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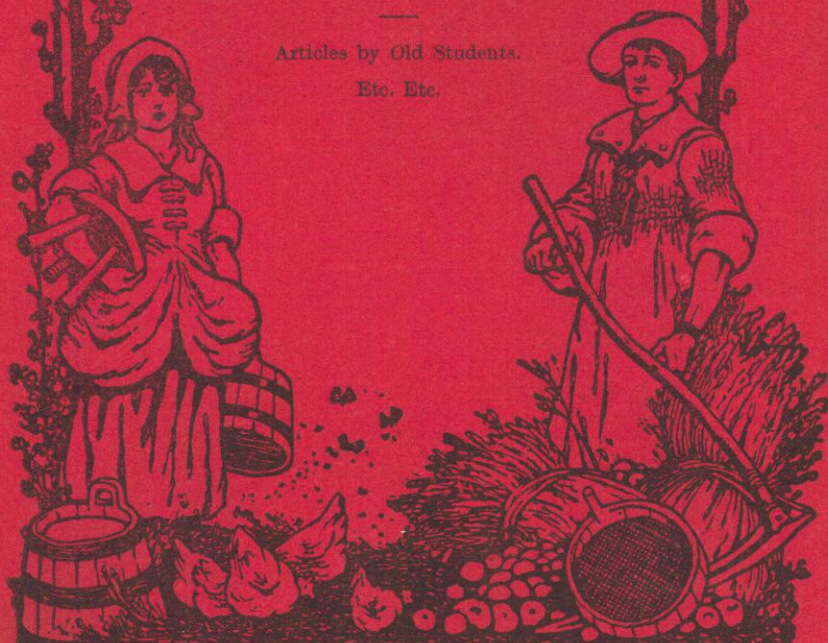
# THE M.A.D.C. MAGAZINE

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COLLEGE ROLL OF HONOUR.

The New College at Sutton  
Bonington.

Articles by Old Students.  
Etc. Etc.



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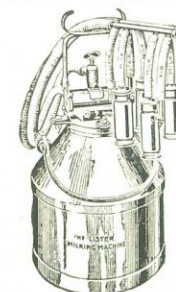
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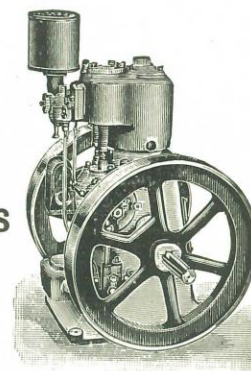
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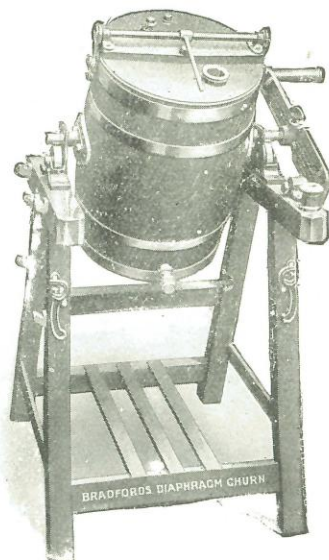
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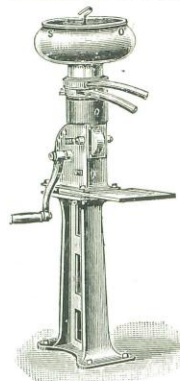
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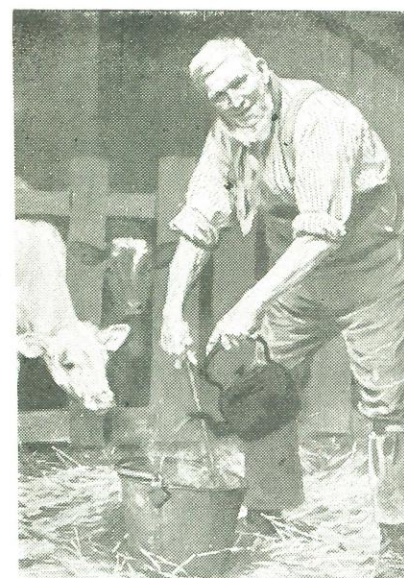
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MISS HAWKINS.

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## EDITORIAL.

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Our College Magazine is presented to its readers this year, in spite of the turmoil which has surrounded the "Old Country." We can hardly pick up a journal or magazine nowadays which does not exhibit a warlike spirit and whose pages are not mainly devoted to articles and discussions breathing a martial air. We cannot entirely ignore this great crisis in our national history in issuing our "1915 number," but still a large number of our pages contain, as in previous issues, articles of agricultural and dairy interest.

This war is undoubtedly the greatest crisis Britain has passed through for many centuries, and needless to say all industries of our busy nation have been affected. It is difficult at present to gauge its effect on Agriculture. We know that farmers at present are getting big prices for their corn, and that dairy products are realising good prices, but against this we have to place the great shortage of labour, the loss of the best men from the farms, and the almost inevitable increase in labourers' wages. How this will balance up at the end of the war, no one can tell, but whatever the balance sheet, we can always pride ourselves that the agricultural community responded nobly to its country's call, and did not consider its losses or gains in the time of Britain's danger.

Our College has "kept going" this session, although the number of male students fell much below the average of the past 4 or 5 years (perhaps we wish it had fallen even lower). The Britisher of to-day measures the patriotism of a house, or business or college by the percentage of eligible inhabitants who have enlisted. Although we cannot claim a record in this respect, yet several of our College people have joined the noble throng.

Of the Staff, every single man of military age has either enlisted or taken up a Commission in the Army after a period of training in the Nottingham University College Officers' Training Corps. One of the students, Mr. A. E. F. Hill, has also enrolled in the O.T.C. and is awaiting the inevitable commission which we hope will soon be his good fortune to get. The majority of the other students are spending two afternoons a week and Saturdays in drilling and attending lectures under the direction of the officers and senior cadets of the Nottingham University College O.T.C.



The old students have responded nobly to the "Call to Arms," of whom a list (those whose names we could possibly obtain) is printed on the next page. All honour is due to these Kingstonians, who have given up their occupations, and in many cases, their livelihoods, to help their country in its hour of need.

I am sure our readers will welcome the latest addition to our "portrait gallery." Miss Hawkins undoubtedly occupies a very warm corner in the hearts of the crowd of boys and girls who have passed through the corridors of Kingston College. Having been a member of the Staff since the old Dairy Institute times, she has seen the College pass through a vista of changes, and her work and personality have been intimately wrapped up with the history of this institution. I am sure all Kingstonians will join the Editor in wishing Miss Hawkins the best of luck and health for many many years.

The Staff has not suffered many changes since our last issue. Only one member has left the College, *viz.*: Mr. W. A. Stewart, Assistant Lecturer in Agriculture, who was appointed to a similar post at Wye College in March of last year. He was succeeded by Mr. H. M. McCreath of Glasgow University. Miss M. Monks (an old student 1912-13) was appointed assistant in the Poultry Department in July, and during the same month, Mr. Beale, of Kew Gardens, assistant in the Horticultural Department.

In spite of the War, College people are watching intently the development of the New Agricultural College at Sutton Bonington. Building operations were commenced in October and the walls are now rising rapidly. Details of these buildings are given on other pages.

The Editor regrets that this issue of the Magazine is rather smaller than the preceding number. This must not be taken as a sign that the "M.A.D.C. Magazine" is not flourishing, for we hope to resume its normal dimensions next year. The reason for its abbreviation is that the number of advertisements (a great source of income in any paper or magazine), has fallen off to a great extent this year. This is no doubt due to the wave of economy which has permeated all business houses during this time of unrest. We hope, however, that the boom in trade, which will undoubtedly follow the declaration of peace, will react in our favour in future issues.

## Roll of Honour.

### Staff.

Corporal J. C. WALLACE, Motor Cycle Dispatch Rider, Cavalry Corps, British Expeditionary Force, France.  
Lance-Corporal J. H. BEALE, Robin Hood Reserves.  
Sec. Lieut. J. G. W. STAFFORD, West Riding Regiment.  
Sec. Lieut. H. M. McCREATH, Royal Scots. Fusiliers.  
\*Mr. J. GOLDING, Artists' Rifles.  
\*Mr. A. MURRAY, Scottish Horse.

### Students.

#### OFFICERS.

Major H. B. WARWICK, Northumberland Fusiliers.  
Sec. Lieut. Parker, 13th Hussars.  
Sec. Lieut. R. D. CROSBY, Lincolnshire Yeomanry.  
Sec. Lieut. K. H. BOND, Sherwood Foresters.  
Sec. Lieut. W. J. ABBOTT, Lincolnshire Yeomanry.  
Sec. Lieut. M. T. YOUNG, Royal Flying Corps.  
Sec. Lieut. E. J. KINGSBURY, Durham Light Infantry.  
Sec. Lieut. C. WALLIS, East Lancashire Regiment.  
Sec. Lieut. A. E. F. HILL, West Riding Regiment.

#### N.C.O's. AND PRIVATES.

L. ASHWORTH, Public School Corps.  
Sergeant J. V. BLUNT, 5th Batt. Leicesters.  
F. H. BATH, 4th Batt. Leicester Reserve.  
A. M. BUNTING, 7th Batt. Oxford & Bucks. L.I.  
Sergeant D. BALL, South Notts. Hussars.  
H. BROOKS, Lincolnshire Yeomanry.  
C. A. B. CAUKWELL, Signalling Corps, R.E.  
J. EVENS, Lincolnshire Yeomanry.  
R. GODSMARK.  
W. HUNT.  
E. P. SANDS, Berkshire Yeomanry.  
E. HAGUE, Public School Corps.  
J. LITTLE, 4th Batt. Leicester Reserves.  
A. NICHOLSON.  
J. W. OLDERSHAW, Derbyshire Yeomanry.

\*Late Members of the Staff.



P. POWELL, Public School Corps  
 E. SHACKLETON, 17th Lancers.  
 B. E. SPINK, South Notts. Hussars.  
 E. SKELTON, Derbyshire Yeomanry.  
 K. STIVEN, Royal Fusiliers.  
 W. A. STEVENS, Derbyshire Yeomanry.  
 H. A. P. R. TOLKEIN.  
 S. WILLOWS.

Sergeant H. WAGSTAFF, South Notts. Hussars.  
 Sergeant BARBER, Lincolns.

## NOTICES.

The Honorary Secretary of our Association is very anxious to obtain as complete a list as possible of all old students who have joined His Majesty's Forces.

Will readers therefore kindly send in to the College the names of such students, accompanied by full particulars as to their rank and regiment, and whether they are on Foreign Service or not.

