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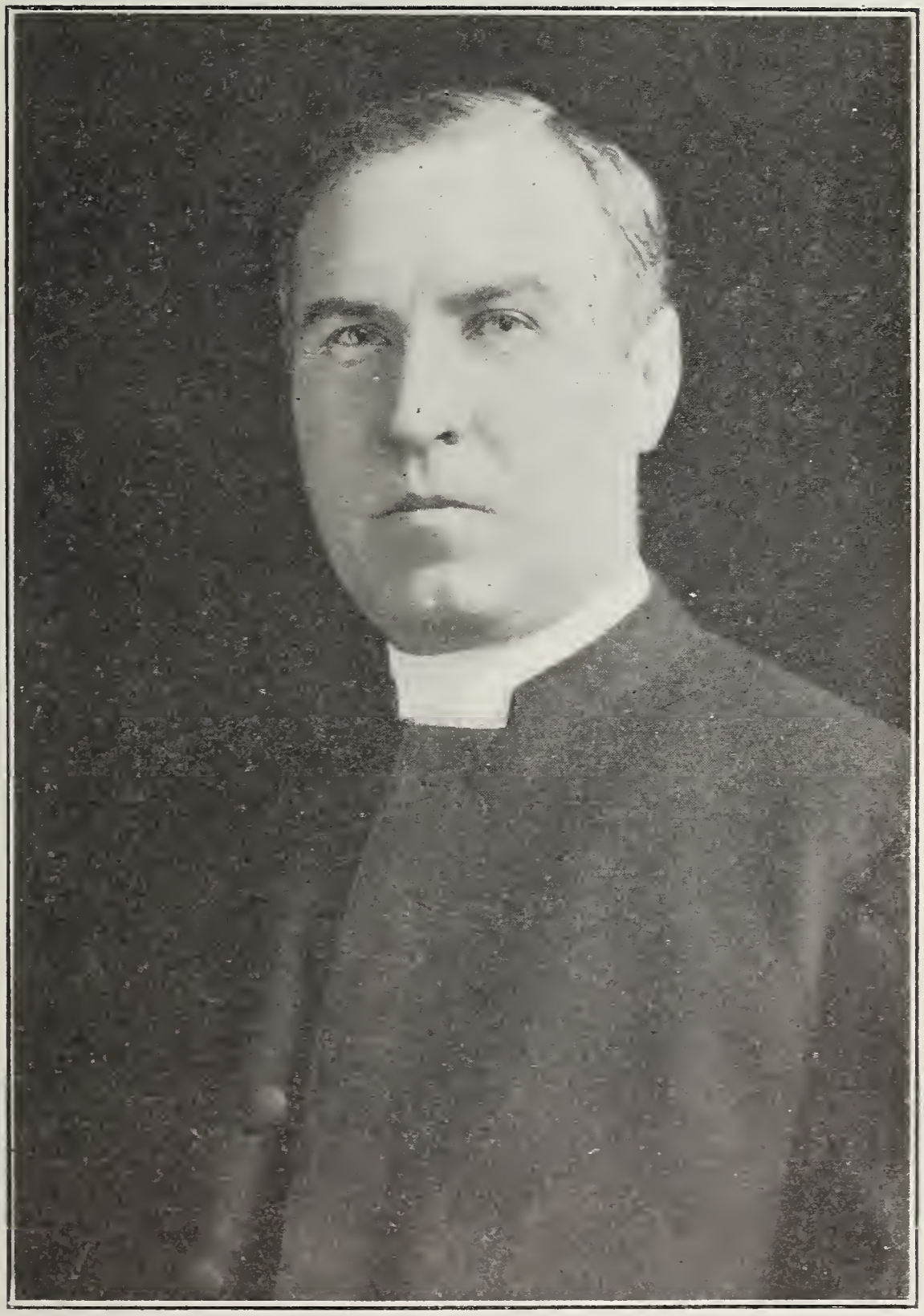
THE O. A. C. REVIEW

"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING"

VOL. XXXI AUGUST, 1919 No. 12



HONORABLE DR. CODY,
Minister of Education for Ontario.

The Month of Ripeness

Thou languid August noon,
  When all the slopes are sunny;
When with jocund, dreamy tune,
  The bees are in the honey.
When with purple flowers,
  A-flaming in the sun;
The drowsy hours
  Thread, one by one,
    The golden pleasaunces.

Then is heart's musing time,
  Then, of all the seasons,
Old earth for inward rhyme,
  Is full of golden reasons;
Then the ripening gourd,
  The sun-kissed garden wall,
The purpling hoard,
  The flocks that call
    Adown the distances.

Forgo the saddening tear,
  Thou month without alloy;
To younger seasons of the year,
  Resign the flag of joy;
But thou, be what thou art,
  Full brooding to the brim
Of dreams apart,
  And purlieus dim
    Of leafy silences.

—Wilfred Campbell.

The Holstein-Freisian.

Origin, Development and Characteristics.

By W. A. CLEMONS, Secretary the Holstein-Friesian Association.

The history of the Holstein-Friesian breed begins about 300 B. C. when the Friesians settled on the shores of the North Sea, occupying the present provinces of North Holland, Friesland, Groningen and Drenthe. It is believed that the Friesians came from Central Asia, bringing with them cattle which tradition tells us were white as snow. Thither also came a German tribe from Hesse, bringing with them black cattle, and settled on a nearby island, which was formed by three rivers and which they called Batavia. The Friesians and the Batavians intermarried and, as Caesar and Tacitus hint, cattle were probably given as dowry with the maidens. In any case the black and white cattle seem to have united producing a variegated black-and-white strain, and as the centuries rolled on, the Freisians reared their heavy milking cows, draining their low, swampy lands where they could be drained, keeping out the sea by building massive dykes, erecting their picturesque windmills and attending to their pastoral pursuits. In the hands of these thrifty farmers the Friesian cattle developed into the greatest milkers in the world. In 1864, according to Mr. Chenery, the first American Importer, the little country of Holland, about two-thirds the size of Nova Scotia, exported 32,000,000 pounds of butter and 61,000,000 pounds of cheese.

The history of the breed on this continent covers a period of less than seventy years. Animals were occasionally imported from Holland, especially by the early Dutch settlers, but these were not kept pure and soon disappeared from sight. To Mr. Winthrop W. Chenery of Massachusetts belongs the honor of establishing the first purbred herd in America. In 1852 he brought over a cow from Holland, and as he himself said, the extraordinary good qualities possessed by that cow led in 1857 to a further importation of a bull and two cows and in 1859 of four more cows. A year later all this little herd, except one bull, were slaughtered by the state authorities on account of a pleuro-pneumonia scare. But Mr. Chenery was a man of unconquerable determination and in 1861 brought over another bull and four cows. These formed the groundwork of the present Holstein stock in America.

Holsteins grew gradually in popularity in the United States until the early eighties when a genuine boom began. The banner year for importations was 1885 when 2538 animals were imported. From that time there was a gradual falling off until importations ceased altogether in 1905 on account of the prevalence of foot and mouth disease in Holland. The first cattle of this breed came to Canada in the winter of 1882-3, several breeders in widely separated localities making small importations at about the same time.

In 1894 the Holstein business took a fresh lease of life with the advent of the official test, when plans were matured for the establishment of a system

of testing under which representatives of agricultural colleges and experiment stations acted as supervisors, watching and weighing every milking and testing all by the recently invented Babcock test. Such tests were practically free from any suggestion of inaccuracy, and in a few years established beyond a doubt the fact that Holstein cows had no equals as milk and butter producers. When we consider that approximately 900,000 Holsteins have now been registered in America, all descended from the original imported stock and that annual registration of black-and-whites in both the United States and Canada now surpasses that of all other dairy breeds combined, we must admit the wonderful impetus given by official testing to the Holstein industry. Up to the present, forty-nine cows have made records of over 40 pounds butter in seven days, the highest being, Rolo Mercena DeKol with 51.93 pounds. Nearly 1200 have exceeded 30 pounds and many thousands have made records between 20 and 30 pounds. Holsteins hold all, or practically all, world's records for milk and butter productoin. At least 75 per cent of all the dairy tests held at exhibitions in America during the last 30 years have been won by Holsteins. The only tests for economy of production at the Ontario Winter Fair have been won by Holsteins. The largest records ever made by cows in a fair ground test were made by Holsteins.

Other breeds than the Holstein-Friesian have large-yield cows, but no other breed offers so large a percentage of large yielders. This characteristic, due to centuries of breeding for a purpose, has endowed the blood of this breed with wonderful potency in grading or crossing. The Holstein bull possesses a vigorous constitution, above, we believe, that of any other dairy breed. Hence his value for grading up ordinary dairy herds.

According to scientists who study the food subject exhaustively, the milk of the Holstein-Friesian cow is in chemical composition and mechanical make-up the nearest approach to human milk that can be found. Its butterfat is put up in fine globules that facilitate emulsion, digestion and assimiliation in the human system. Its other solids are so proportioned to the butterfat that the milk is practically a balanced ration for the infant as well as the adult.

A notable characteristic of the Holstein is their adaptability to varying climatic conditions. They were brought to their present high standard on the rich meadows of Holland, but they lose nothing by removal to other countries. They thrive in the great dairy districts of Ontario and Quebec, on the hills and in the valleys of the eastern provinces, on the western prairies and on the rich alluvial lands of the Pacific slope. Purebred Holsteins are now becoming exceedingly popular in Great Britain although for years it has been impossible to import live stock from the continent, except one importation made in 1914 by special arrangement with the Board of Agriculture. In Belgium, Germany, Denmark, Sweden and Russia, Holsteins have done remarkably well. They are the favorite cattle of South Africa and are numerous in New Zealand. In Australia, the West Indies, Japan and China they are becoming well known.

On account of the scarcity and high prices of all kinds of meats, the production of veal is now adding an im-

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Agriculture as Education.

Summary of an address by JOHN DEARNESS, M. A , Principal of the Normal School, London, Ont.

IN the Report of the Minister of Education (for Ontario) recently published it is stated that "there always has been and is still a feeling among the farmers themselves in opposition to the introduction of agriculture" into the public schools. For the statement—one that is often made elsewhere—it is worth while inquiring into the reasons. Permit me to say that I was raised on the farm, have lived with farmers a good part of my life, and believe that I can see the situation from the farmer's view point. What he disparages is that his neighbor's daughter, possibly a city girl, hardly out of her 'teens, should set herself up as an authority on his life-long trade or pretend to teach children about the mistakes their father is making in farming. On the other hand if she makes no claim to know the right culture of various crops, the methods of improving herds, and selecting and mixing the suitable fertilizers, but confines her activities to impaling insects, making drawings or collections of seeds, mounting various museum specimens, and cultivating a few plots of flowers and vegetables in the name of a school garden, he thinks his children's time may be more profitably employed in what he calls the essentials. I do not know of a single instance where the subject of agriculture was properly introduced at the first trial of it that it met with any objection from a farmer.

A Liberalizing Value

The subject of agriculture can be taught so as to have a liberalizing value like language and science, a socializing value like civics and history, and a vocational value. Prematurely forcing the vocational phases of the subject is the chief shortcoming of our present day efforts. The experience, and opportunities for experience, of children living on the farm—and this as well as the rural-home view point should be intimately known by every rural teacher—can and should be used to deepen the children's sympathies, multiply their interests, and develop their powers of investigation. The gardens at school and homes and the near-by farm-yards are the almost sufficient laboratories for the realization of these aims.

The use of the time of children below the high school entrance standard in filling note-books with vocational information in paragraphs about breeds of live-stock, formulae for insecticides, rules for mixing fertilizers, etc., is comparable to the nearly obsolete practice of memorizing lists of counties, rivers and capes in the geography lesson. The average child under fourteen would derive much more benefit from studying in the school-yard under intelligent direction the adaptations of the hoof, mouth, and other organs of a cow, even though she be a scrub, than by looking at pictures and learning comparisons of Hol-

steins with Shorthorns. The sympathetic, first-hand study of a useful farm animal that responds to human care and kindness and that can, like the children themselves, be hungry and afraid, can get angry and fight for its young, is incomparably better for public school grades than speculating on the prospective profits of preparing it for the butcher's block.

It is one thing for teachers to acquire knowledge of crops and animals, soils and insects from manuals and lectures, but quite another thing to learn how to use this knowledge for the education of public school children. If we had agricultural high schools with ample areas of land and farm buildings, in these we might very well attempt vocational agriculture. In the public schools there is very little of agriculture that cannot be taught and should not be taught with a liberalizing and socializing aim as nature study, granting that the term nature study is properly understood.

Agriculture and Nature Study

In the Report on the Agricultural Instruction Act for the year 1917-1918 we are told that "in Ontario agriculture and nature study are two distinct subjects," while "in British Columbia elementary agriculture is regarded by the educational authorities as occupying a dual position. (1) for its own sake as a preparation for practical work in farming, (2) for the broader educational or disciplinary value. In the lower grades the latter aim is obviously most important and the former merely incidental, while in the advanced and high school grades the order is reversed and the scientific and economic viewpoint are uppermost. In the lower grades the work begins as an intimate personal study of environment, more or less informal in its character and closely adapting itself to those interests that predominate in the developing child's mind. In other words, the study of the forms, forces, and relationships of the child's natural environment afford the logical and proper basis for further advancement along the line of agricultural study. In this sense elementary agriculture is merely applied nature study. The agricultural work of the public schools, which includes the entire programme of nature study and school gardening, is the logical antecedent of a more scientific study of agriculture in the high schools."

Every student of the pedagogics of agriculture for children in the elementary schools will certainly endorse the British Columbia attitude. Indeed it is hard to see why some of the promoters of agriculture in the public schools are so much afraid of its being confused with nature study. Making lists of topics that can be taught as nature study which are not covered by the term agriculture proves nothing to the point. It is easy to make a list of agricultural topics that can be taught and should be taught as nature study; and, for children living on the farm, by the time this list is completed it will be found that as much time as can be spared for nature study is taken up. In this way good teaching in both subjects is economically provided for.

The Development of the Child

The manual on this subject, although written mainly with the vo-

cational aim in view, starts out with this valuable truth that the development of the child is more important than the information with which his memory may be loaded. Now the mental development of a child naturally follows the satisfaction of his desire to know the whys and wherefores of the facts, especially when the knowledge comes through his own research. I heard a speaker, emphasizing the vocational side, say to a body of teachers that if the class asks you why the mixture in the Babcock bottle becomes hot tell them not to mind that; make them expert in the art. This seems pedagogical heresy; better not to trouble with Babcock's test at all than to use it to quiet the spirit of investigation.

The true teacher would say: I am glad that you asked that question; I do not know the reason myself, but now that you have asked it let us both try to find out. Work ceases to be drudgery when the worker's attitude towards it is inquisitive, experimental, interested. It should be kept in mind that the elementary school is foundational and not immediately vocational in either city or country. Agricultural nature study in the public school bears the same relation to farming that manual training does to carpentry; it is good for everybody whether for life on the farm or elsewhere.

No child is old enough to study agriculture who is too young to study it by laboratory method. That is where the importance of gardening is determined. A school garden is not a good laboratory without weeds and insects, fertilized and unfertilized plots, plants too close to each other and too far apart, in short without the exhibits of mistakes and their corrections. The proper use of the school garden is not to produce big cabbage-heads but well-developed children's heads and bodies too. Hence in the school garden there ought to be plots for single pupils or small groups of pupils and larger experimental plots for which the teacher and the school as a whole are responsible. In rural schools there is opportunity for nearly every pupil to have a home garden and here is the place for the application of lessons learned in the school garden. The home garden should be as large as practicable, clean and well cultivated, and well filled with well-grown vegetables and fine flowers. The teacher should have detailed knowledge of and interest in all the pupils' home gardens. It is from these that the articles for exhibition at the school fairs should be taken.

The Agricultural Project

The home garden, the "agricultural project," and the school fair can be intimately related. They have large educational possibilities if rightly managed; indeed the combination can then hardly be rated too highly. There is, however, occasion for a word of caution. Every up-to-date speaker and writer of school management lauds co-operation in contrast with competition as a motive in social and moral education. The school fair is stressing rivalry and competition so strongly that in some instances the stories of dishonesty among competitors have travelled farther than the reports of the merits of the articles exhibited. One would like for once to attend a school fair tingling with the spirit

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Temperature of Atmosphere and Its Relation to Agriculture.

By R. C. MOFFATT, M.A., Department of Physics, O.A.C.

ATMOSPHERIC temperature has ever been a matter of much concern to agirculturists. A high temperature, although necessary and beneficial in some cases, is detrimental in others, but in each case requires a liberal amount of precipitation. On the other hand the destructive frost of late spring and early autumn is an unpleasant but frequent visitor to the agriculturalist. Man has harnessed much of nature and made it his servant, but as yet no one can say that man can control the atmospheric temperature, although he may modify it in a few instances or overccme some of it's disastrous effects.

The primary source of all heat is the sun. Old Sol shines and heat and light travel the intervening 92,000,000 miles of space with a velocity of 186,000 miles per second. Some of this heat is absorbed in its transit by dust particles, water-vapour and the air itself, thus increasing the temperature of the air. The remainder is absorbed by the earth and thus raises its temperature and the temperature of the air in contact with it. The latter has the greatest effect on air temperature.

Local conditions have a great effect on temperature. Water requires a bout five times the quantity to raise its temperature one degree as does soil, thus large water areas tend to prevent high temperatures. Also, as there is always slow evaporation and it requires about 300 times as much heat to evaporate one gallon of water as to raise its temperature one degree, the temperature is kept more moderate. Large swamp and bush areas free large quantities of water to the atmosphere, as well as retaining the spring water longer in the country and consequently have a modern effect.

Frosts are also prevented by water, swamp and bush areas because they prcduce a high humidity and are not so readily cooled as large land areas. Air of high humidity acts as a better blanket as it were, than the dry air. Also the temperature at which dew is formed is higher and the lowering of the temperature may be sufficiently arrested to eliminate any danger of frosts.

The type of agriculture in any section is decided by its air temperature. Any new crops which are imported must first become acclimatized to that section before they are a success. Winter cereal crops of Ontario and hay crops are not affected by extremely low temperature unless growth is started by warm weather followed by low temperature or by heaving of the soil about the roots. Late spring and early fall frosts cause much damage. If the temperature does not drop below 28 degrees Fahrenheit only the tenderest vegetation suffers, but, if below it, wholesale destruction results. High temperatures cause strong evaporation from the leaves of plants and thus the need of a large amount of precipitation to prevent stunting or death itself.

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Vocational Agricultural Education in Minnesota

Under the Smith-Hughes Act, with a few remarks that are closely associated with the subject.

By W. F. GARDINER, B. S. A.

IN August, 1918, Dr. G. C. Creelman handed me a letter. It was accompanied by a few words and a smile that was rather difficult to interpret. I have often wondered since if he knew better than I did myself what was good for me, and was willing to take a chance in sending me out of Ontario. The result of the letter and the interview was that I was plucked from a niche in Canadian affairs, and planted in another one several hundred miles westward, in a foreign country, among strange people and under new working conditions.

This section of Minnesota is settled by a large number of Norwegians and Swedes. They are a fine class of people, with certain standards of their own to which one must readily adapt himself, if he is to do fairly good work among them.

Before rambling on any farther I might say that your present energetic, news-hunting Editor-in-Chief (Woof!—Ed.) asked for an article on my work, and one was promised in a moment of great weakness. This write-up is supposed to relieve me of this obligation.

I am at present teaching Agriculture in a High School and four associated schools. I will try in this article to give you an idea of some of the conditions under which we work. If you, dear reader, are interested in this line of work, read on; you may obtain a hazy idea of conditions here. If, however, you are not interested, it might be wiser not to let your eyes wander down past the first stop.

