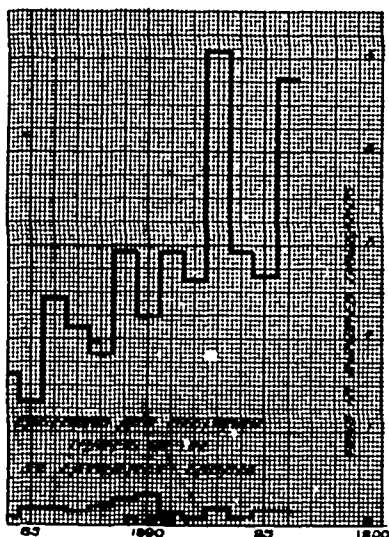


for losses in development, an amount that can only be realized by remembering that it is more than twelve times the horse-power of all the engines in Montreal. The Montreal Board of Trade has opposed this proposition on the ground that a route of such importance should not be alienated to a private company; but in view of the history of Canadian transportation affairs it is doubtful whether this ground is sound, even though the scheme itself may not call for commendation. It is certain that our heavily subsidized railroad corporations have shown an energy and enterprise in developing our trade, and in operating their systems to the satisfaction of our shippers, and of the travelling public that we would never expect from a Government work, and have carried on their extensions with a financial success that the Intercolonial has never had. In Mr. Keefer's essay of 1850, that has been already quoted, he remarks bitterly that the subject of canal development is subordinated to the wrangling of rival lawyers; and from the present result of Governmental control in Montreal harbor, and the recent refusal of the Canal Department to make their repairs so as to get the canals ready to be opened at the date the forwarders requested, it would appear as if our politicians had not greatly advanced in states-



manship since 1850, and that for the present, the interests of the country are better served by highly privileged and subsidized companies, whose very existence depends upon their developing our natural resources, than by Government action under the control of party politicians, who cannot afford to exercise any foresight, but must fight day by day to maintain their hold on the narrow majorities on which their tenure of office depends.

MANUAL TRAINING IN PUBLIC SCHOOLS.

The system of manual training about to be introduced experimentally into the public schools of Canada by the Dominion Government, through the generous endowment given by Sir Wm. McDonald, is almost the same as that in use in some of the English schools, and is described by Jas. W. Robertson in a pamphlet recently issued.

The system of education is called English Sloyd. Sloyd is a Swedish word for "dexterity." Educational Sloyd is an entirely different thing from carpentry. The manual training room is not a workshop where operations are carried on with a view to the commercial value of the articles turned out. A workshop is a money-making institution, whereas a room for manual training—for Sloyd work—in connection with a school, is for the training and developing of the children, without regard to the intrinsic value of the work turned out, or to the length of time required to make any particular object. Sloyd work is really a series of exercises so arranged as to have educational results.

A floor area of about six hundred square feet is enough to accommodate about thirty pupils and one bench for each. A room 24 x 30 feet would be amply large; and would provide also for the instructor's bench, and for a group of pupils to watch what he was doing. Ten classes of thirty pupils each, or three hundred in all, could be passed through such a room in the week. The benches are of convenient height and size, and each one is fitted with a rack for the holding of tools and also

with tools. Some of them are also fitted with a simple device for the holding of the drawings, so that the work with the tools may proceed with the drawing in full view all the time. General class instruction with the aid of a blackboard is given by some teachers in a fifteen minutes' talk, before the particular work of the half-day begins; and instruction is given also to each of the pupils individually as the work at the benches proceeds.

In some schools the first object to be made is a plant label. This involves (1) cutting to an exact length, (2) cutting the ends square by the use of a fine saw, (3) reducing to the proper thickness and width, and (4) making a taper with the same angles as those of the model. In other schools a small pointer is the first model, and in others some object equally easily made. The first article is easily made; the second introduces some slightly different use of a tool or the use of some different tool, and so they proceed, arousing, training and gratifying the child as he makes all of each one himself. It is to be remembered that the pupil makes each article wholly himself. At first he makes directly from the models. Later on he makes drawings from drawings of the models. Further on he makes his own drawings directly from the models. Then finally he is trained to make the articles from his drawings of the models. The course may be arranged on a plan of from thirty to sixty or more articles to be made by the pupil during the three years.

The lectures of Otto Salomon, the renowned director of the Seminarium for teachers at Naas, Sweden, furnished valuable suggestions on the choice of models and on the arrangement of the series of models. An authorized edition of those lectures is published under the name of "The Theory of Educational Sloyd." From it the general principles relating to the series of models are given: (1) All objects of luxury—knick-knacks—should be excluded. From an educational point of view, we must first teach what is necessary; secondly, what is useful; thirdly, if time permits, what is agreeable. These terms are, however, relative.

What is necessary to one person may be useful to another, and what may be useful to one, agreeable to another. What is a luxury in one age or country, is not necessarily so at another time or place. What is a luxury to a poor man may be a necessity to a rich. In regard to nature the terms are more absolute. What is necessary to one is necessary to all. It is necessary to eat food; it is useful to eat food sufficient, and of good quality; it is agreeable to have it well cooked and prepared.

(2) All models should be serviceable in the house. If this is to be the case, the models will vary to some extent in different schools. Not only will the models be different in different countries, but in different districts of the same country; e.g., in country schools it would not be wise to teach the manufacture of objects only useful in towns. It would be preferable to substitute models which may be used in agriculture; but in substituting other models, care must be taken not to disarrange a carefully graduated series of exercises. So, too, if the school be near a lake, objects concerning boats and fishing should receive attention. The general principle by which we should be guided is: That the series of models made in the school should give the best expression to objects needed at home or in the district.

(3) They should be capable of being finished by the children without help. Hence models should not be a part merely of something, but the whole. For this reason it has been found necessary to exclude many things which would otherwise have made useful models.

(4) The models should be of wood, and only wood should be worked in, as a rule. To this rule there are one or two exceptions, as the cloak suspender, the clothes rack, and bucket; and these have been inserted because teachers in the country districts of Sweden cannot buy them, but there is no reason why they should be retained in an English series. When it is said that the models must be made of wood, it is not implied that there is any objection to the purchase of iron fittings.

(5) The objects should not be polished or stained. In the first place, because children cannot polish well. Models are frequently spoiled by it. Many juniors cannot polish well, i.e., French polish. In the second place, it is important that children should not be taught to think too much of the surface. It is not so important that a thing look well, as that it be done well. Polishing and wood-carving exert a morally bad influence, if done to cover up bad or indifferent work. It is a degradation of