The Editor would like to include in next year's number of this Magazine short accounts of the doings of Old Students, who are serving in the Army. Contributions are welcome at any time before the end of the year.

The Editor again urges readers to notify him of change in address.

PLEASE DON'T FORGET to send the subscription for this Magazine at once, before it is forgotten.

## A DAY IN THE LIFE OF A CAVALRYMAN OF THE NEW ARMY.

I was just dreaming of butter-punching and curd-stirring and I could plainly hear the hideous noise of the steam-pipe turned on too full, together with the banging of the scotch hands on the boards. Perhaps the noise was only the strains of "reveille" that I really heard, and, associating it with something hideous, I imagined it to be the steam-pipe. Suddenly there was a bang and a clatter, which my half-waking senses interpreted as the bucket of water falling off the stool, after making sundry jerky perambulations over its surface, but really it was only the corporal waking us in his usual

way by banging the lower half of his iron bed on the barrack-room floor.

Now I was almost awake, at any rate sufficiently in possession of my senses to realise that another day had dawned, that I was in the British Army, and that if I were not dressed, my bed made up and myself out shivering on parade in another fifteen minutes, I should be "in for it," rather a formidable collection of facts to be grasped all at once, but the shock of it is over now and I regard it with my usual complacency and even lie abed for another minute or two.

But now I am quite awake, and if I don't exactly leap out of bed, I get up fairly rapidly, swallow my "gunfire\*", dress, and arrange my bed and blankets in the regulation way.

"Answer your names. All present. File away to stables."

It is a relief to be in the stables, for it is warmer here than outside. Some unfortunates who have to turn out before breakfast are saddling up, while the rest of us carry out the bedding in our arms, and then get "swept up."

Horses are watered and fed, and we file away to complete our toilet, for there is no time to wash before the 6.45 a.m. parade, and then we turn across for breakfast.

Meal times have ceased to be funny and we are now so accustomed to them that they are difficult to describe. You must see for yourself the closely arranged bare board tables with their two loaves and eight mugs of tea and the ornamental part of the breakfast, whatever it may be, bully beef, sausages, or perhaps porridge, and generally margarine, which we always call butter, partly because it sounds better and partly owing to force of habit contracted when we were civilians; you must see all this to know what an army mess room is like. You must do your own "cribbing" if there is no food for you or someone has pinched your rations, then you will understand how you have to look after yourself; you must have your knife and fork pinched once or twice (and pinch someone else's to make up for it) to teach you to look after your property as well, and to remember that if you don't take care of your belongings no one will do it for you.

\*Gunfire is the mug of cocoa each man gets at reveille, and is regarded by a cavalryman as one of his prerogatives. Some envious infantrymen once asked me with derision if we had our shaving-water brought to us as well. I assured them we had no such luck.



Everyone has settled down "eight to a table" except a few discontented beings who have no food or are trying to get more than their share, and the orderly officer comes in. "'Shun, Orderly Officer! Any complaints?" Sometimes the dissatisfied ones have the courage to voice their grievance but more often the answer is "None Sir."

The meal does not last long, and you are back in the barrack room to make your final preparations before parade, clean your boots and buttons and wind your putties. Stables again at 8.45 a.m., and after an hour's grooming you saddle up and turn out. The ride forms line along the road. "From your right number" "One, two, three, four, one—" "As you were. Are you asleep? you dunderheaded idiot" (and a lot of other things quite unmentionable). "From your right number." This time the "dunderheaded idiot" is awake and realises he is number five and is not numbering off in fours, so the line numbers off. "Half sections left. Walk march, head, left wheel," and the ride, thirty strong, is on its way to the Park adjoining the Barracks, accompanied by the Major, Lieutenant and various N.C.O.'s.

Very soon the fun begins. It would be far too tedious to enter into details of mounted drills, suffice to say it is by no means easy to go through without a mistake, but is always good sport. To be the man on the right flank when the line makes a "left about wheel" is the height of joy. He charges round madly yet he must not go out too far, while the centre moves at a proportionate pace. Repeatedly the centre, by closing in, becomes jammed tight, and nearly breaks the rider's legs or pushes him out of the saddle: but you must cling tight. Woe betide any unfortunate wretch who fell off in that frenzied rush.

Sometimes to avoid the discomfort of being sandwiched, a man falls in rear, content to trot behind till the wheel is completed and he can get into his place again, but such conduct is not permitted, and the culprit, with sundry threats and execrations, is told to push his horse up whether he gets kicked or not. The only movement which is more thrilling is a charge in line. The horses go mad and gallop furiously, urged by stinging cuts from your whip. You push your feet well home and sit tight, feel inclined to shout but even a smile is a breach of discipline so you must be quiet and enjoy your ride in silence, though the temptation may be strong.

Then there is the water jump with its humorous scenes, horses that stolidly refuse to jump, horses that jump and leave their riders on the turf—or in the water—and others which clear it easily and dash up the opposite slope.

It is time to return, so the line forms up for a last canter across the park. Horses cantering neck and neck, while the sun flashes on the brass buttons of the riders, makes a stirring picture: it is good to be a cavalry-man, and one looks forward to a day when we hope to sweep in a long victorious line with crouched lance upon the foe.

Yet, we fear the day of the spectacular charge is over, but we may get a chance—who knows?—and then the "Death or Glory Boys" will again show the metal which made their fore-runners famous at Balacava.

But the glory of the day is over and its thrills; we are back in the stables grooming, and the order is "get stuck into it and get finished before dinner." From two till three we wield the lance or the sword, spurred by the furious expletives of the sergeant, then we have a break till 4.15 when the horses are bedded down, watered and fed. Tea at 5.30 and we are free at six to do as we please. Should it be the end of the week, and having recently drawn your six shillings, you are feeling particularly opulent, and needless to say, you go to the Hippodrome and have a general "bust up" but on other nights a concert is provided in the Church Army Hut, which suits all pockets, even the empty ones, and a jolly good show you get for your money too.

Lights out at 10.15 and "thus creeps on this petty pace from day to day."

17TH LANCER.\*

## REVISION OF RULES OF THE STUDENTS' ASSOCIATION.

It has been apparent for some long time to many members, that the Rules of our Association needed revision, and reorganizing. This question was brought to a head last year, and at a Special General Meeting held on November 4th, 1913, a Sub-Committee was appointed to revise the Rules.

\*The writer of this article, who is an old student, has recently received a Commission in the Sherwood Foresters.—Ed.



This Committee completed its task by the end of April, and on May 24th, a Special General Meeting was held to discuss the report. The new rules were adopted and finally passed at a Special General Meeting, held on June 23rd, this meeting being advertised in the local press.

The chief alteration in the rules was with regard to the question of Life Membership. It was felt that members who wished to take advantage of the various benefits of the Association should be asked to pay the subscription annually, since the members of the Staff and also several students who were in residence at the College for more than one year had, in the past, enjoyed all the benefits of the Association on payment of one annual subscription only.

Of course it was not in the power of the Association to deprive the existing Life Members of their privileges, but those who are still connected with the College have been asked to pay the Annual Subscription. The following Life Members have acceded to this request :

Dr. Wm Goodwin.	Miss Hawkins.
Mr. J. Dunlop.	Miss Nicholson.
Mr. H. T. Cranfield.	Miss M. S. Blunt.
Mr. H. P. Hutchinson.	Miss M. G. D. Taylor.
Mr. E. Russell.	Miss M. H. Monks.
Mr. J. G. W. Stafford.	Miss L. E. Pritchard.
Mr. Alex. Levie.	
Rev. A. F. Thornley.	
Mr. J. Matthews.	

In consequence of the smallness of the Annual Subscription it has been necessary in past years to collect donations for the various sports clubs, some members paying as much as seven or eight shillings in the course of a year. It was felt that it would be better to raise the subscription to 5s. per annum and abolish the donation system. Consequently the Annual Subscription is now fixed at 5s.

A new rule was also added allowing the Association to elect Honorary Members. The first Honorary Members to be elected were the wives of Members of the Staff, at a Committee Meeting held on November 11th of last year.

## RULES OF ASSOCIATION.

OCTOBER, 1914.

### 1.—*Title.*

The Association shall be called "The Midland Agricultural and Dairy College Students' Association."

### 2.—*Objects of the Association.*

- (a) Promoting and organizing the social life of the College.
- (b) To control the Sports, Athletic and Literary Clubs.

### 3.—*Members shall be*

#### (a) Ordinary Members :

- (1). Members of the College Teaching Staff.
- (2). Students of the College while in residence.
- (3). Past Students of the College on payment of the Annual Subscription.

#### (b) Honorary Members :

Honorary Membership may be conferred on any person whom the Committee may deem worthy.

### 4.—*Subscription.*

The Annual Subscription for ordinary members shall be, in the case of members of the Staff and Long Course Students, five shillings ; short Course Students (12 weeks and under) two shillings.

### 5.—*Honorary President.*

An Honorary President shall be elected at the Annual Business Meeting.

### 6.—*Office Bearers and Committee.*

The office bearers and a Committee of two ladies and two gentlemen shall be elected at the annual business meeting.

Office bearers shall be as follows : President, two Vice-Presidents (one lady and one gentleman), Secretary, Assistant Secretary, and Treasurer.

### 7.—*Conduct of Business of Association.*

The business of the Association shall be carried on by the above office bearers and Committee, and by club representatives, of whom one shall be elected by each club affiliated to the Association. Seven shall form a quorum.



8.—*Meetings.*

- (1). The Annual Business Meeting shall be held on the second Friday of the Winter Term.
- (2). Ordinary Meetings shall be held weekly during the Winter and Spring Terms.
- (3). A Business Meeting shall be held in the last week of May of each year when interim reports shall be submitted by the Secretary and Treasurer.
- (4). Extraordinary Business Meetings may be called by the Committee or by twelve ordinary members.

9.—*Notice of Meetings and Business.*

Due notice of all meetings, with a statement of the business, must be posted on the Association Notice Board, 48 hours before the date of Meeting.

10.—*Amendment of Rules.*

Any Rule of the Association may be amended or repealed at any business meeting of the Association by the vote of two thirds of the members present. Due notice of motion to that effect must be posted 48 hours previously.

11.—*Affiliated Clubs.*

Clubs affiliated to the Association are as follows :—

Women's Hockey, Men's Football, Men's Billiard, Men's Rifle, Tennis and Literary Clubs. The Committee have the power to affiliate other Clubs from time to time.

Affiliation involves the entire financial support and control of each club by the Association. Annual Grants shall be made to each Club.

