

DIVING APPARATUS

OF ALL TYPES

Original Designers and
Manufacturers of "Self-
Contained" Apparatus
on which all types are
based.

'ESSJEE' AQUALUNGS

Marconi Siebe, Gorman
Underwater
Television Equipment

Cutting and Welding Equipment
Diver's Loudspeaking Telephones
Underwater Lamps, etc.

Davis Submarine Escape Apparatus

*Davis Submersible
Decompression Chambers*

*Davis Submarine Escape Chambers
including one-man type*



CONTRACTORS TO THE ADMIRALTY FOR OVER A CENTURY

SIEBE, GORMAN & CO. LTD.
LONDON

EVERYTHING FOR SAFETY EVERYWHERE

DAVIS RD. • CHESSINGTON • SURREY

COASBY & CO., LTD., SOUTHSEA.

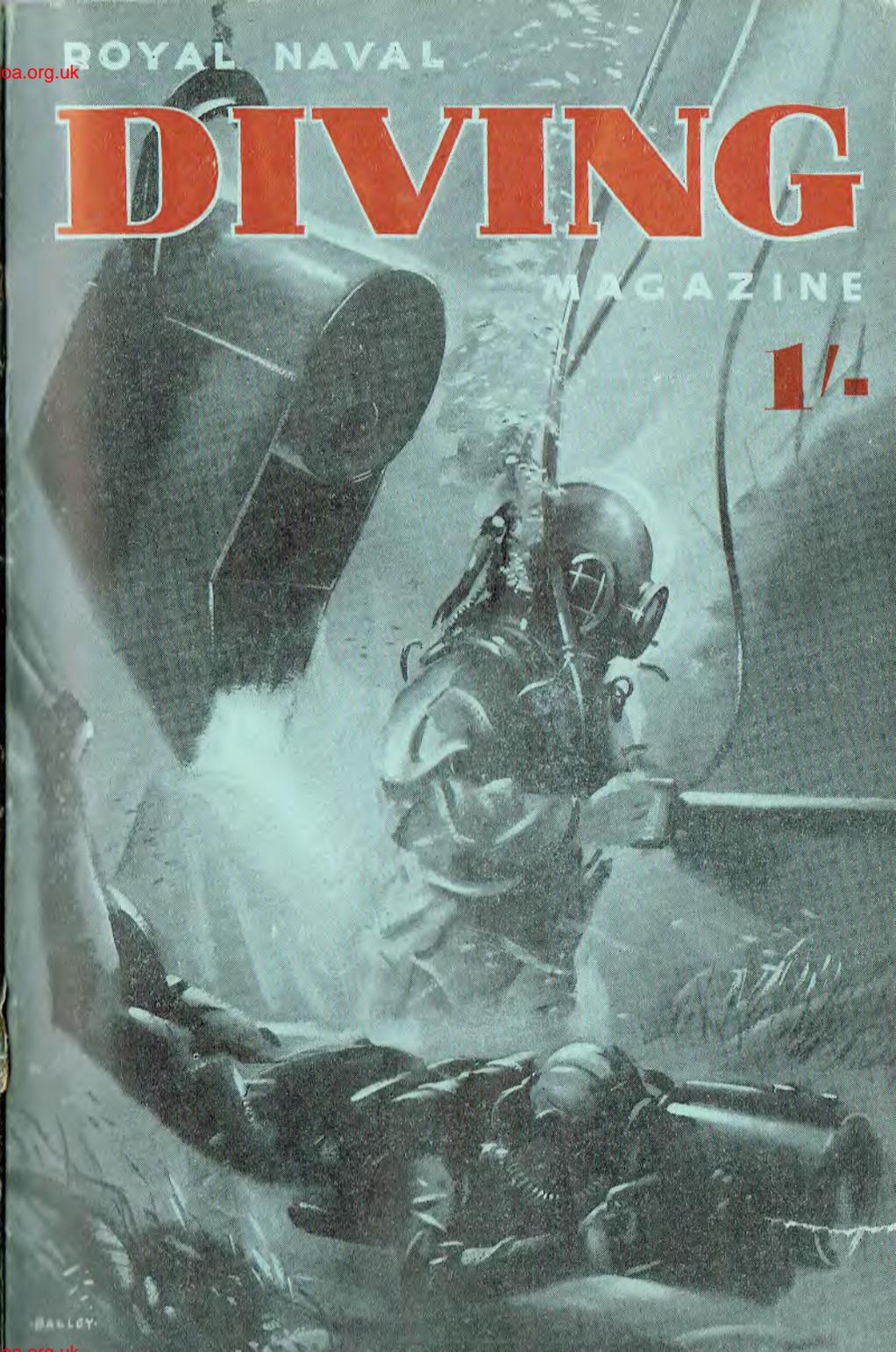
www.mcdoa.org.uk

ROYAL NAVAL

DIVING

MAGAZINE

1/4



HALLCY

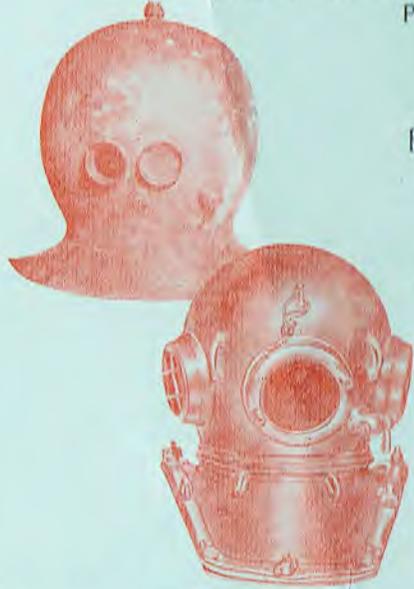
www.mcdoa.org.uk

Vol. 3

H.M.S. VERNON

No. 4

Contractors to Admiralty, Ministry of Supply, Foreign Governments, Dock and Harbour Authorities, Pearling and Sponge Fishing Industries



FIRST DIP—1820

STILL
DEVELOPING
—1955

C. E. HEINKE & Co. Ltd.

LONDON, S.E.1

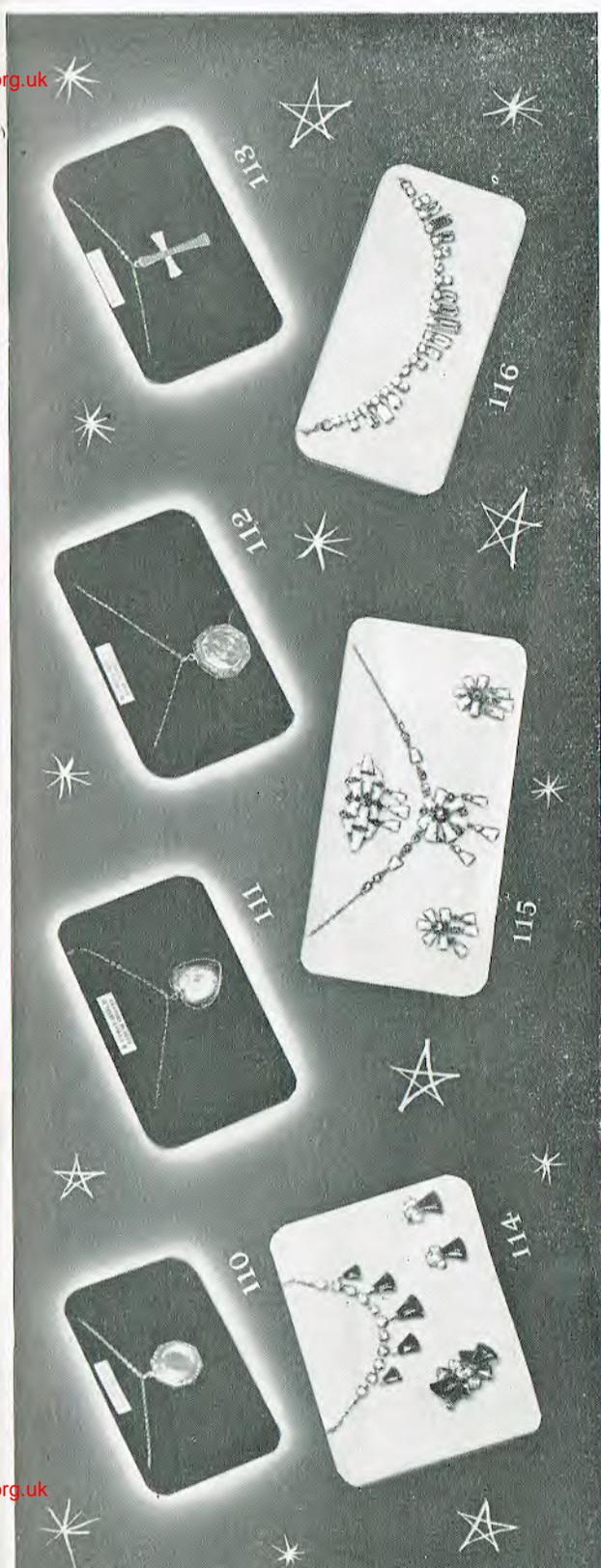
Phone Ber. 4461/5

Manufacturers of
HIGH QUALITY DIVING GEAR
interchangeable with all other makes

- HELMETS
- DRESSES
- HOSE
- DIVERPHONE SETS
- COMPRESSORS, Etc.

**HEINKE
LONDON**

Experimental Designs Developed



Here is a small selection of gifts shown from our 1955 mammoth Catalogue, sent free on request. When ordering please quote reference number.

GREENBURGH'S Catalogue shows you a thousand and one gifts that are sure to please your loved ones and friends at Christmas time.

"My Heart is yours"

GREENBURGH BROS. LTD., 123 6/7 QUEEN STREET
PORTSMOUTH

Branches at Gosport, Portland, Devonport, Chatham, Scotland and Malta

Monthly allotments accepted

Credit terms at cash prices

CONTENTS

	PAGE
EDITORIAL	3
TREASURER'S NOTES	3
THE SUBMARINE RESCUE BELL	4
ANOTHER FISHY STORY	10
TYNE CENTRE	11
THERE'S GOLD IN THEM THAR DOCKS	11
HSCDT	14
WESTO DIVING SECTION	16
CLEARANCE DIVING DOWN UNDER	19
AN ODD EGG	21
SCOTLAND; AMONG THE SEALS AT HAYSTACK	22
DIVERS DITTY	23
BREAKING THE WORLD'S DIVING RECORD (1948)	24
NEWS FROM THE PORT SURVEY TEAM	29
SPECIAL BOAT SECTION	30
ANNIVERSARY OF THE BATTLE OF TRAFALGAR AND DEATH OF LORD NELSON	31
NOTES FROM THE 50TH C.D.T.	37
"YOKE-PETER"	38
SALVAGE SAGA	39
DIVING IN THE LAND OF THE KILT	41
UNDERWATER SWIMMERS' SECTION	43
ADVENTURES IN LOUGH NEAGH	44
R.N. DIVING BADGE	46
THE EMPLOYMENT BUREAU	47

R.N. Diving Magazine

EDITORIAL STAFF

Instructor Lieutenant K. C. LEWIS, B.Sc., R.N., *Secretary*
 Mr. S. J. NEWMAN, Snr. Cd. Gnr. (T.A.S.), R.N., *Treasurer*
 P.O. B. J. FARMER, *Editor*

Vol. 3

December, 1955

No. 4

EDITORIAL

Dear Readers,

Due to drafting requirements another change in staff has come about. Our rotund friend PO Benfield is now gracing the upper deck of HMS *Newcastle*, basking in the sunshine of points East. I wish to thank our readers who answered the appeal for material so promptly and aided us in getting this issue to print. I take this opportunity of asking readers who send in stories to remember that censoring is still a necessity and that their stories may be edited. The Divers' Employment Bureau is in action and may be the means of your finding a berth suitable to your requirements. Forward your name with full particulars.

A Happy Christmas to you all and a New Year of promise for all Divers.

EDITOR.



TREASURER'S NOTES

Time waits for no man so we are told, believe me, just of late it seems to have taken wings, for it is time once again to contribute my few words.

Our last edition took on a NEW LOOK. I trust that it was to your liking. The cost of producing this new look was rather heavy but the funds stood the strain, recovered, and are still healthy.

From the small profits accumulated by the magazine and held in trust, a grant has been made to the dependants of the diver who lost his life three months ago in the Far East.

This is all for now so cheerio until March.

Wishing you all a very Happy Christmas and a Prosperous New Year. S.J.N.



THE SUBMARINE RESCUE BELL

by

LIEUTENANT COMMANDER R. J. CLUTTERBUCK, D.S.O., R.N.
H.M.S. *Kingfisher*

Introduction.

When a submarine is sunk certain conditions are necessary if successful escape is to be made by individual methods. The water must not be too deep, particularly if the air is bad. If it is rough, cold or dark, additional hazards are introduced and a certain amount of intelligent action is demanded of each man if he is to survive. The purpose of the rescue bell (or rescue chamber as it is sometimes called) is to provide a means of saving life when conditions for individual escape are unfavourable and to do so without subjecting the survivors to sea pressure, getting them wet or exposing them to the elements on the surface. It also requires very little action on their part.

