

## USEFUL HINTS.

All dark colour pigments, being but slightly basic in their nature, require more oil in their preparation than light colours. It is noticed in picture and portrait paintings that the cracks in the paint are far more numerous in the dark colours (not blacks) than in the white or light colours.

PAINT FOR IRONWORK.—Professor J. Spennrath gives in the Deutsches Bauzeitung an account of some interesting researches which he has made relative to the value of paints for ironwork. As one result of these, the professor concludes that none of the metallic oxides commonly used combine chemically with linseed oil. The drying process depends exclusively on an absorption of oxygen in a purely mechanical way. The value of the different pigments used varies. Thus zinc white, when used for outside work, rapidly swells to double its previous volume, owing to the absorption of carbonic acid gas and water. Sulphuretted hydrogen will cause red or white lead to act in a similar way, but, when pure, Professor Spennrath considers these two latter pigments satisfactory. Carbon paints are very stable, as is heavy spar, but the covering power of the latter is small. In order to test the relative durability of various paints, sheets of zinc were coated

with a number of different kinds. The zinc was then dissolved away by acid, leaving a film of paint. All these films, it was found, could be destroyed by the action of dilute nitric or hydrochloric acids, while the vapours of sulphuric and acetic acids acted similarly. Alkaline fluids and gases also destroyed the paints rapidly. Pure water was found to be more injurious than salt water, and hence the destructive action of sea water is to be attributed mainly to the mechanical effects of wash. Hot water was found to act more rapidly than cold. The most important discovery made was, however, the great influence of temperature. Films, similar to those already described, completely lost their elasticity and became brittle when exposed to a temperature of 203 degrees Fahrenheit. There was, at the same time, a large contraction.

Mr. W. A. Sylvester, of Boston, Mass., has published under the title "Modern Carpentry and Building," a revised edition of his "Carpenter's Companion." It treats of framing and stair building, builders' estimates, sizes, weights and strength of materials, house planning, etc. We are indebted to Messrs. Damrell & Upham, 283 Washington street, Boston, for a copy of the work.



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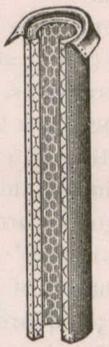
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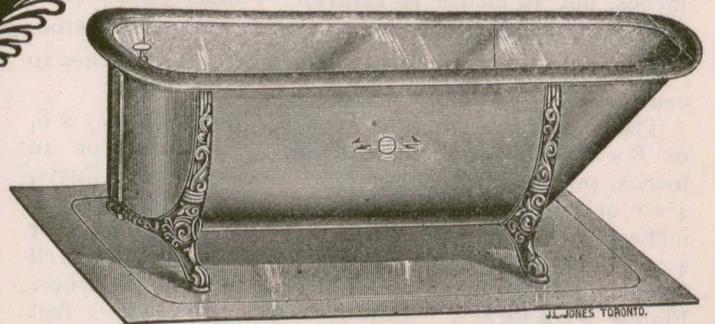
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