

The VWOA was advised today that James C. Hepburn Past President of VWOA 1982-1983 had become an SK on September 28, 2007.

For those of you who were either not a part of VWOA during that time frame, or have forgotten details as the years roll by, we are publishing selective parts of the 1982 VWOA Year Book in the hope that it will let you know the kind of challenges Jim Hepburn faced during those years of service to VWOA as well as emphasize the need for YOU to document your stories of your growth in Wireless.

We have no personal stories from our Past President and thus resort to publishing a year of service to VWOA by him in 1982 to mark his passing.

While working for ITT, I knew him as an Executive in RCA and interfaced with him at meetings of CCITT in London, Brussels, Geneva and Sydney, Australia trying to solve the protocols of International Communications or planning Submarine Cables in all the Oceans of the world with all the other Nations who were participating in CCITT organization.

We thank his son Ronald Hepburn, N2LCZ for the notification received by our Membership Secretary, Wendell Benson

Hi Wendell:

I am reporting that my father – James – W2iiC passed away last fall, and his name should be removed from your active members.

I know his membership was very dear to his heart in his later years,

Thank you for your messages to him.

Regards,

Ronald Hepburn, N2LCZ

THE VETERAN WIRELESS OPERATORS ASSOCIATION



FIFTY-SEVENTH ANNIVERSARY

1982 Yearbook

ISSUED IN CONJUNCTION WITH THE FIFTY-SEVENTH ANNUAL MEMORIAL AWARDS BANQUET OFFICERS CLUB, U.S.C.G., GOVERNORS ISLAND NEW YORK, N.Y.

FRIDAY, MAY 21, 1982

THE VETERAN WIRELESS OPERATORS ASSOCIATION

(INCORPORATED)

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-8

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DAVID W. WINTER

OFFICE OF THE SECRETARY

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Fifty-seventh Annual Awards Banquet

MEMORIAL SERVICES WIRELESS OPERATORS MONUMENT Battery Park, New York

FRIDAY, MAY 21, 1982 – 4 P.M.

Dinner Program

RECEPTION 5:30

DINNER 6:30 PM

Parapet Room, Officers Club Governors Island, New York

MARCONI MEMORIAL GOLD MEDALS

DR. KEATS A. PULLEN, JR. Gold Medal of Achievement PROFESSOR ROBERT E. STUHLER Gold Medal of Achievement CAPTAIN GORDON F. HEMPTON, USCG (RET.) Gold Medal of Service

> MARCONI MEMORIAL SCROLL OF HONOR to RADIO OFFICER PAUL CONATY (Posthumous)

DEFOREST AUDION GOLD MEDAL AWARD to LT. COL. HARRY BLATT, USAFR (RET.)

AWARD OF ARC/SPARK CERTIFICATES

Remarks by- CAPTAIN GORDON F. HEMPTON, USCG (RET.)

ANNUAL MESSAGE FROM OUR HONORARY PRESIDENT



To all of my friends in the Veteran Wireless Operators Association, welcome to our annual meeting. Regrettably, the business of the Senate, being the uncertain thing that it is, has not allowed me to be with you for the meeting. All of us who are involved in the field of communications should be happy with what we are seeing in technological development as well as some of the important, new legislative initiatives in this area.

The Congress is finally beginning to make some long-needed changes in the legislative framework that we have worked under for more than forty years. Hopefully, by this time next year, the regulatory and legislative climate will have been updated to allow all of us to enjoy the benefits of the technological revolution that is upon us. In the meantime, your interest and contribution will be of inestimable value to our field.

My best wishes for an enjoyable and productive meeting.

Barry Goldwater

PAST HONORARY PRESIDENTS

1929-1937 HERBERT HOOVER, 31st President of the United States 1937-1938 SENATORE GUGLIELMO MARCONI 1939-1961 DR. LEE DE FOREST 1961-1971 DAVID SARNOFF, Gen. U. S. Army

THE PRESIDENT'S MESSAGE

JAMES C. HEPBURN

Tonight we pause to reflect over the 57 years of accomplishment and sacrifice by members of the association. We are proud to add 4 new names to the roster of veterans who have made significant contributions to the wireless art. Their accomplishments are cited in the pages that follow and noted by the award of the Marconi and DeForest medals.

