



H.M. DOCKYARD
CHATHAM



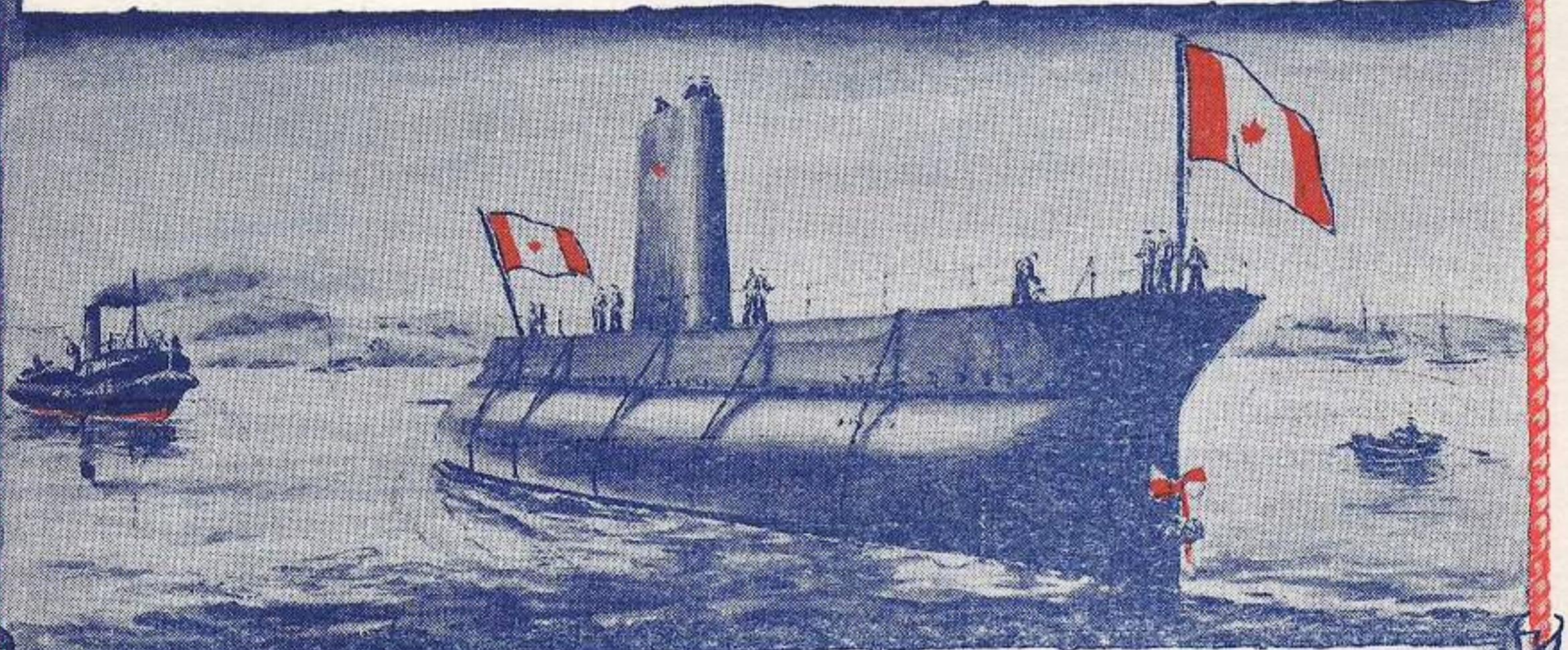
Souvenir Programme

Launch of
HM.C.S. ONONDAGA

by

Mrs. P.T. Hellyer

25th September 1965

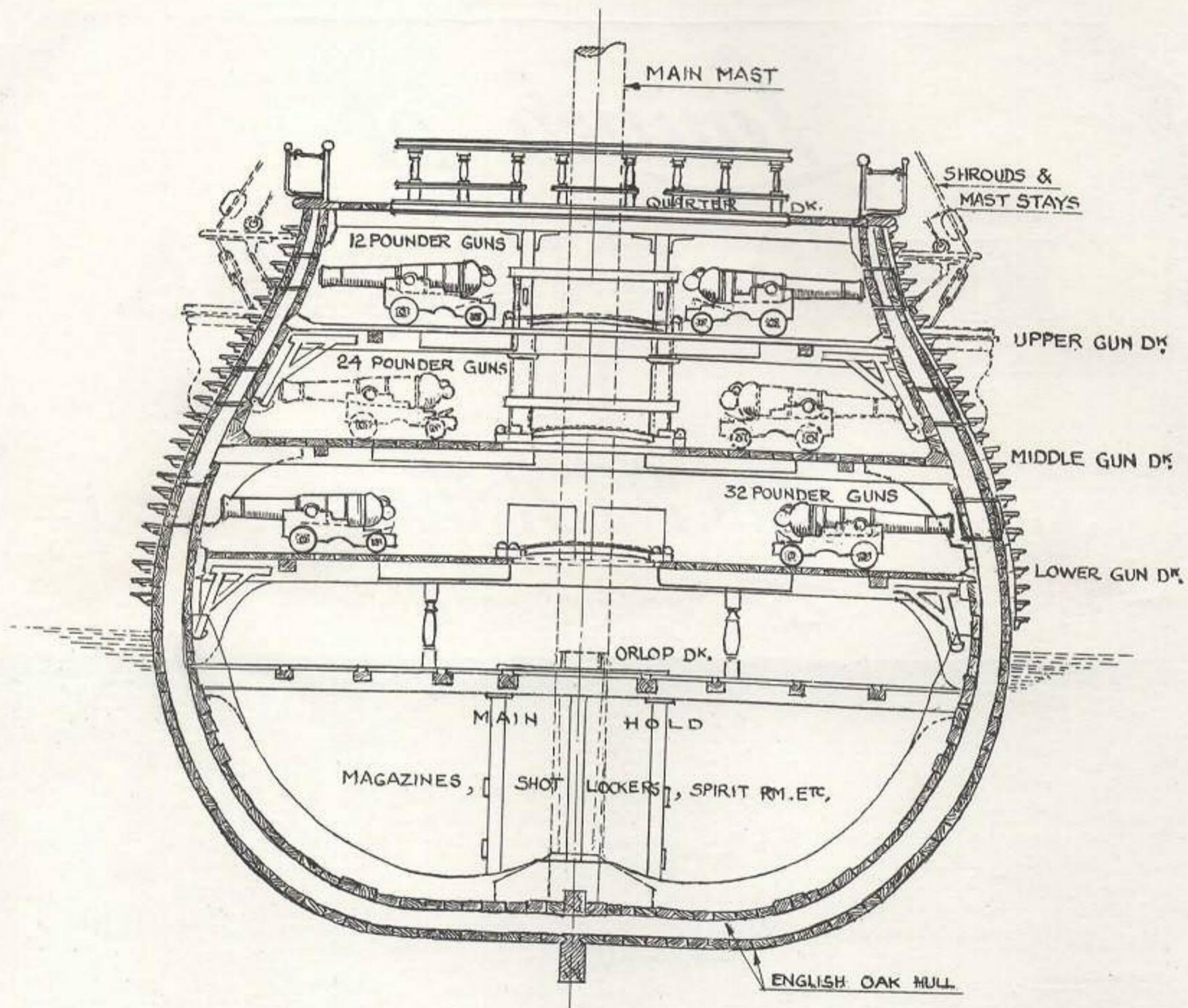


Admiral Superintendent - Rear Admiral I.L.T. Hogg, C.B., D.S.C.
General Manager - E.W. Tucker, Esq., B.Sc.

H.M.S. VICTORY

Launched at Chatham 1765

— MIDSIDE SECTION —



Launching Ceremony

Her Majesty's Canadian Submarine ONONDAGA will be launched today by Mrs. P. T. Hellyer, the wife of the Hon. P. T. Hellyer, Minister of National Defence, Canada.

Schedule of Events

The following timetable is given as a guide to help visitors follow the sequence of events:-

10.00 a.m.

Visitors invited to the Launch may enter the Dockyard to view the Exhibition in No.2 Slip. This will remain open to 5 p.m., and refreshments will be on sale.

12.30 p.m.

Commentaries on the launching arrangements will commence broadcasting at No.7 Slip and at Upnor.

12.40 p.m.

Visitors are requested to be in their places at No. 7 Slip.

12.57 p.m.

Mrs. Hellyer leaves Medway House escorted by the Admiral Superintendent.

12.59 p.m.

Mrs. Hellyer arrives at No. 7 Slip and inspects the Guard.

1.00 p.m.

Mrs. Hellyer is presented with a bouquet, and is then introduced to the Mayors of Chatham, Rochester, and Gillingham, Senior Dockyard Officials, and representatives of the Submarine Old Comrades Association.

1.05 p.m.

The Ceremony of the Launch will begin with a religious service, see centre pages. The order "Stand by to Launch" will follow by the report "Ready for Launch", when Mrs. Hellyer will name the ship. General Manager will then invite Mrs. Hellyer to launch the ship, following which Admiral Superintendent will call for three cheers for Mrs. Hellyer, who in turn will call for three cheers for the men who built the ship. Visitors are requested to remain in their places until this part of the ceremony concludes with the National Anthem followed by "O Canada".