The only rescue bell at present in service in the Royal Navy was provided by the United States Navy and the idea and techniques in use were evolved by them. They were able to use a similar bell to rescue all survivors who escaped immediate drowning in the original accident when the U.S.S. *Squalus* was sunk shortly before the war.

For some years a submarine rescue bell and a ship fitted to use it have been attached to each United States submarine squadron.

It may be asked why this service is only now being introduced into the Royal Navy. An important reason is that in the years before the war when this idea was under development, British submarines were designed with bulkheads only tested to 70 lbs./sq. on installation. These can be expected to hold down to the depths most favourable to individual escape. I do not know at what depth they would actually give way, but individual escape is possible, though hazardous at 300 ft. They would probably fail before this depth was reached. If a submarine is sunk, it is almost certainly because one or more main compartments are flooded and open to sea pressure. In deep water, therefore, sea pressure and probably sea water, can very soon be expected to penetrate to any survivors. Most of the British submarines now in service were built to pre-war designs or to modifications of them, and during the war few submariners would have wished to introduce further escape equipment at the expense of fighting efficiency. Accordingly the 'A' class, designed during the war, retained the old specification for bulkheads. In the Royal Navy it is still considered best to escape quickly individually if possible. It would therefore not be logical to modify the hatches of existing submarines to take a rescue bell without also strengthening the bulkheads which would mean redesigning the ships entirely and is not intended.

The rescue bell therefore is only for new construction submarines having bulkheads of full pressure hull strength and a compartment fore and aft fitted for the rescue bell in addition to means of individual escape.

A specially fitted vessel is necessary to carry the rescue bell and other equipment, but first the bell itself will be described.

Description of the Bell.

The rescue bell is in effect a miniature submarine, supplied with air and electricity from a parent ship. It is made in two compartments strong enough to operate down to 850 ft, the lower compartment being open to the sea and fitted with a rubber gasket at its base. This gasket is designed to seat on a machined plate round the submarine's hatch (fig. 1).

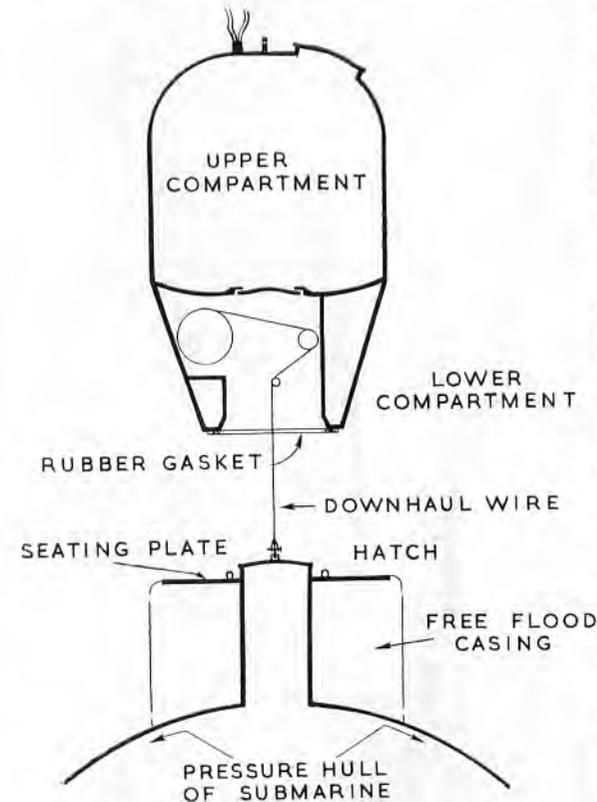


FIG. 1.

The upper compartment carries the passengers, crew and the controls. The bell is slightly buoyant and is hauled down to the submarine by means of a wire attached to the middle of the submarine's hatch.

Similarly, it is allowed to float back to the surface when it has embarked its load, easing out the wire as it goes. The bell complete weighs about nine tons.

The Downhaul Wire.

In order to land the rescue bell in exactly the right spot it is necessary for a 1½" extra special flexible steel wire rope attached to the middle of the submarine's hatch to be hauled in to a point in the middle of the bell.

This wire is one of

the most important items in the equipment and it is impossible to carry out a rescue unless it is clear and correctly secured.

Messenger Buoy.

It is the intention that this wire should be sent up by means of a messenger buoy released from the submarine. The gear for this was under trial recently and at the time of writing (February, 1955) I have no accurate details of its working. Roughly the idea is as follows (fig. 2).

In order to avoid having to have a buoy large enough to lift the downhaul itself, a smaller messenger wire will be sent up first and this will

be used to haul up the downhaul. The messenger buoy is like a dumb-bell with the wire wound round its middle. It is fitted with paddle wheels designed to stop it rotating the moment it breaks surface. This is essential otherwise it would go on paying out wire and the bights would coil down on and around the submarine and would be very likely to foul under something.

The downhaul wire will be stowed on a reel and its top end will be rove through a lead in the middle of the submarine's hatch and secured to the end of the messenger. When the messenger is hauled up, the downhaul will unreel and the last end, fitted with a knob, will come off the reel and be held in the lead.

American Method.

The Americans send up the downhaul itself on a buoy but it has to be a large one. Moreover these buoys are the only ones carried by U.S. submarines. They do not ordinarily release them until asked to by the rescue ship owing to the risk of their fouling or being carried away. So

great are these risks that we also will probably not release our messenger buoys until the rescue ship is at hand.

Indicator Buoys.

British submarines also carry indicator buoys designed purely to mark their positions. These carry lights and possibly radio beacons. They are continually being re-designed and improved and we think them an important aid to finding the submarine. Thus British submarines will carry an indicator buoy and a messenger buoy fore and aft, making four in all.

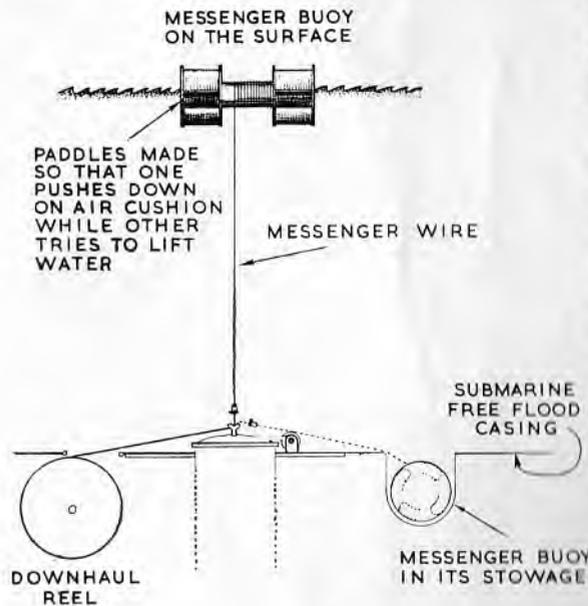


FIG. 2.

Divers.

Provided the water is not too deep and other conditions permit, a diver can be sent down to connect a downhaul wire. In any event it is a sound practice, if possible, to send one down to see all clear before starting bell runs. The limit for deep diving using oxy-helium gear is now laid down in the Royal Navy as 450ft, but the actual record for British divers

is 535 ft and even deeper dives may be possible. There is no pressure-tight suit or chamber at present in use from which it would be possible to attach a downhaul.

Operation of the Bell. (Fig. 3)

The bell is ballasted to have a reserve of buoyancy of about 1,000 lbs. when floating on the surface with the two man crew on board, water ballast blown and lower compartment flooded. It is hauled down against this buoyancy. The downhaul wire leads through portable fairleading gear in the centre of the bottom opening onto a winch or reel in the lower compartment. This is driven by an Ingersoll Rand air motor situated in the upper compartment but this gear can also be worked very slowly by hand. Jockeying gear ensures that the wire winds onto the drum evenly

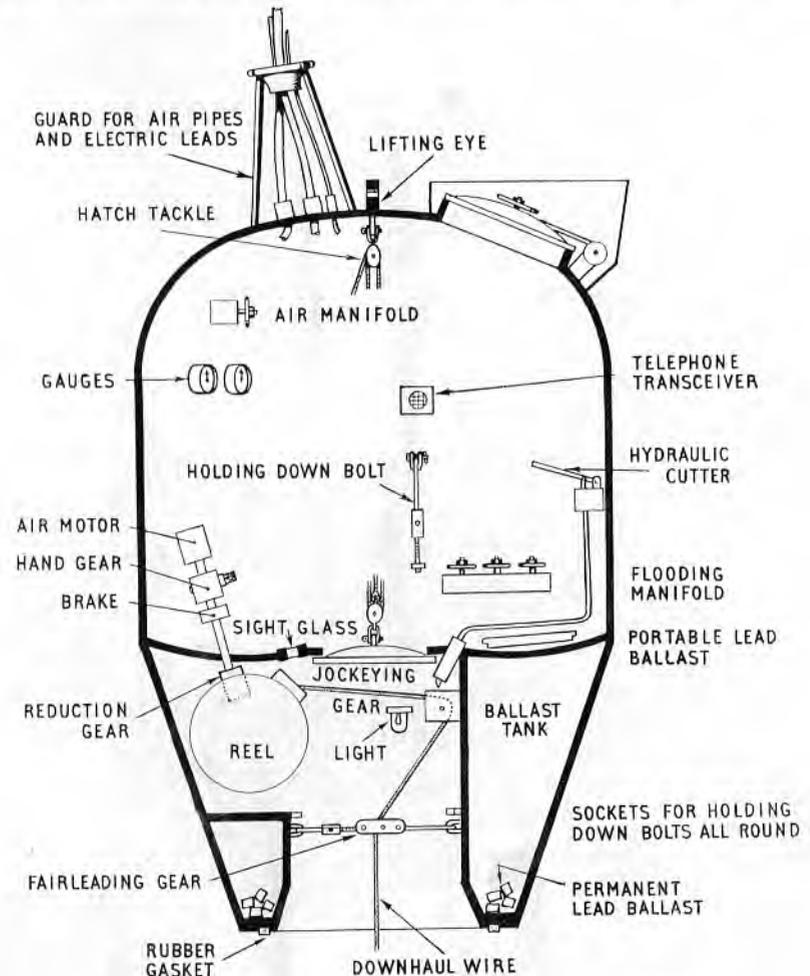


FIG. 3.

OWEN J. CARTER (NAVAL SUPPLIES) LTD.



ESTABLISHED 1864

SHIPPERS OF FINE WINES
AND
SUPPLIERS TO THE
ROYAL NAVY
OF
WINES, SPIRITS,
TOBACCO & CIGARETTES

Our aim: 'Service to the Service'

Head Office:

3/3A HALF MOON STREET, THE HARD
PORTSMOUTH

Telephone 70201/2

Branches at:

DEVONPORT	25 WILLIAM STREET
CHATHAM	37/41 HIGH STREET
MALTA	27/28 PINTO WHARF, VALLETTA
GLASGOW	220/220A BROOMIE LAW

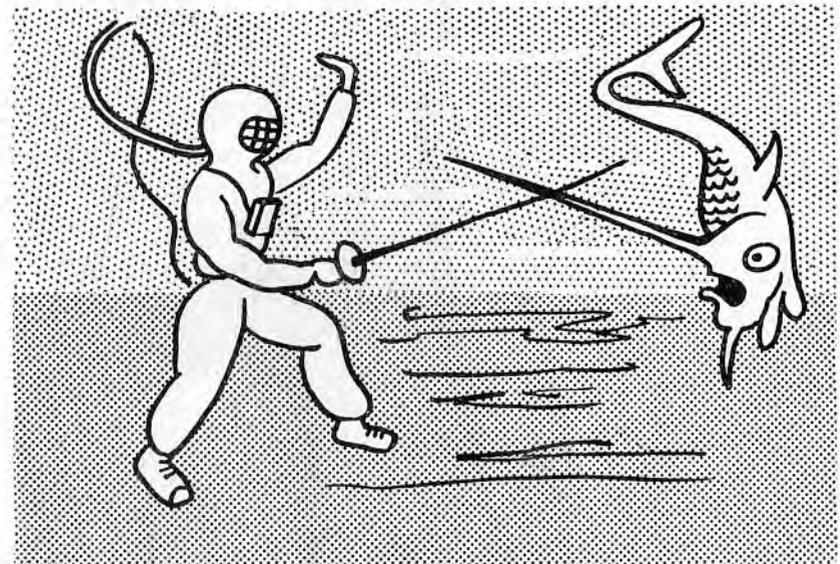
The water ballast tanks are around the lower compartment which also contains pressure-tight lights and a hydraulic cutter to enable the bell to be released from the downhaul in emergency.

In the upper compartment there is a hatch in the crown and another in the deck to give access to the lower compartment.

Both hatches open outwards so that sea pressure keeps them on their seatings. The lower one has no hinges and is oval in shape so that when released it can be twisted and hoisted up into the upper compartment like the lids of some pressure cookers. A tackle is provided for this and when set up taut it serves as a useful grip for strap-hanging when the bell is under way. A strongback holds the hatch shut. The upper compartment also contains portable lead ballast, lights supplied from and a telephone to the surface, pressure and depth gauges, and a hand pump for working the hydraulic cutter. It is designed to carry 8 men as passengers. The crew consists of two qualified divers.