Sadly, we add another name to the monument in Battery Park, which is the roll of those keys made silent by the angry sea.

I extend my congratulations to those who have won honors tonight and I extend my sympathies to the family of our brother who we lost at sea.

Significant changes are taking place in our industry which reflect advances in technology on one hand and changing patterns of government regulations on the other. Many of our members are the architects of the new scenarios in telecommunications. I look forward to the success and to reading about them in future editions of the Veteran Wireless Operators Association Yearbook.



PAST PRESIDENTS

FRED A. KLINGENSCHMITT GEORGE H. CLARK ELMO N. PICKERILL LAWRENCE D. JAMESON JAMES F. J. MAHER WILLIAM J. McAGONIGLE WM. C. SIMON FRED MULLER RAYMOND F. GUY HARVEY R. BUTT, SR. HATTON C. WILKS JACK R. POPPELE BENJAMIN WOLFE GEORGE B. RILEY

DE FOREST AUDION AWARD LT. COL. HARRY BLATT USAFR (RET.)

Col. Harry Blatt graduated from the Radiomarine Corporation of America School in New York City in 1930. For the next eleven years he served as radio officer aboard numerous freighters, tankers, and passenger ships, the last five years as First Radio Officer aboard the US Lines SS Manhattan. During this period he was active in the founding of The American Radio Telegraphists Association—the forerunner of the present American Radio Association.

In 1941, Col Blatt joined Trans World Airlines as an air to ground and point to point radio operator. With the exception of three years (1942-1945) out for military service, he remained with TWA for 35 years, retiring in 1976 as Manager of Telecommunications at headquarters in New York.

In 1942, Col. Blatt was commissioned a Second Lieutenant in the Army Air Corps. He served overseas for 18 months as Wing Communications Officer with the 14th Air Force in Kunming, China. He was discharged in 1945 with the rank of Captain and accepted a commission with the Active Air Force Reserve, where



he served for many years. He was placed on the Inactive Air Force Reserve List with the rank of Lt. Colonel.

Col. Blatt has been an active member of the Veteran Wireless Operators Association for many years. He was elected to the Board of Directors in 1976 and became Chairman of the Board in 1981. Along with Past President and Chairman of the Board, George Riley, he was instrumental in obtaining vintage marine radio equipment for the development of the exhibit aboard the Lightship Ambrose which is now at the South Street Seaport Museum. Col Blatt is currently in charge of the exhibit and is responsible for scheduling operation and watch assignments.

In recognition of his many years of faithful service and especially his continuing efforts to establish and maintain the marine radio exhibit at the South Street Seaport Museum, the Veteran Wireless Operators Association presents the DeForest Audion Award to Col. Harry Blatt.

MARCONI MEMORIAL GOLD MEDAL OF ACHIEVEMENT

DR. KEATS A. PULLEN, JR.

Dr. Keats A. Pullen, Jr. was born in 1916 in Onawa, Iowa. He received his early education in the public school system in Los Gatos, California. He earned a bachelor degree in Physics at the California Institute of Technology in 1939. During World War II he taught war training courses at Johns Hopkins University while working toward his Doctor of Engineering degree, which he received in 1946.

During the summer of 1946, Dr. Pullen served as an electronic engineer at Aberdeen Proving Ground, Maryland in the Ballistic Research Laboratories. During the academic year 1946-1947 he was an instructor at Pratt Institute of Brooklyn. He also taught graduate and advanced under-graduate courses in electronic engineering subjects at the University of Delaware (1954-1959) and Drexel University (1960-1965)

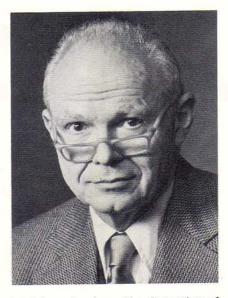
In 1947 Dr. Pullen returned to the Ballistic Research Laboratories and has been associated with that organization ever since. He is currently on the technical staff of the US Army Material System Analysis Activity. Dr. Pullen's work has been

primarily in the field of electronic tracking of guided missiles with special emphasis on the detection of weak signals embedded in random noise. He served as a consultant to the U.S. Corps of Engineers in the development of the first satellite survey system used to check the primary coordinates for the continents. He is currently concerned with the improvement of the survival of electronic equipment in hostile environments and in reducing power dissipation requirements for portable equipment.