The Secretary of the Association shall call separate meetings of each affiliated club not later than three weeks after the commencement of the Winter Term, when the officials, committee and representatives to the Association Committee shall be elected.

12.—*Reporter.*

An official reporter to the Association shall be elected at the Annual Business Meeting. The duties of this official shall be to keep suitable reports of all meetings, sports, matches, etc.

13.—*The M.A.D.C. Magazine.*

The Committee of the Association shall, before the end of November in each year, elect the officials and Committee of this Magazine.

This Magazine shall be the official organ of the Association and shall be published in March of each year. Members of the Association shall be entitled to a copy gratis.

## THE VISIT OF SECTION M (AGRICULTURE) OF THE BRITISH ASSOCIATION, TO AUSTRALIA.

It is impossible in the space of one short paper to deal adequately with so large a subject as the visit of the Agricultural Section of the British Association to Australia, but the whole expedition, in spite of the war cloud which overshadowed all our thoughts, was an unqualified success. The unbounded hospitality and the pains which had been taken to enable the visitors to see as much as possible of the agricultural resources of the country eclipsed all expectation. The interest taken in the work of the section and the valuable contributions made by the Australian workers in agricultural science was most inspiring. I do not wish, however, to attempt a review of all the papers contributed to the section, but rather to draw a comparison between Australian and English methods of Agriculture. Where the conditions are so new a comparison at first sight seems impossible, the impression of unbounded space and unlimited land, the entirely new natural flora which arrests interest at every turn, the semi-tropical climate which permits of such crops as oranges, bananas, olives, vines, and in Queensland, sugar-cane and pine apples. All these make a selection of a basis of comparison difficult.

Fortunately, Mr. Hall, in the second part of his admirable Presidential address delivered at Brisbane, struck the key-note of a most profitable basis of comparison.

After contrasting the agricultural population per square mile in different countries of the world, and the yield per acre of food stuffs, which compares Australia unfavourably with Europe, Mr. Hall said: "The Australian quite rightly replies by setting up another standard of comparison; not the production per acre, but the production per man, is his criterion, and on this basis the Austro-



lian farmer takes a very high position indeed. Against the production of the land when labour is unlimited, he opposes the ideal of the productivity of the man when aided by machines and unlimited land." Mr. Hall further pointed out that organised large scale farming supports far more men than the labourers actually employed on the land, and if a saving of labour is effected in the production of a given quantity of food, the community as a whole is the richer. The means by which such large scale farming can, in the end, beat mere grinding human labour, is by utilising to the full all the resources of science, machinery, and organisation.

Perhaps the highest standard of production per man is to be seen under the most adverse circumstances on the wheat belt in Western Australia. The rain-fall is only about 10 ins. the evaporation factor is four to six times greater than the rain fall, most of the soil is very light and sandy. Yet here are seen prosperous towns where nine years ago there was only scrub; for example at Meckering, where £30,000 worth of wheat was grown last year.

The land is cleared at a cost of only £1 per acre, by rolling down the scrub, and afterwards burning it off. Then follows the stump jump plough, and the wheat is put in the same year. The grain is harvested and threshed in the same machine. The next is a year of self-sown grass, fed off by sheep, then a year in which the moisture is conserved by bare fallow for the following wheat crop. This is sown at the rate of 40 to 60 lbs. per acre, from the combined seed and manure drill—a disc implement which together with the stump jump disc plough and the harvester have made the agricultural conquest of this district possible. All the land is deficient in phosphates, and Professor Paterson of Perth University, told me that 30 lbs. of super applied in this way had been known to raise the yield from 9 to 18 bushels per acre. The usual practice is to use 60 to 80 lbs. of super with the wheat. One man with a six-horse stump jump disc plough will plough 20 to 30 acres per week.

At Kellerberren, I visited a farm which Mr. Mather, his two sons, and two men were working on this system. They had 1,650 acres in crop, 780 in fallow, and had built a comfortable mud walled house, and had a well stocked homestead; the farm was all bush seven years ago.

The 3,000 acre State Experimental Farm at Merredin, under the direction of Mr. J. L. Sutton, is used for growing selected stud wheats for the district, and for experiments on rotations, etc.

I gained a fair notion of unlimited land, wandering in a 700 acre "paddock," looking for wild kangaroo, and as I came upon one on the way home he did not seem cramped for space. Here at Ferndale, near Balingup in the South West of Western Australia, four men seemed to have a fairly easy time on a farm of 2,540 acres, although they had 1,150 ewes with about 1,000 lambs, 200 sheep, 18 horses, and 15 head of cattle to look after, as well as a fairly large orchard of oranges and apples. Red gum trees, over 30 feet in diameter, and Jarra trees 27 feet in diameter, make clearing a matter of many years. Most of the gum trees had been ring barked and stand in the paddocks an army of gaunt, grey spectres against which a never ending war is waged with fire and gelignite. The waste of all this source of energy and the destruction of the tar yielding Grass trees (Kingyai) and "Black boys" (Hastilis), showed that the resources of science are not yet used to the full in this pioneer work, though even in this wild part every fruit tree had to be sprayed with lime sulphur wash as a precaution, and the fear of the inspector ruled in the land.

The dairy industry in Western Australia afforded another instance in which scientific control and inspection was coincident with the start of the industry; but where, as in one case, a farmer had lost 36 cows and had others paralysed with alleged poisoning by *Zamia* palm, research into the cause of the trouble by the State seemed far more urgent than the inspection of his already very satisfactory milking sheds.

In another case I noticed a flavour something like aniseed in the milk as it came from the cows; the farmer thought it was due to something the cows found in the bush.

Very clean, granolithic floored, airy milking sheds used for no other purpose, and in which the cows are not fed or kept for longer than the time of milking, are usual, even in quite out-of-the-way places.

A most interesting development of these milking sheds is the "Echelon" milking stalls, a labour saving arrangement which certainly effects great economy in space and cost over anything



previously tried. A building 31 feet long by 16 wide, affords standing room for 16 cows, which stand along the sides in echelon formation on a concrete floor raised 1 foot from the milker's passage. The cows are not tied up or fed during milking, which is done with a machine, the milk being conducted by a conduit system direct to the separating room at one end of the building.

When the milking is finished the cows walk out at one end of the building and a fresh lot walk in. Half as many cows as the shed will hold are collected in a small yard at the entrance to the shed from the large yard where the whole herd is rounded up.

The inventor claims that with this management the cows do not mess in the shed. The cows I saw certainly seemed to like the arrangement. The stalls are fixed at Hawkesbury, Yanco, and Wollongbar experimental farms, and it has been arranged to give the system a trial under English conditions at Reading.

Labour saving machines were seen in a high degree of efficiency in the big co-operative dairies of the North Coast of New South Wales. For instance, at the butter factory at Byron Bay there are three churns which make half a ton of butter each at a time, the factory turning out 40 tons of butter a week.

Five papers were read at the section in Melbourne on milk records and milking machines. It is estimated that in Victoria alone 2,000 farmers had been supplied with milking machines.

Australia's recognition of the importance of science in agriculture finds expression in the well equipped Agricultural Colleges at Roseworthy, Hawkesbury, and other centres, and in numerous experimental farms, of which the one at Werribee, near Melbourne, is an example in organisation. Cereal breeding, which proved a most popular subject in the meetings in Sydney, occupies a prominent part in the work of these farms.

The utilisation of the resources of science, engineering and organisation are seen to great advantage in the great Murrumbidgee irrigation scheme, a Government enterprise which will ultimately provide for 7,000 farms and 100,000 people.

The great Burrinjuck dam will hold up 766,324 acre-feet of water, which flows by gravitation to the Berembid Weir, and is then distributed by canals over 250,000 acres of land.

Berseem (*Trifolium alexandrinum*) was seen growing under irrigation at Roseworthy College; a 4 acre plot had kept 25 cows for five months during the winter, and yielded green food at the rate of 36 tons per acre.

I will close with one more example of the productivity of the man when aided by machines. This I saw on a great sheep farm in Australia. Two sheep were sheared in nine minutes, the record being 160 in one day by one man. The men were paid 24s. per 100.

In contrast with these methods I have a vivid picture still fresh in my mind from a very small holding in France, where one hot Sunday afternoon, in June, I saw two men, one pushing and one drawing a primitive plough over their miserable patch of ground with infinite toil.

I will conclude by quoting again from Mr. Hall's address: "The application of science to agriculture is the only method by which the community can be saved from falling into the Oriental condition, of a community of labourers working incessantly for a bare subsistence."

JOHN GOLDING.

## ADVENT OF MILITARY DRILL AT THE COLLEGE.

When it was known definitely that we were to have military drill in a day or two, most of us were glad of the prospect of a change from the daily bombardment of "words, words, words." Others, more scrupulous, with peculiar consciences perhaps—there are such in any group of men—were glad, because, here in safety, they could satisfy somewhat their sense of duty by preparing for emergencies; and others among us of the "whole hogger" type, who believed either in soldiering, or letting it alone, thought that this mixing up of things was an infernal nuisance. But a day or two later when word went round that a soldier was on the spot waiting to put us through it, quite a flutter of excitement swamped all wavering doubts, and tedious meditations on beetles, economics and multifarious useful *stinks*. Out of the Hostel we strutted, involuntarily squaring our shoulders and backs, and manfully trying to assume a martial air,



but, it must be admitted, with only indifferent success. Some were constitutionally incapable of it. Others, seemingly thinking that to look fierce was part of the programme, set their jaws, and scowled like Napoleon on his retreat from Moscow. Others, in a vain attempt to stick out their chests, only managed to bring their chins into prominence, while their chests seemed to be projecting somewhere in the rear. In a few—the writer among them—the force of habit was too strong to admit of any drastic change of deportment, and soon in spasmodic efforts to shrink from cold winds they curled up like so many interrogation marks, and moved across the fields with hands that automatically gravitated towards their pockets and sunk deep into the recesses thereof, while their shoulders were hunched up on to the same plane with their ears, and their chins sank somewhere in the vicinity of the second button of their waistcoats.

Thus they tottered along, apparently brooding darkly in the depths of their coat collars, like the villain of a melodrama. With their feet striking out in various directions, their backs bent, their heads half a yard in advance and their "*lumbar vertebrae*" following on behind, it seemed, according to our lectures on engineering, that at every step gravitation was about to pull them to the earth by the nose, but by some benevolent and miraculous suspension of the laws of motion (where's my note book?) they arrived at the "common room," without having lost their equilibrium, and experienced a practical illustration of the laws of falling bodies.