This article will be continued in the next issue.

By kind permission RN Scientific Journal.



SWORD DANCE



ANOTHER FISHY STORY

The article on sharks in the last edition of the Magazine recalls a story I heard some years back from an Australian Bomb and Mine Disposal Officer.

It happened during clearance operations in New Guinea just after the war. A diving party were recovering jettisoned Japanese ammunition from a harbour and dumping it into deep water. The diving conditions were ideal, clear warm water, good visibility, hard bottom, plenty of fish and the depth between 25 and 30 ft. On the day in question operations had ceased but one diver had been sent down to spear the evening meal. He had collected six fish which he had slung round his waist, and was returning to the shot when he sensed that he was being followed. Looking round he was alarmed to find a massive shark taking more than a normal interest in him. The brute, which was between 8 to 10 feet long, swam leisurely round the diver observing hungrily from all sides. Splashing the water, shouting and otherwise creating a disturbance failed to deter the intruder, who appeared to be sizing up his supper and waiting an opportune moment to take his first bite.

The diver was now becoming quite frightened, and when the COME UP was given he did not quite know what to do. Was it supper for the shark or supper for the lads? When the signal was repeated he made his decision and answered with the emergency signal and started flaying the water with his arms and legs as he ascended. The shark, not to be outdone, closed in rapidly, his mouth open, ready to devour all that came his way.

On arrival at the surface, the diver, still conscious, was quickly hauled into the boat, where his legs were found to be covered in blood. On closer examination it was found that apart from a rather bad graze on the backs of his thighs he had suffered no other injury, but the string around his waist now held just six fish heads. G.A.F.

TYNE CENTRE

The author, having completed a SWD Course, returned to the NE, where he was standing by a ship being built and was faced with the problem where to go for the monthly dip! He was not alone in this, as the chap from the ship next door had the same problem.

A 'phone call to Rosyth confirmed that *Safeguard* would be quite happy to oblige, but a day-and-a-half off for 40 minutes' swimming and diving seemed a bit excessive and it is necessary to do some work whilst standing by new construction, so we had to look nearer home.

The answer was found in South Shields in H.M.S. *Satellite* where the RMFVR Tyne Centre have their headquarters. The unit have a special boat section and they appeared to be happy to have a couple of cautious mariners to assist as standby divers, being rather short of numbers at the present time. The section consists of a Colour-sergeant Swimmer Canoeist Instructor on the permanent staff, 1 Lieutenant (qualified as Supervisory Diving Officer), 1 Corporal and 1 Marine all RMFVR, and 1 Surgeon-Lieutenant RNVR (the unit's MO). Training is initially carried out in one of the local swimming baths and as the trainees are only available for 2 hours' dry and 1 hour's wet instruction per week, it takes some time to get one qualified.

For conversion to deeper water and free swimming, the team goes to Seaton Sluice, where two suitable training areas exist, one for the new boys consisting of a channel about 20 ft. wide with sloping sides, 200 ft. long and about 8 to 10 ft. deep. Then for the more experienced there is a sluice going out to sea for about 1/5th of a mile and about 20 to 25 ft deep, with interesting rock formations and lots of fish. These are so tame you can catch them with your bare hands!—we have witnesses to prove it.

As far as practical work is concerned the section has been confined to the odd propeller removal and replacing, and displays at local swimming galas and more recently a gold watch (see 'There's Gold in them thar Docks'). W.S.S.

THERE'S GOLD IN THEM THAR DOCKS OR AIDS TO CIVIL POWER

The wealth of the medical profession is legendary. Every child most surely knows that surgeons, above all, are as rich as Croesus. This particular one was obviously so, since he possessed a gold Rolex Oyster valued at £150, complete with 20 carat solid gold wristband—which was his, and the watch's, undoing. The soft metal of the strap could not withstand the strains so long imposed, and accidentally being knocked against the stay of the mainmast of a yacht one fine day, plop—it was overboard.

How does it feel on seeing a lump of metal of such value disappearing into the murky depths of Sunderland North Dock? Does one say 'Good God. There goes Aunt Mabel's birthday present. Now what shall I do?' or, alternatively, 'Here's a turn-up for the book. A hundred and fifty quid from the insurance. Just the blooming job!'

GLENHEATHER THORNSPROOF



The Wonder Tweed

- Appeals especially to motorists
- Woven in finest two-ply yarns essential to genuine thornproof

- Tailors into hard-wearing crease-resisting suits
- Ideal for Town or Country
- Two-piece Suit

Ready to wear
£15 - 7 - 6

Made to measure
£18 - 5 - 0

J. BAKER & Co.

81-82 QUEEN STREET, PORTSMOUTH

and at DEVONPORT CHATHAM PORTLAND

Whatever the reactions of the loser may have been on this particular occasion, the insurance underwriter did not intend to leave sleeping dogs, or drowned watches, lying. Being a regular, if not enthusiastic, payer of income-tax, he bethought him of the RMFVR and the cost to the nation, and to himself in particular, of supplying these characters with expensive underwater swimming equipment. Action was called for, in an attempt to forestall costly expenditure. A call put through to Tyne Centre brought forth the response that 'frogmen' would be in attendance on Wednesday afternoon, and in due course three stalwart performers, plus bull terrier pup, put in an appearance on the dock-side.

The word best suited to describe this triumvirate is 'motley'—Colour-sergeant Jackson, R.M., Lieutenant-commander (E) Bill Salmon (what a lovely name for an underwater swimmer!), and Surgeon-lieutenant J. Campbell, R.N.V.R.; Jacko had every right to be there. Bill Salmon is standing by a new ship, and knows best what spare time he has. And the Doctor—well there's only one thing the Doctor likes better than diving, and that's not parachuting. He was more motley than the others, because he insisted on having a go with an aqualung and not the UBA. But being mentally alert, he had forgotten to bring any special weights with him. The Commander (E) solved this problem by tying an enormous bag filled with gash UBA weights to the Doc's back. This was so heavy that the Doctor leaned over backwards like the Tower of Pisa, and estimates were quickly made as to the likely charges for hiring a dock-side crane to get him into the water. The Doc, however, was well versed in the Principles of Archimedes, and assured his colleagues, and the bog-eyed bystanders, that all would be well as soon as he got into the water, and mentioned things like 'upthrust' (which Colours thought was obscene), and the laws of flotation.

Being eager to find out how buoyant or other-wise he was, the Doc was elected to be first man down. The shot was lowered, and registered 3 fathoms. Safety line attached, the Doc was man-handled over the side, and into the oggin. There was a moment while he remained on the surface, and the suit vented with a roar like a jet in a hurry, and then he was gone. Archimedes, or somebody, had let him down—and not very gently. About three feet of the recorded depth was fine gossamer-like silt and mud. And there the Doc found himself, not stuck, fortunately, but, thanks to his weights, unable to do anything but crawl on his belly. He frantically signalled four 'pulls' on his line, and was hauled up.

'What's it like down there?' asked Colours.

'Black as the Earl of Hell's waistcoat,' said Doc. 'I have stirred up all the bottom over half an acre. It will be a groping job. Seing is out for this trip.' He was hauled out, and changed the compressed air machine for the more orthodox UBA.

The three spent about 2½ man hours groping around on the bottom. No joy. Crabs were seized hopefully, only to be abandoned when they bit. The thick mud swirled everywhere. It was as dark as Egypt's night. Groping in utter blackness, one feels some mighty queer things slide oozingly through one's fingers. The mud feels every bit like you hope it isn't.

The search was abandoned. Cold and dirty, the lads came ashore. Over tea and buns—alright you rum soaks and beer men—the decision was made to try again the following afternoon. The boat-keeper said he would have a go at marking the spot precisely at low tide, 'But,' he said, 'I may not be lucky, because you see they spent several hours on Sunday evening dragging with a bucket fore and aft.' It says much for the tough moral fibre of the divers that they didn't scream.

There is a happy ending, though. Colours, the second man down on the following day, found the watch within three feet of the marker—it wound up and went, too.

I am authorised to make public advertisement of the fact that Tyne Centre is now in the salvage market. Nothing under £5,000 though. We're much too good for any lesser trash. J.C.

HSCDT

To prove how hard-up he is for material, the Editor has even sunk to the level of asking *us* for an article, and after much cutting of cards and tossing of coins, yours truly has been given the job of supplying it. Not that I am any good at this writing lark, but the nine knives gently prodding me in the back will no doubt give me some inspiration. Anyway let's get on with it.

To start off with, the team has undergone a few changes since the last edition, so I'll let you in on these first. Following the usual farewell run in the 'shot-rope,' Lt.-Cdr., (do or die), Roberts, v.c., D.S.C., relieved Lt.-Cdr. Franklin as daddy of the team, and Commanding Officer of the ship. A lot of things can be said about that run but I'm afraid none of them can be printed. Anyway to get back to the point, A.B.'s Scott, N. and Calkin have now been replaced by Burton and Macdonald; the latter pair have so far lived up to their names, but it is hoped that one day they will both sober up. I think they are the only reliefs we've had; leastways if there are any more they've managed to keep pretty quiet about it.

As regards to our various jobs, it would take a decent-sized book to describe them in detail, so I'll refrain from getting too involved. Shortly after sending in our last article (which was incidentally our first), we steamed down to Guernsey to give the local girls a treat. The less I say about that stay the better. Come to think of it though, there was one afternoon when some of us were sober enough to entertain their branch of the British Sub-Aqua Club. Having told them what death defying dare-devils we were, they surprised us all by asking if they could try on some of our equipment. Being kind at heart, we obliged by getting a few of them dressed up; and boy, was it interesting? You see, their club boasts a few of the fairer sex, and after the initial stampede had subsided, these were shared out as equally as possible. *Eventually* they were all fitted into our suits, but what a job we had getting them there. Have you ever tried squeezing a dumb blonde with a figure like Venus into a frog suit? You want to try it some time, it gets quite interesting – so they tell me.

All too soon we had to leave our new-found haven and return to our students, namely the 51st team. They wanted some more lessons on searches, which we promptly gave them. After this little bit of working up, we returned to the 'happy hunting ground' at Harwich, to take part in another exercise and believe it or not we actually had some success. There's no doubt about it you know; we are getting better. Having completed this spell of S.9. earning, we secured alongside (just for a change) and commenced a hectic week or so preparing for the Commodore's annual inspection. Came the big day and down they swarmed, a whole troupe of officers armed with torches and scrapers, etc., led by the Big Boss himself. Look as they may though, the gash buckets stayed hidden, and nobody found the hooch; in the end they gave us a recommend. But the smiles on our faces were short-lived, because in the afternoon of the same day we had to do General Drill at sea for the Commodore's staff. Yes, you guessed, we ended up on the wrong end of quite a few blasts, but we remained cheerful because next day we all trundled off on leave.

After leave, we stayed a week in Harwich before sailing up to Lowestoft for the Oulton Broad Regatta Week. Before entering harbour, six divers were sent over the side and told to swim into the beach, thereby announcing our arrival, and over we went. Much to our amazement, a huge crowd was awaiting us on the beach, and among them was the Mayor of Lowestoft.

You will note that I left out the bit telling how yours truly managed to get lost, and eventually had to be towed in by a motor boat – the shame of it. There followed a week of exhibitions (go on laugh), in the local swimming bath, where once again we broke all attendance records. Somehow we survived that week, and it was with a mixed feeling of regret and happiness that we were torn away from our true loves, leaving them all set for the next ship to visit Lowestoft.

Somebody then suggested that we show our faces in Pompey, so away we went again, finally ending up in Vernon Creek, but after a while we got fed up with *Deepwater* and Horsea Island, and after consulting our fan mail, decided to give Falmouth the pleasure of our company for as long as we could be spared. Actually we went down there to carry out some more trials. On arrival, we were most annoyed to find the Portland and Trials Teams already there, but they soon left us alone. Must have been the competition. The CDTT very conveniently forgot to take their diving gear off our upper deck when they went and consequently we were on humping exercises for a while. We'll get even somehow.

While we were down in that part of the country, week-end leave was given from Guzz, and it was during one of these spells that a rather amusing incident occurred. One of the unmarried members of the team was chased up by his WIFE? (yes you read it right the first time). He only succeeded in escaping after a rather vicious week-end, and luckily we haven't been to Plymouth since.

On what was supposed to have been our last day in Falmouth, we managed to lose our dummy mine, so another week was spent looking for

it. Needless to say, the mine is still there – somewhere. Eventually and after giving the usual promises to the female population, we removed our carcasses to Harwich, to prepare for yet another good-will visit, this time to King's Lynn. The shackle-nosed members of the branch will recall that Lord Nelson was born there, and that was the reason for our visit. H.M.S. *Aveley* was with us for this trip, and on Trafalgar Day we played them at soccer. Have you ever played football after splicing the mainbrace? you want to try it – the only snag is that you don't see the ball till it's gone. Anyway, we won so it must have been a good game.

