

applied to the older civilization, why must it to the new? Why not Canada throw off old world trammels altogether and set an example of true culture to both continents?

A handsome memorial window has just been put in position in St. Thomas' Church, Hamilton, by the relatives of the late Isaac Anderson. It consists of three panels representing the transfiguration of Christ.

Mr. Begy, the well-known painter and decorator, of St. Catharines, is adding a brick and plate glass front to his establishment on James St., and is converting the first upper floor into an artistic show room.

An ingenious veneering process consists in pressing a metallic pattern into the wood, this pattern being usually composed of zinc. After inlaying in the mould thus provided, the rest of surface is planed to the same level and then polished.

All effects in decorative art are studies in the relations of things. Any two things which belong to each other are related by a third that unites them—the essence of both. Unrelated things are always ugly—a load of furniture, for example.—*Edmund Russell.*

The bronze powders may be used by the home decorator for many purposes. Small plaster casts carefully bronzed—using a fine camel's-hair brush—make elegant little statuettes for stand or bracket ornaments, and larger casts treated in the same way will look nearly as well as real bronze statuary.

CARVER'S POLISH.—In a pint of spirits of wine, dissolve two ounces of seed-lac and two ounces of white resin. The principal use of this polish is for the carved parts of cabinet work, such as standards, pillars, claws, etc. It should be laid on warm, and if the work can also be warmed at the time, it will be still better. All moisture and dampness should be carefully excluded.

Fresco Painting.—A microscopic examination of the ground on which fresco pigments are laid shows a film of crystals, due to the absorption of carbonic acid from the water with which it is damped, converting the surface of the hydrate into carbonic of lime. Hydrate of lime oozes out from beneath through this crystalline film and penetrates the pigments, which are held in place by capillary attraction, but the pigments must be applied before this exudation has proceeded too far.

A finer, cheaper and more durable moulding than plaster of Paris, and which becomes in time as hard as stone, is made as follows: Two pounds of best whiting; one pound of glue and half a pound of linseed oil are heated together and thoroughly incorporated by stirring. The compound is then laid on a stone, covered with whiting and reheated, and when of tough consistency is cut into pieces adapted to size of mould into which it is forced by a screw press. The ornaments or cornice may be fixed to frame or wall by means of white lead.

The high capacity for decoration of the open grate readers welcome its approval by sanitary authorities as securing good ventilation and favoring radiation, that pleasant form of securing heat as against the alleged amount of heat lost, but with the announced progressive advance in the price of coals, the suggestion is opportune of supplying a screen beneath the grate, rendering it air tight, it being sufficient for consumption, that the air has access to the top of the fire. Not only is coal thus economized, but less heat escapes and gases are better consumed.

IVORY GLOSS ON WOOD.—There are two kinds of varnish used to produce this white gloss—one a solution of colorless resin in turpentine, the other in alcohol. For the first pure copal is taken; for the second sixteen parts of sandarac are dissolved in sufficient strong alcohol, to which are added three parts of camphor; and lastly, when all are dissolved by shaking; five parts of Venetian turpentine are added. In order to cause the color to remain a pure white, care must be taken not to mix the oil with the white paint previously put on.

Best French zinc paint mixed with turpentine is to be employed. When dry, this is rubbed down with sand paper, and this is followed with the application of the varnish above described.

Paper hangers' paste is best made by first heating the water to boiling, then adding flour, stirring constantly, to prevent the formation of lumps. The flour may be passed through a sieve, so as to insure it a more equal distribution. Agitation is continued until the heat has rendered the mass of the desired consistency, and a few moments further boiling it is ready for use. In order to increase its strength, powdered resin in proportion of one-sixth to one-fourth of the weight of the flour is added. To prevent its souring oil of cloves of a few drops of carbolic acid should be added.



KEEP PLUMBING FIXTURES CLEAN.

THERE are many housekeepers who imagine that first-class plumbing should not require any attention. How often have we seen plumbing fixtures of the best design and quality kept in the most filthy condition?—a condition so bad that inferior plumbing would cause less injury to health.

Where people are aware that the plumbing in their houses is of an inferior quality, they take every precaution to reduce the evil to the greatest possible extent by cleanliness; but when the plumbing is of the best quality, many seem to think that cleanliness is not required, and blame the plumbing for any sickness which may result from their carelessness in not keeping the fixtures clean.

The fact of the matter is that the better the plumbing, the greater the care to keep everything in perfect order. Where there is good work there is generally a large number of fixtures, and the more fixtures the greater the necessity of cleanliness. In houses where the best plumbing is done, servants must be to a large extent depended upon to keep everything in order; and where servants are not closely watched, the work they should do is only too often neglected. The habit which many servants have of storing anything and everything about the plumbing fixtures, should not be allowed. It should be insisted upon that all fixtures should be left perfectly open and clear, so that a free circulation of air should pass in and about them. Closets, sinks, etc., should be regularly cleaned and all copper lining kept bright. The wood-work surrounding all fixtures should be thoroughly washed at frequent intervals or otherwise kept perfectly clean. In short, we would urge the most perfect cleanliness of all the fixtures and surroundings in every part.

The servants' fixtures should receive the attention of the mistress, as servants are proverbially careless of their surroundings. It is not enough that the principal fixtures should be clean—all should be clean, even in the most out-of-the-way part of the house.

