

MEDFORD HIGH SCHOOL HAS FULL COURSE IN PRACTICAL AGRICULTURE

Students Give Book Work and Actual Experiences in Every Branch of Successful Farming Under Guidance of Professor Hall—Other Schools Adopting It as Course of Study.



A FOUR YEAR OLD APPLE TREE AFTER BEING RUINED BY MEMBERS OF THE CLASS UNDER PROFESSOR HALL'S DIRECTION.



HUNTING INSECTS AND FUNGUS GROWTH IN AN OLD APPLE TREE.

BY ARTHUR M. GEARY. In order to actively meet the special needs of the community the Medford High School has added a course in horticulture to its curriculum. Three years ago the school was the pioneer in introducing the study of agriculture in the state. The classes in agronomy, animal husbandry and farm management installed at that time became so popular with the students and with their parents that it was decided at the beginning of this school year to add the course in horticulture for the seniors, who had already availed themselves of the training offered in the agricultural department.

The planning of the horticultural course was left to Professor S. B. Hall, who has been instrumental in the institution of the agricultural course. Mr. Hall is a graduate of the Oregon Agricultural College, class of 1909. He also received a valuable training as to the special needs and conditions of horticulture in the Rogue River Valley while in the employ of the Oregon Experimental Station under Professor Lewis. In molding his course, Professor Hall sought to teach the general principles of the science of horticulture and from them branch upon a careful study of the particular conditions of fruit-growing in the Rogue River Valley. The main fault that the horticulturists have found with the work of the graduates of agricultural colleges is a general training in horticulture did not give them knowledge of the allowances that must be made for local conditions. These peculiar conditions of each locality can only be learned by association and experience with them. Here the students in high school have the advantage.

Professor Hall has carried on his work in teaching horticulture, by lectures, reference reading, laboratory work and frequent trips into the surrounding orchards and gardens. Mr. Hall was raised on a farm near Fairview. The boys especially take a vital interest in the work of this class. Many of them are planning in time to take charge of their father's orchard or home to some day have one themselves. By learning the rudiments of horticulture, while in high school, they are able to determine whether this particular calling will appeal to them as a life work. It seems that the study of horticulture in the high school is of such an attractive nature that many boys would be influenced into this work of production on the farm if courses were generally installed in the high schools of the state.

The Pendleton High School has already laid plans for installing a like course in its curriculum next year. The study of horticulture has been taken up extensively in the California schools and the movement is spreading northward. The plan is not to supplant the work of the agriculture colleges, but to give to the students a foretaste of and preparation for their work at college and to give a valuable and practical training to those who can not afford to go to an agricultural school. The class work of the year's course in horticulture offered by the Medford High School embraces the study of the following subjects: Different ways and methods of propagation and handling the various kinds of fruit, berries and strawberries. A study of the selection of orchard lands according to soil, climatic conditions and transportation facilities. Selection of stock for variety,

chard systems, in the planting of trees, investigation of moisture conditions of the soil, lessons in pruning, taking of weather observations, records and handling instruments, sorting and packing, a systematic study of the principle commercial varieties of fruit, drawing of plans for packing tables and houses, the mixing and application of sprays, observation and study of as many of the above mentioned work as can be secured during the year.

The course in animal husbandry includes everything from the best cure for plant lice to the art of assembling and a beef animal for the market. This course also includes frequent trips to the surrounding farms. The theoretical laboratory study is carried out through the use of text-books, reference books, state and Government station bulletins and lectures, while the practical side of the training on which the greater emphasis is placed, is taught by laboratory exercises and experiments, visits to farms and markets and by field research work.

The courses in agriculture as outlined by Mr. Hall are as follows:

Agromony—This course shall deal with plant life and its relation to the soil and the soil, dealing chiefly with farm plants.

Class work—1, the structure, physiology and function of each part of the plant; 2, the different forms of plant life; 3, the various forms and methods of propagation; 4, the methods of improvement and development; 5, plant enemies and their control; 6, the injurious climatic effects; the identification and values of the different forage and their crops; 7, the identification, value and methods of control of weeds; 8, the production and marketing of the principal farm crops.

Laboratory—1, structural examination and tests of plants; 2, testing of seeds for purity and vitality; 3, identification of plants by their seeds; 4, effects of sprays on plants; 5, propagation of plants by several ways; 6, moisture effects upon growing plants; 7, moisture effects upon the soil.

Agromony II, the soil—This will take up the study of the soil and its relation to plant and animal life; the origin of the soil; 2, the functions of the soil; 3, the different varieties of soil, their texture and chemical composition; 4, the effects of physical and chemical of the air, sun, humidity, moisture, temperature, tillage, drainage and crop rotation on the soil; 5, the relation of fertilizers to the soil—(a) the origin and contents of different fertilizers; (b) their effect upon the soil and plant life; (c) their availability; (d) the costs and benefits for certain crops.

Laboratory—1, a study of the texture of different soils; 2, physical conditions and their relation to moisture and temperature; 3, the effects of various fertilizers on the soil; 4, comparative experiments with fertilizers; 5, the effects of mulches upon the moisture content of the soil.

