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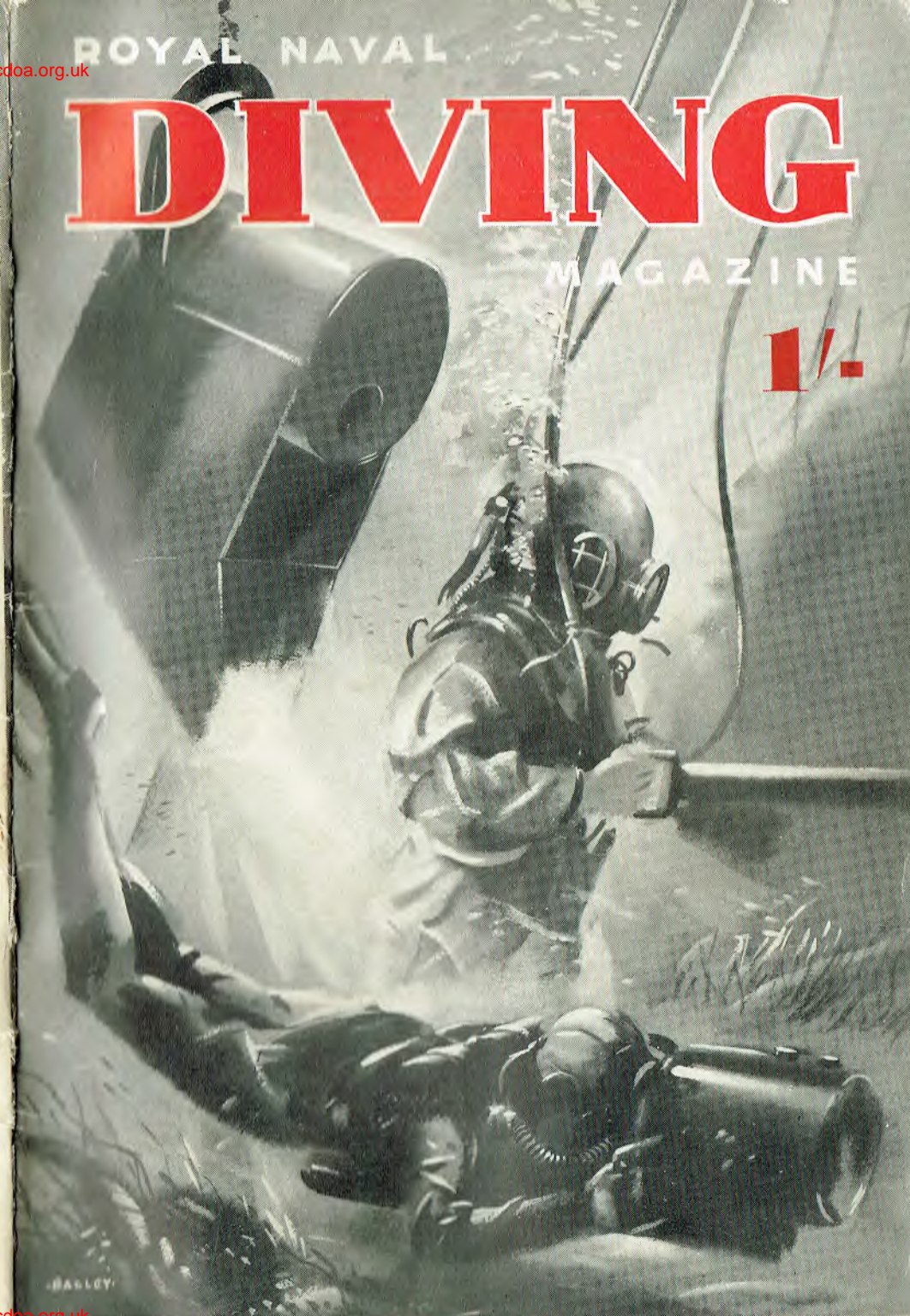
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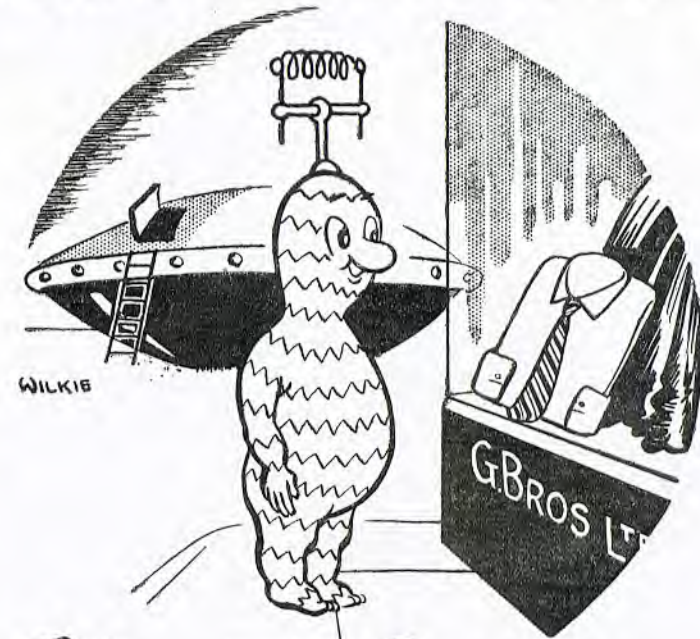
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CONTENTS

	PAGE
EDITORIAL	3
TREASURER'S NOTES	3
H.M.D.T. "CLEARWATER"	4
SCOTLAND, LAND OF THE GOLDEN EAGLE	9
UNDERWATER LIGHTING	10
DIVERS AND SHARKS	13
MEDITERRANEAN TEAM	15
H.M.S. "BULWARK"	15
THE DIVER'S DITTY	20
SUB-SUNK	21
DIVER'S BOOKSHELF	22
U.D.E. NOTES	23
50TH CLEARANCE DIVING TEAM	23
AN INTRODUCTION TO SPEARFISHING	26
HOME-MADE DEPTH GAUGES	28
LIGHT TOPICS	30
H.S.C.D.T. (H.M.S. DINGLEY)	36
THE DINGLEY DIRGE	37
PORTSMOUTH COMMAND BOMB AND MINE DISPOSAL	38
51ST CLEARANCE DIVING TEAM	39
CLEARANCE DIVING TEAM (AMPHIBIOUS)	41
DIVING OFF THE SOUTH OF FRANCE	41
UNDERWATER SWIMMERS' SECTION	45
RIG OF THE DAY	47

R.N. Diving Magazine

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Vol. 3 September, 1955 No. 3

EDITORIAL

'Greetings Dip-Chicks.'

Once again after a period of incubation we have hatched a further issue of the *Diving Magazine*. It has been a hard struggle cracking the shell and getting at the yolk. Articles are very slow in coming in and without them we cannot go to print. Remember this magazine is written by divers for divers. Send us your efforts; there is no need to hold back, feeling you are not an author. Send us a few notes on which an interesting tale can be based and our ghost writers will do the rest. To those stalwarts who have sent us news of interest—our thanks.

It is with regret that since our last issue, we heard of the tragic loss of the *Sidon*. To all relatives and next of kin of the victims we extend our deepest sympathies.

The magazine, as you can see, has taken on a new face, as well as new substance. I sincerely trust that this new coverage attracts many new readers to whom we will extend a warm welcome, and that it continues to provide interest to all our old friends.

Our next edition will be out in December, so until then the best of luck and good diving.



EDITOR.

TREASURER'S NOTES

Once again it is pen to paper time, and on this occasion I am more than pleased to be able to report that our last edition was a complete sell out. Orders for future editions of our magazine are arriving from all corners of the earth, which of course is very encouraging indeed.

There is just one point I would like to emphasis before signing off, and that is—Please remember to keep me posted as regards to any change of address.

All for now,
 S.J.N.

H.M.D.T. CLEARWATER

Apart from the usual training programme, an odd Exercise with the younger half of the branch, and a few trials, we enjoyed (I use the term in its loosest sense!) a pair of trips to the Channel Isles. The first, to St. Helier, Jersey, to act as runabout for H.M.S. *Boxer*, who was there for the Island Pageant Celebrations.

After a rugged night trip on the tail of a westerly gale, we arrived off St. Helier to be greeted with the signal 'Dr. Livingstone, I presume?' from Captain (D), *Boxer*. An appropriate reply was made. On coming alongside our new parent-ship we were gazed at fondly for some time, before it was fully appreciated by the curious throng of 'big ship sailors' that it would assist us greatly if our lines were secured inboard of *Boxer*. After some coaxing, this was finally accomplished to the satisfaction of all concerned. The loading of a Landrover, followed by the customary goods and chattels of the stewards, postman, etc., then commenced. On completion, we proceeded inshore, *Boxer* being some two miles out in the bay.

With many dire warnings from the old hands (who knew the harbour reference the terrors of the rock-girt channel, etc.), we paid strict attention to the personally sponsored chart, loaned by *Boxer*'s pilot (an old friend of the far flung outposts). The digit very firmly extracted, we arrived alongside safely, to be greeted with the news that, due to ship movements, we must be prepared to move our berth frequently (not that we did much time in a berth anyway!). Then, as an afterthought, the Harbour Master gently reminded us that there was a 37 feet rise and fall of tide!

After steady running, we finally neared the close of the first day (and night) of graft—the last liberty trip, at some dark dismal hour of the a.m.! One of the crew, after assisting a number of gallant young gentlemen onboard, made a caustic remark, reference the effect of the local wine gums on the younger generation of his sea-going brethren! Albeit, they performed nobly and well; successfully imitating mountain goats in their many scalings of the jetty and *Boxer*'s ship side. With dawn (and it's amazing how early it arrives in St. Helier), we were greeted with the sight of monstrous mounds of vegetables, bread, bangers, milk churns, etc., on the jetty, not to mention numbers of hollow eyed nautical gentlemen, all awaiting removal to *Boxer*! This was to be our customary early trip—yet it was not without its recompense (try Jersey milk sometime—it's just as creamy as it is reputed to be, at least the top layer in a churn is!).

Among the many amusing incidents the following bear repeating. On the first Sabbath of our stay, all hands climbed aboard a hired 'Triumph Gloria' (something of a squeeze!)—and away we cruised to circumnavigate the Island. Passing the Captain of *Boxer* (also mobile) at one point, one of our members gave a nonchalant wave in truly regal fashion!—Happily, reciprocated in a like manner, and with obvious amusement! After many stops for refreshments, and the passage of time, it was decided to 'take the turn out'—so, darkness having descended, steaming lights were switched on, and away we went—t' other way round! This time, with the added knowledge that we were obviously the most trusting members of H.M. Forces. For it had been unanimously decided that we

should all take a turn at cox'n. Which we did. Naturally there was an excellent sufficiency of look-outs, navigators, etc., and all went well (or fairly so) until the point where, descending a hill, about 1 in 6 gradient, with 'Tapps' as cox'n, it was discovered that a footbrake was a quite unnecessary fitting (as far as Tapps was concerned!). All he could find in the dark nether regions of the car was the accelerator—which he kept firmly pressed down!!! Meanwhile, assuring us all that he had not touched it for five minutes—it was simply the weight of the car, etc., making us go faster (What a genius).

