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It is my hope that you find the file of use to you personally – I know that I would have liked to have found some of these files years ago – they would have saved me a lot of time !

Colin Hinson

In the village of Blunham, Bedfordshire.



THE MAGAZINE  
OF THE  
ELECTRICAL AND  
WIRELESS SCHOOLS,  
ROYAL AIR FORCE.

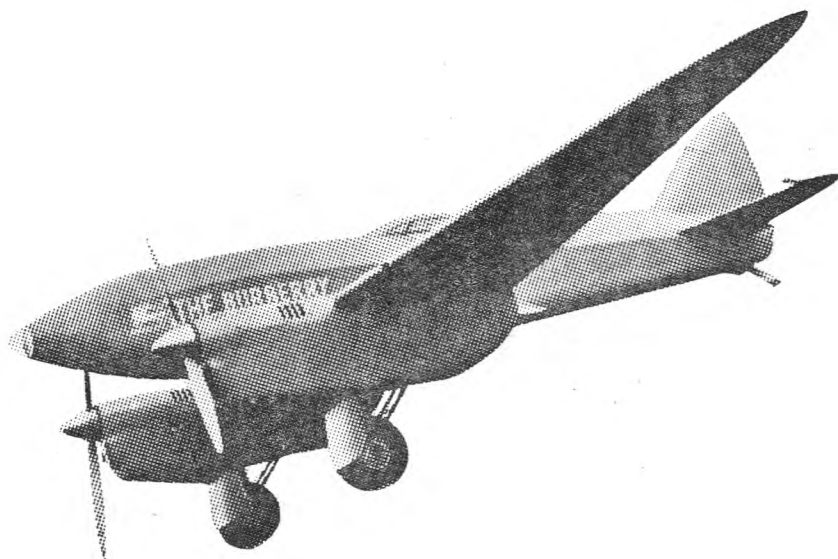
No. 8.

JULY, 1939.

## HINTS TO CONTRIBUTORS.

**I**NTENDING contributors will save the Editorial Staff and the Printer much time, trouble and exasperation if they will conform to the following rules:—

1. Write in ink on one side of the paper only.
2. If a covering letter is necessary, write it on a separate sheet, and don't mix it up with the matter for publication.
3. Use foolscap if possible, not cigarette packets and old envelopes.
4. Leave a wide margin on the left-hand side of the sheet—this is essential for corrections and directions to the printer.
5. Take especial care to write names legibly—editors can guess much, but have limitations.
6. Remember that the Magazine is not published until some weeks after your contribution is written, so choose your tenses accordingly if you are giving "news."
7. Get your C.O.'s authority before submitting articles which deal with active operations or special duties, as such matters must frequently remain confidential.
8. Avoid the purely local joke, unless it is likely to be appreciated by other readers.
9. Avoid excessive paragraphing. A "para." containing only a few words looks foolish in print and wastes valuable space.
10. Submit drawings in Indian ink on plain paper, preferably unfolded. They should be larger than the blocks which are to be made from them.



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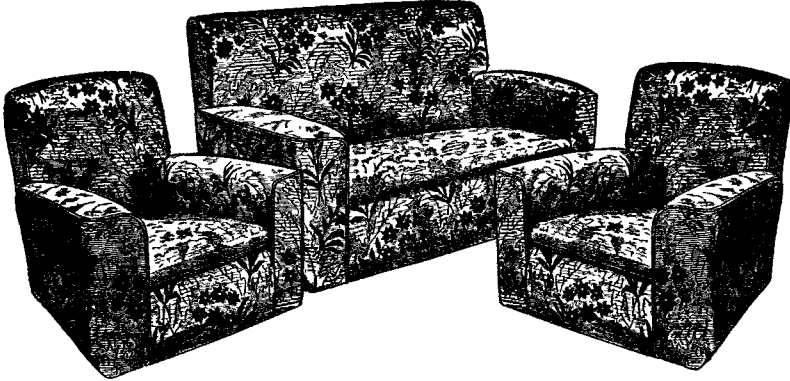
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# The Magazine of the Electrical & Wireless Schools

No. 8.

July, 1939.

Sixpence.  
(By Post Ninepence)

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Published by permission of the Officers Commanding No. 1 Electrical and Wireless School, Royal Air Force, Cranwell, Sleaford, Lincs., England, and No. 2 Electrical and Wireless School, Royal Air Force, Yatesbury, near Calne, Wiltshire, England.



This issue of the Magazine marks a step forward. Previous numbers have been essentially Cranwell publications whereas this one embraces the activities and interests of No. 1 Electrical and Wireless School, Cranwell, and No. 2 Electrical and Wireless School, Yatesbury.

Externally the change is reflected in the cover—"School" gives place to "Schools" and the name "Cranwell" is omitted; internally it is shown by the inclusion of a Yatesbury Section. We appreciate current contributions from No. 2 Electrical and Wireless School and hopefully look forward to others. We thank Mr. A. T. Ryland for his initial efforts and welcome Mr. J. W. W. Whitehead as No. 2 Electrical and Wireless School representative.

The publication of Service items is circumscribed, in certain respects, by official regulations and requirements; in this connection we ask the indulgence of contributors, (particularly those overseas) who may otherwise consider that the Editorial scissors have been unduly exercised.

The restrictions imposed by the form and content of the current Air Force List have inevitably led to the termination of our Overseas Section. We can only hope that those contributors whose efforts we have been unable to publish will realise that the situation is also a minor tragedy for the Editorial Staff. Nevertheless we hope to maintain a strong Overseas interest by means of appropriate articles in the main section of the Magazine; and for such articles we venture to appeal to our distant friends. In conclusion we thank Mr. C. V. G. Coleman for the good work he has done as Overseas Editor.

---

## OUR CONTEMPORARIES.

We acknowledge with pleasure the receipt of the following magazines :—  
*The Boltonian, The Boulevardian, The Caledonia Magazine (H.M.S. Caledonia), The Cockburnian, The Crayfordian, The Croydonian, The Dovorian, The Edwardian, Esmeduna, The Foghorn, The Halton Magazine, The Hymerian, The Journal of the Royal Air Force College, The Marathon, Our Mag (De la Salle College, Jersey).*

We apologise for any inadvertent omissions.

# No. 1 E. & W. SCHOOL, CRANWELL.

## NEWS AND EVENTS.

On March 27th we were honoured by a visit of The Secretary of State for Air, The Right Honourable Sir Kingsley Wood, M.P., who carried out a comprehensive inspection.

Since the publication of our last issue, the undermentioned Passing-Out Inspections have taken place and we take this opportunity of congratulating those awarded Cadetships or Prizes :—

21st December, 1938:—January, 1936 Entry of Apprentices.

Inspecting Officer:—Air Marshal Sir Charles S. Burnett, K.C.B., C.B.E., D.S.O.

Awarded Cadetships :—

568878 S/A. Clegg, B., I.Mkr. (with Hyde-Thompson Memorial Prize).

568881 C/A. Plumb, J. A., W.E.M.

Awarded Prizes :—

569050 S/A. Savell, F. J., I.Mkr.

Highest Aggregate.

Highest Educational.

569322 S/A. Byrne, J. T., I.Mkr.

2nd Highest Aggregate.

Highest Technical.

569268 L/A. Barber, R. J., I.Mkr.

2nd Highest Technical.

568897 L/A. Hollinrake, G. E., I.Mkr.

2nd Highest Educational.

6th February, 1939:—February, 1938 Entry of Boy Entrants.

Inspecting Officer:—Air Vice Marshal J. A. Baldwin, C.B., D.S.O., O.B.E.

Awarded Prizes :—

551538 C/Boy Kemsley, R. W. Highest Technical.

551570 Boy Sibly, G. F. 2nd Highest Technical.

552158 C/Boy Girvan, J. E. 1st Squadron.

551746 C/Boy Lepper, A. L. 2nd Squadron.

17th May, 1939:—May, 1938 Entry of Boy Entrants.

Inspecting Officer:—Air Marshal Sir Charles S. Burnett, K.C.B., C.B.E., D.S.O.

Awarded Prizes :—

552857 C/Boy Shaddick, C. Highest Technical.

552562 Boy Curtis, R. N. 2nd Highest Technical.

551778 C/Boy Watts, J. E. 1st Squadron.

552443 C/Boy Beaumont, O. R. 2nd Squadron.

We are pleased to note that J. A. Holmes and C. Robertson, ex-apprentices from the Electrical and Wireless School, Cranwell, graduated from the Royal Air Force College on 16th December, 1938, and have now taken their commissions as Pilot Officers in the Royal Air Force.

J. A. Holmes was a Flight Cadet Sergeant ; he was awarded full colours for Soccer and half colours for Boxing and Athletics.

C. Robertson was awarded half colours for Fencing.

The Cranwell Amateur Dramatic Society staged an excellent performance of "The Housemaster" during January, the producer being F.Lt. Sawyer.

In March a splendid Variety Entertainment was produced by Mr. W. Kidd, assisted by F.O. H. J. Maxted. The musical arrangements were under the able direction of F.O. A. E. Sims, M.B.E., L.R.A.M., A.R.C.M., and the effective stage management of F.Lt. R. S. Hellier, D.F.C. left little to be desired.

On June 8th, the King's Birthday was celebrated. After the Ceremonial Parade the rest of the day was observed as a holiday.

---

## EMPIRE AIR DAY.

This year the Royal Air Force celebrates its coming-of-age as a separate service, and on May 20th a crowd of over eight thousand people visited Cranwell to enjoy the most ambitious Empire Air Day yet ; as a result, Air Force Charities will benefit by about £439.

Hurricanes, Audaxes and Furies displayed their powers in the air. In the Aircraft Park representative aircraft, including the Wellington, Hampden and the American Harvard, were on view but, interesting as these proved, some of us were disappointed by the absence of the Spitfire, Lysander and the new long-nosed Blenheim.

For many visitors, the high-light of the flying display was undoubtedly the low-bombing by the Hampdens, which showed astonishing manoeuvrability ; we shall not easily forget their almost vertical banking at heights little above one hundred feet.

The whole afternoon could have been well spent in the Workshops alone, and the various indoor displays and exhibits attracted much attention. Senior apprentices were struggling bravely to explain, in non-technical language, the intricacies of the many forms of apparatus. Our old friend "George" created much interest. The room set apart for Model Aircraft was thronged throughout the afternoon ; one corner was especially popular with small boys, the attraction being a petrol engine of almost incredibly small dimensions which, under the control of an apprentice, created an ear-splitting din and emitted a nauseating smell.

One must not overlook the popularity of the P.T. and Gymnastic Display, the Fly Past of Model Aircraft, the Beating of Retreat, and the Musical Programme. It was a great day, and the only valid criticism one can offer is that there was too little time to see it all.

J.P.



## NOTICE.

It will be greatly appreciated if home and overseas contributors to our next issue will arrange for their contributions to reach the Editor not later than 31st October, 1939. They should be addressed to :—

The Editor,  
Electrical and Wireless Schools Magazine,  
Royal Air Force,  
Cranwell,  
Sleaford, Lincs.

Orders, advertisement enquiries, etc., should be addressed to :—

The Business Manager,  
Electrical and Wireless Schools Magazine,  
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## A VISIT TO THE GRUNAU GLIDING SCHOOL.

Many readers have, no doubt, watched gliders and sailplanes in their normally peaceful flight at the various club centres in this country. A few may have visited Germany, the home of this interesting sport and hobby. For those not so fortunate, the account of a few brief experiences may be of interest.

There are three outstanding schools of Gliding in Germany. Of these, Rossiten on the Baltic coast in East Prussia, and the Wasserkuppe, not far from Frankfurt-am-Main, are perhaps familiar to people in this country. I once attended a course at the Wasserkuppe and, on my return, I decided to visit the third school at Grunau, where Herr Wolf Hirth is in charge. When the time came to make arrangements and questions of transport arose, I asked myself, "Why not fly the whole journey?" I visited Imperial Airways, Ltd. and found that the cost was very little more than that of the train journey and that the connections enabled one to get to Breslau in one day.

At last the day arrived and at 9 a.m. we left Croydon. We called at Brussels and Cologne, where there was a stop of an hour for lunch. Here I boarded a small machine, a six-seater of the Deutsch Luft Hansa, and had a most interesting flight to Leipzig, where there was another halt of one hour during which time I looked over some Junkers aircraft.

The next stage of my journey was made in a still smaller machine, a four-seater cabin monoplane. Breslau was reached at 6.30 p.m., and there I was met by the director of the Grunau School who, after fixing me up at an hotel for the night, showed me all the interesting sights of the old town.

The next morning I was at the Air Port early as the machine was due to leave at 7 a.m. for Hirshbirge in the Riesengebirge. I was given a complete flying outfit and placed beside the pilot in the spare pilot's seat. That last stage of the journey was most interesting to me for I was able to note the delicate touch the pilot used with the controls.

Arriving at Hirshbirge one and a half hours later, I was met by Herr Hirth who drove me in his car to Grunau, a village about seven miles from Hirshbirge. I was surprised at the picturesque appearance of the flying school buildings, set amid pine trees and surrounded by flower gardens. All the buildings, offices and principal work-shops are in the village of Grunau, at the foot of the "Galgenberg," which is the range of mountains forming the principal flying grounds. Grunau boasts one very large hotel where the students of the school are specially catered for at reduced rates. I had a bedroom to myself, with attendance and all meals, for three shillings and sixpence per day! The food was excellent.

I was rather astonished on being told that I must rise at 5.30 a.m. and meet the rest of the Advanced Course at 6.15 outside the school, some three minutes' walk from the hotel. Fortunately, before leaving, I was able to shave and have a good breakfast. Then, provided with sandwiches for my mid-day meal, and also with a camera, I set out to meet the boys.

First I was introduced to the instructor, Herr Van Hausan, and then to the nine other students who included a German war-time Air-ace.

The walk to the summit of the Galgenberg (a steep climb all the way) took about twenty minutes. Here was a large brick-built hangar, capable of housing twenty-five machines, and a workshop. The available aircraft consisted of twelve Grunau school machines, four Rumpf machines (the first fuselage machines used by "B" pilots), two Ferdinands, one Falke, two Wiesenbaude and Herr Hirth's Musterle, with its fifty-six feet wing span.

Thirty feet from the hangar is the top of the south slope from which one looks down on the village of Grunau and on Hirshbirge town. At the back of Hirshbirge lies the famous range of mountains called the Riesengebirge, the highest peak being 6,151 feet above sea level. On the lower part of the south slope the beginners' class of fourteen pupils were already flying with two machines. This is really perfect terrain for there are no rocks and no trees, but very good level spaces for landing lower down. The whole of the slope is covered with short mountain grass and when I assert that it is equal to the west slope at the Wasserkuppe, those readers who know that spot will realise how nearly perfect it is both for soaring and for training. At the top of the slope is a level plateau, some three hundred yards square, which is suitable for landings.

We, the Advanced Course, spent the first seven days flying the school machine—a Grunau Zogling. Two machines were used and they were retrieved by horses. The average time for making an "S" turn was 100 seconds. At the end of the second week, when each one of us was ready to have a try for his "C" Certificate (see note), a heat-wave set in and it lasted fourteen days. During this time we had workshop practice and lectures. Fortunately, I was

able to have my lessons in English as both Herr Hirth and Herr Van Hausan speak the language fluently.