Dr. Pullen is the widely published author of literally hundreds of technical reports and papers. He is the author of seven books, the latest of which, "Design of Transistor Circuits with Experiments", was published in 1979. He is a Registered Professional Engineer in the state of Maryland and is the holder of several patents.

During the 1950's, Dr. Pullen served on the Executive Committee of the Maryland Section of the American Institute of Electrical Engineers (AIEE) and as an officer of the Baltimore Section of the Institute of Electrical and Electronic Engineers (IEEE) in the 1960's. He was Section Chairman in 1966-1967. He was awarded Fellow status in the AIEE in 1962.

In recognition of his many contributions to the science of radio engineering, the Veteran Wireless Operators Association is pleased to award the Marconi Memorial Gold Medal of Achievement to Dr. Keats A. Pullen, Jr.



MARCONI MEMORIAL GOLD MEDAL OF ACHIEVEMENT PROFESSOR ROBERT E. STUHLER

Professor Robert E. Stuhler is a native of New York City and grew up in Elmhurst, Queens. In the late 1930's he became interested in radio and in 1939 obtained his first amateur radio license with the call W2NMH, and in 1941 his commercial telegraph and telephone licenses.

During his high school years, Professor Stuhler was employed in his father's machine ship. During summer vacations he worked as a tester at the Andrea Radio Corporation in Long Island City and was also employed by the old Federal Telegraph Company building low and medium frequency transmitters and direction finders. During his last year in high school he worked as a technician at the WOV and WNEW transmitters in the Jersey meadows. After graduation he remained with WOV and WNEW with the exception of the summer vacations of 1946 and 1947 when he sailed as relief operator on several tankers and cargo vessels.



In 1949 the sudden death of his father made it necessary for him to enter the family business (machine shop and pile driving contracting). He remained active with both companies until they were sold in 1980.

In 1945 Professor Stuhler entered the Polytechnic Institute of Brooklyn where, by attending evening sessions, he earned a Bachelor of Electrical Engineering degree in 1952 and his Masters degree in 1956. Having become a college "drop-in", he continued his education and received an MS degree in Oceanography from Long Island University in 1969 and an MS degree in Geophysics from Columbia University in 1976. He is presently working on his Doctoral dissertation.

Professor Stuhler still holds his FCC commercial and Coast Guard licenses but doubts if he will return to active sea duty as he holds a National Board Certificate as a Registered Professional Engineer and maintains a consulting practice. He is also licensed as a land and sea pilot and teaches classes in Geophysics at the Columbia University School of Mines.

Professor Stuhler is a member of numerous professional and amateur societies: National Society of Professional Engineers, New York Academy of Science, American Arbitration Association, American Geophysical Union, Fellow of The Explorers Club, Society of Wireless Pioneers, Quarter Century Wireless Association, The American Radio Relay League, and The Veteran Wireless Operators Association. He lives in Massapequa, Long Island with his wife, the former June Pace, and one daughter, Linda. He enjoys hunting, boating, flying, and operating his amateur radio station W2OQ.

Professor Stuhler's career parallels that of many VWOA members who started their life's work via the amateur radio and marine radio operator route and continued on to other fields. In awarding the Marconi Gold Medal to Professor Stuhler, the VWOA recognizes his many achievements.

MARCONI MEMORIAL GOLD MEDAL OF SERVICE

CAPTAIN GORDON F. HEMPTON USCG (RET.)