My knowledge of Vocational Agriculture, a few months ago, was nebulous, to say the least. Now, I wonder why this branch of education is so little known in Canada.

The Vocational Agricultural Education in Minnesota, previous to 1917, was not considered by the educational leaders as altogether satisfactory, for many reasons; one being that sufficient salary was not paid the instructors to attract the really first-class men.

It was a twelve month job, with small opportunity of making any outside money. The school term was one of nine months. This kept many farm boys from attending school. The instructors were kept so busy with class-room and laboratory work that very little time remained for demonstration work outside of the class-room.

Many of these unfavorable conditions have since been removed by the Smith-Hughes Act. This Act was passed by the Sixty-Fourth Congress, on February 23rd, 1917. It provides for co-operation between the Federal Government with the several States working under this Act. Its object is the promotion of Vocational Education in the fields of Agricul-

ture, Home Economics, and the different Trades.

An annual appropriation is made to each State, after they have fulfilled certain conditions laid down by the Federal Government.

Each State has its own plan for Vocational Education, but the plans differ only in some minor points. The agricultural instructors are paid as follows: Half by the State and half by the School District. The other expenditures of the Department are paid on a similar basis. Up to a certain maximum amount a sum equal to half the expenditure of the State is received from the Federal Government.

Working under this Act, each State has a Board of Directors and an Agricultural Supervisor, whose duty it is to visit the Agricultural Department in the schools which receive state aid. He checks up the work done, offers suggestions and passes on all reports sent in by the Department.

One of the provisions of the Smith-Hughes Act is that schools must provide at least six months' Class-room and Laboratory work and six months supervised Project work in Agriculture.

The success of the Department depends largely on the judgment displayed in the supervision of the different projects. By supervised project work is meant, that each pupil, besides his regular class-room work, must choose, and carry out, some project in connection with the farm. The value of the project depends a great deal on how it is planned and carried out, with the tactful assistance of the supervisor. This work is done during the winter months or in the spring and summer, after the school term has finished. It might be in place to cite an example of this work. For example, three of my pupils in the Animal Husbandry class are looking after a minimum number of four dairy cows each. A plan of what they are supposed to do is made out before starting the project.

All milk is weighed, tested, and a strict account is kept of the manner in which it is fed or sold. All feed given is recorded and credited at its regular market price when fed. Labor, cost of feed, interest on money invested, etc., is charged up against the cow. This project is now going into the fourth month, and some of the results have been rather surprising.

The minimum length of the full course is two years, of not less than six months of class-room instruction, and six months of supervised practice in agriculture, either on a farm or other suitable place, such as a school garden. The minimum number of subjects taught under this Act are as follows: Field Crops, Animal Husbandry, Dairying, Farm Accounts and Farm Management, Soils, Horticulture and Farm Mechanics. Besides the above subjects, instructors have generally part of their time set aside for the following subjects: Economic Botany, Economic Entomology and Apiculture.

The time is divided roughly as given below: Fifty per cent. to strictly agricultural subjects; thirty to thirty-five per cent. to related subjects, and fifteen to twenty per cent. to Academic subjects.

Each school is supposed to emphasize the field of Agriculture most common or profitable in the school district. For instance, Field Crops,

Dairy Cattle, Hogs and Poultry had more stress put on them than Horses or Sheep, it being a rather rare sight to see a flock of sheep around here, for various reasons.

Now that a general survey has been given it might not be amiss to narrow the horizon down somewhat, until a few sentences are given to show how the individual instructor fits into the life of the community.

The instructor must be prepared to do almost anything ranging from ordering alfalfa seed to teaching a Sunday School class, or perhaps acting as a companion to the lady chaperon. In fact the letters B.S.A. must for a few years at least mean "Beginner in the Science of Agriculture," rather than the more stately degree of "Bachelor of the Science of Agriculture." Most schools conduct a short course sometime throughout the winter months, and, when other work becomes slack. There is always a standing invitation to attend the Farmers' Clubs which meet monthly or bi-monthly.

The Department is always open and ready to test milk, cream, soil or seeds; to identify weeds seeds, weeds, fungus diseases and insects. During the summer the work slacks up somewhat. Most of the time can be profitably spent in supervising the project work and the Boys' and Girls' Clubs in the vicinity. All of these clubs are under the control of a State Club Leader, and under him the Agricultural Instructor and County Agents act as local leaders. The County Agents' duties are similar to those of the District Representative in Ontario. The local man's duties during the summer months is quite similar to the County Agents, but of course the district covered is less extensive.

The Boys' and Girls' Club work in Minnesota is pretty well advanced, and is officially encouraged by both the Federal and the State Officials. In this one locality there are a trifle over forty members in these clubs. Special emphasis, in this county, is laid on the following Clubs: Corn, Pig, Garden and Canning, Pure Bred Dairy Calves, and the Bread Baking Club. To be officially recognized by the Federal Government at least five members in each club must register before May the first. It is the duty of the local leader to get the members signed up and organized into clubs; help draw up their constitution and by-laws and keep the members interested, which can be partly accomplished by having monthly or bi-monthly meetings with good outside speakers on the programme; planning for the next exhibit at the following fall fair; getting up debates among the members of the clubs and between individual clubs, etc.

Just a word or so more before closing. If any of you readers ever intend teaching Agriculture in public or High Schools, (before leaving the O.A.C.) go out into the experimental plots and observe how the demonstration plots are arranged; size of plots, color and size of stakes, etc. This knowledge may come in handy. I have seen a number over here that were very poorly laid out. I just finished ripping out fifty stakes with the circular saw for the school garden a short time ago. Perhaps this is the main cause of this digression.

Trials and Tribulations of a Drainage Surveyor.

By R. T. JUKES, '21.

WE remember reading somewhere (in Shakespeare we think) that Job had boils; we have heard a rumor that tobacco is the next "vice" to be banned; there is a report of college professors losing money in food investments,—such trials and tribulations must be disconcerting but to a Knight of the Tripod they pale into insignificance when he thinks of how and where he spent yesterday, and where and how he will probably spend tomorrow.

It has been said that variety is the spice of life, but when one has to take the spice tin and swallow its contents it is easily realized that there can be such a thing as too much of this spicy variety.

Starting with beds for instance (which is where we all start and end each day), it is easy to get used to a bed, whether hard or soft. But to sleep in a Pullman one night, a feather bed the next, then on a springless couch the next night, upstairs under a steel-shingled roof, after a 96-in-the-shade July day, followed by a night of chasing mice out of a straw-stuffed tick,—if this is variety give me, well,—even married life.

But sometimes we sleep at the local hotel, oh joy! To call that friendly little companion a "cimex lectularius" does not make its bark worse than its bite. We spend a night, once described by Mark Twain as "hunting chamois." —hit him and he's not there. This pleasant little nocturnal passtime may be indulged in at any rural Hotel Bolsheviki (1,000 rooms and 1 bath) we know, we've been there.

But we spend only a small fraction of the time in bed. We arise, descend to breakfast, pull the hairs out of our oatmeal porridge and drink a cup of green tea. Thus fortified we sally forth, ready to survey anything that dares to cross the horizon.

The tall grain in the early morning is wet, but we take it as our dew—it is our duty. We wade in with steel tape and stakes to start our eight-hour day, eight hours before dinner and eight hours after.

Noon comes. While eating dinner we perform a little mental mathematics:—

Problem.—If the number of flies in the room increases in direct ratio with the number of children in the family, who will ultimately get most of the dinner?

Answer,—Not the drainage man.

In the afternoon the sun comes out hot. Gentle reader, did you ever hear of "sweat bees"? This summer they must have mobilized and declared war on drainage surveyors. We have counted as many as thirty on our instrument at once. But they won't stay on the instrument. They have an uncanny gift of alighting on the arms, hands, neck, etc., without being felt. Then if they are touched by a shirt sleeve they dig in their "business end" and escape amid a haze of imprecations. They are wise. They believe in "touching wood." Alighting on the tripod they

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Small Livestock

of England, France, Belgium and Prussia.

By Capt. S. G. Freeborn, M. C.

IN the British Isles, the livestock of the landless and small stock of the small-holder is almost exclusively poultry or pigs. On the Continent we find also rabbits and milch-goats adding to the limited variety of animal produce that can be economically obtained from utilization of household waste combined with purchased feeds in the case of the landless and in addition to garden refuse, soiling crops, headland and hedge-row trimmings in the case of the small-holder. During the war Britain was compelled to ration poultry and pigs as to the amount of purchasable grains and common feeding-stuffs they could be allowed. This brought the tame hutch-fed rabbit into favor as a conservationist and the idea met with much approval in a country where the good people did not like to pull their waist belts in that extra hole or two.

Milch-goats have also been more seriously considered but, while the British Isles include among their numerous types of native livestock several breeds of goats, English, Irish, Scotch and Welsh, and Ireland accounts for about a quarter of a million head, none have the milk producing reputation of the best Continental breeds, and these are debarred from import because of Foot and Mouth disease, a disease to which goats have exhibited a high resistance and, in the British Isles, a few instances of remarkably immunity. The existing stocks of high grade milch-goats in Britain are mostly of the Toggenburg and Anglo-Nubian breeds. Good strains of these are reported unable to supply the demand for stock and owing to the import restrictions prices rule high.

Many will recollect the mining towns of the Lens coal-fields, Avion, Leivin, Angres, Calonne, and "Cites" St. Theodore, St. Edouard, St. Pierre, where the rabbit-hutch was a component of the architectural scheme in the construction of those standard "cite" homes for the miners. Frequently it was a tile roofed, gable ended, brick outhouse, built in the corners of four brickyards, about 12 ft. long, 6 ft. wide, 6 ft. to the plate, 3 storeyed, 8 hutches in each flat, giving 6 hutches to each home. The cottages of the French and Belgian laborers would probably have a shed roof lean-to with a stack of hutches of packing box style. The housewife and children gathered greenery for the rabbits on the roadsides and along the railways and canal banks or wherever permitted. Grasses and clovers with weeds such as chicory, mustard, dandelion, plantain, sow thistle, chickweed, marshmallow, thyme, the young growth of gorse and heather and the stalks and roots of bracken and couch grass, as well as tree-prunnings, brought home when the day's labor was done in the field, all was neat in the pot when bunny had transformed it.

The small-holder would grow a patch of alfalfa as a soiling crop to supplement the garden waste in summer while well cured meadow hay and sugar beets with cooked small potatoes furnished winter keep. The landless exchanged his or her labor for hay for the rabbits and vegetables to be used in common.

With a bit of bacon fat to compensate the natural dryness of the rabbit meat the home stewpot furnished the laborer many a savory dish. Quite a surplus was marketed. An interesting recollection is the old French town of Aire on a bright day in early fall, when hundreds of live rabbits were being offered for sale by the peasantry. "Samples" sat in rows on the tables, secured from hopping off by a strip of cloth encircling the hindfeet and tied over the loins. Buyers examined for marketable size, fleshing of back and thighs, and lightness of offal with the same care as a butcher buying lambs in the stock yards.

During 1911-12-13 England imported foreign rabbit meat to the extent of 1,482,169 cwt., valued at £2,111,144. In 1911, at the National Dairy Show, the English Table Rabbit Club was formed to encourage the breeding and use of rabbits for food. In 1913 they were incorporated as the British Table Rabbit Association, Ltd., to provide healthy breeding stock of suitable type and facilitate the marketing of carcases and skins. This movement began in Blackburn and Bradford, industrial centres of the North of England, under conditions closely akin to those of Northern France around Lille, Roubaix, Turcoing, Lens.

The writer holds no brief for the rabbit. In the country that produces the Ostend rabbit carcase for the British market one must watch not to trip over the pump-handle and tumble into the cesspool or midden. Successive generations of the peasantry have become auto-inoculated against the consequences of such laxity in hygiene. The low resistance of the rabbit to diseases in general and their susceptibility to tuberculosis in particular is not going to worry these folk. Where killers and butchers in the public abattoirs frankly tell you that 80 per cent. of the cows that come to slaughter are tubercular, and that many old horses show the disease, and it is met in fowl flocks on every hand, familiarity with the "white plague" would seem to have bred either resignation to the dangers or indifference to the practices that increase the prevalence of this most insidious disease.

At a stock sales ring near Stranraer, a port of entry for Irish stockers into Scotland we listened with amusement and interest to a heated argument as to whether the wild rabbits on the pastures infected the cattle with tuberculosis or did the cattle affect the rabbits. Old butchers in the British Isles recollect when they were apprentice boys seeing "grapes" in the carcases of the cottagers' cows thought to be due to "too much hot feed" and later ascribed as an evil due to careless inbreeding. Their estimates of the prevalence of tuberculosis in mature cattle, particularly dairy cows, today, are startling in their significance. Whether the wild rabbit has had anything to do with the spread of tuberculosis among cattle, will some scientific authority enlighten us?

On the other hand, Continental

milch goats impress one, sort of butt in on the conscience as it were, as having valuable inherent qualities, even when we concede that our dairy cows will furnish their product under favorable conditions at a very much cheaper cost.

Germany appreciated milch-goats before the war to the extent of holding about 4 millions. Prussia and the Rhineland were credited with 1 1-2 millions. Probably the goat meat was more appreciated during the war, when a hungry German soldiery was dining occasionally on pet dogs and cats picked up on the lines of communication. Goats are not omnivorous but many a Rhineland goat lengthened its days by ability to assimilate bracken, gorse, heather, pond bulrush roots, potato haulms, leaf hay and twigfodder, acorns and chestnuts. Figures will prove anything and particularly do some German figures from their agricultural statistics require the proverbal grain of salt for digestion. The German Government set the seal of their official approval upon the milch-goat industry and upon the nanny as a wet-nurse for the young of the Fatherland. Figures were advertised which indicated that in the provinces where the proportion of milch goats was largest per population there the percentage of early infant mortality was smallest. The slaughtering of their milch goats for meat before the coming of the Army of Occupation to the Rhineland was lamented by Prussians when discussing recently the heavy infant mortality.

A good milch-goat could be recommended for certain domestic purposes in this country although goat-farming would not likely at present be a profitable venture. The virtues of the best breeds and strains are little known, there is no demand, on anything like a commercial scale, for goat's milk. Compared with the dairy cow the milch goat must be at a disadvantage in cost of production on a commercial scale, and, though there is recent interest, it is very doubtful, if the breeding and rearing of stock for sale in Canada can be recommended as a profitable enterprise for small capital. But, if this article interests any public spirited person to take up milch-goats as a hobby, the writer will feel well repaid for his interest in their particular and somewhat exclusive virtues as milk-producers.

Compared with the cow the goat has some accommodating propensities. On account of its smaller size household waste contributes a greater proportion of its upkeep. It is more readily housed when space is limited and will stand confinement with soiling feeds and tethering to graze without risk of tuberculosis to which the goats seems practically immune. The Mon Dore district in France offers one of the best expositions of goat husbandry and here the goats are never pastured at all, but thrive on stall feeding with soiling and a bit of roadside exercise. The Paris Abattoirs slaughter thousands of goats and credit them with a clean bill of health as regards tuberculosis. Bottle-fed infants have been changed from cows' milk to goats' milk, and found to assimilate it well. The average composition of goats' milk is probably closer to human milk than that of the cow, though wide variations may occur. In addition to a higher cream content the fat globules are much

smaller than most cows milk, and is a more perfect state for emulsion. On curdling during digestion goats milk forms a curd of very small, light flakes which are soft, pliable, and soluble, affording during digestion a closer comparison to human milk than does the denser, tougher, and more adhering curd of cow's milk.

Goat's milk taken and cared for hygienically has neither goaty odor or objectionable taste. Being richer than cow's milk there will be a difference the same as between whole and skim-milk. There is, however, a peculiar, concentrated, creamy richness of flavor that is most noticeable when used in place of cow's milk in tea, coffee, cocoa or in custards. This can not be due to the higher fat content alone, because with some of the cream removed or compared with very rich cow's milk the rich creamy flavor is still quite marked. Any objectionable flavor can be corrected by the same attention to dairy hygiene and sanitation that is required for well flavored cow's milk.

In view of the fact that tuberculosis particularly in dairy cattle is increasing to a great extent and the consequent risk of infection of bottle-fed infants or predisposed adults or the re-infection of children or adults suffering or convalescent from tuberculosis the value of a cow's milk diet for growth in the young or maintenance and repair in the debilitated is discounted by some authorities in general medical practice. Pasteurized cow's milk is not always so digestible and is sometimes difficult to obtain. The wisdom of the oldtime prescription of goat's milk for persons threatened with a decline seem to be well supported by the evidence of bacteriologists of the present day as to the comparative immunity of goats, and consequently goat's milk, from the germs of tuberculosis.

Goats can be used for light draft animals as playmates for children. They have been seen pastured alternately with the hens to keep the grass short in sodded poultry runs. But the points that might appeal to persons favorably situated, who might be induced to go to the outlay involved in establishing in this country a herd of improved milch goats like the best of Europe, are briefly summarized:—

1. Almost complete immunity from tuberculosis.
2. Easy digestibility of milk, especially by infants.
3. Utility as a milk supply for summer cottage or suburban home.

"Venerable to me is the hard hand, crooked, coarse; wherein lies, notwithstanding, a cunning virtue, indefeasibly royal, as of the sceptre of this planet. Venerable, too, is the rugged face, all weather tanned, with its rude intelligence; for it is the face of a man living manlike."

— *Thomas Carlyyle.*

A Review of Fruit Growing in the Annapolis Valley.

By Miss S. Chase, '20.

ALTHOUGH fruit may be grown in many parts of Nova Scotia for local consumption, the only commercial district is that of the Annapolis Valley, using the latter in its broad sense. It is situated in the north-western part of the Province along the Bay of Fundy, but separated from the latter by a ridge of about 500 feet, known as the North Mountain. The other side of the valley is bounded by a similar ridge, known as the South Mountain.

This valley is about 100 miles long and 20 miles in width at the eastern end, where the Minas Basin forms the boundary, then gradually narrows as one goes west, until the two ridges meet, with the exception of the "gap" at Digby. Thus the natural situation is ideal for fruit, as the valley is sheltered from the cold north winds, and owing to the maritime situation, the climate does not reach either extreme. The rainfall is always sufficient and winter injury is practically unknown.

The upland soils vary from clay through all intermediate soils to sand in some parts, all but the two extremes being suitable for fruit-growing.

In the Apple Country of Nova Scotia.

In the eastern and western ends there are marsh lands, which were salt marshes, covered by the sea at high tides. At the time the French came to this country, they built dykes to shut out the sea, and an

ideal land for hay was the result. Thus in these parts of the valley the farming is mixed and in case of a failure of the fruit crop, the farmer can fall back on his beef and dairy cattle.

As for kinds of fruit grown, although pears, plums, sweet and sour cherries, and small bush fruits may be grown to perfection, the marketing facilities are not such as to pay any one to make a specialty of any of them, the nearest city in Canada of any size being Montreal, which is twenty-four to thirty-six hours by rail, depending on the route, making it impossible to compete with Ontario fruit. If it were not for the high tariff the Boston market would be available at a comparatively low express rate, as over half the distance is by water.

Thus the apple is the one staple fruit. The largest crop was in 1911 when it reached 1,730,000 barrels. Since then, owing to insect pests, weather conditions and lack of care during the war, the crop has not even reached the 1,000,000 mark, but the prospects for the coming harvest are good, and the record yield may be reached and passed.

The nearness to an all year open port, which is the nearest port to Europe, gives the Annapolis region an advantage over all other districts on this side of the Atlantic. Inland rail and ocean freight rates were from 53c to 89c per bbl. in 1915-16.