So we come to our present billet, in the land of drizzle, where jobs are two a penny – HARWICH, and on top line for our next exercise, which starts tomorrow. In a fortnight's time the ship goes on the slips for another refit, and the team will take the opportunity of going to *Vernon* to make sure they are all behaving themselves. It's going to be quite a change living ashore, but I suppose we'll get used to it eventually, it's about time the not-so-happy wanderers settled down somewhere anyway.

Looking back over my handiwork I see that it rather resembles yet another Cook's Tour, and for that I must apologise. Never mind though, maybe next time we'll have something interesting for you to read. In the meantime, how about some reliefs? The terrible trio are still kicking their heels, but that's about all they are doing, so chop-chop.

THAT'S YOUR LOT JACK,

HARRY.

WESTO DIVING SECTION

In spite of repeated requests from our worthy editor, it is some time since we in the west country Diving Section of *Defiance* have sent a contribution to our magazine, so I propose for this edition to give a brief account of some of our diving exploits during the early part of this year, beginning with one in which all who took part fervently expect and hope to result in a salvage award – probably in about five years' time. At least our claim has been accepted by the Treasury solicitors.

In March the Boom Defence Officer at Turnchapel requested the assistance of divers to survey the hull of SS *Venus* – an ex-German Strength-thro-Joy ship which had been blown aground off Jennycliff during the March gales. Not only the hull of the ship but the nature of the surrounding sea bed had to be surveyed. Consequently MFV 1547 with the normal crew plus extra divers arrived at Mountbatten pier at 0800 on the 24th March to be briefed by the BDO who suggested that we allow two divers employed by the Director of Boom Defence to assist in our task. *Venus* was in about 15 ft of water and broadside to the rocky beach when we in the MFV moored in the same fore and aft line but about 50 ft out from her starboard side.

Diving started soon after 1000, the first diver commencing his survey of the hull amidships working aft, another diver working for'ard. Other divers meanwhile locating and surveying the rocky ledges to seaward in order to give the Salvage Officer all possible information as to what had prevented *Venus* being pulled off by the tugs during their earlier efforts. Much of the survey had been completed when the falling tide necessitated the MFV hauling clear of *Venus* and abandoning diving for that tide. This was very nearly disastrous for the MFV which, it appeared, lay in a trough of rocks and nearly resulted in her also going aground. Visions of reports of grounding and reasons why, loomed very prominently for what seemed an eternity, but once clear, diving continued from our other two diving boats, finally completing the survey of the inboard side of *Venus*. Conclusions being reached that the port propellor was firmly wedged in between two large rocks. These, at the request of the Salvage Officer, were later blown apart by a number of 1½ lb. charges – Anyone know of a market for phosphor-bronze?

At the next high tide preparations for the big pull by the various tugs were still not complete, so work continued aboard *Venus* to reduce weight; several hundred tons of fuel were unloaded and most of the lifeboats were lowered and towed away.

Came the dawn, high tide, and a steady pull from the tugs, and *Venus* slid unwillingly from her rocky perch to be immediately supported like a drunken old lady by a tug on either side – later to be towed away for docking and repairs. Damage was evidently not very great as *Venus* has since twice ventured timidly into the Sound during her cruises.

Not long after this little episode, we were again called upon for a diving operation off the north coast of Cornwall. The diving MFV, nothing daunted, and fully equipped for any kind of diving including a chamber in her for'ard hold, sailed off early one morning in July to moor off shore. That's how it should have happened anyway, but fate took a hand just off Manacles and our thrust-bearings failed us. *Barnstone* came to our rescue and towed us into Falmouth (the same thing happened last year in almost the same place). On this occasion it meant remaining in Falmouth until an ERA together with new fittings arrived from Plymouth to fix us up – however, we did eventually get to our destination and finished our survey after a week's diving. Whilst at Falmouth we met the local CD boys under Lt-Cdr Tyrill who were down there doing some experimental diving in an interesting little grotto called the Chain Locker – pity we didn't have time to pursue this.

During the past couple of months we've been glad to welcome the NATO Clearance Diving Course down here, some of them divers of long standing. It was particularly noticeable how well all the different nationalities comprising the course have mixed with our own chaps. We will be sorry to see them go.

To all divers, whether Steamer or Cork, All the very best from way down West,

GEO. W.

A watch that stays waterproof 660 feet under water!

ROLEX have produced a new watch for sea-going activities called the Submariner. Particularly designed for deep-sea divers, this special Oyster wristwatch is guaranteed waterproof and *pressureproof* to 660 ft. (200 metres) under water. Incorporated in the Submariner is the revolutionary "Time-Recorder" revolving rim, which enables the watch to be used as a stop-watch. It is invaluable for navigation, speed testing etc., and *indispensable* to divers, who can now tell at a glance how long they have been under water and how long they may safely stay there.




ROLEX

THE ROLEX WATCH COMPANY LIMITED (Founder and Chairman, H. Wilsdorf)
1 GREEN STREET, MAYFAIR, LONDON, W.1



CLEARANCE DIVING DOWN UNDER BY R.A.N.

Clearance Diving in the Royal Australian Navy commenced with the commissioning of the Diving Tender *Porpoise*. This craft started her life as a 200-ton concrete ammunition lighter and was converted by a private firm of contractors (Storey & Keers) into a completely self-contained modern diving school.

The bottom or hold of the lighter became the main deck in which there are two stores, workshop, machinery space and changing room. The upper-deck superstructure houses a large and a small general purpose room, the larger being used as a general mess room, complete with radio and refrigerator. The other as an officers' mess. Toilet requisites and galley are adjacent. All types of small craft are attached to the school for the use of various types of diving.

The general purpose rooms are so constructed to serve as lecture rooms, cinema and the showing of instructional strip films. In the workshop, in addition to tools, benches and enclosed Proto Sieve (hand-raulic for the use of), there are two large water tanks, one for the testing of sets and the other for the diver to totally immerse himself in fresh water after completing a dive.

The changing room is equipped with steel lockers for men undergoing instruction, to stow equipment. As far as possible a full set is issued to the rating for the duration of the course.

Lt. Titcombe will be the first CD officer to qualify in *Porpoise* and the first class to complete course did so in September of this year.

R. HILLAN,

CLOTHES MAKETH THE MAN . . .

. a debatable point no doubt, but unquestionably clothes are IMPORTANT to men.

Especially fine clothes such as are tailored by Bernards and whether you require Uniform or Civilian wear you cannot do better than consult Bernards at all times.



A comprehensive size range is held at all Bernard branches enabling the customer in a hurry to be fitted immediately, but where Tailored to Measured orders are required Bernards provide a prompt service.

The cost is pleasantly modest and where it is not desired to pay cash a credit account may be opened for settlement by monthly Admiralty Allotment or Bankers Order.

**Remember—
You really do buy better at Bernards**



C. H. BERNARD & SONS LTD.

Royal Naval Tailors and Outfitters

6-9 QUEEN STREET, PORTSMOUTH Tel. 4403

Branches at:—Devonport, Chatham, Deal, Dunfermline, Falmouth, Gibraltar, Valletta and Sliema, Malta, Helensburgh, Grimsby, Harwich, Invergordon, Londonderry, Milford Haven, Newcastle-under-Lyme, Weymouth, Portland, Rosyth, Rothesay, Skegness, Wetherby, and at Lossiemouth, Arbroath, Abbotsinch, Eglinton, Anthorn, Kete, Brawdy, Helston, Corsham and Worthy Down

AN ODD EGG

Friends:

As you know I have been asked here tonight to give you a lecture on the evils of drinking, but as many of my friends well know I am a well known hater of the proverbial bottle. Therefore I propose to give a short discourse on the rising cost of eggs.

First, let us take the poor under-fed, over-worked chicken. Possibly many of you have taken quite a lot of chickens in your lives, but personally I prefer duck. That is getting away from the subject so I will resume on a more topical subject, namely eggs. Sorry I've said that before.

The chicken is a bird of many uses; boiling, roasting or frying to name a few. But my friends its main purpose is to produce eggs also known as hen fruit, cackle berries or just plain eggs. Let us consider the well-known adage 'Which came first, the chicken or the egg?' If we say that the chicken came first we may well say where did the chicken come from. There again, if we say the egg came first the question will arise as to who or what laid the egg. As far as I can see the question is not worth considering. The main query these days is where is the NEXT egg coming from . . . That my learned friends I will answer in two words—the chicken. Now we come to the question of food for this egg-factory. Food as you know is a very important thing, not only to chickens which are only small items in this universe of ours.

Food comes in three categories – good food, bad food and pig food, but as we are not discussing pigs I propose to leave the latter until a later date. Good food is a MUST for chickens if they are to produce the eggs that form a part of our staple diet. They make such a change from just plain bread and water.

As this programme is coming to you over ITA now is the time for our commercial.

Ladies, do you get on a bus and someone says 'Nellie you're smelly'? Now is the time to use our special underarm de-odorant. 'PEHEW' spelt backwards 'WEHEP'.

It comes in three handy sizes:—Strong, medium strong and gale warning.

Get your supply from your local chemist at the very low cost of 2/3 per ton.

Now back to you Jeremy Cacklethorpe.

Thank you Nigel.

Now that we have seen the importance of food I will carry on with how and where to house your chickens, providing of course you are going to keep chickens.

It is inadvisable to keep chickens indoors because of the smell, not that they usually worry about the smell Ha-Ha, just my little joke . . . ahem.

A good strong coop is strongly recommended by all good strong chicken coop makers. This should be placed well away from all draughts and also your next-door neighbour's fence. It should be surrounded by extra strong wire netting to keep out foxes, stoats and weasels and also of course to keep the chickens in!! These birds have a nasty habit of going onto a garden patch sorting out weeds and growing plants usually by pulling up the growing plants.

As I can see the producer waving wildly at me I think I had better conclude this talk.

Next week I will give you a little lecture on pig-raising.

This is Jeremy Cacklethorpe saying good-bye and happy hen-hunting.

P.S.—This story was forwarded by an anonymous writer.

P.P.S.—I don't blame him. EDITOR.

SCOTLAND; AMONG THE SEALS AT HAYSTACK

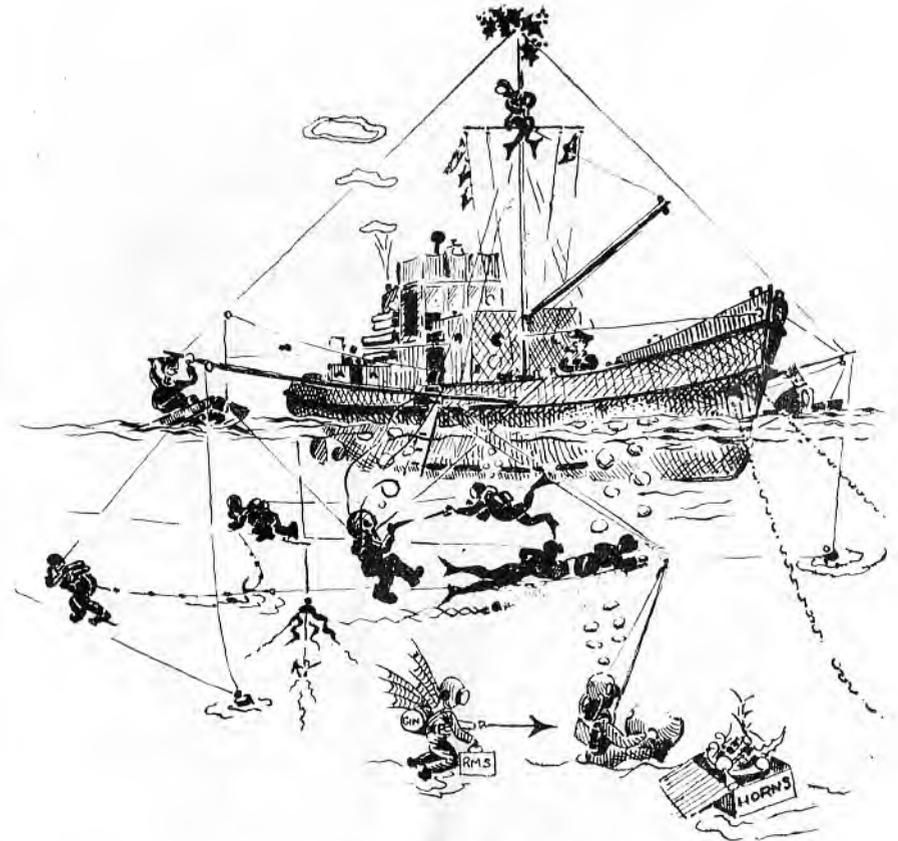
Little time is left to write reams on normal activities which we doubt if any diver reads. Our time is well taken up with training SW divers in the Scottish Command.

Our most amusing incident since last issue was our meeting with the seals at The Haystack. We were seeking maximum depth for a SW class in fairly clear water. To those familiar with the murky waters of the Forth it is well known that to the eastward lies the better clearer water. We fetched up in Dalgety Bay close to The Haystack in about 10 fathoms. The place was littered with seals, the surrounding water was full of playful pups who didn't seem to mind the noisy MFV at all. On the rocks they lay in hundreds dozing and snorting and generally feeding their young. We dressed in swimsuits only and slipped into the water quietly. Our approach seemed to be unnoticed through the water but immediately we hauled ourselves up onto the rocks away they all went.

