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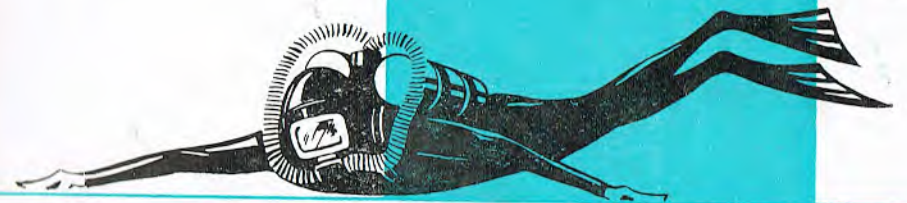


filter and control panel is mounted in a tubular steel carrying frame and weighs approximately 400 lb. It can be used independently or incorporated in a static installation.

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# ROYAL NAVAL **DIVING** magazine



Deep Diving Control Console

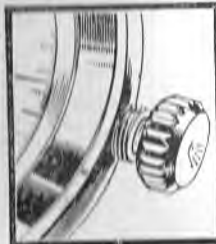




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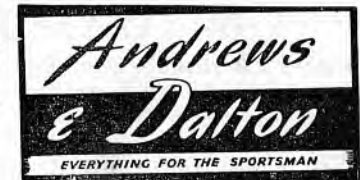
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## R.N. Diving Magazine

Vol. 12

Spring 1965

No. 1

## EDITORIAL STAFF

Editor .. .. P.O. R. GARDNER  
 Treasurer .. .. S/Lt. P. R. PARK

## EDITOR'S NOTES

THE credit for past editions of the Magazine has largely been due to the same group of faithful writers, who regularly subscribe material in time to formulate an interesting magazine.

I feel sure that there are many readers who could enhance our literary presentation by simply penning a few lines to the Editor referring to their recent or proposed diving exploits.

Letters are regularly received in the office praising the magazines value to the readers and only by continually ferreting out information can we maintain and improve our present standard.

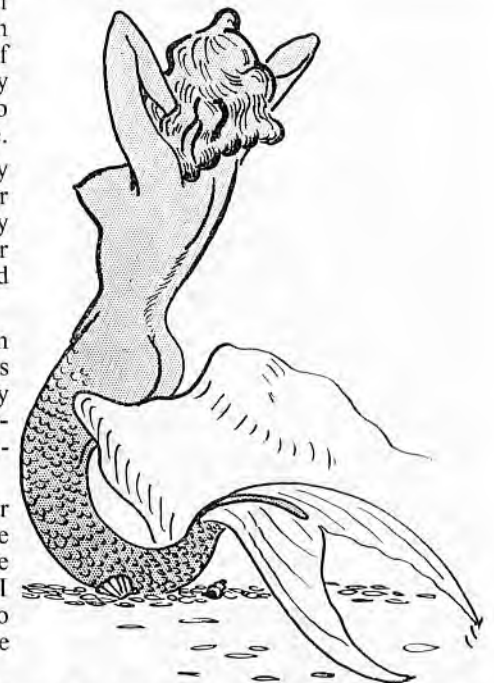
As a reader of the magazine for some time, and now in the onerous position of Editor, like many of my predecessors I appeal for readers support to keep OUR Magazine up to the standard now required.

**Diving Employment** The Editor has details of several civilian appointments. A copy will be sent to any of our readers applying to him.

## TREASURER'S NOTES

THIS is the first issue produced by our new Editor, Petty Officer R. Gardner and on behalf of all our readers I would like to take this opportunity of welcoming him to the position. At the same time I know from your letters received that you will wish me to thank the retiring Editor, Petty Officer V. Gibbons for his dedicated and tireless service to our Magazine. As Editor, P.O. Gibbons has increased sales and improved our liaison with the B.S.A. clubs to our mutual benefits.

His work for the Deepwater Pirate Rugby team requires no mention from me. The Committee have decided to award him an issue of the Magazine in perpetuity as a token of regard for his services.





## Progress in Submarine Escape

**ESCAPES** from sunken submarines can be made in three ways.

**Compartment Escape.** When a whole compartment is flooded deliberately and the survivors make their ascents one after the other.

**Rescue Bell.** Lowered from a rescue ship.

**Tower Escape.** When one or two men at a time lock out of the submarine through the conning tower or escape tower.

Compartment escape may be used from the shallower depths down to about 150 feet. At greater depths this comparatively lengthy procedure will give most of the survivors Bends. The rescue bell has the advantage that escapees never go under pressure at all. It is used as the primary means of escape by some navies, but we believe that weather and tidal conditions will rarely be perfect enough to allow this very cumbersome and expensive equipment to be used. We are also certain that the primary means of escaping should be contained in the submarine. Finally, tower escape, when the time under pressure for each individual is very short, making this method suitable for escapes from the deep. In 1962 this last method was tried out at sea from H.M.S. *Tiptoe* at depths down to 260 feet, and this showed that if the gear was developed, ascents could be made from far deeper. In 1963 a team from the submarine escape training tank, H.M.S. *Dolphin* worked with R.N.P.L. to find the limits in time and pressure on no stop dives on air. Mixture breathing may be tried in the future, but for simplicity, air is used in the present series of trials. The air is provided from the present built-in breathing

system, 'B.I.B.S.' supplied by bottles charged with absolutely pure air.

Our aim was to make 100% safe ascents from 450 feet and this would show that escapees from depths down to 600 feet or so, would have a very good chance of success.

After some preliminary runs in the compression chamber at R.N.P.L. we found that quick pressurisation presented no problems. We planned to double the pressure every 4 seconds, thus achieving a constant rate of air volume charge, so the first 4 seconds took us to 2 ats., the next 4 seconds to 4 ats., by 12 seconds we were at 8 ats., and at 16 seconds were at 16 ats. Due to the mechanical features of the pot this rate was often far faster than intended at the beginning of a run, and trailed off towards the end; however, we got to 500 feet in 21 seconds. During the trials that followed we explored the limits of pressure and time, decreasing the stops until we finally got to 50 seconds at 500 feet surfacing direct at 6 feet per second.

At this stage one of the team got a Bend, and our prudent limit was then fixed just short of this figure. This gave a fair margin of safety in depth and time under pressure for the projected ascents from 450 feet. In the meantime D.G.S. had been designing an escape tower with a means of controlling the pressurisation rate, an air supply system for the escaper and a clean path through the top hatch. At the greater depths a vast supply of h.p. air is required to maintain a large enough airlock in the tower for a man to breathe more comfortably. To economise on h.p. air, which in any case must only come from the B.I.B.S. bottles because they contain no impurities, it was decided to retain the airlock in a simple hood

over the escaper's head and control the flooding rate by the size of the flood valve and the size of the airlock retained in the top of the tower. The escaper is now supplied with pure air enough to keep his life-jacket and hood inflated against the rising pressure, but not so much as to waste it and leave none for the last of the survivors. He has a transparent visor in the hood, the tower is welded and it is unlikely that he will feel much discomfort or anxiety when the water level rises above his head. The simple air dispensing valve produced by Hale Hamilton's to D.G.S. requirements, completes the whole; named the hood inflation system. This system now consists of the man, the hood, the air valve and tower.

In 1962 it had been found that 260 feet was near the limit for free ascents, exhaling throughout and with a glance back to 1910 and the Hall-Rees escape helmet, a hood had been produced by Siebe Gorman. The simple hood such as the S.G. on the American Stienke Hood makes far greater comfort during the ascent, but unless it can be provided with absolutely pure air at the right rate during pressurisation, it is a death trap.

In September, 1964 the system was tried successfully from H.M.S. *Orpheus* at depths down to 200 feet in Loch Fyne. It was found that pressurisation to 200 feet in 10½ seconds under action conditions was a mild experience compared with the deafening noise of R.N.P.L. pot. The ascent was quicker than expected about 10 to 12 feet per second, and was exhilarating.