We were now in a state of 'ACTION STATIONS' cum 'DAMAGE CONTROL READINESS, STATE 1', with very high priority to the organisation for 'ABANDON SHIP' to boot! Switching off the engine (by our stoker hurling himself out of the conglomeration of bodies in the back) and hauling 'luff upon luff' on the hand-brake (by yours truly, and an unidentified hand) brought us to a final anchorage, some four feet from a sheer drop to the rocks below! All doors were open, with bodies hanging in the most precarious manner from all pair of them. After a strained and hushed silence of some seconds, in which we all had a good 'flush through', Tapps was hurriedly ejected from his commanding position and replaced by our gallant stoker, a most experienced night driver. He, by the way, must have been weaned by an owl, for he possessed wonderful night vision.

After a quieter period of time, we eventually reached more civilised parts, where cox'ns were once more changed. On clearing the town centre, course was set for the ship, at three-quarter speed. Reaching the dock road, increased revs were applied, when, with a startled shout, all hands took over the wheel simultaneously, with cursed instructions to 'wait until we're dressed, before we start the night diving'. Apparently, we had, through a combined effort, done a beautiful 180° turn, thus preventing our becoming suddenly waterborne over the edge of the jetty. However, a level head prevailing, command of the motive power was once more, and for the final time, turned over to our experienced engineer, in whose hands we arrived at the *Clearwater* (some fourteen hours after starting out) in a most nerve-racked state. The cautious manner in which everyone descended to the upper deck from the jetty was something to marvel at.

On another occasion, some of the boys returned from shore to find *Clearwater* some 40 feet below the level of the jetty. Without more ado, they shinned down the ropes and so to bed. Not so the Cox'n who arriving some half hour later, in number ones (Best Suit), ribbons, etc., viewed the descent with some distaste. After much interchange of very descriptive language, reference the A.F.S., a ladder, and what he could do with it, he disappeared into the gloom of the far reaches of the harbour, finally arriving alongside about two hours later in a boat. Obviously a one who believes in 'safety of the diver at all times'.

During the course of our eight day stay in St. Helier, a total of 126 trips were run from *Boxer* to shore, and back. A relief crew from *Boxer*, under Mr. Yetman, Cd. Bos'n (P.R.), and later under Lt. Phillips, performed yeoman service. From certain conversations, it was gathered that a number of the *Boxer* crew were having their first—and not very

enthusiastic—insight into small ship life (emphasis being on the *small*). Mr. Yetman also made the trip from Pompey to St. Helier and back with us, when he proved a tower of strength. On our return trip, we also accepted as a working passenger the Squadron 'Schoolie'—Lt.-Cdr. Vautier—who was, to his delight, promoted to 'trip navigator'. The look of satisfaction on his face when we finally sighted St. Catherine's had to be seen to be believed (Vasco da Gama!). Incidentally, on clearing the Alderney races, we sighted the *Queen Mary* crossing ahead of us in the mist, bound for Cherbourg. Much brain work ensued in an attempt to think of an appropriate signal to send. Only when it was too late did we produce a pair of possibles, to wit 'Gangway for a Naval Officer' and 'Your Servant, Madam'. Both the product of our 'navigator'.

On arrival in Pompey we were considerably delayed in going ashore by the late arrival of the Customs Officer, who had a fruitless errand anyway! Although plenty of running time and 'hard lying' was experienced, everyone enjoyed the change, not to mention the hospitality of *Boxer*. It was 'understood' that Lieutenant Phillips, by 'Keeping a Level Head', had qualified as a Jersey Pilot (after an initial touch of 'Jersey Twitch'.)

Our second trip more or less grew out of our first. C.-in-C. (P) had visited the Isles during *Boxer's* stay, and had been requested by the President for assistance in surveying the old German-built pier in Bray Harbour, Alderney. As a reward for our 'rugged duty' trip with *Boxer*, we were given the job.

After a very misty passage, in which our stoker worked overtime supplying air for the siren, we secured alongside in Bray Harbour, made an official call on the Vice-President (in the absence of the President), and relaxed for the evening. Diving commenced early the following day, under the interested gaze of a number of residents. With the usual breaks for meals, work progressed daily until our last day. This we used to service gear, etc., and do our shopping. Apart from the survey of the pier, a number of articles lost by local residents, were searched for and recovered. These included steel strapping plates, magnet, wristwatch and lighter. The latter articles, incidentally, were found by one of our C.D. members, using Standard Dress. A very good effort when the state of the bottom, in the spot where the diving took place, is taken into account. The whole area of the survey, etc., was very heavily covered with thick kelp and stringy weeds. Gas mask, Standard, 5562A, and 5561A, were all used during the period of our stay—sometimes as many as eight divers being in the water at once. A further series of recordings were also made for a B.B.C. programme 'Danger, men at work'. Much fun and games ensuing during this period! Trials with a new type mask telephone were also begun and, after some modifications by our B.B.C. engineer friend, were progressed with promising results.

We had a most enjoyable visit, too, from that stalwart of the nether regions, Commander Crabbe, G.M., O.B.E., R.N.V.R. who, by the way, made the most of the gear available, disappearing into the depths for long periods (in search of Atlantis, I gathered). A most succulent spider crab, caught by Lt.-Cdr. Warner (the uncrowned mayor of Alderney) was given the last rites in no uncertain fashion! We almost had octopus soup, but



'BEEEEELow—IT'S 6 O'CLOCK, HOW ABOUT A ★!●!★!●★ LADDER FOR THE COX'N?'

the diver who saw it moving along the bottom, decided discretion was the better part of valour! A sound principle no doubt. The generous hospitality of the residents, coupled with their friendliness, made our stay, though brief, a happy one. It was in a most unwilling mood, and again a mist, that we finally sailed from Alderney, after what had proved to be a most interesting and enjoyable visit.

Since our return, we carried out the usual drill at Navy Days, with an augmented team, of whom 90% were fledgling dipchicks, the remainder, old stalwarts from the ships in harbour (wave an S.9 in front of some people and they will do anything). Nevertheless, they put on a very entertaining show, and were greatly applauded at all performances.

Our last effort was 'rubbing up' for, and taking part in, 'operation Portsmouth Point', with an absolute army of C.D. members, fully equipped

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with their multifarious weapons of attack, etc. Some say they even enjoyed it!

Our crew is now down to the Stoker Mechanic, P.O. Rackett (Cox.), and Leading Seaman Stewart, sometimes augmented by the addition of the 'odd stray bod', and by the time you've read this yours truly will be in the land of the kilt and 'Pigskin Piano' (Due, I am told, to the exigencies of the service!)

Cheerio from *Clearwater*—and keep a level head.

HOOKEY.

SCOTLAND, LAND OF THE GOLDEN EAGLE

Time passes so quickly up here that we find suddenly that we have another magazine upon us and no contribution offered by the department.

Since our last contribution we are delighted to see such a handsome Magazine produced. Our congratulations to the Editorial Staff.

Scotland's Navy Days were by far the most successful we have experienced as far as attendance figures were concerned. The weather was kind to us and we had a large collection of N.A.T.O. ships in the dockyard. The diving display was so interesting that one small child decided to join us in the basin, much to the consternation of her parents. She was however quickly rescued, wrung out and given an ice lolly. We are convinced that she learned her first basic diving law: 'There is always a small reward for diving'. Chiefly Ware was then approached to use his divers to find a young lady's gold wrist watch dropped on the run-down to King's Pontoon. Using C.A.B.A. we searched with no success; it was eventually sighted up in the cross-beams of the run-down. A ladder was rigged from the foreshore and the diver ascended. We can find no scale of payment for divers in altitude so—*No Reward*. Chief returned the wrist watch; you know how generous these Scottish lassies are.

The qualifying Firsts were with us for their brief fortnight together with Prakash Chand of the Royal Indian Navy. The weather was so good that poor old Chand suffered from prickly heat. The Firsts proved their skill at rabbit shooting, in fact they shot so many they had to bury them.

The qualifying Two's were of great assistance for Navy Days; we hope that you got your extra days' leave.

For the senior officers of the local artillery responsible for the defence of the area we staged an attack on a defence in the harbour. The divers were indicated by floats. All went extremely well and the Army were most impressed with our loud bangs and clouds of smoke as the gate vessel was sunk.

The diving staff are now all in the new houses built as married quarters. All Mod.Con., H. and C., Fully furnished, Marley tile floors, 3 bed. The gardens are a bit of a bind but we will soon break that with a big effort of all on each garden in turn.

Yours aye,

MACBARRINGTON.

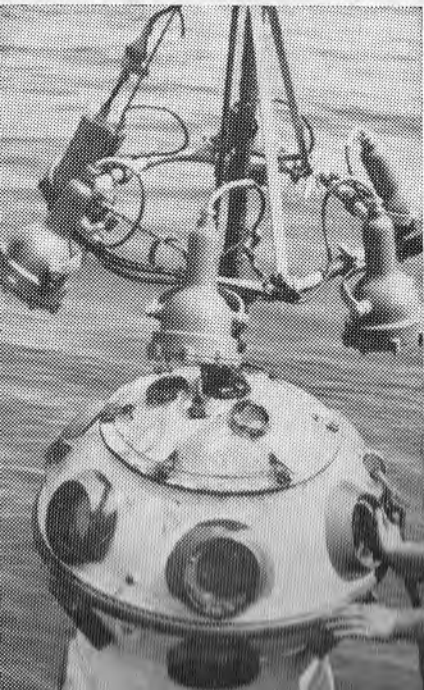
UNDERWATER LIGHTING

by

LIEUTENANT C. W. CHADWICK, ROYAL NAVY (Retd.)

Deep Diving Officer

Consequent upon the development of special helmet diving equipments, observation chambers and articulated armour for ever greater penetration of the ocean depths for salvage purposes, the problem of submarine illuminations has been running in parallel with such enterprises. Careful tests have been carried out to depths of 300 feet, using sodium vapour and incandescent tungsten lamps, also filtered incandescent lamp units. Advantages and disadvantages of all types have been closely studied under working conditions, and it has been found that a medium wattage unit, provided with a pure parabolic reflector within the lamp, lends itself admirably to usage as a submarine searchlight when within a pressure tight case. A group of such lamps, with an arrangement for concentration or diversion of the beams, has been evolved, and has been constructed by Messrs. Siebe Gorman and Company Ltd. The development has been designed to serve for all-round illumination for an observation chamber, or remote lighting in the vicinity of an objective under water. In the latter case the complete unit should be slung on a suitably weighted shot-rope, with the power leads stopped throughout the depth of submersion. This multi-lamp development is the result of all suitable components, i.e., lamp, pressure tight casing, armoured glasses, reflectors, pressure-tight glands and wiring, the completed assembly being pressure-tight to 250 lbs. \square ", or 550 feet head of salt water for the medium depth project. The deep multi-lamp unit will have a depth potential of 1,430 feet or 650 lbs. \square ".



Description of the Lamp Assembly.