We sailed further east to Abadaur and inspected the local yacht moorings and marks for the local regatta. Returning to our Haystack rendezvous, hoping that the seals had forgotten us, this time we dressed CPO Algie Ware in suit and hood, blacked his face and fixed him with a bit of teased-out oakum as a moustache—he left us looking remarkably like a seal. His intentions were to lay wallowing on his tummy and get as close to the seals as possible; all went very well and Algie found himself staring into the eyes of a baby seal, in fact almost rubbing noses. Suddenly the baby seal remembered that his father did not have a (GINGER) moustache; he raised the alarm and away they all went. We all enjoyed our day, tucked into our 6 ounces of corned dog and pussers pea-do.

Caledonia swimming bath has been taken in hand for a long refit so we miss our endurance swims; we are, however, dropping into the cold waters of the Forth with some regularity. Divers have visited us from Tyne, Bulwark, Albion, Centaur, Glasgow and one solitary bod from Scott.

Mr. Gordon is my relief among the seals. Cheerio. MACBARRY.



DIVERS DITTY

An Ode to a Trials Team

When various divers
of odd shapes and sizes,
Meet underwater to chat.
They often contrive,
to get themselves knotted,
But they did'nt oughter do that.

There are Steamers and Corkheads,
And Sub-Aqua Swimmers,
Some Deep Diving blockheads,
and all the beginners.

Some say they're mad as hatters,
and some as mad as hell.
Just take a look at a corkhead,
in a Steamer's-suit - ah well!

If only the corkheads would quietly remember
that steamers can do the same job,
And skin divers also go down in December,
For fun, not a couple of bob.
There would be much more harmony under the
sea:
and then we'd come up for a nice cup of tea.

RATHER WET

BREAKING THE WORLD'S DIVING RECORD (1948)

by

LIEUTENANT-COMMANDER H. WARDLE, R.N.

(Note.—This article continues from Part 4 in Vol. 2, No. 3)

Part 5—Commissioning of H.M.S. *Reclaim*

In March, 1948 my two years as the Officer-in-Charge Devonport Diving School were drawing to a close when I was sent for and given two items of first rate good news (1) Bill Filer had been selected for lieutenants' courses and (2) I was to relieve him as the Senior Diving Officer of the new diving ship, H.M.S. *Reclaim*, at that time, still fitting out at Renfrew in Scotland.

About two weeks later I was up to my neck in all the usual problems associated with the last two months prior to a new ship commissioning.

Appropriately enough H.M.S. *Reclaim* commissioned on the anniversary of The Glorious 1st June in 1948 and the first 12 hours at least were spent celebrating the occasion in the way that 'Diving Types' the world over do so well!

After only 24 hours in the ship, with my previous knowledge of the divers on board I was convinced that we had a first-rate combination. On the 2nd June, 1948 I had a few words with the team diving and informed them that:—

(a) We faced three months of intensive work-up.

(b) That I considered that with all the advantages of a new ship and with the team I had on board I felt we would produce a standard of deep diving never before achieved in the Royal Navy.

(c) That the achievement of the Royal Navy's target depth of 500 feet together with incidental breaking of the world's flexible suit deep diving record should be our first aim after the work-up.

The following is a list of the officers and divers borne:—

Commander W. O. Shelford, R.N. (in command).
 Lieutenant C. W. Chadwick, R.N. (1st Lieutenant).
 Mr. H. Wardle, Gnr. (T), R.N. (Senior Diving Officer).
 Mr. W. D. Barrington, Gnr. (T), R.N. (2nd Diving Officer).
 Mr. E. W. Gordon, Gnr., R.N. (3rd Diving Officer).
 Surgeon-Lieutenant D. W. Barnes, R.N.V.R. (M.O.)
 Mr. Fields, R.G.R., R.N. (Engineer Officer).

Divers:

C.P.O. Clements (Chief Diver)	Shpt. Harfield, Art. Diver
P.O. Yates, D.1.	Sto. P.O. Jackson, D.1.
P.O. Hopewell, D.1.	L/S. Frost, D.3.
P.O. Foggin, D.1.	L/S. Longesborough, D.2.
P.O. Soper, D.2.	L/S. Burrell, D.2.
P.O. Hunter, D.2.	A/B. Carruthers, D.3.
P.O. Bryant, D.2.	A/B. Compton, D.3.
P.O. Bollard, D.2.	A/B. Martin, D.2.

The diving system on board H.M.S. *Reclaim* was a much more Rolls Royce set-up than *Deepwater* and the old *Tedworth*. Electrically driven compressors supplied air at 4,000 lbs. □" to a ring main and incorporated reservoirs. This in turn fed low pressure reservoirs to 200 lbs. □" for supplying the diving panels. The large diving flat was totally enclosed with diving doors in the ship's side giving access to the sea. In this flat was the three compartment recompression chamber.

The well deck was a maze of leading blocks and tackles for operating the two forward derricks. The S.D.C's fitted snugly in their special holds, though the mass of air pipe and breast rope going to the S.D.C's all helped to complicate the issue.

It will be appreciated, therefore, that we had plenty to get on with. First and foremost came all the routine ship acceptance trials, engine trials, testing steering gear, radar, asdics, etc.

Diving trials were commenced on 4th June and completed to a depth of 195 ft on 9th June; needless to say various 'snags' quickly became apparent. We sailed from Greenock on 11th June, arriving at Portsmouth on Monday, 14th June, when the defects and modifications were taken in hand.

On Saturday, 26th June all our acceptance trials and defects were completed, shallow water diving and recompression chamber exercises had been carried out and we were ready to start our work-up of both the ship and the diving team. We anchored over a wreck in the English Channel, lying at a depth of 200 ft approximately. An intensive week's day and night diving exercises were carried out with all divers on board being exercised in standard and deep gear, surface decompression and use of the S.D.C. All went well, with the young Third Class divers doing particularly well in view of their slight experience.

On Monday, 5th July we were back in Portsmouth sorting out the oxy-helium equipment, transferring stores from *Deepwater* and *Reclaim*, divers having X-rays, and generally insuring that both ship and men were 100% before we proceeded once more.

On Saturday, 10th July we sailed once more for Scotland and its deep lochs. By this time we had roughly formulated a diving programme. Only 6 of the 19 diving officers and divers born were qualified in deep diving, i.e., 300 ft on air. It was decided, therefore to requalify all the existing deep divers and at the same time try to qualify the whole of *Reclaim* diving team to 300 ft on air! This was an ambitious programme but, with the good progress made in the Channel, *Reclaim's* first-rate air system and the improved deep diving canisters I felt confident that most of the team could make it. In addition with all the team qualified to 300 ft on air the early stages of helium diving would be easy from the diver's viewpoint.

On passage to Scotland the whole of the team were exercised to 300 ft in the recompression chamber. If you have never been seasick try a pot dip in the English Channel!

Personal Breathing Equipment

Already pre-eminent in the field of aircraft cabin atmosphere control, NORMALAIR are now extending their activities to include personal breathing equipment

NORMALAIR LTD.
YEOVIL · ENGLAND

OVERSEAS ADDRESSES
NORMALAIR (Canada) LTD.
1425 QUEENSWAY, TORONTO, 14
ONTARIO
NORMALAIR (Australia) PTY. LTD.
MELBOURNE

On Monday, 12th July we anchored at Tarbert, that lovely herring fishing port in Loch Fyne; the population, though small, made all on board so very welcome that *Reclaim*, already a 'happy ship,' could not fail to become even happier.

The next two weeks were spent in continuous diving at depths between 220 ft and 240 ft. All successfully made this depth, and by the end of this period the whole team were fully conversant with the deep diving procedure, the S.D.C. drill, etc. I should mention here that we allowed no divers' idiosyncrasies, the drill carried out by all was identical to insure that the conditions for each diver were equal.

Gale force winds were blowing up Loch Fyne on Monday, 26th July, so Commander Shelford decided to move up to the more sheltered waters and better holding ground in the North of Loch Fyne off Inveraray, the ancestral home of all deep divers.

The first diver was on his way down at 1100, and during the remainder of this week all the ship's divers had completed, without a hitch, successful dives to 260 ft.

On Saturday, 31st July the weather had improved considerably so we once more returned to Tarbert. The reader may wonder what the attraction was at Tarbert. No!—the Captain was not in love there (though this did not apply to all), the snag with Inveraray was that the water wasn't deep enough, only about 450 ft !!!

On Monday, 2nd August we commenced the 285' to 300' series, and by Friday, 6th August the whole diving team had successfully carried out dives to this depth, with the exception of one diver who had to withdraw from the team on medical grounds.

This was a real achievement and Commander Shelford, at last, had something positive to show in the deep diving sphere for the enormous amount of work and research that had been carried out under his able direction during his appointment as Superintendent of diving.

The salient points of the air diving series were as follows:—

- (1) The diving team were a 'mixed bag,' some with many years' diving experience down to three with less than 12 months' experience.
- (2) One diver had previously been withdrawn from deep diving at 260 ft due to nitrogen narcosis.
- (3) All had made the elusive 300 ft previously attained by only our finest and toughest divers.

It is considered that the principle reasons for this remarkable improvement over previous years must be due to the elimination of CO₂ from the breathing system. CO₂ was reduced by the following measures:—

- (1) All divers were made to use the mouthpiece connecting directly to the canister the whole time, from 'on front glass' to 'arriving bottom,' no talking being allowed on the way down except in emergency. Thus the air should have been CO₂ free on operating injector.

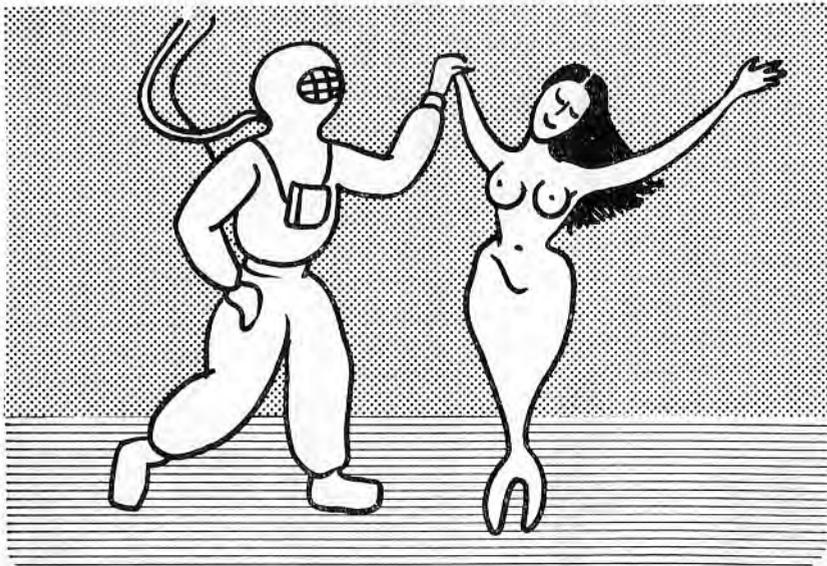
(2) The improved method of filling the deep diving CO₂ absorbent canister.

(3) The improved injector-venturi system and the rigid system of care and maintenance carried out during the trials.

This large group of mixed divers achieving 300 ft without incidents indicated that rigid psychological solution was quite unnecessary for deep diving; given efficient equipment any properly trained diver who is normally fit for deep diving can reach 300' in safety. It was still clear however, that depths of about 250' and above cause a mental efficiency drop of about 30%.

All on board were looking forward to the next series of dives with enthusiasm and complete confidence and buzzes in Tarbert as to what we were going to do next would have taxed the imagination of Jules Verne.

PART 6—Oxy-Helium Diving—will be included in the next issue.



SEEING IS BELIEVING

NEWS FROM THE PORT SURVEY TEAM

It is not very often that one hears mention of the two veterans *Annet* and *Flatholm* since in the CD world they are members of the working classes and carry out the more unromantic duties of surveying, concerning which there is very little to shout about.

As 'Isles' class trawlers converted from Wreck Dispersal Vessels to Port Survey Ships they have been systematically carrying out their duties for nearly three years. *Flatholm* is now in Liverpool and *Annet* at Southampton.

We (*Annet*) started here last May and spent an idyllic Summer diving in Southampton Water. Conditions could not have been more comfortable, and at the height of the heat wave the enthusiasm shown for going away in the diving boat to get in a skin-free-swim was only outdone by that for staying in the boat for the benefit of a skin-sun-bathe. Not much thought was given for the wretched diver sweltering on the bottom fifty feet below.

However, all good things have to come to an end, and after spinning Southampton Water out as long as possible we started surveying off The Needles. Attempts were made to keep up morale by spreading the buzz that in the West Solent and Needles Channel were the best fishing grounds round the South Coast, abounding with succulent lobsters and choice flat-fish. So, armed to the teeth for the expected sport, the disappointment can be imagined when after a fortnight's fishing (and diving) not a bite was had or a lobster seen. No doubt many authoritarians will tell us we did not search in the correct places, but we have it from very reliable sources that, by then, all the lobsters had proceeded to Lee-on-Solent. (No Corkheads or Fisheads there.)