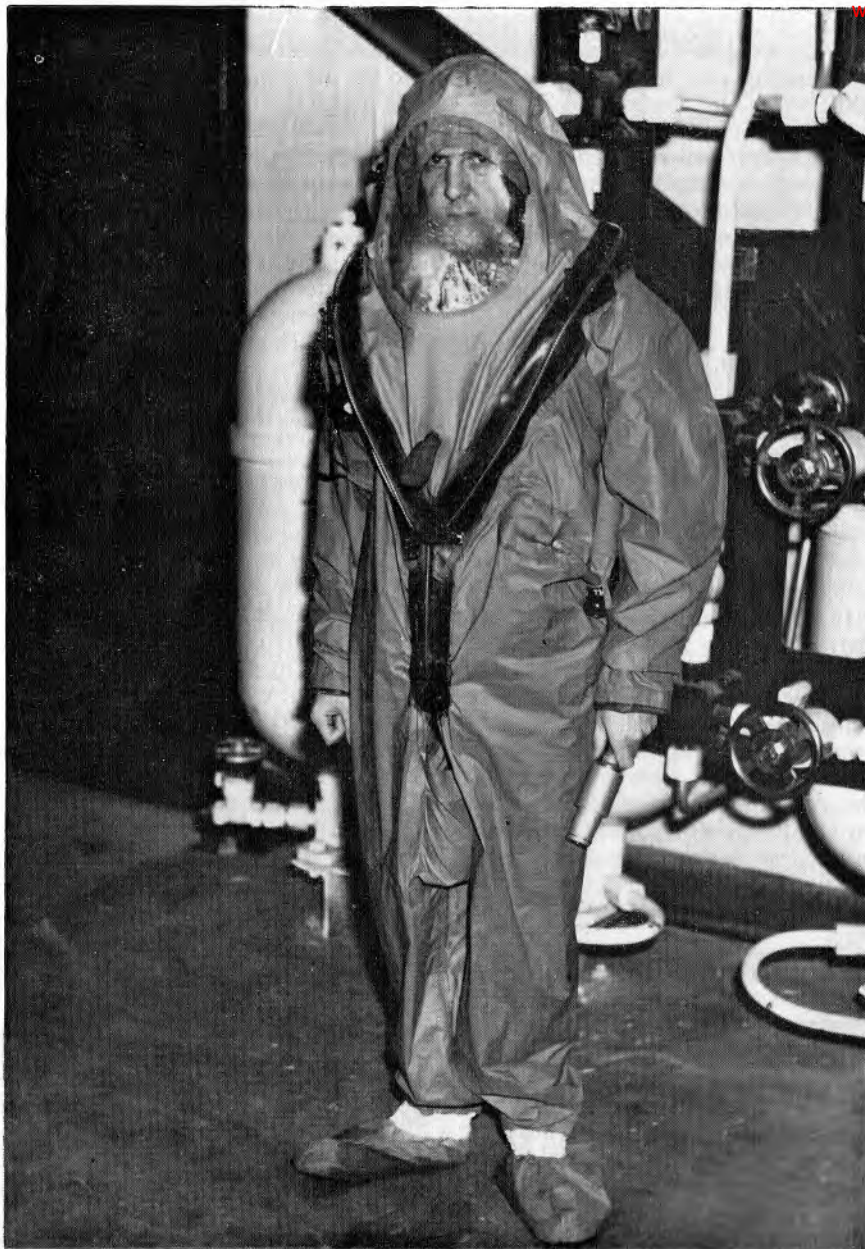
Since the 1962 trials great efforts have been made to simplify the drill, streamline the exit and accelerate the escape cycle. The escaper now dresses in his emersion suit, zips on

his hood, enters the tower and plugs into the air supply. The tower hatch is shut and the flood is opened. Seawater enters the tower and air is vented back into the submarine, so flooding is completed in about 30 seconds, the tower pressure remaining at one atmosphere. When the vent opening, situated at the height required for the airlock, is covered by the rising water, the pressure comes on. For the comfort of those still left in the submarine the vent is shut below: the last man out is not concerned with this.

The escaper floats up under the top hatch, and, as soon as equalisation occurs the hatch opens: this requires no effort and it is in fact more difficult to hold on in the tower than it is to rise through the hatchway. The H.I.S. plug is designed to disengage if not held in, so, conscious or unconscious the escaper will float clear. It can be seen that escapees have nothing to do except plug their H.I.S. and breathe for the critical 16 seconds or so of pressurisation. The last man has only to open the flood valve inside the tower in addition to this.

The cycle takes about 4 minutes a man. It will have been noticed that no mention has been made of ears. The S.E.T.T. staff team have had very little trouble with ears or sinuses, and most of them feel that the fast pressurisation is easier than the slow. Should an untrained man fail to clear his ears by his own efforts, they are cleared for him so suddenly by the quick pressure change that he barely feels the pain. As very few submariners are even likely to need to execute this evolution in earnest even once, let alone more than that, it is felt that a slight temporary damage to the ears is a small price to pay for a safe, comfortable escape.





### THE H.I.S. SUIT

A prototype built by Dunlop to R.N. specification and design. The probe for the air supply can be seen in the left hand. The life-jacket is built into the breast of the suit and overblows into the hood. On surfacing, either the visor can be torn out by a zip string or the hood zip can be drawn back.

In training at the S.E.T.T., only 100 feet of water is used, so time under pressure will not be so important as in an escape from deeper depths. Pressurisation can therefore take as long as the average trainee requires: in all other respects the training will be realistic.

We hope to get approval shortly to do a further series of live ascents from depths down to 450 feet this summer. This will be number four in the 'Upshot' series.

We are grateful for the assistance of the Plymouth Command Deep Diving Team in these trials.

## Horsea Island

**H**ORSEA; known by Sub Aqua Clubs as a quiet spot for diving, known to other people as a handy lake to cool off in, but to most of the Naval Diving world it is a lake where blood and a few tears, followed by cussing, is common place. A great number of suggestions on what to do with the lake have been uttered over the years by those who are a part of, and others trying to be a part of, the Diving branch. And it seems that other parties were interested, with their own suggestions and ideas for Horsea Island.

For a couple of years, up until 1960, the Municipal Council have had ideas on obtaining Horsea Island from the Lords of the Admiralty, and illusions of a fishing port, or a yachting marina, or a garden city, emerging out of mud that is so well known by many divers. The admiralty, however, have been very polite but firm when approached by the council, and calmly answered a barrage of leading questions about the merits of keeping the Island.

Looking back, the oldest inhabitant was Mr. Chivers who lived on the Island for 7 years. He remembered as far back as 78 to 79 years ago when the lake was first built by convicts and used as a torpedo testing area. Twenty-six years later the Admiralty built a wireless station, which remains to this day.

During the war years Horsea began yet another role as a repair yard for landing craft. And during the first 100 days no less than 38 craft were repaired and sent on their way.

H.M.S. *Phoenix* eventually ended up on the Island owing to the popular or rather unanimous demand of the public. The oily smoke used in fire-fighting exercises polluted and blackened the neighbourhood, which eventually led to *Phoenix* breaking the clean air act.

Another inhabitant of the Island is Mr. Callard, known to most of the diving world as 'Cowboy'. He gained renting rites as a result of an accident his son sustained while working for the Admiralty. Upon delving into the past facts of the inhabitants it was found that 'Cowboy' specialises in Chickens, Geese, Rabbits, and Welsh ponies, or so it is said.

But undoubtedly the strongest known tie with Horsea is for the Diving training programme. And on being questioned why the Diving couldn't be conducted at H.M.S. *Vernon*, the answer from the Admiralty was that the water in the harbour was too murky and unsuitable owing to constant boat traffic, also Horsea Island was suitable for administration.





## How can I Save?

Of course, I try to. But my pay's not enough to save anything.

That's what I thought when I was your age, until someone showed me the progressive Savings Scheme. I only had to put aside £3 a month by Naval Allotment but when I leave the Service next year I can collect £855.

Sounds too good to be true. Where's the catch?

No catch. And if I had died at any time my wife would have received the whole £855 immediately. You see, it's a Savings Scheme and Life Assurance Scheme rolled into one.

Supposing you hadn't signed on for 22 years' service?

Well, when I had finished my 9 years, and had paid premiums for 7 years, I could have drawn £234 to help set me up in Civvy Street, but now, after 22 years' service, I shall have the option of taking the £855, or if I don't need the cash immediately, a pension of £172\* a year when I retire from civilian work at 65.

Which will you take?

I'm going for the pension. I'm all lined up for a job already, and with the extra pension to look forward to when I retire, and the wife provided for if anything happened to me—well, it's the kind of security we all want.

How do you set about all this?

That's easy. Ask the Provident Life for details of the Progressive Savings Scheme.

\*For members of the W.R.N.S. the pension is £149 a year.



Send this Coupon to:  
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Please forward details of the Progressive Savings Scheme.

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Rating/Rank ..... Age next birthday .....

Address .....

Which brings us roughly up to date. The future is not known; who knows, will it eventually emerge as a garden city, or fishing port, or a residential area, or even a stepping

stone for a bye-pass, adjoining Gosport.

What ever the future, a host of people connected with the Diving world will never forget it.

J.G.

## The Naval Ordnance Inspection Department

**F**ORTUNE favours the brave, so they say, and on retiring from the R.N. in 1963 I was bold enough to apply to the Chief Inspector of Naval Ordnance for a post as an Inspector of Naval Ordnance. Having survived three interviews, a term at the R.N. college at Greenwich, and with Dame Fortune still smiling on me, or the devil taking care of his own, I eventually became established as an Inspector of Naval Ordnance (on probation). Like most R.N. officers I had only a very vague idea of the duties and responsibilities of an Inspector of Naval Ordnance. Certainly I had on the rare occasion met them in connection with mine disposal operations, e.g. during recovery of mines from the 'Port Napier' in Kyle of Lochalsh and recovery of warheads from the Victoria Channel Belfast. On those occasions while I was duly impressed by their obvious vast knowledge of high explosives, I had little appreciation of the wide scope of their responsibilities and activities.

The Naval Ordnance Inspection Division which is a division of the Department of Weapons (Naval) originated in 1888 as Inspectors of Steel at Sheffield and with the Chief Inspector and his staff based at Woolwich Arsenal. All these officers were Royal Artillery officers. The system proved unsatisfactory during the Boer War and in 1906, under the

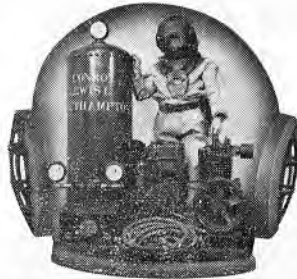
guidance of Admiral Lord Fisher, the R.N. took over its own ordnance inspection but to a somewhat limited degree. A Chief Inspector of Naval Ordnance and two deputies were appointed to the Admiralty, but naval inspecting officers inspected steel only and the inspection of armaments remained under War Office control. In 1917, following the failure of armour piercing shell at the Battle of Jutland, Inspectors of Naval Ordnance were appointed to Woolwich but they were still controlled by the War Office. Finally in 1920 the Chief Inspector of Naval Ordnance became responsible for the inspection of all naval armament stores, and the main inspection area moved from Sheffield to Woolwich. The Chief Inspector of Naval Ordnance and his staff remained at the Admiralty in London until 1939 when they were moved to the present headquarters at Ensleigh, Bath. Between the two world wars and from 1939 onwards the inspection areas expanded and are now as follows:—Woolwich, Birmingham, Sheffield, Newcastle, Glasgow and Belfast.

