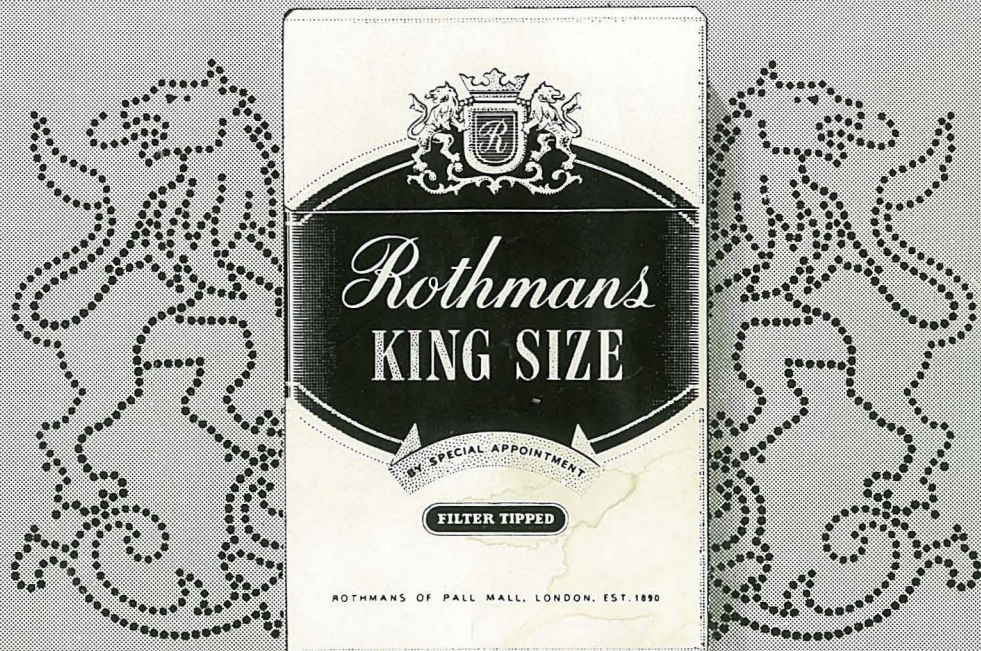


Vol.1 No.1
SUMMER 1964

The Journal of the British Parachute Association

An aerial, high-angle photograph of two skydivers in formation. The skydiver on the right is inverted, with legs tucked and arms extended. The skydiver on the left is in a more spread position. Below them, a city with a grid-like street pattern and some buildings is visible. The sky is filled with a light, hazy cloud layer. The overall tone is dark and grainy, typical of a vintage magazine cover.

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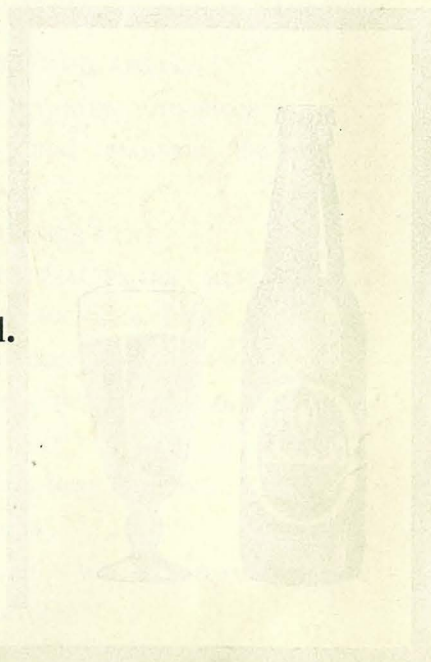
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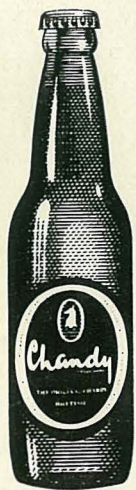
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Sport Parachutist

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Front Cover Photo A pair of skydivers eminently happy in their natural element.

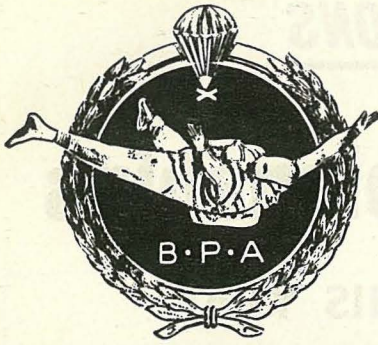
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EDITORIALY...

TARGET: a new national magazine devoted entirely to parachuting in all its aspects and available by June 1st, 1964.

An exciting prospect for all of us, but, as with anything worth while, sport parachuting has problems to iron out. In this connection, I should like to bring to your attention the efforts of the Committee of the British Parachute Association. Without this *force majeure* behind it, sport parachuting would have taken years to accomplish all that has been done for it in such a short space of time.

Many meetings are held, and a tremendous amount of discussion has taken place in an effort to ensure the secure future of sport parachuting in this country.

The hardest-working member is, without doubt, the helmsman and Chairman, Lt.-Col. Dare Wilson, M.B.E., M.C. As a full-time regular soldier of undoubted parachuting ability — and skill in Committee — he is a most powerful protagonist for the Association and devotes his entire off-duty hours to the benefit of sport parachuting.

There are many others deserving of mention, who will understand, I know, that they cannot all be named — grateful as we are to them. But certainly we owe a great debt to the Secretary-General, Group Captain Caster, M.C., who must be the busiest retired officer there is. It is sad indeed that, of them all, perhaps the most dedicated and popular, Mike Reilly, is no longer with us and able to contribute to the scene and to *Sport Parachutist*.

In this first issue, your editors have endeavoured to

present a varied and interesting selection of articles and photographs, both for the active parachutist — sportive and military — and for the large number of people who have often thought about having a go but, faced with much else to do, have put the idea on one side for a while.

Here you should find the answers to your questions if you are thinking of taking up the sport. The money side is explained in detail, showing that it is not nearly as expensive as everyone seems to think; also the medical aspect of parachuting and much more for you to read about. Should you need any encouragement, read Sir Godfrey Nicholson's article about taking up the sport at 62 years of age!

It is hoped that the magazine will be published quarterly and perhaps bi-monthly when we have a larger following. At this point, I should like to thank most sincerely all those who have sent articles and photographs for publication. All contributions are very welcome, so please make every effort to keep us supplied for the future editions, and start thinking something up NOW!

This is your magazine, get to work!

It only remains to wish you all safe, happy jumping and good weather, and to ask you to realise that the vital support of the British Parachute Association is of paramount importance in securing a great future for this increasingly popular sport in Great Britain.

Nota Bene

Club Secretaries were notified on at least three separate occasions, during the last four months, that the final date of entry for news items from their clubs was April 30th. Not only has the magazine gone to press without any contributions from these Secretaries, but not one of them thought fit to reply.

Surely, club members will agree, if a magazine for

sports parachutists like this is to thrive it will have to be fed with news by those interested in the sport.

I suggest that individual club members tackle their Secretaries on this subject — also about other B.P.A. communications of greater interest which should have been passed on — and check on just how good a Club Secretary you really have!

◀ Photo by courtesy of the "Daily Telegraph"

SOME INTERIM IMPRESSIONS

British National Championships

INCREASE IN TEAM ENTRIES THIS YEAR

AS this article goes to press, the first stage of the 1964 Championships is exactly half-way through, and the editors have asked for an interim report to meet the deadline for the first issue of *Sport Parachutist*. Although we have already made a start on all events bar one, I do not propose to include any results, all of which at this stage might be misleading. Because of the decision to have three jumps in each event and discard the worst, it is pointless to produce interim results. It is however possible to produce some interim impressions and this I shall try to do.

The Championships this year are being split into two phases: The Preliminaries at Netheravon between May 9 and 18 and the Finals at Blackbushe on June 13 and 14. They are incidentally the fourth National Championships to be held since the birth of the British Parachute Association in 1960, the first three being at Kidlington, Goodwood and Sywell.

The first noteworthy point is the entry, which this year totals 48. This of course is an increase over all the previous years, and, what is no less interesting is the entry this year of three ladies. Even if we are unable to produce a full ladies' team in this year's World Championships, we shall almost certainly enter one or two individuals.

Consistent with the increased entries and the greater number of jumps which it is planned to achieve (weather permitting), it has also been necessary to assemble more aircraft, and we are fortunate to have the use of an Army Rapide, a R.A.F. Rapide and a Dragon of "Chrisair". With this lift available we can get through a round in less than two hours, depending on the height of the event.

USUAL LIMITING FACTOR

The weather has, as usual, been the principal limiting factor, and out of the first five days, parachuting has been possible only on part of three days. Even so, with reasonable luck we should get through the programme.

A satisfactory feature is the increase in the number of team entries which this year total eight, of which two are civilian and six Service. Of the latter, one is a joint Army/R.A.F. team from Cyprus—an enterprising bit of planning favoured by a convenient rotation of units.

On the subject of administration there is much to be said, but how much of it is of interest to competitors is another matter. Perhaps they should know something of the complexities of the arrangements and of the many months and hundreds of hours of preparations.

Since it is rarely possible or practicable to find a host unit, the work has to be allotted piece by piece to a

number of units, each of which must be willing to contribute something. The number of units which have contributed in fact, to the Championships in one way or another is nearly 20 and put in the simplest terms, without them the Championships would not be taking place.

Perhaps the most important people—apart from the competitors themselves—are the judges. Once again the U.S. Army has provided a first-class team of experienced men, this time under the direction of Major Vranish.

TEAMWORK ENSURES SUCCESS

This is not to imply that all the others who are helping to see the event through are of little consequence, in fact it is teamwork which eventually ensures the success of an event such as this. What one would like to see is, naturally, a greater measure of support and voluntary effort from the Clubs.

