The School Magazine

OF THE

McCABE COMMERCIAL SCHOOL

MAIDSTONE

Vol. 2 No. 5

McCABE COMMERCIAL SCHOOL MAGAZINE

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SCHOOL HISTORY.

The School Calendar is as follows :—

Wednesday, 20th April.—Meeting of Old Boys at School, 7.30 p.m.

Tuesday, 3rd May.—Summer Term begins.

Saturday, 14th May to Wednesday, 18th May.—Whitsun recess.

Saturday, 18th June.—Half-term.

Friday, 29th July.—Term ends.

Tuesday, 20th Sept.—Christmas Term begins.

Wednesday, 21st Dec.—Term ends.

* * * *

The following are the new boys for this term :—

No. 84. A. W. Seymour. III.
No. 85. F. A. Hunt. III.
No. 86. J. W. Hammond. III.
No. 87. E. Skinner. Prep.
No. 88. N. Stevenson. Lower IV.
No. 89. B. H. Reynolds. Prep.

* * * *

At the end of last term A. W. Harman left School to commence work in his father's motor business at Harrietsham. He started at the School in 1924. G. M. Burgess left at half-term to start in the office of Messrs. Loder's Transport Co. after a School career of six years. Two other boys who have been placed in posts this term are W. J. S. Welch (entered 1921) and E. Butler (entered 1929), who have taken up apprenticeships with the Maidstone and District Motor Services, Ltd. We wish these boys every success, and trust that they will all do great credit both to themselves and to the School in their new posts.

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P. Hinton and R. Bodiam are taking the competitative entrance examination for the R.A.F. shortly. It is a difficult test, and we hope they will both prove successful.

* * * *

We congratulate R. E. Bushby upon obtaining his Pitman's Shorthand Certificate in the Elementary Division. A number of boys will be sitting for their Theory and Speed Certificates next term.

We were sorry to lose the services of Mr. A. H. Wallace, B.A., at Christmas, who left us to take up an important post under the Nottingham University. We welcome Mr. A. S. Williams (London University) in his place, who has already shown great interest and obtained much popularity in the School. * * * *

Owing to the growth of the School it has been necessary to provide an extra class-room. A class of 16 upper boys now have a very comfortable and well-lighted room on the ground floor at the front, and the extended accommodation already reveals a great improvement in the standard and quality of the work. * * * *

In spite of the heavy snowfall on the evening of the concert we were pleased to see such a large and appreciative audience. The performers are certainly to be congratulated upon the excellence of their various items. The attendance at the repeat concert was not so large, but the performance proved just as enjoyable. We were pleased to learn that it is now definitely arranged to extend the playground.

* * * *

An average of about 25 books per week have been borrowed from the Library, and W. Beale, P. Hinton and R. Ashby have rendered good service in attending to it. The worn-out volumes were sent up to the children's wards of the hospital, and about 40 new volumes were presented by the following :—R. Bodiam, G. Burgess, C. Jessup, P. Spencer, Mr. A. Williams (12 vols.), Mr. H. Piper, T. Wheeler, N. Stevenson, J. Piper, N. Sturt (9 vols.), P. Randall, R. Ashby, B. Westover, and G. Griffen.

* * * *

Since last term four Football matches have been played as follows :—

Jan. 27.—	*v.* Alcombe's XI, at home.	Won, 7—2
Feb. 6.—	*v.* Alcombe's XI, at home.	Lost, 8—1
,, 20.—	*v.* Church Army, at home.	Won, 10—1
,, 27.—	*v.* Church Army, at home.	Lost, 8—5

The total results for the season are : Played 11, Won 6, Lost 4, Drawn 1. Goals for 72, against 41.

The Captain was W. Beale, R. Ashby was Vice-Captain and S. Reynolds, Secretary.

* * * *

The physical exercises and drill classes have been continued at the Church Institute, and much good work has been done. Mr. Williams has devoted the last portion of the Upper Boys' period to boxing, and many boys have shown their prowess with the gloves. This subject is optional, but the classes have been very well attended indeed. Next term will see the resumption of swimming.

At the Half-Term the boys enjoyed a very successful paperchase. The hares reached home ahead of the hounds, but we managed to discover some very good runners in the School. * * * *

This term's collections amounted to :—R.S.P.C.A. box, 3s. 6d. ; Hospital box, 4s. 6½d. ; tin-foil, 12 lbs.

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A Dramatic Society has been started by B. Finn and W. Beale, and on Wednesday, 6th April, an excellent entertainment was given in the Hall in Brewer Street.

* * * *

We hope to have a Sports Day next Term, probably on a Wednesday in July. The proceeds of the concerts have been placed towards the Sports Fund. Contributions to the prizes will be welcomed, and offers of help on the day itself will be very acceptable. We hope the venture will prove a great success, and that both competitors and spectators will have an enjoyable afternoon. Further particulars will be announced later. * * * *

IMPORTANT.—We wish to draw the attention of all Old Boys to the meeting at School on Wednesday, 20th April, at 7.30 p.m. All Old Boys who have been in the School are invited to attend, and to support the re-formation of the Old Boys' Club. It is hoped to appoint officers, to arrange a policy and a programme, and to start again a society which will prove of social, athletic and friendly interest to all concerned. * * *

With the coming of the Summer Term, the School will be divided into " Houses," which will compete among themselves at games and work. This spirit of healthy competition cannot but do good. Boys learn to work steadily in School, to win without arrogance or to lose with a good grace on the sports field, and to cultivate a feeling of *esprit de corps* everywhere. * * *

With the increase of numbers in the School, it is becoming possible for these innovations to prove very successful. Boys in the School should maintain keenness both at work and play, and by building up strength of character there is no reason why the School should not outshine even its former reputation. * * * *

We wish all our readers a pleasant holiday, and trust they will return to duty ready for a good term's work.

