



W2WJ

"Hollis"

W. Hollis Hoffman,
740 Kresson Road, R.D.1,
Cherry Hill, New Jersey.

Remarks: *Everything I know
abt. William Harrison Shaw,
Now WB2VJ, is tops. We
call him "Had" others "Bill" You
will never regret any visit with
him. Hope to QSO u agn., 73 Hollis*

NAME: William Hollis Hoffman
 BIRTH DATE: 19 May 1894
 BIRTH PLACE: Cold Spring, Cape May County, New Jersey, United States of America
 DEATH DATE: 19 Mar 1975
 DEATH PLACE: Cherry Hill, Camden County, New Jersey, United States of America
 CEMETERY: New Saint Marys Cemetery
 BURIAL OR CREMATION PLACE: Bellmawr, Camden County, New Jersey, United States of America
 HAS BIO?: Y
 FATHER: William C Hoffman
 MOTHER: Hannah E Hoffman
 SPOUSE: Catherine Hoffman



#252 HOFFMAN, W. Hollis, Sk, W2WJ, Ex-3BT, W9WF, W2BEP, W3ECB. Handle "Hollis". Born May 19, 1894. First 2-way wireless contact 1912. Present occup: Retired Electronics Design Engineer. 1912 Amateur Stn. 3BT. 1913-14 Comm. Radio Operator. 1915-1917 Bell Telephone Co. (Wire Chief). 1917-1919 USNR (Radio Electrician). 1920-1924 Navy Dept. (Jr. Engr.). 1924-30 Burgess Lab's (Design and Devl. Engr.). 1930-33 DeForest Radio and Federal Telephone Co. (Transmitter Design). 1933-59 RCA (Transmitter and Computer Power Supply Design). Member IRE since 1918.

RECOLLECTIONS OF AN "OLD TIMER" WIRELESS OPERATOR

By: W. HOLLIS HOFFMAN, W2WJ

MY RECOLLECTION OF EVENTS STARTS IN THE CAPE MAY AREA OF NEW JERSEY. I WAS BORN AND ATTENDED GRADE SCHOOL IN COLD SPRING, A VILLAGE THREE MILES NORTH OF THE CAPE. CAPE MAY IS ON THE SOUTHERN TIP OF THE STATE, AT THE END OF A PENINSULA WHICH EXTENDS 20 MILES INTO THE SEA. BY OLD TIMERS IT WAS CONSIDERED A GOOD WIRELESS LOCATION.

I WAS BORN IN 1894 AND THE FIRST GREAT NATIONAL NEWS THAT I RECALL WAS THE SHOOTING OF PRESIDENT MCKINLEY IN SEPTEMBER OF 1901. THIS NEWS WAS NOT CARRIED TO COLD SPRING BY WIRELESS. IT WAS, HOWEVER, IN DECEMBER OF THE SAME YEAR THAT MARCONI ACCOMPLISHED HIS FIRST TRANSATLANTIC WIRELESS COMMUNICATION, WITH HIS FAMOUS "S" SIGNAL.

WHILE I WAS STILL ATTENDING GRADE SCHOOL, MY DAD TOOK ME ON A TRIP TO PHILADELPHIA WHERE WE VISITED MY DAD'S 23RD COUSIN. HIS SON (A FEW YEARS MY ELDER) HAD A #6 DRY CELL BATTERY AND A DOOR BELL. I COULDN'T QUITE CONCEIVE WHAT WAS TAKING PLACE BUT FROM THAT MOMENT I KNEW THAT MY LIFE'S WORK MUST BE IN SOME ELECTRIC FIELD. I SAVED PENNIES UNTIL I COULD GET A BATTERY AND BELL AND A LITTLE LATER, MY WHOLE FAMILY LEARNED SOMETHING ABOUT ELECTRICITY. I HAD THEM HOLD TWO RUMFORD YEAST POWDER CANS, ONE IN EACH

 HAND, WITH WIRES CONNECTED FROM THE CANS TO THE TWO TERMINALS OF THE COIL ON THE BELL. THE ENERGY STORED AND DISCHARGED BY THE COILS WAS OF SUFFICIENT VOLTAGE TO CAUSE AN APPRECIABLE SHOCK.

MY NEXT VENTURE IN THE ELECTRICAL PARTS FIELD WAS WITH A SMALL BATTERY OPERATED MOTOR. IT WAS THRILLING TO SEE THE ARMATURE SPIN AROUND, TURNED BY FORCES THAT COULD NOT BE SEEN. A STILL GREATER THRILL WAS OBTAINED WHEN FOLLOWING THE INSTRUCTIONS IN THE ARTICLE BY A SOURCE NOW FORGOTTEN, THE WIRES LEADING TO THE MOTOR FIELD COILS WERE REVERSED AND THE MOTOR ARMATURE CHANGED DIRECTION OF ROTATION. FOR SOME TIME THE REVERSING TECHNIQUE WAS KEPT FROM NEIGHBORHOOD FRIENDS WHILE MY EGO GREW FROM SUPERIOR KNOWLEDGE.

I REMEMBER THAT WHEN I GOT FAR ENOUGH ALONG IN HIGH SCHOOL TO STUDY PHYSICS, ABOUT 1910, THE INSTRUCTOR WOULD OFTEN SET UP SOME PART OF THE SCHOOL'S DEMONSTRATING EQUIPMENT THE EVENING PREVIOUS TO THE CLASS. ONE EVENING HE ATTEMPTED TO SET UP AND DEMONSTRATE THE MORSE TELEGRAPH. HOWEVER, ALTHOUGH THE BATTERIES TESTED OK AND AN AMMETER SHOWED PROPER CURRENT FLOW, - OPERATION OF THE KEY WOULD CAUSE ABSOLUTELY NO ACTION OF THE SOUNDER. I HAVE NEVER FORGOTTEN MY FEELING OF SATISFACTION WHEN, WITH THE CLASS AS AN AUDIENCE, I WAS ABLE TO SHOW THAT THE INSTRUCTOR HAD CONNECTED THE TWO SOUNDER COILS SO THAT THEY WERE "BUCKING" AND THAT REVERSING ONE WOULD CAUSE THEM TO ASSIST AND ALLOW NORMAL OPERATION.

MY WIRELESS GOT QUITE A BOOST AT THIS MID HIGH SCHOOL TIME WHEN FATHER, WHO WAS A CONTRACTOR AND BUILDER, CAME HOME ONE NIGHT WITH A TALE ABOUT HAVING VISITED THE MARCONI, CAPE MAY RADIO STATION (MCY) ON INVITATION OF A DISTANT COUSIN, HAD. SHAW. SHAW WAS A SENIOR OPERATOR AT THE STATION AND HAD GREATLY IMPRESSED DAD WITH A DEMONSTRATION OF HOW THE INVISIBLE MAGNETIC PULL OF AN IRON CORE GADGET COULD PULL A HATCHET OUT OF HIS HAND. OF COURSE I SUBSEQUENTLY MANAGED A VISIT TO THE STATION ALSO.