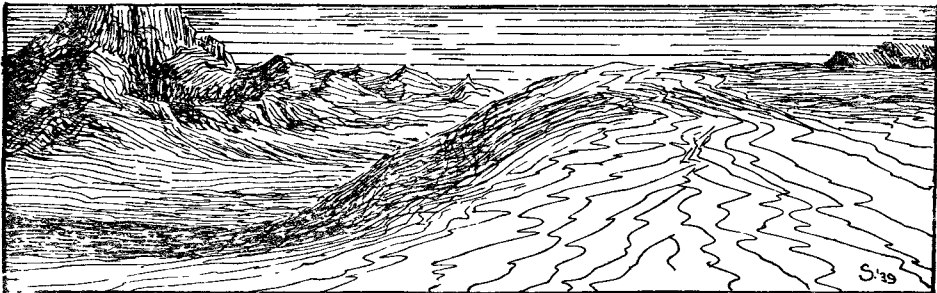
On the last day of the heat-wave, all of us being well sunburnt, we got to work smartly as a welcome 18 m.p.h. wind was blowing. Several machines were brought out and it happened to be my turn first. In a south-east wind I took off from the south slope and immediately made a right turn for the S.E. ridge. The up-current was not strong so I decided to make a very small figure-eight, keeping to the small upper ridge, almost stalling in the up-current. By doing so I was able to keep above my starting place for six minutes; then on the last turn I stalled a little too much and beat a hasty retreat for the starting point. The first "C" Certificate was earned.

Thirty minutes later the wind was due south at 20 m.p.h. Two machines were already in the air and two more were sent off. All made "C" flights. The next morning, with a west wind at 37 m.p.h. we started at 9 a.m. from the west ridge. My turn again came first and Herr Hirth said I must try for my "Amptlisher Aussweis" (Official German Licence). This licence is necessary for the Rhon Competition. I was to fly the Falke for thirty minutes and make a good landing at the starting point. This was a most enjoyable flight although conditions were rough. When my time was up I was flying at 2,000 feet so I crossed and flew along the valley to lose height and then landed.

Satisfied with my success, I am one of the few Englishmen to hold this Special "C" Licence. C.E.B.

#### EXPLANATORY NOTES.

- (a) There are three gliding certificates—"A", "B" and "C" :—  
"A" Certificate : The candidate must carry out a flight of more than thirty seconds duration, followed by a normal landing .  
"B" Certificate : The candidate must carry out a flight of at least one minute's duration, including two "S" turns and followed by a normal landing.  
"C" Certificate : The candidate must carry out a flight of at least five minutes' duration, at a height greater than that of the point of departure, and this must be followed by a normal landing.
- (b) "Amptlisher Aussweis" :—In addition to the conditions indicated above, the flight must be of at least thirty minutes' duration.



## IS MORSE FINISHED ?

### Some Eye-Openers by An Old Hand.

They tell us Morse is finished, and that a one-finger tyro on the Teleprinter will soon be a typical telegraphist; and yet, a visit to a modern commercial telegraph office would quickly provide food for thought. Morse signals shoot through the instruments at over two hundred words a minute for hours on end while, nearby, expert Morse men enable a London stockbroker to get a reply from Wall Street in a matter of seconds. So some recollections of an old hand who has grown up with all this may be of interest.

It is true we have not always depended on Morse. The writer remembers a queer instrument called the Telewriter. This reproduced at the receiving end a facsimile of the handwriting of the sending operator. Firms renting private lines used this instrument but it never became popular because the resulting efforts were too spidery and spasmodic to be attractive. There was also the ABC, besides the railway instruments—the Single Needle and Double-Plate Sounder. It was some ten years before the war when the Post Office altered some of the symbols—the Long-Break came in instead of the double I, and the MM fractional sign disappeared. The ending  $\overline{VE}$  sign was still in use, not disappearing until the printing instruments had firmly fixed the ending cross, leading to  $\overline{AR}$ .

Transcription by hand was considered an art in pre-typing days. Many of us can remember having to take (for hours on end) 28 to 30 w.p.m. continuous receiving with no pauses between messages (“through G” we used to call it). Further, while Censors were about during the early war days, we had to make three copies instead of the usual two, without any slowing up. As the delivery copies were for firms who could just transfer to competing companies if they were not satisfied, we had to make sure there would be no complaints on the score of accuracy or legibility.

The early automatic signals were transcribed by hand—painfully or otherwise according to whether or not one possessed an effective stylo which could press through the dozen or so copies which were often wanted for a news message. Stick perforating was our chief method of preparing auto signals, experts keeping up their 30 w.p.m. for long spells with minimum effort by ingenious cross-punching, while in the News Section of the Central Telegraph Office the operators perforated by pneumatic pressure half-a-dozen tapes simultaneously.

As a digression, perhaps a word or two about some non-Morse instruments may be interesting. First there was the Hughes, a direct-printing instrument which still has a tremendous vogue in France. In this, the keyboard is similar to that of the piano, having alternate white and black keys. No hard and fast rules can be laid down as to its operation, since the endeavour is to get as many letters as possible into one revolution of the “chariot.” There is, of course, a limit as to how much can be included; but an expert, waving his arms and bending his body to achieve such a combination as EJOTYDINTYCHOUZ (which takes no more time to signal than the word POP) needs to be seen to be appreciated.

The Baudot, another direct-printer, is still firmly entrenched on the Continent. This was the chief instrument in the G.P.O. Cable-Room in 1914 and bade fair to overrun the provinces, but it has lost its pre-eminence as Morse has developed. Its chief drawback is the fact that it requires not only highly skilled operating, but the close attention of a "dirigeur" to secure synchronisation etc. This gave us some laughs, however, for an extremely skilful operator can operate its five keys with one hand instead of the usual two, leaving the other available for unofficial acts. Also certain combination of the keys, such as the fourth and fifth alternating, make a distinctive lah-di-dah sound which is guaranteed to call one's attention as much as any printed character. For the benefit of the technically-minded, the Baudot, like the Teleprinter, uses the 5-unit code, all characters (unlike Morse) taking the same interval of time.

The Teleprinter, by the way, came along 18 years ago, the Morkrum being one of the first types. Another 5-unit system was the Murray, which was tried out to Berlin in pre-war days, but failed to oust the Hughes. A unique printing instrument is the Creed re-perforator, which receives the same perforated signals as those sent, the received tape actuating a printer. This Morse system is largely used in newspaper offices.

But the revival of Morse is associated with the Undulator more than with any other instrument. The Beam Short-Wave stations erected in the last ten years or so gave us possibilities of incredibly fast Morse. For instance, twenty years ago automatic wireless between London and New York was effected on Dictaphones, signals too fast for oral reception being recorded on the wax cylinders and later read over by the operator at suitable speed. But when speeds of over 200 w.p.m. became possible, the only instrument sensitive enough was the Undulator, with its trailing ink record somewhat like Siphon Recorder signals, but quite unlike the old Morse Inker.

It is a revelation to watch Undulator signals coming through in a big London office. While the receiving operator dexterously winds the tape into convenient lengths and distributes it to nearby typists, he keeps his eye on the signals to watch for signs of changing conditions that necessitate altering the speed, to detect faults (human or mechanical), to note lengthy statics (wipers) and to pick out "flash" messages needing special treatment. Here is Morse at its greatest—terrific speeds and expert treatment; skilled technical assistants standing by to keep the delicate instruments up to their best; experienced operators deciphering without hesitation where statics have blurred the signals; speedy pneumatic tubes or belt conveyors to other departments, and an alert staff of messengers to link up with other circuits.

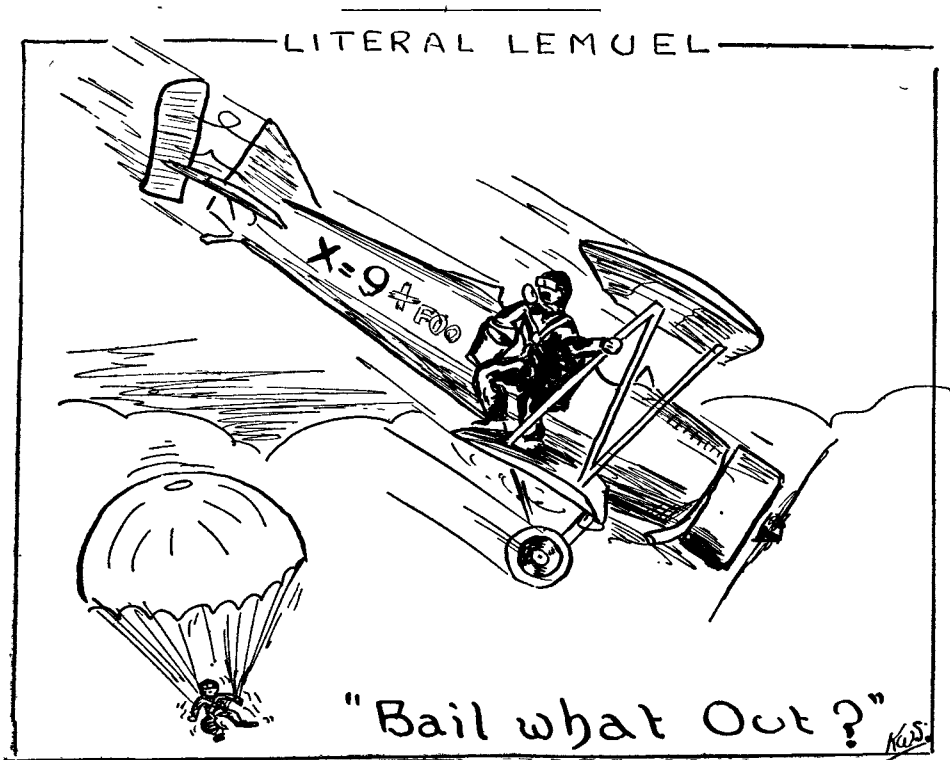
The actual method of translating the Morse signals may be of interest. The typist has a specially constructed stand around his typewriter; the paper tape is led through a guide on the stand and is pulled relentlessly through by a motor, so that one is reading and typing from a moving band. This is called "running-slip reception" and an expert types with accuracy the Morse signals at 70 w.p.m. or more. Accuracy is vital owing to competition between the Cable

and Wireless companies, and the extraordinary high standard that is kept up is evidenced by the fact that half-a-dozen errors in a *year*, involving the handling of millions of words, are likely to prejudice a man's position.

Siphon-Recorder signals of the Cables and the Undulator signals of Wireless are similar in that both use trailing ink siphons, giving a continuous wavy ink-line; but the former has its dots and dashes of the same length on opposite sides of a centre line, while the latter has them of the usual unequal length above a base line. The two systems are linked where a Cable and Wireless system serve the same route, as between London and Cape Town. By this means it is possible for the receiving operator to choose either record or whichever is better at any instant.

Perhaps enough has been said to show that Morse is by no means finished, but that it vigorously leads other methods in speed and efficiency. So our Morse aspirants should take heart and maybe one of these days they will find themselves indulging in chuckles with a foreigner in that engaging "pidgin English" that operators all over the world use. They may well hear a Frenchman telling a Jap SYS (see your slip), calling attention to some irregularity, or the Jap retorting that conditions are NG (no good). To hear the world-wide adieu GN OM sometimes reminds one that not only can high noon here be midnight yonder, but that all countries understand the meaning of our "Goodnight, old man."

S.E.N.



## IN THE KUMAON HILLS, UNITED PROVINCES.

One of the most delightful of India's hill stations is Naini Tal; picturesquely situated it is surrounded by imposing heights of which Cheena (over 8000 feet) is the highest. The lake itself is at an altitude of 6,400 ft. Shaped not unlike the dear old Serpentine, it is a mile in length and approximately four hundred yards in width. The goddess Naini is the ruling deity and the bells of the temple at the north-western end are being continually tinkled by devotees. Similar tinkling reaches the ears from a smaller shrine on the western shore. It is said that Naini claims a yearly victim, and certainly during each of many successive years at least one person has been drowned in this reputed bottomless lake.

Heavily wooded slopes, sheer at times, rise from the water's edge; a narrow roadway runs round the lake and serves admirably for an evening constitutional or for a quiet ride on ponies. The only stretch of level ground in the vicinity lies near the northern end of the lake; it is laid out as a sports ground of the cinder type and contains a garden which is maintained as a memorial to those who lost their lives in the landslide of 1880 to which the level stretch owes its existence. Adjacent to this is the Yacht Club, with the United Provinces Governor's boat-house alongside. Nearby is the bandstand from which, during the season, the regimental band in attendance dispenses music; and very pleasant it is to laze on the water and enjoy the frequent programmes.

For a carefree holiday, away from the heat of the Plains, Naini is exceptionally good; here one may join in all those activities which contribute to the enjoyment of a hard-earned holiday—swimming, sailing, rowing, fishing (though the writer never had a bite), climbing or riding.

Among the many schools the foremost is St. Joseph's which is run by the Christian Brothers; the writer has met many Old Boys all of whom were loud in their praises of this natural beauty spot.

The social side is well catered for by the I.F.A. Club which organises whist drives, dances and outings to other local heights. Two reasonably good cinemas with fairly modern films provide evening entertainment; but they cannot surpass the joys of moonlight on the lake.

The view of the Himalayan Range from the surrounding heights is never to be forgotten; Nanda Devi and attendant peaks rise majestically out of the clouds and, on a clear day, the panoramic beauty is beyond description.

The twisting road from Kathgodam, where the railway ends, is a fine example of the work of the engineers in this country; it is reputed to be the first motor road in India and to drive along its twenty-two tortuous miles is no fit task for the nervous.

At the end of six weeks' perfect leave we left Naini Tal with regret and went down once again to the Plains.

G.P.B.

## JUST ONE OF OUR JOBS.

One of our machines had crashed somewhere in Northern Rhodesia and we had been detailed to locate it and see what damage had been done. We duly arrived at Abercorn, in Northern Rhodesia, where the C.O. rushed round arranging for a car and foot safari out to the broken aeroplane.

Six of us set out the following morning—Kitchin, a local transport man with fifteen years' experience of the district, a doctor, the C.O., an enthusiastic P.O., a Sgt. engineer and myself. My job was merely to check over the W/T on the machine and give the wireless operator any help he might need, as he was rather inexperienced.

The local man drove the C.O. and the doctor in his own car, the P.O. and myself followed in a light van and the Sgt. came last in a lorry with kit and provisions. Leaving Abercorn at half-past six in the morning and travelling on a road cut through burnt-up bush, we crossed several beautifully clear streams—the first clear running water I had seen during two years in the Sudan and two and a half years in East Africa. The bridges over these streams are most ingenious, consisting as they do of three light tree trunks thrown across the gap, with lighter poles loosely bound together with bark strips laid at right angles to the main members. As a car crosses the bridge, the whole thing moves in a most alarming manner, but we were never let down. The lorry put a wheel over the edge of one bridge, but that was merely lack of care on the part of the native driver. From the speed with which the driver and boys got the lorry out I gathered it was a not uncommon occurrence. During the trip we were intrigued by the local native greeting. The native crouches down and claps his hands two or three times uttering in some cases a Red Indian-like whooping noise. After five and a half hours of most uncomfortable travelling, not improved by the occasional presence of a tsetse fly in the cab, we arrived at a Mission station which was to be the stepping-off place for the journey on foot.