Captain Gordon F. Hempton graduated from the US Coast Guard Academy in 1944 and from the US Naval Postgraduate School in 1953. He served 12 years at sea -4 in command of major Coast Guard cutters. His sea duty included convoying in the North Atlantic, International Ice Patrol, weather patrol, fisheries patrol, buoy tending, search and rescue, and military readiness. His experience in extensive searches for survivors at sea influenced his lifelong efforts to promote better maritime safety through the use of radio.

From 1967 to 1972, Captain Hempton served as Chief of Communications at Coast Guard Headquarters, Washington. During this period he substantially modernized Coast Guard communications by introducing the use of Single Sideband Telephony, Narrow Band Direct Printing Telegraphy, a coast-wide system of VHF telephony, and construction of new long range coast stations which are still the most modern in the world. Also, during this time he headed the U.S. preparatory work for the Intergovernmental Maritime Consultative Organization (IMCO)



Sub-Committee on Radio Communications. Through tests made on Coast Guard cutters using satellite techniques he helped initiate a world-wide interest in maritime communications via satellite. This resulted in the International Maritime Satellite (INMARSAT) system which became operational on February 1, 1982. He was Chairman of the IMCO Working Group which specified the operational requirements for a maritime satellite system and was the US spokesman on the technical panel of the IMCO Panel of Experts which led to the INMARSAT conferences in London. One of the primary concerns of the INMARSAT Convention was maritime safety.

Upon retirement from the Coast Guard in 1972, Captain Hempton was awarded the Meritorious Service Medal for his work on maritime safety, especially on Emergency Position Indicating Beacons (EPIRB), a device which helps locate survivors at sea.

Following retirement from the Coast Guard, Captain Hempton accepted a position as Chief of the Aviation and Marine Division of the Federal Communications Commission, where he remained until becoming a Special Assistant to the Chief of the Private Radio Bureau in 1980.

During this period, Captain Hempton was active in International Maritime matters. In 1974 he was the US spokesman on Committee B (operational and distress and safety matters) at the Maritime World Administrative Radio Conference. Captain Hempton has been International Vice-Chairman of the International Radio Consultative Committee (CCIR) Study Group 8 (Mobile Services) since 1978 and was named International Chairman in February 1982, at the XV Plenary Assembly in Geneva. He is now the only US Chairman of any CCIR Study Group. He is also Chairman of an IMCO Working Group which is designing a Future Global Maritime Distress and Safety System (FGMDSS) which is expected to become operational in 1990. The new system will employ satellite and other automated devices.

Captain Hempton served for 15 years on the Executive Committee of the Radio Maritime Technical Committee (RTCM) and 13 years on the Executive Committee of the Radio Aviation Technical Commission (RTCA)

The Veteran Wireless Operators Association, in recognition of his many years of service to the maritime interests of the United States, awards the Marconi Memorial Gold Medal of Service to Captain Gordon F. Hempton.

THE VIDEO EXPANSION

By BEN WOLFE - W3BC

In the 80's, in addition to free – over the air television – it may be difficult for you to decide which other methods of T.V. you will want to bring into your home. There is Cable, the Satellite, microwave point to point, over the air subscription television, the Disc system, the video tape recorder both VHS and Betamax, etc. Its really an explosion of technology for the viewers attention.

Cable companies will provide many channels-80 to over 120 channels, giving you-they say instant access to all sorts of programs. A variety of news, and movies are, of course, available on cable. However the cable industry is now reaching beyond entertainment capability and offers a whole new series of service possibilities. For instance-Banking, Security, Shopping at Home, all sorts of data retrieval, Education, Travel Information, etc. Thus cable may turn the future American home into an interactive communications center. The charges for cable service vary from city to city and from service of one kind to another. It has been reported that there are about 4000 cable systems serving about 20,000,000 people at present. That's far short of the approximate 230 million Americans who at one time or the other view over the air Television. However, as the cable system progresses over the next 5 to 10 years, more and more people will be given a choice to view or not view cable.

