

CANADIAN SOCIETY CIVIL ENGINEERS.

The 10th annual meeting of the above association was held in the rooms of the Society, 112 Mansfield street, Montreal, on the 14th and 15th of January, Mr. Thos. Monro, president, in the chair. There was a good attendance of members, the representation from Ontario being the largest ever present at an annual meeting.

The report of the Council showed a satisfactory balance sheet, and states that the annual subscriptions have been well paid up.

The report of committee on "Close Corporation" was presented by Mr. Alan Macdougall, chairman of committee, and adopted. Steps are to be taken to carry out the recommendations made on the report. The original committee in "Close Corporation" was dissolved, and a larger committee with representatives in each province and a central committee formed to carry on the work, who are to report to Council before the fall.

After routine business had been disposed of, the retiring president, Mr. Thos. Monro, of Coteau Landing, delivered a very able address on the St. Lawrence, as the great water route of our country.

The Gzowski medal was awarded to Prof. Bovey for his paper on "Tests of the Strength of Douglas Fir."

The annual dinner held at the Queen's Hotel on Tuesday evening was one of the largest ever given by the Society, and was thoroughly enjoyed by all present.

On Wednesday evening, Prof. C. A. Carus-Wilson delivered a lecture before the society, on "Electric Power Waves," in the Physics building of McGill University.

The balloting for the election of officers resulted as follows:

President, Herbert Wallis, Montreal.

Vice-presidents, Henry T. Bovey, Montreal, Chas. Macdonald, New York, and W. G. Thompson, St. Catharines.

Treasurer, K. W. Blackwell, Montreal.

Secretary, Professor C. H. McLeod, Montreal.

Librarian, W. McNab, Montreal.

Members of Council, W. D. Barclay, Lethbridge, Man; J. D. Barnett, Stratford; St. Geo. Roswell, Quebec; M. J. Butler, Napanee; W. R. Butler, Windsor, N. S.; R. J. Cambie, Vancouver, B. C.; G. C. Cunningham, Montreal; W. B. Dawson, Ottawa; G. H. Duggan, Montreal; H. Irwin, Montreal; E. H. Keating, Toronto; Alan Macdougall, Toronto; W. G. Mathewson, New Glasgow, N. S.; D. A. Stewart, Winnipeg, Man.; W. J. Sproules, Montreal.

It was decided to hold a summer convention in Toronto during the month of June next.

NOTES ON THE PROPERTIES OF MORTAR.

The durability of brick walls is very much affected by the character of the mortar used in laying the brick, and in the condition of the brick when laid. Clean, sharp and rather coarse sand should be used for mortar, and the lime should be water: slaked and fresh.

Hollow brick, it is said, are coming into more general use in eastern cities, and quite a number of large buildings have been built with them. They crush at 30,000 lbs., or about the pressure which the best solid brick will stand. They are made 8 x 8 x 12, with walls one inch thick. It is claimed that they cost one third less than the regular form, making walls proof against fire, moisture and frost, being warm in winter and cool in summer. They require a peculiar clay in their manufacture, one that will not shrink when dried or burned. The brick are set on end, thus making a wall hollow from top to bottom.

It is reported that the German government testing laboratory for building materials has reported favorably on a new paving block called iron brick. This brick is made by mixing equal parts of finely ground red argillaceous slate and finely ground clay and adding 5 per cent of iron ore. This mixture is moistened with a solution of 25 per cent sulphate of iron, to which fine iron ore is added until it shows a consistency of 38 degrees Baumé. It is then formed in a press, dried, dipped once more in a nearly concentrated solution of sulphate of iron and finely ground iron ore, and is baked in an oven for 48 hours in an oxidizing flame and 24 hours in a reducing flame.

The fact that mortar of old chimneys suffers greatly from the corrosive effect of the creosote of wood soot, says an exchange, was pointed out years ago. The creosote formed from the slow combustion of wood contains a large proportion of pyroligneous vinegar or crude acetic acid. This acid is formed in large quantities when the combustion of wood is slow, and many quarts will be condensed in cold weather, where a large wood fire is very much checked. The time required for such a condensation is but a few hours. The acid dissolves lime readily, carrying it away in solution. In this way the mortar is frequently entirely removed from the tops of old chimneys in the country. New chimneys suffer in the same way. Cases might be instanced where the top courses of bricks in chimneys but two years old are entirely without support other than that afforded by the sand with which the lime was mixed. Usually bricks can be lifted from the top courses of chimneys with the fingers, if the chimney is more than eighteen months old.

USEFUL HINTS.

Five courses of brick will lay one foot in height on a chimney; six bricks in a course will make a fine flue 4 inches wide and twelve inches long; eight bricks in a course will make a flue eight inches wide and sixteen inches long.

A simple way of removing rust from finely polished steel without injury to the surface consists in cleaning the article with a mixture of ten parts of tin putty, eight of prepared buck's horn and twenty-five of alcohol, and then rubbing with soft blotting paper.

To stain bricks red, melt one ounce of glue in a gallon of water; then add a piece of alum as large as an egg, one-half pound of Venetian red and one pound of Spanish brown; redness or darkness is increased by using more red or brown. For coloring black, heat the bricks and dip in fluid asphaltum or in hot linseed oil and asphalt.

The following will soften old paint, when it can be easily scraped off: Two pounds of sal soda, quarter-pound quicklime and one gallon warm water. Stir well and apply hot or cold, and allow it to remain fifteen or twenty minutes. Then scrape the paint off and wash thoroughly with acidulated water (vinegar and water), which is for the purpose of neutralizing the alkali and to stop its action upon the wood, and more still upon the repainting.

Cracks in floors, around the skirting or other parts of a room, may be neatly and permanently filled by thoroughly soaking newspapers in paste made of one pound of flour, three quarts of water and a tablespoonful of alum, thoroughly boiled and mixed. The mixture will be about as thick as putty, and should be forced into the cracks with a bent knife or other handy tool. When dry, it will be harder than the boards.

The following receipt for the cementing of wood and glass is said to have the advantage over many others in that it does not injure the most brightly polished hardwoods: Mix together some finely pulverized, well dried zinc-white with clear copal varnish in such quantities as to produce a half liquid preparation; spread this over the parts to be cemented, and it will be found that they will be joined firmly together.

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