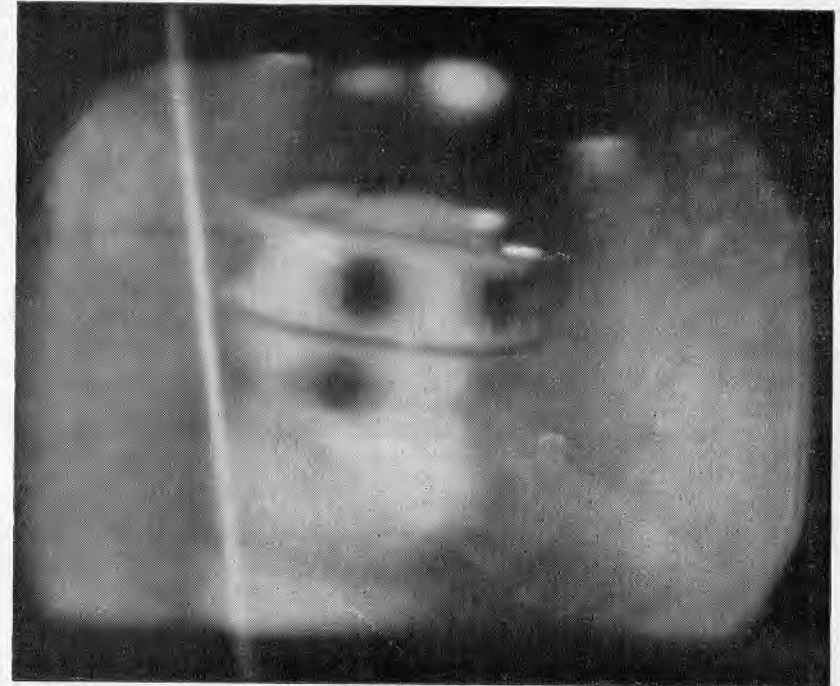
The lamp unit consists of a tubular ring two feet in diameter, mounting six in number $\frac{1}{4}$ " thick gun-metal castings, each containing one 150 watt parabolic reflectored lamp type 126/177 mm. E.S. Cap with the lamps capable of presetting from vertical down to 45° outwards. The armoured glass ports are 6 $\frac{1}{2}$ " in diameter by $\frac{3}{8}$ " thickness and will withstand 1,000 feet of pressure as mounted. The lamps are wired in parallel through their respective glands into a circular free flooding metal ring, terminating at an off-set pressure-tight junction box. The box is off-set on the mounting ring to allow the diver, when using the observation chamber, to see the suspension cable, light and telephone cables in the event of fouling on a wreck,

The Lamp Cable.

The lamp cable on the actual mounting is of type 3 core 23/0076 T.R.S. The cable in between the terminal junction box to the surface and source of supply is 600 feet of 3 core 70/0076 type to B/S 7/1946.

The Power Supply.

The power supply to the unit, from either 110 or 220 volts D.C. ship's mains, consists of a totally enclosed rotary converter, with hand operated starter, graduated resistance with no volts and overload releases. The output is 240 volts, single phase, 50 cycles, 1 KVA unity power factor at 3,000 revolutions a minute.



The chamber in the hold of the wreck down 250 feet. Photographed by the S/G Marconi T/V camera. Good looking!?

Slinging the Lamp Unit.

The lamp assembly is designed to be slung by four chain slings and secured to the purchase wire of the observation chamber when in use, in order to comply with the emergency arrangements for surfacing.

Ultra Deep Under-water Lamp.

The ultra deep project has been subject to experiment in anticipation of thermal difficulties with high wattage lamps, burning in a thick pressure-tight housing of non-ferrous metal and glass, remembering their different expansion coefficients. Results have been promising, a 500 watt lamp

burning throughout designated life in close proximity to armoured glass without apparent damage or injury to the lamp components. Should this trouble have arisen it was proposed to obviate the difficulty by the insertion of a free flooding copper coil within the lamp housing, the ends to sea. This ingenious idea would ensure a continuous circulation of cool water around the lamp and is well worthy of note. This could be incorporated if very high wattage lamps are subsequently used but such developments have their particular problems, i.e., unwieldiness of very large lamp housings which necessitate 7/16" steel or non-ferrous castings with 1 1/4" thickness of armoured glass for the designed depth of 1,480 feet, a 1,500 watt lamp in such a casting weighing about 180 lbs. per lamp. Another factor against the use of very large lamps is the difficulty of utilising the maximum lumen value by reflector to perpetuate the beam in the desired direction. A Continental manufacturer supplies a 500 watt free-flooding lamp tested to 726 feet but the unit is not accurately re-flooded and is extremely vulnerable to shock and the inevitable rough usage to be expected under deep diving and salvage conditions.

Description of the Deep Lamp Assembly.

The improved deep under-water lamp assembly is designed to provide adequate light for salvage purposes for an observation chamber diver, or remote lighting for diving purposes, to an optimum depth of 1,430 feet, or 650 lbs. □ salt water pressure. The assembly consists of a hexagonal casting mounting six lights, of general pattern similar to the 600 feet unit, but with the non-ferrous castings of 1 1/4" thickness with 1 1/4" thick

glasses. The lamp castings terminate in a flanged joint which mates with the hexagonal side of the mounting. The lamps, which are fixed to illuminate at 45° down, are wired through the hexagonal faces to a pressure-tight ring brazed to the interior surface. All wires are fed to a single gland in an off-set terminal position, into which the main power supply is fed. This arrangement is necessary as it is unacceptable to have thirteen glanded joints at a pressure of 650 lbs. □. The lamp assembly is designed to be fed from 220 volt D.C. Mains to an alternator giving 250 volts A/C, 3,000 U.P. VF. with hand operated starter, graduated resistance with no volt and overload releases, thence to 1,600 feet 110/00/0076 cable to the terminal junction. The lamps are 230 volt 150 watt 126/177 mm. E.S. cap cementless internal reflector with ring filament. The lamps being fixed, the distribution of light around the observation chamber will be governed by the height of attachment to the suspension wire.

DIVERS AND SHARKS

This article is written with apologies to the Far Eastern Fleet Clearance Diving Team. They are the experts on the subject and it is only because I am sure that they would not mind me giving an account of their experiences that I venture to do so.

Amongst divers in the Royal Navy sharks have, for a long time, been regarded with little serious interest and no great amount of trepidation. No shark attacks on dressed divers are on record so far as we can ascertain. Because of this the idea became prevalent that divers underwater, provided they were dressed and usually emitting bubbles, were safe from sharks. It was also generally accorded that sharks disliked noise and that splashing in the water was often sufficient to discourage them. Furthermore, clear water was usually regarded as being their natural background.

The sad accident in the Far East last year went a long way to disproving at least some of these widely held beliefs. A Clearance Diver swimming at 20 feet with a breathing set, but no suit, on the bottom of Singapore Harbour, was attacked and killed by a shark while he was carrying out a search. The attack took place in a very busy part of the harbour. Boat traffic, pumping station discharges, and many other noises were going on all the time. The visibility underwater was practically nil. No fin was ever seen nor any disturbance created in the water by the shark, but there is no shadow of doubt that the shark was there. Medical evidence proved that beyond any doubt.

Only a month after this event a young rating from H.M.S. *Comos* was attacked in Hong Kong and died on the way to hospital. He had been bathing over the side of his ship in company with a good number of his shipmates. A patrol boat was circling the swimmers and there was no lack of splashing. The evidence in this case is not so conclusive as to the type of fish which carried out the attack, but it is a reasonable probability that a shark was responsible. No fin was seen nor again was any distur-

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bance observed in the water. Partly as a result of these accidents, a series of trials was carried out by the Far Eastern Clearance Diving Team in June of this year at a small island off the east coast of Malaya. During the trials several sharks were hooked and at least one tiger shark was caught and brought inboard. None of the divers was molested, however, and the final results could not really be called conclusive. On one occasion at this time, meat which had been soaked in shark repellent was snapped up by the sharks with no sign of discomfort, whereas meat hanging in the water fifty yards away, and not treated in any way, was left completely alone. One is forced to the conclusion, therefore, that the only thing we can be certain about, as far as sharks are concerned, is that we know precious little, and that there is an urgent need for basic practical trials on the subject. Where do these trials begin? What is the most sensitive sense of a shark—sight, smell, hearing, or is it some sense of which we have no knowledge? It would seem that the trials would have to begin with a number of captive sharks. A large selection, because there are many types which would need to be represented. The sharks would have to be kept in separate tanks in identical conditions. Various types of disconcertives would have to be tried on each shark. Explosives, unpleasant sounds, bad smells, frightening masks, and any other idea which might serve should be tried. Finally a shark has to be chained by the tail in the tank and a diver must go into the tank with it carrying the deterrent. If the shark cowers away from him then the chain must be removed and the diver, possibly with a clear mesh net between him and the shark, try again. If the shark still cowers away, the diver must then try in the dark; then he must surprise the shark; then anger it; then ensure that every different shark re-acts in the same way. This may sound fantastic, but until some such deterrent is discovered man is always liable to be a shark's prey. Strange though this may seem, to find the answer to the shark problem would be a great step in the field of human discovery as was the discovery of penicillin. It would open up beaches all over the world to swimmers who now only dare to swim inside nets. The annual saving in life would be quite appreciable. It would enable divers to work with confidence in areas where at present the eye is very much over the shoulder. It would be pleasant to know that the Royal Navy was leading the field in this research. Wide international prestige and publicity would surely accrue from any successful achievements connected with the subject. It has the same drama and dangers as had the expeditions to the Poles, the climbing of Mount Everest, and other similar adventures.

All credit then to divers wherever they are, who are adding to our knowledge. Let us in home waters, in the Mediterranean, and in other temperate climates, not forget that elsewhere men are risking their lives every time they go into the water. Let those whose duty it is, never fail in bringing to the notice of those holding the purse strings and controlling the scientific effort the dangers of diving in shark-infested waters; then we may combat and, we hope, finally overcome the menace. J.L.C.

NOTE—The Editorial Staff do not associate themselves with these thoughts.

MEDITERRANEAN TEAM

Since our last letter to the magazine we have had a change of bosses, namely Lieutenant Commander Piper being relieved by Lieutenant P. White, R.N., early this month. Life continues in its usual way with plenty of work such as trials, surveys, exercises and operational work. The 1955 Defence of Malta Exercise was very different this year as we assumed the offensive as opposed to the defensive, attacking the ships of the Fleet both in Grand Harbour and the numerous creeks. The high lights being when the senior 'steamer' found a bottle of 'blue' tied on the bottom line, marked 'With the compliments of the F.C.D.T.' and the Flag Ship in Grand Harbour found that beneath the seemingly harmless dghaisa there lurked two members of the F.C.D.T. with infernal machines ready to make things unpleasant for the ship's shallow Water Divers.

We were then visited by the L.C.O.C.U. Team who, when they arrived, were met by the staff at Luga and taken on a tour of that vast empire and dispenser of bonhomie, namely Calders' Brewery. Everybody now knows how to make beer, or consume it, as the case may be. Then a team run was carried out during the evening, which to the great U.K. tanned brethren was very enlightening. The following morning they were asked 'Was your journey really necessary', and told to pack for home; there was much weeping and wailing and gnashing of false teeth, except from the natives of Poole, etc., who had to take theirs out to gnash them, being so long in the tooth. But we put on a dance in their honour to make them happy and they lived alcoholically ever after (?)

Just before this letter went to press the pride of our isle, *The Star of Malta*, thought she would take a short cut overland and is now showing her nether portion to the sun. The team was called on at short notice to provide burning gear and to carry out searches below water for trapped bodies. We had to leave the job before completion owing to salvage operations beginning (bitter blow).

