

services of Britain were supposed to have private means, which few of the Canadians were fortunate enough to possess.

I felt badly about leaving the flourishing young business I had built up but I was rather between the devil and the deep sea. Being 27 and single, and believing the war would probably last another three years or so, as in fact it did, I felt I should take a more direct part in it than supplying electric motors to munition plants, which could be done by older men with family responsibilities.

My partner suggested that I should continue to draw my modest salary while I was away and it would have been quite a help, but I declined the offer and said I would manage on my naval pay and hope the business would be there for me to come back to when the war was over. I had kept my own salary to a minimum to help build up working capital which the business needed.

I think the beginning of my career as an officer of the King's Navy would be a good place to start a new chapter.

ALONG WITH SOME 40 OR 50 other young men on the same errand I was ordered to proceed to England as a passenger on one of the regular liners plying between Montreal and Liverpool. The passage was uneventful with little outward evidence of the existence of a state of war, except the complete black-out at night and extra look-outs for which duty some of us volunteered our services.

On arrival in London we were met by an emissary from the Admiralty who escorted us to Whitehall, where we were informed that the first part of our training course would consist of four weeks at the naval college at Greenwich, that impressive complex of buildings renowned as the scene of some of the revels of King Charles II and his girl-friend Nell Gwynne. It was of course of more interest to us as the home of Greenwich Mean Time and Zero Longitude.

Before going to the college, however, we must visit a tailor and order uniforms. For this purpose we were given a uniform allowance of 15 pounds sterling and a price list of items that added up to this sum less sixpence. The list must have been drawn up by a confirmed optimist as it fell far short of the minimum necessary to equip us for the job we were going to do. Anyone familiar with the history of the Royal Navy would take parsimony of this kind for granted as traditional since

the time of Elizabeth I, or perhaps even earlier. Good Queen Bess was well known for wanting a navy capable of coping with formidable forces such as the Spanish Armada, while extremely reluctant to part with the necessary cash.

The Officers' Mess in the college was a very dignified affair, especially for evening dinner, with masses of antique silver of historic interest adorning the long table.

Some of my young fellow officers from Toronto were not so much impressed by the dignity of their surroundings, as they were intrigued by the prospect of personally investigating the night life of Leicester Square and Picadilly, to see if it was really as bad as they had heard tell. I think it quite came up to their worst fears or fondest hopes as the case might be.

Some of these youngsters were sprigs of the families sometimes referred to in the social notes as "Wealthy and Socially prominent," who had helped the city to become known as "Toronto the Good," paraphrased by frivolous critics from Montreal and elsewhere as "Toronto the Stuff."

I think they made the mistake of giving their sons too much pocket money, thereby helping to cause inflation in those circles devoted to entertaining members of the armed services in their lighter moments on leave. There was some slight fuss about the young Canadians returning from their revels in the small hours, climbing over the high iron railings of the college to avoid signing the book in the lodge at the gates, which automatically involved an interview with the Admiral Superintendent later on, referred to colloquially as "being on the mat."

Our course at the college was short but intensive and called for concentrated study if one wanted to do well in the concluding examination. For the second part of the course we went to Southampton where we were attached to H.M.S. *Hermione* for instruction in signalling, gunnery, seamanship and such items, including the actual handling of the M.L.'s, and firing the 13-pounder gun which was already "washed out" for us. It was a very useful weapon but I felt forced to agree

with the experts who had decided it was just a bit too heavy for the rather frail construction of our small ships; the weight of the gun made them slightly "down by the head."

In due course I was appointed second-in-command of M.L. 497 which was about to be commissioned in Portsmouth dockyard. I felt it would be a memorable experience to take part in the process of commissioning a ship (even a small one) in the senior base of the Royal Navy, which had played such an important part in the long history of the service, and where Nelson's famous flagship, H.M.S. *Victory*, was embedded in concrete as a lasting memorial to the man and his service to his country.

