

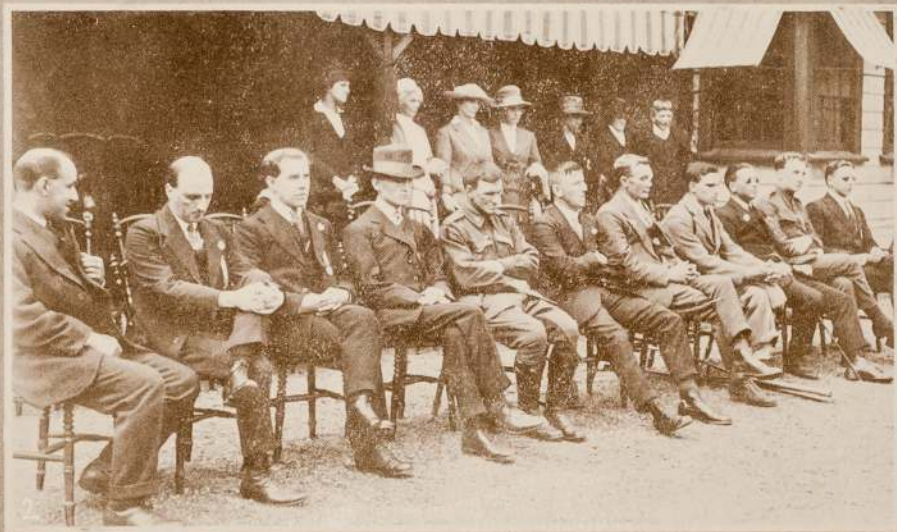
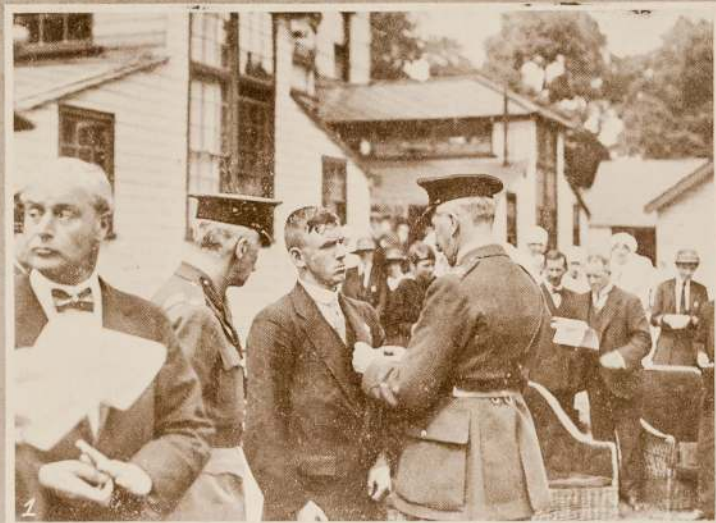
# St. Dunstan's



## Review

For the Amusement and Interest of Men Blinded in the War

St. Dunstan's Motto : "VICTORY OVER BLINDNESS."



1. MAJOR-GENERAL FIELDING, D.S.O., OFFICER COMMANDING THE LONDON DISTRICT, PRESENTING MEDALS ON THE LAWN TO BLINDED SOLDIERS AT ST. DUNSTAN'S.  
2. GROUP OF MEN TO WHOM PRESENTATION WAS MADE.

# St. Dunstan's Review

A MONTHLY RECORD OF WORK AND SPORT

EDITED BY IAN FRASER

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## EDITOR'S NOTES

WE have before us the report of the Executive Council of the National Institute for the Blind for the year ending March 31st, 1919. We refer to it for two reasons. Firstly, because the Institute, which practically owes its existence to its President (Sir Arthur Pearson) and its Chairman (Sir Washington Ranger, D.C.L.), is the biggest and most important organisation of its kind in the British Empire, and probably in the world; and secondly, because St. Dunstan's owes a debt of gratitude to a great many members of the Staff of the Institute for the skilled assistance which has been so readily given in connection with the various activities of the Hostel.

The Institute has, from the beginning of St. Dunstan's, made itself responsible for the training of those blinded soldiers who have taken up massage, with the result that at the time of the issue of this report sixty-one men have entered for the examinations of the Incorporated Society of Trained Masseurs, and have passed without a single failure. Our masseurs are further indebted to the Institute for assisting to bring into being the Association of Certificated Blind Masseurs, an important body which will in the future do a great deal to promote the welfare and advance the interests of all certificated, qualified, and capable blind masseurs.

The Engineering Department of the Institute has given most valuable services to the men of St. Dunstan's, for a great many of the special tools and apparatus used by them in their various occupations have been invented, improved and manufactured in its shops.

In connection with the production of Braille and Moontype literature, which is one of the Institute's chief works, it is interesting to note that during the year under review 23,420 volumes, 7,234 pamphlets, 103,064 newspapers, 44,829 periodicals, and 19,609 volumes and pieces of music, were published. Many hundreds of the above, as well as Braille playing cards, sets of dominoes, draughts, and other games manufactured by the Institute, have been presented by them to St. Dunstan's After-Care Department, and have been sent gratis and post free to blinded soldiers all over the world.

Perhaps the most interesting of the Institute's general work during the past year is the formation of Sunshine House, the delightful home in the country where blind babies are cared for and trained until they reach the age of five years, and are then drafted to kindergarten and other recognised schools for children who cannot see.

That the National Institute for the Blind should be able, in the fourth year of the war, to accomplish the work that is reported on with such remarkable success, is undoubtedly an achievement of which Sir Arthur Pearson and his colleagues might well be proud.

*Editor.*

## NOTES BY THE CHIEF

READERS of these notes will remember that in the December issue of the REVIEW I wrote of a visit paid to Australia by Captain Gilbert Nobbs, one of the officers who lost his sight in the war, and who, after passing through St. Dunstan's, returned with great success to commercial life in the City of London. Captain Nobbs is Colonial director of the well-known firm of Messrs. Holbrooks, whose great business in food products of various kinds has a very important Colonial side.

The result of the investigations made by Captain Nobbs into the business of the Company on his visit to Australia, has been that he has been deputed by the Board of Directors to build a factory for Holbrooks in Sydney, to supervise the manufacture of their products in Australia, and to organise a great increase in the business there.

Captain Nobbs, with his wife and two children, has just left for Sydney: he will be away for at least eighteen months, and after that time will make periodical visits to England to confer with his co-directors.

During his recent visit to Australia, Captain Nobbs found time to interest himself in the future of Australian St. Dunstaners and he proposes to continue this. I have no doubt whatever that he will be able to do much to pull together the rather loose strings of the Australian organisation for the After-Care of our fellows there. I am quite sure that the very best wishes of St. Dunstaners in all parts of the Empire will go with him.

It is to me a very remarkable thing indeed that a totally blinded man should have been entrusted with this extremely important work, which is obviously of a kind that most people would consider to be quite outside the power of a blind man to accomplish. I think indeed it may be safely said that no recently blinded man has ever been entrusted with work of such character, magnitude and importance.

LET me beg St. Dunstaners to be careful to be sure that a railway train has reached the platform before they get out. By this I do not mean to abstain from getting out of a train while in motion, but to be certain that the carriage in which one is seated has reached the platform. It quite often happens that trains pull up, either by carelessness or design, in such a manner that some carriages to the front or rear are beyond the platform. Many St. Dunstaners will remember that poor Sergt. Jones died as the result of an accident caused in this way, and quite recently one of the officers and one of the men have narrowly escaped serious injury. I can write with a good deal of feeling on this subject, for when I was a small boy I remember that my father injured himself quite severely by jumping in the dark from a railway carriage which had not reached the platform.



I THINK I can probably claim to be the first blind man to have reached a famous view-point in the Pyrenees, that beautiful mountain range which divides France from Spain, and in which I spent most of my holidays. The place is one of the frontier points between France and Spain, is over 7,000 feet high, and to reach it from the mountain resort in which I was staying means a three hours ascent on a rough mountain path. In parts the track is not a very good one for a blind man, as it is only a couple of feet or so wide, with precipitous rock on one side, and a drop of some hundreds of feet on the other, so I thought it would be as well to commit myself to the tender care of a mule, walking when the path was fairly simple. I do not mind telling you that when the person in front of me told me that one of these narrow and tricky places was coming the sensation was rather a peculiar one, particularly when descending. However, I hardened my heart, convinced myself that the mule did not want to

break his neck any more than he wanted to break mine, laid the reins on his neck and left the rest to him.

On the whole I do not think that walking on mountain tracks is a very good game for blind people. One is far too apt to twist one's ankle on a loose stone, and there are too many unexpected depressions which are rough

on the knees, to say nothing of making one wonder whether one's spine was coming through the top of one's head or no.

*Arthur Pearson*



## The Plant Inventor

A WATCH Glass, a fine camel's hair brush, these are the simple implements with which the plant inventor performs his miracles.

Two plants are growing in his garden. One we will say, is from South Africa, the other from Central America. Each has its own structure, habits, hereditary tendencies and identity of its own preserved through thousands of years. The plant inventor takes pollen from one, transfers it to his watch-glass, carries it to the other, and from the glass transfers it to the bloom.

The resultant seed is sown. A year passes. The new plants come into being. They may resemble one parent or the other, they may be like neither, they may be the veriest monstrosities. There are thousands of disappointments for one success. Take, for instance, the primus-berry, which is a cross between the raspberry and blackberry, but has a fruit much larger and finer than either. Mr. Luther Burbank, who invented this new fruit, choose one seedling out of 65,000. The rest were remorselessly destroyed.

By artificial methods it is possible to form more varieties in half-a-dozen generations than Nature, unaided, would produce in a hundred thousand years.

In a life time Mr. Burbank has produced 300,000 varieties of plums, 60,000 peaches and nectarines, 5,000 almonds, 5,000 walnuts, 3,000 apples, 2,000 grapes, 2,000 pears, thousands of different kinds of berries, and flowers and vegetables in equal profusion.

