

Volume XXV.

Number 2

O.A.C REVIEW

November



1912

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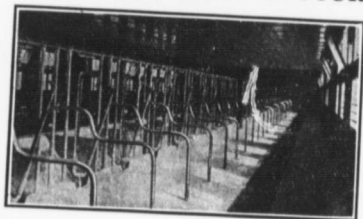


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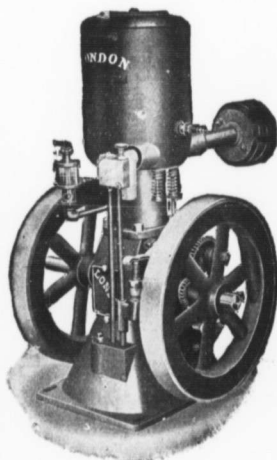
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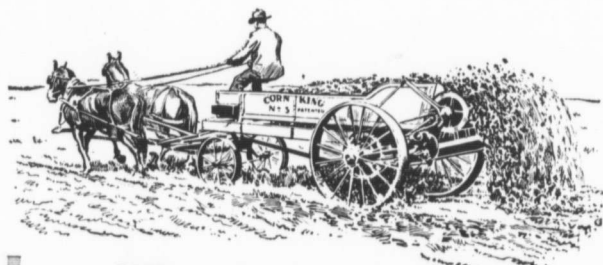


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Series B.

NOVEMBER, 1912.

No. 2

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THE O. A. C. REVIEW

THE DIGNITY OF A CALLING IS ITS UTILITY

VOL. XXV.

NOVEMBER, 1912.

No. 2

A Successful College Career

"A Light to Guide—A Rod to Check the Erring."

PROFESSOR J. B. REYNOLDS.

YOUNG men going to college for the first time find themselves face to face with an entirely new set of opportunities, and, likewise, a new set of obligations. There are the social opportunities afforded by meeting classmates of widely different types, with widely different ideals and outlooks. There are the fraternal opportunities of the various college societies. There are the educational opportunities of the classroom and the library. Each of these opportunities brings with it its obligations. Social intercourse is mutual, and every right-minded student, while he may and should derive profit from meeting other types, will remember that his own personality must have its effect on other members of his class, as well as in making up the average of character by which his class becomes distinguished. The college societies—athletic, literary and religious—are the means for all-round development, but it is easy for sport to degenerate into rowdiness, and for the literary and Y. M. C. A. meetings to become merely formal affairs without life or character. Every student is under obligation to see that the college games and sports are clean and manly in spirit, and to use his talents and his enthusiasm to make the society meetings

truly effective. As for the educational opportunities, it is wise to remember that they are of a special character not often to be enjoyed outside of a college, and in this matter there is a double obligation. The parents, who in many instances are making some sacrifice to send their sons to college, have a right to expect that their sons shall acquire a reasonable measure of the education the college is prepared to give. Besides, the state, in this particular instance the Province of Ontario, which, after all, bears most of the expense of this education, has a right to expect every student to develop into a well-informed and useful citizen.

No time in a man's life is so critical as are the years spent at college. These years usually come at a very impressionable period, when opinions are in the making and habits are being formed. College life, also, is intense in the number and variety of influences that leave their mark on character. To make the situation even more critical, at college a young man has usually dismissed the pilotage that guided his earlier years, and henceforth must trust in a large measure to his own skill in self-guidance.

It will do no young man at college any harm to reflect seriously upon the

critical situation in which he has been placed, and to choose deliberately the means within himself and in his surroundings that will insure success. There are many pitfalls to beset his path—pitfalls of habit and of faith—and it is the height of unwisdom to neglect the means that will safeguard his course.

An academic adviser would probably lay emphasis upon habits of close study and attention at lectures. A religious adviser would probably counsel holding fast to established creeds, lest the new ideas that come with scientific studies should make shipwreck of faith. Both of these lines of advice are good, but there is something back of it all upon which it is necessary to rely. There is no surer safeguard against the waste of opportunity and the disregard of obligation than to have a strong compelling purpose which shall prompt every thought and every deed. Every man

must choose for himself what that purpose shall be, only let him see to it that it is worthy of the best that is in him. It may be the comparatively narrow, exclusive purpose to stand high in the class lists. It may be the broader purpose to play the man in all his college relation, and so to use his time at college that he will become of the highest service to his country. There is no worse situation in which a young man can be placed than to be the plaything of chance desires and impulses. There is no greater curse in life than irresponsibility, to feel that one owes nobody anything, and that there is no better thing in life than to obey the whim of the moment. The choice of a worthy purpose, and the consequent devotion of energy and enthusiasm to accomplish that purpose, enable one to avoid vain temptations, and will bring success to the measure of the talents that have been given.

• • • • •

LOST FOREVER

'Tis possible to lose a friend, and yet
 Another find; a sister's love forget,
 A brother's sympathy, in that fond love
 That seems to flow direct from Heaven above;
 God even may replace the little child
 Whose innocence our lonely hours beguiled;
 A fortune may be lost, another found;
 An exile to another land be bound
 By ties imperishable; colors new
 May thrill his soul, his dauntless eyes bedew;
 Intelligence may be restored when lost,
 E'en reputation blighted by the frost
 Of calumny; a soul to innocence
 Again be brought by tears of penitence;
 But that which never can be found again,
 In Heaven or Hell, or in this world's domain,
 O'er land or sea, in ev'ry age and clime,
 Whenever it has once been lost, is—Time.

—L. E. O. Payment in University of Ottawa Review.

Cost and Profit Per Cow

By CHAS. F. WHITLEY
In Charge of Dairy Records, Ottawa.

WHEN it is claimed that many dairymen have an investment of from five hundred to one thousand dollars for every gallon of milk produced daily, it is evident that many phases of modern dairying might well be submitted to a more strict accounting than they receive from the average farmer.

The householder who finds the price of milk gently increased two cents per quart on the first of October after a good season for abundant milk production, wonders if the farmer is keeping the receiving teller at the bank busy, or if the middleman, the distributing company, is hoping to pay extra dividends to the stockholders.

The average man naturally enquires what is the cost of milk production? Round that point hovers a multitude of queries. We might remain content with calculating the price of 100 pounds of milk from the cost of feed per cow. But surely one must keep track of certain fixed charges, such as interest on the investment in live stock and buildings. Taxes, insurance and depreciation must also be reckoned. Others items, as keep of bull, bedding, light, veterinary services, etc., all add to the cost. In some cases the total of such fixed charges which augment the cost of keeping a cow for a year, not including the value of feed, has been thoughtfully computed and put at sixty-five dollars per cow. (What proportion of cows in Ontario bring in sixty-five dollars for the milk they produce?)

It will pay a man, if he considers such an estimate of cost to be unreasonable, just to sit down and figure out where it is astray and what it does actually cost him. Labor, which in the case of one's self or family, is often ridiculously under-estimated, or again in the case of the incompetent hired help is overpaid, has to be valued at some price and will vary from perhaps eighteen to forty dollars per cow. Similarly, the other items enumerated must all be considered, while in many cases, hard cash is actually paid out for them.

Out of these reflections must come this all-important thought, the modern dairy cow must be an abundant producer. Then to the practical dairyman filters this disquieting idea, does each cow in my herd pay a good profit?

If it is agreed that the best method of increasing the profit is to lessen the cost of production, and if it is not feasible to reduce materially those upbraiding fixed charges, can we not arrive at some immediately useful suggestions? Three things are clear, the cost will be lessened, first, as there is improved quality in the cow, obtained through wiser and more definite breeding and selection. Second, as improved methods are used in feeding and producing the feed; third, as improved ideas are introduced in caring for the cow, so that the feed can produce milk. This includes suitable building construction with attention to light, ventilation, fastenings, cleanliness, etc., and usage of the animal.

One little word, "selection," was

slipped in under the first item, which every dairyman should thoughtfully consider. Selection based on the records of actual production of milk and fat is a logical, simple and paying proposition. The initial step in securing a herd wherein each cow makes a good profit above the cost of feed, plus those fixed charges, is knowledge of what each cow produces. Neither the total nor the average gives this necessary information. A record of each individual cow separately is indispensable. We do not need to pride ourselves so much on the possession of phenomenal cows that give three thousand pounds of milk per month, but we do need, most emphatically, to rid ourselves of those drones that give a bare three

thousand pounds during the factory season. A few minutes, scarcely ten minutes a month, will give a record clear and concise of each cow's production and, consequently, of her claim to a position in the business dairy herd of to-day. Dairy farmers in every province have found it profitable to commence cow testing; some are now getting twice as much milk per cow, because the poor ones have been detected and beefed, and because intelligent selection of the best is as simple as A B C.

If you wish to commence the fascinating study of each individual's production and profit, write to the Dairy Division, Ottawa, for milk and feed record forms and a copy of the report on cow testing.



IN NOVEMBER

The hills and leafless forests slowly yield
 To the thick-driving snow. A little while
 And night shall darken down. In shouting file
 The woodmen's carts go by me homeward-wheeled,
 Past the thin fading stubbles, half concealed,
 Now golden-gray, sowed softly through with snow,
 Where the last plowman follows still his row
 Turning black furrows through the whitening field.
 Far off the village lamps begin to gleam.
 Fast drives the snow and no man comes this way;
 The hills grow wintry white, and bleak winds moan,
 About the naked uplands. I alone
 Am neither sad, nor shelterless, nor gray,
 Wrapped round with thought, content to watch and dream.
 —Lampman.

Forestry Convention at Victoria, B.C.

PROFESSOR E. J. ZAVITZ, M. F.

THE Canadian Forestry Association held its fourteenth Annual Convention at Victoria, B. C., on September 4th, 5th and 6th. Representatives were present from all of the important forest provinces of the Dominion and from several of the large lumbering states across the border. Among the prominent members present were the following: Hon. J. R. Fleming, the Premier of New Brunswick; Hon. Jules Allard, the Minister of Lands of Quebec; Hon. Colin Campbell, Attorney-General of Manitoba; Hon. W. A. Charlton, M. P., Vice-President of the Canadian Forestry Association; Geo. Harcourt, Deputy Minister of Agriculture for Alberta; A. F. Mantle, Deputy Minister of Agriculture for Saskatchewan; Aubrey White, Deputy Minister of Lands and Forest for Ontario; Dr. Bernard E. Fernow, dean of the Forest School of the University of Toronto; R. H. Campbell, Dominion Director of Forestry.

It will be of interest to O. A. C. students to note the Alumni of this College who were in attendance at this convention: Dr. J. F. Clark, Forest Engineer, Vancouver; R. D. Craig, Forest Engineer, Vancouver; H. R. MacMillan, Chief Forester for British Columbia; R. D. Prettie, Superintendent of Forestry, C. P. R.; J. R. Dickson, Forester, Dominion Forestry Branch; J. D. Gilmour, Forester, B. C. Forest Branch.

It has been the custom of the Canadian Forestry Association to hold annual meetings in the various provincial capitals in order to create local interest in its proceedings. In earlier

meetings much of the discussion was theoretical, and did not seem to lead to direct results. The meeting at Victoria was opportune and marks a new era in the forestry movement in Canada. British Columbia has lately enacted a new Forest Act, which is very progressive, and aims at a rational disposal and conservation of the forest wealth of the province. The premier of the province, Sir Richard McBride, took a personal interest in the convention, and delivered the address of welcome in which he showed that as head of the administration he was fully impressed with the importance of an organized forest service for British Columbia. The Hon. W. R. Ross, Minister of Lands, who has jurisdiction over the province's forests and in whose department the new Forestry branch is placed took an active part in the proceedings, and in the most important address of the convention dealt with the workings of the new Forest Act.

By this Act the Forest Branch was created and given most extensive powers in regard to the timber and forest lands of the province. These powers include the entire administration of the crown forests, control of revenues, protection from fire, reforestation, sales and disposal of timber lands, regulation of the traffic in timber and logs and the enforcement of statutes relating to the regulation of the forest. The power of enforcing the statutes of this Act is placed in a Forest Board, consisting of the Chief Forester, ex officio, and five other Foresters or other officials of the department.

H. R. MacMillan, B.S.A., M.F., who was appointed Chief Forester, is gathering about him a fine staff of trained foresters and this is one of the encouraging features of this new administration. It is being handled and developed by technically trained men.

It would be impossible to consider in detail all the interesting features of this convention. Such problems as fire protection, avoidance of waste in lumbering operations, prevention of clearing non-agricultural lands for settlement, and other problems uppermost in the minds of lumbermen were very fully discussed. One important announcement made by the Hon. W. R. Ross, was that the government of British Columbia intended to establish a school of forestry in connection with the new provincial university.

The convention was notable on account of the large number of practical foresters, lumbermen, and crown land officers, in attendance and the frequent discussion of actual meas-

ures, which have been brought into effect by the government of British Columbia, for the preservation of its forest resources and the proper exploitation of its lumber products.

The Canadian public are beginning to take hold of the conservation idea and the Canadian Forestry Association has done much to bring about a knowledge of these questions. Through the holding of such conventions, with the co-operation of the press, the forestry needs of the country are reaching the ears of the average voter and citizen. In Canada the great forest areas are still in the hands of the crown. Few people realize that forest revenues in a large part support public institutions, which otherwise would have to be assisted through direct taxation. Destroy our forest resources and it will affect the pocket of every citizen. Why should not every citizen be a member of the Canadian Forestry Association, as through its efforts proper legislation of forest problems may be effected?

WHAT WAR REALLY MEANS

BULLET wounds, bayonet wounds, sabre wounds, shell wounds; men writhing all night on the ground with their bowels protruding; others with half their face shot off; others dismembered but alive; some stretched on red-hot decks, their mutilated stumps frizzling; some staining the sea as they drown; some dropping in fragments from the sky; dysentery, enteric, typhoid, cholera, plague; farms burnt, harvests destroyed, factories stopped, mills closed; grain, flour, cotton, wool, all that men need for life, sunk at sea, or wasting useless at the ports; credit ruined, employers bankrupt, workmen starving; riot and arson; crowds bludgeoned by the police or cut down by the troops; debt piled up, progress arrested, a few speculators enriched and the rest of the world impoverished; none of the professed objects of the war accomplished, and no one knowing or caring what they were; a legacy of hatred and lust for revenge, promising in a few years a renewal of the struggle; funerals in Westminster Abbey for those who were responsible for producing this result, and ignominy, contempt, or martyrdom for all who oppose it." —Weekly Sun.

The Fullback

From "Stover at Yale," by OWEN JOHNSON.

ALL ready—get out, boys!" Dana came running back. Yale had won the toss and had chosen to kick off.

Some one pulled his sweater from him, struck him a stinging slap between the shoulders, and propelled him on the field.

"Yale this way!"

They formed in a circle, heads down, arms locked over one another's shoulders, disputing the same air; and Dana, the captain, who believed in a victory, spoke:

"Now, fellows, one word. It's up to us. Do you understand what that means? It's up to us to win, the way Yale has won in the past—and win we're going to, no matter how long it takes or what's against us. Now get mad every one of you. Run 'em right off their feet. That's all."

The shoulders under Stover's left him. He went hazily to the place, a little behind the rest, where he knew he should go, waiting while Brown poised the football, waiting while the orange and black jerseys indistinctly scattered before him to their formation, waiting for the whistle, for which he had waited all his life to release him.