The shining example of the Hereford Parachute Club who travelled to Netheravon on the first Sunday and volunteered to a man for whatever work needed doing, is unfortunately all too rare. They were, incidentally, given a dozen shovels and asked to loosen up the soil in the centre of the target area; and at this task they toiled for much of the day.

The question will inevitably arise as to whether Netheravon was a good choice—even though there were few serious rivals. The opinion of many is that it is. There are no metal runways, few obstacles, a considerable expanse of level DZ, and many square miles of Salisbury Plain on all sides—some of which have already been put to use in the style event!

My own thoughts on the Championships of the future are that, somehow or other, arrangements must be made to house and feed all competitors and officials together within the immediate area of the competition. Furthermore, knowing how much work is involved in preparation, and the extent to which we shall almost certainly have to lean on the Services for some years to come, it may be that we should now be thinking of returning annually to the same location, where on each succeeding occasion the organisation should be of a higher standard.

Finally, I should not omit the happiest of my early impressions—that this year's Championships are the friendliest to date, and it has been particularly pleasing to see how much of the reserve which has typified previous events has quite suddenly disappeared.

I feel that all of us would like to see this trend continue.

R.D.W.

A MILESTONE

By the Chairman

EVERY great sport has its milestones. We who choose to parachute for sport think that ours is one of the greatest, and those who have had any part to play in the birth of *Sport Parachutist* believe that it will represent an important contribution. For some years the news and views of the British Parachute Association have been confined to a periodical newsletter. It has served its purpose well, and those who have edited, printed and circulated it deserve all our thanks. But as many of us have agreed, something more ambitious is long overdue.

In this first issue I should like to contribute three thoughts. Firstly, a great amount of hard work has already been involved, and without a great deal of effort on the part of a few individuals this magazine would not have gone further than a resolution accepted at the B.P.A.'s last Annual General Meeting. It is one thing to agree on what ought to be done; it is quite another to achieve it.

So much for the start, but in the long run it is the sustained effort to keep a magazine in circulation that provides the greatest challenge. To meet this it must be kept progressive, constructive and interesting, and the editors will be looking for many contributors. I am sure they will be forthcoming, because in parachuting there is no lack of new ideas.

Secondly, since ours is a young sport many of the rules, practices and techniques connected with it are subject to change, as we learn more about it. In the absence of firmly established standards and methods there is a natural tendency for different Services, Clubs and Schools to follow their own courses. The more firmly these become accepted within the organisations which

have produced them the harder it will become to get one code universally accepted. To do so will require much effort on the part of those best qualified to show the way, and a willingness to co-operate by all others in positions of responsibility.

In parachuting one mistake can have fatal consequences; safety is of paramount importance. This is a plain fact which must surely be accepted by all. Unnecessary risks should be avoided, instructions should be based on solid experience, sound judgment and undoubted reliability.

Equipment should be unquestionably serviceable, and where any element of doubt exists expert opinion should be sought. We must learn to accept the disagreeable fact that, like many other things made by man, parachutes wear out. When this happens they should be condemned.

If we fail to take all aspects of safety seriously we are inviting disaster. There are enough natural risks to make the game what it is without adding unnecessarily to them.

Thirdly, let no one who wishes to see the sport flourish lightly dismiss the importance of presenting a united front on all major issues. We have faced difficulties in the past and I believe we shall again; the possibility of restrictive legislation can be clearly seen by all who do not deliberately wish to ignore it.

If British parachutists are ever called upon to defend their interests against serious opposition, from any quarter, they must be able to speak with one voice.

This voice, surely, is the British Parachute Association. If it is to command respect and authority it must be supported by all for whom it speaks.

THE KHAKI AIRLINE

OR

*A less serious
account of the
Rapide owned
by the
Army Parachute
Association*

DO you sleep well at night? Do you always get your regular eight hours of oblivion? Is your telephone silent? Does the postman pass you by cheerfully whistling? Are you on speaking terms with your wife? Have you time to parachute at weekends? Obviously you are not living the full life. You are unsatisfied, shiftless and lost. What you need is an aeroplane. For nothing can master the human life more thoroughly than a simple wood and fabric flying machine. I know, I got one last year.

I didn't actually buy it — I haven't got that kind of money — but I did do everything except actually sign the cheque; and the preliminaries are so gratifying and flattering that one is lured on at an ever-increasing pace, cheerfully blind to the horrors ahead. There is something wonderfully 'upper-crust' about wandering into an aviation broker's and saying 'I'm thinking of buying an aeroplane — a Rapide would do, not too flashy y'know, just a good dependable machine.' Out come the cigars, the flash of smiling gold teeth is dazzling, and one lunches on the firm.

VIEWING DAY

Then there is the trip to the aerodrome to view the proffered machine. Alfa-Romeos on the car park, secretaries, the proprietor arriving in his Piper Apache; all the trimmings. Fortunately my extensive aeronautical experience had taught me that aeroplanes always rest the tail part on the ground and cock their noses in the air, so I at least knew which end went first. Also, a quick revision

with a picture on an old cigarette card gave me the rough outlines of the plane I was buying.

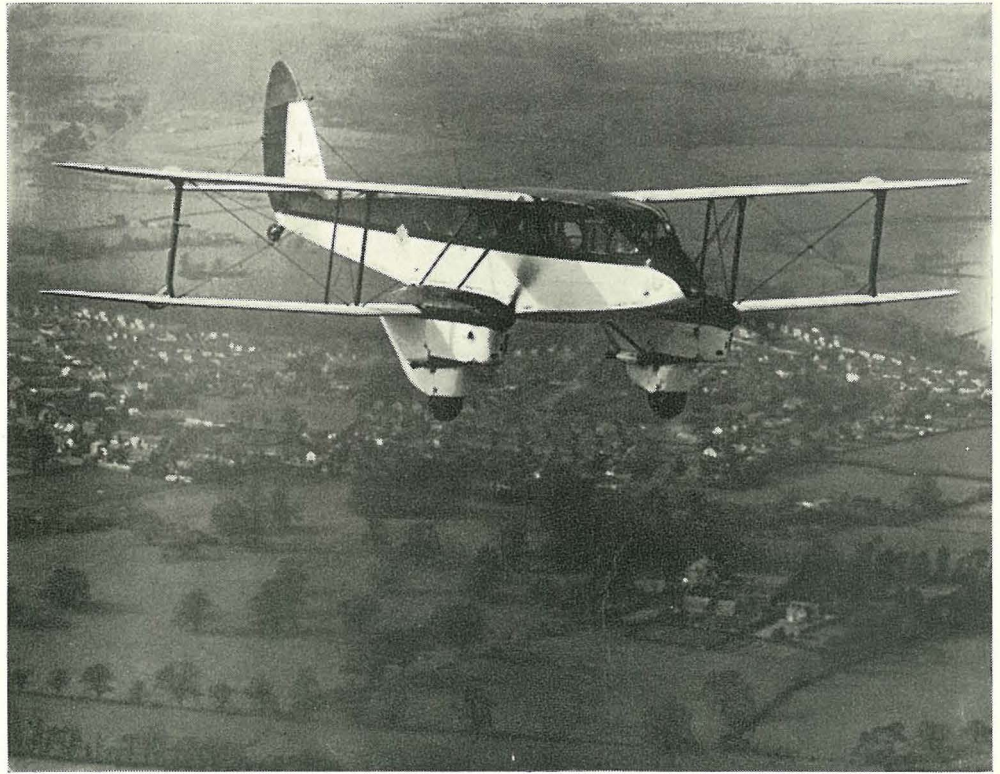
I was therefore able to keep my end up by mumbling about 'C's of A' and 'engine hours,' and twanging the flying wires with my umbrella. My bluff was called when they handed me the log books to inspect, and then politely pointed out that I was reading the radio licence, not the airframe certificate.

SELF-IMPOSED PURGATORY

Anyway, two hours later we settled for £200 less than the advertised price, and gently burping brandy I drove home. I was not properly started on my self-imposed purgatory and the first shots weren't long in coming. Registration had to be transferred, insurance arranged, C. of A. undertaken, hangarage found, fuel carnets requested, radio overhauled. A menacing pile of files began to grow in my cupboard. The phone began to assume a new importance in my life. My typist began to greet me with a wan smile.

Our sponsors wanted to paint the plane in their colours. I took a Saturday to motor to the machine, photograph it with my camera, motor back and develop the film that evening. My wife had arranged that day out with the children. First signs of strain in the family. Next week I took a day off to lunch with the sponsors and discuss the colour scheme. Slight surprise from my commanding officer. First signs of strain in the office.

by
J.S.W.



Three months later we took delivery. Pilots had been a problem until I wrote a letter to *Flight International* and the *Aeroplane* asking for volunteers. After 74 applications the patience of my typist wore very thin indeed, and we duplicated a couple of standard letters in reply. But Paddy had been our No. 1 pilot from the start. He was ex-Army Air Corps, and now earning his daily bread as Second Dickie on a B.E.A. Vanguard. I reckoned that any man who could fly both an Auster and a Vanguard could cope with a Rapide.

And so one night Paddy got back to his flat at 2 a.m. after a round trip from Paris to London via Glasgow and found a message telling him to pick up the Rapide at Northampton at 10 a.m. To his undying credit he did, travelling up by train alternately dozing and scanning the B.E.A. copy of 'Pilots Notes' for the Rapide.

ANXIOUS(!) INQUIRY

At Sywell the mechanics wheeled out the shining aeroplane and cheerfully bundled Paddy in. They swung the props and stood back expectantly. The rudder waggled, the elevators flapped, the ailerons twitched and for several minutes there was a long silence. Then the door opened and a red-faced pilot poked his head out and inquired where the bloody starter switches were on this antique. By the time the mechanics had given Paddy a run through the cockpit drill it was too late for him to try circuits and, by the time the mechanics had given Paddy a run through the cockpit drill it was too late for him to try circuits and, so he took off and headed for Blackbushe.