Plant breeding is, comparatively speaking, a novelty. The best seeds which our grandfathers sowed were the result not of cross-breeding but merely of selection.

"Mungoswell" wheat, famous in those days, was the result of chance. Mr. Shirreff, a Scottish farmer, walking through one of his fields on a July day in 1819, noticed a wheat plant which branched strangely. He marked it and saved its seed. It yielded sixty-three ears with 2,500 kernels. These he sowed separately in the next spring, and found that they preserved their characteristics. So a new and valuable wheat came upon the market.

When cross-fertilization was first discovered, the idea was to get two parent plants as different as possible, and cross them. For instance, a barley from Abyssinia would be mated with one from Scotland. The results as a rule, were monstrosities. Soon these happy-go-lucky methods were abandoned. English experts, like the Garton Brothers and Professor Biffen of Cambridge, learnt what plants were likely to make useful crosses.

The value of this work to the human race is beyond calculation. These makers of new wheats are ensuring a bread supply for all of us in the future. The wheat land of the world is limited in area, while bread eaters are increasing very rapidly. It is said that there is already a shortage in the world's wheat fields amounting to 30,000 square miles.

But by using these new seeds the production of the old fields will be doubled or trebled, and so famine will be indefinitely deferred.

We are as yet only at the beginning of plant breeding. We may in the future grow peas with pods eighteen inches long, apples as big as melons and wheat bearing twenty quarters to the acre.—*Tit Bits*.

### News of St. Dunstan's Men—

**W.** BURGIN, a poultry-farmer and mat-maker, living at Thurgoland, near Sheffield, sent the following interesting letter to the Manager of the After-Care Department:—

"I must thank you and Sir Arthur for your good wishes. I hope that I and other St. Dunstaners will be successful, so that Sir Arthur and his helpers shall not have striven in vain for our benefit.

"With regard to my work I am trying to be a success, and although I had to face a great deal of hard work at the beginning, I venture to say I am gradually overcoming the difficulties, and things are becoming somewhat easier for me. Owing to my special home conditions it is imperative that I should be able to do all the work that is necessary on the farm, or do anything else that I undertake. This has made me set about planning my work so that I can do anything that may be required, and I have accomplished this.

"I got my birds from St. Dunstan's at the same time as some others that I bought, and so I have been able to see by their records which birds suit this place best, and have come to the conclusion that R.I. Reds are the best, so I have disposed of the Wyandottes, which were anything but a success. We have had about 45 birds, mostly hens, and have had close on 3,000 eggs during the first half of this year, and have sold a good many sittings, which I venture to think is a good record. We have a pen of Leg-horns, and one of the birds kindly laid us an Easter egg on Easter Monday morning, which weighed 5 oz., and measured 8½ inches round the thick part and 9½ inches round the long way. We have enough chicks to suit our requirements, and have sold a good number. A good many visitors come here, and they are a good advertisement for me, and they can see, too, what St. Dunstaners can do.

"Now a few words as to my progress with the farm. I always plan out all

erections, so that when fixed up I know exactly how and where they are, and I link up every house so that there is no break, and have places for everything so that I can find them when wanted. We have two fields, the further one being used for our runs and breeding-pens. To get to it we have to cut across a pasture field which is rugged and rather hilly, so I first ran a wire rail from corner to corner, and afterwards made a path with pick and shovel, using the earth for the houses and dropping boards and the stones for the bedding of a path at the bottom of the incline, where I am erecting two more houses.

"When I get a new house erected I first of all overhaul it to see if it is alright; then I creosote the inside, if it has not already been done, and tar it outside, put in a dust bath and a box for shell and grit. I then start on the outside and put a handle on the door near the key hole, as it makes it easier to find the lock, and the handle is something with which to hold the door when opening it. I also put a strip of lath up by the side of the door with two wooden buttons, so that these can be used to save turning the lock so much, and to keep the door from warping. I make out of orange-boxes an attachment for the drinking-troughs to fit on the front of the house, and saw out a hole so that the birds can get into it to drink, thereby saving ourselves the trouble of having to enter the house to fill them.

"The houses we are supplied with have canvas shutters, but as we get a great deal of bad and wet weather I have put a glass window in the centre shutter, as I think this is better for the birds. As the roofs of these two houses are in two sections, and we get a lot of wind, I think it is advisable to strengthen them by putting two or three strong laths on the outside, reaching from back to front. I have put on the ends (east and west) of my houses some felting about quarter inch thick, and on the edge of roof I have nailed a piece

### —From all parts of the World

of wood about six inches wide, and this well covers the crack between the roof and side and prevents any rain being beaten up by wind. All this means work, but I find it is well worth it, and will prolong the life of the houses. I get all the empty wood boxes that I can, for they are always useful on a poultry-farm. I turn orange and bacon-boxes into coups or small huts, or into boxes for despatching hens and chickens to their buyers. Taking things generally I am satisfied with the progress made, and hope that by the end of summer I shall have the work outside finished, so that it will then be easier for me during the winter and next season.

"I have not made many mats as my time has been fully occupied, but I have done some orders, and I hope to do more when my other work is finished and the bad weather is here. I do a lot of netting, and it has helped me a great deal in providing the cash for the houses and also the extra birds. I also do my own correspondence. My typewriter has a lot of overtime to put in, and I must say it does its work well.

"We read the *Review* with great interest when it comes, and I have the newspaper read every day so that I keep in touch with the events of the world.

"It is three years since I was put out of action and commenced my life in the darkness, and I must say that I never remember I am in a dark world unless I am off colour or have nothing to do, so I think the moral is—Keep carrying on and smile,—and I venture to think St. Dunstan's has taught us how to do it.

"I have just received two additional houses to-day, and they will keep me busy for some time. I am writing this in a hurry, for a large party of town visitors are wanting me to show them around the farm."



The following is an extract from a letter to Sir Arthur from A. S. Coulson,

a poultry-farmer and mat-maker, living at Witherwick, East Yorks:—

"... My latest little venture is to ride an ordinary bicycle. I ride by the side of my wife and rest my hand on her shoulder. I find we can manage quite well, but of course do not attempt to ride in traffic. I prefer a lady's machine as I find it easier to mount or to dismount in a hurry. Good brakes and good nerve are both necessary, and one can get a lot of pleasure on the country roads. My wife has a machine and when I can borrow one we often go for a spin in the evening. . . ."



J. T. Waldin, who left St. Dunstan's at the end of 1916, to start work as a boot-repairer at St. John's Wood, wrote recently to the head of the After-Care Department:—

"I am glad to be able to tell you that I am getting along well. The After-Care Department's Instructor has been visiting me and has shown me a few wrinkles I did not know before. I have far more confidence in myself, and my work gives my customers satisfaction; some of them tell me that my work is far neater than that of a sighted man.

"I am thankful that we have the After-Care Department to assist us and that we can get our materials with so little trouble, and I also thank you, sir, for the interest you take in us chaps."

The following are extracts from two letters Waldin received from a customer as far away as Somerset:—

"The slippers wore so well and were so quickly done that I now send you a pair of strong shoes that want soles and heels. . . ."

"I am most happy to recommend you. I never had shoes so well and quickly done. Here we have to wait a fortnight and then get rubbish that wears out at once. . . ."



R. Horner, a boot-repairer and mat-maker, who returned to Holmfirth, near

Huddersfield, at the end of 1918, wrote as follows:—

"Just a few lines in reply to your welcome letter which I received to-day. I am pleased to say that I am still doing well here. I have now secured a good connection mostly with the better class, and I think that up to now I have given every satisfaction. The mats are still going strong and I have started on my second three hundredweight of yarn and I have got orders in that will last me six months. In fact I am now doing orders that I got the first week I was here.

"In the boot-repairing line I get a good mixture of work, some of it very bad and the other straight forward. My father does all the hand sewing for me and my mother binds some of the mats, otherwise I should never get through my work.

"Here is a hint for boot-repairers about the use of Driped. This leather is of course very hard and will not pan very easily; the best way to use it is to either put it in front of a fire or else put it into boiling water. This makes it soft and you can bend it to any shape. I was at first puzzled about using it until a boot-repairer told me this. Amongst my orders I have had some for mats for motor cars with the corners out. I am so busy I cannot spare a mat to put in the window for advertisement, but of course, the people have heard from their friends and that is enough.

"I go about by myself and one night I got a little mixed up. The snow was on the ground so I walked in the middle of the road. The distance was three miles and lay through a wood, I had got half-way home when I turned round and walked back the same way almost back to the point I had started from. No one was about as it was twelve at night so I had to start back once more and got home at one. I can now do that three miles in under forty minutes, but of course, I run some of the way.

Before closing I must thank St. Dunstan's and all connected with it for the help given to me."



J. Cason, who was trained as a mat-maker at St. Dunstan's and who has since

his return to Bathpool, Somerset, started a poultry farm, writing before the holidays, said:—

"As regards the garden, we are beginning to reap the benefit from it already. We dug up our first lot of early potatoes during the week, and although the yield might have been better with a little rain, we really had a nice lot and they were a very fair size. The fruit is also coming on well and we picked four or five quarts of gooseberries off one bush without nearly stripping it. I have three other bushes all equally loaded with fruit, we are also going to have a good crop of blackberries, so I sure the garden will pay for itself.

"When I have an order for two mats of the same size I try to fit up the two side by side, that is, of course, if they are not too big, and then work them both up together. I cannot actually say that it saves time, but somehow I seem to do them quicker. I had one or two good laughs over the last mat. One man wanted to know how I had managed to paint the letters so accurately back and front; another man declared that the mat was made with wire as it was so stiff; while a third man would not believe that I made the mat at all until I took him up and showed him materials. The remarks struck me as being awfully funny.

"The kneelers seem to go very well down here. I have sold three and now I have an order for ten more."



G. Green, a joiner, who left St. Dunstan's at the end of 1918 to start work in Sheffield, wrote:—

"I am still getting on well in the shop. At present I have got in some fine big pictures to do, with three inch deep moulding, and a few like that pay well, as there is no more work to do on them than on smaller ones. Trays seem to be very popular as wedding presents, and there seem to be a great number of people getting married just now. I have an order for four trays to be sent to Glasgow and two to Inverness and about eight for different people in Sheffield, while one of my trays was sent out to South Africa

last week. Then I have another order from Inverness for several small articles for a bazaar, including a teapot stand, a coffee tray and a few photo frames."