I must admit that I felt somewhat disillusioned by the actual experience, probably my own fault for entertaining romantic ideas, the result of being brought up to glamorize the navy, as were most British youngsters of my generation.

In any case we could not expect the business of commissioning one of the 80-foot M.L.'s to be regarded by the dockyard staff with the same importance as that of the battleships and cruisers to which they were accustomed.

In keeping with traditional custom in the navy it was my job as second-in-command to supervise the receipt and proper stowage of the numerous items of stores and equipment delivered to us by the stores department, including some things I had never seen or heard of before, and the use or purpose of which eluded me and everyone else so far as I could find out.

We were all somewhat taken aback by the number and importance of the items of equipment that were missing and apparently not available, such for instance as a gun of any size or sort, and a patent log, that very useful instrument that trails behind the ship at sea and furnishes an accurate record of the mileage run. It is naturally of vital importance at all times to know exactly where the ship is, and when out of sight of land in foggy weather the patent log is essential for this.

Without a gun we were faced with the prospect of searching the seas for signs of submarines and wondering what we should do if we saw one. We had some non-military rifles of the type used for hunting such game as deer, and some .45 calibre revolvers, but no depth bombs. We did have some lance bombs consisting of a small bomb mounted at the end of a broom stick, to be thrown at the enemy in the unlikely event of a U-boat allowing us to come close enough before blowing us out of the water. The lance bombs had the reputation of being as dangerous to the throwers as to the target, so it was only necessary for us to cultivate the spirit of the light brigade at Balaclava, to do or die but not to reason why. Another surprise came with the arrival of the crew from the barracks where they were supposed to have been trained in seamanship and other subjects of a nautical nature. Fortunately there was one old "Salt" who had served in sailing ships and could splice rope, heave the lead, steer a compass course, chew tobacco and spin yarns till further orders.

The other four deck-hands were young landlubbers who had expressed a preference for the navy when registering under the Lord Derby scheme as being willing to join the armed services when called upon to do so. One of the first things we wanted to know was, which of them was to be the ship's cook and was he experienced in the culinary art?

It was obvious that none of them wanted the job but after some shuffling around one admitted that while in the barracks he had watched a man peel some potatoes and make a rice pudding. Subsequent experience forced us to conclude he had not watched the man very closely.

However, we showed him the galley with its petrol stove of American make and somewhat uncertain temperament, and hoped for something edible for lunch. The cook had been a junior bank clerk in civil life and he may have been better at banking than at cookery, or it may have been the fault of the petrol stove which caught fire rather frequently and had to be

doused with chemical extinguisher, but most of our meals had a queer taste and contained some rather odd ingredients like bits of cotton waste from the engineroom and so on.

The engineroom staff consisted of the chief motor mechanic, an experienced garage hand and a youngster who was, I think, an apprentice to the motor trade. They made a good team and seemed to get along well together though lacking experience of marine engineering, which I could supply when it was needed.

In the matter of living accommodation the officers were much better off than the crew, in keeping with the traditions of the sea. We lived in the stern of the ship, our sleeping cabin equipped with two comfortable bunks with spring mattresses and electric lights for reading in bed if so inclined. The other cabin was for eating or drinking in, all very neat and compact but not exactly spacious.

The crew lived together in a sort of glory hole under the fore deck, which must have been somewhat cramped when they were all there. At sea of course half of them would always be on watch. At the worst, however, I suppose we were all much better off than men of the navy in the good(?) old days of Nelson's time, just over a century before.

One drawback we all had was the difficulty of sleeping when out on patrol at night. Even in comparatively calm weather the little ships were "lively," and it was rather like trying to sleep on horseback and a horse with an uneven gait at that. The officers' bunks with their spring mattresses were comfortable enough but the motion of the ship, added to the rough grinding noise of the propellers just beneath us, and the ever-present and all-pervading smell of the petrol fumes, was a combination that Morpheus found it hard to beat, especially in my case; I have always been one of the world's worst sleepers.

