

PAGES

MISSING

THE O. A. C. REVIEW

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

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Juliana.

BY G. H. UNWIN, B. S. A.

THE title of this sketch may be misleading, and since I do not want readers to be disappointed, I may as well say at the outset that it has nothing whatever to do with the heroine of any historical or romantic episode. When Ruskin published "Hints on the Construction of Sheepfolds" it is said the farmers eagerly bought the book, but were chagrined to find that it was meant for the clergy, and that the advice given therein had reference to the spiritual flock, not the laniferous. In order to avoid a similar misconception (sic) I must define Juliana, in approved dictionary style, as "Things concerning, or appertaining to, July."

Humanity has bestowed various names upon this season of the year. In the old Roman calendar it appears as Quintilis, the fifth month, since the year originally began with Martius. The history of early Rome being one of war and conquest, it was fitting that their first month should be dedicated to the god of battle. When the Julian calendar was adopted the months Quintilis

and Sextilis were renamed after Julius Caesar and Augustus. This habit of naming things after their chief men was characteristic of the Latins and illustrates their innate reverence for the past. The Anglo-Saxon names for July offer a contrast to the Roman and show the racial fondness for what is concrete. They called July "Hege-mónath" or the hay-month, no doubt thinking of their strenuous toil in the heat of the year. They also had a second name which seems to be a corollary to the first. Associated with the idea of toil in the field is the resultant thirst; and since in those remote days the quenching of thirst was a lawful and necessary thing they called the month "maed-mónath," the mead month. To all who toil with a three-tined fork this association of ideas will no doubt appear most sensible. Yet there are people who maintain that we cannot learn anything from the ancients!

The picture appended dates from the 11th century and is taken from Green's History of the English Peo-

ple. Notice the foxy gentleman in the left corner, who has stopped to sharpen his scythe close beside the jug.

like the 10th Thermidor, be the beginning of a similar reaction.

To those of us who can afford it, this time suggests a refreshing pos-



July. Haymaking.
Eleventh Century
(Calendar - Cotton. M.S.)

During the French Revolution the fanatics of the convention, in their effort to wipe out all traces of the past, renamed the divisions of the year. The new names were purely descriptive, such as Messidor, the harvest month, Fructidor, the fruit season, Brumaire, the time of fogs, and so on. The name given to July proves that this calendar was manufactured in a city. To the city dweller the outstanding feature of this month is undoubtedly the terrific heat, and the object of greatest interest is the thermometer. Hence the Parisians named the season which corresponds to July and early August "Thermidor." It is interesting to recall that the 10th Thermidor (July 29th) saw the death of Robespierre and the beginning of the reaction against anarchy, or its modern form Bolshevism. The present situation offers a parallel and one is tempted to express the hope, however wild, that this July will,

sibility of cool (or comparatively cool) northern lakes, moonlit nights, the gleam of white tents and the pleasant smoke of camp-fires. The man whose labours are mostly conducted in a sitting position begins to feel a mild glow and to hear the call of the woods and waters. He looks forward to the temporary possession of a sunburnt neck, brown arms and a huge and indiscriminating appetite. What a blessing it is, that annual summer trip! Smith departs, pale from work indoors during the heat, but with glowing visions of the mighty maskinonge, the ticklish trout, or the bashful bass. In day-dreams he catches shoals of monster-fish, which he displays to the admiring gaze of his female appendages. Probably full realization of these dreams does not come. The fish show an unaccountable indifference to his lures; and by the end of his visit a two-pound bass looks to him something like the accommodat-

ing whale of the scriptures. But what matter! He returns with new strength and vitality, with pleasant memories of sunrise over the lake, of early morning dives from some sloping rock, of bacon fried over a smoky camp-fire, of deep sweet sleep after hard toil; he has that sense of physical soundness and power which is one of the great joys of living. As Lampman puts it, he "feels the strength and goodness of his hands."

Having mentioned fishing I should like to entertain the reader with some genuine fishy stories, but Mr. Editor was careful to limit me to a thousand words, and I must be getting near that mark. In any case July fishing is usually a frost — speaking metaphorically of course. Taken as a whole the piscatorial pastime is monotonous, except to those supermen who can catch fish whenever and wherever they please. In my experience the "purple patches" are few and far between. The born angler no doubt believes that "one crowded hour of glorious 'bite'" is worth any amount of patient sizzling in the sun. Such idealism is admirable, but hard to imitate; and I frankly confess that on the rare occasions when I fish, my eye is on the frying pan. Then again the fish's point of view is at least worthy of consideration. I remember a little poem called "Heaven," by Rupert Brooke. I quote a few lines:

"Oh! never fly conceals a hook,
Fish say, in the Eternal Brook,

But more than mundane weeds are
there

And mud, celestially fair.
Fat Caterpillars drift around
And Paradisal grubs are found;
Unfading moths, immortal flies,
And the worm that never dies."

In considering the part played by July in the great war it is remarkable that this month should have seen the preliminary stages of the war and also those of peace. In July, 1914, Austria sent her ultimatum to Serbia, Russia mobilized in defence of the latter, the Kaiser made his significant remark about "the most terrible war," France and then the British Empire stepped out into the ring. Four years later, July 18th, came the initial "coup de Foch," the first of those quick, repeated blows, which kept the enemy on the run till he finally threw up his hands on the glorious November 11th. So that this month has, I think, a special meaning when we think of the past five years.

Lastly, of course, July, to all Canadians, is the month of the year, as it celebrates the birth of the Dominion. This is her fifty-second year, and though at the time of writing peace has not been signed, yet it is coming surely, if slowly." It is a great thing to be able to say: "Civis canadensis sum." No doubt there are troubles ahead, but these are everywhere; and in spite of losses, debts, unrest, all must feel that the great test has left our country stronger than ever.





*"When time, who steals our years away
Shall steal our pleasures too,
The memory of the past will stay
And half our joys renew."*

Distribution of Pure Bred Sires

By *The Live Stock Branch—Ottawa.*

By W. R. REEK, Assistant Live Stock Commissioner.

FARMERS in outlying districts or in the newer sections of Canada are assisted to improve the quality of their live stock through the system of loaning pure bred sires. Associations must be formed, and, when bulls, boars or rams are applied for, ten paid up members must agree to the regulations as laid down by the Live Stock Branch. This system has proved quite satisfactory for the distribution of bulls. Up to date approximately 2,400 bulls have been purchased and placed and at present there are 1,300 on hand. The Department owns the animals and as their usefulness in any district ends they are either marketed or transferred to other points. The bulls are purchased by the Department, inspected and tested for tuberculosis before they are placed. It is impossible to use high priced animals and the Branch guards against the use of inferior animals, but it is difficult to purchase just what is required in sufficient numbers.

The loaning of rams was carried on under the same system for a number of years and has given excellent results in many sections, but it had grown too often to be a method whereby rams might be secured free in other places than those designated. Consequently, it was decided to limit the loaning of rams except to those districts which the Department was confident required the assistance offered. Furthermore, there are still too many grade rams in use and

the plan was not replacing a sufficient number of them. The paying of a bonus to men who have never used a pure bred ram, provided they purchase one, will be tested, and the results watched. It will consist of a payment of five dollars for two consecutive years. The idea is to pay part of the difference between a grade and a pure bred. There has been in the neighbourhood of 1,700 rams loaned to farmers.

Boars have been loaned on a plan similar to those in the other cases but not to such a large extent. It has only been done in very outlying districts where population is sparse and in the neighbourhood of 500 has been placed by the Department.

The conditions which related to horse breeding in Canada during the past few years warranted co-operative measures by which the people would provide for themselves the services of suitable stallions. It is generally admitted that improvement in breeding methods can be effected more rapidly by organized efforts on the part of the owners of mares. It was felt, therefore, that by judicious and systematic assistance horse breeding as an industry could be greatly stimulated and improved. Under the present scheme the farmers of any district may form a breeders' club for the purpose of hiring a pure-bred stallion to travel their district for the benefit of the members. Any club so

formed shall guarantee the stallion owner a definite number of mares, a certain service fee per mare, said mare to be in good breeding condition. All stallions must be submitted to an examination by an authorized Veterinary Surgeon, the minimum service fee shall not be less than \$12.00 and the maximum shall not exceed \$25.00. One-third of the service fee for each mare shall be paid by the club to the stallion owner at the end of the service season. The remaining two-thirds of each service fee shall be paid when the mare proves to be in foal. Properly audited and sworn statements must be furnished to the Live Stock Branch at the end of the service season, and the refund to the club 33 1-3 per cent paid to the stallion owner, and again at a later date 33 1-3 per cent. of the two-thirds of the service fee paid for each mare that proves to be in foal is refunded to the club. This system is rapidly growing in favour because of the co-operation it requires on the part of the people themselves.

It has already been noticed on the live stock yards that the quality of the cattle coming from districts in which departmental bulls have been placed, or the quality of the sheep

where rams have been placed is better than from other districts where no effort has been made to improve their stock in general.

A distinct advantage accruing from this system is that community breeding can be fostered because the Live Stock Commissioner has power to finally decide the breed to be used, and to get results it is necessary that breeds be not changed in any district except on a permanent basis.

The Live Stock Branch has agreed with the Provincial Departments to place pure bred bulls in those sections of Canada where the settlers cannot afford to purchase for themselves; and to purchase the bulls used in a province from the breeders of that province in so far as possible.

The Scrub Sire has undoubtedly done much to prevent a more healthy development of Canadian Agriculture. He is responsible for economic losses amounting to millions of dollars annually, for lean pocket books, unpaid mortgages and for much of the discontent upon many farms. Every farmer to-day should make a determined effort to secure the use of a pure-bred sire of the right type and breeding to meet his requirements.



Ayrshire Families in Canada

By W. F. STEPHEN, Secretary Canadian Ayrshire
Breeders' Association.

THE influence of good families in a breed can hardly be estimated on paper or tabulated in figures, except by way of prizes won or by record of production.

In the early days of Ayrshire breeding in Canada, an animal or herd became noted only by showyard winnings. As there were many splendid bulls and cows that never were exhibited they passed away unnoticed. Valuable as the showing was it did not develop nor bring to our notice strains and families as record work has done. The Record of Performance test has shown that we have some great producing families in Canada.

A study of the pedigree of some of our greatest producers indicates that many of them are descendants of noted prize animals. Many of the families of showyard and afterward of record fame have done much to bring the Ayrshire breed into prominence. Of the families of note in the seventies perhaps the Auchenbrain Beauties are the most prominent. Such scions of this family as "Beauty's Style of Auchenbrain," a bull imported by the Hon. Thomas Ballantyne of Stratford, Ont., and "Hamilton Chief," imported by Davis Morton, of Hamilton, Ont., left behind them many producers of note as well as many champions in the showing.

One of the most noted strains carrying blood from the above two sires is the celebrated "Jean Ar-

mour" family. "Jean Armour" was the first Ayrshire cow to qualify with over 20,000 lbs. milk. She was bred by J. & H. McKee, Norwich, Ont. "Jean Armour's" yearly records, as made in the Lotus Stables at West Berlin, Vt., were 20,174 lbs. milk and 774 lbs. butter fat made at ten years of age, and then at 13 years of age in the stables of W. P. Schanck, Avon, N. Y. 18,382 lbs. milk and 716 lbs. butter fat.

"Jean Armour" has given progeny that eclipses her, for one of her daughters, "Jean Armour 3rd," at 2 years made a yearly record in the United States of 14,937 lbs. milk and 599 lbs. butter fat, and also a senior three year old record of 21,938 lbs. milk and 859 lbs. butter fat, which record remains unbroken in her class.

The dam of "Jean Armour" is the noted Guelph dairy test champion over all breeds, "Sarah 2nd." She gave in the test 62 lbs. milk per day testing 4 per cent. She also has two sons and four daughters that have qualified in the R. O. P. In her fourteenth year "Sarah 2nd" was run in the R. O. P. and qualified with 11,626 lbs. and 442 lbs. butter fat.

The sire of "Jean Armour" was "Bobs" by "Beauty's Style of Auchenbrain" (imp.), a bull whose blood influenced several of our big producing families. The dam of "Bobs" was "Belle of Rosmond," a cow of showyard fame in her time. Her sire again was a grandson of "Tra-

veller of Drumjodn," one of Scotland's noted breeding bulls.

The sire of "Jean Armour" was a grandson of the noted "Royal Chief." In studying out her pedigree we notice that she traces in a direct line to some of the most noted strains, eight times to "Mars 1st," the sire which headed the celebrated Jardine herd at Hamilton, Ont., in the seventies, and considered to be the best Ayrshire bull in his day. His dam was a grand-daughter of "Cuthbert." "Jean Armour" traces nine times to "Eclipse," another bull which exercised great influence on Ontario herds. He was sired by "Cuthbert" in 1858. This makes a total of seventeen times this cow traces to "Cuthbert."

The pedigree shows in-breeding and line-breeding on an extensive scale, but evidently it intensified the desired qualities with no apparent injury to the stock so bred.

Another cow which made a wonderful record and has been bred in such a way as to become a noted family is "Daisy of Ferndale," owned by W. C. Tully, Athlestan, Que. She holds the 4 year old record in the R. O. P., with 15,534 lbs. milk and 590 lbs. butter fat, has a six year cumulative record of 83,524 lbs. milk and 3,227 lbs. butter fat, and within six years dropped seven living calves. This cow shows strong line-breeding. Her dam "Lady Maud of Monteith," being also the dam of her sire, "Lord Ronald of Ferndale." She traces on both sides to "Elgin Chief," whose sire was the noted "Chieftain of Barchesk'ie" (imp.) and his dam "Nellie Osborne," the Chicago World's Fair Champion in 1893.

The influence of such noted sires

and dams is marked by the strong Ayrshires seen in the Howick-Huntingdon district to-day. A family is being originated from "Daisy of Ferndale" that will be heard from later.

Another cow that will head a great family is "Milkmaid 7th," owned by A. McRae & Sons, Charlottetown, P. E. I. This cow has an R. O. P. record at 2 years of 11,673 lbs. milk and 493 lbs. butter fat. She holds the second best Canadian Record in the mature class with 16,696 lbs. milk and 729 lbs. butter fat. In her fourth period in the R. O. P. she gave 17,985 lbs. milk but did not freshen in time to qualify. While making her official record she was winner over all breeds in the Dairy Test at Amherst, N.S., and also took the fall fair circuit, winning champion ribbons at leading Maritime Shows.

This cow, like "Daisy of Ferndale," traces on the sire's side to "Traveler" in Scotland, and to "Nellie Osborne," through her grandsire, "Silver King," on two counts. On the dam's side one of the paternal grandsires was "Golden Guinea," the bull that sired many of the Chicago World's Fair winners in 1893.

Another cow that has become celebrated, and will be the head of a great family is "Lady Jane," owned by A. S. Turner & Son, Ryckman Corner, Ont. She is an R. O. P. champion and heads the mature class with 19,485 lbs. milk and 786 lbs. butter fat. She holds the three highest scores ever made by an Ayrshire in a public test. "Lady Jane" contains the blood of several noted sires — Kitchener, White Prince (imp.), Comrade of Garlaff (imp.), a son of the great "Blood-for-ever-

of-Wynholm" in Scotland. On the dam's side she traces to the celebrated Gurta Family and to the noted bull "Hamilton Chief," which sire also influenced the Jean Armour family.

A British Columbia cow "Grandview Rose," owned by Shannon Bros., Cloverdale, B.C., has an unofficial record (through freshening a few days late to qualify), of 21,423 lbs. milk and 890 lbs. butter fat. This cow was sired by "Springhill Live Wire," her dam being "Auchenbrain May." She is a scion from four of the greatest families in Scotland—Auchenbrain, Lessenssock, Castlemains and Bargaenoch.

Thus I could continue to mention many record cows that trace to some of these great sires and dams of bygone days and of sufficient prominence and influence along blood lines to list them among the great Ayrshire families. It may be noted in passing that in the case of the individuals named they are all animals of splendid constitution, are true to Ayrshire type and carry the impress of strong ancestry.

The R. O. P. has demonstrated that we have recorded a number of Ayrshire Bulls that may be termed heads of families from the number of progeny recorded. "Scottie," bred by W. W. Ballantyne, Stratford, Ont., and owned by H. & J. McKee, Norwich, Ont., claims the largest number of progeny recorded, no less than one son and twenty daughters, seven with double term records, qualified in the R. O. P. Their records ran from 7,000 to 11,000 lbs. milk, testing from 3.6 to 4.1 per cent. of butter fat in one lactation period. He was sired by "Royal Peter of St. Annes," and out of "Daisy 1st, of

Auchenbrain." He carries blood of the Drumjodns and Nethercraigs. A son of Scottie's, "Sarah's 2nd's Scottie," has eight progeny registered in the R. O. P., all with good records and are high testers. The influence of "Scottie" has been most marked, not only in production but in fixing a higher standard of Ayrshire type in the herds which contain his blood.

"Haysmuir Milk Record" (imp.), bred by John Muir, Stewarton, Scotland, imported by Alex Hume & Co., Campbellford, Ont., and later owned by N. Dymont, of Brantford, Ont., has seventeen daughters qualified in the R. O. P., all with creditable records. This bull also has had great influence in fixing Ayrshire form, type and production in his progeny.

"Ivanhoe of Springhill," bred by Robert Hunter & Sons, Maxville, Ont., and later owned by Wooddisse Bros., Moorefield, Ont., has one son and eleven daughters qualified. Seven of which have made cumulative records of two or more years. His son, "Duke of Ayr," has seven daughters qualified.

"Hobsland Masterpiece" (imp.), owned by R. R. Ness, Howick, Que., has lately qualified with ten daughters. This is the only Ayrshire bull that has qualified in Scotland, in the United States and Canada in test work. This great showing champion is remarkably strong in type and is fixing this characteristic strongly in his progeny. His heifers are making most creditable records and are all high testers, all being over 4 per cent. butter fat. A daughter in Scotland has made the highest record among the juniors, and also is champion in the showing. This

sire will doubtless head the "Masterpiece" family, which is now influencing the Ayrshire breed in Canada, and will be favorably heard from later.

We could go on enumerating such bulls as "Woodroff Comrade," with thirteen daughters, "Barcheskie King's Own" (imp.) (a noted show-winner), with twelve daughters, "Garclaugh Prince Fortune (imp.)," with eleven progeny, "Garclaugh Prince Fortune 2nd," with ten, "Star of Glencairn" nine, "Rob Roy" eight, "Hamilton Chief," who has influenced many a herd, has six daughters that have all big records. "Lessnessock Royal Monarch" has ten daughters qualified, as has also "Lessnessock King of Beauty," while "Lessnessock Forest King" has eight. A bull that has influenced the Grandview herd in British Columbia is "Springhill Live Wire," as he has eight daughters qualified, all with

big records. He also is the sire of the noted "Grandview Rose" referred to elsewhere.

The influence of these and other R. O. P. sires cannot be estimated in improving the type, conformation and production of the herds which carry their blood.

A study such as we have made impresses us with the fact that pedigree is of importance in the selection of foundation stock. That there is a strong line of ancestry behind counts for much. Breeding counts for a great deal. Improvement in breeding can only be had by developing strong families either by line-breeding or by the infusion of blood from another strong family. This should be given earnest consideration by our Ayrshire men, so that we may perpetuate the best families and originate new ones that will bring "OUR FAVORITES" into greater prominence.