1.30 p.m. (approx.)

Units of the Royal Navy and the Royal Canadian Navy will march past the dais at the rear of the launching platform where Mrs. Hellyer will take the salute.

Spectators wishing to see the parade are advised to line the roadway at the conclusion of the launching ceremony.

5.00 p.m.

The Exhibition will close, and all visitors are requested to leave the Dockyard.

For security reasons it is regretted that visitors cannot be permitted to see the Dockyard beyond the area of the submarine slip.

Two Centuries of Naval Construction at Chatham Dockyard

Today we are witnessing a milestone in the construction of a modern submarine for the Royal Canadian Navy. Two hundred years ago in this same yard was seen the creation of another great vessel by Men of Kent and Kentish Men - H.M.S. VICTORY, which was launched into the Medway on 7th May, 1765.

VICTORY was laid down in 1759 whereas ONONDAGA's Keel was laid in June 1964. The increased speed of construction may represent the more rapid pace of modern times, but we should not forget the highly skilled craftsmanship that grew up with the "old wooden walls of England" - traditional skills which have been handed down through generations of Chatham families and have evolved and developed into the complex of crafts and trades whose product we see today.

It is of interest to compare and contrast the shape of VICTORY and ONONDAGA, and diagrammatic views shown on the front and back inside covers of this programme give a general idea of the central sections of each ship.

Since VICTORY was built some 300 ships have been built at Chatham and of these, 55 have been submarines. VICTORY was followed by LONDON in 1766, a 90 - gun class 2 Frigate, and from then until the Napoleonic Wars a variety of Men o' War were launched at approximately two - yearly intervals, bearing such colourful names as ROYAL GEORGE, QUEEN CHARLOTTE, and VILLE - DE - PARIS.

This tempo of building continued into the nineteenth century, and in the year of Waterloo three Frigates were launched carrying 268 guns between them. They were too late for the War unfortunately, and the last of them HOWE did not commission until 1832. Others were put to various uses, being converted to convict ships, transporters, revenue cutters and receiving ships.

By the end of VICTORY's first hundred years, the wooden walls were giving way to the iron clads, and steam propulsion was taking over from sail. A paddle mail steamer developing 160 h.p. was built in 1850, and in 1854 an ill fated screw corvette of 400 h.p. was launched, named ORPHEUS, which became shipwrecked within nine years.

An "iron turret ship" with the inappropriate name of ROYAL OAK first appeared in 1862 as a forerunner to the Iron Battleships and Gun Boats of the 1870's. The traditional timbered designs that had served so well at Trafalgar were now fighting a losing battle with the iron ships and by the turn of the century, battleships and cruisers were becoming a regular feature on No. 7 Slip, bearing names that have been handed down to the present generation of fighting ships - MAGNIFICENT, VICTORIOUS and KENT.

The first submarine built at Chatham, known as C.17, was launched in 1908. This was a tiny boat compared with a modern OBERON, displacing just over 300 tons and only 142 feet in length. It was designed for coastal defence with one torpedo tube, and achieved a speed of 13 knots on the surface. The propulsion unit consisted of petrol engines of the period with their attendant hazards.

In 1911, petrol engines were replaced by diesel engines in the D class design which were the first fully seagoing submarines. This marked the beginning of engine building at Chatham, and this has gone hand in hand with submarine construction ever since. By the end of the first World War, Chatham had built ten more submarines, many of which recorded notable war time exploits. D.1 was the first through the Kattegat in October, 1914, and made many patrols from the Baltic Bases of Czarist Russia, before she was scuttled to avoid capture by the revolutionaries. E.2, E.7 and E.12 made daring forays through the Dardanelles to operate in the Sea of Marmara.

At one time in 1918, there were four submarines on No. 7 Slip together, launched at two-monthly intervals, a feat which has never since been repeated. These were all submarines of the R class designed specifically as anti-submarine hunters, with what was then a revolutionary underwater speed of 17 knots. This was made possible by a hull form of advanced design somewhat similar to today's high speed nuclear submarines. It is of interest perhaps to conjecture how the course of history might have been changed if nuclear propulsion had been available 40 years ago.

In the twenties, Chatham's know how was used in the development of the first OBERON. This displaced 1,500 tons, carried three guns and eight torpedo tubes but her speed reached only 9 knots. She was due to be launched on the 23rd September, 1926, almost 39 years ago to the day, but she stuck fast and missed the tide. Activity was intense during the following 24 hours and she eventually took the water the following day. Such is the excitement, apprehension and drama that touch all those concerned with the launch of a ship.