We were waiting on the tarmac for him when he came in. The golden rule with any new thing is that you should never show it in public until it is working perfectly. Thus is a good 'image' presented. We knew this full well, which seemed to be a good enough reason for doing the precise opposite. It was arranged that the machine should drop a stick of eight free-fallers as the highlight of Airborne Forces Day in Aldershot.

LOW COMEDY

The DZ was fairly small, with undershoots but no overshoots; main roads and trees on two sides; and barracks, sports stadiums and telephone wires as general intermediate hazards. So, with a new and strange aeroplane, a tired pilot, a high-powered and sceptical audience, and a dicey DZ, the stage was nicely set for a bit of good class drama. Instead we had low comedy. But to get back to Paddy.

Paddy was an hour and a half late at Blackbushe. We were nearly demented. The telephone seemed incapable of reaching Sywell, and when we did get through the line was so bad that all we could discover was that Paddy had left. By a curious quirk of the Blackbushe Club rules we could not use the bar or restaurant. At least this kept me off the brandy, but the ban also applied to the lavatories, and it was not until we suggested a number of vulgar but perfectly possible alternatives that we were allowed through the vital doorway.

We had a practice drop laid on for 2 p.m., and it wasn't until 1.25 p.m. that we sighted the familiar piece of trellis work in the sky that is the head-on view of a Rapide.

Paddy came in beautifully. Down, down, sinking down — then up again. Down again, up again — down, and up — down and up, there wasn't much runway left and Paddy was still doing his one-man yo-yo act. They tell me my face would have stopped a clock as I goggled at my precious aeroplane sailing towards the pine trees.

Finally Paddy took his courage in both hands and jammed the wheels on to the deck. He taxied round to the control tower and got out beaming all over.

We fell on him. We fed him on coffee and cakes and pork pie. We sat him down and told him what a hell of a fellow he was. Then we told him that he was flying a full load of parachutists in 15 minutes' time.

We fell on the aeroplane also. Off came the door, out came the seats, in went fuel, and away we went. Paddy did remarkably well and our practice drop gave us confidence, although the DZ was undoubtedly tricky.

A FIASCO

Next day was a fiasco. The wind was high, and we had misgivings when we took off. Farnborough was operating, and demanded that Paddy kept in radio contact and only made two approach runs. We dropped three wind indicators and each gave a radically different answer. The wind was obviously varying and fish-tailing. A tremendous argument developed as to whether we should jump or not. Helmets came off, fists were shaken, and some very extraordinary remarks shouted from one end of the plane to the other.

I was No. 7, and jammed in the forward bulkhead door so that I could transmit messages to and from the pilot. I half-lay, half-crouched in an excruciating position, cramped, cold and thoroughly miserable. Paddy had one ear-phone clamped to his head so that he could hear Farnborough Air Traffic Control swearing at him. The other ear was free so that he could hear me swearing at him. He had a difficult day.

After ten minutes' argument the Soviet in the passenger compartment held a show of hands (can you imagine it!) and we called it off. Paddy was pretty fed up by now as he'd had one close shave with a Valetta on finals for Farnborough and wasn't anxious for another. He beat up the D.Z. and we went back to Blackbushe.

I have always maintained that the Farnborough Controller's language was responsible for the recurrent radio trouble we had for the rest of the summer.

As we turned in for Blackbushe Paddy reminded us that he'd only landed a Rapide three times before, and never with a load. There was also a cross-wind. He said he was frightened. I said that made nine of us and would he please get it over quickly. We put on our helmets.

After that things went a little better. I began to feel more confident, and it was some months before I discovered that the machine had been £27 in debt when it took off from Sywell. It flew for the championships at Sywell, thereby sinking further into the red, and didn't really begin to earn good money until August.

By then my family mutinied and I went to Skye for two weeks, taking the precaution of sending the plane to Germany meanwhile. For a fortnight I forgot all about aviation, and even did a little military work.

Back again to civilisation, and the incessant jangling of the phone and thump of letters on the mat. Back to finding pilots, arranging servicing, booking users, paying mechanics, buying radio crystals, spares, dope, fabric, inner tubes, cables, maps, and even polish. But at last the bank balance looked healthy, and the longer it flew, the more it earned.

We had a brush with the Ministry of Aviation over parachuting on the approach to Boscombe Down, but otherwise the Law was lenient. A pilot borrowed the machine to take his family to Tangier, and I.T.V. tried to film a novices course on a rainy day. I had a full day, every day.

In October we flew the familiar old shape over to Germany a second time. This time it stayed for longer, and due to a freak spell of good weather flew almost continuously. It now had flown over 130 hours since its C. of A., and minor troubles started. A steady trickle of spare parts was flown out to Dusseldorf by B.E.A. freight service. Each item was preceded by frantic telephone calls and signals from Germany.

The main trouble was that the users of the aeroplane were, and mostly still are, blithely ignorant of the difficulties and expense of running the machine. This was particularly so in Germany, where the massive technical backing of the R.A.F. and Army Air Corps had led the Army parachutists to regard all aircraft as no more than flying lorries. They looked upon even a short spell of unserviceability as something near to sabotage, which did not help the tone of some of the communications!

The greatest crisis of all was when one of the propellers was bent. The pilot had to take sudden avoiding action when some children ran in front of the plane while it was taxi-ing. The resulting sudden stop caused the tail to rise and both props touched the ground.

Twenty-four hours later no less than five propellers were waiting to be flown by the now familiar route across the North Sea, but a German based De Havilland engineer coolly put the bent blades in a vice and pulled everything perfectly straight in half an hour.

“GROANING GRANNY”

Winter was now approaching, bringing a promise of blessed relief from the continual daily worries. One more short course at Hereford, and “Groaning Granny” as she was now called, went into winter quarters at Middle Wallop. She had £350 in the bank when all the bills were paid, which wasn't bad after the initial debt six months before. She had flown for nearly 170 hours, had dropped rather more than one thousand parachutists at lower rates than in any other country, and had been from Northampton to Hamburg and Tangier.

But my time with her was running out. I was being posted, and it was with considerable relief that I handed over the swaying pile of books and files. It seemed funny at first not to be worrying about pilot's accommodation, or new door hinges, or the current fuel bill, but the human being is adaptable. I can live without it.

And now the Army has acquired two more Rapides, making three in all! Parachuting is a growing sport. Which brings me back to the thought that I started with. Parachute by all means, the more frequently the better. Pay your whack of the aircraft hire, and don't complain if it seems too much. But if anyone ever suggests that you might get cheaper parachuting by owning your own plane — hit him — hard.

An M.P. Steps Into Space

By

SIR GODFREY NICHOLSON, M.P.

The Member for Farnham discovers at the age of 62 that parachuting is more than pie in the sky.

IT is not given to everybody to discover a new amusement fairly late in life, and I think I am very lucky indeed to have discovered, more or less by chance, the delights of parachuting. My first jump was into the sea from an R.A.F. Hastings as an experiment and since then I have done two jumps on land from a Rapide. I mean to do many more, for it is the greatest fun. Obviously, I am only a beginner, but I have done enough to realise what a magnificent recreation it is.

Civilian parachuting is called sport parachuting and it is still more or less in the pioneer stage, having been a going concern only for about five years. Even now, there are only about three civilian clubs in England and one in Scotland and the number of active sport parachutists is still quite small. There is no doubt that one day it will catch on and become as popular in Great Britain as it is in other countries.

However, we are severely handicapped, not only by the absence of any help from the State, but by our infamous weather and also the fact that we are a small island with an airspace that is already overcrowded. There are other obstacles as well, chief among them being the many popular misconceptions that exist.

For instance, most people believe that parachuting is highly dangerous, whereas the fact is that although very



Mick Turner and Sir Godfrey Nicholson in front of the Thruxton Rapide.

Pictures by courtesy of B. Green

Sir Godfrey Nicholson after his third descent.



many thousands of jumps are done all over the world every day, the number of accidents is very few and fatal accidents are very rare indeed. There is, of course, the risk of sprains and minor injuries that is inherent in most forms of activity, but that is all. Serious accidents can always be traced to a neglect of the elementary precautions and the clear rules which are laid down. As to parachutes failing to open, if they are properly packed this never happens, and a reserve parachute is always carried, just in case.

AN ILLUSION

People are also deterred by their ingrained belief that a parachute jump is almost too terrifying to contemplate, an illusion I was inclined to share, until I did one myself. However hard it may be to believe — and it is hard — the honest truth is that fear, in the literal sense of the word, hardly comes into it at all. Of course, one may sometimes have butterflies in the stomach, but that is quite distinct from genuine fear. It cannot be too strongly emphasised that parachuting is *not* frightening and does *not* require courage. I cannot explain why this should be, but the fact is that it called for no great effort of will.

Sport parachuting can be divided into two categories, the first for beginners and the second for experts. In the first stage the beginner jumps from about 2,000 to 2,500 ft., using what is called a static line, which means that the parachute is tied on by a webbing cord to the aircraft itself. The cord releases the pilot parachute which is about the size of a large waste-paper basket, and has a spring inside. This miniature parachute pops out from the pack, and in its turn it pulls out the main parachute, the operation taking about three seconds.

After a certain number of static line jumps — provided of course one's instructor reports favourably — the next stage is that of a free-fall, which entails opening the parachute oneself after a given number of seconds. I hope to be promoted to this stage in due course, but I have not got there yet. To begin with, one is allowed a delay of only a few seconds, pulling the ripcord almost as soon as one has left the aircraft. The really skilled parachutist works up to a delay of a full minute from 12,000 ft. before pulling, and that is where real sport parachuting starts, and becomes the most difficult art of sky-diving, which demands great skill and a high level of training.