This difficulty in sleeping was a factor in deciding how long at a time it was practicable for the ships to remain at sea, and the length of the M.L. patrols varied widely at different bases,

from 24 hours to several days. Sometimes my ship was sent out with rather vague orders to "Return when recalled," which overlooked the fact that having no wireless there was no means of recalling us; so we had a problem.

Our fuel tanks carried 8 tons of petrol which could last us for 2 or even 3 weeks at economical speed with occasional periods when the engines were stopped. We had no refrigeration for food but could manage for the same length of time without going hungry, with careful planning.

On one occasion of this sort when we returned to the base after an unduly long patrol and the skipper went to the base office to report as usual, the patrol commander gave him a severe "blast" for "showing great lack of intelligence," which seemed most uncalled for. We had all thought we were carrying out our orders "come hell or high water" in the traditional "do or die" spirit of the Royal Navy.

The real trouble was that many of the non-sea-going jobs such as C.O. patrols at a base of relatively minor importance, were filled by older officers who had emerged from retirement to serve during the war, and were known as "dug-outs." I had occasion at the time to think that it would have been better to let some of these dug-outs remain in retirement. I was very much interested some years later when reading Admiral Beatty's book, to see that the author made this criticism from his lofty pinnacle, exactly confirming what I saw from my worm's eye view of the naval organization.

Many of the M.L.'s experienced engine trouble much too frequently, caused by a combination of lack of marine experience on the part of the garage hands who were in charge of them, plus in some cases a tendency to report "engine defects" which were largely imaginary, because the chief motor mechanic did not want to go to sea for reasons of his own. Some of the base engineer officers ashore were old-timers who had retired before the internal combustion marine engine came into

general use, and were not well equipped to check on the validity of reported defects.

In the course of my experience I formed a very high opinion of our 6-cylinder engines with a maximum speed of 500 r.p.m. which gave us our top speed of 19 knots. With a good mechanic in charge these engines were exceptionally reliable and would run continuously, day and night for long periods without trouble. At top speed the engines developed 250 h.p. so we had a total of 500 h.p. in the ship.

As the war went on and many oil tankers were torpedoed the air force had a prior claim to available supplies of high grade fuel, and the stuff put into our tanks was graded down till finally toward the end of 1917 it was no longer dignified by the name of petrol or gasoline, but was called No. 3 war spirit whatever that meant.

Our engines ran surprisingly well on the low grade fuel but were hard to start on it in cold weather. This could be overcome by a little ingenuity such as "scrounging" a gallon or so of good fuel on which to warm the engines up, after which they would run as well as ever, which in M.L. 497 was very well indeed.

On occasion 497 was the only one of the six at the base that was ready for sea, the others being unavailable owing to engine defects or periodical refit with most of the crew on leave, or some other reason.

Among other items of equipment not available when the ship was commissioned were the recognition lights, special coloured electric bulbs used at night to either challenge another ship or reply to one that challenged us. Lacking these meant we could not be at sea during the hours of darkness as we might be fired on by our own ships.

Submarines made a practice of coming to the surface at night in order to run their diesel engines to charge their batteries, and to let the crew have some fresh air and do calis-

thenics in the interest of physical fitness. There was always the possibility of finding a U-boat at night and we had to keep a very sharp lookout for them, the problem being to make sure it was a submarine before starting to shoot, hence the coloured lights used in different combinations which were changed frequently for obvious reasons. When challenged by another ship at night it was well to make the correct reply without delay because if we were not quick we could be very dead.

In due course when the process of commissioning was supposed to be complete, the skipper received orders that began with a stereotyped preamble, "Being in all respects ready for sea you will proceed..." and so on. I used to wonder what would happen if the captain of a ship ever had the temerity to reply to the effect that he was most certainly not ready for sea owing to certain essential items of equipment not being available for issue to his ship.