During this period there have been no incidents worth repeating (that bear repeating) apart from the normal day to day hazards (beer, women, alcohol, etc.); but we did have the occasional diving job unconnected with surveying. One was to deal with a screw which was suspected of having picked up a small boat's moorings. We were also told there might be a bight of the moorings hanging from the screw as a drumming noise had been identified from the engine room. On examination *ten turns* of half inch chain cable were found round the screw with two loose ends, one of 60 ft, and the other of 6 ft, with a $\frac{1}{2}$ cwt anchor attached. She was docked a week later, when the screw had been cleared, because of an engine defect!

Other jobs arose in answer to requests from *Diligence* (now our best customer) for searches for odd items of stores - binoculars, Decca sets, etc. - which periodically fall off the end of their jetty; but this has become rather more a feature of the weekly routine instead of an occasional dip.

Our berth at Southampton is generally in the South Railway Docks, and it is very pleasant lying there amongst our own kith and kin like the 'Lizzie', the 'Mary' and others, rather than those grey warships in Portsmouth with guns. However, just to prove that we are not completely lost from the fold we visit them once every three weeks to coal

ship. Quite an evolution – eighty tons are dumped on the upperdeck in six hours, which is shovelled by the ship's company down below to the stokers. What happens to it then is anybody's guess, but somehow it is reconstituted into thick black smoke and large flakes of soot. This does have its uses sometimes though, for our berth is directly opposite the Customs house, and when the wind is south west, which it generally is, the lot blows straight in through their front door. Light grey trawlers are ill advised to go near Southampton after a foreign visit.

Since *Annet's* last article in the magazine, sometime in 1954, we have had three leave periods, the odd weekend and two refits, from the last of which we have just returned to carry on the survey. This trip was not amongst the most comfortable, as we came round in the teeth of a gale, rather like the monkey climbing the proverbial slippery pole: eight miles made good ahead one watch and four astern the next. On arrival we had our usual berthing party – two protesting frogmen flung over the side and made to swim ashore ahead of the ship with the berthing wires.

To finish off – a note about our team. By the time this is printed, the 'Buffer', PO Spicer, will have joined the Staff in *Deepwater*, relieved by CPO McKinlay from UDE, and the best of luck to them both.

Nothing more till next year from *Annet* except to wish everyone a Happy Christmas and a Prosperous New Year. D.B.B.

SPECIAL BOAT SECTION (EX-VERNON ROYALS)

In the future we hope to become regular contributors of material for the *R.N. Diving Magazine* and by doing this we hope to encourage other R.M. Special Boat Sections to send in stories to the editor about the many exciting episodes which happen to us.

Using the above as a foreword and an introduction, we, of the Royal Marine Special Boat Section send our Greetings and Best Wishes for the New Year to you, divers of the Royal Navy; to our friends in the sub-aqua world, Greetings and Best Wishes in your quest for adventure.

The uses of a 'Turkey' (a Royal Marine to you landlubbers) are many and varied. A jack of all trades, put in a mixing bowl and given a hearty stirring, brings forth a being (?) akin to Captain Dan Dare, who is qualified in almost all phases of warfare adopted by the three Services.

Special Boat Sections are stationed all over the world and our missions take us to many varied places, be it hot or cold, over or under the waves, their lives are safeguarded by their personal fitness.

To all men of the SBS's, we of the RNRS *Royal Prince*, BOAR, send our Christmas Greetings and Best Wishes for an energetic New Year.

RED AND THE GANG.

P.S.—A word to Red McCarthy: Have you become a reader yet?

Since the issue of our last edition, the Royal Navy has paid homage to Lord Nelson and the 150th anniversary of the Battle of Trafalgar.

The following, it is hoped, will be of interest to our readers.

150th ANNIVERSARY OF THE BATTLE OF TRAFALGAR AND DEATH OF LORD NELSON 21st OCTOBER, 1955

THE BATTLE OF TRAFALGAR—21st OCTOBER, 1805

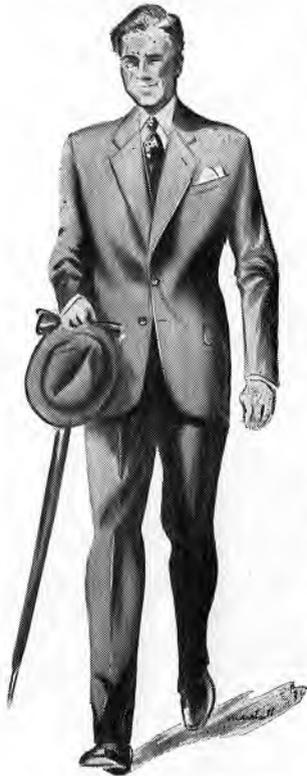
The battle of Trafalgar was, in a way, more than the greatest victory won by British arms; it was at the same time the culmination of as brilliant a campaign as has ever been fought in British history. Two men stand out as the supreme architects of that great victory, William Pitt who set the stage with consummate strategical skill, and Horatio Nelson who crowned it by his brilliant tactical handling of the fleet at the moment of decision.

The story of the campaign which ended with Trafalgar is every bit as interesting as the story of the battle itself. We have to go back 16 months before that fateful 21st October when Nelson met Villeneuve off Cape Trafalgar to find the start of the campaign, to the day in 1804 when Pitt first put into operation his plan to form his 'league' against Napoleon. He sent General Craig and an army to Italy to co-operate with the Russian General Lacy, and he sent Nelson and a fleet to the Mediterranean to cover them. And at the same time he used British sea power to draw so tight a net around Napoleon as to force him into making false moves to break out. The British army in Italy pinned Napoleon down to a campaign there, and from the moment that army sailed from England, the battle of Trafalgar was inevitable. Napoleon was forced, as Pitt meant him to be forced, into an attempt to invade England to break clear of the net.

The risk of a French invasion held no fears for Pitt, for from the start of the campaign there was put into operation the well-tryed and impregnable system of sea defence built up through the centuries. A squadron in the Downs to watch the Texel (Keith), one in the Channel Islands (Saumarez), and the main Western Squadron off Brest (Cornwallis), was the traditional defence, and England was safe enough in such sure hands as those.

But Pitt depended on one more thing to bring his strategy to a successful conclusion. He had to rely on the instinctive knowledge of his naval commanders to do the right thing on every occasion, for only with their co-operation could the net around Napoleon be properly tightened. And throughout a whole year of baffling French moves, with a large number of admirals and captains in more or less individual commands who had often to make strategical decisions on their own, with no method of communication beyond a chance meeting with other ships, with no

Real Service -



Friends may have told you how understanding Flemings are on the question of personal outfitting problems. Possibly you have thought of consulting us but keep having to put it off because no opportunity occurs . . .

Our highly-organised Mail Order Department will gladly send you details of styles with patterns and prices which you will find most interesting



A. FLEMING & CO.

(OUTFITTERS) LTD.

HEAD OFFICES AND MAIL ORDER DEPARTMENT:
P.O. Box No. 3 HAY ST. & PORTLAND ST.
PORTSMOUTH

BRANCHES AT
PORTSMOUTH CHATHAM DEVONPORT DUNFERMLINE
 GIBRALTAR MALTA
H.M.S. GAMECOCK H.M.S. MERCURY H.M.S. BLACKCAP

Members of the Interport Naval Traders' Association

intelligence background such as they would have today, no naval commander ever put a foot wrong. The complete sureness of touch throughout, the innate strategical understanding of the campaign even by junior officers, was superb.

So the stage was set for Trafalgar. In April, 1805, Villeneuve sailed from Toulon with the French Mediterranean Squadron, picking up some Spanish ships on the way and expecting to meet Gautaume, with the Brest Squadron, at Martinique as laid down by Napoleon. But Gautaume was not there. He had been driven back by the blockading squadron into Brest. Nelson, on Villeneuve's heels, forced him to sail hurriedly from the West Indies, bound for Brest, but Calder met him on the way and drove him down to Cadiz. No sooner was he in harbour than Collingwood appeared, to keep him there with a close blockade. Nelson, worn out and sick after nearly two years at sea, returned to England for rest and recuperation.

News travelled slowly in those days, and it was early September before the fact that Villeneuve was at Cadiz was known at home. It was brought by Captain Blackwood, of the frigate *Euryalus*, who called at Merton to see Nelson on his way to the Admiralty. Nelson, detaining him for an hour while he put on his uniform, accompanied him to London and offered his services. They were at once accepted and on September 15th the great sailor again hoisted his flag in the *Victory*, sailing from Portsmouth the same day. On the evening of the 28th, he joined Collingwood off Cadiz, no salutes being fired, by his order, in order that Villeneuve might not know that reinforcements had arrived off the port.

On October 10th, Nelson sent to his flag officers and captains the famous memorandum in which he foreshadowed his plan of attack when the enemy came out. It embodied the 'Nelson Touch,' that the order of sailing should be the order of battle, so that no time need be wasted in forming a line of battle before the action. And with that memorandum he waited, in full confidence of ultimate victory, for Villeneuve to come out. That he would be forced to come out, he knew, for Nelson had studied Napoleon and his methods. Nelson had reckoned the enemy's strength at a maximum of 46 ships of the line. He himself could count on only 27, but the odds against him left him unmoved. For his plan embodied the lesson he had learned from Admiral Hood when he was a young captain, that a victory could still be won by an inferior force if it concentrated on an enemy's rear squadrons. In the days of sailing ships, it took a long time for the leading squadron, even when not attacked, to tack and come down to the assistance of its friends in the rear.

It was on this plan, set out by Nelson, in his memorandum, that the battle was fought. The British fleet, attacking in two lines, brought the whole of their strength to bear on Villeneuve's centre and rear. Nelson, leading the weather line in the *Victory*, cut through the combined French and Spanish fleet, just above the centre of the enemy's line of battle, between Villeneuve's flagship, the *Bucentaure*, and the French *Neptune*. Collingwood, leading the lee line in the *Royal Sovereign*, cut through astern of the *Santa Ana*, flagship of the Spanish admiral de Alava. The

two lines of British ships enveloped and overwhelmed the French and Spanish centre and rear and, as Nelson had foreseen, the van division was too long in tacking to come to their succour.

The fighting was fierce, for although Villeneuve was an irresolute leader, neither French nor Spanish ship was prepared to give up without a struggle. But the issue was never in doubt from the moment when the *Royal Sovereign* fired the first gun of the action at a minute or two after noon until the Spanish *Neptune*, a gallant fighter after the rest had given up, finally struck her colours a little after four o'clock. Nelson, struck down at the start by a musket ball fired from the mizzen top of the *Redoubtable*, lived just long enough to hear the news of his greatest victory, won by a tactical brilliance which cut through the older theories of fighting in line of battle. Seventeen enemy ships, out of a fleet of 33, had been taken, and one had caught fire and blown up. No British ship had been lost. Nelson, the British Commander-in-Chief, had been killed, but Villeneuve, the French, was a prisoner in the *Mars*. The British casualties amounted to 1,678 officers and men, the French and Spanish to six times that number.

So ended Trafalgar. But it was more than the defeat of Villeneuve by Nelson, it was the defeat of Napoleon by Pitt. Its influence radiated far beyond the waters in which it was fought, for its ripples were felt as far away as Russia, Austria and Sweden, bringing new heart to Britain's allies in the struggle against the French. Finally and irrevocably, it cut Napoleon off from the sea, forced him to a purely continental strategy, and sealed his ultimate fate. It was of this campaign of Trafalgar that one of the greatest naval historians of all time wrote 'those far distant, storm-beaten ships, upon which the Grand Army never looked, stood between Napoleon and the dominion of the world.' His words were exactly true, for it was the mighty weapon of British sea power, with a skill unexampled in the history of war, that brought Napoleon to final and inevitable defeat.

VICE-ADMIRAL VISCOUNT NELSON, K.B.

Horatio Nelson was born 29th September, 1758, at Burnham Thorpe, Norfolk, where his father was rector; he was educated at Norwich, North Walsham and Downham.

He entered the navy in November, 1770, as a midshipman in the *Raisonnable* and served in that rank in the *Triumph* (guard ship at Chatham), *Carcass* (Arctic expedition, 1773) and *Seahorse* (East Indies, 1774-6) and as acting lieutenant in the *Worcester* (convoy duties to Gibraltar, 1776). Promoted lieutenant 10th April, 1777, and served as such in the *Lowestoffe* (West Indies) and *Bristol* (West Indies). Promoted commander 8th December, 1778 *Badger* (West Indies) and captain 11th June, 1779.

As a captain, Nelson commanded the *Hinchinbrook* (West Indies, 1779-80), the *Albemarle* (North Sea, Canada, America and West Indies, 1781-3), the *Boreas* (West Indies, 1784-7) and the *Agamemnon* (Mediterranean, 1793-6); he lost his right eye at the siege of Calvi (Corsica) in July, 1794.