ABOUT THE BEGINNING OF MY LAST YEAR IN HIGH SCHOOL (1911-12) ONE OF MY FRIENDS INTRODUCED ME TO THE POSSIBILITIES OF THE SILICON, CAT WHISKER DETECTOR, USING EAR PHONES AND THUS STARTED ME TOWARDS A DREAM WORLD FROM WHICH I HAVE NEVER QUITE RETURNED EVEN THOUGH APPROXIMATELY FIFTY YEARS HAVE PASSED. I CANNOT NOW ESTABLISH THE EXACT TIME THAT I BECAME AN "ALL SPARE MONEY" CUSTOMER OF THE ELECTRO IMPORTING CO., J.H. BUNNELL AND THE GERNSBACK PUBLICATIONS BUT AT SOME TIME AND PLACE I BOUGHT A SET OF 75 OHM EARPHONES THAT WERE HEAVY ENOUGH FOR AN ANCHOR; I STILL MARVEL AT HOW WELL THEY WORKED. TO SPIT ON THE CORD TIPS AND RUB THEM TOGETHER WAS A STANDARD SENSITIVITY TEST AND THESE PHONES WITH A SINGLE CENTER POLE AND A DIAPHRAM THAT RESTED ALL AROUND ITS OUTER EDGE ON A CAST IRON SHELL THAT COMPLETED THE MAGNETIC CIRCUIT, PASSED THE TEST WITH FLYING COLORS.

DAD'S PLACE WAS A PART OF THE OLD HOFFMAN HOMESTEAD WITH A LARGE BARN AND FOUR ACRES OF GROUND, SO ANTENNA SPACE WAS NO PROBLEM. THE BARN AT ONE END AND TWO OLD CEDAR FENCE RAILS, NAILED TOGETHER SUPPORTED MY FIRST ANTENNA, AND A DRIVEN WELL OF 1 1/4" PIPE 30 FEET DEEP, FURNISHED A GOOD GROUND. WITH NOTHING EXCEPT THE ANTENNA, THE SILICON DETECTOR AND THE EARPHONES, THE 3 MILE DISTANT, CAPE MAY MCY STATION SIGNALS WERE SOON HEARD. I THINK I MEMORIZED THE CODE "IN NO TIME FLAT", AND IMMEDIATELY STARTED THE PRACTICE OF SPELLING OUT THE LETTERS IN EVERY HEADLINE AND IN THE WORDS OF EVERY STREET AND STORE SIGN, WITH LOUDLY AUDIBLE; - "DIT" DIT "DAH" "DITS". MY SISTERS' SUGGESTIONS OF INSANITY MADE NO DIFFERENCE. I HAD BEEN BITTEN BY THE WIRELESS BUG.

MY INTEREST AT THIS TIME BECAME EVEN MORE INTENSE WHEN I LEARNED THAT TWO OTHER YOUNG COLEB SPRING EDISONS WERE ALSO WIRELESS BUG VICTIMS. THE REALLY ACTIVE ONE THAT GAVE ME MOST COMPETITION IN ALL PHASES OF THE FIELD INCLUDING SHOWMANSHIP WAS A DISTANT COUSIN, ALFRED CRESSE. THE OTHER WAS HARRY SNYDER, WHO LIKED THE WIRELESS IDEA BUT DISLIKED THE CONCENTRATION AND EFFORT REQUIRED TO MASTER THE CODE. OUR LOCATIONS WERE SPACED AROUND A TRIANGLE. ABOUT A MILE APART. WE LEARNED THAT MCY SENT NEWS FOR 20 MINUTES OR A HALF HOUR EACH EVENING TO SHIPS IN THE VICINITY. THE FIRST DIFFICULTY IN USING THIS FOR CODE PRACTICE WAS DUE TO THE 20 TO 22 WORD SPEED EMPLOYED. ANYWAY WE STARTED GETTING THE ANDS, BUTS, THES, OFS, ETC. AND SOON WE WERE COMPETING TO SEE HOW MUCH OF THE TOTAL WE COULD GET. IT WAS A GRAND FEELING WHEN A WINNER DISPLAYED COMPLETE COPY WITH NO ERRORS OR LOSSES.

 WITH CODE RECEPTION CONQUORED, METHODS WERE SOUGHT TO EXTEND THE RANGE OF RECEPTION. WITH THE ADDITION OF AN ANTENNA LOAD COIL, (COTTON COVERED WIRE WOUND ON A CARDBOARD TUBE, WITH A SLIDER DOWN A BARE STRIP), SIGNALS FROM SHIPS AND OTHER LAND STATIONS WERE FOUND. FINALLY, A HOME MADE LOOSE COUPLER WITH A TIN CAN VARIABLE CAPACITOR USING PAPER INSULATION WOULD, WITH THE LOAD COIL, GET LONG WAVE SHIP SIGNALS. THERE WERE FEW DULL MOMENTS

INTERESTING SIDE LIGHTS DEVELOPED AT TIMES. FOR EXAMPLE; ON HOT SUMMER DAYS I WOULD LISTEN, WHEN HOME ON LUNCH HOUR, AND AT TIMES WHEN THERE WAS NOT A CLOUD IN THE SKY DETERMINE THE TYPE AND INTENSITY OF STATIC. IF THERE WERE SEVERE LIGHTENING CRASHES OF SUFFICIENT FREQUENCY, I WOULD PREDICT AFTERNOON OR EVENING THUNDERSTORMS AND HAD QUITE A REPUTATION WITH SOME OF MY ASSOCIATES FOR MY ACCURACY.

FOR A PERIOD IN THE EARLY WIRELESS DAYS, THE GOVERNMENT HAD A STATION AT OR NEAR LEWIS, DEL. IT USED TO SEND TIME SIGNALS TRANSMITTED TO THEM BY LAND LINE FROM THE SAME SOURCE AS ARLINGTON, VA. (NAA). WHEN SIGNALS WERE PICKED UP FROM BOTH STATIONS SIMULTANEOUSLY, A DEFINATE "LAND LINE LAG" COULD BE DETECTED, THE LEWIS SIGNALS LAGGING SLIGHTLY BEHIND THE SIGNALS OF NAA. OF COURSE, THE TIME SIGNAL RECEPTION ESTABLISHED WE "WIRELESS WIZARDS" AS COMMUNITY RELIABLE SOURCES OF CORRECT TIME, EVEN IF THE BEST TIME PIECE THAT WE COULD AFFORD WAS A DOLLAR INGERSOLL.

I REMEMBER LISTENING, SOMEWHAT AFTER DARK ONE EVENING, AND HEARING LEWIS (12 MILES ACROSS THE DELAWARE BAY), CALL CAPE MAY AND ASK, "WHAT'S THE BIG FIRE OVER THERE"? THE WCY OPERATOR DIDN'T KNOW ABOUT IT BUT WENT OUTSIDE TO LOOK. TO HIS SURPRISE, A LARGE LIVERY STABLE, LESS THAN 3 BLOCKS AWAY WAS BURNING FURIOUSLY. I ALSO WENT OUTSIDE TO LOOK AND FOUND THAT A LARGE SPOT IN THE SKY WAS ALL AGLOW, IN THE DIRECTION OF CAPE MAY.

WHEN WANAMAKER EQUIPPED HIS NEW YORK AND PHILADELPHIA STORES WITH DIRECT COMMUNICATION, (I SEEM TO RECALL, ON OR ABOUT 2500 METERS), IT USED TO BE A PLEASURE TO LISTEN TO THE SNAPPY OPERATION. (CALL LETTERS WERE HI AND HE). PHILADELPHIA WOULD CALL HI HI HE, AND NEW YORK WOULD RESPOND "K". THEN A SERIES OF MESSAGES ABOUT GOODS FROM SHIRTS AND TABLE CLOTHS MIGHT FOLLOW. I REMEMBER THAT ONE DAY THE WHOLE CAPE MAY AREA WAS SUDDENLY DISTURBED BY EARTH TREMORS AND RUMBLING SOUNDS. THERE WAS SPECULATION WHETHER IT COULD HAVE BEEN AN EXPLOSION OR AN EARTHQUAKE. I CLAMPED ON THE EARPHONES. ALL SEEMED NORMAL ON SHIP WAVE LENGTHS, SO I TUNED IN THE WANAMAKER STATIONS JUST IN TIME TO HEAR HE TELL HI THAT A MUNITIONS PLANT DOWN THE DELAWARE RIVER IN THE GIBBSTOWN AREA OF NEW JERSEY HAD BLOWN UP. IT WAS A REAL NEWS SCOOP FOR OUR LITTLE AREA.

