

president of the Bell Telephone company of Canada, to heat the new telephone building now being erected in Ottawa. This installation alone will require 6,000 feet of pipe. For this undertaking the 50 volt alternating current will be used.

### THE SANITARY CONDITION OF TORONTO.

The pollution of Toronto Bay by sewage, the filthy condition of Ashbridge's Bay, and the existence of twelve thousand privy pits within the municipal boundaries, have been a standing menace to the health of the citizens of Toronto for several years past. From the Local and Provincial Boards of Health, the medical profession, and citizens having at heart the city's welfare, have come to the Council repeated and urgent requests for the removal of these nuisances. Typhoid and diphtheria have been unusually prevalent of late, and notwithstanding there was the possibility of cholera reaching this country, a deaf ear was turned to the appeals for sanitary improvement. Now that cholera has actually found its way almost to our doors, the insanitary state of the city invites it to take up its abode and carry on its dreadful work in our midst. In view of the near approach of cold weather, there is a probability that the disease may not attack the city for some months. Advantage should be taken of this period to rid the bay of its foul contents and construct an intercepting sewer along the water front to discharge the sewage at a safe distance from the city. The privy pits, which are undoubtedly the source of most danger, should be closed up as fast as possible, and pending their extinction, should be cleaned at frequent intervals. The city's finances have been largely drawn upon of late for public improvements, but no false economy should be permitted to stand in the way of whatever expenditure may be required to guard the public health.

### WATER AND WASTE PIPES.

THE leakage of water pipes behind decorated walls and in fine ceilings is a sufficient argument against casing or covering service-pipes. The repairs are generally costly in themselves, and they entail the additional services of the carpenter and decorator, as well as those of the plumber. Pipes in casings, or set in walls or partitions, as they pass from floor to floor, provide especially inviting runaways for mice, rats and vermin of all kinds. Nests are built in these places: scraps of paper, rags and food are carried into them, and they become filthy. It is only necessary to remove a covering board from almost any casing to prove this point in a most convincing manner. Even those in comparatively new buildings will be found surprisingly foul.

These casings, recesses or wall-pockets, as the case may be, serve another and usually very unexpected purpose. They act as ventilators, and distribute odors from the kitchen and cellar to all parts of the building. In the performance of this duty they are faithful and impartial. The hollow walls and floors which are nearly universal in the American system of construction greatly assist in this work. Many of the fine French flats which were first erected in the city of New York are now rented with difficulty, owing to the odors which pervade them. When shut up for a short time they are almost unbearable. Rents have of necessity been reduced to one-third the original figures, from this reason alone. The cause is usually found in the careless and ignorant arrangement of pipes and their cases. The odors from the kitchens are carried everywhere. Stale odors from closets and from food from kitchens and garbage-boxes are mingled and distributed with perfect fairness to all the occupants. The large air-shafts, usually held responsible for this state of things, have very little to do with it. The casings open at the ceiling of each kitchen, communicate with all the floor and wall spaces, and usually take their supply of odors from a point very near the range. All of them are directly connected with the cellar, and usually start in some way from the janitor's kitchen.

Numberless complaints coming from new flats of sewer-gas are finally traced to the odors of cabbage, turnips, ham, onions, etc., which have come from the janitor's kitchen. In many buildings this kitchen is directly under the parlor of the first-floor apartment, and is separated from it by one thickness of boards and an inch of plastering. That there should be foul smells on the first floor is not to be wondered at. Tests of the plumbing in these cases are made, and its perfection proved.

There is nothing to be said upon the other side of the question. There are no good reasons for putting pipes out of sight. When people say, in the face of these facts, that they can't bear the suggestiveness of having the pipes where they are visible, they make an acknowledgement that they prefer hidden filth, danger to life, health and property, to a right construction. Life and health cannot induce them to accept and frankly tolerate their plumbing work.