THE CONCERT AND PRIZE-GIVING.

The following is reprinted from the *Kent Messenger* of 13th February :—

For the first time, the Concert and Prize-giving of the McCabe Commercial School, Maidstone, was held in the

Corn Exchange, when on Wednesday a number of parents and friends were present. It is hoped to make the event an annual one.

Mr. H. I. Piper, the Principal, said it had been a very eventful year, and there had been a gratifying increase in the numbers. The Preparatory Department, which was re-opened at the end of 1930, had filled rapidly. An additional classroom for the Senior boys had been provided, and further accommodation was now available for another 20 boys. The lighting, heating and schoolroom equipment had also been brought up-to-date. Private study, with a library of nearly 2,000 books, had been provided for the Upper boys. He also hoped that before the close of the year additional space would be available to provide a larger playground.

He was happy to report good progress in work. In addition to the School Examinations, outside public examinations were taken, and seven boys had taken certificates, chiefly for shorthand and typewriting. The success in typewriting was due to the tuition of Miss Filmer. They also had two boys reading for the London Matriculation. Thanks were due to the Staff, who had worked so loyally. They welcomed Mr. Williams in place of Mr. Wallace. They were making an innovation in the teaching of music, and some of the boys had already taken up pianoforte.

Another innovation was the starting of school journeys and outings, which had taken the form of visiting factories and offices in the district.

During the year they had found suitable posts for 12 or 13 boys in office, workshop and business.

Mr. Piper, introducing Mr. W. J. McCabe, of Gravesend, said his father carried on the School on the present premises since 1901. The School opened with five boys on the first morning. Mr. McCabe then presented the prizes.

Also on the platform were Mrs. Piper, Miss Filmer, Miss Stubbs, Mr. A. M. Williams, and Mons. Ardontz.

THE CONCERT.

The Concert began with a selection from " The Mikado" by R. Ashby and R. Harle, 1st and 2nd violins, and S. Reynolds, piano. The last-named was also applauded for his pianoforte solos, which included Sibelius' "Finlandia."

The School Choir sang the " Border Ballad " and "The Angel," while Mr. V. Whibley, an old schoolboy, contributed the solos, " When the Sergeant-Major's on Parade," " Nirvana," and " You are My Heart's Delight." The orchestra played the " Blue Danube." Humorous numbers were given by W. Beale, G. Burgess, B. Finn and R. Bodiam.

The Preparatory Department presented a sketch, " Land of Christmas," written and produced by Miss D. Stubbs, those taking part being W. Beale, S. Farman, D. Reynolds, W. Tucker, G. Griffen, D. Spencer, P. Spencer, B. Westover, D. Winder, R. Westbrook, P. Fulljames, P. Randall, D. Colinese, E. Skinner. A sketch, " The Clock Watchers," was performed by R. Yuill, J. Piper, E. Locke, W. Apps, E. Bowler, E. Butler, W. Spurgeon; and a play, " Hopkins' Burglar Alarm," by W. Beale, G. Burgess, B. Finn, R. Bodiam, and A. Baxter.

THE AWARDS.

The prize-winners were :—Form prizes : Va, S. Reynolds, Beale, D. C. Potts, F. H. Tolputt, R. H. Bodiam, A. Baxter; Vb, P. E. Hinton, Elbourn, E. Butler; IVa, H. Philpott, R. J. Harle, K. H. Whibley; IVb, S. Beale, H. Pearce, H. Piper, G. H. Goodchild, L. Beale; III, I. Beale, R. W. Randall, E. Shaw, L. Morgan, R. Brett. Map prizes : Senior, D. C. Potts and P. E. Hinton; Middle, H. Pearce and R. Harle; Junior, R. Yuill, E. Austin, G. H. Stone, and J. Pearce. Magazine prize : F. Vidler. Specials : L. Reynold (Pitman's Shorthand, theory), R. E. Bushby, F. H. Tolputt and W. Beale (elementary); H. Philpott (typewriting, 1st class elementary), T. C. George (typewriting and shorthand). Prep., Upper Division : D. Reynolds. Form prize and top of examination, S. Farman, history; P. Spencer, arithmetic; W. Tucker, spelling; K. Bonner, reading; and D. Spencer, all general improvement. Preparatory : R. Westbrook, form prize and top of examination; D. Colinese, geography; B. Westover, English; P. Fulljames, reading; D. Winder, mapping; M. Sturt, writing; G. Griffen, all subjects, all general improvement. Certificates : D. C. Potts, E. B. Bowler, B. W. Finn, Reynolds, F. Harman, A. Baxter, F. Vidler, H. Philpott, S. Beale, R. Harle, G. Goodchild, G. Stone, R. Randall, L. Beale, M. Betts, A. Horn, J. Pierce, and C. Jessup. Prizes were also awarded to E. Skinner and N. Ashton.

THE TREASURES AT OUR DOORS.

