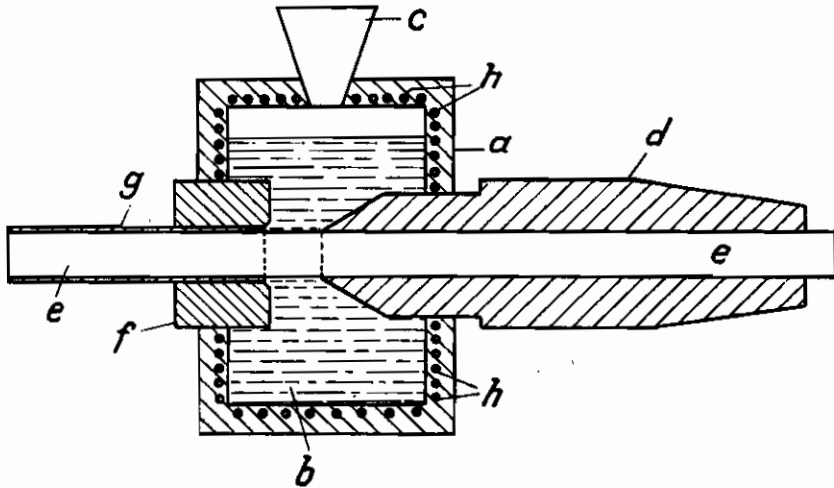


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METHOD FOR SURFACE-TREATMENT OF WRITING- AND  
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ROD-SHAPED ARTICLES  
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# ALIEN PROPERTY CUSTODIAN

## METHOD FOR SURFACE-TREATMENT OF WRITING- AND DRAWING-PENCILS AND OTHER ROD-SHAPED ARTICLES

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The invention refers to a method for surface-treatment of writing- and drawing-pencils and other rod-shaped articles.

Heretofore writing- and drawing-pencils have been polished with cellulose ester varnishes by the wellknown drawing-through method. For 5 coloured first coat nitrocellulose varnishes have been used in the first line containing as a rule 70-75% easily volatile solvents. Artificial resin has already been added to these varnishes, so-called combination varnishes being produced 10 thereby, in order to obtain well adhering and brilliant surfaces. Also acetyl cellulose varnishes having a content of approximately 80% volatile solvents are being used with the result that particularly hard, highly brilliant film coats are created.

In applying the varnishes, the pencils are pushed through a varnish container in continuous working process. A scraping device enables a fine, film-like covering coat being applied which warrants free drying up to the next working step. 20

According to their quality the pencils require to be drawn through 5-8 times for primary colouring, 3-4 times for obtaining the brilliant polish. Thus 8-12 working steps are required in all. During this process the volatile solvent which forms a very considerable component of the varnish, is lost completely by evaporation, unless special devices are provided for to recover the substance. 25

Now it has been found that for the working steps in question substances may be used which are absolutely free from solvent and which allow the method, that is applying colour and brilliancy to the pencils, to be carried into effect by one single passage. 30

According to the invention instead of the varnishes used heretofore thermoplastic artificial substances or meltable artificial resins are used, if need be, in combinations. The absence of volatile solvents such as are usual with the varnishes applied and required heretofore, is essential. 35

The drawing illustrates a device by means of which the method can be carried into effect by way of example. A box *a* contains the mass of artificial substance with which the pencils are to be coated. The mass is filled into box *a* 40

through a funnel *c*. The pencil *e* passes through a guiding member *d* into box *a*, gets there into contact on all points with mass *b*, and leaves the box through scraper *f*. At or close to the interior wall of box *a* an electric heating device *h* is provided for.

By means of heating device *h* the mass of artificial substance *b* is melted (at 100 to 150 centigrades) or transformed into plastic condition respectively. Pencil *e* is conducted quickly through the device, receiving thereby a thin smooth coat *g*. The thickness of the coat is determined by the width of the orifice of passage in scraper *f*. In member *d* the pencil *e* is conducted without 15 play. It is convenient to use thermoplastic artificial substances of comparatively great stability of temperature.

As the thermoplastic artificial substances melt more easily under pressure, the method may be developed in such a way that the heated mass of artificial substance is applied to the pencils under pressure of 2-5 atm. at a temperature of approximately 150 centigrades. In this case the drawing-through device is also provided with an electric heated pressure cylinder in which in a similar manner to a screw-press a piston is moved mechanically. 20

Of the thermoplastic artificial substances such are used as possess sufficient hardness and good adhesive property to wood e. g. vinyl ester polymerisates, urea aldehyde condensates, polymerised vinyl acetate etc. For dyeing these masses all dyes stable up to a temperature of about 150 centigrades may be used, also together with other 30 filling materials such as lenzine, heavy spar, titan acid anhydride etc.

In the spirit of the invention also meltable artificial resins of great stability of temperature may be used e. g. phenol formaldehyde resin, if need be combined with other non-volatile substances such as phthalate plus softening agent (e. g. oil) suitable to increase the capacity of adhering to wood and free the resin from brittleness. 35

Also artificial resins capable of being hardened may be used e. g. such of the type of the resoles-phenol resin the hardening of which may be effected in a short time. 40

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