There they were, a jumbled up jolly laughing crowd of fellows, each with a stubborn way of his own. Surely it were no small feat to get a mixture of hilarious "forked raddishes" such as these, to suspend their own peculiarities of character, to merge, as it were, their wills in the will of the drill instructor, to become of one mind, and to act as one man.

The wonderful creature that was to perform this miracle, according to traditions—as we vaguely felt—should have been a heavy drinking, heavy swearing, corpulent old drill sergeant, who, in moments of anger would entertain us with explosive additions to the English language, instead of which, we found

awaiting us quite a young unpretentious corporal, who with confident but quiet deliberateness obtained in a few minutes our concentrated attention. Every muscle in our bodies was ready to respond to his slightest command; and once he had got us going everyone of us entered into the business with hearty goodwill, and, for the time being, we were absolutely his, to do with whatsoever he willed. The miracle had really come to pass! The corporal knew his business and wasted no words. Soon, erratic and wandering feet, for the first time perhaps, came wholly under their owner's control, and began to move and take up position in a rational and definite fashion.

Click! We strained to straighten out the kinks in our legs and backs, and we assumed a monumental stiffness with faces as serious as County Court Judges. Thus, in our stolid, impassive immobility, when standing at "attention," if someone had stretched out our arms and written thereon "8 miles to Nottingham," we should have made good substitutes for mile posts. No semi-relaxed position was possible to our undisciplined backs. It was a case of being either as stiff as Paris plaster, or else each limb and muscle said to its neighbour "go as you please," and so forming a loose angular animated lump of clay, looking—as the "traditional drill sergeant" would say—as if held in suspension by the braces and likely to fall to the ground if a button gave way. To avoid such an ignominious catastrophe we courageously kept ourselves tense and as unyieldingly perpendicular as so many ramrods. Soon, under the electrifying influence of our Corporal's crisp commands, rapped out like pistol shots, together with our consciousness that the ladies were crowding round the windows, like so many caged canaries, to get a look at us, we began to compete with each other in expanding our lungs till our chests were bulging out like a battalion of miniature boiler ends.

"Form fours!" began again that exacting corporal, "Left! By the right, quick, march!" and off we tramped to the "forsaken" football field with an expansive grin on every face. "Heigho the holly, this life is most jolly." We were actually marching! Left! right! left! right! the blood



in our veins danced merrily along and set our hearts a liting, 'till we soon found ourselves singing the inevitable "'long, 'long way to Tipperary.'" The rhythm of our tramping feet was as exhilarating as champagne, and we sang as if every man had swallowed a bottle of it. As the birds sing simply because they must, so sang we out of sheer joy of living. "Heigho the holly," we felt it a treat to be alive.

But that Corporal was not out for singing or grinning, and when he got us to the field he very soon left us with little energy or breath to do either. He made us close up and he made us extend; he made us swing to the right, swing to the left, and swing all over till we felt like the spokes of a fly wheel. He made us right turn, left turn, and about turn, till some of us felt about turned inside out. We right formed, we left formed, we formed all sorts of blooming forms. We inclined to the left, and we inclined to the right, till we inclined to lie down as a last inclination. But there was no rest for the wicked; and the way he made us march in column, and quick march, and double march, till we were nearly doubled up, would have tried the wind of a channel swimmer, and it set some of us seedy fellows furiously gasping, and our hearts wobbling like lumps of blanc mange.

"Stand easy!" shouted our observant Corporal. "Thank the Lord for small mercies," sighed every mother's son of us. And the stiff backs began to yield, tense muscles relax and knobs and angles and kinks reappeared in us—we were "easy."

We felt that all this was good, that it was important, and that it was ripping exercise. To comment on the necessity of it at present, would be calling attention to the obvious; and few, if any, of us would regret it if every afternoon were devoted to military drill, instead of to lectures; for of the latter, it may be said that you can get too much of a good thing.

H. McKAY.

### CULTURE AT KINGSTON.

Now all of you who think that there's nothing you don't know, You go to Kingston College and you'll find it isn't so, For there the cream of milk and the cream of knowledge too, Are continually sought after by a choice selected few.

For eagerly to get the cream the girl's go every day,  
(Although its not unusual that they forget to pay),  
For they must have some biscuits, some cocoa or some tea,  
After their hard day's work, or else exhausted they will be.

What this hard work consists of, there's little need to ask,  
'Tis the eating of their dinner—a most annoying task—  
But when, alas, they get for tea experimental butter,  
Their task is wholly left undone, profanities to mutter.

If now and then the cheese does not taste quite the thing it should,  
You musn't worry over that for it would do no good,  
Just find whose cig'rette case it was that dropped within the curd—  
Bacey's the latest thing in cheese for flav'ring I have heard.

Now while you are in lectures if you hear of F.Y.M.  
Just take it down and listen, there's worse to come than them;  
For there exist bacteria, with names you'll never spell,  
And even when they're written down you can't pronounce them well.

And when at last you're quite fed up and do not wish for more,  
Just chuck it up, old chap, and go and join a training corps.  
What e'er you do, what e'er you say will never count a bit,  
Your mental state won't matter if you're physically fit.

P.G.B.

### AN UNTRUE STORY.

When I was young and silly and believed I knew a lot,  
I thought I'd go to Kingston, so a Scholarship I got.  
It seemed so nice and jolly and the rules they were so few,  
I fixed I'd try the dairy as I'd have most work to do.

For I was young and silly and thought it grand to work,  
(But now I know much better, and do all I can to shirk),  
Now I wish I were an Agri. and could stay in bed quite late,  
They don't get up for breakfast until its nearly eight.

At fifteen minutes after seven in th'dairies I must be,  
Or else a fine of 3d. they at once extract from me.  
They keep me working on until the breakfast bell has gone,  
At times, alas, I don't come in 'till the meal is nearly done!



They work me all the morning until I am dead beat,  
The only rest I ever get is when the iron I heat.  
And then there is no peace at all—the dairy swarms with girls,  
Who drop within the cheese vats their hairpins and their curls.

Then they give us lectures and I thought I knew a lot,  
I suppose they're very clever, but they seem to one like rot,  
They speak of things I've never heard, of things I've never seen,  
How sesamoid bones in a canine leg must always be fifteen.

Now in the Lab. I slowly tread the dull and dreary paths,  
For I'm told I lack the knowledge of elementary maths.,  
They give me awful sums to work all far beyond my wit,  
And they puzzle me with things about a herring and a bit.

Then I was young and silly, but they started drilling me,  
Tho' 'Shun, Right Wheel, Form Fours, these were all as Greek to me,  
But now I've learnt about them, and something more besides,  
Which is, that I know nothing, but I'm middle-aged and wise.

P.G.B.

### FIRST IMPRESSIONS OF "THE STATES."

To write one's impressions of America, after being in the country exactly one month, is rather a large order; however, I will endeavour to jot down the things that have struck me as typically American, in the short time allowed me, but of course these first impressions may change as I become better acquainted with the country and the people.

To begin with, everything here is more expensive. All street cars are 2½d. and you have to hand up your cash before getting in, but the cars are heated by means of hot pipes. The trains are very comfortable—but oh! so hot. Men and women have sleeping berths all in one carriage, and a "coloured man," (not a "nigger") makes up the beds and sweeps the floors. It is hard to do one's hair or perform other necessary items of the toilet in the small space allowed, and sometimes one sees a foot suddenly shoot through the curtains. There are no separate compartments or carriages, far too private for Americans; all are large, accommodating about forty passengers, and are provided with easy chairs, each seating

two. The luggage goes separately on "Freight Trains." The stations are called "Depôts." Cabs have runners, not wheels, and are drawn by two horses.

The Blacks are educated with the Whites in the State schools, and later attend College with them. All children, rich and poor, receive their education free, and this free attendance is extended to the Colleges, so that the majority take four years college training after leaving school. The girls devote their studies chiefly to Domestic Science, Botany, Stenography and Literature; the men to Agriculture, Engineering, etc. Everything gives way to Education, and it is very plucky how boys without money manage to work through College. So also is the manner in which the mothers, often widows, help them. In this College, I know of mothers who keep Cafés, serve in stores, and take in washing to help to pay their son's bills for books, food, etc.

The boys themselves earn a little money in a variety of ways, such as taking round newspapers, stoking up the furnaces in private houses at 5 a.m., washing up dishes in the clubs, or doing janitor's work in the various buildings; many of them wait in the Cafés for their meals.

The houses are all very hot; there is one big furnace in the cellar, and pipes, either hot air or steam, heat every room—almost over heat them—but it is delightful to have a warm bedroom in which to dawdle round.

In New York it seems extraordinary to see "Coloured Ladies," travelling about in smart hats, veils, bright green ruffles and bright yellow boots. Everyone is a "Lady" in this country. One advertisement, I noticed, ran:—"Wanted a Lady to do washing." There are no servants as we know them. Ladies help in the house, and get very well paid for light work. The Americans are good house wives, and splendid cooks and managers; they wear dainty lace caps and tiny aprons with frills, when cooking or dusting.

One has to learn how to eat all over again here. There are no sharp steel knives, only silver, and the vegetables are all served in small separate dishes round one's plate. They are great on Pie, (not Tart) and ice-cream, and they just love Salty Peanuts, Pickles, Popcorn and Oysters. One needs to get acclimatised to all these.



Americans do live in the lime-light. I did not know where to look, I felt so embarrassed on my first visit to Lansing, when on looking into a shop window, I saw rows of men reclining in chairs, covered with large towels, some with their faces covered with a soapy lather, others, after that was over, having their faces massaged, and still others having their hair cut.

At the hotels the men sit right in the windows in rows staring at the girls. One lady who visited East complained that the men never looked at her—one gets accustomed to everything in time.

The towns have a very unfinished look compared to ours, and are badly lighted, except in the main streets, where many electric advertisements are sparkling all the time. The names of the streets are nailed to the trees, and the wooden houses are dumped down anywhere, and I believe if one gets tired of the view or if the house is sold, they just get a cart and horses, and drag the house along somewhere else. There appear to be no gardens or hedges or walls to sit in, or under, or behind. The people just sit by the road or in the porch, and no blinds are ever pulled down.

The entertainments here are good, and they are open on Sundays. The great thing to do on this day, is to go to a Café for supper; it is a good rest when one has no cook. The only dessert, *i.e.* pudding, to be obtained is pie or fruit, and unless black tea is ordered you get weak green tea.

The shops or stores are large, and one is taken aback by the assistants coming up to one, and instead of saying "Good Morning, Madam," they greet you with "How do you do?" At the chemists or druggists, you buy cigars, stationery, bread, candys, *i.e.*, every kind of sweets, clocks, and all manner of, what appears to us in such a shop, odd things.