Owing to unsettled conditions during the last five years no new orchards were set out, but after last year's large returns a new interest has been awakened and new orchards are being set and old orchards are receiving the best attention by the wide-awake fruit growers, both in regard to cultivation and spraying—each being of equal importance in the production of fruit of No. 1 quality.

The climate being humid, greater care has to be taken in choice and method of application of spray materials than in drier climates. Lime sulphur has been almost abandoned this year as a fungicide, as much burning of foliage and dropping of fruit has been caused by it in the past. The "Thompson Bordeaux" excess of lime and reduction in copper sulphate has been substituted. It is too soon to give results. A cold damp spell just as the leaves were opening gave ideal conditions for the development of "black spot," and every orchard which did not receive the semi-dormant spray is more or less infected, and in orchards which did not receive any spray, the more tender varieties are nearly all spotted.

With the introduction of the low set light tractor the problem of orchard cultivation vanishes, as such a tractor will harrow twenty-five acres a day. Clean cultivation until the first of July is practised by most growers. A cover crop of buckwheat, oats, vetch or crimson clover is then sown and plowed under in the fall or spring, according to the variety of cover crop sown. Another method known as the "Johnson Method" has been followed in the past, but upon the appearance of the pest known as the "green apple bug" it had to be given up, as clean cultivation was a necessary condition for its control, whereas in the "Johnson Method" alternate spaces were left in clover, each season and therefore every two years the whole orchard received a heavy crop of clover

ploughed in, which supplied necessary humus and nitrogen.

The close planting of semi-dwarf trees of early bearing varieties has been tried by some and is proving very successful. This method does away with the long wait for an orchard to come into bearing, and the operations of spraying, thinning and picking are much more easily done than when the orchard is fifty feet high, which is the case in many of the old orchards.

The one apple for which the valley is famous is the Gravenstein. No fall or early winter apple can excel it. The King is another variety which is widely grown, and which is very popular in the London market at Christmas time. Ribston Pippin is perhaps the apple which is most widely grown, being a good bearer and also a favorite with the English.

Twenty-five per cent. of the apples are now packed and marketed by the United Fruit Companies of Nova Scotia. The establishment and building up of which has been one of the greatest assets to the fruit industry in the Valley, to the small grower especially. In former times the small grower having no warehouse to store his crop had to sell to the buyer in the fall at a price set by the latter. Now this man hauls his fruit directly from his orchard to a warehouse belonging partly to him and managed by a man chosen by the members. Here the fruit is well packed and shipped at the proper season. The number of barrels of each grade of each variety of every grower is kept separate. At the end of the season the returns are averaged up, and each member receives the same price for the same grade and variety. Thus the first middleman's profit is eliminated. A flat rate is charged per barrel for handling, which pays for management and overhead expenses.

The strawberry is the one small fruit which is grown commercially, a good market being found in local towns and cities, since the crop in other parts of the province and adjacent provinces is from 10 days to 2 weeks later. It too fills in well with apples, as the strawberries may be grown in the young orchard for the first fifteen or twenty years.

Agricultural Education in the United States.

MR. A. E. V. RICHARDSON, M. A., B. Sc., Agricultural Superintendent of Australia, after spending almost a year in the United States studying agricultural organization and methods has expressed his view of agricultural education in the American Republic.

"The Americans have promoted higher education in all its branches in order to be furnished with a supply of able scientists, engineers, chemists, organizers and administrators, on whose activity the future of the nation largely depends.

"The Puritans who founded the American colonies were keenly interested in national education. The fathers of the republic believed that only a well-informed and well-educated nation could be happy, prosperous and free, and they always acted in accordance with that conviction. From the earliest days the expenditure of the Americans on education has been prodigious, and it has been increasing rapidly in recent years.

"Last year the nation spent £122,000,000 on education—twice as much as Great Britain spent on the Army and Navy the year before the war. The United States spent on education as much as Great Britain spent prior to the war under the budget on its Army, Navy, whole civil service, public education, national insurance, and interest and sinking fund on the national debt.

"The willingness to provide liberally for education, no matter whether it be elementary, high school education, or the training of the artisan, the agriculturist, or the man of commerce, seems to spring from the conviction that a well rounded and comprehensive system of education, freely available for all citizens, is essential for the maintenance and well-being of a democracy. The Americans also hold that an effiient system of agricultural education is an absolute necessity for national progress. They contend that money spent on agricultural education and development is a wise national investment which is repaid to the nation many times over in the form of increased national prosperity.

"The Americans have the reputation of being a business-like and practical nation, requiring a dollar's worth of result for every dollar of expenditure; but on no form of education have the individual States or the Federal Government spent money so freely as on agricultural education.

"The bill for agricultural education, research, and extension approximates £12,000,000. This is a large sum to spend on agricultural education. What, it may be asked, do the Americans expect in return for this expenditure? Let me briefly set out their objective in agricultural education, and how they propose realizing it.

"What is the aim of agricultural education in the United States? I asked many of the leading agricultural authorities this question, and they were all in general agreement upon the fundamental aims. Dr. Davenport, one of America's foremost agriculturists, put

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"Horticulture in the Canadian North West."

By W. J. Strong, '20.

"THE Canadian prairie is not all wheat and cattle; many trees, shrubs and flowers, together with vegetables and fruits, are grown successfully."

An Easterner crossing the Canadian prairie for the first time would be greatly impressed by the vastness of the country, the huge grain fields stretching away to the horizon and by the great herds of cattle and horses growing fat and sleek on the rich prairie grasses, but he would also feel that something was lacking. He would soon discover that it was the large trees, the old snake fences and fields of stumps of Eastern Canada that he missed, and it would not take a very observant person long to see that there were few berry plantations or orchards and, in many parts, no sign of a garden; and if he was of a contemplative turn of mind he would possibly come to the conclusion that the Canadian Northwest was not a horticultural country. This conclusion would be partially correct; but while not particularly adapted to horticultural pursuits the prairies have possibilities which should not be overlooked.

Generally speaking the prairie country may be divided into two main sections according to the precipitation. The country south and west of Moose Jaw and Saskatchewan, and most of Alberta south of the Red Deer River, has less precipitation than the rest of the country and in consequence there is no natural tree growth except along the bottoms of the river valleys. This part of the country is often spoken of as the "Dry Belt." Some years at certain points the precipitation during the growing season has been as low as 2 or 3 inches, and the total for the year only 6 or 7 inches.

It is in this "Dry Belt" that several irrigation projects have been undertaken, namely, the Canadian Pacific Railway Company's irrigation scheme, which aims at bringing under cultivation several million acres of land adjacent to its main line, between Medicine Hat and Calgary in Southern Alberta, and another smaller scheme near Lethbridge which is being developed by the Southern Alberta Land and Irrigation Company.

A large section of the "Dry Belt" cannot be irrigated so that it is suitable only for grazing cattle and raising grain in favourable seasons. The rest of the prairie which is by far the larger portion has more precipitation and is generally more or less wooded. In average seasons the rainfall is sufficient for the grain crops and native grasses also for some horticultural crops.

Disadvantages and Advantages from a Gardener's Point of View

This prairie country has several disadvantages from the gardener's

point of view among which may be mentioned—strong winds, drought, unseasonable frosts and severe winters. Being such an open bare country with no ranges of mountains or forests the winds have full sweep; this by some people is considered the worst feature of the climate. These winds are more or less prevalent all the year round, but are worst in winter and spring, especially in spring, as they cause very rapid evaporation of moisture from the land. Drought is a very serious factor in some seasons and makes some crops rather uncertain, although with proper tillage methods and, in some localities, irrigation, good crops can usually be secured. Unseasonable frosts are at times very serious and every gardener and farmer, for that matter, must be ready for them.

There is apt to be a frost of several degrees in June, also in August, and on rare occasions in July, which makes the growing season very short. Another serious disadvantage is the severe winter, but the low degree of cold is not so bad as the alternate thawing and freezing which occurs in Southern Alberta, due to the warm Chinook winds, which occasionally blows in winter.

It may appear to the reader that the prairie country has all the disadvantages, and none of the advantages, but that is not the case. A few of the advantages are the very long days during the growing season, good soil, comparative freedom from insect pests and plant diseases, and good markets for the commercial grower.

In midsummer the days are very long, it being light from about 3 a.m. to 9.30 or 10.00 p.m. These long days with bright sunshine help to compensate for the short season, and plants grow very rapidly during this time—wheat has been ready to cut 90 days from sowing.

The soil is remarkably fertile and can produce good crops for years without manure, but, of course, this practice is not to be recommended.

The comparative freedom from insect pests and fungus diseases is also a great advantage. Each variety of plant seems to have its particular insect pest or disease, but owing to the cold winters and dry climate they are more easily kept in check than in a milder, moisture climate.

The matter of good markets may not appeal to the amateur gardener, but the man who is making a living from growing crops for sale has to consider his market. While there are not many cities having a population of 20,000 or more, the few there are afford good markets for most of the garden crops that can be grown.

Possibly one of the greatest needs of the prairie is natural windbreaks. Over hundreds of miles there is scarcely anything to break the force of the wind and crops cannot thrive when continually buffeted by it. A great deal of planting has been done but hardly enough to be noticeable. From the Forestry Station at Indian Head, Sask., the Dominion Government has distributed millions of trees free to farmers for planting around their buildings, and in many cases these are doing well. The Canadian Pacific Railway Company also has done a considerable amount of planting along its right-of-way, for windbreak and ornamental purposes. This company has also done a considerable amount of planting around its

principal stations, which not only beautifies the station grounds, but acts as an object lesson to incoming settlers and travellers.

Most of the cities and towns have their public parks and many private individuals have done much to improve their home surroundings by planting trees, shrubs, and flowers, etc., and making lawns. In this connection should be mentioned the Manitoba Horticultural and Forestry Association, which is doing excellent work in encouraging people to take an interest in horticultural matters.

A word or two might be said in regard to the varieties of trees, etc., that can be grown. The number is rather limited, but include Ash Elm, Manitoba Maple, Birch, Poplar, White Spruce, Scotch Pine, American Larch and several others. The common kinds of shrubbery grow well and include Lilac, Bush Honeysuckle, Carazana, Berberis, Amonpha, Willows of several species and some native bushes. The hardy perennial and annual plants do very well. Amongst the perennials might be mentioned Paeony, Delphinium, Golden Glow, Gaillardia, Coreopsis, Pansy and others, while some of the best annuals are Sweet Peas, Asters, Stocks, Marigolds, and many other varieties.

The production of vegetables is the most important branch of horticulture from the commercial point of view. In spite of the short seasons, many varieties of vegetables can be grown successfully and brought to maturity in ordinary seasons. Around such cities as Winnipeg, Calgary and Edmonton a number of market gardeners make a very fair living growing vegetables for the local markets, while farmers and others can raise all they use for home use. All the commoner varieties grow well, such as Potatoes, Cabbage, Celery, Onions, Peas, Beans, Carrots and Asparagus, although the season is rather short for Onions and Beans. Tomatoes, Squash, Cucumbers and Citrons also thrive in favourable locations and in good seasons. In Southern Alberta a start has been made in growing tomatoes under irrigation. Last year about three acres were grown and there is a possibility of the acreage being increased.

Fruit growing is as yet in the experimental stage. The writer knows of only one apple orchard, which is located in Southern Manitoba near the town of Morden. The owner has picked several barrels for some years past and shipped them to Winnipeg.

It is very doubtful if commercial apple growing will ever be a success in the prairie, but there is no reason why the small fruits, such as strawberries, raspberries, currants and gooseberries should not be grown much more than they are now, especially when hardier varieties are developed. Every farmer should have some for his own use and in favourable locations could grow several acres for market. The Canadian Pacific Railway Company has grown first-class strawberries under irrigation on its demonstration farm at Strathmore, Alberta, and there are numerous instances where farmers and others grow the small fruits quite successfully.

While the Canadian Northwest cannot be considered a horticultural country, yet by choosing suitable varieties and with proper care much

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Thicker Than Water.

By R H. BARBOUR and G. R. OSBORNE, in Short Stories From "Life."

DOCTOR Burroughs, summoned from the operating room, greeted his friend from the doorway: "Sorry, Harry, but you'll have to go on without me. I've got a case on the table that I can't leave. Make my excuses, will you?"

"There's still an hour," replied the visitor. "I'm early and can wait."

"Then come in with me." Markham followed to the operating room, white-walled, immaculate, odorous of stale ether and antiseptics. On the table lay the sheeted form of a young girl. Only the upper portion of the body was visible, and about the neck wet, red-stained bandages were bound. "A queer case," said the surgeon. "Brought here from a shop two hours ago. A stove-pipe fell and gashed an artery in her neck. She's bleeding to death. Blood's supposed to be thicker than water, but her's isn't, poor girl. If it would clot she might pull through. Or I could save her by transfusion, but we can't find any relatives, and there's mighty little time."

The attending nurse entered. "The patient's brother is here," she announced, "and is asking to see her."

"Her brother!" The surgeon's face lightened. "What's he like?"

"About twenty, Doctor; looks strong and healthy."

"See him, Nurse. Tell him the facts. Say his sister will die unless he'll give some blood to her, or wait!" He turned to Markham. "Harry, you do it! Persuasion's your line. Make believe he's a jury. But put it strong, old man! And hurry! Every minute counts!"

The boy was standing stolidly in the waiting room, only the pallor of his healthy skin and the anxiety of his clear eyes hinting the strain. Markham explained swiftly, concisely.

"Doctor Burroughs says it's her one chance," he ended.

The boy drew in his breath and paled visibly.

"You mean Nell'll die if some one don't swap his blood for hers?"

"Unless the blood she has lost is replaced——"

"Well, quit beefin," interrupted the other roughly. "I'm here, ain't I?"

When he entered the operating room the boy gave a low cry of pain, bent over the form on the table, and pressed his lips to the white forehead. When he looked up his eyes were filled with tears. He nodded to the surgeon.

Doggedly, almost defiantly, he submitted himself, but when the artery had been severed and the blood was pulsing from his veins to the inanimate form beside him, his expression changed to that of abject resignation. Several times he sighed audibly, but as if from mental rather than bodily anguish. The silence became oppressive. To Markham it seemed hours before the surgeon looked up from his vigil and nodded to the nurse. Then:

"You're a brave lad," he said cheerfully to the boy. "Your sacrifice has won'"

The boy, pale and weak, tried to

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Academic Freedom.

By President Braithwaite, Western University,
in The Toronto Globe.

AS THE world has been engaged in a furious strife for the possession of political freedom, so is there a serious struggle going on among the institutions of learning for the maintenance of academic freedom. The principles involved in this are almost as contradictory, if not almost as vital, as those represented in the two sides of the great world war. This contest is more conspicuous in the highest educational circles, and, as far as this continent is concerned, more prominent in the United States, where the large institutions are more numerous than here. But the symptons are by no means absent from our Canadian arena, nor are the elementary and secondary schools free from its baneful influence. In our own country the time to face such a situation is before its results become as disastrous as they will be if unchecked.

The Financial Nerve.

Several of the strong American universities have been greatly weakened by undue pressure—political, financial, personal, popular, or some other—which has been brought to bear upon professors or administrative officers, interfering with their work on grounds other than those of competency or efficiency. The outcome of this has usually tended in time towards the weakening of the calibre of the teaching body and a lowering of the stand ards to such an extent that the reputation of a noble institution has been in several cases greatly altered. It is natural that those institutions which are maintained by private benefactions should be particularly sensitive to influences of this kind especially the financial, but the stigma is by no means confined to these. State universities have also obtained some very unenviable notoriety, of which there are well known instances, where, by maintaining a prejudiced attitude towards such questions as slavery, single tax, Darwinianism, or by becoming entangled with local partisan politics, they have entered upon a stage of retrogression which has been very difficult to arrest, the strongest men having been driven to seek positions elsewhere

Sapping of Independence.

The effect of any such interference with the legitimate work of an institution of learning is naturally to take away to a certain extent at least, the spirit of independence in the atmosphere of which alone the best work can be accomplished. If the scientist, for example, must be judged by the financial results of his investigations to the college or the community, his wings are clipped. If the professor, whose subject is unpopular and does not attract many students, is discounted because of this, the result is disastrous. If the executive office is estimated by the size of the university's enrolment or endowment, the true basis of academic life is turned upside down. If the professor of Political Economy must make his conclusions conform to the ideas of the capitalists who may occupy a seat on his governing board, the use-

fulness of the institution is seriously impaired.

No Evasion of Truth.

Naturally it is in this last domain where trouble is especially liable to rise. Though Canada may not have had to face the problems of labor and the industrial world to the same extent as older and more populous countries, yet well-authenticated cases could be cited where expressions of opinion on the part of the visitors to academic halls have been fiercely resented by trustees whose own position has not been too highly complimented by the speakers. But surely no educational institution should be afraid to face any theory, however radical it may be. If it is false, it will never be overthrown by denunciation or by being opposed on the basis of selfish considerations. It must be met by argument and the teacher or institution that hesitates to have any view presented for fear it will have a disturbing influence upon students is adopting a craven position, when there is always the opportunity to combat error with truth, which after all, is the only weapon worth while.

Plato's idea is the only correct one. He defines independent investigation as implying a willingness to "follow the argument whithersoever it may lead." The attitude so often exhibited now toward mental and political science is as absurd as the opposition formerly manifested toward natural science. As a rule theologians have stoutly opposed every new scientific theory as quickly as it has been proclaimed. Newton's theory of gravitation plunged his generation into a panic of fear. The Copernican theory was fought by Calvin, Wesley and others on the ground that it was in opposition to the teaching of Scripture. For the same reason evolution has been resisted by religious teachers almost to this very day. But natural science has almost won her battle, and it is for political science to win hers.

Subservience Wanes.

Already there can be mentioned many exceptions to the attitude of subservience to views of this kind such as show that real progress is being made toward the desired goal. On one occasion, in the writer's presence, one of the most radical Socialists of Chicago was speaking in one of the halls of the University of Chicago to an audience made up largely of professors and students. At one end of the hall hung a large portrait of John D. Rockefeller. The Socialist turned toward this portrait and, in the most scathing terms denounced the founder of this University and all others of his class. No interruption occurred, but at the end of the address one of the Faculty quietly arose and attempted to show the weakness of the speaker's position. Nor was any censure afterwards passed upon anyone for inviting this radical speaker to the halls of the University, though the incident must have become widely known.

In the early days of the war a large gift, involving several million dollars, was offered to Harvard University on the condition that the authorities dispense with a certain prominent member of the Faculty, who manifestly sympathized with the cause of the Germans. But though the preponderating sentiment of Harvard was strongly on the side of the allies, a large number of the students having enlisted with the allied armies long before the United States entered the war, yet the Presi-

dent made it plain that they would rather lose the munificent gift than receive it on conditions that would involve interference with any sincere conviction held by anyone connected with the University.

Trustees and Faculties.

This brings us back to the fundamental relation between faculties and trustees. The earliest colleges on this continent began by following the old English system. The corporation and the teaching body of an Oxford or Cambridge College were one and the same, consisting largely of glergymen. So also in New England the clergymen were the first to take the matter of higher education in hand. They were the teachers and the board. But this was gradually changed until, in the words of a recent writer in The Nation, "the American college came to be, and is a company of hired men, subject to the direction and control of a firm of employers," and of these employers he goes on to say: "It is quite impossible that they, with the best will imaginable, should be equipped adequately to conduct a university. . . . Many trustees are doubtless able to conduct department stores. We see them doing it It is an honourable occupation. But to conduct a university on the theory of a department store is to dishonor both learning and scholars."

Hence arises the suggestion which has been seriously made that we should again go back to the earlier position, the trustees to be appointed by the faculty instead of the faculty by the trustees—especially as it is the faculty that make the institution, and not the trustees. In inquiring about the worth of an educational institution nobody cares who constitute the latter body. The only interest is in the former. This may not be regarded as a feasible suggestion, and there is no intention of pushing it here, but before dismissing it as wholly absurd, it is at least worth while noting that it is after all in the direction of a democratic ideal. Indeed, an Independent College of Political Science has recently been projected, one of those provisions is that "the faculty will elect the board of trustees and will also appoint and dismiss its own members."