THE MOWING.

By CHARLES G. D. ROBERTS.

THIS is the voice of high mid-summer's heat,
 The rasping vibrant clamour soars and shrills
 O'er all the meadowy range of shadeless hills,
 As if a host of giant cicadae beat
 The cymbals of their wings with tireless feet,
 Or brazen grasshoppers with triumphing note
 From the long swath proclaimed the fate that smote

The clover and timothy-tops and meadowsweet.
 The crying knives glide on; the green swath lies.
 And all noon-long the sun, with chemic ray,
 Seals up each cordial essence in its cell,
 That in the dusky stalls, some winter's day,
 The spirit of June, here prisoned by his spell,
 May cheer the herds with pasture memories.



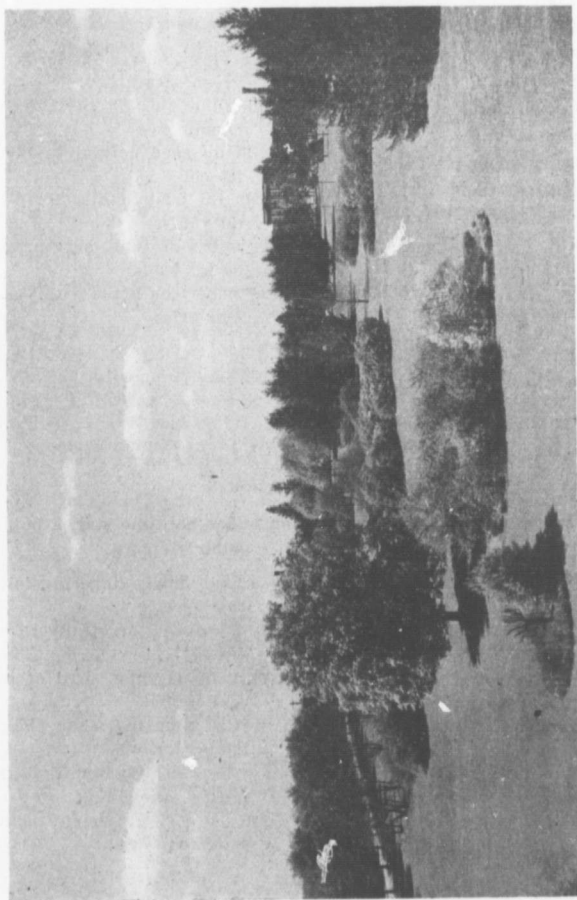
MIDSUMMER NIGHT.

By ARCHIBALD LAMPMAN.

Mother of balms and soothings manifold,
 Quiet-breathed night, whose brooding hours are seven,
 To whom the voices of all rest are given,
 And those few stars whose scattered names are told.
 Far off, beyond the westward hills outrolled,
 Darker than thou, more still, more dreamy even,
 The golden moon leans in the dusky heaven,

And under her, one star, a point of gold.
 And all go slowly lingering toward the west,
 As we go down forgetfully to our rest,
 Weary of daytime, tired of noise and light,
 Ah, it was time that thou shouldst come, for we
 Were sore athirst, and had great need of thee,
 Thou sweet physician, balmy-bosomed Night.





*“How often have I loitered o’er thy green
While humble happiness endeared each scene.”*

"The Soul of the Wild."

By J. L. L.

THE Wanderer sojourns in a far country, seeking in vain the tangible Realities of the elusive Unseen. The Country Gentleman discovers in the silence of the rustic glades about his home those very feelings which his sensation hunting brother has travelled far — to lose.

There is a strange stillness lurking amid the solitudes of Nature's fastnesses. The rarest and the fairest flowers yield their delicate fragrance from the most sequestered thickets; strangers to the ruthlessness of plucking Hands, and the rough-shod feet of Men.

Far in the North Countrie, gay florets brighten the bracken green, in coverts where no human eyes have ever watched the rosy tints of evening; and still some hearth-bound souls persist in thinking that Man is the "raison d'etre" of Nature's existence. One is led to meditate whether, to Humanity alone, is revealed the glory of the Unseen, and Who knows. In yonder North, we found no presence to appreciate the Quiet but that of the crouching Beasts of Prey, who are forced to see the Invisible through the senses. Whether or no they can respect the Spirit of the Woods; none can tell.

Nature has become suspicious of ravaging humanity, and very wisely secretes her tender beauties from rapine; knowing that the animal in Man is prone to destroy, rather than enjoy, sweet Nature.

I have chased a furry woodsman

into a dense mass of scented shrub, and losing sight of the fugitive, I paused to gain my breath. I soon sensed that I was a noisome intruder. The birds piped the 'larum and dashed blindly through the leaves; a startled frog tumbled hastily into a bog hole, gurgling his hoarse croak of warning; the song of a thrumming sicaddy died into stillness: all Nature seemed to accept the signal, that Man, the ruthless destroyer, and the unwitting enemy of wild Nature was approaching. The silence unnerved me. A sapless branch snapped underfoot, as I shifted uneasily. Intent no longer on the chase, but anxious to escape the silent loathing of frightened Nature, I turned, and with furtive backward glances, I retired to an open greenwood, near at hand.

This solemn Stillness is the Voice of the Wild, and potent indeed are the powers of its privacy.

One April day, a boy stood near a lilac bush, dreamily measuring a distant fancy. While lost in his listless reverie, his fingers idly picked soft buds of sappy twigs and flickered them o'er his shoulder, into space. It was sad to see those Forces which Nature had spent months in generating; upon which the Sun had smiled and the Clouds wept, spun into Chaos by a dreaming Idler. Is it any wonder that the wilderness is alarmed at the intrusion of our presence?

Listen. Who has ne'er trampled upon the May flowers heart; who

has not crushed the wee moth's wing; who has resented the stone cast at the warbling songster; who axed the tender tree; who hurt and rarely healed the wounds of dumb Nature? There are few exempt from guilt.

In the crisp, white months of winter, which of us have not entered with zest, into the running hunt; when—

"The foodless wilds

"Pour forth their brown inhabitants.

The hare,

"Though timorous of heart and hard beset

"By death in various forms, dark snares and dogs,

"And more unpitied men, the garden seeks,

"Urged on by bearless want."

Mercy from the Strong is manly,—and there are few vocations wherein an opportunity is granted to present nobility in action, as that afforded in the wildwood life of the Agricult.

The farming fraternity are slow to discriminate between Beauty and Utility, and the necessity of allotting each to their respective spheres.

Real beauty is evidenced by its fragile delicateness and winsome grace, Utility, distorted and inelegant, misshapen thro' toil, is often banned by Culture, retired from the foreground by reason of its uncouth brawn. Man admires Utility for its sturdiness, but is somewhat ashamed of the homeliness of its strength. If the Spirit of the Wild can recognize the Supremacy of Usefulness to Aestheticism, surely the Man of the Fields should also

prize the pre-eminence of Service over Adornment.

The lithsome snake, the ugly toad, the prickly briar, the daggered cactus, the unkempt swine; these are so-called objects of revulsion:—but how much more valuable to humanity they are, than, the gaudy Moths, the pretty daisies, the brilliant poppies, or the parasitism of the dainty, short lived Pomeranian puppy.

The Souls of Things are seeking recognition. They appeal for protection to those whom they are best able to impress—sensitized Men.

We must assist the dumb world to evolve in unison with our own development. We must pry open the clamped shell of the Unknown, if we would find the Pearls. Within the crude ores lie the metals. Men of wisdom strive, by use of patience, observation and harmony, to find the silver on the unseen sides of Clouds.

The Order existing in Nature is an endless profusion of Wisdom, Science and Beauty; and beneath it all there moves the vast Unfound, referred to, as the "Psyche" of Nature.

Romance is extant in the Outdoors. Nature's past is revived in the Present, by such verse, as Omar the Tentmaker, observes—

"And this delightful Herb, whose tender Green

"Fledges the River's Lip on which we lean—

"Ah, lean upon it lightly! for who knows

"From what once Lovely Lip it springs unseen!



The British Milk Trade.

BY CAPT. S. G. FREEBORN, M. C.

BEFORE the war the British farmer labored in competition with the farmers of the world. Tariffs that intended the greatest good to the greatest number of an industrial population made the British farmer's market for the wheat, meats, wool, cheese, butter and eggs of the new continents and the dumping ground for the surplus of the old. Denmark, Holland, Belgium and the North of France were not neglectful of the nearby markets of London and the industrial centres of the North with cheap water transport for their dairy produce, butter and cheese, and pork biproducts. The only branch of dairy husbandry in which the British farmer could escape the competition of his continental neighbours was the production of fresh milk for local consumption. But milk dairying was not without its marketing problems. Combinations of wholesale milkdealers in the large centres, like Glasgow for instance, paid a minimum price for the milk shipped in, with a wide middleman's margin for handling, frequently salving their consciences by agreeing to accept milk from the farmer the year round. The result was a minimum milk supply in winter and a big surplus in summer, for the producer reciprocated the liberality and kindness of the wholesaler by laying down his farm to grass and calving his cows in the spring. This became general policy notwithstanding that in some

instances the increased price paid for winter milk by the city consumer would have warranted winter feeding for milk if that increase had come to the pockets of the milk producer. And so more land was laid in ley, less grain and clover grown, less concentrated feed-stuffs purchased, less milk produced, less manure made, less hoed-crop grown with it, and more howl raised in Parliament about the retrogression of British Agriculture.

Food Control, as a governmental war-measure, compelled the ploughing and sowing to grain of a certain percentage of the acreage and set a producer's selling price and a consumer's cost price for milk. However, the experts forgot that, while a good farmer is essentially a business-man, a cow is not a munition factory most profitable when producing at top speed 365 days a year for duration. The initial control prices while promising profitable summer production on the grass were no inducement to fall calving in the face of rapid advances in the price of winter feeding stuffs. The result was the consumer experienced a winter milk shortage and no readjustment of control price for the milk producer could correct the season's shortage, though honest governments like reasonable individuals do correct the mistakes that experience points out to them.

Though cost prices of labor and feeding stuffs were rising and the

supply of both becoming scarcer and more uncertain, milk producers had the other element of uncertainty, the selling price of the product, removed by the assured control price. The margin was not so wide between the producer's selling price and the ultimate consumer's cost price. With the promise of peace and the possibility of decontrol this spring British farmers asked the Government to continue the milk control. The first reply to this was a campaign by the Agricultural Organization Society, an association bred, born, and fed by officialdom. Present at two of the meetings the writer was interested in the line of advice that was being offered to the farmers. It was pointed out that control of milk prices was a war-measure, that the control must be lifted sooner or later, that the old-time milk-marketing conditions were an unnecessary evil, that the remedy was milk depots to chill the milk before shipping and to care for the fluctuations in production by manufacturing, and closer touch by the producer with the city consumer, and that meant the dairy farmers had to get together and organize co-operatively. "If you don't organize yourselves the Government will have to do the organizing for you," stated one speaker. Just what he meant was not clear, but his remark provoked immediate demands from all sides as to whether or not the milk control would continue for another year. It was admitted that he knew it would and then the meeting was in good humour and quite ready to take a year to consider any good thing the speakers had to offer.

At another meeting, discussing

ways and means of organizing a retail milk trade, one old gentleman who will not see many more winters pass over his silvery head, but who is certainly abreast of the times, made a strong plea for a milk advertising campaign to build up a good summer demand and maintain the price. His argument was sound. How many city milk consumers really appreciate the food-value of the milk they buy? During the war the rise in the price of milk was nothing like the rise in price of many common food stuffs, but it resulted in lessened milk consumption in many households as a measure of domestic economy. The idea prevails in the minds of many that milk has its main utility in flavouring tea, coffee, cocoa, or as food for a child only till it can take "something solid." This deceptive fluidity of milk results in its value for food being very commonly underestimated. The Jewish custom of no milk with a meat meal is based on good principle which is not so understood, and appreciated as it is commonly practised.

The Powers That Be seem to be better posted now on milk production and marketing and the control prices for the coming year, that have just been set (middle of April), probably ensure next winter's supply, though an earlier announcement would have been appreciated by the trade. Considerations of cost of production and competing business give various districts different prices for their milk, which with variable marketing conditions sets a variable cost price to the consumers of different districts. Producers' price and consumers' cost is set for each month to ensure a con-

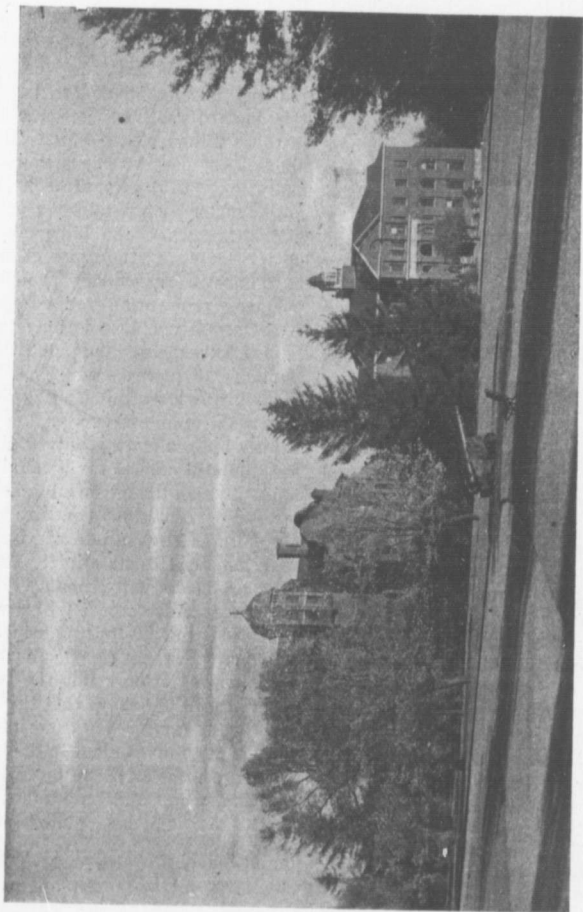
tinuous supply by encouraging fall and winter production.

The Good Lady of the House reads about it all in the daily paper and indulges in some emphatic remarks about the farmers who are making their fortunes by starving the people. Now, during this period of high prices for food in general and animal products in particular, when this public knows exactly what he is receiving for his milk, would be the time for the British dairyman to do a little healthy advertising of the virtues of his milk not only as a food for children and the aged but as an economical substitute for many articles of general diet that are regarded as cheaper and less dispensable. The Good Lady of the House laments the cost of the milk on the porridge, but cheerfully furnishes two Irish eggs and a rasher of bacon. On the basis of heat and energy values a quart of average milk is the equivalent of about 9 extra grade eggs. With the control price of milk this past winter ninepence a quart (tenpence is the highest it has been at any time anywhere) Irish eggs would need to come down to a shilling a dozen to furnish equivalent food value, and they have usually been four to five times that price. One needs to feel like a bloated millionaire nowadays to enjoy an English beefsteak containing the heat and energy value of that ninepenny quart of milk. If we must have "solids" why 2½ pounds of turnips will furnish about

the same quantity of "something solid" as the quart of milk. Think you an argument like the above would discourage the good wife from buying the farmer's eggs? Not a bit of it. She will probably buy more and make custards when she realizes how valuable the milk in the custard really is. Some idea of these things, relative food values, should be part of our elementary education. If the Government does not consider such publicity a general welfare work and undertake to do it widely and therefore cheaply, is it not a reasonably promising business proposition for co-operative Dairymen's Associations to go in for advertising and educational publicity to increase the local business during a season of high prices?

British landlords claim low revenues approximating only 2¾% on their landed capital for a long period. British tenant farming enjoys laws and regulations that are models of their kind, leases are usually long and tend to stability. British milk producers will probably organize and organize thoroughly when they do it, and advertising, educative publicity, may not be too much for their conservation. But the writer finds it hard to believe that the British tenant farmer has the same inducement to investment in co-operative enterprise as is the incentive of the man who OWNS his home, who OWNS the land his plough turns over.





*"The weeping birch with seats beneath the shade
For talking age and whispering lovers made."*

The March Into Germany.

By CAPTAIN GEORGE SPENSER.

Continued from April Issue

I WROTE last about Manhay in the Belgian Ardennes, the place of much game, great opportunities and no shot guns. From here we halted only once before crossing at the border, when we stopped over night at the summer house of the Governor of Liege, who was away with his wife and five little girls. This was very convenient because we had more billeting room. At this time I was appointed billeting officer for the Brigade Headquarters' units, and with a beginner's foolishness, I found space for every man, horse, and vehicle, and then looked around for myself . . . finally sleeping on the floor, because all the beds had been allotted. Once was enough; next time I knew better.

From this place, however, it was only about five kilometres to the border and as usual it was raining steadily when we crossed over and entered the first German town, St. Vith.

Crossing into Germany—such a whirl of thoughts and emotions singing through one's head. It could not be true—France behind us, Belgium behind us, Germany ahead, no trenches, no shells screeching past, no machine gunfire, no aeroplanes—was the war really over—why was not anyone sniping at us—visibility excellent, even in the drizzle? How would we be received by the Germans? Judging by the map we must be near the border now. Would we be able to tell?

Suddenly one noticed a rather large milestone on the right hand side of the road with some words carved on it. This side of that stone were Belgium

and France, oppressed, war-weary, devastated, bled-white, the other side was the land of the Huns, the oppressors, the cause and perpetrators of it all—the one side victorious, the other the vanquished. And yet the country on both sides of the stone was the same—the trees grew just as evenly on the one side as on the other, and just as well—the wind was the same—the road did not change, the fields looked alike, the hens of a solitary farm house scratched just as vigorously and a loyalty for their Hun owners as did those in Belgium and France for their owners and, doubtlessly, laid eggs just as infrequently. And back in one's sub-consciousness something kept repeating over and over again, "the brutes, the dirty brutes." Curiously enough, grimly enough, and perhaps sadly enough, a party of Hun soldiers had halted right at the milestone to have a meal, their last meal as soldiers in Belgium, and the ground was strewn with litter and rubbish—steel helmets, tins, caps and a stray rifle or respirator.

And as we passed the first few houses in Germany and saw the people standing curiously around, one instinctively reached toward the clumsy, trusty old .455 Smith and Wesson—half expecting a shot from some window, thinking all the time what a fine shot some of the men would make.

Even now I hardly ever see a Hun man dressed either in partial uniform or in civilian clothes, without thinking it a shame that such a good snow should go to waste—such a nice easy shot too; lots of them every day. And

just so long ago when my snipers in the battalion claimed and accounted for seven observed hits in one tour of six days in the trenches, we thought we had got on famously. It really is a shame not to be able to shoot these Huns around here, and now and then you can see several together, where a Mills bomb would work wonders. The British cannot hate; apparently it is not a trait of the Anglo-Saxon temperament. I shall always regret that during my time at the front, I have shot and hit only one Hun that I know of. But I find it impossible to hate these civilians; it seems to be the way with all the rest of us too. The few exceptions I have met were those men in higher authority in divisional Headquarters, who do not have to live as close to these people as we do—practically in the next room to them—and even then I think the professed hatred is largely verbal. Your anger, or gorge or something, rises at the sight of a male Hun in anything resembling a uniform and, if only circumstances were at all favourable, one could shoot him very pleasantly, and probably in the long run, very profitably. It is very hard to convince oneself, and to remember, that it is the breed of these seemingly innocent and generally very courteous people; it is in their blood. These wolves wear their sheep's clothing to perfection.

