

SPENCER, who was detained in New York from ill health to the great sorrow of some who had come from great distances in the hopes of seeing him. In other respects the meeting was highly successful, whether we consider the large number present, over a thousand strangers being in the city during the week, or the social enjoyments provided and heartily enjoyed, and lastly, but not least, the work done by the sections in the way of papers and lectures. Some two hundred papers on various subjects were put in, and the majority of them were disposed of. Full accounts of these appeared in the daily papers, and we cannot pretend to reproduce them here. Those who wish to preserve a record of them will find it in the proceedings of the Society next issued. We will only say that, if no startlingly new discovery has made the session remarkable, yet the general character of the papers shewed the steady progress which science is making in the hands of the members of the Association.

The social pleasures provided for our visitors were many and various. After the formal opening of the session by the retiring President Professor BRUSH on Wednesday the 23rd August, the new President Dr. DAWSON on the following day held a grand reception in the Redpath Museum, which was made the occasion of the presentation of that fine building to McGill College by its founder Mr. PETER REDPATH. This was followed by a series of receptions which filled almost every evening of the stay of the Association. On the Saturday, excursions were organized to Quebec and Ottawa in which the members divided their forces, and on the Thursday following, the end of the session was celebrated by a visit to Newport and Lake Memphremagog on the South Eastern Railway, from which the majority of the visitors did not return, taking that route back to their American homes.

We may add that portraits, with carefully written sketches of the principal visitors appeared in the CANADIAN ILLUSTRATED NEWS of the 2nd September, which also contained some illustrations of the proceedings.

Although of less general interest than the meetings of the American Association, we must not grudge a few words to the two meetings which were arranged to immediately precede the session of that body—the Agricultural Congress and the American Forestry Congress. At both of these good work was done, and matters of interest and importance to our country discussed. We are, of course, especially interested in Canada in the subject of Forestry, which is only now beginning to be at all thoroughly understood, and which bids fair to take its place at last in the rank of the main science. Many of our principal citizens have of late years taken a great interest in forwarding the objects which the Congress has at heart, among whom we may mention the Ex-premier of Quebec, the Hon. J. G. JOLY, who as Chairman of the Congress took a large share of its work upon his shoulders, and Mr. WM. LITTLE, the energetic Vice President of the Congress.

#### COMPRESSED AIR LOCOMOTIVE ENGINES.

An important step has been made towards the mechanical working of tramways by the introduction of the Beaumont compressed-air engine on the Stratford and Epping Forest branch of the North Metropolitan Tramways. This engine comprises a store tank or reservoir for the compressed air,

which is utilized in cylinders of small diameter, motion being given to the pistons by the expansion of the air in the cylinders and transmitted to the wheels by gearing. The reservoir is charged at a pressure of 1,000 lb. per square inch at the commencement of each journey. An inspection of the air-compressing machinery and of the working of the tramway engine was made on Friday week, when the details were explained by the inventor, Colonel Beaumont, R. E. The compressing machinery consists of a fix compound engine having a high pressure cylinder 12 in. in diameter, cutting off at half stroke and using steam at 95 lb. boiler pressure. The low-pressure cylinder is 20 in. in diameter. The air compressor is on what is known as the "stage" principal, the air being compressed in a series of cylinders of gradually decreasing diameter. From the compressors the air is conducted through about 250 ft. of 1½ in. iron pipe to the street in the Broadway, Stratford, where there is a flexible hose attachment for filling the reservoir on the engine. This occupation occupies about fifteen minutes, during which time the compressing engine is working. There is only one tramway engine running at present, but the compressing arrangements are equal to the supply of compressed air to four engines, working continuously. The tramway engine takes a tramcar to Leytonstone and back, and then stops a quarter of an hour to replenish its air supply, when it starts with another car, the intermediate journeys being performed by horses. On the occasion of the run last week, the engine having brought in a car from Leytonstone was replenished in a quarter of an hour, the pressure at starting being 1,000 lb. per square inch. The distance from Stratford to Leytonstone is two and a quarter miles and an ascent the whole way, the total rise being 82 ft., and incline 1 in 25 and a curve of 50 ft. radius being encountered at Maryland Point-bridge.

#### THE KNACK IN BREADMAKING.

Three slices of bread shown by a Lewiston flour dealer Thursday, spoke for themselves. Placed side by side, they shaded very abruptly into three strikingly distinct tints. One was of the hue of Graham and fell into your hand like a half-baked brick. Another was nearly white, and would be greeted with pleasure by a hungry man. The third was so white that snow would have to be bleached to compare with it; moreover, it possessed that spongy texture which is so gratifying to the eater and a source of so much pride to the cook. It threatened to dissolve in one's mouth, and would tempt a gorged epicure. It would not be a strain to say any one could distinguish them in the dark. The flour dealer deposed that the three slices of bread were made by three women from one and the same kind of flour. The cook who produced the first slice was dissatisfied with the flour, while the woman who made the bread last mentioned said she could make good bread out of flour that didn't cost less than \$4 a barrel. It is evident that bread-cooking is not one of the lost arts, but it is an art which still contains sufficient mystery to puzzle many and confound not a few of the angels who hover over flour barrels.—  
*Ex. from Maine.*

#### CAR WHEELS OF STRAW.

The straw is first made into common straw board; these are cut into round pieces perforated at the center, and 26, 33 and 42 inches in diameter, for use in wheels of these various sizes, then pasted together and pressed repeatedly in a powerful hydraulic press under a force of 3,000 lbs. to the inch. The block is then fitted into a steel tire bound with plates and bolts, and finally makes a wheel which sells readily at \$60, while an iron wheel costs but \$15. But the paper takes up all the vibration from the rail, which is so injurious to the tire and axle when iron wheels are used, causing breakage and costly accidents. These paper wheels never break, while the iron wheels break very often. An iron wheel will run 100,000 miles, but a paper wheel 400,000 or 500,000 before the tire is worn out, and then the tire can be replaced at small cost. Other important uses are being found for straw, and in course of time it may become too valuable for feeding, and will be more profitable for sale than the grain which it bears. Near the large cities and straw-board mills rye straw is worth a sum equivalent to about \$30 an acre; this is equal to the price of a larger yield than an average crop of grain.—  
*Rural New Yorker.*