The following is a letter to the head of the Netting Department from A. Mason, who has recently returned to Natal, South Africa, to start work as a poultry farmer:—

"I was just starting another hammock when the thought struck me that it was high time that I dropped you a line to let you know how netting has taken out here. The string on board for making hammocks came in very handy, and as I sat on deck netting the fellow passengers were all deeply interested in it and were keen on my raffling it. Not having any of the materials necessary for mounting, this presented some difficulty, but from the ship's carpenter I was able to get the rings, and he also made the poles; then by making love to the saloon deckman, the necessary ropes were forthcoming, and by tying the hammock pole to the deck rail and the ring to the upright the mounting was done and the hammock raffled for £10. The next hammock brought in £6 12s. with shilling raffle tickets, so that by the time I reached Durban netting had brought in all I had spent on it.

"At a bazaar given by a primary school in aid of St. Dunstan's a hammock sold by auction added £8 10s. to the bazaar.

"As yet I have not dared to make anything but hammocks, as I have enough hammocks on order to last me three months at least, and if I tried anything else I could never hope to keep pace with the orders. Finding that a large number of people in town sleep outside their houses I decided to introduce a hammock large enough to take a mattress, and these are selling well. Whilst netting sometime back it struck me that the weakest part of a hammock was where the strand from the ring picked up the two strands of the mesh, and so I decided to pass the rope through all the stitches first and then pick up the rope and the two stitches as before, thus making a double use of the rope.

"There are not half-a-dozen pounds of string left, but I expect the 72 pounds of hammock string which I ordered by cable is on its way by now. By the way, trees out here are not netted, so there is no sale for fruit netting.

"I have reduced the selling price by adding 20 per cent. to the cost of materials and charging half-a-crown an hour for the time spent, which is a mechanic's wage out here.

"So much then for netting, which, as you can see, is far from being financial loss, besides filling in all the odd hours.

"Four fostermothers and eight pens of breeding stock keep me very busy, but it is interesting, and ought to pay well. My brother and I are buying a large farm through the land board, which is allowing us to pay for it by twenty annual instalments. This means plenty of hard grinding, but with a bit of luck we ought to pull through, as there are great possibilities on the place. We cannot get into the farm until September, and at present are staying with my sister on five acres of land, where we are busy hatching and getting everything ready for a combined poultry, dairy and agricultural farm.

"To-day is the first dull day since I arrived, although of course we have had a good many storms.

"My brother and myself have been busy building houses in sections similar to the houses at St. Dunstan's.

"During Easter I went out to a farm of some thirty thousand acres, owned by the biggest dairy company in Natal. There was a lot to be seen, and time passed quickly. A party of us went out by trolley to a neighbouring mountain on Easter Monday and had a good time. On a clear day one can see the sea fifty miles away, so you can guess what the scenery is like from this summit. With best wishes to all at St. Dunstan's, especially the netting room."



JUDGE: "Describe what passed between you in the quarrel with your wife."

Prisoner: "The plates were regular dinner size, your Honour, and the teapot had a broken spout."

## Torn by Starving Jackals in Macedonia

A BRITISH SOLDIER'S TERRIBLE ORDEAL

(As told by Private James McDade, in the "Wide World Magazine.")

**M**ANY a soldier who has fought on four different battle-fronts in the Great War must have had experiences and narrow escapes from death which remain as long as memory holds.

I only hope that few if any of the millions who left the shores of Great Britain to wage war in the crusade for Liberty and Freedom had to undergo that awful ordeal through which I passed on the Macedonian front when surrounded and borne to the ground by a pack of fierce and starving jackals.

The type of jackal of which I write was not the little harmless-looking creature often to be seen in travelling menageries. The jackals in the Macedonian region were big, ferocious brutes, about the size of a boarhound, and evidently a breed between a wolf and one of the species of wild dogs which frequent that part of the world. Although called jackals by the British soldiers, these animals were really wolves, and big-boned, strong-jawed brutes as a rule. I have seen a big she-wolf, or jackal, seize hold of a mountain goat, and, with a peculiar jerk, throw its victim over her shoulder, and then amble off to some quiet spot to enjoy the reward of the hunt. Fierce, cunning, and desperate, especially in winter when food was scarce, they invariably roamed about in packs, keeping to the shelter of the woods by day, and sallying forth under cover of darkness on the prowl for a meal. Fire was the only thing these fierce brutes were cowed at. Even when famished, the sudden flare of a naked light had the effect of making them scamper back into their bleak fastnesses on the hills.

Before the war the jackals and wolves in Macedonia had no difficulty in finding plenty of food, as many parts of that war-ridden country were well cultivated. Fowls, lambs, and sheep figured extensively among the depredations of these

marauding packs of lean, cadaverous quadrupeds, and with the evacuation of the peasantry in consequence of the advance of the Bulgars, their source of food was automatically cut off. When the British forces proceeded to occupy a large part of the territory, the plight of the jackals and wolves hiding by night upon the hillsides and in the thick woods became desperate. Our soldiers had orders to shoot these pests at sight, but they were cunning creatures, and usually sallied forth only under cover of darkness.

At the time of which I write I was attached to the 10th Irish Division, which played a fitting part in the eventual overthrow of the Bulgar forces. We were ordered to proceed by the Struma Valley and take part in the advance across the Struma River, and in time the British held the whole line from Dorian to the sea. My own battalion, the 6th Royal Inniskilling Fusiliers, occupied a village called Jenokia, and I acted as batman to an officer in our company. It was part of my duties to carry messages to and from our battalion headquarters, which were situated a little more than a mile away from the village. All round the village was a veritable network of trenches and defences against attack, and as it was winter time the jackals used to descend from the hills and prowl about when darkness fell in search of food. The British soldiers in that part of Macedonia were well aware of this, but, like the sly brutes they were, the jackals kept clear of places where numbers of men were in the habit of moving about together.

One night I had orders to proceed to battalion headquarters, and just before darkness fell I set out on what was to be for me a never-to-be forgotten adventure. In due course I delivered my message, after which I hung about for a little, chatting to several of my soldier comrades who acted as officers' servants. As it was then dark I decided it was time for me to get back to my own quarters at

Jenokia. I was, however, quite familiar with the road, although on such a bleak countryside, and in the depth of winter, there was an eerie feeling in the air. Stamping my feet to get rid of the chill following the chat with my comrades, I set out on the return journey, deriving a measure of Dutch courage in the darkness by whistling a familiar Irish air.

I had not proceeded far when I suddenly remembered that there was a short cut to Jenokia across the trenches, and as I was anxious to get back amongst my own chums, I turned off the beaten track. After walking some little distance, I reached the first line of trenches, over which in the darkness I had to proceed with caution.

Up to this point nothing had occurred to arouse the slightest apprehension, but no sooner had I stepped across the parapet of the second line of trenches than I experienced the shock of my life. Howling dismally in the night air, out bounded about a score of fierce, starving jackals, whose exact numbers could not be readily ascertained in the gloom. Many a time before and after that, when fighting against the human enemies of Britain, had I experienced what is known colloquially in the ranks as having the "wind up," and a cold sweat broke all over me as I realized the perilous plight in which I found myself at that moment. I shudder yet when I recall all the circumstances. I was practically helpless against such a pack of savage brutes, and I had not even a stick wherewith to defend myself.

As the jackals, emboldened by their number, crowded round me, snarling and snapping viciously, I lashed out at them with my bare fists and kicked at them with my heavy Army boots. But the brutes were not to be got rid of in this fashion, as I soon discovered. Even in the darkness, when my relentless enemies were silhouetted against the skyline, I could perceive that they were lean and gaunt, and evidently famished with hunger. One or two of the jackals got so close to me that their teeth penetrated my trousers, and in the face of a deadly peril I lunged out desperately, and more than one of the brutes felt the full force

of my thick-soled boots in their ribs. My chief anxiety was to keep the jackals all in front of me, and with the object of ensuring that I should not be attacked from behind I started to walk slowly backwards, facing the howling quadrupeds all the time, jabbering and yelling like a Red Indian.

If I could reach the embankment formed by the next line of trenches I fancied that I might be able to keep my savage foes at arm's length until help arrived, although where that was to come from I could not then even imagine. But a further surprise and an unpleasant one, awaited me. Just as I arrived at the next line of trenches another pack of jackals came into view, or rather I became aware of their existence, and I realized that my plight was now desperate in the extreme. The reinforcement seemed to give the brutes additional courage, and one or two, more desperate and daring than their fellows, sprang at me. I was encompassed on every side by these starving denizens of the woods, and while I was warding off an attack by one hungry jackal, I felt the sharp teeth of another rip my trousers and tunic.

With a feeling of unutterable despair I realized that it was only a matter of time—possibly only a few short moments—before I would be borne under by that pack of four-footed enemies and die a lingering and horrible death in that wild and dreary sector of Macedonia. Was this, then, to be the end, after I had escaped from the inferno in that corpse-strewn peninsula of Gallipoli? No one can possibly realize my anguish of soul during those fearful moments. Life then seemed doubly dear to me. I was young and strong, but to what avail was courage, even when allied to a vigorous frame, against such a horde of bloodthirsty enemies driven practically frantic by the pangs of hunger?

But if I was to go under I was determined to make a fight of it, and after I had succeeded in momentarily shaking off two particularly desperate brutes, I lashed out my arms like a windmill, kicking and trying to face half-a-dozen different ways at the same moment. The

excitement under which I had laboured for what could have been only a few minutes, but which seemed a life-time, at length had its inevitable climax, and with a wild shriek for help which must have reverberated over the surrounding country, I turned about and dashed off in the direction of where our camp was situated. With all the voice of which I was capable I kept on yelling for assistance as I stumbled on over the uneven ground, several times in my anxiety to get clear of my relentless pursuers almost falling owing to the inequalities of the terrain.

