

AN AMERICAN VIEW OF CANADIAN PROGRESS.

(From the Albany Evening Times)

Ill-informed persons ignorant that the divided British provinces of the past and the Dominion of Canada of to-day are very different affairs, are apt to under-estimate the importance of the progress of events north of the St. Lawrence in their bearing on the United States, and more especially on the northern and north-western portion of this country. The act of confederation has been successful in the object for which it was intended. The prospects of the annexation of Canada to the Union are far less than they were five or even three years ago. A new nation has been brought into existence, and a national spirit fostered, which is growing stronger year by year. Its effects are already apparent in the growth of commerce; in the construction and enlargement of canals, in the increase of ocean transportation, and in the projected Canada Pacific railroad. In support of our assertions as to the growth of commerce in Canada, we will cite the city of Montreal as an illustration. The wonderful growth of that old French city and the great improvements made there, force themselves on the attention of all persons who have recently paid it a visit, and know what it was a few years ago. Montreal has increased its population since 1850, and mostly within the era of the Dominion, from 57,000 to 150,000 inhabitants. The city is admirably situated for commercial purposes, on the St. Lawrence, and when the canals are completed will be able to receive the largest vessels from our lake cities, and thus in great measure divert the grain trade from New York. There are now numerous steamers plying between Montreal and Great Britain, and as the railroad system of Canada is directly connected with that of Chicago, Montreal is as near the Pacific as the metropolis of the Hudson, and twenty-four hours nearer Glasgow and Liverpool than New York. Already four miles of stone docks have been built at Montreal, and ten miles additional are in course of construction; a large hydraulic dock is projected, and the river to Montreal has been dredged, so that vessels of twenty-four feet draught can approach the safe, handsome and convenient wharves of that city. New York cannot compare with Montreal in some important respects; and in the next decade the Canadian emporium will inevitably divert much of our western trade unless vigorous means are speedily taken to prevent it.

The opening of Lake Erie to the largest class of lake steamers will immediately draw a large amount of the grain trade from the Erie canal and from the American railways, if things are allowed to remain as at present. We have the advantage in climate—perhaps four or five weeks in the year—shall we not use it? The *Chicago Tribune* says:—

During the last week it has been demonstrated that Chicago could receive 2,100 cars of grain and send back the empty cars to be re-filled in a single day. It is also well understood that a daily arrival of 500 cars of grain exceeds the present hauling facilities of New York, and grain has to wait in that city until such time as the slow and round about mode of doing business there, will admit of its being transferred. Philadelphia and Baltimore are, in this particular, in advance of New York; they have provided elevators and warehouses into which grain can be received as fast as it arrives. In New York it has to wait. At Montreal, the arrangements of docks and warehouses are so complete that, whether the grain arrives there by rail, steam-sail vessel, or canal, it can be handled instantly.

Montreal, with the lakes, canal and river, has superior facilities for water transportation (which we have previously demonstrated to be more expeditious and economical than land carriage). A lake propeller can hold as much grain as 200 cars, and for exportation purposes, the cheapest route is certain to be favoured by the producers of the North-West. Europe seems to be depending more and more on the western continent for her breadstuffs, and if they are to pass through Canadian instead of American hands it will furnish a very sensible item of loss. It seems to us a very bad time to sneer at Canada and the Canadians, it would be better to be up and doing all that is possible to prevent them from gaining any commercial advantage over us.

PHILADELPHIA CENTENNIAL EXHIBITION.

The preparations for the Centennial Exhibition at Philadelphia in 1876 are gradually maturing, and the work of arrangement intrusted to the several committees is progressing. The executive commissioner, Prof. Blake, is at present at Vienna, making personal observation of the arrangement and conduct of that great display. He had carefully investigated the Paris Exposition of 1867, as shown by his work upon it; and such experience is imperatively demanded, to avoid the blunders and mistakes of previous efforts. The commission is now in daily sittings at their rooms, Walnut-street, near Ninth-street where they have employed two secretaries and three heads of bureaus, each of whom is entrusted with the management of some speciality. The necessity of pushing forward as rapidly as possible the preparations for the exhibition buildings is fully recognised. The statement is made that the committee on plans and architecture have decided to make use of four buildings—a central main building, to be devoted to general exhibition purposes, and separate structures to contain the departments of fine arts, of machinery, and of horticulture. It is further stated that the appointment of the architect will be thrown open to public competition, and that all architects will be invited to contribute plans; the authors of the ten most approved designs to each receive a prize of £200. The decision upon the successful plan will be made about July. The plan of classification adopted at the Paris Exhibition of 1867 will be carried out, that is to say, each class of exhibits will have a space assigned to it, and each country exhibiting will have a portion of that space, so that the best opportunity will be afforded for comparison. The following are the divisions under which they will be arranged.—(1) Raw materials—mineral, vegetable, and animal. (2) Materials and manufactures used for food or in the arts, the result of extractive or combining processes. (3) Textile and felted fabrics—apparel, costumes, and ornaments for the person. (4) Furniture and manufactures of general use in the construction of dwellings. (5) Tools, implements, machines, and processes. (6) Motors and transportation. (7) Apparatus and methods for the increase and diffusion of knowledge. (8) Engineering, public works, architecture, &c. (9) Plastic and graphic arts. (10) Objects illustrating efforts for the improvement of the physical, intellectual, and moral condition of man, &c. The Centennial Commission for the inauguration and conduct of the great exhibition have already made most commendable progress. Committees from their number, having in charge special departments of this vast scheme, are in constant session, and the general outline of the work seems to have been fully developed. The site for the buildings used for the occasion has already been secured in Philadelphia's beautiful park, and the formal transfer of the ground by the city authorities to the control of the Centennial Commissioners took place, with suitable ceremonies, on July 4th. The decoration of the ground for the purpose, the planting of shade trees, &c., is to be taken in hand at once.

DIVING DRESS USED IN OBTAINING AMBER.

The Königsberger Maschinenbau Actien-gesellschaft Vulkan of Königsberg, in Eastern Prussia, exhibits amongst other things in the pavilion for the Prussian Iron and Mining Industry, at the Vienna Exhibition, some interesting diving apparatus as used on the eastern coast of Prussia, for obtaining amber. This apparatus, an illustration of which is given on page 270, and which received a gold medal at the Moscow Exhibition of last year, is constructed on the system of MM Roux-quayrol-Denayroux, some alterations and improvements having however, been introduced so as to give greater safety. The air is transmitted to the diver through long india-rubber tubes by means of an easily transportable air pump with two cylinders. These tubes, which are strengthened by spiral wires, conduct the air to a regulator carried on the diver's back. The completely air and water-tight dress of the diver is connected by an india-rubber ring with a copper helmet, or also with a mask, the helmet and mask being provided with strongly grated windows. The helmet is used for works under water in which the head of the diver has to be kept upright (repairing ships for instance), whilst the mask is adopted for researches and examinations on the sea bottom.

A great advantage of this arrangement is that the diver has always a certain reserve quantity of air in the regulator, so