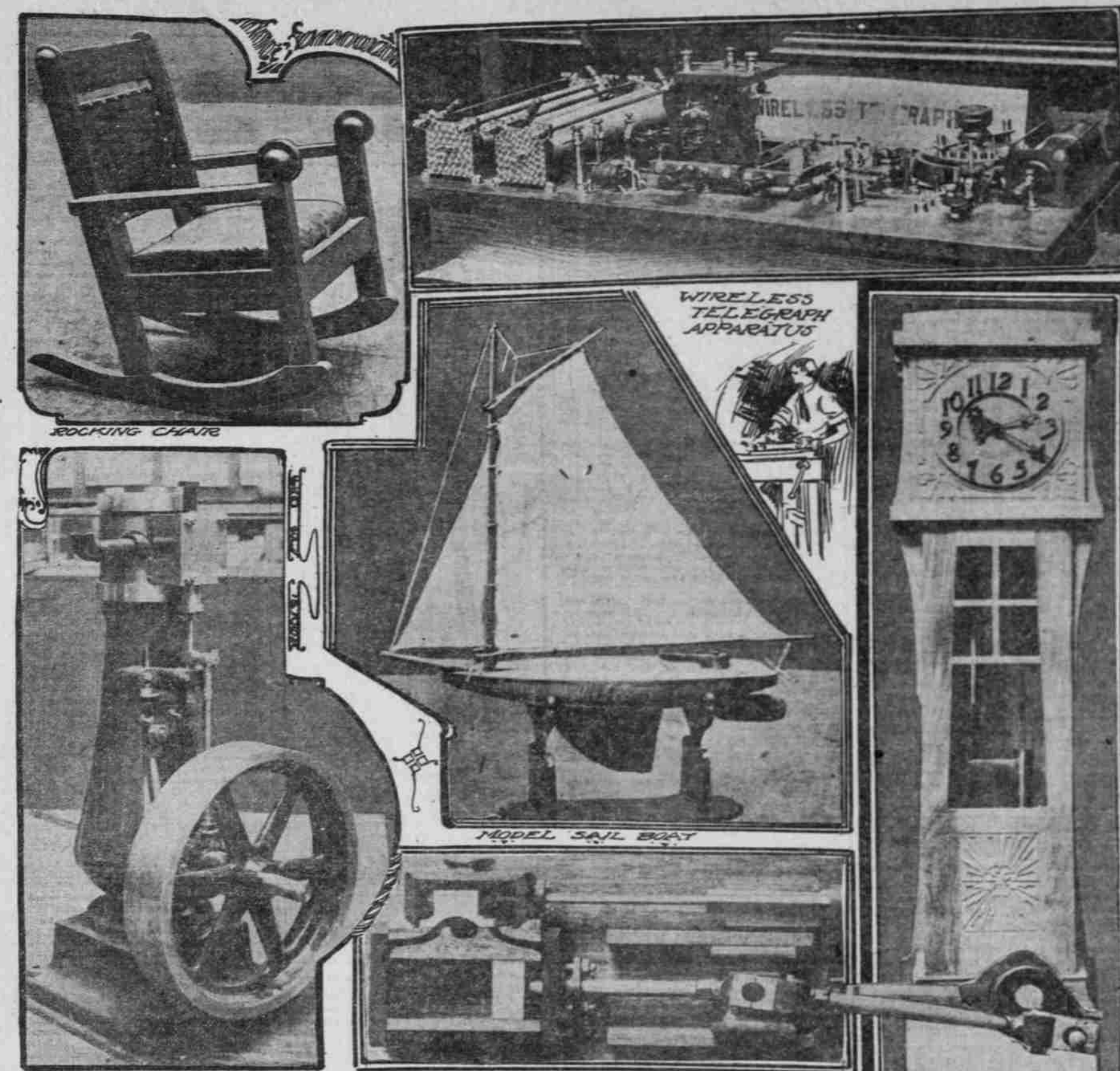


MANUAL TRAINING EXHIBIT SHOWS SOME WONDERFUL WORK BY PORTLAND BOYS

Collection Which Will Be Sent to A-Y-P. Exposition on View in Art Museum—Trades School Has Been Productive of Great Good to Pupils in Search of Practical Education.