This was where Kitchin came into his own. He got hold of an English-speaking native (we gathered that he was the local curate) and told him that we wanted thirty to forty porters. On hearing that the men were out working in the paddy fields, he told the curate to release the boys from schools to go and fetch the men. Meanwhile we commandeered the Mission house and partook of a meal. Lunch finished, we went outside to find about twenty not so able-bodied men and about thirty boys. Kitchin and the two government messengers we had brought with us distributed the loads amongst the natives according to their apparent weight-carrying capacities—our own ideas on this point differing considerably from those of the natives. Then, six stout sticks having been cut for the Bwanas, we set off.

The path we followed was a single track which started off through shoulder-high grass and then after a couple of miles broke out into bush country. After about an hour's walk we started the descent of a 3,000 feet escarpment. Soon we found ourselves emulating mountain goats, scrambling down a 60° incline.



With us, using two hands and two feet, and not doing so well at that, the porters carried on quite happily with their loads balanced on their heads. Occasionally a couple of piccaninnies would become annoyed with our slow rate of progress and trot on ahead of us. The steepness of our descent gradually lessened, until, after about an hour and a half from the top of the escarpment, we reached level ground once more. Here we stopped for a while to drink water and remove odd irritants from our persons.

On again through the bush we went until confronted by a native village. Our guide led us over a stile cut in the boma, through a cultivated plot and the village, then over the boma on the far side. Strange idea this, ambling through somebody's domain! We were now on the floor of the valley and only a stretch of burnt grassland separated us from the river. Soon we caught sight of the aeroplane and automatically increased our pace. As we drew near, the crew came out to meet us, looking rather "part-worn" after three nights' sojourn in a burnt-up waste, with no available change of clothing. The aeroplane was a "write-off" apart from the engine, instruments, and radio equipment. It looked rather pathetic, as do most broken aeroplanes.

Once again Kitchin showed his organising ability. In next to no time the boys and porters had erected a shelter, beds, mosquito nets and washing utensils, and a meal was being prepared. The crew of the aeroplane complained very bitterly about the viciousness of the local mosquitos. Apparently the latter considered a net mere child's play and ate their way straight through. The curses which split the night asunder when we had retired to bed testified to the truth of the reports we had heard.

In the morning we breakfasted and set off on the return journey, feeling a little apprehensive about the climb up the escarpment. Actually it was not so fearsome as we expected and we reached the Mission station in about four hours, including two stops for rest and water. Having played lots of hockey in the near past, I felt none the worse for the walk, but two or three of the party were definitely fagged out.

The porters having been paid off, the cars were loaded up and we drove back to Abercorn. On this trip I went in the lorry and I must confess to an uneasy feeling as we dropped down the escarpment which forms the other side of the ridge. The narrow winding road had obviously not been intended for huge diesel-engined lorries. However, we duly arrived at Abercorn in the darkness, after demolishing one bridge and severely shaking a couple of others.

Having now tried the thing myself, I have come to the conclusion that a lot of balderdash is talked about the hardship of safari in Africa. Had the Bwanas themselves to pitch camp and cook their own meals, then it would be a little tough. But, at the end of the day's journey, they sit down; in half an hour or so the boys have caused a camp to spring up and it remains for the white man to bath, change, have his sundowners and dinner, and then climb into his bed. I think I could carry on doing that for a long time.

Looking back, perhaps the most striking part of the whole trip was the fact that during our one hundred and twenty mile car ride and twenty-five mile walk, the only living things I saw, apart from human beings, were two birds, fish in the stream and a safari of ants. What a country ! H.C.

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## THE BRUSH.

### A LESSON IN STORES PROCEDURE.

1.

From :—Sub-inventory Holder 100/4 to O. i/c Inventory 100/4.  
For Exchange.

Sec. 1A/2693 Brushes Engine Cleaning—1 of. Instructional equipment. U/S through fair wear and tear. Approx. life 6 years.

2.

From :—O. i/c Inventory 100/4 to Equipment Officer, Stores.  
Above exchange is approved.

3.

From :—E.O. Stores to Equipment Officer, "Q" Group.  
1A/2693 Brushes E.C. submitted for exchange.

4.

From :—Equipment Officer, "Q" Group to E.O. Stores.  
1A/2693 Brushes not accepted as Brushes "Engine Cleaning."

5.

From :—E.O. Stores to Sub-inventory Holder 100/4.  
Reference Brushes Engine Cleaning for exchange. This is not as described and is returned to you.

6.

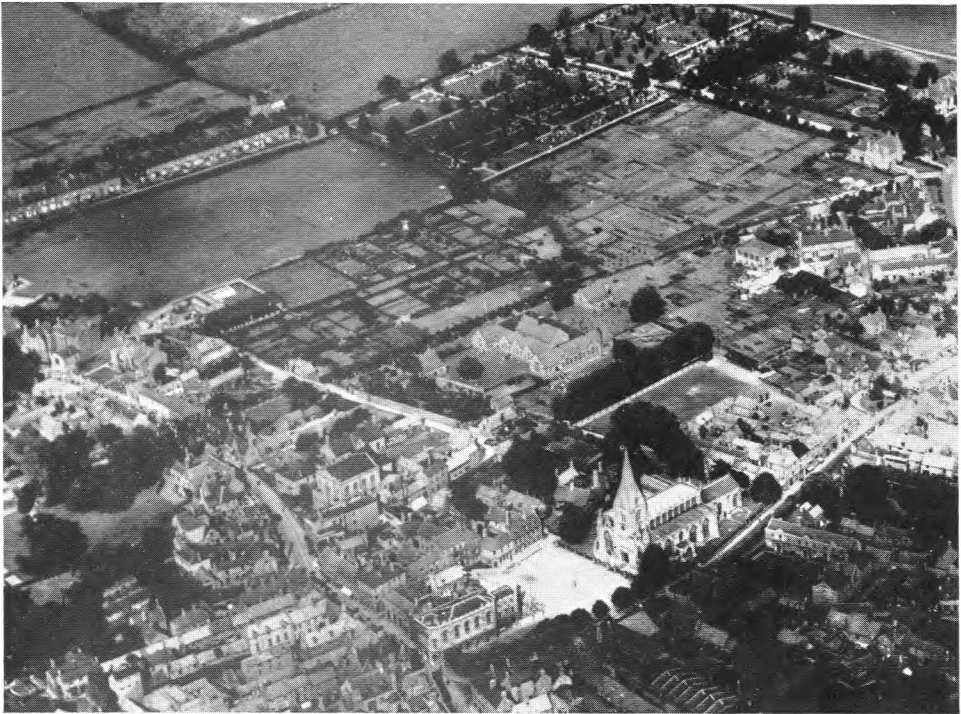
From :—Sub-inventory Holder 100/4 to O. i/c Inventory 100/4.  
Sir,

I return herewith 1 of Sec. 1A/2693 Brushes E.C. which has been refused exchange by Equipment Officer, "Q" Group, (Minute No. 4).

I wish to point out the injustice of the arbitrary decision of the Equipment Officer's Staff.

Here, Sir, is a brush which has been cherished in the bosom of my inventory for six years as a Brushes Engine Cleaning (it definitely is a brush and has certainly been used for engine cleaning) promptly relegated to the position of a masquerader by the autocratic decision of some over zealous store keeper—a decision against which the Inventory Holder has no appeal.

It is admitted at once that there is a difference between the so-called brushes "Engine Cleaning" and this "masquerader"; but it



SLEAFORD FROM THE AIR.





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**WIRELESS OPERATORS OF THE FUTURE.**



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**TOMORROW WILL BE SATURDAY.**

is pointed out there is also a difference between any two of the 1438 other types of brushes; yet, in many cases, even the most expert of storemen could not differentiate between them.

This at once raises the point that the Inventory Holder is entirely at the mercy of the Stores Department in this question of nomenclature. For instance, an inventory holder may have on his charge what he fondly thinks is a Boats Flying "Sunderland Pattern," (Stores Ref. 34H/206) until such time as he wishes to return it to Stores when he is promptly and decisively told it is a Boats Gravy (Stores Ref. 20H/202) "Willow Pattern".

Reverting to the Brushes Engine Cleaning, what is my position now ?

- (a) This brush is no longer a Brushes Engine Cleaning.
- (b) On the Stores decision, I am now 1 Brushes Engine Cleaning deficient.
- (c) By the same decision I am surplus a brush of doubtful lineage.
- (d) Do I first submit my brush (late engine cleaning) for adjustment of nomenclature ?
- (e) Do I request that the newly christened brush (say brushes writing fitch goose Mk IIIA) be brought on charge, or converted or struck off ?

*or*

- (f) What happens to the Brushes Engine Cleaning that I have not got ? Do I pay for it ? If so, why, since I have never possessed it ?

I am, Sir,

Yours obediently,

Inventory Holder 100/4.

7.

To :—Equipment Officer, Stores, from O. i/c Inventory Holder 100/4.

The attached memo is passed to you please.

O. i/c Inventory Holder 100/4.

P.S. What is a Brush Engine Cleaning ?

8.

From :—E.O. Stores to Equipment Officer, "Q" Group.

With reference to attached memo will you please state what action is to be taken.

9.

From :—Equipment Officer, "Q" Group to Director of Stores Development.

Sir,

With reference to the attached correspondence, will you please give a ruling on the procedure to be adopted.

Equipment Officer, "Q" Group.

10.

From :—D.D.S.D. to E.O. i/c “Q” Group.

With reference to attached, it is decided that, provided no loss occurs to public funds, the Brushes Engine Cleaning may be written off charge, and the brushes Writing Fitch Goose Mk IIIA be returned to Store forthwith.

D.D.S.D.

11.

From :—E.O. i/c Group to E.O. Stores.

Mk IIIA Sect. 1C Ref. 2619 to be returned at once please.

12.

From :—E.O. Stores to O. i/c Inventory Holder 100/4.

Will you please arrange for 1 Brushes Writing Fitch Goose Mk IIIA Sect. 1C Ref. 2619 to be returned at once please.

13.

From :—O. i/c Inventory Holder 100/4 to Sub-Inventory Holder 100/4.

Please get rid of this confounded brush.

14.

From :—Sub-Inventory Holder to E.O. Stores.

Herewith Sect. 1C Ref. 2619 Brushes Writing Fitch Goose Mk IIIA 1 of. u/s through fair wear and tear; approximate life 6 years.

15.

From :—E.O. Stores to Equipment Officer, “Q” Group.

Herewith Form 675 and brush referred to in recent memos.

16.

From :—Equipment Officer, “Q” Group to E.O. Stores.

Form 675 returned herewith; brush not accepted as Brushes Writing Fitch Goose Mk IIIA.

17.

So What ? ? ? ? ? ? ? ?

H.P.

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## GLEANINGS.

The specific heat of water is nudity.

Grid Swing is the latest American Dance.

A barograph has a revolting drum.

A diaphragm responds to the punctuations of the atmosphere.

A chevron is a shirt.

A chevron is a service batman.

A cuckoo is a bird which allows another bird to lay eggs in its nest and viva-voce.

Someone else’s pigeon means another chap’s bird.

## OXYGEN EQUIPMENT TESTS.

It is well known that atmospheric pressure decreases as altitude increases until, at 20,000 ft., it is approximately equal to 7 lbs. per square inch or just under half the normal pressure at sea-level.

The effect of this reduced pressure on the body is not often discussed although it is known that a supply of oxygen is desirable or even essential for most people when flying at heights above 15,000 ft. for any considerable period. The tests detailed below were carried out by the writer, in a Harrow aircraft, during November, 1938, and the results may be of general interest.

The oxygen supply was turned on prior to take-off; the flowmeter was set to read 5 and the pulse and respiration rates were noted to be 76 and 18 per minute respectively. The following rates were recorded during ascent, oxygen being used in accordance with R.A.F. regulations.

Height (I.C.A.N.).	Pulse.	Respiration.
4000 ft.	76	18
8000 ft.	78	18
12000 ft.	78	19
16000 ft.	76	19
18000 ft.	76	18

The oxygen mask was then removed and the following results recorded, height being maintained:—

Time After Removal.	Pulse.	Respiration.
3 minutes.	100	26
6 minutes.	100	23
12 minutes.	108	32
15 minutes.	120	34

All the foregoing tests were carried out in a sitting position.

The writer then stood up and carried out a few simple exercises such as touching toes, body rolling etc., to correspond to normal work carried out during an operation, e.g. lifting ammunition pans. Further endeavour was then made to record the pulse and respiration rates, but without success—due mainly to blurred vision and a certain lack of power of concentration.

The oxygen mask was then replaced and the following rates recorded:—

Time After Replacement.	Pulse.	Respiration.
3 minutes.	96	20
6 minutes.	88	20
10 minutes.	88	20
20 minutes.	76	20

At no time during the test did the writer feel undue physical discomfort.

W.R.S. (Electrician 1.).

## THEOLOGICAL THERMIONICS.

Being part of an old book recently brought to light during excavations for a new building at Cranwell.

It is thought that this book must have been used during the great crisis of September, 1938, when, owing to the urgency of the international situation, wireless instruction was introduced into the Sunday services.

The lesson for to-day is taken from the second chapter of the first book of the prophet Fleming, beginning at the fourteenth verse :

And there dwelt nigh unto one of the gates of the great city of High Tension Battery, an official of the greatest importance, known as the Negative Terminal.

It came to pass that this official, seeing a number of Electrons gathered together a little way off, saith unto them :

Get ye gone, O ye of little mass, gird up your loins, and follow in the footsteps of your brothers and sisters before ye.

And they straightway made haste and departed.

And as they travelled through the narrow valley of Copper Wire, they were guided by a great pillar of fire, called the Indirectly Heated Cathode.

When they had come nigh unto this, a voice issued from the pillar of fire and cried unto them, saying, Halt, ye have travelled far, and are doubtless weary. Prepare your camp, and rest.

And they did so, numbering many thousands.

Wherefore they named the place Space Charge, as it is known even unto this day.

But on the morrow there came a mighty wind, known in those parts as the Electric Gradient, of such great magnitude that it swept the Electrons through the great Forest of Grid, up the steep slope of Anode Resistance, ceasing not until it had deposited them on the great Plain of Plate.

And there they did rebuild their camp, as they were weary and did hunger and thirst.

But presently there cometh an inhabitant of that part, an aged Atom of Molybdenum, renowned for his sagacity and piety throughout all the land.

And he drew nigh unto the Electrons and spake in this wise :

There lieth, but a few days' journey distant, a great city in a land flowing with electrolyte and honey.

And the Electrons, knowing this to be their birthplace, made haste and journeyed without ceasing.

But lo, in their path there stood a great mountain, called the Anode Load.

And there were two paths, one steep and rocky, passing over the top of the mountain, the other wide and smooth, passing around its foot.