In addition to the posts in the main inspection areas, Inspectors of Naval Ordnance are also appointed to serve in stations such as:—R.A.R.D.E. Fort Halstead, Kent, A.U.W.E. Portland, armament depots, Royal Ordnance Factories, and the various experimental and



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proving ranges such as Shoeburyness (Essex), Pendine (S.Wales), Eskmeals (Cumberland), Inchterf (near Glasgow) and Arrochar (Argylshire).

The main duties of Inspectors of Naval Ordnance are:—

- (a) To watch RESEARCH and be actively associated with the design of ordnance stores (including guided missiles, atomic weapons, guns and gun ammunition, torpedos, anti submarine weapons and rockets, automatic guns, small arms, pyrotechnics, etc.) for use by the Fleet. To ensure that while full advantage is taken of scientific and technical advances the stores produced remain suitable and safe for sea-going conditions.
- (b) To inspect all new manufacture and filling of ordnance stores to ensure that the requisite standards of safety, efficiency, and suitability (particularly with regard to explosive stores and diving gases) are maintained.
- (c) Periodically to inspect stores in service to ensure that they are in a fully safe and serviceable condition.

Wherever he may be employed the guiding principle of the Inspector of Naval Ordnance is that he must ensure at all times that the product he is inspecting, testing, or checking will be safe, suitable, and efficient for

use at sea or in the field. Sometimes the manufacturer may feel that the Inspector of Naval Ordnance is being too meticulous and over zealous in his inspection techniques, when these are compared with his own factory inspection. However the manufacturer usually appreciates that this zeal is necessary when it is explained that in H.M. ships one defective round can mean the loss of a ship's company and a ship.

In recent years the Naval Ordnance Inspection Division has become responsible for the inspection of all diving gases, and I venture to opine that this has resulted in increased efficiency both in the quality of the gas and the state of the cylinders. Having on several occasions visited B.O.C., Wembley, I can assure all divers that our inspection team there work hard and conscientiously to give the diver the efficient product you must have. In conclusion, I would say to all Clearance Diving Officers especially when abroad that if at any time you have a query as regards the safety, suitability, or efficiency of any of your armament stores, contact your local Inspector of Naval Ordnance. He will be glad to help you if he can or direct you in the appropriate procedure to be adopted.

Best wishes to all at home and abroad.

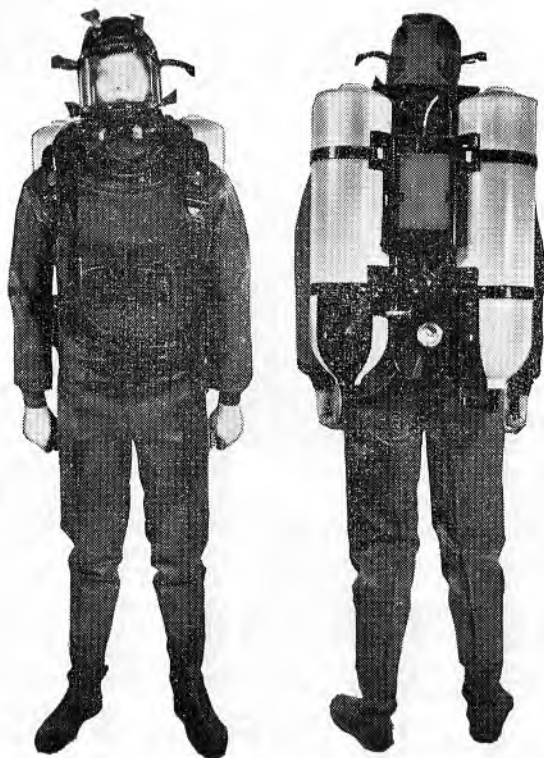
Yours aye,  
MAC.

**DIVERS REQUIRED** for 1965 season (April to November) for salvage work in the Orkneys. Salary £20 weekly, plus maintenance allowance. Tonnage bonus normally payable on results. Applicants must be experienced in actual salvage recovery and should apply in writing to Nundy (Marine Metals) Ltd., 175, St. Vincent Street, Glasgow.

### A LIVERPUDLIAN TO HIS JUDY IN THE DANCE HALL

'That's a nice dress your wearing'.  
'Thank you' she said blushing.  
'It's coming off though' he said.  
She looked down quickly.  
'No it's not'.  
'Yes it is' he said firmly, 'I've made me mind up about that'.





The diver is wearing an Under-water Swimmer's Dress made from rubber-proofed crimped knitted nylon, and is using SABA (Swimmer's Air Breathing Apparatus).

The suit is manufactured by Dunlop General Rubber Goods Division of Manchester, and the breathing equipment by Dunlop Aviation Division of Coventry.

Dunlop have for many years produced various types of underwater equipment for the Admiralty, playing a leading part in the design and development of apparatus for different specialized branches of underwater operations.



**DUNLOP**

CFH/AY/24

## Extract from the Note Book of a Chemistry Student - Element Women

### PHYSICAL PROPERTIES.

(a) *Colour.* Usually a light pink, although turning rosy when discovered in natural state.

(b) *Smell.* Can easily be distinguished by its pleasant overpowering smell at ranges up to 100 yards.

(c) *Taste.* Sweet or sour (depending on type).

### CHEMICAL PROPERTIES.

(a) *General.*

1. Properties are vastly improved if specimen is placed in dark (again depending on type.)

2. Properties vary considerably when placed in company of males.

(b) *Specific.*

1. Turns green in presence of other specimens.

2. Leaves a red deposit on china and cigarettes.

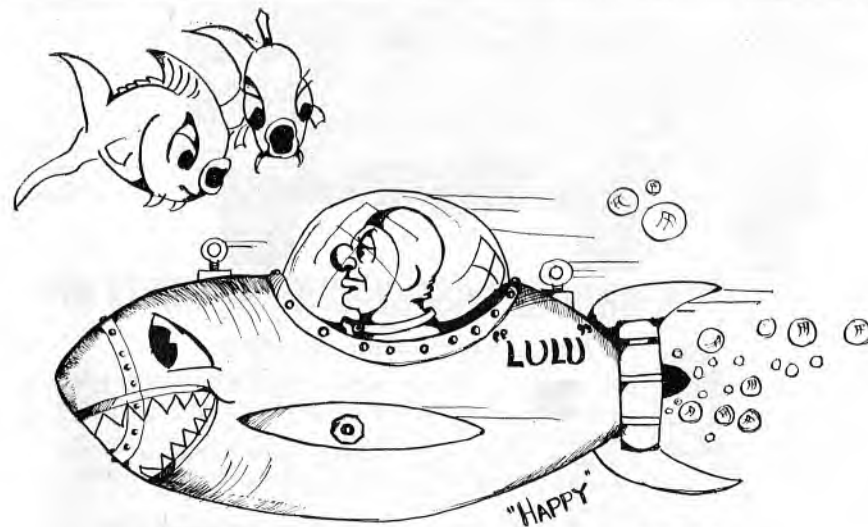
3. Turns brown in summer, though not always naturally.

4. Non magnetic though attracted by coins and precious stones. (It is interesting to note that the attraction is directly proportional to the amount of said coins or precious stones.)

5. Its shape varies considerably with different specimens, but this is often changed artificially so that the change is indiscernible, except to the experienced eye.

6. The element is said to possess great affinity for water but this has been found to be incorrect. (The report probably originates from the fact that the element seems at its best when close to water.)

**Warning.** This element is dangerous. Handle with extreme care but ensure that during your lifetime you handle at least one since the experience of this cannot be printed.



"Some of these big chaps will eat absolutely anything ! !"



## Devonport Command Bomb Disposal Unit

**T**AKE note of what happened to us last April and be warned.

A call from the police to remove a long cylindrical object from a trench at Torquay came early in the morning.

On arrival the 'Thing' appeared to be harmless, rather slender, about 4 foot long and with 4 large fins. Nothing like it in the books, no obvious fuzes or strikers. So we took it away.

A short trip over into Cornwall and we returned to the Torpoint Ferry. As we had a short wait we switched the engine off, then 'that thing's ticking,' we said together. Women, children and dockies coming off the ferry. Down the beach road we raced, out with the 'Thing' and across the mud flats, ticking all the way, half a pound of P.E. and two foot of safety fuze, later we examined

the remains which now strangely resembled an exhaust pipe, two alarm clocks and a piece of paper with 'Herr Kilroy Was Hier' printed on it. Only then did it dawn on us that it was the first of April.

Back to *Drake* where we are. still kept busy by the local fishing vessels with a couple of 1914 — 1918 mines round as marbles. Some spectacular results with drums of gun cotton, diving with the R.A.F., Mount-Batten for depth charges. Picking Gelimex out of Post Office safes after miss fires by safe breakers, plus all the small objects that never stop popping up.

The Unit now consists of Sub-Lt. Jenkins, P.O. Witherell and A./B. Briggs. All shortly to be amalgamated with the P.E.D.D.T. to form one team.



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## Shoulton Continues

**G**reetings — and a few lines to prove that we in the mine-hunter still survive and are still able to write despite certain rude remarks from the Editor.

Considerable changes have taken place in recent months during which time the ship has migrated from the flesh pots of South Queensferry to the arms of our 'alma mater' and the purlieus of Portsmouth, had her ship's company reduced by about one third and suffered three changes of managing director.