STEAM ENGINE. The exhibition of the Portland public school work in manual training, drawing and trades, which is to be sent to the A-Y-P. Exposition, will close today at 6 o'clock in the Museum of Art at Fifth and Taylor streets. The exhibition has attracted much attention and favorable comment and many visitors have gone to the building during the past week.

Especially deserving of recognition is the work in the Manual Training Department. The extensive collection is a representative one, done by boys ranging in age from 12 to 17 years, from the sixth to the ninth grade inclusive. The achievements in this line are really little less than remarkable, and will undoubtedly win high honors at the A-Y-P.

Among the many handsome pieces is a huge settee of oak, richly and deeply carved from original designs. Three years ago this settee was begun by a class of ten boys in the grammar grades; two volunteers each from five schools formed themselves into an evening class, called the Industrial Arts Club. Some of the boys who began the work three years ago are now in the High School and assisted in its completion.

The settee is stained in rich antique brown, and the carving was executed from models worked out in clay prior to reproduction. The settee was finished by boys of the Washington High School, who also constructed a huge wall clock of richly carved mahogany. Several well-made and substantial medicine chests, tabourettes, and handsome bookcases of antique mission style were made by the older boys' class. Another article is a big chest of cedar, with planished copper mountings of especially good lines.

A grandfather clock of mahogany, with strongly-built parts and graceful design, is one of the best in the exhibit. A massive library table of oak, stained in artistic brown, is the individual work of one member, as is also a beautifully made desk in old mission style, the work of another pupil.

A doll's house, complete, with porches, windows and doors, and with every part detailed as carefully as a real house, is the work of a class of several picked pupils. A playhouse, with latticed windows, a desk and chair, takes the form of a miniature store and postoffice of canvas on cedar frames. This is all sixth-grade work.

MODEL FOR STEAM ENGINE. A strange thing to withhold the commercial aspect of work from the young boy, who, while working steadily upon a project for a number of lessons, has become greatly interested and is proud of his work when finished. The general testimony of manual training teachers is that the boy places an ideal value upon his work; and will gradually learn the real worth as he advances. It is better that he work for the work's sake than to be "working against the clock" in the attempt to see how much money he may earn in a short time.

Practically all bench work is preceded by a working drawing made by the pupil from another drawing, or from the object itself. The use of the working, or mechanical drawing can be perhaps best illustrated by a boy who attempted to build a chicken-house. Procuring a quantity of lumber and nails, he set about erecting his building. After getting it roughly shaped he discovered that it was not what he wanted, tore it down and built again. This in turn was not to his liking and was torn down, and tired of his efforts, he abandoned the task. Had he known how to lay it off on paper, he would have been enabled to see just how it would look when finished, he could have measured and learned just the kind and quantity of lumber, nails, shingles and size of doors and windows. He would have been enabled to foresee the difficulties ahead of him, and have had a close estimate of the cost, all before he had sawn a board or driven a nail.

The time is not far distant when a person will be considered as awkward and ignorant if unable to express himself with a simple practical drawing; as one is today who cannot read or write.

In his workshop practice the boy learns the practical value of arithmetic. When his working drawing calls for pieces of certain dimensions, and he gets one or more pieces a little too short, or long, he has no need for taking them to the teacher to test them. He knows that he is responsible for the mistake and that he cannot construct the piece of furniture unless he works exactly to the measurements indicated. When a boy has been able to produce an exact, well-executed article, he will seldom revert to careless, ill-fitting work afterwards. The work as planned and taught in the workshops of the Portland public schools is intended to make boys thoughtful, careful, exact and with skill and knowledge of tools they may acquire will be in accord with the standards of the best authorities.

The more pretentious articles of furniture exhibited could not be undertaken if only worked upon during the regular class period, since a boy only spends about four days of eight hours in the workshop during the school year. The boys may be found in several of the shops working before school time during the noon hour and after school.

The cold metal work is just in its beginnings in the city workshops. It is interesting, comparatively simple, and admirably lends itself to trimming and enriching simple furniture.

The work in the manual training shops is so graded that the slow worker is given a project in its simplicity, while that of the rapid worker is made more complex and elaborate. Boys commence work on the articles as arranged in the course of study. When they have reached the stage that they can control the tools they are using, can intelligently follow instructions, and have developed some of the spirit of "stick-to-it-iveness," they are allowed to try on special work. The material for the regular work is

furnished by the school, but the pupil furnishes the material when undertaking larger work.