And the two paths were known as Inductance and Capacity.

Whereupon the evil Electrons took the smooth path of Capacity.



But presently they came to the bottom of the great precipice of Dielectric ; and they could not pass.

Then there sprang up a mighty tempest known as the Tank Circuit Oscillatory Current, which swept the Electrons against the precipice time and time again.

But they still could not pass, as it allowed no admittance.

And there they remain, even unto this day.

But the good Electrons took the rocky path of Inductance.

And it came to pass that they were attacked by a great army of warriors, known as Lines of Magnetic Flux.

Whereupon the Electrons cried out unto their Ruler of Positive Potential, and he heard their supplications.

He blessed them with kinetic energy, and on that day there collapsed many thousands of Lines of Magnetic Flux.

And presently they drew nigh unto the great city of High Tension Battery, where they were received with great rejoicing.

And the Ruler of Positive Potential spake in this wise :

My children have been returned to me unharmed; let there be a great feast.

Whereupon many fatted Atoms of Zinc were slaughtered, and many vessels of electrolyte made ready.

But afterwards the Electrons, having eaten and drunk to excess, dispersed throughout the city, destroying many vessels of electrolyte, killing many Atoms of Zinc and polarising the rest with fear.

And the Ruler of Positive Potential was exceeding wroth, and condemned them to be driven from the city by the Negative Terminal.

And so they wander, even unto this day.

Here endeth the lesson.

D.G.W.

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## MORE GLEANINGS.

The following were taken from a list in the "University Correspondent" :—

You break the law if you use mallet and forethought.

In a boat there are eight men and one to coax them.

Napoleon called England a nation of shoplifters.

What do you understand by the Theory of Exchange? The Theory of Exchange, as I understand it, is not very well understood.

He died of a painful melody.

A lifeboatman must possess great courage, a spirit of self-sacrifice and a waterproof.

## **CRYSTAL CONTROL FORESHADOWED.**

Most of the scientific developments of the present day were foretold by imaginative writers well before they became accomplished facts. But few of these prophets were able to stretch their imaginations far enough to include wireless communication.

A rather remarkable prediction, however, can be found in "The Immortals' Great Quest," a book written by Barlow in the eighties of last century. This book, which is not as well known as it deserves to be, is a description of life on the planet Venus. In spite of the popular preference for Mars, Venus is a much more likely location for life as we know it.

The story relates that the inhabitants of Venus had a mineral which was found as long, slender, double crystals. When the two halves of a crystal were separated, the two pieces were found to be "in tune" with each other, but not with any other crystal. That is to say, when one half of the crystal was moved, the other, no matter how far away, always turned into a parallel direction. The crystals were pivoted and placed in boxes like compass needles. Every inhabitant of the planet had one of these needles, and its twin was kept in a central exchange. When wanting to communicate with anyone else, an individual took his needle-box out of his pocket and "rang up" the exchange by turning the needle backwards and forwards according to a code. The exchange then "put him through" by connecting his twin needle to that of the person to whom he wanted to signal.

This certainly seems to have been a forecast of crystal control.

A.T.R.

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## **FOR THOSE ON THE P.W.R.**

When I arrived in the Sudan I heartily regretted having disposed of certain items of my wardrobe before leaving England. Under the impression that I was bound for a desert station, remote from civilisation, I had retained only blazer and flannels, two sports shirts, socks and a pair of shoes. Lest you should do likewise, I tender the following advice.

Winter evenings in the Sudan are often cold and you will do well to bring, in addition to the garments already named, a lounge suit and a couple of pull-overs; you will appreciate this advice when sitting in one of the open-air cinemas or sipping beer on the side-walk. Should you be likely to make trips by air bring a suitcase too, for much of your time will be spent away. Summer and sports wear can be bought more cheaply here than at home.

Kenya presents a different problem. There you can make good use of everything you wear at home, with the exception of overcoat and gloves. Bring not only the clothes you have but, circumstances permitting, bring also an extra supply; evening dress, if you run to it, is not to be despised. Everything is very expensive in comparison with prices in England. Don't expect your Colonial allowance to do much more than cover the extra cost of such necessities as soap and tooth-paste.

H.C.

## AN AWKWARD MOMENT.

In the second year of the Great War a General, well known for his insistence upon strict discipline and rigorous observance of details at all times, was proceeding to the front line trenches when he realised that he was not in possession of a gas mask.

With no little apprehension he saw that this omission in such a martinet as himself would be sufficient to blast all further belief in his efficiency. He therefore stopped a party returning from the line and borrowed a mask from one of the men.

Its acquisition at once restored his accustomed appearance of composure as well as that indomitable will which had made him great. Straightway he encountered a subaltern not wearing a gas mask. "Where is your gas mask?" thundered the General. The subaltern timidly replied that he had left it in his dug-out. And then in a mighty crescendo the General fumed—"In your dug-out? In your dug-out? I don't believe you have one. I don't believe you even know how to use one! Take mine and put it on at once." And he handed him the one he had borrowed.

Under the penetrating eye of the General, the subaltern suspended the apparatus round his neck and, opening the case with great deliberation, drew forth—a pair of dirty and much worn socks!

C.G.G.



## MY FIRST EXPERIENCE IN AN AIR CRASH.

In the year 1938 a Flight of the Indian Air Force was on detachment. I was with the Flight as an air gunner.

On the 6th October, 1938, the first extraordinary incident in my life occurred. It was one o'clock when I took off with F.O. Mehar Singh to drop pamphlets in the proscribed area. After dropping some pamphlets on the outskirts of our own location we made our way to the hostile zone. It was a very mountainous region and very thickly forested in some places. We were flying fairly high over the mountains while dropping pamphlets over the scattered villages. Hardly had I dropped more than two hundred when a stray bullet struck the pipe line. In no time the engine was entirely cut off. There was no place suitable for a forced landing but, luckily, the pilot kept his head. At once an idea flashed into his head and he glided the machine towards an area which was densely forested. I thought that we were going to die.

During this anxious period which was convincing me of our approaching end I felt a tremendous shock; I was thrown from the cockpit and subsequently found myself lying in a nullah. I do not know how I fell out of the cockpit; that is still a mystery to me, but when I came to my senses I saw that petrol was flowing near me like a stream. All the bombs from the racks had come off and were lying about me. In this state of semi-consciousness I heard a voice saying "Ghulam Ali are you all right? Can you help me out of the machine?" This voice rang in my ears as a call to duty. I recovered myself and saw that my limbs were bleeding badly. I got up, feeling dizzy, and looked at the machine; it was a complete wreck. Some trees had fallen over the cockpits, smashing them entirely. My officer was in a precarious condition. There was danger of the machine catching fire as the main tank had burst and the petrol was running all over the machine. I tried to pull the officer out but could not do so owing to the huge weight of the trees; moreover, being injured, I could not use my full strength. As I was trying hard to remove the trees, Mr. Mehar Singh was also struggling hard to come out. After great exertion he got out and I was pleased to see him safe and sound. There was still another danger, that of the "blood hounds" (i.e. the tribesmen) who would have tortured us to death on finding us. We decided at once to run up to the top of the hill and hide ourselves in a cave because we knew that the tribesmen would rush to the crash. We did so and at about two o'clock we were in a cave on the top of the mountain. From there we could locate our position and the route to be followed. We were about fifty miles from our camp, the nearest British Fort being about sixteen miles from us. We could not move from the cave in the daytime because it was a "declared" area. The tribesmen were always on the look-out to snipe at British and Indian troops and attack the posts. We decided to remain where we were till midnight.

While we sat there we saw three aeroplanes coming towards us. My joy knew no bounds and I thought they would surely detect us and we would be rescued.

We at once displayed a cross mark near the cave, using the pamphlets we had taken from the crash, so that the aeroplanes might easily find us. Unluckily they did not find us, and when it grew dark they all went away and left us to mere disappointment.

As it became darker and darker it got colder and colder. The height of our hiding place was about 10,000 feet; we had no warm clothes on because we had thrown away our flying suits while climbing the mountain. When the cold became unbearable we collected some grass and leaves and covered our legs with these but did not gain any relief. We remained in this state up to twelve o'clock at night and then started off. Luckily it was full moon and we could see everything clearly. Several times wolves came our way but did not attack us. We were approaching a village when, by accident, a stone rolled down producing a tremendous noise. The dying of this noise was followed by the murmuring of the tribesmen. It took our breath away for we were sure that they would rush up and catch us; so we at once slipped under the trees, terrified, and waited for the coming trouble. But gradually these noises died away, and after a long wait we came from our hiding place. This time we took off our boots and started off bare-footed.

After half-an-hour's walk we had passed the tribesmen and now we were in an open valley. Because of our daily flying over that area we knew that on the other side of the valley there was a fort, so we started off in that direction. It was a long way to go; we were tired but were struggling hard to reach a place of safety before sunrise. It was about four o'clock in the morning when we reached a place which looked like a fort. We shouted to the sentry to open the gate; instead of a sentry we saw six Pathans rushing towards us with guns in their hands, and we were surrounded. I recognised them as "Khasadars" (tribesmen paid by the British Government to keep law and order in their territory). They adopted a very hostile attitude and even threatened to put us to death. As I knew a bit of their language I told them that we had lost our way, that we were British servants and that they would get a good reward if they took us safely to the fort. When they heard of the reward they at once changed their attitude and one of them told us to sit down. Meanwhile another fetched a pen and paper and asked us to write the promise of a reward on the paper. I gave the paper to my officer who wrote something on it and then gave it back to them. Then they were all pleased and told us to follow them. We did so, and after ten minutes' walk sighted the gates of the post. One of the Khasadars stepped forward and shouted in his own language. The sentry at the post challenged and after convincing himself of the identity of the men, opened the gates and came out with six armed soldiers. They did not ask us anything but straightway took us into the fort. The fort commander was also informed about our arrival and came to see us immediately. He was very hospitable to us and at once got us admitted to the hospital. By this time it was morning and we saw dozens of aeroplanes going towards the proscribed zone. They were the search party sent to look for

us. That morning, Mr. Mehar Singh sent a signal to our Flight Commander about our safe arrival. For three days we stayed in the fort, after which time a military escort came to take us back to our camp.

Ghulam Ali.

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## WE'LL LAUGH AGAIN TO-NIGHT.

*(This article was first published in the Daily Sketch on the day of one of the annual dinners of the Prisoners of War Dining Club. It is here reproduced more or less in its original form).*

Leif Robinson, V.C., of Zeppelin fame, and I were dragged in a cage through the main streets of Douai. We attracted as much attention as a couple of circus animals, with the difference that we excited jeers instead of cheers. Some of the rabble threw things at us, but the wire netting was a protection from the missiles, and our ignorance of German saved us from any stings there may have been in the shouts. That was in February, 1917. Robinson has died since then.

There were times after that incident which followed my capture just outside Douai, when life scarcely seemed worth dragging on. For two years it was just a succession of changing prisons. I went to Karlsruhe, Crefeld, Schwarmstedt, Holzminden, Schweidnitz and Graudenz. But for all the misery there were plenty of laughs, and looking back to that time it is difficult to recall anything but the funny side. Because I am no different in this respect from any other British prisoner of war, I am sorry it has always been my bad luck to miss the annual reunion of the officers who shared imprisonment. They have been jolly gatherings; and another is due to-night.

Air Commodore Rathborne will preside. He was at my third prison, Schwarmstedt. I remember that he got away dressed as a civilian and carrying a passport forged by the Master of Saltoun, Captain Fraser, who was the most accomplished forger of passports the war produced. All the seals he used were made with the rubber heels from our boots, on which, using only a safety razor blade, he carved any sort of crest that might be needed. Armed with one of his passports, all the escaping prisoner needed was a cool head and a fluent German tongue.

Escapes were always being engineered. We were a mixed lot of French, Russian, Italian, and British, about 1,000 in all. The general idea was to overcome the guard and fight our way through. But every camp had its spy, and the gentleman at Crefeld got the wind of our plan. He told the authorities. Result, crowds of machine guns were rushed to the camp. There were enough to make a complete ring right around the barbed wire netting. It would have been certain death for every man Jack of us had we made the rush. We didn't.

A second result of that scheme was separation, and all the Britons were passed

on to Schwarmstedt, miles from anywhere, and the coldest camp in creation. Escapes were everyday affairs. A crowd of officers planned to hide in the property baskets piled in the store, and a score or more of us were in them, waiting to be carried out by orderlies, when one of the bunch lifted the lid of his to see if the coast was clear. As luck would have it, the guard was looking that way. That meant "paid" to our attempt. After we had done our spell of "Cells"—meaning close confinement in huts, no parcels or letters, no comforts, and only German food—we were sent to Holzminden, the worst P.O.W. camp in all Germany.

Holzminden was then under the command of a Captain Niemeyer, a typical ferocious wartime Prussian officer. He was hated for his bad temper, but kept us laughing by his muddled English. One day, after an escape, Niemeyer was passionate with rage. He strode through the camp flourishing a pistol and shouting: "I guess you know I will shoot swinehound. You tink dat I do not know you English, but I tell you I know dam all about you."

At Schweidnitz we worked in day and night shifts, four at a time, for six months, burrowing a tunnel for escape. Close by the wall of the camp we had a hut which we used as a kitchen. In it was a huge cupboard, and we obtained permission to keep the doors locked to prevent the German orderlies pilfering. It was as good an excuse as any, and worked. In this cupboard we sank the shaft with implements improvised out of wood and bits of iron discovered in the camp. Bed boards and bits of wood stolen from the parcel room were used to support the roof of the tunnel, which was driven through the concrete wall below floor level, of course. The underground shift consisted of a digger, a sandbagger, a pitman and a fanman. The duty of the fanman was to keep waving a piece of cardboard at his end of a rough tube or cardboard. This sent a current of air down into the tunnel and so kept the candle alight. While we were engaged on this the Germans periodically made rigorous searches. On one occasion special detectives were brought from Berlin, one of whom soon bore, pinned to the tails of his coat, a card with the words: "You know my methods, Watson." But the real joke was that when they went they found their pockets had been picked. Twenty-six of us crowded into the shaft and tunnel on the night we made the get-away, and all but two escaped. Some got across the frontier, but I was one of the unlucky ones to be recaptured—after two weeks of wandering.

The biggest joke I can remember was "lifting" all the wine in a Commandant's cellar. We considered ourselves still at war and had no compunction in rifling his cellars. Of course, we were paraded when the theft was discovered and invited to confess. Every morning after that, until the stock was exhausted, the Commandant would find a score of empty wine bottles strewn about the camp. But he never set eyes on a full one.

We got some fun out of being prisoners of war, and there will be nothing but laughter when "the old gang" meet once again to-night.

C.G.G.