At my first rush I managed to gain what I considered to be about twenty yards from the pursuing jackals, but within a few brief seconds I could hear the lumbering forms of the brutes bounding after me with angry howls. It was, however, an unequal race. I was blown by my exertions of keeping my foes at bay, and as I staggered rather than ran, I realized that unless succour was near at hand I would "go West" in a manner I had never even in my wildest dreams imagined. As I stumbled on I saw a light in the distance and this gave me a certain measure of hope as I struggled in the direction of this grateful beacon.

All the time, close and even closer pursued by the jackals, I had been yelling in agonized tones for help. Just as I was practically out of breath, several of the jackals sprang simultaneously at me, bearing me to the ground, and with a groan of despair I fancied that my last tragic hour had come. As I sunk to the ground, my clothing torn and dishevelled, a number of the brutes bounded over my prostrate form, and I felt their hot offensive breath in my face as I gave vent to one last piteous shriek of terror. I suppose I must have lost consciousness just as I fell, and when I regained my senses it was to find myself living in a little dug-out with several of my comrades anxiously bending over me and applying Army rum to my lips. I was in a truly pitiable state, torn and bleeding, and my poor body bore the marks of where the cruel fangs of the ravenous jackals had pierced my flesh.

No man, I learned afterwards, ever had a more narrow escape from a horrible death, and I owed my life to a circumstance upon which I had not calculated. A number of men belonging to the Transport Section had been engaged attending to the mules which were housed a good distance from the village, and immediately on hearing the cries of distress, they seized their rifles and dashed off in the direction whence the sounds came. Not a moment too soon did they arrive on the scene. It was a race for life, and the stakes was my existence. Another few seconds and my remains would not have been recognizable had that wolfish pack been given time to gratify their craving for blood. With a presence of mind which can only be described as providential in the circumstances, my comrades correctly guessing what had happened, fired several rounds into the pack of snarling jackals, fortunately missing my prostrate form, and thereby saving me from further cruel laceration.

After my comrades succeeded in dispersing my wolfish pursuers, many of which had been rendered desperate by tasting my flesh, they struck a light and peered down at my mangled form. I had been torn and riven all over the body, and my military uniform was in shreds. I could hardly have presented a more pitiable spectacle had I been thrown into a den of lions. Even my boots bore the marks of the sharp fangs of some of the jackals which had not been able in the crowd to get a snap at some more tender part of my anatomy. Although used to some horrible sights in the course of the war, several of the comrades who rescued me confessed to almost turning sick on first viewing my blood-stained form just after the jackals had been chased away.

At first my chums actually thought I had been literally worried to death by the sharp-fanged brutes, but under the influence of the stimulant I revived, and, torn and in great agony, I was carried into the safety of my own camp. For a time I was very weak from loss of blood, coupled with the severe nervous shock, but I suppose I must have been endowed

with the average British Tommy's rapidity of recuperation.

The Army medical officer who treated me most sympathetically for my injuries, sustained under such dramatic circumstances, saw to it that I was excused from all duty until I had fully recovered from the effect of my terrible ordeal. Among the men of the 10th Irish Division, my eleventh-hour escape from an awful fate was keenly discussed for days afterwards, and when any man in the course of the fighting spoke of experiencing a particularly close brush with the Angel of Death, it was a common



### The Good Men Do

"THE evil that men do lives after them."

This statement I have often wished to stem,

We have washed the clay, but missed the gem,

"The good that men do lives after them."

I have built the dam, I have formed the track,

Which brings the chrystal stream a long way back

To the thirsty city beside the sea.

"The good I have done will live after me."

I have felled the bush on a hundred hills,

I have rafted logs to the timber-mills,

I have built a house from the forest tree.

"The good I have done will live after me."

I toiled for months, in the wind and rain,

That you might ride in a railway train;

And though I be gone, still, trains shall be.

"The good I have done will live after me."

That you might have your electric light,

I toiled in the mine from dawn till night;

And, by that light, it is plain to see

"The good I have done will live after me."

I have rioted off with women and wine,

I have eaten husks with the hungry swine.

My one excuse, if one there be,

"The good I have done will live after me."

So when I hear the oft-told tale

Of human nature, weak and frail,

I quote once more this little gem:

"The good men do lives after them."

*Third Reserve.*

expression: "Pretty narrow shave, mate; but nothing to Jim McDade and the jackals."

The officer to whom I acted as batman was greatly concerned at the details of my adventure and he organized a large firing party to avenge my sufferings and also to minimize the risks of other men having to undergo the same grim ordeal. After that firing party had carried out their task I am happy to say there were fewer jackals to be found in the vicinity where British soldiers were obliged to perform their duties.

### The Super Stove

IF only the world lasts long enough, our inventors will discover cures for all our present trials and troubles. One of the most astonishing productions which we are shortly to see is a stove that works something along the lines of an alarm clock, and does your work for you while you shop, or visit, or go joy-riding.

This stove, which is an American invention, is worked by electricity, the heat being stored by the device used in the thermos bottles. Thus, all the heat is kept inside, and the outside of the stove is cool whether the current is turned on or off.

But the real beauty of the stove is this. Suppose you want to put in vegetables, a joint, and a pudding during the morning, go out for the day, and return at seven, to find them all ready at the identical moment.

First of all you wind the clock for the vegetables according to the length of time required for cooking. While you are out, the clock turns the heat on and off at the required times, and by regulating the joint and the pudding clocks in the same way all these dishes, requiring different times of cooking, will be ready and awaiting you simultaneously.

This sounds like a dream, but it is not. This wonderful stove, as a matter of fact, is already upon the American market.

## Sports Club Notes

### ANNUAL REGATTA AT PUTNEY.

WE had some very keen racing this year at Putney on July 15th and 16th. The 15th proved to be rather a disastrous day, the weather was very cold and there was half a gale blowing. In spite of this the morning races went off very well, but in the afternoon the weather became worse, the water was so rough and the tide so swift that the boats had the greatest difficulty to keep going at all. The climax came in the afternoon about 3.30 when one of the Bungalow "Fours" containing A. J. Porter, G. Swindell, E. P. Horran, and D. O. Evans was swamped near Beverley Creek and turned turtle. It might have proved a very disastrous affair had it not been for the pluck and presence of mind of the cox—Miss Stein—who although fully dressed, swam about the upturned boat, placing the men in position and keeping them there until the police boat arrived and rescued them. The shipwrecked crew were all landed at Putney, and beyond a soaking, seemed none the worse for their trying experience. We sincerely hope that the Royal Humane Society will show their appreciation of Miss Stein's plucky effort by awarding her their medal which she certainly deserves.

Directly it was seen from the starting point that the boat was in difficulties, A. Blackwell and H. Glendennan jumped into a boat and rowed down to Beverley Creek in record time; they actually beat the police motor-boat. Unfortunately, just as they were nearing the upturned boat, Blackwell collapsed and had to be landed, A. W. Ballard taking his place, and in spite of this delay, they were in time to give valuable assistance in the rescue. After this mishap, Mr. Calcutt decided it would be better to cease racing for the day.

### ROWING DINNER.

The Regatta had a very pleasant termination. In the evening our President,

Sir Arthur Pearson, gave a dinner at the Trocadero restaurant. All the men, old boys included, who had competed in the races, were present; also the Worcester Crews, and Mr. Phillips and Dr. Bridges, both of whom so generously presented cups. During the evening we enjoyed a very excellent concert. The following artistes kindly gave their services: Ethel Newman, W. V. Robinson, Alice Skivington, Gus Garrick, Goodfellow and Gregson, Hilda Glyder, Wood and Court trio (Haydn Wood), Pitt and Marks.

After dinner, Sir Arthur told us some amusing stories of his own rowing experiences. In the course of his speech, he thanked Mr. Calcutt for his splendid services in connection with the rowing, and also Capt. Williams and all those connected with the Sports, including Dr. Bridges and Mr. Phillips, for the great interest they had taken in this department. Mr. Calcutt, Capt. Williams, Dr. Bridges and Mr. Phillips all made fitting replies. While Sir Arthur was expressing his admiration for Miss Stein's plucky act, he mentioned that the four boys whom she had rescued had shown their appreciation by presenting her with a gold wrist watch, and that he himself was also making her a suitable present. Sir Arthur said it gave him great pleasure to welcome the Worcester Crews once more, but was sorry that they had not won a race and were going home empty-handed. At the end of the evening Sir Arthur presented the prizes.

### TUG-OF-WAR.

The Tug-of-War pull for the Pearson Challenge Cup between the Holders (House) and Challengers (Bungalow) took place at Olympia this year on July 11th. The teams looked very smart as they entered the arena, clad in their white ducks and sweaters. They marched in in regular military style, quite as smartly as any sighted soldiers. They went straight to their stations on the rope amid

tremendous applause. Both teams were out for business and were deadly earnest. The huge audience fully expressed their feelings by giving the men a tremendous reception.

The first pull lasted five minutes, and the second about six. The teams were very evenly matched; although the House won both pulls, it was touch-and-go on more than one occasion for the Bungalow.

At the conclusion of the pulls the teams lined up in front of the Royal box and the cup was presented to H. N. Hardy, of the House, by the wife of Major-General Seeley. The men then marched off quite smartly and with as much confidence as on their entry. The officials were loud in their praises of the bearings of the men and their confident manner; they said they had not seen better pulls at Olympia during the Tournament.

We all felt very proud of the men, for they gave a splendid example of the care and training they had received at St. Dunstan's. The French Cavalrymen who were taking part at Olympia were so delighted with our men's exhibition that when they marched out of the arena they seized them and in true French style proceeded to kiss them on both cheeks.

The teams on their return celebrated the occasion by having a little dinner at Canuto's.

*J. D. V.*

### ST. DUNSTAN'S ATHLETIC CLUB REGATTA.

WINNERS OF FINALS, July 15th, 1919:—

Novices' Single Sculls (light-weight).—1, H. Neivens (C.T.); 2, R. Wilkinson (B.); 3, W. C. Clifton (C.).