The Scholastic Viewpoint.

The chief difficulty of this plan, however , connects itself with the same fundamental weakness that forms the subject of this whole article, namely, the lack of emancipation and complete freedom on the part of professors as as well as others. A distinguished scholar, writing recently in The New Republic, goes so far as to say: An efficient union of professors is an almost Utopian dream. Ninety per cent. of American professors are uninterested in the advancement of learning as defined by Plato. They are content with the chance to live in relative peace, teaching in the traditional manner of the secondary schools, but with fewer hours' work and more concessions to their vanity. The vast majority, by training and temper, are inclined to view their function as that of transmitting information rather than as the training of critical, inquiring minds eager to go wherever arguments may lead them."

In the same spirit the New York Nation strongly criticizes the members of a certain faculty for not being willing to take the official lives in their hands, if necessary, when certain of their colleagues were dismissed because

of views which they expressed. The Otulook calls attention editorially to another similar situation in connection with which an amendment to the regulations was secured, giving to the faculty a share in the responsibility of appointing and dismissing professors.

The Point of Beginning.

All of this goes to show how fundamental and deep-seated this whole question is. In some way we must retain the ideal freedom to think independently. To get at the root of this we shall probably have to go much further back than we have imagined. Indeed it is of the first importance that we begin in the public school. Our educational system has been so rigid that with all its excellent qualities it has had this fatal weakness, that it has tended to drive from teachers and scholars alike any originality, genius or iniative. This is probably part of what Bernard Shaw meant when he said, "My education was interrupted by my schooling."

Fortunately the new Minister of Education for Ontario is striking deep at the root of things in the plans he is evolving, and the promise is that some of these fundamental defects will be in large measure corrected. It is important that in these endeavors he shall be seconded by all who have to do with educational matters, as this banner Province must maintain its lead in this most important domain.

CONCEIT VERSUS MODESTY

If you think you're beaten, you are.
If you think you dare not, you don't,
If you'd like to win but you think you can't,
It's almost a cinch you won't.

If you think you'll lose, you're lost,
For out in the world we find
Success begins with a fellow's will,
It's all in the state of mind.

If you think you're outclassed, you are,
You've got to think high to raise,
You've got to be sure of yourself
Before you can ever win a prize.

Life's battles don't always go
To the stronger or faster men,
But soon or later the man who wins,
Is the fellow who thinks he can.

The Review Story Competition

By Dr. O. J. Stevenson, Professor of English, O. A. C.

(From August, 1917, Review.)

STUDENTS who intend to enter the Review story competition this fall, should begin at once to put their stories into shape. With the small amount of spare time that most students have, three months is none too long to allow for this work. A suitable subject must be chosen. the details must be worked over, different methods of telling must be considered, and finally the story itself must be written and rewritten several times before it is ready for submission. The best pieces of literary work are, as a rule, not done in a day, but are the result of careful revision.

The first thing to be considered is the choice of material for a story. Few people have the power of constructing a story wholly from their own imagination. Most stories are based upon some personal experience of the writer or upon some incident of real life of which he has read or heard. Review your own experience and think over the history of different people if you cannot find material out of which a story may be developed. For the purpose of this competition it is better that your story should relate to farm life.

The first essential of a good story is that it must have a PLOT; that is, it must present some situation or incident which involves a difficulty —the solution of which forms the point of the story. Technically, the difficulty is spoken of as the COMPLICATION of the plot, and the solution is the DENOUEMENT. The short story deals with only a single incident or situation, and you should, if possible, choose a story which has a very simple plot. Young writers are as a general thing likely to make their plots too complex and to fill the story with impossible and far-fetched incidents.

In some stories the chief interest lies in the plot, but as a usual thing the characters are equally as important as the incidents. In reading a story we are not usually so much interested in what takes place as in how people act and what they have to say. But in a well-told story the characters are usually left to reveal themselves in their words and actions, and very little direct descriptions is required.

Aside from plot and characters the most important element in the story is its emotional tone. When we read a certain story we usually form our judgment of it according to the feeling which it produces. Of course our feelings depend very largely upon the incidents and the people; but a good deal depends also upon the ATMOSPHERE of the story,—that is, upon the choice of minor details which are likely to produce certain feelings. If, for example, we are writing a ghost story we must see that all the circumstances,—time, place, and trivial details,—are in keeping with the eerie effect which we wish to produce. In choosing material for your story, then, be careful to consider whether it has any emotional possibilities. A story

which is a mere narration of incidents and which does not appeal to the feelings of the reader can scarcely fail to be uninteresting.

When you have worked out the details of your story mentally you must next decide upon the best way to tell it. The first thing to consider is how to catch the interest of the reader at the very outset, so that having begun to read he will wish to continue. It is evident that you will not catch the reader's interest if your opening sentences contain a series of dry facts or a statement of some abstract theory. Some writers prefer to plunge the reader at once into the middle of some interesting incident or conversation and leave him to gather the facts as the story proceeds. If the story begins with facts, these facts must be interesting enough to hold the reader's attention.

The next thing to consider is what details you will put in,—or rather what you will leave out. You must give your reader some information as to the time, the place and the people in the story. You must see that all the details necessary to the understanding of the incidents are included. How much additional incident or detail you include will depend upon your own ability to write a vivid narrative which will interest the reader without wearying him and will stimulate his imagination without satisfying it. In general it is well to remember that a certain amount of conversation in a story adds vividness to the narrative. But the writing of good conversational dialogue is in itself an art which requires much practice.

In the short story the reader must at the outset be given no clue as to how the story is to end. As the story proceeds every means must be used to brighten the interest of the reader, and when the final point in the denouement is reached it must if possible, come as a surprise. With this "climax," as it is called, the story naturally ends, and the ending, it need scarcely be urged, should under no circumstances be allowed to "drag." It is better to leave something to the imagination of the reader than to run the risk of destroying his appreciation. And it is scarcely necessary to say that no moral must be attached to the end of the story. A story that is effectively told conveys its own moral.

As a preparation for writing a short story it is advisable for the beginner to study various types of story in books and magazines, to see what method the writer in each case has employed. In making such a study you should pay special attention to the way the writer has begun and ended his story and note what means he has taken to develop the character and plot as to hold the attention of the reader until the climax of the story has been reached. One of the secrets of good writing is to study the success of others, and try in your own way to imitate them until you find it possible to develop a style of your own.

"I warn my countrymen that the great progress made in city life is not a full measure of our civilization, for our civilization rests at bottom on the wholesomeness, attractiveness and completeness of life in the country." — *Late Theodore Roosevelt.*

"Rural Social Problem."

By Rev. J. A. Black, B. A.

NOTE—Believing that our readers would be interested in knowing what was being done by men who had attended the Rural Leaders' Conference, held each summer at the O. A. C., the editor wrote to two of these men, asking them to send him an account of what they were doing. Rev. J. A. Black, of Horning's Mills, Ont., has kindly complied with our request. His account of the work accomplished in his community shows what may be done by men possessing initiative and training.—Ed.

EACH community has its own difficulties for what is called united work or play. Some centres are situated on the town line and include part of two, three or even four municipalities. It is difficult enough to get the support of one council, and more difficult when four have to be consulted and support secured from them. Some centres have long standing differences and quarrels handed down from one generation to another. It is impossible to have union among these factions. Again other centres have no outstanding leaders to head off in innovations that would benefit the life of the community, while at other centres one man may want to be the "bell sheep" and kill everything that is not initiated by himself.

It was my privilege to attend some of the sessions for training rural leaders at the O.A.C., Guelph, and I have been able to put into practice some of the lessons learned. Several public schools have been visited and it has been a satisfaction to teach the children six or eight games that they never heard of before. It only required the time of recess to teach them. At a Union Sunday School picnic we were able to keep both young and old amused for the afternoon and evening playing games that all could join in and profit by. No costly equipment was necessary. Our Guild has also had some splendid social evenings. The receptions for returned soldiers have given a chance to develop community singing and cheering. Unexpected talent has been discovered and put into use. The Woman's Institute and Red Cross Societies have done a grand work in solving social problems and are rendering a great service in welding together the different classes which find that they are not so very different after all.

We had an interesting and instructive evening with the young people in rehearsing, what we remembered, a lecture given by Prof. Zavitz, in judging oats. We hope to discuss other subjects which will tend to develop the community spirit. Much bigotry and prejudice has already been broken down by working for a common cause, getting up programmes, including plays and uniting in patriotic work.

The Consolidated School is being discussed in public and in private, its methods explained and objections

Continued on page xx.

"Passing Rich."

By Lusus Naturae.

"AN increase!"—The Trustees of S. S. No. 3 gathered together at Hiram Johnson's, one of the trio, with whom Miss Pansie Lichum, the school ma'am, boarded, opened their mouths in horrified astonishment at the timid suggestion. "Did we understand you to say increase, Miss Lichum?" incredulously inquired Hec. Card, the secretary-treasurer. "Y-yes, Mr. Card, that was what I-I stated."

"Hump!" And Hec. drummed his weathered knuckles on the parlor table.

"An increase!" echoed Ab. Bailey. "Why, such a thing is absolutely out of the question. Don't you think it's a very extraordinary demand to make, Miss Lichum? You're only a girl you know—and all you have's a normal? Five hundred dollars a year for a girl like you is pretty good I should say. Pretty good."

"That's what I think," chimed in Hec.—Hiram remained silent, because Miss Lichum boarded there and he didn't like to speak his mind in front of her.

"Why," quoth Hec, delving into the past, "it's not so many years ago since three hundred and seventy-five dollars used to be considered a pretty fair salary. And for a man at that."

"Yes, and mighty good teachers we used to get, too," stated Ab. emphatically. "There was Smith and Anderson — and that big fellow — Blacky Wilson. They sure was humdingers."

"Five hundred seems a mighty lot for a teacher," drawled Hec, coming back to modern times. "Why, let's see—two hundred and two teaching days—five hundred"—figuring in a small complimentary bank memorandum—"that's something over two-forty-seven a day, for a six hour day. Not bad goin'."

"And, why, Miss Lichum, you have only — how many children have you?"

"Forty-six on the roll. The average attendance was thirty-four last month."

"That all! Why, when Wilson and Anderson was here there used to be an average of sixty—quite a difference.

"I should say you were earnin' your money fairly easy. Thirty-four. Let see—how many classes have you?"

"Nine."

"Nine classes. That doesn't mean four to a class. Small classes. That ought to make it fairly light. You can soon run over a lot of classes of that size.

"Humph! It costs a hanged lot to get children educated now-a-days. Five hundred to keep thirty-four children at school. Expensive work. Mighty expensive.

"And you don't have to have much trainin' either, do you? Let see — what is it—three years in high school and a year at normal. That's all, isn't it?"

"Yes."

"That makes a hundred and twenty-five for every year's schoolin' you had past the Entrance. Not bad."

Continued on page xxiv.

Preparing Vegetables for Exhibition.

By Austen Richardson.

WHEN exhibiting vegetables it is a good plan to study the points that take the eye of the judge. As an exhibitor myself, I would do my best to please the judge; give him as little unnecessary work as possible; have my exhibit so placed that it always takes his eye by its attractiveness, cleanness, quality, etc. Summing up in a few words, I would make the best of a good article.

If some other exhibitor having a little the better exhibit, places his exhibit anyhow on the table, not properly trimmed, or awkward for the judge to see, he should deservedly lose. Although exhibiting a better article he has spoilt it by carelessness. There is not only the judge to please, but also the public. The judge as representative of the public makes his decision for them.

Taking any roots such as parsnips, carrots, turnips, the main point, as in every other class of exhibit, is to act according to the rules. If there is a call for six of one kind, five of one kind and one of another will not answer at all, and the judge would have to disqualify. Just have six, no more, no less. Clean them by washing or drying and brushing. In doing so do not scratch the surface. Trim all the small side roots off. In case of beets care should be taken not to bleed them. The top root should be left. The tops should be cut an inch above the crown. I have noticed that one way of exhibiting is to tie six vegetables, such as carrots, in a bunch with the tops on and place them on the exhibiting table. (It would be as well to state here that if possible choose a flat or slightly sloping table to exhibit on, rather than a very sloping table. It is more difficult to keep your exhibit where you placed it. You cannot use a dish or any attractive receptacle on a very sloping table.) When an exhibit is tied up in this fashion, the judge cannot see each individual root in the exhibit. He has to handle them over several times. Since he is only able to see about two at one time, he has extra work in memorizing. If a good article was for sale it would help that sale if the customers were able to see it to advantage and not have to keep examining it to be able to see the best point of it.

Make your exhibit catch the eye on passing. Endeavour to keep it fresh. At the last moment before the exhibition is closed for judging, sponge the exhibits over with a damp cold sponge. If the exhibit is washed heavily with water some days before exhibiting, the tendency is for the article to turn green when exposed to the light; therefore do not wash too far ahead, and keep in the dark as much as possible. Potatoes should not be washed, but dryed and brushed. Wash by hand or smooth brush. If washed they will be liable to green, and this will lose points when judged, because if put up for sale in a store it would have

a less ready sale than the same class of potatoes not greened.

An exhibit of carrots, parsnips, etc., should have no tops on, be clean and placed either on a plate or on the table, in as attractive a manner as possible, so that each individual carrot or root is in view. The same holds for potatoes.

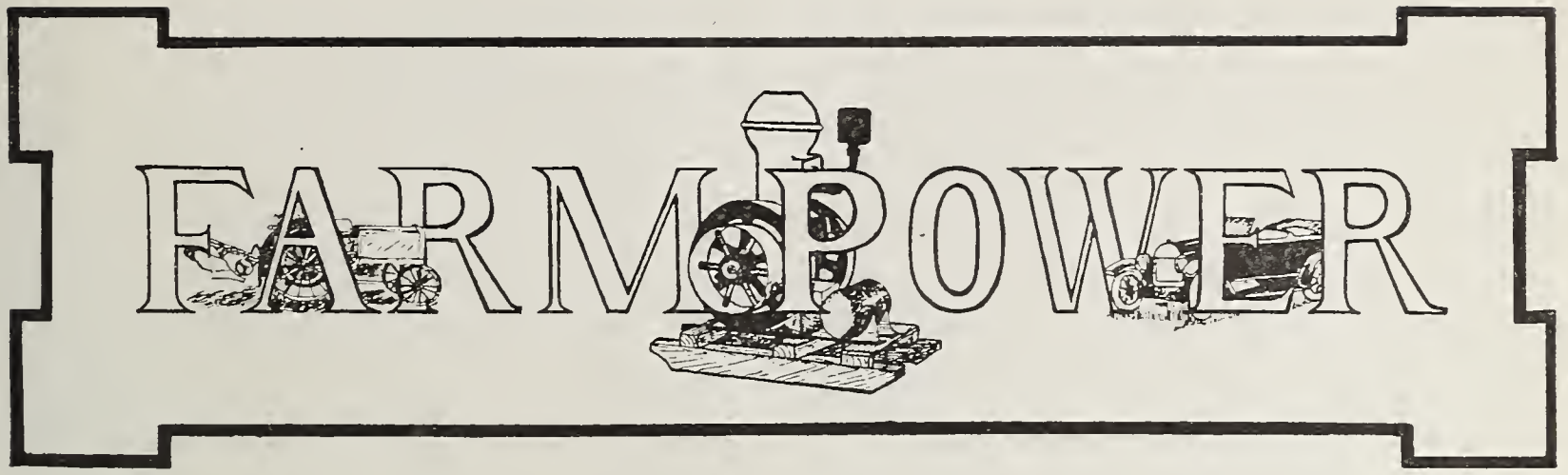
A carrot should be straight, even and as smooth as possible. The idea being to have as little waste as possible from the householders point of view. An article such as beans and peas should be kept in as moist a condition as possible, without being wet. One good method is to wrap them in cabbage leaves when travelling. After cutting they might be placed with their stalk end in water about an inch deep. This will keep them fresh. Also cucumbers. These should be placed neatly on a plate or on the table, always following the exact number or conditions called for by the prize list. The peas should be green, young, full and firm, good size and uniform. They should not rattle when shaken.

Supposing there is a patch of cauliflower that is too forward and will be full a week ahead of the date of the exhibition. Cut the cauliflower a little time before being ready, hang them up in a cool dark place, sprinkle them will fresh cool water every morning, and they will keep good for two weeks or more. The cauliflower for exhibition should be white, free from blemishes, well rounded heads, firm and of good depth.

In choosing potatoes choose them of good and uniform shape, free from blemishes, and with as shallow eyes as possible, of a commercial size, not so big that an hotel would have to cut them in half to serve to one person. In choosing for exhibition the vegetable chosen should be the ideal sample that an householder or hotel would choose. In placing these on exhibition they should be so placed that they will attract these people. It is quite evident to do so you would trim the foliage off carrots, beets, parsnips, turnips, etc. Cabbage and cauliflowers should have the outside leaves trimmed off —the cabbage should be as firm as possible. In a collection there should be a ground work of green. Parsley is the best. It looks natural and shows off the vegetables. Peas and green exhibits can be placed on white. Tomatoes look nice on a plate bedded with parsley.

Try to get each exhibit of as uniform a size as possible. It is a bad plan to have five carrots of medium size, and first class in every way, and then put in the sixth almost double the size, or on the other hand half the size. It spoils the exhibit. It looks odd and unattractive, and is not so good from a customer's point of view.

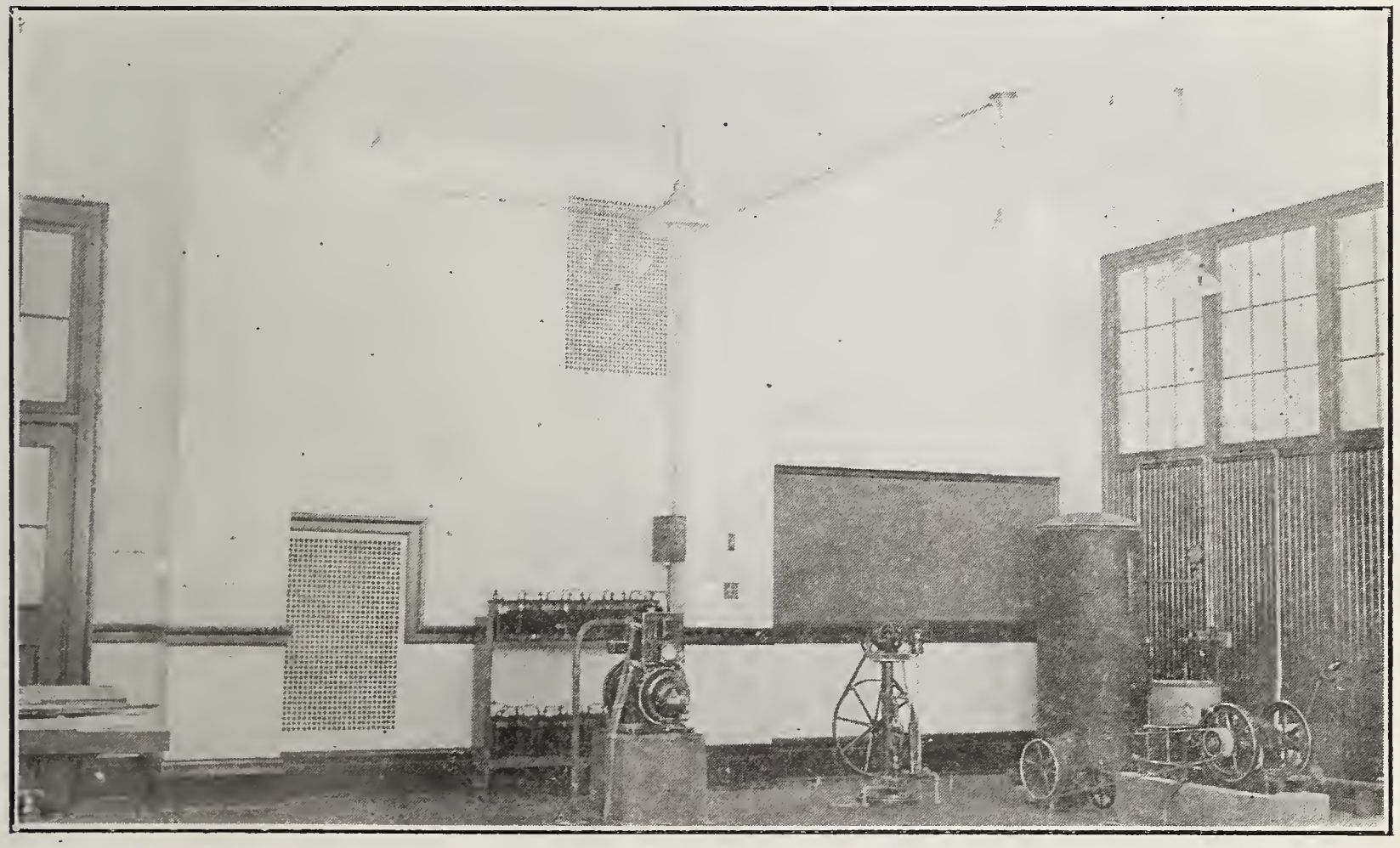
The main mistake in small exhibitors appears to be bad staging. That is, the exhibits are not trimmed, and in attention to what the prize list calls for is shown. In taking articles to the exhibition care should be taken to wrap each article separate so that they do not bruise or get dirty. Have the box or hamper well lined with paper or what packing material is to hand, and write on the label each article that is in the hamper so that each article is handy to get.