And for a third time his legs seemed to crumble, and the whole blurred scheme of stands and field to reel away from him, and his heart to be lying before him on the ground where he could lean over and pick it up.

Then like a pistol shot the whistle went throbbing through his brain. He sprang forward as if out of the shell

of himself, keen, alert, filled with a savage longing.

Down the field a Princeton halfback had caught the ball and was squirming back. Then a sudden upheaval and a mass was spread on the ground.

"Guess he gained about fifteen on that," he said to himself. "They'll kick right off."

Dana came running back to support him. He was forced to run back, misjudged it a little, reached out, half fumbled it and recovered it with a plunging dive just as Cockerell landed upon him.

"Get you next time, Dink," said the voice of his old school captain in his ear.

Stover struggling to his feet looked him coolly in the eye.

"No, you won't, Garry, and you know it. The next time I'm going back ten yards."

"Well, boy, we'll see."

They shook hands with a grim smile while the field straggled up. He was lined up, flanked by Dana and Dudley, bending over, waiting for the signal. Three times De Soto, trying out the Princeton line, sent Dana plunging against the right tackle, barely gaining the distance. A fourth attempt being stopped for a loss, Stover dropped back for a kick on the second down.

The ball came a little low and with it the whole line seemed torn asunder and the field filled with the rush of converging bodies. To have kicked would have been fatal. He dropped quickly on the ball, covering it under the shock of his opponents.

Again he was back, waiting for

the trial that was coming. He forgot that he was a freshman—forgot everything but his own utter responsibility.

"You center men, hold that line!" he cried. "You give me a chance! Give me time!"

Then the ball was in his hands, and still a little hurried, he sent it too high over the frantic, leaping rush, hurled to the ground the instant after.

The exchange had netted Princeton twenty yards. A second time Bannerman lifted his punt, high, long, twisting and turning over itself in tricky spirals. It was a perfect kick, giving the ends exact time to cover it.

Stover, with arms outstretched, straining upward, cool as a Yankee, knew from the rushing bodies he did not dare to look at what was coming. The ball landed in his convulsive arms and almost exactly with it Garry Cockerell's body shot into him and tumbled him clear off the ground, crashing down; but the ball was locked in his arms in one of those catches of which the marvel of the game is, not that they are not made oftener, but that they are made at all.

"Come on now, Yale," shouted Charlie Soto's flaming voice. "We've got to rip this line. Signal!"

Two masses on center, two futile straining, crushing attempts, and again he was called upon to kick. The tackles he had received had steadied him, driving from his too imaginative mind all consideration but the direct present need.

He began to enjoy with a fierce delight this kicking in the very teeth of the frantic Princeton rushes, as he had stood on the beach waiting for great breakers to form above his head before diving through.

On the fourth exchange of kicks he stood on his own goal line. The test had come at last. Dana, furious at being driven back without a Princeton rush, came to him wildly.

"Dink, you've got to make it good!"

"Take that long-legged Princeton tackle when he comes through," he said quietly. "Don't worry about me."

Luckily, they were over to the left side of the field. He chose his opening and kicking low, as Tompkins had coached him, had the joy of seeing the ball go flying over the ground and out of bounds at the forty-yard line.

The Princeton team, springing into position, at last, opened its attack.

"Now, we'll see," said Stover, chafing in the backfield.

Using apparently but one formation, a circular mass, which, when directly checked, began to revolve out toward end, always pushing ahead, always concealing the runner, the Princeton attack surely, deliberately and confidently rolled down the field like a juggernaut.

From the forty-yard line to the thirty it came in two rushes, from the thirty to the twenty in three, and then suddenly some one was tricked, drawn in from the vital attack, and the runner, guarded by one interferer, swept past the unprotected end and set out for a touchdown.

Stover went forward to meet them like a shot, frantic to save the precious yards. How he did he never quite knew, but somehow he managed to fling himself just in front of the interferer and go down with a death grip on one leg of the runner.

A cold sponge was being spattered over him, he was on his back fighting hard for his breath, when he again realized where he was. He

tried to rise, remembering all at once:

"Did I stop him?"

"You bet you did."

Regan and Dudley had their arms about him lifting him and walking him up and down.

"Get your breath back, old boy."

"I'm all right."

"Take your time; that Princeton duck hasn't come to yet!"

He perceived in the opposite group something prone on the ground, and the sight was like a tonic.

The ball lay inside the ten-yard line, within the sacred zone. In a moment, no longer eliminated, but close to the breathing mass, he was at the back of his own men shrieking and imploring:

"Get the jump, Yale!"

"Throw them back, Yale!"

"Fight 'em back!"

"You've got to Yale—you've got to!"

Then again and again the same perfected grinding surge of the complete machine; three yards, two yards, two yards and he was underneath the last mass, desperately blocking off some one who held the vital ball, hoping against hope, blind with the struggle, saying to himself:

"It isn't a touchdown! It can't be! We've stopped them! It's Yale's ball!"

Some one was squirming down through the gradually lightening mass. A great weight went from his back, and suddenly he saw the face of the referee seeking the exact location of the ball.

"What is it?" he asked wildly.

"Touchdown."

Some one dragged him to his feet, and unnoticed, he leaned against him, gazing at the ball that lay just over the goal line, seeing with almost a bull-like rage the Princeton substitutes frantically capering up and

down the line, hugging one another, agitating their blankets, turning somersaults.

"Line up Yale," said the captain's unyielding voice, "this is only the beginning. We'll get 'em."

But Stover knew better. The burst of anger past, his head cleared. That Princeton team was going to score again, by the same process, playing on his weakness, exchanging punts, hoping to block one of his until within striking distance, and the size of the score would depend on how long he could stand it off.

"Goal," came the referee's verdict, and with it another roar from somewhere. He went up the field looking straight ahead, hearing, like a sound in a memory, a song of jubilation and the brassy accompaniment of a band.

Again the same story: ten, fifteen yards gained on every exchange of kicks, and a slow retrogression toward their own goal. Time and again they flung themselves against a stronger line, in a vain effort to win back the last yards. Once, in a plunge through center, he found an opening, and went plunging along for ten yards; but at last the ball was Princeton's on the thirty-five line, and a second irresistible march bore Yale back, fighting and frantic over the line for the second score.

Playing became an instinct with him. He no longer feared the soaring punts that came tumbling to him from the clouds. His arms closed around them like tentacles, and he was off for the meager yards he could gain before he went down with a crash. He no longer felt the shock of the desperate tackles he was called on to make, nor the stifling pressure above him when he flung himself under the serried legs of the mass.

He had but one duty—to be true to what he had promised Tompkins: Not to fumble, not to miss a tackle, to get each punt off clean.

All at once, as he was setting in position, a body rushed in, seizing the ball.

"Time!"

The first half was over, and the score was: Princeton, 18; Yale, 0.

Then all at once he felt his weariness. He went slowly, grimly with the rest back to the dressing-room. A group of urchins clustering to a tree shrieked at them:

"O you Yaleses!"

He heard that, and that was all he heard. A sort of rebellion was in him. He had done all that he could do, and now they would haul him over the coals, thinking that was what he needed.

"Oh, I know what'll be said," he thought grimly. "We'll be told that we can win out in the second, and all that rot."

Then he was in the hands of the rubbers, having his wet, clinging suit stripped from him, being rubbed and massaged. He did not want to look at his comrades, least of all Dana. He only wanted to get back to have it over with.

"Yale, I want you to listen to me."

He looked up. In the centre stood Tompkins, preter-naturally grave, trembling a little with nervous, uncontrollable twitches of his body.

"You're up against a great Princeton team—the greatest I remember. You can't win. You never had a chance to win. But, Yale, you're going to do something to make us proud of you. You're going to hold that score where it is! Do you hear me? All you got left is your nerve and the chance to show that you can die game. That's all you're going to do; but, by

heaven, you're going to do that! You're going to die game, Yale, Every mother's son of you! And when the game's over we're going to be prouder of you second half than the whole blooming Princeton bunch over their first. There's your chance. Make us rise up and yell for you. Will you, Yale?"

He passed from man to man, advising, exhorting, or storming, until he came to Stover.

"Dink," he said, putting out his hand and changing his tone suddenly, "I haven't a word to say to you. Play the game as you've been doing—only play it out."

Stover felt a sudden rush of shame; all the fatigue left him as if by magic.

"If Charlie'll only give me a few chances at the centre. I know I could gain there," he said eagerly.

"You'll get a chance later on, perhaps, but you've quite enough to do now."

The second view of the arena was clear to him, even to insignificant details. He thought the cheer leaders, laboring muscularly with their long megaphones, strangely out of place—especially a short fat little fellow in a white voluminous sweater. He saw in the crowd a face or two that he recognized—Bob Story in a group of pretty girls all superhumanly glum and cast down. Then he shed his sweater and was out on the field, back under the goal-posts, ready for the bruising second half to begin.

"All ready, Yale!"

"All ready!"

Again the whistle and the rush of bodies. Dana caught the ball, and, shifting, and dodging, shaking off the first tacklers, carried it back twenty yards. Two short, jamming plunges by Dudley, through Regan, who alone

was outplaying his man, yielded first down. Then an attempt at Cockerell's end brought a loss and the inevitable kick.

Instead of a return punt, the Princeton eleven prepared to rush the ball.

"Why the deuce do they do that?" he thought, biting his fingers nervously.

Opening up their play, Princeton swept toward Bang's end, forcing it back for four yards, and immediately made first down with a long, sweeping lunge at the other end.

Suddenly Stover, in the backfield, watching like a cat, started forward with a cry. Far off to one side a Princeton back, unperceived, was bending down, pretending to be fastening one of his shoe-laces.

"Look out—look out to the left!"

His cry came to late. The Princeton quarter made a long toss straight across, twenty yards, to the loitering half who caught it and started down field clear of the line of scrimmage.

A Princeton forward tried to intercept him, but Stover flung him aside, and, without waiting went forward at top speed to meet the man who came without flinching to his tackle. It was almost head on, and the shock, which left Stover stunned, instinctively clinging to his man sent the ball free, where Dana pounced upon it.

"Hoy Mike, what a tackle!" said Regan's voice. "Any bones broken?"

"Of course not," he said gruffly.

Some one insisted on sponging his face, much to his disgust.

"How's the other fellow? he said grimly.

"He's a tough nut; he's up too!"

"He must be."

The recovery of the ball gave them a short respite, but it served also to

enrage the other line, which rose up and absolutely smothered the next plays. Again his kick seemed to graze the outstretched fingers of the Princeton forwards, and he laughed a strange laugh, which he remembered long after.

This time the punting duel was resumed, until within Yale territory Cockerell looked around and gave the signal for attack.

"Now, Yale, stop it, stop it!" Dink said, talking to himself.

But there was no stopping that attack. Powerless, not daring to approach he saw the blue line bend back again and again, and the steady machine-like rolling up of the orange and black. Over the twenty-five-yard line it came and on past the twenty.

"Oh, Yale, will you let them score again?" De Soto was shrieking.

"You're on your ten-yard line, Yale."

"Hold them!"

"Hold them!"

Two yards at a time, they were rolled back with a mathematical, unfeeling precision.

"Third down; two yards to go!"

"Yale, stop it!"

"Yale!"

And stop it they did, by a bare six inches. Behind the goal-line Charlie De Soto came up, as he stood measuring his distance for a kick.

"How are you, Dink? Want a bit of a rest—sponge off?"

"Rest be hanged!" he said fiercely.

"Come on with that ball." He—

Suddenly, instead of time myself? and off to the right, h your life! straight down the field

ounce of strength h iversity of Illinois. The punt, the best catching the back over his head, rolling fore he could reco-

went up from the Yale stands, fired by the spirit of resistance.

Thereafter it had all a grim sameness, except, in a strange way, it seemed to him that nothing that had gone before counted—that everything they were fighting for was to keep their goal-line inviolate. Nothing new seemed to happen. When he went fiercely into a melee, finding his man somehow, or felt the rush of bodies about him as he managed each time to get clear his punt, he had the same feeling:

"Why, I've done this before."

A dozen times they stopped the Princeton advance, sometimes far away and sometimes near, once within the five-yard line. Every moment, now, some one cried wearily:

"What's the time?"

The gray of November twilights, the haze that settles over the struggles of the gridiron like the smoke of a battle-field, began to close in. And then a sudden fumble, a blocked kick, and by a swift turn of luck it was Yale's ball for the first time in Princeton's territory. One or two subs came rushing in eagerly from the side lines. Every one was talking at once:

"What's the time?"

"Five minute's more."

"Get together, Yale!"

"Show 'em how!"

"Ram it through them!"

"Here's our chance!"

Stover, beside himself, ran up to and flung his arms about his You can't win in his ear: chance to win—chance—you must give up to do some. Send me through of you. You're score where it is. All you got left is. Every nerve set, fight-chance to show that the great bulk of That's all you're getting yards. A sec-

ond time he was called on, and broke the line for another first down.

Regan was transformed. All his calm had gone. He loomed in the line like a colossus, flinging out his arms, shouting:

"We're rotten, are we?" Carry it right down the field boys!"

Every one caught the infection. De Soto, with his hand to his mouth was shouting hoarsely, through the bedlam of cheers, his gleeful slogan.

"We don't want to live forever, boys! What do we care? We've got to face Yale after this. Never mind your necks. We've got the doctors. A little more murder, now! Shove that ball down that field, Yale! Send them back on stretchers! Nineteen—eight—six—four—Ha-a-ard!"

Again and again, Stover was called on, and again and again, with his whole team behind him or Regan's great arm about him, struggling to keep his feet, crawling on his knees, fighting for every last inch, he carried the ball down the field twenty, thirty yards on.

He forgot where he was, standing there with blazing eyes and colorless face. He forgot that he was only the freshman, as he had that night in the wrestling bout. He gave orders, shouted advice, spurred them on. He felt no weariness; nothing could tire him. His chance had come at last. He went into the line each time blubbering, laughing with the fierce joy of it, shouting to himself:

"I'm the weak spot, am I?" I'll show them!"

And the certainty of it all overwhelmed him. Nothing could stop him now. He knew it. He was going to score. He was going to cross that line only fifteen yards away.

"Give me that ball again!" he cried to De Soto.

Then something seemed to go wrong. De Soto and Dudley were shrieking out something, protesting wildly.

"What's wrong?" he cried.

"They're calling time on us!"

"No, no, it's not possible! It's not time!"

He turned hysterically, beseechingly, catching hold of the referee's arm, not knowing what he did.

"Mr. Referee, it isn't time. Mr. Referee—"

"Game's over," said Captain Dana's still voice. "Get together, Yale. Cheer for Princeton now. Make it a good one!"

GLORIES OF THE GRID

I love the football season,
 With its bracing atmosphere,
 I love the blare of braying horns,
 The ringing college cheer;
 I love the madding music,
 Of the thunderiffic thud,
 When the horde of husky heroes
 Hurl each other in the mud,
 What care I for battered bean,
 Or elbow out of gear?
 The creaking of a slivered slat
 Is music to my ear.
 I dote upon the hero
 With a dislocated back,
 And punctures in his bellows,
 And his innards out of wack;
 Give me a good rough tackle,
 With a sanguinary slam,
 And a thousand pounds of huskies

Hurled upon some diaphragm.
 Let molly-coddled mummy boys
 Confine themselves to skat,
 Parchesi, ping-pong, crackaloo,
 And gentle games like that;
 Let weans and weaklings, shrink and
 shriek,
 And shudder at the shock,
 When battling burlies buck the line
 And boot-heel beats on block,
 But as for me, the forward rush,
 The mass and flying wedge,
 With plenty out at every down,
 To keep a chap on edge;
 Give me the grid where gore flows
 free,
 And strenuous is the strife—
 Eh? Do I play the game myself?
 What! Me? Not on your life!