Also what would happen if he meekly went off to sea (as we did) and ran into serious trouble as a direct result of something missing such as the patent log that we should have had but did not? As it happened I had worked out a substitute for the missing log in the form of a piece of squared paper, on which I plotted a curve of the engine revolutions in relation to speed of the ship in knots, and this proved to be quite accurate enough for our purpose, though of course it was more trouble than just reading the log. I have no idea whether my curve would have been accepted as evidence in a court of enquiry about an accident to the ship, but it would be a lot better than nothing. Fortunately we had no accident.

The passage of some 500 miles round the coast from Portsmouth to our base at Liverpool served as a short shake-down cruise for the crew. It took longer than it should have done as it was mid-winter and the nights were long, and lack of the recognition signals meant we must put into any convenient

port before dark; but it was all good practice for the crew including the engineroom staff. We could also check the accuracy of the compass before going out on patrol at night and finding we were not sure of our exact position, a very uncomfortable feeling. Some of the lighthouses and other aids to navigation were discontinued during the war, so that they would not help the enemy.

It helps the morale of the crew if they have confidence in the capability of their officers, especially in the matter of navigation and when the members of the crew are inexperienced landlubbers with no previous experience of sea-going. It is likely to shake them at any time to realize that the officers don't know just where the ship is or the course to steer to get to any required destination. This is not so simple as it might seem if only because it is necessary to allow for the effect of tidal currents which are often very strong and very variable in the coastal waters of the British Isles.

The R.N.V.R. had experienced very rapid expansion under the stress of war conditions. The qualifications of some of the newly-appointed officers were so dubious that one could not help wondering why they were given commissions.

Some of my fellow Canadians were much better qualified than the officers under whom they served in the M.L.'s, who were of the same rank but had three months seniority because they were in Britain instead of coming from Canada. So far as we could see no attempt at all was made to sort out the competent from the inefficient in our branch of the service.

I was more fortunate than many as my skipper was an Englishman of a good type who had been for many years an enthusiastic sailing yachtsman, taking part in cross-channel races which call for a considerable knowledge of seamanship and coastal navigation. He left much of the running of the ship to me as second-in-command, in accordance with tradition in the navy. He did not have my experience of engines or

of gunnery which latter did not matter much so long as we had no gun. When the skipper was on leave I was in responsible command as there was usually no replacement for him.

The area we were supposed to patrol from Liverpool extended from Barrow-in-Furness to the north coast of Anglesea and west to the Isle of Man, and was mainly notable for unpleasant weather and dense traffic going in all directions and at all hours of day and night. It was no joke on pitch dark nights with none of the ships showing any lights, or in the daytime with dense fog. The frail wooden hull of an M.L. stood no chance at all in a collision with a steel-hulled ship, and at night or in fog the M.L. would look so much like a submarine on the surface that any other ship would be more than likely to try to ram us if she sighted us ahead, or shoot if her gun would bear on us. It seemed like an existence made hazardous by our friends though there were no enemies within 100 miles so far as any of us knew.

The degree of risk intensified suddenly with the entry of the United States into the war in the spring of 1917. Rumour said that when the folk in Washington asked those in Whitehall what naval help was most urgently wanted, the reply was "Destroyers for escorting convoys and any vessels suitable for hunting down submarines," or words to that effect.

I don't know if this is true but it does fit the facts within my own experience. We began to see American destroyers coming in with convoys and some of them going into Cammell Laird's shipyard at Birkenhead to have the rivets in their hulls tightened up after crossing the Atlantic with a convoy. They were more formidable in appearance than our own destroyers but apparently not so well built. At least this was the opinion of an old friend of mine who held a senior executive post in Cammell Laird's organization.

The Americans also sent over some submarine chasers somewhat like our M.L.'s but larger, being 110-feet in length to our 80-feet, with a complement of 22 to our 9, and to our

envy a much larger and better gun. Altogether we thought they were better craft for the job we were trying to do, being more seaworthy and equipped with a really useful gun.

