

they are commanded by high land on the western part of Wales Island. From the head of Portland Channel, the line runs north to the 56th parallel, and thence follows the highlands. This decision is also in favor of the Canadian contention, for the United States claimed that there were no mountains that could be taken as defining the boundary; but it is a worthless victory for us, as the mountains fixed upon by the majority of the commissioners are so far back from the coast as to give to the United States practically all the width they claimed. The very important question as to whether it was intended that there should be a continuous fringe or strip on the mainland separating the British possessions from all the bays, ports, inlets, and waters of the ocean, was decided in favor of the United States; and so Canada loses not only the ports on the Lynn Canal, but all other harbors, known and unknown, north of Portland Channel. We have gained the whole width of the body of water in front of Port Simpson, and the islands that command the entrance to it. We have virtually lost everything else in dispute.

The award of the Alaska Boundary Commission is final, so far as the governments are concerned. But in the United States the government does not govern. The senate does that; and it may refuse its consent to the award, as it refused to accept the treaty of arbitration with Great Britain.

Some curious facts are connected with the semi-annual migrations of birds. A writer in the *Scientific American* points out that storks in their flight from Buda-Pesth, in Hungary, to Lahore, in India, accomplish this air-line distance of nearly 2,400 miles in twenty-four hours without a rest. Dr. Gatke, in his observatory at Heligoland, regards 240 miles an hour as not unusual.

Mr. Frank M. Chapman, of the United States, points out the relation of the bird's extraordinary sight and hearing—many times greater than man's—to the unerring course of the air journey, and the apparent following of certain great earth lines, rivers, basins, mountain ranges, etc., at the enormous height of one to three miles in the darkness of night.

When Prof. Alfred Newton, of Cambridge, in 1878 declared "bird migration the greatest mystery in the entire animal kingdom," he was thought extravagant. To-day his dictum is accepted and a new impetus given to the study of that semi-annual event.

Every school boy knows that Columbus sailing due west in 1492 was diverted from his course by land birds flying in a southwesterly direction; and, following his winged guides, he landed, October 12th, on Guanabana Island, two hundred and fifteen miles nearer than the coast of Florida, toward which he had been steering. The effect of the birds upon the admiral and his mutinous crew is a matter of record. But it was reserved for Frank M. Chap-

man to point out the value of the coincidence.—Had Columbus set sail ten days later from Palos, the face of the world might have been changed, for he would then have missed the autumnal migration.

Amid the intense excitement of a vast crowd, consisting largely of experts, the Siemens electric train on October 23rd achieved the record speed of 207 kilometers, or about 129¾ miles per hour, beating the record of the last previous trial by six kilometers.

After the recent trial on the experimental Marienfelde-Zossen line, near Berlin, when a speed of 125 miles an hour was attained, the engineers declared that this would be exceeded, and that a speed of even 140 miles an hour was practicable. The tests have been going on for several weeks, and are being watched with great interest by the Emperor William. The Reichstag has devoted the sum of 280,000 marks toward the cost.—*Scientific American*.

Manual Training.

Since the last issue of the REVIEW the remaining unengaged teachers of mechanic science have secured profitable employment. There is at present not an unemployed mechanic science teacher in Nova Scotia, *i. e.*, teachers who are open to engagement as mechanic science instructors. Two teachers are needed, one for the manual training department in the consolidated school at Middleton, and an assistant teacher for the Halifax Public Manual Training School.

In this connection it is interesting to note that the twentieth manual training school in Nova Scotia is now almost ready to open. The action of Sir William MacDonald and Prof. Robertson in establishing the different model schools throughout Canada is amply justified in the case of Nova Scotia, which province leads Canada in manual training. If the present law and the present efficient supervisor remain, three years more will probably see double the present number of mechanic science departments established.

It is pleasing to mention the fact that our kindred subject, domestic science, which is taught concurrently in most schools with mechanic science, is about to be introduced into Yarmouth. In this subject, as in mechanic science, Nova Scotia leads in Canada.

The special summer course in manual training given at Truro last July and August makes it necessary to make some changes in the term of study for mechanic science teachers. The terms for teachers' license are (a) For candidates who have not had