—University of Illinois.

Fattening Poultry for the Market

PROF. M. C. HERNER.

(Prof. Herner is Professor of Poultry Husbandry at Manitoba Agricultural College and is an Recognized Authority on the Subject.)

THE consumption of table poultry in Canada has increased so rapidly the last ten years that we have become an importing, rather than an exporting country. While the quality of our market poultry shows some improvement over that of a few years ago, still there remains much to be desired. Much of the poultry, chickens especially, is placed on the market in the raw unfinished condition, with but very little covering on the breast bone, besides being of an inferior quality, and improperly killed. The bulk of the market poultry is produced on our farms where feed is cheap and where conditions for raising poultry are almost ideal. Under these conditions each dollar invested in poultry cannot fail but bring the highest returns. The cost of producing a pound of chicken is so much less than that required to produce beef, pork, or mutton, and the price realized per pound for the finished product is so much larger than any other kind of meat that the practice of fattening chickens for the market will always mean more profitable returns than those obtained in the production of beef, pork, or mutton.

The production of a better class of market poultry on our farms does not necessarily mean a large outlay for stock, buildings, or labor, but rather more care in selecting the breeding stock, better care for the growing stock, and proper fattening before marketing. We must select a better type of chicken to breed from, one having less of a mixture of all

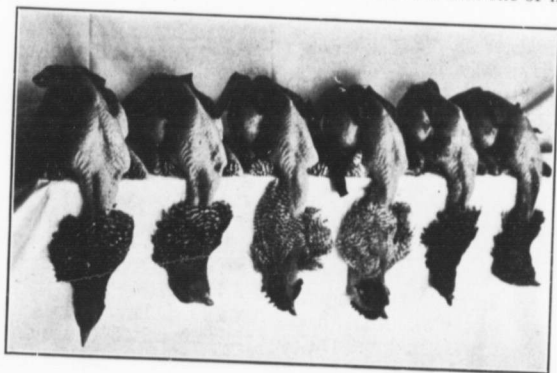
breeds than is found on a good many of our farms. If they are cross breeds the blood of the utility breeds should predominate. Too many of our farm flocks have too strong an infusion of Leghorn blood, or are of the nondescript type of chickens which are undesirable and unprofitable to feed for the market and can never be disposed of as first-class roasters. The utility breeds, either pure or crossed, always give the most economic production when raised for market purposes. Strong, vigorous chickens of any of our utility breeds when taken at the age of four months will generally give one pound of increase for every four pounds of grain consumed. On the other hand chickens of the same breed but lacking in vigor and constitution may require as high as eight pounds of grain to make one pound of increase, hence the need of selecting, and breeding only from strong vigorous stock.

Farm conditions are such that chickens can make rapid growth and mature early providing they are looked after properly and if taken at the right time will make very economic gains. If chickens are raised the right way the question of fattening them is one of placing on fat and improving the quality rather than the production of any lean meat.

All experimental work in fattening chickens for the market shows a decided preference for fattening in crates rather than in pens. The size of the crates is usually about six feet long, depending on the size of the chickens and the number in each

crate. The width and height may vary with the breed requirements. A crate six feet long, sixteen inches wide and eighteen inches high is about the standard size for twelve chickens. It should be divided into three compartments and each one should open separate on the top. The bottom, back, and top are slatted lengthwise with the slats an inch and a quarter apart. In front the slats are placed on upright and two inches apart. A small trough for feed is placed in front of the crate. Any outbuilding protected from

grain fed must be finely ground as whole grain requires too much energy to digest and the chickens are likely to get sick when placed in close confinement and fed on whole grain. Oats finely ground with the hulls sifted out should form the greater part of any fattening ration. A mash made of two parts oats, one of barley, and one of wheat, all ground up fine and the hull sifted out will give very good results for fattening purposes. Where the grain is purchased the wheat and barley may be omitted and one of corn meal and one of flour tak-



wind and rain will answer the purpose of a fattening shed. Place the crates about three feet off the floor and in such a place that draughts may be avoided. Pullets generally make heavier gains during the fattening period than the cockerels, but they are usually held over as layers.

At the time the chickens are put in the crates they should be thoroughly dusted with some lice powder. No feed should be given for at least twenty-four hours. After that they should be fed twice a day throughout the entire fattening period. All the

en instead. Finely ground buckwheat is also a very valuable addition to any fattening ration. The first meal should consist of an ounce of mash per bird mixed with buttermilk or sour milk sufficient to make a thin batter. At each succeeding meal the amount of mash should be increased at the rate of half an ounce to each bird until they are on a full ration or diet. Beef scrap and water will answer the purpose of buttermilk if it is not available. Starting with five per cent. of beef scrap and finishing off with ten or twelve per cent. will

give very good results although it will always produce a yellow colored meat compared with milk. Grit should be fed once a week. But very little drinking water will be required unless the weather is very warm.

The success of crate fattening depends very much on the way in which the feeding is done. Regular and judicious feeding must be followed throughout the whole fattening period. Chickens of the utility breeds should make a gain of a pound to a pound and a half in three weeks. After that the gains in proportion to the amount of food consumed will gradually decrease. The price of chickens is usually increased about five cents a pound and the careful painstaking feeder should always be able to show a handsome profit at the end of the fattening period.

ROUP

Roup is the common name applied to a disease affecting poultry, which, in fact, is an acute catarrh of the mucous membranes of the nose and upper air passages. One or both sides may become affected, and quickly extends into the maxillary and frontal sinuses, the lachrymal ducts, causing a severe inflammation and consequent swelling about the head. It is in fact "a cold in the head." The mucous membranes lining the head, first become swollen, red and at first dry, but is soon bathed in a profuse secretion of serum, which later becomes sero-purulent and is loaded with salines which are very irritating.

This in turn causes a blocking up of nostrils and tear ducts, compelling the fowls to breathe through the

mouth. As this exudation gathers in the back part of the nasal cavities, it flows down into the throat and air passages and produces the rattling sound so familiar to all who have experience with the disease.

The fowl becomes somewhat deaf as a result of the Eustachian tube being filled with mucous or from swelling in that region. All these conditions cause the bird to become droopy, unable to eat and it suffers from indigestion, and as a result it is out of condition. Fowls so affected should be removed from the yards or houses to a warm, dry place, as the disease will certainly extend to others of the flock if this is not done at once.

The most common causes of the disease are drafts, sudden cold and inhalation of irritating substances.

Without going into any more details, suffice to say, keep your fowls free from the causes of roup, and if you are so unfortunate as to be called on to combat it, do so as you would for a cold in your own head and you will be treating it properly. Apply some fresh lard, to which a little quinine is mixed, to the sides of the head and across the nose. Spray the nostrils with some simple antiseptic as listerine, liquid alboline or camphorated oil. This can be done with an ordinary atomizer, to be had at any drug store. As an internal remedy nothing that I have used has given better results than one drop of camphor in some bread or other food.

To some this would seem like a great deal of "doctoring," but to those who are interested in good, healthy poultry and some of great value it may appeal with good results.

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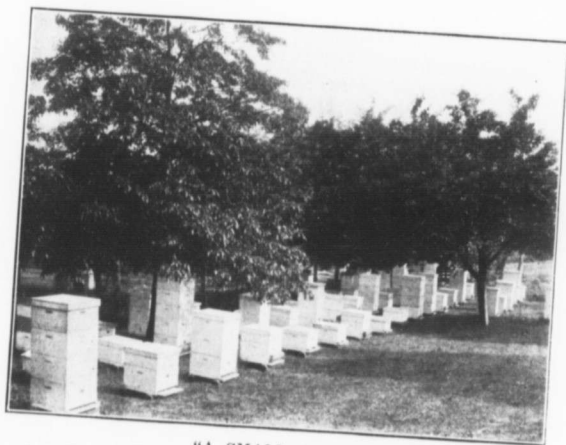
The Need of Educational Work for Apiculture

DR. E. F. PHILLIPS, IN CHARGE OF APICULTURE, UNITED STATES DEPARTMENT OF AGRICULTURE, WASHINGTON.

THAT bee-keeping is an important minor branch of agriculture is becoming more and more widely recognized. A few colonies of bees were formerly part of the equipment of nearly every farm, and bees like poultry were looked on as an incidental means of picking up a little money or a small amount of a delicious food. Conditions are fortun-

of people interested, a campaign of education becomes more feasible.

We shall do well to remember that bee keeping is really a young member of the agricultural family. Langstroth invented his movable frame hive in 1851, and it took at least twenty years for information concerning this hive to become fairly general. With bees in box hives and



"A SMALL APIARY."

ately changing and bee keeping is rapidly becoming the business of the specialist. To educate a large number of people in a line in which they have little interest, financial or vocational, is practically out of the question, but with the changed conditions of the business and the corresponding marked reduction in the number

hollow logs an industry is impossible and the marketable product is negligible. The first bees introduced into America in the seventeenth century were the common blacks. Italian bees were first brought over about 1860, and they are still being more and more widely distributed while some of the other races of bees im-

ported at later dates are gaining in adherents. This means the passing of the black bees and a marked impetus to the industry. From these conditions it will be seen that improved apiculture is not one of the old established branches of agriculture on the North American Continent. While we have a considerable number of well-informed bee keepers these facts warrant the supposition that probably the rank and file of bee keepers need to be informed concerning the best apparatus and latest manipulations. This need actually exists to a marked degree.

Unfortunately the forces which are advancing agricultural education with such rapidity have not usually been enlisted in the advancement of bee keeping. Few agricultural colleges and experiment stations have so far undertaken work in bee keeping which may be looked on as valuable. A few short courses in apiculture have been instituted but too often these reach a small number of individuals and furthermore do not make as well-trained bee keepers as would a short time spent in the apiary of a good bee keeper. The reasons for this are easy to recognize. Usually there is no person in the college with sufficient knowledge of the business to give a practical course, and bee keepers have not generally demanded that a special man be obtained for the work. The Bureau of Entomology of the United States Department of Agriculture has an office devoted to bee culture. Special attention has been given to a study of the cause, distribution and control of the brood diseases but other problems of a practical or scientific nature are being undertaken. Bulletins on bee disease

treatment have been sent by the Bureau to the bee keepers in every country where a brood disease is known to exist.

The brood diseases of bees are causing such great losses in the United States and Canada that it is becoming imperative that steps be taken to save the industry. A financial loss will awaken people to a realization of their needs much more quickly than a mere failure to increase their productiveness and bee keepers are demanding assistance more insistently than ever before. These brood diseases are not particularly difficult for the individual bee keeper to control but before he can do it he must learn to know that there actually are diseases of bees, how he can recognize them and how to control them. Inspection of apiaries is a help to the industry and as usually conducted is practically an educational campaign. In this work the agricultural colleges, experiment stations, farmers' institutes and agricultural papers may do great good by learning new facts and spreading well known information.

These educational forces are rapidly being enlisted in the fight to save the bee-keeping industry. The work is not being confined solely to bee diseases although that is the most needed work in the present emergency. It can be stated positively that the present efforts are meeting with success in that the industry is actually on a better footing to-day than ever before in its history. Results up to the present are, however, showing the need of still more educational work and it is to be hoped that it may be forthcoming in order that apiculture may assume the importance which its possibilities lead us to

desire. If the spread of bee diseases is the means of bringing to us the educational assistance which is needed we may justly look on the epidemic as a blessing very scantily disguised.

The Ontario Agricultural College is one of the leaders in undertaking work in apiculture and the work is being watched with interest outside the Province. In all such work there will naturally be some question as to the amount of time which should be devoted to bee keeping in justice to the numerous other important subjects which must be taught. Bee keepers may be pardoned for insisting on the importance of their hobby but all that can reasonably be asked is a fair division of the time in the curriculum. The regular courses together with short courses and elective advanced work will doubtless greatly benefit the industry, and

when there is added the sending out of bulletins and circulars, apiary inspection, demonstrations and exhibits and other publicity there is good reason to look for even brighter days in Canadian bee keeping. I can speak from personal knowledge in commending the present work being done by the Apiculture Department at the Ontario Agricultural College. The attitude of the College authorities, and the enthusiasm of the lecturer on Apiculture make a condition on which Canadian bee keepers may be congratulated. It is obvious that the benefits of such work will not cease at the border line and those of us on this side of the line appreciate what is being done. It must be a matter of gratification to every one interested in the advancement of apiculture to see a marked advance in the educational work for the benefit of the industry.

Why don't they keep the streets a little cleaner?

You ask with deep annoyance not undue.

Why don't they keep the parks a little greener?

(Did you ever stop to think that they meant you?)

How long will they permit this graft and stealing?

Why don't they see the courts are clean and true?

Why will they wink at crooked public dealing?

(Did you ever stop to think that they meant you?)

—University of Ottawa Review.

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Apple Packs and Packing

Editor's Note:—

This article has been prepared from a circular written by R. M. Winslow, Provincial Horticulturist of British Columbia and deals quite extensively with the subject. Wrapping apples and packing them in boxes has become the rule and not the exception in British Columbia within the past few years and it is high time that the practice was more in use in Ontario.

Wrapping.

Almost all No. 1 British Columbia apples are now wrapped. The advantages are as follows:

1. Wrapping gives a more finished appearance to the package. It presumes a high-grade article, so finding a readier sale, a steady market and a higher price.
2. Wrapping improves the keeping quality, preventing disease spreading from fruit to fruit.
3. The paper serves as a cushion, preventing bruising and so prolonging the life and improving the appearance:
4. Wrapping makes an elastic but firm pack, much less liable to shift, and much quicker to put up:
5. It protects the fruit from changes in temperature and absorbs surplus moisture.

The cost of paper for wrapping is almost saved by the weight of fruit which the paper displaces. Experienced packers do as quick or quicker work wrapping than without it. There is very little foundation for any objection to wrapping, save that there is quite a knack in it, which some packers seem unable to grasp.

The wrapping paper most largely used in British Columbia is styled the "Duplex", so called because it is calendered on one side and rough on the other, the latter being turned to the fruit. Yellow papers are not in favour with the trade.

When apples are not wrapped it is best to use lining-paper for the boxes.

The brand used in the Province is termed, "White News," and sells for four and one-half cents a pound in Vancouver. The sheets are cut to size 20 by 26 inches, two being used to each box. A pound contains twenty-five sheets.

Layer paper is used only for exhibition fruit and that intended for shipment to Great Britain.

Method of Wrapping.

The details of the method adopted by packers vary, and it is impossible to describe the details of any particular method on paper. The general system which all use is as follows:—

The right-handed packer stands with his right side to the packing-table, picks up the paper with the left hand, the apple with his right. He places or drops the apple into the paper, the side or end which is to be packed uppermost being placed downward on the paper in the palm of the left hand. The fingers of both hands are used to make the wrap in the fewest possible motions, and the apple is placed in the box with the left hand.

The Packing-Table.

