

HALIFAX, N. S.—Samuel Marshall has been awarded the contract for erecting Scriven & Son's brick building on Barrington street.

KINGSTON, ONT.—J. B. Reid, of Ogdensburg, has been given a contract to build a new casino among the Thousand Islands, near Alexandria Bay. The contract price is \$15,000.

TORONTO, ONT.—The Fensom Elevator Works shipped last week to Halifax, N. S., a car load of elevator machinery, and will send forward another car load in the course of a few days.

NICOLET, QUE.—Preparations are being made for the erection of a new cathedral in the spring. The contract has been given to Paquet & Godbout, the price being in the neighborhood of \$50,000.

ST. JOHN, N. B.—James McDade has been awarded the contract for supplying the galvanized hot air and ventilation piping for the new High School building. From nine to ten thousand pounds of galvanized iron will be required.

OTTAWA, ONT.—The contract for the new opera house has been awarded to E. C. Horn, contractor and builder, of New York. The site will be on Queen street, and the building will have a frontage of 186 feet. The accepted plans were prepared by Messrs. J. B. McElfatrick & Son, of New York, and call for a building of stone and brick, as nearly fireproof as possible, with a seating capacity for 1,500 people. The cost is placed at \$100,000, and work will commence on the 1st of April.

MONTREAL, QUE.—Building permits have been granted as follows: One house, three stories, brick, to be erected on Fullum street for Nap. Provost—masonry, D. Peltier; carpenter and joiner's work, Z. Dufort. Modification and alterations of a house on Dorchester street for the Hon. C. A. Geoffrion—architects, Cox & Amos; masonry, H. Réaume; carpenter and joiner's work, Bourgoûin & Cadieux.—L. R. Montbriant, architect, has let contracts as follows for modifications and alterations to a house on Desiry street for J. A. Madore: Masonry, Labelle & Ouimet; carpenter and joiner's work, J. B. Gratton; roofing, plumbing and heating, Noël & Germain; plastering, T. Leclaire.—Clift & Pope, architects, have let the contract for a building, three stories, for John Gault, to Simpson & Peel for all trades.—David Ogilvy, architect, has awarded contracts as follows for one building, three stories, to be erected on St. Catherine street, for Alex. Scott: Masonry, O. Martineau; carpenter and joiner's work, Simpson & Peel; plumbing and heating, F. H. Barr; brick, P. C. Wand; plastering, James Morrison & Son; painting and glazing, George Kumber; iron work, Dominion Bridge Co.—Messrs. Cox & Amos, architects, have accepted the following tenders for the modification of a residence, three stories, on Dorchester street for the Hon. C. A. Geoffrion: Masonry, H. Réaume; carpenter and joiner's work, Bourgoûin & Cadieux; roofing, plumbing and heating, Leclerc & Son.

MIXING AND APPLYING PAINT.

There are two reasons why we paint our buildings, and two reasons why we wish the paint to wear well when once the buildings are painted. Paint preserves and beautifies. The first is a purely utilitarian matter; the latter a matter of æsthetics. Both together constitute our reasons for painting. The reasons for wishing the paint to preserve its original condition long and well are similar—identical, indeed. It's a matter of money and appearance.

How to do painting that wears well seems but little known, even among professionals. It is usual for paint to show signs of deterioration the first year, and to go to pieces, in many cases, in a short time after that. Now when we paint our house we have a right to expect that the job will last for some years.

White lead is used to give a good paint; it does not do so now, because it is too pure. All carbonates are easily acted upon by the weather, and white lead is carbonate (more exactly hydro-carbonate) of lead. It is too soft and besides this, it is chemically active in paint form (with the oil, &c.), and this effects its durability. Sulphur gases also act upon it, forming with it a black sulphide of lead. It is not fit for paint used alone. Zinc oxide is a hard, very white, non-poisonous pigment, and is unaffected by gases, &c. But it is too hard and brittle, used alone, to make a good paint. It will scale off, and lead will flour or chalk off; the one is too hard and the other too soft for paint. But mix the two together, and you counteract those two defects; the zinc gives proper hardness to the soft lead, while the lead gives proper softness to the hard zinc. But this is still an imperfect paint, as mixed with oils and driers there will still be a chemical activity, inimical to wear. Also, the mass forms too dense a paint.

Paint blisters are caused by steam, &c., forming under the paint. If the paint is made porous by the addition of an inert crystalline substance like silica, for instance, or barytes, then this steam or vapour will pass through the paint layers and cause no trouble. An inert substance will also prevent the chemical activity mentioned, by keeping the belligerent parties separated. Therefore, 50 parts lead, 40 parts zinc, and 10 parts silica (finely ground and floated), all by weight, will give you a perfect paint—at least as perfect as we can devise, and certainly far more durable than any pure lead paint ever made. This is not mere theory; it is a scientific fact, supported by actual practical demonstration. It is well known at least that lead paint does not answer at all at seashore places; lead and zinc are used together, and are able to withstand the salty atmosphere.

In addition to being the best paint mixture, it is also a cheaper one than lead

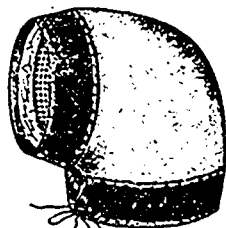
alone. Approximate compounds are made by many as "whites" or compound leads.

Another factor in successful painting is the doing of it right. The woodwork should be quite dry and clean, and free from all loose particles. A building that stands unpainted for a few months will show cracks and stains, but it will take the paint better and retain it longer than when painted immediately after erection. The reason is this: Fresh wood, even when apparently dry, contains considerable moisture, and this must escape. If it escapes after the paint is on, so much the worse for the paint. As for the cracks, putty them. Then you will have a solid surface. And it is a mistake to have the surface quite smooth, as paint holds much better on a slightly rough surface than on a smooth one. A little fuzziness is just right for holding paint on.

For priming, use the lead and zinc mixture; don't use ochre, or imagine that anything does for the first or priming coat, for it is the foundation for the subsequent coats to rest on. Ochre priming is too hard and will not hold paint, which will scale off. This is the general conclusion among the best master painters. Raw linseed oil is best for outside painting. Use as little driers as possible, as driers impair the durability of the paint; they are a necessary evil. Buy the best.

It is customary to shellac pine knots (other sorts don't need it) before priming, but this may be done with even better results upon the priming coat. Use the best grain alcohol orange shellac varnish, and use it thin. Make the priming mostly oil; the second coat somewhat heavier, and the third coat still heavier, or with more lead, &c., to the oil used. Paint should be well brushed out. This is important, as the paint will last longer for it. Allow, if possible, a few days between coats. Paint applied in fall or winter will last much longer than that put on in spring or summer. Putty holes, &c., on top of priming coat. Get (or make) pure linseed oil and best whiting putty, if you want it to remain. Much putty sold is bad.

The matter of color is important, but cannot be treated now. Some colors do not wear well, others do not look well. A few words touching these things would be sufficient to make clear most of the chromatic problem.



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