Before leaving we would all like to wish Lieutenant Commander Piper every success and all the best from Cassars (Toot semi-sweet) in his next appointment. SAM.

H.M.S. BULWARK

Bulwark's diving team have broken no records, performed no spectacular salvage feats or deeds of enormous valour, nor have we been asked to install any replacement eyes in ailing bat rays! However, as in the last number of the *Diving Magazine* you called for news and views, I thought some of you full-time professionals at *Vernon* might like to hear a bit about diving activities of a ship of the fleet, so here goes.

After commissioning late last year with four divers (Messrs. Wheeler, Jackett, Gloster and Smith) and no Shallow Water boys, we started to try out our gear and work up. We were not very successful at first with our bottomline and there was the awful occasion when, trying to take poker guage tests, one diver was unable to find the propellor! However, now poker guage tests are simple stuff and we do them in a matter of minutes. Later dips included various underwater work at *Safeguard* and the usual treatment kindly provided by *Vernon*.



By kind permission of
Torquay Herald and Express

Bulwark's Divers

Our first chance to do something different came at Torquay, where nice warm clear water gave excellent conditions for underwater work. We therefore made arrangements with Torquay Town Council who organised the 'corporation diver' plus large diving boat for our lads to work with. The result was *Bulwark's* divers relaid seven yacht moorings for the Corporation and had a very good dip. We took the opportunity of taking

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ROLEX

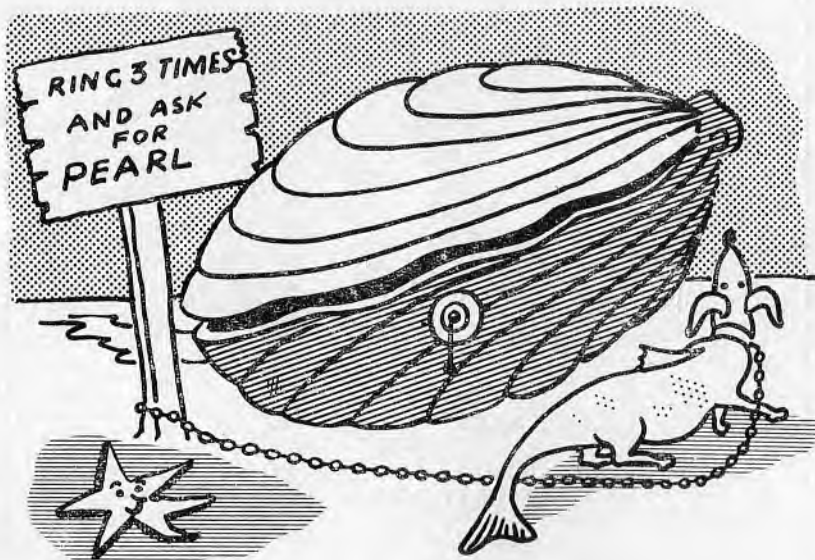
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along all our shallow water divers, of whom we now have 4, plus a number of enthusiastic amateurs. We were thus able to provide quite a show with frogmen for the sizeable crowd which gathered on the pier close by, and soon the Press were along to report the goings-on (see photo). Whilst diving in Torquay outer harbour we took the opportunity of scouring the bottom for a host of reported lost items varying from cigarette cases to buckets, but, I fear, without any great success.

The only mishap at Torquay befell Mr. Credland (the Ship's Diving Officer) who had a wet dip in the underwater swim suit after the unfortunate loss of a lower relief valve. No great harm was done but he had a struggle climbing up the pier with a full suit.

Since then we have had a number of straight-forward dips with nothing more exciting than the recovery of an aircraft jack lost overboard from an M.F.V. at *Excellent Steps*. L/Sea. Wheeler advises other divers to try somewhere else for a dip, the bottom just there being a shambles of every conceivable sort of gash dumped through many generations. We did however take the opportunity of 'Hands to Bathe' at sea recently, to put all our divers over the side in the Mk. 1 UWSS to act as life savers if required and also exercise the lads in swimming in these suits. It also provided good publicity for the diving branch and drew a number of enthusiastic enquiries from young ratings keen to become divers.

Our team has now changed very much, Gloster and Hackett being replaced by Thomas and Newton, but all divers in *Bulwark* take this opportunity of sending greetings to all readers of the *Diving Magazine*.



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THE DIVER'S DITTY

(To the tune of *Lilly Marlene*)

By "BF"

Don't forget the Diver 300 feet below,
Circling round his shot rope just to make some dough,
He crawls around on hands and knees,
With perfect ease, though fit to freeze,
So don't forget the Diver and leave him down below.

Don't forget the Diver who's gone down for a dip,
He's looking for a stoker lost overboard last trip,
He knows exactly where to go, to find poor Joe, cause
they all know,
They marked the spot with a smoke float,
Just eighteen months ago.

Don't forget the Diver don't leave him down too long,
If you do you'll hear him sing this plaintiff song,
I'm being got at by the Narks, he's at his larks,
Just briefing sharks, to bite me in the region,
Where all my air will flow.

Don't forget the Diver don't choke his air supply,
If you do you'll hear him ask the reason why,
He'll curse until the waters heave, for him to leave,
Without reprieve, their very holy sanctum,
Down in those depths so low.

Don't forget the Diver and throw out all your gash,
On the spot where he'll break surface with a splash,
If you do he will return, just to learn, with great
concern,
That nobody thinks of the Diver,
When he's down below.

Don't forget the Diver he may get Oxy Pete,
If his O₂ depth is more than thirty feet,
His lips will start to tremble and itch, and maybe twitch,
To such a pitch, that he will have convulsions,
Because he had the wrong Do.

Don't forget the Diver don't ignore his stops,
Otherwise he will be, in for nasty shocks,
He to the surface will ascend, and get a bend,
That may well end, his flirtings with the mermaids,
When he is down below.

SUB-SUNK

To all divers the pipe 'SUBSUNK' means exactly what it is, and the tragedy which is associated with it stirs everyone in the team to action, as teamwork is *now* of prime importance.

'SUBSUNK' came over the ship's warning telephone at 0845 approximately on Thursday, 16th June, when it was apparent H.M. Submarine *Sidon* was sinking alongside H.M.S. *Maidstone*, in 36 feet of water.

The accident was due to a torpedo explosion in No. 3 tube, the cause of which is still being investigated.

The ship's divers under Petty Officer Riley went into action and transferred the necessary diving equipment into a launch commandeered at the time. It was fortunate that air for the divers' panel could be supplied direct from the depot ship which cut down any time-lag of rigging pumps to a minimum and the first diver of this team, Leading Seaman King, was down on the job at 1015. He reported the submarine to be laying over on her starboard side at an angle of 40°; about 3 feet of the damaged torpedo was protruding out of No. 3 tube, with the bow of the submarine 6 to 8 feet in the mud.

During this time Mr. Currie-Davies, M.B.E., with whom I had got in touch, arrived with his team, and carried out a complete diving survey which was of vital importance to the salvage experts—well done the C.D's.

The salvage divers arrived in an incredibly short time from Rosyth and Gosport *via* helicopter with their helmets and dresses, and when the salvage task was accepted by them, worked non-stop on the job. Up until the salvage experts took over, the ship's divers were responsible for securing the salvage clips on all hatches, and firing 12 air bolts into the pressure hull aft. During these tasks the hull was tapped from for'ard to aft to ascertain if anyone was still alive, but as time went on it was only too apparent that there was no hope.

Diving continued all day with such jobs as checking the source of air leaks in the hull, and it was not until 0230 17th June a halt was called. During this time the inner man had to be fed and in no time at all loads of sandwiches and hot drinks were lowered down to the diving boat, and from then on Petty Officer Burgess was content, thanks to Sub.-Lt. Johnstone, R.A.N. who organised the food supplies and helped with the tending in the boat. Shortly after this, one of the press representatives who was watching the diving turned to an Officer and asked who is supposed to be the father, but from then on I was Pop!

However the team worked extremely hard and dived on and off for six days until the *Sidon* was beached. The finale was cutting away the damaged head and part of the torpedo in No. 3 tube to facilitate the fitting of a watertight blank cover; the cutting was done with the British Gas Torch equipment, and on no occasion did it let us down.

The aftermath of the accident has been one of getting the diving gear operational and to date we are ready to press on if called upon.

DIVER'S BOOKSHELF

It was with regret that I was unable to obtain an article from Mr. James Benson reviewing 'Books of Interest' for this edition, but I take this opportunity of bringing to your notice the following publications, all of which I feel sure will give you many hours of pleasant reading.

The Skin Diver's Manual, by Bill Barada.

Underwater Photography, by Schenck & Kendall.

Shallow Water Diving and Spearfishing, by Schenck & Kendall.

"NEPTUNE"

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U.D.E. CLEARANCE DIVING TEAM, PORTLAND

The past few months have been quite eventful; apart from our normal commitments we have been engaged on many varied tasks for 'outside' ships and services. As a part of the 'SUBSUNK' organisation we were employed on the sunken *Sidon* and in fact carried out the preliminary survey (being the first Naval divers to dive), and thereafter assisted on and below the surface.

A week or so before the *Sidon* incident, B.D.O. Portsmouth L.C.M. loaded with electric cable capsized (without sinking), and we arrived on the spot to find her keel uppermost. We carried out a search and survey until the arrival of Admiralty dockyard divers, and subsequently, after salvage, searched the bottom and recovered several valuable items not least of which was the Admiralty Salvage Officer's oilskin (issued on permanent loan).

During recent weeks we have met most of the Gosport Salvage team and have thoroughly enjoyed working with them. We now possess as a trophy their 'Diving Unit name board' recovered from the L.C.M., and opportunity is taken to announce through these columns that its return will cost Mr. Finch and his trusty (?) young (?) gentlemen (?) five pints of light ale.

July finds us practising the proverbial 'drop and pick up' for Navy Days. This, as during previous years, is being done from a T.R.C. at 16 knots; the only snag we find is that with such a comparatively large vessel the 'bow wave' is inclined to submerge one just at the critical moment when the hoop comes into line. We have, of course, tried altering the position of the rubber dingy but somehow just can't dodge that bow wave!

A good liason has been established with the local 'X' craft merchants and we are hoping that one day opportunity may be given for us to exercise together. Local dockyard divers can also sometimes be seen within our portals and our relationship with them is on an excellent basis; we really do get on to-gether and when passing in Portland Harbour exchange the usual 'hickory'—'steam' compliments, pin 'ead' and big 'ead' being the favourite expressions.

The team now consists of Mr. Currie-Davis, not so fresh from *Vernon*, P.O. McKinlay, L/Sea. Housden, A.B. Christmas, and A.B. Whitmore who will now all sign off by saying 'Cheerio till next time'.

50th CLEARANCE DIVING TEAM

Life in the waters surrounding the land of heather dew has taken on a much rosier complexion since we have said goodbye to the vicious winter, the memory of which still causes us to shudder.

We note with smug satisfaction, and not a little pride, that we head the list of ships in the squadron as far as running hours is concerned, which also confirms our feelings that we have been pretty busy. We have gradually worked up to a high standard of efficiency at locating and recovering mines and other miscellaneous objects and feel we could moor and drop our shot-rope on a pin-head if required.