## HIAWATHAN INQUISITION.

**S**HOULD you wonder, should you ask me,  
Ask me what tremendous problem,  
What world-shaking, towering problem  
Furrows o'er the frowning forehead  
Of the much-harassed apprentice  
With three badges pointing upward,  
Badges of his faultless conduct,  
Of his misdeeds undetected—  
He, the lordly Senior Entry—



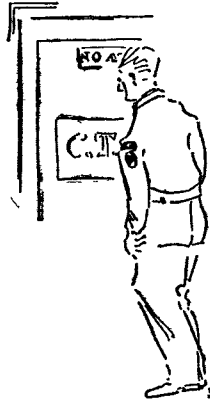
I should answer, I should tell you,  
Speaking softly, speaking gently,  
Speaking in a voice of reverence,  
As is fitting when one touches  
On a matter full of mystery,  
On a subject grave and solemn  
As the loftly hills at evening,  
When the sun has dipped behind them,

I should tell you of the Spectre,  
Looming dark and grim and awful,  
Looming larger still and larger  
On the dimly-seen horizon,  
On the margin of the future,  
Of the undiscovered future  
Of the learned Senior Entry.  
I should tell you of the nightmare  
That disturbs his fitful slumbers,  
Stalks upon him in his slumbers,  
Follows him into the daylight.  
Spectre that the light of noon-day  
Has no power, none, to banish;  
Evil thing that haunts his movements,  
Grisly vision, ne'er relenting,  
Grisly vision, peace-destroying,  
Vision of the awful Board-room.



Serried ranks of written questions  
 Have scant power to affright him,  
 Have no power to dismay him,  
 For he knows he has their measure,  
 Knows the magic word to quell them.  
 Have not his Instructors told him  
 With impressive declamation,  
 Oft repeated declamation,  
 Just the very words of wisdom  
 To reduce those written papers  
 To the veriest play of children,  
 To the simple play of children?

But the earnest exhortations  
 Of experienced Instructors  
 Who have passed the ordeal before him,  
 Passed the fiery test of knowledge,  
 Powerless are to calm the thumping  
 Of his wavering heart within him,  
 Calm the hammering, beating, thumping  
 Of his quavering heart within him,  
 As he stands in trepidation  
 Just outside the fearful Board-room.



"C.T.T.B." "No admittance."  
 "No admittance. Board in progress"—  
 Grim inscriptions o'er the cavern.  
 Soon, soon *he* must enter therein,  
 Face the dreaded Inquisition,  
 Re-incarnate Torquemada.  
 "No admittance"—none may enter:  
 None to succour or to aid him,  
 None to whisper consolation.  
 He alone must face the Judges,  
 Arbiters of fate and future,  
 Probers of his inmost knowledge,  
 Bare to lay his soul within him.

Grouped around him—apparatus;  
Every kind of apparatus.  
Squat receiver, gaunt transmitter,  
Gleaming valve and stark condenser;  
Twisted coil, fat generator,  
Grim bomb-gear, and naked, tangled  
Innards of once-understood sets.  
Walls all hideous with writhing  
Diagrams that grin around him,  
Diagrams wherewith the Judges  
Soon will seek to get him guessing,  
Soon most utterly confound him.

Dark and terrible the picture,  
Picture of this fearful torment.  
Yet—beyond the Place of Terror  
Lies a fair and gracious country,  
Lies a land of joy and freedom.  
Freedom from the yoke of swotting,  
Where the emancipated trainee  
Tastes the fruits of all his labours;  
Where the victor o'er the Board-room  
May forget his tribulation,  
May forget the six-and-thirty  
Months of toilsome preparation.

Spurns he then the gleaming circlet,  
Spurns he then the brazen circlet,  
Symbol of his days of learning  
Torn with loathing from his tunic.  
Wears he proudly on his right arm,  
Lightning-grasping badge of honour,  
Badge of his hard-won profession,  
That will bring men's recognition  
Of his passage through the furnace,  
Through the dross-removing furnace,  
Through the stern Ordeal by Board-room.

P.F.W.





## APPRENTICES' ENTERTAINMENTS.

During the past six months a dance was held every Friday evening in the Canteen; this proved to be one of the most popular forms of entertainment and even in the hot weather the A/As. continued to enjoy dancing. The Apprentices' Dance Band gradually improved and eventually rose to the heights of playing for Wing Dances in the Gymnasium. Their chief difficulty at first was "too many instrumentalists with too little co-operation"; this trouble has now been overcome by a gradual elimination of those unable to co-operate. Many thanks are due to Sgt. Baxter for the work he has done in connection with these dances.

Billiards and Snooker came next in order of popularity; a "ladder" was established and several tournaments were held. An innovation this Winter was "the partner tournament"; all entries were placed in a hat, partners being drawn by lot, and this proved a better method than allowing A/As. to choose their own partners, a system which inevitably led to all the best players teaming up one with the other. Table tennis continues to hold its own in the Games Room though it is to be regretted that outside teams cannot be invited to the tournaments, as fresh blood would give an added keenness to the play.

Most apprentices take to card games, and Whist and Bridge Drives were much appreciated. On one occasion a whist drive included 37 tables while 20 to 30 tables were quite usual. Bridge was not so popular, but to aid Apprentices who wish to learn the game it is proposed to hold Bridge Classes in the canteen next winter.

Darts, Lotto, Table Skittles and Shove-halfpenny have their own enthusiasts for whom tournaments and matches are frequently arranged.

The Recreational Library is now situated in the Canteen and is widely used by Apprentices. It should be emphasised that the running of this library is largely the work of A/As. and is an entirely voluntary task. The new method of signing for magazines and games has proved far better than putting these items out in the appropriate rooms and just leaving them there. Wear and tear has been reduced and the R.A.F. Hospital benefits by getting a considerable pile of serviceable magazines and papers at the end of each week.

One or two alterations have taken place in the allocation of rooms; N.C.O. Apprentices now have their own games room which relieves congestion in the

main games room, while S/As. have the use of the Parents' Room in the evenings, a concession which they greatly appreciate.

In conclusion we wish to thank all those who have assisted us in the hundred-and-one jobs that were always cropping up; without their ready aid the task of entertaining so many would be almost impossible. E.O.B.

## **CRANWELL MODEL AEROPLANE CLUB.** **(Affiliated to the S.M.A.E.)**

Owing to promotions, postings, passing-out examinations and the usual exigencies of the Service, there have been several changes in the administration of the Club as well as an influx of new members. We welcome S.Ldr. E. S. Borthwick-Clarke in his three-fold capacity of Officer i/c the Club, Chairman and official S.M.A.E. timekeeper. The secretaryship is now in the hands of F.Sgt. W. H. Crittle while W.O. P. R. S. Gutteridge continues his old and valued association with us in the newly created post of Competition Secretary. This new post was very necessary owing to the extended competition work now being undertaken. The lack of timekeepers was also remedied at the Annual Meeting of the S.M.A.E. in January, when Cranwell was allocated ten official timekeepers.



The December competition for Non-Flying Scale Models produced work of a high standard, and the judges had no easy task to decide the winners. Final classifications were as follow:—

- 1st.—A/A. Boardman. MacDonal Cup and Silver Medal. (Miles Magister).
- 2nd.—A/A. Finch. Silver Medal. (Lysander).
- 3rd.—A/A. Dee. Bronze Medal. (F.E.2B.).

The Club held its first indoor flying meeting at the "A" Flight Signals' Squadron Hangar on February 15th, in the presence of Air Vice-Marshal J. E. A. Baldwin, C.B., D.S.O., O.B.E., who donated "The Baldwin Trophy," to be competed for annually, and a cash prize. At the conclusion of the meeting the Air Vice-Marshal presented his trophy and the other prizes.

- 1st.—A/A. Boardman. The Baldwin Trophy and cash prize.  
(Hand-launch Duration Flight of 1 minute 36.4 seconds).
- 2nd.—A/A. Drury. Cash prize.  
(Hand-launch Duration Flight of 1 minute 7 seconds).
- 3rd.—A/A. Hendry. Cash prize.  
(Hand-launch Duration Flight of 57 seconds).
- 4th.—A/A. Willcocks. Cash prize.  
(Hand-launch Duration Flight of 32 seconds).

In the R.O.G. event, the following were successful :—

- 1st.—A/A. Drury. (R.O.G. Duration Flight of 1 min. 31.4 secs.).
- 2nd.—A/A. Boardman. (R.O.G. Duration Flight of 1 min. 24 secs.).
- 3rd.—A/A. Hendry. (R.O.G. Duration Flight of 42.5 secs.).

To keep members from going rusty during the winter months a new competition, "The Easter Cup Competition," was inaugurated by the N.C.Os. of the Club, who subscribed for and bought a new trophy. The object of the competition was to encourage members to build good reliable elastic-driven models for the coming season. The actual number of entries was not up to expectation, but the workmanship was very good. Results :—

1st.—A/A. Dee. The Easter Cup, to be held for one year, a silver medal and a cash prize.

2nd.—A/A. Rutter. Bronze medal and a cash prize.

3rd.—A/A. Boardman. Cash prize.

4th.—A/A. Finch. Cash prize.

It is interesting to note that during the flying tests of models for this competition, A/A. Rutter's model rose to a height of about 300 feet and then disappeared from view in a time of 3 minutes 49 seconds. All attempts to trace this model failed, but some days later S.Ldr. E. S. Borthwick-Clarke found it in the middle of a spinney near Cranwell Village. What a pity to lose such a record.

Owing to the Air Ministry ban on visits to aircraft factories, no outings have been arranged at present, but a full programme of visits to other clubs, including the newly formed Newark Model Aeroplane Club, should make up for this disappointment. There is also the end of term dinner, for "passing-out" members, which invariably provides an enjoyable evening for all.

Six of our members have built models for the Wakefield Competition ; we wish them every success for the winners have the chance of a free trip to America in August.

**"FLIGHT" CUP.**—It is with great pleasure that we are able to report that, by kind permission of the Air Officer Commanding, it was arranged with the S.M.A.E. to hold the centralised "Flight" Cup Competition, for petrol-driven models, on the south aerodrome on June 11th.

The competition is a national one and visitors came from all parts of the country, bringing with them some model aircraft of the first class. Each competitor is allowed three flights which must be arranged to last a set period of time, the period being chosen on the day of the competition. Marks are also awarded for construction, and for take-off and landing in respect of each flight.

The weather was not good, the wind being rather strong and variable, but the first round was completed before conditions changed for the worse and shelter from the rain had to be sought. After a time the rain ceased temporarily and the first round was completed. It was then agreed that the meeting should be abandoned and the Cup awarded on the results of the one flight. Mr. Coxall, of the Hayes Club, was the winner, and we are proud of the fact that one of our own Associate Members, Mr. J. Wainscott, gained 6th place with his first petrol-driven model.

During a short period when the rain held off, Mr. Coxall made an attempt to beat the Duration Record which stands at 16 minutes 25 seconds. His model,

however, went out of sight after 6 minutes 43 seconds, and the record remained unbroken. Mr. Wainscott intends to make an attempt to beat the record some time this season.

The C.M.A.C. sends greetings far and wide to all its past members and hopes that some of them are still building models and picking up thermals galore.  
W.H.C.

## CYCLING CLUB.

This season, cycling has become a fully organised sport in the School, both tourists and racing men being catered for. At present each Squadron of Apprentices has its touring club and there are Senior and Junior racing sections—the whole organisation being affiliated to the Road Time Trials Council and the National Cyclists Union, under the title of “No. 1 Electrical and Wireless School (Cranwell) Cycling Club.”

Every Wednesday the tourist clubs proceed together on runs selected by the School cycling captain and at week-ends, independent runs (sometimes lasting all day) are enjoyed by all; the pleasure is increased by the cyclists being permitted to wear a comfortable standard kit.

Several Road Time Trials have been organised for the racing sections, and a selected team from the Senior Section races almost every week in some outside R.T.T. or massed-start events. It is hoped that the Junior Section will also soon be able to race in these events.

At the beginning of June the club records for the various distances were as follows:—

### Senior Section.

50 miles :— A.C. Lamb.	2hrs. 26mins. 11secs.
25 miles :— A.C. Lamb.	1hr. 8mins. 10secs.
Boston and back :— A.C. Laverick.	2hrs. 5mins. 34secs.
Grantham and back :— A.C. Simpkins.	1hr. 10mins. 30secs.

### Junior Section.

25 miles :—A/A. Allan.	1hr. 14mins. 58secs.
Grantham and back :—A/A. Marsden.	1hr. 19mins. 26secs.

Membership of the club is open to everyone in the School, and prospective members should communicate with Sgt. Darlington.  
G.J.D.

## SKETCHING AND ARTS CLUB.

A resting place and light! After many moons we have both. Skylights in the roof—which so far, don't leak—and electricity in our own end of the hut. Creation must follow. And the club is busy creating. What is being created we hope to show the world towards the end of this term.

We have a few vacancies, for enthusiasts, but our numbers are near saturation point for our accommodation, and only real enthusiasts need apply. Art marches on.  
R.P.S.

## PRINTERS GUILD.

While the Royal Air Force, like the Universe, continues to expand, the Printers Guild, with gay disregard for cosmic physics and the principles of logic, manages to expand and contract simultaneously.

For various reasons the number of printing jobs undertaken during the last six months has been slightly smaller than during the previous half year and one or two members have found it expedient, in view of other interests or duties, to resign. Reconstruction of Hut 77 has also involved a diminution of the space allotted to the Guild.

These contractions, however, are neither symptomatic nor causative of any great evil—perhaps the reverse. A pause in the output of jobs permits the younger members to “get their hand in” and to obtain that instruction from the senior members which helps to ensure the maintenance of the quality of craftsmanship. Moreover there has been, partly perhaps as a result of the more “cosy” atmosphere of the smaller room and certainly by reason of the inherent qualities of the members, a concentration of the guild spirit which is manifest in a desire, actively expressed, to undertake further responsibilities and to inaugurate fresh developments. Business meetings have been particularly well attended and certain discussions on constitutional matters have been conducted with a keenness and diplomatic sense that would have done no serious discredit to a Committee of the House of Commons. The atmosphere of corporate enthusiasm is also reflected in the fact that any vacancy in the membership is very rapidly filled.

The chief expansion has been the acquisition of a new machine and suitable type for the printing of posters and bills up to 18in. x 24½in. The press, a hand-operated Columbian proof press, was obtained at the beginning of last term. Its date of manufacture is “*circa 1840*” and, as it arrived in parts (very heavy parts), the business of assembly provided an entertaining, intriguing and rather strenuous evening’s task for the members. Now that the technique of operation has been mastered, it is found that the machine is capable of excellent work, visual evidence of which is already available. This new departure extends the Guild’s sphere of work and service to the community and, furthermore, facilitates co-operation with the Sketching and Arts Club, enabling the printing of lino-cuts of quite large size.

On March 29th the Guild visited, by invitation, the Sleaford Printing Works of Messrs. W. K. Morton and Sons. Mr. Hugh Morton and the staff demonstrated, explained and answered a multitude of questions with charming courtesy. The members were still loth to leave, after two hours, the fascination of the automatic presses and Linotype machines. One hopes that the painstaking demonstration of the correct technique of setting type *by hand* is also well remembered.

For all these opportunities of recreative activity the Guild has many people to thank : in particular those senior Officers and Education Officers whose lively interest and support have smoothed out not a few difficulties in recent months ;

the P.S.I. for very important material assistance; the Works and Buildings Dept. for the very expeditious execution of the construction of the Guild's section of Hut 77; Messrs. W. K. Morton and Sons and their staff for several much appreciated courtesies; and of course the Guild's many customers, especially, may one respectfully add, those who give early notice of their requirements.