History of the Oberon Design

The history of the present OBERON class submarines goes back more than a decade, and indeed many of the design features are derived from lessons learned in the Second World War. The A class submarines, many of which are still regular visitors to Chatham, were designed for high speed surface patrols for the war in the Pacific 1941 - 45. Arising from experience gained, research was directed towards improvements in underwater performance, including a substantial increase in diving depth, which was achieved by a great deal of experimental work on both the geometry and the material of the hull at the Naval Construction Research Establishment at Rosyth and elsewhere.

Intensive work in design offices, test laboratories and in some cases full size trials with actual submarines led to the development of the Porpoise class submarines, which became one of the first high speed submarines capable of almost continuous submergence when snorkeling in any area of operations. From this was evolved in 1954 the present OBERON design, which incorporated improvements in accommodation and sonar equipment among other features.

The first OBERON of the present design was ordered in 1956 and completed in February, 1960 at Barrow-in-Furness as H.M.S. ORPHEUS, followed closely by H.M.S. OBERON at Chatham. Since then, twelve sister ships have been completed including H.M.C.S. OJIBWA, the first of the present group of OBERONS building for the R.C.N. Currently there are two boats building for the Royal Australian Navy at Greenock, one at Cammell Lairds for the Royal Navy, and the third for the Royal Canadian Navy at Chatham.

The later OBERONS have a number of additional features compared with the first, which reflect continuous advances in the material field - Butyl rubber electric cables, glass reinforced plastic casing and bridge fin, one man control gear, and others. In addition, the Canadian OBERONS incorporate a number of design changes to meet R.C.N. customer requirements. These include an air conditioning system which has been extended throughout the boat by means of a freon liquid/gas main which achieves local cooling at any desired position through a series of direct expansion cooling coils.

There are two electrical systems, a 60 cycle per second system for weapons and radar and a 400 cycle per second three phase system for Canadian equipment. North American lighting and R.C.N. operating equipment are other features which have been substituted for their British R.N. equivalents.

Perhaps the biggest single problem in adapting these submarines for R.C.N. requirements has been the design and development of special electrical conversion machinery to meet the need for 400 cycle per second three phase supply. The requirement was for a very small capacity machine for pulse loading calling for a special design with better load characteristics than the normal ship's generator. This necessitated research and development within the unprecedented time scale of 12 months (2 years is normal). The achievement of this reflects the high degree of team work and co-operation by designers, planners and men of the production line essential in complex projects of this nature.

Diesel electric propulsion is a feature common in all OBERON submarines, the aim being a reduction in engine noise transmission. When running on batteries, propulsive power of several thousand shaft h.p. can be provided by connecting the two battery groups in series to give 880 volts on load. These high voltages have necessitated new insulating materials for the construction of the switch gear possessing high tracking resistance and freedom from smoke or toxic products in the event of fire. The battery cells have been specially developed to be capable of high rate of discharge in the same battery size.

The present OBERONS have been called one of the best conventional submarines of the sixties.

Ceremony of Blessing the Ship

The Chaplain of H.M. Dockyard, Chatham, shall say:-

Brethren, seeing that in the course of our duty we are set in the midst of many and great dangers, and that we cannot be faithful to the high trust placed in us without the help of Almighty God, let us unite our prayers in seeking His blessing upon this ship and all that shall serve in her, that she may sail under God's good providence and protection, and that there may never be lacking men well qualified to offer in her their work and skill for His greater glory and for the wellbeing of our realm and empire.

Then the people shall sing together the Hymn "Lead us, Heavenly Father"

Lead us, heavenly Father, lead us
O'er the world's tempestuous sea;
Guard us, guide us, keep us, feed us,
For we have no help but thee;
Yet possessing every blessing
If our God our Father be.

Saviour! breath forgiveness o'er us,
All our weakness thou dost know,
Thou didst tread this earth before us,
Thou didst feel its keenest woe;
Lone and dreary, faint and weary,
Through the desert thou didst go.

Spirit of our God, descending
Fill our hearts with heavenly joy,
Love with every passion blending,
Pleasure that can never cloy:
Thus provided, pardoned, guided,
Nothing can our peace destroy!

Then the Chaplain of the Fleet (P), Royal Canadian Navy shall read:-

PSALM 107, VERSES 23 - 31 AND 43

23. They that go down to the sea in ships: and occupy their business in great waters;
24. These men see the works of the Lord: and his wonders in the deep.
25. For at His word the stormy wind ariseth: which lifteth up the waves thereof.
26. They are carried up to the heaven, and down again to the deep: their soul melteth away because of the trouble.
27. They reel to and fro, and stagger like a drunken man: and are at their wits' end.
28. So when they cry unto the Lord in their trouble: He delivereth them out of their distress.
29. For He maketh the storm to cease; so that the waves thereof are still.
30. Then they are glad, because they are at rest: and so He bringeth them unto the haven where they would be.
31. O that men would therefore praise the Lord for his goodness: and declare the wonders that he doeth for the children of men!
43. Whoso is wise will ponder these things: and they shall understand the loving-kindness of the Lord.

