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VOL 4 NUMBER 4 MARCH 1964



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Editorially Speaking

The British Olympic Association was founded in 1905 and since then its task has been to send teams from this country to the Olympic Winter Games and the Olympic Games.

This year the Association has a formidable task before it for Tokyo. It must first obtain at least £150,000 by public appeal. It then must arrange an airlift for its team of up to 300; arrange sea freight for yachts, rowing shells, canoes and ammunition; co-ordinate the horse charter aircraft for the equestrian team and - perhaps - import fodder into Japan.

As well as all this it must deal with the planning and issue of clothing for the team and handle insurance, documentation and a host of other matters.

Finally, it provides the Team H.Q. staff in the Olympic Village which assists and co-ordinates the work of the team managers of at least sixteen sports, which will make up our team.

All this requires a lot of money. That is why "The Trip to Tokyo Contest" (see inside back cover) has been devised, so that members of the public can have the opportunity of supporting the Great Britain Team, and at the same time can have the chance of winning a prize of being in Tokyo to see the Games. This is a worthy cause, please give it your support.

Canoe Building in Glass-Fibre/Resin - Part 4

BY BILL SAUNDERS, C.C.P.R. SENIOR TECHNICAL REPRESENTATIVE

COMPLETING THE CANOE

The decks and cockpit can be made in a variety of ways.

1. Glass Fibre

If a deck mould is available a deck can be laid up in the same way as the hull and the two then joined. Though it has obvious advantages this method brings difficulties. These include that of the fitting of the two separate shells, both usually a little "floppy", and the efficient joining of them. Some amateurs have found that fitting a light wooden inwale which is allowed to stand proud and accept the deck, fitted on a tin-lid principle, is a good system; others use the "sandwich" method of wooden inwales inside and gunwales outside, the two being screwed, riveted or bolted together. The hull deck joint can be stuck with Araldite, resin, or a mixture of resin and sawdust, if the fit is a safe one, and then topped off with glass tape inside and/or outside.

2. Plywood

For the amateur, fitting ply decks is a method which has much to recommend it. Cheaper, and easier, it also allows the builder a good deal of scope for experimenting with deck shapes, cockpits, water-tight bulkheads, etc. Methods are diverse; the following has worked well.

a) Fitting deck beams (half frames)

Having decided on the design, these are cut from ply, alloy channel or laminated on a jig from thin strips of ply and fitted to the correct place in the hull. Choice includes single chine, double chine, and rounded (with or without a central joint) - the design adopted will determine the top shape of the beams. If decks are to be "hog backed", allowances will be necessary when working out the relative heights of the beams. The position and size of the cockpit will decide the placing of the cockpit deck beams and it is suggested that at least another two intermediate beams be put in between the cockpit and the bow and stern. To prevent distortion, beams should be fixed with the hull in the mould. Bedding in thixotropic resin and fixing in position with resin and glass tape is the easiest and most efficient method.

b) Fitting inwales

These, of materials $\frac{3}{4}$ " - 1" x $\frac{1}{2}$ ", are bedded in resin and screwed or riveted in position. Distortion must be guarded against and they may need to be fitted proud if the deck line requires it, for example if a double-chine or rounded deck is to be fitted.

c) Fitting deck stringers

These are glued and screwed into the notches in the beams and to the inwales at stem and stern. Breast blocks can be fitted, and stem and stern blocks of a sawdust/resin mixture tamped in to "solid" the job up. Sometimes these blocks can conveniently be put in at the end of the laying-up of the shell, if there is surplus of resin mix. If cockpit fashion frames are to be used they should be fitted at this stage.

d) Fitting decks

Beams, inwales and stringers are planed down to correct levels 3 mm. ply is cut, fitted dry, then removed and varnished. It is then fixed with glue or resin and brass nails or screws, outside joints can be taped for extra strength if desired.

e) Cockpit

Fashion frames having been fitted (see above) and after the deck is fixed and the cockpit opening trued up, the coamings are fitted. This can be done either by fitting narrow strips to the fashion frames in situ, softening in hot water or steam bending if necessary, screwing into position a complete jig-built coaming in which case, fashion frames are not necessary. Alternatively pre-shaped pieces of $\frac{1}{4}$ "/ $\frac{1}{2}$ " thick ply are built up to the required thickness and screwed and glued flat on to the deck around the cockpit opening.

f) Fixing Fittings

There is divergence of opinion on the methods of fixing fittings to a fibre-glass hull. There is evidence that, when a different material is moulded to the glass-fibre, parting occurs on shock, sometimes with damage to the glass-fibre - thus the simpler method of fixing two wooden struts along the bottom of the hull by bedding in resin and fixing with tape or mat and then screwing seat and footbar to these, may not satisfy the more ambitious amateur. Knee grips present no problem, foot bars can be fixed from high up the hull sides (or better still, from the inwale), but the seat is more difficult. If wooden struts are used, their size should be kept to a minimum (the system of fixing 2 long struts to which are fixed seat, foot bar and bottom boards (which are unnecessary) is not recommended. It may be better to fix the seat direct to the hull at a few small but strong points (e.g. 4 corners). The best way would seem to be the use of a bucket type seat which is fitted on the "suspension" system from the coaming or deck so that it hangs clear of the hull - a rubazote pad between hull and seat bottom can further spread the load; this makes it easier to repair as well as making it more comfortable and efficient.

g) Finishing

This is done with paint, varnish or resin in the normal way after fittings have been added as desired, using methods as detailed above.