Novices' Single Sculls (heavy-weight).—1, Capt. A. R. Peareth (O.); 2, A. P. Archibald (B.); 3, A. D. Kerstein (B.).

Inter-House Fours.—1, L. E. Carter, A. H. Craigie, J. H. Ham, and H. Glendennan (B.); 2, C. A. Fankhauser, H. N. Hardy, E. W. Martin, and J. H. New (H.); 3, A. J. Cooper, W. Trott, A. F. Smith, and T. Stevenson (H.).

Inter-House Fours (Novices).—1, A. Blackwell, R. Wilkinson, L. Jenkins, and C. R. Breed (B.); 2, B. F. Jones, C. E. Beck, A. Gribben, and F. Aubrey (H.);

3, G. A. Burnett, F. C. S. Hillings, S. H. Edwards, and S. W. T. Taylor (C.T.).

Dr. Bridges' Cup (Double Sculls).—1, H. N. Hardy and W. McLurg (H.); 2, F. Ashworth and J. Robbins (C.); 3, E. W. Martin and J. G. New (H.).

Major and Mrs. Holland's Cup (one-armed men).—1, J. G. Rose and G. W. Killingbeck (H.); 2, N. Downs and G. Craddock (H.); 3, A. B. Lawlor and G. Richards (H.).

Pair Oars.—1, Capt. A. R. Peareth and Lt. W. W. Hitchcon (O.); 2, J. W. Kimber and F. Ashworth (C.); 3, W. Trott and A. J. Cooper (H.).

WINNERS OF FINALS, July 16th, 1919:—

Open Single Sculls.—1, W. McLurg (H.); 2, H. N. Hardy (H.); 3, W. T. Scott (C.).

Phillips' Cups (Single Sculls).—1, H. V. Thompson (C.); 2, C. F. Hornsby (C.); 3, F. C. S. Hilling (C.T.).

Old Boys v. St. Dunstan's Present (Double Sculls).—1, F. Ashworth and J. Robbins (St. Dunstan's); 2, A. Ballard and A. W. Peckham (O.B.).

Old Boys v. St. Dunstan's Present (Fours).—1, J. Doubler, C. Thompson, F. W. Shelton, and J. Corrigan (O.B.); 2, C. A. Fankhauser, H. N. Hardy, E. W. Martin, and J. H. New (St. Dunstan's Present).

Single Sculls.—1, H. N. Hardy (H.); 2, Capt. Baker (O.).

Pair Oars.—1, W. Christian and W. Pratt (C.); 2, W. Trott and A. J. Cooper. (Did not finish the course).

Worcester v. St. Dunstan's Past and Present (Fours).—1, C. Thompson, J. Doubler, F. W. Shelton, and J. Corrigan (O.B.); 2, Worcester.

Worcester v. St. Dunstan's Present (Fours).—1, A. H. Craigie, L. E. Carter, J. H. Ham, and H. Glendennan; 2, Worcester.

Worcester v. St. Dunstan's Present (Double Sculls).—1, H. N. Hardy and W. McLurg; 2, Worcester.

Worcester v. St. Dunstan's Present (Single Sculls).—1, W. McLurg; 2, Worcester.

Worcester v. St. Dunstan's Present (Pair Oars).—1, J. Kimber and F. Ashworth; 2, Worcester.



## Blinded by a Cherry

PINEAPPLES THAT POISON

SIXTEEN years ago a young man was brought into the hospital at Cairns, in Queensland, suffering from a strange paralysis of the optic nerves. In spite of skilled treatment, he became blind.

Other cases occurred in the same district, and were traced to the eating of a wild fruit known as the finger cherry, a long, bright red berry, which has nothing in common with our English cherry.

The effects of certain vegetable poisons are at present beyond scientific explanation. The finger cherry is not the only Australian plant which has a baneful effect upon the optic nerves.

### MELONS CAUSE BLINDNESS.

Some years ago Mr. W. H. Morrison, a well-known Australian horse-breeder, wrote to the *Sydney Morning Herald* pointing out that numbers of horses were being blinded by eating the wild melon, which is common in many parts of Australia, and which grows in great profusion after the breaking of a long drought.

One of the most terrible plants in existence is the *Asclepias Gigantea*, which is common in Abyssinia, and grows also in Ceylon. When cut, a milky sap exudes from the stem and leaves, and the least drop of this will cause total blindness if it comes in contact with the eyes.

### THE GOAT IMMUNE.

The *Asclepias* is used largely for fire-wood, but the men who cut it have to exercise extreme care. If a man accidentally rubs his eye with his hand while engaged in cutting this wood acute ophthalmia is certain, and the sight of the eye is gone for good. There is no cure. Yet the strangest thing is that goats eat the *Asclepias* without suffering harm.

Goats, too, can eat the Texan loco weed, which kills horses and cattle. This poisonous plant drives horses mad. They run in circles, and sometimes are seized by a sort of mania.

We have plants even in the British Isles which are none too safe to meddle with. Reference is not made to the regular poison plants, such as hemlock, deadly nightshade, or wild parsnip. There are plants, which are popularly supposed to be harmless or even wholesome, yet which have very queer effects on certain individuals.

### DON'T MIX THEM.

Mountain ash, for instance. The pretty fruit of this tree is made into jam, jelly, and a sort of spirit. The spirit has the extraordinary power of destroying the memory.

Mixtures of fruits or leaves, each harmless in themselves, may have unpleasant consequences. Be careful not to eat spinach and an orange at the same meal. The oxalic acid of the former is freed by the citric acid of the latter, and the result is a more or less sharp case of poisoning. Tomato must not be followed by lemon, or the result may be the same.

Some fruits are injurious in an unripe condition. The juice of a raw pineapple, if injected under the skin, is most dangerous.

### Presentation to Miss Pearson

ON August 1st, the second anniversary of the opening of West House, Kemp Town, Brighton, the men in residence made a collection and presented Miss Pearson with a mahogany clock in token of their appreciation of her untiring energy and devoted work.

THE new candidate was canvassing for votes.

"Don't you see," he said, "if your husband supports the other side—why, good gracious, madam, the Empire may be ruined!"

"That doesn't matter," the lady replied airily, "my 'usban works at the 'Ippodrome."

## Departmental Notes

### The Braille Room

WE heartily congratulate the following officers and men on having passed their Braille Tests:—

*Reading Test:* C. H. Cornwell, W. McCombie, J. P. Ireland, G. Hutcheon, Lieut. A. H. Tuppen, Cadet A. M. Hunt, T. Kent, Lieut. A. G. Fisher, P. Martin, C. Sullivan, G. Swindell, R. H. Hardy, J. H. Lea, J. Woodhouse, W. Williams, C. G. Jeffries, J. Higginson, A. Adams, Capt. Foxton, D. Griffie, E. J. Laker, A. J. Porter, and M. W. Brown.

*Writing Test:* A. Abram, F. C. S. Hilling, T. W. Gell, J. Hartley, F. J. Mears, T. Gibson, G. Johnson, E. Nava, P. White, Lieut. B. J. Fryer, M. E. Horan, G. Burnett, W. Robinson, W. Newland, P. Rose, C. E. Thomas, H. R. Pratt, T. Newman, J. W. Macauley, W. Mackey, H. A. Knopp, C. H. Cornwell, G. J. Webster, J. Muir, J. Stibbles, J. Ingram, F. Green, J. H. Lawson, J. Elder, W. Tout, A. T. Gray, and G. Hutcheon.

At the request of some of the readers, the Editor of *Nuggets* has introduced a sports page, giving a summary of the news of the week, of cricket, racing, boxing, etc. Readers are asked to let him know what they think of this idea, and as it is chiefly St. Dunstaners who will be interested, it is important that every man who wants the sports page to be continued should write and say so and make any comments that may occur to him.

By an arrangement with the National Institute for the Blind, the After-Care Department will forward *Nuggets* to any St. Dunstaners gratis and post free, so if there are any men who are not yet receiving it, and would like to do so, will they please apply to Capt. Fraser.

Just a word about the books that have been taken home for the holidays. Will

everyone please bring them back to the Braille Room when finished. It has been noticed that volumes have a way of returning in safety to the various annexes, but they remain until the periodical raid is made to recover them. D. P.

### Typewriting Tests

WE congratulate the following men on having passed their test, especially Craddock, who has only one arm:—W. T. West, J. A. Dunlop, E. R. Breed, Mr. McLean, J. Palmer, R. T. Tudor, W. M. Jack, T. W. Gell, C. R. Masters, E. Hall, J. Francis, A. E. Smith, F. Milligan, J. Simpson, W. W. Wakeland, A. Taylor, A. Loveridge, J. G. Straughton, E. C. Oram, D. W. Campbell, D. A. Tregent, P. C. Spurgeon, E. Varley, G. Craddock, A. Tillotson, T. Gibson, J. D. Lee, F. V. Hesketh, E. Evers, H. C. Nightingale, J. H. Poole, S. Ash, and G. H. Orrow.

### Massage

HEARTY congratulations are due to E. Benton for his splendid success in the last Massage Examination. He appears in the list as No. 11 from the top, and only just misses Distinction, his marks being over 75 per cent.

The remainder of the successful students in the order of passing are:—*Between 65 and 75 per cent.:* A. J. Caple, S. Goburn, Lieut. Millard, W. S. Peary, A. Rees, C. Bregazzi, J. H. Burt, H. Costigan, H. McDowell, J. Boyce, and C. G. V. Russell. *Between 51 and 64 per cent.:* R. J. London, A. Brown, and D. McPhee.

It is worthy of notice that the two massage students who have done best in the examinations since the beginning of

the St. Dunstan's entrants, viz., D. J. McDougall, who achieved "Distinction," and E. Benton, with marks "over 75," are both quite blind. *F. G. B.*

### Netting

WE offer very special congratulation to G. W. Killingbeck, who is our first one-handed netter. His artificial left-hand enables him to net extremely well, and his first hammocks are models of good work.