The Dockyard Chaplain will then say:

Let us pray:

O Thou that sittest above the water floods, and stillest the raging of the sea, accept, we beseech Thee, the supplications of Thy servants for all who in this ship, now and hereafter, shall commit their lives unto the perils of the deep. In all their ways enable them, truly and godly to serve Thee, and by their Christian lives to set forth Thy glory throughout the earth. Watch over them in their going forth and in their comming in, that no evil befall them, nor mischief come nigh to hurt their souls. And so through the waves of this troublesome world, and through all the changes and chances of this mortal life, bring them of Thy mercy to the sure Haven of Thine everlasting Kingdom, through Jesus Christ our Lord. *Amen.*

Almighty God, who has given men vision and skill to devise and construct all manner of works: we praise Thee for the men who have laboured with brain and hand to build this ship, and beseech Thee evermore to bless them in their labour: through Jesus Christ our Lord. *Amen.*

The Minister and people shall say:

Our Father, which art in Heaven, Hallowed be Thy Name. Thy Kingdom come. Thy will be done, in earth as it is in Heaven. Give us this day our daily bread. And forgive us our trespasses, As we forgive them that trespass against us. And lead us not into temptation; But deliver us from evil: For Thine is the kingdom, The power, and the glory, For ever and ever. *Amen.*

Then the people shall together sing The Hymn:

Fight the good fight with all thy might,
Christ is thy strength, and Christ thy right;
Lay hold on life, and it shall be
Thy joy and crown eternally.

Run the straight race through God's good grace,
Lift up thine eyes, and seek His face;
Life with its way before us lies,
Christ is the path, and Christ the prize.

Cast care aside, upon thy Guide
Lean, and His mercy will provide;
Lean, and the trusting soul shall prove
Christ is its life, and Christ its love.

Faint not nor fear, His arms are near,
He changeth not, and thou art dear;
Only believe, and thou shalt see
That Christ is all in all to thee.

Let us pray:

O Lord God Almighty, who blesseth those who put their trust in Thee, let Thy blessing be upon this ship and upon all who serve and sail in her. May good success and Thy protection be with them always, in the name of the Father, Son and Holy Ghost. *Amen.*

The Lord bless us and keep us; the Lord lift up the light of His countenance upon us, and give us peace, now and for evermore. *Amen.*

Then shall prayers be said by the Chaplain of the Fleet (R.C.), Royal Canadian Navy.

Background to H.M.C.S. Onondaga

The name ONONDAGA was given to the Central Tribe of Indians or "fire-keepers" of the Iroquois Confederacy. Their home was North of Onondaga Lake in Central New York State. Onondaga means "on the hill or mountain".

Two previous men-of-war also bore the label of the Iroquois Confederacy's Central Tribe. The first ONONDAGA was the twenty-two gun Snow (distinguished from a Brig by its stubbytrysail mast, rigged fore and aft) laid down at Niagara on 11th August, 1759, by the command of the C.-in-C., Jeffrey Amherst. Before this no British ship had ever been built as far West as Niagara. She had a short and violent career during which her master, Second Lieutenant Joshua Thornton, Royal Marines, achieved infamy. Britain used her in finally and permanently wresting Northern North America away from France. During her commission she wore the pennant of the Lake Flotilla's Senior Naval Officer, Captain Joshua Loring, Royal Navy.

The second to bear the name was His Majesty's armed Schooner ONONDAGA, completed during the Winter of 1790 - 91 at Raven Creek (not definitely located) on the North shore of the St. Lawrence River near Kingston, Ontario. She was a topsail schooner 100 to 120 tons with six guns and became Flag ship of the Provincial Marine Fleet of Lake Ontario under Commodore David Beaton. Most of her eight year commission was spent transporting supplies between Kingston and Niagara as well as providing passages for very important people. There were few highlights in the career of this plodding transport. After foundering in November, 1797, a Board of Inquiry stated "It is our opinion it would be less expensive to the Government to build a new vessel". The second ONONDAGA was decommissioned in 1798 and never sailed again. Thus an end was put to the use of this Naval name for 167 years.

Though just now coming into the Royal Canadian Navy, the name ONONDAGA being given to the second R.C.N. Oberon Class Submarine is thus deeply rooted in Canada's Naval past.