The men are very temperate—many States having no drinking at all, and I have seen none—only they chew (not the better class ones) but some chew both gum and tobacco: the latter is the worse, and is horrible. Also in the cafés, at the paying desk is a little pot of tooth picks, and the men, again not all men, go down the street with a tooth pick protruding from their mouths.

Everyone wears rubbers. At first I wondered why, when it was quite dry and the snow frozen hard. After falling down

suddenly several times, I found the reason, and always wear them now.

The climate in winter is fine—cold, but dry and invigorating; only one day of rain since I've been here.

The people are very hospitable, friendly and kind to strangers, and people are valued for their brains. There is absolutely no "class" as we have it, and that is one of the most difficult things to get used to; everyone is the same, H's or no H's, provided they have education and good breeding, *i.e.*, good manners. The grandparents of this generation are of all nationalities under the Sun. This equality is the reason why America appeals to people with brains and no money.

The young boys are polite and full of self confidence and the children are most independent. They seem to marry early—28 is the average age—and on very little; but you cannot tell who is engaged, for they wear rings on any finger, and I am told often married women don't wear wedding rings, and unmarried ones do.

There are about 2,000 students at this college, and they generally join clubs, each club having a house. To be initiated into these clubs, they do mad things. For example, some boys had to make flower beds in the snow all one day without speaking to anyone.

The girls at this college have a huge building. They apparently wear evening dress all day long, being attired at breakfast in low necks and short sleeves, and in the evenings they are still more dressy; all in the very latest fashions, such flimsy clothes, and such beautifully polished nails. How they laugh at us for our thick, solid, English woollens, although the average temperature now is 25° of frost.

The men wear funny checked, spotted coats, like Tiger's skins, called "Mackinaws"; the fashion started by a man being dared to walk down the street in one of them.

In the girl's club, there is a large dining room on the top floor; there are about 40 round tables, each holding eight, and the meals are very dainty, the girls taking it in turns to wait. For breakfast at 7 a.m., they get fruit, such as oranges, apples, grapefruit, and coffee, cream, toast, butter and porridge; never marmalade.

Lunch at 11.30. Macaroni, cheese, etc., and cocoa.



Dinner at 5.40. Meat, often chicken or pork, creamed potatoes, vegetables, though I've seen no greens yet, and dessert, such as pie, ice cream, fruit salad, etc.

No tea or jam, all day long. I've had to get a private supply of the former.

Girls and boys mix a lot. They are allowed to receive boys up to 8 p.m. in a reception room, and some brave ones even venture up to the dining room when asked; they go skating together, and anywhere about on the Campus, which is very beautiful and well wooded, with squirrels running round, quite tame, and two deer and a 'possum. There are 600 acres or more of Campus, and the river runs through it. To go down town, however, or to a theatre, special permission has to be obtained. They have club parties twice a week and enjoy life very much.

The sleigh rides are lovely, a moonlight night, two fine horses, a sleigh holding say 20, and you go jingling over the snow, which sparkles like diamonds with the frost upon it. Its cold but very jolly.

Base ball is the game just now for men; they go as far as two days journey for a match. The girls don't play much here except tennis in the summer.

The girls are rather palefaced, probably owing to the extremes of cold and heat.

Just now there are very few birds about, only jays, sparrows, and snowbirds, and very few dogs. Collies, seem to be the only thorough-breds, the other few I've seen are mongrels, a kind of bull terrier mastiff, big, ugly, and dirty.

The dairy building is large, with a very big milk room, washing room, cheese room, butter room, separating room, and upstairs are the laboratories. The butter is all made on a very large scale, no small churns and fancy patterns.

Ice cream is made and largely eaten, about 15 galls. going in one day, even now in winter. People order it for Sunday, and one man has to be on duty all Sunday morning packing it up to go out. Its lovely stuff, and if one did not mind putting on weight, one could eat pints a day. Its quite cheap too, heaps for 2½d., with a cracker like container, called a case to hold it.

The Kingston cheese is very popular, selling for 40 c., (1/8) for two lbs. It is ready so soon and the Americans like to hustle; they only press Cheddars one day, and keep on one cloth all the time, just paraffining them over.

The men working in the dairy, and the students are very nice, polite, cheerful, and always willing to help. No thinking it a funny joke to syringe the girls' feet!!!

Well, I think you will know enough now to appear quite American when you come over for a visit. Say "Yer" not "yes," and "Gee," and "Her-ford" for "Hereford" and sing, "Farewell Lice ter-square" not "Leicester," and they won't recognise you for a foreigner at all, or, as they say on board ship, "Aliens."

A. RANSFORD, N.D.D.,

Michigan Agricultural College,  
East Lansing.

## THE "NEW" COLLEGE.

On all hands one hears enquiries regarding the "New" College and one also hears a good many erroneous statements as to the buildings and their future use. As was pointed out in the last number of this Magazine, the Governing Body have had before them for a number of years past the necessity of making some improvements in the teaching and housing accommodation at Kingston. The steadily increasing number of agricultural students threw a great strain upon the College as we now know it. In order to get the financial assistance promised by the Development Commissioners it was necessary to possess freehold land, and the purchase of the Lodge Farm, Sutton Bonington, was the first step in the direction of expansion.

After some considerable amount of discussion between various Government Departments, and the Governing Body of the College, it was agreed that a block-grant of £25,000 should be paid from the Development Fund, and that the Counties of Derby, Leicester, Lindsey Division of Lincs. and Notts. should subscribe £4,000 each.

Shortly after the purchase of the Lodge Farm, the property known as "the Elms" on the opposite side of the road came into the market and was purchased on behalf of the College. About



100 acres of land in all are now obtained and the new buildings are being erected on the large field at the front of the Lodge Farm.

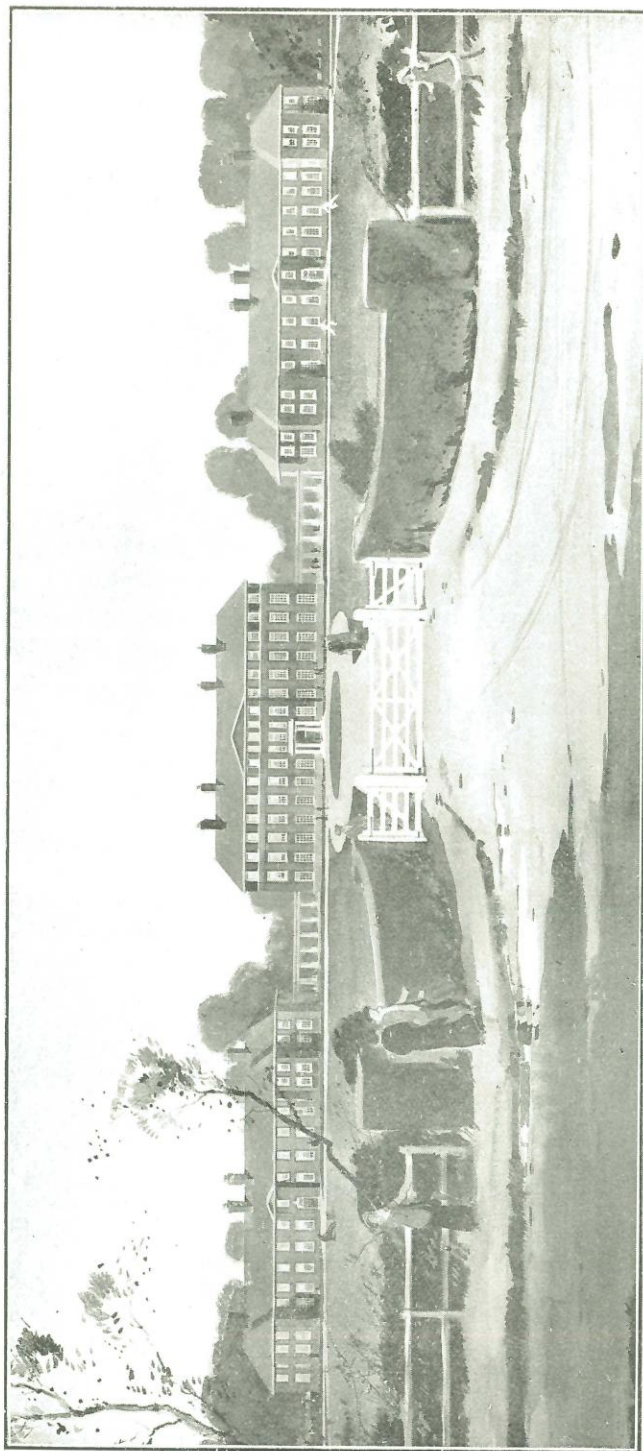
The buildings have been designed by Mr. S. Perkins Pick, of Leicester, who was the Architect of the Leicester Municipal Technical School, Leicestershire County Asylum and many other important buildings. It has been the particular care of the Architect that good plain construction with plenty of room for expansion shall be the characteristic feature, and, as the illustration opposite shows, a distinctly pleasant exterior has been designed. For the present the Hostel on the right of the main building will not be erected, but when in due course the Dairies are removed from Kingston a women's hostel will be needed and it will occupy that site.

The main building, it will be seen, is three stories high, it has the maximum amount of window space so as to ensure light rooms, and the use of special facing bricks gives a warm and weathered appearance even in the beginning.

A brief description of the internal plan of the buildings will serve to make clear to those who have no opportunity at present of seeing the new College, what the place will be like when finished.

The main entrance opens into a Hall and on each side is a corridor, the one on the right leading to rooms which will probably be utilised as follows:—Clerk's office, Principal's office, Library. This last room is a large one, 27 ft. x 26 ft., with pleasant end windows and plenty of space for books.

To the left of the entrance are four rooms which will be used by members of the teaching staff as private rooms, &c. Behind the main entrance and reached by corridors on either side is the Dining Hall, which measures 44ft. x 25 ft., and will accommodate about 90 people. The Served, Kitchen, Stores, Scullery, &c., are behind the Dining Hall, as are also Dining and Sitting Rooms for the servants, &c. On the first floor are placed the Chemical Laboratories and they occupy the whole of the front part. The main teaching laboratory is 48 ft. x 26 ft. and will provide space for about 40 students. A private laboratory and a preparation room adjoin the main laboratory, whilst a lecture room 27 ft. x 26 ft. and an analytical laboratory of equal size occupy the right and left ends of the floor.