Maidstone Museum has lately received a fine Stone Age axe. It is a chipped flint, nearly nine inches long and about 5,000 years old.

The most interesting thing about it, perhaps, is its discovery. It was lying under a hedge in a lane. To most people it was just a stone, but a schoolgirl knew it for a hand-worked flint, and carried it home in triumph.

Only the day before she had had a lesson on the Stone Age, and had set out to look for flints. We can imagine her

mother smiling and saying, " Poor child ! I am afraid she will come back very crestfallen."

This is not the first time that the sharp eyes of a child have made a notable discovery. It was little Mary Anning who discovered a monster in the cliffs near Lyme Regis, and so gave modern man his first sight of the ichthyosaurus.

There is no need to imagine that you have to be old before you can be a discoverer. If you cannot go looking for treasures and ruined cities in Asia, you may look for treasures on a country walk in England, and find it sticking out of a cliff or lying under a hedge. F. E. M. Betts.

INDUSTRIAL GEOGRAPHY.

The Upper Boys this Term have taken a very practical interest in this subject. So far visits have been paid to the Gas Works, the Electric Power Station, and the *Kent Messenger* newspaper works. During the visit to the Gas Works, we were shown the old and new types of retorts, in which the coal is roasted. The old type is charged from overhead, the load of coal being shot down from a hole in the top of the retort. In the new type, doors are opened at either end, and a ram pushes the red-hot coke out through the farther door, which is then shut. Fine coal is then blown in through the open door. The red-hot coke drops into water, which rushes it out of the building, and cools it.

Meanwhile, the impure gas from the retorts is allowed to bubble up through water, in order to clear it of tar and ammonia; it is then passed slowly through pipes to reduce the heat, and through scrubbers, which consist of wet revolving brushes; impurities in the gas combine with the drips of water flung off by the brushes.

The gas is then passed over oxide of iron. The sulphur in the gas combines with this to form ferro-sulphate. The gas is then pumped into gasometers, ready for use.

We were shown the power-house, the meter showing the amount of gas in stock, etc.; the laboratories, the showroom, a chart showing the many by-products of coal-gas; in fact, everything connected with gas was shown to us, and explained very clearly.

At the visit to the Electricity Works, we were shown the coal being automatically deposited on the moving floor of the furnace.

The steam from the boiler heated by these furnaces is fed to turbines, which are coupled direct to dynamos, generating 6,600 volts. A.C. The steam, after passing through these turbines, is condensed by being passed through pipes containing river water. This river water is screened, and chlorine mixed with it in order to kill the organisms, etc., in it.

When the river is low, the water is not pumped back into the Medway, but is passed through the cooling tower, which consists of a series of slats and beams fixed parallel to the ground. At the bottom there is a large fan that forces air up among the slats. The water is released at the top of the tower, is broken into drops by the slats, and cooled by the rush of air. In the main power-room there are two turbines driving four alternators, and a huge switchboard. In the old power-room, there are three triple-expansion engines coupled to huge dynamos, two smaller sets of turbine and alternator, and a rotary converter, consisting of a 6,600-volt. A.C. motor, driving a 230-volt. D.C. dynamo, thus converting 6,600 volts. A.C. to 230 volts. D.C. We were shown the huge switches that control various sections of the town, the meters that show the amount of current being consumed in those sections. Every time a trolleybus starts or stops, the pointer flickers !

The first thing in the production of the *Kent Messenger* is the setting-up of the type. This is done on the linotype machine, which has a keyboard like a typewriter. The type is taken, and assembled in the " forme," which is a kind of picture-frame. The forme is taken to the foundry, where a proof is taken and sent to the " reader." If it is correct, a sheet of damp tissue and blotting-paper is placed over the forme, and it is pushed through a pair of rollers, the result being an impression on the paper, which is now the mould. The mould is put into the stereotype machine, and type metal (lead, antimony and tin) poured in. This forms a semi-circular roll of print, which is mitred and bolted on the rollers of the printing machine. This machine can print 400 papers per minute.

We were shown the hand method of setting-up type, and the printing machines which do bills, posters, etc.

Every boy was given a line of type on which was his name.

These visits have been supplemented by additional notes given in class. We can now appreciate what it means when we learn that the Gas Works utilize Durham coal, while the Electricity consume our own Kentish coal.

Several other interesting points, *e.g.*, the War Debts, Reparations, and kindred subjects, have been dealt with and illustrated by graphs.

We are now anxious for the time when we shall visit the Creamy Toffee Factory ! P. Hinton.

THE SCHOOL ROLL.

(*Continued.*)