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80% of our diving has required 40/60 mixture and we have become reasonably adept at hanging on to a shot-rope in a tideway for the purpose of doing our stops.

Unfortunately we have not had nearly enough free swimming, but we are hoping the character of the trials work will change and allow us to change our C.D.B.A. for swimming sets. We did, however, have a job the other week near North Berwick that turned out to be a swimmer's paradise, underwater foliage, gorgeously coloured canyons, luscious crabs and lobsters, in fact the lot. We must confess however that our technique for catching these tasty crustaceans needs considerable improvement and we trust that the future will provide the opportunity.

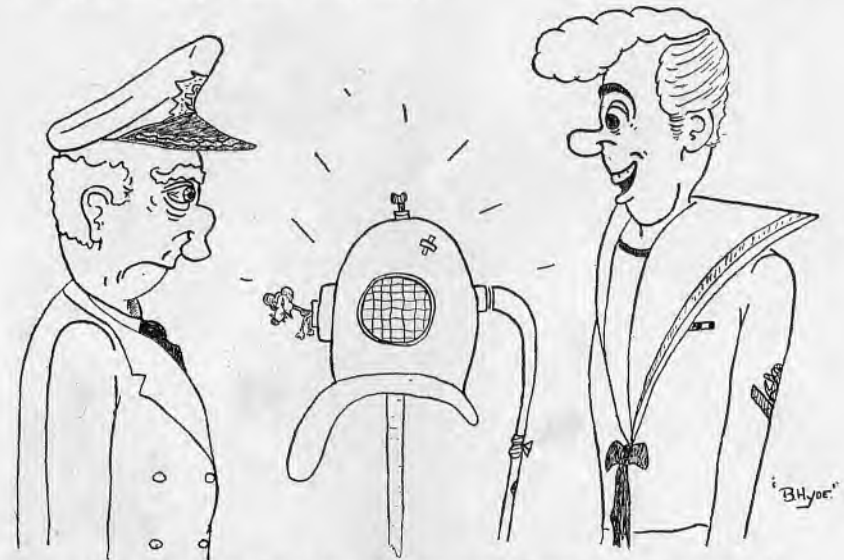
We have managed to get in some shallow-water training on the rare occasions we have been in harbour, and have just qualified our E.M.T. Although it has taken since last October to get through the syllabus we are pleased that we persisted in doing so, and feel quite proud of our product.

We have some seven volunteers from the other ships but, although we are doing what we can, the attention we can give them is far from satisfactory as it is so difficult to forecast when they will be in as well.

Our congratulations to colleague Harrison on passing out top of the board for Leading Seaman the other week, and again for being selected to represent Scottish Command in the forthcoming Swimming Championships.

We end these few lines on a sad note—we have to endure at least six weeks in the dockyard whilst refitting, which is due to commence on the 1st August; the imminence of leave is the only thing that makes the thought tolerable.

In conclusion we would like to congratulate the Magazine Staff on their last production and wish them continued success, and finally good diving to all 'dip-chicks' everywhere.



"If you think I'm putting that thing on, after paying seven and a tanner for a 'Tony Curtis' ... you're flippin' wrong!!!"

AN INTRODUCTION TO SPEARFISHING

By FRANK MARTIN

Chairman, Southsea Branch British Sub Aqua Club

Now that the vogue of underwater swimming has reached our shores, the question is—to fish or not to fish? I find generally that once intoxicated by the 'silent world', most will try their hand at hunting the game therein and most also, having killed a few non-edible fish mainly for practice or because of ignorance, will limit their bag to the more succulent types, and just view with interest or admiration those fish with more appeal to the eye than to the palate.

We are told of the massacre that had occurred along the Continental coasts; how spearfishermen have cleared the waters completely of fish. This may be true, but in my experience here, it is not a question of the fish (a quick-witted beast) being 'cleared up', but that they 'clear off', or take more local evasive action. So do remember that those fish you hit and get away, through perhaps the use of inefficient weapons, are not long in 'blowing the gaff', and a spearfisherman's paradise becomes devoid of targets.

To assist the beginner, the weapons available range as follows; the Hawaiian spears, the elastic-operated guns, a variety of spring guns, those using explosive or CO₂ charges, and the more recent compressed-air guns.

The hand spear is practically useless, unless perhaps when taking flatfish. The elastic-operated spear, usually known as the Hawaiian sling spear, consists of a simple elastic loop attached to the rear end of the spear, the other end of the loop being caught in the valley between the thumb and finger of the hand holding the spear. The elastic is then stretched to the limit as the hand moves up the shaft towards the head, and is eventually gripped, and held until the appropriate moment. This simple piece of apparatus makes quite an efficient and inexpensive 'gun' for the beginner.

Guns worked by elastic are similar in operation, except that the harpoon (now metal and elastic) are housed along a metal tube, the elastic is caught at one end, and the trigger operates at the other: Working parts are usually few, and a double-stranded gun can be quite powerful, though these guns are usually found to be a little inaccurate.

The spring-operated gun, usually a spring within an alloy tube, either slung from the muzzle (and expanded by the harpoon as it is pushed home to engage the trigger) or the spring is compressed in another type. These guns are usually accurate and powerful; the harpoon, as in the elastic guns, is attached to the body of the gun by a fixed or reel-wound line. The fixed type of line I have found the best, and it is very seldom that one requires any more than fifteen feet of this line.

CO₂ and compressed airguns are certainly most powerful and accurate, but perhaps less foolproof than other types. The principal of operation is simple, and similar in action to the conventional firearm; replace the

bullet by the harpoon, the charge by the small quantity of CO₂ or compressed air, which is released from a container by the trigger mechanism, directly behind the harpoon. The advantage of this sort of gun is mainly the semi-automatic nature of its working, which eliminates the somewhat difficult task of loading underwater of many types of guns.

Almost the most important part of the gun, whatever the type, is the design of the head of the harpoon. The trident head is almost useless when the fish hunted is much over a couple of pounds in weight, and then it depends on whether it has been hit at close range or in some vital spot of its anatomy. The weightier fish will, with one sharp flick, disengage itself from most tridents, and off goes another informant, and you need not try to fish in that area for some time. The single point, with one or two hinged barbs, is without doubt the most effective harpoon head. These will pierce the fish and open out, making a spread of at least two inches across the two barbs, and few fish will care to rip that much out of themselves; even so I have known large mullet or bass manage to get off a single barbed head.

Really large fish are being taken by use of a 'powerhead' which itself carries an explosive charge; this charge explodes on hitting the target, driving the harpoon through completely, and stunning the fish in the process. A harpoon head which itself is attached to the harpoon by a short 'running' line is a comparatively new innovation; this allows the 'head' to slip off as the catch is made, thus reducing the leverage the fish gets from the long haft of the harpoon when trying to break away.

What to do with the catch? Fish of reasonable size can be threaded through the gill and mouth onto a line attached to a waist belt, the threading end of the line being attached to a six inch metal 'needle' with a centre eye. A method of hanging the gun onto the waistbelt is useful—both hands are needed to 'store' the catch.

Now for the \$64 question—where to fish around our coasts? My answer to that one is, wherever you can find clear water. Where there is sea there is fish of various sorts, even in the 'desert' of our local waters; given the right weather conditions, and consequent clarity of water, one finds that fish abound, especially the flat variety, which are good food if not good sport. The 'free swimming' type of fish prefer the rocky bottom, but can still be found in our desert, around wrecks, piers or any large underwater object.

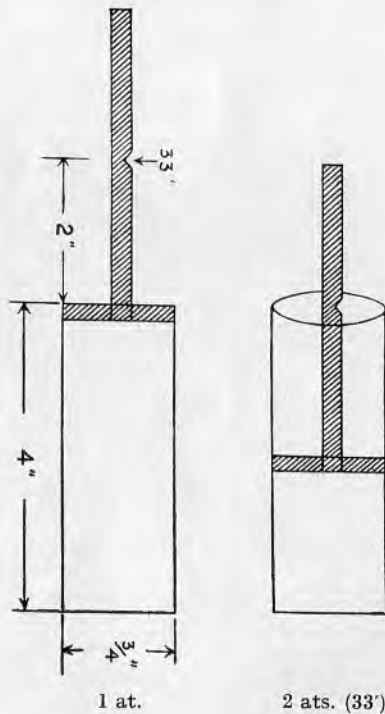
The clear water and rocky coast of the Lulworth area has been a popular resort for most aspiring spearfishers for the last two years or more, but if it's fish you want they are not there anymore—but if it's underwater scenery you require, its wonderful, with the usual forty-foot visibility. The rocky coasts of Devon and Cornwall, are providing good fishing at the moment. In our own neighbourhood, why not the I.O.W.? The S.E. corner is certainly good given an off-shore wind, which helps clear the water, also the S.W. corner should be even better, and comparatively unfished.

Well good hunting! Better still, good viewing!

HOME-MADE DEPTH GAUGES

Without doubt in all forms of diving a depth gauge is a very desirable accessory; in fact it almost becomes a necessity for the free swimmer. The cost of these instruments is often prohibitive but with a little effort the enthusiast can make his own. Here are two suggested designs which operate on the principle known as Boyle's Law (as pressure increases so the volume decreases in proportion).

The first apparatus works on the piston principle. A piece of tubing is blocked off at one end and fitted at the other with a plunger on a spindle, which is also fitted with a rubber washer or 'O' ring to make an airtight seal. On the surface at atmospheric pressure the plunger is in the out position; as the diver descends water pressure increases and the volume of trapped air decreases, so the plunger is forced inside the tube. The greater the depth then the greater the pressure and the further in the plunger is pushed. This instrument can be calibrated as before but this time with the advantage that depth marking can be notches in the spindle and gauge can be read in poor visibility.



For the second one, a piece of perspex $4 \times 2\frac{1}{2} \times \frac{1}{2}$ can be drilled with an $\frac{1}{8}$ inch drill as shown in the diagram.

Personal Breathing Equipment

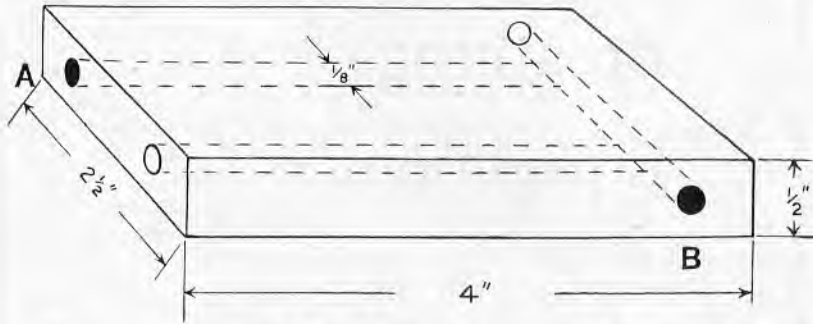
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The holes are plugged at 'A' and 'B'. This provides the capillary tube up which the water is forced due to the increase in water pressure and corresponding decrease in volume of trapped air.

After a few trials at known depths the instrument can be calibrated in the 'pot' or by comparison with a standard gauge, depth markings being in the form of scratches on the perspex.



Measurements quoted in both cases are only suggested sizes and they may be varied to suit the gauge.