G. Eades is also to be congratulated on his share of the beautiful embroidered Altar Frontal made entirely by disabled soldiers, and presented to St. Paul's Cathedral for the "Thanksgiving" service

on July 8th. His name and regiment is written on a page of vellum, decorated with a special design for St. Dunstan's, which will be bound up into a book made of all the other representative signatures, and forming a permanent record of St. Paul's.

The Frontal, which is of silken embroidered damask, is designed to represent victory gained through suffering, its centre panel portraying the Holy Grail in golden silk, representing suffering, and those on either side bearing the palms of victory, also in golden silk. The end panels, one of which is worked by troops from the Dominions, are purely decorative in the Italian style, as is the super frontal.

*G. H. W.*

## What to do on a Poultry Farm in September

THE time of year has arrived when the stock should be well sorted over, and a decision arrived at as to which birds are likely to be profitable to keep; any that do not, for some reason or other, come up to this standard should be disposed of at the first opportunity. All two-year-old hens not required for breeding purposes, surplus cockerels, backward or in any way deformed pullets, are taking up room and time that should be devoted to stock which has every prospect of doing and paying well, if given a fair chance.

While it is a pleasure to have pullets starting to lay early in life, yet it seldom pays to force them to commence, for the eggs are generally on the small side, and the bird invariably continues to lay similar eggs throughout the whole year. Much better to keep the pullets back an extra few weeks, so that they are fully developed before they start laying. Perhaps nothing retards laying more than a change of house, or run, feeding on nothing but whole grain, and not providing nest-boxes.

Owing perhaps to the avidity with which most fowls eat it, a great many poultry keepers give their poultry whole maize;

owing to its fat-producing properties it is a useful cold weather feed only, and then not every day. Mixed grain has been largely used in the last few years, but is never as good a feed as sound, clipped, white oats, of which we now have a most excellent sample.

Do not forget green food daily, especially for the moulting hens; some flowers of sulphur in the soft food twice, or even three times a week, will also help the hens cast their old feathers, and an occasional feed of hemp-seed, or sunflower-seed, will assist in the production of the new plumage.

Get the whole place in good order before the bad weather arrives, pay attention to making houses water-tight, clean, and sweet; tidy up runs, see that posts and gates are in good condition to withstand autumn and winter gales; clean and repair and put under cover all appliances, such as coops, foster mothers, chick troughs, etc., not required. Any pullets to be trap-nested should be sorted out, ringed, and placed in proper houses at first opportunity, so that a fair test from October 1st to December or even January can be made. *J. P.*

## News from the Workshops

VERY significant evidence of the rapid development of the work of St. Dunstan's After-Care Department is given by the fact that the Department's visiting staff has, during August, been strengthened by the addition of five instructors from the Workshops.

Mr. Fred Weeks was the first instructor in boot repairing, and his name is familiar to those who began work in the conservatory of the house and continued in the first Workshop that was erected, and also to the large numbers of men who are now working in the big building which has become necessary.

He has been particularly successful in his instruction, and has imparted to the blind men under his care useful information in methods of handling their tools and manipulating the material and articles to be repaired under their special circumstances. He will receive a cordial welcome from those to whom he will go, not only for the assistance he will be able to give, but on his own account, as a man who has always devoted himself to their interests.

Mr. C. Parkinson has for a short time been working chiefly with the cloggers, and has rapidly adapted himself to the work. Mr. T. H. Panton has been a very valuable instructor in the Mat Department, and Mr. J. Sherratt's bright manner and skilful instruction has been much appreciated by the basket-makers.

Mr. C. Luck, boot instructor, has also become an After-Care Visitor in the North of England, and he has already received a hearty welcome from some men he visited in the Wigan district.

During the period when the Workshops were closed all the instructors had the pleasure of assisting the men who have recently completed their training to commence their new career in business, and

also paid some visits to men who have left for a little while. This has given pleasure to all concerned, has provided another link between St. Dunstaners of different periods, and has given the instructors themselves much information as to the conditions under which St. Dunstaners have to work in their homes, which should be valuable to them in future training.

The test work in baskets, boots and mats, which the men have been doing towards the end of the term in order to qualify for their proficiency certificates, has been of a very high order, and we should like to commend each man without exception.

In the Mat Department work done by W. Cox and C. F. Hornsby has attracted attention.

In the Basket Department F. J. Brown relinquishes his appointment as pupil teacher, and at his own request will have a month on the plank to gain experience in several new makes. The square baskets which he has been doing recently are excellent specimens. As a pupil teacher he was devoted to his men, and was successful in imparting his own accurate knowledge. Some barrel baskets made by T. Ashall during July were of a very good type, and one turned out by W. Hildick immediately on his return was quite up to the mark.

In the Picture-framing Department E. Barrett has been doing good work, while we understand that J. Burley has been experimenting at home during the holidays with French polishing with very good results. He is a careful worker, and will make good.

The following men left the Workshops at the conclusion of the summer term:—

J. Kennedy (baskets), W. Martin (baskets), G. Moore (baskets and mats), T. E. Langham (boots), T. Murphy (boots and clogs), W. Nash (boots and mats), F. Thatcher (boots and mats), J. Heeley (boots), J. H. New (boots, clogs, and mats), W. Rushen (boots and mats), A.

Scott (boots and mats), M. Anker (boots), S. Wilding (boots), H. G. Gransby (boots and mats), F. J. Mears (boots and mats), S. Bakewell (boots and clogs), W. H. Hines (boots and mats), A. Jenkins (boots), G. S. Bailey (mats).

W. H. O.

## Peace

"HE giveth His loved ones peace," they say;

Of the lads who tread the long, long way,  
When their bounding hearts for ever cease,

"He giveth His loved ones peace."

"He giveth His loved ones peace," and so  
His father bows his proud head low,  
While his mother strives her tears to cease,

"He giveth His loved ones peace."

But what of the child he loved, his wife,  
Dearer to him, by far, than life,  
Can we say to them while their funds decrease,

"He giveth His loved ones peace?"

If we be the ones He loves, then we  
Have a bounden duty clear to see,  
That the widow's cruse shall ne'er decrease

Till He gives those loved ones peace.

Third Reserve.

## Airmen's Dark Searchlights

NIGHT GUIDES FOR NIGHT FLYERS

ONE of the most remarkable improvements in directing airmen has just been announced by Mr. Godfrey Isaacs, of the famous Marconi Company.

This remarkable invention is a new wireless searchlight, but with no light! What actually happens is this: By means of a patent transmitter the wireless waves are concentrated into a wireless beam like the beam of a searchlight. These beams will be placed round towns, and will regularly and automatically flash into the skies the name of the town, in exactly the same way that a seaman knows the name of a lightship or lighthouse by the intermittent flashing of the light.

So long, for example, as an airman is flying over Sheffield he will receive the signal "This is Sheffield." He will know his position, in fact, just as well as the railway passenger does reading the names on the platforms he passes through.

## It Has Come True

AS Jerusalem, previous to being captured by the British in December, 1917, had been under Turkish misrule for 400 years, it was thought by the natives of Palestine that it would for ever remain in the hands of the Turks. Hence the old saying common amongst the inhabitants which runs: "When the waters of the Nile flow into Palestine the Turk will be ousted from Jerusalem."

As geography tells us this is impossible, it is interesting to know it actually did happen. What seemed impossible was effected by the Engineers of the Egyptian Expeditionary Force. After overcoming great difficulties, they succeeded in laying a large water-pipe across the bed of the Suez Canal near Kantara. Through this pipe flows water from the River Nile. The water eventually finds its way through the Sinai Desert and into Palestine. Thus it came to pass that Jerusalem was taken two months after "the waters of the Nile flowed into Palestine."

## Church and Catholic Chapel Notes

### Church Notes

I AM looking forward to having a very happy and inspiring term's work.

With such keen and enthusiastic Church workers, and with the men responding so well, there is no reason why we should not have our beautiful little chapel well filled at each service. On Sunday, September 7th, I held the first of a series of short Sunday morning addresses in the chapel, on "The Foundations of Belief," and was very gratified by the excellent attendance.

There will be special celebrations of the Holy Communion at 7.15 a.m., on Sunday, 21st September (St. Matthew's Day).

The Special Intercession Service for the Workers will be held each Friday at 1.45 p.m. All workers are most cordially invited.

Choir practice will be held on Tuesdays at 6 p.m., and Fridays at 12 noon. We shall be most grateful for any assistance from staff or men.

All who are interested in St. Dunstan's will heartily congratulate our Hon. Chaplain (the Rev. Ernest Sharpe, M.A.) in his appointment by the Bishop of London as Vicar and Rural Dean of Paddington. The position is one of the most important in the Diocese, and Mr. Sharpe will have a great field for service. All wish him Godspeed.

We are delighted to know that Mr. Sharpe will not sever his happy connection with St. Dunstan's, but will gladly give his helpful assistance in any way possible. He hopes to take the morning service at 10.15 a.m. on Sunday, 28th September, and I trust there will be a

good congregation to welcome him, and in this way show our keen appreciation for all the splendid work he has done for St. Dunstan's.

E. W.

### Catholic Chapel Notes

THE chapel re-opened on Sunday, August 31st, with the usual services.

The Chaplain would be glad to hear of any new Catholics who have arrived since the holidays.

The photos of the chapel and the congregation that were taken at the end of last term were very successful, and soon there will be a supply sufficient to satisfy all demands. Those men who have left will have copies forwarded to them.

P. H.

### Marriages

ON Saturday, June 28th, F. P. Best was married at St. Marylebone Parish Church, to Miss M. L. Hilten.

On Thursday, July 3rd, R. J. London was married, at St. Marylebone Parish Church, to Miss D. M. R. Leonard.

On Saturday, July 5th, G. W. Crow was married, at Hamilton Rooms, Edinburgh, to Miss J. G. Hunter.

On Saturday, July 12th, G. V. E. Watson was married, at St. Marylebone Parish Church, to Miss H. M. Temple.

On Saturday, July 12th, H. Gover was married, at Christchurch, Wanstead, to Miss E. C. Pearson.