Admission No.	Name.	Address on Entry.	Date of Admission.
81	Chambers, Eric	Week Street	Jan., 1907
82	King, Albert Cecil	49 King Edward Road	Feb., 1907
83	King, Frederick Stuart ...	49 King Edward Road	,, ,,
84	Sharp, Cuthbert	Station House, Wrotham	Mar., 1907
85	Ashby, Leonard	Western Road ...	Apl., 1907
86	Beeching, Leonard Ewart...	8 Hardy Street ...	May, 1907
87	Peacock, Frederick Gordon	6 Church Road, Tovil	,, ,,
88	Dixon, Hedley	98 Week Street ...	,, ,,
89	Mayor, Hedley	High Street	,, ,,
90	Coveney, Reginald ...	1 Holland Road ...	Sept., 1907
91	Hoar, Roland Wilfred ...	Bower Mount Road ...	,, ,,
92	Crispin, Jesse	48 Salisbury Road ...	,, ,,
93	Wadkinson, Ronald Albert	48 Holland Road ...	,, ,,
94	Busbridge, Leslie	9 Week Street ...	,, ,,
95	Green, Evelyn	2 Hardy Street ...	,, ,,
96	Edwards, George Harry ...	3 Trevarno Terrace	,, ,,
97	Thomson, Thomas Alexander	Gighill Farm	,, ,,
98	Piercy, William	51 Randall Street ...	Oct., 1907
99	Bridges, Herbert James ...	20 Charles Street ...	,, ,,
100	Vinson, Edward	Old Vicarage, Loose	,, ,,
101	Verrall, Leslie	Bower Mount Road ...	,, ,,
102	Hart, George Arthur ...	36 Hastings Road ...	,, ,,
103	Hart, Leonard	36 Hastings Road ...	,, ,,
104	Higgins, Frederick	69 Holland Road ...	Nov., 1907
105	Wadkinson, Harold ...	45 Holland Road ...	Jan., 1908
106	Brett, Victor	High Street	,, ,,
107	Larkin, Harold	Loose	,, ,,
108	Winn, Ewart Edward ...	21 Hardy Street ...	May, 1908
109	Hare, Tony	St. Faith's Street ...	,, ,,
110	Woollard, Ewart	St. Luke's Avenue ...	,, ,,
111	Woollard, Reginald ...	St. Luke's Avenue ...	,, ,,
112	Holness, Sidney	70 Salisbury Road ...	,, ,,
113	Manion, Ernest	25 Brewer Street ...	,, ,,
114	Jackson, William	25 Brewer Street ...	,, ,,
115	Cottam, Lewis	25 Brewer Street ...	,, ,,
116	Cogger, Roderick William	57 St. Luke's Road	,, ,,
117	Welfare, William	4 Hardy Street ...	Sept., 1908
118	Parrish, Ernest	King Edward Road ...	,, ,,
119	Farnham, Percy	Salisbury Road ...	Jan., 1909
120	Nesbit, Roy	Week Street ...	,, ,,

FLIGHT.

(*Continued.*)

The aeroplanes of to-day can be roughly divided into two main classes—civilian and military.

Military 'planes consist of several classes, day and night bombers, reconnaissance 'planes, single and double-seater fighters, torpedo-bombers, troop-carriers, and general purpose 'planes.

Day bombers are fairly light and speedy, some reaching 180 m.p.h. !, because, in the day they can be seen a long way off, and are therefore liable to accurate anti-aircraft shooting and attacks from opposing 'planes.

Night bombers are large, heavy and not necessarily fast or manœuvrable, owing to their flying very high and during the night time, which prevents their being seen or heard till very close, when it is usually too late. Single and double-seater fighters are very fast and " nippy."

Double-seater fighters are usually selected for planned attacks, and home defence. Single-seater fighters for intercepting enemy 'planes and for scouting and fleet-spotting work.

Torpedo-bomber 'planes are fairly fast and very " nippy," because their usual job is to skim along a few feet above the sea and aim a torpedo at a warship.

Reconnaissance and general purpose 'planes are used for bombing, surveying, fighting, nearly " any old job " that comes along; therefore they are fairly fast, fairly manœuvrable, and not too small.

Troop-carriers are large and fast for their size, they are used for transporting small numbers of men to quell riots, etc.

A well-known type, the Vickers' " Victoria," was once used to convey 570 people from Kabul.

Civil flying can also be divided into several classes, consisting of mail and passenger 'planes, instructors, surveying, flying clubs, private owners, joy-riding and sky-writing.

Mail and passenger 'planes are usually large and fast, but sometimes important mails are carried in 'planes which are small and very fast. The large type of modern passenger 'plane is very finely fitted in the interior, complete with curtains, mirrors, comfortable air-chairs, buffet for serving light meals, electric light and heating, small tables, and magazines; in fact, everything that could possibly be needed. In the front bulkhead of the cabin there is usually a set of instruments, consisting of altimeter (for height), air-speed indicator, clock, and revolution counter. These are fitted for the benefit of the passengers. Instructors, flying clubs and sky-writers usually have the same type of 'plane, a fairly fast, very manœuvrable, light 'plane. They have this type because their work entails numerous acrobatic stunts.

Surveyors have a fairly large 'plane, capable of slow flying and with long duration.

Sometimes, as in the Gloster A.S. 31, the pilot's cockpit has a floor of glass, to enable him to see the land over which he is passing. These 'planes are used for photographing the land, in order to make maps.

There are a large variety of 'planes that are used for joy-riding, the seating capacity varying from two to ten.

The private-owner class contains a monoply of 'planes, light 'planes, heavy 'planes, amphibians, flying boats, sea-

planes, auto-gyros, in fact, almost every type of aeroplane that exists. But undoubtedly the most popular is the light single or double-seater landplane.

In the King's Cup air race, most of the machines entered are of this type. Many famous flights have been made in them. Mollinson's recent flight, in the little single-seater comper " Swift "; Amy Johnson's and Mr. Scott's flights in their two-seater De Haviland " Moths "; Bert Hinkler in his Avro " Avian." These last three have engines of 100 h.p., and the " Swift " has an engine of 40 h.p.! What a difference between these and the " Hannibal," with its four engines, each of 550 h.p.!