In spite of these factors, the last year has presented a busy and varied life during which we claim that we have managed to leave our mark and hope that we may have performed a useful service now and again. In addition our technical boys have proved their worth and have continued to keep our equipment working. For the benefit of those who have not yet encountered a mine-hunter, the days of 30 foot circular searches are receding — when we are told that the marking error is 2 yards, that means 6 feet, (see the advantages of higher education), and if the error is more than three yards that is a bad run and it is time for the 'Ops' room to start again. The only disadvantage being that a 5 minute

dive is poor recompense for having been in a rubber bag for 5 hours.

Over the time our excursions have taken us to Lerwick, Invergordon, Port Edgar, Esbjerg, Den Helder, Flushing, Brest, Caen, Brixham and Portland, and at times we have tried to educate divers from *Plover*, *Dingley*, *Miner III*, *Reclaim* and the Plymouth Deep Team. In addition we have sought swimming aircraft off Lossiemouth, Great Yarmouth and in Torbay. We even managed to find and destroy a G.C. in Sandown Bay (and get sour looks from the B. and M.D. team in Pompey on our return to harbour after a very creditable bang.)

We have also tried to initiate our successors in the gentle (or should I say — patient) art of minehunting, after all they will man the conversions and we do appreciate that they must be good imitations even if there is only one *Shoulton*.

As far as the future is concerned the buzz is that we shall be invited to pay off soon so that our hull may be returned to some dockyard for conversion to who knows what. When that time comes all we ask is that the radiators' crew move one tiny pace to the left and allow their seagoing confreres to get at the coffee boat (black, two sugar, please!)

## Big Bangs on the Whenua Site

by Geo. W.

**D**URING April 1963, a team of New Zealand Naval Divers working for the Marine Department demolished an old timber boom across the Whenuakite River near Whitianga in North Island, New Zealand.

The boom, extending for about a hundred yards along the river constructed to restrain logs to be made up into rafts during the old timber-milling days, had caused the river to silt to a narrow channel. When the boom was built about 70 years ago,



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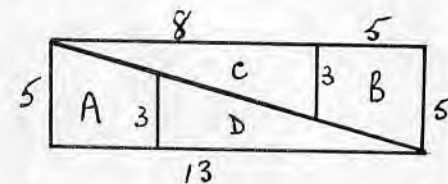
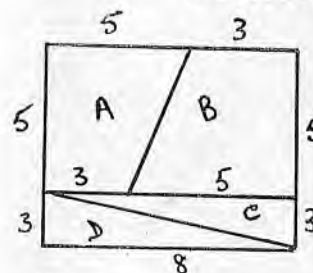
it reached 184 feet out from the eastern bank to a 30 feet gate and then continued to the western bank. The river was 230 feet wide at this point and had a maximum depth of 20 feet.

The divers worked for eight days demolishing the piles at a level several feet below the river bed and found the work full of interest. Over the years since the boom was last used about 35 years ago, successive storms washed a great deal of timber debris down the river and mingling with huge kauri pine logs left behind after the last consignment of logs to be floated out to sea, wedged themselves against the boom causing the river to narrow to such an extent that by the time the divers started tackling this demolition work, the surrounding country and farm land

was frequently turned into swamp during the heavy seasonal rains experienced in this part of the country.

Much help was given by the local farmer who owned the surrounding land and without the loan of his tractor (which was used to drag the piles out of the river bed after demolition), the job of clearing the river would have taken much longer. Many such diving jobs for civil departments are undertaken by the Royal New Zealand Navy, contributing to a thoroughly interesting time for all concerned. During 1962 for instance, approximately 60 days were spent working on civil projects whilst continuing with the diving schools' normal function of diving training.

## Something for Nothing



How good are you with figures?

Not figures divers for looking at, but figures, numerals and figures geometrical. We all know that the length of the side of a square when multiplied by itself gives the area of the square, and that the length of a rectangle multiplied by its breadth gives the area of rectangle, or does it?

Construct figure A to a suitable scale, let the figure 5 say be represented by 5 inches and the figure 3 by 3 inches. Now you have drawn a square 8 inches by 8 inches. Well done! No doubt you will agree that its area is  $8 \times 8 = 64$  Sq. ins.

Now cut up the squares into pieces A, B, C, D, and re-arrange them to make the rectangle shown in figure B. Well done, again! But have you done well? The length of the new figure is 13 ins., and its breadth 5 ins., so its area is 5 ins. — 13 ins. — 65 Sq. ins. or is it.

At least you seem to have 'proffed', after all you have made another square inch of paper out of nothing, and just think of the times when you could have used only one square inch of paper, made out of nothing.

Ah see.



## 'Seabed' Sappers in Earl's Court Experiment

TEN-DAY EXERCISE IN UNDER-WATER 'IGLOO' by George Hogan

THE Royal Engineers' underwater operation in the harbour feature during the 10 days of the International Boat Show at Earls Court, London, is an exciting but natural development to their normal diving duties. The Sappers pioneered underwater work among the Services and in 1839 an Engineer officer named Colonel Pasley led a team of three divers in the demolition of the wreck of the historic Royal George. The vessel had sunk at Spithead in 1782 while heeled over to enable an underwater pipe to be repaired — there were no divers in those days to perform such tasks. Colonel Pasley and his men placed gunpowder charges alongside the hull. They weighed up to more than a ton and were packed in water-tight metal cyclinders.

At Earls Court the half-dozen Sapper divers commanded by Capt-

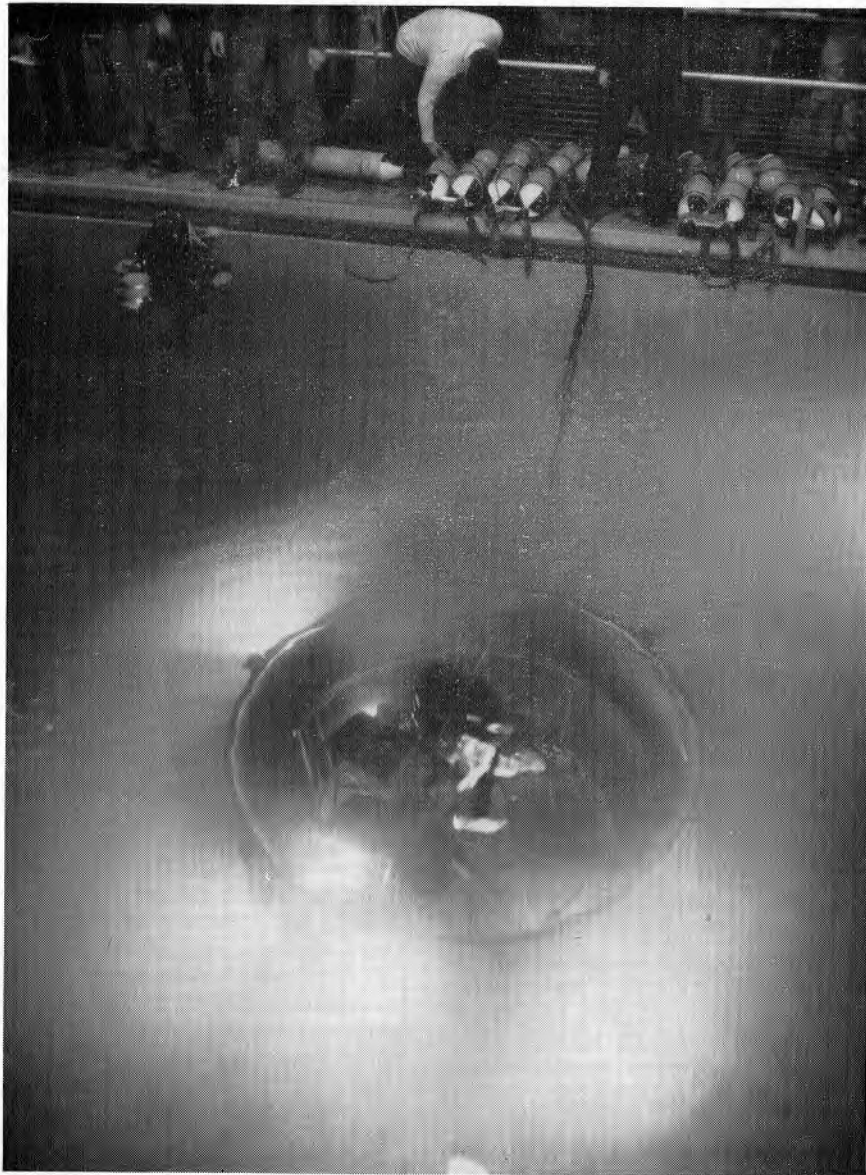
tain David 'Davy' Jones are living under water, two or three at a time for 12 hour-stretches, in a Perspex dome, or 'igloo', constructed by the plastics division of Imperial Chemical Industries. They dive to their new-style living quarters on the harbour floor wearing frogmen's 'wet suits', masks and aqua-lungs, but once inside the dome they remove their equipment to live in dry conditions. They have their meals there and perform various tasks, while records are kept of their reactions and experiences. This is the first time that people in Britain have had an opportunity to see men living under water and the first time the Sappers have had the chance to use such a structure. Doctors from the Royal Air Force School of Aviation are co-operating with the party for experimental research purposes.

## Royal Engineers' Diving School

IT is logical that the Royal Engineers should study the techniques and the physiological and psychological reactions of living under water. They provide divers for the Army and in modern war there is an increasing need for them. Most field units of the Royal Engineers maintain a team of trained skin divers to tackle the wide range of tasks that are the Corps' special responsibility and which include underwater demolitions, river, beach and harbour reconnaissance, obstacle clearance and the maintenance of Army vessels. In 1961 the Sappers opened their own Diving School on Southampton water, which is to be

incorporated as a wing of the Royal School of Military Engineering.