Pipes carried openly through a building are not dangerous because their condition can be constantly observed. If accidents occur, the point at which the break takes place can be reached at once and repairs easily made. The quality of the work gains materially, because the plumber takes pride in putting up work which is to be exposed. He has a natural and very justifiable pride in having the workmanship creditable to himself. This

pride is increased by certain traditions of the trade, and there is a double gain to owner and occupant.

Exposed pipes may be made to pass through floors without leaving an opening. The floor around the pipe can be made perfectly tight, and the passage of odors cut off completely—at least, as perfectly as the nature of plaster will permit. This is an enormous gain, while the runaways for rats and mice, roaches and water-bugs, are entirely done away with. These vermin can then be exterminated. This is practically an impossibility in houses where casings protect them and afford perfect breeding-places. Cut off from free passage to all parts of the houses, they prefer more congenial quarters, where rapid transit and fields for colonization are provided.

As decorative features of the rooms, cast-iron pipes at least are often treated in a beautiful way. The body of the pipe is colored a very dark-bluish gray, scarcely removed from black. The bands are silver or nickel bronzed, or have silver or nickel leaf applied to them. Occasionally the whole pipe is finished with two or three shades of bronze. Lead and wrought-iron pipe receive somewhat similar treatment. The lead is often polished and varnished. There is, however, no difficulty in making the decoration of the pipes strikingly effective.

It is satisfactory to know that architects and builders are beginning to break away from the old custom, and expose their pipes wherever the prejudices of the owners can be overcome. Some of the best men in the profession are treating the plumbing work in a manner to show constructively its importance and value. The result is a great gain both to owner and occupant.—*Mechanical News.*

### BRASS FOR DECORATIVE PURPOSES.

THE toughness of brass, allowing of economy of material in its use, so securing lightness of construction, together with its brilliant, enlivening appearance, has maintained it in constant favour for various articles of household furniture, while in chased, engraved and repoussé designs, cut open work and in the round, hammered or cast, it has become an important factor in interior decoration, the more so that it tends to harmonize neighbouring colors, as well as to form effective contrasts with hard woods, whether light or dark.

Its scope has been enlarged by the variety of tints given to it by certain superadded elements in the fusion of copper and zinc. Among these are golden orange, greyish green, violet moiré, olive and olive green, and brownish and reddish hues of different intensities, to which is to be added the effect of fire gliding, the peculiar lustre occasioned by which is altogether different from that resulting from the mere application of gold leaf to a metallic or other surface.

Decorative devices include antique or fanciful or ideal figures—human, animal or legendary—masques, flowering plants, arabesques, scrap and scroll work. In furniture, brass is utilised for tables or their supports, fire screen frames, chandeliers, candelabras, brackets, lamps, picture and mirror frames, fire dogs, cabinet mountings and so forth. Key plates, handles of doors, central ornaments and corner pieces for panels, usually in cast relief or incised ornament, are included in the general uses to which it is put. Decorative brass requires for its best effect pronounced designs free from complexity. Objects from nature when represented in this metal are commonly conventionalised selections being made of prominent characteristics.

The Italian preference for carving and sculpture over working in metals left brass in abeyance in the period of Italian Renaissance, but it was otherwise in that splendid outburst of artistic power, the French Renaissance, when this metal obtained full recognition.—*Furniture and Decoration.*

### QUERIES AND ANSWERS.

A TORONTO subscriber writes: Upon taking down a building on King Street, I discovered a crack in the wall of the adjoining building, which, if subjected to a slight jar, would probably be the means of precipitating the front of the building into the street. This defective wall was in no way supported by the building which was taken down. I would like to know whether, under the law, any responsibility attaches to me by reason of my having caused the removal of the building to which I have referred?

ANS.—The law provides that you should give the adjoining owner six months' notice of your intention to remove the building. In default of such notice, you are liable for any accident which may occur to the defective building.

An increase of \$107,231 is shown in the value of new buildings erected in Hamilton the present year as compared with 1891.