I MARVEL TODAY IN THIS AGE OF DOUBLE SUPER-HETS AND SENSITIVE RF AMPLIFIERS HOW ON WINTER EVENINGS IN 1911-12, I LISTENED WITH A CRYSTAL DETECTOR AND A SET OF 75 OHM EARPHONES AND HEARD SIGNALS REGULARLY AT CAPE MAY FROM ALONG THE COAST; FROM BOSTON TO KEY WEST, AND INLAND FROM THE GREAT LAKES. ON LONG WAVES, THERE WAS THE HIGH POWER STATION WCC AT CAPE COD WITH MACHINE SENDING AND RELATIVELY LOW CHARACTERISTIC NOTE. THE GERMANS SET UP THE SAYVILLE, L.I. STATION, WSL, WITH A HIGH PITCHED NOTE. THEY ALWAYS STARTED OFF THEIR NEWS BROADCAST TO SHIPS: "TO DEBEG SHIPS ONLY".

DURING THE SPRING OF 1912 (MY FINAL YEAR IN HIGH SCHOOL), THE TITANIC DISASTER EMPHASIZED THE IMPORTANCE OF SHIP WIRELESS AND THAT SUMMER THE CONGRESS PASSED THE FIRST ACT COMPELLING SHIP USE OF WIRELESS. OPERATORS WERE REQUIRED TO OBTAIN LICENSES AND THANKS TO THE EFFORTS OF EARLY AMATEUR ORGANIZATIONS AROUND NEW YORK AND NEW ENGLAND, THE AMATEUR WAS RECOGNIZED BY THE GOVERNMENT WITH PROVISIONS FOR THE LICENSING OF THEM IN THE NEW LAW. THAT FALL (1912) CRESSE, SNYDER AND HOFFMAN MADE A DAY'S TRIP FROM COLD SPRING TO THE PHILADELPHIA NAVY YARD AND TOOK EXAMINATIONS FOR AMATEUR OPERATING AND STATION LICENSES. CRESSE APPLIED FOR USE OF A TWO INCH SPARK COIL, 36 WATTS INPUT AND HOFFMAN FOR A ONE INCH SPARK COIL, 18 WATTS INPUT. SNYDER DECIDED THE CONDITIONS WERE TOO TOUGH AND DROPPED OUT. CRESSE AND MYSELF COPIED THE "HALF BUZZ, HALF SQUEAL" OMNIGRAPH SIGNALS OF THE TEST WITHOUT DIFFICULTY AND SATISFACTORILY DESCRIBED OHMS, VOLTS WATTS AND COULOMBS IN A WRITTEN TEST. WE WERE SOON THE PROUD OWNERS OF AMATEUR STATION LICENSES "BT FOR HOFFMAN AND 3BU FOR CRESSE. THESE OLD CALLS AND THEIR ASSIGNMENTS ARE STILL LISTED IN COPIES OF THE FIRST DEPARTMENT OF COMMERCE CALL BOOK: "RADIO STATIONS OF THE UNITED STATES", PUBLISHED JULY, 1912.

A LOCAL GENERAL STORE IN THE NEIGHBORHOOD OF COLS SPRING, AT ERMA, OWNED AND OPERATED BY A MR. REUBAN JOHNSON, SUDDENLY REALIZED AN INCREASE IN SALES FOR #6 DRY CELL BATTERIES. SOME PUBLICATION HAD STATED THAT TWO SETS OF BATTERIES CONNECTED SERIES-PARALLEL WOULD LAST THREE TIMES AS LONG AS A SINGLE SET. SO, CRESSE AND I GOT OUR SPARK COILS ON THE AIR ON THIS BASIS. THE RST SYSTEM HADN'T BEEN INVENTED AND MY MEMORY DOESN'T RECALL ALL DETAILS BUT I THINK THERE WAS BRAGGING OF, "READING YOU WITH PHONES ON THE TABLE". ANYWAY COMMUNICATION OVER THE MILE BETWEEN 3BT AND 3BU WAS ESTABLISHED AND COMPLETELY SUCCESSFUL EXCEPT FOR AN OCCASIONAL "AS" WHILE WE CLEANED A PITTED VIBRATOR CONTACT ON ONE OF THE SPARK COILS.

CRESSE HAD AN UNCLE WHO AT THIS TIME WAS A NEW JERSEY STATE SENATOR, THE HONORABLE SENATOR (BOB) HAND. THIS DIDN'T HURT CRESSE'S PRESTIGE ANY IF HE CHOSE TO SWELL OUT HIS CHEST A LITTLE AND ON ONE OCCASION, I REMEMBER HOW HE GENEROUSLY SHARED HIS FUN WITH ME. HIS FOLKS THREW A LITTLE PARTY FOR SEVERAL OF THE LOCAL POLITICIANS. CRESSE STOLE THE LIMELIGHT AND HAD THEM IN THE WIRELESS SHACK. AS I REMEMBER, NOTHING HAD BEEN PREARRANGED BETWEEN US BUT HE CALLED ME AND I HAPPENED TO BE ON THE AIR. WE COMMUNICATED BUT HE COULDN'T CONVINCHE HIS COMPANY THAT IT WAS BEING DONE. THEY SAID, "IF THIS IS SO HAVE HOLLIS CALL YOU ON THE PHONE". OF COURSE I COMPLIED AND THEREAFTER SEVERAL SKEPTICAL POLITITICIANS WERE ADDED TO OUR FEW ADMIRERS. BEFORE THIS, THEY HAD SOMETIMES RESPONDED TO OUR CHATTER ABOUT DIT DAH DIT DIT, SKIN EFFECT, SYNCHRONISM, ETC. BY SAYING "NUTS". INCIDENTALLY I WOUND UP THE EVENING BY JOINING THE PARTY AND ENJOYING IT WITH THEM.

DURING THE EARLY FALL OF 1913, I LEARNED ABOUT THE PHILADELPHIA SCHOOL OF WIRELESS TELEGRAPHY, OPERATED AT THAT TIME BY HEILIG AND APPLEBY. HEILIG WAS ALSO PORT MANAGER FOR THE MARCONI COMPANY AS WELL AS PART TIME OPERATOR OF THE WANEMAKER STATION WHICH WAS HANDLING THE PORT OF PHILADELPHIA FOR THE PHILADELPHIA BOATS ON THEIR WAY UP THE RIVER. AS I WAS FAIRLY PROFICIENT IN HANDLING CODE, I ENTERED SCHOOL AND GRADUATED IN FIVE WEEKS. A FEW INCIDENCES HAVE REMAINED IN MY MEMORY. I REMEMBER ONE DAY AT SCHOOL, THERE WAS A FLASH OF FIRE IN THE CODE PRACTICE ROOM. FOR SOME CURIOUS REASON, ONE OF THE BOYS HAD PUSHED A METAL CLASP, WHICH FORMED THE TOP OF HIS PURSE, ACROSS THE OPEN BLADES OF A 110 VOLT DC KNIFE SWITCH, TO SEE WHAT WOULD HAPPEN. ALL OF THE METAL PARTS OF THE PURSE AND PORTIONS OF THE SWITCH HAD DISAPPEARED. THE LAST WEEK BEFORE I GRADUATED, MR. HEILIG LET ME OPERATE THE LATE NIGHT WATCH AT THE WANEMAKER STATION.