AIM OF SKY DIVER

The aim of the sky diver is not only to land as near as possible to the target, but, before pulling, to perform certain set evolutions, or to engage in baton-passing. To do this, he has to make himself manoeuvrable by getting into a sort of spreadeagle or swallow-dive position, using his limbs as rudders or stabilisers. In this position, the terminal velocity, reached after 12 seconds, is 174 ft. per second, which is about 118 m.p.h.

One of the beauties of sport parachuting is that, unlike Service parachutists, who jump from a low level and have to land in a closer group, we can steer our parachutes by means of cords which run up to the edges of two apertures which are cut out at the rear of the canopy. As the

air escapes through these two apertures, it imparts a forward speed of 5 m.p.h. or more to the parachute. By pulling the right-hand toggle cord, you distort the shape of the aperture, so that the escaping air starts to rotate the parachute and you do a fairly quick turn to right or left, as you wish.

The forward speed is used to get on to the target, and also of course, to neutralise the wind to some extent by turning into it just before you land. Even the most experienced sport parachutist is not allowed to jump in a really strong wind, and beginners are not allowed to jump if the wind exceeds 8 to 10 m.p.h., whereas the Service parachutist has to be prepared to jump in nearly any condition. Floating down to earth, with a large measure of control over speed and direction, is one of the great charms of the whole affair.

Now for landing. People imagine that landing is rather like jumping from the top of a fairly high wall, but there is a considerable difference. I use a parachute which is slightly larger than standard, being 32 ft. in diameter as against 28 ft. which is the normal size, thus reducing the speed of my descent to 18 ft. per second, which is about 12 m.p.h. But this is not equivalent to jumping straight on to the ground at that speed, for the wind and power of manoeuvre inherent in the parachute prevent a sheerly vertical fall. In other words, the fall is at an angle, and this cushions the impact.

Of course, a helmet to prevent head injuries, and strong boots for ankle protection, are obligatory, and for landing on an airfield, as I have been doing, great care to avoid the concrete runways is to be recommended! We are taught that the secret is to be relaxed, and to fall at a comfortable angle, that is, not flat on one's back or straight on one's face.

SALT OF THE EARTH

There is much more to sport parachuting than this short summary can convey. I would like to have been able to write about the sort of people who do it, for they are the salt of the earth and come from every walk of life.

Naturally, much of the hard core of civilian parachuting is composed of Servicemen who do it in their spare time. Indeed, were it not for the Services, it would be impossible for this country to put teams into the field for international competitions and championships. But even so, we are handicapped by having to raise, from voluntary sources, the money needed to train, equip and send teams, whereas in almost every other country in the world parachuting is heavily subsidised by the State. Nevertheless, our teams do very well.

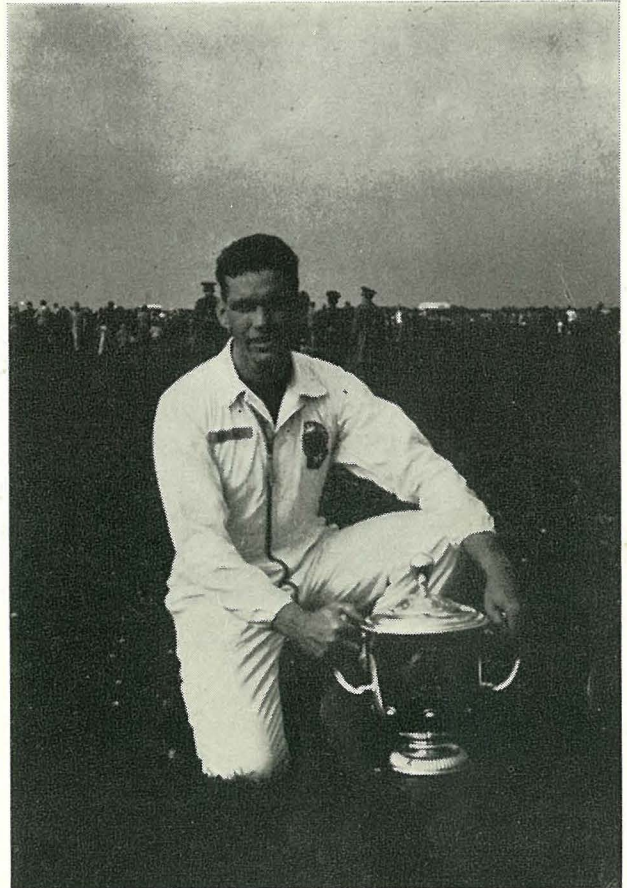
Sport parachuting is a true sport, because people do it purely for fun. It is comparable in thrill to hunting, steeple-chasing or mountaineering, but far less dangerous. Finally, it is not expensive.

Anyone interested will be sent full particulars of sport parachuting from the British Parachute Association, 7c Lower Belgrave Street, S.W.1, if they will send a stamped, addressed *foolscap* envelope.

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NATIONAL CHAMPION 1963

**Staff Sergeant
P. W. Turner, R.E.**



A Pioneer's life . . .

IN the churchyard of St. Margarets, the Parish Church of Lee, London, is buried a pioneer parachutist, Robert Cocking. His reasoning that an upside-down umbrella was the correct design for a parachute was to cost him his life.

We are informed that the hoop at the top of three hoops was 107 feet round! In the year 1837, he persuaded two balloonists to take him up from Vauxhall Gardens. He was carried to a height of 5,000 feet over Blackheath before casting off. The upside-down umbrella folded up and Cocking crashed in a field near Lee Green.

His sacrifice was not in vain, but a further step in the development of the parachute as we know it.

. . . is a hard one

DIARY

The Finals of the British National Championships (1964) are to be held at BLACKBUSHE, HANTS. on the 13th-14th June, 1964.

The VIIth World Championships will be held this year in Germany, 30th July-17th August, 1964.

SPORT PARACHUTIST

1964 CHAMPIONSHIPS

The Positions at the end of the Eliminating Rounds at Netheravon, Wilts. (May, 1964)

GIRLS: 1. Miss H. FLAMBERT
2. Mrs. P. SEEGER
3. Mrs. D. KNIPE

MEN: 1. A. F. CHARLTON
2. P. SHERMAN
3. R. GRIFFITHS
*4. P. W. TURNER
5. R. REID
6. B. CLARKE SUTTON

TEAMS

R.A.F. Sport Parachute Club
S.A.S. Sky Divers
Cyprus Combined Services
Free Fall Club
British Parachute Club

* Last year's Champion.

Frankly, an appeal to the ladies...

By **BRIGADIER W. F. K. THOMPSON**

THIS is frankly an appeal to the young women of Britain to take up the sport of parachuting and so put Britain where she should be, up with the leaders in the international field. When I say young I mean young in heart rather than in time spent on this earth. That it can be successfully taken up after the 'first flush' is well exemplified by the reigning World Champion, Muriel Simbro, who made her first jump at the age of 33 and having completed some 500 jumps in two years became World Champion in 1962. In accomplishing this feat she enjoyed the advantage of living in California whose salubrious climate puts little restriction on parachuting.

FINAL ORDER

The final order in the World Championships is arrived at by adding together the points scored by each nation's men's and women's team. The standard of our men has improved remarkably in the past three years, but before we can catch up with the leaders they must be complemented by a team of British women. The B.P.A. expects to enter a women's team, for the first time, for the World Championships to be held in West Germany from July 30th to August 18th this year.

All power to the ladies who have agreed to be considered for this year's British international team, but if we are going to be up among the leaders we must have far more ladies to choose from, it is too much to expect that the few who have so far taken up the sport in this country are those who by nature are potentially the best that Britain can produce. Never has there been a better chance of representing Britain in international sport than that now offered to women attracted by a sport that poses a challenge and provides a thrill.

To members of the B.P.A. I apologise for repeating my article, which has appeared in the *Newsletter*, on the women's teams in the last World Championship in 1962, but our new magazine is intended to appeal to a larger

audience to whom the attractions of the sport are less known.

Thirty-eight women from eleven countries competed in the Sixth World Sport Parachuting Championships at Orange, Massachusetts. Austria, Bulgaria, Canada, France, Poland, Rumania, Russia and the United States produced full women's teams. Australia, Ireland and Yugoslavia were also represented but, alas, no British girls.

The outstanding women's teams were those of the United States and Czechoslovakia, but it is not of parachuting I wish to write but of those who indulge in this newest and most exhilarating of sports. My only former acquaintance at Orange was Liebraut Nowak, the Austrian girl who was so popular with the crowd at Goodwood during our own Championship. With the aid of interpreters, I set about finding the answer to the question: 'What sort of women are taking up parachuting as a sport?'

ATTRACTIVENESS

My immediate impression, which needed no interpreter, was of the very high standard of feminine attractiveness among the jumpers. This extended right across the board, the myth of the stolid Slav proving to be indeed a myth. Britain's men's team judged the Russian girls the most attractive and certainly I found them so: three blonde and a brunette with hair done in Grecian style, vivacious, good-looking and full of fun.

The Czechs, who had done brilliantly in the 'style' event, were quietly charming, though feeling a little down on their luck as they had not done as well as expected in the team accuracy competition, thus giving the team championship to the Americans. The French, as expected, upheld their reputation for *joie de vivre*, as did the Rumanians in their slightly windswept way, while the Polish girls gained the reputation for being the most outspoken of the East Europeans.

WHY DO THEY?

- 'floating freedom'
- the 'butterflies'
- the challenge
- the 'romance'
- accomplishment



The Russian Team, 1962

Surprisingly, about a third of the women competitors were married, and the results provide strong circumstantial evidence that if you want to be 'in the money' you must be a mother. The new World Champion, Muriel Simbro of California, has two daughters; the runner-up Dagmar Kuldova of Czechoslovakia, has one daughter; while Nona Pond of Massachusetts has no less than three sons and a daughter; Carlyn Olson, another Californian and the third scoring member of the American team has three sons and a daughter.