Animal Husbandry—This course takes up the study of the domestic animals, including the cow and a little of the business side of farming; 1, a study of the origin, types, breeds, care and usefulness of horses, sheep, swine, cattle and hogs; 2, a study of food nutrition and rations as for different animals and under different conditions; 3, the meat products of the farm; 4, the care and testing of milk and the manufacture and care of its products; 5, poultry products and production; 6, some of the principles of farm management.

Laboratory—1, judging of horses, sheep and swine; 2, testing and pasteurizing milk and the manufacture of butter and cheese; 3, testing for food elements; 4, drawing of plans for farms and farm equipment.

KING'S HEIGHTS GETS CARS

First Winding Trip Around Hill to Be Made Today.

Streetcar service will be extended over King's Heights beginning this morning. The car will be run to the highest point of the hill and later will be extended in a westerly direction when the new section will be supplied with service. The view from King's Heights embraces the Willamette River clear to the mouth where it joins the Columbia.

The line traverses several miles in its winding process around the hill. At several points the railway runs close to the edge and the observer may look down several hundred feet from the cliff. The work of stretching the wire and placing the poles was completed last week to the distance desired and it will be several weeks before it is completed to its full length. For the present the cars will be run from Twenty-third street only. Later, when all of the string and the work of placing the rails is completed, the cars will run down to Washington street and will return by the same track.

When the first car is run a delegation of railway men and promoters interested in the King's Heights property will make the trip and the event will be marked by ceremony in honor of the long-sought achievement.

Night Billposter Is Sought.

J. Schmidt, of 508 Flanders street, is accused of posting signs about the city Friday night attacking the brewery and declaring his intention to tell down several hundred feet from the cliff. The police are looking for him with intent to file a charge against him, alleging violation of the bill-posting ordinance.

Exercise in making hardwood cuttings, softwood cuttings, leaf cuttings, layering and budding, in the planting of seeds, in budding, in grafting, in transplanting, in the manufacture of grafting wax, in the examination of nursery stock, in the laying out of or-

growth, methods of reproduction and spread, effects and control. Bacterial diseases, life history, mode of attack, effect and control. Physiological troubles, The building up and protection of markets. The demand and fluctuation of the large markets. Market quotations as they appear in the daily papers. A comparison of the different horticultural societies and fruitgrowers' organizations as to their work, as being of benefit to its members, the community and the industry. Framing of constitutions to fit different conditions.

The laboratory work consists of: Exercises in making hardwood cuttings, softwood cuttings, leaf cuttings, layering and budding, in the planting of seeds, in budding, in grafting, in transplanting, in the manufacture of grafting wax, in the examination of nursery stock, in the laying out of or-

parentage, vigor, age, etc. Systems and practices of laying out orchards. Care and inspection of stock before planting. The cultivation and care of trees of different ages and varieties. Mulches and other crops. Pruning and tree training. Relation of farm animals to the orchard. Frost effects and control. Effects of wind and sun, and methods of protection. Irrigation and drainage of orchard lands. Fertilization. Handling of fruit in the orchard. Methods of sorting, grading, wrapping, packing, hauling and the handling, icing and pre-cooling of care. Study of boxes and crates. Store houses and packing-houses. Qualities of the standard varieties.

The chief insects injurious to fruit and orchards. The life history, location, methods of attack, object of attack, when and how controlled. The injurious fungus diseases, character of

CO-OPERATION IN ENGLAND APPLIED SUCCESSFULLY IN MANY LINES

Spirit of Change in British Affairs, Commercial and Industrial, Most Marked—Municipalities Are Now Taking Over Big Enterprises From Private Hands and Working Them for People.



ABOVE, INSIDE OF CO-OPERATIVE BAKERY. CENTER, LEFT, A CO-OPERATIVE OBJECT LESSON; RIGHT, ROBERT OWEN. BELOW, A STREET IN A CO-OPERATIVE TOWN.

LONDON, June 17.—(Special.)—The traveler who brings to England that healthy National prejudice that holds all Englishmen to be incurably slow and "behind the times" must be a thick-skinned individual indeed if he fails to be shaken at times by the piled-up evidence of his colossal mistakes.

He may get out of it, as many of us do, by insisting that most of the bustle and enterprise that have lately been rupturing precedents over here are due to roll-top desks, typewriters, American salesmen and such like products purely transatlantic. But these are only superficial influences. The spirit of change in England's affairs, commercial and industrial, is far bigger than anything that has been altered by the introduction of elevators or cash registers.

Thus while American commercial prestige may be said to rest on the brilliant but desperately unconnected efforts of notable individuals, the spirit of change in England has moved not so swiftly, but a great deal more significantly through the collective efforts of great masses of men.

Co-operation Brings Results. Conceive, then a body of working men so banded together, with 70 years' accumulated hard work behind them, a membership almost touching three millions, possessing a long-ancestral successful plan of running all kinds of industries and distributing all kinds of products to suit themselves. Conceive of these things in their proper magnitude by considering the annual trade of 600 millions they will support, and you will see what is meant by the real innovations England has made in modern business—for these are none other than the fruits of the most revolutionary element in English trade today, the co-operative movement.