LIGHT TOPICS

A Satire

By LIEUTENANT C. W. CHADWICK, ROYAL NAVY (Retired)

The Captain rolled from his bunk, gazed pensively through the scuttle at the lowering sky. It was four a.m. A rattle of crockery foretold the making of tea and as the galley funnel was belching forth smoke, the cook was about too.

'Morning, Sir!' The steward brought in a steaming mug of brown fluid with a flourish born of long practice. Dour, forbidding of countenance, but a welcome sight even at dawn!

'Morning, Steward. Has the bosun called the hands yet?'

'Yes, Sir.'

The ship, heaving gently in a long westerly swell, was moored over a wreck, the crew in process of salving her cargo.

In the ship were all the latest devices for the recovery of the deep Davy Jones' hoard of vessels sunk by hazard of war and wind.

Megohm and Ohm, the two television men, were busy about their brainchild on deck, with orders to be ready at five. Sliding in the camera, they were soon busily screwing down the dome of the pressure canister. Wistfully, they thought of better days!

'My back', says Ohm.

'Yes', replied Megohm, 'No feathers in our bunks—but—think of the fresh air you get'.

Unkempt and hirsute, with cigarettes at lips, the crew, a motley of organised labour under the boatswain, prepared the derricks, guys and whips, ready for work.

Pete and Narcosis, the two divers, had meanwhile bestirred themselves, coiling down their airpipes and breast-ropes, testing telephones—just in case.

'Chance of a dip, do you reckon?'

Shifting his pipe to spit, Pete replied—'Maybe—Maybe not', and with this cryptic remark continued befouling the morning air with smoke. Diving was—sometimes—relegated to the background with all these modern wonders.

In the chartroom, recorders indicated that the ship was in position.

'Out camera'.

With a cluck of the blocks and hiss of escaping steam, the derrick and winches responded to their masters, hoisting the television camera overside, to disappear in the dark green fastnesses below.

The power cable runs out smoothly.

In the control cabinet, Ohm and Megohm cast anxious eyes over their relays of switches, knobs and the master scan.

'Visibility poor—ON LIGHTS—That's a little better'.

A tracery of fine dots now dance a jig on the television picture screen.

'All correct, Sir'.

'Send the camera down'.

Down goes the camera, ever deeper, the depth being checked by the echo sounder. One hundred—visibility poor—and across the picture monitor a dense fog appears, like a blizzard!

'Stop the camera'.

Still many feet from the wreck, the camera portrays the bogey of submarine illumination, impenetrable blanking by plankton in suspension, moving immutably with the tide, the organisms scintillating in the camera lens.

'Bosun! Hold everything!'

The Captain hails his stalwart with a gleam in his eye.

'Yes, Sir'.

'Is the Professor awake?'

'No, Sir'.

'Well, call him and ask him to speak to me'.

'Aye aye, Sir'.

Down in the hold, in huge tanks, the plankton sweepers swim—the Boffin's hope for clearing the submarine murk!

Professor Aqua Boffin arrives on deck, spindle shanks aquiver as the ship rolls, Bevan wig lashed on with spunyarn. He greets the Captain with a quizzical smile—'Morning, Captain'.

'We'll try your cure today, Prof—take a look at the screen—Megohm will show you'.

The Boffin's eyes sparkle as he rubs his hands with glee!



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'PLANKTON!' 'BEAUTIFUL',—he cries!

With a stentorian roar the Captain orders 'Out tanks'.

Four-legged slings on hook, the second derrick plumbs the hold.

'Go down and give your instructions, Prof'.

The professor climbs awkwardly into the depths of the hold to inspect his pets.

'HERRINGS' ! ! ! !

Large and small, ten thousand of them, swimming close-packed in their steel prison—hungry, too!

The shoal leader, a burly herring of one pound, cocks a bright red eye at his keeper.

With precision in every syllable, the Professor gives his instructions.

'Now, pay attention. You are all going for a swim. I want you to rally round your leader as soon as you are in your domain, CLEAR YOUR EARS, and DOWN, DOWN in the sea. Form close station, with your mouths open, facing the tide, and a GLORIOUS meal awaits you!'

'I will fire an eight-ounce charge when my television screen is clear—UNDERSTOOD?'

The tank water becomes turbulent as ten thousand fish nod their heads.

'Right'.

'Then you will return to the ship and the tanks will be lowered for you—swim in—and back to your nice home, away from the drifters!'

'RIGHT'O, Captain'.

The huge tanks rise from the gloom of the hold and overboard, the herrings disporting themselves madly in their own wider element—and—OFF to their target.

Ohm and Megohm, at their screens moodily watching, are hoping for the light to improve.

Echo Ping, earphones on, traces the shoal in the depths.

In the chartroom, confused etchings on the sounder give their tell-tale readings to the Captain and Professor.

Plankton, by the trillion, vanish down the throats of the herring—AND—suddenly, a gasp from Ohm! 'Gosh, Sir,—IT'S WORKED!'

The screen clears and the limpid waters are etched clearly on the screen for all to see!

'GOOD'.

'Lower the camera'.

Down goes the camera, to reveal to wondering eyes the shattered frames, the gaping hull of the wreck.

'Hold the camera'. Winches, blocks, all is silence.

All hands on deck, quiet now, awaiting orders.

'Up camera'.

'Professor'—

'Yes, Sir'.

'Recall your fish'.

Down goes the plunger, and KLONK goes the little charge, reverberating through the ship, the sea, and all that there is.

Ten thousand herring hear their recall, and, full of their meal, spindle up as one, behind the leader to the waiting tanks. Many with a migraine due to the charge. They move warily—not to be adrift—but cautiously—their swim bladders are due for refit! The gleaming mass, all correct, are hoisted inboard, all the better for their frolic.

The Professor is jubilant !!!

The camera whip tightens, STOPS.

'Hold the camera'.

'Up camera'.

Again—'STOP, all standing'.

'Afraid she's foul, Sir'

Unprintable epithets mingle with anxious enquiries, and Ohm and Megohm look apprehensive. Over ten years' salary hangs on that wire!

'PETE'.

'Yes, Sir'.

'Get dressed'.

Narcosis swiftly dresses the diver, and, turning over to the linesmen, adjusts the air supply and telephones. The crew heave over the ladder and the shot hurtles to the sea bed.

'O.K. Pete, carry on'.

The surge of air rushes into the helmet, and the crackle of an unbalanced fuse temporarily distorts speech from the diver, but all is well.

Testing up on the ladder, and with camera cable in hand, the diver, swallowing, descends swiftly.

'Fifty. Hundred, One fifty—nearing the job, Pete'.

'O.K.'

'On the job'.

The camera, in the easing tide, had fouled very nicely in a mass of twisted metal and debris.

'Ease off my gear'.

After a long struggle, Pete clears the camera, the lens portraying first a hand, then a boot, to the bridge onlookers.

But what is this?.

Ohm and Megohm frantically work their controls and focus adjustments, but a dense pall of mud obscures their vision. The diver has stirred it up!

'CAMERA FREE'.

'UP CAMERA'.

The entire ship's company are vastly relieved at the diver's order. Slowly, the camera is hove to the surface—Megohm meanwhile watching the screen.

'PROF'—He calls excitedly!

'WHAT'S THIS'.

Bombarding the screen with fervour unabated, the amazed eyes of Aqua Boffin see—nothing but—PLANKTON.

The diver, finished work, regains his shotrope.

'Ready to leave'.

Inboard, the incoming airpipe and breast-rope are coiled down expertly, and the linesmen greet their charge with an alacrity born of need.

Off weights and helmet, and into the waiting chamber goes Pete, another job completed, to decompress in solitude—and dry.

And—What's the time?

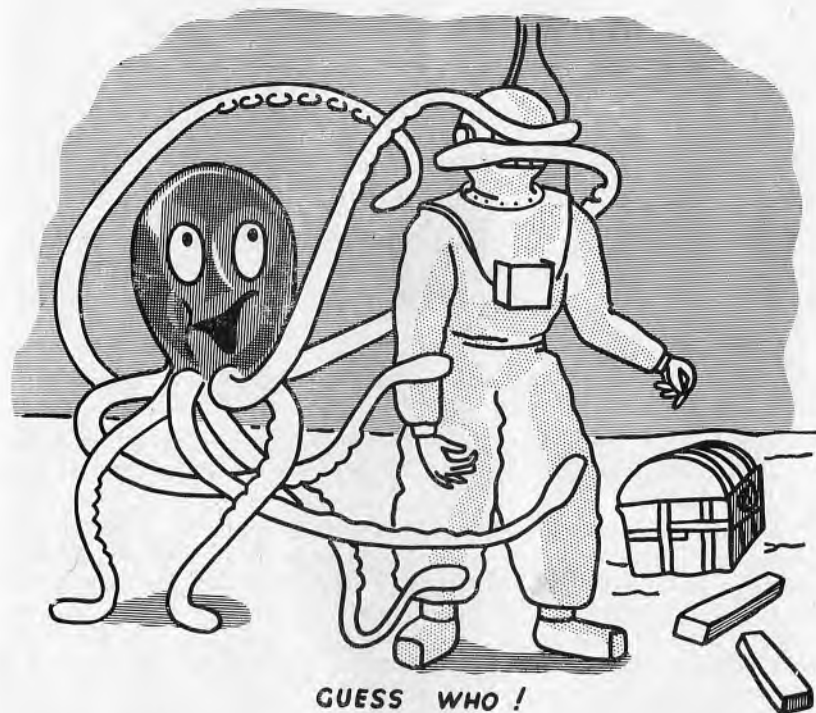
Six a.m.

Hungrily, Captain, Officers, Boffin and crew go to their breakfast—ALL BUT TWO.

WHO?

Pete—the diver, and Narcosis, the Chamber attendant.

They, like us all, have not always seen the light—UNDER WATER.



H.S.C.D.T. (H.M.S. DINGLEY)

I have been threatening (and have been threatened) to do this article for the *Mag.* for some time, but—Well!! That's my excuse anyway.

A lot has happened since the M.F.V. 1567 days and we now have *Dingley* as our base ship. With the change of ship has come many changes in the team. C.P.O. Foggin relieved P.O. Hopewell—Sorry, now C.P.O. Hopewell—and of the original M.F.V. team all but two have moved on, most of them to Civvy Street. However, the team plods on.

After commissioning *Dingley* we showed our faces at our Home (?) Base at Harwich then laid up the ship at *Diligence* and decamped to Gibraltar with the Home Fleet, where we stayed for six weeks. The highlight of our Gib stay was the presentation of C-in-C. Nore's commendation to Cannon for a previous piece of good work in the M.F.V. (congratulations 'Guns'). On this occasion at Gib we did not meet Stanley's Serfs (the Med team), which, though doubtless all good men and true, after due thought and consideration, we decided was just as well. The border was closed anyway.

Returning to England we re-commissioned *Dingley* and then to Portsmouth where we stayed under *Deepwater's* wing until Christmas leave period.

