
The social entertainments will consist of an informal drive about Mont Royal Park, an excursion by special train to La Chine, and down the rapids, an excursion to the dredging operations on the St. Lawrence, visits to the Canada Southern Railway Company’s power house, with luncheon and inspection of the power plant, a garden party at the house of Mr. and Mrs. N. N. Cadieux, and a cruise from Ottawa to Kingston. The New England contingent in cars from Boston at White River Junction, can enjoy the pleasures of a journey at no greater cost than the regular rate, and perhaps at a reduction of fare. The train will probably leave New York at ten o’clock Monday morning, June 4. The headquarters are to be at the Windsor Hotel, where the rates are from $3 to $3.50 per day. Members of the Convention are requested to wear a button badge used at conventions, as they render social acquaintance more easy.

Engineers’ Society of Western Pennsylvania.—At the regular meeting on March 20, Mr. Nichols, of the New England contingent, described a paper describing the emerald mines of Muo, in the Republic of Colombia, South America. These mines have been worked for upward of two hundred years, and were known long before the Spaniards explored and took possession of the country, and they are still said to be the richest emerald mines in the world. The entrance to the mines is at the end of a ridge, near the head of two mountain streams. The mine is a bituminous black limestone, for the most part laminated like slate, the slabs being 2 or 3 in. thick. These are separated from each other by layers of black powder. This formation is found in innumerable cavities and crevices, and in the intersections of which veils the emeralds, in a rough state, are found, generally associated with crystals of a transparent quartz and a yellow mineral not yet classified. The emeralds are a fine green in the black powder. The mine itself is in a deep basin excavated back of a sharp ridge, and is about 600 ft. in diameter and 100 ft. deep. The water from the mine is drained from it through a trough about 100 ft. to an adjoining brook. In the rainy season this brook becomes a furious torrent.

In the center of the mine, a little to the left, is placed a small shed, where the superintendents can watch the operations of the miners. The only tool these miners use is an iron crowbar % in. thick, with a chisel edge, and weighing 25 lbs. With this instrument the rock is broken and allowed to fall into a sluice-box below, which is the bank in a tank about 5 ft. wide; when the quantity is sufficient, it is let fall on the mass below, and by this means the debris is washed away, leaving the emeralds in the sluices. Every evening the sluices are carefully examined and the emeralds collected. The close work is done by the superintendent, however, fails to get all the emeralds for the mine owners, for a great many of the stones are stolen by the miners, as it is not very hard to make off with small objects. The former manager of the mine, with whom I was acquainted, told me that perhaps 25 per cent. of the gems never went into the hands of the company, but were taken by workmen and sold on their own account. The demand for the stones influences the number of workmen employed. This number varies at times from 50 to 500. They are fed by the company, and it costs 20 cents a day to feed each man. Their wages vary from 50 to 200 cents a day.

The mines are owned by the Colombian Government, but are operated by an English company, which rents them from the owners. The mines are in number. Before the fall of Napoleon III, the Empress Eugenie was said to possess the largest emerald in the world.

Association of Engineers of the South.—At a recent meeting Mr. Samuel Wallace gave a talk on paints, bringing out considerable valuable and interesting information. Among the things he gave a description of a painting ironwork, in which he recommended that the first coat should consist of pure red lead in powder and raw oil to be used within two or three weeks after mixing, and to be kept tightly mixed while dry. This paint should then be allowed to dry 30 hours. The red lead should be ground in a mill, if possible, immediately before using. If the finish is to be black, use two coats made from paste consisting of 80 per cent. pigments and 20 per cent. raw oil. The pigment to be made of 80 per cent. of per cent. sulphate of lime, 20 per cent. lampblack, and 5 per cent. red lead as a dryer. The whole thinned to a proper consistency with pure boiled oil. This paint ready for use will cost about 65 cents per gallon. If the finish is to be red or brown, use a paste consisting of 75 per cent. pigment and 25 per cent. pure raw oil. The pigment to consist of 55 per cent. sulphate of lime, 40 per cent. oxide of iron free from sulphur and of scabious substances, and 5 per cent. carbonate of lime as a dryer. The sulphate of lime is to be fully hydrated. This paint will cost, ready for use, about 75 cents per gallon. The coats of paint are not recommended for final finish, the account of chalking, neither is zinc on account of cracking. Graphite paint does not dry well in linedin oil, and is not impermeable to water. The color is steel gray. Both white and red lead should be thoroughly tested for purity.

International Railway Congress.—The International Railway Congress, which is attended by representatives from all of the European railways, will hold its next session in London on the 1st of June, 1885. This next session will be the fifth, the preceding reunions having taken place at Brussels, Paris, Milan and St. Petersburg, having had its origin at the centenary celebration of the introduction of railways in Belgium, to which a great number of railway men were invited. This reunion was so successful that it was decided to create a permanent organization for the purpose of organizing others in similar ways. The permanent office of the commission is at Brussels, and it is composed of 30 members renewed in thirds at each session. The association is certainly very unique, and seems admirably organized for obtaining the maximum results at the work of the session. The present President is Sir Andrew Fairburn, General Manager of the Great Northern Railway of England, and member of the Board of Directors. The Vice-President is W. W. Ackworth, Vice-President of the Great Western Railway, and the Secretary is W. C. Ackworth. The association of European railways, who have appointed a special committee for the reception of suggestions, consists in great number. They have selected Mr. M. E. Goldsworthy as secretary of this committee, and upon him will fall the greater part of the duties of taking charge of the concourse.

Civil Engineers’ Society of St. Paul.—At a meeting held on May 7 Mr. O. C. Claussen read a paper on the Requirements of Municipal Electric Light Plant Installation, advocating the location of the power house near a plentiful supply of water, in order that compound condensing engines might be used, and that such a works be so placed as to be separate from the business center to escape excessive cost of real estate, while near enough to profit by transportation facilities. Tiled floors were recommended for the engine and dynamo rooms, with rubber mats that were to be placed as a necessary for protection against insolation. The engine rooms as a fixture would assist in handling the equipment. The machinery and foundations were to be massive and of hard-burned brick laid in Portland cement. He favored the speed of the engines, 400 to 600 revolutions per minute, as being sufficient to meet the requirements, and the power of the engines should be, for a 1,000 kilowatt plant, about 1,500 horse power. The generators should have a double drum for the starter, which would have a capacity of 200 horse power. The plant should be as simple in design and operation as possible as a means of avoiding trouble.

Association of Engineers of Virginia.—At a meeting on April 18 Mr. G. R. Henderson read a paper on boiler construction, in which he gave an interesting description of a modern water-tube boiler, where a complete stack with a few inches clearance regulate the draft instead of the usual very expensive stack, and where the fuel was not handled except by the mechanical means after it was dumped by the teamster until the ashes did not get into the cart to be carried to the opposite designs of water-tube boilers, showing the novelties of their