A Direct Broadcast Satellite (DBS) system has been proposed by Comsat's Satellite Television Corporation, (STC). This system will provide three channels of pay television to subscribers equipped with small earth stations for a monthly fee of about \$25.00. STC Chairman Johnson indicated that the system could be ready by 1985. When the entire system is operational STC expects to reach between five million and seven million homes, or between 6% and 8% of the total television homes. It is contemplated that the home receiving dish antenna will have a diameter of between 0.6 meter and 0.9 meter, depending on the signal strength in the area they are installed.

Some people have already built their own Satellite receiving stations. In an article in *Radio Electronics*, Robert B. Cooper tells you how to build it and what you can watch. In North America the Satellite geosynchronous positions go from about 70 degrees west longitude to approximately 135 degrees west. If correct vertical polarization is used it is only necessary to rotate your receiving satellite dish azimuth wise and of course know the longitude of the Satellite you are aiming for to obtain a clear picture. If you are really interested in building your own homebrew satellite I suggest that you send to *Radio Electronics* for their 1980 special reprint on "Building a Backyard Satellite TV receiver" by Robert B. Cooper, Jr. Heathkit also sells complete Satellite dishes and equipment for the home. Incidentally, the satellite uplink frequencies are 5900 Mhz - 6400 Mhz, and the downlink frequencies are 3700 Mhz - 4200 Mhz.

Certain terrestrial television broadcast stations have become known as subscription broadcasters. These stations scramble their video and audio, and if you buy their service, furnish you with a demodulator to unscramble the video and audio. This again is pay television and in some parts of the country has become quite popular.

In addition to all of this, the home video recorder and disc units have become very popular in the last year and a half. Movies are available, for a fee, and, of course, the machine permits one to video tape programs for later viewing. The disc machine does not provide for taping video, but is a playback machine only. I should mention that the video tape machines are in general known as the VHS and Betamax types. Because of the difference in tape winding and heads used, these machines are not compatable with each other. Both have made inroads into the home and are reported to be popular items.

Comes now another new system of Video known as High Definition Television. This system is being pioneered by the Japanese and C.B.S. Not long ago, the writer had a chance to view this high definition system and compare it to the present NTSC system. I must conclude there was, indeed, a noted improvement in picture definition. However, High Definition T.V. requires 1100 horizontal line standard and thus would require a specialized television receiver. In addition the transmission of H.D.T.V. requires a bandwidth of between 25 and 30 Mhz. The present allocation of the television broadcast system in the United States permits a T.V. bandwidth of only 6 Mhz. Thus, in addition to the receiver we have a transmitting problem. The Japan Broadcasting Corporation (NHK) which has done primary research in H.D.T.V. believes (1980 I.E.E.E. Transactions on Broadcasting) "The developement of a high definition television system is essential to meet the social demands of post - industrial societies". "Viewers will not remain content with what they had 30 years ago in the field of television" It is their belief as well as others that receiving and transmitting standards and methods will eventually change or be modified to meet the new as well as old standards. Present methods to transmit such wide band signals would appear to be feasible with Satellite direct transmission coupled, of course, with a receiver designed for wide band standards. Not all broadcasters agree with high definition television however, the Japanese are continuing their research for transmission from the 22 Ghz and 12 Ghz Satellite band.

> BIBLIOGRAPHY AND REFERENCES Radio Electronics—R.B. Cooper—Building a Backyard T.V. Satellite Receiver. Broadcasting Magazine I.E.E.E.—1980 Transactions on Broadcasting Comcast Corp.—The Wired Nation

THE FUTURE GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM

GORDON F. HEMPTON Federal Communications Commission

The Maritime Mobile Service is the oldest radio service. The maritime distress system goes back seventy years to the Titanic disaster in 1912. Essentially, our present distress and safety system is not much changed today. Statistics published by Lloyd's of London show there is an average annual loss of 260 vessels over 100 gross tons in size. Further, there have been many recent instances where large ships have sunk without alerting anyone to their distress situation. The time has come for a new improved distress and safety based upon current technology.