SOME GENERAL POINTS

1. Old clothes, and footwear should be worn - particularly by the inexperienced. The processes involved can be messy.

2. On activation, fumes are given off. Some people, particularly when working 'inside' the mould, find them irritating - do not rub eyes or skin - get outside into fresh air. Though they often make themselves noticeable, the fumes are not dangerous.

3. Barrier cream or gloves are a useful protection for the hands against irritation by glass and resin materials. Since there is the possibility of dermatitis unless all remnants of resin, etc. are quickly and fully removed, it is worthwhile taking precautions.

4. Any group undertaking a wet lay-up job must maintain a sense of urgency. Once mixed the resin will "set" and once the shell is started it must be finished. Stopping work between laminations

leads to weakness at the joint and unless subsequent laminations

are applied to "green" laminations, separation is likely.

5. A gel coat, 2 lam. chopped strand hull, for a single seater canoe, will take two people about 4 hours of hard work to complete.
6. With regard to the amount of materials, most beginners use too much resin. A resin-rich matrix results in a weaker laminate and is more liable to shattering, as well as being heavier and more expensive. Similarly, an incompletely "wetted out" laminate will result in an inefficient job, though I have found that this is usually due to insufficient work rather than insufficient material. Again, a reputable supplier will indicate the correct ratio of resin to glass - this is normally between 2:1 and 3:1. Thus a laminate approximately 3/32" thick of chopped strand mat would require the following per square foot:-

2 layers $1\frac{1}{2}$ oz. mat = 3 ozs. Activated resin = 6 - 9 ozs.

(Concluded)

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sportsmen pledged to aid research into crippling

The use of our limbs is something we all take pretty much for granted - until something happens. Perhaps a strained muscle, a torn ligament, or perhaps even a cut hand, and then for a short time we are crippled and we realise how little thought we give to that beautiful mechanism, the human body.

Fortunately for most of us the inconvenience of a temporary handicap soon wears off and with time we forget the discomfort and the clumsiness from which we suffered. But what about those other people, the people who through disease or injury must remain crippled for long periods, possibly even for life? In our health and happiness should we not help them carry their burden and try to ease their handicap?

With these thoughts in mind an organisation of sportsmen pledged to aid research into crippling (SPARKS for short) has been formed and we are sure, many of our readers will wish to offer their support. Briefly what is required is that those interested in sport will join SPARKS and offer to provide a little publicity, help local activities, or perhaps organise a collection, and if you care to send a subscription of twenty shillings or more then you will receive a SPARKS tie.

If you wish to pledge your aid for research into crippling, then write to The Secretary, 'Sparks', 61 Oxford Street, London, W.1.

Base Camp Canoeing

BY GEOFF. SANDERS

Most of us didn't need the Buchanan report to make us realise that the effect of the internal combustion engine on our lives has been great, is great and is going to be greater. The development of canoeing as a sport and means of recreation has taken place roughly at the same time as that of the popularisation of the car but it is only in recent years that the two have come to have a really direct bearing on each other. Before the war and in the immediate post-war years canoeists generally ignored the car as far as their canoeing holidays were concerned : public transport was used to convey folding canoes and canoeists to and from the waterways of their choice. Rigid canoes were the exception though do you recall that idyllic picture in William Bliss's 'The Heart of England by Waterway'? The photograph shows a Canadian canoe lying almost casually across a horse drawn cart and the caption reads "You must cart your canoe from Chalford to Cricklade." Shades of a bygone age!

As more people purchased cars the rigid canoes again come back into popularity. New designs and new methods of construction were introduced but the common factor, that they could be carried easily on the roof of the small modern car, remained. Although folding canoes remain ideal for extensive touring (Raven-Hart and a rigid canoe just don't go together!) it is true that the majority of people taking up the sport construct or buy a boat that is non-

collapsible (they hope!).

Having cruised for thousands of miles by canoe I know that a canoe-camping holiday takes a lot of beating, but I am equally willing to keep up with modern trends and bring the car more into the planning of canoe holidays. Although cars seem to be more and more necessary at the beginning and end of cruises as an increasing number of country railway lines close down, they can be a nuisance on an extended down river cruise. The only exception is if the party happens to include a non-canoeing driver who is pleased to follow the progress of the river travellers by road and even to carry bulky camping gear for them.





