



THE  
O·A·C·  
REVIEW

CHRISTMAS  
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DECEMBER·1911

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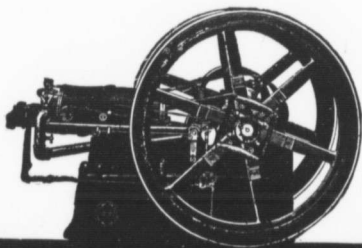
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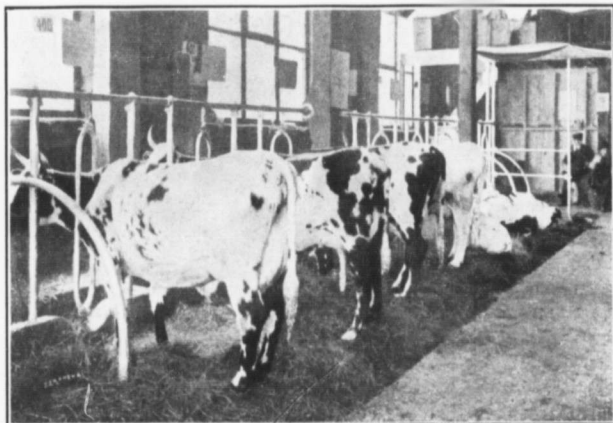
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## Louden Machinery Co. - Guelph

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THE DIGNITY OF A CALLING IS ITS UTILITY

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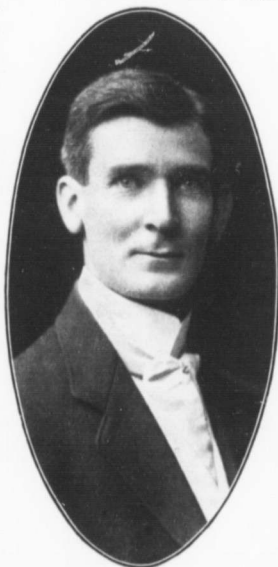
## Christmas and the Farmer

W. P. GAMBLE.

THE first certain traces of the observance of the nativity of the Saviour are found about the time of the Roman Emperor Commodus, 180-192 A.D. In later years mention is not infrequently made to Christmas Day, though it does not appear that there was any uniformity in the period of observing this Holy day; some held the festival in the month of May or April, others in January. It is almost certain that the 25th of December cannot be the nativity of the Saviour, for it is then the height of the rainy season in Judea, and shepherds could hardly be watching flocks by night in the plains.

Christmas not only became the parent of many later festivals, such as those of the Virgin, but especially from the 5th to the 8th century, gathered round it, as it were several other festivals, partly old and partly new, so that what may be termed the

Christmas Cycle sprung up, which surpassed all other groups of Christian holidays in the richness of its festal usages. Not casually nor arbitrarily was the festival of the Nativity celebrated on the 25th of December. One of the principal causes that co-operated in fixing this date was that almost all the heathen nations regarded the winter solstice as the turning point of the year—the beginning of the renewed life and activity of the powers of nature. At the winter solstice the Norsemen held their great Yule-feast, many of the beliefs and usages of the old Germans and also of the Romans, relating to this period, passed over from heathenism to Christianity, and have partly survived to the present day. But the church also sought to combat and banish—and it was to a large extent successful—the deep-rooted heathen feeling by adding, for the purification of the heathen customs



W. P. GAMBLE.

and feasts which it retained, its grandly devised liturgy, besides dramatic representations of the birth of Christ, and the events of His life. Hence sprang the Christmas carols as well as Christmas dramas. The custom of decorating churches at Christmas, especially with holly and ivy, is a very ancient one.

Of recent years it has become usual for friends to forward to one another by post gaily illuminated cards bearing Christmas greetings. The Christmas tree would seem to be traceable to the Roman saturnalia. It is noteworthy that the Christmas tree with its pendant toys and manikins is portrayed by Virgil. The Christmas numbers of magazines are often at great cost rendered specially attractive, and in these days are often issued as early as October.

By many of the Christian denominations the day is celebrated by public worship of one form or other; while throughout many parts of the world it is kept as a social holiday on which there is a complete cessation from all business, a day of keenest enjoyment because of the intercourse with friends seldom seen at other times throughout the year, a day of "Peace and goodwill toward all men."

In the enjoyment of this annual holiday may not the farmer partake in an especial sense? For, while free to enjoy the Christmas-tide as no other class may, he at the same time rejoices in the consciousness that from his goodly fields have gone forth to innumerable homes the very necessities of life, without which "Christmas Joy" is a misnomer. One of the Hebrew writers has well said: "The king himself is served by the field."

Agriculture as it was the first, is the most general occupation of man.

Indeed, it has been the chosen occupation of the great and good in every age. Warriors, philosophers, and statesmen from King David to King George V., have made it their favorite employment. During the brightest period of Roman history, work upon the farm was the only manual labor worthy of a free citizen; and from the first dawn until the decline of their literature, rural economy formed a favorite theme for composition both in prose and verse. The works of Virgil, Cato, Varro and Pliny attest the strong and enduring charm the subject of agriculture possessed for the Roman mind.

Nor is it to be wondered at that men in every age and every land should have found much to eulogize in the heritage of the farmer. Indeed it would be truly amazing if such were not the case. For where but on the farm has one such opportunity of enjoying Nature's Cycle—springtime, the voices of returning birds, the elfin horn of the first honey-bee venturing forth, the clear piping of the little frogs in the marshes at sundown, the tinge of green that comes so suddenly on the sunny knolls and slopes,—how these things and others like them charm the eye and ear.

As the season advances nature displays new charm in the appearance of strips and patches of the most vivid emerald green while the fields are yet brown and sere. The rapid growth of leaves on the trees changes the whole aspect of the landscape, and thick luxuriant grass gives to nature an appearance of equipose and repose in the highest degree restful to the mind. Visions of the world of meadows and orchards bursting into bloom and vast stretches of wheat,

oats, barley and maize encourage feelings of prosperity, and remind us of the goodness of the Creator.

To labor amidst such surroundings is the good fortune of the farmer. What pleasure is his as he watches the flash of the mould-board in the sun as at each furrow it is brightened! What pleasure to turn over the renewed soil, to scatter the rich compost, to sow the seed and bury the tubers, to till the soil, to gather the early fruits and vegetables, and as the season advances to scent the odour of fresh cut hay!

Then, too, is there not inspiration in the knowledge that the farmer has a great and important part to play in inducing the earth to give of her very best? For, as nature grows less capable (and she surely does) of supplying her own, then man must take up the task, and the contributions which mother-earth makes are in a measure at least determined by the industry and skill practised by the tillers of the soil. Therefore, not only is the farmer's profession pleasant from the standpoint of the beautiful in his environment, but he is doubly blessed in the knowledge that intelligence is required to assist the labors of his hands.

Then, how shall we portray the glories of the golden harvest, or paint the rich coloring of the autumn fruits or express the joy of the lords of the soil as they see earth's increase safely garnered? With cellars filled with luscious fruits, with bins bulging with their loads of grain, with roots and vegetables securely protected from frosts, with flocks and herds safely sheltered, the gusty

November wind whistles almost a musical tune in the thrifty farmer's ear. At the same time these things mean health, joy and comfort to millions of people in cities and towns.

Hand in hand with the harvesting of the fruits of the field there has come a great change over the face of nature. At first the trees of the woodlands appear as if they had been lightly and hastily brushed with gold. The outer edges of the branches become a light yellow, while, a little deeper, the body of the foliage is still green. Gradually but surely the process of change goes on until all the leaves have taken on new colorings, then the breezes separate them from the parent stem and these souvenirs of departed summer are borne hither and thither by the gusty winds of autumn. When the fields are shorn of their increase and the trees are stripped of their leafy coat, then are ushered in the white angelic days we have in winter and which Whittier has so well described in these lines:

"Around the glistening wonder bent  
The blue walls of the firmament:  
No clouds above, no earth below,  
A universe of sky and snow."

'Mid scenes like these our Christmas comes, and while the farmer has had his pleasure in the season's cycle, yet his labor in each season and the fruits thereof are the conditions necessary to the other classes of mankind having the wherewithal to enjoy the Christmas holiday. Therefore, in a very special sense, and with feelings of warmest gratitude to our benefactor, we extend to him the "Season's Greetings."



## CANADA

## First Prize Poem.

Our native land! A heritage more vast  
Than we her sons can dream of, though we may  
Have travelled far and wide her boundaries o'er.  
Yea, who, though gifted with a prophet's eye,  
Can frame a vision that shall touch the rim  
Of that high destiny which beckons thee?  
When he of old saw in the coming years  
His country's glory, did his brethren dream  
Of such high honor, favor so divine?  
So we in our dim musings, day by day,  
Cannot conceive of future such as thine.  
Then must we in thy greatness have no share?—  
The way is open, mines of wealth untold  
Await the staunch of heart on every side;  
The still unbroken fields within their grasp  
A thousand, thousand golden harvests hold;  
Close hid within the heart of cloud-topp'd range  
Or scattered 'neath the broad plain's bosom lie  
Unfathomed treasures gleaned by far-off years  
That not Cathay nor isles of Inde can yield;  
On mountain slopes unbounded forests green  
Their mighty tow'ring heads to heaven upraise,  
And listen for the echo through their aisles  
Of man's all-conq'ring tread which speaks their doom;  
Through rock-wall'd gorge and down precip'tous steeps  
Resistless mountain torrents rage and leap  
And tell of future millions warmed and fed  
By their exhaustless forces.  
This land is ours! We are her masters!  
With lordly mien we lift our heads on high,  
And peer into the centuries yet unborn.—  
They, too, are ours,—a thought which gives no pause,  
And bids us walk with care our way along  
By whom must heritage so great be held?  
Not by the weakling! No! Nor him unworthy, but  
By men true-hearted, noble, broad of view,  
Unselfish, humble, willing to endure,  
That she, our country, may with stately tread  
March onward in the van of moving nations  
Untouched by shame or weakness or decay.

—Bessie M. Philp.

## Rambles in Rome

TENNYSON D. JARVIS.

WE left Naples at 8:30 a.m. and arrived in Rome a little after one. The trip was most delightful. The high degree of cultivation for a distance of about fifty miles was interesting to note. The peasants were busy in the open fields planting seeds and tilling the soil with their primitive wooden sticks pulled by roan-colored oxen. On the right of us we could see a range of snow-capped mountains. It was our first glimpse of the Appennines. We passed along sometimes close beside them and sometimes with intervening slopes covered with vineyard or olive trees. The vineyards looked very different from ours—the vines were trained to short bamboo sticks and not put up in festoons as in the Naples district. We passed many quaint old towns and villages with scattered houses in clefts and gullies of the hills. The white-washed frame buildings against the green of the poplar, elm and olive with the mountain background looked very picturesque.

It was on my ride to Rome that I had my first experience in an European coach. It is always a temptation on the part of the American tourist to describe and contrast them with the trains of Canada and the United States. An European coach at first strikes a Canadian with a feeling of amusement or of curiosity, or perhaps both combined, anyway, there is no feeling of alarm and they do

their work fairly well compared with their diminutive size, and when they blow the whistle they seem just as important as a real train. It was in this coach, too, that I for the first time saw a victim of Pelagra. It was a pitiful sight indeed to see the helpless state of this unfortunate. I was informed by his physician that his present state was simply the result of the disease, that the organism itself had now left him. So far this disease



OLD RUINS AND THE APPIAN WAY.

has not reached us here in Canada, but it is getting fairly common in the Middle and Eastern States, and it looks like our turn is coming. This terrible disease attacks the nervous tissues, causing paralysis and insanity and even if the patient survives he is almost sure to be an invalid for the rest of his life. The hope of the disease seems to be in the recent discovery that the spread of the disease is caused by an insect belonging to

the genus *Simulium* and known to Canadians as the black fly.

In this same coach my experience touched a lighter vein: this time it was to watch the disappearance of large quantities of bright red sparkling wine. It seemed a custom for the natives to make the national beverage a large part of their travelling outfit. The ones we saw were imbibing from gallon flasks. There is something unique about drinking from a gallon flask; I should imagine one would be rid to a considerable extent of that unhappy feeling of reaching the bottom too soon.

On our arrival in the Eternal City we were delighted with the beautiful buildings and cleanliness of the streets. We were now very hungry and made straight for Hotel Laurati which is very centrally situated and affords an excellent connection to all parts of the city. It was here that we were first introduced to spaghetti on goat. Goat is not bad at all served in this way; indeed we enjoyed it almost as much as venison on a Canadian table. Dinner over, we secured a

carriage and made a beginning of our two weeks' sojourn in Rome.

Our attention was first directed to a large church, Maria di Maggiore, built on the Roman style. We entered here with heads bared and bowed and approached the altar. It was a most enchanting sight: the stained glass windows, the display of brass and candles, the Murril paintings, the shining lights subdued by the darkness of the place, the statues, the apparent sincerity of the worshippers, the odor of the burning incense,

the supreme yet worshipful attitude of the priests in their gowns of black and white; the shrines, the fonts and the penitent boxes, the calm, the quiet, the seclusion of the place—all these combined were almost sufficient to intoxicate the senses.

We drove from here to the Vatican and enjoyed the wonderful works of art immensely. They contain thousands of pieces, the Apollo, Belvedere, the Laocoon group; the Perseus and the Barberini candelabra are among them. We went into the Raffaele stanzas, which is in three rooms, and



ENTRANCE TO HADRIAN'S VILLA,

were amazed by the works. From there we went to the Sistine chapel, and saw Michael Angelo's masterpieces: the ceiling showing the Creation, also the Sybils; on the front wall is the famous Last Judgment. We also saw here the beautiful tapestries and the Vatican library. From here we went to the Corsini Art Gallery and saw many famous masterpieces. There are several Ruben's and a Holbein's portrait. The Murillo Madonna and many others. We then went to the Palace Farnesiana and were

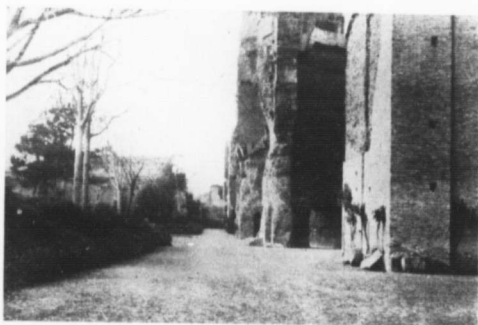


delighted with Raffaelli's beautiful version of the story of Cupid and Psyche, and the Feasts of the Gods. The rest of the afternoon was spent in driving around the town. We saw beautiful fountains, antique bridges, aqueducts and aerial waterways; catcombs with the bones of the saints; ruins, walls and excavations; forums, amphitheatres and temples by the score; arches and gates of all ages; parks, piazzas and classic busts galore; palaces, villas, courtyards and the seven hills.

In the evening we drove to the Coliseum and enjoyed a rare treat. The old ruins were illuminated from top to bottom with many colored fires, and a military band was playing which gave a very festive impression. The building was much larger than we imagined it to be and when it was all lighted we made a careful examination of the old walls and massive columns covered with creepers, mosses and herbaceous plants. We then walked around the Arena and saw the underground dens for the wild beasts, the openings through which they were fed and the corridors through which they rushed to their death, and also the apartments where the gladiators were kept. At about 11 o'clock the band played the national anthem and then thousands of people marched through the narrow outlet leading to the Old Roman Forum. This was also a blaze of fire and presented a glorious spectacle, but we were too

tired to stay long, so we strolled back to the centre of the town and after some light refreshments returned to the hotel.

At 12 o'clock we rolled into bed and prayed that no ill dream might disturb our sleep. It turned out that our prayer that night was disregarded. Scarcely had we fallen asleep when there appeared what I took to be at first a suffragette procession, but on closer observation I found that this great throng was a mass meeting of Madonnas, thirty thousand strong. Leading the host I could discern the



RUINS OF CARACALLA, ROME.

outline of St. Peter with the key, accompanied by Titian's Mary Magdalene. At intervals in the procession were groups of Holy families and behind all were several young girls each bearing a head in a charger, which was beautifully inlaid in antique mosaic. At this point I rushed to follow the procession but stubbed my toe against the bed. Soon I fell asleep again, only to be troubled in a similar manner, but this time with scenes of a very different character. Nero's ghost appeared. He was up to his old stunts and told me to eat

a cake of soap or drink a bottle of Italian wine right on the spot. I swallowed the soap. He then explained to me that he was making a collection of digits and after removing my little finger he passed on. Again I awoke to find that I had been dreaming. Once more I fell asleep. Now, I am in the streets of Rome and it is the Ides of March, and another procession comes before my vision. Hark to the shouts—they are going to make me king. They offer me the crown; thrice they offer it to me and thrice I push it away.

Again I awoke, but now it was morning: a bright, clear, joyous Easter morn. After a breakfast of coffee and rolls we drove to the great piazza of St. Peter's. It was a grand sight to see the people, native and foreign, dressed in their glad rags, entering St. Peter's. We absorbed all we could from the outside and then entered and spent the early part of the morning viewing the chapels, frescoes, mosaics, etc., with which the place is adorned. At about 10 o'clock we attended the grand high mass. The church was crowded and the soldiers of the guard were busy keeping back the crowds from the narrow passageway leading to the altar. The procession started—first came the choristers, and then a great many priests, walking two and two and carrying lighted tapers. Cardinal Rompolio, the Pope's substitute, then appeared, bearing the covered

Sacrament in both hands; cardinals and canons clustered round him, making a brilliant show. The soldiers of the guard knelt down as he passed and the bystanders bowed as he passed on into the chapel. A few more couples brought up the rear and passed into the chapel also. The music was grand and was supplied by a choir of men and boys hidden away in a chapel to the left of the altar. One thing peculiar about the singing was the absence of note books. We were told that they depended largely upon inspiration. The building it-

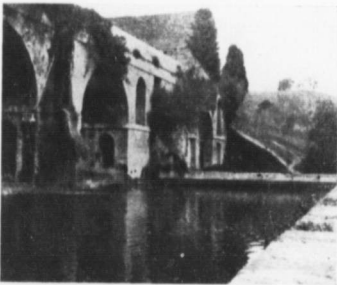


OLD ROMAN WALL.

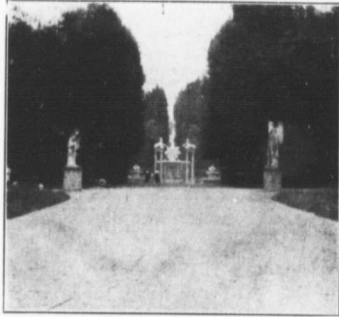
self is simply marvellous and to get a full idea of its beauty one must spend much time there. The beautiful paintings and mosaics, the exquisite sculpture of Michael Angelo and others; the beautiful proportions of architecture, the impressive service and angelic music, all combined to have a very wholesome, cleansing and elevating effect upon the worshipper.

In the afternoon, to vary our experiences in this wondrous city, we drove beyond the walls to the most interesting thoroughfare in the world

—The Appian Way. For miles on both sides of the road vestiges of sepulchers are seen. We passed the tomb of Cecilia Metella, a very large and imposing tubular structure. In the distance we could see the ruins of the Claudian aqueduct. The beautiful Stone Pine with long, naked trunks and ball-like tops were conspicuous objects in the landscape. We next came to the Protestant cemetery and visited the graves of many noted people, including those of Keats, Severn and Shelly. We passed to the Catacombs, and there heard many thrilling tales about this city of the dead. On the way back we visited the famous Caracalla Baths, situated a little distant from the entrance to the Appian Way. These baths were built by the Emperor of Rome to contribute to the cleanliness, pleasures and luxuries of the people and it has been calculated that sixty-one thousand people could have bathed here at one time. We also stopped at the noted Church of St. Paul, outside the wall. This church is like a huge ball-room. They have here around the nave of the church the portraits of all the Popes up to the present time. There are still about thirty blank spaces.



TERRACE OF VILLA MADAMA, ROME.



STATUARY IN THE GARDENS.

The next morning we saw the arrival of Prince Arthur, the British Envoy to the Exposition. It was a great sight; long lines of Italian infantry lined the streets, which had been strewn with clean white sand for the occasion. The cavalry looked grand as they came down the streets with their shining breast plates and beautiful black horses. We also saw the King of Italy as he went to meet the Prince.

From here we went to the Rag Fair and never before had we seen such a conglomerate mess of produce. The streets were crowded with booths and everything but rags was offered for sale.

In the afternoon we took the tram car to Popolo Gate and from there we drove through the Villa Borgese. The air was fresh and fragrant with the odors from the early summer blossoms of the Dogwood, Hawthorn and Wisteria. In the green grass were countless little pink daisies, blue violets and white anemones. The avenues were lined with tree lilacs, tall elms and spreading oaks. The growth was about a month in advance of that in Southern Ontario. After driving for some time in the beauti-

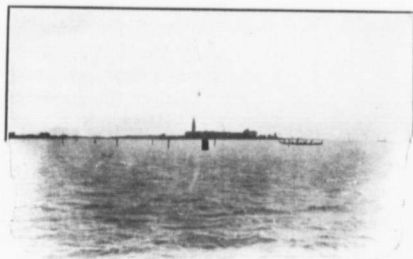
ful garden we left for Pincian Hill and enjoyed a fine concert by the military band. From here we could get an excellent view of Piazza del Popolo, from the centre of which arises one of the eleven obelisks brought to Rome from Egypt. It is the oldest bit of work in Rome, older indeed than Rome itself, since it was built 1,000 years before the wall of Romulus and Remus was erected. It was here that in the middle ages, Nero's restless ghost was thought to wander in the night and it is not to be wondered at when we think of the many cruel deeds that have been performed on the hill.

From day to day we visited galleries, churches, museums, forums, etc. We saw paintings, statues, relics and historical scenes enough to fill many volumes.

Before leaving Rome we walked over to the Trivi fountain to say farewell to Rome. It is the custom of tourists who wish to return to the great city to throw a penny in the water of this fountain as a guarantee that they will be permitted to visit Rome again.

The excursions in the neighborhood of Rome are charming, and would be full of interest were it only for the changing views they afford, of the

wild Campagna. But every inch of ground in every direction is rich in association and in natural beauties. On our third Sunday in Rome we went to Tivoli, on a little steam train. All along the route there were great fields of clover and meadows. Large patches of pink oriental poppies were conspicuous flowers in the meadows. We stopped at Hadrian's Villa and walked through the long avenue of cypresses and then examined the ruins of this once magnificent villa. The fruit trees were in full bloom and the birds I had never seen so thick before. It seemed a perfect paradise for the feathered tribe. We had our lunch on a plateau which overlooked a beautiful valley and after taking a few pictures we returned to the station and proceeded to Tivoli. Here we saw the river Anio diverted from its course and plunging down, headlong, some eighty feet below. We viewed the picturesque Temple of the Sibyl, perched high on a craig; its minor waterfalls and rainbow from their spray. We then went to the beautiful Villa d'Este, deserted and decaying and surrounded by cypress and stone pine. We returned to Rome at 6:15 after a most pleasant day's cutting.



THE LEDO, VENICE.

## Christmas Spirit in Dickens

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

PERHAPS no author writes so well about Christmas as Dickens. None seem to be able to picture quite so easily and pleasantly the genial atmosphere of that festival of rejoicing. The kindness of Christmas lives in his pen, the spirit of the season when wrongs are forgotten, and all the world and his wife are merry and foolish. Indeed from what we know of the life and character of Charles Dickens he was just the kind of man to whom Christmas would mean a great deal. His childhood, described in *David Copperfield*, was spent in the poorer quarters and in the back streets of London; none knew better than he the pinch of poverty and the disgrace of debt. It is said he could never look back on this life without bitterness; and though he undoubtedly violated the law of filial reverence in the picture he drew of his home and parents, yet probably no son had better cause of complaint on the score of neglected childhood. With what pleasure, then, must he have turned from recollections like these to the warmth and jollity of the Xmas festivities of his later prosperity. His nature, generous and impulsive, was troubled by no cynical disbeliefs; he could honestly join the multitude and "make a joyful noise." His very style seems to help. The loose construction, long repetitions, the multitude of sentences rolling in one after the other in a sort of breathless eagerness, even the quaint exaggerated figures and absurd "fairy-story" names, all these seem to be part and parcel of

the whole, to belong by just right and privilege to the merry pageantry of Christmas.

One of the most enjoyable features of the Christmas stories, is the hearty appreciation of what we may call the "good cheer" of Christmas, the

"Turkeys, geese, game, poultry, brawn, great joints of meat, long wreaths of sausages, mince pies, red hot chestnuts, juicy oranges, luscious pears, immense twelfth cakes, and seething bowls of punch."

We can imagine the little waif, half frozen and wholly hungry, wistfully passing in review a glorious procession like the above; or gazing in at such a shop window as this:

"The poulterers' shops were still half open, and the fruiterers' were radiant in their glory. There were great, round, pot-bellied baskets of chestnuts, shaped like the waistcoats of jolly old gentlemen, lolling at the doors, and trembling out into the street in their apoplectic opulence. There were ruddy, brown-faced broad girthed Spanish onions, shining in the fatness of their growth like Spanish Friars; and winking from the shelves in wanton slyness at the girls as they went by, and glanced demurely at the hung-up mistletoe. There were pears and apples, clustered high in blooming pyramids; there were bunches of grapes, made in the shopkeepers' benevolence, to dangle from conspicuous hooks, that peoples' mouths might water gratis as they passed; there were piles of filberts, mossy and brown, recalling in their fragrance, ancient walks among the

woods, and pleasant shufflings ankle-deep through withered leaves; there were Norfolk Biffins, squab and swarthy, setting off the yellow of the oranges and lemons, and in the great compactness of their juicy persons, urgently entreating and beseeching to be carried home in paper bags and eaten after dinner. The very gold and silver fish, set forth among these choice fruits in a bowl, though members of a dull and stagnant-blooded race, appeared to know that there was something going on, and, to a fish, went gasping round their little world in slow and passionless excitement."

What a veritable feast of fat things is here conjured up before us. The man who wrote this must have longed for those good things, must have felt the spell of those same Norfolk Biffins, "earnestly entreating to be taken home in paper bags," must have experienced the tingle of an excitement which communicated itself even to the lethargic gold fish.

In the Posthumous Papers of the immortal Pickwick we have a delightful old-fashioned house party. No one reading this can fail to catch the spirit of Christmas fun which it exhales. One is taken at once into an atmosphere of holly and mistletoe, of games and festivities, of those benevolent ghosts and goblins which always appear at this season. Read this description of the ballroom at Wardles on Christmas eve:

"The best sitting-room at Manor Farm was a good, long, dark-pennel room with a high chimney piece and a capacious chimney. At the upper end of the room, seated in a shady bower of holly and evergreens, were the two best fiddlers, and the only harp, in all Muggleton. In all

sorts of recesses and on all kinds of brackets, stood massive old silver candlesticks with four branches each. The carpet was up, the candles burnt bright, the fire blazed and crackled on the hearth; and merry voices and light-hearted laughter rang through the room. If any of the old English yeomen had turned into fairies when they died, it was just the place in which they would have held their revels."

Again, who does not recall the misfortunes of the unfortunate Winkle, the would-be sportsman, when he essays to "cut figures" on the ice, but only succeeds in cutting one miserable figure, and earning from the indignant Pickwick the title of "Humbug"? Or the part played by the old boy himself, in the afternoon's amusement?