Serious work to plan and develop a Future Global Maritime Distress and Safety System (FGMDSS) was commenced in 1979. Two important conferences were held that year. At Hamburg a new International Maritime Search and Rescue Convention was agreed and at London the Inter-Governmental Maritime Consultative Organization (IMCO) established a Working Group to define a future global maritime distress and safety system to be implemented about 1990. The Safety of Life at Sea Convention, when amended, will be the mechanism to transition to the new system.

Since 1979 considerable work and progress has been made. In December 1980, IMCO unanimously approved the requirements for the FGMDSS and this year the International Radio Consultative Committee (CCIR), working closely with IMCO, gave technical advice with regard to the FGMDSS to Administrations for their use in preparing proposals to the 1983 Mobile World Administrative Radio Conference. The dominant theme of the 1983 MWARC agenda is maritime distress and safety matters. It is expected that the Radio Regulations will be amended at that conference to provide frequencies and other enabling provisions to implement the FGMDSS. The United States has nearly completed drafting its proposals for the 1983 Mobile WARC. In March of this year, IMCO stopped just short of giving final approval to the ship equipment carriage requirements for all convention ships 300 G.R.T. and larger. Final approval of ship equipment carriage requirements is expected at the December 1982 IMCO meeting.

How is the FGMDSS expected to function? As you know, the present distress system is based primarily on the ability of any ship in distress using 500 kHz. or 2182 kHz. to alert a nearby ship which then must proceed to rescue the stricken ship. In other

words the present system depends almost entirely, on ship-to-ship distress alerting. The new system retains the ship-to-ship alerting capability but only to an expected range of 100 miles. The usual distress alerting method, when the ship is not close to shore, will be to alert a Rescue Coordination Center (RCC) ashore using satellite techniques, normally Emergency Position Indicating Beacons (EPIRB), via a cost earth station. An RCC responsible for each specific maritime area of the world will be designated under the Hamburg SAR Convention. Each RCC will have computerized information on ships and search and rescue facilities in its area as well as access to both terrestrial and satellite communications facilities. So when a distress alerting message is received at an RCC, the SAR controller will ascertain, normally from a computer, which ship or ships are best suited to be "rescue alerted" and diverted to assist. Shore-to-ship communications will be via the INMARSAT system if the ships are so equipped, otherwise on appropriate terrestrial frequencies (MF, HF or VHF) using digital selective calling. If the SAR controller wishes to supplement the ship listing given by the computer, he may put out an area broadcast to ships using either or both terrestrial or satellite methods. The rescuing ships will keep the RCC informed of the rescue actions using voice or teleprinter on dedicated frequencies and, if able, will keep the ship in distress informed of their progress and intentions. As the rescue ship approaches, it will be able to communicate and home with the ship in distress or survival craft using 2 MHz. or VHF frequencies.

Some of the new equipment deserves special comment:

- a. Satellite EPIRBs are very important. They are devices that contain the identification number (NID) and current ship position data. They are also expected to contain a 2 MHz. or VHF radio-beacon to provide locating or homing signals. When a ship sinks the satellite EPIRB will float free, access an appropriate satellite, send the ship identification number, position and optionally, the nature of the distress. It also sends signals for homing and it can be manually operated from the bridge.
- b. Digital selective calling will be used to initiate all terrestrial communications except with survival craft. It has the capability to send a complete distress alerting message in the call.

- c. A Narrow Band Direct Printing (NBDP) receiver on 518 kHz. will be used to receive navigational and meteorological warnings.
- d. Low G/T ship earth stations will be available as alternative equipment to HF or INMARSAT equipment.
- e. Each survival craft will probably only be fitted with a 2 MHz. or VHF transceiver.

¹ The minimum specific equipment required on a ship will be determined by the ship's area of operation and equipment redundancy is required only for the most important functions of ship-to-shore distress alerting and transmitting locating (homing) signals. Both synchronous and polar orbiting satellite systems will be used in the FGMDSS. The system will accommodate both Convention and NonConvention ships which are equipped to participate in the system.

Only existing technology is used. Nothing has to be invented however CCIR is planning to coordinate tests of satellite EPIRBS to determine the best modulation method and further tests of digital selective calling is planned.