Perhaps one should examine the possibilities of 'base camp' canoeing holidays a little more thoroughly - finding suitable camp sites which will act as convenient bases for a number of 'car assisted' canoe journeys. If you are lazy and shirk the daily rigours of striking and setting up camp or, say, like returning to a well established camp at the end of a vigorous day's canoeing - then the standing camp will have much to commend it. The thought of the possible extra luxuries that go with the more permanent type of camp - those items that just won't fit under the decks of even the largest of canoes - might prove an additional attraction to those with the courage to admit that they enjoy the comforts of life on their holidays.

Selecting a suitable location may be difficult, though it will provide an interesting, if at times frustrating, occupation for winter hours. You will want a site which is roughly at the centre of a number of the required kind of canoeing waters and that can possibly be used also as a base for interesting land expeditions according to taste. If you enjoy canoeing on more passive waters lakes, calm rivers, small streams and canals - your choice of centres will obviously be greater. For a 'Family base camp', where, for example, there are youngsters not old enough to paddle their own boats, almost every region of the country will provide suitable waters. My wife and I with our two youngsters have found many superb sites from the Camping Club Handbook which have made excellent bases for simple expeditions in our Canadian canoe. Apart from canoeing stretches of rivers like the Wye we have explored many small streams which, too small to be included in the B.C.U. Guide, have been discovered from a 1" O.S. map. trips there will be few transport problems - journeys may be up and down the same stream or round trips, utilising canals and rivers, can be planned. There are many points where our rivers do convenient loops - as between Kerne Bridge and Huntsham Bridge on the Wye. Failing this a local bus time-table will suggest ways of getting back for the car.

Ideally, where it is planned to canoe sections of a number of rivers in a region, there should be two cars in the party or, at least, one car and one scooter complete with pillion! The first car should be large enough to hold all canoeists and to carry or tow (preferably on a trailer!) all canoes. Thus if there is no convenient bus or train to get the driver back to the start, the

first vehicle can be parked at the end of the stretch to be canoed and its driver taken up to the start. It may seem that this makes life unnecessarily complicated and that a lot of time will be spent in travelling, but with careful planning it is surprising what enterprising trips can be arranged with not too much time spent at the wheel.

For the last four years I have been taking school groups on what we hopefully call 'white water' expeditions and we have followed this base camp idea. We have been fortunate in having the use of a Land Rover, which is the ideal vehicle for such trips as it will hold all the members of the expedition as well as tow our trailer with its nine canoes. With at least one other car as well (motorised old boys of the school club kindly come to our aid) we are able to arrange a wide variety of activities for our camps. With less time spent on the actual 'mechanics' of mobile camping there is much more time to devote to canoeing and other journeys. We enjoy planning 'initiative' tests on foot - to the members of the camp these are fiendish schemes planned by the 'executive' staff for making them walk miles over rough country whilst the perpetrators simply motor round to the scheduled destination.

From our experience we know that it is possible to find good centres for such white water expeditions in this country. In Wales we found that Bala made a good base for lake, river and sea canoeing (but see the account in 'Canoeing' for May 1962; 'We Decided on Wales'). The Lake District offers fairly good opportunities, especially if you are able to canoe the small rivers after heavy rain. From our camp at the southern end of Lake Windermere one year we were able to canoe on the sea Silecroft, to sample many of the smaller streams in spate and to canoe parts of the Lune. We had gained prior permission to canoe the Nunnery Rapids on the River Eden and but for the inexperience of some members of the party would have tackled this exciting stretch.

Last year we chose the Yorkshire Dales as our area and Gargrave, a few miles west of Skipton, as the site for our base camp. The site actually adjoined the Leeds and Liverpool Canal, though we only used this waterway on one occasion. A holiday in a district like this is always something of a gamble as little water





will be found in the rivers after a dry period. We fortunately came after a wet period (not very difficult to arrange in 1963!) and despite some sunny weather during the course of the camp managed to canoe the rivers before the water levels fell. The Ribble proved an excellent training ground for canoeists who for the greater part of the year are confined to the slow rivers of the Midlands. We enjoyed the sport that the river offered between Clitheroe and Ribchester and, in fact, on completion of the stretch from Ribchester to Preston rather wished that we had done the former journey a second time rather than the duller reaches below Ribchester. The Aire in good spate provided us with pleasant canoeing and we utilised it to canoe into Skipton for supplies, making the return journey with laden boats by the Leeds and Liverpool Canal.

It was the Wharfe, however, that provided the grand climax of our river canoeing. In terms of distance our journey from Linton to Barden Bridge represented a meagre seven miles: much more relevant were the thrills and spills that this fine stretch of river offered us. The weather may have been dull but the canoeing was certainly not, and this, linked with the truly magnificent scenery, made it a memorable day. If there had been more days to the holiday we would have tried the river between Bolton Abbey and Ilkley, though we would have probably found it disappointing after the excitement of the higher reaches.