"It was the most intensely interesting thing to observe the manner in which Mr. Pickwick performed his share in the ceremony (of sliding): to watch the torture of anxiety with which he viewed the person behind, gaining upon him at the imminent hazard of tripping him up; to see him gradually expend the painful force which he had put on at first and turn slowly round on the slide, with his face toward the point which he had started; to contemplate the playful smile which mantled on his face when he had accomplished the distance. And when he was knocked down (which happened upon the average every third round), it was the most invigorating sight, to behold him gather up his hat, gloves and handkerchief, with a glowing countenance, and resume his station in the rank, with an ardour and enthusiasm which nothing could abate."

Of the Christmas books and stories

the best known is probably "A Christmas Carol." This tale reminds one of a third quality of Dickens' writings, namely the spirit of Christmas charity. The day which celebrates the birth of the only entirely unselfish man, is rightly a season of good cheer and sport, but above all it is a season of self-sacrifice, a time to wipe the slate clean and to forget the work-a-day doctrine of "Look after number one"—for a few hours at least. There is one story, not so well known perhaps as some, which seems to me to breathe out the very spirit of quiet, unobtrusive Christmas charity. I mean the tale of the Seven Poor Travellers.

"Strictly speaking there were only six Poor Travellers; but being a traveller myself, though an idle one, and being withal as poor as I hope to be, I brought the number up to seven. This word of explanation is due at once, for what says the inscription over the quaint old door?

Richard Watts, Esquire,  
by his will, dated 22 Aug., 1579,  
founded this Charity  
for six poor Travellers  
who not being Rogues or Proctors  
may receive gratis for one night  
Lodging, entertainment  
and Fourpence each.

It was in the ancient little city of Rochester in Kent, of all the good days in the year upon a Christmas eve, that I stood reading this inscription over the quaint old door in question. \* \* \* 'Now,' said I to myself as I looked at the knocker, 'I know I am not a Proctor; I wonder whether I am a Rogue!'

Briefly then the Seventh Poor Traveller enters the "Charity" of Master Richard Watts, and finding the enter-

tainment somewhat scanty, obtains permission of the caretaker, "a decent body of wholesome matronly appearance," to treat the aforesaid Poor Travellers to a supper and a temperate glass of hot wassail; and evening finds him seated before a gigantic turkey and surrounded by the six travellers, a ship-builder, a young sailor, a lawyer with a dry, suspicious look and few buttons, a watchmaker from Geneva, a little widow, "who had once been very pretty and still was very young" and finally a book pedler, "who presently boasted that he could repeat more verses in an evening than he could sell in a twelve month." The company does wonderful justice to everything set before them.

"It made my heart rejoice to observe how their wind and frost hardened faces softened in the clatter of plates and knives and forks, and mellowed in the fire and supper heat, while their hats and caps and wrappers hanging up, a few small bundles on the ground in a corner, and in another corner three old walking-sticks, worn down at the end to a mere fringe, linked this snug interior with the bleak outside in a golden chain."

Supper over, Ben the waiter boxes the ears of the inattentive serving boys, skirmishes the "sauce-female" out of the room, and softly closes the door. The logs are stirred into a shower of sparks and by their light mine host fills their glasses and gives them, Christmas! Christmas eve, when the shepherds, who were Poor Travellers too, heard the refrain "on earth peace—good-will toward men." The travellers stretch their limbs in the mellow light of the fire. Someone tells a story—and the shadowy figure

of Master Richard Watts looks down through the blue tobacco smoke and the fragrant mist of the punch bowl.

Finally after all the stories (and all the wassail) have been finished, they break up as the cathedral bell strikes twelve. Number seven has a bad night, which he is unwilling to attribute to the turkey or the beef. Of course the wassail is out of the question. Next morning he bids farewell to the Six Poor Travellers and starts to walk "by Cobham woods" to London. Let us accompany him part of the way:

"And now the mists began to rise in the most beautiful manner, and the sun to shine; and as I went on through the bracing air, seeing the hoar-frost sparkle everywhere, I felt as if all nature shared in the joy of the great birthday. Going through

the woods, the softness of my tread upon the mossy ground, enhanced the Christmas sacredness by which I felt surrounded. As the whitened stems environed me, I thought how the Founder of the time had never raised his benignant hand, save to bless and heal, except in the case of one unconscious tree. By Cobham Hall I came to the village, and the churchyard, where the dead had been quietly buried in the "sure and certain hope" which Christmas time inspires. In time the distant river, with the ships, came full in view, and with it pictures of the poor fishermen, mending their nets. \* \* \* My very shadow on the ground was eloquent of Christmas; for did not the people lay their sick, where the mere shadow of men who had heard and seen him, might fall, as they passed along?"



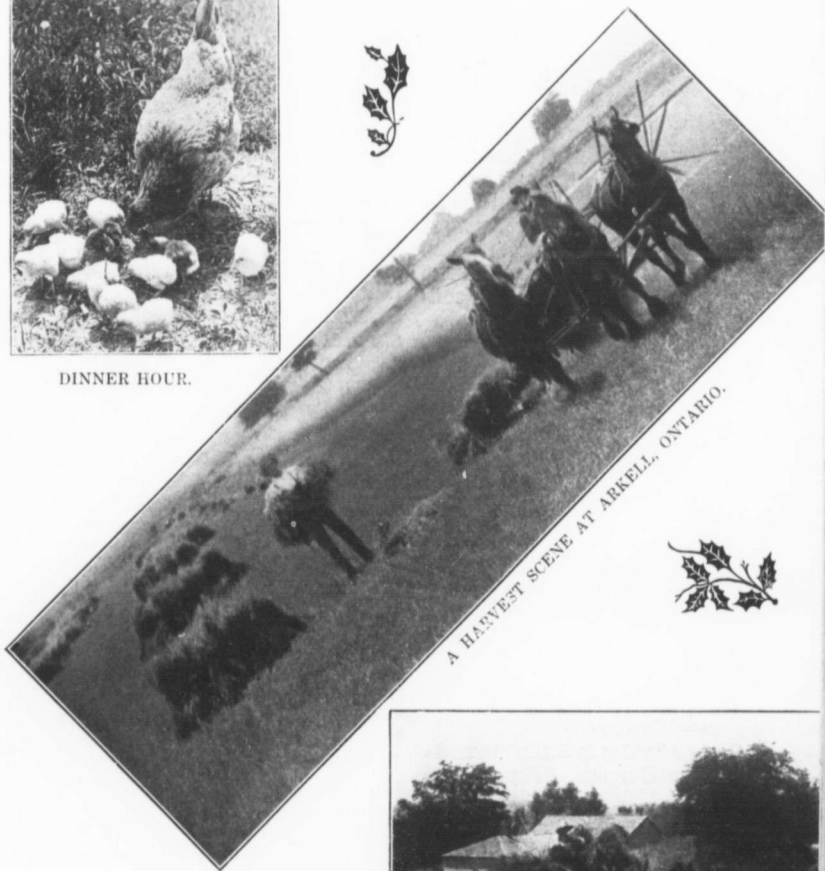
Ring out, wild bells, to the wild sky,  
 The flying cloud, the frosty light:  
 The year is dying in the night;  
 Ring out, wild bells, and let him die.  
 Ring out the old, ring in the new,  
 Ring happy bells, across the snow:  
 The year is going, let him go;  
 Ring out the false, ring in the true.  
 Ring in the valiant man and free,  
 The larger heart, the kindlier hand;  
 Ring out the darkness of the land,  
 Ring in the Christ that is to be.

—Tennyson.





DINNER HOUR.



A HARVEST SCENE AT ARKELL, ONTARIO.



*First Prize  
Photographs in  
Review Competition*

S. ROGERS.



THE LAST LOAD.

## After Lights Go Out

J. MILLER, '13.  
(First Prize Story.)

IT was mid-night of a January eve and the air was filled with flying snow flakes. On College Heights there were few lights left to signal those in the city beneath, for at the College they had disappeared one by one as the students had retired. A few streaks of light beneath locked doors indeed proved the wakefulness of a few studious ones, but the residence was silent.

In room 121 the quiet remained undisturbed, except by a squeaky alarm clock, and by the doleful whistling of young Morris, next door. The Sophomore students within were copying borrowed notes, and had just arrived at the point of hazing and despair when a knock disturbed their labors.

"Just walk in through the fanlight," invited Dicky Smith, the smaller, more serious of the two.

"Open up, you tight wads, I want to see you, quick."

"Aw, go drown yourself."

"Come on don't be a clam," persisted the intruder with redoubled efforts on the door.

"Better let him in Dicky," remarked Misery Heggins. "Those panels have been kicked out twice already this week."

"Well, you bally mut, what're you disturbing up here this time of the night for anyway?" growled Dicky, as big, good-natured Billy Holtz was finally admitted.

"Let's make a raid on the kitchen and look up some grub; I'm hungrier than a coyote. Get Tiny Scott and we'll all hit it up together."

Long Tiny when approached upon

the matter was unfortunately found in bed. He joined the conference in his pyjamas, but although usually eager enough to join in any mischief, he refused upon this occasion to dress again for anyone. He did, however, vastly approve of the enterprize, and was altogether willing to assist in disabling any eatables secured. But Dicky disapproved of it entirely. After sundry threats "to take a round out of somebody just now," he decided it was too late, to dark, too snowy, too everything, in short, and wrathfully requested everyone to "blow."

"Well, come Billy, at last exclaimed Misery. "If these poor sports are afraid we'll go alone, and bring them back some tuck just for shame."

Together the chums proceeded down the staircase to the back hall and from there quickly running around the engine house they cautiously approached the cellar entrance. Here very silently they entered and with much knocking of elbows and shins stumbled through a large dark outer room stocked with old machinery into the potato room, which was lighted with a single electric bulb. Turning to the left they entered a smaller apartment and rounding an abrupt corner reached the foot of an unsteady stair-way leading to the kitchen.

"Jove, it's a rambling, eerie sort of a hole down here," said Misery, glancing apprehensively around at the black door-ways. "A fellow could lose himself forever in these rooms; but I guess we'd better turn out these lights, hadn't we, in case the Dean

comes? Old Gamey could never find us here in the dark."

After this had been done and they had groped their way back under the steam pipes to the stairs they stopped awhile to listen. The darkness was intense and the stillness broken only by the dull throb of the nearby engines. It was their first expedition of this nature, and the ghostly surroundings rather appalled them. Dark forebodings of detection and subsequent expulsion from residence oppressed their spirits discouragingly. However, they dared not admit their fears to the chaps waiting above, or even to each other. They could not turn back now, and after all, the excitement of breaking rules, so dear to the heart of the healthy Sophomore, was in itself a compensation for the danger.

Cautiously they ascended and at every step a protesting groan arose from the ancient stairway. The door grated, the floor creaked—every footfall to their over-wrought nerves echoed through the empty rooms alarmingly.

"Good gracious, Misery! what's wrong?" fearfully whispered Billy, as an unearthly shriek mingled with a clatter of falling pans arose in the darkness.

"Stepped on a cat," answered this perspiring worthy, clutching a shelf he'd fallen into. "Scared me stiff; thought it was a ghost, or the old boy himself I'd got my feet upon. We'll have to take off our shoes or we'll waken the whole place."

They listened awhile in the darkness. The College surely would be aroused by that din; yet not a sound did they hear, save the mournful wails of injured puss in an adjoining room. Together through the various

apartments they searched, but with little success. Bill, to be sure, found a great kettle of prunes, but turned therefrom in disgust. Never again would prunes tempt him after two years of residence life, and everything else was apparently securely locked in the store room.

"What luck!" suddenly exclaimed Misery, who had been rummaging in a side cupboard. "Got a cake that shot. Guess we'd better beat it if there's nothing else in this dive, but prunes. Lord! I've murdered a million of them already."

"All right," returned Billy, following close behind towards the stairway. "Say, wait half a minute, though! I remember some shelves by the dining-room, I saw last year on a student labor stunt."

So Misery lingered on the top step while Billy went, more boldly now, in quest of the aforesaid shelves. Finding them no great distance away he was rewarded after a hasty search with a pitcher of cream. Just as he started to return, the amateur robbers were startled into an abrupt halt for along the hall within a dozen yards they heard stealthy footsteps approaching. In an instant panic seized them both. Rushing headlong with his shoes knocking together around his neck, Billy pitched forward down the steps, dumping his cream over Misery, who had already reached the bottom. Arriving in a heap on the cellar floor, bruised and shaken, he charged through the blackness, losing in his haste both his shoes and the proper doorway.

"Clumsy ass," growled Misery, as wiping his cream-plastered face, he hurriedly groped his way behind the potato-room door. With awe he listened to the tumult behind him.

Somewhere in the darkness Billy went plunging wildly while ruin spread in his wake, until after a mighty crash all was still. Misery strained his ears, but not a sound could he hear. One minute passed—two minutes—many minutes—hours it seemed and yet he heard nothing—yes, he did though! What was that! Again he heard it—an empty box moved, a brush of clothes—as though someone very near were creeping softly. Suppose it were Gamey and he should find the light! In dismay he crept toward the potatoes. But Alas! this move was also fated to end in disaster. He had not taken five steps when his right foot descended in a rat-trap, and stumbling forward he barked his shin severely against the low board partition holding back the potatoes on that side. Quietly he released his foot, and sitting down, gripped his leg with both hands. Fervent opinions of all cellars in general and of this one in particular rose to his lips and were crushed with an effort. The stillness was oppressive. His pursuer had also paused, perhaps to get his bearing. As he painfully crouched upon the boards, hardly daring to breathe, an idea came to him. It might not prove so very difficult to get out after all.

Not far away to his left he discerned a window, showing a dim patch of light against the surrounding blackness. He had but to reach it over the potatoes and thus escape. After that a dash in front of Prexy's residence around to the sitting-room door, and he would be safe. The Dean couldn't get out of that dismal hole in time to stop him; and in the storm outside he would not be recognized by any night prowlers returning

from the city. He felt sorry for poor Billy. He wondered what had become of him. Judging from the row he had probably been captured in some musty recess of their prison.

Carefully stepping upon the potatoes and clutching the cream bespattered cake he commenced the ascent. Surely many a mountain climb has been fraught with less peril! Rumble, rumble, bang! came the potatoes in tiny avalanches each one trying to outstrip his neighbor in his hasty journey to the bottom. Each time Misery listened breathlessly and each time the shuffling approach below abruptly paused. At last he reached the top. The window was fastened with nails, but these proved no great obstacle. Rapidly he bent them back and was just on the point of swinging it up when with a rush a landslide brought him to the bottom. For a while he lay half-submerged, smeared with as filthy a mixture of cream, cake, and dust as ever disgraced even a Freshman. Arising at last as noiselessly as possible, he reached the bare floor and crept to the opposite side of the room. Soon he heard the same muffled sounds as before. Closer and closer they came while he flattened himself against the wall, until with a subdued howl, the intruder bumped against him. He knew that voice and relaxed limply.

"Lord, Billy, I thought that was Gamey. What's the matter?"

"Stepped on a confounded tack," moaned Billy, sitting down and hugging his foot. "Darned if I'll prow around here any more, no matter who comes. I thought you were Gamey all the time. Heavens! my foot's about ruined. Let's get out of here quick."

"But I thought you were caught

What was all the noise about? Where did the Dean go?" whispered Misery.

"I ran into the wrong room. Got into a store-room, I guess, and thrashed around through boxes and screens and barrels; and then a hundredweight of glass or something tipped over and I laid low for the dust to settle. I thought Gamey was out here and so got my shoes and came to get around him in the dark. What happened to you anyhow?"

After a hurried account of Misery's adventures they limped hastily through the dismantled machinery until the door was reached. They paused to put on their shoes. Billy tenderly patted his foot, and thought of his bible class. Misery rubbed his shin and swore. He felt his matted hair and swore again. But they still possessed the mangled cake and began to take almost an interest in life.

Sneaking quickly back lest the Dean by any chance should head them off, they were about to pass the side

entrance to the kitchen when a form furtively squeezed through. They shrank behind a corner of the engine room and as the light from the windows fell upon him they recognized a Freshman. Concealing the cake they stepped out, arresting him. He was visibly agitated, but upon perceiving who confronted him stopped somewhat reassured.

"Been in the kitchen?" casually asked Billy.

"Yes. Didn't get anything though," replied he, looking doubtfully at Misery's villanous appearance. "I was just going into the end room when the Dean made a rush at me in the dark. I got under a table and he missed me. He went down stairs and there's been the deuce of a row there. As soon as things got quiet I bally well hiked it.

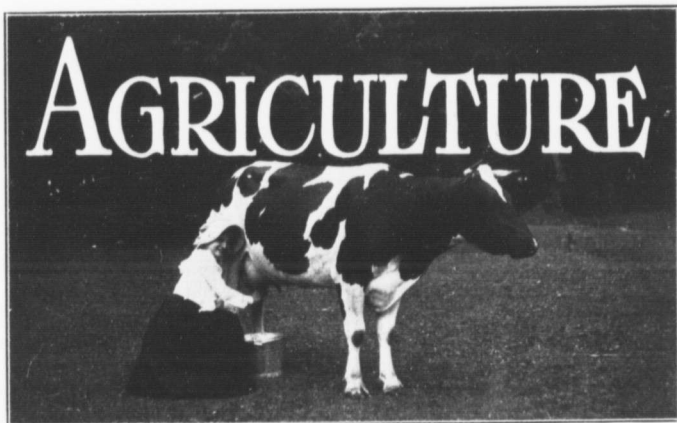
The chums gazed at each other as he walked away.

"Well, I will be darned," said Misery.



#### SNOWFALL.

Down drops the snow, the fleecy hooding snow  
 On town and wood and haggard, wind-blown space;  
 And hushes the storm, and all weird winds that blow  
 Upon the world's dead face.



## The Conservation Movement

F. C. NUNNICK, B.S.A.

UNTIL quite recently the resources of this country were commonly thought to be inexhaustible. Some of them were even considered to be obstructing the country's development. The forests were regarded as enemies to be destroyed or burned. Our lands were supposed to be illimitable, enough for all, to be had for the asking. It was held that our mineral resources would last through the ages and could be drawn upon rapidly at any and all times.

Under the prevalence of these ideas our laws and customs have grown up. That these ideas are incorrect has been appreciated by scientific men for many years. The foresters, the physiographers, the geologists, have shown the limitations of many of our resources and their views are emphasized by the situation in other countries. As a direct result of the

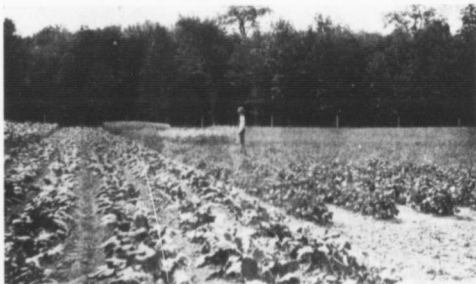
work of these scientific men we have the modern Conservation Movement.

In 1908 President Roosevelt called a conference of the Governors of all the sovereign states of the Union at Washington to consider what steps might be taken to conserve the natural resources of their nation. That was a great gathering—one of the greatest gatherings in history. Early in 1909 Clifford Pinchot, who was then Chief Forester to the United States, spoke before the Canadian Club at Ottawa. He brought a message from Washington inviting the Canadian Government to appoint representatives to a continental conference to consider the conservation of the natural resources of the whole of North America. Hon. Sydney Fisher, Hon. Clifford Sifton and Dr. Henri Beland were sent to represent Canada. The conference drew up a declaration of principles. Soon there-

after the Parliament of Canada passed an Act providing for the formation of a permanent commission—the first of its kind created by any government. The Commission was duly constituted and held its first convention at Ottawa in January, 1910. Twelve Cabinet Ministers, three Federal and nine Provincial, serve on the Commission, ex-office, and twenty other men. Its business is to enquire, to consider and make recommendations as to how the people can conserve forests, minerals, fisheries, lands, water power and pub-

men were employed to visit one hundred or more representative farms. The information thus obtained has since been published. The results are considered fairly representative of the actual conditions in each province in regard to the preservation of soil fertility, the inroads of noxious weeds and insect pests, and the practice of well-planned farming as shown by systematic rotation of crops, the practice of sowing selected seeds and the application of manures and other fertilizers.

From the figures obtained in 1910



DEMONSTRATION WORK ON AN ONTARIO FARM

This man's farm is the cleanest in his district, yields good crops, and is a valuable lesson to his neighbor.

lic health. At its first meeting the Commission formed committees for the particular consideration of these several large questions. Dr. Jas. W. Robertson serves as chairman of the Committee on Lands.

A beginning was made in 1910 on the work outlined for this committee. An effort was made to secure information by means of an agricultural survey of selected areas in each province. In every province except Ontario, in which the survey was made by representatives of the Seed Branch of the Department of Agriculture, special

it was found that only about ten per cent. of the farmers visited were following a systematic rotation of crops. In Prince Edward Island ninety per cent. of the farmers claim to be following a systematic rotation; but it cannot be called such when the course extends over an indefinite period of from seven to ten years, with hay and pasture making up five or six years of the course. Only three per cent. follow a rotation as short as four years. The leaving of land in red clover and timothy hay and pasture for so long results in scant pasturage after the

first two years and the increase of noxious weeds. Those farmers who have adopted the shorter rotations are pleased with the results, they report fewer weeds, increased fertility from the use of clovers and higher crop yields. In Nova Scotia and New Brunswick very similar conditions obtain. Among the French-speaking farmers visited in Quebec, less than five per cent. were pretending to follow a systematic rotation and these in the true sense of the term could not be called systematic. In Ontario we find systematic crop rotation being followed more generally than in any other province. During a visit of a deputation of Western farmers to the Capital last winter many interesting conversations took place. Part of one conversation overheard by the writer may be worthy of mention. The prairie man called the Ontario man who practised farming, a market gardener and truck farmer. The Eastern farmer in turn called the Westerner a soil robber, a wastrel, a profligate dissipater of his country's wealth.

Would you in the years that are to follow rather be eulogised as a nation builder or derided as a spoiler of the land? This is worth thinking about.

Regarding seed selection it was found that in some provinces among those visited there was very little being done in the way of systematic seed selection. Some clean the seed grain by use of the fanning mill while many sow ordinary feed grain without any attempt being made at cleaning. One district was visited in New Brunswick in which not one fanning mill could be found. There is much room for improvement along this line. Great gains could be made if more

farmers would practise hand selection and make use of the trial plot.

Another great source of loss to our farmers is in the way manures are handled. So many give little or no attention to its care and use, much waste is allowed to go on. In the prairie provinces very little manure is produced and what is produced is either burned or drawn away in order to get rid of it. In some instances when the accumulation becomes too great the buildings are moved to another place and a fresh start made. Fertility to the amount of millions of dollars is being shipped out of our country every year. No country can continue to do this indefinitely without returning anything to the land. The end must come at last, and the sooner this fact is realized by the farmers of to-day, the better it will be for our sons and our sons' sons.

In the matter of weed prevalence in the prairie provinces, wild oats were found on all of the one hundred farms in Manitoba; seventy-one per cent. in Saskatchewan, and less than five in Alberta. This shows plainly that this vile weed is "going west." In some places the weeds have actually pushed the people off the land. In the Maritime Provinces couch grass, ox-eye daisy, sow thistle, mustard and other weeds are reported as bad, and many report them as becoming worse. In many localities practically no attention is paid to the cutting of weeds by the roadsides, along line fences or open ditches. Many farmers are discouraged after having worked hard to keep their own farms clean to have their windward neighbors allow their farms to become distributing centres for these noxious weeds. Roadside inspection



is needed for the enforcement of laws where such exist for preventing weeds going to seed.

In regard to some of our resources such as water-powers and water-ways, forests, fisheries and perhaps minerals, regulations laid down by legislation will go a long way toward their conservation. For the protection of our lands, the conservation of its fertility and the prevention of the spread of noxious weeds and injurious insects, much less can be done by legislation. Most must be accomplished by directing the intelligence of the man on the land and by furnishing him with such information as will make him more competent and willing to use his land wisely. To do this something besides talking must be done. It will take more than the verbal cannonades of our Farmers' Institute speakers. It will take more than the written warnings found in our agricultural journals. The farmer must be shown. He must be shown that it does not pay to insult his soil. He must be shown that it will pay him to return something to the land. Demonstration Farms are what he needs. Will they be successful? In the latest bulletin published on the subject by the Depart-

ment of Agriculture at Washington, we read:

"The Farmer's Co-operative Demonstration Work now carried on in twelve states, employs 375 travelling agents, and has many thousands of demonstration farms. It is proving by results that preparation of the soil so as to make the best seed bed; that the planting of the best seed; and that shallow frequent cultivation will immensely increase the yields of field crops. A total increase of two hundred per cent. has been made."

Think of it, a crop three times the average, produced by methods within the reach of all. These facts and methods are not understood by all, hence the need of teaching by actual demonstration. It is apparently quite easy to get some great movements under way, but it is difficult to arouse the whole people to their separate and conjoint interests and responsibilities in this great agricultural matter. It is incumbent on all good citizens, everywhere, to help forward the conservation movement. Upon it depends whether we shall have an unstable growth or a development that shall be strong, permanent and in the best interests of posterity.



POOR USE BEING MADE OF THIS LAND



## Breeding Varieties of Wheat of High Baking Strength

CHARLES E. SAUNDERS, Ph.D., DOMINION CEREALIST, EXPERIMENTAL FARM, OTTAWA, CANADA.

**I**N Canada, for more than twenty years, efforts have been made in connection with the system of Experimental Farms established by the Dominion Government, to produce, by cross breeding and selection, early maturing varieties of wheat suitable for the northern districts of the great central prairies, and possessing those qualities in the flour which are usually designated by the word "Strength" or the phrase "Baking Strength." This expression has no exact meaning; sometimes it signifies chiefly the power of the flour to absorb and retain water in the making of bread, and in other cases it refers principally to the size and appearance of the loaves. As a general rule, however, we may say that flour is called "Strong" when it is capable

of producing a large loaf of fine texture and containing a considerable proportion of water. A large light, pompous looking loaf is more easily sold than one of a compact and modest shape, and the advantage to the baker of selling as much water as possible is obvious; indeed, a great part of his profit, which in Canada is certainly not excessive, depends upon the amount of water which the bread contains. The preference of the bakers for strong flour and the fact that it is usually rather scarce, account for the high price which is paid for those kinds of wheat from which strong flour can be produced.

As a rule, wheat, with a rather high gluten content, produces strong flour. Such wheat is, however, not very common, because many of the

largest wheat-growing countries produce chiefly soft, starchy kernels, which are somewhat deficient in quantity of gluten and are comparatively low in baking strength.

The climate and soil of many areas in Central and Western Canada, are well adapted to the production of wheat containing a large proportion of gluten, and which should command the highest price, provided those varieties are grown in which the baking strength is naturally good. For, as is well known, some sorts of wheat never yield strong flour even when grown under conditions which produce glutinous kernels.

The problem of producing wheats of high baking strength assumes particular importance in those parts of Canada which are remote from the sea coast, because the price of our wheat is usually the price in England less the cost of carriage to that country. If the wheat from Central Canada were to be sold in England at low price, the freight charges would leave comparatively little profit for the Canadian farmer. To be commercially very profitable, therefore, our wheat must produce flour of high baking strength.