G.R.S.

## **PHOTOGRAPHIC SOCIETY.**

Since taking possession of the reconstructed rooms in Hut 77 the Society has welcomed to its ranks twenty new members. All of those members can claim to have had some previous experience in photographic work and most of them devote several hours per week to their hobby.

Arrangements are in hand for a visit of the members during this term to the factory of Messrs. Kodak Ltd., at Harrow.

C.M.O.

## **R.A.F. AMATEUR RADIO SOCIETY.**

The departure of W.Cdr. E. M. Drummond left the Society without a chairman and made a gap difficult to fill; it is fortunate that F.O. H. O. Maxted, who was an elected vice-chairman, was available to take over this office at short notice.

News from overseas is particularly encouraging; the announcement of the formation of a Section in India, together with a request for affiliation received from an amateur radio society in the Far East, would appear to indicate that our Society is fulfilling its major object, namely, to co-ordinate the efforts of individual amateur radio experimenters throughout the Royal Air Force.

To further this aim, the Society's magazine, "QRV" has been greatly improved, the new method of production being readily adaptable to serve the needs of a rapidly expanding organisation.

In accordance with tradition, the Cranwell Section took part in the National Field Day organised by the Radio Society of Great Britain by erecting its 3.5 Mc/s portable transmitting and receiving station in a field at Brauncewell during the week-end June 3rd-4th. A 24-hour watch was maintained and a total of 158 points scored; in view of the poor conditions prevailing at the time, this compares favourably with the total of 172 points which brought the R.G.S.B. award to Cranwell last year.

Applications for membership should be made to:—

The Hon. Secretary,

R.A.F.A.R.S.,

No. 1 E. & W. School,

R.A.F. Cranwell.

N.D.



## DEBATING SOCIETY.

The success of a Debating Society depends firstly upon the presence of a nucleus of people who have a lively interest in the practice of debate, and the kind of temper and temperament which makes friendly give-and-take debate possible; during the Christmas term, in spite of local crises in the shape of lack of electric light and occasional lack of fire, the Society was very successful in building up such a band of enthusiasts. Secondly, to be fully successful, it was realised that in addition to enthusiasts, there must be a large number of members who are sufficiently interested in a general way to support the Society with their attendance and votes, and later, perhaps, with their spoken contributions; the Easter term was spent in interesting this "larger number" in the activities of the Society. An attractive programme of debates was drawn up and considerable publicity given to it thanks to a good printing effort by the Printers' Guild and, above all, to the posters and cartoons of A/A. Shonk. The results of this publicity were very encouraging; on quite a number of occasions Hut 113 was packed to capacity, while never did the attendance fall below fifty.

In the choice of topics, an endeavour was made to cater for all tastes, and so give everyone an opportunity to speak. Nearly everyone in the audience, for instance, contributed something to the debate on the modern woman. The motion proposed that "The Modern Woman is a Failure." Mr. R. A. Pomeroy painted a dismal picture of Miss 1939 as a flat-chested, cocktail-drinking, cigarette-smoking specimen, interested principally in dance music and film stars. "Woman," he said, "was meant as a mate for man—how could such a person possibly be successful?" The audience were inclined to agree with him until Mr. H. V. James rose in opposition, and appealed to the House with "patches of purple passion and unbridled rhetoric" (vide the Proposers) to throw out this invidious motion. After a long and strenuous debate the opposition view was upheld by 41 votes to 26, a few nondescripts still being unable to make up their minds. This meeting was held soon after Christmas leave, when memories of mistletoe were still vivid in the minds of many and this undoubtedly accounted for emotion and rhetoric prevailing over cool reasoning and sound logic.

It was in a very different vein that the House debated the subject of dictatorship. On this occasion there was little humour noticeable in the speaking; the would-be dictators proclaimed their wares in hard metallic voices and were very assured, while the democratic opposition seemed a little dumb and undecided as to the virtues of democracy and positive only as to one thing—its hatred of dictatorship. Eventually, after much serious argument, the motion that "This House would Welcome a Dictatorship" was rejected by a good majority—and Westminster breathed again!

Several Education Officers and a large number of apprentices turned up to defend their native heaths when it was proposed that "The South has a Monopoly of Culture." The proposers spoke long and learnedly on Southern culture which

flourished about Oxford, Cambridge and London and they finally concluded that the North's only contributions to civilisation were haggis, bagpipes and golf. Opposing, Mr. Carmichael traced Northern culture back to the Venerable Bede; he enthused on the simple virtues of the Northern poets and then extolled the virtues of Edinburgh University. When the debate was thrown open to the House, much argument concerned the meaning of the word "monopoly" and it was mainly owing to the opposition's insistence that "monopoly" meant "the sum total of a thing" and obviously the South had *not* got *all* the culture, that the motion was rejected. Feeling had run high owing to the hybrid nature of the audience and the Chairman had a busy time preventing irrelevant remarks which were quite out of order; the only complacent people present were a few Midlanders who ascribed to themselves the virtues of both the North and the South.

In all, over a dozen meetings were held. Moreover, for the first time in its existence the Society carried on into the Summer Term, holding fortnightly meetings up to Whitsun. It was then that the Chairman decided that the call of the fine weather should be answered and the Society adjourned. As time went on the standard of speaking improved considerably, while increasing numbers of apprentices plucked up courage and made their maiden speeches. We look forward to seeing all the "old hands" and also plenty of newcomers next, September, when the debate will continue.

R.A.P.

## TOC H.

This term has been a significant one for the group; we have gained many new members and, above all, a room of our own on the Camp complete with the services of a "technical tea-masher" of great ability. The Boy Entrants have at last mustered a small vanguard and it is to be hoped that reinforcements will appear from time to time. The Toc H rooms in Sleaford are now proving a great boon to members—cups of tea being much in demand. Certain A/As. take a morbid delight in washing up for evenings on end; whether it is real love for this task, or the bait of "free eats" and/or the use of the canoe has never yet been satisfactorily determined.

A pleasant interlude in the normal routine was the Easter end-of-term dinner. S/A. (now F/Cadet) Plumb presided, giving us a last glimpse of his inimitable wit, which made him so popular as "look-out" last year.

It is with sincere regret that we hear of the posting of Padre Wright, whom we have come to regard as an essential "section" of the Toc H. at Cranwell. We offer hearty congratulations to F.O. G. Prigmore on his recent appointment to commissioned rank. East Camp will also miss the services of A/A. Jeeves as treasurer; let's hope he gets the posting he deserves! In conclusion, the flame of Toc H. still burns brightly and we feel that, in spite of many limitations, we are achieving the essentials of our creed.

G.L.



**THE APPRENTICES DANCE BAND, No. 1. E. & W. SCHOOL.**

**Back Row :** A/A. Rowe, A/A. Williams, A/A. Butt, A/A. Conway, A/A. Moss, A/A. Holness,  
A/A. Cooke.  
**Front Row :** A/A. Sheppard, A/A. Winborn, A/A. Proctor, L/A. Lee, A/A. Stubbings.



**"A" SQDN., No. 2 WING, No. 1 E. & W. SCHOOL BOXING TEAM.**

**Winners of the "Sigrist" Trophy, R.A.F. A/As. and Boys Inter-Squadron Championships, Senior, 1939.**

**Back Row :** A/A. Bulmer, C/A. Hayden, L/A. Mitchell, L/A. Lloyd, Sgt. Abbott (Trainer),  
A/A. Litman, S/A. Ware, A/A. Blackall.  
**Middle Row :** F.Lt. R. Jones, W.Cdr. P. J. Barnett, M.C., F.Lt. C. J. Farrell,  
**Front Row :** C/A. Matthews, A/A. Lord.



**"B" SQDN., No. 2 WING, No. 1 E. & W. SCHOOL BOXING TEAM.**

**Back Row :** A/A. Cockle, A/A. Manquet, L/A. Hills, A/A. Beattie, A/A. McLeod, A/A. McNicot, A/A. Armstrong, A/A. Smith, A/A. Batty,  
**Front Row :** A/A. Haymes, L/A. Woods, Cpl. McLeod, F.Lt. R. S. Hellier, D.F.C., F.Sgt. Booth, L/A. Diplock, A/A. Dearie, A/A. Cozens.



**"B" SQDN., No. 2 WING, No. 1 E. & W. SCHOOL "SOCCER" TEAM.**

**Back Row :** A/A. McLean, A/A. Lewington, A/A. Howarth, A/A. Davis, A/A. Mann, C/A. Stewart, A/A. Thomas.  
**Middle Row :** A/A. Vinall, L/A. MacLuskie, Cpl. McLeod, F.Lt. R. S. Hellier, D.F.C., F.Sgt. Booth, A/A. Fraser, L/A. Smith, A/A. Blackett.  
**Front Row :** A/A. Hodgkin, L/A. Diplock.



## **THE ORGANISATION OF GAMES IN No. 1. E. & W. SCHOOL.**

With the rapid expansion of the service, the problem of giving all personnel an equal opportunity to play games became increasingly difficult ; hence, at Cranwell, there has recently taken place a complete reorganisation of games facilities.

It must be remembered that there are no actual playing fields for School use, so the North and South Aerodromes have to be used. In these days of increased flying, the difficulties of the ground staff in preparing and marking-out pitches will be readily understood ; at great inconvenience to themselves, they do much of the marking-out during their meal times when there is little or no flying.

Every conceivable game is played, and there are no less than 145 pitches of various kinds, giving all an opportunity to play their favourite games. The running of School second teams has been discontinued and Wing teams have been instituted with a view to improving the team spirit. Neither School nor Wing teams are allowed to arrange more than five fixtures per month ; by this limitation star players have ceased to resemble paid gladiators tied to one team, but have become available for Wing and Squadron games, and for the coaching and encouraging of less competent players.

In supplying equipment for the numerous activities, the old store in the gymnasium became very much overcrowded. Under the new arrangements each Wing now has its own Sports Store. All equipment is bought centrally and then issued to the Wing sub-stores.  
A.W.T.

## No. 1. E. & W. SCHOOL.

**BASEBALL.**—The baseball season at Cranwell officially opened on April 26th, when the first games of the School League were played. The League consists of ten teams representing the squadrons of each Wing, and this year great enthusiasm has been shown by all participants. The fine weather has undoubtedly aided this enthusiasm so that throughout the season the “diamonds” on the North and South Aerodromes have been fully occupied.

The School team was selected from the League teams and we were fortunate in having some of last year’s players to coach the new members of the team. Through the splendid co-operation of the P.S.I., a number of good away fixtures have been arranged and we feel certain that we shall not disgrace ourselves when they are played off.  
J.R.

**HOCKEY.**—The standard of play during the past season was much higher than for some time, and resulted in a very good playing record :—

Games played.	Won.	Drawn.	Lost.
32	28	1	3

The Inter-Wing Competition was played off with much keenness ; No. 1 Wing (then No. 4 Wing) ran out as winners, much to the surprise of many of us.

In the School Hockey League the apprentices of “B” Squadron (No. 2 Wing) carried all before them, winning the league championship without losing a game.  
J.C.

**RUGBY FOOTBALL.**—The fair promise shown early in the season was not belied and the School XV enjoyed from every point of view a very successful season. Twenty-four matches were played with outside teams, of which we won 18, drew 2, and lost 4. In addition, three very close games were played against the Apprentices XV, each side winning one game while the third resulted in a draw ; two matches were also played against the Cranwell Station XV. In the first of these the heavier Station side rather overwhelmed us in the last few minutes, but in the second game the School team played remarkably well to be beaten by only one converted try.

Postings, injuries and the demands of the Station team, who had prior claim on all our players, meant constant changes in the side. In spite of this, a very fine team spirit prevailed and pulled us out of many tight corners, for a number of our games were won only by the narrowest of margins. Except in the case of one game we were able to avenge all our defeats during the second half of the season.

F.O. Howell captained the team until Xmas when he was posted and F.Lt. Vickers was left to carry on the work. The School was fortunate in having the services of a very useful full back, A/A. Bailey, and of that very versatile player Sgt. Collett who played outstandingly well, no matter what position he occupied behind the scrum. Thanks must also be given to A.Cs. Grant-Davey, Jeffries and Allison not only for their keen play but for the help they gave the Captain in getting and keeping together the team in spite of the many changes. The following were regular members of the team at one time or another during the season :—F.Lts. Vickers and Crawford ; F.O. Howell ; Sgts. Collett, Gittings and Mullinger ; Cpl. Terry ; A.Cs. Allison, Browne, Brunt, Goldsmith, Grant-Davey, Jeffries, Jeffcoates, James, MacDonald, Morgan, Pollard, Thomas, Williams and Wilson ; S/A. Chisholm, C/A. Hayden and A/A. Bailey.

T.R.V.

## No. 1. WING.

**ATHLETICS.**—The Inter-Squadron Athletic Meeting was held in the Stadium on Wednesday, 31st May, "B" Squadron being winners of the Squadron Athletic Cup.

**RUGBY FOOTBALL.**—A very successful season was enjoyed by the Wing XV who scored 164 points for to 33 against.

H.M.C.

## No. 2. WING.

**ATHLETICS.**—No. 2 Wing Athletics were held on the 17th May, practically in overcoats, the weather being very wintry. The Senior Championship Cup was won by "C" Squadron, while "D" Squadron "lifted" the Junior Cup after a keen struggle, by a margin of only one point. The final placings were :—

Seniors.

Juniors.

"C" Squadron 109 points.

"D" Squadron 78 points.

"D" Squadron 104 points.

"C" Squadron 77 points.

"A" Squadron 43 points.

"B" Squadron 76 points.

"B" Squadron 37 points.

"A" Squadron 63 points.

In an elimination contest with No. 3 Wing for the honour of representing the School in the Apprentices' and Boys' Triangular Contest at Halton this year, No. 2 Wing Junior and Senior teams were both successful. We wish them the best of luck when they visit Halton for the contest.

A.W.T.

**BOXING.**—After a series of bouts with other Squadron teams the "A" Squadron team was chosen to represent the Wing in the Apprentices' Championship. They early went into strenuous training under the supervision of Sgt. Abbott and Mr. Morgan and a fine team spirit was soon evident which promised great success. The promise was not belied ; after winning the early rounds of

the competition with considerable ease, they met "B" Squadron, No. 1 Wing, Halton, in the final. Once again "A" Squadron proved superior, both in fitness and skill, to their opponents, losing only one fight, thus bringing the championship once more to Cranwell. C/A. Hayden, C/A. Matthews, L/A. Mitchell and A/A. Lord are to be congratulated on not losing a single contest throughout the whole of the championship. L/A. Mitchell also boxed for the R.A.F. regularly with considerable success. L.A.M.

**ASSOCIATION FOOTBALL.**—The record of the Wing XI during the past season was indeed excellent, the team finishing high up in every competition they entered; their outstanding success was the winning of the Apprentices' and Boys' Championship at Halton. A splendid goal average was maintained, A/A. Campbell at centre forward alone scoring 98 goals in the course of the season. The team was captained by S/A. Gunn who invariably played a great game in the vital position of centre-half.