I STILL REMEMBER THE FIRST COMMERCIAL MESSAGE I RECEIVED. IT STARTED OFF, "TO MR. BONGARTZ"---IT WOULD HAVE SEEMED MUCH LESS DIFFICULT IF IT COULD HAVE BEEN TO A SMITH OR A JONES. FINISHING SCHOOL EARLY NOVEMBER, 1913, MEANT A TRIP TO THE NAVY YARD TO TRY FOR A COMMERCIAL LICENSE. THEY GAVE A CODE TEST FIRST AND IF YOU PASSED THAT YOU TOOK A WRITTEN TEST. I STILL REMEMBER THE CODE TEST, USING A HIGH PITCHED BUZZER OPERATED FROM AN OMNOGRAPH, STARTED OFF; SOS SOS SOS STEAMSHIP- - - -LAT- -N LON- - W- - ETC. ETC. AFTER LOOKING OVER OUR PAPERS, OF 13 TRYING FOR LICENSES, 5 INCLUDING MYSELF WERE ALLOWED TO REMAIN FOR THE WRITTEN TEST.

IN LESS THAN A WEEK AFTER GETTING MY 1ST CLASS COMMERCIAL TICKET, HEILIG FOUND AN OPENING FOR ME AS SECOND OPERATOR ON THE MERCHANTS AND MINERS SS INDIAN, RUNNING PHILADELPHIA TO BOSTON. SALARY WAS \$30.00 PER MONTH AND BOARD. THE FIRST OPERATOR WAS NAMED QUINLAN, A GOOD OPERATOR AND WITH CONSIDERABLY WORLDLY EXPERIENCE. HIS NERVE AND SELF-CONFIDENCE WERE OF VALUABLE ASSISTANCE TO ME. AT BOSTON WE DOCKED AT THE FOOT OF HANOVER STREET, NEAR THE HOME LONEY CHOCOLATES. THEY SOLD MARRIED CHOCOLATES THERE AT HALF PRICE SO WHEN WE LEFT BOSTON FOR PHILADELPHIA, I HAD MY "TUMMY" FULL. WE CAME SOUTH AROUND CAPE COD THAT NIGHT INTO THE FURY OF A STRONG NORTHEAST STORM. THE SS INDIAN ROLLED 37 DEGREES AND HAVING FAILED TO CLOSE THE MAIN DOOR TO THE RADIO ROOM, WE SHIPPED WATER THRU THE SLATS OF AN INNER VENTILATING DOOR. ABOUT AN INCH OF WATER ON THE DECK BECAME THREE OR FOUR INCHES DEEP AROUND THE MOTOR GENERATOR, FOR THE RADIO TRANSMITTER, WHEN WE ROLLED TO STARBOARD. FORTUNATELY IT DIDN'T REACH THE GENERATOR WINDINGS. I FED THE FISH WITH THE CHOCOLATES I HAD EATEN.

AFTER FOUR ROUND TRIPS TO BOSTON, HEILIG TRANSFERRED ME TO THE SUN OIL CO. TANKER, THE SS TOLEDO. THE USUAL RUN FOR THE SS TOLEDO WAS FROM MARCUS HOOK BELOW PHILADELPHIA TO SABINE PASS, TEX. AS THE RADIO WAS ONLY CARRIED FOR THEIR OWN CONVENIENCE, I WAS THE ONLY OPERATOR. THE RADIO TRANSMITTER ON SS INDIAN AND ON THE SS TOLEDO, LIKE MUCH OF THE SHIP EQUIPMENT USED BY MARCONI AT THIS TIME, USED ROTARY SPARK GAPS. THE GAP

CONSISTED OF A BAR ABOUT TEN INCHES LONG, FASTENED AT IT'S CENTER TO A MOTOR SHAFT¹ WHICH WHEN OPERATED, SPUN AROUND BETWEEN ABOUT A HALF DOZEN SETS OF FIXED POINTS ON SEMI-CIRCULAR SEGMENTS, THE POINTS WERE ADJUSTED TO POSITIONS AS CLOSE AS POSSIBLE TO THE SPINNING BAR AND THE RESULTING SOMEWHAT IRREGULAR SPARK NOTE WAS NOT UNPLEASANT, PROBABLY IN THE 200 TO 300 CYCLE RANGE.

AFTER A TRIP TO SABINE PASS, THE SS TOLEDO WAS SENT TO BAYONNE, N.J. TO TAKE A LOAD OF GAS OIL TO HAVANA CUBA. JUST AT THIS TIME THE NARCONI CO. GOT INTO A LEGAL BATTLE WITH THE TELEFUNKIN CO. AND BEFORE LEAVING PORT THE MARCONI MAINTENANCE MAN CAME ABOARD. HE SAID THAT WE WERE FORBIDDEN TO USE THE ROTARY GAP AND ALTHOUGH LEAVING IT IN PLACE, INSTALLED A SET OF FIXED POINTS ACROSSIT. THIS FIXED GAP MADE AN UNPLEASANT 60 CYCLE BUZZ AND ALLOWED ANTENNA VOLTAGES TO INCREASE, PROBABLY SEVERAL TIMES. AFTER LEAVING NEW YORK HARBOR THAT EVENING, I STARTED SENDING OUR POSITION USING THE FIXED GAP, WHEN THE THIRD MATE CAME RUSHING INTO THE RADIO SHACK, SHOUTING, "YOU WILL SET THE SHIP AFIRE, SHUT THAT THING DOWN!". WHEN TRANSMITTING, THE ANTENNA DOWN LEAD, CLOSE OVER ONE OF THE SHIP'S VENT PIPES, WAS GLOWING FROM END TO END WITH A VIOLET COLORED CORONA DISCHARGE.

I REMEMBERED SOME OF QUINLAN'S STUNTS, SO I RIPPED OFF THE FIXED GAP POINTS WROTE UP THE INCIDENT IN THE LOG AND THEREAFTER USED THE OLD ROTARY GAP WITHOUT FURTHER DIFFICULTY. I SAW SOME ROUGH TRIPS ON THAT OLD TUB. AFTER ONE ROUGH NIGHT, COMING UP THE ATLANTIC, I WENT ON WATCH IN EARLY MORNING TO LEARN THAT I HAD JUST MISSED AN SOS. ANOTHER TANKER, THE SS OKLAHOMA BROKE IN HALF, ONLY A FEW MILES FROM US. OTHER BOATS WERE WERE ALSO NEAR TO THE TWO SECTIONS, STILL AFLOAT AND OUR CAPT. NELSON REFUSED TO JOIN IN EFFORTS OF ASSISTANCE.

THE SS TOLEDO WAS SO SLOW, WHEN LOADED, (ABOUT SIX KNOTS), THAT WE USED TO CATCH SEA BASS AND SPANISH MACKEREL BY TROLL LINE. I LEARNED, INCIDENTALLY, THAT TANKERS THAT USUALLY CARRY CRUDE OIL, SOMETIMES CHANGE AND CARRY A LOAD OF MOLASSES. THE TANKS ARE STEAMED OUT BEFORE LOADING AND THE MOLASSES IS REFINED AFTER UNLOADING.