Electric Lighting and Its Conveniances On The Farm.

By W. O. Coon, '21.

IN a world such as ours where great advancement has taken place in the development of machinery and mechanical appliances, current electricity, one of nature's great hidden resources, has of late been harnessed and made of universal use to mankind. It supplies the cheapest, cleanest and most healthful light known to man, as well as affording power necessary for the operation of machinery. Up until very recent years, however, most of this electric service has been confined to cities and towns, leaving the farmer without its many conveniances.



View of Farm Power equipment at Physics Department, O. A. C.
Delco Light Plant in centre.

To offset this drawback to the farmer electric plants have been manufactured and placed upon the

market which generate and store their own current electricity. These electric plants consist of an engine, generator and a set of storage batteries. The engines of the different outfits vary considerably as to mechanical construction, operation, attachment to the generator and the fuel on which they are operated. Some of the plants are so built that the engine may be utilized for belt work, while others are constructed with the generator in direct connection with the engine.

The generators are practically the same in all types of electric plants. As the name implies, electricity is generated here and then passed on to the storage batteries, where it accumulates. These are made in different sizes, depending on the amount of current which is to be stored. The lights are wired in direct connection with the batteries, and any number of lamp sockets may be attached to a series of wires. Sixteen cells is the number employed by many of the manufacturers. The leaden plates, which form to a large extent the make-up of the cells, are placed in a vertical position inside glass jars. The operator can thus see the level of the solution through the glass containers. On many of our power plants a thirty-two volt current is utilized. This has the advantage of being entirely shockless, while it has the disadvantage of not having sufficient power to operate large electric motors.

Such electric plants as described will supply abundant current to light any large-sized farm home, besides providing a sufficient voltage to operate motors up to one-half horse power. Electric pumps and pressure systems, which supply water for both house and barns, are being operated successfully by these small electric motors. Milking machines, cream separators, root pulpers, churns, fanning mills and several other hand-operated machines are capable of securing sufficient power from any of our standard lighting plants, thus economizing time and labor on the part of the owner.

Besides adding a high degree of cheerfulness to the farm home through its illuminating property, electricity may be used to several

An I. H. C. taking a wide strip.

good advantages to greatly lighten the labor of the housewife. Such labor-saving devices as the vacuum cleaner, sewing machine, electric ironer and toaster and several other smaller attachments go a long way toward making rural life more congenial to its occupants.

The purchase of an electric lighting outfit, similar to an automobile, calls for considerable investment. Individual plants, which are practically fool-proof, are now on the market, and during the past three years, have been installed in thousands of Canadian homes. Such outfits which stress reliability, compactness and simplicity, can be readily operated by any farmer without necessitating a full knowledge of electricity on his part. Decades ago scientists and engineers devoted their time to the installation of electricity in the homes of urban dwellers, so as to save labor and make life more attractive to them. Men in such professions as these have at last realized that their ingenuity is needed as greatly, if not more so, in the interests of the practical agriculturist to remove the drudgery from the shoulders of those on whom rests the responsibility of feeding the world.

Calculating the Horse-Power of a Gasoline Engine.

MANY of our readers do not fully understand how the horse-power of a gasoline engine is determined. Theoretically speaking, the horse-power is the energy which is available for external work as transmitted by the driving pulley. In actual practice this energy is much less. The horse power is obtained by squaring the diameter of the piston in inches, multiplying by the length of the stroke in inches, and by the revolutions per minute of the fly wheel. Now divide this by 15,000 and the horse-power is obtained.

The formula then would be:—

$$= \frac{D^2 \times L \times X}{15{,}000}$$

D=Diameter of piston in inches.

L=Length of stroke in inches.

X=Revolutions per minute.

TO MEN

You talk of your breeds of cattle,
And plan for a higher strain,
You double the food of the pasture,
You heap up the measure of grain:
You draw on the wits of the nation,
To better the barn and the pen;
But what are you doing, my brother,
To better the breed of men.

You boast of your Morgans and Herefords,
Of the worth of a calf or a colt,
And scoff at the scrub and mongrel,
As worthy a fool or a dolt;
You mention the points of your roadster,
With many a "wherefore" and "when",
But, Ah are you conning, my brothers,
The worth of the children of men?

You talk of your roan-colored filly,
Your heifer so shapely and sleek;
No place shall be filled in your stanchions
By stock that's unworthy or weak,
But what of the stock of your household?
Have they wandered beyond your ken?
Oh, what is revealed in the round-up
That brands the daughters of men?

And what of your boy? Have you measured
His needs for a growing year?
Does your mark as his sire, in his features,
Mean less than your brand on a steer?
Thoroughbred—that is your watchword
For stable and pasture and pen;
But what is your word for the homestead?
Answer, you breeders of men!

"OUTLOOK" MAY 7TH, 1919. MISS ROSE TRUMBULL

THE O.A.C. REVIEW

ODELL

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EDITORIAL:

Consolidated Schools.

RURAL education is not and cannot be efficient under the present system. Under the present scheme the Entrance Class of a country school represents the survival of the fittest, the duller minded boys and girls having left school to drive a team or wash dishes. It is not at all remarkable that most of the graduates of our rural public schools hew their mark; they are the "bright" boys of the country, boys whose brains developed early, who desired education, and were prepared to largely "dig it out" for themselves.

To expect any human being to give thirty boys and girls, divided into six to nine classes, a fair chance is asking the impossible. Anyone who has attempted to do so will not hesitate in making such a statement. A teacher may merit an excellent report from the inspector, he may coach a possible number of Entrance candidates successfully; he may keep perfect order in the school room; he may worry, work and ruin his throat; but he is really not teaching the children of the section efficiently. No single teacher can wade through the necessary recitation, instruction and individual coaching of six to nine classes. If he wishes to have his senior classes pass, he must neglect his junior classes; if he would drill his classes in the three R's he must neglect the "non-essentials," as nature study, agriculture, drawing, etc.; if he

would pass his entrance class he must call that class together at eight a.m. school days and on Saturday forenoons; and if he tries to keep every class up to the standard set forth by the Department of Education, he will never live long enough to utilize his superannuation fund.

The only solution for the rural school problem is consolidation of schools. Consolidation is not practicable in all townships, but that should not prevent well populated districts from organizing Consolidated Schools. In such a school grading allows for efficient teaching, and the sections so united are strong enough financially to secure capable teachers. Not only is there sufficient time and equipment to teach the regular subjects intelligently, but time and equipment for agriculture, domestic science and allied subjects.

In considering this question farmers must not miscontrue the partial failure of the Macdonald Consolidated School, O.A.C., Guelph. As far as scholastic efficiency is concerned this school is a great success. However, by establishing the school near the O.A.C., as a convenient point for observation, the necessity of having it centrally located was disregarded, with the result that its distance from the majority of the homes was so great that several of the sections withdrew.

Education is the basis upon which progressive agriculture must be built. It is the key to our rural problems. The majority of farm boys and girls cannot receive a liberal education as long as they are forced to dig it out of one-roomed school houses. Proper facilities do not exist in such. The only course, therefore, is the organization of Consolidated Schools.

The Rural Church.

CREEDS were largely non-existent among our troops overseas. Anglican, Presbyterian and Catholic, etc., worked together in the interests of our boys. Such a condition has left its effect on many people, preachers included. It is to be hoped that the idea spreads, for it it a very sane idea. There is no reason whatever for a large number of Christian denominations. In fact, such a state is very detrimental to the work of the Christian Church.

Especially is this true of the Rural Church. In many districts where there is scarcely enough people to make up one strong congregation there are three and four churches of different denominations. Each of these are weak, and frequently tended by poor ministers, the two combined resulting in little being accomplished.

The writer once resided in one of these rural districts for some time. On the first Sunday of his residence in the locality, he attended the Presbyterian Church. There were thirteen worshippers, the singing was weak and discordant, and altogether there was little inducement for the sinner to attend. The minister of this church had two other

charges. He preached to two congregations each Sabbath, the third thus being forced to refrain from organized worship. Next Sunday the writer attended the Methodist Church. There were about twenty at this service. The minister of this church also preached in two other churches, one congregation being without worship one Sunday out of three. Then there was a Free Methodist Church which was composed of about a dozen families. There were half a dozen Catholic families in the vicinity who drove eight miles to the Catholic Church in the village.

The ministers in these churches were perhaps above the average, speaking of rural preachers. But they could not accomplish much work, their interests being spread over such a wide section. The churches were not progressive, being too weak. They were not fostering Community Life, nor grappling with the Rural Social Problem.

What is wanted in this district, and in all other rural sections, is Church Union. Our rural congregagations ought to unite whether union takes place in the city or not. Conditions demand it. It is possible, and excellent results will come of it. As a striking illustration we may cite the People's Church of East Lansing, Michigan. In a suburb of one thousand, Methodist, Episcopalians, Catholics, Baptists and all other denominations have gotten together and organized a strong church. As a result they are a thriving, progressive congregation.

The reconstruction of the Rural Church presents a difficult task; prejudice and bigotry must be overruled and vision and judgment exercised. The leaders in the movement must be chosen men. They must be true Christians, willing to sacrifice their own views, and acquainted with the modern needs of humanity.

The Rural Social Problem is unsolved. A large portion of our rural population is narrow-minded. Too many farm boys and girls grow up without being trained in ethics, civics and modern culture. A great percentage of our farm homes lack those easily accessible things, which satisfy esthetic desires, nourish the brain and develop the soul. These problems can be largely remedied by a progressive community under the direction of an active United Rural Church.

New York State College Alumni.

IN order to obtain some definite information regarding Alumni Associations the editor wrote to Mr. Cornelius Betten, Secretary and Registrar of the New York State College of Agriculture of Cornell University. The letter is published below.

Their Alumni Association recently sent out questionnaires to exstudents in connection with the semi-centennial celebration held June 20-23, 1919. The following information was requested: Name; permanent address when a student; number of terms in college, with dates; degrees from Cornell University; degrees from other institutions

with dates; farm experience before entering college; parents' occupation when a student; date of marriage; number of children; occupation(s) since leaving college, with dates and annual earnings (not including gifts, inheritances, interest, etc.); positions of responsibility held; military service, honors, casualties, etc.; the assigning of values to the class of subjects which have proved of most value (classification, basic sciences, practical agricultural subjects, general subjects); from experience after leaving college, the offering of suggestions for the improvement of the teaching of the College with reference to—subjects taught, content of courses, method of instruction; what was omitted from the college training, or insufficiently emphasized, that later proved essential; criticisms or suggestions regarding the activities of the College in extension work and investigation; definite suggestions or criticisms on the work or the organization of the College; whether intending to attend the semi-centennial Celebration.

Mr. Betten's letter is as follows:

"The work of the Association has not been very complicated, and the dues amount to but a dollar a year. The Alumni meetings in the University are commonly held in connection with Commencement in June, but we have found it necessary to place the meetings of the Alumni of this College in connection with Farmers' Week which comes in the middle of February in view of the fact that so many of the former students are here at that time and they are not likely to make a second trip in what is for them a busier time of the year. While the Association has sometimes undertaken specific tasks, its primary function is to keep up an acquaintance among its members and to keep former students in touch with the work of the college. The present opportunity in connection with the alumni conference is very unusual, but that is exactly the kind of thing that we regard as a more or less continuous work for the Association. We are glad to send you a copy of the questionnaire that we sent out. The replies have proven to be interesting though they are not very accurate with respect to the earnings of our former students.

The officers of our Association serve without salary."

Not all the great men of Canada have impressive monuments erected to their memory when they die. We all have known such men, men who struggled through a humble life, paying their debts, being good neighbors, supporting progressive movements, and giving their children a greater opportunity than they themselves had. Such men have always been, are, and will continue to form the backbone of Canada.

More and better live stock is the pivot of better farming. Farmers must concentrate their efforts more upon their live stock than upon any other line.

Commercial fertilizers will be used more in the future than they have been during the past. Our land is no longer the virgin soil of our forefathers. The longer farmers delay in supplementing barnyard manure, the greater amount of fertilizer will they or their sons have to purchase later on.

This may not be the proper season to talk of making the farm house more home-like, but it is an excellent season to observe the results of such planting at the homes of those who are not content with existing.

If any of our readers disagree with our views, we will welcome their opinions. By having various sides of a question presented a more complete understanding results.

Lack of farm labor must be counteracted by the increased use of labor-saving machinery and well-planned buildings and fields.

"If a teacher's work is to be well done his mind must be perpetually refreshed by new thought and new opportunities of thought."

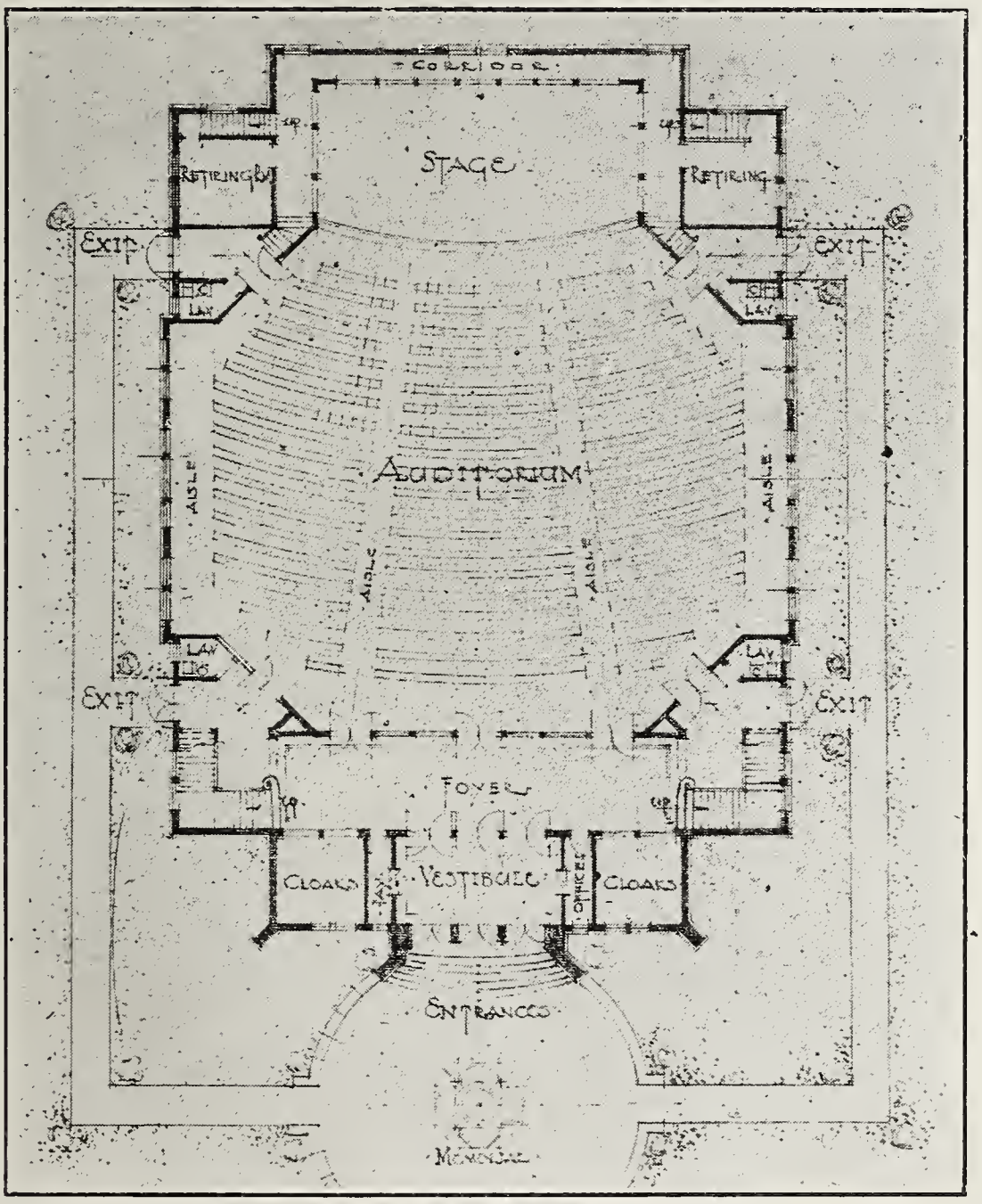
— Rt. Hon. H. R. L. Fisher, Min. of Ed., England.

The Memorial Hall Fund.

As announced through the columns of this paper some weeks ago donations are now being received to provide the necessary funds to erect a suitable ornamental, yet useful, Memorial Hall on the campus of the Ontario Agricultural College, Guelph, Ontario. As stated at that time the Provincial Government has voted $40,000 as their contribution to the cause, leaving to be collected by private donation $60,000 or more. At first the idea was to dedicate the New Hall, plan and elevation of which are herewith reproduced, to the memory of the upwards of one hundred O.A.C. students and ex-students who gave their lives in Free-

THE PROPOSED MEMORIAL HALL

dom's cause during the four years of awful carnage recently brought to a close. Of seven hundred O.A.C. men who went overseas less than six hundred returned. However, at the suggestion of several prominent agriculturists not directly connected with the College, but vitally interested in the welfare of the College and of agriculture generally the idea was enlarged and the New Hall is to be erected sacred to the memory of all those from the agricultural calling who fell in the Great War, O.A.C. students and ex-students in particular, but to all the agriculturists of the province in general. It is to be agriculture's apprecia-



PLAN OF THE PROPOSED HALL.

tion of the great work her boys did in the biggest game they ever played. Their lives and deeds must be suitably commemorated.