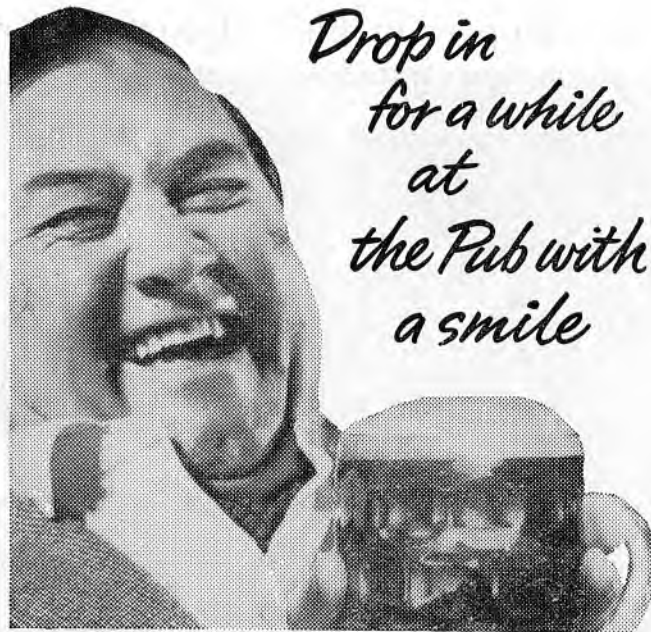
Aqua-lung divers have contributed much to repair, research and development under water. They augment the heavy-suited divers and perform many tasks they cannot attempt. Future development must depend on man's ability to live for long periods under water and often at considerable depth. Surfacing involves long delays for decompression. It can amount to four hours a day — a real time waster. The wealth of the sea and of the oil and hard minerals under it are enormous. Fish farming and vegetable growing, too, are



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Sappers in the Underwater House at the Boat Show, January 1965





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occupying attention as the resources of the oceans are becoming known.

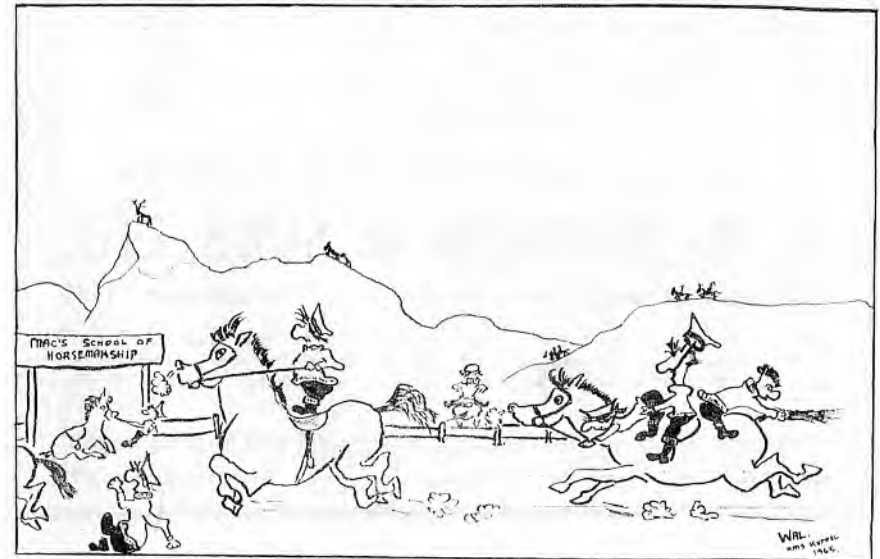
In 1962 a young American, Robert Stenuit, dived 200 feet under the sea and stayed down 24 hours, using open-bottomed, pressurised cylinder in which to eat and sleep. In 1963 the Frenchman, Commandant Jacques-Yves Cousteau, spent four weeks in a five-roomed house 50 feet under the Red Sea. Madam Cousteau, also, was there for some time to do the housework, for this was a fully-equipped unit with radio, television, all modern conveniences and even a rack of good wines. In 1964 the Commandant continued his experiments under the Mediterranean. He has dedicated his life to this work and says he is just as much at home under the water as anyone who spends his days on dry land.

It is the British Sappers' experiments in this new kind of living that visitors to the Boat Show are able to see at Earls Court. While they can sight little through the deep green water of the harbour feature the actions of the men in their dome are captured by an underwater television camera and broadcast in the

hall. Visitors can also talk to the men by telephone.

The dome is made of half-inch clear Perspex and is 7 feet 6 inches in diameter. Vertical walls are bonded to this bubble to give headroom and the top of the dome is about five feet under the surface of the harbour. Nearly 400lbs of transparent plastic was used in the construction which was tested to withstand pressures of six and a half tons. The floor is of glass fibre. The water is kept out by the pressure of air inside and this is replenished by the aqua-lungs taken in each day by the divers.

Princess Alexandra spent some time speaking to the 'seabed' Sappers on the day she opened the Boat Show and visitors have shown considerable interest in the exercise. On the Royal Engineers' stand in the hall diving suits and other equipment are on view and the public can watch, through television the progress of the men below. This latest, exciting experimental operation of the ever versatile Sappers emphasises once again the progressive trends in the British Army of today.



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*Acknowledgement to "Dorset Evening Echo"*

## Gales Lash Dorset Coast

### Frogmen save cars.

Naval divers wearing frogmen's suits saved eight cars caught in a high tide which swept over Weymouth harbourside today and swamped other parts of the town. Sand bags went up round houses in Hope Square and stopped serious flooding, but waves crashed over the Preston Road closing it to traffic.

The Naval Divers, at Weymouth from H.M.S. *Vernon*, Portsmouth were on a training course had just finished breakfast in the Kings Arms Inn when the sea came over. Said licensee, Mrs. Mabel Marett, 'They put on their suits and rushed over to the quay near Pankhursts and got to

work like Trojans pushing the half-submerged cars out of the water'. Mr. and Mrs. S. Humphreys of South Kensington, staying in Weymouth overnight before sailing for Jersey, today arrived at the quayside to hear how the divers had floated their submerged car to dry land.

Commented Weymouth's Police Chief, Supt. Bertram Smith, 'The divers did a first class job in acting so quickly to save the cars.

The six divers who belong to the R.N. Diving school at H.M.S. *Vernon*, went on for their daily duty at the Bincleaves Fleet Clearance Diving Centre after their rescue mission.





## Deep Diving - Part 1

FOR many years the Royal Navy have been leaders in the field of Deep Diving. The research into diving schedules of this has, since 1948, been carried out at R.N.P.L., the Navy's Physiological Laboratory. Development of equipment and the provision of Diving Medical care and supervision has been the responsibility of A.E.D.U. (Admiralty Experimental Diving Unit).

R.N.P.L. is a small establishment situated on the pleasant piece of coastline between Gosport and Lee-on-Solent, overlooking Stokes Bay. The A.E.D.U. recently opened a Deep Diving trials unit, containing a wet and dry chamber, but the present series of dives are carried out in a large re-compression chamber called the 'Rocket'. This chamber is 5 feet in diameter and 18 feet long, containing three compartments. The working pressure of 360 lbs. is equivalent to 850 feet.

Although the 'Rocket' was not designed for this research, its versatility makes it ideal for the work in hand. One shortcoming from the divers point of view is that there is no small lock, consequently food, etc., has to be taken in on commencement of the dive. As only two of the compartments are needed for the actual dive and subsequent decompression, the third becomes an emergency lock and on exceedingly long dives, can be used to lock through supplies. This system is not adopted on the short 18 hour dives, but it has become usual practice to lock in a cooked meal, toilet requisites, and daily papers occasionally during the longer dives.

The crew for a deep dive using the 'Rocket' would be: two divers,

selected by roster system; outside: a Diving Officer, Medical Officer and stand-by diver. Operating the chamber, timekeepers, changing gas banks, etc., is carried out by civilian scientists.

Prior to a deep dive the civilian scientific officer with his assistants calibrate clocks and gauges, test the R.C.C. and check over the oxygen and helium banks. Meanwhile the two divers having had medical examinations, prepare for their dive. Books, games and food are passed into the chamber. Tinned food is a favourite, most other food loses its taste or goes leathery, hard sweets such as boiled sweets have a habit of painfully sticking to your tongue as the air bubbles in them are uncovered. Blankets being a must are also handed in.

We are ready, the two divers dressed in woolly undersuits climb through the narrow aperture at the end of the chamber. CLANG; the circular door is shut and immediately a noisy hissing is heard as the pressurised oxy-helium mixture pours in, increasing the pressure to pounds within seconds. The rate of descent for these dives is usually pretty fast. Helium has a curious action on vocal chords, speech is very high pitched and sounds like impressions of 'Pinky and Perky'.

On the bottom, rowing exercises and small mathematical problems may have to be done. The effect of pressure on the human body varies with individuals, most of the team only suffer slight uncomfortable feelings, but at 800 feet mild narcosis has been felt. Arms and legs feel heavy and deep concentration is required in carrying out the smallest task.



'Two minutes to breakdown' is the announcement over the loudspeaker. This is the cue to snuggle into blankets for as the gas is vented so the temperature drops rapidly. Whilst breathing Helium the heat loss from the body is five times greater than while breathing air. Therefore you feel cold at higher temperatures than you would on the surface. The remainder of the dive or de-compression is basically just a long wait, reading, sleeping and more reading. As previously stated food and toilet gear can be passed in through the third chamber. This is a great occasion. Food is usually a fry-up (eggs bacon, bangers, etc.) — but on one occasion, Mona Lott, our auspicious C.D.I requested Chow Mein, and got it.