MY NEXT ASSIGNMENT INVOLVED A TRANSFER TO NORFOLK, VA. WHERE MR. C.J. PANNILL WAS SOUTHERN DISTRICT MANAGER, WITH HIS OFFICE IN BALTIMORE. I WAS ASSIGNED TO THE SS RESCUE, AN OCEAN GOING SALVAGE TUG BOAT OF THE MERITT AND CHAPMAN WRECKING CO. AFTER SOME VERY INTERESTING SALVAGE WORK IN THE WEST INDIES, WE HAD A RENDEZVOUS AT KINGSTON, JAMAICA, WITH A SISTER SHIP OF THE COMPANY, THE SS MERRITT. THE SKIPPER WAS HIS OWN OPERATOR, AND FURNISHED HIS OWN EQUIPMENT. HE WAS USING ONE OF THE FIRST DE FOREST AUDIONS, TOGETHER WITH A TUNER THAT WOULD TUNE TO LONG WAVES. IT WAS HEART-BREAKING TO PULL IN SAYVILLE (WSL), PRESS NEWS ON HIS RIG AND THEN GO BACK TO RELATIVELY LOCAL RECEPTION ONLY. ON MY CARBORUNDUM DETECTOR.

AFTER WE RETURNED TO NORFOLK, I WAS ASSIGNED TO THE LATE NIGHT WATCH AT THE VIRGINIA BEACH LAND STATION, WSY. DURING THE RELATIVELY SHORT STAY ON THIS ASSIGNMENT (DURING JUNE 1914), I RECALL SOME INTERESTING HAPPENINGS. FIRST, I LEARNED THAT CRESSE MY 3BU-3BT SIDE KICK, HAD GOTTEN HIS COMMERCIAL LICENSE AND WAS ON HIS WAY TO NORFOLK ON THE SS POWHATAN, AND AFTER ARRIVAL, WE HAD A PLEASANT REUNION.

ON THIS (WSY) ASSIGNMENT, I HEARD MY FIRST WIRELESS VOICE. A PLAY BOY HAD EQUIPPED A PRIVATE YACHT WITH WHAT WAS SUPPOSED TO BE MODULATED ARC. (MY MEMORY FAILS ME CONCERNING THE NAME OF THE YACHT AND WHO WAS OPERATING IT). THE SIGNAL CONSISTED OF A LOUD AND FUZZY BUZZ ON WHICH THERE WAS A RELATIVELY WEAK VOICE MODULATION WITH SOME WORDS DISCERNABLE. HIS SIGNALS BLANKED OUT A WIDE BAND AND BEFORE MY NIGHT WATCH WAS OVER, I WAS ASKING HIM TO QRT SO THAT I COULD HANDLE TRAFFIC. IF HE COULD READ CODE HE IGNORED MY PLEADING. HIS SIGNALS FINALLY FADED OUT ON HIS WAY UP THE BAY TO BALTIMORE.

THE MANAGER OF WSY, MR. GARDINER, WAS MY BOSS AND HANDLED SOME OF THE OPERATOR ASSIGNMENTS TO NORFOLK SHIPS. AFTER I WAS BEGINNING TO LIKE WSY, LAND STATION OPERATING HE GOT A PHONE CALL, ONE DAY FROM CAPT. RANSOME OF THE SS RESCUE, STATING THAT HE WAS LEAVING FOR COLUMBIA, SOUTH AMERICA. COULD HE HAVE HOFFMAN FOR HIS OPERATOR? I SAID "NO SO, THE BOSS SENT A MESSAGE TO PANNILL AT BALTIMORE FOR A DECISION. ON MY LATE WATCH THAT NIGHT I HANDLED A MESSAGE: PANILL TO GARDINER, IT SAID; "SEND HOFFMAN".

THE SS RESCUE WAS FINALLY SENT TO NEW YORK TO BE TAKEN OUT OF SERVICE FOR A MAJOR OVERHAUL, SO I HAD TO SEEK REASSIGNMENT FROM MR. EDWARDS, MANAGER OF THE MARCONI NEW YORK OFFICE. HE ASSIGNED ME TO THE SS EL RIO, 1ST OPERATOR, RUNNING NEW YORK, GALVESTON. ONE THING I LIKE IMMEDIATELY. THE TRANSMITTER EMPLOYED A 240 CYCLE MOTOR GENERATOR WITH A SYNCHRONOUS SPARK GAP ON THE END OF THE ALTERNATOR SHAFT. I WAS ABLE TO TRANSMIT GREATER DISTANCES, HAD A SMOOTH 240 CYCLE NOTE AND THOROUGHLY ENJOYED RELAYING MESSAGES FOR OTHER LESS FORTUNATE SHIPS THAT WERE UNABLE TO GET THEIR TRAFFIC THRU.

AT THIS TIME THE WAR BROKE OUT IN EUROPE. EVERYONE WAS EAGER FOR NEWS. MY SECOND OPERATOR, CLARENCE STURZ AND MYSELF FED HOT NEWS TO THE CREW BY THE REAM. I TOOK THE WATCH ONE NIGHT WHEN WE WERE NEARING THE FLORIDA KEYS FROM GALVESTON, DURING A SEVERE THUNDER STORM. ALTHOUGH QRN WAS BAD, I TRIED TO COPY NEWS FROM TAMPA (WPD) WHEN SUDDENLY LIGHTENING STRUCK THE SHIP. IT KNOCKED ME OUT OF THE CHAIR, SET THE RECEIVER ON FIRE AND BURST A WATER PIPE BELOW DECKS. I ALWAYS GAVE A PENCIL CREDIT FOR SAVING MY LIFE. IT WAS LAYING ACROSS THE BLADES OF OUR TRANSMITT-RECEIVE SWITCH. (WHICH WAS FROM ANTENNA TO GROUND). THE PENCIL WAS SHATTERED UNTIL THERE WAS NO PIECE OF IT LEFT LARGER THAN A MATCH STICK. WE REPAIRED AN OPEN COIL IN THE RECEIVER AND I NURSED A LAME SHOULDER THAT I HAD LEANING AGAINST THE GROUNDED BULKHEAD. NO MORE NEWS GOT COPIED THAT NIGHT.

MY DEPARTURE FROM COMMERCIAL "WIRELESS OPERATOR" ACTIVITIES WAS HASTENED BY A PECULIAR HAPPENING. I DEVELOPED A YEARNING TO GET INTO WORK THAT I BELIEVED OFFERED A BETTER LONG TIME CAREER AND OPPORTUNITY TO STUDY ON THE SIDE; HOWEVER I WAS QUITE AGGRAVATED AT THE MARCONI CO. BECAUSE THEY FAILED TO PAY ME FOR A WEEK WHEN THEY TRANSFERRED ME TO NORFOLK. THE OFFICE CLAIMED THAT I HAD BEEN PAID AND I WAS SURE I HADN'T. THE ARGUMENT WAS CLEARED UP WHEN, AFTER ABOUT A YEAR AFTER MY RESIGNATION, I RECEIVED A LETTER, (I FORGOT WHO SENT IT), STATING THAT DURING REMODELING OF A SECTION OF THE PHILADELPHIA WANAMAKER STORE, THE ENCLOSED LETTER HAD BEEN FOUND, STUCK IN A MAIL CHUTE THE LETTER CONTAINED THE MARCONI WEEKS PAY.