When we met the Americans in port we fraternized with them but when we saw them at sea we used every effort to avoid them. We learned quickly that some of them were even more trigger happy than the gunners on our own merchant ships; they didn't wait for poor visibility but blazed away at us in clear weather and broad daylight. Fortunately our maximum speed was 3 knots faster than theirs so we could get away from them, while reflecting that this kind of fun and games was all very well, but not exactly what we had come over from Canada to do.

Shortly before the Americans arrived our gun was installed but it was a sore disappointment, being a 2½-pounder Vickers that had belonged to the Japanese and had seen much use as the rifling of the barrel was badly worn, either in fighting the Russians or in target practice; it was so bad as to seriously affect the range and accuracy of the weapon. We never had the opportunity to see if we could hit an enemy submarine with it but I doubt if it would have been much use in combat.

Soon after the Americans came into the war we did have some excitement in our area. We were sent out one day to search for a submarine minelayer said to be coming to visit us, though we were not told why; that came out later. We had no means of detecting submarines under water so it was rather like looking for a needle in a haystack, unless one surfaced within sight of us, which they naturally tried to avoid doing. We did our best but were not able to prevent this one from laying his mines in the vicinity of the Mersey Bar Lightship.

A large American passenger liner that normally plied between New York, Southampton and Cherbourg hit a mine and docked in Liverpool with a hole in her hull. It turned out that the American General Pershing was on board and the Germans evidently knew it, and exactly when the ship was

due in Liverpool. Our intelligence people obviously knew the submarine was coming to try to sink the ship and hopefully Pershing too, so it was an example of the efficiency of the intelligence on both sides!

Another passenger ship that was in use as a troopship also hit a mine but did not sink, while a third ship, a smaller one of the tramp cargo type did sink in the channel; altogether a fair night's work for the U-boat though doubtless disappointing for them that General Pershing suffered no more than some slight inconvenience.

Rumour said that the Americans were much upset by the incident and refused to send any more ships to Liverpool unless we could provide what was known as a "War Channel" into the port, which meant a channel that was swept by the mine sweepers every day. Up to that time there was no mine-sweeping at Liverpool at all, presumably because the Admiralty did not think the risk of mines was sufficiently serious, or they simply did not have the necessary ships and gear to spare.

However, needs must when the devil drives or our American allies must be placated. Orders went forth for a trawler here and some drifters there to be detached and sent to Liverpool to form a mine-sweeping flotilla and one of the most experienced officers was appointed as port mine-sweeping officer, or P.M.S.O. for short. He had been at Dover which was naturally a hot spot for submarine activity, and had been blown up three times, being wounded and the only survivor twice.

He proved to be what Canadians call a "hustler," a fellow who gets things done without waste of time, and my M.L. 497 was placed at his disposal for the month or so that it took to get the mine-sweeping organized and working smoothly as a daily routine.

We laid out a war channel of some 50 miles in length and supervised the placing of the buoys to guide the sweepers and the ships that would use the channel. I came to the conclusion

that mine-sweeping was one of the least attractive jobs done by the navy, being dreary and monotonous as well as distinctly hazardous.

Another incident occurred about this time but my memory is not as clear about it as I could wish, perhaps because I was not directly involved. One night the pilot ship hit a mine and sank quickly with the loss of 31 lives including 19 pilots, the only survivors being a man and a boy.

I do not know if the mine was one of the same batch or another lot. Some of the German mines were equipped with a device that caused them to be inactive for varying periods after being laid, so that it was never possible for us to be sure the channel was safe even when it was swept every day.

The weeks we spent under the orders of the P.M.S.O. were certainly strenuous but we felt we were really being of some use to the war effort. This was a pleasant change from the feeling of futility that plagued us when we were out on patrol without either a gun or depth-bombs, supposed to be searching for submarines and wondering "So what?" if we saw one. It would have been quite useless for us to try to ram a U-boat as they were stoutly built of steel and the M.L.'s were of very frail wood construction, not designed to ram anything more than a rowboat, and not a very heavy one at that.