Packing on a bench instead of on tables is gaining in favour in some districts, and this system was used in the Summerland and Penticton packing-schools last year. The operator stands in front of a sloping bench, on which are placed five apple-boxes, with an orchard box of fruit at his right hand. The packer picks up the apple nearest to hand; if it will fit into any of the five boxes before him

he wraps it as he puts it in its place. If over or under size, it goes into one or two boxes placed conveniently near, and if a cull, is run down to a box on the floor. This system is of advantage to skillful packers, who can tell at a glance what packs will be useful for the fruit in the orchard boxes. The bench is quickly and cheaply constructed, the fruit receives a minimum of handling, and consequently of bruising. Experienced packers have widely different opinions on the relative methods of these two systems. For the beginner and for poorly graded fruit the table is preferable.

The Essentials of A Good Pack.

While a packed box of apples looks simple enough, it must fulfil certain requirements to be considered well put up.

First, and most important the pack must be firm. There must be no room for the fruit to shift in any way. It is often possible to stand a box on end without the cover nailed, without any of the apples falling out. This is usually impossible if each apple does not touch all those surrounding it in the proper way.

The bulge or swell is also important. The idea is that as the apples lose moisture and shrink, the cover which has been pressed down tightly over the bulge will contract and continue to hold the apples firmly. The bulge is secured by turning the apples when packing, so that the slightly longer diameter is vertical. Doing this becomes second nature by practice. It is sometimes necessary to turn the end apples on their side, in the end-on packs, in order to get this just right.

In order to create some pressure on the end rows of apples, the fruit of both ends should be one-quarter to

three-eighths inch above the top of the box. The cover presses this down that much quite easily without bruising, and elasticity of the fruit will keep it tight for some considerable time.

There is at present some reaction against the bulges of one and one-half to two inches common a few years ago. Experience has shown that a bulge of one and one-quarter inches, counting both top and bottom, is sufficient. More is necessary with the end-on packs than with the side packs. This applies also to the height of the ends.

Regularity of pack is very important. When an irregularly packed box is opened at the side, it shows how the packer may start to pack a box in one size, and may change halfway through the box. Where the change is made apples are liable to be very much bruised, on which account this practice is to be condemned, and the application of the term "stacked pack" indicates the essential dishonesty of this proceeding, which is poor packing and worse morality.

The attractiveness of the finished pack is very essential. British Columbia apples rely a great deal on their appearance for high-priced sale, and the finished pack should be attractive in the regularity of size, smoothness of the wrap, and the alignment of the fruit in the box.

The above points deal only with the mechanical operation of packing. Not less essential, but even more so, is the grading of the fruit to size and color. Grading to size is usually done in British Columbia by the packer himself, and he should use every effort to make the box uniform throughout.

A good packer must be conscientious, quick and accurate. The ability to learn to pack fruit is natural,

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and a big percentage of people do not possess it.

The British Columbia apple box, 20 by 11 by 10, is the result of many experiments, some twenty or more sizes having been extensively used in California before the present sizes were finally adopted. The result is that practically all sizes and shapes of apples likely to be found in this Province can be put into our boxes in diagonal packs. In the very large sizes it is necessary to pack some apples on the square, three cross and three deep in the box. The square packs, as well as the offset, we know from actual trial, are usually unnecessary. The buyers are beginning to be suspicious of packers who still insist on their use, and quite rightly so.

2-1 Diagonal Pack.—Apples must be too large to fit in three in straight line across the box. Start with two apples, one in each corner, then one between these, then two at sides, and so on.

Second Tier.—Start with one in the centre of the end over blank space, then two and so on, covering the blank spaces.

The third tier comes directly over the first, covering the blank spaces in the second tier.

All 2-1 packs go on the side.

The straight 3-tiers, 45 and 54, are rarely actually necessary. The 45's will usually go in 45, 2-1 diagonal. The 54's go in the 56 diagonal, 2-2.

2-2 Diagonal Pack.—Apples must be large enough to fit in, four in a straight line across the box. Start with two apples, one in left-hand corner and one half-way to right corner both with stem towards packer. Then two more—one between first two and the other between the second apple and the right side of the

box—both calyx towards the packer. Then two more each in line with first and second apple, and so on, keeping each two in straight line across the box to ensure diagonal lines being straight. Finish tier with apples in same relative positions at far end as at near, viz., farthestmost two, stem to end.

Second Tier.—Start with two again, one in right-hand corner and one half-way to left corner, over blank spaces, stem to packer, and follow on with next two, calyx to packer. Finish two with farthestmost two covering the two blank spaces at far end of first tier, with stem to end of box again.

All open spaces between apples in lower tier are now covered by apples in second tier, so that the bottom of the box cannot be seen. The third tier follows directly above the apples of the first tier; the fourth tier is directly above the second tier.

The proper bulge is secured when the ends are slightly above the level of the top of the box, with a gradual rise to centre from each end. An inch and a quarter to an inch and a half bulge at centre is correct. Cover should touch every apple in top-tier, thus giving equal pressure on every apple in the box. This applies to every apple-pack. To get bulge correctly, choose apples slightly larger or longer for the centre of the box.

The 2-3 Diagonal Pack. Apples that will fit in, four in straight line across the box, and not small enough to fit in five across, come in this pack. All packed on end, calyx up. Start with three apples, one in each corner, and one exactly half way between them. Then two in next row, then three again and so on, keeping each row of two and three in straight line across box to ensure a good align-

ment always. Work in the longer specimens towards centre of the box, and flat ones in ends, to give the bulge. This done in every tier brings the bulge without perceptible difference in the size of the apples.

Second Tier.—Start with two, covering the blank spaces left between the first tier, then three and two, and so on.

Third Tier.—Same position as first.

Fourth Tier.—Same position as second.

Fifth Tier.—Same position as first and third.

Long shaped apples come high in the pack, to avoid which reverse alternate tiers—that is put the second tier stem up, instead of the calyx; third tier calyx up; fourth tier stem up; fifth tier calyx up.

It is sometimes necessary to get the correct height to set centre layers slightly on a slope, lengthwise with box, which brings the pack lower.

The Marking of Packages.

The biggest shippers are now adopting the practice of stamping on the end of the box the exact number of apples contained in it. This has a number of very important advantages:—

(1) The purchaser, whether jobber, retailer, or consumer, prefers to have the number stamped, because he knows then exactly what size he is getting. If the apples are for the fruit-stand trade a glance tells him what price can be paid per box if they are to be sold at certain set prices by number. He sells by number and wishes to buy in the same way. The consumer buying for dessert purposes, whether for his own use, or whether for hotel use, also appreciates the information given by the number.

(2) With the adoption of the diagonal packs the old description of

apples by tiers is not now accurate. Under the present system some apples, such as 2-3, 5-5 (125), are marked "4-tier," while in reality there are five actual tiers of apples. The 2-3, 6-6 (150), is marked "4½ tier," but has five actual tiers. The 2-2, 8-8 (200), is marked "5 tiers", and it actually does have five tiers of apples. The same anomaly occurs all through. The designation of tiers must soon be discarded as obsolete. The use of the number can not come too soon. It is now used by the principal Washington and Oregon shippers.

(3) The designation by tiers is just as misleading to the grower as to the consumer.

Only a technical expert knows how to interpret his packs in the terms of "tiers".

The Dominion Government Bulletin recommends the following system:—

The packer's number is placed in the lower corner. Any brand may be used. Where the shipper's brand is given the law does not require that of the grower, though usually the grower's name or number is stamped on, so that the fruit can be identified in case of complaint.

Summary.

1. Wrap all No. 1 and fancy fruit. Wrap No. 2's of winter varieties.
2. Method in wrapping is a matter of individual practice.
3. A good pack must first of all be firm. It must have a total bulge of about one and one-quarter inches, and the apples must have a height at ends of about one-quarter inch before the cover is nailed on. Regularity is essential to good shipping qualities, and honesty as well. The pack must be attractive in appearance.

4. The apple-box 20 by 11 by 10 is quite satisfactory for all apples.

5. The square and offset packs are defective and should be avoided.

6. The diagonal packs meet practically all requirements.

7. Your fruit should not fall below the requirements of the "Fruit-marks Act" in any particular. Better keep your grades well above the law.

8. Mark the number of apples on the box, rather than the tier.

9. Finally apply the highest standards of perfection to your own pack. Be persistent in your effort to attain the highest standard. Then use your influence as well as your example, to influence your neighbor and every other grower and shipper to do the same.

L. B. H.

THE MAN BEHIND THE PLOUGH

They sing about the glories of the man behind the gun,
 And the books are full of stories of the wonders he has done;
 There's something sort of thrilling in the flag that's wavin' high,
 And it makes you want to holler when the boys go marching by
 But when the shoutin's over and the fightin's done, somehow
 We find we're still dependin' on the man behind the plough.

In all the pomp and splendor of an army on parade,
 And through the awful darkness that the smoke of battle made;
 In the halls where jewels glitter and where shoutin' men debate,
 In the places where the rulers deal out honors to the great,
 There's not a single person who'd be doin' business now,
 Or have medals, if it wasn't for the man behind the plough.

We're a building mighty cities and we're gainin' lofty rights;
 We're winning lots of glory and we're settin' things to rights;
 We're showin' all creation how the world's affairs should run;
 Future men will gaze in wonder at the things that we have done—
 And they'll overlook the feller, just the same as we do now,
 Who's the whole concern's foundation—that's the man behind the plough.

—S. E. Kiser, in Record Herald.

The Potato Industry in Ontario

THE potato is one of the important farm crops of Ontario. There are two reasons for this. It is a widely used article of food and it is a crop which can usually be sold for cash at a good profit. In addition it is a plant which does not make heavy demands upon the stores of plant food in the soil, and when properly cultivated leaves the soil clean and in excellent condition for the succeeding crop.

The area devoted to potatoes in Ontario in 1910 was 168,454 acres, which, with an average yield of 130 bushels per acre, had a market value of \$10,798,597. The potato was only surpassed in market value by hay, oats, fall wheat and corn. The average returns for five years from potatoes were \$57. per acre, while turnips gave \$40., wheat \$19., hay \$15., and oats \$14. per acre. The counties of Simcoe, York, Middlesex, Hastings, Carleton and Wentworth devote the largest areas to the cultivation of the potato. It is however, grown quite generally over the whole province. The newer parts in the northern districts seem very well adapted to the potato, the yields obtained in these districts being much above the average. For example in 1909 the average yield per acre in Algoma was 226 bushels, in Nipissing 201 bushels and in Rainy River 230 bushels.

The potato grows well on a wide variety of soils but the most suitable is a deep loam grading to a sandy loam, containing a large amount of humus. The soil should be well drained either naturally or artificially. A light easily worked loam can be gotten ready for planting earlier

in the season, warms up more quickly, and the potatoes grown on such a soil are cleaner, smoother, and more uniform in size.

Potatoes do best after clover. The land should be plowed deeply in the fall. Apply stable manure previously to fall plowing at the rate of twelve to fifteen tons per acre. In the spring the soil should be worked deeply and thoroughly getting it into as fine tilth as possible. It is better to delay planting a short time rather than plant the potatoes on poorly prepared ground. Planting should be done about the last week in May or the first week in June for the general crop. Plant in rows about thirty inches apart and place the sets about sixteen inches apart in the rows. The tubers should be cut to about three to four eyes a piece and the sets should be planted from four to five inches deep.

After planting, the potatoes should be cultivated frequently to destroy weeds and conserve the moisture in the soil. The amount of moisture in the soil, especially after the blossoming period, has a very great influence on the yield. The rows themselves should be kept clean by hand hoeing. The first cultivation after planting should be about four to five inches deep but subsequent cultivations must be shallow not over two inches deep, as the roots of the potato spread out rapidly and come close to the surface. At Cornell it was found that seven to nine cultivations after planting were the most profitable. As a rule level culture will give the largest yields. It may be advisable to throw some dirt against the rows where the tubers are close to the sur-

face and there is danger of sunburn. On wet soils and in wet seasons it is perhaps better to grow the potatoes in drills.

When the plants are about six inches high they should be sprayed thoroughly with Bordeaux mixture to every forty gallons of which one-half pound of Paris green or three pounds of arsenate of lead have been added. This spraying should be repeated every two weeks until about the end of August. The poison may be omitted in the later sprays if there are no leaf eating insects attacking the plants. If done thoroughly this will largely control and prevent the attack of insects and diseases. The

scab on potatoes used for seed can be destroyed by immersing them for two hours in a solution of water. All articles used in handling the seed should be disinfected also.

The varieties most highly recommended for main crop are Empire State and American Wonder. Rural New Yorker is also a good variety. In addition to these there are many other very popular varieties. The grower, however, had better confine himself to one or two varieties, selecting those which suit his section and soil the best. He will then have a more uniform product to place upon the market.

L. J. T.



NEW BULLETINS.

A second edition, revised and enlarged, of "Sheep Husbandry in Canada" has been prepared by J. B. Spencer, B. S. A., and published by the Department of Agriculture at Ottawa. It is a large bulletin of some 126 pages, and describes the origin, development and characteristics of the leading breeds of sheep. It gives complete details in regard to establishing a commercial flock. Mutton production in Great Britain is taken up fully as an example of how sheep are made a paying proposition there. A chapter is devoted to handling sheep, prior to reaching the block, and another to the most approved methods of handling from the block to the table.

Feeds and feeding. sheep barns.

animal enemies, diseases, sheep as weed destroyers, are taken up fully, as well as the condition and outlook for sheep raising in the different provinces. Lastly the Canadian woollen industry is discussed. This bulletin, which contains over 70 clear cut illustrations, may be obtained on application to the Department of Agriculture at Ottawa.

Bulletin No. 69, of the Department of Agriculture, or No. 2 of the Division of Entomology, Ottawa, entitled, "The Honey Bee: A Guide to Apiculture in Canada," is a comprehensive account of the bee industry, by Dr. C. Gordon Hewitt, Dominion Entomologist. It may also be obtained from Ottawa.

Poultry Notes

C. A. WEBSTER, '13.

THERE is in course of erection at the O. A. C. Poultry Department a new hen house. It is intended primarily for conducting breeding experiments, and will be ready for operation by the first of January.

The house will be 200 feet long by 12 feet deep. The pens will be 6 feet wide, so there will be 33 pens, each one holding six birds. The front of the house faces the south, and is 8 feet high, the back being 5 feet high. A shanty roof will cover the house, and the floor is cement. The walls are made of fine boarding, planed on one side. Each pen will have a separate door, the bottom half boarded while the upper half will be cloth, and a glass window. Both door and window will be in front. Partitions between the pens will be from back to front, for $3\frac{1}{2}$ feet, of matched boarding; the balance covered by heavy cloth moveable screens.

The perches are situated at the back, extending across the pen two-thirds of distance, the rest being occupied by trap nests. The estimated cost is \$1,500. Extensive breeding experiments may now be carried out.

FATTENING.

At Clinton, Ontario, there is being equipped a modern fattening

station, similar to the largest ones in the Western States. The feeding capacity of this plant is 6,000 birds. The man who is in charge of this station is one of the most expert feeders in the United States.

A few other stations that I recall to mind are, Holmesville, Simcoe, Thamesville, London, Harriston, Peterboro, Morrisburg and a small one at Arthur.

The building and the successful operation of these stations is the direct result of the farmers refusing to fatten their birds and the packers demanding fattened poultry.