The following are the final placings attained in all competitions entered :—

- Winners : A/As.' and Boys' Championship.
- Winners : Lincolnshire R.A.F. Mid-Week League.
- Winners : Inter-Wing Knock-out Competition.
- Runners-up : Lincoln League, Division 2.
- Semi-finalists: Lincolnshire David Cooper Cup.

T.R.B.

**HOCKEY.**—In addition to the Inter-Wing tournament in which we were runners-up, a full fixture list with outside clubs was completed in which ten matches were won, one drawn and two lost.

**SHOOTING.**—The Inter-Squadron Shooting Cup was decided in favour of "C" Squadron, closely followed by "D" Squadron, final scores out of a possible 1,200 being :—

"C" Squadron	... ..	1,095
"D" Squadron	... ..	1,083
"B" Squadron	... ..	1,038
"A" Squadron	... ..	1,037

Rapid firing was included in the above competition; nevertheless, as can be seen, the scores were quite high.

In spite of their keenness the Wing were unsuccessful in the Nobel Cup Competition, obtaining 1,131 points as compared with the winner's, the R.A.F. College, 1,144 points. Several of the Wing represented teams in the L.C.M.R.A. Winter Postal League, which afforded us valuable practice in .22 shooting. Although not climbing to the top of the League, we did complete the full list of fixtures for which effort a medal was given by the Lincolnshire Association.

A Novices Silver Spoon Competition was won by "D" Squadron with a score of 551 out of 600. Individual spoon winner, A/A. Baker, "D" Squadron.

S.W.



**CROSS COUNTRY RUNNING.**—After the Christmas leave serious training began for the Apprentices' and Boys' Championships which were held at Halton on 23rd March, 1939. This year there were two divisions, the original Moffatt Trophy being awarded to the Senior Section while a Cup was presented by F.Lt. D. O. Finlay for the Juniors. No. 2 Wing represented the School in both divisions; the Juniors won their event while the Seniors were second.

L/A. Humphrey, "A" Squadron, was third individual home in the Senior division, while A/A. Lewcock, of "C" Squadron, was first in the Junior event. The time for the Senior event over a course of 5 miles was 32 mins. 17 secs., while the Junior course of 4 miles was covered in 28 mins. 51 secs.; as running conditions were difficult both these times were considered to be very good.

T.F.

### **" A " Squadron.**

**ASSOCIATION FOOTBALL.**—A.5. dormitory reached the final of the Wing Six-a-side Competition.

S/A. Gunn, L/A. Madger and A/A. Gibson played for the Wing team throughout the season and assisted in the winning of the Inter-Wing Challenge Trophy, the R.A.F. Mid-week League and the R.A.F. A/As. and Boys Championship.

L/A. Madger played for the Station on two occasions.

**RUGBY FOOTBALL.**—C/As. Hayden, Brazier and Matthews, L/A. Jackson and A/As. Payne and Bulmer played for the Station on several occasions.

**HOCKEY.**—The Squadron team were runners-up in the E. and W. S. League.

**BOXING.**—The Squadron were winners of No. 2 Wing Inter-Squadron Championship, and also of the Senior A/As. and Boys R.A.F. Championship.

L/A. Mitchell represented the R.A.F. and reached the semi-final in the Individual Championships.

**CROSS COUNTRY RUNNING.**—L/A. Humphreys was awarded County Colours and, with A/As. Prestoa and Clarke represented the Wing in the A/As. and Boys Championships at Halton.

C.T.F.

### **" B " Squadron.**

**BOXING.**—The Juniors did exceptionally well in winning the No. 2 Wing Inter-Squadron Cup; the Seniors, however, were no match for "A" Squadron.

**HOCKEY.**—This team had the proud distinction of going through the season without losing a match; in consequence it was top of the School Inter-Squadron League, and won the No. 2 Wing Inter-Squadron Knock-out Cup. In the course of the season many of the team were called upon to play for Wing, School or Station.

**RUGBY FOOTBALL.**—The Squadron were runners-up in the No. 2 Wing Inter-Squadron Competition, being beaten in the final by only 3 points. A very enjoyable trip to the Nottingham Seven-a-side Rugby Tournament was organised at the end of the season, thanks to our Commanding Officer.

**ASSOCIATION FOOTBALL.**—The Soccer XI held their own, winning the No. 2 Wing Inter-Squadron Knock-out Cup and finishing runners-up in the School League Championship, being only one point behind the holders.

R.S.H.

### **“ C ” Squadron.**

In the last report the superiority of the 9J. Entries in sport was noted ; now, they are to be congratulated on being the backbone of the effort which led to the filling of the Squadron show case with many of the Inter-Squadron Trophies. Other Squadrons will be interested to note that we are contemplating the installation of a modified show case (Mk.1A) which incorporates an automatic expansion device.

G.T.C.

### **“ D ” Squadron.**

**ASSOCIATION FOOTBALL.**—The Squadron won the School Inter-Squadron Soccer League in spite of the fact that we had at least four apprentices playing in Wing matches. We also won the Inter-Squadron, School and Command Six-a-side Competitions.

**ATHLETICS.**—Our Junior Athletic team carried off the No. 2 Wing Junior Inter-Squadron Athletic Cup, for the second year in succession, with a total of 78 points. Our Senior team were runners-up for the No. 2 Wing Senior Athletic Cup with 104 points against the 109 points of the winners (“C” Squadron).

Outstanding competitors were A/A. Griffiths (220 yds. Hurdles, High Jump, Hop, Step and Jump), C/A. Wyse (Putting the Shot), A/A. Cotton (Hurdles, 220 yds., Long Jump and High Jump), and A/As. Fraser, Thompson and Gow (Pole Vault).

### **No. 3 WING.**

**ATHLETICS.**—The Annual Sports were held at Cranwell Stadium on May 24th, 1939, in ideal weather conditions. Whilst there were no outstanding performances, mainly due to the low average ages of the boys, the general standard of achievement was quite good. “A” Squadron won both the Junior and Senior trophies. The final placings were as follows :—

Seniors.	Juniors.
“A” Squadron 142 points.	“A” Squadron 112 points.
“B” Squadron 109 points.	“B” Squadron 98 points.
“C” Squadron 41 points.	“C” Squadron 84 points.

Boy Durant is to be congratulated on winning the Junior Long Jump, Hop, Step and Jump, High Jump, and Hurdles.

**BOXING.**—The boys took up boxing with enthusiasm, and “A” Squadron reached the semi-final of the A/As.’ and Boys’ Junior Team Championships, being eventually beaten by a team of Apprentices from Halton. In the R.A.F.

A/As.' and Boys' Individual Championships, Boy Tucker won at Midge Weight, Boy Dyson was beaten in the final of the Light Weights, and Boy Burrton was beaten in the final of the Feather Weights. Boy Tucker also fought for the R.A.F. against the R.N. Boys at Portsmouth, and lost on points. Four Boys boxed in the Annual Match of A/As. and Boys versus Cadets on 6th February, 1939.

**ASSOCIATION FOOTBALL.**—The Wing team played in the Lincolnshire League, Division 4, throughout the season, and attained third place. The representative XI of "B" Squadron won the No. 3 Wing Inter-Squadron League Cup for 1939.

**SWIMMING.**—"B" Squadron won the Inter-Squadron Swimming Certificate Cup for the third year in succession. F.G.A.R.

## AUNTIE & THE C.A.G.



# No. 2 E. & W. SCHOOL, YATESBURY.

## NEWS AND EVENTS.

As the construction of the Camp is brought nearer and nearer to completion, so the number of social and sports activities of its members approaches those normally found on a Royal Air Force station. For instance, by the end of the 1938-9 winter season, Association and Rugby Football were in full swing. And now Cricket is the most popular game. In addition, Boxing, Fencing and Baseball clubs are under formation.

The inhabitants of Calne have extended an enthusiastic welcome to the personnel of the Camp. The Y.M.C.A. has been thrown open to them, and some members of the community, headed by the Mayor, have started a canteen and an amusement centre in the Town Hall. Concerts, run mainly by the R.A.F., are given on Sundays, and there are periodic dances to the music of our own dance band.

Captain Guy and Lady Violet Benson have opened Compton Bassett Park to members of the Camp, and full advantage of this valuable privilege is taken during fine weather.

On Wednesday, June 21st, the Station Sports were held. A cup presented by the organisers of the Calne canteen, is much appreciated by the airmen.

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## CALNE.

Since we arrived at Yatesbury last February, the inhabitants of Calne have endeavoured to make our out-of-school time as pleasant as possible. Nothing is too much trouble, if the "troops" benefit, in the opinion of a group of ladies headed by Mrs. James, Mrs. Dixon, Mrs. Cooper and others.

These ladies opened a canteen for the use of the troops in Calne and everything possible is done to make everyone feel at home.

Another committee, headed by the local Mayor, Mr. Dixon, Mr. Cooper and Mr. Stokes, have provided concerts in the Town Hall on Sunday evenings. No charge has been made for admission but the airmen, who packed the hall on every occasion, have responded nobly to the collection that has been made to cover expenses.

Mr. H. Whiles of No. 1 Wing has taken several concert parties from the camp to these concerts and has "put over" some very excellent performances.

A.C. Craggs was a great success in the role of "The Retired Explorer" and A.C. Dickinson revelled as "The Swiss Mountaineer."

The concerts have been discontinued for the Summer, but we hope to be able to resume next season with a show worthy of the "West End."

Thanks are due to all those who have helped to make these shows such a success.

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## SPORTS.

**ASSOCIATION FOOTBALL.**—The formation of the School so late in the season made entrance into the local Leagues impossible, but the committee which was formed succeeded in arranging a series of friendly fixtures; our record up-to-date leaves us confidently looking forward to next season when we propose to enter the Senior Wilts. League and the R.A.F. Senior and Junior Cup Competitions.

A League is being arranged to run right through the summer and a Six-a-side competition is being played at the time of going to press. "A" Squadron were worthy winners of the Inter-Hut Knock-Out competition when X60 defeated Z54 by three goals to two after a great struggle. The winners and runners-up received a trophy and medals from Mrs. Hanmer at the end of the game.

We have arranged a series of "International" matches which should result in some good games.

The record of the Station team is as follows:—

Games Played.	Won.	Drawn.	Lost.
11	8	2	1

The team were worthy winners of the first cup (the Hospital Cup) for which they have competed—surely a good omen—defeating Calne Town F.C. by five goals to two.

The positions of the teams in our "International" League are as shown:—

Team.	Played.	Won.	Lost.	Drawn.	Points.
England .....	1	1	0	0	2
Wales .....	1	1	0	0	2
Ireland .....	1	0	1	0	0
Scotland .....	1	0	1	0	0

In conclusion, let us hope that the day is not far distant when the Yatesbury team will take the field against Cranwell; in the meantime here's wishing the Soccer team every success in the coming season. H.M.

**RUGBY FOOTBALL.**—A summary of the matches played during the 1938-39 season is given below:—

Games played.	Won.	Lost.	Points for.	Points against.
5	3	2	91	22

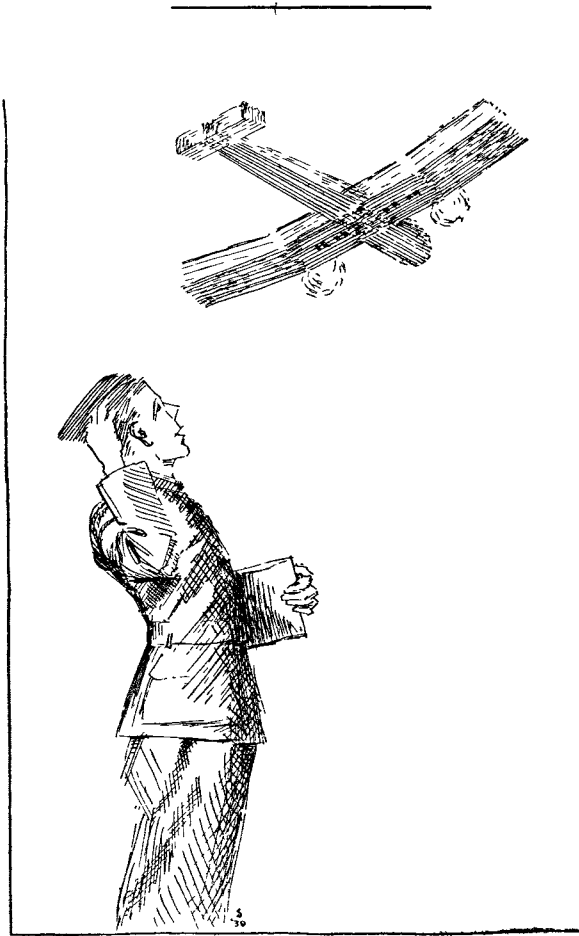
We confidently expect an equal measure of success in the games which are to be played during the coming season.

**CRICKET.**—At the time of going to press, six matches have been played; of these, Yatesbury won four and lost two. It is hoped that we shall be able to publish a comprehensive account of the season's doings in the next issue of the Magazine.

# COMRADES OF THE ROYAL AIR FORCE ASSOCIATION.

Mr. H. Whiles, of No. 1 Wing, has been appointed Liaison Officer of the R.A.F. Station, Yatesbury.

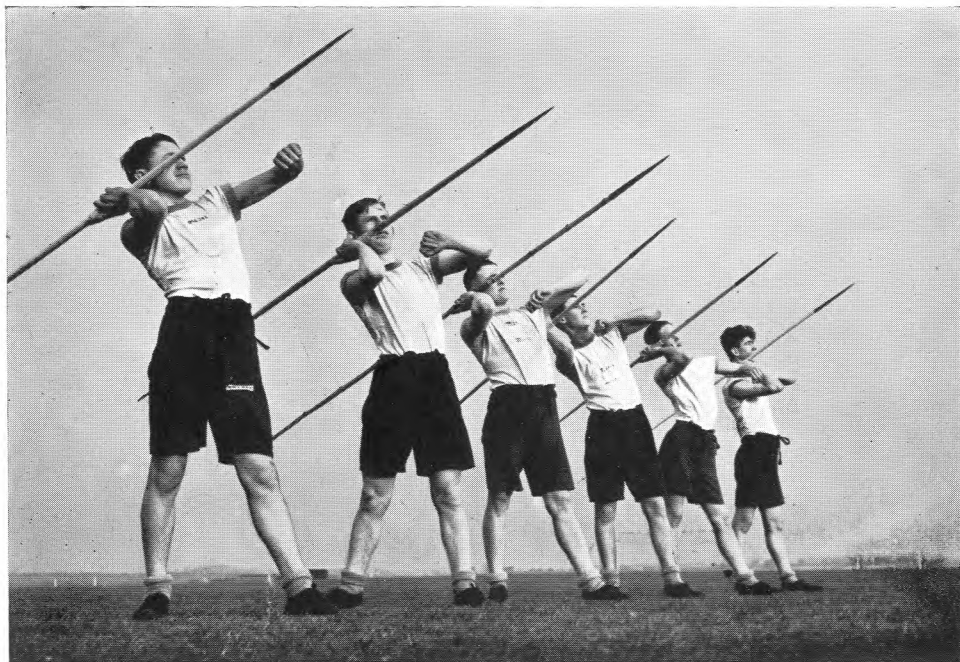
It is hoped to form a branch of the Association in the near future. Readers are urged to support an organisation which caters solely for members and ex-members of the Royal Air Force.