In summary – a great deal of work and discussion has gone into planning the FGMDSS. It is noteworthy that there is unanimous approval within IM-CO on the FGMDSS requirements and there has been close cooperation by several other involved international organizations. Even the International Civil Aviation Organization (ICAO) is participating in the work as the air carriers may eventually join the system. It is expected that by 1990 or shortly afterwards that the FGMDSS will be fully implemented, working well and saving lives and property.



A typical 1920's shipboard spark gap transmitter (RCA P-8, 2KW) and carborundum crystal receiver (RCA-106D). Picture supplied by member Frank Geisel.

When the Alamance Went Under

BY HARVEY R. BUTT



THERE is a law that for every effect there must be a cause. In the case of the Alamance it may have been the second mate who took the skipper's black kitten ashore one night and suggested with the aid of his shoe that kitty disappear up a dark alley. Kitty never returned. Again, it may have been the numerous improvements made in the rooms of the officers (including Sparks'), and that superstition among mariners that such innovations never do the ship any good.

Whatever the cause, the effects may be traced through a chain of minor mishaps to the climax: the torpedoing of the S. S. Alamance on February 5th, 1918, just off the Irish coast.

In port, considerable difficulty was experienced in taking fuel oil aboard, too, and in the middle of the trip the cabin boy nearly died of heart disease while just outside of the war zone our steering gear carried away and we had to heave to for a

OPERATOR HARVEY R. BUTT we were next to the last ship in the second line, but just before we entered the war zone the positions of several ships were changed, and we were then the second ship in the third line.

On the morning of the 5th we sighted the coasts of Scotland and Ireland, and during the day entered the Irish Sea. Having come so far safely and being then inside, everyone felt secure and gave no more thought to Fritz and his highly explosive strafing.

Lest some wiseacre nod his head knowingly at this juncture, I will add that the convoy was still in formation and was zigzaging. We were surrounded by destroyers, light cruisers, and trawlers, also we were highly "cauliflowered" in the latest American fashion. We carried four-inch guns mounted fore and aft, with a gun crew to man them.

I was sitting in the radio cabin, writing, when I heard a tremendous roar and felt the ship give a lurch to port. I lost no time moving out of the room. I remember being thankful that the door had not jammed. I ran to the next door aft, which was the entrance to my room; it would not open so I ran back to the radio cabin and climbed through a cubbyhole which connected with my room. It didn't take long for me to get into sweaters and coats and get on deck again and up to the bridge. Finding no one there I returned to the main deck, just in time to see one of the boats smashed up, spilling several men into the water. Going up to the lower bridge I found the captain; he told me that there was no need of getting out an SOS. Both of the starboard boats had been smashed by the seas but the two on the port side were intact, although the torpedo hit almost directly under one of them. I hopped into one of these lifeboats and helped to pull away from the ship. We started for a light cruiser which had stopped for us, but on sighting two men in the water a little distance from us we turned and pulled over, but were beaten to them by a small boat sent out from the cruiser. A trawler came alongside then and we climbed aboard, setting the lifeboat adrift. The two men picked up in the water were also put aboard the trawler and proved to be our second mate and a seaman.

While they were changing their clothes I went out on deck and watched the good ship sinking, slowly at first and then faster and faster, till the stern was completely under. She stood on end then for a minute, and dropped out of sight.

When the men had changed their clothes for dry ones given them by the crew of the trawler, we were transferred to the cruiser. There we found the rest of the officers and crew. The officers, including myself, were given the use of the officers' wardroom. A supper of canned willie and hardtack with tea was served, sugar and butter being included. During the night hot whiskies were served regularly to those who wanted them. Next morning a breakfast of fried canned willie and ham, hardtack, butter and sugar was served. Just before dinner we ran alongside the landing stage of Liverpool and were landed. The ship's company agent put us up at various hotels after the alien officers had gone through their usual red tape, and for nine days we lived on fish and chips, without sugar and only a little butter for the war bread.

It was a very happy party that stepped ashore in New York.



EIFFEL TOWER

Reprinted from Marconi Service News April 1918.

Shown Above