Passing along very winding, hilly roads the column halted for the first night at St. Vith. Since we were an Army on the march to occupy conquered territory, fighting formations were observed all along in true Field Service regulation manner. A cavalry screen travelled a day's march ahead—some twelve or fifteen miles, then a brigade in advanced guard with its

own screen of Canadian Light Horse and Cyclists on ahead, followed by an infantry screen and a main body of four battalions with artillery, field ambulance, and ammunition column. Everything correctly carried out and working fairly smoothly except for the ludicrous fact that the whole of Divisional H.Q. was a day's march ahead of the advanced guard—"seeing the country."

The billeting parties also went ahead to arrange for the accommodation of the troops following.

At St. Vith, our first stop, we found Division already quartered and naturally occupying the best part of the town. All army movements are governed by Me Lord Blue Pencil. Army commander seizes map and a blue pencil, rules a few lines and says to the Corps Commander, "There are your areas." Corp Commanders do the same thing on a smaller scale to Divisional Generals, who in their turn pass it on to Brigade Generals and they to Battalion Commanders. And if any of the higher commands happens to forget any unit for the moment he seems to spin a coin and dump it on to one of the areas already occupied by some other unit.—Those at St. Vith had a merry time, when some eleven hundred men had to be quartered somewhere and as each other unit arrived at all hours of the evening and night, they had to root around and find places to sleep until you could hardly move for troops: in fact, you daren't move or else some one jumped your claim.

After several hours chasing around, I managed to place our one hundred and fifty men and forty-five to fifty horses. Especially is it interesting when one knows only one or two words of German, and then the follow-

ing sort of thing takes place with the good Frau of the house.

"Bon jour, Madame: I want ein Zimmer for one officer avec eine very gude bette (with one finger in the air and your open hand on your face to signify sleep); and also zwei zimmer for eight unteroffizer with as many beds as you've got and a stable for four (4 fingers in the air) horses—horses, sure gee, whoa, get up—understand me—compris? That's good. O!, but I must have zwei zimmer for eight unteroffizer,—that's right acht. All right, this one will do and montrez moi l'autre s'il vous plait. Bien and vous mettez sine autre bette in this room. See? Yes, coming dis tag at four o'clock. And oh yes, one cook-house, cuisine, Koeher food-place. See? No, we bring our own rations. All right, four o'clock—get me?

Bon jour, Madame, I guess I'll have to put the horses somewhere else! This your child, eh? So long, sonny, why don't you wash your face once in a while; but I guess you've got no soap,—good for our blockade. **Bon jour, Madame.**"

Then you have a big sign marked on the door in large chalk letters:

5th C. & B... ..1 Off. 8 N.C.O's.

5-12... ..1 cookhouse (Sigs.)

1918... ..Stables next door.

and repeat the game with variations, until all your men are housed.

In nearly all cases the civilians seemed to be trying their best to please, and in a few instances we were welcome because as we found out afterwards they spent a considerable part of the time thanking God that we were not French or Belgians. All the inhabitants had to be indoors by seven o'clock at night and all men had to salute British officers by taking their

hits off to them. The stores people made up for this by charging colossal prices for post cards and all sorts of trash which our men bought for souvenirs.

The Brigade H.Q. was in a hotel, and we had good beds to sleep in. Moving off next morning in the usual rain, we went to Losheim just past Manterfeld and if you look at the map I send, you will see how tortuous the roads are. The country was very hilly and the scenery between these two places was extremely beautiful with a sweeping panorama of deep purple hills. The sun shone out for a while and made the atmosphere as clear as crystal, or, as we would say in trench days, the visibility was excellent.

At Losheim our quarters were in a shell filling factory where they used to make the famous T.N.T. I got the Director to show us round the works, which were closed down except for a few people who were beating the swords into ploughshares. Before speaking of the factory, I may say that it was up on the mountains among scrub pine, heather and bracken, literally among the clouds and perhaps for this reason as well as for the secrecy maintained, and its distance from our aerodromes, it had unfortunately never been bombed by our air force.

Extensive series of cottages and huts had been built to accommodate the workers who had moved up there, families and all; everything had been made as comfortable as possible with a library, recreation rooms, electric light, bathrooms and generous furnishings. Five little houses held the officers of the factory until we arrived. After the 11th the work stopped and

the machinery emptied of its T.N.T. Without manufacturing any more, the cleanings up filled one hundred and thirty great barrels. So you can get some idea of the size of the place. The shells were made elsewhere, filled at Losheim and sent on to be fused. Passing through the great rooms one felt somewhat glad that the Armistice had come because vast numbers of all the ordinary shells up to twenty-one cm. (about eight inches) were piled on the floors. One room was piled with great pyramids of 10 cm. gun shells and I figured out that each pyramid contained over nine thousand shells. And this essentially practical race had already got well started on the way to peace measures—every shell had four great nicks put into the screw threads on the inside of the shoulders so that the fuses could not be put in, the T.N.T. was being bored and steamed out for the manufacture of fertilizer and a certain series of machines were laid at work cutting off what copper driving bands there were. I found the place intensely interesting, because the director explained many points which were not clear to me about certain shell makings and widths of driving bands, double driving bands, shells for Russian guns, etc. Two points about certain shells were quite different from what our authorities had explained to me.

In its line, this factory was probably a small one. There must be millions of shells in the belligerent countries in all stages of completion. It would be interesting to know to what extent the different nations are turning the component parts of the shells to peaceful products.

Our next journey took us through rough mud and ever terrific hills to

Blankenheim—a small town of which a part is very old, but no town could be better named as far as interest goes than this one. The column halted here two day's, and several parties went out shooting over the hills, armed as usual with service rifles and army revolvers. All the game around there—and it was plentiful, lived to be shot at by some one else. In my diary of Dec. 8th, I find recorded that—"it does not seem advisable to fire at a running hare at over three hundred yards range with any hope of hitting it, even when there are four cartridges still left in the L.E. Magazine." This explains itself.

Munstereiffee, our next halt, was a town as full of interest as Blankenheim was blank, and the roads leading to it were excellent. The town used to be protected by a great wall with a battlemented gate at the four points of the compass; and a castle and a convent keep watch over the town from the heights alongside.

Our men by this time were beginning to get tired of being show boys, and decided that they ought to give the Huns a sample of what France and Belgium had suffered. So they occasionally but quietly with all, pocketed small articles from various stores.

And as several of us were sitting in the hotel quaffing the odd, or it may have been the even, stein of beer, the landlord's son hurried in with a lengthy tale in broken French of one man who had asked for a bottle of wine and had them pass it to a companion who promptly walked out and neither had paid. Thinking of the dozens of places we had just passed through in Belgium, where the Germans had looted thousands of bottles of valuable wine.

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Pasture and Soiling Crops for Hogs.

Reduce Costs of Production by 20 to 30 Per Cent.

By C. M. FLATT, '21.

FOR the swine breeder who is carrying on even a moderately sized business, the question of making economical gains is particularly important at the present time. Any system by which gains can be made with a minimum use of high priced concentrates is of special interest to the feeder. There are few instances in which the use of pasture or soiling crops, supplemented with grain, will not give greater gains at less cost than where the hogs are raised and finished on grain alone.

*Of the comparative value of soiling crops and pasture crops, it can be said that from an economic standpoint there is very little difference. While slightly greater gains are secured from the use of soiling crops, the extra work entailed in cutting and carrying the green feed to the hogs balances these gains. The manure is largely lost under a soiling system, while in pasturing it becomes available in the soil.

Feed Grain With Pasture

It has been found by experiments carried on at experiment stations both in Canada and the United States that it is seldom advisable to pasture hogs under 75 lbs. in weight. Soiling crops, however, can be fed to advantage at a much earlier period. When hogs are fed on pasture alone they barely maintain their weight, so to secure rapid gains some grain must be fed. It is seldom a good policy to be sparing with grain to hogs on pasture even where it is exceptionally luxuriant. The amount of grain

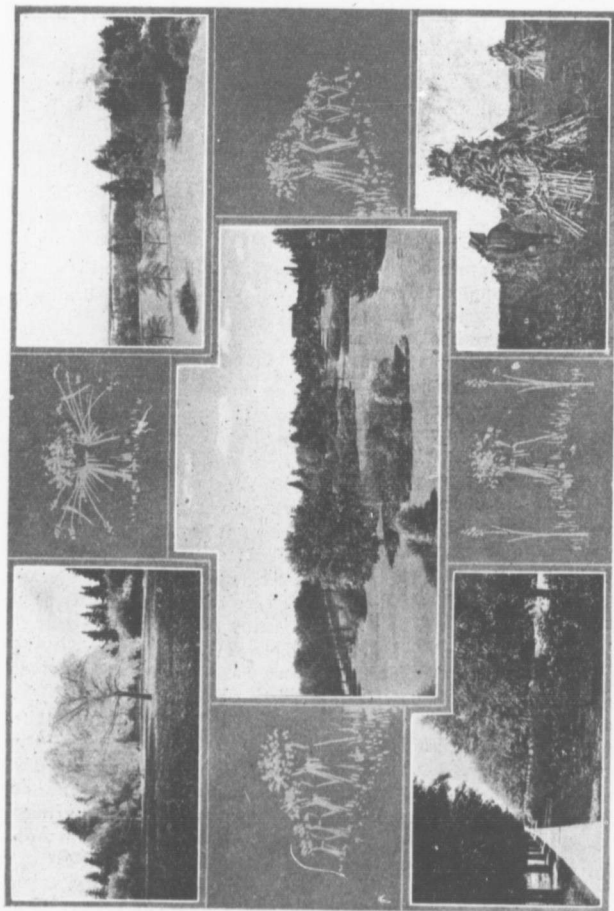
fed will of course depend to a large extent on the class of forage crop used as well as the time at which the hogs are to be finished. This amount must be increased as the finishing stage is reached. About 1 lb. of grain is a good allowance to start with. This can be improved gradually until 4 to 5 lbs. are being fed.

Alfalfa and Rape Good Forage Crops

Of all forage crops alfalfa is the most suitable where it can be grown with a reasonable degree of success. It provides early pasture that continues to be succulent throughout the season. New seedings of alfalfa must be pastured carefully, but after a good stand is established from 10 to 20 shoats may be pastured on an acre, providing they are receiving a fairly full grown ration.

Next to alfalfa, rape is the best green crop for swine. Because of the ease with which it may be grown in many sections it is a more valuable crop than alfalfa. It may be sown in drills 28 inches apart at the rate of 3 lbs. per acre, or sown broadcast. Pigs should not be turned on rape until it is about 10 to 14 inches in height, and when it is fairly well eaten off should be given a chance to grow up again by having some other pasture on which the hogs can be turned for a time. Next to rape, clover is possibly the best pasture or soiling crop. The growth is not so luxuriant as either rape or alfalfa, nor does it cover as long a feeding period. Clover should be used where

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VARIOUS VIEWS AT THE O. A. C.

Preparing Stock for the Show-Ring.

Type, Correct Feeding and Training Necessary.

BY W. A. FLEMING, '20.

THE secret of success in the showing of live-stock is not solely due to merit and the animal's part, but rather to the perfect blending of merit and finish. Many of the good qualities and fine points in an animal are due to heredity, but it is the feeding and finishing which develop these and bring them to the foreground. The choicely bred animal lacking proper finish is out-classed in the ring by the ordinary animal shown in the full bloom of high fleshing.

The knack of picking and developing show winners requires careful foresight and an intimate knowledge of the ideal to which the animal should conform. Experience is the greatest and best teacher, for the art of showing cannot be learnt in a day, but only by long patient study of the high class winners, and what it takes to make them. The road to success in exhibiting live stock is not easy, but is plain to follow, and the reward is there for those who stick to it. To the man of little or unsuccessful show ring experience these are a few points to remember and watch closely.

Select Early and for Type

If it is decided to show one or more of the best animals at the fall fair, commence early to give him or them a better chance than the rest of the herd or flock. It takes time to bring an animal to full bloom.

Heavy feeding or forcing is not to be recommended, but rather economical, careful feeding which gives results at less cost and without danger to the animals' health or usefulness. If fleshing is a desired point, as in cattle, sheep or swine for the block, it will be found that easy feeding started early, with small, steady increases, will make firmer flesh of higher quality than that laid on quickly at great expense. With the dairy cow also the gradual increases will bring her to full production with much less danger than when forced feeding is resorted to. Start feeding early, feed well but carefully. Never overfeed; here is where the thrifty animal of strong constitution proves its worth in its ability to eat and assimilate food.

Select only the individuals which approach closely to the desired type. A breedy head, strong constitution, showing vitality and strength — a general well-doer. Never attempt to finish a coarse animal or one defective in any strong point of the breed it represents, it being merely a waste of time and feed. The owner is judged to some extent along with his animal so he should not allow it to be said that he did not know his business. How often are horses of draft breeding shown in heavy draft classes, when they really ought to be in general purpose. An animal noticeably off in a strong point such

as size is certain of his place—he is a sure loser. To the beginner the correct type is often a puzzle, but a study of the ring and the winners will soon demonstrate what the judges want, and all judges demand the same thing, trueness to type.

Feeding and Training

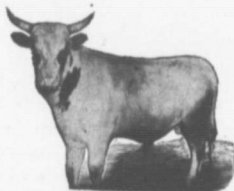
Under selection the feeding was touched on, except how and what to feed. All showmen have their own "pet" ways of feeding to produce bloom and finish. Follow the methods in which one has been most successful before; to produce a good coat of fleshing and fine skin in horses, soft feed and oil cake meal are standby's. Bran, shorts, cottonseed and oil cake will produce flesh on the beef animal that is thick and high in quality. Feed regularly from the commencement of the feeding period and increase the ration regularly until the maximum amount is reached. Over-fitting is almost as bad as no fitting. Be careful not to have the show animal loaded down with fat, or fat too long before showing or he will show past his best.

Training Necessary

Training is the last though not the least point in the show animal, the point most often neglected by the owner. All other points may be possessed but if the animal lacks

manners, he is shown under a great handicap, which he cannot overcome. From the ringside nothing is more noticeable or detracts more from the prestige of the exhibit, than an animal being dragged or pushed into the ring and when refusing to stand or move as requested. Never show an untrained animal or wait till in the ring to commence work that ought to have been completed at home. It reflects carelessness on the owner's part. Once an animal is properly trained for the ring, he will naturally remember and show himself to best advantage, the exhibit often showing more style and ring manners than the attendant who too often slouches along in dirty overalls and ragged appearance in general. An animal in smart trim deserves a smart-appearing attendant.

In training first teach the animal to stand still when asked to, then to move as required, and only when asked to do so. Training requires patience and time, but the time spent is well repaid in the satisfaction it gives the owner when his animal acts in the ring to suit the judge and the critics at the ringside. The man who takes a real pride in his stock may be pardoned, when by patience and hard work, he brings them to the height of perfection where they are proclaimed the finest of the breed.



The Quest of the V. C.

By A. BYERS FLETCHER, in Short Stories From "Life."

THERE was tumultuous cheering in the ranks of the Irish Guards somewhere in France. Sergeant O'Reilly, V.C., had returned to the trenches. Two months before, Private O'Reilly had, with a scorching hot machine-gun, held, single-handed, an important trench after all his comrades had fallen. Incidentally, he had also saved the life of an officer, who lay wounded and exposed on the parapet of the trench. His was but one of many such brave deeds which occurred almost daily along the terrible front, but O'Reilly's deed had the advantage of being conspicuous. Hence his two-months' leave, his journey to London, and his reception at Buckingham Palace, where the King himself pinned the little bronze cross to his khaki jacket. Hence, his public reception in his native village of Tullameelan, where they hung garlands of flowers about his neck, and his old mother wept tears of joyful pride. Hence, too, his return with the sergeant's stripes. The stories of the honours heaped upon him had been duly chronicled and illustrated in the press, and had preceded his return to the trenches. Hence, his joyful reception by the regiment.

Private Finnessy and Private Moloney had been among the first to grasp the hero's hand, and had joined heartily in the vociferous cheering, but now that affairs had again resumed their normal round, these two companions sat at the bottom of the trench, smoking thoughtfully.

"O'Reilly's a brave man," said

Finnessy; then added after a pause, "The lucky devil!"

"I believe ye," replied Moloney.

"And he's only five feet sivin," continued Finnessy.

"With one punch," said Moloney, contemplating his hairy fist, "I could lift him into the enemy's trenches!"

"Do you mind how all the girls in Tullameelan kissed him?" said Finnessy.

"I know one girl there that didn't," said Moloney hotly.

"And I know another!" as hotly replied Finnessy.

"The papers are nothin' but lyin' rags," said Moloney.

"I believe ye," said Finnessy.

Viciously whistled the bullets across the top of the trench, and a shell or two whined overhead, unheeded by the comrades, long accustomed to the sound.

"But I'm not denyin'," said Finnessy, after a pause, "that the little brown cross is a great temptation to anny girl."

"It is that!" agreed Moloney.

* * * *

"At five o'clock!" the whisper ran along the trench. Since three o'clock the guns massed on the hills behind them had been sending a shrieking death-storm into the enemy's trenches in front of the Irish Guards. At five, promptly, the storm of shell would cease. At a given signal the men would clamor out over the parapet, make their way through the openings in the wire entanglements, and rush the trenches before them. There was no outward excitement.

The aspect of the men remained unchanged, but one could feel the nervous tension. A young subaltern, near Finnessy and Moloney, glanced occasionally at his wrist watch and smoked his cigarette more rapidly than usual.

"If he falls," whispered Finnessy to Moloney, "'tis meself that will bring him in."

"You will not," said Moloney, "I've had me eye on him f'r wakes."

"You can have the Major," said Finnessy.

"I'll not!" said Moloney, "twud take a horse to carry him in!"

The batteries ceased firing; a low whistle sounded. The men grasped their rifles with bayonets fixed. Cold steel alone must do the work now. Another whistle. With a hoarse cheer the men climbed out over the front of the trench and the charge was on.

Side by side raced Finnessy and Moloney, with eyes fixed on the young subaltern who, carrying a rifle, was sprinting on before them. For a few moments it seemed that the batteries had effectually silenced the trenches of the enemy immediately in front. A hundred yards farther and they would be reached. Now, however, from that line of piled earth and barbed wire came the crackling roar of machine-guns. For a moment the men wavered and many fell, but, with a growl, the others rushed on. Fifty yards farther, and then the ground seemed to heave up and hit Finnessy and Moloney. Side by side they lay, with their faces partly rooted in the trampled ground. To their ears came dully the sound of the fierce hand-to-hand fighting beyond them. Slowly they scraped the dirt from

their faces and looked at each other.

"Where did they get ye, Finnessy?" asked Moloney.

"In the leg," groaned Finnessy.

"The same for me," moaned Moloney.

The bullets of the machine-guns still sang over them, and both men began to dig into the soft earth and pile it up into a mound in front of their heads.