She will be the fifth vessel of the OBERON class to be constructed at Chatham, her older sister OJIBWA having been completed just a few days ago whilst her younger sister known at present as SS 74 is taking shape alongside her on the same slip.

Work on H.M.C.S. ONONDAGA began just over a year ago, but the design work goes back much further of course, and an article on page 3 may interest the technically minded. The combined efforts of a large team of designers, naval constructors, mechanical and electrical engineers, scientists, draughtsmen, estimators and planners are absorbed in drawings specifications and documents before a single piece of hardware appears.

A period of intense activity follows the order to build - ordering equipment, steel and other materials culminating in the laying of the Keel which marks the first visible stage in the creation of a submarine. An interesting traditional craft that precedes these activities is "laying off" - a process by which scale drawings of the ship are reproduced full size on a wooden floor as large as the drawing office itself, known as the Mould Loft. It is from the moulds or lines produced here that the ship takes her shape. Three-dimensional full scale models of complex compartments, known as "Mock-ups", are also developed in the Mould Loft, in conjunction with the Design Office. ONONDAGA's keel, consisting of a prefabricated section of the pressure hull, was laid on 18th June, 1964 at roughly the mid-point of the vessel, and since then approximately ten more sections have been welded in sequence working towards the forward and after ends simultaneously. The ends of the submarine are closed by large domes consisting of spun steel supplied by specialist manufacturers. The external tank structure is built up concurrently with the bridge fin and various other pre-launch work, resulting in the first major stage of the construction of the submarine we are witnessing today..

When ONONDAGA leaves the slip she will go to her fitting out berth where a large number of craftsmen of many different skills and trades will pack her with a complex of equipment, wiring systems, pipe work, furnishings and finishing materials until she is a fully self-supporting living and fighting unit.

When she is completed in early 1967, she will have employed an overall average of 300 men per week including those working directly on the submarine and in various supporting workshops. Shipwrights, fitters, electricians, plumbers, coppersmiths, joiners, painters, welders, caulkers are some of the many trademen who will have taken a hand in the construction of this vessel.

It is not always realised the extent to which a submarine of the complexity of an Oberon embodies the products of a very wide range of industry. It is estimated that more than 40 companies between them have supplied several thousand items of equipment worth more than £1,000,000 per submarine.

It is also worthy of mention that ONONDAGA and her two sister ships represent between them a multi-million pound export order.

The Royal Canadian Navy Today

The Royal Canadian Navy was created by an Act of Parliament on the 4th May, 1910, but its history as a substantial fighting force dates only from the Second World War when from a tiny beginning of six Destroyers and four Minesweepers the fleet expanded to nearly 400 armed ships and the manpower increased from 1,700 to 95,000. This formidable force was engaged mainly on anti-submarine warfare in the North Atlantic.

The end of the war was followed by a period of re-adjustment to peace-time requirements which resulted in a considerable reduction in the size of the fleet, and a decision to continue to concentrate on anti-submarine operations in the North Atlantic. Thus, when NATO's Allied Command Atlantic was established in 1952, Canada was in the position to offer an effective contribution to what was then, and what is still considered to be, the greatest Naval need - an anti-submarine force.

The R.C.N.'s current combat strength of some fifty ships of which more than half are assigned for service with the Supreme Allied Commander Atlantic in the event of an emergency, are based at Halifax, Nova Scotia and Esquimalt, British Columbia.

Spear-heading the R.C.N.'s anti-submarine elements are the 20,000 ton Belfast-built Anti-Submarine Warfare Carrier H.M.C.S. BONAVVENTURE, carrying fixed wing aircraft and helicopters, and 20 Canadian built Destroyer escorts of the St. LAURENT, RESTIGOUACHE and MACKENZIE classes. Older destroyer escorts, Frigates and other units make up the balance of the fleet.

The largest ship in the R.C.N. is the 22,000 ton Fleet Replenishment Vessel, H.M.C.S. PROVIDER, which was commissioned in September, 1963. PROVIDER's role is to serve as a seagoing source of fuel, ammunition and supplies for combat units, thereby extending appreciably their endurance and range of operations. Two additional operational support ships, similar to PROVIDER, were approved for building on 22nd December, 1964.

The addition to the fleet of modern submarines of the OBERON class will make it possible to provide more and better at-sea training for Canadian anti-submarines Forces, and at the same time enable the Royal Canadian Navy to extend and improve its anti-submarine capability.

History of Submarines in the Royal Canadian Navy

The story of how the Royal Canadian Navy came to acquire its first submarines nearly 50 years ago, is one of the most colourful in the history of the R.C.N.