It may be said at the start that Englishmen do not appreciate the importance of this amazing development of co-operation. Like so many startling things in England, it is taken for granted. Nor do the co-operators themselves, particularly the older ones, get unduly excited over the vista opened up before them. Up at the central offices of the Co-operative Wholesale Society in Manchester are found many functionaries exhaustively versed in the imposing statistics of co-operative trade, in the scores of farms and factories, and the multitude of products turned out, in the profits and the dividends, and the vast material wealth of the corporate societies. But there were a few men who were not submerged by these things, who viewed the co-operative idea not as a huge business, but as a working ferment among the people, making for a change of life.

Co-operation Is Revolution.

But co-operation is so familiar a working force in England that Englishmen are greatly surprised to hear it called a revolution. Yet so it is, as a glance over its eventful history will soon demonstrate. Co-operators regard 1844 as their birth year, for then it was that the famous co-operative store was opened by the 28 weavers of Rochdale. There were 28 of them, all told, and they put in \$5 apiece and rented a rickety old warehouse in a little street that went by the unattractive name of Toad Lane. Here their little common funds laid in a stock of four homely articles—flour, butter, sugar and oatmeal. At the end of the first year they divided up the modest profits, in proportion to the size of each man's account at the store—and the seed had been sown.

From Rochdale the idea spread to Manchester, 20 miles away, and from there it raced all over England. Stores sprang up everywhere, as fast as workmen realized how much cheaper and more independent it was to take the distribution of the common articles of life into their own hands. The private traders fought bitterly, of course, and finally organized a boycott of the booming co-operatives by the wholesalers.

For a time the movement was stunted, but in 1863, in the midst of England's cotton famine, caused by the American Civil War, the Co-operative Wholesale Society was founded, and from that hour till now the triumphant progress of the co-operative stores has never been checked.

Business Is Large.

The whole business has grown up to colossal proportions. Besides the great cotton mills, woolen mills, blast-furnaces, jam factories, breweries, ironworks, potteries, printers and the innumerable variety of industries controlled in England, there are tea plantations in Ceylon, grain elevators in Canada, and plans under way for cotton plantations in British East Africa and Nyassaland.

But the material aspect of the movement, however enormous, is still not at all the most important. It is a deal more significant to read that \$50,000 is spent annually for education and libraries among co-operators than to marvel that they divide up \$50,000,000 a year profits. Of this latter sum each of the 2,750,000 members receive about \$18 a year, but he profits deal more than that out of the spirit of the thing, as expressed in the money spent on stirring up his ideas.

The co-operators have started three things in England, two of which have now been taken under state control, and the third is fast inclining that way. The common interest and the brilliant but desperately unconnected efforts of notable individuals, the spirit of change in England has moved not so swiftly, but a great deal more significantly through the collective efforts of great masses of men.

The same thing precisely happened in the case of technical schools. Even in trading schools on the plan of the Cooper Institute in New York or the Franklin Institute in Boston, were set up everywhere by the co-operators as a necessary part of far-reaching co-operative effort. Again the town councils saw the public advantage and the co-operative societies are today relinquishing their hold on technical education, with the sure knowledge that they are passing it on to broader public control.

The venture now in its evolutionary stage is a far more vital matter than either of these—the business of housing. Here again the lever of the co-operative effort has been amazingly effective. Upwards of 35,000 houses are now owned by co-operators themselves or leased from their societies, according to the system purchased. All day to people who are planning to come to Kansas to work in the harvest fields, Harris says the demand has been supplied and that hundreds of men for whom there is no work are flocking to this state.

Kansas Has Harvesters Enough.

TOPEKA, Kan., June 17.—Charles Harris, director of the State Free Employment Bureau, issued a warning today to people who are planning to come to Kansas to work in the harvest fields. Harris says the demand has been supplied and that hundreds of men for whom there is no work are flocking to this state.

GRAND LODGE OFFICERS, ORDER OF THE EASTERN STAR, ELECTED IN PORTLAND LAST WEEK.



Reading from left to right the officers are, in the top row—Miss Nellie McKinley, grand secretary, Mrs. Nellie Baldwin, Mrs. Maude West, Mrs. Nellie McGowan, Mrs. Alice C. Gibbs, Mrs. Ella Evans. Second row—Mrs. Pauline Moore Riley, worthy grand matron; Mrs. Margaret V. Harter, Mrs. Margaret E. Kellogg. Third row—Mrs. Katherine Freeman, Mrs. Dora B. Schilke.

The 22d annual session of the Grand Chapter of Oregon, Order of the Eastern Star, closed Thursday afternoon with the installation of the newly-elected officers by Mrs. A. Antonette Stiles, past worthy grand matron, succeeding Mrs. Jennie Kinshart, resides at Baker. U. J. Boyd, of this city, was succeeded as worthy grand patron by Clyde Evans, also of this city. This year's convention was one of the most successful conducted in this state by the order, which has a membership of 2000 in Oregon.