In the early years of the settlement of the Canadian prairies, a variety of wheat known as Red Fife was chiefly grown, and was found to be very satisfactory in every respect except that it was too late in maturing to escape the early autumn frosts in some districts. It appeared essential, therefore, to obtain for those areas varieties which would mature earlier, and at the same time possess as high baking strength as Red Fife, which has long been famous for that quality. In the effort to secure such sorts of wheat, importations were made from

many foreign countries; but while some very early maturing varieties were thus obtained, none of them possessed the high baking strength of Red Fife. Cross-breeding was eventually the only method by which we could hope to obtain exactly the required combination of qualities. Inasmuch as Red Fife possessed nearly all the desired characteristics, except that of earliness, it was natural that in most of the cross-breeding that was carried on, Red Fife should be used as one of the parents.

In regard to the origin of Red Fife, I should perhaps say a few words. It has generally been considered a Canadian wheat, but as a matter of fact it is identical with a variety grown in Europe under the names "Galician Summer," and "Hungarian Mountain." This wheat found its way to Canada in a somewhat peculiar manner. A cargo of winter wheat from Danzig was shipped to Glasgow and a portion of it was sent from Glasgow to Canada. This was sown in the spring, as the farmer, Mr. Fife, who received it did not know its character. Only one plant produced mature heads. This plant attracted the attention of Mr. Fife, and he propagated from it the variety which is generally known in America by his name. I have proved, however, by tests in the field, in the mill, and in the bakery that this plant of spring wheat which Mr. Fife obtained was not a sport or mutant produced in Canada, but belonged to a variety grown in Central Europe, one kernel of which happened to be present in the shipment of winter wheat.

There is also another variety known in Canada under the name of White Fife, which is practically iden-

tical with Red Fife in all respects except that the bran is of a paler color. I have never been able to ascertain the origin of this wheat but it certainly appears to be a sport from Red Fife. This variety we have also used as parent in cross-breeding for high baking strength.

The first series of crosses produced was between Red Fife or White Fife and an early ripening wheat from Northern Russia. From these crosses four varieties were obtained which have proved of value in some parts of Canada. These new wheats were found to possess to a very large degree the early ripening habit of the Russian Wheat, and when first examined by experts in the United States and England, were pronounced almost equal in value to Red Fife. Subsequent work, however, in the laboratories of the Experimental Farm at Ottawa showed that these opinions were unduly favorable and that the new cross-bred varieties only stood in regard to baking strength about mid-way between the two parents.

They therefore could not be unreservedly recommended for general cultivation.

At this stage in the development of our work it became clear that some method of determining baking strength when only small quantities of material were available, was imperative. It has long been known that the character of the gluten obtained by chewing a few kernels of wheat varies in different varieties. Investigations revealed the fact that when unfixed varieties of cross-bred origin were studied, variations from plant to plant could often be observed. It appeared, therefore, that by the use of this test the work of selec-

tion in its earlier stages, could be brought to a much higher state of perfection.

This plan of chewing a few kernels from each selected mother-plant has been carried out for several years, and while it cannot be said that the character of the gluten so obtained gives an infallible indication of baking strength, subsequent baking experiments have clearly shown that the chewing test is very valuable in enabling one to eliminate many of the plants or strains which are distinctly inferior. Invariably those which appeared weak in the chewing test, and which were propagated and subsequently baked, proved quite unsatisfactory for bread making. Not a few disappointments were met among those selections which gave preliminary test has proved of great value and has saved an enormous amount of work.

The chewing tests were not expected to take the place of actual baking trials and it was, therefore, necessary to devise a system of milling and baking tests such as could be carried on with very small quantities of wheat, for the purpose of determining the baking strength of all the new varieties and also of the older standard sorts, none of which had previously been studied with sufficient care.

After a considerable amount of work had been done, a satisfactory baking method was evolved, which has given quite trust-worthy results within reasonable limits of error.

I shall not enter into any detailed description of the milling and baking apparatus which I use, or the exact manner in which the operations are carried on. It is sufficient to say that about five hundred (500) to one thou-

sand (1,000) grammes of carefully cleaned wheat, are ground in a small roller-process flour mill. This produces flour of very good quality though not of the best color, the yield being usually about 65 to 70 per cent. of the weight of wheat.

For the baking tests, a special apparatus has been made, consisting of a fermenting cupboard, warmed by electricity, in which the air is kept saturated with water vapor to prevent any drying out on the surface of the dough. A laboratory table is employed in which are sheets of plate glass for the kneading operations, these plates being slightly warmed from beneath by an electric light. The oven is electrically heated and the temperature can be easily controlled. Very small loaves are usually made, only 50 grammes flour being used. This is necessary when the total quantity of flour on hand is not large, in order that the tests may be repeated several times. The unavoidable experimental errors in baking tests are greater than those in most analytical operations, and single tests of flour from new varieties of wheat are seldom sufficiently accurate. The loaves are baked in shallow pans so that any tendency of the dough to spread over the sides may be observed.

In determining the strength of any flour, the following points are taken into consideration: (1) water absorbed in making the dough; (2) water retained in the bread; (3) volume of loaf; (4) relationship of height to diameter of loaf; (5) form of crust; (6) texture. From these various observations a figure for baking strength is obtained which usually stands between 70 and 100. This numerical form for the expression of

baking strength seems essential when the results of one year are to be compared with another. Of course opinions would differ as to the relative importance of the various figures obtained, from which the baking strength is deduced, but it seems imperative to sum up in one expression all the qualities of the bread.

Where greater accuracy is required, in comparing results with those of other workers, it is usually necessary to consider each characteristic separately and not to employ any figure for baking strength as a whole.

The question naturally arises, on what does the baking strength of any sample of wheat depend? A systematic study of our commercial and cross-bred varieties has shown that baking strength depends chiefly on two causes, variety and climate, the latter term including also soil conditions. Each variety may be said to have its own characteristic degree of strength, although fluctuations both up and down occur to a very considerable extent. These fluctuations are due to differences in soil and climate.

It has been found that as a rule, if two samples of the same variety are compared, that which is of the more glutinous character will usually show the higher bread-making strength, provided that both have been well ripened. If, however, we are comparing different varieties, we sometimes find that the more starchy sample of the two is of the higher strength. Some hard, glutinous wheats are extremely low in baking strength; other varieties show high baking strength associated with softness or starchiness. These cases are somewhat exceptional; but there is certainly no such correlation between hardness and baking strength as has

been assumed by some investigators.

The way in which climate and soil effect baking strength is partially understood. It appears that the less moisture there is available (within reasonable limits) when the grain is maturing, the higher will be the proportion of gluten and the lower the proportion of starch in the wheat. The development of the highest baking strength seems, also, to require warm weather when the grain is ripening. Cool weather at that period appears to be decidedly detrimental to baking strength and the effects of frost are quite disastrous even when the kernels are so far advanced as not to become shrivelled.

For the production, therefore, of wheat of the highest possible baking strength, we must sow a suitable variety under such conditions that as the grain approaches maturity it will receive a sufficient but not an excessive amount of moisture, together with a rather generous amount of heat.

After the wheat has been harvested there are still other factors which influence baking strength: factors which must be recognized if our investigations are to lead to conclusions of any value. Obvious the method of milling and the percentage of flour made will influence the strength. For comparisons of varieties it is therefore necessary to produce as nearly as possible a uniform grade of flour, the percentage of which will vary according to the plumpness and other characters of the wheat. The length of time that the wheat or flour has been stored has often a great effect on its baking strength, and whether the period of storage was previous or subsequent to the milling. The stored material

almost always shows greater baking strength and paler color, though there is not necessarily any connection between color and strength. It is evident that the percentage of moisture present in the flour must always be determined when accurate figures for water absorption (in making dough) are required; a consideration which some experimentalists have overlooked. According to the conditions under which it has been stored, the moisture content of good flour varies from about 8 to 15 per cent. In order to overcome these difficulties in regard to storage and moisture, I have made it a rule when comparing different varieties of wheat to bake only these flours which were of nearly the same age, and which had been stored together under the same conditions for a few weeks. In such cases they always contained approximately the same amount of moisture. When the greatest accuracy was required moisture determinations were made.

Even after taking all the precautions mentioned so that the determinations of baking strength shall be trustworthy there remain many difficulties. Unfortunately there is no process of bread-making which can be referred to as a standard. Each baker has a slightly different method. Variations in the length and temperature of fermentation are very common and quite important; but the chief differences arise from the custom of adding to the flour not only water, salt and yeast, but other ingredients such as fats, sugars and malt extract (or malt flour). Phosphate and other chemicals are doubtless employed occasionally, but only rarely I think and need not be considered in this connection. Experience has shown that any additional ingredi-

ent usually produces a similar effect on all the flours, but irregularities are observed, and occasionally brought about in one sample by the addition of some substance which fails to produce any similar change in another. To avoid unnecessary complications the dough for my regular baking tests contains nothing but flour, water, yeast, salt and a very small quantity of sugar (about the same amount as the salt.)

Various fats have been added in special experiments, and it has been found that they do not all act in the same way. The animal fats, such as lard and butter, sometimes produce improved loaves, but superior results have been obtained by the use of peanut oil, perhaps owing to the presence of some enzyme in it. At all events the addition of about 2 per cent. of this oil to the flour generally causes a very distinct improvement in the volume and texture of the bread.

Various methods of fermentation and manipulation may also affect flours differently, though, of course, it is obvious that one must always endeavor to carry the fermentation just to that point where the best possible condition of dough is obtained.

It will be clear from the foregoing remarks that there are insuperable obstacles in the way of establishing a perfect baking method for testing flours. Nevertheless the method which I have adopted has proved sufficiently accurate for all ordinary cases.

The difficulties encountered in endeavoring to reach a high degree of accuracy in milling and baking tests, and the confusion caused by each investigator using a somewhat distinct method of his own, have led a number of American workers recently to or-

ganize a new association, under the name of "American Society of Milling and Baking Technology." The objects of this society are chiefly to study and standardize milling and baking methods, so that more accurate work can be done and that the work of all investigators may be expressed in a similar way, and thus become generally useful. The elimination of empiricism from baking tests may not be possible; but the methods generally employed at the present time are certainly capable of great improvement.

Although we know that baking strength depends on certain factors such as variety, soil, climate, storage, etc., we have as yet very imperfect knowledge of the way in which most of these factors affect the composition of the wheat.

Various theories have been put forward to account for the observed differences in baking strength. As a rule, however, these theories have been based on extremely little experimental evidence and the incorrectness of most of them has subsequently been demonstrated. It is a generally accepted idea that the quality and quantity of the gluten determine the baking strength; though no one has yet been able to state the exact significance of the term "gluten quality." The hypothesis advanced many years ago that it depended on the ratio between the gliadin and glutenin has been shown to be of little or no value.

The theory that the size of the loaf depends chiefly on the amount of available yeast food in the dough has been found quite untenable as a general proposition.

That the proportion of mineral salts contained in the flour has much to do with baking strength is by no

means substantiated, though it appears that this may be one of the controlling factors.

A recent suggestion is that baking strength is intimately related to the proportion of organic nitrogen compounds present in the flour and soluble in water. This requires further investigation.

The effects of storage have been studied in the laboratories at Ottawa for several years. It has been found that prolonged storage of wheat or flour under favorable conditions frequently produced marked improvement in baking strength. This improvement varies greatly in amount but is usually observed in almost every character of the loaf, and is especially rapid when the material is kept as flour. In the most striking instances the gain in baking strength after twelve months of storage (as flour) has been sufficient to raise a flour from almost the weakest group to the very strongest. Contrary to the common supposition, I have not yet observed any undoubted case of deterioration in baking strength under reasonable conditions of storage; though I have made bread from wheat seven and a half years old. In some samples a slight undesirable odor has been developed, probably owing to the rancidity of the natural fat, but this has not been accompanied by any loss in baking strength. These hopes have not been fully realized. Careful chemical analyses, from time to time in conjunction with the baking trials, have revealed some slight changes in the constitution of the stored material, but scarcely sufficient as it seems to account for the remarkable improvement in baking strength observed in some cases. These investigations are being con-

tinued in the hope of obtaining further results of a more definite character.

The alterations in baking strength due to storage of wheat or flour furnish additional and serious obstacles in the way of making such determinations of strength as shall be unquestionably correct. As a rule my baking tests have been made about mid-winter, using wheat of the current season which had been ground in December. While this plan is fairly satisfactory for practical purposes it is open to serious criticism when we are studying the inheritance of baking strength. At present we are totally unable to answer the simple question, "At what time after harvest should baking tests be made?" Possibly they should be postponed until the material, (wheat or flour) has been stored long enough to reach its highest possible strength. If kept as wheat this would involve some years of storage. To select any other age for the testing of the material is quite arbitrary, even though it may seem unavoidable for practical reasons.

I have thought it necessary to occupy considerable time in pointing out the difficulties encountered in the determination of baking strength and the lack of precise knowledge as to its nature in order that you may see clearly how complex a problem we have to deal with and how important it is when studying the inheritance of baking strength to draw conclusions only after long and painstaking series of tests. If I have made this clear you will not be surprised when I state that we still know very little about this subject and have not yet reached any important generalization in regard to it.



It was suggested some years ago, on the basis of a very small number of experiments, that baking strength is inherited as a Mendelian unit character. Such an idea would scarcely have been proposed if a large series of baking tests had been conducted. It becomes obvious to any one who works for some time on this problem that baking strength depends on many factors and that while it may be inherited in a Mendelian way, it must be as a group of Mendelian characters and not a simple unit. Considering the weakness of the evidence advanced in favor of the idea of simple Mendelian inheritance I scarcely think any disproof is necessary. Some of my experiments afford, however, very strong and positive evidence against it. I have baked several cross bred varieties produced by crossing the very strong wheats Red Fife and White Fife with a weak variety from Northern Russia, and have found the baking strength of cross-bred sorts to be usually about mid-way between the two parents. These tests have been repeated many times and have been carried on chiefly with very carefully selected and well-fixed strains propagated from single plants which were selected many years after the crosses were made. These strains were remarkably uniform in all visible respects and it would be foolish to suppose that almost every one of them was heterozygous in regard to baking strength only.

On the scale of points for baking strength which I use (in which 75 indicates weak, 85 medium, and 95 very strong) Red Fife and White Fife have usually ranked between 90 and 100. The early Russian wheat referred to ranked 75 in two different seasons, and the cross-bred varieties

have usually shown a strength between 80 and 90, about mid-way between the two parents though occasionally, it has been higher, especially when some of the selections which were made by chewing tests were baked. These relationships were especially clear whenever the samples tested were all grown in similar soil and climate. A mixture of equal parts of flour from one of the strong parents and the weak parent showed a remarkable similarity to the cross-bred sorts which were baked at the same time. Only one cross-bred variety of this parentage stands in the highest group for strength, approximately equal to the strong parent. Doubtless some of those which were rejected by the chewing test would have given baking results similar to the weak parent. But the fact of greatest significance is that the majority of those tested were of intermediate strength.

Of course, the proof here advanced is not perfect? For an almost absolute proof it would have been necessary to propagate from each of the parent plants a series of strains and to make baking tests of each strain in order to prove that the parent plants employed were homozygous in regard to baking strength. A similar operation would have been necessary with several plants from each of the cross-bred varieties baked. Such an investigation would have involved an enormous amount of labor, which could scarcely have been justified.

Most of the crosses which I made have been between wheats of high baking strength and weak or comparatively weak varieties. Other combinations have been effected, however. Recently some crosses between

two varieties, both of which are of high baking strength, have been made, and some crosses between different strains of the same variety. The baking tests of selected, fixed strains from these crosses, may it is hoped, give some information in regard to this problem of the inheritance of baking strength.

The practical results of the work of the past few years at Ottawa are very satisfactory. Out of a large number of cross-bred early wheats, rigidly selected by single plants until all visible variation was eliminated, I have baked about one hundred and fifty sorts, the majority (though not nearly all) of which had been selected for high strength by the chewing test. Many more are now being fixed or propagated and will be ready for baking within the next few years. Out of those thus far tested in the bakery, about fifty were found to be in the first rank for strength, and of these about twenty were exceptionally high, above the usual standard for Red Fife. Eight of these wheats have been grown this year in the prairie provinces of Manitoba and Saskatchewan, and have shown themselves well adapted to the conditions prevailing there. The baking strength of these varieties as grown this season will be tested again next winter before a decision is reached as to which of them should be multiplied for distribution.

The efforts to produce new varieties of wheat of the highest baking strength have been attended with serious difficulties and the proportion of valuable sorts obtained has not been quite so high as might have been anticipated; nevertheless, there are far more of these on hand than are

required and we are suffering rather from an excess than a lack of good material.

It is evident that some of the new varieties which have been produced will be of great value in the large wheat areas in Northern Canada, by enabling farmers to escape the danger of frosts and to grow good crops of wheat of the highest baking strength, and capable of commanding an excellent price in the markets of the world.

Although it seems clear that baking strength is not inherited in any simple manner, it is encouraging to the practical wheat breeder to find that by the use of the chewing test in the earlier stages of selection and of baking trials later on, he can obtain cross-bred varieties possessing the full baking strength of the stronger parent and combining with that some of the desirable characteristics derived from the other parent.

From a scientist's point of view it is to be regretted that more definite knowledge as to the manner in which baking strength is inherited, has not been obtained. In my work, however, it was necessary to look rather for results of immediate practical value than to attempt to establish the principles or discover the underlying laws of inheritance. Many valuable opportunities to make scientific records have been rejected without very thorough examination when it was clear that it could not be of any practical use to the farming community. I feel, however, that such information as has been acquired should be put on record even though it may not contribute very much to the elucidation of the laws which underlie the complex problems involved in breeding wheats of high baking strength.



## Niagara District Fruit Report

E. D. SMITH.

THE past season has been a fairly profitable one for the fruit growers of the Niagara District in spite of the fearful heavy setback they received in June and July and the early part of August on account of the long continued and persistent drought which reduced the raspberry crop and strawberry crop to less than one-half of a normal crop and caused a very heavy loss in gooseberries and currants, many growers losing their entire crop of gooseberries through the sun-scald, and many crops of currants being more or less dried up on the bushes and dropped off badly. The consequence of this, however, was extremely high prices, which in view of having the Canadian market entirely to ourselves enabled the growers to receive almost as much for their small crop in net returns as they would have received for an average crop with average prices.

I have heard different growers of raspberries say that they netted just as much as they did with a normal crop. Of course, those who contracted with the canning factories and jam factories were not so fortunate,

their prices being fixed early in the season before there was any prospect of a drought. The canners and the jam manufacturers, however, had their prices fixed and the product sold in most cases before they had any knowledge of a drought also, and so were not able to advance prices to the growers beyond the contract price, otherwise their profits would have been entirely wiped out. This was particularly the case with the jam manufacturers as every pound of jam was sold in advance and there was unfortunately not more than half enough of raspberry and strawberry packed to fill their orders, consequently they have been obliged to import from Great Britain raspberry and strawberry pulp, which they were able to do in spite of a duty of 1½ cents per pound, on the gross weight of the package. Both of these fruits being grown in Britain and sold by the farmers and fruit growers at less than half of the prevailing price here. This is a condition which has prevailed for many years. Strawberries can be bought in Britain on a contract at from one to two cents per pound less than they have

ever been here in the cheapest years, and raspberries during the seasons of 1909 and 1910 were as low as two cents per pound in the glut season, but during this year, 1911, the drought which prevailed here also prevailed there, and the raspberry crop was shorted up immensely, though it did not seem to have affected the strawberry crop so much.

Following the strawberry and raspberry crops in the Niagara District there was this year picked the heaviest crop of cherries ever known, there was no rot and so every cherry developed and was picked and sold, and brought the highest prices that have prevailed for many years, so that those who had cherry orchards reaped a very large profit. In my own case I had a Windsor cherry orchard of 55 trees from 16 to 18 years of age which produced at the rate of about \$3,000.00 per acre gross. And a Montmorency orchard of about the same age which produced at the rate of more than \$1,000.00 per acre.

After the cherries were marketed a hail storm, the most severe that has ever occurred in this district since fruit growing has been carried on on a large scale, swept the country from Jordan to Fruitland, covering the whole of the very best fruit district in Canada. This did very heavy damage to the grapes, peaches, plums pears and apples and blackberries. Still in spite of this, many growers told me that they have made more money than last year and are highly satisfied with the result. The demand was so great that even hail-struck stuff sold at a fair price and good stuff that was not damaged brought handsome prices all through the season. Concord and Niagara grapes netting the growers for good

stuff 14 to 15 cents per 8-lb. basket. First-class Crawford and Elberta Peaches, 75 cents to \$1.00 per 11-quart basket. First-class plums, such as Reine Claude, Yellow Egg and German Prunes bringing from 40 to 60 cents per 11-quart basket. The jam factories and canning factories used very large quantities of both and paid very profitable figures, 4 cents per lb. being the common price paid for clean peaches not struck by hail.

Through this Niagara District most of the vineyards and orchards are well cared for. I believe the greatest need is for higher fertilization of the soil. Owing to carelessness for the past few years the yellow and little peach has made great headway in the peach orchards, but now that the growers have got wakened up they are taking determined action and I feel sure that it will be stamped out, as it was once before some twenty years ago, when a similar epidemic over-ran the country. In Saltfleet where the inspection and destruction of diseased trees has been more thorough there is no serious loss, though there is quite enough and even Saltfleet needs to be thoroughly alarmed, otherwise this disease will undoubtedly spread. I say, even Saltfleet, because Saltfleet I feel sure had the most thorough inspection system in force for many years and has been able by means of it to keep down all diseases of fruit trees to a very small percentage. Black Knot was entirely eradicated. San Jose Scale has been kept down so that there had been no loss of trees, and the Yellows and Little Peach have not caused the loss of more than perhaps 1 per cent. of the trees in the township. This shows what can be done by a system of

inspection that is only fairly efficient, even in Saltfleet the inspection is not as thorough as it should be.

There is little or no difficulty in finding markets for all the fruit grown in the Niagara District, and there are a large number of dealers and companies catering to the wants of the consuming population of the Dominion from one end of it to the other, so that no towns or villages anywhere within the broad confines of this Dominion, have any reason to be without fruit grown in this district, and laid down at as low a rate as can be done under our present express and freight rates. One of the great needs of this country is lower express rates to the Western Provinces, which would be one of the

largest consumers of our products could they get them at anything like a reasonable rate, but when they have to pay an express rate of about 40 cents per basket in addition to the cost of the fruit it enables Washington and Oregon and California to sell enormous quantities of their fruits in that Western market. Our freight rates are not unreasonable, but it is difficult to lay down these tender fruits by freight, in fact it cannot be successfully done unless we have a pre-cooling plant. With a pre-cooling plant and the fruit thoroughly pre-cooled before starting no doubt most of the tree fruits could be carried to central points in the West by refrigerator cars successfully and from these points distributed to the smaller places.



J. W. SMITH'S PACKING HOUSE, WINONA.

## Some Results and the Outlook for Fruit Growers for 1912

FROM all sections of Ontario comes the report that 1911 has been an unusual season. The foregoing report of Mr. Robertson gives us much in detail from the east of the Niagara peninsula. Mr. Thompson, president of the Association at St. Catharines, finds that in spite of the excessive drouth the growers who, by regular, shallow cultivation conserved their moisture, gathered good average crops of berries, of fruit of all kinds on trees and also of vegetables. Owing to higher prices prevailing these growers realized more than in seasons of more favorable weather. Those who practiced slipshod methods suffered severely. Over at Oakville, Clarkson's, and Lorne Park, Mr. Hamilton characterizes the crop of small fruits excepting sour cherries as the worst they have ever had. The prices of berries averaging from eight to ten cents for strawberries and twelve to fifteen for raspberries made up to some extent for the shrinkage in quantity. Some few individual growers even profited by the unfavorable conditions, owing to these prices. The large crop of sour cherries brought on an average a dollar and a quarter for the eleven quart basket in Toronto. This feature, Mr. Hamilton calls the saviour of the situation.

From Leamington the report comes that the better growers received good prices for excellent crops. The receipts there run from thirty to forty per cent. above the average, making a record season for their district.

The majority of growers practice thorough cultivation and being favored by two or three good rains, crops as a rule did not suffer. Vegetables and peaches yielded more than an average crop, early tomato growers report gross sales of all the way from three hundred to a thousand dollars per acre, and muskmelons and cucumbers combined a good early crop with high prices.

Mr. R. A. Thomas, manager of the "Simcoe Fruits, Limited," co-operative, says: the past exceptionally dry season was disastrous to uncultivated orchards in his district, while in the orchards of the association, although not the bearing year, fruit was large and plentiful.

In the Niagara district and I think in many others, spraying this year was general and more thorough. Its results may, however, not be so apparent as fruit in unsprayed orchards has been exceptionally clean.

Prices for small fruits and early vegetables and tomatoes ruled high, but Mr. Thomas reports glut prices on early apples which sent more than a usual amount of their fruit to the West, where they hope soon by proper distribution to secure an excellent market. Much of the Leamington fruit found a way to Manitoba and Saskatchewan. The St. Catharines fruit was none too plentiful to supply the regular markets, but the West is now one of their regular markets according to some of the members. Mr. Johnson, president of the Norfolk Fruit Growers, says that they are shipping to no new markets

and that practically none of their apples will go to the States this year.

No one has mentioned the Cobalt district or New Ontario. Perhaps it is because this market is entirely in the hands of the dealers as yet. Heretofore, much of the fruit sent there was bought and loaded at Hamilton. Some few cars left Hamilton this year for Cobalt, but I imagine more fruit was bought in Toronto, where lower prices prevailed on peaches and other late fruits. Hamilton marketers this year had a good thing on prices, and they held out to the last for the best rather than sell in large lots to buyers.

In the Oakville, Clarkson district, as in many others an additional loss to the growers was the dying of young stock planted this year. Berry patches look ragged and orchards must be replanted making an additional cost for labor and trees. The outlook for the house-holder for 1912 is a gloomy one. The authorities on small fruits almost everywhere claim

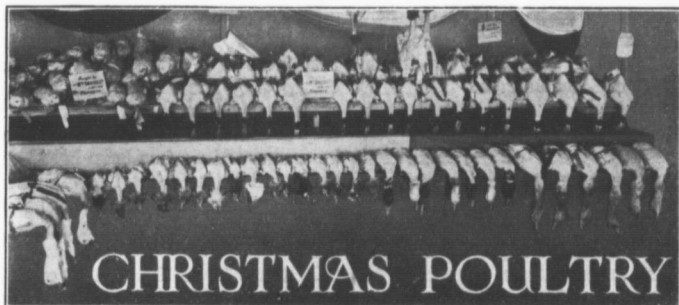
a poor set of plants and so expect as high prices in the coming season as they have enjoyed in the past. The cherry slug has made great deprivations this year, and if a poorer crop of cherries results, matters may be worse. Little has been heard of the apple outlook, but if fruit buds are any indication there will be a good crop of the staple fruit for next year.

It seems to be the opinion everywhere that careless, slipshod growers have been hit the hardest during the season past, and that progressive growers have reasons to congratulate themselves. Hail storms have upset many calculations but the hail-struck fruit which persisted, found a ready home market. The recent fruit show in Toronto indicates great progress in the apple business, and if the exhibits there are an indication of the actual progress being made, the counties having district representatives are far out-stripping those that have none.

W. M. A.



A NIAGARA FRUIT WAGON ON THE WAY TO THE STATION.



## The Poultry Department at Iowa Agricultural College

F. N. MARCELLUS, B.S.A.

IT has often been said, "travel and learn," but all are not in a position to enjoy the pleasures of such an education. The next best thing to do is to read and learn. It is often possible to become familiar with distant places, etc., by reading descriptions written by someone who has been so fortunate (or unfortunate as the case may be) as to have seen the same.