It is very interesting to wonder in what direction the aeroplane of to-morrow will develop. Will it be on the same plan as to-day, or will it develop on the lines of an auto-gyro, dirigible, or rocket 'plane? P. HINTON.

IF COAL GAVE OUT.

Have you ever thought what would happen if the world's coal supply failed?

A casual thinker would reply, " Oil or petrol," but prohibitive prices would soon eliminate these.

Imagine London, the North with its industries, both would soon be at a standstill. On the Thames, picturesque barges would tack up the river in place of the puffing tugs, the streets would be like a city of the dead.

Imagine Mr. Business Man! He arises for his morning dip. No gas, hence no hot water. Decidedly inconvenient and uncomfortable, especially in winter. It is useless to switch on the electric stove. No coal to generate the power, and petrol engines cost £1,000 an hour to run! Mr. Business Man turns on the cold water and philosophically braves the terrors of that refined element.

This meagre toilet completed, the maid offers a breakfast of slices of bread, fruit, and a glass of cold water. Gone are the eggs and bacon of yester-year.

He picks up *The Daily Misery*—now a single sheet—and learns that the coal supply will only allow the printing presses to run for another week. But habit is a strong characteristic, and, snatching up his hat and attaché case, he sprints for the 8.15. The station is deserted. He realizes—no coal—no train.

Wheeling round, he espies an old hansom cab and a decrepit horse attached. He engages it and calls " City, please," with an air of offended dignity.

At the office all is quiet and peaceful, the staff, from chief to office boy, are morbid and depressed. The arrival of luncheon hour gives him an opportunity to contemplate the crisis.

He comes home thoroughly dejected, but no cheerful fire—all available wood has long since been consumed. Silently he eats his cold collation.

But presently, a bright idea! The pleasure of smoking still remain. He pulls out his favourite briar and proceeds to drown his sorrows in smoke, leaving the rest of the world to wonder how much longer they will have to be without that important factor—coal. D. POTTS.
F. TOLPUTT.

THE GRAMOPHONE.

The first actual machine to be used for the recording of articulate speech was the phonautograph, invented by Mr. Leo. Scott in the year 1856; it consisted mainly of a conical mouthpiece; attached to the smaller end was a diaphragm of light material, a needle was fixed to and followed every movement of the diaphragm, and traced them on a blackened cylinder of paper, which revolved underneath the needle.

The inventor of the gramophone was the late Mr. Edison, whose death recently was such a blow to the scientific world. The only alteration he made to Mr. Scott's phonautograph was to substitute tin-foil for the blackened paper; and as Mr. Edison said, " No one was more surprised than I when the machine reproduced the words spoken into it."

The working of the phonograph, as it was called, and still is in America, is relatively simple to understand. The needle attached to the diaphragm of the recorder presses into the tin-foil, and impresses it with a series of indentations which vary with the frequency of the sound being recorded; to hear a record thus made, it was only necessary to turn the cylinder back and let the needle follow the track previously made. The records made in this manner were by no means perfect; for one thing, they could not be reproduced many times, because the impressions faded with use.

A further improvement was accomplished by the use of a flat circular plate, with a spiral groove cut, from the outside to the centre. For the final perfection of the instrument, however, we are indebted to Dr. Chichester Bell and Mr. Tainter, who found that better recording could be obtained by using paraffin wax, mixed with other materials, for receiving the impressions; then they evolved a different method of cutting, by which the fluctuations of the diaphragm were recorded by means of a wavy line, varying according to the frequency of the sound recorded. The numerous benefits which the gramophone has bestowed upon mankind are fourfold. It is the gramophone which enables us to hear beautiful music, and also the speeches of great men. It is a tremendous benefit to those who study foreign languages, and finally, we must not forget that great masterpiece of modern

science, the " sound film." In film work, however, the gramophone is not used as much as it used to be, owing to the difficulty of obtaining perfect synchronism between the film and the sound, but still there is no doubt that without the gramophone the accomplishments of great musicians and statesmen would be entirely unknown to rising generatons.

FREDERIC W. WALKLING.

THE FUTURE OF AVIATION.

Aviation will be the means of travel and transport in the near future. Great steps are already being made. The mail is brought from Australia to England in about twelve days. The Imperial Airways are now proposing a passenger and mail route between London and the Cape, the journey to be completed in four and a half days, which will be of great use to men whose business takes them abroad.

In America there is an air service which goes from New York to Los Angeles, and is completed in five days.

The aeroplane itself is getting safer; it is not very often now that we hear of an air liner crashing. " Hannibal " shows a great step towards the future. It is designed for long distances, the span of the top wing is 130 ft. and the lower wing 94 ft., from nose to tail measures 86 ft.; its height from the ground is 25 ft., and it carries thirty-two passengers. Its top speed fully laden is 116 m.p.h. This plane is fitted with a kitchen, so that passengers can have their meals on board, as the distance between aerodromes is sometimes great.

Engineers are dreaming of the time when they will be able to construct a plane with cabins, dining-room, and control rooms in the wings, or planes that will be driven by rockets. This was tried with a motor-car, but was not a success.

The auto-gyro will be a very useful type of plane, because it can rise and land almost vertically, and therefore save a great amount of space in landing. The speed of the aeroplane increases rapidly, the record being held at 408 m.p.h.

The desire to go up in an aeroplane, or be able to fly one, is rapidly increasing in the rising generation. So in a few years to come air travel will be the universal means of conveyance.