When the depth-bombs were finally issued to us the feeling of futility was somewhat lessened though we still had the 2½-pounder gun that was nearly worn out. It was doubtful whether it would have been effective in causing a submarine to submerge so that we could drop depth-bombs. It was my belief that one good, modern .50 calibre machine gun would outshoot and out-range us.

In addition to being very frail the M.L.'s were very vulnerable, in that they were loaded with highly combustible fuel and explosives. Under normal conditions we were in far more danger from fire and explosions than from the enemy. Fortunately we were well supplied with chemical fire extinguishers

which were used at least once a week on the average to put out petrol fires, started in most cases in the galley stove or the engineroom bilges.

The worst fire I remember occurred when we were in the dock at Fleetwood, just after we had been up on the slipway there for our periodical overhaul. It was a tidal dock so we had to wait till the lock gates were opened at high tide, before we could go to sea.

The cook went to fill his two-gallon container from one of the after fuel tanks, and managed to spill a quantity of petrol over the stern of the ship, including the four 300-pound depth-bombs in their brackets. The skipper was on leave so I was in charge and was in the chartroom laying out our course for return to the base, when I suddenly heard the too familiar cry of "FIRE."

I snatched an extinguisher from its bracket and leaped out onto the deck in one instinctive movement, as the result of much practice, and I don't mean mere fire drill. I saw the entire stern of the ship including the depth-bombs engulfed in flames and black smoke, and ran toward the conflagration, shouting orders to the crew to bring me all the extinguishers in the ship, and the refills from the magazine where they were stowed.

It was only possible for one person at a time to get close enough to the fire to use the extinguishers effectively. It seemed obvious that the fire must be put out quickly if we could do it at all, and I could only guess how long it would be before the 1,200 pounds of TNT in the 4 depth-bombs would reach the ignition point. Two of the four fuel tanks were under the deck beneath my feet, and the cook had not managed to replace the filling plug of the one from which he had drawn petrol for his stove.

Altogether the situation seemed precarious and I remember thinking how foolish was Casabianca, the lad in the poem that begins, "The boy stood on the burning deck\*...." The

\*One important difference, nobody had fled.

crew kept passing extinguishers to me as I emptied them, and refilling the empty ones with the precious fluid of which we fortunately had a good supply in the magazine. By the time the fire was out there was very little of the extinguisher fluid left, and we all felt it was a narrow escape. The fire had probably been caused by someone carelessly tossing the butt of a cigarette where the petrol had been spilled.

Soon after we returned to the base we had another job that made a welcome change from routine patrol duty. The new battleship H.M.S. *Ramillies* was damaged in launching on the Clyde and was towed to Liverpool to be dry-docked for examination and repair.

She was a most tempting target for any submarine that happened to be around, especially in view of the very low speed of the tow. So several M.L.'s were detailed to "screen" her, which meant hovering about at a suitable distance and keeping the sharpest possible lookout for an intruding periscope. We all felt relieved when the *Ramillies* was safely in the river at Liverpool, where she promptly signalled an invitation to the M.L.'s to "Come aboard and have a drink," which was accepted with alacrity.

It was about this time that I applied for two weeks leave for the purpose of being married to an English girl who was also in uniform and on active service as a member of the V.A.D., in the First Western General Hospital in the suburbs of Liverpool.

We had done most of our courting on the links of one of the local golf and country clubs, when my ship was in dock and she had a half-day off duty. We did not intend to set up housekeeping till the war was over and we could do so in Canada, we hoped. It suited our ideas very well that elaborate weddings were very much out of style in England during the war, so we arranged to be married very quietly indeed, and went to Devonshire for a holiday and to visit her parents. We were both subject to recall at any moment but the war managed to get along without us for the fortnight of our honeymoon leave.