The New Hall as shown in the illustrations will seat 800 people, and will be used by the students for church services, concerts and all such gatherings. It will also be used for public meetings in connection with the numerous farmers' gatherings at the College. Every Ontario farmer should have a part in its erection. Friends of the College are contributing. Friends of the boys who fought, and of the boys who fell are sending in their donations to Ontario Agriculture's Memorial. The committee desire that none be missed. The campaign will go on

through the fall and winter, and next year building will commence. A number of promient farmers, fruit growers and stock breeders are being asked to allow their names to be added to the committee already formed. One friend of the College has given $1,500.00. Others have sent $500.00. Many ex-students of the O.A.C. and of Macdonald Institute have given from $50.00 to $100.00 each. Some will give more and some less. Donations large or small will be thankfully received. Dr. G. C. Creelman, President of the College. is Chairman of the Committee and Treasurer of the fund. All money should be sent to him.

County Representatives of Ontario

Algoma	J. W. Wadsworth	Sault Ste. Marie
Brant	R. Schuyler	Paris
Bruce	N. C. McKay	Walkerton
	R. J. Brydon	
Carleton	W. D. Jackson	Carp
Dufferin	H. A. Dorrance	Orangeville
Dundas	F. A. Wiggins	Morrisburg
Durham	G. A. Williams	Pt. Hope
Elgin	J. W. Buchanan	Dutton
Essex	J. W. Noble	Essex
Frontenac	A. W. Sirrett	Kingston
Glengarry	D. E. McRae	Alexandria
Grenville	W. M. Croskery	Kemptville
Grey	H. C. Duff	Markdale
	R. K. Stratford	
Haldimand	Geo. L. Woltz	Cayuga
Halton	H. R. Hare	Burlington
	W. F. Strong	
Hastings	A. D. McIntosh	Stirling
Huron	S. B. Stothers	Clinton
Kenora	D. Frejd	Kenora
Kent	J. L. Dougherty	Chatham
Lambton	W. P. Macdonald	Petrolia
	W. H. Sproule	
Lanark	Fred Forsyth	Perth
Leeds	W. H. Smith	Athens
Lennox & Add.	G. B. Curran	Napanee
Lincoln	S. M. McElroy	St. Catharines
Manitoulin	I. F. Metcalfe	Gore Bay
Middlesex	R. A. Finn	Box 663, London
	G. R. Wilson	
Muskoka & Py. Sound	R. S. Beckett	Huntsville
Norfolk	E. F. Neff	Simcoe
Northumberland	H. Sirrett	Brighton
Ontario	R. M. Tipper	Whitby
Oxford	G. R. Green	Woodstock
Peel	J. A. Carroll	Brampton
	A. E. Springstead	
Peterboro	F. C. McRae	Norwood
Pr. Edward	A. P. McVannel	Picton
Rainy River	R. E. Cumming	Emo
Renfrew	M. H. Winter	Renfrew

Simcoe	A. Hutchinson	Collingwood
	A. R. Mitchell	
Sudbury	D. J. Robicheau	Sudbury
Thunder Bay—		
Pt. Arthur	L. M. Davis	Pt. Arthur, Ft. William
Ft. William	G. W. Collins	Ft. William
Temiskaming	J. M. McIntosh	New Liskeard
Victoria	A. A. Knight	Lindsay
Waterloo	J. S. Knapp	Galt
Welland	E. K. Hampson	Welland
	R. R. Fleming	
Wellington	R. H. Clemens	Arthur
Wentworth	W. G. Marritt	18 Market St., Hamilton
York	J. C. Steckley	Newmarket

Graduates of the Ontario Agricultural College

(Continued from the July issue)

1890—Brodie, G. A., Bethesda, Ont., Farmer.

1891—Buchanan, David, Azul, Argentine Rep., Missionary.

1893—Beckett, H. L., Hamilton, Ont., Farmer.

1893—Bell, L. G., South Qu-Appelle, Sask., Farmer.

1894—Brown, W. J., Aylmer, Ont., (Enlisted), Farmer.

1894—Burns, J. A. S., Whitewater, Man., Clergyman.

1896—Bishop, W. R., London, Ont., Optician.

1898—Beam, E., Netherby, Ont., Farmer.

1898—Butler, W. E., Ingersoll, Ont., Horse Exporter.

1899—Buchanan, J., Agr. College, Ames, Iowa, Supt. Co-Operative Experiments.

1902—Black, W. J., Chairman Soldiers' Settlement Bd., Ottawa, Ont.

1903—Broderick, F. W., Agr. College, Winnipeg, Prof. of Hort.

1904—Barber, T. C., Tallulah, La., U.S.A., Entomologist.

1904—Bray, C. I., Agr. College, Stillwater, Okla., U.S.A., Assist. in Animal Husbandry.

1904—Buchanan, Daniel, R. R. No. 2, Thamesville, Ont., Farmer.

1904—Bustemante, R. S., M. Y. Garcia, F. C. O., Buenos Ayres, Arg. Rep., Rancher.

1905—Baker, R. G., Unknown.

1905—Bell, H. G., Toronto, Ont., Director of Soil and Crop Improvement Bureau of the Canadian Fertilizer Association.

1905—Brerton, F. E., Union Station, Toronto, Brakesman, C.P.R.

1905—Bustemante, D., M. Y. Garcia, F. C. O., Buenos Ayres, Arg. Rep.

1906—Baker, M. R., Collingwood, Ont., Fruit Farmer.

1906—Barberee, G. L., Hammond, Minn., U.S.A., Mgr. Creamery Co.

1906—Bower, J. E., Beatrice Creamery Co., Lincoln, Nebraska, Superintendent.

1906—Bracken, J., Agr. College, Saskatoon, Sask., Prof. of Agronomy.

The Alumni Department will publish the addresses of any O.A.C. men of whom our readers enquire, if such information is on record at the O.A.C.

1906—Brackon, W. D., Dept. of Agr., Edmonton, Alta., Supt. Exp. Farm.

1907—Barton, H., Macdonald College, Que., Prof. of Animal Husbandry.

1907—Binnie, T. H., R. R. No. 2, Priceville, Ont., Farmer.

1907—Bunting, T. G., Macdonald College, Que., Horticulturist.

1908—Barnet, W. A., Harrow, Ont., Supt. Exp. Farm.

1908—Bowes, L. A., Calgary, Alta., Farmer.

1908—Brown, W. A., Dept. of Agr., Ottawa, Ont., Poultry Expert.

1909—Bailey, C. F., Dept. of Agr., Toronto, Commissioner of Agr.

1910—Bengough, W. L., Grimsby, Ont., Farmer.

1910—Bowman, W., Georgetown, Ont., Farmer.

1911—Baldwin, M. M., Colchester, Ont., Farmer.

1911—Buchanan, C. W., Dutton, Ont., Agr. Rep.

1911—Baker, A. C., Ent. Br. Dept. of Agr., Washington, D.C., Entomologist.

1911—Baker, A. W., O.A.C., Guelph, Ont., Assist. in Entomology.

1912—Beaupre, F. C., Simcoe, Ont., Farmer.

1912—Bergey, S. A., Macdonald College, Que., Assist. in Poultry.

1912—Bosman, A. M., 75 Rock St., Pretoria, Transvaal, S.A.

1912—Boyd, F. A., Wolesley, Sask., C.P.R. Dem. Farm.

1912—Bradt, E., Sec. Dept. of Agr., Fredericton, N. B.

1913—Beckett, R. S., Brighton, Ont., Enlisted.

1913—Bland, A. G., Toronto, Ont., Enlisted.

1913—Boddy, R. A., Health Dept., City Hall, Toronto, Ont., Chemist.

1913—Bramhill, G. G., Dept. of Agr., Ottawa, Flax Expert.

1913—Brown, R. W., Winnipeg, Man., Prof. of Dairying.

1914—Barnett, I. T., Exp. Station, Harrow, Ont.

1914—Bergey, J. E., Agric. College, Winnipeg, Assist. in Poultry.

1914—Blanchard, B. H. O., Peterboro, Ont.

1914—Britton, J. E., Supervisor of Agr. Education, Armstrong, B. C.

1914—Brown, J. M., Agr. College, Winnipeg, Assist. in Animal Husbandry.

1915—Bell, W. J., Principal Kemptville School of Agriculture.

1915—Bligh, R. D. L., Dept. of Agr., Kentville, Nova Scotia, Assist. in Horticultural.

1915—Burrows, L. F., Soldiers' Settlement Board, Victoria. B.C.

1916—Binkley, H. V., 30 Ontario St., Hamilton, Ont.

1916—Brownridge, J. W., R. R. No. 2, Georgetown, Ont., Farmer.

1916—Bryden, R. J., London, Ont., Farmer.

1916—Baird, A. B., Entomology Branch, Dom. Dept. of Agr., Fredericton, N.B.

1916—Bennet, W., Poultry Dept., O. A. C., Guelph.

1916—Burrows, A. R., Guelph, Ont.

1919—Brink, R. A., Chemistry Department, O.A.C., Guelph.

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President of Montana Agricultural College

The following note has been kindly forwarded by R. O. Wilson, Secretary to the Faculty, College of Agriculture and Mechanic Arts of the University of Montana, Bozeman:

You will be interested to know of the appointment of Alfred Atkinson to the presidency of the Montana State College of Agriculture and Mechanic Arts. Mr. Atkinson was elected to the chair of President of the institution at a meeting of the State Board of Education of Montana, held at Helena, Monday, July 7th. Mr. Atkinson succeeds James M. Hamilton, who for fifteen years has been President of the institution. Mr. Atkinson has been connected with the Montana State College for fifteen years as Professor of Agronomy.

Mr. Atkinson received his Associate Degree from the Ontario Agricultural College, in 1902, his Bachelor of Science Degree in Agronomy from the I. S. C. in 1904, and his Master of Science Degree from Cornell University in 1912.

Since the United States entered the Great World War, Mr. Atkinson gave his services as Food Administrator for Montana. It is needless to say that his work in this position was excellent.

Major N. D. MacKenzie, graduate of Class '09, has recently been appointed Superintendent of the Dominion Experimental Farm at Indian Head. MacKenzie was born and raised on a farm near Galt and is well versed in all affairs pertaining to agriculture. After graduation he was engaged in agricultural representative work in Glengarry County and in the fall of 1915 he enlisted and went overseas. After his discharge from the military service in 1917 he was appointed to the position of Assistant Superintendent of the Dominion Experimental Farm, Brandon. Being a practical farmer and conversant with experimental work and farming conditions in the West he will "make good" in his new position.

Capt. Arthur E. Slater, for eight years a Presbyterian missionary in North India, who during the war was released to recruit 800 men monthly in the Agra and Mainpuri districts, arrived in New York about June 1st on the Ellerman liner, City of Benares, from Calcutta.

He is a graduate of the Ontario Agricultural College at Guelph, and will spend his furlough in Grimsby, Ontario. His work in teaching modern agricultural methods to low-caste converts in the Etah district of the united provinces attracted wide attention in military circles, and was a great help in furthering the movement toward self-support in the churches of the Villages.

Capt. Slater holds a commission in the Indian Army Reserve Corps. His father was one of the pioneer missionaries in South India, and was the author of "Higher Hinduism," a philosophical study of the religion of India.

It is a human trait to be interested in one's fellows. We have every reason to believe our ex-students are human; therefore they are interested in each other. If all of them would send in information about themselves, all of them would enjoy the result.

S. P. Wai, '20, was a visitor at the college recently. Wai is at present in Montreal studying the commercial conditions of Canada. He has given up all thoughts of continuing his agricultural education.

Lionel H. Hamilton, '18, cheerily sends in his subscription from Arthur, Ont. He is farming with his father. They have about four hundred acres under cultivation. He also expresses his appreciation of the Review—a thing which always falls upon ears that hear.

We like the manner in which Frater Hamilton sends in his subscription; he accompanies it with some news. Others also pursue this plan. It is an excellent idea.

Waugh, '22, is working in the Horticultural Department on the Central Experimental Farm at Ottawa.

J. E. McLarty, B.S.A., a graduate of Class '16, who has been Director of the Rural Science Department, Prince of Wales College, Charlottetown, P. E. I., is now engaged in farming in Saskatchewan. He resigned his position last spring in order to put his knowledge of agriculture into practice in the West. We wish him success.

Among the O.A.C. boys who make up a considerable portion of Ottawa's population is W. F. Argue (Blargie) an associate of Class '19. Bill is in the coal and wood business. He's as enthusiastic in this work as he used to be in horticultural pursuits in the college orchard on dark autumn evenings.

H. Harley Selwyn, '18, addressed the beekeepers of Carleton County on June 20th, at the annual meeting at Ottawa.

Selwyn, who was employed at the C. E. F. all winter, is now attending to his own apiary in Quebec Province.

Oh, Me!

A dingy office! The windows closed for the night! The doors locked to keep out intruders! The two thirty-two candle power lights making ghastly shadows! A man hunched in a creaky chair before a time-stained desk! His face overcast! Without doubt he sees no solution for the question taxing his tired uningenious brain! He is attempting to be an imitator. Robert Bruce! Ah, that is the man he wishes to imitate! But, hang the luck, no inspiring spider hangs suspended from the cob-webs in the corner! Finally the unsuccessful man feels the pang of hunger, rises wearily and leaves the office, without having successfully concocted a plan whereby he may fill the Alumni columns! Poor Editor!

Harold Mason, '17, who completed his third year and went overseas in 1916, has been invalided home. He was severely injured in the leg, but is recovering nicely.

The Alumni Department will publish the addresses of any O.A.C. men of whom our readers enquire, if such information is on record at the O.A.C.

Harry Smallfield, '20, doesn't mind hard labor in the Renfrew Creamery, but he finds the city very dead without Doc. Fraser.

Arthur Mann, '18, has returned from overseas.

Geo. Knowles, '18, has returned from overseas and is now operating a ditcher in Niagara district.

Art White, '17, and "Chesty" Davis, '18, have also returned.

"Mac" MacGregor, '18, has the agency for the durable Dodge and the famous Franklin in Guelph.

Imitating "Life."

Last winter we received a note from a man who had apparently at some distant time been a student at the O.A.C., from the fact that he had been receiving the Review for fifty cents per annum. It contained this curt reply to our request for one dollar for a year's subscription: "I'll pay no dollar for your paper. Scratch 'of' my name." Any ex-student who can spell "off" properly never hesitates to send in a dollar annually, so that he may receive the O.A.C. Review for the coming year.

W. R. Gunn was hardly an hour in Winnipeg before he had a hurricane going full blast over the city. We would look on the affair as a coincidence and make no remarks, but it would hardly be fair to the West if we kept silence. This is just a warning to the Westerners to retreat to the storm-cellars on Gunn's approach. He has raised Cain around Guelph on many occasions, especially on Sport's day. Apparently he mistook the "Peg" for a campus and started in a hurry to raise Cain once more.

Miss Beatrice M. Turner, of Spring Short Course '15, has graduated from Toronto University.

In Memoriam

In loving memory of Capt. Lewis E. Henry, B.S.A., who was killed in a bombing raid on a German outpost, left of Lens, on August 30th, 1917. He was one of the officers in charge of the attack and was just going up the sap when struck by a shell, being instantly killed. He was buried close to Bully Grenan, in Aix Roulette Cemetery. Lewis Henry was one of our finest young men, and is greatly missed by all who knew him. His parents reside at Winona, Ont.

The following notes were left out in the make-up of the January issue. They only recently came to view:

Killed in Action

Muchlow—Killed in action on September 27th, 1918, Gordon Muchlow, second son of Edward and Mabel Muchlow, of Woodhill Bing, Lancashire, England, aged 26.

Stairs—Killed in action September 29th, Lieutenant K. C. Stairs, 60th Battery, C.F.A., son of Mr. and Mrs. Ed. Stairs, of Halifax.

Major Cuthbert F. McEwen, son of Lt.-Col. Robert McEwen, of Byron, Ont., was killed in action on

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October 21st. He went overseas with the Divisional Cavalry under the command of Lt.-Col. Ibbetson Leonard. He was 30 years of age. He is survived by his parents, three brothers, including Major Allen McEwen, returned, now of Montreal, and one sister.

WEDDING BELLS!

Coke-Dodds

Truly, one never knows, does one? As Bob Skelton says, "Whoever would have thought that the old p—t b—y, who never would look at a girl, unless she were an aunt or a cousin, would be one of the first to strike the double trail? But it really actually happened. On July 1st, in St. Andrew's Church, Orangeville, Ont., the Rev. Mr. Morris asked the question: "Do you, Joseph Coke, take Elsie Clare Dodds, to be your lawfully wedded wife," and Joe's answer was very much in the affirmative. And in proof of the fact that disuse in early years had not dulled Joe's powers of discretion in the choosing of girls, was the large assemblage of the bride's friends who came to witness the marriage of this young lady who had been so popular among them—the church was filled to capacity. The bride looked most charming indeed in a gown of white Georgette and Rosepoint lace, with flowing bridal veil, and carried a large bouquet of roses. Daisies and ferns combined to make a tasteful decoration of the altar and guest pews.

Following the ceremony, a reception was held at the home of the bride's mother, where the young couple were made the recipients of the best wishes of all. And then, amid showers of confetti and to the tune of four large rocks in a coal-scuttle at the end of six feet of rope, mingled with intermittent blasts of motor horns, they were whirled away on the first stage of that great journey—the honeymoon. After a short trip down Lake Ontario and the St. Lawrence, Mr. and Mrs. Coke will take up residence in Guelph.

NOTE—We publish this nuptial note in the form in which we received it, feeling sure that in attempting to abridge it we would most certainly mar its literary charm.

Birdsall-Kent

A pretty wedding was solemnized in St. George's Cathedral, Kingston, recently, when the Bishop of Ontario united in marriage Ethel, third daughter of Lt.-Col. and Mrs. R. E. Kent, to Lt.-Col. F. E. Birdsall, '11, Commander of the Hutments at Barriefield.

Leggatt-Hearle

The marriage of Lieut. Cyril Wilmer Leggatt, R. A. F., son of Mr. Leggatt, of Godalming, England, retired Session Judge in the Indian Civil Service, and Miss Margaret Hearle, daughter of the late Nathaniel Hearle, Conservator of Forest,

Continued on page xvi.

It is a human trait to be interested in one's fellows. We have every reason to believe our ex-students are human; therefore they are interested in each other. If all of them would send in information about themselves, all of them would enjoy the result.

The School Lunch Box

In the schools of the present day many of the children go home for their dinner. The greater proportion, however of the children in the country, live too far from the school to go home for dinner and must therefore take their lunch. The mother finds the school lunch boxes, which must be filled day after day, one of her most difficult problems.

At the opening of school in the Fall, she may take up the task with enthusiasm, but by midwinter interest is apt to wane and the provider feels as if her ingenuity and the resources of her pantry were alike exhausted. The children too may seem more difficult to please. Colds and other winter ailments result in loss of appetite and fastidiousness. Thus the cold luncheon provided for a freezing day may be brought home half-eaten. When the hot Spring days come, the unattractive lunch with no variation from day to day, will be thrown half-eaten into the waste paper basket or wood-box, furnishing a feast for the school mice.

A little time spent by the mother at these seasons, in planning new combinations, in studying the possibilities of her private stores and those of the country store, also an effort to harmonize the likes and dislikes of her children, with her own knowledge of the food their bodies require, will be far from wasted. If the lunch is either deficient in quantity or poor in quality, the result may be, lowered vitality and increased susceptibility to disease, instead of healthy growth of body and mind. Careful planning and prepartion of the lunch must be given if it is to be instrumental in producing healthy boys and girls.

In some schools there are cooking utensils provided by the school board in which soups and drinks, such as milk chocolate and cocoa may be reheated, thus providing something warm for the lunch which is to be eaten on a cold winter's day. When the school is equipped with a domestic science kitchen lunches may be prepared by the cooking class and served to the children at small cost. This helps to pay for the cost of the materials used and provides a warm lunch for those who cannot go home for their dinner. A few city schools have a lunch counter where the children may purchase a good nourishing and appetizing lunch for a few cents. Since very few rural schools are provided with any equipment for the serving and preparing of school lunches, the children must eat their lunch as prepared at home and carried to school in the lunch-box. The mother must then plan to

pack into the lunch-box food which will supply the bodily needs of the child.