For our 'traditional' day of sea canoeing we chose Morecambe, but somehow the concrete promenade seemed out of keeping with the rest of the holiday and the sea was disappointingly calm. Our excursions on foot were numerous - below as well as above ground, for there are many fascinating caves and pot holes to be found in this region. Although we had to be careful to pick the safe ones as our equipment was limited to old clothes and sound torches. When we returned home we had by no means exhausted the possibilities of the area. There were many miles of Grade II rivers that we had not explored and yet which were within reasonable distance of our site. Still water canoeists would have no doubt enjoyed exploring the attractive summit level of the Leeds and Liverpool as it crosses the Pennines - even we managed to fit in an evening visit to the famous five stair lock on the canal at The most ardent white-water men would view with compelling fascination the numerous waterfalls which, after heavy rain, provide spectacles which are well worth seeing. I recall our ernest deliberations as to the 'shootability' of Stainforth Foss on the Ribble above Settle and secretly was rather glad that we hadn't got any canoes on top of the Land Rover on this occasion!

We are now looking around for a site for our base camp for our 1964 White-water expedition. Any helpful suggestions?

The 'Go' Factor

BY LT. B.E. BROWN

I would like to point out a factor which, as far as I know, has not previously been acknowledged in any way in print, but more than likely has been experienced by many competitive canoeists.

It is somewhat indefinable, and extremely elusive, so before we can start analysing it, let us give it a name and call it the "G", (Go) Factor. It is this factor, which, for some inexplicable reason, somehow comes into play and makes a team of canoeist and canoe, and makes them "go".

Some may say that it is a perfect combination of all other factors which win competitions, such as stamina, determination, perfect weight-power ratio, ideal weather conditions, good balance, and so on through the list. This is all very well, but let us now remove one or more factors and go L-D Racing.

Let us, for arguments sake, develop a slight but persistant cramp in the left thigh, and the canoe appears to have too much water in the bottom, taken aboard when tackling that patch of rough water which lost time anyway, and you are fed up with seeing the shoulders of the fellow in front which have been moving in an experienced way for some time about 30yds ahead. Then for some reason, you are there with him. He hasn't slowed down, you haven't changed your sitting position, yet inexorably, you are passing him with the finish just around the bend.

What was it that suddenly made you "go", after all those miles. For want of a better reason, I like to call it the unknown "G" Factor.

Possibly, after a few more years of canoeing, I'll find out what it is, isolate it and work on it. To date, my views are as follows.

After quite a few miles have been covered, you settle down to a steady pace, gradually mentally switch off, and no longer concentrate on anything specific, i.e. your breathing, stroke, balance and style are not the subject of any specific endeavour on your behalf.

It is then that you will subconsciously balance all optimum factors and start canoeing naturally. For example, the "perfect style", devised by the Pundits and for which you have been striving and training for, (probably for months, or anyway, since it was last changed), gradually relaxes into the style naturally suited to your own muscles, power-weight ratio, and balance. Very much like a sea-touring canoeist, when L-D racing, quickly changes into sea touring stroke on encountering a gust of wind on a patch of rough water. (As done by many of the N. East canoeists.)

I have just used the one example of style to illustrate how the subconscious is possibly the home of the 'G' factor, but most other factors when traced back can give the same root.

Perhaps other readers have experienced this 'G' Factor and agree and others may say "unscientific rubbish", but I am convinced there is this additional factor as yet unknown, which, without warning, suddenly clicks, and one "goes".

The British Canoe Union and the Canoe Life Guard Corps have been experimenting with methods of using Canoes as rescue craft to assist swimmers who get into difficulties round the coasts.

Canoes have been used with considerable success for reconnaissance and in the assistance of other canoeists who are in difficulties. The assistance which can be given to a swimmer by a canoeist, in a slalom canoe much as is used by the Canoe Life Guard Corps, is limited to providing a conscious patient with support, and towing him slowly for a relatively short distance. In the case of expert canoeists it is possible to carry a co-operative patient on the after deck but this is a rather unstable means of transport and very uncomfortable for the patient if it is a canvas covered canoe with a central ridge on the deck.

At the B.C.U. Surf Canoeing week at Polzeath last year, attempts were made to load an inert body on to the after deck of a With only a slight swell it required a considerable time and the combined efforts of 3 experts (Don Lucas, Jim Barbour and Norman Brown) to get the body (myself) on to the after deck of Norman's canoe. I was then brought in through the surf with some difficulty.

With an unconscious patient there is the added difficulty of holding his body in place particularly in rough water and it is unlikely that a simple device could be designed which would fix the patient securely enough to enable the canoeists to perform a successful "seal roll" in the event of a capsize, and be able to be released quickly enough if the roll is unsuccessful.

The Surf Life Saving Association have used Surf Skis as an accessory to their normal belt-line technique for rescue and it is possible to get into the water, place the patient on the ski and climb aboard without assistance from others. This is undoubtedly more economical then requiring 3 canoeists and the ski is a more stable platform than a slalom canoe, but it also has several disadvantages.