Behind the laboratories and above the dining hall is placed a large lecture hall with platform. The hall measures 44 ft. x 25 ft. and the platform 13 ft. x 25 ft. and is intended to serve for meetings, public lectures, &c., and the provision of a platform gets over the great difficulty usually met with in erecting a suitable stage for theatrical performances. A separate staircase from the platform to the ground floor will no doubt be appreciated by performers—particularly if their performance has not been a very successful one. It is hoped that the lecture hall may be also used under suitable regulations for a gymnasium and for indoor games such as badminton.

On the third floor are placed the biological laboratories, the main teaching laboratory being above, and of the same size as the chemical laboratory. A lecture room similar to the one below is provided on the extreme right of the floor and the bacteriological laboratory occupies the extreme left above the analytical laboratory. At each end of the main biological laboratory are private rooms, one for the botanist and the other for the entomologist.

A small laboratory for mycology and a dark room are also provided on this floor, behind the front range of laboratories.

In view of the great necessity for adequate accommodation for teaching certain manual operations of importance to a farmer, a large carpenter's shop 30 ft. x 18 ft., and a smithy of equal size have been provided as part of the workshops' block. This block has also a large implement shed 61 ft. x 18 ft. in which instruction in the details of farm machinery can be given under cover. It is proposed to get the loan of new implements from makers and place them in the shed for teaching purposes, replacing them from time to time with newer ones.

The boiler, electric light plant, &c., are housed next to the implement shed and a good workshop for the engineer's use has been provided. This brief and, probably to a stranger, rather complicated sketch of the new teaching buildings will serve to show that in the future the many criticisms of the equipment at Kingston will not be likely to be transferred to Sutton Bonington.

The question as to the lines upon which agricultural teaching shall be carried out in the future, still remains debatable, but it is gradually coming to light that probably a longer course than was previously suggested for the "short course" would be advis-



able and that a two year's course should also be provided. As was pointed out by Sir Sydney Olivier, the Secretary to the Board of Agriculture, when he came to Kingston last July to distribute the Diplomas at the Annual Meeting, the Midland College occupies a unique position amongst similar institutions in this Country. It has set out to combine the work of a Farm Institute with that of a College, and whilst at the present time its main activities are with the Farm Institute type of work, there is nevertheless great need of higher work, both in teaching and investigation, being fostered in the area it serves.

The contributing County Councils have warmly supported the idea of the College serving as their "United Farm Institute" and every care will be taken that a course of instruction suitable to the needs of the class of young men who would attend a farm institute will be provided. The wisdom of uniting in this way seems to be clear, for not only will the expense be less, but it will be possible to have a much superior teaching staff, laboratories, equipment, &c. It cannot be denied that where a teacher can occupy himself with a small number of subjects he will be a more competent man than if he had to jump about from one thing to another, this hour teaching botany, the next chemistry, the next engineering, and so on.

From the "College" point of view (as contrasted with the Farm Institute) the future is less clear. To make a really successful two year course it is almost essential that those who attend should have had a good secondary school training, for otherwise the detail, into which it is necessary to enter when teaching subjects applied to agriculture, cannot be grasped. There are of course in the district and in the Country generally, plenty of young men who would be glad of the extra training they would get in such a course, and when the many-sided activities of a farmer's life are considered, two years technical training seems short enough. As far as possible the farm institute type of work should be clearly separated from the College type, for they cannot successfully be combined to more than a limited extent, and to try and amalgamate them is likely to lead to disaster to both courses.

As far as can be foreseen the teaching accommodation, laboratories, etc., will be ample for two such courses of instruction as are suggested above, and if they come into being the great advantages

to be gained by mutual rivalry and intercourse ought to be very beneficial all round.

The advisory and research work which forms part of the activities of the College is supported by a grant of money from the Board of Agriculture, and there ought to be a considerable expansion in these directions, seeing that the lack of laboratory accommodation at Kingston has proved such a drawback in the past.

The men's Hostel contains 55 bed-sitting rooms together with two large rooms measuring about 21 ft. x 30 ft. One of these large rooms is intended for a recreation room and a full sized billiard table will be provided. The other room is to be kept for writing, reading, &c.

As each bedroom will be provided with a radiator it can be used for purposes of study, and it is proposed that at certain hours, preparation work shall be obligatory. The lack of reasonable quiet is a great hindrance to study, and without it only limited progress can be achieved. The second floor of the Hostel (it has two stories only) is occupied by bedrooms and at the back a complete set of baths (three slipper and four spray) have been provided.

Adjoining the Hostel, at the back of the right hand side, is a house for the caretaker.

The heating of all the buildings will be by steam or hot water and electric light will be installed. Gas will be used for cooking and in the laboratories, whilst the water is being brought from the Derwent Valley Company's main on the Loughborough road. The distance is nearly a mile and the main will have to cross the river, so that some considerable engineering difficulties have had to be met. Unquestionably, the advantages to be got from an unlimited supply of pure water will in time compensate for the heavy cost of laying the main. The sewage will be taken under the railway to the Sutton Bonington sewage works, there to be treated before being passed into the river.

At the present time the buildings are progressing rapidly. The Hostel is up to the second floor and the main block walls are visible. The unfortunate occurrences of the past six months, combined with the rainy weather experienced at the end of last year, have all com-



bined to hinder the Contractor in his work. It is doubtful, therefore, whether the new College will be ready, as was hoped, for occupation in October next, but as far as can be judged at the present, the buildings ought to be finished by the beginning of 1916

### AN IMPRESSION OF KINGSTON.

No one seeing the Midland College in all the uncompromising solidity of daylight, would believe that on a night of misty moonlight it could be vague as a mirage, tantalising as a buried treasure and its students elusive as Will-o'-the-Wisps.

Yet in such guise it has been my fortune to find it, all because the Midland Railway has a courteous train which "stops at Kegworth when required," and because the cab—or more familiarly, "The 'Bus'"—is liable to be in attendance upon a local concert, to the undoing of innocent travellers.

A friendly porter directed me across the fields, and away I started—along the road and round the corner to the left, as far as a cottage on the right and then plunge into the Park. This is Lord Belper's beautiful Park, full of stately trees, ghostly cattle and quiet sheep. White mist lies in the hollows and the soft moonlight lies over all, a park after Verlaine's own heart, dim and icy cold. Here a dying monarch looms up and there a lonely thorn bush.

"If any man so daring as dig them up in spite  
He shall find their sharpest thorns in his bed at night."  
And just then you reach the end of the asphalt path, and taking, as usual, the line of least resistance, you probably turn down to the Home Farm and never notice a Will-o'-the-Wisp flit by you in the shadows.

Your reward is the usual one obtained by waiters upon the line of least resistance, and may be summed up in the word "Alas"!

Of seas of mud it behoves not to speak, nor is it wise to claim too close an acquaintance with any ponds to which your attention may be called next day. Suffice it, that you arrive and the kindness of your welcome more than atones for anything you may have suffered. After all, cabs are dull things, and hardly any references to them are found in the writings of the poets.

Out of the depths of my ignorance it does not become me to speak of the polity and inner workings of the College, but of the cheery spirit pervading staff and students alike, too much cannot be said. The atmosphere of development and advance is very pronounced, even to a perfect stranger—as is appropriate in a College devoted to the reconciliation of an art as old as Agriculture with a science as young as Bacteriology.

Looking back on my own student days, I see very clearly how often the "better that might be" blinded us to "the good that is." There are few institutions more far-sightedly useful to our country now, than the Agricultural and Dairy Colleges and Schools, and this particular one, set so aptly in a country of noble proportions and beautiful contours, in touch alike with the best developments of civilisation and the immemorial simplicity of rustic life, seems especially fitted for the difficult work in hand, namely, that of harnessing imagination to the plough, bringing Science to the service of the Spade, and solving the pressing and critical problems with which Agriculture is faced.

E.L.R.

### "WEED."

#### FOUNDED ON FACT.

One night Tom\* said 'twas his intent  
His stock of "weed" to supplement.  
A dozen pouches flashed in view—  
But no—not one of them would do.  
"Plug" "Navy Cut" and "Cavendish"  
And "Twist" as thick as one could wish,  
And dainty mixtures—"New Mown Hay"  
And "Orange Bloom" and "Peep o' Day."  
Some were too fine and some too strong,  
Some were not worth a "Cadger's" song.  
Some were too scented, others vile,  
And Tom said, turning with a smile  
"I never smoke but 'Peace Profound'  
"And buy it by the quarter-pound."  
Then cross his bike he quickly strode  
And soon was pacing down the road.



"Caw," said the crow in croaking voice,  
 "He's too fastidious in his choice.  
 "And who has ever heard the sound  
 "Or smoked a pipe of 'Peace Profound' ?  
 "I through it all can clearly see,  
 "'Twas either bluff or strategy."  
 Then swiftly winging through the skies,  
 Saw, what to him was no surprise.  
 For lodging in the "Old Yew Tree"  
 —"Protective Colouring"—don't you see ?—  
 He gazed around, with pate serene,  
 Content to see and not be seen.

\* \* \* \* \*

Tom sauntered up and slowly made  
 His way beneath that yew tree's shade.  
 He then so gently took his "weed"  
 And very carefully indeed  
 Placed it quite near to where he sat.  
 —Queer place to put the "weed" was that.—  
 'Twas wrapped in softest shade of green,  
 —"That colour restful to the een"—  
 Its weight—although so much it sounds—  
 Would be about one hundred pounds.  
 The brand if rightly I divine  
 Was either "May" or "Eglantine."

\* \* \* \* \*

As soon as ever Tom came back  
 The old crow settled on his track.  
 "Where had he been ?" "What was the need ?"  
 "Where was that hundredweight of "weed" ?"  
 "A hundredweight ?" "Yes !" "I'll be bound  
 "I only said a quarter pound."  
 And forthwith from his pocket took  
 A well-wrapped packet, saying "Look !"  
 The old crow took it. "Caw" said he,  
 "It has the smell of Bonus Tea."  
 'Twould take too long for all the tale,  
 So over it I'll draw the veil.

Enough to say that after then,  
 Tom never tried his tricks again.  
 And if you near the door should be,  
 So out of danger you could flee,  
 —For Tom is fiery as can be—  
 Just whisper "Weed" or "Bonus Tea."

THE OLD CROW.

\* "Tom" is the fictitious name.

## THE BRADFORD MUNICIPAL MILK DEPOT.

You ask how Bradford is striking me. Well, first of all, let me state that I am loving the work and finding it most interesting, in parts even exciting.

At the same time I should be very glad to have been spared some of the trials which have overtaken me.