The mother should consider the age of the child for which the lunch is to be prepared. The diet for children of early school age that is children from five years to twelve, require a different diet from those in the adolescent period of life. In the early school age milk should be used generously, supplying a large percentage of the protein or tissue building material required for growth. Meat may supplement milk but not replace it. Lean beef, mutton, lamb, chicken and lean fish are most suitable for this period. Meat should be given in very limited quantities and not more than once a day. Strong acid fruits should be avoided. Fat meats or foods cooked in fat should never be given to children of this age, since they are very hard to digest. Since children do much mental work, the brain must be nourished by a good supply of blood. If the blood is required for the work of digestion, there must be less left for the brain and its activity declines producing a feeling of drowsiness and inability to concentrate the mind on anything requiring mental work. Hence easily digested foods should compose the lunch of every school child. Fats given should be derived from such sources as good milk, butter, the yolk of egg and bacon.

Sugar is one of the most important forms in which carbohydrate can be added to the diet of young children. The craving for sweets which children show is no doubt the natural expression of physiological need, but they should be taken with meals or immediately after, never between meals. A piece of candy tucked away in the corner of the lunch-box is always a delightful surprise for children. Sugar may be supplied in the form of icing on cake. Chocolate is one of the most wholesome and nutritious forms of sweets. Rich confections and stimulating drinks such as tea and coffee should never be given children in the early school ages. Nuts are too concentrated and should be given in the ground form such as peanut butter. Fruits should find a place in the contents of every lunch-box, because of the mineral salts they contain as well as for their cellulose. Food carrying substances for growth, such as milk eggs, butter and thin leaved vegetables, are very essential and should find a place in the child's menu.

Children in the adolescent stage of life may have any wholesome food in right amounts at the right time in easily digestible forms. Meat may be given in moderate amounts and vegetable salads may help to vary the lunch. Tea, coffee and strong condiments should not be given. Hence the mother should know what is best for the child at its particular age before she can effeciently prepare a good lunch.

Many children are given carelessly prepared lunches without variation in a very inattractive form because the mother hasn't the time to give it much thought and consideration. Even where there is help in the home, the planning of the school luncheons cannot be satisfactorily left to the untrained servants as this would probably result in improper combinations of food and a lack of balance.

If the mother has sufficient money at her disposal she may give a greater variety to the lunch than one with a more limited means. Foods should be utilized when they are in season.

The physical needs and condition of the child must also be considered. Delicate children may not have good appetites and then is the time when extra thought and care are needed in planning. Some children are more active than others and must therefore have more provided for them. Chidren all enjoy a small lunch between meals. Some thing especially tucked away for recess will always be a source of pleasure and surprise to the child. The recess lunch should be very easy of digestion and in small quantities. A lettuce sandwich or an apple would be sufficient to appease the child's hunger until noon hour.

Children have likes and dislikes in what they eat as well as in what they wear. Whenever possible the likes of the child should be taken into consideration . .

The school lunch is the child's noon meal and should with the other meals of the day furnish the bodily requirements of protein, fat, carbohydrate and mineral matter. This noon meal should be as varied as the mother can possibly make it, since children tire of the same things day after day.

When these important points have been considered, care should be taken to prepare and cook the food properly and attractively.

The packing of the lunch plays a very important part in the success of the lunch. A suitable box or basket should be secured which can be easily washed and sterilized. Each food should be wrapped in butter or paraffin paper. Only foods which will not crumble should be packed. The more compact foods should be placed in the bottom. The corner might be suitably filled with little surprises. Foods having a strong odor should be put in containers. Two paper napkins should be placed on top of the lunch. One for the child to spread on the desk, and the other to be used by the child. The wise mother will enquire about the lunch to find out what has been done with it. All spaces in the lunch box should be filled so there will be no jolting of one food against another.

The children may forget to thank their mother for the delightful lunch which she had prepared for them, when they come home, but if she could see their faces beaming with pleasure when they uncover their dainty lunch, she would be amply rewarded for the extra trouble she had taken.

J. de G.

Salads

Since time immemorial salads have been a most acceptable addition to our menu. How cool even the word sounds these warm August days! Yet we can remember how welcome the salad was when appetite lagged during the monotonous meals of winter. The word "Salad" comes from the Persian "Salata," meaning any cold food eaten with salt, oil and spices. Now it is applied to a multitude of dishes in which almost any food is combined with Salad Plants or Dressing.

The salad may be in evidence at all meals save breakfast, forming the first course, the dessert or the

piece de resistance. Or the salad may be merely the relish of the meal where it has replaced those neat little cucumber pickles we used to know so well. Considering that salad materials may now be obtained the year round, their health giving properties and our craving for them, should they not be eaten even more freely than they are?

As the dressing is often the making of the salad it is of first consideration. Our Latin fathers were the first to conceive the idea of the dressing. But they merely sprinkled the food with salt, lemon juice, and oil from their olive orchard. To-day we have numberless and complex dressings which may be divided into the following main classes:—

Uncooked

French—Oil, acid and seasonings.

Mayanaise—Oil, acid, seasonings and egg yolk.

Cream—Cream, acid and seasonings.

Cooked

White Sauce Basis—Combined with eggs, acid and seasonings.

Custard Sauce Basis—Eggs alone used to thicken.

These dressing add food value to the salad and give it a zest obtainable from no other food. The salad should not be marinated as a rule, very long before using or it will lose its fresh appearance.

And now let us choose our salad materials. As far as possible it is best to select those in season, as they are in better condition and cheaper. They must harmonize in colour and flavour. Shun such combinations for example as beet and pimento. Beware also of foods which will react chemically to form indigestible compounds. The materials should be cold, fresh and in perfect condition.

Among salad greens are cress, parsley, dandelions, celery, the first tender leaves of cucumbers and parsnips. Lettuce is the great favorite, however, and several kinds are obtainable. We may look to Luther Burbank, the Californian Wizard, for new varieties of salad greens. Greens are especially valuable food, supplying cellulose and organic acids to keep the blood purified, and an abundance of minerals to tone up the system. These minerals, being in organ combinations, are more readily used by the body than medicinal minerals. The greatest value of greens, however, lies in their richness in the much talked of and élusive irtamines.

For fruit salads the same rules of selection apply as in vegetable salads i. e., any combination harmonizing in color and flavour. They have the same valuable constituents as vegetables, mineral, organic acids and cellulose. Their tempting appearance and colours can be employed by the skinful cook to make a dish irresistably tempting and the large percentage of water contained in them leaves the consumer cool and refreshed.

Garnishes for salads add to their food value and enable the cook to transform the appearance of otherwise plain foods. Garnishes suitable for vegetable or meat are curled celery, parsley, mint, lemon and cucumber in fancy shapes, rings of onion, eggs cut as water-lilies, rose radishes or pimento. Or they may be served in cucumber boats, scooped out apples or beets. For fruits try

whipped cream, angelica, maraschino cherries, jelly cubes, flowers, raisins or nuts. Have the garnish a contrast to the main part of the salad and avoid over-garnishing.

Two novel ideas in fruit salads follow:

Belgian Salad—(Representing colors of Belgian Flag)—Steam soaked prunes till tender. Chill and remove stones. Fill cavity with chopped celery nuts and dressing. Arrange three on a bed of curled celery and place pieces of pimento, cut into fancy shapes with vegetable cutters, between them. In the centre put a spoonful of yellow dressing.

Candlestick Salad

Place a slice of pineapple, from which the core has been removed, on a lettuce leaf. Cut a banana in half horizontally and place upright in centre of pineapple. Surmount with a cherry (fasten on with a toothpick) and a shread of cocoanut, for the candewick. Make a handle of a strip of green pepper fastened in side of banana. Serve dressing around base of banana.

Miss Bertha Scholfield has accepted a position at the St. Christopher House, 67 Bellevue Place, Toronto.

Pussy Willow and the Backward Youth

(By "Viviette")

Pussy Willow, a harmless soul, was one of those big-eyed, soft-voiced creatures who look up at and to one, especially if one happens to belong to the more assertive sex.

Pussy had come from Willow Creek, but that meant nothing in her young life. Her favorite color was cerise, and she was addicted to all the helping nature help herself habits of her kind—such as powdering her nose in public, applying Gilman's rouge in private and little things like that. She had hit on Mac Hall as an ideal place for an ideal holiday. Lots of boys, scenery and competition.

Of the competition Pussy felt unafraid. She knew as many tricks as any down-town girl! The scenery bored her but the boys fascinated her. Is it necessary for me to add that they were O.A.C. boys?

It is generally supposed that boys at the Agricultural College are not bashful, but there are many whose strange behaviour can be attributed to nothing else. In this class belonged the bashful youth, hero of our tale. Inasmuch as he was big, handsome, and athletic, Pussy, sighting him, decided to overlook this pitiful shortcoming.

Pussy found she knew his cousin's cousin's sister and the first thing Handsome Harry knew he was dragged over to Mac Hall for a friendly call.

As he waited outside the door, reflecting on the fact that he had never seen this girl before, weird thoughts chased themselves through the airy passages of his cranium.

What would this person be like? Would she be a vivid, colorful, flashing boinsettia, or a pale, pastel-tinted cabbage? Being just twenty-three Harry had lots of imagination. One of the boys had seen her on the campus, but she had, on that occasion, been so disguised by make-up that he had been unable to form any opinion. Besides she had her face screwed up as she was eating chocolate bars from the Co-op.

Would her manner be sauve, her

air blase, sophisticated, bespeaking the woman of the world? Or would she fall awkwardly into the room, and be shy about it all, showing herself a simple soul? He hoped she would not embarrass him by being a clinging vine.

Would she wear satin and creamy lace? Or would her gown (personally basted by Lucille) be a stunning creation of purple crepe de chine and black sackcloth (run up on the machine by Lady Duff Gordon) ? ? ?

Would she be dashing? He prayed not! He had brought a few gum drops to offer her in case she was the giddy type who liked candy.

Suddenly, noiselessly — almost quietly, Pussy entered. He was thrilled. She was beautifully made up and becomingly gowned in a laundry apron.

"Won't you sit down?" Her tones were dulcet.

"I-I-yes," he found the edge of a chair—a gilt-edge security against a fall. Never had the interior of the wild men's residence seemed so attractive.

Pussy started the conversation many times, but Harry refused to respond.

"We are not congenial!" decided Pussy. That had been Harry's only coherent opinion since he had met her, but something kept his tongue sealed. It may have been politeness.

"However, I will let you take me to the rink," she promised with a sweet air of bestowing a favour only possible to Duchesses and Mac girls who have season tickets.

"Oh—yes—yes—delighted." He had gained the door at last!

As he walked across the moonlit campus (moonlight is so necessary in a story of college life) he reflected. "By Saturday I hope to be in Aberfoyle."

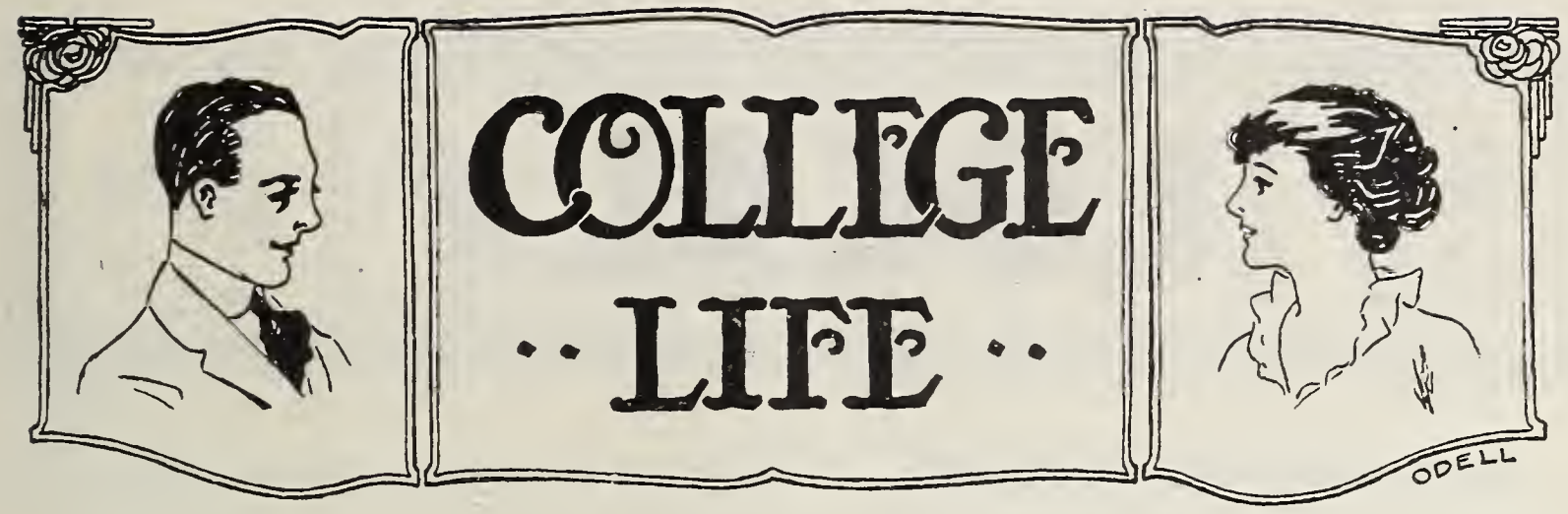
Such is Love in an Institution.

Student—Have you that book of Kipling's? Er-er-Klim is the title of it.

Patriotic Lady (to returned soldiers)—"I'm sure there must have been a lot of spies about the other day, for a queer looking man on the street car says to me, say he: "Is that the River Speed?" and I never let on I heard him. They don't get information out of me, never fear!"

A Pueblo newspaper, describing a wedding, refers to the "Bridle" party. It is fair to presume that, as the groom is a horse doctor, the bride was led to the "halter."

"Every school district should be a little democracy, and the school house the social centre of the community, where all the people come together in a neighbourly way on terms of equality to discuss among themselves their common interests, and to devise methods of helpful co-operation." — *John D. Hunt, K. C., Alberta.*



Teachers and Inspectors.

How delighted all school children would be and what a surprise would be in store for them if they were granted the privilege of spending a few days on the populous O. A. C. Campus. Especially would this be true of those whose teacher and inspector were among the pedagogues now studying agriculture. Their eyes would bulge at seeing some of our lecturers attempting to force knowledge into brains as dense as those of any red-schoolhouse dunce. They would gasp to see teacher deprived of all her authority and dignity —a mere human, and a pleasant one at that.

And yet that is the course of events at the O. A. C. Teachers and inspectors are once more but humble pupils attempting to get the "drift" of what the learned professors are saying. They are chasing base balls, gossiping, giggling and breaking rules just like ordinary human beings. They are crowding into the co-op in the same manner that the seedy freshmen do. They are enjoying real relaxation, never possible in the domain within which their word is, or ought to be, law.

But best of all this genial crowd is learning the elements of agriculture. To this end they have lecturers from nine a. m. till twelve and from two to four-thirty, five days a week; they snare insects, and collect, press and hand in mounted plants; they have tests; in short, they have a hard five weeks of training.

Conference of Agricultural Representatives.

During the week of July 14, the District Reps. of Ontario returned to their Alma Mater for a pow-wow. Needless to say the conference was a social as well as a professional affair. A great assembly of rattling, nutless Fords occurred at the same time.

In the wool judging competition held the first prize and, as well, a special prize offered by the Ontario Sheep-breeders' Association, was won by Mr. R. M. Tipper, of Ontario county. Addresses were given by R. W. Wade, Director of the Ontario Live Stock Branch, Mr. Jennings of the Sheep and Goat Division, Ottawa; Professor W. R. Graham, Poultry Department; T. G. Raynor of the Seed Branch, Ottawa; J. E. McRostie, Dominion Eggs Circle work; F. C. Hart, Director of Co-operation and Markets; Professor Howitt, Botanical Department, Toronto; W. J. Bell, Principal of Kemptville Agricultural School and others.

Rural Leaders.

Into our busy midst, the other day,

Continued on page xvii.

How Awfully Human We Are!

I smiled. Yes, I smiled aloud. The cause of my loud smile you ask. Ah, that is not hard to explain. To make the explanation more lucid let me lead you out on the campus any afternoon between two and half past four. I will take you to a fine big spreading maple whose generous branches shade some thirty or forty school teachers, in which group the so-called weaker sex predominates—in numbers at least.

But wait! If I did that I would distract the attention of the class. Instead I will grab your hand and turn our footsteaps towards a nearby building.

We have arrived. I now produce a pair of field-glasses, raise the window and tell you to study that educated bunch.

But no, pull those glasses down. I have a certain brief speech to make—a prologue, as it were, to the spying act.

You know these are school teachers. They drive or coax knowledge into Young Ontario's heads—some one, some another. They stand for law in their respective schools. They discipline the children of their schools, or should. They expect attention when they talk to those children. If they don't get it they punish by means of tongue, time or tanning. Still, even though they finally manage to gain attention, this inattentiveness worries them,—"If only the children would have a little sense and heart; if they only knew what good the teacher was trying to do them; etc., etc."

Now then gaze at the crowd and take in everything.

This is what you see.

The lecturer has material with which to illustrate his lecture. He cracks a joke once in a while. He makes his lecture as interesting as possible.

However, when the group of teachers is not smiling, I notice you smile. The reason is this: When the lecturer is not cracking jokes or demonstrating, the interest of the pedgies wanes.

Some of them are sitting with their backs against the maple's trunk. Ah, see that one. She is stretched out languidly. Her eyes are blank, her mouth slightly open. She hears not. Not far from her, right at the feet of the lecturer, two are whispering and smiling. To the right, one flexes her knees, fixes her skirt, stretches out her legs, fixes her skirt, leans farther back and again fixes her skirt, and so on. To the left, one is taking notes, until suddenly she thinks better of it and lays her book down. That there are still notes to be taken is shown by the fact that some others are still writing.

This is the manner in which those who expect attention from others and are greatly annoyed if they don't get it treat those who expect attention from them. It is well, it is well that these pedgies' pupils are not permitted to gaze in upon them.

But, say, even though some of us do

fill positions of authority, aren't we all awfully human after all?

If the man who doesn't renew his subscription each year knew what we thought of him we feel sure he would either use a ploughline, the horse trough or lime-sulphur.

Jack Neale is of the opinion that the Ontario government should include another question in the Temperance Referendum, namely: Are you in favor of taking the kick out of Ford cars? Jack says he would put a heavy "X" under the "Yes" column.

———

If the Federal government levied a heavy tax on bachelors, we wonder:

If Sid Curzon would study the results of human affinity instead of chemical affinity; if Prof. Crow would enter the Garden of Love; if C. R. Klinck would extend his selection work to the fair sex; if Jack Neale would supplant his Farm Management experience with that of household management; if Fred Ferguson would begin considering a bridal tour instead of contours; if A. H. Tomlinson would practice landscape gardening around a bungalow of his own; if R. C. Moffat would learn what velocity a rolling pin attains when thrown by an infuriated wife; if Bob Skelton would separate out a girl that used cold cream; if Bill Stanley would learn what retorts really are; if Doc. Crawford would choose a butterfly or a book worm; if E. S. Snyder would pick out a chicken of his own; if C. F. Luckham would make an inventory of his lady acquaintances and propose to the one whom he thought would be satisfied with a modest labor income; or would they all gather around the reservoir, shake hands and jump in?

Just a School Ma'am!