On Monday, July 14th, J. M. Broadley was married, at St. Marylebone Parish Church, to Miss C. E. Cholmondeley.

On Monday, July 21st, C. Rideout was married, at St. Marylebone Parish Church, to Miss C. Fone.

On Friday, July 24th, W. G. Heritage was married, at St. Marylebone Parish Church, to Miss D. A. Nutt.

On Saturday, August 2nd, H. Bennett was married, at St. Silas Church, Bristol, to Miss R. Randall.

On Tuesday, August 5th, W. Robinson was married, at St. Andrew's Church, Welby, to Miss E. Robinson.

On Wednesday, August 27th, J. McAndrew was married at St. Joseph's Church, Christchurch, to Miss E. F. Tatnall.



Mr. Percy Goulden, the blind Clogging Instructor in the Workshops, acted as best man at the wedding of A. Allen, and is, we understand, to be married to Miss Marshall, the sister of the bride this month.



### Flying Mo-Bikes Next

THE development of flying will bring about many remarkable inventions. Not the least of these is the aerial motor-cycle.

Obviously the ordinary aeroplane will be far too expensive a luxury to come within the reach of the average man's pocket.

So far the lowest priced machine on the market is a Bantam, at £450. But there has been invented by a Swiss engineer a motor-cycle aeroplane. It is similar to the ordinary motor-cycle, but a trifle larger, with a flexible back wheel.

Its dimensions on the road, with wings folded, are 6ft. wide and 12ft. 9ins. in length; in flight, from wing to wing, its span is about 23ft.

The steering arrangement resembles that of the ordinary motor-cycle, and it can be controlled either in the air or on the road with one hand. Fitted with a 30-h.p. engine, a flying speed is attained of fifty-six miles per hour, which is quite sufficient to ensure an easy rise from earth and steady flight, the propeller developing 1,400 revolutions per minute. The total weight of this novel machine

Births		
NICHOLAS, I., son	-	June 30, 1919.
HILL, S. T., daughter	-	July 9, 1919.
BROGEN, W., son	-	July 11, 1919.
HOLMES, W., daughter	-	July 11, 1919.
HERMON, A., daughter	-	July 28, 1919.
CREASEY, F. R., daughter	-	Aug. 1, 1919.
DENNIS, G. T., daughter	-	Aug. 10, 1919.
BOCKING, G. A., daughter	-	Aug. 22, 1919.
HOLLINS, G. A., daughter	-	Sept. 1, 1919.
GREEN, G., son	-	Sept. 2, 1919.
LAWRENCE, H., son	-	Sept. —, 1919.
BULL, S., daughter	-	Sept. 4, 1919.



### Baptism

ON July 6th, Arthur Frederick George Lenderyou, the son of J. Lenderyou, was baptised in the Chapel.



is approximately 500lbs., including that of the pilot. Immediately the machine touches ground an automatic arrangement brings the propeller to a standstill and enables the machine to be run as an ordinary motor-cycle at a speed of forty miles per hour.

It is with such a machine as this that private flying is more likely to develop than in any other phase, for, manufactured in large numbers, the demand would be such as to bring the flying motor-cycle to a price not greatly in excess of the ordinary high-power motor-bike. For country runs, or "flights," an aerial motor-cycle combination will probably be highly popular a year or two hence.



### Chess

WILL any St. Dunstaner who would like to learn chess, or who already plays and would like a game, get in touch with A. L. Kauffman at the Bungalow Annexe. Chess is one of the most suitable indoor games for blind people, and is one in which the lack of sight is no handicap.

## Shorthand Clerk to Judge

HOW AN ARMLESS MAN WON THROUGH

IF you had lost both arms in a railway accident what would you do?

"I should be too helpless to do anything" ninety-nine people out of a hundred would reply.

But there is no reason why you should be helpless. There is no reason why you should be placed on the shelf because you have lost an arm or two, or even a leg or so. That is, if you have sufficient determination and grit.

Listen to the story of Quentin Corley, who, bereft of his two arms in a railway accident, rose, at the age of twenty-nine, to the position of Superior Judge of Dallas County, Texas, the youngest man ever to receive that honour. It is a story not only of triumph for himself over a fearful handicap, but the story of a man who has rendered invaluable service to suffering humanity—those who, like himself, were maimed for life. He has won through, so why should other cripples despair?

### SPARE TIME STUDY.

When Judge Corley was so cruelly deprived of his arms, he refused to sit down and bemoan his fate, although the accident made it impossible for him to earn his living as a stenographer, the occupation he had been following. Neither could he realize his ambition of becoming a civil engineer. So he took the best job he could get in a store, at seven shillings a day, and studied law in that part of his spare time not devoted to inventing mechanical appliances to take the place of hands and arms.

Here again we get an illustration of his indomitable perseverance. He wanted to shave himself, wash, and comb his hair, fasten his collar, tie his necktie, write, drive a motor-car, and take part in the local bowling tournament by way of relaxation.

He refused to be beaten. "Doubt, despair, self-pity, and a dozen other hobgoblins tried to drag me into the Slough of Despond," he says in *Forbes' Magazine*;

"but I laughed in their faces and determined that life, after all, is what we ourselves make it. I knew that, having been allowed to live, there was reason for my existence, and that, if I only tried to justify it, happiness could be an ever-present quality in my life."

### ASKED NO FAVOURS.

And so he went to work, inventing apparatus which made him independent of all help. His mechanical arms and hands made him as good as any man. He refused to be pitied.

"I have never," he says, "asked a favour of anyone. All I wanted was to be alone to take care of myself. It was hard at first, but it grew easier with practise."

Having accomplished so much for himself, Judge Corley turned to help the armless heroes of the war, with the result that he has invented ingenious work hooks for heavy farm labour, and for driving teams, ploughing or digging, an artificial hand, the fingers of which are controlled by the muscles of the shoulder, and an automatic elbow-joint for those whose arms are amputated above the elbow. "No matter what your handicap, there is still much for you to do in the world," and with this motto he exhorts the limbless to "keep trying."

### Tit Bits.



A MAN was seen driving a horse with a heavy load on its back up a very steep hill. He had to whip the horse to get it to go. A gentleman who saw all this went over and stopped him.

"Surely," he said, "you are not going to force that poor old horse up that hill? You could go another road home. Don't you know it is a sin for you to be so cruel?"

"I'll be blowed," growled the driver. "The blooming horse can't see the hill; it's blind."

## On Braille

DEAR friend, when first you taught  
my hand  
To wander o'er the maze of dots,  
It seemed at first a barren land  
Of hills and mounds and beastly spots.  
It seemed as if the pimples were  
Some dread disease the paper had,  
And each collection was a blur,  
That made my fingers nearly mad.  
I've mastered nearly all those dots  
(Although at first they mastered me).  
But now I punish all the spots,  
And kill them all the dot four D.

And when I've got some dot four T,  
With two, four, six, I shall read,  
For books are still a joy to me,  
And Braille is still a friend indeed.  
At first I thought that all those dots  
Would make a fellow dotty too!  
And chasing those elusive spots  
Would leave my digits feeling blue.  
But still, my friend, I will admit  
It is a fascinating game,  
And when I've passed my testing "bit,"  
I'll thank you kindly for the same.

W. V. Clampett.

## How the Blood is Poisoned

WHAT HAPPENS WHEN THE SKIN IS BROKEN

THE importance of being healthy and fit to cope with those minor accidents that are of every-day occurrence is illustrated by what happens to a man who, being out of condition, succumbs to so trivial an injury as a scratched finger.

Immediately the skin has been scratched by a rusty nail, or pricked with a dirty pin, there follows pain, heat, redness and swelling—the first signs of inflammation. What does this mean? It means that the local intelligence department of the body has notified headquarters that an attack has been made on its outermost defences in the skin, and that an immediate mobilisation of its defending forces has been ordered, with a view to closing the breach and repelling any threatened invasion by armies of blood-poisoners.

The pain we feel is the flashing of the danger signal from the local station. The heat, redness and swelling are caused by the rapid congestion of our lines of communication (arteries and veins) by the fighting units of the blood, with their transport stores and commissariat.

THE WAR AGAINST DISEASES.

This is no mere fancy picture. It is the real thing, though on a minute scale.

A state of war exists between the invading units of disease and death on the one hand and the defending millions of the body on the other.

When in a healthy state an injured man's body should be able to put in the field countless millions of defenders in the shape of white blood cells, whose job it is when on a war footing to fall upon and annihilate the invading enemy armies. Let us assume that on that pin point, which is the spear head of the demon army of disease, there were some thousands of invaders. The numbers are soon doubled and quadrupled, and rapidly become millions. Their method of recruiting is simple but efficient; each recruit speedily divides into two, the two into four, and so on. The body's defending army of white blood cells (the red corpuscles playing the part of the A.S.C.) move down the arteries of traffic in hundreds of thousands and concentrate in their millions at the point of attack.

Then the attack is opened and the battle between the white cells and the demon armies begins. Through the field glasses (in the form of a microscope) each jelly-like white cell can be observed to

alter its shape, surround one demon enemy after another, until it has actually gobbled up and digested ten, fifty, or even a hundred of them.

THE DANGER OF C3 BLOOD.

When the fighting is favourable to the white cells, the battle proceeds till every enemy unit has been devoured by a white cell and the battlefield cleaned up. When the defending army retires on its laurels, the units get demobbed, the local conditions become normal, and the wound in the skin healed. But, as must happen in the case of an unhealthy

man with C3 blood in his veins, the result may be very different. Something has gone wrong with his white-cell army, or with his red-celled commissariat and supply columns.

Vainly do the white cells attempt to devastate the enemy by devouring them, and even liberating a kind of poison gas. The demon army moves forward in countless hordes, the white cells die in their millions, and the war continues until every defence is broken down, and the trivial incident of the pricked finger ends in blood-poisoning.