W. APPS.

Contributions to this Magazine are very welcome, especially from Old Boys. Address all communications to the McCabe Commercial School, Maidstone. All Old Boys are strongly urged to become subscribers, and thus keep in touch with their School. Annual subscription 2s. 6d. for three issues.

DOWN ON THE FARM . . .

Agriculture and Fox Ranching.

(Based on information kindly supplied by J. C. Leslie, M.A., B.Sc., Principal East Anglian Institute of Agriculture, and Mr. T. Melross, President of the British Fur Traders' Association.)

Lots of people are telling us that Great Britain could, if she chose, grow all the food and clothing necessary to keep her people adequately supplied.

Unfortunately, almost an equal number of people are telling us that we can do no such thing! That, you will agree, is an extremely muddling state of affairs. It is certain, however, that we could grow a very great deal more than we do. Since this fact is becoming increasingly recognized and bold steps are being planned to put so admirable a plan into practice, it looks as if a very promising career is likely to develop.

If more and more animals are to be bred in Britain, *someone* has got to rear them. If more and more fruit, wheat, rye, barley, vegetables, and hops have to be grown, *someone* must plant them. The land certainly looks at the moment as if it is worth considering as a means of procuring a profitable and exceedingly interesting career.

Let us see how we can prepare ourselves to take part in this rapidly developing movement to make our country as independent as possible of food and clothing produced in other lands.

We shall assume that you will wish to acquire the highest degree of efficiency in what is undoubtedly a very complicated job. Farming is not easy. It requires lots and lots of experience and hard work. Either you can take it up by becoming apprenticed to a *successful* farmer or you can follow the course described below and study all sides of the work at some recognized training college. Your choice will naturally depend upon what funds are available for your vocational training. The college training described below is desirable *but not essential*. Do not be put off going

on to the land for lack of funds. There are plenty of farmers who will gladly give you the necessary experience in exchange for help on their farms. A college training, however, is essential for most of the administrative and advisory jobs described below.

The Ministry of Agriculture will always assist boys anxious to take up farming but unable to meet the costs of a college training, by putting them into touch with farmers willing to teach them in return for help on their land.

School Days.

The importance of every boy taking vocational training of any sort after he leaves school, passing the Matriculation or an equivalent examination, cannot be sufficiently emphasized. It is fundamental. Without some such certificate the boy will have to spend a valuable year of his life working for a Preliminary Examination. These Preliminary Examinations are practically always a test of general education, and the Matriculation will be accepted as a satisfactory substitute.

Work at the various Schools of Agriculture consists of preparing students for the B.Sc. (Agriculture).

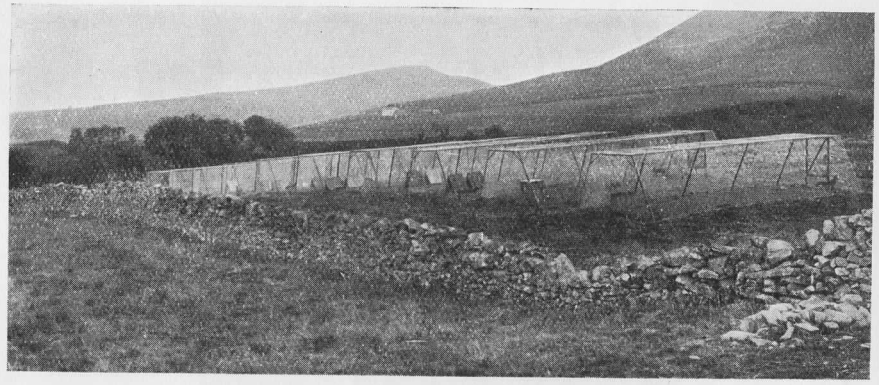
Some Openings.

For graduates in Agriculture the scope is much wider. Practically every County Council in England and Wales now has an Agricultural Organizer who has under him a number, which varies according to the size of the county, of Assistant Lecturers in Agriculture. There are possibilities of appointments as Lecturers in Agriculture at all the various Agricultural Colleges and Agricultural Departments of Universities. Artificial Manure Syndicates and Feeding Stuffs firms employ a considerable number of trained agriculturists as propagandists and advisers. In the past there has also been a large demand from the British Colonies for assistant managers of Rubber, Tea, and other plantations. There have also been many appointments in the various Colonial Agricultural Departments. Salaries in this country vary from £250 to £1,000, while in the Colonies the maximum is, of course, considerably higher.

Students who have taken these degrees may return to college and, provided their practical experience has been sound, may take the National Diploma in either Dairying or Poultry Husbandry. These added qualifications open up possibilities of appointments as lecturers in Dairying or Poultry Husbandry under the various County Councils, Agricultural Colleges or University Agricultural Departments, while in commerce there is usually a good demand for people with either qualification. The salaries vary from £200 to £500.

For a student who has taken a degree in Pure Science in say either Chemistry or Biology, and who follows that up with a post graduate course at an Agricultural College in some branch of Agricultural Science, say Animal Nutrition, Bacteriology or Biology, there are possibilities of appointments as advisors in Agricultural Chemistry, Entomology, or Mycology.

There is also a large demand from the Colonies for men who have been so trained. Salaries vary in this country



FUR RANCH IN NORTH OF SCOTLAND.

from £250 to £700. Such qualifications also lead up to the various University Chairs of Agriculture, Agricultural Chemistry or Agricultural Botany, which carry with them salaries at the usual University scale.