Jim Reed called in at his neighbors, Bill Norris' place to buy a bushel of seed corn. Blil Norris was away but Mrs. Norris undertook to oblige their neighbor

Having secured a peck measure and led the way to the corn crib, she filled the measure twice, emptying the contents into the bag. Then she proceeded to tie it up.

"But—wait!" remonstrated Jim Reed. "It takes four pecks to make a bushel."

"Oh, does it?" Mrs. Norris asked languidly. "Such matters are entirely out of my province. You see before I was married, I always taught school."

Brief Biogarphy of a Teacher

Being educated, educating, being criticized and scrimping.

Strange!

Preachers and teachers are probably the most important branches of society, yet they are the poorest paid.

Doc. Fraser, expert analyist of the Chemistry Department, sauntered out on the Campus one warm evening recently, in search of some fair teacher to turn his analytical powers upon. Needless to say he met one.

In the course of their conversation she said:

"I don't like dancing."

"Neither do I," blithely coincided the genial descendant of Scotia's rugged shores.

"Why," the sweet pedgie continued, "Dancing is simply hugging to music."

"That's all," echoed the appreciative Doc.

"I don't like the music," she informed him.

"Oh, I say," said Doc, as the truth slowly dawned upon his Scotch brain, "I say, let's take a walk in the gloaming."

Sid Curzon believes that the Rural Leaders are being encouraged to live a simple life. At least if we remember rightly it was some such word as that which Sid used in describing the games which they were being taught during the progress of the course.

Grafters break in where burglars fear to tread.

Waste no time in worrying about the past. Today and tomorrow are yours.

Teacher—Willie! You're not fit to sit beside decent people. Come right up here, and sit beside me.

A gentleman wishing to procure a July issue of the Review walked into a local news stand and asked for one. "Not in yet," was the brisk response, in spite of the fact that the Review is not on sale at any of our local news stands.

One and one make two, says the teacher.

One and one make one, says the preacher.

We wonder if there is any relation between Fred Fergusion's brief visit to Winnipeg and the strike settlement in that city.

We should try to live so that when we die even the undertaker will be sorry.—Elbert Hubbard.

"I'm never going to keep a pupil of mine in," said a demure summer school lass while walking from one lecture to another the other day. "After enjoying these open air lectures on the Campus I would never think of being so inhumane."

"How long have you taught?" quietly inquired her companion, whose mien pronounced her a teacher of experience.

"Two days," lisped the sweet thing.

"Well, my dear, you'll learn by and by that you will require to do such cruel things in order to maintain discipline."

J. B. Munro had scarcely obtained a glimpse of the teachers when paying a flying visit from Ottawa, than he remarked that he'd just love to be in Guelph for a couple of weeks. On hearing of Doc. Fraser's little episode he actually delayed his return to the Capital City a day, with what results we have not heard.

The supply of common sense never exceeds the demand.

If Wallie Gunn, Bill Currier or Sippel were around the College now we honestly believe they could take a few notes on making noise from the preachers.

If your heart prompts you to do a good deed, do it immediately, before you have heart failure.

Oh! That some bright, inventive man
  Would patent, make and sell
An onion with an onion taste,
  But with a violet smell.

AGRICULTURE AS EDUCATION.

Coniinued from page 585.

of co-operation. The evils of the prize system in school work generally are admitted; it can hardly be injurious every where else and wholly beneficial in agriculture. There is an educational problem here which managers of these worthy institutions should consider seriously. —Agricultural Gazette.

When a woman tells you she is afraid her child isn't as bright as it might be she wants you to assure her that the youngster is a marvel.

In looking over the bunch of teachers now at the O. A. C. we wonder how some of them restrain their effervescent emotions sufficiently, while directing education in a rural section, to retain the good will of the trustees.

The Holstein Friesian—Coninued from page 582

portant item to the credit side of the farmer's balance sheet. No kind or quality of veal is in such great demand as that of the Holstein-Friesian breed and its grades. Veal is also an important source of revenue to the dairymen of North Holland and Friesland. They supply vast quantities to the English markets. Cows of this breed make an excellent quality of beef. Whatever the breed, in no country does a dairy herd last longer than from six to ten years; age, accidents and failures to breed constantly deplete it. If the cow thus dropped out cannot be profitably turned to beef, the capital in the herd is totally lost every period of from six to ten years. Cows of this breed put on flesh rapidly when dry and their beef commands a high price. Over and above all labor and cost of keep, the average Holstein cow will show a nice profit on the butterfat she produces, while the skim milk will not only rear her own calf but a couple of litters of pigs besides.

Owners and breeders of Holsteins base their claims for the superiority of the breed over all other dairy breeds mainly on the following points: that she is a large vigorous cow, full of energy and abounding in vitality; that her physical organization is such that she is able to turn to the best advantage the roughage of the farm, converting the same into merchantable products; that she yields large quantities of most excellent milk, fit for any and all uses and especially well fitted for shipping purposes; that heredity is so firmly established through her long lineage that she is able to perpetuate herself through the production of strong, healthy calves; and that, when for any reason her usefulness in the dairy is at an end, she fattens readily and makes excellent beef.

Glorious Prospects

The Rev. Sol Broils was preaching what he considered his best sermon, but for some unaccountable reason it failed to arouse sufficent interest.

He decided to try his audience in another theme, "Brethren," he shouted, "in dat Glory Land dar ain't gwine ter be no mo' suffin' fer de good things to eat! Everything gwine ter be fotch to you—sassage, sparerib, chitlin's, possum.' Think uv dat!"

Old Uncle Bill Franklin who had been sound asleep, woke up at this point and yelled out fervidly: "Parson, say dem greasy wuhds again."—Ex.

What a wonderful world this would be if after-dinner speeches, dinners, funerals, bad cigars, concerts by precocious infants, operations, noses, lectures, bills, petticoats, telephone calls, temptations and a women's call-down were as short as a pretty girl's first kiss.—Smart Set

To an embalmer there are no good men and bad men. There are only dead men and live men.

There was no doubt about it. Pat was in a bad state. His nose had assumed twice its normal dimensions, his left eye had gone in for art shades, and he badly wanted a new set of teeth.

"Sure, and it was that baste Maloon did it!" he remarked, in reply to his wife's indignant question.

"Phwat? D'ye mean to say as ye were licked by a mean, grousy, little whipper-snapper loike Maloon? Why, he—"

"Whist!" said Pat, painfully. "Don't shpake evil av the dead!"

"The Rooster, like a lot of men,
Can crow to beat the deuce;
But when you crowd him for results;
You see he can't produce."

There's one thing that never gets too fresh, and that's an egg.

"Her neck has furs,
To stop the breezes;
But she looked cold
Below the kneeses."

SOBER TRUTH

Two Irishmen had been arguing, and when one of them found he was being worsted he began to be abusive.

"You're drunk!" he jeered.

The other man grew red with anger.

"Drunk, is it?" he snarled. "Ye're a great liar, thin! You wouldn't dare say that to me if I were sober!"

STICK TO IT

Plan for more than you can do,
Then do it.
Bite off more than you can chew,
Then chew it.
Hitch your wagon to a star,
Keep your seat, and there you are.

A NEW ROLE

A Tommy was standing knee deep in mud and water in the trenches.

"Are you a corporal?" asked a man approaching.

"No, my deah fellow; I think I'm a bloming bulrush!"

They stood facing each other. He gazed steadily into her eyes. Her fixed resolve nearly vanished. He stretched out his arm. She hesitated. Her moment of weakness passed.

Slap! Slap! Slap!

"Now, Johnnie, you must never do that again," she remarked crossly, as she returned her rubber strap to the drawer in her desk.

True love never demands a pedigree.

TEMPERATURE OF ATMOSPHERE

Continued from page 586.

In a pamphlet by A. J. Connor of the Meteorological office. Toronto, an interesting relation between the growth and yield of wheat and the temperature is set forth. Both yield and growth are increased by a low temperature and a low range in temperature. A critical period appears to exist in the latter part of the 90 days following sowing and if the weather in this period be warm and dry. with great temperature range, the wheat plants will head quickly and the harvest be light, but if the cool moist conditions exist heading will be postponed and the yield increased. Thus it remains a matter of seeding at the proper time to insure the cool moist weather in the critical period. In the Western Provinces the sowing is early, namely. the last of April. throwing the critical period about the middle of July, the variability of the temperature of which is the critical factor. However, the rule there is the earlier the better while in Ontario we are unable to sow spring wheat sufficiently early to procure that desired cool moist weather, nor can it be obtained by late sowing.

Most cereals are best adapted to the temperature regions and especially to those of low temperature and small temperature range. Consequently the above temperature effect is applicable to all. Fruits as a rule require a higher temperature region but not a high temperature range. Many fruits. however, have a wide distribution and is the result of variety.

ALUMNI.

Continued from page 630.

India, took place in St. George's Church, June 13th. Mr. Leggatt was a prisoner of war in Germany for over a year, and Mrs. Leggatt server for twelve months as a nursing V. A. D. in the Bath War Hospital, England.

French-Crews

On Thursday, July 10th, Miss Jessie Crews, '15 (Mac.) was united in marriage to H. S. French, '16, of Vernon, B.C.

Fancher-Allen

On Wednesday, June 25th, at Guelph, Ont., Miss Grace Irene Allen, of Guelph, was married to Mr. P. L. Fancher, B.S.A.

A Question.

Socialists say a man should get the fruits of his toil. How can a teacher ever obtain the fruits of his toil?—Still, summing it all up, perhaps he does. A teacher gets, perhaps, $675 a year, somewhere near three months holidays, a superannuation fund—after he has begged school boards to take and retain his services for the lats five or ten years of the thirty he is required to teach to get it, a dogmatic, cranky nature and the knowledge that at least one boy out of every section he ever taught in is going to trim him when he grows up.

If a million teachers, as hungry for bugs and weeds as those now in attendance at the summer school, were turned loose in Ontario. Professors Caesar and Howitt would require new positions.

COLLEGE LIFE

Continued from page 637.

stepped some fifty men and women, for a short training in Rural Leadership. This course is made up of addresses by such men as Dr. Gilmour, of McMaster University, Mr. John Bradford, of Montreal, and J. Lockie Wilson; discussions, music and games. The Rural Leaders thoroughly enjoyed themselves as well as receiving many ideas that will be very helpful to them in attempting to alleviate the rural social problem.

Peel Juniors.

In our brief account of the excursion of Ontario farmers to the O. A. C., in the July Review, we neglected to record the fact that Peel County, under the leadership of J. A. Carrol, District Representative, was represented. The feature of the Peel party was that it was composed of between 175 and 200 juniors, young men and women members of the Junior Farmers' Improvement Association and Junior Women's Institute. The girls were especially pleased with the visit as they were shown through Macdonald Hall and Institute, also the poultry and dairy buildings, and inspected home conveniences in the Physics Department. The boys, as well as making the trip to the Experimental Plots and other Departments, had a class in judging of beef cattle.

It is human nature for one man to ask another how he feels—also not to care.

He who is false to present duty breaks a thread in the loom, and will find the flaw when he may have forgotten the cause.—H. W. Beecher.

TRIALS AND TRIBULATIONS

Continued from page 590.

know they are safe. We cannot swat them or we immediately jar our instrument out of level. It's a case of "grin and bear it."

The job is finished; we "move on". Our next port of call is a little village some twenty miles away. We get to the station and the local is three-quarters of an hour late. At last she comes wheezing in, reminding us of a horse with the heaves. We climb aboard the passenger coach. Ahead are two cars of hogs and behind our coach is a car which instinct or some other,—smell, tells us is fertilizer. But nothing surprises us any more. We have passed that stage.

Tripod in hand, we seek a seat that somebody has sat in recently,—there's less soot on it. The little girl across the aisle says audibly to her mother, "Oh, look mother! that man's been taking pictures."—sweet innocence.

After an hour of squealing pigs and shunting cars we arrive at our destination. For some unknown reason we have difficulty in stopping and go past the station platform. However, our obliging engineer backs in and triumphantly manoeuvers to place.

We alight, we see a farmer at the other end of the platform eying us furtively,—we know he is guilty of luring us to this spot, and he admits the charge. Introductions follow, we both agree that it is hot, we both need rain (for different reasons). The horse is untied and heads for the open country.

But this time our task proves a little more agreeable.

She is about nineteen and has that look of innocence still found in some country girls. She has been picking berries. Yes, we would like some. We would eat acorns if profferred by those hands.

We did not intend to mention her when we started writing this tale of woe, but the truth is not the truth unless it is the whole truth, so we cannot leave her out. Anyway we do not wish to be too like a pessimist, the fish that sees a hook in every worm, the individual who of two evils chooses both.

We drainage men may have and do have our trials and tribulations but we like fresh berries.

AGRICULTURAL EDUCATION IN THE U. S.

Continued from page 598.

the general view very clearly. He said that the fundamental purpose of agricultural education is the development of agriculture as a productive occupation, and of the agricultural people as an important part of the social and political fabric.

"Development is the central thought in educational activity, and the development of American agriculture to its highest possible limit, both as a business and as a mode of life, is the purpose for which the colleges and experiment stations were founded and supported by the public. The development of agriculture until it shall be profitable, productive, permanent, until the rural districts are comfortable, and the rural people are educated—these are the specific aims of American educationists."

When it comes to fussing with the birch rod gang, the Chemistry Department boasts a trio that's hard to beat, namely: Messrs. Curzon, Fraser and Stanley.

"HORTICULTURE IN THE CANADIAN NORTH WEST"

Continued from page 601.

can be accomplished. There is no reason why, in years to come, all the farmers' homes should not be surrounded by groves of trees and plantations of shrubbery, and why they should not produce all the vegetables and small fruits they require and have enough to make it worth while shipping them to the city markets.

They say cricket is a gentlemanly, afternoon tea game, but anyone who witnessed Guelph play Hamilton on Peace Day could not help but conclude that even cricket is rough in spots.

McCrimmon, surveyor, when spending week-ends in Guelph, has a great desire to become well read and to attain that end spends much time in Massey Library.

The lay of a number of local young men as they saunter across the Campus of a summer evening: "Make me a school-kid again, just for to-night."

One of the youthful members of the Physics Department has now an exaggerated opinion of his warbling powers

The other day a knot of teachers of the fair, giggly sex, were passing the Physics building. The simple young man in question protruded his head from an upper window and whistled in vulgar fashion after the vanishing maidens.

One of them, in apparent innocence, gazed heavenward and inquired of her companions, "Where's the bird?"

THICKER THAN WATER

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smile. "Thank God!" he muttered. Then, with twitching mouth: "Say, Doc, how soon do I croak?"

"Why, not for a good many years, I hope." The surgeon turned frowningly to Markham.

"Didn't you explain that there was no danger to him?"

"Huh! I'm afraid I didn't!" stammered Markham. "I was so keen to get his consent. Do you mean that he thought—"

The surgeon nodded pityingly and turned to the lad. "You're not going to die," he said gently. "You'll be all right to-morrow. But I'm deeply sorry you've suffered the past hour. You were braver than any of us suspected!"

"Aw, that's all right," muttered the boy. "She's my sister, ain't she?"

"RURAL SOCIAL PROBLEM"

Continued from page 609.

being met. Gradually, little by little, the seed is being scattered. We hope that the time will not be long delayed when we shall see many a Community School with its teacher living beside it; the Community Church near by, with its home for the minister; the Community Hall and Playground, and many other attractions that will make our country young people feel that their country home has as fine equipment as the City home can provide.

Willie. (reading history lesson) "William the Conqueror landed in England in 1066, A. D."

Teacher—"What does A. D. stand for?"

Willie—"I don't exactly know; maybe it means 'after dark.'"

Guelph Business Directory

The attention of the O. A. C. and Macdonald students is drawn to the following directory of Guelph business and professional men. Their advertisements help to make your magazine a success. They carry the best goods and give the best service you can obtain. It is only fair that you patronize them.

Banks—
The Dominion Bank.
Guelph & Ontario Trust Company.
The Merchants Bank.
Royal Bank.
Union Bank.

Barbers—
R. H. McPherson.
Stock Donaldson.

Butchers—
E. A. Hales.

Boots & Shoes—
J. D. McArthur.
S. Enchin.

Cafes—
Dominion Cafe.

Candy and Ice Cream—
The Kandy Kitchen.
Royal Candy Works, Wyndham St.

Dentists—
Dr. M. J. Rudell.
Dr. R. H. Wing.
Dr. G. P. Britton.
Dr. E. V. Humphries.

Druggists—
J. D. McKee.
Alex. Stewart.

Dry Goods and Ladies' Wear—
Moore & Armstrong.
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R. S. Cull & Co.
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R. E. Nelson.
Geo. Wallace.
Lyons Tailoring Co.
Hillman & Wallace.

Hardware—
The Bond Hardware Co.
G. A. Richardson.

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Opticians—
A. D. Savage.

Photographers—
The Kennedy Studio.

Printing—
The Guelph Herald, Ltd.
Kelso Printing Co.
The Guelph Mercury.

Pressing—
C. F. Griffenham.
Hillman & Wallace.

Real Estate and Insurance—
D. H. Barlow & Co.

Shoe Repairing—
W. J. Bridge.
S. Enchin.

Soaps and Boiler Compounds—
Guelph Soap Co.

Taxicabs—
C. L. Kearns.

Theatres—
Regent Theatre.

Typewriters—
A. E. McLean.

You will be doing the Review a service if you tell these people you have read their advertisement.

PASSING RICH

Continued from page 610.

"But, you forget, gentlemen," began Miss Lichum, aroused by their conversation, "that we're now living in the present age. Why girls can now take a two years' course in book-keeping and stenography and start off at fifteen to twenty dollars a week—seven hundred and eighty to ten forty a year—and paid for their holidays.

"Moreover, you don't know what teaching includes. The nearest boarding house I can get is one and a quarter miles from school. That means two and a half miles a day—five hundred and five miles in the course of the teaching year—with a daily cold lunch thrown in. Why, I've worn out three pairs of ten dollar shoes and five pairs of rubbers since last September.

"I've got to be at school at 8.45 a.m. I seldom leave before 4.30 and often not till 5 p.m. Even then I usually bring some test papers and exercises home with me to mark.

"I've not only got the children, but you, the people of the section, and the inspector, to contend with. I've got to act just so all the time, or t-t-t-t-t-'isn't that terrible.' I've got to go out for tea, attend box socials, and look wise all the time whether I feel like it or not. I've got to talk crops, weather, babies, baking, fancy work, books, religion, current events and every other thing—but never dare I pass a bit of gossip.

"And as though that weren't enough," she sobbed—"but I've got to listen to a bunch of hard-shelled, old tight-wads, like you, discount my work. (Ow-ough.) I won't stay! Keep your increase! Keep your dirty twenty-times-handled five hundred dollars!—I don't want it!—I resign! (boo-hoo) I resign! Hear me!"

"Miss Lichum!" they chorused.

"We didn't mean to hurt your feelings," explained Hiram. "You've done good work. Excellent work. The inspector's reports have been very good. We don't want you to go. We'll have to see if we can't keep you. What about a raise, boys?"

"Yes, she's right," said Hec. "A teacher's life is none too easy, I guess—and things are rather high. What do you say to a raise of twenty-five dollars?"

"Done!" said the other two.

And the raise, when she gets it, will almost pay for a pair of shoes, and her transportation home for the summer.

A Warning.

Charming girls, do not teach
Until your hair is gray.
Until old age you reach
And men look t'other way.

An ignorant person is dangerous. It is among the ignorant men of Canada that Bolshevism thrives. While we are holding the present generation of Red agitators and sympathizers down we should educate, by law if necessary, their children. Education more than anything else will eradicate Bolshevism.

If some of the teachers at present studying agriculture at the College don't sympathize with the block heads whom they later have occasion to supervise, it won't be because they have never undergone the sensation of being one.