The collection is a large and varied one, and contains among other things leather-mounted footstools, towel racks, necktie racks, whiskbroom-holders, ironing boards, weather vane, bird houses, match trays, pen trays, magazine and book racks, medicine chests, Indian clubs, calendars, picture frames, boxes of all sorts and sizes, carved mirror frames, wall cabinets, corner closets and plate racks.

The exhibition of the trade school is little less than marvelous, when one considers that only eight months have elapsed since its organization. The trade school is the only one of its kind in the Northwest, and one of three in the United States. It opened on September 14 last with 120 students, a sturdy lot of boys, ranging in age from 14 to 19 years, all eager to learn some trade. The trades offered are as follows: Machinist, carpentry, cabinet-making, pattern-making, electrical construction, mechanical and architectural drawing.

George W. Hamilton has had charge of the work, with an efficient corps of assistants, and the results are gratifying. Students are instructed in the underlying principles of electricity. They have a good opportunity to study the various kinds of motors, starting boxes and controllers used in the machine shop and the pattern shop. All the students take mechanical drawing, so that it may correlate with the work of the different trades.

Great stress is laid on the fundamental operations of arithmetic, mensuration and English. Applied physics is also taught in connection with several lines of work.

Mr. Hamilton thinks that fundamentals of inorganic chemistry should also be

taught, and it is planned to equip a department for this work. The pattern-makers will be given work in molding, so they can better understand pattern-making. There is equipment in the molding department for 20 boys.

Those who are taking plumbing are expected to spend some time at the machine trade prior to taking up joint-wiping, etc. Pupils who are taking the electrical workers' course are given certain periods each week in the machine shop and wood-working shop, so that they may be more skilled in the construction of electrical apparatus. Observation has taught that all electrical workers should have instruction in these lines of work. It is desired to avoid turning out "screw-driver electricians."

Another feature which has attracted much attention is a 12-inch motor-driven lathe, every minute part of which was designed, patterns made, molded, cast and finished by the pupils, and which has since been in use in the manufacture of other articles.

The drawing and painting exhibit has been selected from the regular work of the classes, showing the development from elemental color and line work in the first grades to the exceptionally well-executed compositions of the ninth grade pupils with water-color, ink and charcoal as mediums.

Preparations are under way to take the exhibition to Seattle during the next week. Mr. Standley and Mr. Hamilton will probably accompany the collection and see that it is given an artistic and worthy setting.

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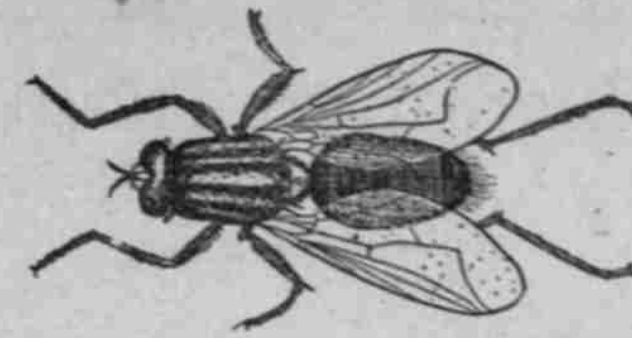
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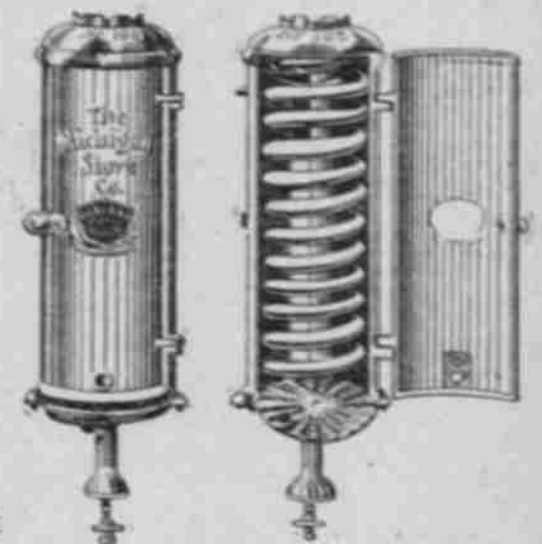
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