Let us consider the pros and cons of the two types of craft.

Slalom Cance 13' to 14' long x 2' beam

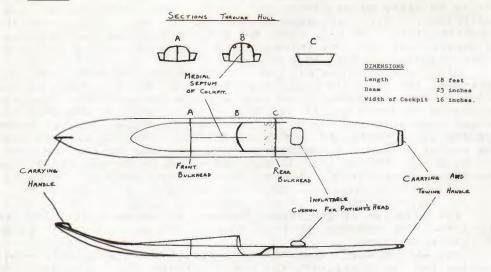
- Manoeuverable.
- 2. Can be rolled if capsized.
- Canoeist fixed in cockpit.
- 3. Canoeist fixed in cockpit.
 4. Rather unstable while carrying patient.
- 5. Bow tends to dig in if surfing straight in to the beach.
- 6. Directional control is difficult while surfing.

Surf Ski 16' to 18' long x 25" beam

- 1. Manoeuverability poor.
- 2. Heavier than canoe.
- 3. Paddler can get into the water then climb aboard even in surf.
- 4. More stable than canoe.
- Can be surfed straight to the beach.
- 6. Directional control is relatively easy while surfing.
- 7. Paddler sits on the ski and must balance it. (No knee grips, only toe straps).
- 8. Artificial respiration can be given before the patient is brought to shore.

If it is possible to select the qualities of each craft which are desirable in a surf rescue craft one would end up with a combination of the two which I propose to call a "Skiak".

The general principles in this design were the result of much discussion of the idea by myself and Keith Slocombe of St. Ives Surf Club, and I believe that the first prototype is under construction at Atlantic College in South Wales under the patronage of the President of the RNKA, Rear Admiral Desmond Hoare R.N. Rtd. who is now the Headmaster of the College.



The "Skiak" is a single seat craft 18 feet long with a beam of 23". The hull is basically that of a surf ski but it is hoped that the weight will be kept down to about 45 lbs. if at all possible. Because of the cockpit and knee grips it should be possible to roll in the event of a capsize and the paddler should have sufficient control of the craft to enable him to surf broadside to the waves if he wishes.

The high bow should be sufficient to prevent the bow digging in while surfing straight to the shore without the paddler having

to leave the cockpit and move aft.

The fairing at the after end of the cockpit will make it easier for the rider to slip into and out of the cockpit. The cockpit is open, and self draining every time the bow rises over a wave. The box sections at the sides of the cockpit strengthen the centre section of the hull and reduce the quantity of water which the cockpit can collect, while the central septum supports the cockpit decking and prevents water movement from one side to the other. This will contribute considerably to the stability of the craft.

A carrying handle is fitted to the bow and at the stern there is a large transverse handle which is useful for carrying the craft or for towing a swimmer in the water.

The amount of rocker on the hull should give the best possible

manoeuverability for a single seat craft of this length.

It should be possible to carry a patient comfortably on the after deck and due to the broad flat tail it is hoped that the craft will surf satisfactorily with a patient aboard.

Trials will commence as soon as the first prototype has been

completed.

British Canoe Union A.G.M.

REPORTED BY JAMES BRIGHT

The twenty-eighth Annual General Meeting of the B.C.U. got off to an early start and a full house. The President. Mr. J.W. Dudderidge, O.B.E., welcomed everyone present especially a visitor from Hong Kong. He then asked for a few moments silence in honour of Martin Rohleder, the international slalomist who was killed in a motor-cycle accident last November.

After the Minutes of the 27th Meeting had been read and approved, the result of the Postal Ballot for election to the Council was announced. Five people had been nominated for four vacancies on the council and the announcement of the results caused some surprise. A surprise due not to the names of those elected but surprise at the low number of votes, resulting from the Postal Ballot. A comment on this was made by the Hon. Sec. Mr. R. Baker, to the effect that there had been more votes from the floor at previous A.G.M's. The results were as follows:-

Mr. C.B. Manton 44 Mr. J. Spuhler 58 Mr. R.F. Tyas 39 Mr. C.M. Rothwell 55

The adoption of the Annual Report, of the accounts, and the appointment of the Hon. Auditor, brought the meeting to the first of the two motions.

The motion was, "that the constitution of the Council shall provide for the President, the Hon. Treasurer and Secretary, ten Members elected by the Membership and not more than two Members appointed annually by each of the Technical Committees and one Representative from each Division".

The meeting was unanimous in voting for the motion and the necessary amendments to the rules. This will make for a larger Council but will bring the various committees in much closer liaison and perhaps better understanding of each others' problems.

The other motion before the meeting was - "that the Union, having now reached a size such that the duties of Secretary can no longer be efficiently conducted on an Honarary basis. the council be empowered to appoint a full time Official" proposed by J. Short and seconded by W. Horseman.