Answers to my inquiries suggest that there are two reasons why married women take up parachuting, or anything else for that matter: one is to be with their husbands, the other to get away from them. I asked a striking ash blonde from East of the Elbe, 'no names no pack drill,' why she liked parachuting and was told that it was the wonderful sense of freedom when floating through the air. She went on to explain, with a twinkle in her eye, that, in her country, in the home the man was the head and the women the neck and that it was no bad thing occasionally to separate the two.

FAMILY SPORT IN U.S.

On the other hand, Muriel Simbro said that parachuting was becoming a family sport in America. Her own husband, Henry Simbro, is a reserve parachutist for the American team; while Nate Pond, Nona's husband, is the American team's pilot. The Simbros have always done everything together, motor cycling, car racing and flying aircraft. Muriel used to pilot the aircraft from which her husband jumped and became so envious of the obvious enjoyment and exhilaration he got from the sport that two years ago she made her first jump. In two years she made the remarkable total of 500 jumps and now at the age of 35 this charming and vivacious woman is the first American to become the World Individual Woman Champion.

The spreading popularity of the sport owes much to the discovery that man can gain complete control over his body while it is falling freely through the air and can manoeuvre it in any direction relative to the ground, thus gaining the wonderful sensation of free flight. Women find the same attractions in the sport as men: the sense of freedom, of challenge and of accomplishment. Natalija Maslova, a tall, good-looking Russian with curly blonde hair and a great sense of fun, who is a radio technician, said she liked it because of 'the romance'; Angela Natase of Rumania, a tall, slightly built, fair girl with straight hair, who is a draughtsman in an architect's office, did it for the challenge it presented; while Dagmar Kuldova, the Czech champion and a teacher of physical training and natural science, enjoyed the 'butterflies' of anticipation.

Occupations of those who were not fully engaged looking after their children were, as one would expect, of all kinds. Monique Labbe of France is an orthopaedic sister, and her fellow countrywoman, Jacquelin Courcy, is also a nurse. Maria Stancikova, one of the outstanding Czechs, said she had a job 'that was unknown in your society.' She is a planner in a State stocking and sock factory, having previously worked on the factory floor. Eva Hribalova, another Czech, is a watchmaker; incidentally, Ilona Bergen, the best woman parachutist in the Canadian team, is a refugee from Hungary.

This magnificent sport, which properly conducted is not more dangerous than mountaineering, is not cheap. In France it is subsidised by the Government in the same way as their light aircraft clubs; behind the Iron Curtain it is practically free, and millions of jumps are made each year; in America many can afford it — they now have some 500 clubs with 15,000 jumpers. In this air and space age, more and more of our young people need to get off the ground and become air-minded, whether flying, gliding or parachuting. What are we going to do to help them?

“ O R A N G E M



Time to go

ASS., 1962''

SEE ALSO
NEXT PAGE



Photo by Sgt. Joe Gonzales

The target

“ORANGE MASS., 1962” (cont.)



★ ★ ★
“THE
BOYS!”
★ ★ ★



★ ★ ★
THE
TEAM
★ ★ ★

Photo by courtesy of Sgt. Joe Gonzales



Maureen and Peter Denley

How much does it cost?

UNTIL such time as the student parachutist decides to take up parachuting seriously, there is no need for him to buy any gear, let alone the parachutes. Most clubs and training centres hold a number of these to hire out to trainees, as well as helmets, overalls and boots. But the wise student will bring his own boots, and then all he requires is the will to jump.

As far as training fees are concerned, the different training establishments vary, but a fair estimate would be as follows:

Basic fee: £6 (This includes the legally required third party liability insurance.)

Initial descents: 30s. each jump. (This includes the hire of aircraft and parachutes, etc.)

As the student progresses through training, his delayed falls increase in duration and naturally the aircraft charges will increase slightly.

Under the present standard and progressions recommended by the British Parachute Association, the student with adaptability can expect to carry out about 25 jumps before he will be considered eligible by his instructor for a full licence. An estimate of the total cost incurred to reach this standard is about £45 in all.

The cost can be minimised by a course of about two weeks. This will enable the student to reach the necessary standard in a shorter total time, by virtue of the continu-

ity of the training. For example, the student who completes twenty descents during a two-week period will perform far better than his counterpart who carried out a similar number of descents on odd days scattered over a period of several months. Hence he will reach the required standard of a full licence holder long before the casual caller.

Besides this, the student who undergoes a continuous period of training gains confidence in his own performance far more quickly if his initial descents follow each other in quick succession. Confidence is a vital ingredient if the tyro is to become a top-rate performer. With this basic training and the requisite number of descents under his feet, the student will find that a week-end practice will be sufficient to better his performance and will rapidly become a safe, confident sport parachutist.

Anyone of either sex, who is medically fit, has normal co-ordination and common sense, coupled with the ability to adapt to a new environment and just a little courage, is ideally suited to become an exponent of this exhilarating sport. Parachuting is as safe as the individual makes it, and if the recommended procedure and safety regulations, all of which are laid down by the Committee of the British Parachute Association are adhered to, then the injury rate will be kept to a minimum.

Peter Denley,

School of Sport Parachuting, Kidlington, Oxon.

The best thing

I ever did

BY SUSAN PHILLIPS

WHEN asked to write a few lines on the most fascinating sport of all my first reaction was to refuse; my second to accept — which I did with faint cries on the woman's privilege of changing her mind.

I ended up by waiting for a sunny day in which to lie in the garden and think about what I was going to say; an unusual occupation for me. (I could hear the Editor gnashing his teeth, as the sun did not appear until the last possible moment.)

This is all merely to show that it does not take a hard decisive character, a female Errol Flynn, to pilot aeroplanes or even on occasion jump out of them, but to show that any of you delightfully butterfly-minded compatriots can do the same thing if you set your hearts on it.

I was once an ardent parachutist, ardent in the sporting sense, I mean, until the day when, through various circumstances, I took up aerobatics. Whereupon, having just reached competition standard (with enormous will-power and large quantities of port and brandy to quell a somewhat rebellious tum), I got knocked off my perch, clubbed, and dragged into a cave by my hair.

Somehow I never found the time to return to jumping, but had to make do with memories of those wild and exhilarating years.

Parachuting being undoubtedly the best thing I ever did in my life, here are a few words to tell those among you who have not experienced the thrill, exactly what you have missed, for it is a sport which opens up new visions, new landscapes and it literally changed my life.

EASIER TO LEARN

It is a bit easier to learn these days than it was when I first started — you merely join one of the many clubs. It is also much cheaper, although the expense side of it I will leave to those currently in touch and just say that it is within the reach of the average pocket.

My first real urge to jump came during a gliding holiday in Yugoslavia. Although I failed to get permission at the local club I was determined to do so on returning to England. A coin over the Bridge of Sighs in Venice, a few telephone calls and finally a meeting with an utterly charming character called Dumbo Willans, and I was set on the path for the most unforgettable years of my life.



The training I had as one of Dumbo's first half-dozen little elephants was hilarious and glorious, and occasionally just frightening enough to add a little spice to the mixture. They were all very special mates and there was, it seems on looking back, a lot of sun and a lot of laughter, not to mention the enormous celebrations after every jump. Already intoxicated by the post-jump 'champagne feeling' one was taken down to the 'local' and ceremoniously plied with grog until the very world seemed to burst with happiness around one's ears.

You might ask what made me continue after the first stages of training. Was it the people, the atmosphere, the sport itself? Actually it was a mixture of all three, for later, in addition to this zest for living, there was the incentive to get better. The more you progressed the more there seemed to be to learn.

PURE EXPERIENCE

In those days the science of 'sky-diving' was all pure experience and our first efforts were like lambs learning to walk, undignified tumbles with little control. But the more you discovered the more excited you got and the more fascinating and enjoyable the feeling of free fall and mastery of the air became.

Till there came the day when you ran down the fuselage of an aeroplane cruising along in a brilliantly deep blue sky, and you flung exultantly out of the door and spread your arms and legs wide, poised over the great flat expanse of milky cloud below, and shouted for the sheer joy of it as you wove through your friends, wheeling lazily around you like a great gathering of eagles.

But back to the beginning, you do not need to be a female Tarzan to indulge in this delightful pastime. People used to gaze in astonishment when told that I jumped, for I weigh less than eight stone, and the popular notion of a parachutist in this country is five feet tall and correspondingly wide.

Actually it is the one sport in which strength and stamina do not give an unfair advantage to men, for judgment and skill are by far the most important qualities.

Contd. at foot of next page



Photo by courtesy of the "Daily Express"

MOMENT OF TRUTH

By heaven methinks it were an easy leap — *Henry IV, part I*

In fact I (humbly albeit) believe that women have just as much chance of winning mixed competitions as men, if only they would train as single-mindedly. All you need in fact, is average health, and average intelligence, and if you're doubtful about the latter, I took it up — so why not you?

'But,' you say in the best present-day philosophy, 'what do I get out of it?'

Well, if you haven't gathered between the lines what you do get out of it, I'll summarise.

You will develop your character and your personality, and gain an unexpected self-possession and poise. (If you happen to be painfully shy as I used to be, you'll find that it will vanish overnight.) You will meet some fascinating

people, famous and infamous, and learn how to make friends and above all to keep them.

You will get chances to go abroad and meet other nationalities in many parts of the world, not as an ordinary tourist would but with the intimacy that a common bond and interest provides. Suddenly you'll discover that you have been given the means and found the will to enjoy and cope with every situation, no matter how unusual.

You will find you have friends all over the world, and perhaps even marry one of them.

All of which, should you doubt my word, is true. I know, because I did.

Well?