THE LATE SCHOLAR.

PROBLEM No. 4.





TRAINING FOR THE JAVELIN THROW.



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# COMPETITIONS

## COMPETITIONS.

Once again we offer six puzzles for your entertainment and, as in previous issues, three prizes of ten shillings will be given—one for the best solution of each of problems 2, 4, and 6. The Editor's decisions in this matter must, of course, be accepted as final. Entries, which are restricted to R.A.F. personnel, must be addressed to:—

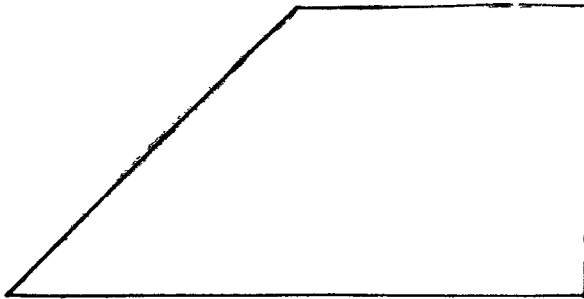
Competitions Editor,  
Electrical and Wireless Schools Magazine,  
Royal Air Force,  
Cranwell,  
Lincs.

and must be received not later than 1st September, 1939.

We take this opportunity of thanking all those readers who have been kind enough to submit problems and suggestions for this section. Wherever possible we shall be pleased to include readers' original puzzles in this feature.

### PROBLEM 1.

Here is an easy one to begin with. Divide the following figure into four equal parts of the same shape in the simplest possible way.



## PROBLEM 2.

A prize of ten shillings is offered for the best set of conclusions drawn from the following evidence.

Inspector Hornblow addressed the sombrely clad figure seated before him : "Be kind enough, Mr. Tippler, to listen carefully whilst I read your signed statement." Picking up the paper before him he then read in a steady tone:—

" I, Jenkyn Tippler, valet to the late Mr. Cornelius Van Blank, last saw my master alive when he left the house at about 7.30 p.m. last evening. At about 9.30 p.m. a stranger who stated that he was Mr. Van Blank's son-in-law called and as he said that his business with my master was of considerable importance, I admitted him to the library to await my master's return. I should add that Mr. Van Blank had mentioned only two days previously that he was expecting a visit from his son-in-law. Some time later the visitor rang for me and told me that he could wait no longer. Immediately after his departure I locked up and went out for my evening stroll, returning about three quarters of an hour later. I realised that my master had returned during my absence because I saw a light in the library and heard the sounds of dance music from the radio set which he always turned up to full volume, being somewhat deaf. I entered the library and was horrified to find my master lying on the floor with a bullet wound in his chest and his revolver lying beside him. I at once concluded that he had committed suicide because I had frequently heard him state that he would kill himself if anything happened to the famous Van Blank diamond. I rushed down to the hall where I immediately telephoned the police, and waited there for their arrival. I was so agitated by my dreadful discovery that it was not until my return to the library that I remembered to switch off the radio set.

As regards the Van Blank diamond, it is of course of very great value and my master had often expressed regret at the fact that on his death it must pass to some other branch of the family since he himself was a childless widower. The diamond was kept in a carefully concealed safe in his bedroom."

Inspector Hornblow looked steadily at the figure before him for several moments and then added quietly, "I suppose you do not wish to add anything to your statement or to modify it in any way? "

The valet replied, "Well sir, I have omitted one important detail. At the moment of finding my master lying dead on the floor it flashed across my mind that the revolver might show some of my finger prints and that I might be suspected of the robbery. Only the day before I had had occasion to move it when tidying up my master's desk. I therefore wiped it over very carefully before calling the police."

"And now," continued the Inspector, "perhaps you would not object to answering two important questions. We have examined the coat you were wearing last night and have discovered two small bloodstains. Can you suggest how they came there? Did you by any chance touch your master's body? "

After a moment's consideration the valet replied, "Why of course! Now I come to think of it I did kneel beside him to listen for his heart because I thought that there might just be the chance that he was still alive."

"Thank you," the Inspector went on, "and can you give me any idea how long it was before your master's return that his son-in-law left the house? "

"I should think he left about twenty-five minutes before my master returned," replied the valet.

Read this account very carefully and draw as many conclusions as you can. When you send them in, they should of course be accompanied by the reasons for your deductions.

### **PROBLEM 3.**

Ayliffe and Beeton were toiling up the long staircase inside a lighthouse when the former remarked, "I have been trying to devise some method of calculating the length of the hand rail of this staircase, but I have come to the conclusion that it is a problem in higher mathematics." "On the contrary," replied Beeton, "it can almost be done mentally. This tower, which you will notice does not taper, is roughly 66 ft. in height and 20 ft. inside diameter. The staircase is 3 ft. wide and makes exactly two complete revolutions before reaching the top. The calculation should not take you two minutes."

Can you find the length of the inner handrail in two minutes ?

### **PROBLEM 4.**

Judging by the intense gardening activities about the camp we feel that many of our readers are now expert horticulturalists, and we are therefore setting this identification problem. All you have to do is to examine the accompanying photograph, name all the flowers shown in it and place them in order of popularity. We offer a prize of ten shillings to the competitor who correctly identifies each of these flowers and places them in the order nearest to that which we shall obtain from a general scrutiny of the entries received.

For obvious reasons we must restrict efforts to one entry per competitor.

### **PROBLEM 5.**

Here's another problem for the gardener. The occupants of a certain hut found themselves with a number of plants (less than 100). When they tried to arrange them in rows of 3 they found 1 over. Next they tried them in rows of 4 and found 2 over. Their annoyance grew when they discovered that if placed 5 in a row they had 3 over, and their exasperation can be best imagined when after placing them 6 in a row they had 4 over. How many plants had they?

### **PROBLEM 6.**

The popularity of the crossword puzzle shows no signs of waning so once again we offer one together with the usual prize of ten shillings for the best correct solution. In case you find this one rather more difficult than usual we give you just one hint—this crossword puzzle should be of particular topical interest to Airmen.

## SOLUTIONS TO PROBLEMS IN THE LAST NUMBER.

### Problem 1.

This problem is anything but straightforward unless tackled in the correct way. Since the car must have left the house at the normal time, it was on the road 15 minutes less than usual. The man must therefore have covered a distance equal to that which the car could have covered in half this time, namely  $7\frac{1}{2}$  minutes. The car therefore met the man  $7\frac{1}{2}$  minutes earlier than usual. Since the man had set out from the station an hour earlier than on previous days, he must have been walking for  $52\frac{1}{2}$  minutes before meeting the car. The man walked at 3 m.p.h. and took  $52\frac{1}{2}$  minutes to cover the distance which the car could cover in  $7\frac{1}{2}$  minutes. The car must therefore have travelled at 21 m.p.h.

### Problem 2.

The smallest number of weights which could be used for this purpose is five, and their values are 1 lb., 3 lbs., 9 lbs., 27 lbs., 72 lbs. Several competitors sent in the correct solution and the prize of ten shillings was divided between :—  
369924 A/A. Atkins, "A" Squadron, No. 2 Wing, and 620054 A.C.2. Paterson, "B" Squadron, No. 1 Wing—both of Cranwell.

These competitors' solutions were accompanied by complete explanations of the methods by which they had reached their results.

### Problem 3.

In the ordinary way the boy would have received 17/6 each pay-day so that in two weeks he would be entitled to 35/-. He actually received this amount because his employer made the appropriate deduction in the second week, but out of this total he had to pay his friend the borrowed half-crown. Thus the half-crown which he lost represents his only financial loss.

### Problem 4.

We received many entries to this competition but few competitors succeeded in identifying correctly more than half the photographs. Numbers 1 and 2 in particular caused a great deal of trouble. The correct solutions were :—

1, Surface of a cork table-mat ; 2, a pat of butter ; 3, end view of a bundle of firewood ; 4, end view of a gas-fire element ; 5, top view of a soda-water syphon ; 6, wine glass viewed from below.

A prize of ten shillings was awarded to :—

621208 A.C.2. Elston, No. 1 Wing, Yatesbury, for the best entry.

### Problem 5.

Unfortunately space does not permit a complete account of the best method of solving this problem but we can assure readers that a knowledge of higher mathematics is not necessary for its solution. It is possible to write down an equation which can be made amenable to the general solution for a quadratic. Two correct solutions were received so that we are quite sure that the solution lies within the capabilities of our mathematically minded readers. The correct answer is 19 ft.  $10\frac{1}{2}$  ins., with a possible (but less reasonable) alternative of 2 ft. 2.7 ins.

**Problem 6.**

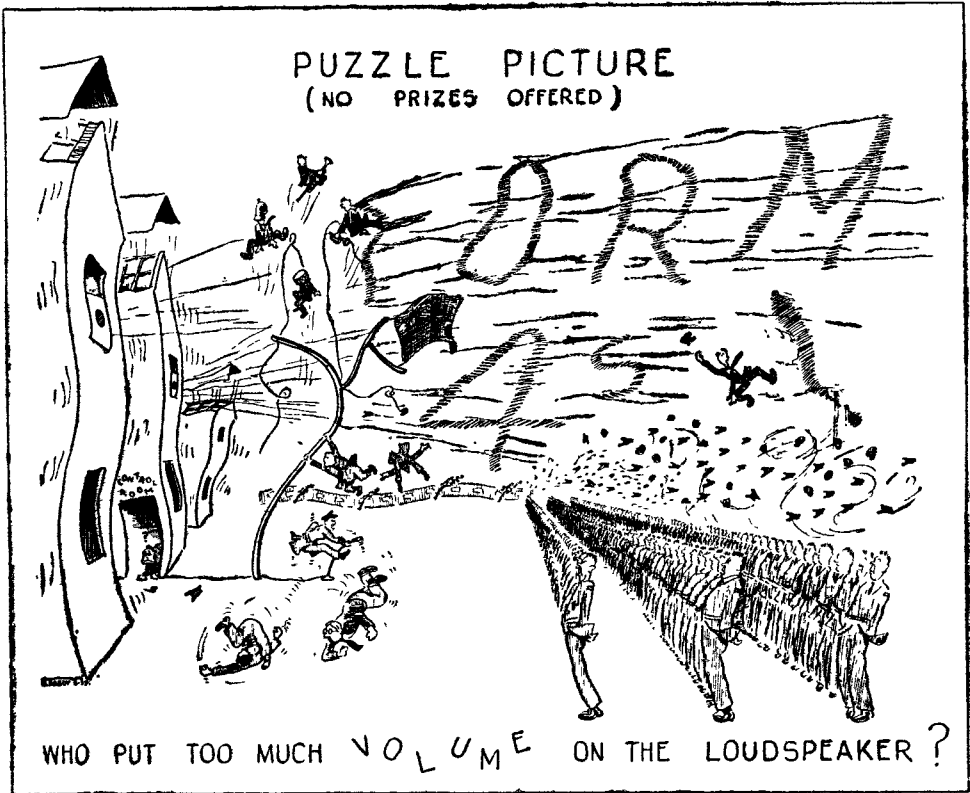
Many solutions to the crossword puzzle were received but most had one or two mistakes. The only correct solution came from :—

A/A. J. H. Bell, "C" Squadron., No. 2 Wing, Cranwell,  
who has now received a prize of ten shillings.

The correct solution is as follows:—

**Across.**—(1) Hangar, (6) Rears, (8) Acorn, (9) L.T., (10) At, (11) Fabric, (14) Terminus, (15) Use, (16) Led, (17) Sodden, (19) A.D., (20) Mac, (22) Enid, (23) Aeroplane, (24) Palm, (26) A.B., (27) Stock, (28) Glossy, (30) Sir, (31) Prey, (32) Duty, (33) Cars, (36) Emu, (37) Atoms, (39) Rut, (40) Cedar, (41) Omit, (42) Plots.

**Down.**—(1) Halted, (2) Acted, (3) No, (4) Grammar, (5) Anti, (6) Reasonably, (7) Raise, (11) Fuselage, (12) Rudders, (13) Century, (16) Lamp, (18) Din, (20) Memory, (21) Cockpit, (23) Altitude, (25) Assume, (29) Strut, (32) Deck, (34) Arid, (35) St., (37) A.R.P., (38) S.O.S.



No.	1	2	3			4		5		6	7	8	9
	10									11			
	12					13							
Rank.	14												16
						17						18	
	19							20			21		
Name.						22		23		24			
	25		26	27					28				
Address.			29			30		31				32	
			33						34				
	35					36			37			38	39
								40			41		
	42		43								44		
	45									45			

**CLUES.**

**Across.**

1. Was this used in drawing the plans of the monastery ?
7. A circle with something missing.
10. "\_\_\_\_\_ for shame !"
11. If man followed this it would improve his civic status.
12. Unlike the leopard it has but one spot.
13. Sounds as though the fowl were being urged to imitate cattle.
14. Then follows the subject referred to.
15. Herein we may find animals.
16. Not a degree for mother.
17. Male species.
18. "\_\_\_\_\_s the word !"
19. Arrests.
20. A Spaniard follows the first part of 13 across.
22. A wolf after this might give a good subject for a creepy story.
24. 38 down is a good example of this.
25. Likenesses are often surrounded by this.
28. Care should be taken to spell this correctly in a boxing report.
29. Such conduct is often unpardonable.
32. Usually followed by something explanatory.
33. One does this before coming to Cranwell.
35. Style of making.
36. This article is in common use across the Channel.
37. Such bodies are formed by those of similar views.
40. Early one morning !
41. Indicates the Orient.
42. "Thorn lot" (Anagram).

**Down.**

44. Would not include high voltages.
45. When long ones are offered, acceptance is often risky.
1. Anything which is this is three-quarters of it off.
2. Best rice in another way.
3. The female of this species is often used for gunnery practice.
4. Extract from an opera.
5. This river commences in nothing.
6. He waking indicates this station.
7. Put two and two together.
8. Introduction to a reference.
9. Often refers to that which is richest and uppermost.
13. Sounds like a good advertisement for a sewing machine.
16. In warfare, these are destined for the enemy.
18. Often the result of pain, or a grouse.
20. Abbreviated title.
21. "If Dr. Field \_\_\_\_\_", (Anagram).
25. Some branches of this are concerned with raising 24 across.
26. Wade in a different way.
27. Not yours.
30. O. Flint. (See what you can make of it).
31. See 44 across.
34. You get this if you follow the instruction in 7 down.
38. The wild variety is of no value in 25 down.
39. Instruction to leave things as they are.
40. Implies location.
43. A system of conveying the spoken word.



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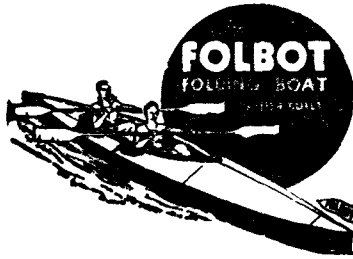
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