That fattening poultry pays is proven by the fact that it commands three cent. a pound more sold live weight, and five cents more dressed, than ordinary barnyard fowl. Roughly speaking, each packing house would handle 1,500 chickens every two weeks. Thus there is a great demand.

While most Ontario farmers are behind the times, still some are wide awake. The farmers of Wellington County fatten their chickens and secure handsome returns for their trouble. This is the direct result of the work of Mr. A. Armstrong, Fergus, who loaned the farmers fattening crates and boomed the business in many other ways.



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More About Fertilizers

Mr. H. G. Bell, B. S. A., a graduate of '05, and who is at present Agronomist of the Middle West Soil Improvement Committee, recently gave an address before the American Society of Agronomists, at Lansing, Michigan. His subject was the relation of the agricultural college and experiment station to the fertilizer industry.

After giving a brief history of agricultural college and experiment station work, and tracing the growth of the fertilizer industry since its inception in 1843, Mr. Bell said that the belief of the fertilizer industry is:

- (1) That experiments and experience have shown conclusively that the judicious use of fertilizers is a profitable investment for the farmer.
- (2) That successful crop production depends on, (a) soil drainage, (b) a good supply of organic matter in the soil obtained by the growth of legumes in crop rotation. These also supply considerable nitrogen; (c) proper and judicious soil tillage; to a large extent governing water supply and soil aeration; (d) conservation and wise use of barn manure. (e) use of selected seed; (f) supplementing the fertility obtained as above by liberal amounts of suitable plant food rightly applied.

He then referred to the work of some of the leading experimenters in farm crops, such as Liebig, Lawes and Gilbert, and emphasizes the responsibility which rested upon the farmer

for increasing his crop production. He concluded by pointing out three ways in which the fertilizer industry could aid agricultural experiment station work. These are: (1) In suggesting problems which appear of sufficient importance to warrant investigation. The fertilizer industry is constantly dealing with the problem of rendering unavailable material into such form that the plant can make use of it. His experts are busy constantly endeavoring to find more effective methods of treatment.

Necessarily problems are coming up every day whose solution would mean much to the farmer. Moreover, the fertilizer industry, carrying on business directly with the farmer, is in closest touch with the farm and all its problems. Might it not be possible for the manufacturer, who is in such close touch with the farmer and the problems which are so vital to his welfare, to suggest lines of investigation which might engage the attention of experiment stations, to the great benefit of the farmer?

(2) In providing reference literature in the libraries of the great manufacturers of this commodity, and in its central service bureau, where are being assembled the latest and best works issued.

(3) In directing the great army of farmers to their own state and provincial institutions to which they should be able to look for reliable advice.



THE O. A. C. REVIEW

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Editorials

IT SEEMS preposterous to question the efficiency of our Ontario Agricultural College. It is known the world over for its success in developing the genus homo, the cultivated plant and the domesticated animal. Analysed qualitatively, the result is very satisfactory. Let us, however, make a dispassionate analysis under the quantitative method and compare results.

At the last Canadian census in 1911 the rural population of Ontario was 1,194,785. At a conservative estimate one-eighth of these inhabitants would be young men eligible for attendance at the O. A. C., or in round figures, 150,000. Now, on the other side, compare the rolls of the various classes here. There are, taking the regular course, somewhere in the neighborhood of three hundred and fifty students, of whom probably two hundred and fifty are from Ontario. On this estimate, then, one-sixth of one per cent. of the farmers' sons of Ontario are attending the Ontario Agricultural College. If the short course classes be included and

total of one-half of one per cent. would be reached.

Does not this seem to be a matter for thought? Even the two years' course at the college is of unquestionable benefit to the boy who intends returning to the farm, not only because of the information he receives relating to his vocation, but also because of the mental awakening he gets. He begins wondering why a prosperous manufacturer or business man should accumulate wealth so easily and live so comfortably, as compared with a farmer who commences with similar capital and works more hours per day. He realizes that an institution called a tariff exists, and perhaps forms some ideas of his own regarding the principal benefactors by it. The advantage to a nation of an intelligent and scientific farming community are many. And yet we have only one-sixth of one per cent. of the available students enrolled at the only vocational college of its kind in Ontario. A vigorous campaign of advertising would bring larger classes. It seems to be highly advisable.

The bumper number of the year is coming. Already the beads of perspiration are forming on the foreheads of the Review staff.

Christmas Number

It is our object to have this year's Christmas number profusely illustrated and thus make it peculiarly suitable for mailing to friends and relatives far and near. Prize winners in the four competitions will appear. Suggestions and photographs are always welcome. Leave your order early for extra Christmas numbers to send home. Our supply of copies is inexhaustible, and the demands of our creditors the same. The Christmas number will be off the press on December 7th.

This year marks the centenary of the battle of Queenston Heights and the death of Sir Isaac Brock. If the shade of the gallant general could re-visit the

Sir Isaac Brock

land of its master it would assuredly not consider that his death had been in vain. Although we have been for the past hundred years closely connected geographically, and for part of this time commercially, with a people of the same race and speech and twelve times our population, yet we are now just as loyal to the motherland and as independent of Uncle Sam as we were at the time of the war of 1812. Had we formed a union with the United States fifty years ago, or had we been compulsorily annexed one hundred years ago, we would perhaps have had a more dense population, and our resources would have been developed—and depleted—to a greater extent, while we would not be distinguishable in our ideals and

sentiments from those that inspire our southern neighbors. But we have, under British influence, had a healthy natural growth of population, a conservation of our natural resources, and have developed a high sense of national honor. The union of all the Anglo-Saxon races is indeed to be strived for. But let London and Washington be the centers of negotiation.

LETTERS TO THE EDITOR

Editor O. A. C. Review:

I feel that I am not transgressing upon your time or upon space in The Review when I write you regarding a subject which so intimately affects every student; namely, the purchasing of text books and stationery, and the possibility of doing so at a lower price than is now customarily paid. Allow me first to give you briefly a history of what is known as the "Cosmopolitan Book Club."

Until the beginning of this college year text books and stationery were, except in sporadic cases, where the members of one year would buy a certain text book direct from the publishing house, always bought singly, at or above ordinary list prices. Publishers would in no case allow any extension of time of payment to any but fourth year men, with usually some additional guarantee as well, so anything but a cash purchase was impossible. Some dissatisfaction was naturally felt by many men at this uneconomic method of purchasing, but nothing was done. Last year the Cosmopolitan Club undertook the task of purchasing direct from the publishers without the intervention of the middleman, and notwithstanding the fact that this is only the second season the scheme has been working, and that a

number of students who are apparently not in sympathy with the project have continued to buy at least a portion of their supplies from retail merchants, it is well assured that the sales this year will reach a total of nearly twenty-five hundred dollars. But this amount of business in small sales can not be transacted without a great expenditure of time; and the amount of labor it has thrown upon myself and other members of the club goes far to counteract the satisfaction which we have derived from the contemplation of the success of the venture. And this brings me to the point of my letter.

The Cosmopolitan Club does not wish to continue this business. In fact, it has virtually decided that after next spring it will not continue the business. Valid reasons can be given. Lack of space in the clubhouse, lack of time on the part of the members, and partly lack of sympathy among a portion of the student body, are responsible for the decision. Now, Mr. Editor, the enterprise has reached such a stage, and shows such possibilities of greater success, that it would be nothing short of criminal to allow it to lapse, and the old system of individual purchasing to return.

My suggestion is that a co-operative society be formed, similar in constitution and by-laws to those which have achieved such marked success in American colleges and universities. Cornell offers an excellent example. This society would be run on a strictly co-operative plan. The full retail price, or at best a slight reduction on this price, would be charged at time of purchase. At the end of each term, or at the end of the college year, the expenses would

be deducted from the gross profits (which should not be less than twenty per cent.), an allowance made for possible future losses, and the remainder divided among the students in the proportion of their purchases. With the building of the new dining hall there should be ample space in the main building of the college to partition off a room where shelves could be erected and the business of the society conducted. It would probably be necessary to have a supervising director from outside the student body, but the major portion of the work would be done by students, who would receive payment for their services. It might be feasible to have this society either affiliated with, or under the jurisdiction of, some, or one of the present major college societies. The surplus which I believe The Review now possesses would be of inestimable value in putting the co-operative society on a firm financial basis and establishing a line of credit that would invite competition from publishing houses.

This, Mr. Editor, is only a rough sketch of the scheme. Time and space will not permit of details. But, with your permission, I should be pleased, and I think it would be in the best interests of the student body to invite correspondence on the subject from either students, faculty or ex-students. Criticism, either adverse or favorable, would be very helpful.

A. S. CLEEVES.

Editorial Note: This letter comes to hand just as we are going to press. The Review would be glad to hear from anyone interested in the subject and will publish all letters received.

ALUMNI

THIS department wishes again to emphasize the necessity of all students, associates and graduates, contributing any information about our ex-students that may be available. Views of homes or surroundings such as may present to us "an account of their stewardship" will be especially acceptable as such information will be valuable as an impetus to all those interested in maintaining the standard of this institution.

The college at St. Anne de Bellevue owes much to the O. A. C. for appointments to its staff, and this debt is materially increased by the recent appointment of F. C. Clement, who, since graduating here has been the popular District Rep. for Elgin County.

Fred '11, besides being an expert horticulturist, is a good all round sport. He was freshman champion, and an enthusiastic hockey, baseball and rugby player.

His appointment as professor of Horticulture is hailed with pleasure by his college chums, amongst all of whom "Fred" was deservedly popular.

Another appointment to the St. Anne's staff is L. L. Bergey, '12, recently appointed lecturer on poultry at that institution.

On Wednesday afternoon St. John's Church was the scene of a pretty country wedding, when Elsie Margaret, eldest daughter of Lieut.-Col. and Mrs. Van Nostrand, was married to Mr. Robert Dilworth Campbell, of Lyndock, Ont., son of the late Mr. Robert Campbell and Mrs. Campbell, of Hamilton.

Mr. Charles Newman, of Hamilton, was best man, and the ushers were the Messrs. Basil Wedd, Arthur Rowsell, Howard Robertson and James Creelman.

"Bobby" Campbell took the Associate Course with '14. His musical talent made him a valued member of the college orchestra. His many impromptu concerts on Lower Hunt and Mills Streets were warmly appreciated by the habitués of those corridors.

At last his frequent and prolonged absences from Mills Street, during the winter of '11 and '12, are explained. That he was making excellent use of his time during those periodic recurrences is confirmed by our representative at the event noted here, who says "Bobby is a lucky dog."

Cupid has claimed another victim in the person of Mr. C. Shuh, of Waterloo, Ont., an associate of '03.

On September 18th he was married to Miss Bella May Shantz, of Berlin. The ceremony was performed at the home of the bride's parents in the presence of a large number of immediate friends. After the reception

they left on a trip down the St. Lawrence to Montreal and Quebec. On their return they will reside on their farm, near Waterloo. The Review joins with their friends in wishing them a happy life.

J. L. James, from far off Argentina, in sending a subscription of twenty-five dollars to the rink fund inclines us to the belief that "Absence makes the heart grow fonder."

"Jimmie," who took the Associate Course with Class '09, was an all round man, equally at home at baseball, hockey or his studies. He distinguished himself as a judge of live stock, winning first prize for judging beef cattle at the Winter Fair in his first year, and securing the medal for best judge of live stock in his second year.

This liking for good stock has grown with him. On his stock farm, in one of the best districts on the Southern Railroad, between Buenos Aires and Bahia Blanca, he has surrounded himself with breeding stock of horses, cattle and hogs, of which any young breeder might well be proud.

In taking advantage of the de-

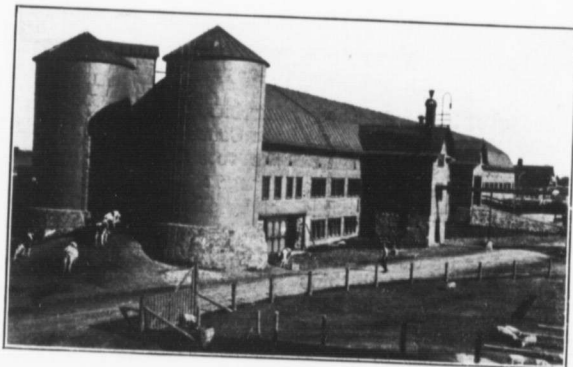
mands of the market for breeding stock in this new country, Jimmie's past record is maintained by striving consistently towards the ideals received at the O. A. C., with a degree of success reflecting great credit on his Alma Mater.

Many students have returned this term to finish their course. Class '13 is reinforced by the presence of H. L. Keegan, '11; R. W. Brown, '12; and H. S. Ryrie, '12. J. R. Ramsay, '06, and M. H. Winter, '05, who have been farming since taking their Associate Course, have joined Class '14.

"Pete" Forsythe, of the Experimental Department, has resumed lectures with the third year.

J. S. Knapp, '12, who has been Assistant District Rep. for Waterloo County, for the past two years, and H. S. Fry, '13, who has been Assistant District Rep. for Northumberland County, have both joined Class '14.

Other additions to the same class are: J. R. Stark, '13, and Pat. Stewart, '12, the latter having spent the intervening years on Heart's Delight Stock Farm, Chazy, Clinton County, New York State.



Barn on Hearts Delight Farm, Clinton Co., N. Y.

College Life

THE STUDENTS' COUNCIL

The students, considering that there should be more business-like organization in control of the student body, decided in the fall of 1910 to form such a committee. Accordingly the Students' Council was established and a constitution drawn up, Mr. J. E. Smith being elected chairman. It

quality of paper for the examinations, and anyone who has written on the paper formerly supplied, will appreciate the change. Permission was obtained to have the electric lights left on until eleven o'clock, instead of going out at ten thirty.

The main reform, however, is the controlling of the elections of officers



Initiation Fight—the Start.

is representative of the student body to the faculty, and consists of three members from each year, the chairman being one of the seniors and the secretary usually coming from the third year.

Although it does its work quietly, and some are only too apt to think that it is of not much importance, it nevertheless has brought about some changes of great benefit to us. It has succeeded in securing a better

for the main college organizations by the Council, and the introduction of the vote by ballot. Prior to this change elections were usually carried on by show of hands; occasionally a society using ballots. The elections were held in the college parlor, usually after supper, and although otherwise desired by the society, perhaps only one-third of the boys in the residence would turn out, not to mention those that boarded out and could

not or would not come (and one could hardly expect them to do so). In such meetings very little time, if any, was allowed for consideration, and that characteristic known as "railroading" was only too perceptible in some.

This spring the first ballot elections were carried out. Each society had a separate ballot and only members of that organization could vote, one of the faculty being returning officer, and each society appointing scrutineers. The polling booth was

tions is "That no student may hold office in more than one major society." This prevents the placing of the responsibilities of several offices on one pair of shoulders and enables the new officers to attend more closely to their business, while at the same time it does not interfere with their studies or recreation.

The Council, if notified, will consider any question. So, if anyone thinking that there is a grievance that can be overcome, can, by writing to the secretary



Initiation Fight—the Finish.

open all day and gave abundant opportunities for recording votes. As the list of the candidates had been posted on the bulletin board for some time, the electors had every chance to choose suitable men.

Thus the many grievances of the former practise have been abolished. The elections are open only to members of the societies, and whereas previously only the slightly-interested few voted, interest is aroused throughout the whole student body.