It was with the above thought in mind, when I was asked to contribute an article on Poultry that I offered to describe in a general way this Department and its work. All statements and descriptions will of necessity have to be general as the giving of details would require too much space.

The first place of interest is the home or headquarters of the Department. At Ames all departments are on a par and the office of Professor of Poultry is identical in size and furnishings with that of the other branches of the department of Animal Husbandry, under which it still

labors. A room about 18x24 with a 12 foot ceiling, finished in oak, with oak furniture throughout and carpeted floor, represents the office. It is located on the main floor of the agricultural building, a magnificent structure, 75x150 feet, four stories high and built of grey stone.

Leaving the office the next point of interest is the departmental stock and plant. The department is somewhat handicapped at present in that the stock, etc., is kept at the Experiment Station about a mile distant from the office. This causes a great loss of time to students and instructors in travelling to and fro. Especially is this the case where work in judging and other work is to be done involving the use of the stock or equipment. It is expected that this difficulty will be overcome in the near future, as the Poultry Department expects to appropriate a fair sized brick building, at present occupied by the Department of Veterinary Science. By this move the Departmental stock will be separated from



the Experimental and also be more suitably located for class work.

The stock is composed for the most part of the four utility breeds: White Wyandottes, Barred Rocks, Buff Orpingtons and Rhode Island Reds. A pen of White Rocks and also one of White Leghorns assist in broadening the work of the Department, especially for judging. The balance of the stock is mixed and is used mainly for experimental purposes. The birds of the breeds mentioned are good representatives of the breeds both in color and type. The pure bred stock is kept principally for class-room work. Individual trap-nest records are kept, however, so that their value from a utility point is known. About four hundred birds in all are kept for departmental and experimental purposes.

The majority of the birds are housed in a continuous house, which is run on a semi-open-front plan. It is built with a shed or flat roof and faces south. The balance of the stock is kept in colony houses 15x14 feet. A number of these have been placed in a row touching each other, forming practically another continuous house. The balance (5 in number) are singled out, and with ten birds in each one, are used in practical feeding work for Senior students.

The work of the Department, apart from the Experimental, which is directly under the supervision of the Professor of Poultry, consists of lectures and demonstration work. Students in the Junior and Senior years are the only ones receiving instruction in Poultry Husbandry, with the exception of a few specialists in the work. The lecture work covers the

care, feeding, and management of young, market, and laying stock; killing, dressing, marketing and the questions of incubation and brooding. A course of lectures is also given on the anatomy and physiology of poultry. In the laboratory work students are required to operate an incubator and brooder and each one is required to feed a pen of laying stock for three weeks, crate-fatten at least a dozen birds, kill, pluck, and truss the same ready for market. Practical work is given in judging fancy and utility poultry, dressed poultry, and eggs, as well as a study of poultry houses and fixtures, location of plant, poultry appliances and a study of the anatomy of birds, both external and internal.

The most of the work outlined in the preceding paragraph is that taken by the regular students. With the object of meeting the demands for special work the Department added a one-year course in Poultry Husbandry. It is sometimes called the "long short-course" to distinguish it from the two weeks' course in January. The one-year embraces the work covered by the regular students and in addition a course in Poultry Research and Experimentation. Considerably more practical work is required of these students, who at present are seven in number.

A number of changes are in contemplation for the future, but the foregoing gives in a general way an account of the Department and its work as carried on at the present time. It is earnestly hoped that this rambling account will give the reader at least a faint idea of the Poultry work as carried on at Ames.

## Notes From The Poultry Department

Egg production was effected to a marked extent by the cold snap of November thirteenth. This was especially true in the case of the old hens, some of which have stopped laying entirely since the freeze. The pullets were affected to a lesser extent. However, they have shown considerable decrease in the number of eggs laid during the days immediately following the cold wave.

Owing to a lack of house room a number of breeding cockerels have been left to roost out in the leafless apple trees. The fall of sixty degrees in temperature in the course of twelve hours, left many of these birds with frosted combs; as a result their value has decreased considerably.

During a recent visit to Montreal Professor W. R. Graham was strongly impressed with the large quantities of poorly conditioned poultry seen on the market there. This is due, he

thinks, to the past dry season, and the prevailing high prices of grain, causing poultrymen to ship their birds before properly finishing them.

\* \* \*

That it pays to be very careful about feeding laying hens, is again demonstrated in the case of a flock that came to our attention lately. These birds were laying well on a ration of corn, wheat, oats and buttermilk. Through some mistake they were overfed on wheat a few times. The result was that egg production at once fell off one third. It takes only a very little thing to make loss out of profit in the hen business; hence, look out for details, and get to know your flock as well as possible. Some one we know in the poultry world says it takes a genius to feed poultry properly. That is why so many fall short of results that count in the pocket book.

J. H. F.



# THE O. A. C. REVIEW

## REVIEW STAFF.

W. DAWSON, Editor-in-Chief.

J. MILLER, Associate Editor.

L. STEVENSON, Agriculture.

E. BRADT, Experimental.

W. M. AIKENHEAD, Horticulture.

J. H. FAY, Poultry.

C. W. STANLEY, College Life.

H. M. McELROY, Athletics.

L. B. HENRY, Alumni.

MISS E. M. JONES, Macdonald.

J. H. WINSLOW, Locals.

F. WATERHOUSE, Artist.

E. A. WEIR, Business Manager.

G. J. JENKINS, Assistant Business Manager.

## Editorial

In looking through the back files of The O. A. C. Review, the following very interesting and complete bit of history was found. In view of

### The Story of Our Paper

the fact that the Alumni Department in this number contains much that concerns the history of our paper, we have reprinted this interesting sketch:

"In 1888 the first issue of The Review appeared under the management of H. H. Dean, now Professor of Dairying at this College. One can imagine a little coterie of enthusiasts meeting together to discuss the founding of the paper. Doubt and fear were probably present, but after much discussion it was decided to launch the new venture. But under what name? An hour filled with many suggestions and stormy arguments followed with no appearance of a satisfactory decision. Finally C. A. Zavitz, our Experimentalist, moved that the new publication be called

The O. A. C. Review, which motion was immediately seconded, and in a trice unanimously carried. Thus sprang into being The O. A. C. Review.

"The first number appeared as a small sheet, the earnest production of an anxious but enthusiastic staff, and entirely creditable as a beginning. Since then The Review has grown until it has become a magazine of 80 pages, and in this special number, of over 100 pages. Slowly at first it grew but we must remember that it takes considerable time and work to establish a venture on a sound basis, and to those who stuck by the paper in its struggling days all honor is due. A few of these besides the two mentioned, were: H. L. Hutt, now our Professor in Horticulture; G. E. Day, now Professor in Agriculture; G. C. Creelman, J. C. McDonald, H. R. Ross, N. Monteith, R. S. Shaw, A. M. Soule, J. Atkinson, J. J. Ferguson, and many others who are to-day prominent in the different branches

of agriculture. To these men the O. A. College is indebted for founding our paper, for working for it and sticking by it in its struggling period.

"In the last four years our paper has increased by about 60 pages. It has taken tremendous strides, ever increasing, until we begin to wonder where the limit will be. In illustrations, especially, our paper has advanced wonderfully. In the December number, 1901, a small beginning was made, the staff nervously deciding that they could afford two small illustrations. In this number we are spending over \$100 in illustrating. Last and greatest from the financial and ground-rock point of view has been our rapid increase in advertising patronage? In the last year the advertising has doubled. Why is this? Because manufacturing concerns have begun to see that our publication is a matter of consideration; that what we lack in circulation is made up by the right class of subscribers; and that we insert only the 'ads' of reliable firms.

"Such is a retrospect. What is the prospect? This must be in our case altogether dependent upon circumstances and is risky to outline, but if we are permitted to look into the future, we should proclaim boldly that this must be only a beginning; that in the near future The Review will become the official organ of the Experimental Union, later that of the Farmers' Institutes, and then necessarily a paper for the Agricultural College people at large. No man can say that this is an impossibility; no man should say that it is an irrational expectation; for what better point of dissemination of agricultural knowledge is there than from an agricultural college. When this time comes

we shall see a periodical published to carry knowledge and pleasure to its readers, not for the sake of remuneration but for the desire of giving instruction. We believe that the future has in store great possibilities for The O. A. C. Review."

Since the foregoing was written in 1903, The Review has made rapid strides forward. From a magazine of 80 pages, it has become one of 88, with every prospect and strong reasons for still further enlargement. During the past few years our advertising, too, has become increased until now we are carrying more than at any time in the history of our paper. Much might be said of the men to whom this great success is due. In the Alumni columns we hope to keep our readers informed as to the whereabouts of all our past Editors, and of those who have given of their time and talent to make The O. A. C. Review second to none among agricultural publications. Truly at the present time we can say that the future has great possibilities for The O. A. C. Review.

Once more sleigh-bells and whitened fields announce the advent of

Christmas and the  
**The Season's** close of another  
**Greetings** year. Soon, if not

already, we shall hear again the cheerful(?) sounds of trunks being dragged—or hurled—along the corridors, cheerful, because it means that we are going home at this the happiest season of the year. At this season, The Review extends to the students, ex-students and all its readers, its heartiest greetings. With these greetings we wish also to convey, to one and all, our thanks for their support. A few days more,

and New Year Resolutions will be in order, therefore in forming these we ask you to co-operate with us in resolving that the present happy relations between The Review and its supporters may long continue.

Probably one of the last of the world's great industries to recognize

### **Agricultural Co-operation**

the need of organization in all its branches, is agriculture. Reasons for this are manifest and manifold; a low standard of education and the fact that agriculture can live independently of other industries are perhaps two of the foremost. But education for the rural population of Ontario is steadily improving, and with this progression our farmers are learning by example from other industries, that unity is strength, that co-operation amongst themselves will in time mean a fuller, freer, more productive, more profitable agriculture.

At present the main trouble in bringing agricultural co-operation to a reality, is the lack of a knowledge of the detail of the organization and management of co-operative concerns. Very valuable information on these points is now being supplied by the Ontario Department of Agriculture through the medium of a Bulletin, entitled *Agricultural Co-Operation*, written by S. E. Todd, B.S.A., District Representative for Lambton County. Perhaps there is no greater authority on this subject in Canada, than Mr. Todd. He has made a deep study of co-operation in various counties, paying particular attention to the failures and successes of agricultural co-operative schemes. At the present time the organization of the Horticultural interests of Lamb-

ton County is claiming his attention, and already he has introduced some valuable and efficient methods in making fruit-raising more profitable in that section.

In his bulletin, Mr. Todd gives the reader full yet concise information on the subject. He explains what true co-operation is, outlines its development in Europe, discusses urban co-operation, then treats definitely of co-operation amongst farmers, first in Europe, then in the United States and Canada. Co-operation in the fruit industry is discussed with especial detail.

A copy of the By-laws used as a basis on which to form co-operative associations, by the District Representatives of Ontario, is appended, pages 48-51. This information is very valuable, indeed, for those proposing to organize for co-operative purposes.

A copy of this Bulletin will be forwarded to any address free of charge upon application to the Department of Agriculture, Parliament Buildings, Toronto. Ask for Bulletin No. 192, entitled *Agricultural Co-Operation*.

According to the rules and conditions governing the competition recently held by the

### **The Review Competitions**

Students' Publishing Association we publish this month all first prize productions. We are glad at this time to be able to state that, despite the short time given to competitors, the competition has met with great success. In all we received seven stories, eighteen poems, two sets of cartoons and sixteen sets of photographs, three in each set.

These were judged by special committees and awards made as follows:

Stories—1, J. Miller; 2, E. A. Pul-  
eston.

Poems—1, Miss Bessie M. Philp;  
2, W. H. Wright.

Photographs—1, S. Rogers; 2, E.  
W. White.

Cartoons—1, W. H. Wright; 2, J.  
Lever.

The results of the competition as-  
sure us that we have in our student  
body those who can supply The Re-  
view with spicy stories, poems, car-

toons or pictures. It has been our  
endeavor in the past to secure articles,  
etc., from the students in actual at-  
tendance at College. This has always  
been a difficult problem. However,  
we feel that a solution has been  
found and next year if competitions  
are again held, we look for a larger  
number of entries and for a greater  
degree of success. The prize-win-  
ning cartoons are published this  
month in the Locals Department.



### CHRISTMAS.

The time draws near the birth of Christ;  
The moon is hid; the night is still;  
The Christmas bells from hill to hill  
Answer each other in the mist.  
Four voices in four hamlets round,  
From far and near, on mead and moor,  
Swell out and fail, as if a door  
Were shut between me and the sound;  
Each voice, four changes of the wind,  
That now dilate and now decrease;  
Peace and goodwill, goodwill and peace.  
Peace and goodwill to all mankind.

—Alfred Tennyson.



# COLLEGE LIFE

## From the Dean's View-Point

THE position of the Dean is a peculiar one, especially when, like the writer, he has only recently left the ranks of the student body. As a student, he has inevitably felt the bias of that all-pervading sentiment known as "year feeling." Now this sentiment, I take it, like patriotism, has its bad and its good points, its narrowing and its broadening influences. But be that as it may, from the moment the Dean takes upon himself the duties of his position, he feels that influence no more. In his exalted station he is like a spectator on a high tower gazing upon the surging crowd beneath with interested but impartial eyes. He feels the aloofness, the distance, the disassociation of interests that now divide him from his fellows. Not again for him the midnight raid, the apple-pie beds, the nocturnal feasts, the surreptitious enjoyment of the weed, and other "joys" of residence life. He may sometimes think wistfully of these things, but now—he is not of them.

Blessed is he if possessed of the gift of humor; heaven knows he needs it! And in many of the situations in which he finds himself he will be able to discover some welcome spark of that saving grace. In the dark and fearsome hours of initiation night, lying in the friendly shelter of his bed, but with sleep banished from his eyes, uproarious sophomores pounding on his room door under the mistaken notion that he is a freshman, he is enabled to remain stoically still, and smile, with his ears plugged with cotton-wool, instead of pouncing out with intent to kill, murder and destroy.

It is study hour. Thump! Thump! Thump! on the stairs opposite his room door. The whole flat shakes. He opens his door in time to catch the wretch as he reaches rock-bottom, drags him into his sanctum and proceeds to deliver an eloquent dissertation on noise in general, and that noise in particular. He is considerably astonished and mollified, however, when the culprit breaks in with

"P-p-pleasir, I fell downstairs!"

Again it is study hour. The "absolute quietness" mentioned in the rules, is broken by a hurrying and a scurrying overhead. He ascends the stairs; they creak; more hurrying and scurrying. As he turns the corner he sees indistinct forms darting for their rooms,—and he smiles; it reminds him, irresistibly of a number of rats scurrying for their holes, and he is the cat.

On another occasion he hears sounds of riot and revelry borne on the still night air from a distant quarter. It is nearly midnight. He proceeds to the source of the disturbance, and his eyes are greeted by an unexpected sight. Here is assembled almost his entire Bible class—his soul's delight, in whom he had hoped to inculcate those principles of good conduct which would make them a living example to the rest of the student body. Here they are assembled in riotous glee, and breaking almost all the rules in the calendar! After quelling the mutiny he returns to his fitful rest, his faith in human nature broken.

The study of human nature in its different phases is one of the most interesting elements in the life of the Dean. He wonders what defect in human nature it is which causes some fellows, while religiously abstaining from water in its legitimate functions of washing and drinking, to deem it absolutely necessary to sprinkle the liquid over their fellow students in copious quantities whenever and wherever this can be done without risk to themselves. Again, what is that queer streak in their nature which prompts students to look upon stolen eatables, digestible or indigestible, as not stolen at all, but as

perfectly legitimate plunder? Is it the wild untutored instinct of the eagle, pouncing upon its prey regardless of whom it belongs to, so long as hunger is satisfied?

What is it that causes the weak victim of a bully's spite, no matter how he may hate his oppressor or what he has suffered at his hands, to remain silent under questioning, and rather to shield his adversary than to expose his evil-doing? Assuredly not fear, but something nobler.

These and similar reflections cross the mind. But the Dean has other and more serious problems confronting him. At the outset he must decide on his policy. Is he to adopt the attitude of the strict disciplinarian and inflict fines for each and every infringement of the rules? The rules are there in black and white and it is his duty to enforce them! That is a fact. It is also a fact that fines are largely futile, for the reason that in most cases, the parents of the pupils pay them, not the culprits themselves. There is a further and all important fact to be considered, and that is this; Not the rules, not the Dean, not even the president is the ruling factor in governing the conduct of an institution such as this, but the public opinion of the students themselves.

Then the question arises, "Why is it necessary to have a Dean of Residence at all? It is necessary for this reason; every student body is divided into two sections, the responsible and the irresponsible; the former, although by far the larger section, is almost entirely passive, while the irresponsible are quite evidently active. Thus it is that a few characters of the latter type may constitute themselves a nuisance to everybody, and still pursue their course unchecked by their

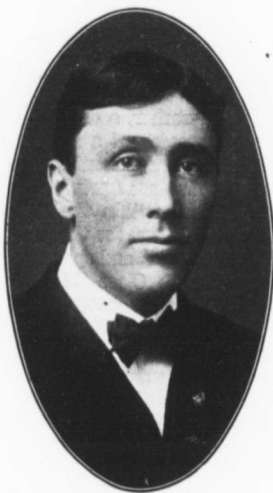


right-thinking, but passive fellow-students.

Hence the Dean. He is the figure-head, the spokesman and the officer of the law of the passive majority, seeing that their rights are not infringed and guarding their interests when at stake. So long as he has a strong and healthy public opinion behind him he is on firm ground. Hence it is to his best interest to educate that opinion in the right direction. What then shall be his policy? Dr. Arnold, the famous headmaster of Rugby, said "If you expect a boy to behave like a gentleman, you must treat him as one." It is a good policy, but,—"blessed is the Dean who expecteth little, for he shall not be disappointed."

#### Changes in Staff.

The College staff has suffered a loss by the resignation of Mr. M. C. Herner, B.S.A. Although only a mem-



M. C. HERNER, B.S.A.



L. D. JACKSON, B.A.

ber for a short time, he made good. Mr. Herner has gone to the Manitoba Agricultural College at Winnipeg, where he will have charge of the organization of a Poultry Department.

Mr. Herner hails from Waterloo, and has been actively engaged in the poultry industry ever since he could walk. For ten years previous to his entering here as a regular student, he was a successful breeder of Exhibition Barred Rocks. In January, 1901, he attended the first Short Course in Stock and Seed Judging. In January, 1907, he took the regular Short Course in Poultry Raising, and in September of the same year entered with Class '11. During the course he spent considerable time at outside work such as institute work or judging and lecturing at fall fairs or poultry shows.

Herner was the chief organizer of the Poultry Club and was its first president. That he is an efficient

poultry judge is plainly evidenced by his success at the Boston Poultry Show last January.

The Review joins with the rest of his many friends in congratulating him on his rapid promotion and in wishing him continued success.

Mr. L. D. Jackson, B.A., is another member of the staff who is leaving. He has been captivated by the lure of the West, and intends going to Winnipeg as chemist for the Lake of the Woods Milling Company. Mr. Jackson is from Lambton County, although his home is now near Guelph. He received his early education at

Petrolia High School and Sarnia Collegiate Institute. From there he went to Toronto and after graduating from McMaster University two years ago, came to the College as Fellow in Chemistry. Last year he was Demonstrator in Chemistry and Lecturer in Geology. He is a rugby enthusiast and in his first year here played on the college team.

Mr. Jackson is an energetic worker and can be depended upon to give a good account of himself in anything he undertakes. We wish him continued success, long life and happiness.

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## Presidents of the College Societies

E. W. White.

White's unbounded enthusiasm for every branch of sport is shown not only by the ribbons he has won but also by the offices he has held in the Athletic Association. As year representative, secretary, vice-president, and president in the respective years, he has been instrumental in creating renewed enthusiasm in all branches of athletics, particularly track events.

In his Freshman year he began to show his prowess as an athlete by establishing a record in the mile walk, which still stands unbroken. His presence each year on the College track and basket ball teams has helped greatly to keep these branches of sport thriving.

With Ed. at the helm for the succeeding term we can rest assured of a successful and profitable year for the Athletic Association.

R. Schuyler.

He must, indeed, be a very capable man who can so ably fill the position of President of the Union Literary Society as has Roy Schuyler during the past term. Being an experienced and willing worker, a clever speaker and the possessor of a genial countenance, he was the unanimous choice of the students last April.

Roy entered within the precincts of the O. A. College for the first time in the fall of 1907, and spent his first two years with Class '11. During this time he was actively interested in Literary Society affairs. The following year found him Assistant District Representative in the County of Peterboro. In the fall of 1910 he joined Class '12, and during the last term of his Junior year he reigned as President of the Delphic Literary Society. This admirably fitted him for the position he now resigns.

Diplomatic, energetic and ingenious, under his guardianship the Union Literary Society has prospered and the outlook for the future of both the Society and its retiring president is encouragingly bright.

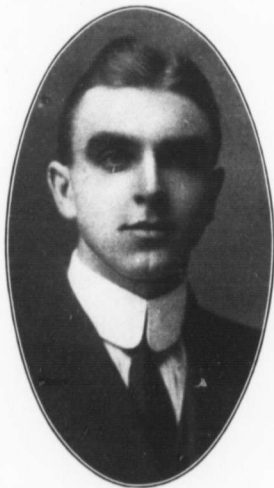
P. O. Vansickle.

"Time rolls his ceaseless course." So Percy like his predecessors resigns as President of the Y. M. C. A., which office he has so ably filled during the past year.

ciety is deeply indebted. May this good work during his college career, be but the beginning of greater works in broader fields of labor.

F. A. W. Boyd.

"Art," as he is familiarly called, first took up residence on College Heights, in September of '08. Since then he has evinced an unflinching love for music. Tradition even asserts that in the cradle, he was accustomed to singing to the accompaniment of



E. W. WHITE,  
President of the Athletic Association.



R. SCHUYLER,  
President of the Literary Society.

By nature a leader of men, with exceptional ability and a physique as strong as his will, a benefactor to his fellow students, by whom he was always held in highest esteem, he was chosen Secretary of the Y. M. C. A., from which position he has risen to the presidential chair. "Van" has spared neither time nor energy to further the interests of the organization, and to his leadership, the so-

hush-a-bye-baby." Not content with that, he is at present endeavoring to instil in his fellow students a similar musical appreciation.

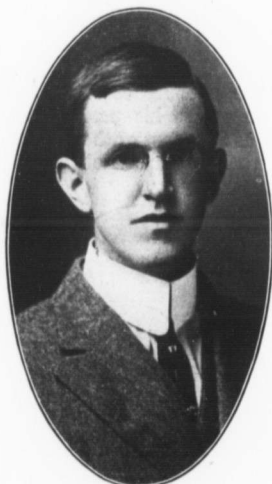
As President of the Philharmonic Society he is doing much valuable work by advancing the musical and social side of College Life, thereby bringing to notice many, whose musical talents might otherwise remain undeveloped. Under his supervision

the old College song book has been revised and materially enlarged, which work, has supplied a long-felt want, and is duly appreciated by all.

The present prospects for the Philharmonic are bright, and we all join in wishing him continued success in his worthy position.



P. O. VANSICKLE,  
President of the Y. M. C. A.



F. A. W. BOYD,  
President of the Philharmonic Society.



## SOCIAL

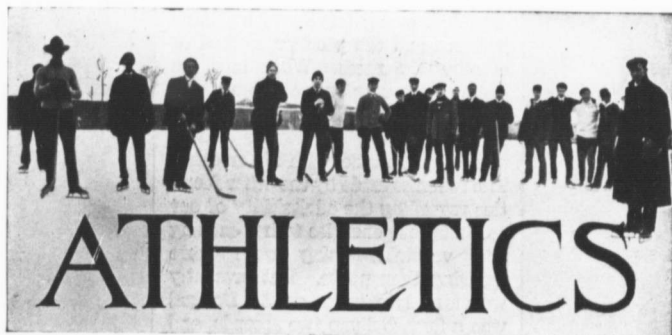


The engagement is announced of Miss Laura Rose, Guelph, Ont., to Mr. W. F. Stephen, Huntingdon, Que. The marriage to take place the 30th December.

The alliance is very popular in Agricultural circles. Mr. Stephen was for many years a progressive farmer and successful Ayrshire breeder of Quebec Province. He is now the energetic secretary of the Ayrshire Breeders' Association of

Canada, and the Montreal Milk Shippers' Association.

Miss Rose, apart from her long connection with the Dairy Department of the O. A. College, is well and favorably known all over the continent as a dairy expert, Institute lecturer and writer on agricultural and home topics. Her latest and greatest work being her excellent book, "Farm Dairying," which although only published last spring is now in its second edition.—Toronto Globe.



## Field and Track

J. MILLER, TRACK MANAGER.

OUR first event this fall was held with much misgiving. For many hours previous to the annual meet it rained steadily and the track was heavy and slow. The air was

everyone. Nevertheless, very good work was done.

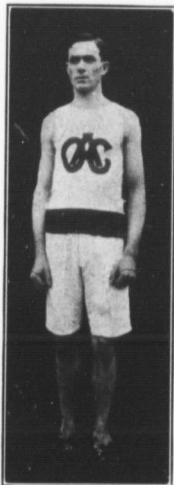
G. Culham carried away the grand championship with the excellent total of 27 points, and breaking the standing high jump record. D. B. Fraser, who has since proven himself the star runner of the College, broke the mile record by 16 2-5 seconds. Charlie Petch broke his own two-mile record by 8 seconds. The half-mile record was likewise broken by 2-5 of a second. H. Horobin made a splendid showing in the sprints, but is inexperienced. With proper training he should make a very fast man. The entire meet was quite up to the standard in every way and the athletes who competed deserve great credit for the fine showing they made.



J. MILLER,  
Track Manager.

very unfavorable, being raw and cold, hard on the throats and lungs of the runners and disagreeable to

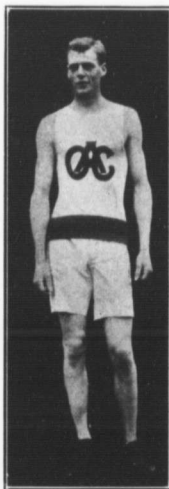
Our team at the Varsity Inter-faculty sports did very encouraging work. We were assured that we had first-rate material and so had considerable faith that a creditable showing would be made. For some time, however, the outlook was dark. Our sprinter failed to make the points



D. B. FRASER, '15,  
Winner of Three-Mile  
Race at 'Varsity.

expected, owing largely to his inexperience and the peculiar method of starting the races. When half the events were over our total score was but 7 points—Miller making second in the half-mile, and Fraser coming second in the mile, with Miller third. The remarks made by the other faculties regarding the advisability of our confining our energies to hay-making and vegetable-raising were more amusing than polite. But presently we started to make good. Dougall won a first, Culham two seconds, and McRostie and Palmer each a third in rapid succession. And when Fraser came first in the three-mile with Harding third and Porter fourth, the hay remarks were only whispered. The team race was decidedly the most spectacular event of the day.

Our fellows won this in handy style by about 100 yards, each beating his opponent in a fast race. The team



G. CULHAM, '13,  
Grand Champion, Field  
Day, 1910-11.

finally came away with 31 points and ten medals; winning second place and defeating five faculties.

Since that time no large meets have been held. A series of football races were outlined, but as only one game was played we could not make arrangements for but a single race. This was a three-mile relay, run by teams consisting of two men. It was won by Fraser and Harding in 13 minutes 22 3-5 seconds, with White and Palmer second.