Now back across the torn ground came the remnant of the charge for the trenches had not been taken. Some ran, others walked or crawled or were carried, but always over them and among them whirled the leaden death. Soon Moloney and Finnessy were left alone in their little self-made trenches, for none of their retiring comrades had noticed them.

Twilight was fading, when a brilliant idea flashed across the brain of Finnessy. The intensity of the illumination almost dazed him for a moment.

"Moloney," said Finnessy, "'tis not very sthrong ye're feelin,' I'm thinkin'."

"Ye'er think tank is overflowin'; shut it off!" growled Moloney.

"Sure, Moloney, ye'er voice is very wake! Ye'll be faintin' in a minute!" said Finnessy soothingly.

"I'll not!" cried Moloney. "What's eatin' ye?"

"Poor old boy!" purred Finnessy, "ye're in a desperate state. Ye must be rescued. I'm goin' to take ye in!"

"How?" asked Moloney.

"I'm goin' to take ye on me back and crawl in with ye. It's me duty to do it, and England expects every Irishman to do his duty! Me only reward will be ye'er gratitood!" said Finnessy.

Slowly the brilliant idea spread to the mind of Moloney.

"Sure, Finnessy," said Moloney, "'tis brave and kind of ye, but I can't accept ye'er sacrifice. 'Tis ye'erself that must be saved. I can hear the tremble in ye'er speech. No one can say that a Moloney ever deserted a friend! I'll take ye in if I die f'r it!"

"Don't be a fool, Moloney; ye know ye're waker than I am!"

"I'm not," cried Moloney. "I'm as strong as a horse, and I am goin' to save ye or perish in the attempt!"

"Ye selfish baste!" howled Finnessy. "Ye'd spoil me chance for the V. C. would ye?"

"Selfish baste ye'erself!" roared Moloney. "'Tis me own chance; and in ye'll go on me back, dead or alive!"

Moloney and Finnessy reached for each other.

Back in the trenches of the Irish Guards the young subaltern, peering through a loop-hole, saw dimly through the growing dusk the struggles of Moloney and Finnessy.

"Poor devils," he muttered, "must

be in agony. "Didn't know any were left alive out there."

Even as he spoke a wiry figure beside him sprang to the top of the parapet and started toward the struggling men.

Now the enemy's trench awoke again, but presently, through the zone of death, the subaltern and all who could secure loop-holes saw that wiry figure slowly crawling, crawling back toward their trench, dragging behind him two reluctant but exhausted men.

As the bodies of Finnessy and Moloney slid down into the trench a cheer broke forth from the men who drowned the noise of the firing.

Slowly Finnessy and Moloney opened their eyes. The subaltern was speaking:

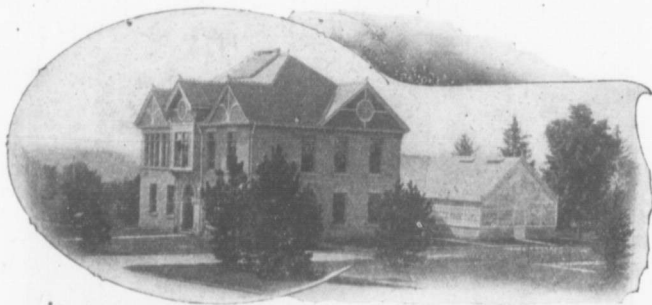
"Sergeant O'Reilly," he said, "if such a thing were possible, you deserve and should have another Victoria Cross!"

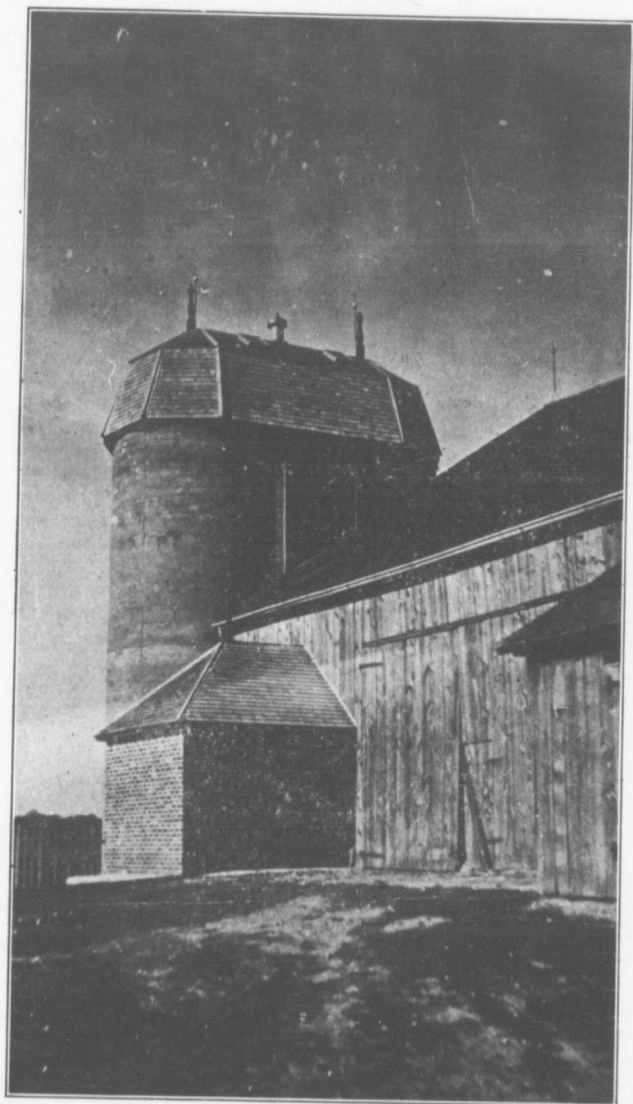
Again the cheers broke forth.

Finnessy looked at Monoley.

"For the love of Mike," said Finnessy.

"I believe ye," said Moloney.





The Monolithic Concrete Silo.

Construction and Cost of a Special Form.

By S. W. KING, '20.

GENERALLY, the concrete type of silos are classified into the double-wall form and the single-wall form. We must not forget, however, that there are wide variations within either of these special forms.

In the single-wall form the outstanding differences are in thickness of wall, the style and degree of finish, and the fact that some walls taper on the outside surface from the base up, while others are of a uniform thickness throughout the entire height. It is the single-wall form with which I purpose dealing. I shall endeavor to outline briefly the construction and cost of a particular form of silo which has proven to be exceptionally serviceable in Oxford County.

This form, with few variations, has been in use for many years. It is not a home-made silo, but one constructed at a moderate cost by a conscientious contractor. Steel casings are used for constructing the wall. These casings are neatly riveted and, by being kept well oiled or soaped, the surface of the wall is made very smooth. After the wash is applied it is practically impossible to detect the layers or rings of the concrete work.

Foundation

The foundation must be built to suit the nature of the subsoil and general contour of the site. For the sake of convenience it is very often required that the silo foundation be

built against the barn driveway. And I might say here that this form of silo is specially adapted for such circumstances or conditions. The foundation wall is strongly built of comparatively coarse concrete varying from eighteen to twenty-four inches in thickness. An excavation of about 2 to 5 feet is necessary, depending, as previously stated, upon the nature of the subsoil.

Walls

The inside surface of the wall is built flush with the inside of the foundation wall. This is a very important feature in silo construction. It must be constructed so that the inside surface of the superstructure is a continuation of a perpendicular line from the interior of the base. This prevents the possibility of an air space causing mouldy silage at the union of the wall and foundation. It also allows the valuable space within the foundation wall to be utilized to any depth below or above ground. The wall is 9 inches thick at its base or juncture with the foundation. It tapers very uniformly on the outside surface, so that it is 6 inches in thickness when 40 feet high. This makes a strong, well proportioned wall. True, it requires a little more concrete than would a straight 6 inch wall, but there is a considerable saving in steel reinforcement. At present prices quoted for steel this is by no means a small item.

The proportions of cement and gravel used for the wall are as follows:—

If fairly fine gravel5 to 1
 If medium gravel6 to 1
 If coarse gravel7 to 1

There are many different aggregations such as crushed stone or screenings used for concrete work. Good pit gravel gives as good results as any thing else and is generally the cheapest form of material. The best results are obtained where a medium sized grade is used.

Reinforcement

Four single strands of No. 9 soft wire are twisted or woven into a cable. The cables are laid in the concrete, near the outer edge of the wall. The ends are interlocked or hooked into each other. The cables are placed at equal distances apart—about 24 inches—throughout the entire height of the silo wall. In a silo of average size, say 12 by 40 feet, it requires only 180 lbs. of wire for reinforcement.

The most general and satisfactory method of reinforcing around the hatch-ways is to use strips of wagon tire, placing one piece just above and another piece below the hatch-way. Generally a few discarded wagon tires are found on any farm. These make an inexpensive and serviceable reinforcement.

Finish

To make the wall non-absorptive and impervious to air, a creamy wash of sand and cement is applied. The wall is also made more attractive by this application.

A plaster consisting of sand, cement and asbestos is applied to the inner surface. The materials used in this mixture are in the following proportions:

1 part of asbestos.

2 parts of sand.

6 parts of cement.

The asbestos forms a greasy substance which makes the plaster easy to trowl and brush. It is quite impossible to plaster the wall satisfactorily without the use of asbestos. The value of asbestos in the mixture is very great and its cost almost negligible.

The time required to construct the cement work in such a silo, 12 feet by 40 feet, is about six days.

Such features as continuous or non-continuous hatch-ways, the style or type of roof and of chute are usually decided by the farmer. The intermittent hatch-ways are most generally used. Care and exactness are necessary in forming the hatch-ways and the fitting of doors.

Many farmers claim that a roof is not necessary. The need of a roof may be partly determined by the location of the silo to the other farm buildings. Sometimes snow will sift or whirl from the barn roof into the silo. A roof is necessary for keeping out snow and rain; it assists materially in protecting the silage from frost and keeps out the pigeons and sparrows. It provides for economical space at filling time—if it is the proper type—and gives the silo a finished appearance, which enhances the value of any property. The writer favours the hip roof style, or else a fairly steep roof with a gothic. Where two or more silos are built side by side, the continuous is more economical than separate roofs. There should be a few pieces of timber arranged within the roof—their arrangement depending

Continued on page xv.

The Growing of Alfalfa.

Sow Grimm's or Ontario Variegated on Well Drained, Alkaline Land.

By P. M. DEWAN, 21.

FOR at least two thousand five hundred years alfalfa has been cultivated in Europe and Asia. The home of the plant is Central and Southern Asia. In time of war it was carried to Spain by the Saracens as fodder for their cavalry horses. The Spaniards introduced the plant into America. They brought it to Mexico, from which country it gradually spread northward. It has now been grown in Canada for more than fifty years.

Since its earliest cultivation alfalfa has been highly esteemed as a forage plant. Its merits as an animal food were recognized by the early growers of the old world—particularly by those chiefly interested in animal husbandry. This is indicated by the name "Alfalfa," which is derived from the Arabic "Alfalfah," meaning "the best kind of fodder."

Alfalfa has a high feeding value. It is much relished by all kinds of farm animals, when fed either in the green state or as hay, and furnishes a nutritious and wholesome food.

Horses are very fond of alfalfa hay; for this reason it should be fed to them in limited quantities. If fed judiciously it will suffice as the sole roughage, even for working horses.

In the fattening of cattle and sheep, alfalfa hay, combined with carbonaceous grain, produces large gains. Comparisons have shown that it has a value about equal to

red clover hay for fattening animals. For breeding cattle a very suitable maintenance ration may be made from well cured alfalfa hay and corn silage. For sheep alfalfa is an exceedingly valuable legume.

Being rich in available protein, and highly palatable, alfalfa is an excellent food for the dairy cow. It is the best roughage to be had for milk production. To heavy milking cows some concentrates should be fed in addition to the alfalfa.

Fair results have been obtained from alfalfa as a pasture plant, but it should not be pastured too early or too late in the growing season. Experiments have shown that more forage and greater returns may be obtained from a given area by using the alfalfa as soilage than as pasture.

As a pasture for hogs alfalfa seems to have about twice the value of rape. An experiment conducted at the Kansas station showed that an acre of alfalfa hay, yielding 20,000 pounds during the season, cut green and fed to hogs, produced approximately 2,000 pounds of pork when fed along with corn. Well cured alfalfa hays is unsurpassed as a part of the ration for the brood sow during winter months.

As stated, alfalfa hay has about the same feeding value as red clover hay. However, alfalfa is the more economical crop to produce when it can be successfully grown; for its yield is generally double that of red clover.

Not alone because of its feeding value and superior yield is alfalfa a paying crop for the grower; it has also a fertilizing value. Like other legumes it enriches the soil with nitrogen obtained from the air; its dead leaves and roots add humus to the soil.

For years after the introduction of alfalfa into Ontario, it was grown by a few farmers only, in the Counties of Lincoln, Haldimand and Welland. Of late years it is being grown more generally throughout the Province. Yet, considering its merits, it is regrettable that the plant is not more extensively grown in Ontario.

As the alfalfa plant has a vigorous root system, which penetrates deeply into the soil, it should be grown on land with a rich and open subsoil. Alfalfa thrives well in a moderately moist, well aerated soil. The land should, however, be well drained. A water clogged condition prevents free circulation of the air through the soil, and thus seriously impedes the growth of the plant. A sour soil is also very objectionable. When the soil is acid the acidity should be neutralized by the application of lime. As alfalfa is a fairly long-lived perennial it is wise to grow it in a field which does not enter into the regular farm rotation.

For alfalfa growing, clay loam is the preferable soil. The land selected should have an abundant supply of plant food, and should be as free from weeds as it is possible to have it. The land should be put in a fine state of tilth. The methods of soil preparation depend upon the nature of the crop previously grown. If the alfalfa is to be sown after a hoed crop, it is best to plow deeply or

plow shallow and subsoil deeply immediately after the preceding crop has been harvested. In the spring the ground should be harrowed as often as weeds appear until the alfalfa is sown. It is well to roll with a heavy land roller just before sowing, as this insures a firm seed bed. If the land selected is in sod, more cultivation will of course be necessary. In such a case the land should be plowed shallow after the hay crop is harvested. After being plowed the land should be rolled, and a short time later disced and harrowed. It should be cultivated frequently until late autumn, when it should again be plowed and, at the same time, subsoiled as deeply as possible. The spring cultivation should be similar to that outlined above.

In many soils the bacteria necessary for a healthy and vigorous growth of alfalfa are not sufficiently plentiful. These bacteria live in association with the alfalfa plant and collect nitrogen from the air, which is utilized by the plant. In soils where sweet clover or alfalfa have been grown the required bacteria will likely be present. Soils in which the bacteria are wanting can be treated artificially. Soil from an old alfalfa field or a sweet clover field may be hauled and spread over the prepared seed bed. The objection to this method is that it is expensive and cumbersome.

Seed inoculation seems to be more practicable. This is done by treating the seed immediately before sowing with an artificial preparation called nitroculture. This culture may be obtained free from the Division of Botany, Central experimental Farm, Ottawa, or for a nominal charge

Continued on page xiv.

FARM POWER

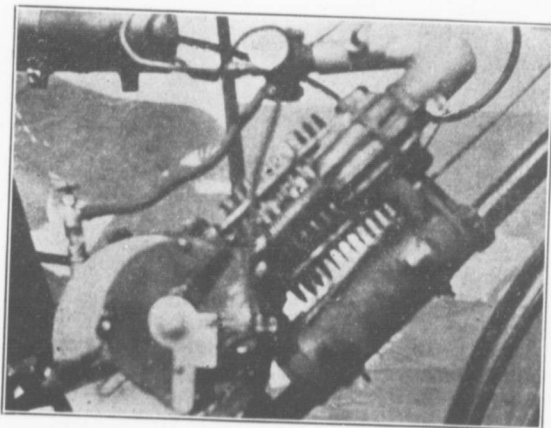
The Cooling System of a Gasoline Engine.

BY S. D. IRVINE, '21.

THE cooling system of an engine is provided to maintain such a temperature within the cylinder that will permit of proper lubrication. The parts which are affected by

The Air Cooling System

In the types of engines which are cooled in this manner, the cylinders and cylinder heads are furnished with fins or projecting ribs of iron.



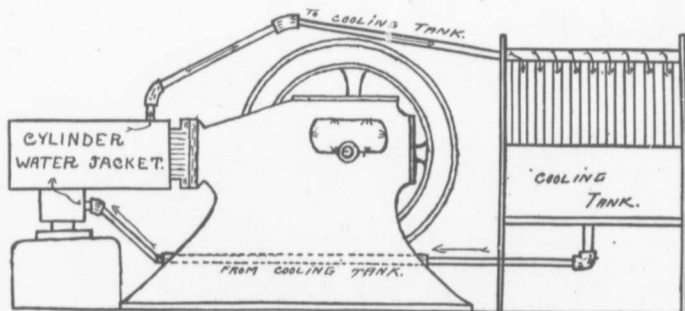
Air-cooled engine, showing fins on cylinder and head.

the compression and power strokes of an engine are the cylinder walls, piston rings, valves and piston pin. There are at least six different ways of getting rid of the heat generated by an internal combustion engine. The first we shall mention is:

Thus a much larger surface of the cylinder is exposed to the air and the excess heat is done away with by radiation. It is obvious in this type of engine that a large quantity of cool air must come in contact with the cylinder and cylinder head

or the engine would heat very rapidly. In motorcycles or on aeroplanes the engine is kept at a low temperature due to the motion of the machine. Another point worthy of notice about the air cooled engine is lubrication. Such an engine, especially those of the motorcycle type, where the flywheels revolve as many as fifteen hundred times per minute, creates a very high temperature, and if ordinary cylinder oil is used this oil will be so lessened in viscosity that it will climb

be maintained. The water in the hopper has therefore to be replenished at intervals, depending of course on its size and also that of the engine. Care must be exercised in the operation of the motor, that no part of the cylinder wall is exposed above the surface of the water, also when refilling the hopper, to pour the cold water in slowly so that the cylinder will not suffer any serious results. This system of cooling is very useful in climates where freezing of the water



Thermo-system of cooling

past the piston rings and up to the cylinder head, where it fouls the spark plug. It is therefore necessary in this type of engine to utilize a heavier oil and one compounded expressly for this purpose. This little point of lubrication is away from the subject, but is worthy of notice.

Hopper Cooling System

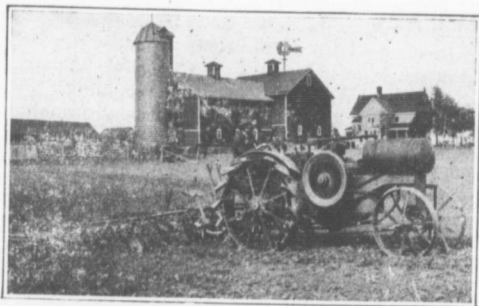
In this method a quantity of water standing in a hopper which surrounds the cylinder is depended upon to carry away the surplus heat by evaporation. Satisfactory lubrication within the cylinder can thus

is liable to occur because, in designing the hopper, provision is made for the expansion of the water into ice without injury to the engine.

An improvement on the hopper system of cooling is: **The Thermo-Syphon System.** This method is used extensively as it enables the cylinder temperature to rise to the boiling point of the water, and automatically starts it flowing through the cooling system. As the temperature of the water rises the warm liquid seeks a higher level in the hopper, while the colder water circulates down to take its place.