Last years' (1964) successful dives to a depth of 500 feet were carried out off the coast of Tenerife — Canary Islands in H.M.S. *Reclaim* the Navy's deep diving vessel. This year we aim to test schedules at 600

feet and shallower, and with luck, in the form of weather and good schedules, we may be able to try even deeper depths.

The team is due to sail in H.M.S. *Reclaim* on the 23rd April 1965. The location of these trials is near Toulon, not far in fact from where Captain Cousteau is carrying out experiments in his man-made island. We hope to be able to write an article during these 'Wet trials' which with any luck will be published in the summer edition. We are due to return to U.K. at the end of June.

#### The Team Consists of:

Lt.Cmdr. Parker  
P.O. Lott  
P.O. Gibbons  
P.O. Wilkes  
P.O. Charlwood  
P.O. Hodge  
P.O. Shennan  
L.S. Dadd  
L.S. Moss  
A.B. Martin

## Promotions and Advancements

WE heartily congratulate Cdr. A. Checksfield, R.N. on his promotion and wish him *Bon Voyage* in H.M.S. *Whirlwind*. We hope to hear of his diver's accomplishments in due course.

#### To C.D.O.

Lt. Hicks  
Lt. Waddington  
S.-Lt. Churcher  
S.-Lt. Lombard  
Lt. Baker  
Lt. Braidwood  
S.-Lt. Jonker, S.A.N.  
Lt. Magnussen, Norway  
Lt. Cardoso, Portugal  
Lt. Da Silva, Portugal  
Lt. Martis, Indian

#### To C.D. I

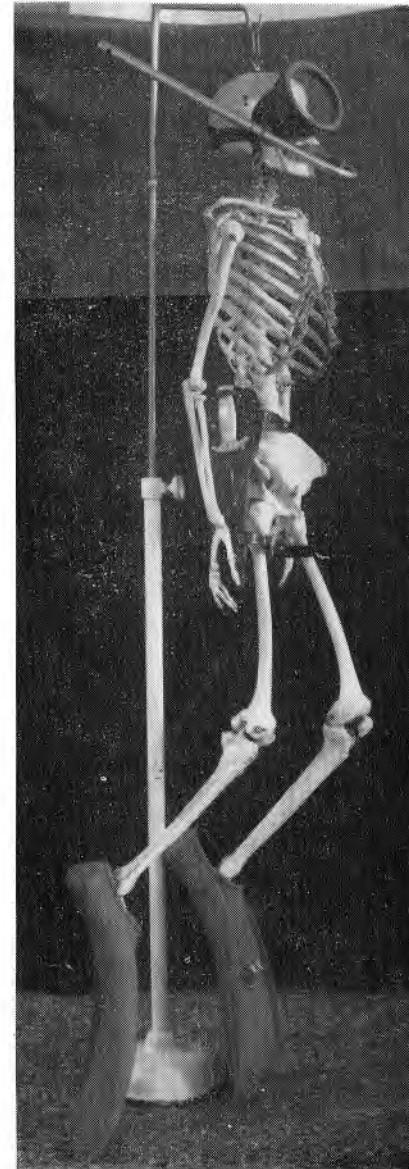
P.O. Snowball  
P.O. Miller  
P.O. Futchner  
P.O. Power

#### To C.D. II

P.O. Gardner  
P.O. Neave  
P.O. Haines  
L.S. North  
L.S. Baukham  
L.S. Hewitt  
L.S. Turner  
L.S. Newman  
A.B. Chapman

#### To C.D. III

A.B. Wood  
A.B. Evans  
A.B. Stallwood  
A.B. Everett



## The Last Editor

The photograph was taken of our last Editor, P.O. V. Gibbons, prior to his joining the Deep Diving Trials team.

This I feel, is a man of circumstances, who having put his body and soul into the Magazine has suffered the consequences of working long hours and inevitably missing a meal now and then.

Regardless 'Gibbo', we wish you the very best of luck in the future, with the Trials team, and again thank you for your service of the past to the Magazine. J.G.



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## Fleet Clearance Diving Team H.M.S. "Terror"

HAVING at last recovered from Yuletide and New Year Festivities, we noticed that your last two editions contained no contribution from the Mystic East. So greetings to you and all our rubber covered friends wherever they may be. The long pause in our communications has been due mainly, I think, to pressure of work (that's our story anyway) and several changes in the Team.

For the benefit of anyone who owes us a 'fiver' the team, at the time of writing comprises:—

Lt.-Cdr. D. Lermite, C.D.O.  
Lt. T. Trounson, C.D.O.  
Lt. E. Smith, Q.D.D.  
C.P.O. B. Brooke-Foster, C.D.I  
P.O. T. Norman, C.D.I  
P.O. T. Gibson, C.D.I  
P.O. E. Ayre, C.D.I  
P.C. N. Edwards, C.D.II  
A.B. W. Thomas, C.D.II  
L.S. G. Wilson, C.D.\*  
L.S. B. Coulson, C.D.\*  
L.S. D. Cripps, C.D.\*  
L.S. D. Coote, C.D.\*  
L.S. W. Turton, C.D.\*  
L.S. D. Jones, C.D.\*  
A.B. P. Marks, C.D.\*  
A.B. L. Whelan, C.D.\*  
A.B. J. Harris, C.D.\*  
A.B. G. Elder, C.D.\*  
A.B. D. Williams, C.D.\*  
A.B. V. Humphrey, C.D.\*  
A.B. R. Chandler, Ships D.  
M.(E) M. Wilton, Ships D.  
C.P.O. Byrne, O.A.I  
P.O.M.(E) F. Armitage, P.O.M.(E)  
M.(E) A. McCallum, M.(E)

Recently departed members may like to know that 'Iggy', our resident lizard continues to grow, mainly due to a varied diet of married men's

sandwiches, and rumour has it that he is courting, hence his shyness of late.

In the past year the F.C.D.T. has covered a wide range of activities, engulfing the Phillipines and Hong Kong, to the Nicobar Islands and of course all the domestic requirements of a busy Naval port. Training classes run at full bore and the occasional un-routine day is spent on countering the 'Confrontation' problem.

In May of 1964, half the team were despatched to Subic Bay in the American Underwater Demolition Team. No. 11, Section Bravo, and for those involved it was, I venture to say, an enlightening trip.

Yours truly and his Frightful Frogmen embarked in H.M.S. *Bulwark* where we were well looked after by 'Taff' Davey, spending five pleasant days on passage. We somehow became involved in helicopter jumps and winching, to the delight of *Bulwark's* Search and Rescue Divers. Surprisingly everyone survived and the Team were flown to Subic Air Base on arrival in Subic Bay. Life in a United States shore establishment at first was confusing, but the team was taken well in hand by all the U.D.T. and made to feel very much 'at home'.

Two days later, in company with Unit Bravo we joined U.S.S. *Perch*, an American Troop carrying Submarine, to make an exercise passage to Mindora, another Phillipines island, which was to be the venue for a multi-National Maritime exercise and beach assault.



In the four days en route many friendships were sealed, in fact we ended up frequently using the expression 'God dammit' and were often referred to by the U.D.T. as 'ruddy blokes'.

Once again the hospitality of our hosts nearly ruined us, in the form of thick steaks and at least four kinds of fresh milk at each meal. Movies too were endless and were much appreciated as for most of the trip U.S.S. *Perch* was submerged. This period also gave both teams the opportunity of comparing jobs and doing short courses on each other's Diving gear, although needless to say, working space was at a premium.

On the fifth day the U.D.T. left *Perch* to carry out the preliminary submerged survey of the landing beach and on their return the submarine withdrew to the safety of the Fleet Screen. In the evening F.C.D.T. made a clandestine landing to rendezvous with the Australian S.A.S. but failed to make contact. However, we were wished a 'goodnight' in impeccable English by a Phillipines fisherman, who had for some hours been an amused audience at our attempts at silent progress in the bordering jungle.

In the morning we executed a token disposal of a wreck which was the home of many brightly coloured fish, and enjoyed underwater visibility in the region of 50 feet. Following the bang, we were able to gather a large number of fish, Red Snapper and Garfish mainly, much to the delight of *Perch's* cooks.

The next move was to the *Raja Sulliman*, Flag Ship of the Phillipines Navy. As the cuisine was not quite what we were used to, the U.D.T. took over the catering, so we were able to maintain the 'four eggs' for breakfast standard. Raji Sull became

our base for the beach assault and the teams combined to survey the three probable areas, assisted by the Phillipine U.D.T.

On 'D' Day the final survey was done on blue beach and the detonation of demolition charges was the sign for the landing to commence.

We had a ring side view of the whole operation, being about a mile of beach, and enjoyed a display of aerial bombing, beach landings and parachuting, against a background of green jungle and a pink rising sun. We counted a total of 98 ships of all Nations and sizes, but the total activity was really too much to grasp, on land, sea and in the air and all happening at once.

With the large increase in numbers in Raji Sull, fresh water became an acute problem, so we took the opportunity of a lull in the proceedings to pay 'hygiene' courtesy visits to the nearer larger ships, for much needed baths and laundry and also welcomed the chance of sighting the R.N. ships' canteens in quest of 'fags' and of all things toilet paper, both items being very scarce commodities at the time.