HEMISPHERE HOPPING

with

MIKE JACKSON

and

JOE O'NEIL



Photo by courtesy of Cpl. M. L. Jackson

WHILE in Kenya last November Joe and I found ourselves at Nakuru airstrip, enjoying a great many high descents and spending the days thinking of new ideas to try out for a forthcoming display. It was then, over too many drinks in the Flying Club bar, that someone suggested jumping-in at the Equator which was only some 35 miles to the north.

Finding a suitable D.Z. proved to be a difficult task, as the first reconnaissance north of Nakuru in vehicles showed ground altitudes of over 9,000 ft. A.S.L. with bad areas of scrub to contend with. The problem was eventually solved by our Cessna pilot, Jim Cosgrave, flying a sortie along the Equator until a passable site loomed up. The only feasible D.Z. revealed itself on the Thompsons' Falls-Nakuru road, with a road sign conveniently adjoining. Ground altitude 7,747 ft. A.S.L.

However, on closer inspection the next day, our hopes were somewhat diminished by obstructions that I hadn't noticed from the air. Twin sets of telephone wires alongside the main road and railway line, a ditch and a fence, as well as a fringe of trees — all too close for comfort to the Equator sign. We eventually O.K'd the position for the target as close as we dared to our all-important sign, obtained the farmer's permission to use his field, then lined up a reporter from the national newspaper and hired a cameraman.

As the short monsoons were causing a little trouble around lunchtime each day, we checked with the Met and found the prospects gloomy, in that cloud was expected over the target by 9 a.m. so accordingly we planned an early start at 8 a.m. the following day.

The next morning, as always, was crisp, cold and clear,

with not a breath of wind about. The early morning peace was soon shattered by the throaty roar of our Cessna 180 as we took off and climbed steadily northwards. Around 12,000 ft. the scenery was quite breathtaking. Far away the green Aberdare mountains rose up to meet the distant slopes of Mt. Kenya away to the east. Far below us we could see into the vertical rockfaces of the Nakuru crater and across the shimmering lakes of Nyvasha with a feeling that this special jump was going to be a 'piece of cake.'

Troubles soon overtook us. Joe became violently airsick as we hit the turbulence over the hills. I've known in the past for Joe to feel green on board ship still tied up in the Manchester Ship Canal!

On reaching the D.Z. we were dismayed when thick cloud forced us down to 9,700 ft. for the streamer run. Our hopes of a long drop with a tracking session to and fro across the 'line' suddenly petered out, especially when the wind started freshening quickly. We motioned the pilot to go in on jump-run just underneath the cloud to allow a delay of one second, as by now we were determined to show the spectators something; and that we did!

Sitting in the saddle at 9,700 ft., engulfed in cloud, was quite a blow to our high expectations, but after a few confusing seconds, out we came and with a little work on the steering lines, proceeded to cross the 'line' from north to south and back again, finally landing more or less on the exact Equator, which was marked by a series of target panels.

So that was it. The inevitable crowd of jubilant Africans met us on the road all wide-eyed and gibbering at seeing parachutists for the first time. After a quick photograph, we packed our gear and drove home as the rains came pelting down. 'Cutting it fine again,' we thought.

STRESS

by Dr. Charles A. Robertson

THE practice of medicine is not so much a calling, a vocation, or a job, as it is a way of living. It becomes something inescapable and like an odour it pervades and clings to all it touches. Thus, being no greater and probably much lesser than many of my kind who have gone before and no doubt will come after, I have found it difficult to dissociate my profession from my sport.

Parachuting is thoroughly capable of absorbing an inquiring if faintly macabre mind, for it abounds with examples of stress meted out to that willing animal, man. Probably no other species enjoys self persecution and experimentation to such an incredible degree, but as a participant of 'le sport' it would not be for me to acclaim the popularity of sky-diving as proof of the incongruous in man.

CHANGES IN PHYSIOLOGY

If we think backwards to our first parachute descent there can be few of us who do not admit with honesty that it was a frightening piece of work. Work it most certainly was. Three stones of parachutes in packs to be fitted to the body and manoeuvred into and later out of a light aircraft. But work is not only measured in terms of physical movement, and when we walk out for that first jump and to some extent for all those that follow, there are other signs of increased body katabolism. The heart will be beating faster and the blood volume it pumps in a minute of time will be greater. The tone of the muscles is increased, and we are more alert. Vision appears sharper and our senses more acute. Even the poorest of jokes gains a response, though not always that expected by the comedian. These changes in physiology are brought about by stress.

Stress is a vague term inasmuch as it refers to a multitude of factors which may cause it. They may be emotional or physical, and in parachuting both apply. Hans Seyle brought the word a new meaning to medicine when he showed that under its influence the endocrine glands and in particular the suprarenals which sit on top of the kidneys, respond to fear and all shades of the meaning of that word, by liberating vast quantities of hormones into the blood stream. These in turn affect the performance of the nervous, visceral, and muscular systems.

The well known hormone adrenalin prepares the body for 'fight or flight.' Large quantities in the blood make us 'jumpy' so that we tend to react swiftly and violently to a situation. According to our natures we will either strike back or run, and we must not think too hard of those who run, for it is all part of an inbred survival mechanism.

But many more hormones than adrenalin are produced under stress and all play their part in making the body perform more efficiently or effectively. Under their influence time may be subjectively extended. The number

of seconds to recognise a main canopy abnormality or its non-emergence and to react by pulling the reserve parachute may be small by measure, but to the parachutist the whole sequence of his actions may seem to have taken place concisely and with moments to spare for assessing the situation in all its phases.

Conversely the stress of pleasure can make us as forgetful as the lotus eaters, and time compresses to nothing. So the enjoyment of the long delay has to be tempered with a discipline of total awareness lest the pleasure be terminal and eternal.

Another aspect of the effects of stress is a sensation first described to me by the late Mike Reilly as the 'champagne feeling.' This is a feeling of elation which follows the subjectively perfect descent and it may last for hours. Almost certainly due to a critical balance of many hormones circulating in the blood. Their composition and quality vary according to the emotions aroused during the descent and the after effect is a mirror image of the total reactions of the nervous system during the descent.

PLEASURABLE AFTER EFFECT

If the jump was thrilling without being frightening then the after effect is pleasurable, but, if unpleasant, we may expect our after-reaction to be sour and even leave an unpleasant taste in the mouth. That there is an after effect at all is partly because the nervous stimulation has been greater than the physical exertion that might have been expected to follow, for parachuting does not make great demands on the physique.

But it is not only the psyche which suffers, the body is the most likely part to receive lasting impressions of the descent. The investigation and analysis of injuries during parachuting is far from straightforward. Often they are inexplicable in the light of the weather conditions, the rate of descent of the canopy and the experience of the parachutist. A club may run for two or three years without a single member incurring more than a bruise, and then there follows a series of mishaps which seem quite unwarranted.

One may implicate carelessness born of experience, and it is noteworthy that airline pilots have 'accident prone' periods numbered in thousands of hours of flying. And yet in review it is difficult to assert that a man was always more lax in his technique at the time of his accident than at others when no injury resulted.

At this point it is the custom to invoke statistics and laws of average which certainly predict from experience the expected frequency of injury, yet they do not tell us the cause. I nurse the heretical theory that if it were possible to dispatch a number of untrained fellows from an aeroplane their accident rate would not be so much greater than ours.

(Cont. on page 30)

The man who missed the Adriatic

THE Yugoslavian Adriatic Cup Parachute Contest is an international event, probably second only in importance to the biannual World Championships, and also usually held on alternate years.

Although only a single water jump is made in the Cup programme, it is this event which gives the contest its especial individuality, the aquatic high-spot in fact which puts the 'Adriatic' into the Adriatic Cup.

Now some might think that this is the one event in which the British team would come into their own, water being their natural element, it seems. With Britain's heritage glistening beneath their toes and the strains of 'Britons rule the waves' sounding in their ears, how could they fail?

In 1951 Dumbo Willans built up an unassailable points lead on terra firma, only to get himself entangled with his rigging lines when he hit the water. A busy official in a launch retrieved the canopy and towed poor Dumbo off at a high rate of knots, away from the floating target and into second place.

In 1963, the entire British entry, with the notable exception of Don Hughes, was sunk without a trace on the score-sheets, after beating all Europe in a land-based team event.

"THE FARMER"

But in 1959 the British contingent lined up for the water jump without even the benefit of any sparkling successes over land. In fact the writer had been christened "the Farmer" due to the number of times he had been observed walking in from the surrounding fields. At this particular juncture, I didn't think it was the time or place to tell my companions that I couldn't swim a stroke! In any case, I was wearing a reassuringly large Mae West, loaned to me by a sympathetic Israeli.

It was then that the first difficulty arose. It was evidently the accepted technique to tie the life-jacket to the parachute harness and not to one's person; then, on arriving in the water one would be entirely free to demonstrate one's best racing crawl to the target. No doubt it was an excellent scheme for those who were able to swim.

As I walked out to the flight-line to board a P.O.2 biplane, clad only in trunks and a parachute, well-meaning Bulgarians, Russians and Slavs repeatedly stopped me, undid my Mae West and re-fastened it to the harness. I had to give a somewhat forced smile of thanks to each, wait until they had moved away and then laboriously undo it and tie it back around myself again.

Eventually, I clambered into the roomy front cockpit still busily tying up lengths of webbing. I leant across to give a last-minute briefing to the Pilot Tibokir Bobitch. But 'Bobs' cut me short.

"Ver' hazy, ver' difficult to aim over water, I say when!"

Thankful to be able to rely on a veteran's experience, I huddled down out of the slipstream, the biplane lurched off the strip, and soon we were circling in the heat haze over the blue waters of the Adriatic.

We waited for our turn to run in over the target dinghy, fifth or sixth in a queue of aircraft which droned their way around Tivat Bay. While we flew, Bobitch would lean forward and shout above the noise of the engine, pointing out the local beauty spots or a distant range of mountains or his beloved Yugoslavia.