Now, two pipes join the hopper with the cooling tank, one to the upper part and the other to the lower. When the temperature of the water rises to boiling, as already stated, it flows over to the cooling tank, which contains a fairly large quantity of cold water, while an equal quantity leaves this tank to replace that which left the hopper. The water in the hopper is thus kept at an optimum temperature, the basic principle of this system being that hot water weighs less than cold water.

to the water. We must keep in mind, however, in all of the cooling systems mentioned above, that the object of cooling is not alone to keep the cylinder cool, but to prevent the heat of the successive explosions from heating the cylinder walls to a degree which would vaporize the cylinder oil and thus prevent satisfactory lubrication. The hotter the cylinder can be kept without interfering with the lubricating oil, the higher will be the efficiency of the gas engine, and the greater the output of available



An International Harvester Tractor in operation.

A third system known as the Pump, Fan and Radiator System might be mentioned, as automobile motors are cooled in this manner. This system carries the water from the radiator, through the pump and into the engine, and thence back to the radiator for cooling.

In all water cooling systems use clean rain or soft water if at all possible, because hard water contains lime and other sediments which, when the water vaporizes, settle on the external cylinder walls and prevent the heat from getting

horsepower. If the water in the jacket or hopper is kept at a low temperature, the pressure and power will be reduced by overcooling as the heat of the expanding gas will be taken from the cylinder and transferred to the cooling medium, i.e., water. The temperature of the cylinder, and therefore the efficiency of the gas engine will be largely determined by the vaporizing point of the lubricating oil, and consequently the higher the grade of oil, the higher the allowable temperatures of the cylinder.



Human or Otherwise?

E. L. EATON, '20.

ONE often misses the human touch in the hurry and bustle of our modern travelling, with its fast trains, its brief stops and its endless monotony; but while riding recently upon the ——— Railway, my attention was pleasantly taken by an incident which brought to mind in a delightful way the lines of Burns:

"For a' that and a' that, a man's a man for a' that."

As the train stopped at a small country station to pick up the usual mail bags and to deposit the inevitable heap of milk cans, a diminutive, sun-tanned, barefooted boy, almost hidden under a big straw hat, entered the train. A few minutes later the conductor called for his ticket, and the little chap said he hadn't any. Of course the duty of the conductor was to put the boy off at the next stop; but as he told him so with studied severity, one could see the laugh in the wrinkles under the elderly conductor's eyes, and turning away hastily, after a final warning, the laugh descended to the mouth, spread over the entire face, and the erstwhile austere conductor

was just an ordinary man, with an ordinary man's affection for children. He was probably the grandfather of another such boy.

I have had little liking for the road in question before, but since watching this little scene the entire system has risen greatly in my estimation. A big corporation is said to have no soul, but if all employees and officials behaved as much like human beings as this conductor, there would be very little ground for the statement; there would be fewer misunderstandings; there would be less industrial turmoil; and the general public would have a much kinder feeling toward the large private enterprise.

A machine in which men are only the cogs need not be purely mechanical, and it does not always pay to be so even in the material realm of dollars and cents. As one business man aptly puts it: "It often costs more to look after the leaks than the leaks lose." It is the everlasting grind of business that kills the best of men, and we are all only too prone to forget the other fellow's feeling. Let's be human.



THE O.A.C. REVIEW

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EDITORIAL:

The Teachers' Summer School.

EARLY in July five hundred public and high school teachers will begin or resume their study of agriculture and related subjects. We extend a hearty welcome to these pediges, not only as pleasant summer visitors, but as future exponents of progressive agriculture.

While the teaching of agriculture in our rural schools has not stemmed the exodus of the rural population from the farm, wrought a marked improvement in Ontario farm methods, or been the direct cause of the erection of the new residence at the O.A.C., yet its influence is now felt throughout Ontario. Many of us who have talked with the people of those sections in which O.A.C. trained teachers are

stationed, note the favor with which these people are beginning to look on the scheme.

The teaching of agriculture in the rural schools brings progress in several ways. First, it causes the farm boy and girl to realize that farming is not a matter of ploughing, sowing and harvesting—summed up as hard work. Their minds are broadened generally. They gain a lot of good everyday knowledge concerning the things about them, opening up an entirely new world to them, the effect of which extends to the parents. It assists, though its effect is not yet large enough to be noticeable, in keeping boys and girls on the farm. The editor knows of a

man in this college who owes his presence here to the teaching of nature study, and the operation of a school garden by one of his last public school teachers, who had taken a course at the College.

Thus far agriculture has not been an important phase of rural educa-

tion. However, it is gradually gaining momentum, and greater results will attend such progress. Every board of trustees should favor a teacher possessing agricultural training, other qualifications being equal.



A Good Move.

THE announcement that the Ontario Department of Agriculture is preparing to organize bull clubs, after a detailed investigation into the live stock needs of the province, cannot but receive favorable comment. A review of the export trade and the results of the Farm Surveys conducted by the Department of Farm Management, O.A.C., Guelph, reveal the fact that the live stock of Ontario lacks quality, and that if the live stock industry is to be put on a firm economic basis, great improvement must take place.

No great improvement will result from mediocre efforts. The results of any campaign bear a direct relation to the size of that campaign. The Dominion Government spent millions of dollars for advertising in the Victory Loan campaigns, with splendid results. The government admitted that the great success of the last Victory Loan was largely due to the voluminous advertising which preceded the campaign. Bill boards, newspapers and magazines, and the platform were the media through which the facts of the Victory Loan were disseminated among the Canadian people.

The improvement of our live stock

is also a vital issue. It is necessary not only as far as rural prosperity is concerned, but for National prosperity. Therefore any considerable efforts on the part of our Provincial and Federal Governments are warranted.

Both Governments have been doing considerable advertising through our Farm Journals, but the total efforts so far have been rather weak. Bull Clubs will aid the situation considerably, if carried out extensively, but much greater efforts are still necessary.

A vigorous campaign in which our live stock specialists, district representatives and progressive farmers get right out among our farming population and emphasize the need of improvement and the results that will come of such improvement ought to bring marked results.

The present time is a fairly prosperous period in rural districts. If farmers are going to invest money in better animals, now is the time, if ever, when they have money to do so. Therefore, if we are going to make efforts to bring about a wholesale improvement of Ontario's live stock, let such a campaign be waged now and in vigorous fashion.

BRIEFS.

A Memorial Hall worthy of the memory of our O.A.C. boys who died while aiding in throttling the colossal efforts of the Germans is the objective which every man ever connected with the O.A.C. has set before him. To reach this objective he realizes that he must give

liberally, that if he does not, and others think likewise, a hall in keeping with the sacrifice of our men cannot be built. It is only by the hearty co-operation of all students, ex-students and farmer friends that our objective can be reached.



AN Alumni Association would aid primarily in maintaining the ties that exist between ex-students themselves and between them and the College. Because of this one fact alone it would be worth while. Considerable extension experimental work in various fields of agriculture might possibly be accomplished.

Dr. Zavitz has developed the Experimental Union along this line. By means of an association the College could keep in closer touch with the ex-students and benefit by constructive criticism, which they would be able to offer. Altogether, an O. A. C. Alumni Association should be an organization worth striving to attain.



WE have been much surprised to learn that standardization of Farm Products is already a reality so far as animal products are concerned. Bacon, butter, cheese and eggs are all graded. However, as far as we know there is no direct relation between the farm and standardization, unless it be the fact that we would not hold the overseas trade

we do without the degree of standardization we possess. The next move that seems to be in order is, that standardization bear a direct relation to the prices paid the farmers for their stock or products. Then only will Standardization be a reality to the farmer and increase the volume of our export trade.



IF farmers decide to adopt the forty-four hour week at city wages, with time-and-a-half for overtime, and double time for Sundays, the city

consumer will have a more difficult task than ever to live. In fact prices of farm products will increase at least seventy-five per cent.



WITH a new residence and a handsome Memorial Hall bordering the west side of the campus, there remains but one serious

gap in the semicircle of fine college buildings — the old Horticultural Building.

AN irksome task confronts the majority of students at this season, the collecting of diseased plants, normal plants and insects. It is an excellent idea not to delay the making of these collections too long, as such procrastination may create a distressing condition, and, in fact, may mean a matter of dol-

lars and cents to the guilty person. Even though it requires considerable effort, the student who takes the trouble to make good collections in the proper manner discovers later on that the practical entomology and botany do not require so much "plugging."



THE holiday season is here! The holiday season includes summer cottages, haying, fishing, hoeing, motoring and harvesting. All aid in gaining health. Some give pleasure. Statistics prove that farmers live

longer than any other class. This fact outweighs a month's pleasure each year. Yet a shorter Life (with a capital L) seems to be preferred by the majority of Ontario's population.



COLLECT FOR DOMINION DAY.

By CHARLES G. D. ROBERTS.

Father of Nations!	Help of the	To the strong stern, to Thee in
feeble hand,		meekness bowed!
Strength of the strong!	to whom	Father of unity, make this people
the nations kneel!		one!
Stay and destroyer, at whose just	command	Weld, interfuse them in the patri-
Earth's kingdoms tremble and	her empires reel!	ot's flame,
Who dost the low uplift, the small	make great,	Whose forging on Thine anvil was
And dost abase the ignorantly	proud;	In blood late shed to purge the
Of our scant people mould a mighty	state,	common shame;
		That so our hearts, the fever of
		faction done,
		Banish old feud in our young
		nation's name.





The following very interesting letter has come from Donald B. Shutt, '19:

I told you in my last letter of my experience in crossing the ocean and of joining the Artists Rifles as a Private, and later of going to No. 2 Officer Cadet Battalion, at Emmanuel College, Cambridge. My cadet

course ended on the last day of July, 1917, and I went on leave pending gazette-ment. At the latter end of August, I received word from the war office that I had been

successful and that I was to proceed to Fort Stamford, Plymouth, to join my regiment, The King's Own (Royal Lancaster) Regiment. I did so, and spent the whole of September there.

On the 1st of October I was sent to France, and eventually was posted to the 71st Battalion, The King's Own. They were in reserve billets at Kemmel Hill. I spent over three months in that portion of the Ypres Salient, that lies between Kemmel Hill and the Zamvoorde Ridge. Our track up to the line was in our place around Hill 60. I shall never forget

the utter desolation of that shell-pocked country, and those horrible stinking pill-boxes we were forced to live in for a week at a time, with bits of dead men continually being exhumed by the ever constant shell fire. I spent the whole of October, November, and the greater part of December in the Salient.

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.

At Christmas time my Division, the 19th Division, was sent south to hold part of the new Cambrai salient, and allotted that sector known as Marcoing. Our

camp, when not in the line, was in Havrincourt Wood. It was impossible to live in the villages round about, as the Germans, before evacuating them, had even destroyed the cellars, and not even a stick of wood was to be found, only rubbish. I spent Christmas day in one of these ruined villages, known as Etricourt, near Ypres, and my billet for the night was an old stable, wherein the surplus kit of the battalion was stored. I had Christmas dinner with some of the transport men of the Royal Naval Division, who had a ration

dump near by. They gave me turkey. Where they got it from I don't know. It does not pay to ask questions. Christmas night, after walking eight miles over ice-coated roads, I discovered my battalion transport lines, and got in in time to hear a few Christmas Carols and "The End of a Perfect Day." I'll never forget that song and the setting:

On the morning of the 28th of December, I had a very curious dream, which is worth mentioning. In the first place I was asleep in my valise, which was spread out on the floor

of my tent, when I dreamt I was at home and sitting in the kitchen. Mother had some jam on the stove, and seeing me about, asked me to watch it for twenty minutes. I said I would. At the end of the twenty minutes I called out that the time was up, and then I awoke. Now the curious part was this: When I had rubbed my eyes I could still hear the bubble-bubble-bubble of that jam. While I was thinking it out, there came a blinding flash right over my tent, followed by a scattering of shell splinters. That was enough for me. It turned out that the Germans had made a big attack about five miles away, and the bubbling noise I'd heard was the distant barage fire. It was a narrow squeak for me, as that shrapnel which burst over my tent killed a couple of chaps in the next one.

As the noise still continued we were all sent up to the village of Metz, there to await further orders. We stayed in Metz until the 2nd of January, when we got orders to proceed to the front line.

I'll never forget that nerve-racking tramp overland to the front line. The ground was covered with ice, and shell-pocked. There were hills and valleys and sunken roads and old deep trenches to get across. It took us seven hours to do the five miles, and there was not one that was not black and blue from continually slipping. Our rum issue soon became a casualty, much to the disgust of the men. At the end of

Any reader who so desires
may subscribe to the Review
for six years for five dollars.

that journey we found our front line consisted of an old sunken road without a scrap of shelter. We only

had one very tortuous communication trench, which was much the worse for repair. There was one dugout in Central avenue, as it was called, in which two companies carried on in as joint headquarters. The sunken road went by name of Camouflage Road. My company had 500 yards of front line to hold, and only 86 men, including officers, to do it with. Our first job was to make T head trenches into the side of the road, shaped like a letter T, and then each man set to to dig himself a rabbit hole in the side of the road for his own comfort.

The first night it was cold and crisp, but on the second it thawed, and in the morning it drizzled. The drizzle turned to rain, and then it all froze again. Central Ave. filled up with water and Camouflage Road became a big stream of icy water. The rabbit holes disappeared, and to make matters worse, supplies of fresh water and food failed to come up in their proper quantities. The men stuck it well for about eight days, but human nature can't

stand up against exposure too long, and on the ninth day our casualty list was very large. Trench feet, Bright's Disease and Dysentery were the chief complaints. I fell a victim to the first and last mentioned. I learned afterwards that the Battalion had had to endure those conditions for 12 days altogether, and that they marched out with only 24 men, officers included. Following that, I was in luck's way, and was kept in Rouen for the rest of January, in No. 8 General Hospital. For convalescence I was sent to Lady Michelham's Officers' Hospital, at the Cap Martin Hotel, Mentone, on the Riviera. I had a gorgeous time there, and soon pulled up my strength. I was there three weeks, I went to Monte-Carlo, Nice, Cannes and Marseilles, and climbed mountains and generally knocked the bad effects out of my system.

On my way back to the line from the Riviera I spent a day in Paris, what continental people call an American tour. From Paris I went to my base at Etaples, and a few days later was sent up to join the 1/4 Battalion, the King's Own Regiment, in the 55th Division, my old battalion having been disbanded while I was away from them.

I joined the 55th Division, West Lanc. Territorials, at a village called Allonagne, near Bethune, one of the few pretty villages in that district which missed destruction. From there I went to my battalion, which was billeted on the La Bassier Canal, at Aingetts. That was the first week in March, 1918.

My company was billeted in one of those old-fashioned French farms, that one never knows where the house begins and the barn leaves off,

and in the courtyard, a nice smelly manure heap by way of a lawn.

Owing to a big number of battalions being disbanded last spring (1918) those which survived were made up to a full equipment, both in officers and men, and, as I was a new arrival, and billets were scarce, I went out and got my own, at another farm house across the canal. There were only three old women in the house, the men being in the army. They only had one old white horse and one cow. I was much interested in their ploughing with a wooden plough and only one rein.

I prevailed upon them in my best French (very much mangled) to let me have half a day at it. I did about two or three days all told, and with a bit of practice became quite expert at it. I also had about half a day sowing oats with a machine Noah must have used. All bolts and bits of wood and tin. It did fairly good work, however.

We were only in Huegetts for about eight days, (I lost my diary during the big German push on April 9th, so can't say exactly as to dates), when we were given orders to move up to Locon, in front of Bethune, and about five miles behind the line. We managed to obtain very good billets here, both for the men and ourselves. All this while, wild rumors of coming attacks were coming in, and the general feeling was known as "wind up." On or about the 15th of March we went into the front lines, my Brigade holding Givenchy and Le Plantain and another Brigade of my Division holding Festubert.

All went well until the first week in April, when things began to hum, and wild rumors would get amongst

the men. On the 6th, 7th and 8th of April we sent out very strong patrols to gather information, but the enemy were not taking any chances with their secrets, and had abandoned both front and close support lines. The nights of the 8th and 9th were utterly black and very foggy. I went down to the front lines to do my two hours' patrol of this line at 9.00 p.m., and was to have been relieved at 11.00, and eventually should have come on again at 3.00 a.m. However, the officer who was to have relieved me at 11.00 p.m. did not turn up, nor did the next one at 1.00 a.m., but at a quarter to three Lt. Court, who should have come at 11.00, came up, and apologized for not turning up. Half an hour later he was blown to bits. I had hardly sat down to eat when a most terrible bombardment commenced, and mustard gas started coming into the dugout. We all jumped out into the trench and gave orders to put on gas helmets. For five hours that rain of high explosives, which ranged from a pip squeak to an 8-inch, continued, and then of a sudden it passed. All this while the fog was very dense, so much so, that our men were overpowered almost before they saw the Germans coming over the parapet.

They managed to penetrate through the centre of our line to the support trench, but no further. "A" Company on the La Basser Canal in "Death and Glory" Sap, holding up the right, and Coventry Sap, in "D" Company holding up the left and the thirteen mine craters held by the Loyal North Lancashires, to the left of that. Away to the left, at Festubert, our Division linked up with the Portugese. With-

in a few minutes after the launching of the attack the Germans were through the Portugese line, and in half an hour the whole 55th Division was almost surrounded by the hordes which swept round in the gap made by the Portugese. It was touch and go for half a day, but our men put their backs into it and pushed the Hun back. By 4.00 p.m. we were in full possession of our original line, and had taken over 2,000 prisoners, and killing—we could not count them. When I came away in June they were still lying around in No Man's Land unburied. Our casualties were large, only about half of A Company remaining, practically all of "B" and "C" Companies being killed or captured, and only fourteen men and one officer remaining in the line of D Company. Luckily I was the officer. At about 5 p.m. Capt. Simpson, my captain, who was absent on a course, came up, bringing with him all the men he could muster from the Brigade Transport Lines, and a queer assortment they were. They consisted of the band of the South Lancashire Battalion, most of the transport men, the cooks, bootmakers, tailors and even the postmen. Nevertheless, they were very welcome, and within a few minutes posted. They did their job well, but naturally did not know much about trench warfare, but with a lesson or two in bomb throwing and what to do in an emergency, they settled down like any ordinary soldiers.

About six p.m. the same night we experienced another very severe bombardment which lasted for two hours, but happily we had no casualties. My sergeant was of great assistance during this shelling by

playing a mouth organ he had taken from a German a few hours previous. By means of the music we soon had the new comers to the line in a happy mood, and either whistling or singing. I am sorry to say Sergeant Watson was later killed by a minenwerfer. During this two hours bombardment, a fellow officer, having been through the fight in the morning with "A" Company, and lent to my company for the night, went insane and had to be carried out.

We remained in the line until the 16th of April, when having put in altogether thirty-two days in the front line area, we were relieved and sent back to Marl-Les-Meurs, a pleasant mining village about nine miles behind the line, there to have our gaps filled and be re-equipped and to have a rest.