DURING 1915 AND INTO 1917, I BECME ACTIVE IN TELEPHONE MAINTENANCE WORK AND SUBSEQUENTLY GOT ASSIGNED AS WIRE CHIEF AT COLLINGSWOOD, N.J. HERE I JOINED IN WITH HARRY PHILLIPS, BILL DENSHAW AND OTHERS IN AMATEUR RADIO ACTIVITY UNTIL THE UNITE STATES BECAME INVOLVED IN WORLD WAR I. I WAS OF DRAFT AGE AND NATURALLY FAVORED NAVY ACTIVITIES, SO I ENLISTED IN THE U S NAVY RESERVE FORCE.

DENSHAM TOGETHER WITH AMATEURS IN THE AREA ORGANIZED THE SOUTH JERSEY RADIO ASSOCIATION. THIS RADIO CLUB HAS KEPT ACTIVE AND AFTER 45 YEARS SINCE MY FIRST ACQUAINTANCE WITH DENSHAM, I AM GLAD TO BECOME A SJRA MEMBER AND RENEW CONTACTS WITH HARRY, WHO IS NOW K3EH.

MOST OF MY USNRF, 1917-18 WINTER WAS SPENT IN LISTENING AND COMPASS STATIONS ALONG THE ATLANTIC COAST WHERE WE KEPT WATCH FOR GERMAN SUBS. AT ONE STATION ON YOUNG'S MILLION DOLLAR PIER, ATLANTIC CITY, WE ALSO INSTALLED A SPARK TRANSMITTER. WE ALSO TRAINED OPERATORS AS MOST OF THE BOYS HAD NOT HAD OTHER THAN SOME SCHOOL PRACTICE. THE STATION WAS OUT OVER THE WATER, IN A PAVILION THAT HAD AN OVERHEAD LOFT WHICH WE USED FOR SLEEPING QUARTERS FOR THE OPERATORS SCHEDULED TO TAKE THE NEXT WATCH.

TO CALL THE SLEEPING OPERATOR. A COUPLE OF WE "OLD TIMERS" STARTED THE PRACTICE OF START+ ED THE PRACTICE OF STARTING UP THE TRANSMITTER, DISCONNECTING THE ANTENNA AND TAPPING OUT RISE AND SHINE ON THE NOISY, CRACKLING SPARK GAP. THIS WAS OK UNTIL WATCHES WERE CHANGED AROUND AND AN INEXPERIENCED GUY DIDN'T REMEMBER TO DISCONNECT THE ANTENNA. RISE AND SHINE SIGNALS WERE REPORTED ALONG THE COAST AND THE UNFORTUNATE BUDDY WAS RELIEVED AND DEPRIVED OF LIBERTY FOR A CONSIDERABLE PERIOD. I SUBSEQUENTLY LOST TRACK OF THESE BOYS COMPLETELY UNTIL ONE DAY (ATRCA) IN 1959 (AFTER 42 YEARS), I LEARNED THAT I WAS WORKING WITH THE BROTHER-IN-LAW OF ONE OF THE BUDDIES THAT I HAD ROOMED WITH, JOE RILE. FOUND THAT AFTER THE WAR, HE HAD FINISHED SCHOOL AT PENN STATE AND ACCUMULATED A LONG RECORD OF ENGINEERING ACCOMPLISHMENTS WITH THE BELL LABS. J.C RILE IS NOW W2IKO IN SPRINGFIELD N.J.

ONE OF MY COMMANDING OFFICERS IN THE USNRF WAS CHARLIE SERVICE. CHARLIE HAD BEEN ONE OF THE ARRL HEADQUARTERS TECHNICIANS IN EARLY DAYS AND HE WAS INSTRUMENTAL IN GETTING ME AN ASSIGNMENT IN LABORATORY WORK UNDER DR. AUSTIN AT THE BUREAU OF STANDARDS, WASHINGTON, D.C. BELIEVE IT OR NOT WE MADE QUANTITATIVE, RADIO FREQUENCY MEASUREMENTS AT THAT TIME BY CALIBRATING CAT WHISKER DETECTORS TOGETHER WITH SENSITIVE GALVANOMETERS. WE DETERMINED DIFFERENT ANTENNA CHARACTERISTICS FROM A TO Z. WE LAID ANTENNAS UNDER GROUND AND UNDER WATER, AND BUILT LOOPS, LARGE AND SMALL, IN EFFORTS TO ESTABLISH A BETTER SIGNAL TO STATIC RATIO FOR THE IMPROVEMENT OF WIRELESS RECEPTION. WHEN THE WAR ENDED, I TOOK A CIVIL SERVICE EXAMINATION FOR RADIO LABORATORIAN. GOT A MARK IN THE UPPER 80S BUT THERE WERE NO OPENINGS, SO WAS PLACED ON A WAITING LIST. I RETURNED TO TELEPHONE WORK IN THE PHILADELPHIA AREA (1919). ALSO GOT MARRIED.

IN 1920, A LABORATORIAN JOB, BY THE BUREAU OF STEAM ENGINEERING, (NOW THE BUREAU OF SHIPS), BECAME AVAILABLE AND I ACCEPTED LABORATORY WORK IN THE WASHINGTON NAVY YARD. MY FIRST SIZEABLE ACCOMPLISHMENT WAS THE DESIGNING AND "TRIP TESTING" OF THE FIRST TUBE TYPE TRANSMITTER FOR SUBMARINE USE, THE NAVY MODEL "TM". IT EMPLOYED TWO 50 WATT TRANSMITTING TUBES, BACK TO BACK IN AN OSCILLATOR CIRCUIT, OPERATED FROM A 500 CYCLE MOTOR GENERATOR, FORMERLY USED FOR A SPARK TRANSMITTER. THE SPARK TRANSFORMER WAS REDESIGNED AND REWOUND SUITABLY FOR SUPPLYING THE TUBE PLATES BY AN ASSOCIATE LABORATORIAN, HERMAN GRAF. MR. GRAF WAS A MAN THAT ALWAYS DEVOTED HIS BEST EFFORTS TO THE BEST INTERESTS OF THE SS NAVY. HE COMMUTED BETWEEN WASHINGTON AND BALTIMORE FOR ALMOST ALL OF HIS LIFE'S WORKING DAYS.

IN JANUARY 1922, I INSTALLED THE MODEL "TM" ON THE USS R 22 AT NEW LONDON. CONN. DURING JANUARY AND FEBRUARY, WE MADE A TEST TRIP SOUTHWARD INTO THE ATLANTIC AND HAD COMMUNICATION BACK TO NEW LONDON IN DAYLIGHT HOURS, FOR A DISTANCE OF OVER 400 MILES, FROM POINTS MORE THAN 100 MILES SOUTH OF CAPE HATTERAS. THE "TM" TRANSMITTED ON EITHER THE SUBMARINE ANTENNA OR LOOP, ON WAVELENGTHS FROM 500 TO 1000 METERS. (600 TO 300 KILOCYCLES). THIS PERFORMANCE WAS MANY TIMES BETTER THAN SUBS HAD EVER DONE WITH SPARK SETS.