It often happens that because the plumbing is good, temporary and local smells are noticeable. With bad plumbing, there is always a close, heavy odor, to which people become accustomed, and the temporary odor is not noticeable. When plumbing is good, the careless or indifferent use of the apparatus may be noticeable because of the absence of the overpowering and ever-present odor usually about inferior work.

Another portion of the house that should receive close attention is the cellar. Nothing should be allowed to remain in it in a state of decay or filthiness. The cellar should be kept as scrupulously clean as any part of the house.

TORONTO MASTER PLUMBERS' ASSOCIATION.

THIS Association was started four years ago with only four members, and for some time struggled along with very little success. Not infrequently in those early days of its history the President and Secretary were the only ones to respond to the call for a meeting. Nothing daunted however, the leading spirits in the movement kept right on, and eventually succeeded in getting into the organization all the leading plumbers of the city. The proposal to put into operation a Plumbing By-law, seemed to awaken some interest among the plumbers in the Association, which has since grown into an active, influential organization representing about forty establishments. The Association is represented at the Federated Trades Association by W. Burroughes, J. Ritchie, Joseph Wright and A. Fiddes.

At the annual meeting of the Association held on the 30th January, the following officers were appointed for the ensuing year: President, W. J. Burroughes; Vice-President, J. Sim; Secretary, W. T. Guy; Treasurer, J. Ritchie, Sr.; Guide, C. Weeks.

The following resolution was adopted: "That all master plumbers of this Association will in the future, after the passage of this notice, refuse to supply any materials or furnish any labor to complete a job of plumbing or work of any kind on which a master plumber of this Association has been previously engaged except by the full consent of the plumber who has before been employed. And such consent shall be given in writing only."

A resolution was also passed to the effect that in future

no plumber will do work for a lump contractor, but will deal with the owner direct.

The Association has petitioned the City Council to amend the Plumbing By-law as follows:

That in rule 1, clause 10, the following words be inserted: "That the plumber shall be responsible only for such works as are actually performed by him. That after the word 'time' in the fourth line of clause 9, be inserted 'during the progress of the work'; and after the word 'Inspector' in the last line of the same clause, 'who shall on the satisfactory completion of the work, give to the plumber a certificate to the effect that the work has been inspected by a person appointed by the city, and found to fully comply with the requirements of the By-law, and that the certificate shall free the plumber from any further responsibility.' That in clause 10, all words after 'By-law' (2nd line) to 'Toronto' (4th line) be struck out. That in clause 14, in place of the words 'any credible witness,' in the fourth line, be inserted the following: 'The Plumbing Inspector, and in the event of any person being charged with infractions of this By-law, he may in his own defence produce one or more witnesses, such witnesses to be master plumbers in good standing in Toronto.'

The Association is very desirous that the By-law, after being amended in the directions suggested above, should be permanently enforced.

THE RELATIONS OF TEMPERATURE TO HEALTH IN DWELLING HOUSES.

BY D. BENJAMIN, M. D.

WHAT is generally called a "cold," is always produced by some change of temperature, with or without moisture, to which a part or the whole of the person has been exposed. In most cases the change must be from a given temperature to a lower one in order to produce a cold. One is more apt to take cold if a part and not the entire body be exposed to a low temperature. Dampness adds greatly to the power of a low temperature to produce a cold.

A cold is a disturbance of the circulation of the blood, whereby a part of the body has too little blood in it, and, therefore, some other part has too much. The part that has too much is said to be congested, and if the congestion is not promptly relieved by treatment inflammation is sure to follow. If in the throat, croup; in the lungs, pneumonia; in the bladder, cystitis, etc.

The human flesh is elastic and contractile, and, therefore, when cold is applied to a part it contracts, holding much less blood, consequently some other part must contain more than it should. Moreover, all vital action goes on more slowly in a low than in a high temperature, so that by cooling a part overmuch its nerve energy and vital force are greatly affected, causing delayed and dangerous reaction, or actual destruction of a part; while the undue blood in some other part of the body lights up inflammation that would not have been called into existence without this stimulus.

Cold applied to the skin generally produces congestion of the mucous membranes, because of their similarity of construction, nerve supply and continuity of structure to the skin.

The most healthful temperature for the human body to live in is about 70° Fah. In a slowly moving atmosphere at 70° Fah. a person cannot take cold; but a change of 10° Fah., especially if it is sudden, is often sufficient to cause one to take cold.

The foregoing are undeniable truths, based on physiology, chemistry and physics. Their importance, and the practical application of them, especially in the prevention and treatment of diseases of the respiratory organs, we will now consider.

A few years ago I began making some observations and experiments on the circulation and temperature of air in rooms, with results which appear to me to be of practical importance. The conditions of temperature and circulation of air vary greatly in rooms, especially those that are in use.

Fig. 1 gives the results of experiments in a room 10 feet high, 12 feet wide and 20 feet long, with a good stove and steady fire. Three-story brick house, south front, twelve rooms, and warm cellar. Out-door temperature, 24° Fah. By examination of Fig. 1, it will be seen that when the center of a room is 78°, four feet from the window it may be 70°; one foot from the window, 54°; and at the window 40° (no doors or windows having been opened for thirty minutes); a difference in the room of 38°.

In Fig. 2, a vertical section of the same room, it will be seen that while the head is in 75° the feet may be in 50°. What must be the effect on a person who removes his warm boots and wears slippers, or the one that lies down to sleep on such a floor? Many do these things, however.