Starting the New Year right, we completed our work at Portsmouth then sailed for Scandinavia in company with 232nd M.S. Squadron, visiting Aarhus, Christianssand and Copenhagen. Nice places you say, I only hope that next time I can go by air. In short—after that trip I am convinced that these ships should be restricted to 'Horse Lake' limits. For some time afterwards that popular tune 'Shake, rattle and roll' was No. 1 of our 'Top Twenty'. However we survived to, once again, enjoy the comforts and amenities of the 'Pussers' land locked lagoon at Harwich, watching the sun sink below the after derricks of the *Mull of Galloway* which towered above us on our port hand. Alas, we remained but a short time for after our defects were made good we sailed for Portsmouth to take station once again on *Deepwater*. From here we sailed for Gillingham for a small refit, and changed ship's company, Portsmouth for Chatham, so now week-ends 'up the Smoke' are all in vogue. Whilst on the slips the H.S.C.D.T. deserted the ship and worked with 'Carter's Cranks' at Portsmouth, though a short period was spent in London. During that time, it is said, Piccadilly was almost deserted—it is SAID.

Returning to the ship at Gillingham we commenced another exercise but with disheartening results, and returned to Portsmouth for Easter leave on completion.

After leave we were literally dragged off to Alderney. No description of our stay is necessary—it is all left to your fertile imagination. Since Alderney and up to the time of writing we have spent the last nine weeks with the 51st M.S.S., our 'Chummy' ship being H.M.S. *Brenchley* (Lt. Guy Worsley) with P.O. Little Redman Colby and his bunch. In that nine weeks we have visited Falmouth, Plymouth, Dartmouth, Portland and—here we go again—Guernsey and Portsmouth. Then, after two more weeks in the Thames Estuary and Harwich we have but a week in Chatham

before Commodore's inspection, then early summer leave prior to a display at Oulton Broad, Suffolk.

I hope you have not been bored by our 'Cook's Tour' but the Editor wanted some material, so here is our lot, make the most of it for writing is not my strong suit and heaven know when you will get the next. Nevertheless, as I have a pen in hand may I send our regards to all 'Dipchicks', steam or otherwise, and best wishes to the Magazine Staff.

THE DINGLEY DIRGE

The skipper was worried, his divers were ill,
And the Cox'n has only got one aspirin pill,
They whimpered and whined and groaned where they lay,
And one thing was certain—no diving that day.

Now I wonder what happened to all those brave men,
To the *Dingley* who boasts of her strong divers ten,
Were they sea sick, home sick, love sick or what,
I'm sure it was not due to the over-strong tot.

A doctor was sent for but that was in vain,
He could'n't pin-point but one single pain,
So down in the wardroom all officers met,
To figure out just what they could do next.

The Subby suggested they holy-stoned decks,
To stop them from turning to physical wrecks,
The Jimmy suggested they do general drill,
When they'd equally split up the one aspirin pill.

Now all these suggestions were all very well,
But as yet no one had rung the bell,
For alas all the divers stayed down in the grot,
Even refusing a dip in the pot.

But harken! What's this, the Captain has spoken,
And as one the sick men are all awoken,
They rush round the ship and there's a panic for sure,
Anyone watching would think there's a war.

Where others had failed the skipper succeeded,
And uttered the magical words that were needed,
He turned to the lads, said your suits you must don,
For Long Week Enders, you can now carry on.

The *Dingley* lay quiet until Monday morn,
When the divers appeared like babies new born,
With their bright blue eyes and red chubby cheeks,
They were healthier now than they had been for weeks.

And here is the moral of this little tale,
Don't serve out rum and gallons of ale,
But the odd long week end, just one every week,
Is all that these diehard chaps ever seek.



R.I.P.

PORTSMOUTH COMMAND BOMB AND MINE DISPOSAL

Since taking over from the 'Bandit' in May it has been quite an interesting period moving around in his beaten track, and operating on his hunting ground.

This glorious summer, we are still enjoying, has brought quite a number of sorties, mainly due to the number of holiday makers touring the beaches and reporting odd objects to the police. The popularity of 'snork' swimming is now bringing in reports of objects well below low water mark; these have proved difficult in locating, generally because the finders mark the spot with a pebble on the beach. Wild-goose chasing still holds a fair percentage of our work although these chases are not without their humorous side. A typical example being August 13th—Saturday—afternoon a signal received, text of which read, 'Under-water object 18" in diameter protruding 12" above sea bed reported off beach at Ringstead, object well rusted and underwater at low tide. County and local police alerted'. B. & M.D. party left by road in very quick time and with speedometer hard over all the way arrived in record time, diving gear, R.M.S. tools, etc., at the ready to deal with this lethal object that had disturbed our Saturday afternoon's study. Sure enough there it was as described:—Rusty, filling bung and lifting lug fitted to the top, and on its side painted in 1" lettering was nature of main charge, maker and weight, namely 'Best Australian Honey, Co-op Society, Adelaide, net Weight 60 lbs.', only one snag—it was empty.

We have completed a thorough beachcombing of three miles of beach near St. Alban's Head, where hundreds of rocket projectiles were uncovered

just below low water; whilst these were being collected a number of unexploded 6" projectiles were found. It was decided to countermine these close to the base of the 200' cliff so that shrapnel would fly to seaward. When the bang went, Taff Jones gave one of the finest exhibitions of a rabbit that I have ever seen. In fact the length of his burrow was over 8' in 10 seconds.

One interesting job which is outstanding at the moment is a suspected 500 lb. bomb 4 feet under the silt and sand of a canal at Linton-on-Ouse, Yorkshire. In brief, the army Bomb Disposal requested our assistance to find this, after it had been brought up by a dredger, promptly dropped back again into its hole and covered over with numerous grab loads of silt, etc. by the dredger skipper. A thorough search was carried out and, with the assistance of the Chatham Unit who were in that vicinity at the time, it was found by probing. However, efforts to uncover it were unsuccessful. It has now been decided to dredge all round the spot and get to it that way. In the meantime we are awaiting insurance details to be completed between War Office, Treasury, and Company. It was a great pleasure meeting the Chatham boys on their own ground, at darts and exchange of stores! The darts finished even, but in the latter, the result was Pompey 2, Chatham 1.

Since the commencement of these notes we were called to Folkestone where a German ground mine became entangled in a trawler's net. She could not lift it off the bottom so dragged it into shallow water and dumped it. Fortunately it was brought right inshore at high tide and became high and dry at low water. With Lieutenant Commandeer Gutteridge we tackled the job in the early light of dawn. After it was rendered safe it was rolled down to the water's edge, stropped ready for lifting with the rising tide. Unfortunately, the trawler doing this job could not lift it by capstan so we had to insert the countermining charge there and then and tow it out at 'short stay' a mile from shore. It was quite a sight for the thousand or so holiday makers looking on when the mine went off. A column of water over 150 feet high and a large 'fall out' looked quite impressive. The whole rendering safe procedure and countermining was filmed for television and appeared on the T.V. news reel that night. We are now running a dead-heat with Chatham in the glamour boy stakes.

This magazine now under 'NEWMAN'agement, is anxious to go to print on time, so until the next edition we wish all B. & M.D. units 'good hunting' especially in the Southwell area.

D.D.

51st CLEARANCE DIVING TEAM

GREETINGS ALL! Owing to our silence you no doubt thought we were disbanded, but no, the first copy sent was, I imagine, lost, or more probably too late for publication, thus the reading public lost yet another literary masterpiece. However, this time we are hoping to be on the ball, enabling our friends and enemies to gloat over the fortunes or misfortunes which have attached themselves to us or vice versa.

During our wanderings we have met up with quite a number of Clearance Divers, some in teams and the others loafing, at least it appeared that way; however, to all and sundry I would now offer the entire team's

thanks for the hospitality we have received at our brothers' hands. Also, if any ever come within our realm, please let us know and we will arrange a cruise, for we haven't anything to give away and our locks aren't strong enough to keep you out.

The cruise we are now completing began in very pleasant weather and convivial company, namely Lt.-Cdr. Franklin, C.P.O. (I feed 'em chicken) Foggin plus their 'erberts onboard *Dingley* at Falmouth. However, after a few lessons from the gallant 51st they didn't shape up too badly and between us we were able to shake the crustaceans from the seabed around the Cornish coast with much gusto.

During the week-ends, when we weren't slaving, the trade in the local 'cantinas' stepped up somewhat and the 'tonk', possessing a late licence, was a popular playground for the thirsty sailors with a few pounds to spare. Mr. C. D., his gang, old uncle Mac and all, paid a visit (flying) to Falmouth but luckily we were spared meeting them ashore although the extent of their iniquity was the rage (literally) with the local inhabitants the following week-end. The Trials team were also in attendance; in fact it appeared to be a reunion of the C.D.'s from all parts; however, extra locks and security police having been ordered well in advance, everything was fairly much in order when we left.

Whit-sunning at Guzz we were able to give a hand with Navy Days thus stealing some of the glamour from the boys down there. Also Tuesday morning proved most interesting, the weekenders bathing their poor blistered feet after hitch-hiking countless miles, railwaymen in general being the main topic of discussion for as long as their feet bothered them.

Onward, ever onward, a quick flit to Poole, for a week's courtesy visit and much fraternising with the L.C.O.C.U. at work and play. We thoroughly enjoyed both, the frogsuit being a welcome change from 'clammy death' and socially—most regal. A short sharp shift to Portland brought us into contact, physical as well as mental, with the watchkeepers of that area, whereupon we were set upon and taken to a place of refreshment (liquid), a hep-cat drummer being in attendance to rattle them pots and pans making an infernal racket which 'Them squares seem to dig awful cosy' (so they tell me). Into the school at Portsmouth was the next stage, but not quite so welcome, a look of fear from 'Knocker' as he furtively locked away his woollens, and an expectant air of despondency from the Petty Officers' bar, injured innocence from myself and finally a pint of frothy ale in my hand 'Ha! Ha! Friends, comrades, well aint life grand'.

Now having most successfully completed another Harmex exercise, assisted by our chicken-fed brethren, we are on the move once more, saying farewell to our oppo's in the Home Fleet Team. We have a few days in Chatham, and they are going to let us fire our gun at a plane towing a drogue. We will now hold two minutes' silence for the brave pilot. Then we are off to Berwick for another courtesy visit, which, if intelligence is correct, will be the berries. After which we sail for our wee hame in the north, to tell stories of the sea to the folks up there who sail around Bass rock when the weather is not too harsh.

CLEARANCE DIVING TEAM (AMPHIBIOUS)

The continual nagging of the Editor has driven us to take refuge in writing this, in the vain hope of getting some peace. The only pencil owned by the team being kept in a place of honour in a glass case, only to be used on State occasions, we have drawn a typewriter from its locked stowage (only four signatures and two sets of finger prints required).

Lieutenant Neill is due to be relieved any time now by Lieutenant Commander McLean-Foreman, so he can be found at any time patrolling round the Diving Store, shot-gun in hand, to catch the unwary customer who might be fitting himself out with the odd pair of socks (undersuits for the use of).

To get back to the serious business in hand, the team moved down to Poole from Eastney last December, with the Amphibious School, R.M. (the Special Boat Wing No. 1 Special Boat Section included). The camp itself was basic to a degree at first, but things are improving fast (Dockyard speed). The main trouble is that the Diving Store is the best part of three-quarters of a mile from the water's edge and the water's edge is 5 miles from the harbour entrance. The amount of boot leather consumed by the team in making the daily pilgrimage to the waters is undoubtedly a record in the history of the C.D. Branch. However, rumour has it that the team may be due for another move in the near future, but where to is not known.