On the outbreak of the first World War, the government of the Province of British Columbia became greatly concerned over the lack of naval protection on Canada's West Coast. Acting on its own initiative, the British Columbia Government purchased from Seattle, Washington shipyard two submarines that had been built for the Chilean Navy but for which only part payment had been received.

Under cover of darkness on August 4th, 1914, the two submarines were sailed secretly out of Seattle by crews from the shipyard. At sea they were met by two naval officers, acting for the British Columbia Government, who, after inspecting the boats and declaring them acceptable, handed over a cheque for \$1,150,000. White Ensigns were then hoisted and the submarines proceeded to the naval base at Esquimalt, B.C. On August 7th, the Federal Government, presented with a *fait accompli*, confirmed the acquisition of the submarines. The two submarines, named CC-1 and CC-2, remained in service on the Pacific coast until 1917, when they were transferred to Halifax, Nova Scotia. In 1920 they were sold for scrap.

In 1919 Canada received as a gift from Britain two H-class submarines that had been built in the United States for the Royal Navy. They lasted only until 1922, when they were paid off as part of a naval retrenchment programme. The R.C.N. did not operate any submarines from then until after the Second World War. However, about twenty Canadians served in British submarines during the War, some of them in the 8th Submarine flotilla, commanded by the then Commander A. C. C. Miers, R.N. Submarines of the R.N. were based at Canadian ports for the training of Canadian ships in anti-submarine warfare.

When Germany capitulated, two submarines, the U-889 and U-190, surrendered to Canadian warships in the Western Atlantic and were commissioned in the R.C.N. The U-889 was eventually turned over to the United States Navy, while the U-190 was kept in operation by the R.C.N. for testing and evaluation. She was sunk by R.C.N. ships and aircraft, off Halifax, on Trafalgar Day, 1947.

In May, 1961, H.M.C.S. GRILSE, the former U.S.S. BURRFISH, was commissioned into the R.C.N. at New London, Conn. She subsequently proceeded to the Pacific Coast, where she has been employed in the training of sea and air units in anti-submarine warfare.

In the Atlantic, the Royal Navy's Sixth Submarine Division, based at Halifax, has for some years provided training facilities for Canadian anti-submarine forces.

Victory to Onondaga Exhibition at No. 2 Building Slip

This year being the bi-centenary of the launch of Nelson's famous flagship, it is fitting that the theme of our Exhibition should be from "VICTORY to ONONDAGA". Some of the features will enable a contrast to be drawn of the building of VICTORY in 1795 and present day shipbuilding, with particular reference to submarine construction.

The VICTORY section of the recent VICTORY Bi-Centenary Exhibition is retained, including the full size reproduction of part of the Lower Gun Deck.

The display of modern shipbuilding illustrates, under sections dealing with design and research, hull construction, armament, machinery, communications and radar, and habitability, the complexity of the work today and the diversity of the skills and techniques necessary.

In a Dockyard the size of Chatham there are many people who are not engaged directly on the building or repair of ships and their equipment. Their work is, nonetheless, essential to the Dockyard organisation and we feature the work of such departments under two main groups.

The first group includes the Yard Services Department which is responsible for Dockyard machinery and the provision of electric power and other services. The Personnel Department too, has, among its functions, the responsibility for the training of about 1,000 Dockyard Apprentices. Besides the examples of their work on display, the apprentices have made the stands and fittings for the Exhibition, including the VICTORY Lower Gun Deck reproduction.

The Ministry of Public Building and Works is another such department for it has the responsibility for maintaining the buildings, roads, docks etc. in the Dockyard.