The cross-country was won by S. G. Freeborne in 31 minutes. This makes a new record but doesn't truly indicate the ability of the runner for he was not forced to do his best at any stage of the race. He has just recently entered the running game and a very successful future may be safely predicted for him.

This, then, has been the record of

our track work for this fall. We have met with some defeats and have achieved some successes. But our eyes should be turned to the future rather than to the past. We have material in this College to make a track team second to none; but a great deal must be accomplished along both training and executive lines to put us on a really sound basis. However, attention will be drawn to these weaknesses in a later issue. Roughly speaking, what we need is a greater sympathy and harmony between the different branches of sport. We want everyone's assistance on the field and on the sidelines. A long pull and a strong pull and a pull altogether will next year, I trust, enable your future manager to take a team to Toronto that will "clean up" on the Varsity Athletes for the honor of the track and of the O. A. College.

**Rugby.**

T. O. Clark, Manager.

Much might be said about last season's rugby. We will only mention those facts which may be useful in future.

We are pleased with the change from intermediate to junior ranks. The games this year proved that there we can win on one condition, namely, that the men will get out and

kicked just as well as 'Varsity, but lacked the finish in training. In the first half 'Varsity scored nearly all their points. The second half was nearly all college, but the team took too long to get their stride. The game ending with the score, 20-11 in favor of 'Varsity.

**O. A. C. at 'Varsity III.**

On the University campus, college for three-quarters out played 'Varsity in every way and led by a score of 6 to 5. Then! in the last quarter! What happened? The question has never been answered. We can say it was a 'Varsity finish. They beat us by the score of 16-7.

**Inter-Year Football.**

The first game of the Inter-Year football series was played on Saturday, Nov. 4th, on the college campus, between the third and fourth years, and resulted in a decisive victory for the Seniors. From the time the teams lined up for the first scrimmage it was evident that the light inexperienced line of the Juniors could not hold the heavy line of the Seniors. In the first half the Seniors bucked through the Juniors' line almost at will, and secured three tries, one of them being neatly converted by Rogers. The second half was a much better exhibition of football. The Juniors settled down and played a better game. Culham, by long punts, notched two points for his year, while the Seniors scored eight more. The game ended with the oval in the Seniors' territory. Final score Seniors 24; Juniors 2. Clarke, Rogers and Aikenhead starred for the Seniors, while for the Juniors Culham, Webster and Campbell played an exceptionally fine game. Mr. Jackson, the referee, handled the game in a faultless style.



S. G. FREEBORN, '14,  
Winner of Cross-Country Run.

work as soon as the college year commences.

Last season the faculty did a great deal to aid the team—but, did the student body? With the men now in view, it is merely a matter of spirited work to make our team junior inter-collegiate champions next year!

**Varsity III. at O. A. C.**

The game was a little disappointing, but not one-sided. Our team worked hard, they ran, tackled and

**Sophomores vs. Juniors.**

November the seventh, the day the Second and Third Years were to clash in the second game of the inter-year series, looked very unpromising. A cold sleet, driven by a strong north wind, swept across the college campus. However, the teams determined to play and lined up on a wet, slippery field. And it looked as if the few spectators, whose love for the game induced them to brave the elements, were to be rewarded by a slow game. But on the contrary, it was one of the fastest, keenly-contested games played on the campus this season. Notwithstanding the slippery condition of the ball, and the field, the game was characterized by few fumbles. The back divisions of both teams catching and punting with equal dexterity. It was a punting duel from start to finish, each team taking turns punting with the wind, as they changed ends from quarter to quarter. But the punts were so well handled and run back by the back divisions of each team that at the end of the third quarter neither side had scored.

On the last quarter the second year had the wind, and taking advantage of both the wind and darkness they kicked to the dead line for two points. Time called, score, Sophomores 2; Juniors 0. Madden, Weld and McDonald were the pick of the Sophomores, while Culham, Henry and Webster did good work for the Juniors. "Cap." Gandier made an efficient referee.

**Sophomore vs. Freshmen.**

The Freshmen sprung the first surprise in the inter-year football series by defeating the Sophomores by a score of 7-4. It was thought throughout the other years that the

Sophomores would have an easy victory. However, the Freshmen were confident, and when the play started it could be seen that their confidence was well grounded. The Freshmen went into the game with a rush, and by pretty running, passing and kicking they succeeded in getting over for a try in the first quarter, and later scoring two more points. The Sophomores seemed to lose heart, and played rather loose ball, although they came back strong in the last quarter and scored four points, McDonald kicking a drop in the last minute of play. For the Freshmen, Mills, Stirrit, Kilgour and Dudgeon starred, while McDonald, Weld and Madden were the pick of the Sophomores, although not up to their usual form.

**Seniors vs. Sophomores.**

The Sophomores showed their come-back powers, when, after suffering defeat at the hands of the Freshmen, they turned around and defeated the Seniors by the score 8-7. They deserved their victory, outclassing the Seniors in every department of the game. For the Seniors Palmer was the only man who played up to his usual form, his punting being indirectly responsible for their seven points. But for the Sophomores every man played star football, and especially the back division, the running and passing of Madden, McDonald and Weld was pretty to look at. In the first quarter the Sophomores took the wind and started out to win, McDonald ran the ball down near the touch-line, and Bergey went over for a try; while for the Fourth-Year Palmer and Rogers each kicked to the dead line. The quarter ended with Sophomores 6; Seniors 2.

In the second quarter the Fourth-



Year had the wind, but were unable to score. McDonald kicked an on-side kick to Weld, who caught it on the rebound and went over for a try. But the try was disallowed by the referee on the grounds that the whistle blew for an offside and the Fourth-Year stopped playing. Half time was called with score still 6-2 in Sophomore's favor.

In the third quarter the Sophomores again had the wind and tallied two more points, Weld dribbling an onside kick to the dead line, and Madden kicked behind the line to Clark, who was forced to rouge. The quarter ended Sophomores 8, Seniors 2. The Seniors took a brace in the last quarter and went over for a try. Madden kicked, Palmer returned to Weld, who ran it out five yards, but Second-Year failed to get yards on three downs, and Fourth-Year got the ball and bucked over the line, Rogers failing to convert. Time was called with the Seniors in possession of the ball five yards from the Sophomore line. Gandier and Jackson as officials gave entire satisfaction to both years.

#### Fourth-Year vs. Freshmen.

Perhaps the best game of the inter-year series was played on the college campus between the first and fourth years, on Saturday, November 12th. The game was fast and keenly contested throughout, and it was either team's game up to the last minute, when Fourth-Year cinched the game by going over for their second try. The First-Year had a faster aggregation, but they played loose football, especially in the back division, and this was responsible for their defeat.

#### The Play.

First quarter—First-Year won the toss, and Fourth-Year took the kick. Stirret returned to Rogers, who kicked to Kilgour, Kilgour was tackled about the twenty-five yard line. Then on a fumble by the First-Year backs, Johnston secured the ball and romped across for a try. Rogers neatly converted. When the quarter ended the score stood Seniors 6; Freshmen 0.

Second quarter—In the second quarter the Freshmen were kicking with the wind, and by good booting and following up well, they notched two points, while Fourth-Year failed to score. Kilgour booted behind the line to Rogers, who was forced to rouge. Rogers kicked at quarter way and Williams returned to Clark, who ran it up about ten yards. Palmer kicked to Stirret, who ran it back about fifteen yards, and on first down Williams kicked to dead line for another point. Time was called. Half time score Seniors 6; Freshmen 2.

Third quarter—In the third quarter neither side scored, the ball staying in the centre of the field. And neither team having any advantage in the play.

Last quarter—In the last quarter the Freshmen pressed the Seniors hard, and secured the ball within a few yards of the Senior line, but could not buck it over on two downs, and were forced to kick to the dead-line for a point. While Murray stole a pass from the First-Year backs, and went over for five more points. Rogers failed to convert. Time was called. Final score Seniors 11; Freshmen 3. For the Seniors Bosman, Johnston and Aikenhead starred, while for the Freshmen, Stirrit, Kilgour and Williams played a good game. At time

of going to press the Freshmen, Sophomores and Seniors are tied for the championship.

#### **Basketball Prospects.**

By W. H. Smith, Basketball Mgr.

With the end of the inter-year football series, we naturally look to the gym for recreation, and to some of us the gym is synonymous with basketball. During the fall term we run off a single series of inter-year games, with a view to getting the fellows in shape for the double schedule played after Xmas.

Formerly the chief grievance with which the basketball enthusiasts had to contend was the absence of a suitable league in which to enter our team. This year we have every prospect of getting our team in the Sifton Cup (inter-faculty series at 'Varsity). We have already entered a team in the intermediate series of the Ontario Basketball Association, but at time of writing do not know with what teams we are grouped. It is due to this fact that it is impossible to state whether we will have a junior team in the association or not. However, the Juniors will be given a few games with outside teams.

I think I am safe in saying that we have not had so much likely basketball material in the college for years, and with the prospects of a team being sent to St. Anne's College, late in the spring term, competition for the college team should be keen.

#### **Baseball.**

G. G. Bramhill, Baseball Mgr.

The popularity of indoor baseball at

the O. A. C. is generally obscured by the more strenuous winter games of hockey and basketball. Baseball is distinctively a summer game, and it would be expecting too much to hope for its popularity to continue undiminished during the winter season. However, to a large number of fellows baseball holds a charm, be it on the campus or in the gymnasium. The management this year are aiming to place the college in the city league, in the hope that a keener interest will be stimulated in this branch of college athletics.

#### **Hockey Prospects.**

By W. G. English, Hockey Mgr.

The prospects for hockey this winter are probably better than they have been for some years. The Macdonald College team from Quebec gave us a game here last winter, and it is expected that we will send a team down there to play the return game this winter. Arrangements are in progress to enter an O. A. C. team in the Junior Inter-Collegiate Union, and if we are admitted to this union we want to put up a winning team. To get a winning team we want all old players and all those interested in the game to get down to work as soon as possible.

A number of last year's team are not here this season, so there are several vacancies to be filled. Last year the inter-year games were closely contested, and indications point to a still closer contest this year.



# ALUMNI



## Just a Bit of History

**W**HEN the O. A. C. Review was born into the world of college journalism, it was not conceited enough to imagine that it was the only college magazine in America. But still it had the earmarks of success, and being ambitious it has gradually forged ahead, improving year by year, until now it stands in the front rank when com-

ated in 1890, and for three months was in charge of the Dairy work at the Experiment Station, Geneva, N. Y. In January, 1891, he obtained a position in the Dairy Department of this college and has filled that position without a break since that date.

Chas. F. Whitley then took up the good work for the year 1890, and



PROFESSOR H. H. DEAN



MR. CHAS. F. WHITLEY.

pared with the very best college papers of our fair Dominion.

The history of the Review dates from 1889, when Prof. H. H. Dean filled the chair in the editorial sanctum and sent the little paper off to a good start. Professor Dean gradu-

ated with honors in 1891. In June of that year a position was offered him in the Dairy Division, Ottawa, with which he has been identified ever since. He has charge of the cow testing department and it is gratifying to know of the substantial

gains accruing to many of our dairymen through his activity. Mr. Whitley is well known in the capital in musical and fraternal circles, while his name is found on the executive of three or four philanthropic organizations.

Professor F. C. Harrison then assumed the ropes of office and piloted *The Review* during the year 1891. The next year he graduated and for a time acted as assistant to the late Professor J. H. Panton, until 1896, when he was appointed to the Bacteriological Department. He took post-graduate work at the universities of Wisconsin and Cornell, and during 1900 studied bacteriology at Berne and Copenhagen. In 1905 he was appointed Bacteriologist at Macdonald College, and in 1909 received the degree of Doctor of Science from McGill, also representing Canada at the International Dairy Conference at Budapest in the same year. The next year he was appointed Fellow of the Royal Society of Canada and acting principal of Macdonald College upon the retirement of Dr. Jas. W. Robertson. This year the Board of Governors of McGill have given him full



PROFESSOR F. C. HARRISON.

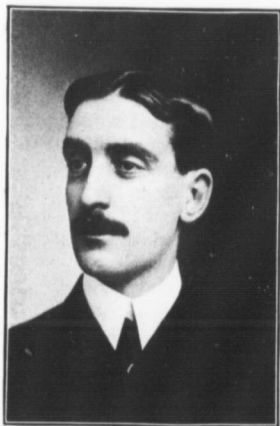


PROFESSOR G. E. DAY

powers of principal of the affiliated college. During his energetic career, Professor Harrison has prepared many reports and agricultural bulletins, as well as writing for the agricultural press.

Next in line came Professor G. E. Day, who held office during the year 1892. The summer after graduating in 1893 he took charge of a traveling dairy, and in the fall was appointed at this college as Lecturer in Agriculture. Certain changes have been made since that time as the department has broadened out and now we speak to the former Lecturer as Professor George E. Day.

As regards J. J. Ferguson, who was editor in 1893, we are sorry that no recent news has been obtained as to his exact official position. Upon graduating in 1894. Ferguson took charge of the Maplehurst Stock and Dairy



J. J. FERGUSON.

Farm and in 1899 was connected with the Dairy Department of the Michigan State College. Following this, he was in charge of the Animal Husbandry Department for a short time, after which he became connected with the Bye-Product Food Department of Swift and Co., and is still with the same firm.

The call of "back to the farm" kept playing on the ears of W. A. Kennedy, and back to the farm he went. He was editor in '94, and after graduating was assistant in the Chemical Laboratory for three or four years, after which he was in the employment of an Electrical Construction Company for a year. At this time he returned to his native soil at Apple Hill, Ont., but in 1907 the lure of the West seized him and he went out to Conquest, Sask., where he now controls 800 acres of prairie. On Dec. 13 last, he passed the critical stage of life, that day being the occasion of his marriage with a former Guelph girl.

T. F. Paterson is a son of Middlesex soil, being born near the village of Thamesford, in 1869. He was at the helm in the Review office in 1895-96, and also held such positions as President of the Literary Society and Athletic Association. In '96 he went west to British Columbia to deliver a course of lectures on the Farmers' Institute system of Ontario, and organized Institutes throughout B. C. After being assistant editorial writer on the Vancouver World for two years he went into the lumber business, being Secretary-Treasurer of the Canadian Pacific Lumber Company, Ltd. At present he is president of the Paterson Timber Co., Ltd., President and General Manager of the Cascade Mills, Ltd., and also the Terminal Lumber and Shingle Co., as well as the Federal Trust Co. and the Burrard Publishing Co. Being tired of going through life alone, he persuaded Miss M. O. Tait, originally of



W. A. KENNEDY



T. F. PATERSON

Burks Falls, Ont., to share its joys and sorrows with him, and on Oct. 16th, 1901, they were married. Besides being abundantly supplied with the world's necessities, Mr. and Mrs. Paterson are now blessed with four young Patersons.

J. C. Macdonald came to the throne the following year, and carried The Review through its troubles for one period. After graduating he was Fellow in Biology at this college, following which he took a post-graduate course at Cornell. However, Macdonald could not turn his back on journalism and accepted a position as agricultural editor of The Mail and Empire, which he held for five years. Then gravity attracted him to Montreal, where he has since held a similar position with The Montreal Family Herald and Weekly Star.

Henry R. Ross, known to his fellow

students as "Hank," hailed from the eastern part of our Dominion, and during his college course was always regarded by his fellow students as a leader and by the faculty as a student of excellent ability, who was certain to make good. He piloted The Review during the years '97-'98, and, after graduating in '98, accepted a position as chief editor of The Maritime Farmer, which he raised to a high standard and caused it to become a great influence in the agricultural life of the Maritime Provinces.

Soon after he became General Manager of the Sussex Packing Company and made a thorough study of refrigeration. As a result of his good work, a few years later he became General Manager of the New Brunswick Cold Storage Company at St. John, which is the largest cold storage concern in Canada east of Montreal.

Outside of business hours "Hank" takes his part as a citizen, and is a lieutenant in the Third N. B. Heavy Brigade, last year winning the binoculars for officers' observation of fire, at camp at Petawawa.



J. C. MACDONALD.



H. R. ROSS.

W. J. Price fathered *The Review* during the years '98-'99, and after graduating was Assistant in Animal Husbandry at this college for a short time, but decided that filling human teeth was more agreeable than filing a horses back molars, so he took a course in dentistry and graduated about four years ago. Since that date he has been following up his adopted profession in Wingham, Ont.

B. S. Pickett, B.S.A.M.S., Sigma Xi, Editor-in-Chief of the *O.A.C. Review* in 1900-01, entered the Ontario Agricultural College with the class of '02. He was graduated from Simcoe High School in 1898, and entered college the same year. Throughout his first three years Mr. Pickett ranked first in scholarship without a break. During his Freshman year he stood first in rank for scholarships in each of the four departments. In his Sophomore year he was awarded the Governor-General's medal for first

place in general proficiency in the theory and practice of Agriculture. During his Junior year he edited the *Review*, being second to hold this position after the publication changed from the pamphlet to the magazine form. During this year he was also President of the College Literary Society. Among the editors associated with him on *The Review* staff were a number of men who have done splendid work since leaving their Alma Mater:

Mr. James Murray, now of the Canadian Wheat Lands, Ltd.; Mr. W. J. Black, now President of the Manitoba Agricultural College; Mr. L. A. Moorhouse, now with the Department of Agriculture, Washington, D. C.; Mr. Elmer C. Hallman, one of the most notable stock raisers in the Canadian Northwest; Mr. F. S. Jacobs, of Winnipeg, Manitoba, and others.

In November of 1901, shortly after commencing his senior year, Mr. Pic-



PROFESSOR B. S. PICKETT.

kett was appointed secretary to the college and temporarily abandoned his studies in the institution. Registering again in the fall of 1903, he completed the regular course of studies, graduating in 1904, winning this year the prize offered to the student ranking highest in general proficiency, with first-class honors in his special option.

In September, 1905, Mr. Pickett resigned from his position as secretary of the college and went to the University of Illinois for graduate work in his specialty, Horticulture. He was awarded his Master's degree in 1906, and was immediately engaged as instructor in Horticulture at this university. It was at this time that he was elected to membership in the honorary scientific society, Sigma Xi. Mr. Pickett remained two years with the University of Illinois, at the end of which time he was elected to the chair in Horticulture, at New Hampshire College, a position which he still holds.

Professor Pickett was married in 1907 to Miss Bertha Gay Beamer, of Grimsby, Ontario, an alumnus of the Macdonald Institute.

Professor Pickett has published the following bulletins:

No. 120, University of Illinois, "Spraying Apple Orchards for Insects and Fungi."

No. 153, New Hampshire College, "Fruit Bud Formation."

Circular 11, New Hampshire College, "Horticultural Information and How to Obtain It."

He is engaged in investigation on the following lines: "The formation of fruit buds in apple trees," "Correlations between fruit and leaves in strawberries," "Laws of inheritance in squashes and muskmelons," to-

gether with some problems of lesser importance.

Professor Pickett is a member of the American Association for the advancement of Science, the American Association for the Advancement of Horticultural Science, the American Pomological Society, and the Honorary Scientific Society of Sigma Xi. In addition to his position as Professor of Horticulture at the New Hampshire College, (Durham, N. H.), he is Secretary of the New Hampshire Horticultural Society and Vice-President of the New England Fruit Show.

**The success of this department is due to the hearty co-operation which we have received from the former editors, and we wish to thank all those who have helped. To all our Old Boys let us say, "Send in your history and we will make you famous." Don't knock. Be a booster.**

Then came E. J. MacMillan, who edited The Review during the year '00-'01. After graduating he re-



E. J. MACMILLAN.



turned to his home province, Prince Edward Island, where he held the positions of Secretary for Agriculture, Superintendent of Farmer's Institutes and also that of Lecturer in Agriculture at Prince of Wales College. He then went to South Africa, and is now the Assistant to the Director of Agriculture of Orange River Colony. After much research work he propounded a theory that two could enjoy life better than one, and so married a Prince Edward Island girl about a year ago. The happy couple are now living at Bloomfontein.

James Murray held the reins of office during the year '01-'02, and graduated as an agricultural specialist. For two years after graduating he had charge of the Seed Branch of the Dominion Department of Agriculture and then went west for the Canadian Seed Growers' Association, which had just organized to bring the importance of good seed to the attention of the farmers. In April, 1906, he was appointed Superintendent of Fairs and Institutes for Saskatchewan and after holding this position a year he resigned to accept service under the Dominion Department as Superintendent of the Experimental Farm at Brandon, Man. After spending nearly four years there, he resigned last February to accept the managership of the Canadian Wheat Lands, Ltd., with headquarters at Suffield, Alberta. This is an English company holding 64,000 acres of prairie as well as having an option on another tract of 56,000 acres, so we can imagine that Murray is a very busy man.

D. T. Elderkin edited the paper during the college year '02-'03, and made a specialty of the Christmas number.



D. T. ELDERKIN.

After graduating Elderkin obtained a position with the Live Stock Branch, and is now Assistant Director of Live Stock for the Province of Ontario and Secretary of the Eastern Ontario Winter Fair.

W. R. Dewar, known to his fellow students as "Billy," was "Sports" editor in '01-'02, associate editor in '02-'03, and was chief in the editorial sanctum during the fall term of 1903. At the end of his term a system of electing the editors at the beginning of the calendar, instead of the college year, was inaugurated. He was an athlete as well as an editorial genius and was champion in field sports for the college years '02-'03 and '03-'04. After graduating in '04 he left for Africa, having received an appointment as Entomologist for Orange River Colony. In January, 1906, he became Eastern Province Entomologist in Cape Colony and in 1908 resigned and returned to his native land. During the winter of '08-

'09 he took a special course in Horticulture at Cornell University and last winter spent six months in the various fruit districts of California, returned home to Fruitland in the spring and was engaged in the fruit business during the past summer. While in Africa, Mr. Dewar did not confine his energies to bugs alone, but was also a member of the militia and for two years was a lieutenant and acting-adjutant of the First City Volunteers of Grahamstown, Cape



W. R. DEWAR.

Colony, an old regiment in African service

The Review was very ably carried through 1904 by "Bob" Deachman, who graduated in '05. He first accepted a position in the Calgary office of The Farmers' Advocate, and after staying there about one and a half years, went to the Winnipeg office for six months. He then says that he left God's country and went

to Vancouver, where he worked on the "Saturday Sunset," a society paper with a fighting front page like "Saturday Night." After leaving this he bought an interest in the Noble Advertising Agency and now he and Esmond own nearly all the stock. Eight months ago the two of them launched "The Commercial Review," a trade paper published every two weeks and persuaded Logan to get in on it. What a desperate triumvirate! They promise to start some more papers when they have time. Incidentally, in June, 1910, he took a day off and captured a life partner, now being blessed with a young Deachman, who resembles his dad and will vote right.

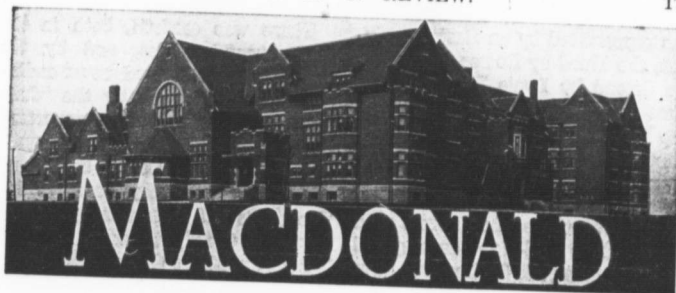
Owing to lack of space, this little history will be continued in our next number.

#### A Victim of Hymen.

Tired of living the lonely life, a graduate of class '11 has finally launched his craft on the calm sea of matrimonial bliss. On Oct. 26, 1911, at the Boharm Methodist Church Miss Margaret Hill, daughter of Mrs. J. Hill, of Boharm, was united in marriage to R. Grant Thomson, of Moosejaw. The Rev. Mr. Davies was the official starter and after the event the guests adjourned to the home of the bride, where luncheon was served. Mr. and Mrs. R. G. Thomson departed on the evening train for Winnipeg, where they will take up their residence.

A very Merry Christmas and a Happy and Prosperous New Year is extended to all our readers.





## Hallow'een Masquerade

**T**HE girls viewed their return to Macdonald Hall after the Thanksgiving vacation with a keener interest than might have been expected owing to the Hallow'een dance which was held on the following evening. On Tuesday afternoon busy people scurried to and fro putting finishing touches to decorations. Con-

fusion reigned supreme throughout the Hall, the excitement culminating when all were summoned to a "stand-up" tea in the pantry. For several days previous the decorating committee had been at work converting the Hall into a scene in keeping with the historic eve. The dining-room with its subdued lights, weird scenes of witches and bats, created in imaginative minds a rather uncanny feeling. In one corner stood a fish pond from which you were granted the privilege of extracting befitting souvenirs. In the witches' hovel, Madame Fortune Teller enlightened many on their past, present and future. The "Gym." was prettily decorated in white and yellow, to say nothing of the cheerfully, grinning Jack-O'Lanterns.

When at seven-thirty the delegation from O. A. College arrived garbed in various costumes from knights in knee-breeches, to negroes and cowboys, the corridors were already filled with girls attired in gaily colored dominoes. However, the outstanding feature of the evening was the Inter-year competition. This took place in the dining-room after all had unmasked. The Fourth year



was represented by an Eastern princess, the Third by Romeo and Juliet, the Second by Louis XVI., and the First by the progressive Japanese. The judges' task was a difficult one, but finally the decision was given in favor of Romeo and Juliet. During the whole evening, dancing was indulged in by those who desired. And shortly after mid-night as a grand finale the energetic Sophomores gave a splendid display of fire-works equal to any shown at Toronto exhibition.

### Theatre Night.

Theatre night is now one of our many pleasant memories of the past. It was really a huge success. We have been asking ourselves ever since which we enjoyed most, Grace George in her play "Just to Get Married" (which by the way may be a lesson to many), or the stunts with which the boys entertained us during the times the curtain was down?

Each year strove valiantly to outdo the others. Nineteen-Fourteen scored rather heavily when they attached their year pennant to the curtain. We loved the Rah, Rah, boys, but honestly are the Macdonald uniforms quite as unlovely as they appeared on the stage? And might we enquire why the Second year chose a goat?

While the people on whom the hens did not roost, fully appreciated the humor, it must have been rather a moment of torture for the ladies who feared for the down-fall of their puffs, owing to the hen's scratching. Several unsophisticated Mac girls were greatly exorcised when the feathers began to come down and were heard to exclaim, "Oh, those cruel boys, what are they doing to those poor hens, now!"

There was confetti, both in the small, round circles, and by the yard, in what seemed never-ending quantities, and evidently the "dummy" filled our young reporter's brain with terror as he spoke quite nicely of the O. A. College boys' manners (and, well they deserved it). The songs and yells were great and always in the right place.

I am sure Miss George will always remember the night she played in Guelph. She showed her appreciation of the flowers presented to her by wearing some of them tied with the College colors. We can only guess as to Mr. Harding's appreciation. It was a novel idea, too, the elevated means of getting the flowers, etc., to the stage.

Altogether, it was a happy crowd who left the opera house. The boys marched home and gave their usual salutes as they passed the Hall. We hope that coming "Theatre Nights" may be as great successes as the last.

### The Cosmopolitan Club Dance.

Friday evening, November the tenth, nineteen hundred and eleven, Macdonald Hall was the scene of one of the prettiest and most enjoyable social functions of years. This was the occasion of the Cosmopolitan Club dance. It is an event which is always looked forward to, and this time it exceeded everyone's expectation, contracting the time-worn proverb—"anticipation is greater than realization."