Nelson was promoted commodore on 11th August, 1796, and flew his broad pennant in the *Captain* at the battle of Cape St. Vincent (14th February, 1797); as a reward for his services in this battle he was created a Knight of the Bath. He was promoted rear-admiral on 20th February, 1797, and transferred his flag from the *Captain* to the *Theseus*, in which ship he lost his right arm in the attack on Santa Cruz on 24th July, 1797. The *Vanguard* was Nelson's flagship at the battle of the Nile (1st August, 1798), for which victory Nelson was created a baron. Promoted vice-admiral on 1st January, 1801, Nelson flew his flag in the *San Josef*, the *St. George* and the *Elephant* as second-in-command to Admiral Sir Hyde Parker in the Baltic (battle of Copenhagen, 2nd April, 1801); for his services in this campaign he was created a viscount.

Vice-Admiral Nelson was appointed Commander-in-Chief, Mediterranean, in May, 1803, and sailed from Portsmouth in the *Victory* on 20th May, 1803, for a two-year duty of keeping watch on the French fleet; he noted in his diary in July, 1805, that when he went ashore then, at Gibraltar, it was the first time he had set foot on shore since June, 1803! After three weeks' leave in England he rehoisted his flag in the *Victory* and left Portsmouth on 15th September, 1805.

About an hour after the battle of Trafalgar began on 21st October, 1805, Nelson was struck on his left shoulder by a musket ball fired from the mizzen top of the French *Redoubtable*; the bullet penetrated to his spine and Nelson died at about 4.30 p.m.: his last words were 'Thank God I have done my duty.' His body was brought home in the *Victory*, lay in state in the Painted Hall at Greenwich and was buried in St. Paul's Cathedral, London, on 9th January, 1806 (in the sarcophagus originally made, at Cardinal Wolsey's expense, for King Henry VIII).

NELSON'S PRAYER

The following was written by Lord Nelson in his diary on the morning of 21st October, 1805:

May the Great God, whom I worship, grant to my Country, and for the benefit of Europe in general, a great and glorious victory; and may no misconduct in any one tarnish it; and may humanity after victory be the predominant feature in the British fleet. For myself, individually, I commit my life to Him who made me, and may His blessing light upon my endeavours for serving my country faithfully. To Him I resign myself and the just cause which is entrusted to me to defend. Amen. Amen. Amen.

"ENGLAND EXPECTS THAT EVERY MAN WILL DO HIS DUTY"

Lieutenant John Pasco, who was acting as flag lieutenant to Lord Nelson in the *Victory* at the battle of Trafalgar, related the following:

'His Lordship came to me on the poop and after ordering certain signals to be made, about a quarter to noon, he said, "Mr. Pasco, I wish to say to the Fleet 'England confides that every man will do his duty,'" and he added 'You must be quick for I have one more to make which is for close action.'" I replied, "If Your Lordship will permit me to substitute 'expects' for 'confides' it will be sooner completed, because 'expects' is in the vocabulary and 'confides' must be spelt." His Lordship replied in haste and with seeming satisfaction, "That will do, Pasco, make it directly"'

In the inscription on the base of Nelson's Column in Trafalgar Square, London, the word THAT is erroneously omitted. The signal was made in Sir Home Popham's code of *Telegraphic Signals or Marine Vocabulary*, published in 1803. Three flags (2, 5, 3) denoted the code group for ENGLAND; 2, 6, 9, for EXPECTS; 8, 6, 3, for THAT; 2, 6, 1 for EVERY; 4, 7, 1 for MAN; 9, 5, 8 for WILL, 2, 2, 0 for DO; 3, 7, 0 for HIS; 4 for D; 2, 1 for U; 1, 9 for T; and 2, 4 for Y (note that in the signal alphabet of that period j was omitted and v preceded u). The 'telegraph flag' was also flown to denote that the signal was to be decoded by the Popham code.

Shortly after the signal had been hoisted, the second signal, 'Engage the enemy more closely' (flags 1 and 6), was hoisted.

A record of which we are proud—
75 years' service to the Royal Navy

For PERSONAL and INDIVIDUAL ATTENTION

Phone
6908



Established
1880

BAUN & CO
Naval and Civilian Tailors and Outfitters
172 QUEEN STREET, PORTSMOUTH
(Members, Interport Naval Traders' Association Ltd.)

The Voice of the Silent Service—
"I cannot thank your firm and staff enough for the services they have rendered me. Once again I thank you and say you are not only Tailors, but a friend to Sailors in need, indeed."—I.H.

Credit Terms available at Cash Prices Price List on request

NOTES FROM THE 50th C.D.T.

With the editor always screaming for news one can never lapse into peaceful solitude, especially as Sir Boss, smug in the knowledge that he wrote the last contribution, waxes extremely caustic concerning other people's literary efforts.

This last quarter of the year has been just too wonderful. From the beginning of August to the middle of September, we languished in the tender care of the dockyard mateys at Rosyth. We spent the best diving weather of the year working out the air supply required by a diver via a pneumatic scaling hammer and how to avoid oxide narcosis when applying red lead in the strict confines of the cable locker. Fortunately this bitter pill was occasionally sugared, when we would leave the dockyard mateys in peace and ply our trade from H.M.S. *Dipper*, our sister ship.

Mr. Barrington and Chiefy Ware, the *Safeguard* stalwarts, were very kind to us and kept us air-conditioned in the leanest days of this tortuous period.

When finally we steamed full ahead out of the narrow exit (they don't like you to get away) of the dockyard basin, to get stuck into our accumulated diving tasks, it was found that there was still a gremlin in the main engine. All went well for a couple of weeks until this nationalised enthusiast turned over on the other tack and fouled up the drive to the main circulating pump and compressor. At the moment of writing we are inoperative and impatiently awaiting spare chunks of chugger to render us unsafe again. *Dipper* has been our second home for the last fortnight and no doubt their fine spirit of camaraderie is wearing a little threadbare, particularly as we are responsible for delaying their refit, sabotaging their Christmas leave and always being late for our potmess.

Although we were never too sure of the purpose of their visit, we were nevertheless pleased to see the flying squad from UCWE up here for a brief visit. Due to the fact that it was a blank week and the 13th week after dhobeying Tuesday, we never really got together ashore, though it was reported that there was a 'Russian' and his interpreter gibbering in 'rubbish' ashore in the 'Ferry' one evening. Whatever their evil intentions, Inspector Terril and his Braves doubled our work output and we were most grateful. We would warn them, however, that the market for mooring ground tackle is not a very lucrative one.

The unidentified large object reported flying east at minimum oxygen height on the 19th October, we know to be 'The Beast,' alias A.B. Horner, who has been relieved by Jock Adams.

The team now consists of Lt.-Cdr. Filer, P.O. Lardner, P.O. Carr, A.B. Andrews, A.B. Harrison and A.B. Adam.

In conclusion may we wish all 'Dip Chicks' good diving, A HAPPY XMAS, and best of luck for the New Year. 'NUTTY.'

“YOKE-PETER”

By CHADS



The loss of comet 'Yoke-Peter' last year struck a blow at British commercial airlines from which it was difficult to recover, but the facilities afforded by a private salvage company coupled with the infinite resources of the Admiralty made possible the salvage of practically the total aircraft from depths of 77 - 90 fathoms. This remains a record of major recovery from such depths. Acknowledgments are due to Commander C. G. Forsberg, O.B.E., Royal Navy, who made our stay in *Sea Salvor* memorable, as well as facilitating the incursion of non-service personnel and equipment into the realm of the Boom Defence Officer, Mediterranean for the operations. The salvage took two months to complete and all diving equipment and personnel were ferried in aircraft of Transport Command, while H.M ships *Vanguard*, *Whirlwind*, and Fairchild Packet aircraft ferried home the wreckage.

NOTE.—The well known 'Chads,' Lt. Chadwick, R.N., Retd., Deep Diving Officer.

SALVAGE SAGA

The *Sea Salvor's* captain is hearty and able,
A general soul and John Hayward's his label
At home on the bridge and at home on the deck
At home on the moorings while lifting a wreck,
And ditto while working with anchors and cable.
He keeps in *Sea Salvor* a wonderful table.

To Admiralty salvage officials its fun,
To break up old ships and sell scrap by the ton.
But finding an airplane in pieces below
Ninety fathoms of water is not a good show.
But like other difficult tasks will be done
For Campbell is Victor in more ways than one.

Lombardi's a colonel who does us right proud,
With sextant and notebook round Elba he's ploughed.
He finds every witness and grills them a lot,
Then puts it all down on an accurate plot.
Without this good friend of the Navy avowed,
It would take a lot longer it must be allowed.

A job in the Admiralty runs in set lanes
Of dockets and meetings and underground trains.
At least that's the theory but now it's in doubt,
For didn't the Salvage Director come out.
By land and by sea and by BEA planes,
And then he got soaked to the skin for his pains.

And Captain McMullen's a vigorous spark,
For sailing at dawn and then working past dark.
With cameras and cables and anchors galore,
And so many wires we've forgotten the score.
For sometimes it's toughish and sometimes a lark,
To *Sea Salvor*, *Barhill* and SNO (A) and his ark.

Captain Pollard's an expert with chamber and shot,
With Galpin and Bray in the team, he's red-hot.
And so pieces of wreckage get placed in the maw,
Of the world's largest, murderously accurate claw.
Tho' their work is quite splendid their humour is not,
They will keep on calling their chamber, 'the pot'.

Trawler boss, trawler boss, where have you been?
I've been for a trawl sir. The area's clean.
A piece of a comet and twenty-five fish,
The former for scrap heap: The latter for dish.
Besides that good news sir, you'll doubtless have seen,
I've had the misfortune to sweep up Queen Queen.

The tiny ship *Sursay* once laid out a dan,
Which really was not very near to my plan;
But that we must pardon this busy wee boat,
For she's pussier and ship-shape as any afloat.
Harry Stern as the skipper; a 'crackalong' man,
Who clocks up twelve knots between mike and Nan Nan.

Mac Neice is a man with a clearly cut mission,
To help all he can with his dear television.
Undaunted by brass-hats he'll sit on his perch,
Saying 'No you can not use the camera for search'.
When sniped at by all for his stated decision,
He beats all the doubters with clear exposition.

Young Gardiner is not a plain officer (L),
He hops in and 'makes one' in most things as well.
A character here that is out of the ruck,
And way above amperes and ergs and such muck.
One biased idea though he couldn't quite sell,
'It's always the fault of the user', he'd yell.

Barhill is a ship of which good must be spoke,
Though often quite hidden by black clouds of smoke.
She picks up the moorings, and lays them back down,
With a shocking decrease-rate of anchor buoys (crown).
She swept thirty times for an anchor what broke,
Till BDO signalled 'Just leave it to soak'.

The text of this tale couldn't take place at all,
But for Fenech and Urry and Joe on the ball,
For the strength of the chain is the link that is weak,
And that ain't the bosun or Briffa or Meik,
Neither Price no Young Sparks could they make the thing fall,
For with all the *Sea Salvors* they've answered each call.

And experts in airplanes, they are here by the score,
Ben Folliard and Detmold, John Goulding and more,
They study their text-books, they stare at the screen.
Eric Newton wires details of wreckage he's seen.
And blimey although it's been hauled by the claw,
They worry like mad how it's hoisted ashore.

There ain't enough space to make talk of each one,
But Toderò trawled up, of wreckage, a ton.
Young Jenks did his stuff, and likewise did Hooke,
They often were right but were sometimes mistook
'It's certainly Comet, sir. Shows every sign'
But weren't faces red when it came up a mine.

Here are some others who helped us get home,
There's Murphy the Consul and BNA Rome
And Chadwick the diver so fond of the deep,
He's always requesting a mobile sweep.
And *Wakeful* and *Whirlwind* with asdicdome,
And Craig, head of BOAC on Rome aerodrome.

Now BDO Med. has attracted scant mention
Though matters have hardly escaped his attention.
A light neath a bushel are symbols admired,
Besides it's his job, and that's why he's hired.
So he'll wield his poor pen to relate of the others
While thanking the Lord for this good band of brothers.

DIVING IN THE LAND OF THE KILT

by

WALTER C. DEAS

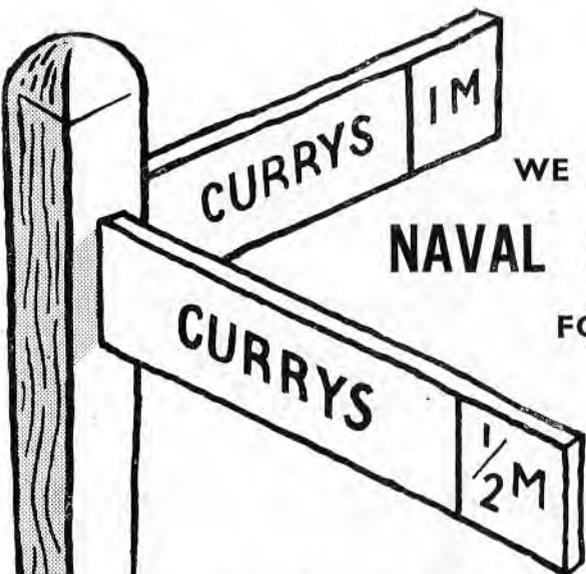
A small club, known as The Dundee Sub-Aqua Club (name to be changed in the near future), has been formed. To-date we have a dozen or so keen enthusiasts who turn out in all kinds of weather, and who dive in all temperatures (average summer temperature here 53°).