A noteworthy clause in the regulations drawn up last spring re elec-

or letting the year representatives acquainted with it, bring the matter to the notice of the Council. A meeting is called, and if the trouble is existent, an investigation proceeds.

There are a few matters, worthy of investigation which would hardly be out of place to mention here. As of old, the lights have been going out at 10:30 instead of half an hour later as was arranged last winter. Then, could we not do with a better telephone system? Would it not be advisable to have a students' phone,

connecting directly and separately with the city, and why could we not have a private line, or perhaps more, to the Macdonald Hall, for there it is that the boys do most of their 'phoning. Lastly, would it not be fitting to ask for a reorganization of the finances and the enrollment of the different societies, and the placing of each on a more business-like basis.

The members of the Council this year are:

Fourth Year—Messrs. E. L. Davis, R. H. Ferguson and C. A. Tragillus.

Third Year—Messrs. J. H. Winslow, C. F. Neelands and H. D. Leppan

Second Year—T. G. Laird, A. Cory and D. R. Sands.

First Year—Messrs. H. Lewis, M. F. Orr and E. S. Sandy.

The chairman and secretary being Messrs. E. L. Davies and H. D. Leppan respectively.

Y. M. C. A. Reception.

Coming shortly after the initiation, the reception given by the Y. M. C. A. served to unite still further the bonds of friendship between Sophomores and Freshmen, a very close intimacy having already begun at the flag and pole fight. This is also the time when the faculty and the older students are at home to the new boys.

A large, and as usual, hungry crowd assembled in the gymnasium on Saturday evening, September 21. Dr. Creelman, in the opening address, welcomed the new men in behalf of the student body and congratulated them on their sportmanlike defense of their flag. The Sophomores received some praise in that they had established a precedent by being the first of late years to have a daylight initiation. Mr. S. H. Hopkins, the

Dean of Residence, gave a vocal solo, after which there followed a pillow fight between Messrs. Sutton and Hutchinson. Miss Stolschmidt also gave a vocal solo, being presented with a bouquet of flowers. Prof. Dean welcomed the students in behalf of the faculty, and, speaking for a few minutes on efficiency, explained the value of specialization and of thoroughness. After his talk, Miss Rowland rendered a selection on the piano. Two Sophomores, blindfolded, then had the floor, and with boxing gloves on their hands, attempted to find each other.

The programme over, refreshments were served after which the Philharmonic Society took charge of affairs and spent a pleasant time singing over college songs.

More Changes in the Staff.

W. A. McCubbin, M. A., who came to us a year ago and remained here last winter, left this summer for St. Catharines, where he holds the position of Field Officer for the Dominion Division of Botany.

R. E. Stone, M. Sc., who has just come from Cornell, has taken Mr. McCubbin's place as Lecturer in Botany.

Mr. Stone loves the Stars and Stripes, having been born in Nebraska, the state university of which he attended, and in due time graduated with the degree of Bachelor of Science. The next few years he spent in studying the flora in Colorado and the rusts at Purdue University, Lafayette, Indiana, teaching at the Alabama Polytechnic Institute, where he took his Masters degree, and lecturing at the Agricultural School in Nebraska. During the three years prior to his arrival here he assisted the Botanical Department at Cornell, and made a thorough study of

Cryptogamic Botany. He intends getting his Doctor's degree from that University sometime near the end of the year.

The Review extends a hearty welcome to Mr. Stone, and our wishes are that all success may attend him.

Wm. Southworth, B. S. A., hails from Lancashire, England, taking his primary education at the Harris Institute Science Schools and afterwards four years' training at the Agricultural School connected with the above institution. He obtained the National Dairy Diploma of the Royal Agricultural Society, and the diploma and silver medal of the British Dairy Farmers' Association. He is also medallist of agriculture (Harris Institute), and medallist in agriculture of the Science and Art Department of the Royal College of Science, and was elected Fellow of the Linnean Society of London. After being Assistant Lecturer and Superintendent of Experiments to the County Council of Lancashire and subsequently Lecturer of Agriculture at the Agricultural College at Uckfield, Sussex, he came to Guelph in 1911, and worked on the Plant Breeding Department. Being accepted as a fourth year student, he graduated this summer and since then has been connected with the same department, working particularly with alfalfa.

G. P. McKay, B. A., who resigned from the staff toward the end of August, has been appointed as chemist at the Filtration Plant at Toronto Island.

G. J. Spence, of Class '13, has dropped out, and is assisting the Entomological Department.

Social.

The new boys were tendered a reception by the Union Literary So-

ciety last Friday evening, September 27, in the Macdonald Hall. This night will long be remembered, especially by those of the Freshmen year, as this was their first entrance within the storied walls and their first acquaintance with its fair inhabitants.

Although the "At Home" did not start until 7:30 many were found waiting, as patiently as they could, for some time before it was necessary to set out. It was at last, after a hurried rearrangement of hair and ties and with a feeling of trepidation, that they set out on their way to the unknown land. This uneasiness, however, gradually wore away as they became more accustomed to the Hall and were busily engaged in securing proms.

As at all other receptions at the Hall, the boys outnumbered their fair co-eds, but this did not hinder a good evening's entertainment from being carried out.

After the preliminaries the following programme was rendered in the gymnasium:

Piano Solo Mr. B. K. Horan
Vocal Solo Miss Jean Sinclair
"Study Hour," Homemaker B Class
Vocal Solo Mr. P. Vahey
"Study Hour" was a little farce played by the girls of the Homemaker B Class, it being a caricature of girls residential life. It is generally known that it was a great success.

During the course of the evening refreshments were served, and after the "Extras," the company broke up, even before the lights went out at 10:30.

Church Receptions.

On September 30, the young ladies of Macdonald Hall and the boys of the O. A. College were invited to spend a social evening with the

young people of Norfolk Street Methodist Church. Having secured partners a varied programme was rendered and each was enabled to test his or her ability in the guessing competitions. Refreshments were served, thus fittingly completing a very pleasant evening's entertainment.

Two similar functions were held a

week later, one at Dublin Street Methodist Church, and the other for the Anglican students, at St. George's Church. A large crowd was present at both receptions and everyone spent a very enjoyable evening. After the various programmes, refreshments were served and the gatherings dispersed.



Pleasures are flowers which the hand of God
 Rears 'mid the thorns which spring upon our road;
 Each has its season, and with moderate care,
 May serve the winter of our life to cheer.
 They must be plucked, howe'er, with fingers light,
 For frail their form, with breath their hues so light.

—Voltaire.



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Athletics



THE TEAM

The New Physical Instructor

We extend a hearty welcome to Mr. D. W. Gillies, who has come to the college as Physical Instructor, succeeding Mr. H. S. Ringland in that position.

Mr. Gillies was born in Scotland in 1887, and established for himself a reputation as an athlete while still quite young. Since coming to this country Mr. Gillies has allied himself with the Y. M. C. A. athletics, and last year held the position of physical director with the Collingwood Y.M.C.A. Mr. Gillies was a pupil of Dr. Barton, of Hamilton, and comes to the college with an established reputation. It is our earnest hope that his work may prosper throughout the coming winter.

U. C. C. vs. O. A. C.

The College Football Club marked

the opening of the season on September 28th by entertaining the pig-skin chasers from Upper Canada College, and getting trimmed by a score of 16 to 6.

The game was played at Exhibition Park, and, despite unfavorable weather, a good crowd was present, the girls from the Hall being particularly in evidence. The play, though not of mid-season variety, was good, considering the length of time the boys have been in training.

U. C. C. led at quarter time 3 to 0, and at half time 6 to 0, all the points having been scored on rouges. In the third quarter U. C. C. scored four rouges and a converted touch-down. In the final quarter the college woke up and had the boys from "The Little Red School House" on the run. A rouge was registered, and Curtis shoved over for a try, which Hurder

failed to convert, while the visitors were held scoreless.

U. C. C. won the game with their back division, De Gruchy gaining ground on every exchange of punts. They also had their signals working well, and got the ball out fast.

The college back division was off-color, both in catching and punting. The line worked splendidly and tore holes in the U. C. C. line time after time, Curtis being the particular star. Judging from the work seen, we feel confident that the college, with some more practice, should be right in the running this fall.

The teams lined up as follows:

U. C. C.—Howard, full-back; De Gruchy, Drew, Tennant, half-backs; Heintzman, quarter; Replar, Peterson, Morrow, scrimmage; Burwash, Arnoldi, Morse, left wings; Jones, Saunders, MacLean, right wings.

O. A. C.—Madden, full-back; Simpson, Campbell, Herder, half-backs; Webster (McElroy), quarter; Bergey (Neelands), Dudgeon, Davidson, scrimmage; Jackson Curtis Neelands (Webster), left wings; Hare Braithwaite, Webster, right wings.

Referee—S. H. Gandier.

Freshmen's Fall Meet.

The second annual Freshmen's meet was held on September 30th. The weather was cold and the track heavy, rendering good performances impossible. As a consequence of these conditions many entries were withdrawn.

The performances of Messrs. White and Puleston are particularly worthy of note. Under better track conditions both should improve considerably. In fact, White looks like a "find."
—W. A. W.

G. C. I. vs. O. A. C. II.

The Guelph Collegiate Institute

rugby team sustained defeat at the hands of the College Seconds on Wednesday, October 2, by 19 to 0. Although G. C. I. failed to tally it was not for the lack of trying, and despite the one-sided score, the game was interesting all the way.

The first half was the more closely contested, the G. C. I. holding and even gaining on their heavier opponents on the line, while fumbling by the O. A. C. backs lost many opportunities. At half time the score was 3 to 0.

In the second half weight began to count, and the O. A. C. line broke through frequently for their yards. Finally, after College had forced G. C. I. to rouge, Steckle was shoved over for a try. Another try was registered by McLaren, who broke through the G. C. I. line, stole a pass and trolled half the length of the field unmolested. Then, to show there were no hard feelings, College again shoved Steckle over G. C. I.'s line, making the score 19 to 0.

The G. C. I. boys are quite small, and deserve credit for the way they held their heavier opponents. The work of Warden and Archibald is particularly worthy of note.

All the College boys played a good, consistent game, though the team work was very loose sometimes. "Happy" Williams booted the ball in good style, and Oswald got his man every time. Percy Culverhouse also deserves great credit for the manner in which he handled his charges.

The teams lined up as follows:

G. C. I.—Full-back, Baines; halves, Greave, Warden, Talbot (capt.); quarter, Nunon; scrimmage, Kennedy, Oakes, Ingraham; left wings, Terrance, Craig; middle wings, Mit-

chell, Archibald; right wings, Dryden, Cartridge.

O. A. C. II.—Full-back, Hales; halves, McLaren, Williams, Culverhouse (capt.); quarter, Creelman; scrumage, Neelands, Donald, Brinkley; outside wings, Horan, Bertram, Smylie; middle wings, Sibbitt, Oswald; inside wings, Steckle, Brown.

Referee—Mr. Wm. Squirrel.

Umpire—Mr. C. A. Webser.

St. Jeromes vs. O. A. College.

The college boys scored their first victory of the season at the expense of St. Jerome's College on Saturday, October 5th, by a score of 39 to 0. The game was merely an exhibition affair, but the good weather served to induce a goodly number of spectators out to see the boys perform.

From a local point of view it was a good game, as the red and blue for the first time this season showed their real class. The back division worked with the speed and precision of a well-oiled piece of machinery, not a single error being made. Time after time the local's line bucked for their yards, and while playing on the defensive every man from Capt. Webster down got his opponent.

The great fault of the Dutchmen was their lack of condition. They were all in at quarter time. With the gaining of condition they will undoubtedly gain some fine points of the game.

There was no scoring in the first quarter, but in the second the fire-works began in earnest. Boog Madden kicked to the dead-line for first blood, and this was rapidly followed by three tries, the last of which was converted. Half time score, 17 to 0.

The visitors freshened up after the interval, but the third quarter saw the locals send Curtiss over for a try

which was neatly converted by Herder.

The Dutchmen were fading fast, however, and in the final quarter the blow-up took place. Madden forced a rouge, and then followed with a neat end-run for a try. Neelands, not to be outdone, broke through the opposing line, blocked a kick and sprinted from centre to the visitors' five-yard line, from where he was sent over the line on the first down. To cap the climax, Curtis made a great thirty-yard run through a broken field for a try. Final score 39 to 0.

All the O. A. C. boys played splendidly, but special mention must be made of the plunging of Jackson, Webster's tackling and Simpson's punting.

Davis and Flaherty on the back division were the pick of the visitors.

The teams:

St. Jerome's — Full-back, Davis; halves, Flaherty, Roche (Ford), James; quarter, Sullivan; scrumage, Leibel, Boyes, Sadlo; middles, Dehlen, Theobald; insides, Laskies, Frederick; outsides, Gorsky, Marentelle.

O. A. C.—Full back, Madden; halves, Simpson, Campbell, Herder; quarter, MacElroy; scrumage, Neelands, Dudgeon, Davison; middles, Curtis (Bergey), Braithwaite; insides, Jackson, Hare.

Referee—Mr. Kilgour, O. A. C.

Umpire—Mr. Karby, Berlin.

VARSITY TRACK MEET

The Varsity athletic meet was held October 12th, and although our track team did not, as was fondly hoped last year, win first on points, they made an excellent showing against the larger faculties at Toronto. The Dents headed the list with 34 points, and O. A. C.

came next with 29. Had Miller and Pope been in condition to enter the tale might have been different. But as it is great credit is due to Freeborn, the track manager, and the O. A. C. team, for the faithful training they went thru.

O. A. C. did not make any notches in the sprints. Puleston and Horrobin both came second in their heats in the 100 yards, and Horrobin captured



"Cap" After the McMaster Game.

second in his heat of the 220, but as only the winners of the heats entered the finals they were out of it. The quarter mile was a pretty race. Palmer led for O. A. C. until the stretch, when White and Holmes (Dents) came up behind and captured first and second respectively, Palmer finishing third. The hurdles were run immediately afterwards and "Shorty" Culham got a third. White finished first in the half mile

in 2.09 1-5, making his second win for the day. He is evidently endeavoring to exceed the exploits of his brother, and his prospects for success look very bright. In the mile O. A. C. picked another third, with D. B. Fraser. Campbell, for the Dents, ran well in this race, and also in the three mile, which he also captured. Freeborn and Fraser finished second and third respectively, running up four more points for college.

O. A. C. annexed only one point in the jumps, Culham making third in the running broad. Pete Forsythe was an easy winner in the discus-casting, with a throw of 92 ft. 8 in., but was nervous in the shotput and did not make a place.

The feature of the day though for the O. A. C. was the relay race of one mile. Horrobin, for college, was the last runner. When his lap commenced O. A. C. was in second place with a gap of 20 feet between that and first. After a splendid run Walter made up the difference and finished 10 feet ahead, amid cheers from the grandstand.

The silver cup so kindly donated by Mr. Savage this year to be given outright to the member of the track team winning the greatest number of points at this meet was won by A. H. White, who accumulated 10 points, first place in $\frac{1}{4}$ mile and $\frac{1}{2}$ mile.

As the O. A. C. is not a full faculty under the rules of the Intercollegiate Athletic Association, members of the team could not represent Toronto at the meet the following week. It is very regrettable that O. A. C. cannot be represented at this meet, and the Athletic Society should endeavor to have arrangements made by next year to allow of it.