In addition to advisory appointments there are also many appointments at Agricultural Colleges, Universities, and so on, as lecturers in specialized subjects.

Length and Cost of Training.

The minimum length of time essential for both the B.Sc. (Horticulture) and the B.Sc. (Agriculture) is three years. Students wishing to specialize are advised, however, to take the full four years' course.

The cost of training is between £16 and £23 a year.

FUR BREEDING.

Building up a New Home Industry.

The story of how the silver fox became domesticated to a degree that permitted of its being bred in captivity on a commercial basis is one of constant endeavour and indomitable struggle against failure extending for more than sixty years, and is an object lesson to all boys and girls.

It demonstrates clearly that with courage and perseverance, coupled with absolute singleness of purpose, a seemingly hopeless enterprise can be turned to complete success.

As far back as 1870 the great Lord Strathcona (once Donald Smith, a poor Glasgow boy who left Scotland to seek his fortune in Canada, and who became the greatest pioneer in that country, the builder of the wonderful Trans-Canadian railway, and the head of The Hudson's Bay Company) tried to raise the Silver Black Fox in captivity; but he was not successful. It was left to some earnest trappers in the Backwoods to try and try again until at last they were triumphantly able to say that they had fixed a strain of foxes which always bred true, and the industry was launched as a profitable new enterprise.

From the earliest times people have used furs, first as a means of protection from the weather, and, latterly, as a means of personal adornment as well.

The fox is one of the greatest furbearers we have. There are various colour phases, the white fox which comes from the arctic regions, the blue fox which is found in Alaska, in Greenland, and in a little island in the far north belonging to Norway called Jan Meyen, and the red fox, common nearly all over the world.

Mysterious Happenings in Canada.

Until recently these were the only varieties of foxes; but, occasionally, the trappers in Canada used to find a black fox in their traps, which made them very curious as to where these came from. They were very rare, and, as is the consequence of scarcity, they were eagerly sought after by the skin merchants who would pay very high prices for fine silver black pelts.

Silver foxes were equally rare in every part. No place could point to a greater quantity occurring than any other hunting ground. It was only when a trapper one day found a litter of red fox cubs with a little black one among them that the secret was out; the silver fox was nothing more nor less than a sport of accidental colour variety of the common red animal.

The home of the Silver Fox industry is Prince Edward Island, a little island off the coast of Nova Scotia. Here it was that Sir Charles Dalton established his first silver fox farm. Prince Edward Island is now one huge fox farm, every ordinary farmer keeps a few pairs of foxes as a side line to his other stock, and, on some of the big fox farms, there are up to 1,000 pairs of foxes breeding. It is interesting to note that these farmers in this little island are among the richest per head of any in the world. From its small beginning in Prince Edward Island, fox farming has spread all round the world. In Europe, there are thousands of foxes in Norway, Sweden, Germany, France, Switzerland, Finland, and Russia.

The Industry Comes to Britain.

In Great Britain the first silver fox farm was begun in the far North of Scotland some eleven or twelve years ago, and is still going on, though it now covers many acres of ground.

Since this farm was begun, others have started until at the present time there are over one hundred owners of silver foxes in this country, and the numbers are increasing every year.

Last year saw a great influx of new breeders. At the beginning of 1931 there were not more than 40 members of the Silver Fox Breeders' Association; to-day there cannot be far short of 150. Farms are established all over England and Scotland, and at the Show which was held in London last November there were over 200 fine quality foxes on exhibition.

Silver fox farming is an ideal occupation for anyone who is fond of a country life. Foxes cannot be bred in

towns, and a farm must be located in the country. The more isolated it is the better the foxes like it. Foxes are shy animals; they have not yet got over their wild nature; they like to be left in peace.

The industry needs a considerable amount of capital for anyone who is going into it who is to depend on it for his living from the end of the first year; but the best plan is for parents to buy a pair or so for their children when they first begin to go to school, and leave the foxes on the farm to be bred by the experts there until the child is able to leave school and spend at least one breeding season on the farm doing the actual work of looking after the animals. This is the only way to learn the business. At the end of one breeding season, if the young farmer has any aptitude for the business at all, he should be able to take charge of the herd with only the smallest amount of expert advice, and by the time the age of twenty-one is reached, should be in a fair way to a comfortable income.

Fox farming is equally suitable for girls. On the Nithsdale Ranch there are girl students learning the routine in the same way as boys, and in many cases making a better job of it. Some of the best foxes on the farm were brought up by hand by the Mistress with the help of some of her own pet pussy cats, and, although at the present time there are no positions vacant for kennel maids, the time is not far distant when a demand will certainly exist.

Good Return for Hard Work.

It will be asked, what is the return to be expected from the industry? This should be in the neighbourhood of 20 per cent, *but* this all depends on the farmer.

Some will be able to raise the best of stock and therefore will be in a position to sell all they can raise as pedigree breeding foxes; whilst others with the same foundation stock will only be able to breed poor stuff which they will have to sell for pelting. It can be readily understood that it is much more profitable to sell foxes for breeding than to pelt them, as two foxes with a potential breeding life of eight years are more valuable than the same animals as two dead skins.

It is comparatively easy to buy a few pairs of silver foxes and let them breed, and at the end of the year pelt them and send the skins to the Fur Sales in London; but it is much more interesting and profitable to breed fine quality pedigree stock scientifically, and develop a name for the best breeding stock.