Some ten minutes had elapsed when suddenly, with a loud Slavonic shout, he leant half out of his cockpit and pointed downwards, beckoning me, it seemed, with a jerk of his head. I was surprised that he had not given me any previous warning that we were on the run-in, but I obediently scrambled out into the slipstream, I balanced myself on the lower wing and left the aircraft. Bob's usual parting pat on the shoulder seemed harder than usual — it knocked me forward and I slid off the wing feet first.

It was then that I saw beneath me the interesting fortress that my pilot had been endeavouring to point to me. His last despairing clutch had unfortunately failed to prevent Britain's last hope from casting off. The parachute cracked open. I was some little way from the waters of Tivat, and indeed the target could not be seen!

I finally landed on the beach, curling my bare toes in an apprehension, and rolled heavily. To my dismay, the Israeli life-jacket inflated itself upon impact, imprisoning me in my harness and making it quite impossible for me to turn my head. I lay there on my back like a stranded turtle. Fortunately, a helpful crowd appeared from nowhere, disentangled me and put me on my feet.

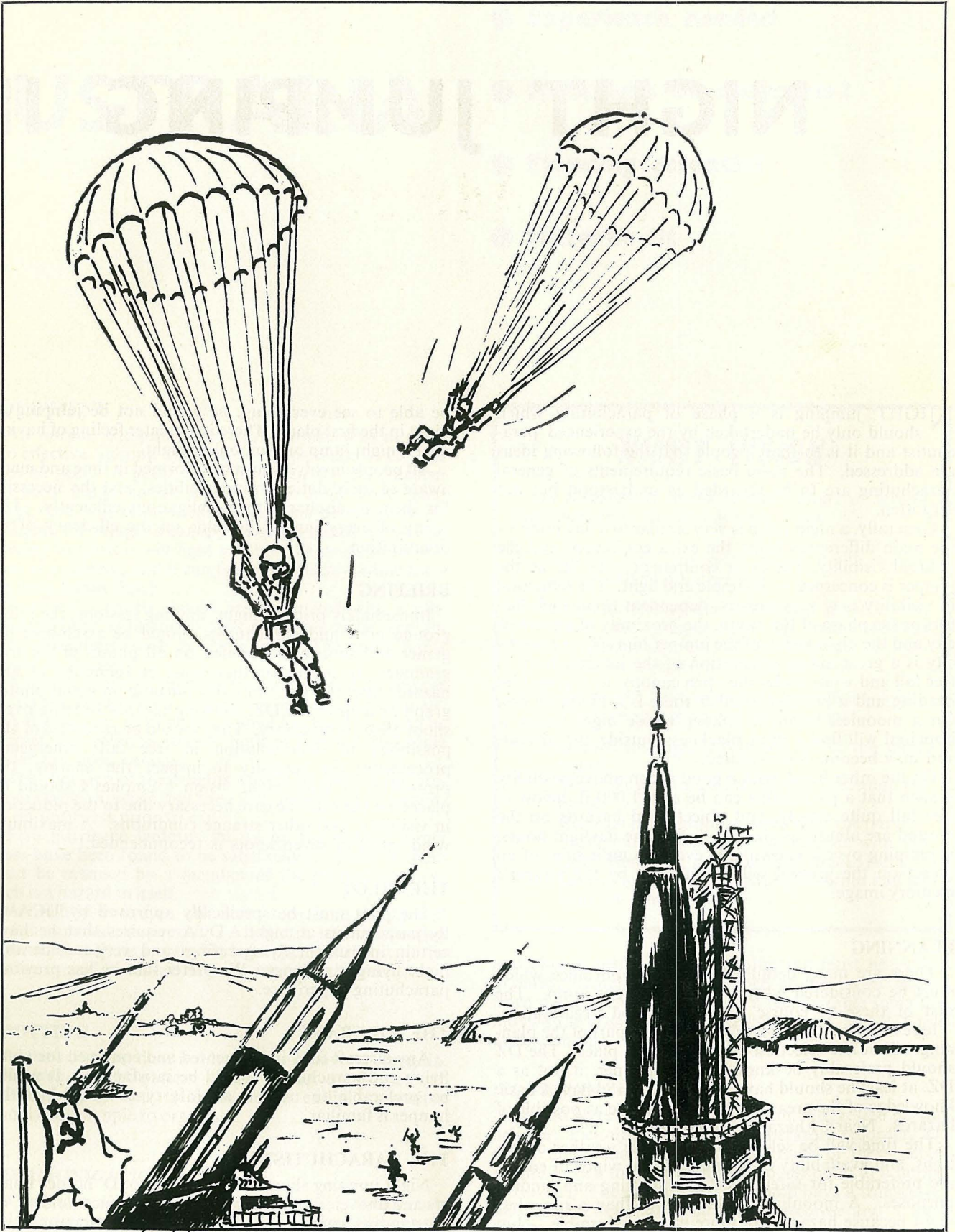
PRESENCE OF MIND

I walked gingerly down the beach, waded out into the water — with my canopy firmly clasped — to where a fast recovery vessel was now waiting. The coxswain of the boat showed great presence of mind. He immersed my parachute in the water so that it would look wet on arrival, and made me dip my head over the side also.

But our deception was in vain. As I climbed the harbour steps and strolled along the promenade with a hopefully nonchalant air (the remainder of the team had disowned me), one could hear them all exclaiming on either side in German, Russian and Croatian-Serb:

"There's the man who missed the Adriatic."

Peter Lang



CUTTING

Hey! Some Spotting! This doesn't look like Netheravon . . .

NIGHT JUMPING IN

NIGHT jumping is a phase of parachuting which should only be undertaken by the experienced parachutist and it is to these people that the following ideas are addressed. The more basic requirements of general parachuting are to be regarded as understood but not forgotten.

Generally, a night jump is very similar to a day jump — the main differences being the extra equipment and the reduced visibility. The extra equipment — as far as the jumper is concerned — is simple and light. The reduction in visibility may vary greatly, dependent upon such factors as the phase of the moon, the proximity of a town or city and the night vision of the jumper himself. A near-by city is a great aid to orientation of the jumper, both in free fall and while under the open canopy, as it gives him heading and a horizon whether there is a moon or not. On a moonless night, a jumper whose night vision is impaired will find a thick blackness outside the aircraft and may become disorientated.

On the other hand, with a good moon above, visibility is such that a parachutist can be seen 1,000 ft. below in free fall quite clearly, and objects and hazards on the ground are almost as clear as during the daylight hours. If jumping over a known DZ, even the unlit sides of an object on the ground will be filled in by the jumper's memory image.

PLANNING

There are many details of varying importance which must be considered when planning a night jump. The first of these of course is planning and organisation. 'There is a time and a place' and the first part of the planning will be the selection of a time and a place. The DZ should preferably be known to the jumper, if not as a DZ, at least he should have flown over it and have a basic knowledge of the area. It should be as free as possible of hazards. Near-by hazards should be lit.

The time will be selected by probable weather conditions, and availability of jumpers. Light winds of course are preferable for safety, both for spotting and landing purposes. A moonlight night is safer than a moonless night because hazards are more easily discernible — but a moonless night provides a greater challenge and requires a more competent parachutist — if he wanted to

be able to see everything, he would not be jumping at night in the first place. There is a greater feeling of having *done* a night jump on a moonless night.

All people involved must be informed in time and made aware of their duties, responsibilities, and the necessity for them to discharge their obligations efficiently. The safety of every jumper depends on the efficiency of the organisation.

BRIEFING

Immediately prior to night jumping sessions, the pilot, ground crew and parachutists should be assembled together and thoroughly briefed on all phases of the programme. In particular they must be reminded of any hazards near the DZ. For this purpose an aerial photograph or map of the DZ, showing hazards and safe overshoot areas, is necessary. They should be reminded of the possibility of disorientation in free fall; emergency procedures; the necessity to inspect the canopy; the protection of their night vision. Emphasis should be placed on the extreme care necessary due to the reduction in visibility, and other strange conditions. A maximum wind speed of seven knots is recommended.

THE PILOT

The pilot must be specifically approved by DCA to fly parachutists at night. DCA requires that he have certain instrument flying ratings and very considerable night flying experience. We prefer that he has previous parachuting experience.

THE AIRCRAFT

Any aircraft fully instrumented and equipped for night flying and parachuting should be satisfactory. It would be preferable to use an aircraft type with which the jumper is familiar.

THE PARACHUTISTS

Night jumping should be restricted to 'D' licence holders and above. Special approval to 'C' licence holders, of outstanding competence, reliability, and commonsense, could be given by a senior parachute instructor with night-jumping experience.

AUSTRALIA

- Experience needed
- Moonlight or moonless?
- Planning essential
- Hazards lit

EQUIPMENT

All normal equipment should be worn, plus at least two effective lighting systems, so the parachutist can see and be seen. A good torch strapped to the forearm has been found to be excellent for both these purposes, and it is recommended that this be compulsory. (It lights the jumper's canopy when his hands are on the steering toggles; it will light anything he needs to handle such as a reserve; and it can be pointed easily, while leaving both hands free.)

Instrument panels should be illuminated with a subdued red light, as luminous dials disappear under medium light conditions, such as moonlight. The panel lights *should be shaded*.

A bicycle torch, strapped to the underside of the reserve assists the ground crew in locating the jumper in the air.

A flashing red light on the helmet has been found to be a good anti-collision device, both in free fall and while under the open canopy.

The checking of these lights should be part of the pre-jump check sequence, but then they should not be switched on until just prior to exit.

Five hurricane lanterns set up on the normal target cross have been found to be satisfactory. Each of these must be manned by a member of the ground crew, as each is a hazard in itself.