Following is a summary of the events in which A. O. C. scored

points. The time or distance of the winner of first place is given, also the time and distance in other events.

Quarter-mile—1st, White; 3rd, Palmer. Time, 56 2-5 sec.

Half-mile — 1st, White. Time, 2.09 1-5

Mile—3rd, D. B. Fraser. Time, 4.53 2-5.

Three miles—2nd—Freeborne; 3rd, D. Fraser. Time, 15.56 1-5 sec.

Hurdles—3rd, Culham. Time, 17 3-5 sec.

Broad Jump—3rd, Culham. Distance, 20 ft. 7 in.

Discus—1st, I. Forsythe; 3rd, Culham. Distance, 92 ft. 8 inches.

Relay—1st, O. A. C., Puleston, Horrobin, Smith and Mollison. Time, 3.49.

High jump—5 ft. 5 in.

Pole vault—11 ft. 2 in.

16-lb. shot—33 ft. 6 in.

16-lb. hammer—134 ft. 9 in.

How They Broke The Speed Laws At Ghent:



I sprang to the auto, and Joris, and he;
I cranked it, Direk cranked it, we cranked it all
three;

"You try it," I gasped, for it snorted and stopped
As though it would balk, though I cranked till I
dropped;

So we each took a turn, till the car had the grace
To start itself off at a leisurely pace.

Not a sentence was spoken; we all clambered in;
The honk of the horn made a horrible din,
I turned and I squirmed, for the fit proved too tight—
There were three in a seat that for two was just
right,

"One should push," our friends shouted, but we paid
no heed,
And the car kept on steadily getting up speed.

'Twas sunrise at starting. We knew it was day
By the number of chickens that got in our way;
Some stood in the road as though anxious to see
What sort of a beetle our auto might be;
Then with wings widely spread to the fence they
would fly,
And Joris just muttered, "They're trying to die."

We dodged all the cattle. To run a cow down
Would wreck all our chances of getting to town,
Inside the time limit, and we three went bent
On winning our wager by speeding to Ghent;
But on rounding a bend where the road took a fork,
We ran over a pig and it turned into pork.

Then we doubted our speed, and Direk lost his new
hat,
But we could not get out to go back after that;
The dust flew in clouds, while a hump in the road
Very nearly relieved our brave car of its load;
And each bump in a rut filled my mind with fresh
doubt

Last the next time we struck one, we all would
bounce out.

I heard Direk give a groan, and though I was quite
calm,

Joris snorted out something that sounded like "d-n";
The car gave a lurch and the tire gave a wheeze,
Like a tired marathoner who sags at the knee,
In the long miles of dust lay one pointed wire nail,
But we found it, we found it; what auto would fail?

We jacked up the wheel to put on a new tire;
We worked with such haste, we'd no time to perspire,
A farmer came by with a pitiless laugh,
And offered to "go us a race" with a calf,
I heard Joris say "We have not lost the bet;
If the gasoline lasts, we can make the town yet."

On starting, there was a long incline to climb;
We thought not of caution, but only of time,
And rushed past the farmer, who started to swear,
Then stopped—to hang on to his runaway mare;
His cart lost a wheel, gave a roll and a pitch,
And a whole load of turnips went into the ditch.

I tied down the cover that pulled like a sail;
My cap shot away as a bird in a gale;
We had dust in our nostrils and gnats in each eye,
But we knew that the end of the journey was nigh,
Down the main street we scroched without changing
our pace,
And had seconds to spare when we finished the race.

There's a sequel. The judge would not let us explain,
But warned us 'twas jail if we did it again;
It cost us two hundred—we each paid a share,
'T might have been more without being unfair"
(Thus the burgesses voted by common consent)
'For breaking speed laws on the highway to Ghent,"
—Fred. Jacob.

MACDONALD

Welcome.

FORTY years on when afar and
asunder,
Parted are those who are sing-
ing to-day,
When you look back and forgetfully
wonder

What you were like in your work
and your play;
Then, it may be, there will often come
o'er you

Glimpses of notes, like the catch
of a song,
Visions of boyhood shall float them
before you,
Echoes of dreamland shall bear
them along."

—Old Harrow Song.

Good-day to you, Freshies, and a great many good days. For that is what you have come to look for, and one generally finds what one looks for if one will only look hard enough. Some of you are in search of good play-days, where studies are but an interesting game, others are hoping for good work days, when strength of mind and body shall be pitted against the important problems of the modern home. Whichever you want we hope and know you will receive it.

We are very new Seniors. In fact, it seems only yesterday that we were very new Juniors, and we are quite familiar with the "all-at-sea" feeling of the first few days and weeks. But the first strangeness of the new surroundings wears away quickly, and by the time you have your trunks

unpacked and stored away, your rugs down, your pictures up, and some maulage spilled on your brand new blotter, you will feel as though you had belonged at the Hall for a long time, and as though one term or one year were a very short time to pass in such environment.

So it is. Ask any senior, and she will tell you that last year was the shortest she ever dashed through. Homesick? No one ever has time for that except on Sunday afternoons, and then everyone is asleep.

And the homesick girl is the girl who is most dissatisfied when she is at home. Her imagination is working backwards instead of forwards, and the world likes the people whose clockwork is running the right way. Shakespeare says, "'Tis in ourselves that we are thus, or thus. Our bodies are gardens to which our wills are gardeners, either to make them sterile with idleness, or manured with industry." So when the "Heimweh" threatens to get the upper hand, see if you can't forget it by working up an interest in something else—or somebody else.

The year is short, and we all want to get the most we can from it in every way, for the majority of us will never again be in a place where there is such a community of interests. Let us learn first to forget the unessential things that we may save our time and thought for those essential things that we shall carry away with us.

At
place
tinue
class

Macdonald Memories

IT was morning at Macdonald Hall. The breakfast gong had sounded—noise was everywhere. To reach the dining-room door before it closed on the tardy student was the aim of each and all—struggling madly with refractory ties—black or white—for even the staid senior would oversleep at least once in the month—possibly after her “dem.” In less than half an hour the sound of feet is heard once more—breakfast if over—chairs are shoved noiselessly in on the right front leg—beds are made—rooms are tidied and at the summons of another bell the roll call race begins. Here the careless, unmindful of the edict respecting “Low Heels” creep in quietly amidst a throng.

The day's work has begun in earnest. Girls in their neat, blue uniforms go quickly to the lockers, greeting the “down town” girls on their way, don white aprons to complete their cooking costume and are soon deep in the mysteries revealed in Fannie Farmer's famous cook book. Others with doleful faces trudge across the campus to the Chemical Building, where smiling professors await their students. The refrain as they pass runs something like this:

“Ashes to ashes,
Dust to dust,
If cooking don't kill us,
Chemistry must.”

At noon the postoffice is a popular place. Here a bystander could distinguish members of the various classes. Business envelopes usually

find their way to the short course girls' boxes—neat, little notes come to the Homemakers. Some turn sadly away, while others hail with glee a “letter from home,” with the longed-for cheque.

At two the days' work is resumed, but at four-thirty the girls go free. “Down town” claims the attention of many—some nature lovers stroll to the dairy woods—others less energetic saunter about the beloved campus, watch the tennis players, admire the flowers in the borders, naming the various ones for favorite teachers or friends among the girls. In the evening—but it is as well for an ex-student to refrain from mentioning the evenings. They are passed as each student deems wisest and best at the moment—whether profitably or otherwise, remains to be seen.

Macdonald is a pleasant memory. We'll all agree upon that, and very lucky are the girls who have that pleasure still in store. But lucky are we too although we have only “pictures of memory” now—lucky to have had them. We've made our best friends here and learned many, many things that will be with us always. Whether we think of the “nights when time was made up,” the days when “dems” were our portion, when “frozen dishes would not freeze,” or “wool soap left out of the pastry and shrinkage resulted,” when the tragic words “To clean a gas stove thoroughly” appeared on our house practice card, or the “apartment” was our fate. None of these seem troublesome now—even an “homologous series of hydro carbons” or a “chlomydobactenaceae” seem almost

as welcome as old friends. We think of it all—the big, sunny dining-room where all was laughter always—the room above where we've all danced—we've all drilled—we've all played. Where, too, on Sunday evenings we have attended Y. W. meetings and been made woefully homesick by the grate fire and the singing of the familiar hymns. We think, oh, so often of our beloved bedrooms, our pennants, our pictures, the friends we've gathered there, the serious, the sad, the merry conversations we have had, at all hours of the day or night.

We think of the institute, for there we spent much of our time, grave and gay, of Massey Hall, where lovers of English loitered, of the other buildings into whose sacred precincts we were sometimes permitted to enter, and then we think too of the campus. But the campus means so much to us all that it is better to class it with study hour and refrain from a public discussion. I. S. '12.

Initiation.

Friday evening, September 20th, will ever be remembered by the residents of Macdonald Hall as the first, but by no means the dullest, social gathering of the year. The hostesses were the members of the two-year classes of 1913, and they succeeded in giving their fair guests a most lively time.

The students' sitting-room served as a reception-room. Here the guests, in full evening dress, were received

by two ghosts and a policeman. A flashlight photograph, intended for a "before-and-after" series was secured at an early stage in the evening, but it was found impossible to persuade the sitters to submit to the "after" edition.

Roll-call, by one of the ghosts, was answered promptly, and the guests, in small groups and singly were escorted to the gymnasium door, whence they enjoyed a roller-boller-coaster ride to the platform. The entertainment committee consisted of the House-President, two doctors and a nurse, several ghosts, a switchman, two runners-up, a suffragette policeman, and two general managers, all of whom succeeded in discharging their duties in a manner that left nothing to be desired. The guests were so impressed by the kindly attentions of Class '13 that they brought tears to many eyes by their touching vows of loyalty and allegiance. The evening wound up in true Macdonald fashion with light refreshments and a dance, and was voted a most successful initiation.

In the list of contents for October it was stated that Miss Watson was the author of the article on "Social Life." This was due to a misunderstanding, as the perpetrator of the article in question was a member of Class '13, and not a member of the Faculty. We owe an apology to Miss Watson for making her appear responsible for the views and feelings of an undergraduate.



Much Ado About Nothing

Breathless Female, at a ticket wicket—"Two-to-Duluth."

That Bold Clerk—"Rooty-too-too, oh, you kid."

◇ ◇

Tourist—"And is the Countess well thought of among the villagers?"

Driver of the Brake—"She's the most populous lady in these parts, ma'am."

◇ ◇

Guileless One—"Can you tell me what I am spelling if I speak quickly?"

Confident One—"Certainly."

Guileless One—"S-k-i-r-t"

Confident One—"Skirt."

G. O.—"S-h-i-r-t."

C. O.—"Shirt."

G. O. (quickly)—"S-c-h-e-m-e-s."

C. O. (confused)—"You don't spell chemise with an S."

Paper Bag Cookery.

By Quincy Kilby.

(From Judge)

Have you learned to like the latest
Uncontested, up-to-datest,

Final form of fickle fashion—frying
food in paper bags?

By its means the merest messes
Seem superlative successes,

While its bigoted believers bore our
brains by blatant brags,

You will realize from reading
That the process of proceeding

Is to beg a biggish bag and slickly
salve its seamy side,

Chuck a chop or chicken in it

For a metaphoric minute,

Then produce the promised pro-
vender with pardonable pride

You can fry familiar fishes,
Do desserts and dainty dishes,

By preparing proper paper sacks of
serviceable size;

Do your basting, baking, boiling,
Braizing, brewing or your broiling;

You can soak and simmer, steep
and stew, or steam and sterilize

While in finer fleeting flavors,
Or in sweet, seductive savors,

The result is really rather reminis-
cent of a rag,

Caused by chemical condition,

All the natural nutrition

Percolates the paper package. Pru-
dent people eat the bag.

When I saw that, to my sorrow,

I could neither beg nor borrow

Any bag whose bulk was big enough

to roast a rooster raw,

I conceived a clever caper,

So procured a penny paper,

Wrapped him round and round and

clamped the cover closely with
his claw,

After rather reckless roasting,

And terrific, torrid toasting,

His agility assured me I had made

a marked mistake;

That unhealthy heat unheeding,

In his wrapper he'd been reading

And its wails of woe and want and

war had worked him wide
awake.

THE LIBRARY, UNIVERSITY OF CALIFORNIA

LOCALS

Reception of Welcome

At about 1 p. m. Friday morning, Sept. 20th, the freshmen were given a reception by the Sophs. The judging pavilion was brilliantly illuminated for the occasion and well decorated with upper classmen.

The freshmen arrived in groups, escorted by their hosts, the Sophs., who formed a guard of honor around them. After bowing to the king of the ceremonies the freshies were

desiring to let the good work go on, decided to hold a lawn party on the campus. On Saturday, Sept. 21st, a flagpole was erected at a convenient gathering spot and the freshmen, accompanied by many onlookers, arrived about 1:30 p. m.

After several hours of necessary (?) delay the Sophs were seen approaching with a wagon heavily laden with refreshments. In order to serve the refreshments quickly and in the



most warmly welcomed and warmed so well that a mantelpiece was far to be preferred to eat from than a table. After indulging in games, in which water, lamp-black, grease, barrel staves and clubs were much in evidence, most of the guests departed.

The Lawn Party

The freshmen being so pleased with the reception tendered them in the judging pavilion, and the Sophs

most nifty manner, the freshmen were roped in around the pole. Brother Tisdale then pronounced the blessing with a whistle, and the refreshments, consisting of fruit, both of the hen and garden with flour, molasses and lamp-black for dessert, were rapidly and forcibly conveyed to the freshmen.

To the regret of the faculty and the joy of the Sophs, the party only

(Continued on Page x.)

Telephones at the Exhibition

(From Toronto Globe, Sept. 7th.)

The telephone exhibits at the Exhibition are becoming more and more an object of interest to the visitors from the different parts of Ontario, and in fact from all the Provinces, owing to the fact that the rural telephone business is in the majority of cases in the hands of local companies or municipalities, there having been quite a few municipal systems organized during the past two or three years. This alters entirely the condition that existed a few years ago when the telephone business was entirely in the hands of the one company, and the ordinary citizen was not interested in the different types of telephones and switchboards. This is all changed now, however, and the interest that was evidenced in the exhibits at the Fair this year was very marked.

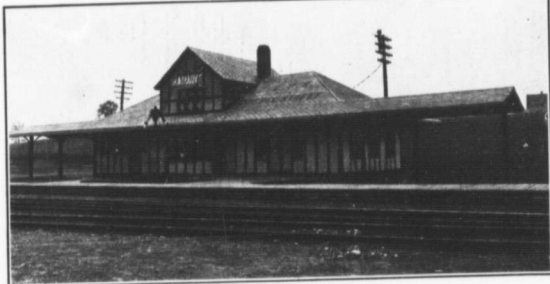
The Canadian Independent Telephone Co., which has its offices and factory on Duncan street, occupied a very prominent booth in the south wing of the Process Building, and the exhibit seemed to be the most complete, as far as equipment for rural telephone lines were concerned, that was on the grounds. It included every type of central energy and local battery telephones, including the Lorimer Automatic Telephone, which is used on the "girlless" system, which is being successfully operated in Brantford and Lindsay. Along with the telephones were shown the magneto switchboards, one being equipped for 150 lines, and the other for 50 lines, both of the floor cabinet type. These switchboards were connected up so that the visitor was allowed to see by actual operation the distinct advantages which the company claim for this switchboard equipment—the self-restoring drops, easily removed and interchangeable drop coils, ringing and listening and ring back keys, etc.