On our return to Subic both the U.D.T.'s laid on a mammoth party and by the appearance of 'Our Side' the following morning, the R.A.F. aircraft provided to return us to Singapore, might have been a casualty clearing flight. However everyone agreed that it was a good trip.

Also during this period we have recovered most of two *Buccaneer* aircraft which crashed off Singapore Island within 11 days of each other, working from H.M.S. *Barfoil* and *Barbain*. 'Cable and Wireless' provided an interesting job by inviting the F.C.D.T. to assist in their 'Seacom' venture. A multi-cored

telephone cable has been laid from Singapore to Hong Kong via Jesselton, as part of Asia communications link-up and required protective covering on the lengths in shallow water. This was effected by bolting numbers of cast iron, interlocking sections to the cable, out to the 5 fathom line. Tackled in three phases the Singapore and Hong Kong ends are completed, although the Divers claim that the cable is not all it might be, as the Singapore end could not get a reply to 'Five Bells' from their 'oppo's' in Hong Kong.

Having changed 'end for end' diving wise, all the Team had the opportunity of a bottom search in Kowloon and Wanchia, concluding that San Mig is maintaining its usual alcoholic standard. Our man in *Tamar* (Monty) Mountford providing the necessary help and advice.

More recently time has been spent feverishly stripping the cocoon coating from the reserve small ships in preparation for their commissioning for additional coastal patrols, and

then being called to clear the pro-pellers of local fishermen's nets.

Paulo Tioman can be recommended for its sandy beaches and fairly good camping sites as we found in July when we spent ten days there, annoying the fleet with night attacks and doing beach surveys. The two way trip was really too much for our M.F.V. which has been in for refit almost ever since and our demand has gone in for another  $\frac{1}{2}$  cwt. of sea-sick pills.

In the field of sport we cannot claim high honours, although the 'stout' members won the tug-of-war knock-out against the rest of the Fleet at the *Terror* Sports Day (and they have got trophies to prove it — the win I mean). Most of *Terror's* Water Polo team is drawn from the Section and have achieved success in most of the recent games.

That just about covers the news from us at present, except to remark that the cost of living has gone up — Tiger is now 55 cents a pint. T.G.G.

#### NECKNOTE (for Past Clearance Divers of the Far East Fame)

A Far East C.D.T. Tie is being made at a cost of one Guinea (including postage), which should be available for despatch in early June.

It will be a dark green Terylene Tie depicting groups of Silver Frogmen in pairs, similar in design to the Frogmenton existing tie.

Those wishing to have one (or more), please apply early to the F.C.D.O., H.M.S. *Terror* stating your requirements and printing your name and address clearly at the same time. It is emphasised that the numbers of ties available will be few and only past and present members of the F.E.C.D.T. will be eligible.

#### TRUE HUMOUR

A young lady of our acquaintance, writing home, mentioned that she was going out with a wizard new boyfriend, who had a big car and is a Colour Sergeant in the Marines.

Replying, her mother said, she supposes that her daughter is now old enough to know what she is doing, but surely there must be plenty of nice English Boys in Singapore. ANON.



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ENQUIRIES INVITED

## Mediterranean Diving Centre, Malta

THE 'Med.' Team is at last putting their heads together to write an article for the Magazine. The office dictionary only turned up the other day after some months and all work was suspended and the office closed down. The grouper took a beating. If Dutchy Holland had his way they would have been extinct a long time ago in these waters. Get him to tell you about the 60 lb. one. It's worth at least a tot, or so he says.

The Team is still set up on Manoel Island and looks like being here for at least another 18 months. Then we move into H.M.S. *St. Angelo* or out of the island altogether depending on the whims of our political masters. The new site in *St. Angelo* has possibilities except that it's in Grand Harbour with all the restrictions imposed by shipping. There is no doubt that the present site on Manoel Island is a divers dream as anyone who has been here will agree. The Boss is now Senior Officer, Manoel Island which does help of course. The team still has *Gamma* and the M.F.V. and we are now down to our basic complement of C.D's. In the last year we have done the rounds of the Mediterranean to Turkey, Italy, Greece and France. The last trip in November was to Toulon where we met some old friends. Unfortunately during our visit an old friend, Capitaine de Fregate Busson was killed in a diving accident. Previous members of the 'Med.' Team would know him. The most outstanding thing about the exercise was the amount of food and vin ordinaire provided for us by the French. Thank goodness the firm principle that the team always flies holds good otherwise we would have been in dead trouble coming back by sea.

Life in Malta is much quieter now especially since the terrible twins, Chief's McKinlay and Packer left. No ships in Sliema as most of the Navy is now up Dockyard Creek. The 'Great War Bar' and the 'Brit' are just holding their own. Great things are expected of the tourist trade here to fill the gap and now that the creek is empty we can get some idea of the form on Sliema front in the summer. We hear that bikinis may be seen in a few years time. Now that the island is independent there is a duty free ration of spirits and tobacco. New arrivals please note that a crate and bottle is now insufficient for fathers, B.13's and leavers. There's plenty of diving to be done here and when there is a slack period there is always other work to be done. Some joker in Hong Kong has marketed a very convincing Hand Grenade for children in plastic explosive we're glad to say. Sells well in Malta. Usually reported on Sundays when the beaches are clear.

This year we have an exercise in Greece in June, Turkey in August and Sardinia in October to date, and some more to fill in the gaps. *Gamma* is on the slip and just as soon as the winter breaks we will be locking up the filing cabinets, polishing the shuffy boxes and getting organised for the new boss in the autumn. The team is as follows:—

Lt.Cdr. Lovel Smith	L. S. France
S.-Lt. Carr	L. S. McCluskey
C.P.O. Jackson	A.B. Broadhurst
P.O. Holland	A.B. Dalby
P.O. Wright	A.B. Eastwood
L.S. Shewan	A.B. Harrison

THE TEAM.





## Memo to Sergt. Widley

### JOINT SERVICES BOMB AND MINE DISPOSAL SCHOOL

The heart-felt job of instructing sailors the pros and cons of the various items of bomb location and disposal, can be appreciated by all. And in the case of one fresh young Clearance Diver newly graduated from the knowledgeable school at Horsham, the chance came where he could put forward this new found knowledge on a job which required the use of a type 4C locator.

A genade was reported found in a Southsea back garden. To the fore jumped the knowing lad.

Assembled and tested in a matter of minutes. Don the weird equipment and began to sweep, alas, the sound appears suspect. What could it be? A voice saying: 'And this is for Mrs. Smith who hasn't seen her children for 15 years. She would like to hear Burl Ives sing.

Yes... HOUSEWIVES CHOICE, being received as loud and clear as any transistor.

The end of our tale of fact, so please Horsham, what did go wrong?



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## A Canary Lift

THE dull grey of the ship at anchor was the only break in the sun sequined blue sea and her rippled reflection almost met the shimmering reflection of the snow capped peak of mount Tidei in the waters of Santa Cruz Bay.

How perfect the setting, how perfect the day for a gentle swim or even perhaps for the diving that brought the ship and her men to this place of majestic calm and beauty.

I, however, had no power to enjoy the sea, the sun or the setting. Like any other diver I was inured to pain and hardship. Dark and dangerous waters were an integral part of my calling, sharks and the Bends were acceptable risks if one were to enjoy the delights of the diving. But toothache. That was entirely different. My tooth ached, it throbbed, it growled and bit into me like a living thing. I was a wreck of a man waiting only to die, and the doctor was unfeeling.

However in my agony I had lost my faith in naval efficiency and organisation. With no more ado the doctor obtained the address of the local spanish dentist ashore, and within only 24 hours I was slumped miserably in the back seat of a car. A Spanish taxi speeding my way to the dentist and relief.

'Do you know where we are going Doc' I whispered between frenzied grasps of my burning jaw. 'Of course I do' he began confidently, 'We go to the square and the dentist surgery is in the large office block which has a large lion over the doorway. We can't miss it, at least that's what I was told', he finished hopefully.

There was a scream of brakes. I was flung violently against the front seat and the pain shot searingly through my head, I wondered dazedly if the dentist had been saved a job. Surely my tooth must have been knocked out. But as I pulled myself slowly up to the window to see what had caused the sudden disruption, I firstly realised that my tooth still ached and secondly that the door was being held open for me to alight by a grinning peak capped maniac imitating a taxi driver. I crawled out on all fours expecting to see a dozen mangled bodies and battered cars; but all was at peace, if that is the adjective to describe the jostling, chattering crowd of Spanish shoppers who had amazingly had not noticed anything unusual.

I jumped up angrily glaring about me. 'What the . . . ' I began, but I had seen it. 'There, over there Doc' I shouted. 'There's the door with the lion over it. We are here, you are a genius and I'm almost cured'. I rushed over to the building leaving the doctor to haggle happily with the taxi driver.

I was followed into the building by the now sedate and complacent doctor who bundled me into the rickety old lift saying confidently 'The surgery is the third floor'. I pressed the appropriate button and waited hopefully. 'These old lifts take a long time to get moving' I thought quietly to myself, 'perhaps I didn't press hard enough'.

I pressed the button furiously again and again, but the lift refused to move.

We turned bewildered to see an old Spanish char lady standing out-



side the lift gabbling and gestulating in our direction. So, as apparently we were not going anywhere we left the lift to calm the poor old dear. While she was waving, pointing and shouting and we were shrugging and clicking consolingly, an elderly business gentleman marched calmly past us all straight into the lift. We forgot our hysterical charlady and dashed after him jumping into the lift before he could slam the gates in our faces. He frowned disconcertedly at us; we smiled guilelessly back at him. Calmly he opened the gates and got out. We, non plussed by now shut the gates and with the elegant Spaniard smiling sardonically at us we again pressed the third floor button, and again nothing happened.