The President, endorsing the motion, said that the Council had applied for a grant for just this purpose and although not as large as he had hoped for, we were to receive one. Further to the subject, the Government was building an office block to be adminstered by the C.C.P.R. in which amateur bodies could have office accommodation for a Headquarters staff. The B.C.U. had applied for and been granted, office space in the building, which should be finished some time in 1964.

When the General Business of the meeting had been concluded, there was an address by Mr. W. Winterbotham, O.B.E., General Secretary of the C.C.P.R. on "Grant Aid to Clubs, Canoe Clubs and Local Sports Advisory Councils".

Presentation of Awards of Honour, preceded presentation of trophies. The first award went to Maurice Rothwell for over thirty years support to Canoeing and the second award to Hein Thelen for his activities in the field of International Canoe Administration.

The evening finished with the traditional Film Show.

The Lifemaster Jacket (B.C.U. Approved)

This bright orange coloured lifejacket was put through a number of tests, using various subjects, in the local swimming baths.

It is both easy to put on and inflate.

The lockable non return inflation valve can be reached with mouth whilst wearing the jacket.

The webbing straps are very strong and are easily grasped for hauling a person out of the water. The adjusting buckle is slip-free whether wet or dry.

Only when fully inflated did the lifejacket feel a little cumbersome but otherwise it was quite comfortable to wear and did not chafe the skin during these tests.

As this lifejacket can be used as a buoyancy aid due to the blocks of sponge rubber contained in the front and neck sections, the first series of water-work tests were conducted without inflation:-

1(a) AS A BUOYANCY AID

Subject fell face downwards into pool feigning unconsciousness. Result. Subject remained face downwards and was not turned over on to his back.

Repeated 6 times.

Results. On one occasion only was the subject turned over, the angle of the head seeming to be the deciding factor. If the head is dropped forwards, chin on chest, subject remained floating face down. If the head was tilted back a slow turn over resulted.

(b) AS A BUOYANCY AID

Subject assumed he had stomach cramp, crouched on edge of pool, arms pulling knees and legs up to chest, head tucked in. Fell forwards into pool and held stomach cramp position.

Result. Remained face downwards in stomach cramp position.

Repeated 3 times. Same results.

(c) AS BUOYANCY AID

Subject paddling canoe assumes he is knocked unconscious by overhanging branch or low bridge or etc.

Result. Subject remained face downwards in water after capsize.

Repeated. Subjects legs trapped in canoe and was held face downwards by capsized canoe.

Repeated. Subject was turned over, face up.

These tests were then conducted with the lifejacket about $\frac{1}{3}$ inflated, with the following results:-

$2(a) \frac{1}{3}$ INFLATION

Subject fell face downwards into pool feigning unconsciousness. Result. A slow positive turn over (8 secs). Repeated 6 times. Similar results, the subject being held in position, lying backwards at about 45° but rather low in the water.

(b) $\frac{1}{3}$ INFLATION

Subject assumed he had stomach cramp, crouched on edge of pool, arms pulling knees and legs up to chest, head tucked in. Fell forwards into pool and held stomach cramp position. Result. Remained face downwards.

Repeated 3 times. Twice with same result, once subject floated face up.

(c) $\frac{1}{3}$ INFLATION

Subject paddling canoe assumes he is knocked unconscious by overhanging branch or low bridge or etc.

Result. Legs trapped in canoe but subject was turned face up in

5 seconds. Repeated 3 times. Similar results.

3. $\frac{2}{3}$ INFLATION

Once again the lifejacket was further inflated to about $\frac{2}{3}$ of its total capacity and the tests repeated. On each of the tests rapid "turn over" resulted (about 3 to 4 seconds) and in the first group of tests the subject was held at the correct angle in the water on every occasion with nose and mouth well clear. In the second group of tests subject bobbed about like a cork but position was held. During the third group of tests the subject's legs did not remain trapped in the canoe at all and once clear of the canoe the correct position resulted.

4. FULL INFLATION

Full inflation tests then followed with similar results but with a more rapid turn over (2 to 3 seconds). On one occasion the subject was actually pushed up into the cockpit of the capsized canoe. The canoe half rolled off the subject and up he bobbed.

The webbing straps were then tested to ensure that they were sufficiently robust to withstand pulling an unconscious person out of the water. Four times this was done without any damage resulting, but on the 5th occasion the rubberised fabric securing the waist strap split along a quarter of its length.

These tests appear to suggest that, for canoeists, this lifejacket should always be worn at least $\frac{2}{3}$ inflated for the sake of safety and comfort but fully inflated in adverse weather conditions. CONCLUSION

While it is realised that it is impossible to reproduce exactly the conditions under which a life jacket will save a canoeist from drowning, these tests were sufficient to show me and the members of my club that the 'Lifemaster' represents a considerable step forward in design. Perhaps, the best recommendation I can give is that this jacket will be adopted for our Club use in the future.

The jacket is manufactured by Vacuum Reflex Ltd. and is available from the main canoe supplier price £3. 18s. 6d.