On the 18th the 1st Division which had relieved us at Givenchy, experienced another terrific attack, and though they fought splendidly they were compelled to relinquish the extreme front trench. We had expected a long rest, but it was not to be, and on the 22nd we were once more in the line. On the afternoon and evening of the 23rd we went over the top and regained the lost trenches, but, as the attackers to our right and left failed to take their objectives we were compelled to leave our gains. The attack was not in vain, however, as we took fifty-two prisoners, and killed over two hundred, and they were the famous Prussian Guards. We only had one officer and six men killed.

To make a long story short I was in and out of that sector until sent to Hospital on June 21st with Mustard Gas and P. V. O. or Trench Fever. On the 25th of August I was

evacuated to England, and was luckily sent to Lord Sefton's Auxilliary Hospital, at his estate, at Liverpool. From there I went to Lord Furness' Auxilliary Hospital in the Grand Hotel at Harrogate, and on November 23rd was recommended to relinquish my commission by a Medical Board as I was permanently unfit. I did so and was gazetted out on December 21st, 1918.

Since then I've been putting up a stiff fight with the powers that be, at the Repatriation Records who have made many promises, but no attempt so far to fulfill them. With a bit of luck I may get away soon, at least I'm hoping so.

Mr. H. H. LeDrew has received the following letter from O. McConkey, whose address at time of writing was: Queen's College, Oxford, England:—

I have long intended writing to you, so made up my mind this morning to follow the motto "do it now."

I left the corps on the way up to the Rhine, shortly after the signing of the armistice, and came back to England with the Agricultural Department of the Khaki University, where I found the work with the returning men very interesting. We had a fine enthusiastic class of about 500 young Empire Builders at Seaford. Lord, what eager material they were to work with. I don't believe I ever felt any more satisfied with life than the period I was with those chaps. Perhaps it was because most of them intended going West, and I certainly could give them some first hand information because I had been over the trail. I believe that was the reason of my liking the work so much.

However, about the end of January I was sent up to Oxford under the army regulation, which sent 200 men out of the corps up to Br. Universities, and I certainly have profited by and enjoyed the splendid opportunity. There are a few men here on the faculty, about 12, who are Big Men with Big Minds, men who are accepted as world authorities on their respective subjects, men who have their hand on the throttle of the world's finances, men from the Board of Trade, Westminster, and the Foreign Office. One feels the force pervading the place because of its intimate contact with the hub of the world.

I hope to go over to Denmark to study co-operation and their marketing system, knowing that you have been over on a similar measure. I would be very much obliged if you would give me any tips that you have gained from your experiences as to the best avenues of approach to get the information which we desire, and any particular men which you think I should meet. I should be going over some time in July if all is well.

Oxford is very beautiful now, and getting more lovely as spring advances. The river is a picture these days with the flotilla of punts, canoes and practicing eights, and the whole brightened by the picture of happy English life in flannels and many colored blazers. It surely is a great life around here in the summer term.

We wish to apologize for this news item appearing at such a late date. It arrived early in April, but too late for the May number. In publishing the June issue, the

printers were greatly rushed, and deciding that there was more material than needed to fill eighty-eight pages, left some matter for the July Review. The editor will be pleased if the readers will accept this alibi.

The Ontario Agricultural College Old Boys' Association of Manitoba, has been slumbering peacefully for some months, on account of the war. At a banquet on February 18th in the Fort Garry Hotel, Winnipeg, it awoke, rubbed its eyes and found itself stronger and huskier than ever.

It seems to have been that owing to the unsettled conditions of the war, Associations such as this, remained inactive. With the idea of reviving it, two or three members of the old Executive, under the leadership of J. A. Hand, took occasion of Farmers' Week in Winnipeg to get the crowd together and reorganize. As a result, thirty-three graduates sat down to dinner on the above date.

Those present were as follows:—

- James Duthie, Hartney, Man.
- J. B. Reynolds, Pres. Manitoba Agricultural College.
- Dan. Johnson, Dominion Live Stock Branch, Winnipeg.
- H. B. Smith, Nor' West Farmer.
- F. W. Brodrick, Manitoba Agricultural College.
- R. W. Brown, Manitoba Agricultural College.
- M. C. Herner, Manitoba Agricultural College.
- W. W. Emerson, Grain Growers' Guide.
- Eli Robinson, Stonewall, Man.
- R. D. Colquette, Grain Growers' Guide.
- D. N. McIntyre, Meadows, Man.

J. H. McCulloch, Farmers' Advocate.

E. A. Weir, Manitoba Farm Loans Association.

R. G. Thomson, Farmers' Advocate.

Harris McFayden, Harris McFayden Seed Co.

J. H. Tozeland, Winnipeg, Man.

W. H. Hammill, Winnipeg, Man.

J. F. Davidson, Winnipeg, Man.

R. G. Shortill, Nor' West Farmer.

J. E. Bergey, Manitoba College Extension Board.

A. D. Campbell, Adjuster for Hail Insc. Companies.

Chas. Murray, District Rep., Dauphin.

J. R. Oastler, East Selkirk.

W. Southworth, Manitoba Agricultural College.

V. W. Jackson, Manitoba Agricultural College.

Norman James, Manitoba Agricultural College.

A. V. Mitchener, Manitoba Agricultural College.

J. A. Hand, United Grain Growers, Winnipeg.

L. D. Jackson, Western Canada Flour Mills Co., Ltd.

As guests we were fortunate in having A. J. Logsdail of Central Experimental Farm, Ottawa, Professor J. A. Bracken, of Saskatoon, J. B. Spencer, of Department of Publications, Ottawa, and G. A. Putnam, Superintendent of Institutes for Ontario.

The following officers were appointed:—

Honorary President—Jas. Duthie.

President—J. Albert Hand.

Vice-President—R. G. Thomson.

Secretary - Treasurer—L. D. Jackson.

Committee to meet with the Exe-

cutive:—H. B. Smith, W. Emerson, V. W. Jackson.

The programme was informal from start to finish. To describe it would be most difficult. Speeches were made by everyone present. Some discussed the relation of the farmer to the banking system of the country, others covered crops, but most of them just reminisced and told jokes on each other. Many appreciative references were made to the O.A.C., the life there as a student, and to present and past members of the faculty, particularly Dr. Mills, Dr. Creelman and Professor George E. Day.

The presence of the guests, Logsdail, Bracken, Spencer and Putnam, added greatly to the enjoyment of the evening, and these men seemed to appreciate the opportunity of renewing acquaintances.

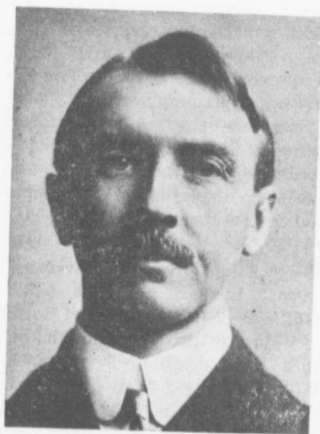
Everyone enjoyed the informal nature of the gathering, and the Executive felt gratified at the enthusiasm displayed, which augurs well for future meetings.

L. S. Klinck Head of University

Prof. Leonard Silvanus Klinck, B.S.A., Dean of Agriculture in the University of British Columbia, and, since the death of President Dr. Wesbrook, acting head of that institution, has been elected by the Governors of the University to succeed the late Dr. Wesbrook. Notification of the action of the Board of Governors was received here recently by Hon. J. D. MacLean, Minister of Education.

Dean Klinck was born at Victoria Square, Ont., forty-two years ago. He spent his youth on his father's farm, studied for the teaching profession, and for three years taught

in one of the rural schools in his native county. Following a course at the Ontario Agricultural College, at Guelph, he graduated in 1903, securing the degree of B.S.A. in Biology. In 1904 he was appointed lecturer in farm crops at the State College at Ames, Iowa, from which he secured his M.S.A. degree in 1905. Shortly afterwards he returned to Canada and joined the faculty of Macdonald College at Montreal. In 1907 he was appointed a professor at that institution. In 1914 Professor Klinck was chosen to fill the Chair of Agriculture of the University of B.C.



J. H. Grisdale, B.Agr., D.A.Sc., is now Deputy Minister of Agriculture for the Dominion. Since June, 1918, he has been holding the dual position of Director of Experimental Farms and Acting Deputy Minister of Agriculture.

After graduating from Albert College, Belleville, Mr. Grisdale attended Toronto University, and later

came to the O.A.C. He graduated from the Iowa State College of Agriculture and entered the Government service as Agriculturist at the Central Experimental Farm, Ottawa. This position he held until 1911, when he succeeded the late Dr. Wm. Saunders, who had been Director of the Farms since their organization.

E. S. Archibald, '08, B.A., B.S.A., has been appointed Director of Experimental Farms for the Dominion. Mr. Archibald has been associated with the Experimental Farms since 1912, when he was appointed Dominion Animal Husbandman. During the three years immediately preceding he had been Farm Superintendent and Professor of Agriculture at Truro, N.S. He is a graduate of the O.A.C., and also holds the degree of Bachelor of Arts from Acadia University.

A. W. Mead, '20, who has been Alumni Editor of the Review for the past year, has decided to return permanently to England. He intends to farm. Duke has been an energetic worker on the Review, in his year, the Cosomopolitan Club and other College executives. He is a man who will be much missed by fellow students and in College circles.

May His Tribe Increase

J. B. Munro, the genial Associate Editor of the Agricultural Gazette, sent in a large number of the items which appear in the Alumni this month. These were received prior to his receipt of the June Review, so that he is an example of one past editor of the Review, whose interests in its welfare did not cease

with the end of his stewardship. Moreover, Munnie says, "I'll keep on gathering items and sending them in periodically." We certainly appreciate such efforts.

Gerald S. Grant, '19, has left the O.A.C. for the West Indies. Jerry's address is, 9 Queen's Park, Port of Spain, Trinidad, B.W.I.

G. H. Unwin, B.S.A., is to be congratulated on sharing first place in the recent Arts Examinations in Moderns. Considering the fact that Mr. Unwin has been lecturing in English and French at the O.A.C. during his preparation for these examinations, his winning a scholarship is meritorious. Mr. Unwin has received a year's leave of absence for the purpose of taking his fourth year in Arts at Toronto. He will be greatly missed in all phases of college life.

J. B. McCurry, B.S.A., has been appointed in charge of the Botanical laboratory at Brandon, Man.

W. C. Hopper, '20, and R. C. Frith, '21, have left for Western Canada in charge of the exhibit of agricultural products put up by the Dominion Department of Agriculture.

Percy Shorey, '20, is in the Entomological Branch at Ottawa.

Len. Johnson, '22, is working in the Seed Branch, Ottawa.

Among the members of Year '22 at the Central Experimental Farm, Ottawa, are the following: Miss F. Heming, P. B. Saunders, Watson, P. Halfpenny and T. Smith.

Fred Bryson, '22, who left O.A.C. in February, is on survey work in Quebec Province.

E. C. Stillwell, B.S.A., is on the staff of the Swift Canadian Co. His headquarters is Toronto.

W. R. Gunn, B.S.A., is with the Nor'West Farmer, at Winnipeg. His work will take him over three prairie provinces.

H. H. Taylor, '21, J. S. Shoemaker, '21, and R. M. Goodier, '21, are all working in various departments at the C. E. F., Ottawa.

Ray Atkin, '19, has been lecturing in Agriculture at the Dunbar School of Agriculture, in Michigan.

E. J. Atkin, '19, is located at Chatham, Ontario. He is engaged in the vegetable seed production work being carried on by the Provincial Department of Agriculture. A. H. MacLennan, Vegetable Specialist, is in charge.

Bert Begg and Clancey Caldwell are with the Soldiers' Re-establishment Commission.

San King, '20, writes from a ranch at Hussar, Alberta. He says that when the prairie breezes begin stirring up the dust that 'tis good-bye to clean linen. At date of writing they were starting in to put up 22 miles of fence. The crops in that district look promising.

Misener, '20; Brickley, '20, and Alex. Munro, '21, are at Ripon, England. They are all continuing their studies at the Khaki University.

A. Z. Zubiaur, B.S.A., '06, writes us from South Bend, Indiana. He is with the Oliver Chilled Plow Works. His private address is 410 W. Wayne St., South Bend.

John McLean, '19, (Scottie), is now in Russia with the 68th Battery.

R. E. Walker, who entered College in 1915, with Class '19, is farming at Milverton, and handles the shipping of cattle for the U. F. O. in that locality.

Morley C. Jamieson, '21, is working on the farm of H. W. Graham, B.S.A., near Ottawa.

G. R. Wilson, B.S.A., is assistant agricultural representative at London, Ontario.

W. H. Sproule, '17, is assistant agricultural representative for Lambton County. He is stationed at Petrolia.

The 66th Battery arrived on "Scotian" June 21st. Many of the O.A.C. boys returned on this boat.

"Bill" Surgenor, '19, is back from France, and is working on his father's farm near Cornwall.

V. C. Lowell, '19, of the 6th Seige Artillery, has returned to Canada and is living in Ottawa.

Cecil Tice, B.S.A., is with the Federal Department of Agriculture in the capacity of Potato Inspector.

Archie Porter, '20, who has been on the Drainage Department, O. A. C., this spring, has left to assume the duties of Potato Inspector with the Ontario Department of Agriculture.

Raymond (Rustie) Zavitz, B.S.A. and Bill Michael, B.S.A., are with the Ontario Sheep Breeders' Association at Guelph.

Bob Skelton, who has returned from overseas, is on the Dairy Department, O.A.C.

Kindly inform us of any change of address, or appointment, marriage, death or birth, in which you or other old boys are concerned.

Correction

In the editor's letter in the June issue the word "not" was unfortunately omitted. The line should have read: "An opinion on the matter would not be out of order."

McGuigan-Fitzgerald Nuptials

A quiet, but pretty wedding was solemnized in St. George's Church, on Tuesday afternoon, June 10th, 1919, at two o'clock, the rector, Rev. G. F. Scovil, officiating, when Miss Florence H. Fitzgerald, daughter of Mr. A. A. Fitzgerald, Cork street, Guelph, became the bride of Mr. Virgil Gladstone McGuigan, '20, of Cedar Springs. The bride was unattended, and was given away by her father, in the presence of a number of relatives and friends. The couple left for a short honeymoon, after which they will take up their residence in Cedar Springs.

Weir-Trusler

On Friday, May 23rd, 1919, at the home of Mr. and Mrs. S. W. Trusler, Camachie, Ontario, Miss Gladys Trusler was married to William A. Weir.

Brownridge-Kennedy

On May 24th, 1919, John Wilbert Brownridge, B.S.A., of Georgetown, Ontario, was married to Miss Nora Kennedy, B.A., only daughter of Mr. and Mrs. Robert Kennedy, at her home, Heath street, Toronto, by the Rev. J. B. Kennedy.

O. A. C. Graduates

In this issue we are publishing the first instalment of the list of O. A. C. graduates. The publication of the whole list will require considerable time, but at the end of that time the readers will have a complete list of the graduates. We have endeavored to make this list as accurate as possible, but, without doubt, there will be some errors. It is our wish that readers knowing of any changes of address or occupation of any graduate of which we are apparently unaware will inform us of such. We will publish these corrections as they come in, so that when the list is completed the reader and Review will have a complete, up-to-date list.

Later we intend to begin a list of the associates and other men who have attended the O. A. C.

1896—Atkinson, Jas., 1008 8th St., Des Moines, Iowa, Agr. Editor.

- 1904—Arkell, H. S., Dept. of Agr., Ottawa, Live Stock Commissioner.
 1904—Avila, C., Cordoba, Argentine Rep., Rancher.
 1908—Archibald, E. S., Director of Experimental Farms for the Dominion, Ottawa, Ont.
 1908—Arkell, T. R., Dept. of Agr., Ottawa, Sheep Expert.
 1909—Allen, R. J., Winnipeg, Man., 505 Raglan Road, Market Expert, Dom. Live Stock Branch.
 1909—Angle, P. E., Newark Realty Co., Newark, Cal., U. S. A., Farm Manager.
 1911—Austin, R., Welland, Ont., Enlisted.
 1912—Aikenhead, W. M., Oshawa, Ont., Fruit Farmer.
 1914—Allan, J. N., Canboro, Ont., Farmer.
 1914—Anderson, J. F., Raymond, Alta., Farmer.
 1916—Abraham, R. H., Chatham, Ont., Farmer.
 1916—Atkins, E. W. M., Apriculture Dept., Exp. Farm, Ames, Iowa.
 1916—Archibald, J. G., Nova Scotia Agric. College, Chemist.
 1916—Amos, L., Enlisted.
 1917—Aiton, R. M., Botanical Department, O. A. C., Guelph.
 1917—Austin, W. J., Supervisor of Agr. Education, Kelowna, B. C.
 1919—Arnold, G. J., Dairy Department, O. A. C., Guelph.
 1919—Allan, R. D., Assist. Mgr., Lambton Co-op. Assoc., Petrolia.
 1919—Aylsworth, D. F., Farming, Bath, Ont.





We Go

Farewell, Macdonald!

The two years which loomed up large and long before us, as we climbed thy stairway of approach, have slipped away imperceptibly and our departure draws near.

To the strenuous work of the diet kitchen, to the busy life of the summer camp, to the problems of the school, to the joys and trials of the home, to the feeding of the hungry, and the enlightening of the ignorant, the helping of the perplexed, and the arousing of the indifferent, sooner or later we go.

Fortified by training, prepared by patient instruction, enthusiastic and anxious to work, we go. We, who have sat side by side in rows to drink in knowledge, who have stood in hollow squares to concoct delicate dishes, who have marched in squads on the campus and danced hornpipes in the gym; we, who have been fined for walking on our heels during study hour, who have been deprived of our best slippers, who have blown out fuses in making toast and cocoa, who have been chidden by the students' council, shall soon be scattered far and wide. Another generation will take our places and thou wilt know us no more.

In thy beauty we leave thee! In the rich luxuriance of summer foliage, in the grateful verdure of

shaven lawns, bathed in sunlight, chequered with shade, fair to look upon!

Farewell, Macdonald! We take with us many a pleasant memory, many a helpful thought, with gratitude we shall remember thee through the coming years!

Continue thy good work! Enlarge thy borders, lengthen thy cords and strengthen thy stakes!

Blessings be upon thee! Farewell!

Luncheon to the Faculty

On Friday, May 30th, the annual luncheon to the Macdonald Staff and the wives of the O.A.C. Faculty was given at Macdonald Institute.

Miss Watson appointed Miss Harley as steward, and her enthusiasm and hard work were strong factors in the success of the entertainment.

As usual, the senior students were arranged in groups, some preparing the dishes and others arranging and waiting on the table.

Miss Eustis was responsible for the decorations, which were in excellent taste, branches of apple blossom adorning the windows and the platform, while pink tulips were set in vases on the tables. Mrs. Bailey had charge of the serving-room.

The menu was as follows:

Salted nuts	Olives
• Julienne Soup	
Veal	Olives

Riced potatoes, Asparagus on toast
 Rolls
 Tomato-jelly salad; Cheese straws
 Cocoa-nut ice, Strawberry Sauce
 Cake

Coffee Mints

After the luncheon, Mrs. Adam Short, of Ottawa, addressed the guests, giving an interesting account of present day economic conditions as they bear upon the problems of women.