Long before the first strain of music sounded, the corridors began to fill with eager participants and many and various were the expressions on the different faces.

'Ere long the dancing commenced to the inspiring strains of Thane's

orchestra. The musicians fairly excelled themselves in rendering the various numbers of the excellently arranged programme. To onlookers the scene was well worth watching as the merry couples glided to and fro—the girls looking bright and winsome in their pretty gowns and the boys working their best (?). During the evening dainty refreshments were served in the drawing-room by the boys who fairly out-rivalled the girls in their expertness.

We cannot close without mentioning what to some was the all-important feature, we refer to the numerous tempting little cozy corners which appeared in the apparently, most unexpected and apparently most out of the way spots. Nor must we omit the few moments when darkness prevailed, and matches formed a very unsatisfactory light—for dancing.

Every face was joyous by the end of the evening and the maidens and boys parted reluctantly after the very last extra was over. We take this opportunity to thank the Cosmopolitan Club for their kindness in providing this enjoyable evening, and to congratulate them on the success of their endeavors.

#### Open Gymnasium Evening.

Friday evening, November the seventeenth, was the time set apart for open gym. Invitations had been sent to the faculty and a few interested friends. Lack of space forbade a more general invitation being given. The audience, though few in number, showed marked appreciation of the efforts put forth by the girls. The girls fully merited this as in no other function given in Macdonald Hall have they displayed such a general interest due undoubtedly, to the fact that each had her part to play.

Great praise is due Dr. Ross, whose ability to manage and willingness to work accounts in a large measure for the success of the evening.

The programme was varied in character showing to a marked degree that while all-round physical development is aimed at, the poetry of motion is not over-looked. This was shown especially in that time-honored dance, Sir Roger de Couverley, in which twelve girls in College caps and gowns took part. It was danced with an ease and grace which would have been creditable in the days of our grand-mothers. The Folk Dances, though not so familiar, showed what a pleasing effect can be produced by simple music accompanied by graceful movements. They were characteristic Olde English and Norwegian movements and give an indication of what can be done towards preserving these charming and expressive national dances.

The Baseball Match between the Seniors and Juniors proved the bon mot of the evening. The Juniors, from the beginning had the best of the play. The Seniors, however, stood their ground well and showed that though luck was against them, yet they had a team who had to be reckoned with. Plans of other matches in the near future are already being discussed when the Seniors feel confident of reversing the score which was 21 to 5 in favor of the Juniors.

Another game in which keen interest was taken was the Overhead Ball. In this the two teams were so evenly matched that at the end the leading team had but a few seconds' advantage.

After this game came a very interesting item on the programme—the presentation to Miss I. Shaw, by Miss Watson, of the Tennis Trophy, a gold watch fob. In a few appropriate words Miss Watson noted that this was the second year Miss Shaw had won the championship. The applause which followed attested the popularity of the Tennis Champion.

The most unique feature of the evening was, possibly, the Living Bridge Game. Each of fifty-two girls represented a card. By a fancy march these were shuffled and dealt to the players. Professors Harcourt, Reynolds, McCready and Day. Professor Reynolds was dealer and made it diamonds. The audience were quite as interested as the players and

on every hand comments were heard concerning the different plays. As the trick was completed the cards advanced and bowed to the player to whom they belonged. Though the dummy's hand was not very promising, Professor Reynolds made his points. While he was receiving the congratulations of the others players they found themselves the centre of a circle of girls who sang, "For They are Jolly Good Fellows" to the accompaniment of a rollicking dance. This was followed by "Good Night Ladies," a slower movement making a graceful and appropriate close to the evening's programme. The National Anthem was then sung, after which, with Mrs. Fuller at the piano, the girls proceeded to conclude the evening in true Macdonald style.



## Much Ado About Nothing

J. to Hales—What does 'no twos-ing' mean?

Hales—Two and one.

Bargains in O. A. College men any "Lit." night at five minutes after eight, in Mac. Hall drawing-room. Left-overs going at half price.

Who is Miss Wilson's favorite author? Emerson.

H.—When does a fellow find out how many girls he is taking to the "Lit"?

B.—When he enters Massey Hall.

Miss S. to Bursar—I wish to change my room. How much are rooms on the first floor?

Bursar—One dollar per week extra, owing to telephone conveniences.

Miss S.—And the baggage room?

## Schools' and Teachers' Department

Devoted to those interests of the Ontario Agricultural College which pertain particularly to the training of teachers for giving instruction in the schools of the Province along vocational lines—in Home Economics, Industrial Arts, Elementary Agriculture and Horticulture.

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### AGRICULTURE IN ONTARIO SCHOOLS.

The past five years have been marked by a decided advancement in the teaching of Agriculture in our schools.

#### In The Public Schools.

In the Public Schools, the work has been carried on under the name of Nature Study, but it has been no less agricultural, dealing as it has with weeds, soils, rainfall and the concerns of the farm in general. The advancement here has been due to several causes:—Official endorsement of the work by our Department of Education, encouragement by many of our school inspectors, training of teachers in the Normal Schools, the help of the Schools' Division of the Experimental Union and the practical instruction given at the College to teachers in the spring and summer teachers' courses. Signs are not lacking that even greater progress will be made during the next five years. During the season of 1911 there were thirty-three regularly organized school gardens in the province, whereas there were only fourteen in 1910. For 1912, there is likely to be another decided increase in the number as School Boards are now beginning to ask for teachers holding certificates in Elementary Agriculture. Of such teachers there are now about two hundred and fifty available, trained here at the Agricultural College during the past three years.

It must not be inferred that only in the thirty-three schools referred to is practical instruction being given in the subject. Many other schools have gardens, but on account of the work not being organized under a teacher certified in Agriculture, no special grants are given. In many other schools work is carried on by the pupils in home gardens under the teacher's direction and encouragement. In other cases experimental and observation plots are conducted on the school grounds without having pupils' individual plots. The Schools' Division of the Experimental Union has had about two hundred schools co-operating along these lines during the past season. For the supervision and encouragement of this work in its different phases the writer has been appointed *Director of Elementary Agricultural Education for Ontario* by the Department of Education.

#### In the High and Continuation Schools.

As the work in the Public Schools has been done, under the name of Nature Study, so has it been done in the High Schools in connection with the Elementary Science Course. With the revision of the courses of study in 1904, work in agriculture was included in many suggested topics. In 1909, at another revision of the courses, the work was outlined specifically and included such topics as plant propagation, weeds and weed seeds, plant diseases, economic insects, and breeds of farm animals. This year, this course has been detailed still more specifically and a number of topics added under the title of *Work in Agriculture*, to be taken as an option

for the so-called *Outside Work* of the Elementary Science course. The belief is that pupils taking up High School work for only one or two years will find this of great practical value in taking up their life's work on the farm, or, if they should enter the teaching profession, that they will be prepared to teach Elementary Agriculture in rural schools.

It is not to be expected that this work will be immediately taken up in many schools. The teachers as a rule are not prepared for it, and it finds place at first only as an option. With public opinion, however, tending to demand instruction of a practical and vocational character from the schools and with many science teachers seeking to make their work effective for the work-a-day needs of their pupils, the time will not be long until many schools will be following out the work. To aid in this, it is proposed to issue special bulletins and manuals for the teachers. The course is as follows:—

### Work in Agriculture for Fifth Classes, High and Continuation Schools.

#### First Year—Fall Term.

*ANIMAL STUDIES: POULTRY.*—Characteristics of different breeds of domesticated fowl; best methods of housing, feeding, managing, fattening, dressing, and marketing fowl; preserving eggs. *BEES.*—Origin of Breeds, management, habits, and value to fruit growers.

*PLANT STUDIES.*—Recognition and comparisons of the cereals and legumes commonly grown in the locality; methods of fall cultivation in garden, orchard and farm; observation of rotations practised in the neighborhood by successful farmers; discussion, etc., on articles in the agricultural papers and Government bulletins.

#### Spring Term.

*PLANT STUDIES.*—Work in experimental and demonstration plots to furnish material for observation and class study; as, for example, a wild flower garden, a plot for climbing plants, a plot for propagation of currants, seedling apples, etc.; study of the best methods of preparing the ground, planting the seed, and caring for garden vegetables and flowers.

#### Second Year—Fall Term.

*ANIMAL STUDIES: LIVE STOCK.*—Characteristics of different breeds of farm animals, their origin, uses, care, feeding, and breeding; judging and marketing. *INSECTS.*—Special study of economic insects; spraying mixtures, and spraying machines.

*PLANT STUDIES.*—Special study of weeds, weed seeds, and plant diseases; systematic studies of varieties of fall apples, grapes, etc., best suited to locality; best methods of handling, storing, shipping, and marketing fruit; discussions, etc., on articles in agricultural papers and Government bulletins.

#### Winter Term.

##### Chemistry and Physics.

*MEASUREMENTS.*—Exercises in the use of the common surveyor's chain and comparisons with metric measurements; determination of weights of measured bushel of common grains, and of cubic foot of water, milk, sand, gravel, or grains.

*SOILS.*—Simple physical analysis of samples; comparative weights of different kinds of soil; estimation of water-holding capacity, of air content, of amount of humus; effect of frost, lime and humus on clay.

*MILK AND OTHER FOODS.*—Estimate of fat in milk by means of Babcock test; use of lactometer in determining richness or presence of adulteration; simple analysis to show albumin, casein, and sugar; pasteurization; cream separator; comparisons of flour for strength; estimate of moisture in vegetables.

*COMMON COMMODITIES OF FARM AND HOUSEHOLD.*—Practical acquaintance with Lime-Sulphur and Bordeaux Mixture, fertilizers, disinfectants, poisons, etc.

#### Spring Term.

*PLANT STUDIES.*—Work in plots for growing tree seedlings at the school; and in plots for representing economic plants in botanical families or groups, as wheats, grasses, corns, legumes, vegetables of the cress family, etc.; work in experimental plots for testing value of inoculating seed of legumes, different fertilizers or different methods of cultivation, etc.; observation of fields entered in the local Agriculture! Society's Field Crop Competitions; work and methods of the Dominion Seed Growers' Association.



### Special Courses Conducted by Agricultural Representatives.

Besides the general course in Agriculture mapped out for all pupils taking up one or two years' school work past Public School instruction, another course is suggested for schools where the District Agricultural Representatives are located. In most cases this work will be taken in short courses extending through four or six weeks during the months of January, February and March. The classes will consist of young men who have been out of school for several years, actively engaged in farm work at home. The instruction given will deal directly with the affairs of the farm. The course will be drawn up by the Representative and as far as possible suit local conditions along the lines suggested in the following:

### Courses in Agriculture Carried Out by County Agricultural Representatives

(1) *FIELD HUSBANDRY.*—History of agriculture; different systems of farming; different kinds of soil; rotation of crops; farm crops in their relation to drainage; application of manures; green manuring; preparation of the land for the different crops; methods of cleaning, testing, and selecting farm seeds; study of cereals, roots, fodder crops, grasses, clovers, and other farm crops; sowing, harvesting, preserving, marketing.

Experimental grounds near the school for illustrative experiments with varieties of cereals, grasses, and root crops, and in seed selection, methods of cultivation, rotation of crops, and the use of various kinds of fertilizers.

(2) *ANIMAL HUSBANDRY.*—A study of the history and characteristics of the principal breeds of live stock, including light and heavy horses, beef and dairy cattle, sheep, and swine; feeding and management; principles of breeding; registration of pedigrees; market requirements.

Visits to local farms, and practical work in judging stock.

(3) *DAIRY HUSBANDRY.*—The herds: formation, care, and management of a dairy herd, rearing of calves; dairy stables; lighting, cleaning and ventilating; individual cow records. The milk: care of milk, elementary chemical and bacteriological study of milk. The home dairy: running of hand separators and care of dairy utensils; manufacture, packing, and marketing of butter.

Visits to local creameries and cheese factories, and a study of factory methods of manufacture, packing and marketing.

(4) *POULTRY.*—The most valuable breeds and varieties of hens, ducks, geese, and turkeys, their characteristic points and peculiarities; various methods of housing poultry; incubation, brooding, and rearing of chickens; general methods of feeding and management; market conditions; the fattening and dressing of poultry for home and foreign markets.

(5) *HORTICULTURE.*—Treatment of fruit plantations; cultivation, grafting, spraying; value of cover crops; methods of growing and caring for vegetables; selection of varieties; study of insect and fungus diseases affecting fruits and vegetables; care, storing and marketing of fruit.

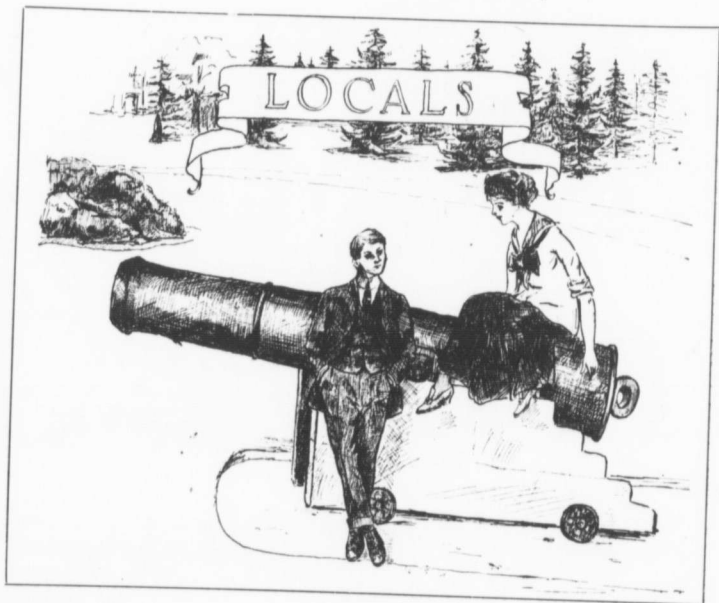
(6) *FORESTRY.*—Forestry as related to the farm; classification of the common forest trees, the establishment, care and protection of the wood-lot; varieties and methods for roadside planting and shelter belts.

(7) *AGRICULTURAL BOTANY.*—Identification and eradication of weeds and weed seeds; Seed Control Act and its application; experiments to show seed germination and growth of plants; the relation of plants to soil, air, light, temperature, and moisture; systematic study of the structure of cereals, grasses, legumes, and roots; plant diseases: smut, rust, mildew, etc.; how to recognize and combat them; collecting, pressing, and mounting of weeds and grasses; weed seeds for samples in identification.

(8) *ENTOMOLOGY.*—A practical course in economic insects, identification, habits, and life histories; a close study of the more important insects, by means of breeding and rearing cages; insecticides; collecting of injurious and beneficial insects and samples of their work.

(9) *AGRICULTURAL PHYSICS.*—Soil: classification and physical examination, origin, and mode of formation; soil forming, soil-forming rocks and minerals; behaviour towards moisture. Surveying and drainage; measurement of fields and farms with the chain; calculating areas and drawing plans; use of various instruments for determining levels, preparing plans for drainage; methods of digging, laying of tile, and filling of trench; calculations concerning required size of tile and cost of various systems. Conservation of moisture by drainage, mulching, and cultivation; capillarity and its relation to plant growth. Water capacity of different soils. Mechanics: principles of farm machinery; principles of ventilation, lighting and heating.

(10) *AGRICULTURAL CHEMISTRY.*—Chemical composition of soils; elements used by plants; availability and assimilation of plant food in the soil; application of fertilizers; absorption and retention of important constituents, as nitrogen, phosphoric acid, and potash; insecticides and fungicides; their composition and proper mixture.



Madden—Darling used to be a straight chap. What made him get so crooked?

Gerow—Trying to make both ends meet.

Higginbotham (to fair maiden at Knox Church Reception) — Say! How's chances fur swapping auter-graphs?

Maiden—Exturordinary!

Miss W. (reading her Bible before retiring)—A "Good" name is rather t<sup>r</sup> be chosen than great riches.

Dig in, Charlie. Things look bright for you.

The first time R. L. V. swore—It was a dark night, and he was riding to Jackson's Point on a bicycle with

no lamp. He came to a cross-roads and didn't know which way to turn. He felt in his pocket for a match. He found but one. Clambering to the top of the pole he lit the match carefully and in the ensuing gimmer read:—WET PAINT.

Rettie (after debate)—Don't you think my head seemed as clear as a bell to-night.

Bland—Yes, it seems to contain not but the clapper.

Jack (on the back platform)—The Freshmen are going to wholesale Doc. Reed's horse.

Stanley—Where is Millar to-night?  
Winkle Hood—He has gone down to the beach to pick beech nuts.

**Love as a Chemical Element.**

Valency 1, 2, or 23.

History of love as a chemical element.

One of the oldest elements. Adam and Eve were aware of its presence in nature.

Occurrence:

In the free state rarely known.

In combination in great quantities.

Occurs slightly in organic world. In the organic world it occurs in all liv-

portant methods used will be discussed here.

1. By long, continuous, fractional distillation of kisses in absence of either day or lamp light. Good results may be obtained in presence of an open coal or wood fire.

2. By oxidation process in pure moonlight in shady paths, lanes, etc.

3. By reduction of the substitution of products when only two are present.



Cupid Think they can do better than I can do they  
Trying to do me out of a job, kind of mean I will afford  
I've done for Macdonald Hall they have educated women they

ing things, with possibly a few exceptions.

Formed in large quantities in young people, and to a slight extent to old married people. Seldom found in old maids, and when it does occur, it is in the form of an acid.

Preparation:

Prepared in many ways and in many places. A few of the more im-

Properties:

As gas it is very active, causing the heart to beat abnormally and also causing high temperature, homesickness, sleepless nights, and sometimes even causes death.

As a liquid it has a very pungent odor. It is volatile and extremely unstable. When taken into the system in large quantities it causes very

great exhilaration of mind, being almost equal to a "creme de menthe" in its effect.

As a solid it does not exist. Its specific gravity is .001, boiling point is 0C., and its kindling temperature is blood heat or 40 C.

It combines with a few of the

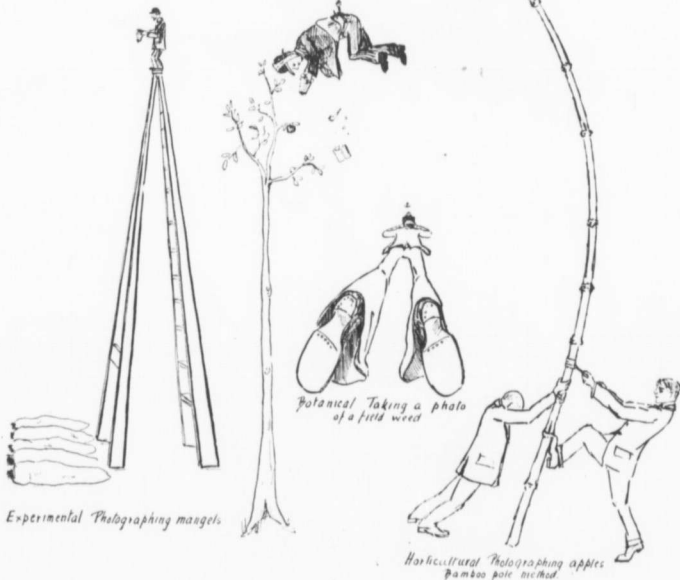
pound. The above reaction is very deeply seated, starting with the preachers and ending with the judge.

Remarks:

Love may be chemically pure in some cases, but is often mechanically mixed with some foreign substance such as selfishness or pride.

## PHOTOGRAPHY IN AGRICULTURE

*Demonstrated by some of the heads of the Departments*



lighter elements and very readily with the heavier ones. With both silver and gold it forms very unstable compounds. These break down into their constituent parts through love and gold changing places. When hydrogen lovefide is treated with gold chloride, gold lovefide is formed. Gold lovefide is a very explosive com-

### A Fish Story From B. C.

"While on a hunting trip last fall in British Columbia I had a rather remarkable 'streak of luck' one afternoon. I had been shooting all day, but had not hit anything and was returning to camp very tired and disgusted, when I noticed fourteen grouse sitting on a limb overhanging

the river. As I had only two cartridges left I decided to trust to luck, so I shut my eyes and fired. I was somewhat surprised to see them all on the limb, but I found I had split it and it had closed on their toes. I then took careful aim and shot the limb off, it fell into the river and I waded in for it. Before I got up so many fish got up my pant legs that the top button flew off and killed a mink on the bank."

Why do they call Mr. McCubbin a "Social Botanist"?

Because he pays special attention to wall-flowers.

Where is my Sophomore son to-night,  
The child who is dear to me?

Does Pathology worry his weary  
brain,

Or Physics or Botany?

Mother, none of these things bother  
him,

So, don't let them worry you.

He is taking a course in College Life,  
You'll be proud of him when he's  
through.

He's hazing the Freshmen to make  
them grow,

Or yelling the College call,

Or down at the theatre, seeing the  
show,

Or practising basket-ball.

Or maybe he's raiding the apple  
house,

Or committing other crimes;

But, mater, you bet on it anyway,

He's having his Time of Times.

—An Old Boy.

Nixon (in chemistry)—What is the  
formula of heat?

### Quite Simple.

(G. G. gives this as one of his experiences.)

L asked a little girl to wed,  
With sweet simplicity she said,  
"Go to Father!"

But she knew that I knew her father  
was dead;

She knew that I knew what a life he  
had led.

So she knew that I knew what she  
meant when she said,—

"Go to Father!"

Gravely—No! Why?

Jack—Because they can't retail  
him.

Gardiner—How long does the  
house-fly live?

Mr. Jarvis (taking class for Mr. Le-  
Drew)—I don't think the examiner  
will know, so it doesn't matter.

He failed in English, flunked in  
Chem;

They heard him softly hiss:

"I'd like to find the man who said  
That ignorance is bliss."

That Annexation Bogey again:

He—If I were to kiss you would  
you reciprocate?

She—Well, yes, if it wouldn't lead  
to annexation.

Professor G. E. Day—Can any one  
tell me why the new piggery was  
placed beside the College rink?

Pat—So that the pigs could root  
at the hockey matches!

C. L. S. Palmer (to photographer)  
—Which way shall I turn my eye?

Photographer—Toward that sign,  
please.

(Sign reads) Terms Cash.

# Hats Off!

To Lyons' Tailored-to-order Suits or Overcoats. They have that distinctive grace, that "air" of Style and Quality which all well-dressed men admire.

\$15.00 \$18.00 \$20.00 to \$25.00

expended with us will make you one of the best-dressed men in college.

*Lyons Tailoring Company*  
TAILORS TO MEN WHO KNOW  
47 Wyndham Street, Guelph



### The Farmer.

Let the wealthy and great  
Roll in splendour and state,  
I envy them not, I declare it,  
I eat my own lamb,  
My own chicken and ham,  
I shear my own fleece and I wear it,  
I have fruits, I have flowers,  
I have lawns, I have bowers,  
The cock is my morning alarmer  
So jolly boys now,  
Here's God speed the plow,  
Long life and success to the farmer.

The Secretary of Macdonald College in sending out a list of questions to be answered by applicants for entrance always includes the question, "Are you engaged?" One of the applicants was apparently in doubt on this very important point, for his answer was, "Am not positive. Am awaiting letter."

## The People's Store

Is headquarters for Men's High Class Ready-to-wear Clothing; also made to measure

### CLOTHING.

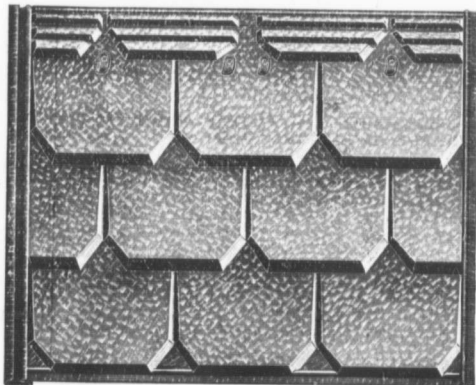
Have also a big assortment of gent's furnishings in all the up-to-the-minute styles.

We specially solicit the patronage of the O. A. C. boys and faculty.

Prices Moderate.

**COLE BROS. & SCOTT**

29-31 Lower Wyndham St.,  
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**"Eastlake" STEEL SHINGLES**  
**BECAUSE**

They are "Weathertight."

They are Fireproof.

They are Lightningproof.

They are practically everlasting.

And BECAUSE they have proven by twenty-six years' actual service, that all these statements are facts.

WRITE FOR THE "EASTLAKE" BOOKLET TODAY



**THE METALLIC ROOFING CO.**

OF CANADA, LIMITED,

Manufacturers

TORONTO,

ONTARIO.

Professor McL—n believes in applying mathematics to Horticulture. In one lecture alone he referred to no less than sixteen "propositions" and eleven "Figures."

Definition of Mater—One who finds mates for her daughters.

By an Alumnus:  
Silence is the college yell of the school of experience.

At Chorus Practise a few nights before the Philharmonic Concert, they were discussing dress for the chorus. "Oh! Mr. Shildrick," said Miss P—, "Don't you remember last year the girls had all sorts of colored bows, which did not look a bit nice?"

Mr. Shildrick—"Yes! Girls, please leave your beaux (bows) at home!!"


¶ All works of taste must bear a price in proportion to the skill, taste, time, expense, and risk attending their manufacture. Those things called dear are, when justly estimated, the cheapest; they are attended with much less profit to the artist than those which everybody calls cheap.

¶ Beautiful forms and compositions are not made by chance nor can they ever in any material be made at small expense. —*Ruskin*

## Advertiser Job Print

LONDON, ONTARIO

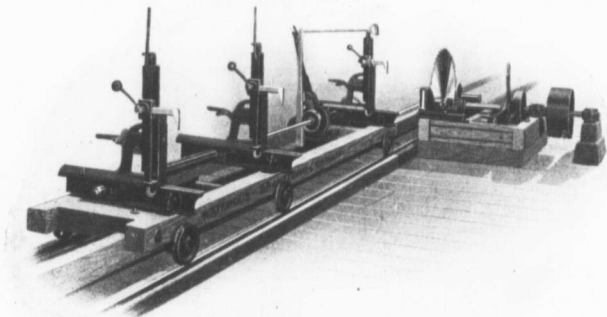
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<b>THE BOND HARDWARE CO., LIMITED</b>		



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LIGHT, COMPACT, DURABLE.



In sizes that will cut 2,000 to 8,000 ft. per day. Let us send you Catalogue No. 100. Write for it to-day. A postcard will do.

**The WATEROUS ENGINE WORKS CO., Ltd., Brantford, Canada**

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We invite every O. A. C. and Macdonald student to the

## SPA CANDY WORKS

To make it your Headquarters when down town.

We manufacture all our candy, and are continually getting up new things for our customers.

Our Saturday Candy Specials 10c a pound are winners.

In the Lunch Room we serve Hot Chocolate and Bovril at 5c a cup. We give the best Oyster Stew in the city for 15c. A trial solicited.

## SPA CANDY WORKS

CORNER WYNDHAM AND McDONELL STREETS.

Remember the place

# Chemical Analyses of Soils

Extract from "Artificial Fertilizers, Their Nature and Use."  
By B. Leslie Emslie, P.A.S.I., F.C.S., C.D.A.



At one time it was thought that a chemical analysis of the soil ought to indicate exactly the manurial requirements of that particular soil, but this theory was very soon upset, when it was observed that certain rich clay soils, on analysis showed a very high total potash contents, were still benefitted by an artificial application of potash, as proved by the increase in crop production.