## Learning to Fly Indoors

WOULD you like to take flying lessons without leaving Mother Earth? Remarkable as it sounds, it is now possible to become an expert airman without having driven anything more dangerous than a wonderful machine called the "Orientator," a new invention which enables the budding pilot to practice the "broken-leaf dive" and "loop the loop" while safe inside the practice shed at an aerodrome.

This marvellous machine, which will save hundreds of lives during the next few years by familiarising the beginner with the various loops, turns, and dives, is composed of steel hoops fastened together on the universal joint system. Inside the steel rings there is an ordinary pilot's seat, complete wall, and the control levers to drive the engines, exactly the same as an aeroplane.

Once in this seat the pilot can put himself through all the evolutions which he is to experience up among the clouds, without being at any time more than six feet off the ground.

In this way any mistakes he may make are easily corrected by the instructor, before any harm is done, and a slip, which would have been followed by a certain "crash" in real flight, has no more harmful result than a lecture for the pupil on what to avoid in future.

## Butter from Boots

IN preparing hides for market large quantities of scraps remain over, but these are no longer wasted. It has been discovered that they contain no less than six hundred and fifty pounds of grease to a ton.

This grease contains both tallow and stearine, which, when purified, can be used in the manufacture of some of the coarser forms of margarine. It is possible that, during the war, you may have buttered your bread with the refuse of hides from which your boots were made.

The grease is usually extracted by means of a naphtha solvent, and the six hundred and fifty pounds are worth a ten pound note.

The residue left over, after the grease has been got out, contains six per cent. of nitrogen, which is valuable as a fertiliser, and to make this available the waste is treated with sulphuric acid.

If this treatment is not adopted the greaseless residue can be worked up for a cheap soling material, an insulating substance, or for agricultural belting for washes, care straps, and other purposes.

During the war the Germans saved every atom of scrap leather for such purposes, and by mixing the scrap with asbestos produced a very useful insulating substance. None of it was spared for boot soles, wood being generally employed for this purpose as a substitute for leather.

## Aeroplane Passenger Service of To-day

THE following interesting article on the possibilities of aerial passenger services is taken from a recent issue of the *Scientific American* :—

"The aeronautical industry is now getting through its period of reconstruction. During the war all aeroplanes were talked of in terms of speed, climbing ability, manœuvrability, bomb-carrying capacity, armament, and other expressions of warlike intentions. But to-day, with the war at an end, and after satisfying the comparatively light demand of the military establishments of various countries, all thoughts are being directed towards passenger-carrying, cargo-carrying and mail service.

"Bombing planes are most susceptible to conversion into peaceful planes. Thus the great bombing planes of all leading countries are rapidly being converted into passenger- and cargo-carrying machines. Typical of this activity is the passenger-carrying Vickers-Vimy biplane, which in general design differs but slightly from the Vickers-Vimy bomber of the great war. As a war machine the bomber carried a crew of four—a gunnerbomber, a pilot, a mechanic, and a rear gunner. When the same type of machine was prepared for the trans-Atlantic flight of Alcock and Brown the space ordinarily given over the bombs was taken up by extra fuel tanks. In the more recent commercial model the body has been somewhat altered so as to provide ample room for ten passengers, while the two pilots sit up forward in a cockpit.

"The seats for ten passengers are arranged on either side of an aisle. Baggage is stored up front under the pilots. There is a porthole for each passenger. Access to the passenger coach is gained through a watertight door. The cabin will float upright in water, so that there is no grave danger if the machine is forced to alight on a river, lake or sea. The engines are provided with silencers

in order to enhance the comfort of the passengers. Most remarkable of all perhaps is the fact that the machine can maintain a speed of 70 miles per hour with one engine in operation, whereas the speed is somewhat better than 100 miles an hour with the two engines running.

"Photographs recently from Germany indicate that the German aircraft constructors are going right ahead with their peace plans. The huge bombing planes are being converted into passenger carriers, the Farman 'Goliath,' in particular, representing an interesting case of French aviation reconstruction. The 'Goliath' is engaged in carrying passengers between Paris and Brussels, on a regular schedule, and the air line is being patronized by French and Belgians alike.

"So it is evident that the day of the aeroplane passenger service is here. The excellent performance of the aeroplane in the late war, considered as a whole, has convinced the world at large that there is little danger in the present highly developed aeroplane. Indeed, there are numerous aviators in the United States to-day who have gone into the business of taking passengers aloft for a modest remuneration. Some of these aerial establishments do a flourishing trade on Sundays and holidays, taking up one passenger after another for a fifteen minute flight. In fact, it is the overcoming of the heretofore prevailing fear on the part of the public that has proved the greatest detriment to aeroplane passenger service, and now that this fear is definitely shattered there seems no obstacle to progress along these lines."



TEUTONIC INTRIGUE.—The Village Oracle: "You mark my words—these 'ere Germans 'll do us to a finish. They'll pay the bloomin' six thousand millions, or whatever it is, in threepenny-bits, and then 'oo the 'ell's going to count it."—*Punch*.

## Secrets of War and State

ALL ABOUT CIPHERS, CODES AND OTHER METHODS OF CONVEYING INFORMATION

THERE are few besides the initiated who have the slightest conception what extraordinary methods are employed for conveying secret information, especially during war-time. The Morse code woven into cloth, chess problems in the newspapers, invisible writings on the human body, besides many others, have been used. Before describing actual instances and methods, let us see the general ideas underlying the use of secret writing.

Secret writing is used by the State, the Army and the Navy, to guard the secrets. These are called ciphers and must not be confused with "codes" which are used in commerce. The ciphers employed in messages of State and military communication are very cleverly made. To create them is difficult enough; to decipher an epistle composed with their help is only possible to those who hold the key or the cipher itself. To obtain possession of such a cipher in war-time for his country is the dream of every would-be "agent." The price offered to an individual who has access to it is prodigious. A photograph of its pages is sufficient, and therefore these ciphers are guarded with extreme vigilance. The criminal and paid spy, on the other hand, use as a rule far simpler methods. They are often composed of cryptograms made with the help of simple transpositions of letters, or by stencil.

The examination of a suspected document is interesting. First of all it is carefully read, and particular note made of anything seemingly devoid of sense. If there is more than one involved remark, special attention is given; or if there should be more than one insignificant scrawl, it may turn out to be cipher writing. The letter is then submitted to the light test, which may reveal signs of chemically prepared paper, or show up minute pin-pricks under certain letters. This was for a time a favourite method

of conveying information by newspaper. Again, the document is submitted to tests for invisible ink—from the heat and warm-water test to the highest tests modern chemical science has been able to devise. One of the most difficult inks to deal with is visible ink made invisible after writing by chemical process and only to be restored by one re-agent. A difficult case may occur in which a stencil paper has been used. The letter may have every appearance of being bona-fide, and only the holder of the duplicate stencil paper can read the hidden message by placing the stencil on the lines and using only those letters which he can see through the slits of the stencil.

CARRIED BY THE CARDS.

Packs of cards have often been used for conveying some secret message. One of the most interesting cases happened not so very long ago. Mr. X. lived in a very fine house on a hill not far from the East Coast. He was an old inhabitant and naturalised. He lived with his wife and daughter just outside one of the prohibited areas. Suddenly he developed a liking for playing patience and bridge. His liking developed into a passion, and he was continually buying fresh packs. Three-handed bridge is not much fun, and the whole thing struck the patriotic servant as peculiar. She noticed that the packs never remained in the house long, but were sent off to an address right on the coast. One evening she watched through the keyhole. She then noticed that no bridge was played, but something was done to the pack, and very wisely she informed the police. The truth was then revealed that the man was sending information abroad by playing card cipher. The pack, which should be new, was arranged in a known order. It was then held tightly together, and a series of small figures written on the side. The pack



Secrets of War and State—Continued

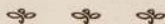
was then well shuffled, packed up and despatched.

The highest form of conveying information is the personal method. It is impossible, however, for an individual to carry all that may be told him in his memory, but it is also of the highest importance that nothing shall be omitted and that nothing incriminating shall be found on him if he is searched. Therefore an aid to the memory of some sort must be evolved. For some time at the commencement of the war the following simple method was employed—until it

was found out. Words, dates, numbers, etc., were written on the man's flesh in milk. This could not be seen when the man stripped, but when the skin was warmed and fine graphite-powder sprinkled on the part it adhered to the writing, and could be read even a fortnight after it was written. But, of course, he must not wash for that period.

These are just a few of the many methods of secret writing employed. To record them all in detail would take up two or three thick volumes.

*Answers.*



**Milk Mysteries—Umbrella Handles from the Cow!**

**M**ILK is one of Nature's familiar products about which even scientists confess they know next to nothing. To remedy this state of things a Milk Research Institute is being established at Reading, at a cost of £60,000, part of which sum is being provided by the Government.

Why does milk go sour? This is one of the problems Captain Rupert Guinness, the head of the Institute, will attempt to solve.

Over a million pounds a year is lost to the country through this provoking habit of the nourishment of childhood. It is believed to be caused by a microbe, but vast armies of microbes settle in milk directly it comes from the cow's udder, and multiply at the rate of a million every twenty-four hours.

The average number of microbes to the teaspoonful in milk kept under the most sanitary conditions is 6,000,000. Some of them are probably doing useful work, whilst others are decidedly pernicious.

Science is, however, on their track, and soon we may expect some startling news

about milk. One of the most likely events is that directly certain lactic germs are properly understood we shall become independent of cows and dairy farmers, and manufacture at infinitesimal cost synthetic milk, which, in addition to being identical with cow's milk, will be free from noxious germs.

It has already been found that sour milk and the waste from butter and cheese making can be turned into a substance resembling ivory in appearance and texture. This substance is known as galanite or kaisine.

It is manufactured by compressing sour milk and its waste products by powerful hydraulic machinery into solid slabs or sheets. A surprising variety of articles—umbrella handles, combs, cigar and cigarette holders, pipes, buttons, and billiard balls—are manufactured from this by-product of milk. It can be made to imitate ivory, tortoise-shell, amber, and vulcanite in appearance, and being non-inflammable, is safe to use for combs and belts, which are so often the cause of disaster when made of celluloid.

*Tit Bits.*