The swarthy Spaniard licked his lips and his smile contorted his face into that of a cat savouring the last drop of cream. Slowly he opened the lift gates and joined us in the confinement of the ancient cage. As he appeared to have objected to our accompanying him in the lift previously we politely stepped out and closed the gates behind us.

His smile became decidedly fixed, he once again opened the gates and stepped out. Before we knocked him down in our rush to get back into the lift he raised his hand in a commanding gesture and said, 'The lift, it take only one man'.

Having at last solved the problem of the stationery lift we proceeded to explain what we were looking for. At the mention of the dentist he looked rather puzzled but offered to take us up and make enquiries on our behalf. I was unceremoniously bundled into the lift and instructed to meet the others on the third floor.

With a self-conscious bravado I swept into the lift, slammed the doors, and pressed the button marked

third floor. Suddenly I was thrown across the lift and I clung despairingly to the bars as I was rushed skywards past the astonished doctors' face and the calmly smiling Spaniard. Floor one, floor two, floor three, all rushed past my desperate eyes and we came to a sickening, bone-jarring halt at the fourth floor.

I looked down to see the doctor and his sinister friend disappear into an office of the third floor. Again without regard to the consequences I pressed button three and suddenly the bottom dropped out of my world.

The lift stopped at the second floor while I was still somewhere in mid-air between the two floors. I had had enough; I crept out of the lift with knees shaking, brain in a whirl, toothache completely forgotten to see the doctor standing patiently on the ground floor waiting for me. At his grumbles that I had been enjoying myself playing with the lift while he had been in and out of every office in the building, my lips just quivered into the semblance of a sickly smile.

We wandered disconsolately out of the building into the crowded square while I thought that if Spanish dentists were as efficient as their lifts then I would rather suffer my toothache in silence.

'Look there's a lion.' I leapt behind the doctor, but seeing nothing that resembled the king of the beasts I whispered in his ear 'what the hell are you talking about'. 'There over the door of that large building, there is a stone lion over it'. 'We must have been in the wrong building all the time'.

Striding confidently into the gleaming marble lined hallway we looked quickly round us. 'Ah, good there's a lift we can use, let's go up' said the doctor over optimistic,

'Lift' I said cuttingly 'lift, I've had enough of Canary lifts. But surely,' I said beginning to weaken and starting to feel my tooth again 'there can't be two lifts in the same town like that last one'.

I was quite right there were not. This lift was modern, it was clean, its doors shut smoothly quietly

behind us. It even began its dignified ascent the moment my finger pressed the button. It even came quietly to a halt with hardly a shudder. The whole luxurious, modern lift however with its two passengers one with toothache and both with violent tempers was irretrievably stuck between the second and third floor.



"He goes a great voyage, he that goes to the bottom of the sea."

Thomas Fuller, 1963





Golden Rules for Mine Disposal, Rule No. 5, "Never work when tired"

## "Deadline Danger"

**B**OMB and Mine Disposal! What stirring deeds, scenes of tense excitement and constant thrills these words evoke. This is what it is really like.

One evening recently we received a call about an unidentified object in the rocks south of Cape Wrath. It was sighted by a shepherd and reported on one of his trips back to civilisation. We rang to contact him but found he was off in the wilds again. Not having any idea of what one is looking for is one of the hazards of the game so, nothing daunted, we drive off with our bits and pieces, travelling north through the night.

It rains and blows the whole way but as we approach Kinlochbervie in the grey light of dawn at least the rain stops. We pull onto a cart-track, rutted and boulder strewn, ideal for testing army tanks, and thread our way through numerous locks until the track peters out in a peat bog. A little thing like that can't stop us now and out we clamber to tramp our way two miles over bog and heather to the sea. Here we are met by one of the most glorious beaches in Britain. A mile of golden sand, ringed off-shore by jagged rocks and hemmed in at each end by cliffs, the shore-line blurred by constant spray where huge Atlantic rollers end their long journey in a dull booming roar.

A little jaded after traversing the sand we meet our first real obstacle, a river in full spate from the melting snow. The older and wiser members of the team philosophically remove their boots and wade across while the younger and more agile try to jump across from boulder to boulder. The

results in either case are very similar and four wet, numb bodies force themselves on and up a cliff at the other side. Already breathless, at the top we get a breath-taking view of the beach and a rather sobering look at a 700 foot hill to be tackled.

Still, only five miles to go and we can stick to the crests if we are lucky. What a hope! Down we slide another 700 feet with a 1,200 foot hill starting up immediately. we reach the bottom. This is getting tedious but C.D's are reputed not to care so we scale the hill and find at the top a flattish area which does much to cheer our wilting spirits. Bog! and for variety swift deep burns dashing to destruction over the sheer drop on our left. It seems we just can't win and when we get through it all and descend again almost to sea level we are all wondering just why we joined. Never mind! A 1,500 foot climb and we can see just where we are.

The glorious view shows that we have made about  $1\frac{1}{2}$  miles of the 5 and that there are at least 3 more mountains, getting progressively higher, in front of us. What lies beyond will never be known as it is now raining and the distance is shrouded in a delightful mist.

We are very cold, tired out and hungry and it is obvious that we need climbing ropes to go on. Even more obviously we shall have to hurry back if we don't want to spend a night in the open. Regretfully we begin to retrace our steps. No light springy gait now and when one member of the team walks into a burn up to his waist the rest of us hardly raise a grin although it is



quite apparent that he didn't do this on purpose.

Much, much later we reach the Landrover, a haven in the wilderness, and a quick brew-up actually removes some of our despondency. In fact we decide to try to get to our target from the other side which says much for the efficiency of tea.

A swift drive brings us to the Cape Wrath ferry and once across, we again start plodding on. After 8 miles of track we take to the hills and bogs again and at long last reach the goal which has become such an important aim in our lives. A quick scramble down to the rocks and some tricky dodging over slimy weed covered boulders reveals our target — three huge black sinister-looking

cylinders, with chains, wires, valves and shackles galore. Approaching with trepidation we discover three large fenders, made of rubber and used by Russian factory ships for catchers coming alongside. No danger! No bang! Nothing but another 12 mile hike and then the prospect of a second night in the Landrover going back to Base. Ah well! We can't all be James Bond! 'Footsore'

The Scotland Command Team now consists of:—

Lt.-Cdr. Johnson-Newell.  
C.P.O. Jones, C.D.1.  
L.S. Newman, C.D.2.  
A.B. Williams, C.S.D2.  
L.S. Adams, C.D.\*.  
A.B. Boulton, C.D.\*.



## The Divers' Alphabet

**Aaron**—What you should keep your.  
**Allocate**—usual greeting for Cather-  
ine.

**Aloes**—Somefink yer never see rahnd  
the angel.

**Assert**—A tip from a horses mouth.

**Auk**—To sell rag mags from door to  
door.

**Avalanche**—Where one goes to be-  
tween 12.30 and 1.30.

**Bittern**—What it is that being once,  
you are twice shy.

**Camphor**—What Boy Scouts start  
by rubbing two sticks together.

**Cistus**—Female children of the same  
mother.

**Dyne**—Mortally sick.

**Eczema**—Abbreviation for Christ-  
mas.

**Electron**—Ron for President.

**Endorse**—The one I always back.

**Ethics**—A county north-east of  
Thuthex.

**Farthingale**—Very very very very  
cheap beer.

**Falsetto**—Italian Dentures.

**Fervour**—To far to walk.

**Fodder**—Masculine. Equivalent of  
Mudder.

**Foist**—The winner.

**Genie**—A spirit with light brown  
hair.

**Gentlemanlike**—Blondes.

**Gnome**—The place that there is no  
place like.

**Gurgles**—Glass eye protectors worn  
by racing drivers.

**Hieratic**—The loft.

**Hippocampus**—University for train-  
ing Hippos.

**Hippogryph**—What hippos learn at  
hippocampus.

**Hirsute**—Lady's costume.

**Intense**—Campers.

**Juniper**—Small Hebrew boy.

**Khaki**—The starting mechanism of an  
Automobile.

**Larva**—What you shave wiv.

**Macadam**—First man according to  
Scots legend.

**Massacre**—Enormous estate.

**Masterhood**—The brain behind the  
gang.

**Minus**—People who work under-  
ground.

**Moor**—The merrier.

**Mushroom**—Dining room at the  
hostel.

**Navigator**—Length of string tied  
around bottom of labourers  
trousers.

**Necromancing**—Necking.

**Neighbourhood**—The rough-neck  
next door.

**Neptune**—Sea shanty.

**Nitrate**—Time and a half.

**Odont**—Natural cry of the human  
female.

**Palladium**—The fiftieth state of the  
Union.

**Pawnee**—Painfull leg joint.

**Penniless**—Very slightly cheaper.

**Permutation**—Alteration in a  
womans hairstyle.

**Phlebitis**—Complaint caused by flea  
bites.

**Treasure Chest**—The source of Miss  
Sabrinass fortune.



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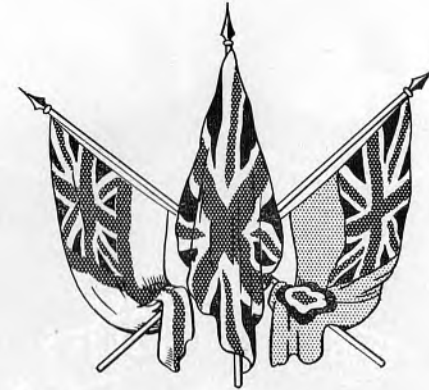
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