In telephones the company again showed that they continue to study the possibilities

of improving the bridging telephone for rural systems with a view to increasing its efficiency both in the way of good service and low cost of maintenance. Just to mention one or two of their new features this year they have done away with the old push button and non-interfering service is given through a new patent hook switch. If you ring with the receiver on the hook you ring the subscribers on the line only; if you remove the receiver and ring, you ring the switchboard only. They not only showed this improvement in the wall telephone, but also had on exhibit a new desk set, which was also equipped with the non-interfering hook switch. Anyone who uses a bridging desk set knows how awkward it is sometimes to get at the push button, and will appreciate the great advantage it will be to simply be able to ring the subscribers on the line or the switchboard without bothering with the push button. This change should make desk equipment much more popular on bridging lines. These new and distinctive features are just mentioned as an indication that the Canadian Independent Telephone Co. is keeping right up to the minute in telephone equipment.

The exhibit also included samples of every kind of construction material and telephone supplies. They guarantee their telephones and switchboards, and also all their construction material. Their motto is to build up their business on a high standard of quality, prompt shipments and guaranteed satisfaction. The company reports a larger business this year than ever before, and last year, it will be remembered, they doubled their business over the previous year. Their factory on Duncan street was visited by many of those who are interested in local systems in different parts of the Dominion, and the complete and up-to-date method and facilities for manufacturing equipment of uniform was very interesting to those who inspected the factory.

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



CHOSEN BY THE RAILWAYS

If there are any keener or more careful buyers than the Purchasing Departments of our great Railway Systems, they are yet to be discovered. It is therefore most significant that every Railway in Canada, with one exception, is using

ASBESTOSLATE Cement Shingles

The searching, systematic tests of their Maintenance Departments cannot fail to endorse "Asbestoslate." They find it wind and weather-proof—unaffected by extreme heat or cold—absolutely fireproof—artistic in appearance—light in weight—and practically everlasting, without paint, stain or repairs.

Made in three soft colors—Slate, Grey and Red. Write to-day for Booklet G.-R. ASBESTOS MANUFACTURING CO., LIMITED., E. T. BANK BLDG., MONTREAL. Factory at Lachine, Que.

LOCALS

(Continued from Page 86).

lasted a record time of two minutes. During this short period the Sophs, armed with stockings, filled with lamp-black and soaked in molasses, delivered an impressive welcome to the year '16.

Prixy's revised motto—"The Sophs love daylight rather than darkness." Yea! Bo!

◇ ◇
Freshie—Oh! I have an idea in my head.

Soph—Treat it kindly kid. It's in a strange place.

Lo, The Poor Farmer

While crossing a city street a farmer was knocked down by an automobile. Before he could get out of the way he was knocked down again by

a motor cycle, which came rushing along behind.

A friend of his on the sidewalk yelled to him:

"Why didn't you get out of the way?"

"How the dickens did I know it had a colt!" was the angry response.

Notice

Any one endeavoring to imitate me by singing out of tune will be prosecuted. By order of

Lawrence.

Wanted

A room at Mac. Hall—Bill Weir.

A hair cut—A bunch of freshmen.

A better time-piece—Doc Reed.

A Western Belle—Pres. S. Johnston.

Someone to go to the shows with me—Ed. Mallock.

On the Opening Day

the old boys meet at the

Kandy Kitchen

always the popular rendezvous
for the college boys and girls.

Hot drinks for cool days.

Cool drinks for hot days.

The choicest confections made
on the premises. Time passes
pleasantly here, while you are
waiting for a car.

“GET THE HABIT”

The Kandy Kitchen

Lower Wyndham Street - Guelph, Ontario

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

Barretts Dairy Co., Ltd.

F. L. BARRETT	President
P. A. B. CHERRY, B. S. A.	Treasurer
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Besides handling Milk, Cream and Butter we manufacture and deliver to all parts of the city

Devonshire Clotted Cream and Lactic Cream Cheese

Delicacies Hitherto Unobtainable in Canada.

Give us a trial and if satisfied patronize an establishment which was organized and is run by ex-O. A. C. students.

BARRETTS DAIRY CO., LIMITED

Phone 799 - - - 2 Carden Street (Market Square)

College Athletic Outfitter

TENNIS BALLS
TENNIS RACKETS
O. A. C. SEAL
PENDANTS



RUGBY OUTFITS
GYMNASIUM
OUTFITS
SWEATERS
SWEATER COATS

SEND FOR CATALOGUE

J. BROTHERTON, 550 Yonge St. Toronto, Ont.

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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.



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

We have a very complete
stock of

*Entomological
and Botanical
Supplies*

For students. At student's
Prices

Alex. Stewart

CHEMIST

NEXT TO POST OFFICE



The Overcoat

You want is right here. Over 100 beautiful new weaves and patterns to choose from. We make a real good Overcoat to order for \$15; some as much as \$30, but we specialize some of our handsomest patterns and best values.

At \$20.00

Ask to see them. A large range of Suits to order at \$15, \$18, \$20, \$25 to \$30.

Lyons Tailoring Company

Tailors to Men Who "Know"

47 WYNDHAM STREET



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., Limited*

EVERYWHERE IN CANADA.

Head Office, Toronto.

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

First Freshman—"Say, can you tell me how the shower bath works."

Second Freshman—"Oh, It gets hot and cold by turns."

◇ ◇

Soph—"I hear you had some money left you."

Senior—"It left me all right."

◇ ◇

Course Wit.

"In what course does your son expect to graduate?"

"In the course of time."

◇ ◇

Conductor (gruffly)—"Did I get your fare?"

Student (meekly)—"I gave it to you, but I don't know whether you got it or the company."

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

DENTIST,

Cor. Wyndham and MacDonnell Streets.
Telephone 14. Over Dominion Bank.

ERNST M. SHILDRICK,
Teacher of Singing,

Pupil of Van De Linde of New York
Studio, Opera House Block.
Phone, Studio, 625K. Phone, Res., 625L

Elite Shaving Parlor

T. J. SUNLEY, Prop.

70 Macdonnell St., just east of Spa.

FOUR CHAIRS

First Class Work Guaranteed.

**CANADIAN
PACIFIC**

Unexcelled Train Service

FAST TIME AND ATTENTION

—TO—

WINNIPEG
EDMONTON
BRANDON
BANFF
NELSON

SPOKANE
VICTORIA
TACOMA
SASKATOON
REGINA
CALGARY

LAGGAN
ROSSLAND
VANCOUVER
SEATTLE
PORTLAND

Standard and Tourist Sleeping Cars

Via Canada's Greatest Highway

J. HEFFERMAN, CITY AGENT

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WINDSOR
DAIRY SALT

**Swept The Boards
At All The Fairs**

1911 was a triumph for Windsor Dairy Salt. Practically every prize for butter-making was won by someone who used Windsor Dairy Salt.

Those, who make their living out of their dairies, say that Windsor Dairy is their o'd standby. They always rely on it because they know it is pure—because it makes the richest, most delicious butter—because they win the prizes and get "Top prices" for their butter—when they use WINDSOR DAIRY SALT.

66D

CITY CAFE

We make a specialty of catering to the wants of the college students



71 QUEBEC STREET

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CUT FLOWERS

Choice Cut Flowers always on hand. Roses, Carnations, Valley, Violets and all Flowers in season.

GILCHRIST'S

Phone 436. St. Georges Square.

JOHN IRVING

"MY TAILOR"

Clothing Made to Order
Pressing, Cleaning and Repairing
49 Cork St. Phone 739L. Guelph.

You could enjoy yourself for a nice meal and a cup of real American Coffee.
Call at the

DOMINION CAFE

104 WYNDHAM STREET.
Phone No. 688

WHOLESALE AND RETAIL. PHONE 197

THE M. AXLER COMPANY

(M. AXLER)
IMPORTERS AND DEALERS IN
Staple and Fancy Dry Goods, Ladies' and Gentlemen's Ready to Wear Clothing, Carpets, House Furnishings, etc.
SPECIAL ORDER CLOTHING
107 Wyndham Street Guelph, Ont.

Guelph and Ontario Investment and Savings Society

(Incorporated A. D., 1876)

Debentures issued for \$100.00 and over for five years at four and one-half per cent., and for shorter periods at four per cent.

Deposits received and interest paid or compounded half yearly at highest current rate

Executors, Trustees, etc., are authorized by Special Order-in-Council (Ontario Government) to invest trust funds in the Debentures of this Society, and to deposit trust funds in our Savings Department.

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

J. E. McELDERRY, Managing
Director

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

HEADQUARTERS FOR
Students' Supplies

ASK FOR CATALOGUE

WATERS BROS.

PHONE 350

GUELPH

LOOKEE HERE!

Lee Wing calls for your laundry on Monday and Wednesday and returns it Wednesday and Friday.

WORK GUARANTEED

NOTICE TO STUDENTS

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

SHERIDAN & O'CONNOR,
Tobacconists,

45 Wyndham Street.

R. H. McPHERSON

Barber

Get your hair cut at 145 Wyndham street. An extra barber employed at the highest wages for your sake.

THE OLD TOBACCO SHOP

A full line of imported cigars, cigarettes and tobaccos always in stock. First store on Quebec Street, opposite Montreal Bank. BBB pipes a specialty.

E. H. JOHNS, Proprietor

Successor to R. Hackney.

Phone 312K

Regal Shoes
For Men.

Sorosio Shoes
For Women.

W. J. THURSTON,

Sole Agent

THE NEW SHOE STORE,

39 Wyndham Street

MIDNIGHT SUPPERS

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

J. A. McCrea & Son

COLLEGE STORE

CANDIES, CIGARETTES,
TOBACCO, Etc., Etc., Etc.

CORNER OF CAMPUS.

JAMES H. SMITH
Next to Barrett's Dairy
Molasses Taffy, Walnut Cream and Maple
Cream. Best in the city.
Fresh Every Day.
LUNCHES SERVED

LEE LEE & CO.

Best hand laundry in Guelph. Goods called for on Monday and Wednesday and delivered Wednesday and Friday.

SUEY WAH

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

16 Wilson St., GUELPH.

KING EDWARD BARBER SHOP

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

CHAS. BOLLEN - Proprietor

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

Sells the Best Meats
and Poultry

Phone 191. - - Open all Day

Students' Special In

PHOTOS

\$1.50 Per Dozen
Students Only

THE BURGESS STUDIO

FREDERICK SMITH,

PLUMBER, STEAM
AND GAS FITTER

Sanitary Appliances Estimates Furnished.
GUELPH.

"Eclipsed by None."

Walker's Electric Boiler Compound



It removes the scale or incrustation from boiler without injury to the irons, packings or connections, and prevents foaming.

The only reliable boiler compound on the market today. We also handle cylinder, engine and machine oils. Tri-sodium phosphate, engine supplies, etc. Specialty departments, Crystal Separator Oil, Waxine Floor Oil. Correspondence invited.

The Electric Boiler Compound Co., Limited
Guelph - Ontario

Football Boots

Boys, see our Sporting Shoes before buying. We have a special line of Football Boots at \$2.25.

Send us your repairing.

J. D. McARTHUR

"THE HOME OF GOOD SHOES."

16 Wyndham St.

BOYS, BUY YOUR SUITS AND FURNISHINGS HERE.

We carry only the best makes of clothing in correct styles for men who care. Our stocks of fine shirts, ties, collars, gloves, underwear, etc., are complete, and marked at prices that will convince you of this store's value-giving powers.

Pay Us a Visit.

D. E. MACDONALD & BROS.
LIMITED.

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.

NOTICE

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

H. H. WORDEN, ST. GEORGE'S SQUARE,
Street Cars every 15 minutes. Three chairs.

No waiting.

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Pringle

THE JEWELER

Entomological Supplies,

Magnifying Glasses, all qualities

Fountain Pens Rubber Stamps

O. A. C. and Macdonald Institute

College Pins.

Fine Job Printing

We execute the finest grades of printing, plain or in colors, promptly. Put us to the test.

Kelso Printing Company

St. George's Square.

Phone 218

Opp. Post Office

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.

Look!

Look!!

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

MONTHLY CONTRACTS

Work Done by Practical Tailors.

C. E. HEWER,

49 QUEBEC ST. - PHONE 808

The College Book Shop

4 Doors Above Post Office	The only shop in Guelph with all the Text Books and requisites in use.	Upper Wyndham Street
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\$1.00 FOUNTAIN PENS.
SWAN FOUNTAIN PENS
EMBOSSD O. A. C. NOTE PAPER
AND PADS.

Special prices to students on all lines.

The Recommended Shop. **The College Book Shop,**
C. L. NELLES.

Central Book Store

Opposite where the Street Cars Cross.

Dealers in

**BOOKS, STATIONERY,
FANCY GOODS,
CHOICE CHINA.**

C. ANDERSON & CO.

LADIES' SUITS

OF

THE BETTER CLASS

**GLOVES, HOSIERY, WAISTS
DAINTY EVENING DRESSES**

HEWER'S FASHION HALL

St. George's Square.

**BROADFOOT'S
Red Cross Pharmacy**

DRUGS AND SUNDRIES

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

ST. GEORGE'S SQ., COR. QUEBEC
PHONE 381.

PHONE 719

44 CORK ST.

Jas. K. Readwin

Successor to Chas. A. Kutt

**Ladies' and Gentlemen's Clothes
Cleaned, Pressed and Repaired**

Goods Called for and Delivered. **GUELPH.** French Dry Cleaner.

HEADQUARTERS FOR

HARDWARE

AND SPORTING GOODS
AT LOWEST PRICES

G. A. RICHARDS

Upper Wyndham St., **GUELPH.**

R. S. Cull & Co.

THE LEADING

**Clothiers and
Furnishers ::**

35 Wyndham Street

GUELPH - - ONTARIO

HELP

Yourselves by buying any furniture you may need at

J. M. STRUTHERS,

120 Wyndham Street - - - Guelph

He will use you right.

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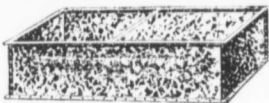


Fig. 3

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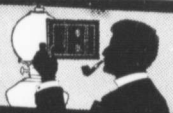
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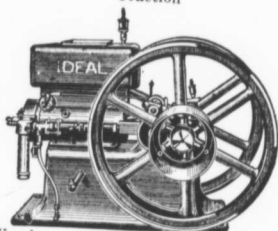
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9—09.

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6.15	8.25	10.35	12.25	4.05	7.55
6.35	8.45	10.55	12.45	4.25	8.15
6.55	9.10	11.20	1.05	4.50	8.35
7.20	9.30	11.40	1.30	5.15	9.00
7.40	9.50	12.05	1.50	5.40	9.20
8.00	10.15		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	

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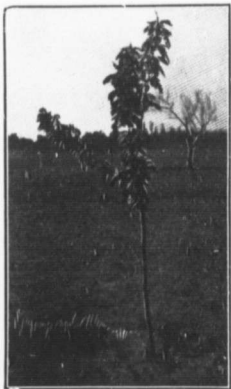
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International Colic Remedy—50c and \$1.00 per bottle.
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