..... Continued from Page 61.

To conclude then, I am personally a believer in the 'G' factor, and, to make matters more complicated, I don't think it can be isolated owing to the fact that as it appears to be a subconscious factor or combination of factors, by concentrating on it, it moves from the subconscious to the conscious, loses its roots, and disappears.

Letters

Dear Sir,

I have pleasure in enclosing my subscription to your magazine for a further year and would like to take this opportunity of saying how much I enjoy each issue.

I have been particularly interested in your articles and project for recording information on various types of Eskimo kayaks and think that it would be very useful if these could be made available as separate reference sheets, reprinted from the magazine for the benefit of people who like to keep a file of canoe designs.

Your excellent plans service, which makes specialist canoe plans available to the general canoeing public is an excellent idea but I feel there might be an interest by "collectors", of smaller scale reproductions.

Features I particularly enjoy are tests of canoes and equipment, "How to make" articles - these I think are very interesting - book reviews, articles on canoe touring at home and abroad and canoeing in other countries.

Wishing you continued success with Canoeing.

Yours faithfully,
D. Welch,
122 The Avenue,
Lowestoft,
Suffolk.

(From time to time we get requests for reprints of articles of 'Canoeing' but we are afraid that to provide such a service would be quite uneconomic unless several hundred were printed at the same time. Extra copies of 'Canoeing' can be purchased price 1s. 3d. (post free) and this would seem to meet most peoples needs. The availability is usually fairly good up to a year, and then falls off rapidly as we bind up the spare copies. Ed.) Dear Sir.

White Water Foam Domes

In your November issue M.Pindar commented on the fact that no suitable helmet is available for white water canoeing. I wonder if he has ever seen the helmet used in ice hockey? It is of shockproof material, is light in weight and consists largely of holes. If this is available in England it would seem to be admirably suited to the job.

Having recently left England, and kayaks, behind me I greatly look forward to receiving my copy of 'Canoeing' in order to keep up to date with the sport. Due to the predominance of 'Canadian' canoes over here, the kayak is something of a rarity, and if any fellow enthusiast in Canada would care to write I would be only too glad to reply.

Yours faithfully,
C. Gold,
Dept. of Geology,
McGill University,
Montreal 2,
P.Q., Canada.

Dear Sir.

White Water Foam Domes

With reference to Mr. Pondar's unfortunate experience with improvised crash helmet, about which he wrote in the December issue. I would like to state that I am in a position to supply the crash helmets suggested by him, i.e. with outlet holes.

Yours faithfully,
J. Critchley,
4 Cox's Avenue,
Grange Farm,
Upper Halliford,
Shepperton,
Middlesex.

Dear Sir,

Kent Canoe Club

On 7th November, 1963 the inaugural meeting of the Kent Canoe Club was held at Bexley & Erith Technical High School. A model constitution was passed and officers elected for 1964.

As we are a club primarily designed for the younger canoeists in Kent, we would be glad if you could find space in your magazine to assist the growth of the club.

As soon as firm details of our year's programme have been drawn up, I will naturally forward them on to you.

Yours faithfully,
P. Lawson,
Hon.Sec. Kent Canoe Club,
108, Halfway Street,
Sidcup, Kent.

Dear Sir.

Canoe Widows Wanted

May I through your magazine send a letter to all the "Canoe Widows"; especially those in the racing field. I have been wondering if anyone else might be interested in a joing Camping, Caravan, Canoe holiday, where we "Widows" can look after the children, and the "Dads" can talk and paddle boats together. Somewhere nice and quiet in the British Isles. Has anybody got any ideas?.

Yours faithfully, Mrs. Molly Green, 2, Highfield Road, Impington, Cambs.

Turbulent White Water

Reference to the announcement in the February issue of Canoeing which says that we are no longer treasures/distributors of WHITE WATER, and that a Mr. MacAllister is now doing the job.

This is not the truth. We are still treasures/distributors and have no intention of giving up this job - as Mr. Sutton as

Editor will confirm.

We are interested to know who gave you this information. In the event of us giving up our job for WHITE WATER we shall let you know personally. However, we regret this has happened, but we can assure you it has come as a very great surprise to us.

With best wishes,

Yours faithfully, Xenia & Ron Crockett, 12 Blue Coat Walk, Bracknell, Berks.

(We regret any confusion that has been caused by the News Flash, but since we received the announcement of the official 'White Water' notepaper we acted in good faith. Ed.)

Book Review

PLASTIC BOAT BUILDING by B.A.Arkhangel'SkII and M.I.Al'Shits (Pergamon Press 25s.)

The rock-wary, high-drawing canoeist peering suspiciously at this book, may wonder what "one tenth of a millionth part of a millimetre is an angstrom" has to do with his sport. If, however, as is his wont, he allows his natural curiosity to take charge and he reads further, he will find that this book has much to offer the would-be well-informed canoeist, particularly if he is keen on recent building developments.