We hope in time to get the Dairy as nearly perfect as is possible in this vale of tears. But oh, from what depths of slovenliness we have painfully to drag ourselves ! When I tell you that it has hitherto been the custom to wipe the splashes of milk off your boots with the cloth that is used for the dairy utensils, you will perhaps get some idea of our insouciance ! But though ignorant we are very willing to learn, and that is always hopeful.

The Chairman, as I told you, gave me *carte blanche* to make what changes I thought advisable in the staff. So far, I have got rid of five, and four of them gave me, before leaving, ample cause to congratulate myself on their departure. One indeed, came into the Dairy in a state of intoxication and was with some difficulty got rid of.

Two of my drivers were, on Wednesday, attacked by mysterious diseases. One I think was really ill ; the other had "that wambling in his inside" accompanied by dizziness which always arouses unkind suspicions in my mind, especially when, as in this case, it is attended by a strong smell of alcohol. I told him that I should be obliged to look out for someone a little more healthy if he didn't improve.

Then there is my own blissful ignorance of much of the formality and etiquette attaching to the conduct of Municipal



affairs. The entire Town Hall holds up its hands in horror at my irregular ways, and as for the unfortunate City Treasurer, I'm sure his hair stands on end every time he sees me. Just to give you an instance. I have arranged for all the women to have their midday meal in their own homes instead of on the dairy premises as they have done in the past, and to that end have given them half-an-hour longer in the middle of the day. One of them lives too far away to walk in the time, so, in order that she should not be worse off under the new arrangement, I proposed to give her a penny car fare each day. It seemed simple enough? But I understand that it is one of the most awful and unauthorised things I could do. I may give the girl 6d. a week rise in wages, but five pennies for the car would produce a tottering in our civilisation that is unthinkable. However, I have already found kind friends who pilot me through the Municipal Maze and out of all their flowers of wisdom I extract two drops of rarest honey—Principle and Precedent. And on these two hang all the law and the prophets.

For the other and more strictly dairy side of the picture, I can only say that I can see, in the near future, that the dairy will be such as will rejoice the heart of any dairy-woman. Even now, since we have a few trained people in it, the dairy is a different place, and when we have some system for the disposal of surplus milk, very little will be left to desire. Taking a leaf out of the Kingston book, I am putting my people into pink frocks and white aprons, with the addition of a little pink bonnet to cover up the hair.

As regards the medical aspect of things, I feel it is too soon to speak, but apart from the general betterment in health of the population, our aim is the reduction of infantile mortality. It is, of course, impossible to over-estimate the importance of this work, especially at the present time when so many of our bravest and best are laying down their lives for us. And if we are able to produce an appreciable impression in this direction we shall feel that we have been privileged to serve our Country, and shall be able to forget the "drunks and disorderlies" we have encountered by the way.

E. LILWALL ROBINSON, N.D.A., N.D.D.

Manageress of the Bradford Milk Depot.

## THE DIAMOND INDUSTRY.

Kimberley stands unrivalled in its diamond production.

Of the world's output during 1912, 95.1% were obtained from South Africa, and of this total 46.1% came from De Beers Consolidated Mines Ltd., Kimberley.

About the year 1867 a trader, John O'Reilly, obtained possession of a "white stone" which was the plaything of the children of a poor farmer on the North side of the Orange River. This stone was afterwards purchased by the Governor of the Cape for £500. This created great excitement and thousands of men were infected with an attack of "Diamond Fever" and made a rush for the Vaal River where other stones were found.

In the year 1871 stones were found at Colesberg Kopje which at the present day is named Kimberley. This Kopje was the division of two farms, that of Mynheeren De Beer and of Nicholas Waterboer, a Griqua Chief. Waterboer's farm was taken over by the Free State Government, who allowed Waterboer a pension of £1000 a year. De Beer's farm was also sold, and was bought in small lots for diggings. As the pioneers made money they bought more claims from the men who had not found stones, and who had no money with which to work their claims, and formed themselves into Syndicates. At this time there were four distinct mines worked by different Syndicates and they were half-a-mile apart. These were De Beers, Kimberley Mine, Du Toit's Pan, and Bultfontein.

Early in 1888, the De Beers people bought out the Kimberley Mine people for £5,338,650. Later in the same year De Beers approached the heads of Du Toit's Pan and Bultfontein and succeeded in buying them out. From that date De Beers have had control of the whole of the mines, and in 1890 they purchased a new mine which had just been discovered, namely, Wesselton Mine, and worked them under the name of De Beer's Consolidated Mines, Ltd. These were all open mines, and as they became difficult to work owing to their depth, shafts were sunk and worked on the same principal as the Coal Mines in England. Kimberley Mine is 1,200 feet deep, the circumference is 1,600 yards, and the area 38 acres.

Diamonds are found amongst Blue-Reef, which is conveyed a distance of about 3 miles and laid out to pulverise. After that the



Blue ground is conveyed to a washing machine, which is a kind of mill with sieves which collect the hard pieces. These are then crushed and put through another machine called "The Pulsator." As the minerals and blue-ground get to the last machine of the Pulsator, they pass on to a disc which is coated with grease. The grease holds the Diamonds, whereas the ground by the continual washing passes away. The Diamonds are then taken into a room, sorted and graded and removed to the Head Office. They are then sorted again and are packed ready to be sent to Europe for cutting. The largest stone found on the Kimberley Diamond Fields weighed 503½ carats.

The largest Diamond found in the Premier Mine, which is under the control of De Beers, weighed 3,025 carats (1.37 lbs.) and is now in the possession of the King. De Beers Co. employs in and about Kimberley, 2,900 Europeans and 16,000 natives.

Their wage bill exceeds £129,000 a month, when working normally.

A. BRADBURY.

## SPORTS.

### ANNUAL SPORTS.

The above took place on Friday, May 29th at the end of the third term of the Agricultural Session.

The usual events comprising a Sports Day were indulged in, amongst which special enjoyment seemed to be derived from:—

The Ladies' Traveller's Race,

The Wheelbarrow Race,

The Obstacle Race,

The Hurdle Race, and

The Tugs of War.

Agricultural Students v. Dairy Students.

Dairy Students v. Poultry Students.

The Championships were won by Miss E. Faulkner and Mr. E. J. Kingsbury respectively.

Towards tea time, the weather was not all that could be desired, heavy showers of rain fell, and as tea is enjoyed *al fresco* on this occasion, the best had to be made of the inconveniences resulting, amongst which were the vain attempts to erect a roofing between the trees, with the aid of a waggon sheet.

Later, the prizes were distributed by Miss Hawkins, the occasion being also marked by the presentation to the members of the Miniature Rifle Range Club of the various trophies competed for, and won during the session, as well as the spoons, won at the spoon shoots, held each month.

The rain clouds having dispersed, an informal dance on the lawn succeeded an enjoyable afternoon.

M.T.

## CRICKET.

Very little enthusiasm was shown at the general meeting of the Club, for this essentially British Sport, and it seemed very doubtful if we could raise a team. It was, however, decided not to discontinue play, and eventually a short programme was drawn up.

Always a short season, in consequence of the early termination of the Agricultural Term, the fixture card was reduced to six matches owing to the paucity of players. This arrangement provided for one match per week, instead of the usual Wednesday and Saturday matches.

Of the six matches played, four were won, one was lost, and one drawn.

Considering that we had only just a team, the result is highly creditable.

Messrs. Gibbs, Harker and Harris, were the most promising bats, while Messrs. Woodfield, Harker and Harris shared the honours in the bowling.

## FOOTBALL.

All fixtures arranged were cancelled almost immediately the session commenced. This favourite sport gave way to "Military Drill," a change, which under the present circumstances was desirable and commendable.

The "footer" field has not however presented an altogether deserted appearance, as the drilling has taken place there under the command of one or other of the cadets from the Nottingham University College Officers' Training Corps.

M.T.

## HOCKEY.

On looking through previous reports of the doings of this Club, we find such comments as "the season has not been a successful



one," "a disappointing season has been encountered" and "the hockey team have not secured a victory," by way of variety, and such we are told is the "spice of life," instead of euphemistically stating that "Kingston came off second best every time" it is pleasing to note that more than one match has been won, and as many as 15 goals have been accounted for by the College team as will be seen in the following list of fixtures and results. This is very encouraging when it is considered that last season 2 goals only were scored, and the season preceding that they were a minus quantity.

Of those of our team who are "always with us," for the season at least, special mention must be made of the efforts of Miss King and Miss Vendy on the forward line, Miss Carter as centre half, and Miss Littler the mainstay on the half line.

The loss of our centre forward, Miss Billson, a keen and enthusiastic player, (even on her knees) before the end of the season, was regretted by all the members of the club.

The captain merits a word of praise for her rounding up of the short course students, to make up the teams for the matches, sometimes a none too easy task.

#### FIXTURES AND RESULTS.

Played 7 : won 2, lost 4, drawn 1.

			For.	Ag'nst
Nov.	14.—Loughborough Ladies' H.C., 2nd XI.	.. Home	1—3	
	21.—Burleigh Ladies H.C.	.. .. Away	3—2	
Dec.	5.—University College, Nottingham	.. Home	2—2	
Jan.	9.—Burleigh Ladies' H.C.	.. Home	2—0	
	16.—Gregory Ladies' H.C.	.. Home	2—4	
	25.—Gregory Ladies' H.C.	.. Away	5—9	
	30.—Loughborough Ladies' H.C., 1st XI.	.. Home	0—3	
Feb.	13.—*Loughborough Ladies' H.C., 1st XI.	..		
Mar.	6.—*Loughborough Ladies' H.C., 2nd XI.	..		

\*Cancelled owing to inclement weather.

M.G.D.T.

#### TENNIS.

The affairs of this Club, which has many strong supporters during the summer months, has hitherto been neglected in the reports of the Sports.

Keen enthusiasm for the game is evinced by the majority of the students, especially at the commencement of the season, and reaches its zenith when the tournament takes place.

The winning couple last year were Miss Blunt and Mr. Hill.

The prizes were presented on the occasion of the Annual Sports.

Four matches were played with the following results :—

May	9.—Nottingham University	.. Home	6—3	Rubbers.
	16.—Cheddesden Tennis Club	.. Home	5—4	„
June	18.—Wyggeston Grammar School	.. Away	8—1	„
„	27.—Nottingham University	.. Away	5—3	„
				G.D.T.

#### RIFLE CLUB.

During the past year facilities have been found for students to become familiar with the use of the rifle.

Through the kindness of the late Lord Belper in providing a suitable site, a range has been constructed in a field to the rear of the hostel, and a "Certificate of Safety" has been obtained from the War Office.