If the best is to be got out of the industry it is not enough to raise fine quality foxes; they have to be sold, and selling in these days is a full time job for an expert. The ideal combination is two persons of either sex, one who is able to take entire charge of the farm and attend to all the practical details connected with it, and the other to devote his or her energies to the publicity and selling side of the enterprise.

Sittin' still an' wishin'
Won't make the country great,
The Lord provides the fishin',
But YOU'VE *got to dig the bait.*

INTERESTING CAREERS "AT A GLANCE."

Accountancy.

Length of Training : 3 to 5 years.
Cost of Training : £100 to £150.
Qualifications Required : Membership of Institute of Chartered Accountants or the Society of Incorporated Accountants and Auditors.
Initial Salary : £250 to £1,500.
Age of Entry : 16 to 17.
State of Profession : Rather overcrowded.

Commercial Art.

Age of Entry : 16-19.
Method of Entering : Course at Art School and apprenticeship to commercial art studio.
Cost of Training : £30-£35 a year.
Initial Salary : 15s. to 25s.
Work Prospects : Sound returns for real talent.

Biology.

Age of Entry : 22-23.
Method of Entering : Matriculation plus University Degree. 3-4 years at University.
Cost of Training : £60-£70 a year.
Initial Salary : £250-£300.
Work Prospects : Good for some years to come.

Civil Service. General Clerical Class.

Age of Entry : 16-17.
Method of Entering : Competitive examination set by Civil Service Commissioners.
Initial Salary : Approximately £90 a year.
Salary Prospects : £375 unless "Executive Class" Examination taken at age of 18.

Electrical Engineering.

Age of Entry : 16-17, as Articled Pupil.
Method of Entering : Pupil for 3-5 years plus Engineering Institute Classes.
Cost of Entry : Some firms charge £100-£250 to pupils. Others do not charge.
Initial Salary : As pupil 10s. to £1 a week.
Work Prospects : Good for some years to come. (Alternative method is to obtain B.Sc. (Eng.) at a training college. This is expensive).

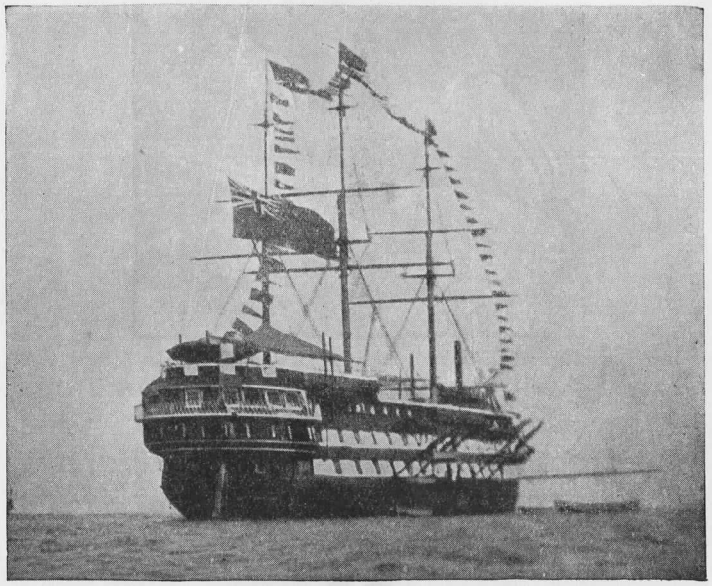
H.M.S. "Conway" School Ship

IN THE MERSEY, MOORED OFF ROCK FERRY, BIRKENHEAD.

The Senior Training School for Officers of the Mercantile Marine.

CHAIRMAN: SIR F. C. BOWRING, J.P.

CAPTAIN: **CAPTAIN F. A. RICHARDSON, D.S.C.**
(Commander, R.N., Master Mariner, Younger Brother of Trinity House)



Age of admission, 13 to 17.

Established in 1859, the ship is designed to give a sound general and technical education to boys desirous of becoming officers in the Mercantile Marine Service. The technical curriculum includes Navigation, Nautical Astronomy, Practical Seamanship in all branches, Ship Construction, Engineering (practical and theoretical), Wireless Signalling, etc., and especially Management of Boats, as the ship lies at anchor a quarter of a mile from Rock Ferry Pier.

Sanatorium and large playing fields on shore, equipped for football, cricket and tennis.

Two years on board count as one year's sea service.

Cadets on joining are entered automatically as Cadets, R.N.R., and wear that uniform.

Nominations to Cadetships, R.N., and appointments as Midshipmen, Royal Naval Reserve.

Fees £120 per annum, which include ordinary medical attendance, school stationery, use of tools, etc.

A copy of the illustrated prospectus will gladly be sent to any school for placing in reading rooms.

Further information or personal copies of the prospectus can be obtained if parents, guardians or other responsible persons will write to Captain F. A. Richardson, D.S.C., H.M.S. "Conway," Rock Ferry, Birkenhead.

Mr. Melross, the proprietor of the Nithsdale Silver Fox Ranch, of Thornhill, Dumfriesshire, will be glad to advise parents and others who have young people in their charge for whom a healthy open air occupation is desirable, on the suitability of Silver Fox Farming as a career.

HOLIDAYS?

Spend them in the lovely Surrey Hills. . .

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