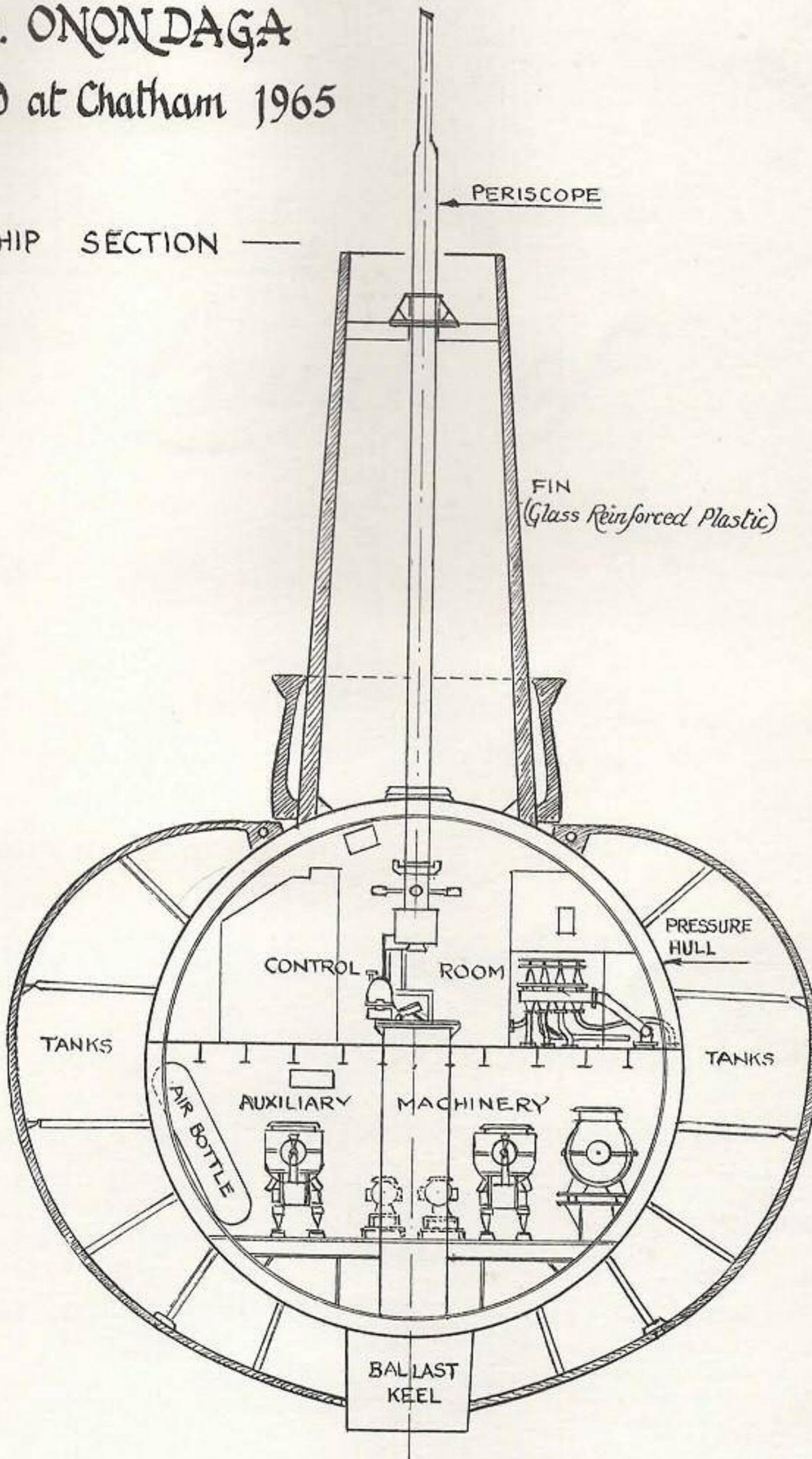
The second group are the supply departments - the Naval Store Department, the Victualling Department and the Armament Supply Department. Not only do these play their part in shipbuilding and repair but they also supply a great deal of equipment direct to seagoing ships.

As the "customer" on this occasion is the Royal Canadian Navy the Exhibition would not be complete without a contribution from Canada. On display are models of Canadian designed and built anti-submarine Destroyer Escorts, and other vessels. Included is a model of the first hydrofoil craft designed and currently being built in Canada for anti-submarine operations. Also on display are some photographs depicting submarine building in Canada during World War I. Canadian Vickers Ltd., Montreal built 24 submarines at this time for Britain, Italy and Russia. Six of these for the Royal Navy sailed on July 22nd, 1915 and became the first submarines to cross the Atlantic under their own power.

With the accent this year on history, there is, finally, a section of the Exhibition showing the development of submarines. Regrettably, security restrictions prevent the illustration of the latest submarines in this story - the nuclear powered ships of this age and the next.

H.M.C.S. ONONDAGA
Launched at Chatham 1965

— MIDSIDE SECTION —





Launch of H.M.C.S. Onondaga

Luncheon

Saturday, 25th September, 1965.

Menu

Smoked Salmon

Roast Norfolk Turkey, Cranberry Sauce

Duchesse Potatoes

Brussels Sprouts

Maple Leaf Cassatta

Canadian Cheddar Cheese

Coffee

Zeltinger Riesling

Port

Toasts

HER MAJESTY THE QUEEN

ONONDAGA

and all who serve in her,
coupled with the name of

Mrs. P. T. Hellyer

Proposed by

Rear Admiral I. L. T. Hogg, C.B., D.S.C.*,
Admiral Superintendent

Reply by

Mrs. P. T. Hellyer

Gale & Polden Ltd., Portsmouth.