ANOTHER ASSIGNMENT OF INTEREST WHILE I WAS WORKING AT THE WASHINGTON NAVY YARD, WAS TO MEASURE THE HIGH FREQUENCY RESISTANCE AND THE EQUIVALENT CAPACITANCES OF THE BIG ANNAPOLIS (NSS) ANTENNA; - FROM IT'S FUNDAMENTAL FREQUENCY TO 100,000 METERS. IT WAS BEING OPERATED AT ABOUT 17,100 METERS (17.5 KC). IT'S FUNDAMENTAL WAS AROUND 4000 METERS (975 KC). SIGNALS THAT HAD BEEN DETECTED IN WASHINGTON AT 100,000 METERS (IN THE AUDIO BAND), WERE SUBSEQUENTLY TRACED TO EXPERIMENTS OF ALEXANDERSON IN NEW YORK STATE. THE HIGH FREQUENCY RESISTANCE OF THE NSS ANTENNA AND OF THE ANTENNA LOADING COIL, AT THE OPERATING FREQUENCY, WERE FOUND TO BE OF THE ORDER OF 0.5 OHMS EACH. ONE HALF OF THE STATION RF ENERGY WAS BEING DISSIPATED IN THE LOAD COIL.

AFTER ABOUT THREE YEARS IN THE NAVY YARD THE NAVAL RESEARCH LABORATORY AT BELLEVUE, DC WAS PUT INTO OPERATION AND I WAS TRANSFERRED THERE TO WORK UNDER THE VERY CAPABLE AND BRILLIANT SUPERINTENDANT, DR. A. HOYT TAYLOR. (MY RATING BECAME JUNIOR

ENGINEER). I STRUGGLED WITH EVENING COURSES AT GEORGE WASHINGTON UNIVERSITY UNTIL I LEFT WASHINGTON TO GO BACK TO WORK IN THE COMMERCIAL FIELD. I ACCEPTED A JOB WITH BURGESS LABORATORIES AT MADISON, WISCONSIN, WHERE I OPENED UP A LABORATORY SECTION FOR RADIO ACTIVITIES. IN ADDITION TO INVESTIGATING THE PERFORMANCE OF VARIOUS BATTERY RADIO RECEIVERS AND THE MERITS OF "B" ELIMINATORS, WE ESTABLISHED THE RADIO STATION 9EK-9XH AND TOOK PART IN AMATEUR ACTIVITIES.

WE WERE FORTUNATE IN EXPANDING OUR ACTIVITIES TO PERSUADE FRED SCHNELL, DON MIX AND PHIL ZURIAN TO JOIN US IN OUR ENDEAVORS. SCHNELL HAD BEEN ACTIVE IN ARRL HEAD-QUARTERS AND MIX HAD MADE FAME BY KEEPING MACMILLAN IN COMMUNICATION WITH THE NORTH POLE REGION. MIX, WITS HAS BEEN A TECHNICAL EDITOR AT QST FOR A LONG TIME. SCHNELL GAVE THE CHICAGO POLICE RELIABLE RADIO COMMUNICATION AND IN WORLD WAR II BECAME A CAPTAIN IN THE NAVY. HE IS NOW W4CF AFTER RETIREMENT TO BRADENTON, FLA.

FOR A PERIOD FROM LATE 1924 UNTIL AFTER THE ECONOMIC BREAK IN 1929, - WE 9EK-9XH BOYS FURNISHED AMATEUR DATA TO RADIO PUBLICATIONS, INCLUDING QST AND "DO IT YOURSELF" PAMPHLETS TO AMATEURS GENERALLY. WE ESTABLISHED 20 METER COMMUNICATION COMMUNICATION BETWEEN WISCONSIN AND FLORIDA, WHERE DR. BURGESS HAD A SUMMER COTTAGE ON AN ISLAND IN CHARLOTTE HARBOR. MY OWN AMATEUR STATION DURING THESE WISCONSIN ACTIVITIES WAS W9WF.

DURING THE DEPRESSION YEARS, 1930-32, I LIVED IN BLOOMFIELD, N.J., WORKING FOR THE DEFOREST CO. AND THEN FEDERAL TEL. & TEL. CO. AND HAVE MANY FOND RECOLLECTIONS OF MY ASSOCIATIONS WITH ALLEN DUMONT, LOUIS CLEMENT AND HARRIDAN PRATT. ENGINEER HUGO ROMANDER, AT FEDERAL, WAS IN AMATEUR ACTIVITIES AND WROTE ARTICLES FOR QST CONCERNING OPERATION OF GROUNDED GRID AMPLIFIERS. AT BLOOMFIELD, I BECAME W2BEP. I ESPECIALLY ENJOYED TIGHT SCHEDULES WITH FRED SCHNELL IN CHICAGO.

DURING 1933 I JOINED RCA IN CAMDEN, N.J. AND REMAINED WITH THEM UNTIL MY RETIREMENT IN 1959. WHILE RESIDING IN MERCHANTVILLE, N.J. (1933-36), I OBTAINED AMATEUR LICENSE W3ECB, BUT DUE TO OTHER PRESSING ACTIVITIES, I NEVER GOT AROUND TO ERECTING AN ANTENNA. MOST OF MY YEARS AT RCA WERE DEVOTED TO THE DESIGN OF NAVY TYPE RADIO EQUIPMENT.

DURING THE OLD RUM RUNNING DAYS, I TRIP TESTED A TRANSMITTER THAT WE INSTALLED ON A COAST GUARD CUTTER AND AFTER LOCATING A RUM RUNNER OFF THE JERSEY COAST, WE PREVENTED HIM FROM UNLOADING AND CHASED HIM ALL THE WAY TO WARMOUTH, NOVA SCOTIA. WHEN I RETIRED IN 1959, MY RCA ASSOCIATES PRESENTED ME WITH A NC-109 RECEIVER. I PUT UP A 45 FOOT TOWER WITH THE ABLE ASSISTANCE OF OZZIE JAEGER, W2VND. I CONVINCED THE PHILADELPHIA FCC OFFICE THAT I SHOULD AGAIN HAVE AN AMATEUR LICENSE, SO AM BACK ON THE AIR AS A VERY RUSTY HAM, NOW W2WJ. HAVE OBTAINED A B&W 5100-B XMITTER AND HAVE RECENTLY JOINED THE OLD OLD TIMERS CLUB AND THE SOUTH JERSEY RADIO ASSOCIATION. HOPE TO BE A GOOD HAM AGAIN WHEN I GET SOME OF THE RUST SCRAPED OFF. DALE KENTNER, W2ZX AND ED BRADDOCK, W2BAY ARE NEIGHBORS THAT HAVE SET VERY EXCELLENT HAM RECORDS FOR ME TO SHOOT AT.

THANKS HOLLIS FOR A FINE ARTICLE. WE EXPECT MORE OF THEM. OUR MEMBERS ARE SURE TO ENJOY YOUR RECOLLECTIONS. E.E.C.

A LETTER FROM W6KAA OUR VERY GOOD FRIEND TOM STEVENS REPORTS THAT OUR LATEST HONORARY MEMBER, MR. W.D. TERRELL IS IN GOOD HEALTH AND ENJOYING HIMSELF IN MIAMI. WE ARE HAPPY TO REPORT THIS VERY GOOD NEWS CONCERNING A VERY DISTINGUISHED MEMBER.

Cape May Wireless History

Digital media by John Dilks, K2TQN ©

Remember the 'Non Sync' Rotary Gap??

by W. Hollis Hoffman SGP-128

One mid-Summer day in 1914, the Sun Oil Company Tanker, "S.S. TOLEDO" docked at Marcus Hook, Pa., loaded with crude oil from Sabine, Texas. Radio operator "Sparks" Hoffman took-off for a night ashore and upon returning the next afternoon, found a note from R.I. [Radio Inspector] "Morris" stating: Due to patent difficulties, the Marconi Company of America had been denied the use of the non-sync rotary spark gap. A fixed gap had been installed across your rotary and the fixed gap **MUST BE USED** unless some difficulty arises.