Distances up to 100 yards, for miniature ammunition, are provided, the light is perfect at all hours of the day, and the club is now equipped with everything necessary to enable members to become expert rifle shots.

The thanks of the Association are due to H. Mellish, Esq., for his generosity in presenting to the Club four new Military pattern rifles fitted with aperture and standard sights.

The Club is affiliated to the Society of Miniature Rifle Clubs, and the National Rifle Association, and medals and certificates granted by these societies are annually competed for by members.

Approximately 12,000 rounds have been fired, and although at first the shooting was somewhat erratic, most of the difficulties associated with accurate shooting were quickly overcome, as was shown by the way individual scores improved with practice.

After some little practice, the Club opened with a match, Staff v. Students, which resulted in a victory for the Students by 109 points.



During the Shooting year two Post Matches were arranged with Barrow on Soar R.C. the second of which was won by the College.

A Post Match with Brighton and Hove Imperial R.C. resulted in a win for the Brighton Club.

A match, shoulder to shoulder, against Kegworth and District on the College range, was won by the home club. In the return match, under conditions of artificial light, we were hopelessly defeated.

Five "Spoon" Shoots under handicap conditions, and one Open Shoot took place during the year, and resulted as follows :

	Winner.
March Spoon .. ..	J. W. Oldershaw.
April Spoon .. ..	R. Jolliffe.
May Spoon .. ..	K. C. Stiven.
October Spoon .. ..	A. E. F. Hill.
November Spoon .. ..	H. G. Barker.
Open Spoon .. ..	H. McKay.

#### MEDALS AND CERTIFICATES.

"Daily Telegraph" Certificate ..	J. C. Wallace.
"Daily Mail" Certificate ..	S. R. Donaldson.
"Daily Express" Medal ..	R. Jolliffe.
S.M.R.C. Medal ..	L. Jones
"Bell" Medal ..	E. Russell.
N.R.A. Donegall Badge ..	R. Jolliffe.

The winners of the above are entitled to shoot annually, free of entrance fee, at the S.M.R.C. Meetings, for the Trophy and a long list of money prizes, in competitions for which the medals and certificates are offered, so long as they remain members of any club affiliated to the Society.

The winner of the Donegall Badge is entitled to enter for the Donegall Cup and money prizes at every succeeding Annual Bisley Meeting.

The Annual Prize Meeting was held on May 27th, and proved an interesting and enjoyable fixture.

#### MATCH I.

10 shots at 25 and 50 yds. Handicap (Students only).

1st Prize	J. W. Oldershaw .. ..	197.49
2nd ..	Capt. H. B. Warwick .. ..	197.16
3rd ..	W. L. Harker .. ..	197.00
4th ..	R. Jolliffe .. ..	195.20
5th ..	K. C. Stiven .. ..	195.17

#### MATCH II.

10 shots at 100 yds. Handicap (Students only).

1st Prize	W. L. Harker .. ..	98.92
2nd ..	Capt. H. B. Warwick .. ..	98.76
3rd ..	J. W. Oldershaw .. ..	98.50
4th ..	L. Jones .. ..	98.20
5th ..	R. Jolliffe .. ..	97.30

#### MATCH III. (Open).

10 Shots at 50 yds. Rapid. Time allowed, 90 seconds.

1st Prize	*E. Russell .. ..	96
2nd ..	*L. Jones .. ..	96
3rd ..	R. Jolliffe .. ..	90
4th ..	J. G. W. Stafford .. ..	86

(\*Shot off the tie).

#### MATCH IV. (Pool).

50 yds. All in, the carton scoring.

	Cartons.
R. Jolliffe .. ..	3
E. Russell .. ..	2
L. Jones .. ..	1
J. W. Oldershaw .. ..	1

The following members obtained "Skilled Shot" Certificates offered by the N.R.A. :

H. T. Cranfield .. ..	283
G. O. Fox .. ..	288
R. Jolliffe .. ..	285
L. Jones .. ..	287
E. Russell .. ..	290
E. Russell .. ..	290
J. C. Wallace .. ..	284



The conditions for these certificates are somewhat severe. A minimum total of 283 points must be scored (out of a possible 300) in 30 consecutive shots.

The Club finished up with a balance in hand and on the whole the season was a highly successful one.

It is hoped that every member will make it a point of duty to fire a number of rounds sufficient to enable him to become at least an average shot. It must be borne in mind that the underlying purpose of all Rifle Clubs is Patriotic, and although Meetings and Competitions are all conducted under the usual conditions of Civilian Sports, the object sought is to train every man in one of the first essentials of good citizenship and so enable him to effectively take part in the defence of his country, if and when called upon to do so.

### LATE NEWS.

RECEIVED WHILE GOING TO PRESS.

MR. ALEC TODD, Vice-Principal of our College and Head of the Dairy Department, has been appointed Manager of the British Dairy Institute, Reading, in succession to the late Mr. Miles Benson.

MR. P. W. BAILEY, (Dairy Student 1912-13) has been appointed temporarily to the Staff of the Agricultural Department.

MISS B. MANNERS (Dairy Student, 1913-14), has been appointed temporary to the staff of the Dairy Department.

MISS CHAMBERS (Swanley Horticultural College, Kent), has been appointed temporarily Instructress in Horticulture.

MR. A. E. F. HILL (Agricultural Student, 1913-15) has obtained a Commission in the West Riding Regiment.



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1914-15.

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# PROGRAMME OF THE SESSION, 1914-15.

## FIRST TERM.

- 1914.
- Oct. 23.—Whist Drive.
- „ 30.—Debate (Gentlemen).  
“Country v. Town Life”  
*affir.* : Mr. Clayton.  
*neg.* : Mr. McKay.
- Nov. 6.—Concert.
- „ 13.—Address : “Rhodesia”  
Mr. Cheatle.
- „ 20.—Debate (Ladies)  
“Should women follow the  
fashion.”  
*affir.* : Miss Billson.  
*neg.* : Miss Look.
- „ 27.—Dramatic Entertainment
- Dec. 4.—Address—Mr. Bond.
- „ 11—Dance.

## SECOND TERM.

- 1915.
- Jan. 8.—Address—Dr. Goodwin.  
“Pasteur and his work.”
- „ 14.—Whist Drive.
- „ 21.—Address—Mr. Bradbury.  
“South Africa.”
- Feb. 5.—Address—Mr. Levie,  
“Darwinism and the origin of  
life.”
- „ 12.—Concert.
- „ 16.—Address—The Rev. A.  
Thornley,  
“Childhood of Animals.”
- „ 25.—Address—Capt. Trotman,  
“The War.”
- Mar. 4.—Address—Professor Carr,  
“British Flora and Fauna.”
- „ 12.—Dance.

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Won't burn or stick to the bottom.

Saves 50 per cent. in the waste  
of cooking.

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**Ironmongers & Implement Agents.**

PLOUGHS, HARROWS, CULTIVATORS,  
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**HAY HARVESTING MACHINES** BY ALL THE  
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**Sole Agents for HORNSBY OIL ENGINES.**

REPAIRS OF ALL KINDS AT, LOWEST CHARGES.



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**URALITE,** Best Fire-resisting Material  
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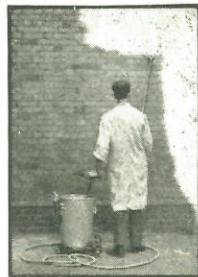


## FIRE EXTINGUISHERS.

- (1). SALVAGE Extincteurs Liquid.
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Several  
Patterns  
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# THE MIDLAND FARMERS' CO-OPERATIVE ASSOCIATION, Ltd.,

DURHAM CHAMBERS, PELHAM STREET, NOTTINGHAM.

REGISTER No. 4448 NOTTS. R. Nov. 7th, 1906.

**OBJECT.** "To carry on the industry or occupation of Wholesale and Retail Dealers in Agricultural Requirements and Produce, in Dairy Produce, Eggs and Poultry, etc. The Society may obtain and disseminate among its members useful information in order to foster, develop, and promote the Agricultural Organization movement in Great Britain."

**CAPITAL.** The Capital of the Association is raised by shares of the nominal value of five shillings, and one share has to be taken for every ten acres in the occupation of a person desirous of becoming a member. Payment for shares is as follows, viz., one-fourth (1/3 per share) upon application, and the balance as the Committee may decide. A Member occupying 100 acres would therefore, have to pay 12s. 6d. upon application; he is responsible for a further sum of £1 17s. 6d. in such amounts as may be called up from time to time, upon payment of which all liability on his part ceases, the liability of the Association being limited. The first charge on the nett profits is payment of Interest at the rate of 5 per cent. per annum upon the amount of the paid up capital.

[N.B.—No application for shares can be entertained unless at least four shares be applied for.]

## GENERAL COMMITTEE

from which

the Trading and Finance Committees are selected:

THE PRESIDENT: COLONEL SIR LANCELOT ROLLESTON, K.C.B., D.S.O.  
(Chairman).

Mr. R. P. ALLSEBROOK, Prestwold.	Mr. R. G. NORMAN, Rufford.
" F. P. ASTILL, Cossington.	" G. E. READ, Low Toynton,
" FRANK BEEBY, Clifton.	Horncastle.
" W. H. BRADWELL, Nottingham.	" R. SHELTON, Ruddington.
" G. A. BELLWOOD, Bishop Norton.	" B. A. SMITH, Nottingham.
" C. BURNETT, Packington.	" GEO. TAYLOR, Aspley.
" E. E. STOKES, Nottingham.	" T. TURNER, Harpswell.
" H. HEATH, Bestwood.	" T. TURNER, Kingston.
" J. H. HOUGHTON, Ashfordby.	" F. E. F. WRIGHT, Ashbourne.
" OSWALD KIRK, East Leake.	

## AUDITORS:

MESSRS. THOMAS LEMAN AND SONS, St. Peter's Church Walk, Nottingham.

## HON. TREASURER:

MR. W. H. BRADWELL.

## MANAGER AND SECRETARY:

CHARLES G. BRYANT.

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**NITROLIM**

**Calcium Cyanamide,  $\text{CaCN}_2$**

**CONTAINS :**

**15½ per cent. Nitrogen.**

**40 per cent. Free Lime (hydrated).**

**19 per cent. combined Lime, becoming Chalk  
in the Soil.**

**Thus each Ton of Nitrolim  
supplies 12 cwt. of Lime to  
the soil.**

**THIS LIBERATES Potash,  
makes Phosphates available,  
neutralises Acidity, and liberates  
Ammonia from the humus.**

**Recent research shows that Lime  
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