The Graduation Dinner

On Friday evening, June 6th, Miss Watson entertained at dinner, Dr. and Mrs. Creelman, Dr. Shearer of Toronto, the members of the immediate staff, and the graduating classes of the year.

The decorations for this annual function were simple but effective. Festoons of Spring blossoms and evergreens garlanded the lights and windows while the tables were dainty with pink-shaded candles and feathery columbine in tall vases. Unusually clever were the "kewpie" menu and place cards, which caused much amusement among the guests. The menu was as follows:

Fruit cocktail,
 Gherkins, Olives, Salted peanuts
 Baked Whitefish, Bread rolls
 Leg of lamb, Mint Jelly
 Mashed potato Green Peas
 Lettuce Salad, Water thin biscuits,
 Frozen Strawberris, Sponge cake
 Coffee

After the dinner Dr. Creelman in a few words introduced the guest of the evening, Dr. Shearer of Toronto, head of the Social Eservice department of the Presbyterian Church for the Dominion.

"Service" was the keynote of the

speaker's address and Dr. Shearer from the height of his twenty years experience in one of the highest forms of service, knows the meaning of the word and how to explain it to others. In the course of the address, Dr. Shearer told of the work of St. Christopher's House, Toronto, one of the many homes doing good work for the needy. He also gave startling statistics regarding the death rate of infants in Canada and pointed out that this rate was for the most part due to neglect. In this connection the speaker showed that the responsibility for these things rests on every citizen and that every girl should do some part however small in remedying this evil.

Dr. Shearer said that social service might be divided into two classes, professional and non professional. A limited number only might engage in the life work but in the latter every girl should do her share in her community.

On behalf of the audience, Dr. Creelman moved a vote of thanks to Dr. Shearer and the rapt attention of all present and later the applause were futher signs of appreciation.

Following the address of the evening, came the annual ceremony at the graduation dinner to which every Junior looks forward—the presentation of the black tie of senility by each Senior to her favourite Junior. The exchange of ties being happily concluded, the guests after chatting a few moments dispersed.

The steward of the dinner, which is planned, cooked and served by the Juniors, was Miss Dixon of the

Housekeeper Class, who proved most capable in this capacity.

Address on War Savings

On Monday afternoon, May 26th, Mrs. Putnam of the National Thrift Campaign gave an address to the students in the Institute Assembly. Miss Watson introduced Mrs. Putnam as a speaker of unusual ability and wide experience in her work and her address fulfilled the expectation of her audience.

In a clear, concise manner, the speaker explained the need of the campaign for the purchase of War Savings Stamps, the plan of the campaign and the results both to the purchaser and the country. The address was pointed and practical and it could plainly be seen that it appealed to the audience.

The May Dance

On Friday evening, May 23rd, a very successful May Dance was given in the Hall gymnasium by the Juniors of the year. It was indeed a springtime dance with its wild flowers, palms and decorations in rainbow colors.

The guests who were received by Mrs. Fuller were composed largely of outsiders, but with a good number of men from the college. The music of the orchestra was all that could be desired and the generous encores satisfied even the most tireless dancer. Punch and macarons were served during the 10th and 11th dances. The proceeds, which amounted to over forty dollars, were in aid of the Comforts Fund of the Military Hospital. Much of the credit for the dance is due Miss F. Leeming who, as convenor, worked tirelessly for its success.

H. T.—How did you treat the fractured knee-cap in the First Aid exam?

L. S.—Oh, I just put a splinter on it and applied a tourniquet!

Hymn of the Junior Normals

(Tune Old 100th)

We are the Junior Normal Class,
We hope in June '19 to pass;
Then Senior Normals we will be
And demonstrate in cookery.

We'll teach the country farmers' wives,
How they can make their bread to

rise:
We'll tell them of the calorie,
It's value in the dietary.

We'll demonstrate to every man
The uses of the frying pan;
The eggs we use we'll wash with care

And trace each microbe to its lair.

We'll give up all our midnight teas
And foods not feeds will be our
sprees;

Our class will give a good repute
Bring honour to this institute.

L. S. A.

Where do we go from here?

Some of the graduating class are going home to rest for a while and have no definite plans for the future, but others are going right to work.

Miss Germain will travel west and do fine work, we are sure, as Cafeteria Secretary of the Y. W. C. A. in Regina.

Miss Bailey will superintend the Y. W. C. A. at Kitchener, where Mrs. Davies went last summer. Mrs. Davies is now in charge of Dalhousie.

sie Hall, the up-to-date residence equipped by the Dominion Rubber Co. for their girl employes at Port Dalhousie.

Miss Flatt and Miss Tippett will spend the summer in Y. W. C. A. camps, the former at Fort Qu'Appelle, Sask., and the latter at Lake Couchiching.

Miss Wesmer will be pupil dietitian at the O.A.C. Dining Hall under Miss Montgomery.

Miss Smith has been appointed housekeeper to the Halifax Ladies' College, and Miss Crawford to the Mohawk Institution, Brantford.

Miss Nicholl begins work immediately as pupil dietitian in the Toronto General Hospital.

Other students entering hospitals in this capacity are Miss Totten, Grace Hospital, Detroit; Miss Lethbridge, Cleveland City Hospital; Miss Sheridan, Royal Victoria

Hospital, Montreal; while Miss Murray and Miss Willans intend to follow suit but at present have not fixed destinations.

Miss Lewis expects to enter St. Luke's Hospital, Chicago, in September to train as a nurse.

Miss Maclean has some idea of lecturing to Women's Institutes for a time, while Miss Reid will qualify for the management of an institution by a course as pupil at the Sherbourne House Club, Toronto. Miss English, Miss Beaman, Miss Mogg and Miss Suttaby expect to teach after the vacation, and will sow broadcast the seed gained from the harvest of learning they have reaped at Macdonald.

They will all have interesting experiences and it is hoped they will describe some of them for the benefit of Review readers.

Miss Boughner's Picnic



Some members of the Macdonald Faculty, Senior and Junior Housekeeper Classes

At Dinner—"Who are those two ladies in military uniform?"

"They have come from England to see about positions for the Wacks and Wrens."

"What are Wacks and Wrens?"

"Oh, they are birds. The Wacks follow the men in the army, and the Wrens follow the men in the navy."

"Well, when they go back, I do hope they will take the sparrows along."

Miss Olive Hayes has been appointed to the Superintendency of the Women's Institutes in British Columbia. Miss Hayes is a graduate of Macdonald Institute, Guelph, and was for a time a demonstrator and lecturer with the Women's Institutes in Ontario.

Mrs. Jean Muldrew, leading educationist, lately director of Household Economy for the Canada Food Board, has been appointed Director of the Home Branch of the Home Branch of the Soldiers' Settlement Board. Mrs. Muldrew trained as a specialist in household science at Macdonald Institute, Guelph. She was for a time House Mother at Macdonald College, Ste Ann'e, Que., and later was Principal of Red Deer Ladies' College, Alta. In connection with her new work, Mrs. Muldrew plans a campaign for the improvement of home conditions on the farm.

ELECTIONS

The usual elections were held on Monday, June 2nd, with the following results:—

Students' Council

President—Miss Staples.

Vice-President—Miss Dickenson.
Secretary—Miss Touche.

Athletic Society

President—Miss McDonald.
Secretary—Miss Grant.
Treasurer—Miss Rogers.
Baseball Manager—Miss Rebbeck.
Hockey Manager—Miss Forester.
Basketball Manager—Miss Luckham.

Y. W. C. A.

President—Miss Cass.
Secretary—Miss Warner.
Treasurer—Miss Hamilton.
Press Reporter—Miss Morton.
Bible Study Leader—Miss Robertson.
Mission Study Leader — Miss Sharpe.
Social Convener—Miss Zavitz.
Musical Convener—Miss Taylor.
Review Representative—Miss Gardiner (automatic succession)

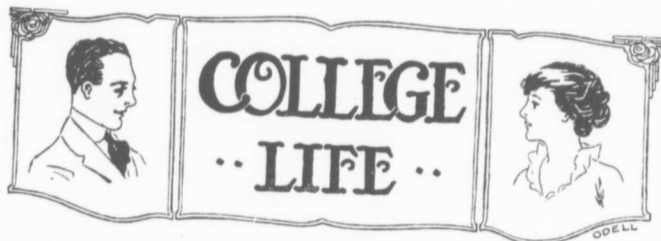
Literary Society

President—Miss Barker.
Secretary—Miss Fellows.
Treasurer—Miss Bier.
Philharmonic Representative — Miss Ferguson.

A Forecast

I dipped into the future, far as human eye could see,
Caught a vision of my old friends,
and the wonders they would be.
Saw our Dona, plump and jolly,
grown so matronly and wise,
Ruling o'er her little household,
darning socks, baking pies,
Mending picture-books and play-

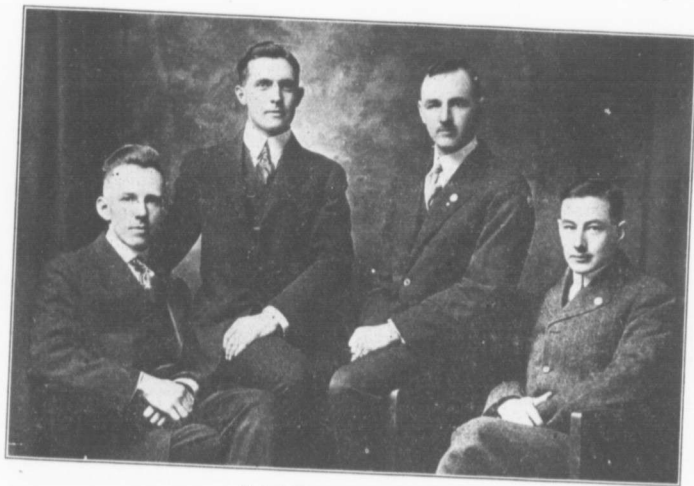
Continued on page xi.



The Debating Champions

The Sophomores have just reason to be proud of their representatives in the interyear debating series. Despite the fact that they were pitted against very able opponents, they accomplished

Ruwald and Welland of the Freshman year, advanced as to the relative amount of misery caused by pride and ambition and by ignorance and superstition were somewhat unsound. Then in the final debate Messrs. Ferguson



C. M. FERGUSON

R. F. JUKES

C. M. FLATT

W. H. GRANT

what many had deemed impossible and what has seldom been done before—the winning of the debating honors for a second year.

In the first debate Messrs. Flatt and Grant convinced the judges that the views which their opponents, Messrs.

and Jukes won on the subject, "Rural Consolidation in Ontario," from Messrs. Caldwell and Begg of the Senior year. In both cases the margin was slight but still sufficient to balance the scale in favor of the Sophomores. We wish these men every success in future efforts

and know that they will win further honors for themselves, for their Class and for the O. A. C.

Professor of Beekeeping

Frank Eric Millen, B.S.A., who has recently been appointed Professor of Beekeeping at the O.A.C., has arrived from Ames, Iowa, and will at once assume his duties. Prof. Millen has also been appointed Provincial Apiarist. For some time past he has been Associate Professor at Iowa State University at Ames, and previous to that was Associate Professor of Beekeeping at the Michigan State College. He is a graduate of the O.A.C. of 1913, and and has always specialized in apiculture. Dr. Burton N. Gates, who previously held the position, has returned to Massachusetts.

Excursion to O. A. C.

Nearly one thousand attended the excursion to the O.A.C., June 18, coming by automobile from Brant, Norfolk, Wentworth and Wellington Counties. District representatives came with the farmers and their families and with the assistance of the College staff a thorough inspection was made of the farm, the stock, and especially the experimental plots. Lunch was provided for the visitors at the College, and though the heat was intense all appeared to enjoy the day.

The excavation for the new residence at the O.A.C. is nearly completed. This building will occupy the corner of the Campus opposite the Dining-Hall

and across the road from Maedonald Hall. Just below it towards the Hamilton Road, nearly opposite the old van sheds will be built the Memorial Hall. In order to secure sufficient space for this latter building the course of the road curving up from the West corner of the Campus to the Main Building will have to be altered.

Since Doc. Fraser has joined the staff of the Ontario Agricultural College he has become a frequenter of the bachelor apartments in Massey Hall. As a result Doc. is rapidly cultivating an ironical, eccentric deportment.

Bill Stanley, B. S. A., of the Department of Chemistry, has become the pleased owner of a chummy little Maxwell. The Maxwell seems a very popular car in this vicinity, if the joyous loads of smiling girls usually occupying this car are a gauge to such.

Warren Oliver of the Landscape Gardening Division, O. A. C., prefers the flowers around Maedonald Hall to all others.

Fred Ferguson, B.S.A., of the Drainage Department, O.A.C., has made a Survey and now appears to be making Plans at the Hall.

The warm weather has hatched the 1919 crop of insects. As a natural sequence Doctor Gordon Crawford of the Entomology Department, may now be frequently seen sprinting gaily after flitting Painted Ladies.



Macdonald

Continued from page 576.

things, scolding dad for petty
sins,

While he calmly studies law-courts
and occasionally grins.

Next saw "Hydie" flourishing dumb-
bells, swinging clubs and wav-
ing wands,

Teaching dances to her pupils —
guiding clumsy feet and hands.

Saw her fame spread through the
country—she, the pride of
Pincher Creek,

The despair of her opponents and
the envy of the weak.

Then our Dora rose before me with
her crown of golden hair,

Continued on page xiii.



That Excellent Flavor
Is Due To -

Windsor
Dairy
Salt

Made in
Canada

THE CANADIAN SALT CO. LIMITED

265

Memorial Tablets in Bronze

"Enduring as the Ages"

Made and designed
in our workshops

Ryrie Bros.

Limited

134-136-138 Yonge St.

TORONTO

Get Better Profits From Your Crops

Don't be satisfied with an ordinary crop, and don't experiment with an unknown fertilizer. Get real results from the perfectly balanced soil food that has proved its great value to farmers all over the country.

Gunn's Shur-Gain
FERTILIZERS



"Making two blades grow where only one blade grew before"

Are the product of fertilizer experts who have had years of experience with Canadian farm needs. In Gunn's "Shur-Gain" Fertilizers they have produced the perfect blends of nitrates, phosphoric acid, and potash that insures greater crops wherever it is used.

Gunn's "Shur-Gain" Fertilizers are the best and cheapest plant food you can buy. Ask your dealer for it. If he cannot supply you with the genuine "Shur-Gain" write to us and we will mail you the interesting booklet "Bumper Crops" and get you the supply you need.

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TYPE Z OIL ENGINES are made in our own factory, that has been specializing on this type of machinery for forty years.

CASE OIL TRACTORS are made by J. I. Case Threshing Machine Co., who have been making Plowing and Threshing Machinery for seventy years.

Why buy experimental machines when you can be absolutely sure of good service and a profitable investment by buying your engine or Tractor from

The Canadian Fairbanks-Morse Co.
26-28 FRONT ST., TORONTO LIMITED

Please mention the O. A. C. REVIEW when answering advertisements

Macdonald

Continued from page xi.

She, who'd rather count your pulse-beats, than the richest kingdom share.

Saw her bending o'er the sick-bed
scorning ever to take rest,
With her ukelele music soothing
e'en the wildest breast.

Then sweet Hattie passed before me
with her laugh like silver bells,
She, whose spirit blithe and cheery,
nothing dampens, nothing quells.

Through a wildering maze of cooking
and the fine domestic arts,
She was guiding younger Calgary—
ever always "Queen of Hearts."

Then our dear old "Nick," God bless
her bonny blithe and smiling
face,
Started up in haste to tell me of her
own peculiar place.

Dietetics had attracted. This she
dropped for golf full soon,
And "International Champion Golf-
er" was the title that she won.

Then a creature, haggard, weary,
garbed in commonest prison
fare,
Raised her hands in wildest warn-
ing, whispering hoarsely, "Oh,
beware!"

Cease your senseless rhymes! Re-
pent ye of your sins ere 'tis too
late,
Or as the wretch you see before you,
will be your own well-earned
fate.

"IRISH."

Please mention the O. A. C. REVIEW when answering advertisements

Some Athlete

An American and an Irishman were telling each other wonderful things which had been done in their respective countries.

"I guess we have the best jumpers in the world," said the American. "Why, one of our men ran thirty miles and then jumped over a five-barred gate.

"Sure, no wonder he did," said the Irishman, "Look at the run he took—"

"What would your mother say, little boy," demanded the passerby virtuously, "if she could hear you swear like that?"

"She'd be tickled to death if she could hear me," answered the bad little boy. "She's stone deaf."



Simplicity is the foundation of efficiency. EMPIRE Milking Machines are supremely Simple and correspondingly Efficient.

They do their work perfectly, with the least possible effort on the part of the operator and the greatest possible comfort to the cows; they get the most milk, of the best quality in the least expensive way.

Send us a postal for the Empire Catalog and learn about "the Modern Milking Method."

The Empire Cream Separator Company
of Canada, Limited

146 Craig Street West Montreal
TORONTO WINNIPEG

EMPIRE
MILKING MACHINES

The Growing of Alfalfa

Continued from page 552.

from the Bacteriology Laboratory, Ontario Agriculture College, Guelph.

The most suitable varieties of alfalfa for Ontario are Grimm's, Ontario Variegated and Baltic. The seed may be sown with or without a nurse crop.

Three methods of seeding are commonly practised. The seed is either sown on winter wheat in early spring after a fall of snow, or in spring with a cereal nurse crop, or about the middle of July on a well cultivated soil without a nurse crop.

The seed may be broadcasted or sown in drills, at the rate of twenty pounds to the acre.

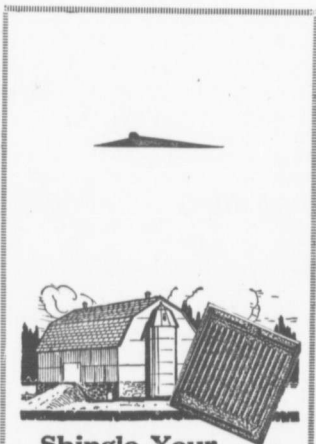
Alfalfa should be cut for hay immediately it commences to bloom, or as soon as new shoots are well started at the crown of the plant. By harvesting at this early stage, as much as possible of the leaves, the most palatable part of the hay, is saved. Generally three crops and always two are obtained during a season.

From what has been said it can be seen that, under favorable conditions, alfalfa growing is a paying business for the farmer and that the plant deserves to be grown much more extensively than it has been in past years.

The miser who has money to burn ought to take it with him when he dies.

Very Democratic Then

The only time the average man is willing to admit that he is one of the common people is when he is running for an office.



Shingle Your Barn with

PEDLAR'S GEORGE SHINGLES

THEN you need have no fear that lightning or any of the other elements will harm it. These shingles give positive and dependable service in all weathers. Made of heavily galvanized steel, designed to lock securely on all four sides, they are immune from damage by lightning. They cannot rust, burn or decay, but will last a lifetime without repair. See your dealer or

Write for Roofing Booklet A C

THE PEDLAR PEOPLE
LIMITED
(ESTABLISHED 1881)

Executive Office and Factories: Oshawa, Ont.

Branches:

Montreal, Quebec, Ottawa, Toronto, Winnipeg, Vancouver.

When you have done one good thing, don't stop to talk about it. Do another.

Some men are so busy looking for a position, that they cannot find time to work.