Some soils, also which analyzed high in phosphoric acid, were found to respond readily to an artificial application of an available phosphatic fertilizer.

Now, while a general chemical analysis will show the total amounts of plant food in the soil, it does not indicate what proportions are available to the plant, so that the quickest way to find out the manurial requirements of a soil is to conduct fertilizer tests on the farm.

Notice.—Copies of the above named pamphlet may be had on application to

The Dominion Office of

## The Potash Syndicate

1102-1105 Temple Building,

TORONTO,

ONTARIO.

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TRY THESE!

The Evolution of the Prairie Provinces, 75c.

By W. S. Herrington,

Author, "Heroines of Canadian History."

Their Heart's Desire, \$1.00

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Illustrated by Harrison Fisher  
As sweet and tender a little love story as this is rarely written.

A Weaver of Dreams, \$1.50 net

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Author, "Lonely Lady of Grosvenor Square."

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## A MATCHLESS CHRISTMAS GIFT

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# The GILLETTE SAFETY RAZOR

No Stropping! No Honing!

For the man who shaves, you couldn't select a more acceptable gift than this world-famous razor. Progressive men everywhere are using it. The "No Honing—No Stropping" feature makes a hit with every shaving man. Few can stop a razor right. The Gillette doesn't need it.

The Gillette is absolutely safe. You can shave as fast

as you like. Your shave is perfect—clean, quick, safe and economical. The Gillette is *adjustable*—for a light or close shave.

Ask your dealer to show you the different styles of Gillettes. If he has not the goods or our catalogue, write us. We will see that you are supplied.

Pocket Addition, \$5 to \$6, Combination Sets \$6.50 up

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**Gillette Safety Razor Co. of Canada, Limited**

Office and Factory: 63 St. Alexander St., Montreal

NO STROPPING - NO HONING



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

# FOR 1912

The Cockshutt line radiates an air of progress. In addition to the well-known Cockshutt Implements, we are adding Harvesting and Haying Machinery, Manure Spreaders, Wagons, Sleighs and Gasoline Engines. The Cockshutt line is now the most complete we have ever offered. Moreover, every implement we sell is replete with the newest improvements and is of the highest possible quality.

Special Catalogues and folders illustrating the above mailed on request.

## Appreciation

*THE spirit of the Christmas Season prompts us to sincerely wish you, our friends, the compliments of the Season. We trust also that the New Year for you will be most prosperous. We cordially thank our dealers and patrons for the business they have given us during the past year. □ □ □*

**COCKSHUTT**  
of Brantford

# \$35<sup>00</sup> Disc Cream SEPARATOR



Satisfaction  
or Your  
Money  
Back.

RUMS  
EASY  
SKIMS  
CLEAN

**WELL BALANCED BOWL.** Most everyone who has ever used a cream separator has experienced a bowl going out of balance, and knows that the bearings are quickly worn out by the bowl of that kind, and that the expense and inconvenience he is put to is no small matter. Nothing of that kind can ever happen with the **EATON Separator**. The reason is the unique construction of our bowl. The entire bowl is made of one solid piece; the shell and bottom are made of the highest grade tough forged steel; the spindle is ample in thickness, and is made of high carbon tool steel, welded to the bowl by electricity.

**THE BEARINGS** are all made of the best known material, and are accurately and perfectly cut. All gears are amply protected, so that nothing can catch in same, and all dust and dirt are kept out.

**EXTRA STRONG FRAME.** Made of finest grey iron, but neatly designed and proportioned, with the strength placed just where it is needed. The base is detachable, and bolted to the main frame. The frame is beautifully finished in dark blue enamel, and decorated artistically with gold and silver stripings.

**Freight Paid in Ontario, Quebec or Maritime Provinces.**

**THE NECK BEARING** in our **EATON Separator**, which is made of phosphor bronze, is supported by a thick rubber ring, which is adjustable, and allows the bowl its necessary vibration. The heavy rubber ring is supported by a one-piece coil spring and adjustable lock-nut. This permits it to be tightened or loosened in a few seconds' time without removing any part or parts.

**THE SUPPLY CAN** is well placed, and made from a single piece of high-grade steel, heavily tinned and retinned. There are no seams or soldered joints; no corners; no place for dirt to catch; perfectly sanitary; made of heavy material.

**THE DISCS** are made of best quality pressed steel, and heavily tinned, thus insuring very easy cleaning. There are fewer discs in the **EATON** than in most separators, and they are easily cleaned.

## OUR CATALOGUE

is mailed FREE to any address upon receipt of your request. See the farm implements listed on pages 165, 166 and 167.

## NOTE THE SIZES AND LOW PRICES.

No.	Capacity.	Height from Floor to Top of Tank	PRICE
<b>2N-800</b>	250 to 275 lbs. of milk per hr.	49½ inches.	<b>35.00</b>
<b>2N-801</b>	300 to 350 lbs. of milk per hr.	50 inches	<b>39.00</b>
<b>2N-802</b>	450 to 500 lbs. of milk per hr.	52 inches	<b>48.00</b>
<b>2N-803</b>	600 to 650 lbs. of milk per hr.	52½ inches	<b>52.00</b>

**THE T. EATON CO. LIMITED**  
TORONTO CANADA

A bunch of the Seniors while picking chickens recently were denouncing the crawlers with which they were covered, in very strong language, when "Friar Tuck" silenced them with, "Hush! Hush! boys, this is foul talk."

Question on "Economics" exam—How do girls and billiard balls resemble each other?

Our guess—They kiss each other with about the same amount of emotion.

Professor Day was endeavoring to explain to the Freshmen Class the other day the intricacies of the barometer, its pressure, readings, etc., when Shuttleworth interrupted with the question—But how do you set the blame thing when you want it to rain?

## Guelph and Ontario Investment and Savings Society

(Incorporated A.D., 1876.)

Four and One-Half per cent. paid for money placed on Debenture.

Three per cent. paid on Deposits.

Interest paid half-yearly.

Executors, Trustees, etc., are authorized by special Order-in-Council to deposit Trust Funds in our Savings Department, and to invest Trust Funds in our Debentures.

Office hours: 10 a.m. to 4 p.m.

J. E. McELDERRY,  
Managing Director.

Office: Society's Building,  
Corner Wyndham and Cork Streets,  
GUELPH.

## ASPINWALL *Potato Machinery*

Efficient Spraying  
Outfits for Every Purpose

*Accuracy, Simplicity, and  
Durability Characterize  
the Aspinwall Line*

ASPINWALL MFG. CO.  
JACKSON, MICHIGAN, U.S.A.

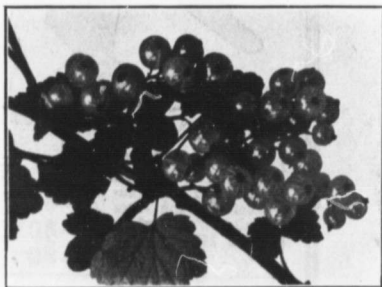
Canadian Factory, Guelph, Ontario.

*World's Oldest and Largest  
Makers of Potato Machinery*

## The Fonthill Nurseries

HEADQUARTERS FOR

High-Class Nursery Stock



ORDER NOW FOR SPRING PLANTING

Send for Catalogue and Quotations

Agents Wanted

**STONE & WELLINGTON**  
TORONTO

## "T. & D. CLOTHES"

THE SIGN OF GOOD CLOTHES.

Clothes that are built to give comfort. Correct and distinctive in style. Our garments will do the right thing by your appearance—every time—all the time.

"T. & D." Suits, \$10 to \$25.

"T. & D." Overcoats, \$8.50 to \$25.

Our Hat and Furnishing Departments are complete with the newest things in men's wear.

**THORNTON & DOUGLAS**  
THE "COLLEGE MAN'S" STORE  
Lower Wyndham.

**ERNEST A. HALES,**  
68 St. George's Square.

Sells the Best Meats  
and Poultry.

Phone 191

Open all Day.



**FREDERICK SMITH,**  
PLUMBER, STEAM  
AND GAS FITTER,

Sanitary Appliances. Estimates Furnished.  
GUELPH.

**SAM LEE HING,**  
The Expert Laundryman,  
ST. GEORGE'S SQUARE.

## SNOWDRIFT, PEOPLES' MAPLE LEAF



Three Well-Known Brands of Flour,  
Ask for them and be sure you get them.

## The James Goldie Co.

LIMITED

GUELPH, ONTARIO.

Telephone 99.

WE MANUFACTURE

## PEEP SIGHTS

For use on home-made draining  
levels, as designed by Professor  
W. H. Day.

## H. Occomore & Co.

GUELPH, ONT.

## O. A. C. Students

Will find the biggest Book Store  
in Guelph on Upper Wyndham  
Street.

## The ONLY Place

That carries the full stock of all  
Text Books required at the Col-  
lege and Macdonald Institute.

## C. L. Nelles

PHONE 45  
ABOVE POST OFFICE

You Can't Cut Out A BOG SPAVIN, PUFF  
or THOROUGHPIN, but



**ABSORBINE**

will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. \$2.00 per bottle, delivered. Book & E. free.  
A BLOOD PURIFIER, J. K. Liniment for man and, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Gout, Wens, Cysts, Alays pain quickly. Price \$1.00 and \$2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by  
W. F. YOUNG, P.D.F., 177 Lyman's Bldg., Montreal, Ca.

Wolseley, Sask., March 28, 1907.

Dear Sir,—Have been using Absorbine for three months, and I have great faith in it. I first tried it on a colt that had got his leg cut in a barbed-wire fence. It healed up and began to swell. I applied Absorbine and it removed swelling in twelve days.

Yours truly,

F. O'Neill.

#### A. AMODEO

We sell all kinds good

**FRESH FANCY FRUIT**

at wholesale and retail prices.

**PURE OLIVE OIL**

59 Quebec Street.

Open till 10 p.m.

Clark (carving chicken on Sunday)  
—May I tender you another piece of chicken, Mr. Hogarth?

Hogarth—No, but I wish you would tender this chunk that I have.

The Motor Age:

Professor Wade—We have the record-breaking Holstein here.

City Student—Is that so! What horse-power?

#### FLOWERS

We carry the best selection of Cut Flowers in the city. When you want something choice call on us or phone 866. Prompt delivery and careful attention to all orders.

**McPHEE, FLORIST**

Wellington Block.

D. M. FOSTER, L.D.S., D.D.S.

DENTIST.

Cor. Wyndham and MacDonnell Streets.

Telephone 14. Over Dominion Bank.

#### MIDNIGHT SUPPERS.

Bacon, Oysters, Fancy Biscuits, Olives, Pickles, Chocolates, etc.

J. A. McCrea & Son.

R. H. McPHERSON,

BARBER,

Hair Cut, 20c; Shave, 15c. Close 8 p.m.

145 Upper Wyndham St., GUELPH

THE GUELPH OIL CLOTHING  
COMPANY, Limited,

Manufacturers Oiled Clothing, Tarpaulins, Tents, Awnings, Stack and Binder Covers.

#### SUEY WAH.

Hoop la! Come to the Big Laundry. Expert workmen. Hand work only. College calls made Monday, Wednesday and Frid.

16 Wilson St., GUELPH.

JAMES H. SMITH

Opposite Traders' Bank.

Molasses Taffy, Walnut Cream and Maple Cream. Best in the City.  
Fresh Every Day.

LUNCHES SERVED

COLLEGE STORE

CANDIES, CIGARETTES,

TOBACCO, Etc., Etc., Etc.

CORNER OF CAMPUS.

**McHugh Bros.**

Wholesale and Retail  
TOBACCONISTS

28 Lower Wyndham St., GUELPH.





**AGRICULTURAL COLLEGES  
REFERENCES**

At Guelph, Truro, St. Anne de Bellevue  
Winnipeg, and the trade generally.

**THE BURGESS STUDIO**

High-Class Portraits.

**SPECIAL RATES TO STUDENTS**

**NOTICE**

The best and most convenient Barber Shop  
for O. A. C. Students.

**WM. COON, ST. GEORGE'S SQ.**

Street Cars every 15 minutes. Three chairs.  
No waiting.

**ERNEST M. SHILDRICK,**

Teacher of Singing,

Pupil of Van der Linde of New York,  
Studio, Opera House Block.

Phone, Studio 625.

Phone, Residence 697.

**NOTICE TO STUDENTS**

You are invited to make our store your  
meeting place when down town.

**SHERIDAN & O'CONNOR,**

Tobaccoists,  
45 Wyndham Street.

Regal Shoes  
For Men.

Sorosis Shoes  
For Women.

**W. J. THURSTON,**

Sole Agent,

**THE NEW SHOE STORE,**  
39 Wyndham Street.

**KING EDWARD BARBER SHOP**

Headquarters for a first-class  
shave and hair cut or shoe shine.

**CHAS. BOLLEN, - Proprietor.**

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



**Lee Wing,**

**CHINESE LAUNDRY**

The Best Work in the City.

57 Quebec Street, Opposite Chalmers Church,  
GUELPH, ONT.

Wash every Monday, Wednesday and Friday.  
Iron every Tuesday, Thursday and Saturday.

We guarantee best work in the City, having  
latest improved machinery for ironing collars,  
and cuffs, which will not crack or break the  
wing.

Shirt collars ironed straight, so as not to  
hurt the neck. Stand-up collars ironed without  
being broken in the wing. Ties done to look  
like new.

Please call and try. Parcels called for and  
delivered to any part of the City.

Goods not called for in 60 days will be sold  
to pay charges. Goods at owner's risk in case  
of fire.

**Our Business is  
MEN'S WEAR**

Young Men, come here for up-to-date Cloth-  
ing, Hats, Caps and Furnishings.

Oak Hall Clothing is sold in 2,000 stores in  
Canada. Come on in!

**Gummings' Oak Hall Store**

**Rob Roy Restaurant**

12 GARDEN ST., MARKET SQUARE

Regular Meals and Lunches, Dinners 25c.

Meal tickets arranged for.

Fish and Chops.

Open from 5:30 a.m. until 12 Midnight.

**Royal City Mineral Water Works**

Manufacturers of

**HIGH-CLASS CARBONATED BEVERAGES**

247 Brock Road.

Phones—Works 582A

Residence 582B

**A. REINHART**

Proprietor.

**WATERS BROTHERS**

Phone 350

**Students' Supplies**41 Wyndham St.,  
GUELPH.

BOTANICAL, ENTOMOLOGICAL, NATURE STUDY, EXPERIMENTAL and MANUAL TRAINING, DRAWING MATERIALS and OUTFITS, NOTE BOOKS, FILLERS, INKS, PENCILS, FOUNTAIN PENS.

Special Prices for Quantities.

**Cut Flowers  
Chocolates**

Violets, Valljy, Roses, Carnations, Mums,  
Received Daily.

Complete Assortment of Neilson's Chocolates

**"The Roser,"**

ST. GEORGE'S SQUARE. PHONE 378.

**PRINTING**

We execute the finest grades  
of printing, plain or in colors,  
promptly.

**Kelso Printing Company**

St. George's Square,  
Phone 218. Opp. Post Office

**Cut Flowers**

Call on us when you want choice flowers,  
Roses, Carnations, Valley, Violets and all  
flowers in season.

We handle "Dale's" flowers.

Phone orders receive careful attention.

**GILCHRIST'S**

Phone 436. St. George's Square.

HEADQUARTERS FOR

**HARDWARE**

AND SPORTING GOODS  
AT LOWEST PRICES.

**G. A. RICHARDSON**

Upper Wyndham St., GUELPH.

**Pringle**

THE JEWELER

Entomological Supplies,

Magnifying Glasses, all qualities

Fountain Pens Rubber Stamps

O. A. C. and Macdonald Institute

College Pins.

**Horse Owners! Use**

GOMBAULT'S

**Caustic  
Balsam**

A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes  
the place of all liniments for mild or severe action.  
Removes Blisters or Eruptions from Horses  
and Cattle. SUPERSEDES ALL CAUSTIC  
OR FIRING. Impossible to produce scar or bluish.

Every bottle sold is warranted to give satisfaction  
Price \$1.50 per bottle. Sold by druggists, or  
sent by express, charges paid, with full directions  
for its use. Send for descriptive circulars.

**THE LAWRENCE-WILLIAMS CO., Toronto, Ont.**

## Hockey Boots

Students' headquarters for Hockey Boots. The largest assortment in the city to choose from.

Gents' - - - \$1.75 to \$2.75  
 Ladies' - - - \$1.50 to \$2.25  
 Ladies' and Gents' Skates, 50c, 85c, \$1.00, \$1.50 to \$5.00.

SKATES ATTACHED FREE.

Ask to see our Kosy Xmas Slippers, Evening Pumps, Club Bag and Suit Cases.

**NEILL, the Shoe Man**

Say boys. Patronize the Young Music Dealer,

# Wick's

Next door to G. B. Ryan's, Guelph.

Pianos, Organs, All Kinds of Phonograph Records, etc., Musical Goods, Sheet Music, etc., etc.

We appreciate your business. We need your money.

Phone 431.

### FOR PARTICULAR MEN

We like to make clothes for the particular man. Anyone can suit the fellow who is easily satisfied, but it takes good workmanship, honest materials and the best of tailoring experience and ability to suit the really careful dresser. Ask the particular man what he thinks of the last suit or overcoat we made for him. It is likely he will tell you they are the best he ever had, even for double the price. Suits and overcoats \$18.00 to \$30.00.

**R. J. STEWART,**

Opp. Knox Church, 19 and 21 Quebec Street.  
 Phone 456.

## Look!! Look!!

Suits Pressed	50c
Suits Cleaned and Pressed	75c
Pants Pressed	15c
Velvet Collars	75c to \$1.25
Dry Cleaning	\$1.25

Work done by practical tailors.

**C. E. Hewer & Co.**

49 QUEBEC ST.

PHONE 808

## BROADFOOT'S

RED CROSS PHARMACY

— FOR —

DRUGS AND SUNDRIES

Fountain Pens  
 Toilet Articles  
 Nyal's Family Remedies  
 Paterson's Chocolates

St. George's Sq., Corner Quebec.  
 PHONE 381.

## Students!

It will be to your disadvantage not to be on intimate terms with this store.



**R. S. CULL & CO.**

The House of Better Clothes.

## We Have Them

Shoes for street wear.

Shoes for evening wear

and shoes for all occasions. See our

**Wauk-On Shoe**  
**at \$3.75**

**J. D. McARTHUR, 16 Wyndham St.**

SUCCESSOR TO C. E. FOWEN

LEE LEE & COMPANY

Opera House Block

## Hand Laundry

Goods called for on Monday, and returned on Wednesday. We guarantee best work in Guelph.

Tisdale—I hear one of the undertakers down town has a motor hearse.

Henry—Yes, several people are just dying to get a ride in it.

On the parade to town theatre night, the mouth piece off the bass horn was lost. Neelands, to assist in its recovery, ran back along the line shouting, "Who found the mouth-piece of the kettle-drum."

When the Fourth Year men were discussing what their mascot for theatre night should be they were not surprised to hear Walter Smith exclaim, "Say, fellows, let's get a Mac tart."

Mr. P. A. B. Cherry (to Miss R. while discussing theatres and plays) —Did you go to "The Devil" last year?

Miss R.—Sir!!!!

## Useful Gifts

China is always appreciated; so is Cut Glass and Pottery, Brassware is especially attractive.

We have all four—they're gifts that are sure to please.

Prices from 5c upwards

Spend a few moments in our China Department when next up town.

### Benson Bros.

WE HAVE A VERY COMPLETE STOCK OF

## ENTOMOLOGICAL

and

## BOTANICAL

## SUPPLIES

For Students. At Students' Prices

## ALEX. STEWART

CHEMIST

NEXT TO POST OFFICE

## Art Materials

Our large and complete stock of Art Supplies are selected specially for school and college use. The quality is the best, and the prices are within the reach of every class of student.

Color Boxes, A1 - 25c each  
Crayons—Crayograph, 10c pkg.

Complete Catalogue mailed on request.



## The Geo. M. Hendry Co.

Limited,

215-219 Victoria St., TORONTO, Ont.



## Throbbing Head

AND TIRED EYES

Are not the right equipment for a successful College Student!

Take time to come here for a searching examination that will reveal the cause of your tired eyes and when we prescribe and furnish glasses to correct the trouble you'll find the world looks brighter again.

A. D. SAVAGE,

Guelph's Only Exclusive Optician,  
Cor. Wyndham and Douglas Sts.  
Phone 627. GUELPH.

# R. B. KENNEDY

## Photographer



The best place to get a good Group Photograph or a Portrait of yourself.



PHONE 498

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

'Phone connecting  
All Floors.

Daily Delivery  
to College.

# Christmas Gifts

Make Ryans your headquarters for Xmas Gifts—you can't go wrong by doing so. Our prices keep you right. Wearable Gifts are greatly appreciated and whether it be for Her or Him a look through will impart to your mind what to give.

G. B. RYAN & CO.

## ONTARIO VETERINARY COLLEGE

Affiliated with the University of Toronto, and under the control of the Department of Agriculture of Ontario.



Infirmary for Sick Animals at the College.



E. A. A. GRANGE, V.S., M.S.,  
Principal.

N. B.—Calendar on application.

**The Menu.**

Come, list all ye who wish to hear,  
And I will whisper in your ear  
About that bully beef;  
The plate is cold, the meat is old,  
The cabbage has no leaf.

The milk, the sugar, and the mush  
Combine to form one awful slush.  
How do we get them down?  
The milk is turned, the mush is  
burned;  
And oh! that sugar brown.

The marmalade, when was it made?  
Does anybody know?  
The butter's pale, the bread is stale,  
An ancient mass of dough.

The cheese is always on the trot,  
And never will stay in one spot—  
They should provide a rope.  
The tea's not strong, the coffee's  
wrong,

They are the awfullest dope.

(Continued on page xxviii.)

**Rexall**  
TRADE MARK

**Shaving Lotion**

25c and 50c,

Delightful to use. Allays all irritation  
caused by shaving. Also, a full line of  
needs for gentlemen who shave Razors,  
Strops, Brushes, Mugs, Soap, etc.

**QUALITY IS ECONOMY.**

**John D. McKee, Phm.B.**

*The Rexall Store*

18 WYNDHAM ST., - GUELPH.  
PHONE 66.

**BUY YOUR**

**Shaving Outfit**

**HERE !!**

Gillette Safety Razor, each - \$5.00  
Auto Strap Safety Razor, each \$5.00  
Fountain Safety Razor, each - \$5.00  
Ever Ready Safety Razor, each - \$1.00  
King Cutter Razor, each - \$1.50  
Razor Strops  
Shaving Soap  
Pocket Cutlery.

**Guelph Hardware Co.**

20 WYNDHAM STREET.

**R. E. NELSON**

93 Wyndham Street

For your up-to-date Hats and  
Furnishings.

I make a specialty of men ordered  
clothing, and guarantee perfect satis-  
faction to all.

Prices Reasonable

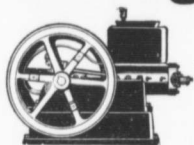
All my goods marked in plain  
figures, and only one price.

**R. E. NELSON,**

Men's Furnisher, Hatter and Merchant  
Tailor.

**A Feeling of Security**

Of absolute Reliability and Power is  
Enjoyed by Every Owner of a

**Gilson Engine**

"GOES LIKE SIXTY."

A mechanical masterpiece of the highest type, with our improved simple methods of cooling, governing and sparking. Positively guaranteed, biggest value. All sizes. Save money. Ask for catalogue and prices.

**GILSON MANUFACTURING CO.,**  
610 York St., Guelph, Canada.

A HIGH GRADE  
ESTABLISHMENT FOR THE

**PRINTING**

OF CATALOGS, BOOKS and  
COMMERCIAL JOB WORK



Society and College  
Work a Specialty.

**R. G. McLEAN**

26-34 LOMBARD STREET,

TORONTO, - - ONTARIO

Telephone, Main 637 638.

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

**The Royal City  
SHOE STORE**

Opposite Winter Fair Building.  
52 Market Square. Phone 589

Dealer in

**HIGH GRADE BOOTS, SHOES,  
RUBBERS, Etc.**

Our display of Footwear is now at its best. Shoe Goodness at moderate prices, and Shoe Elegance and Luxury are both in evidence.

The High Knob Toe, Short Vamp, High Heels and Arches, the New Tips and Perforations, and other New Features are here for the College Students. This is the store for the young people.

See our Window Display.

**W. J. HENRY,**  
Manager.

**J. E. SCHMIDT,**  
Proprietor.

**OURS IS A  
Sanitary Laundry**

Disease germs find no resting place here.

Cleanliness in every detail is a rule rigidly enforced.

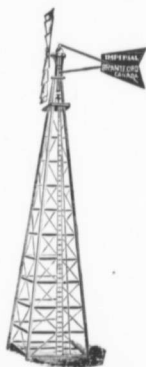
Every precaution is taken to insure our patrons the very best service in our power.

Our drivers are at the O. A. C. Monday, Wednesday and Friday mornings.

**Guelph  
Steam Laundry**

Phone 95. G. P. McARTHUR, Mgr.

# Windmills! Central Book Store



Towers girded every five feet apart and double braced.

Grain Grinders.  
Pumps.  
Tanks.  
Gas and Gasoline Engines.  
Concrete Mixers.

Write for Catalogues.

**Goold, Shapely & Muir Co.**  
Limited  
BRANTFORD, CANADA.

53 WYNDHAM ST.,  
Opposite where the Street Cars cross.

The Place to Buy  
TEXT BOOKS, BLANK BOOKS,  
STATIONERY, PENS, INKS,  
PENCILS, Etc., Etc.

See our Special O. A. C. and Macdonald Hall Note Paper and Envelopes

**C. Anderson & Co.**  
Phone 256.

## Guelph Radial Ry. Co.

### TIME TABLE


Cars leave St. George's Sq. for Elora Rd., Suffolk, Waterloo Avenue and O. A. College as follows:

	A.M.	
6:15	8:25	10:35
6:35	8:45	10:55
6:55	9:10	11:20
7:20	9:30	11:40
7:40	9:50	12:05
8:00	10:15	
	P.M.	
12:25	4:05	7:55
12:45	4:25	8:15
1:05	4:50	8:35
1:30	5:15	9:00
1:50	5:40	9:20
2:10	6:05	9:40
2:35	6:30	10:05
2:55	6:50	10:25
3:20	7:10	*10:45
3:40	7:35	

Returning, Cars leave Terminals 10 minutes later.

\*Saturday night only.

Cars run to Fower House only after last trip.



**UNDERWOOD**

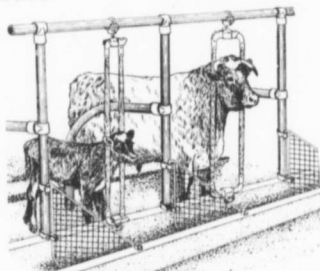
The Underwood is used more extensively in Canada than all other makes of typewriters combined.

550 Underwoods are sold every day. The Underwood is the "aristocrat" of the typewriter world.

**United Typewriter Co. Ltd.**  
EVERYWHERE IN CANADA.  
Head Office, Toronto.



# Stable Your Cattle the Superior Way



**THE SUPERIOR**—The only stanchion made that will adjust to tie from your smallest calf to your largest export steer.

Our book on stable equipment gives the most modern, practical business getting ideas of the leading Stock and Dairy men of to-day. It is free. Write for it to-day to

**The Superior Barn Equipment Company**  
FERGUS, CANADA

The Superior Way of stabling cattle is the only way that will reduce the stable labor, time and money problem to a minimum.