It is intended primarily for the student of plastic boat building. Proceeding logically and factually, it deals with the chemistry and properties of plastics, the manufacture of and recent developments in materials used in glass fibre laminates, the design and procedures of making glass fibre boats, some points on the advantages of the method and finally possible future developments.

The text is supported by useful diagrams and comparative tables; the critical may point to some of the illustrations being a little small and not sufficiently well-produced for a technical study and of the need to sift out the material of specific interest to the canoe-builder.

Though much of the information is already available in technical manuals, these are not always easily obtainable and this book helps to fill a gap and provides a useful introduction to the study of recent developments in the field of plastics.

News Flashes

NEW TREASURER FOR 'CANOEING'

This month we welcome a new member to the staff of 'Canoeing', she is Maureen Dawson who will take on the job of Treasurer. appointment has been made necessary by the increasing circulation of the magazine, and by Marianne Tucker's need to devote more time to training in the Olympic year. Marianne, we are pleased to say, will still be helping with the magazine in the capacity of Secretary.

NO COMMENT NEEDED

Reader J. Winlove sent us this extract from a local paper :-

Don't buy a kayak kit less than about 14 ft. length, and choose a single-water. "General purpose" canoes designed for nothing-in-particular should be avoided. Instead alm for either a long distance racing kayak or a slalom canoe.

The former craft is tailor-made

for East Anglia, where long stretches of flat water can be covered with great speed and comfort. The length of such a kayak is about 15 ft. The cockpit is roomy. And there is ample space to stow camping gear. Because the canoe is designed for competition you have the guarantee

competition you have the guarantee of a thoroughbred.

The slalom canoe is designed for rapids shooting. However, it is ideal for still water, too, and is the most versatile of all kayaks. It is first the People of the procedure of the procedur on the Broads.

A NEW K.1. FOR UNDER £40

We hear that Bob Vardy of Avoncraft canoes has just completed the prototype for a K.l which is expected to retail at under £40, or as a kit with hull complete for just under £30. The exterior finish we understand will be varnished mahogany, and we presume that like the other Avoncraft canoes there will be an inner lining of glass cloth.

C.C.P.R. COACHING COURSES

The 1964 list of C.C.P.R. residential courses is now available from 6 Bedford Square, London W.C.1. These courses represent first-class value and if you have a week to spare they are well worth considering.

BRITAIN'S OLDEST ROLLER

Seen recently in a London swimming bath was David Hirschfeld of Tyne Folding Boats. He was practising several different rolls and since, if our calculations are correct, he will celebrate his 64th birthday this year he must be the oldest British roller afloat.

D/W RACE WARM UP

Sunday March 15th is the date of the first of this year's Medway Challenge Races. The distance is 30 miles and includes 11 miles of open tidal water and 9 portages. Organiser Peter Antwis, 38 Hill Road, Rochester, Kent, suggests that this will be ideal for D/W crews wishing to flex their muscles.



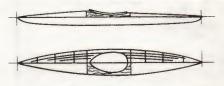
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Fibre Glass. 20z mat - 3/- lb., cloth from 2/6d. sq.yd. All best quality, 'E' type. Braund, 36 Chain Lane, Knaresborough, Yorks.

For Sale. Pioneer folding double. Length 17 ft. With carrying bags, spraydeck, rudder, glass fibre seats, kneelstrip. First class condition. £45. Skilling, 1, North Lodge, Ealing Green, London, W.5. (Phone: EAL 0303).

Wanted. Veneer K.2, good condition preferred. P. McMurray, 24, Butleigh Avenue, Cardiff.

WHITE WATER

Obtain your copy from R.V. & X.Crocket, 12 Bluecoat Walk, Harmans Water, Bracknell, Berks. Quarterly 10s. p.a. (post free). Back numbers and single copies 2s.6d. each. Also available WW supplement No.1. WIGGLE/WRIGGLE TESTS 6d. each, reductions for quantities. WW Supplement No.2 SPUHLERISED RULES - a 12 page booklet 1s.3d. each, reduction for quantities.

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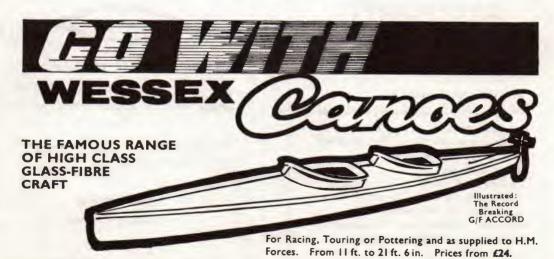
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You may make up to a maximum of 12 attempts on each entry form, and send as many official entry forms as you like. A donation of 3d. to the Olympic Appeal Fund must be sent for every attempt and a donation of 3/- will entitle you to twelve attempts.

A panel of judges will award the prizes to the senders of the three entries they consider best. In the event of ties, an eliminating contest will be held. A copy of the full rules may be obtained by sending a s.a.e. to the organisers of the contest.

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