The man who profits by his mistake is better than the man who has never made any.

No amount of voice culture will make a fat man stop snoring in his sleep.

The Monolithic Concrete Silo
Continued from page 55o.

and rapid setting up of pipes at filling time.

The concrete chute may be used to advantage with the concrete wall, but in the majority of cases matched tongue and grooved lumber is preferred. It is important that the chute fit closely to the silo. Here again where silos are built side by side the chute may serve for two or more as is the case with the roof. It is desirable to have a window in the chute. A ladder leading from

the ground to the top of the silo wall is essential.

Cost

The cost of materials for silo construction has varied and increased considerably since the outbreak of the war. It is possible to make an approximate estimate only. Also, labour has increased in cost and the price of materials may be much higher in one locality than in another. The following figures are fairly representative for 1917: of silage than does the low silo. Concrete silos may be built to any de-

Size of Silo	14 ft. x 42½ ft.	12 ft. x 37½ ft.
Gravel @ 35c	\$ 15.75	\$ 12.75
Cement @ 50c	100.00	82.50
Reinforcements and Bolts	13.25	11.50
Asbestos	2.40	2.15
Construction	125.00	100.00
Doors	5.00	5.00
Total	\$261.40	\$213.90

N.B.—The total cost including roof and chute would depend upon

the sort of material used and the type preferred.

Size

The best size of silo to build depends entirely upon such conditions as: The number of cattle in the herd; the daily amount fed each animal; and the number of months one wishes to feed. The high silo provides for more economical storage

sired height within reason. The following table gives the approximate capacity, in tons, of round silos.


N.B.—The diameter is shown at the top of the columns, and the depth at the left.

Continued on page xvi.

Inside diameter of silo in feet and the capacity in tons.

Height	10'	11'	12'	13'	14'	15'	16'	17'	18'
Feet	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
20	26								
21	28								
22	30	36							
23	32	39							
24	34	41	49						
25	36	43	52						
26	38	46	55	64					
27	40	49	58	68					
28	42	51	61	71	83				
29	44	54	64	75	87				
30	47	56	67	79	91	105			
31	49	59	70	83	96	110			
32	51	62	74	86	100	115	131		
33	53	65	77	90	105	121	138		
34	56	68	80	94	109	126	143	162	
35	58	70	84	98	114	132	149	169	
36	61	73	87	102	118	136	155	176	196
37	63	76	90	106	123	142	161	183	204
38	66	79	94	110	128	148	167	191	212
39	68	82	97	115	132	154	174	198	221
40	70	85	101	119	138	160	180	205	229
42		91	109	128	148	172	193	218	244
44			117	137	159	184	207	233	261
46					170	197	222	247	277
48							236	261	293
50									310





CLEVELAND TRACTORS

Do more than Plowing
They prepare the seed-bed without packing

The Cleveland Tractor Company
of Canada, Limited

WINDSOR ONTARIO

Ability

The man who develops himself develops his ability to handle men.

A man who really knows what he is talking about commands respect.

The man who is largely a "bluff," no matter how magnetic or forceful his personality, is soon found out and retired in avfor of a man of smaller pretensions, but more knowledge.

A wise old owl lived in an oak,
The more he saw the less he spoke,
The less he spoke, the more he heard,
Why can't we all be like that bird?

—Production

If some artists see things as they paint them, they should cut the booze.



Get Good Harness

Any goods put out by this firm and bearing our yellow ticket trade mark are guaranteed. The Imperial Brand Harness is well known as high grade, and the makers stand behind it. We have never adopted any make-shift methods to cheapen our product on account of the high cost of material, but stick to the good old standards of fifty-two years ago, when this house was established. If there is anything you need in harness, ask your dealer for the Imperial Brand, or write us direct for it. Ship same day order is received.

SAMUEL TREES & CO., Ltd.
Mfrs. Harness & Saddlery
42 WELLINGTON ST. EAST, TORONTO

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SPECIAL BUGGY HARNESS.
Handsome, light road buggy harness, rawhide lined, track style, 56 in. traces. Shaft wrap belly band, beaded lines; folded and padded breeching seat and breast collar; three-quarter inch buckle over-check; track blinds; traces double and stitched throughout; trimmings are finished in genuine hard rubber and near gold. This is the dandiest harness for the price in Canada, strong and reliable, every inch of it. Price only \$35 Special. Ask your dealer or order from factory. Our Guarantee—If it does not satisfy you, return it at our expense.

\$35

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to the cheapest
that is
good**



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London, Ontario

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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.

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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.
D. E. Macdonald & Bros.
- Electrical Appliances, Plumbing and Heating—**
The Grinyer Co.
- Florists—**
James Gilchrist.
E. S. Marriott.
- Grocers—**
Hood & Benallick.
- Garage—**
Robson Motor Corporation.
- Gents' Furnishings and Tailors—**
R. S. Cull & Co.
D. E. Macdonald & Bros.
R. E. Nelson.
Geo. Wallace.
Lyons Tailoring Co.
Hillman & Wallace.
- Hardware—**
The Bond Hardware Co.
G. A. Richardson.
- Hair Dressers—**
Cora A. Pringle.
- Jewellers—**
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- Ladies' Tailors—**
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Geo. M. Henry.
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C. W. Kelly & Son.
- 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.

The March Into Germany

Continued from page 540.

without paying anything—I told cub landlord to hurry out and bring in the soldier from the street and I would then take further action. So cub dashed doubtfully out and probably discovered that a soldier with a stolen bottle of wine does not loiter around the corner—for he did not come back to me. It was hard to see what the people in these small towns did for a living, as there were no farms near by and no factories at all. They could not all be buying and selling from each other.

If I haven't already done so, I must pay tribute to the Germans, with both hands, for their reforestation system. Where fields end there the forest begins; there is absolutely no land lying waste either up in the mountains or on the plains, and the forests do not grow haphazard. They are planted in great blocks and though they may be thinned out a bit to ensure better growth, yet, when cutting really takes place, it is done by the block, so that all the trees are very uniform, and as soon as the place is cleared it is replanted. The trees generally used are Austrian and Scotch pin, spruce, fir, scrub oak, and beech, in order of frequency of occurrence, of course I speak only of the limited areas I have seen. However commendable the scheme is from a purely economic standpoint, yet it is rather appalling when entering what looks like a fine bit of forest, to find the trees growing in straight rows as far as you can follow their trunks. One occasionally comes across a bit of wood growing according to nature's planting—but it generally turns out to be very steep ravines. The little blocks of forest shelter a surprising amount of game, hare, rabbits, deer and pheas-

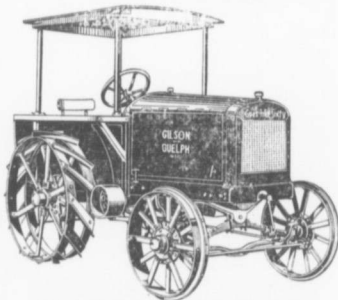
sants, with an occasional woodcock. This winter has been unusually mild—the only snow we have had fell on Christmas day—and yet the deer do not seem to feed on the growing grain, in the fields or the tufts of grass in the woods, so much as on the moss which they root up from under the pine needles. It seems as if they are accustomed to feed on moss in winter by digging it up from under the snow, and because there happens to be no snow this year, they do their best among the pine needles.

Munsterceiffel was the last town in the mountains and our journey then lay on the plains, so that it was good for the troops to find good hard roads for marching; without three or four inches of slush. The good roads took us to Meckenheim. The whole history of our march at this time centres

Continued on page xxii.

THE LATEST & GREATEST TRACTOR SUCCESS

11-20 H. P. with Big Surplus



OTHER GILSON PRODUCTS

FOR THE PROGRESSIVE FARMER,
"GOES LIKE SIXTY" ENGINES, GILSON SILO
FILLERS, THE HYLO SILO, LIGHT RUNNING
GILSON THRESHER

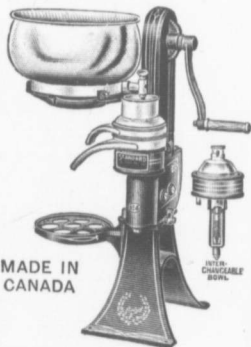
Call at our factory, on the York Rd. Visitors Welcome
GILSON MFG. Co., Limited, Guelph

Better Butter and more of it

The best of the high prices are paid for butter of firm solid quality. In the ordinary separator with the straight wing bowl, the globules of fat are shot against the inside edges of the discs and smashed to pieces. This means inferior butter.

The Renfrew

is the only separator in the world that has the curved wing feature. In the Renfrew the globules of fat are conveyed in the milk along these curved wings without whipping. The result is that you get first-class firm butter.



MADE IN
CANADA

Our catalogue gives full particulars. Write for it to-day.

The Renfrew Machinery Co. Limited, Renfrew, Ont.

ESPECIALLY FOR MACDONALD GIRLS

Everything you are interested in—The Everyday Chemistry of Food and Cookery; The Diet in Spring, Summer, Fall and Winter; The Fine Art of Combining Foods; Seasonings, etc.—is most interestingly discussed in

MRS. ALLEN'S COOK BOOK

Bran' new, and authorized by Food Controller Hoover.

The many delighted dishes and menus are alone worth many times the price of the book, and the illustrations—nearly fifty in number—are photographs of tempting dishes and attractive table settings, which are invaluable.

\$2.00 POSTPAID.

Order from:

Library Department

WILLIAM BRIGGS

PUBLISHER

TORONTO

Please mention the O. A. C. REVIEW when answering advertisements

The March Into Germany

Continued from page xx.

around my first and second lessons in German, which I got in Meckenheim. Oh, she was a lovely girl and a most delightful teacher—although she was a German. And by some curious anomaly her surname meant Heart of Stone.

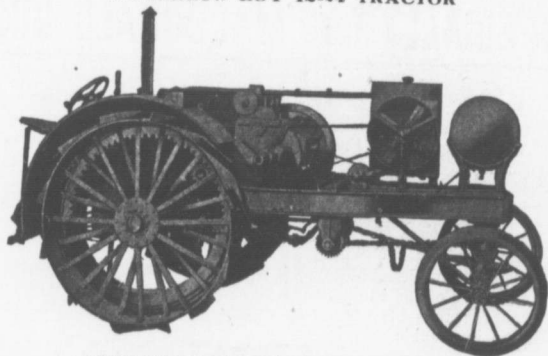
However, other than these lessons of mine in German, I assure you that nothing else of interest happened to the Brigade or to the whole Division—and so we journeyed to Godersberg—a suburb of Bonn, on the banks of the mighty Rhine.

The mayor, or burgomaster, of the place had gone to some pains to billet our men, so everyone had a bed. Headquarters had a house to themselves, and the officers lived in the Godersheighof, a so called Swiss and therefore neutral hotel right on the river.

Imagine a hotel styling itself neutral in a country as much at war as was Germany. We took possession of the whole place in comfort, living in quarters which in peace times would cost a good deal.

The proprietor had been trying for some time to get permission from the Germans to get married but they would not allow it, so when we arrived our signalling officer magnanimously gave him a note scribbled on a telephone message pad, graciously allowing him to marry, and the grateful proprietor coughed up some wonderful wine for Sig's and invited him to the wedding. Just lately Sig's declared that as he had played Cupid in the first case it was up to him to go and bring about a divorce so he travelled into

Continued on page xxiv.

WATERLOO BOY 12-24 TRACTOR**ATTENTION FARMERS OF ONTARIO**

Take a good look at this Tractor. Study the lines of it, the design of it, and the simplicity of every working part. Doesn't it impress you well at first sight, as a real Tractor,

You can see this Tractor at Seaforth. If you buy one you can get service on short notice. You can get repairs at once. Consider the matter. Come to Seaforth and see the Waterloo Boy.

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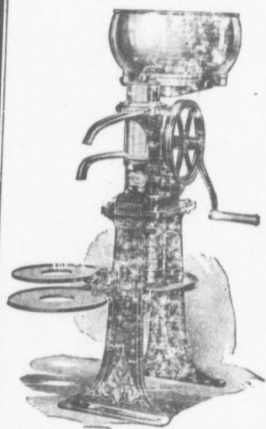
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One of the greatest factors entering into the production of high class dairy products is sanitary cleanliness—not a cleanliness that is superficial, but a cleanliness that eliminates practically everything, both the noticeable and the microscopic.

If you have any doubts as to

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being the ideal cleaner for the dairyman, you need only consult anyone of the thousands of successful dairymen that use this dairy cleaner.

The low cost of this material makes it possible for every dairyman to profit by its use.

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It cleans clean.

The J. B. Ford Co., Sole Manufacturers. Wyandotte, Mich.,

Indian in Circle



On Every Package

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The March Into Germany

Continued from page xxii.

Godersberg and came back next day, very reticent.

Some men suggested that he had a black eye; but I didn't see it. From the top we could see the Seven Sisters, great mountains on the East of the Rhine, and the country for miles around. The river was over five thousand feet wide at this point and about thirty-six feet deep, with very little traffic on its four mile an hour current, except an occasional tug putting coal barges.

On the 3rd day, 13th December, we took part in the official entry of the 2nd Canadian Division into the Bonn Bridgehead.

And here we have been since then, with our outpost lines running in great arcs round each of the great

Bridges over the Rhine, as I have indicated roughly on the map I send. The Americans are on our right around Coblenz, and British troops are on our left.

In two days time we are to commence our journey.

—"HOMEWARDS"—our first step being in the neighbourhood of Namur. Are we downhearted?

Poor Circumstances

"I am sensible of the honor you do me, Mr. Mitchell, in the proposal of marriage you have just made," said the young lady, with a slight curl of the lip, "but circumstances over which I have no control compel me to decline the honor."

"What are those circumstances," demanded the young man.

"Your circumstances, Mr. Mitchell."

AT WHAT AGE DO FARMERS RETIRE ?

A farmer retires when ill health compels him to do so, or when he has enough money to keep him for the rest of his days.

Farmers are much like other men. In the past they have spent freely as they have earned and old age has found most of them without the money upon which to retire.

But the farmer of today—if he is wise—does not leave the matter of his independence in old age to chance. By investing a few dollars each year in an Endowment Insurance he builds up a fund to keep him in comfort when he is old, or to care for his family should death claim him early.

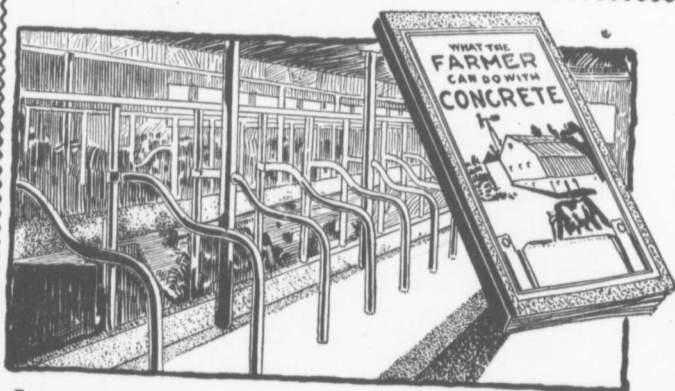
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Increase Your Dairy Profits

HEALTHY cows mean good flow of milk—and you know how important it is to the health of the animals that their housing shall be warm, dry and sanitary. Concrete is the only material that fully answers these requirements. Concrete is the only material that affords proper sanitation and cleanliness.

Think, too, of the ease with which a concrete floor can be cleaned—the labor it will save.

In our book, "What the Farmer can do with Concrete," a section is devoted to floors of Concrete. Such improvements of Concrete as you can easily make on your farm will help materially to improve the value of your property.

Moreover, you will be able to "work" your farm with less effort and greater profit when your wooden buildings have given place to concrete.

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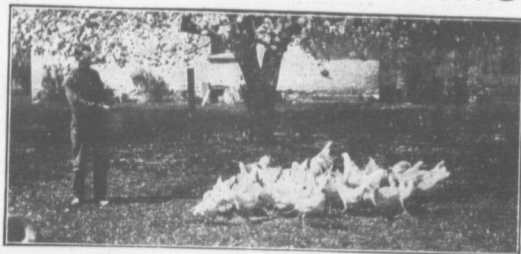
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NORTHERN ONTARIO



NORTHERN ONTARIO is an immense forest-robbed land stretching from the Province of Quebec on the east to Manitoba on the west and extending north 770 miles from Southern Ontario to the Hudson Bay covering an area of 330,000 square miles, being 208,000 square miles larger than the British Isles, or comprising a region big enough to include the six New England and four middle States of the American Union. Its climate is similar to that of Manitoba and its soil as rich.

Its bush relieves the monotony of the scene, protects from storm and wind, furnishes timber for the settler's dwelling and fuel for his winter need, as well as a source of income; large rivers and lakes and many lakelets water the land and offer fine inducements to stock raising and dairy farming.

Already there are thousands of miles of colonization roads and steam railways spreading like a spider's web over a huge part of that vast new land.

This rich agricultural land may be had by returned soldiers or sailors in 160 acre blocks free; to others, 18 years and over, 50 cents per acre.

For free descriptive literature and information,

G. H. FERGUSON,
Minister of Lands, Forests and Mines.

WRITE—H. A. MACDONELL, Director of Colonization,
Parliament Buildings TORONTO, Canada.

Pasture and Soiling Crops for Hogs

Continued from page 541.

several plots are being pastured alternately. Red clover is most commonly used, but recently sweet clover is rapidly demonstrating its value as a pasture crop for hogs.

Other pasture crops such as peas, rye, oats, vetches and turnips are of less value and do not give good enough results to warrant their use except where it is impossible to use the more highly recommended crops. Rye may be advisable in cases where a particularly early pasture is desired.

A good arrangement of pasture crops is secured when alfalfa is pastured first, and when it is eaten off fairly well, a plot of red clover or sweet clover can be pastured. The alfalfa may then be allowed to grow

up for hay and a field of rape sown to be pastured later, when the clover is done. Rape sown at different intervals can be used alone, but gives slightly inferior gains compared to the use of different pasture crops. It has been found by experiments carried on at widely distributed experiment stations, that the use of pasture or soiling crops in feeding hogs enables the feeder to secure gains at from 20 to 30 per cent. less cost than where grain feeding alone to finish the hogs on pasture its use is practiced. When it is not desired to furnish the hogs on pasture its use is still valuable because of the healthy thrifty condition it induces in the growing hogs, thus making them much more likely feeders than when they are raised without green feeds.



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THE
Two Year Course
AT THE
Ontario Agricultural College,
Guelph

Is within the reach of all farm boys

BECAUSE

Ordinary public school education is sufficient for admission to the course.

The College Year begins September 19th and ends April 15th, so that students from the farm may return to their homes to assist in the Spring and Summer work.

Five months during the Spring and Summer gives many students opportunity to earn sufficient money to defray College expenses for the following year.

The tuition fee for Ontario students for two years is only \$20.00 per year while the lowest possible rate is charged for board and room in residence.

A portion of the cost the first year is defrayed by work on the farm and the various departments.

Students wishing to take the full Four Years' Course for the degree of B. S. A. conferred by the University of Toronto, do not require matriculation standing. Students are accepted for this Course if their standing on second year examinations warrants it.

College Opens Sept. 19th,

1919.

Write for a College Calendar which gives full particulars

G. C. CREELMAN, President