1st. They cost no more than the old method of stabling your cattle, and will out-wear three of the old style.

2nd. You can tie ten head of stock while you would be tying one the old way, and you run no risk of getting your ribs broken or injury in any way.

3rd. You cut the feeding and cleaning out work in two.

4th. Your cattle have the maximum of freedom consistent with cleanliness.

5th. The Superior Way makes stable drudgery a pleasure.

## Make Your Cows Comfortable

and you'll get more and better milk. No guess-work about it. The biggest dairymen are demonstrating to their profit that

### Champion Cow Stanchions



quickly pay for themselves in increased milk production. Easy to instal. Won't break or blister. Self-locking. Write for more particulars to

Ontario Wind Engine & Pump Co.,  
Limited,  
WINNIPEG, TORONTO, CALGARY

## SWEATER COATS and SWEATERS

In all Styles and Colors

### JERSEY HOSE AND ATHLETIC SUITS

Made in Club Colors to order, with special club insignia.

Designs submitted.

Get our Catalogue and Prices.

## Scott Knitting Company

352 QUEEN ST. W., TORONTO.

PHONE MAIN 4440.

(Continued from page xxiv.)

A little fly, cooked in the pie,  
 Gives it a little savour;  
 That beastly duff's the darndest stuff,  
 It really has no flavor.

Be not misled by what you've read,  
 For we are going strong;  
 We're gaining weight, at a whole of  
 a rate,

And we'll be Sophs. 'ere long.  
 —S. P. C. F.

### The Rugby Alphabet.

A stands for Archie whose play is  
 supreme,  
 B stands for Boog Madden who cap-  
 tains the team;  
 C stands for Chirpey whose play is  
 some class,  
 D stands for Dub Kilgour who signals  
 the pass;  
 E stands for Evert who tackles right  
 low,

(Continued on page xxx.)

**Vanco**  
**LEAD ARSENATE**

is better in every way, than any other spray for  
 worm, codling moth, potato bugs, asparagus  
 beetle and other leaf-eating insects. **Vanco**  
 sprays easier, sticks to the leaves better,  
 does not burn the foliage, and always kills  
 the insects. Contains guaranteed

CHEMICAL LABORATORIES LIMITED  
**VANCO**  
 CHEMICAL LABORATORIES LIMITED

amount of arsenic oxide—of uniform  
 strength and highest quality. It is made in  
 Canada. This means no duty to pay, lowest  
 prices, lower freight from a Home industry.  
 Our book on Spraying is free. Write for a copy  
 Fertilize us—We also sell Nitrate of Soda, Nitrate  
 of Potash, Sulphate of Potash and Acid Phosphate.

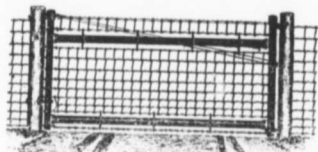
**Chemical Laboratories Limited**  
 120-120 Van Horne Street, TORONTO.

# Who Left The Gate Open?

The hired man, stranger, your own boy, your wife, or perhaps yourself.

## WHY?

Because it was so hard to open and shut. Use the CLAY GATE and a small  
 boy can handle it with ease.



Write for particulars of our Sixty-Day Free Trial Offer to

**CANADIAN GATE COMPANY, Ltd.**  
 GUELPH, - - - - - ONT.

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

**A GIFT EVERY MAN WANTS**

**“EZE” SUSPENDERS**

(Pronounced “Easy”)

“EZE” (pronounced easy) Suspenders are so stylishly finished, and the quality is honest through and through. Better still, they have the famous “EZE” double back.

In a Handsome Christmas Box without extra charge

Dressy colors; smart designs; sizes for all men, big or little.

A pair of “EZE,” in fancy 50c box

A pair of “EZE,” with armbands and garters, in fancy \$1.00 box

If your dealer hasn't them, write us. Postpaid anywhere upon receipt of price.

**THE KING SUSPENDER CO.**

64-68 Adelaide St. E., TORONTO



PROFIT BY THE RESULTS SECURED BY SOME OF  
THE MOST SUCCESSFUL STOCK BREEDERS IN CANADA AND USE

# Schumacher Feed

(A balanced ration of Corn, Oats and Barley)

A TRIAL IS ALL THAT IS NEEDED; THE RESULTS  
YOU SECURE WILL KEEP YOU A CONSTANT USER

If your dealer does not handle our feeds, we will appreciate your  
giving us his name.

**The Quaker Oats Company, Peterboro**

**The Rugby Alphabet.**

(Continued from page xxviii.)

- F stands for our Full back Stirett you know;
- G stands for Gurth Wiltshire who is right in the scrim,
- H stands for Bunny Hare who is always in trim;
- I stands for I who am watching the game,
- J stands for Jumbo of ponderous fame;
- K stands for the Kick Webster gives when he ties,
- L stands for things useful—that is to say Lies.
- M stands for three M's Mac, Moorehouse, and Morse,
- N stands for Slats Neelands a man with some force;
- O stands for Old Raynor, a son-of-a-gun,
- P stands for Prixy, some man for a run;
- Q stands for Query, they ask "Whose Ball!"
- R stands for Ref. on whom the— does fall;
- S stands for Skin Porter who bucks like a horse,
- T stands for Tubby in other words Nourse;
- U's for the Umpire who on the game keeps an eye.
- V stands for five or the score for a try;
- W stands for Happy Williams—last but not least,
- X stands for excitement of which there's a feast.
- Y stands for the yells while they fight for the ball,
- Z stands for Zero or nothing at all.

—N. I. W.

**DON'T PUT MONEY  
IN A LETTER!**

Letters are frequently lost or mislaid. The proper way to remit money is by

**DOMINION  
EXPRESS****MONEY ORDERS  
AND FOREIGN  
DRAFTS**

They are issued in the currency of the country on which drawn, and are payable in all parts of the world. If lost or delayed in the mails, a prompt refund is arranged or new order issued without further charge. Travellers' Cheques, issued in denominations of \$10, \$20, \$50, \$100 and \$200, the handiest way of carrying funds. Foreign Money Bought and Sold. Money transferred to all parts of the world by Telegraph and Cable.

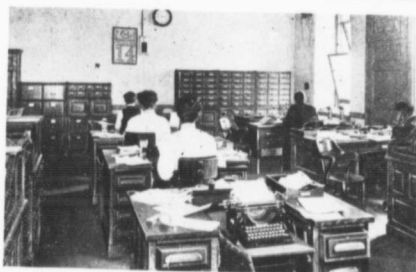
AGENCIES THROUGHOUT CANADA.

Dominion Express Company.

General Offices: Toronto, Ontario.

**Economy  
Convenience  
Safety**





## Let Us Fit Our System TO YOUR BUSINESS

We have devised eight standard Systems, which cover practically every Department of Business activity. These Systems are in use in many Business Houses all over Canada. We will gladly send complete information about our helpful, practical, economical Systems if you will request the information, and tell us what papers you want to file, on your letterhead.



**OFFICE SPECIALTY MFG. CO.**  
LIMITED

Head Office: 97 Wellington St. West,  
TORONTO

Branches, Halifax, St. John,  
Quebec, Montreal, Ottawa,  
Hamilton, Winnipeg,  
Regina, Calgary,  
Vancouver.

For Policyholders Only

During the past five years the

# Mutual Life of Canada

Has earned in profits for its policyholders

**\$2,262,158**

Being 23.43 per cent. of the premiums received for that period.

PROFITS EARNED IN:

1906	1907	1908	1909	1910
\$335,325	\$381,146	\$428,682	\$501,922	\$615,083

PROFITS EARNED IN PER CENT. OF PREMIUMS RECEIVED:

1906	1907	1908	1909	1910
20.9%	21.99%	23.36%	24.49%	27.39%

GEORGE CHAPMAN, District Manager,  
Office 8 Douglas Street, - - - GUELPH, ONT.



Hockey Boots, Skates and Sticks  
Sweaters and Sweater Coats  
College Cushions  
Banners and Athletic Supplies



**J. BROTHERTON**

550 Yonge Street, TORONTO, ONT.

SEND - FOR - ILLUSTRATED - CATALOGUE



We stake our reputation on these splendid boots.

**The Hartt, Derby  
and Model**

\$3.50 to \$5.00.

Hockey Boots,  
Hockey Skates,  
Hockey Gauntlets.

No charge for fastening skates.

**W. C. GOETZ**

Opp. Ryan's

The Pages of This Journal Are  
Printed on

**Reilance Coated  
Book**

Manufactured under a Special  
Formula Exclusively for

**THE BUNTIN, REID Co.**  
of Toronto, Ont.

by

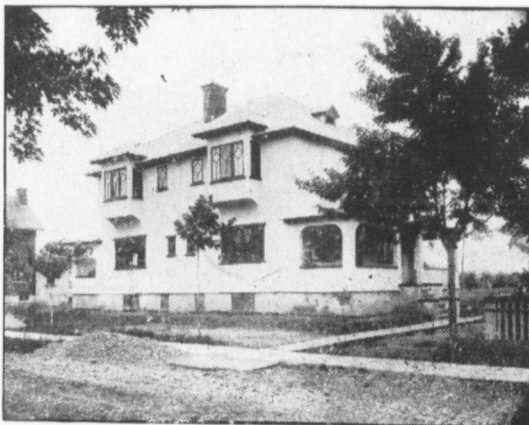
**The Canada Coating Mills Co**  
of Georgetown, Ont.



When you shingle that barn roof, or when you put up new buildings, on the farm, be sure and see that asbestos shingles are used. They need no paint, will not crack or rot, are fireproof and indestructible.

There are many kinds of asbestos shingles, the best, the kind made with the finest cement, and high grade asbestos, sold under a trade name, for your guidance, and satisfaction.

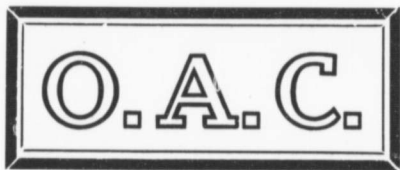
Insist on Bestoslate Asbestos Cement Shingles. Write for catalog, showing uses of asbestos. Mention this magazine please.



**The Asbestos Mfg. Co.**

E. T. Bank Bldg.,  
Montreal.

*"Bestoslate"* Shingles  
Are The Genuine



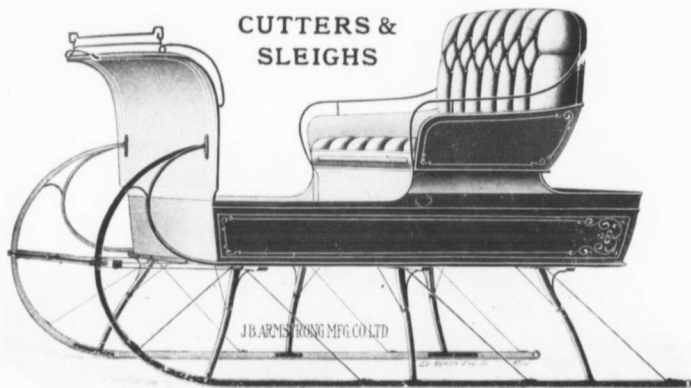
Students will make no mistake if they make the Golden Fleece headquarters for Men's Furnishing. Fine tailoring our specialty. The very newest things in Golf and Hockey Coats. Best qualities of underwear, including Dr. Diemel, Dr. Jager, Stanfield's, Woolsley's and other makes. A beautiful line ready to wear Ulsters, real waterproof coats. All are invited to look through at

## KELEHER & HENDLEY

Macdonald Hall ladies will find our furs stock up to the minute; also Golf Coats.

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

CUTTERS & SLEIGHS



A variety of styles in panneling and decoration. Catalogue and prices on application.

THE J. B. ARMSTRONG MFG CO., LTD.  
GUELPH, - - - - - ONTARIO.



KANDY KITCHEN AND QUALITY  
STAND FOR ONE AND THE SAME THING  
THE PUREST AND BEST IN

CHOCOLATES, BON-BONS, ETC.

WHILE WAITING FOR A CAR DROP IN AND ENJOY A  
Hot Chocolate or Soda  
YOU WILL COME AGAIN.

The Kandy Kitchen



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



**Opportunities in**



**Western  
Canada**

Immense new fields of activity have been thrown open for the Manufacturer, Agriculturist and Business Man in Western Canada; and easy access has been given to new unspoiled territories where opportunities are afforded for every kind of enterprise.

#### INDUSTRIES

The best of six provinces is available along the line of the Canadian Northern Railway system. There is coal, and plenty of it in Nova Scotia and Alberta; Ontario is noted for its extensive quantities of Iron, Nickel, Copper and Silver. The greatest Water powers in Canada are adjacent or within transmissible distance of Canadian Northern Towns. FOR THE SPORTSMAN and TRAVELLER—lake river and mountain scenery from Atlantic Coast to the Rockies; Moose, Caribou, Elk, Black Bear, and Deer; Salmon, Trout, Ouananiche, Tuna and Black Bass.

#### FARMING

The Canadian Northern traverses the most fertile sections of Western Canada; through the famous Saskatchewan Valley wheat lands, the well-wooded, well-watered Prince Albert and Shellbrook district. The Railway lands—thousands of acres—were selected by experts. The services of the Land Department are free to homesteader and land-buyer alike.

WRITE TO THE INFORMATION  
BUREAU

**CANADIAN NORTHERN RAILWAY SYSTEM, TORONTO.**

## **Something for the Floks at Home**

### USEFUL CHRISTMAS GIFTS.

Have you ever received a Xmas Gift from classmate or friend, which was purchased at a distance—perhaps hundreds of miles away? No doubt you have—and well do you remember the thrill of appreciation experienced. Don't you think that the folks at home would be delighted with a gift purchased in your college town? Of course they would.

Macdonald's is a storehouse of suitable and sensible gifts for everyone—Father, Mother, Sisters, Brothers and Him or Her. Here you will find a most comprehensive display of beautiful and sensible gifts—Neckwear, Gloves, Handkerchiefs, Leather Goods, etc.—all neatly arranged in seasonal boxes and convenient for delivering.

Come in and have a look—It's no trouble to show goods and we consider it a pleasure to serve you.

#### **O. A. C. and Macdonald Cushion Covers, \$1.00 each.**

Leather and Felt Cushion Covers in College colors, with college monograms—just the thing to give a classmate or friend. By a special purchase we are enabled to sell these regular \$2.50 covers at \$1.00 each.

#### **COLLEGE CLOTHES FOR COLLEGE MEN.**

We are exclusive agents for the famous 20th. Century Brand Clothes; for men and will appreciate a call from you at any time. We take pleasure in showing these clothes and in talking about their good points.

We are also well stocked with the best lines from other well known makers and guarantee to give every customer entire satisfaction or their money back.

See our line of Dress Suits and accessories.

**D. E. MACDONALD & BROS.**

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# Griffin's Theatre Royal

## GUELPH'S BIG Amusement Resort



PRESENTING HIGH CLASS OPERA COMEDY AND  
DRAMATIC PRODUCTIONS.

Only the very best shows coming to Canada are seen at Griffin's. Same attractions that play the Princess and Royal Alexandria Theatres, Toronto, and at same prices—quite frequently at lower prices—a high class motion picture and vaudeville programme is run every evening at 8 o'clock.

ALL SEATS 10 CENTS.



When in Guelfh there is no more pleasant place to spend the evening. Always a good show. Remember the place.

# GRIFFIN'S The Big Theatre

JOHN C. GREEN, Manager.

**A \$3,000  
Stock Book  
Free**

**Contains 183 Large Engravings.**

This book cost us over \$3,000 to produce. The cover is a beautiful live stock picture, lithographed in colors. The book contains 160 pages, size 6½x9½, gives history, description and illustration of the various breeds of horses, cattle, sheep, hogs and poultry. Many stockmen say they would not take five dollars for their copy if they could not get another. The finely illustrated veterinary department will save you hundreds of dollars, as it treats of all the ordinary diseases to which stock are subject and tells you how to cure them.

**MAILED FREE. POSTAGE PREPAID.**

Write for it at once and answer the following questions:

- 1st—Name the paper you saw this offer in.  
2nd—How many head of stock do you own?

ADDRESS AT ONCE

**International Stock Food Co.**  
TORONTO, CANADA,

Sole Manufacturers of

**INTERNATIONAL STOCK FOOD**  
**THREE FEEDS FOR 1 CENT**

**INTERNATIONAL STOCK FOOD, 3 FEEDS FOR ONE CENT**, is a purely vegetable MEDICINAL preparation composed of roots, herbs, seeds, barks, etc. It is equally good and very profitable to use with horses, colts, cattle, cows, calves, hogs, pigs, sheep or lambs, because it purifies the blood, tones up and permanently strengthens the entire system, keeps them healthy and generally aids digestion and assimilation, so that each animal obtains more nutrition from the grain eaten. In this way it will save you grain and **MAKE YOU LARGE CASH PROFITS**. You don't spend money when you feed **International Stock Food**. You save money because the **GRAIN SAVED** will pay much more than the cost of the **International Stock Food**. Refuse all substitutes and get paying results by using only the genuine **International Stock Food**.

**THREE FEEDS FOR 1 CENT**  
**Dan Patch Mailed Free**

When you write for Stock Book mentioned above ask for a picture of Dan Patch 1:55, and it will be included free of charge.

**International Stock Food Co.**  
TORONTO, CANADA.

# College Days

Will be made happy if you own a Camera. Remember the folks at home will enjoy the pictures you take, as well as you will in after years, when you will never tire of using them to recall the friends and scenes of your O. A. C. days.

Remember that our stock of Cameras and Supplies is the largest in Western Ontario, also that the Photographic Department of this store is second to none in Developing, Printing, Mounting and Enlarging Work. Get your Drugs, Stationery and Toilet Articles at

## Petrie's Drug Store



## "Banner" COLD Blast Lanterns

We recommend the "BANNER"

—BECAUSE—

It will last longer,  
Has Patent Automatic Lift Lock,  
Has Patent Double-seamed Oil Well,  
Burns fifteen hours longer than others,  
Has Solid Non-corroding Brass Burner,  
and  
Costs you no more than inferior lanterns.

A Coupon for a Calendar in Every Lantern

FOR SALE BY ALL FIRST CLASS  
DEALERS.

**Banner Lantern & Lamp Co., Limited**  
HAMILTON, ONTARIO.

## Official Calendar of the Department of Education for the year 1911

### December:

1. Last day for appointment of School Auditors by Public and Separate School Trustees. (On or before 1st December.) Township Clerk to furnish to the School Inspector information of average assessment, etc., of each School Section. (On or before 1st December.) Legislative grant payable to Trustees of Rural Public and Separate Schools in Districts, second instalment. (On or before 1st December.)
11. Model School Final Examination begins. (Subject to appointment.)
12. Returning Officers named by resolution of Public School Board. (Before 2nd Wednesday in December.) Last day for Public and Separate School Trustees to fix places for nomination of Trustees. (Before 2nd Wednesday in December.) Local assessment to be paid Separate School Trustees. (Not later than 14th December.)
15. County Council to pay \$500 to High School and Continuation School where Agricultural Department is established. (On or before 15th December.)
- Municipal Councils to pay Municipal grants to High School Boards. (On or before 15th December.) Model Schools close.
22. High Schools, first term, and Normal, Public and Separate Schools close. (End 22nd December.)
25. Christmas Day (Monday). New Schools, alterations of School boundaries and consolidated Schools go into operation or take effect. (Not to take effect before 25th December.)
27. Annual meetings of supporters of Public and Separate Schools. (Last Wednesday in December, or day following if a holiday.)
31. High School Treasurers to receive all moneys collected for permanent improvements. (On or before 31st December.) Protestant Separate School Trustees to transmit to County Inspectors names and attendance during the last preceding six months. (On or before 31st December.) Auditors' Reports of cities, towns and incorporated villages to be published by Trustees. (At end of year.)

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

## The Royal Military College of Canada



**T**HERE are few national institutions of more value and interest to the country than the Royal Military College of Canada. Notwithstanding this, its object and the work it is accomplishing are not sufficiently understood by the general public.

The College is a Government institution, designed primarily for the purpose of giving instruction in all branches of military science to cadets and officers of the Canadian Militia. In fact it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the College course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

The strict discipline maintained at the College is one of the most valuable features of the course, and, in addition, the constant practice of gymnastics, drills and outdoor

exercises of all kinds, ensures health and excellent physical condition.

Commissions in all branches of the Imperial service and Canadian Permanent Force are offered annually.

The diploma of graduation, is considered by the authorities conducting the examination for Dominion Land Surveyor to be equivalent to a university degree, and by the Regulations of the Law Society of Ontario, it obtains the same exemptions as a B. A. degree.

The length of the course is three years, in three terms of 9½ months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about \$800.

The annual competitive examination for admission to the College, takes place in May of each year, at the headquarters of the several military districts.

For full particulars regarding this examination and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont.; or to the Commandant, Royal Military College, Kingston, Ont.

H.Q. 94—5,  
9—09.

## Take Advantage of Your Opportunity

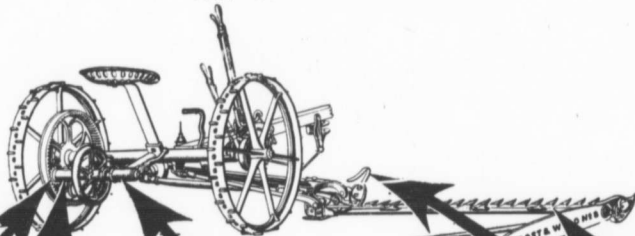
To purchase a Life Insurance Policy and thereby create for yourself an immediate estate sufficient to meet all liabilities in case of your death. At the same time, you would have a valuable investment in case you survive. Write NOW for particulars.

W. E. BROLEY, General Agent, Elora.

# The Manufacturers Life

## Insurance Company

HEAD OFFICE, . . . . . TORONTO, CANADA.



**Your Farm  
Needs  
This  
Worry Saver**

Expect more of this mowing machine than you ever did—or dare—expect of another. It will surely meet your expectations. For the Frost & Wood Number Eight actually DOES run easier (and so spares horses). It actually DOES stand the hardest usage year after year, with fewest repairs. It actually does get the mowing done more quickly, and with less wear and tear on you, on the team, and on the machine itself. These are not mere assertions—they are facts, and can be proved to you. Write us for reasons why YOU need a

**Frost & Wood**  
**number eight mower**

There is no room here to fully describe the betterments (found alone in Frost & Wood Mowers) illustrated here. But you should inform yourself about them. You should know the value of the double brace and roller bearings (see picture B) of the big bearings and double-strength ray (picture C) between cutter bar and main frame. You should appreciate the quick starting device of the Internal Gear (picture A) and the Wearing Plate under the cutter bar (picture D). Each of these, and many other Frost & Wood improvements greatly add to the life of this Mower and vastly increases its service. This is the mower that will not stall in the heaviest hay—that gives least boiler and most efficiency. There is a catalogue worth reading that tells everything about it. Ask for F.

Request Free Catalog

**FROST & WOOD CO., Ltd., SMITH'S FALLS  
C A N A D A**

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



D  
1.

11.  
12.

15.

## WINDSOR TABLE SALT

Salt goes in or on practically everything we eat—which shows the importance of using only pure, wholesome salt.



Windsor  
Table  
Salt is pure  
salt—all salt—and nothing  
but salt. It is the standby in  
all Canadian homes.

35

Your grocer is sure to have it.

## Sporting Goods for O. A. C. Students

# "RUGBY"

For years we have supplied O. A. C. students with the best sporting and athletic goods obtainable in Canada. For the Rugby season we are showing an extra fine line of Clothing, Pads and Boots.

Our 1911 RUGBY Boot at \$3.50 is the greatest value ever offered. "Yale" cleats, solid toe—sole will not spread over sole—extra light.

Send for special Rugby Catalog.

## O. A. C. PENNANTS AND CUSHIONS

Every student needs College Pennants and Cushions. We have the largest assortment in Canada.

SEAL PENNANT, size 15x34 inches, with the official college seal, price, \$1.00.

SEAL CUSHION, size 24x24 inches, with the official college seal, price, \$2.00.

PLAIN PENNANTS, in official college colors, size 11x32 inches, price, 50c.  
size 7x18 inches, price, 25c.

Special Monogram Pennant, size 11x30 inches, price, 75c.

Send for our complete Catalog of Athletic and Sporting Goods.

**Harold A. Wilson Company, Limited,**  
297-299 Yonge St., Toronto.

McTaggart is a master of the fine points in judging horses. At a class last week he gave as a reason for placing one up that, "she is better fleshed on the breast and has a sweeter croup."



Freshman—Mr. Graham, do you think a memory for dates helps a man in the poultry business?

Professor Graham — Sometimes, but not when he is selling spring chickens.



Davies—I hear one of the boarders in your house was forcibly ejected last night.

McElroy—No, it was only a rumor.



*Wishing You*  
*A Merry Christmas*  
*and*  
*A Happy New Year*



**Advertiser Job Dept.**  
LONDON, ONT.







## Do You Keep Cows, or Do they Keep You?

A few cows should do much toward making your farm a paying proposition. If not, there is something wrong.

Three things are necessary to make the dairy yield a satisfactory profit:—

**FIRST—Good Cows.**

**SECOND—Proper Feeding and Care.**

**THIRD—Proper Disposition of the Milk.**

No matter whether you have half a dozen cows or half a hundred, it will pay you to take steps to see that you secure the proper returns from this source—be sure that your cows are more than self-supporting.

Some helpful hints will be found in



*“PROFITABLE DAIRYING,”*

Which may be had  
from any

**Massey-Harris Agent.**

# An Interesting Incident at the Exposition

## DE LAVAL'S FRIENDS LOYAL

**A**MONG the many visitors to our booth at the Exposition was a lady who wanted our representative to show her a DE LAVAL. He took the separator apart for her and she seemed surprised at its simplicity and especially at the short time it took to take the machine apart and put it together again. ¶ "Why," said she, "I've got a separator in on trial and their agent told me that the DE LAVAL was complicated, and that it was hard to wash and that the discs would soon rust." ¶ Just then a lady close by spoke up and said, "Why, it's no such thing. I've had a DE LAVAL for eight years and I've never had a bit of trouble with it. It's just as good now as it was when I bought it, and besides it will skim cold milk, and that's what the machine you've got won't do, or any other that I know of, for that matter." ¶ By that time a dozen or more had gathered round and no less than seven people spoke up and said that they owned DE LAVAL separators and that they were giving splendid satisfaction. ¶ There was one man in the crowd whom the lady looking at the DE LAVAL knew, and she turned to him and asked, "You've got a machine like the one I'm trying out. Isn't it alright?" "Well," he admitted, "it's certainly better than skimming by hand, but it's mussy and gets milk on the floor; it's hard to turn, and if I were going to buy a new separator to-day it would be a DE LAVAL. I know more about cream separators now than I did two years ago. My brother has a DE LAVAL and he has tried them all and says the DE LAVAL is the best."

Our salesman didn't have a chance to talk the merits of the DE LAVAL. Our good friends in the crowd persuaded the lady that she ought to give the DE LAVAL a trial before she made any choice, and before she left the hall she gave an order to have a DE LAVAL sent out to her house, and after a ten days' trial she bought the DE LAVAL.

There is a moral to this story: Don't buy a cream separator until you have given the DE LAVAL a trial. It costs you nothing to try it.

---

The More You Come to Know about CREAM SEPARATORS the More  
apt You Will be to Buy a DE LAVAL.

---

## De Laval Separator Company

173-177 WILLIAM STREET,    ::    ::    ::    MONTREAL.