As an interim measure, we have got ourselves a trip to the sunny Mediterranean coming up any day now. We shall be attached to the Amphibious Warfare Squadron for an Exercise.

Stocks of sun-tan lotion have already been laid in specially for the oldest inhabitant, A. B. Dunbar. To get our hands in for the exercise, we have been paying increasing attention to the local beaches (Bournemouth). It is hoped that we shall be able to cross Messrs. Symonds, Farsons, or Cisk's, bottles with the Med Team while on their beat.

In June, we had a completely unexpected visit from H.M.S. *Brenchley* and the 51st Team. We actually met them in mid-stream as they came in to Poole. We were able to offer them washing facilities, which made them possible at close quarters.

A final note to all those who may in the future be diving in close proximity to the Amphibious War-fare Kings—never fly a diving flag, because as everyone knows, red has a certain attraction to the 'genus Taurus'.

H.NEILL for C.D.T. (A).

DIVING OFF THE SOUTH OF FRANCE

By 'BUBBLE'

After a winter of diving in the cold dark waters that are a part of nearly every English port, Bubble decided to savour once again the delights of plunging into the Mediterranean in summer. Bubble, the amateur diver who attempted (under persuasion) to become an amateur author on the subject of Wookey Hole in this Magazine's last issue, was to be

accompanied underwater on this occasion by his wife, 'Squeak' having duties elsewhere.

His wife, Audrey, having never worn so much as a mask or fins before was initially subjected to three 45-minute lessons on the C.A.B.A. in the R.N. Swimming Bath, Portsmouth. Any early fears that Bubble may have had were soon dispelled by Audrey, under her 45 lb. load, half falling into the deep end, hitting the bottom with sufficient force to have broken 6 normal tiles, and remaining there quite happily for half an hour. After that she was schooled in mask clearing, tube clearing, swimming in all attitudes and the principles of free ascents. Her instruction was somewhat hastily completed by a dive in skin in Horsea Lake to test ears (and morale); the latter because a thunderstorm broke as the lake was entered and visibility at the sides became about 2 feet. Furthermore, notwithstanding the deafening noise of the cloudburst on the surface, morale did go up when on the bottom, as it did appear to be the one dry place.

Forty-eight hours later at midnight, with the car staggering under the weight of breathing apparatus, underwater cameras, fins, masks, harpoons, and camping gear which included two tents, they set off for Dover. By 0815 the following morning, following the sign 'Toutes Directions' they were speeding down the right side of the road in Boulogne and so on to their first camp, using a small pup tent, 280 miles away. Finding suitable camp sites in a country the size of France presents no problem so after two and a half days of easy motoring, which included going over the famous Route Napoleon, they covered the 750 miles to the organised campsite at Miramar near Cannes.

At Miramar a standing camp using the larger tent was set up amidst excellent surroundings. The cost was 80 francs per car per person per day (1,000 francs=£1). The campsite was clean and spacious and provided with toilets, showers, washing facilities, a general store, and even a restaurant where one could eat if one felt too lazy to cook, after a long day's diving.

A rendezvous was made the following day with Jack Atkinson, a leading member of the British Sub-Aqua Club, who runs a scheme for those who wish to spend their holidays underwater. The most important part of his equipment consists of a mobile 3 stage 2,000 lb. \square " air compressor driven from the power take-off of a Land Rover. For a very few francs considering the service supplied he provides embryo divers with full equipment, including either single or twin Siebe or Heinke 'lungs' and first class instruction. He is an excellent diver himself and *does all his instruction underwater with his pupils*. For a few additional francs per bottle Audrey and Bubble had their lungs recharged by Jack Atkinson who also showed them some of the best dives.

Every day brought a dive of interest, the 'grotto' and 'tumbler rock' of Galère, the 'Cathedral of Notre Dame', the 'archway' at Anthéor and finally the 'amphora jar' wreck at Pallise. All dives except the latter were carried out from shore, sometimes 'snorkelling' out from the beach to conserve air. At Pallise a fisherman for 3,000 francs took the party out in a very small craft which necessitated the four divers entering the water in pairs backwards off the side of the boat to preserve its precarious

stability. The fisherman made a great point in counting the divers over the side and making sure that the same number returned! Reboarding the boat could only be achieved by slipping ones C.A.B.A. when still in the water.

Bubble distinguished himself on his first dive by collecting a foot full of sea egg spines. Remembering the marked ability of the Maltese variety for going poisonous he decided to consult a doctor whose treatment was to leave well alone unless they come straight out. Two days later Audrey got a spot of sinus trouble doing her first 50 feet dive. Again their medical adviser was consulted, this being no hardship as the accompanying photograph will show. She prescribed penicillin nose drops and meanwhile Bubble put Audrey on two days' stoppage of diving (and S.9's). The day after diving was resumed Audrey went over the 'tumbler rock' to a depth of 110 feet just to show that she was properly cured.



The Medical Adviser

On diving to below 50 feet it was advisable to wear some woollen clothing and if possible a free flood suit because in spite of the short endurance of the C.A.B.A., below this depth the water was, by contrast with the surface, very cold; and after all, they were enjoying themselves and not doing the C.D. 'Commando' Course under Willie Wyvill in a frozen January Horsea!

Marine life as anticipated was disappointing. The French snorkeler armed with a harpoon gun seems to have driven most of the bigger fish either offshore or deep. Great excitement one day in the 'Cathedral of

Notre Dame' when Audrey, busy picking herself some pink coral, came across a scorpion fish. The divers were able to identify him, as the day before they had seen one in a tank at the Oceanographic Institute at Monte Carlo, probably the best place of its kind in the world.

Another day when on the bottom in 100 feet of water an unusual view of a ray was seen, cruising leisurely about 50 feet or so above us. Bubble armed for most dives with a still 35 m.m. underwater camera, which was



Audrey picking coral at 75 feet

the late Jimmy Hodges' original instrument, but was handicapped by lacking an exposure meter and a viewing device (besides experience). As a result the negatives were of a very variable quality. Two of the better results are shown. These were taken at 1/100 secs. with stops varying between 3.5 and 5.6 at depths down to 125 feet.

When the Navy is eventually issued with C.A.B.A. the training methods will require considerable alteration from those in force today using mainly pure oxygen regenerative sets. It will be essential when diving in open water to carry a snorkel tube and/or a buoyancy bag. The latter requires to be of the quick acting CO₂ cylinder type so that a diver in difficulties or with exhausted air bottles may readily provide himself with positive buoyancy and also be in a position to assist anyone in difficulties. As at present, the U/W watch, compass, and depth gauge are most useful adjuncts to the diver's equipment.

Stop Press:

As the author is soon going to spend a commission with the 1st Submarine Squadron at Malta, he is pleased to say that the Editor will no longer be in a position to reach and then twist his arm to produce stories of his private life under the sea. For past stories rendered he would, however, like an introduction to the Med. C.D. Team and he might even be persuaded to add an occasional post-script to the Team's *Diving Magazine* report.



Bubble and Audrey searching for the "Amphora"

UNDERWATER SWIMMERS' SECTION

As most of you know the Admiralty have given their blessing to the many organisations who promote underwater swimming activities. It must be appreciated, however, that no assistance can be given with equipment or financially.

During my visits to various clubs I have found unbounded enthusiasm backed up by very sound knowledge of the diving problem. I have also found that same enthusiasm backed up by complete ignorance. In fact I met one person (who shall naturally be nameless) who insisted that an old German submarine escape set was just the thing, if he filled his bottles with welding oxygen and the canister with ordinary washing soda. I think that I was able to show him the error of his ways.

In this section of the *Diving Magazine* I propose to go through the various stock questions I get asked by underwater enthusiasts, and in each

edition I hope to touch on at least one of the many problems of diving physiology. Many of you may think, 'Why should I worry about the physiology of diving, providing I can breath underwater?' The answer to that is simple:—if you want to swim underwater or dive with safety without being a menace to yourself and your friends you must understand the elementary physiological problems that apply to diving.

To get back to one of the questions that I am asked frequently, 'How can we get hold of some government surplus breathing sets?' The answer is 'You cannot'. The Navy, and to my knowledge none of the other services, have ever, in the past, had self-contained compressed air breathing sets for diving. It is possible that the old type Salvus Oxygen breathing sets may find their way into the market. I certainly do not advise anybody unless he is an expert to attempt to use one. The sets were never designed for diving originally and unless they are treated with the greatest respect they can be a menace.

The difficulties of getting oxygen of the purity required and the correct soda lime are not easily overcome, and of course all the dangers and restrictions necessary when using pure oxygen cannot be exaggerated. From this you will gather that I am very much against the use of oxygen breathing by the amateur. Another question that always crops up is, 'How can we avoid wasting time, and also save money, by having our own bottles topped up without sending them to the firms that cater for this business?' Once again I am afraid the only simple way is rather expensive. It means buying a motor or electrical high pressure compressor, either of which are very expensive. Another way is to buy a hand booster pump, which can be used to boost up the equipment bottles from 100 cubic feet, or larger, storage cylinders. This type of pump is sold by most firms that deal with diving equipment. They are very effective, and will boost from the storage bottles when they are as low as 30 atts, but once again it is not a cheap piece of equipment. One thing that you must remember when buying, scrounging, or just borrowing, H.P. air, is that it must be free from toxic gases. For example, the slightest trace of carbon monoxide can be lethal if breathed at depth.

Frequently I am asked advice on the type of equipment to buy. The answer of course depends on what one intends to do with it, but in any case, always get help of somebody who has actually had experience in the equipment you want. Many salesmen will attempt to sell you gear never having put their heads underwater except perhaps in their bath. You will always find the experienced diver is only too keen to help others, so get hold of somebody with experience to help you, and by experience I do not mean swimming-bath experience.

So much for the first inclusion of the underwater swimmers' section in the *R.N. Diving Magazine*, but as our circulation has grown to cover many of the civilian clubs it is hoped these paragraphs will prove useful.

As nitrogen and compressed air illness seem to be always to the fore with divers, I propose to include an item on these in the next edition, as well as more questions.

S.A.W.

"RIG OF THE DAY"

October will mark the one hundred and fiftieth anniversary of that decisive fleet action which was fought off Cape Trafalgar in the Straits of Gibraltar. It was a Naval victory which was to change the face of Europe and open the path to Britain's greatest period of expansion and world leadership. That famous engagement still stands as a unique example of fine seamanship backed by superb morale.

In commemoration of that anniversary, Messrs. C. H. Bernard & Sons, Ltd., well-known Naval outfitters and Admiralty contractors, have published an attractive book, illustrated in full colour, under the title *Rig of the Day, 1805-1955*. The illustrations are from paintings by the marine artist, David Cobb, R.O.I., S.M.A., who was specially commissioned by Bernards to prepare the series for this book.

The cover bears a representation of H.M.S. *Victory* at sea, and the inside pages contain, in addition to a short history of the engagement, descriptions of Naval uniforms as worn from Nelson's time up to the present day. The interest of this entertaining narrative is enhanced by the re-productions in full colour of seamen at various periods, and the whole series constitutes a connected history of the evolution and development of Naval uniform as worn today.

Copies of this attractive book may be obtained post free on application to the Head Office of Messrs C. H. Bernard & Sons, Ltd., which is at Ordnance Buildings, Harwich, Essex.

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.



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