At the present moment the club equipment situation is rather a sore point for we can muster only one twin bottle breathing apparatus, this being owned by Mr. A. Black. Progress so far is slow, due to this shortage, but FORWARD is the order of the day, and it is hoped that by the New Year we will be in a better position as regards u/w breathing apparatus.

Several of the members have purchased two-piece Heinke suits. They are rather costly, but at the same time it has been found a necessity to wear some form of protective suit in these cold waters.

The Firth of Tay is used primarily as our hunting ground, but the water here is often murky. Spearfishing has been attempted but, due to our lack of experience in this new world of sport, to the fish not approving of being disturbed by intruders such as us, and to the murky waters, our efforts so far have been handicapped. South of the Tay offers beautiful clear water and terrific underwater landscape. We dive here whenever possible.

A few of the club members have ventured further afield, visiting the west coast of Scotland (the Isle of Seil). 'Here is a perfect paradise for sub-aqua enthusiasts.' The visibility at times is up to fifty feet, and the underwater vegetation has to be seen to be believed. Fish abound in a variety of numbers and colours, but once again they did not approve of our company or the harpoon. Diving at night was also indulged in, and to me it will always remain an unforgettable experience, eerie but thrilling, with the phosphorescence in the water turning everywhere into a wonderland of twinkling stars.



WE GLADLY ACCEPT
NAVAL ALLOTMENTS
 FOR ALL GOODS

CYCLES, POWER ASSISTED CYCLES & TRIKES
 RADIO & TELEVISION
 WASHING MACHINES & REFRIGERATORS
 VACUUM CLEANERS & SEWING MACHINES
 PRAMS & TOYS

Don't forget the Youngster!

Visit our UPSTAIRS TOY SHOWROOM
 before coming home on leave

HUGE SELECTION from
 HORNBY, MECCANO, TRI-ANG, PEDIGREE,
 TRIX, MINIC, KIDDIECRAFT, etc.

CALL, WRITE OR PHONE



217 COMMERCIAL RD., PORTSMOUTH
 Telephone 73650

UNDERWATER SWIMMERS' SECTION

I trust that some of you have found some points of interest in this section so I propose to continue.

A frequent question asked, is 'How can one keep warm underneath and so dive the whole year through?' The best way, in my opinion, is to buy an underwater swimsuit made of rubber, that covers the whole body, being sealed at the neck and wrists. I know that this is an expensive item but, used with care, it will repay in pleasure with time spent underwater when normally diving would be impracticable. When buying a swimsuit, remember to allow for any woollen gear worn as underclothes. The average cost is £18. I certainly do not advise buying a sponge rubber suit for use in this country. In my opinion they do not extend one's diving season long enough to justify the expense. If, of course, one's finances are low (an affliction from which we all suffer) and will not run to the expense of a suit, an ordinary woollen sweater and long underpants do help to a certain extent. Above all, don't warm the body by generous helpings of alcohol before diving. Leave that until the dive is completed. The mention of alcohol brings me to the first of the ailments that I propose to discuss in this article, the symptoms of which are the same as those produced by an excess of this beverage.

Nitrogen narcosis, or 'narks' as it is commonly known, is due to absorption of nitrogen by the brain. At normal surface pressure the nitrogen content in the air has no effect other than 'topping up' total pressure. However, when air breathed is at pressure due to depths of 160 to 300 ft, then the nitrogen has a progressively increasing narcotic effect, like that of alcohol. It is not sudden in onset and is not really dangerous as long as the diver realizes the limitations it puts on his judgment. (All the same as learning to carry one's drink.) Coustea called it 'Raptures of the Deep.' The symptoms vary from a feeling of hilarity to loss of emotional control and incoordination of muscular movements to a point where consciousness is lost. There is also a feeling of over-confidence which is not easily recognised and could be dangerous to the free swimmer.

Symptoms of nitrogen narcosis have been known to occur in depths of 100 ft so it is essential that the free swimmer is aware of its danger.

Bends (another common danger), or compressed air illness as it is technically known, is due to two factors, both of which are brought about by too rapid decompression (i.e. ascending too quickly). These factors are: (a) The clumping together of the red cells of the blood which block the small blood vessels and causes skin irritation (b) Excess nitrogen in the blood forms bubbles which are unable to vent through the heart and lodge in the joints causing excruciating pain and sometimes temporary paralysis. In the worst case the bubbles can fill the right side of the heart and cause death. To avoid this danger the decompression must be controlled and therefore the rate of ascent is governed. This is quite simply done for the diver by stopping him for set periods at pre-determined depths during his ascent. The swimmer, however, is not dependent on the surface and controls his own rate of ascent. It is, therefore, essential

that he has a knowledge of the stoppage table for the depths at which he is operating. In the event of a man suffering from bends after surfacing he must be put under pressure again immediately. This can be done by the use of the re-compression chamber, or by putting the man down again until the pain ceases. The rate of ascent in both cases must be supervised by a qualified man and, if in doubt, medical attention should be sought. J.W.

ADVENTURES IN LOUGH NEAGH

(Diving in Ink)

Lough Neagh is reported to be the longest inland stretch of water in Europe. It is very shallow but extends over an area of 200 square miles. A torpedo firing point was constructed in 1942 on the shore and in front of this at every 1,000 yards five pylons were erected to act as range marks. These pylons took 18 months to build and put in position. All this work was reduced to nothing in the winter of 1946. The lough was frozen to a depth of 12 ft and during a large blow the sheet ice moved and sheared off the tops of the pylons. The remains of the pylons were buoyed, but the mooring wires of the buoys were continually being chafed through and the underwater structures becoming navigational hazards. Furthermore the fishermen were continually damaging their nets on these obstructions, and claims for compensation to the Admiralty were running high. As a result of this the Admiralty decided that the pylons had to be removed.

The Londonderry Diving Team, under Mr. J. L. Browne, Sn.Cd.Gnr. (T), were given the job. The initial task, commenced in February, 1955, was a survey as there were no plans in existence. The only boat available was a small seaplane tender which was adapted for diving by Commander (E) Abbot, D.S.C., R.N., and his staff at the RNTD. The static fresh water, in February, was very cold so the survey was not very successful and the team returned to Londonderry to await warmer weather.

On the 1st June the team returned to Antrim and were accommodated in the RAF Marine Section Camp adjacent to the Torpedo Depot. Great praise is due to the sergeant-in-charge for the way he looked after the team. The team by now was augmented by P.O. Williams who was sent out by the C-in-C Plymouth on loan for the job. He proved a tower of strength during the whole operation.

It was decided to start on the pylon first-out from shore. The pylon was located by sweeping and when found was rebuoyed, the plan of operation being to unbolt all cross members and then to blow up the three main piles. All sounds very simple but it must be remembered that all streams and rivers running into Lough Neagh had been running through peat bog and the water was just like black ink (permanent—not washable). Visibility being so poor at 10 ft. that the diver could not see his front glass. Torches and underwater lamps were useless due to the suspended matter in the water.

It took a week, diving 12 hours a day and using two divers, to remove the crossbeams and fishplates from No. 5 pylon. Diving was further complicated by changes in wind direction causing more hours to be wasted in shifting anchor.

The lower support boxes of the main piles proved to be 14" square of $\frac{1}{2}$ " steel, so it was decided to try and weaken them by burning. Frequent blow-backs occurred and rendered the torches useless, and it was at this point that it was discovered that the boxes were filled with concrete. The team now had to revert to using explosives.

Trials were arranged to determine the best method of cutting the piles off at sea-bed level. The first method used was fitting a 10 lb. charge to either side of the pile and trying it as a shearing charge. Cordtex was brought to the surface and secured to a firing platform supported on oil drums. The boat retired to a safe distance, and the safety fuse fired by Mr. Browne from a dinghy which joined the boat as fast as the outboard motor could push it. The result of the first trial was that the box was only slightly dented. (The team had fresh trout for breakfast.)

The second trial was carried out using 25 lb. charges and the result was more denting of the boxes and more fresh trout.

These trials took a long time due to the negative visibility and time lost while our small boat sheltered from the frequent storms.

It was decided to use aircraft wreck dispersal charges which should knock the piles down like ninepins.

On one occasion 3 depth charges had been placed in position and fitted with 1 $\frac{1}{4}$ lb. blocks of TNT fired by Cordtex to act as primers. Just after they had been laid it came on to blow, so the charges were quickly fired and a diver sent down for a quick survey. On his way down the diver found that his telephone did not work. Groping around in the black ink he came across a crushed 1 $\frac{1}{4}$ lbs. primer tin; he also found that two charges had failed to fire. He was unable to talk to the surface so he gave the signal to be hauled up. When he broke surface it was seen that he still had the crushed charge in his hand. This was removed, wrapped in canvas, and placed in the empty ammunition dinghy for disposal ashore. The weather further deteriorated and the boat ran for shelter in the lee of the lough. Unfortunately a squall hit the boat and the dinghy was capsized, losing the charge. The police were notified, and the local inhabitants warned by the BBC not to touch strange objects washed up onto the beach. The number of objects checked by us was unbelievable. The charge has never been found.

Four pylons were destroyed in the 30 days of June then the diving team returned to Londonderry for an enforced rest due to weather conditions.

There is still one pylon to be destroyed but that is over to Mr. King, Cd.Gnr. (Tas) as I have been returned to H.M.S. *Vernon*. I wish him the best of luck (Irish) and hope that he likes trout.

MR. BROWN, Sn.Cmd.Gnr.(T).

R.N. DIVING BADGE



This blazer badge is available to all R.N. divers and ex-divers.

The badges are made by Messrs. Greenburgh Bros. Ltd of Portsmouth, and are available for purchase either from the *R.N. Diving Magazine* or direct from the makers at a cost of 42/6.

The aim of the Association (sponsored by the *R.N. Diving Magazine*) is to help all serving divers and ex-R.N. divers to obtain employment (*see opposite—Divers' Employment Bureau*). It also aims to help in any way the dependants of serving divers should a fatal accident occur. As a matter of interest, a grant has been made to the dependant of a serving diver who lost his life in the Far East a few months ago.

The colour scheme of the badge is: Gold lettering in Red scrolls outlined with Gold Braid; Yellow helmet with Gold and Silver Braid, finished Black and White; the whole outlined with Gold Braid on a Black ground. The above illustration is true to size.

THE EMPLOYMENT BUREAU

Many enquiries have been made recently from divers away from their depot regarding the Employment Bureau, and wishing to know if we can help in any way by giving names of firms requiring divers in civilian life.

Many of you I am sure will be pleased to hear the good news that the Employment Bureau has been revived. If you wish to have your name on record please forward the following information to *R.N. Diving Magazine*, H.M.S. *Vernon*, Portsmouth.

Full Name..... Rating..... Off. No.....

Time as diver..... are you willing to serve abroad.....

Time expires..... Private Address.....

This record, when received from you, will be filed, and when your turn comes, "Who knows." Please remember the bureau does not assure you of employment. It merely puts you in contact, the rest is up to you. Records held show that many divers upon receiving information from this Bureau have found good employment in civilian life.

AMERICAN UNDERWATER MAGAZINES

One year subscriptions—*Skin Diver* 28/6; *Waterbug* 28/6; *Water World* 28/6. Specimens 3/- each.

AMERICAN UNDERWATER BOOKS

Guide to Skin Diving and Spearfishing 15/6
Shallow Water Diving and Spearfishing 30/-
Underwater (Barada) 6/6; *Underwater Photography* 22/6
Underwater Photography and Television (Cross) 44/-
Underwater Sport 29/-

Descriptive list free

All American magazines available, list on request

PETER F. HOBSON

79 SOUTHBROOK ROAD, COUNTESS WEAR
EXETER, DEVON

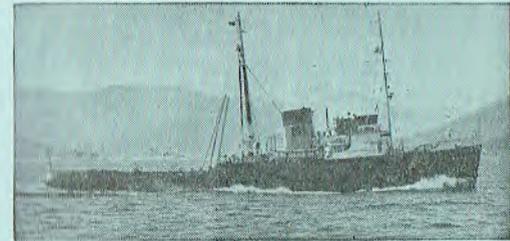


DUNLOP - *Pioneers of Streamlined*
form fitting underwater SWIM SUITS

DUNLOP SPECIAL PRODUCTS LTD., FORT DUNLOP, BIRMINGHAM 14

METAL INDUSTRIES
(SALVAGE) LTD.

Marine Salvage, Towage and
Underwater Contractors



The Company's Fleet includes the following

"SALVEDA" 781 tons 1200 I.H.P.

"METINDA III" 593 tons 1275 I.H.P.

"WHIRLPOOL" and "LYNESS"

Coastal Salvage Vessels

GWEEBARRA - Oil Recovery Vessel

All classes of Ocean and Coastal Towage
undertaken on Day or Contract Terms.
Harbour Clearances and all branches of
Diving and Underwater Work carried out

FASLANE PORT
SHANDON - DUMBARTONSHIRE

Telephone (Day and Night): GARELOCHEAD 351 (3 lines)

London Agents: W. P. JOBSON & CO. LTD