That night the SS TOLEDO left the Delaware River and Bay for Bayonne, N. J., with orders to take a load of "gas oil" from Bayonne to Havana, Cuba. Late afternoon, two days later, the loaded tanker was on her way down the Jersey Coast, toward her destination. Sometime after dark, Captain Nelson, personally brought a position message to the radio room. The usual position report to the Steam Ship Company.

Operator "Sparks" had previously kept the rotary spark gap electrodes adjusted as close as possible, without touching, and frequently smeared them with Vaseline.

This produced a somewhat irregular but pleasing 240-cycle note. Now, the newly installed, fixed gap had an appreciable separation. The note was a horrible, fuzzy, 60-cycle monstrosity and a few test dashes indicated that the transformer, secondary voltages were

building-up so high that snappy sparking sometimes jumped the six inches across the bulkhead, bowl insulator.

The position message was the first one to be sent using the fixed gap. Spar~, reluctantly, threw the big, knife switch to "transmit" and started yelling WCY. Almost immediately, rapid, "klank" - "klonk" foot-steps were heard - outside on the steel deck. The Radio shack door was flung open, and in the darkness was visible - the excited eyes and white teeth of the sun-tanned face of the ship's third mate. He was shouting - "Shut that thing down" •• "you will set the ship On fire!"

"Sparks" looked out a port-hole and pressed the key. What a sight! The single wire lead-in from the bulkhead insulator to the mast-height, four wire flat-top antenna was surrounded by about a six foot diameter, deep purple corona glow. The lead-in drooped, diagonally, only a few feet above the top of a Ship's vent pipe. A vent that allowed gasses to escape from the highly volatile "gas oil" in the ships ~.

Sparks grabbed the Radio Inspector's note - and could see only the part that read: "fixed gap must be used unless - - -" He tore off the fixed electrodes and threw them into a trash basket - started the rotary and cleared his traffic with WCY.

Early evening, about three weeks later, the S.S. Toledo again proceeded up the Delaware River with a load of crude oil. Inspector, Morris, was visiting with Port Manager, Heilig. As they listened together to ship traffic, Morris said ••• "Here comes Hoffman using his rotary."

Old Timers Navigation By Wireless

A True Story by "Sparks" W. Hollis Hoffman

The use of the crackling, non-sync spark gap on many steamships in the 1913 era, resulted in many ship officers calling the Wireless Operators "SPARKS" . Captain Nelson, master of the 21,000 barrel tanker, SS TOLEDO, made regular trips from Marcus Hook, on the Delaware River, near Philadelphia to Sabine, Texas bringing back crude oil. The SS Toledo was a tanker with her boilers, engine room, stack and poopdeck at the stern and the pilot house, deck officer quarters and Wireless Room up forward. Midship decks had only a chain for a railing and were only three feet above the water line when the ship was loaded. Tempestuous seas washed across the midship decks when the weather became real rough.

Captain Nelson was small of stature, had a tanned , weather beaten complexion with bleached-out, red hair. He was a typical Swede but spoke good English. His manner was not over-bearing and many times he seemed friendly but he generally kept aloof from most of the other shipboard personnel.

The SS Toledo was equipped with "Wireless" for the convenience of the Steamship Company and therefore employed one Wireless Operator only. The hours of duty were not specified but all outgoing messages were handled and all shore stations contacted for any possible incoming messages. Frequently during pleasant sail Captain Nelson would come to the Wireless room, throw himself across the bunk and talk with "Sparks" concerning all kinds of trivial subjects . He seemed to need a conversational outlet.

All oceans can be extremely rough at times. Few spot of the ocean or sea can show more fury than the great Atlantic Ocean in January. Spark, wireless equipment on ships like the SS Toledo (call KTV) had a possible communication range of two or three hundred miles at best. Direction finders had not yet been invented.

On one trip back north with a full load, in January 1914, Captain Nelson, as he passed the Jupiter Light on the eastern Florida coast, set a course for the Diamond Shoals Lightship - a lightship stationed about twenty miles off shore from Cape Hatteras, N. C.



All ships sailing north, must go around the famous light ship before changing course to a more westerly direction in order to reach Norfolk, Philadelphia or New York. To mistakenly get inshore of the Lightship means certain doom. Soon after leaving Florida's Jupiter Light, the SS Toledo encountered heavy weather. The loaded ship could make only five or six knots per hour. At this rate, the Diamond Shoals Lightship was about five days away.

Captain Nelson had an excellent record as a navigator but the storm continued severe and there was absolutely nothing on which to take a sight . The waves looked like mountains and visibility was limited to one or two boat lengths. Each

engineer on duty, continually grasped the engine throttle and closed it frequently as the ship 's propeller lifted out of water with the passage of each large wave under the ship. On the fifth day the storm still raged. Skipper Nelson had not removed his storm togs all the five days and nights. At the end of the fifth day, the Captain developed a strong intuition that he had missed the Lightship and should change course to the Westward. If he did so and his intuition was wrong, it would be disastrous for the ship and crew.

Sparks was sitting with the head phones clamped to his ears when the Wireless room door opened . There stood Captain. He said: "Sparks, - how near are we to Cape Hatteras?" The only measure 'Sparks' had was by judging the loudness of the Hatteras signals. Sparks hesitated then replied: "The Hatteras signals should be a little louder when we get nearer." The Captain shook his head undecidedly and without replying, left the room. He was hardly out of sight when Sparks received a signal so loud that it seemed it would burn-out the sensitive spot on the crystal detector. The ship sending the signal had to be very near. Sparks called the ship and asked if they knew their position. A reply gave their accurate position as they were bound south from New York and had a few hours previously, passed the Lightship. The data showed the SS Toledo to be about 70 miles south of Diamond Shoals. Sparks, with glee, hurriedly took the information to the Captain. He listened, then said: ... It can't be! It can't be!

If Captain Nelson neither gave to, or accepted from, other ship officers, any suggestions concerning navigation. He seemed to reason, - Why now, should he listen to a young "Whipper Snapper" referred to as "Sparks?" However, he did

not change course. After another torturous night, pitching and rolling, the storm finally abated to the extent that things became visible a few miles distant from the ship. Dawn broke, and there in plain sight was the Diamond Shoals Lightship .

That morning, "Sparks" returned to the Wireless room after getting breakfast. Soon thereafter, the door opened . It was Captain Nelson . He said: "Sparks" ... you were correct concerning our position, last night.

-30-

Hoffman, William Hollis 128-SGP "Hollis"

Hollis started his professional wireless-telegraphing back in 1913 when he was assigned to the SS INDIAN/KKI of the Merchant & Miners Line. In addition to early assignment on the SS TOLEDO he also worked the SS El Rio and was assigned to Virginia Beach (WSY) in 1914. 1917 to 1917 he was assigned to an USNRF "Listening station" and the Bureau of Standards . Early amateur call was 3BT in 1912. Present call W2WJ. Says if we like this 'story' he will send us more, including a 'close all for lightning'. Hollis is one of our Charter members. His current QTH is Cherry Hill N.J. Sends his 73.

Hollis Hoffman, W2WJ, is a SK.
Digital media by John Dilks, K2TQN ©

Note: If anyone has a photo of Hollis, please contact John Dilks, K2TQN
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