A brightly lit drifter, able to be seen from the aircraft and the ground, is necessary. An electric torch suspended from a pilot chute is suitable but expensive if lost — the drifter should be off-set to make recovery simpler.

SPOTTING

If the exit point does not happen to be over a recognisable area, a light pattern should be set up. Motor car parking lights and trafficators are easily discernible and usually simple to organise.

COMMUNICATION

Ground to air communication is essential. Small portable transceivers operating in the 29 m/c band have been found to be very useful between DZSO and air traffic controller. Direct radio communication between DZSO

NIGHT VISION

All parachutists should be made aware of several important facts concerning night vision.

1. Smoking will adversely affect night vision. (Stop half an hour before).
2. Oxygen deficiency starts to affect night vision, from the *ground level up*, and becomes dangerous above 8,000 ft. This can be overcome by using oxygen in the aircraft.
3. Some people have inherently poor night vision. These people must not jump at night.
4. Exposure to bright lights will affect the night vision.
Wear sunglasses during the day preceding the jump.
Restrain photographers until after the jump.
Mask interior lights in the aircraft with red tape. Red light does not affect night vision.
Do not look at any bright light within half an hour of jumping.

and pilot is better still. If a jump run must be orbited urgently, complete disappearance of the target pattern (turn the lanterns out) could be a recognisable signal, removing the possibility of electronic failure, and R/T misunderstanding.

DZ PERSONNEL

Should be restricted to a minimum. Suggested personnel are: Pick-up driver, radio operator, recorder, DZ safety officer and two assistants. Each of these people should have a torch (which they do *not* point at a jumper in the air). The pick-up driver should have a transceiver, and the DZSO should have a transceiver and a loud-hailer.

(Cont. on next page)

NIGHT JUMPING

(Cont. from previous page)

THE DESCENT

During the descent, the jumper should keep his canopy illuminated as much as possible, so the ground crew can keep him in sight. Immediately on landing, he should flash his torch at the ground crew and the aircraft, to indicate his position. It is imperative that he report in to the DZSO as soon as possible, to obviate unnecessary recovery searches.

Judging of height and distance is no problem. (At 1,200 ft. the jumper should be half-way between opening point and target, etc.) Reliance on altimeters below 200 ft. is not recommended. The ground which is lit by the target lights, or the jumper's arm torch (which is pointed down when deflecto-spill technique is used) will come clearly into focus about one second before impact. This is just time to release the toggles, grasp the rear lift webs, and land.

PROGRESS

Remembering that the jumper will probably be a 'D' licence holder before he jumps at night, it is suggested that his first night jumps should be as follows: one 10-second delay, one 20-second delay, and then longer delays as conditions permit. Long free-falls should be approached cautiously, bearing in mind the possibility of disorientation in free fall, spotting difficulties due to unknown upper winds, and the night blindness experienced by *everyone* due to anoxia. (This is dangerous above 8,000 ft.)

RELATIVE

Before attempting night relative work, a parachutist should have successfully completed a minimum of 10 baton passes, and must make his first two night relative jumps with instructors who have a minimum of 25 baton passes. He should not attempt night relative work with another parachutist until approved by these instructors, in writing, in his log book.

Special approval should be obtained from the ASO for more than two parachutists to attempt relative work together.

This rule should not prevent parachutists existing in a slow stick, for the sake of economy of aircraft costs.

All this sounds very strict, and it *is*! Night relative work presents many new problems, even to very competent and experienced jumpers, and we must approach it with extreme caution. Just one small accident could put the progress of our sport back by several years.

Don McKern D2O,

*Senior Parachute Instructor
Newcastle Sport Parachute Club,
Australia.*

Prestwold Garden

THERE are four of us, the Major, two subalterns and Private Charlie. In a rather rash moment the Major had said we would lay on this demonstration of skill and daring for the Prestwold House Garden Party.

It's a beautiful day when we arrive at the airfield and find our two Beagle Terriers. What a small door! However, we think we can manage — we'll have to! Unfortunately the two pilots have never flown for parachuting before, so the Major and my fellow-subaltern take off to pass them out.

These jumps go off uneventfully and soon we are dressing ourselves in our spotless white overalls, spotlessly white except for Edward's, that is — he's the other subaltern — for his fiancée has made a magnificent job of removing oil stains, but that's another story!

TWO COLOURED SMOKE GRENADES

Anyway, at the appointed time, Edward and I squeeze our way into one aircraft, and the Major and Charlie climb into another. Charlie, by the way, has got more jumps than any of us. We're all armed with two coloured smoke grenades and a few tatty little bits of string for letting them off when we're clear of the aircraft.

A couple of minutes later, both aircraft are charging madly across the grass and seconds later we have that sinking feeling as the stick is pulled back, and then we're airborne.

About ten minutes later we're running in over Prestwold House at 2,000 ft. for the streamer run. The DZ is in the Park, surrounded by ancient oaks and there are hundreds of cars glinting up at us in the sunshine.

House Party

Edward's fiancée is doing DZ control; no worries, we hope, she's done it all before.

There goes the streamer, my head's straining at an unnatural angle trying to keep it in sight. I wish these wretched goggles wouldn't steam up. The short climb up to 6,000 ft. seems an age, then we're on the run-in; yes, there's the target. Edward's first, but he's stuck in the tiny door — a heavy boot in the back soon sets him free, and out he goes, just like a cork from a bottle.

I struggle for the door, claw my way out, and after doing a series of antics between the wheel and the strut which would have done credit to the most agile of monkeys, I'm away!

I'M CLOUDED IN SMOKE

No sign of the Major or Edward . . . there's Charlie's blue smoke streaming away below me. Blimey! I'm miles away . . . I'm on my back now, pulling my smoke string, haven't time to track, better pop at 4,000 ft. . . . nice and stable . . . four coming up . . . NOW! A sharp tugging and crack. Another miracle! I'm clouded in smoke. Better drive in to the target. There's the Major and Edward, they're nicely placed . . . Charlie's not doing so well, though . . . it looks like the ploughed fields for him.

I watch the crowd surge towards where Edward and the Major are going to land. I'm still a thousand feet up. Only one of the Major's smoke canisters has gone off and the shock of his hitting the ground sets off the other one! Dense clouds of red smoke envelop him. I'm going to land quietly behind the crowd about eighty yards away.



Picture by courtesy of "Daily Telegraph"

Suddenly a small boy looks up: "Look Mum, there's another one!"

Seconds later, feet and knees tight together, bump, and I'm home. The crowd trample my canopy good-naturedly into the dirt.

"Say, mister, can I have your autograph?" I sign it Brigitte Bardot, but the boy doesn't notice. Moments later, I've rejoined the others and we make our way up to the house. I'm red-hot and dying for a pint.

But what did we hear? "My dears, you all look terribly hot, would you like a drink?"

I caught Charlie's eye as we were handed petite glasses of sherry. He shrugged his shoulders resignedly at me and tipped it into a flower-pot while no one was looking.

GREATEST MOMENT OF THE DAY

The greatest moment of the day was yet to come. A dear little old lady, who had probably had a wee bit too much sherry, tapped the Major on the shoulder.

"Young man," she said, "were you the one that was on fire?"

The delights of sky-diving are many and ever with us.

Charles Shea-Simonds

STRESS (Contd. from page 23)

The opening shock of the main canopy at a terminal velocity of 115 m.p.h. has been reduced from approximately 25 G. to about 12 G. by means of the 'deployment sleeve.' Unfortunately it is not practical to use a similar device for the 24-foot diameter reserve canopy which has an even higher peak retardation force under equal conditions. Severe physical damage may result at speeds in excess of 110 m.p.h. if unexpected deployment takes place, especially at altitude, or if the body is not in the best opening position. This suggests that for the present, automatic opening devices should be fitted to the main packs and not the reserves.

Parachuting is one of the most exciting and stimulating sports which is available to us to-day. It has been termed the sport of the 'space age' and I am sure there is some truth in this. It is not without significance that most of the Russian astronauts have been picked from the ranks of their parachutists. It is also attractive to feel that physically we can parachute for most of our lives.

On the other hand, the great Russian physiologist Pavlov indicated that we learn all things by practice, even emotional response. Thus foolishness may cause us to learn fear, and nothing is easy to unlearn. Those of us looking for a long career as parachutists should be circumspect from the start, for the oftener we practise even this emotion the less stimulus it requires to produce the maximum of unpleasant reaction.

CANOPY OPENING

The vast majority of parachuting injuries are incurred striking the ground, and this is an example of stress in more obvious form. Resolved simply there are two forces at work. The first is a vertical component which is the rate of descent. The second is the horizontal force, and this may be considered as the three factors of wind, canopy drive, and oscillation. This last force is not purely horizontal, for depending at what point in the pendulum swing the ground is struck there will be a greater or lesser vertical component.

In the course of an oscillation of thirty degrees, which is not uncommon when turning highly modified canopies across and into wind with more vigour than finesse, the maximum horizontal velocity during the swing is 13.7 feet per second. The maximum vertical velocity which could be added to the rate of descent is 3.5 feet per second. This figure of 13.7 feet per second is nine miles per hour and if added to a wind of 15 miles per hour, landing is no fun at all. Late turns when driving down wind are not usually happy events.

Much thought has gone into the preparation of new canopies, all of which have in common a wish to decrease the rate of descent. Ideally the figure to be aimed at might be 12 feet per second, but this makes the angle of approach to the target so narrow that accurate prediction of the touchdown point is difficult. A happy compromise taking into account the landing impetus and the accuracy of approach would be about 15 feet per second.

Although the 24-foot diameter canopy is our reserve, it is the main canopy of British aircrews, and I cannot say that the thought of using this parachute in all corners of this world is particularly endearing. The vertical rate of descent at mean sea level for a 200 lb. man is approximately 24 feet per second. One might hope not to oscillate prior to landing.

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