Hair-raising Romance Helps Get BN Off To Historic Career

by Art Stockellburg, W70E

Back in 1909 was erected the first commercial station in Boston with the call letters "BN". Bill English came up from New York and hired me to help him open the station.

The station was located at 88 Broadway, on the tenth and top floor of the building. The antenna was hooked to the top of a 75-foot mast on the roof. Two rooms were set up: one for the wireless equipment and the adjoining one for the stock salesman. When a likely customer came in, we put the rig on the air — and believe me, that old open spark was something to hear!

The outfit was built by the United Wireless Co. (part of the old DeForest Co.) and consisted of an open 2-kilowatt core transformer which was under the operating table. If I remember correctly, there was a wooden guard rail around the two-inch safety gap. Leyden jars were on the table to the left with the helix and spark gap in the side of the helix. We left the muffler off the top of the gap most of the time to impress prospective stock buyers with the loud noise!

Sitting at the table, the operator had a telephone to his left near the antenna switch; the type D-3 slide tuner in front of him (it had a carborundum detector), the key and motor-starting rheostat on the right. The anchor gap was high on the wall. I tell you all this because it reminds me of an incident that occurred.

One evening when activity was at a low ebb, a young lady called me on the telephone. It seems she understood from a friend that you could hear the mysterious wireless over the telephone. Now, being a young fellow and always willing to oblige, and she was very pleasant to talk to, of

(Continued on next page)

Meet Howard Pyle, 'YB', W70E

Maybe you, like others have wondered about this fellow out on the West Coast. The most prolific writer of radio material of our time, "YB's" articles, stories and books are constantly being published.

Sometime ago we proudly wrote Howard about an article of his that we had found in one of "Zip" Jone's magazines of 1921. W70E politely informed us that the article was NOT his first — the first having been published in "Modern Electrics" in 1912!

Since retiring from Government service a couple of years ago, we find him devoting all his time to writing. His latest two books are "Building up your Ham Shack" and "Trouble Shooting for the Radio Ham" and we are told that another one is on the way! His latest magazine article will appear shortly in "Electronics World".

Howard's pride and joy, however, is the Seattle's Museum display of old gear of which he is responsible for. Dope on this exhibit in the next issue.
Hair-raising Romance

(Continued from Page One)

course we would turn on the wireless set. After waiting for a while by explaining the workings of the set and trying to encourage her to come over, we finally decided to turn on the transmitter.

I started by pulling the handle of the Outlar-Haner starting rheostat. At that point she asked to hear the motor generator running. Eager to please, I placed the telephone receiver down, turned the telephone microphone around - still holding on to the telephone stand. My earphones were still on as I swung around in the swivel chair with my feet on the transformer guard rail (supposedly)...now to let her hear the spark gap! I pressed the key: 

... what beautiful shooting stars! What a pretty rainbow!...

... what am I doing on the floor? Where are the stars and rainbow?... now come the room is so dark? Get up! Get up!...such I that's the swivel chair tipped over... oh-h, yes, I'm in the wireless room!... what happened? ??... what are those voices? ??

"Hey, Pat, I'm stuck between the fourth and fifth floor!"
"Everything is out...

"Do you think lightning hit that wireless thing on the roof?...

"Hold on Mire, I think the main fuse in the basement is gone..."

Slowly I came to. Ah, the lights just came back on. There's the telephone... wonder what happened to the nice young lady... the headphones on the floor are burnt out... wonder how the receiver... the motor-generator seems ok. Stumbling to my feet, I manage to write a note for Bill and went home..."

Having her memory I was so stiff and sore that I could barely move. I had my mother call Bill and tell him I had a cold and wouldn't be in until the following day.

When I reported the following afternoon for work, Bill was waiting for me. Did lightning strike the antenna? The stars had been out for the last two nights. I told him that I had REALLY seen stars - but wireless was new back there in 1909 and certain things couldn't be explained!

FEDERAL CRYSTAL SET of the BC variety is part of W2DRP's collection. A rare item, Joe wonders if many of them are in the hands of other collectors.

BUNNELL 1900 Catalog and a 1926 1st Edition of the A.R.L. Handbook are new items for W4AA plus several new receivers including a Zenith 1-8.

REFERENCE BOOK LISTING we know of 3 large listings of historical radio books - the latest is one compiled by W2IA. The other two are those of W2DI and the A.W.A.

500 CYCLE SPARK SET AT W4AX

A power source of 500 cycles was quite common over 60 years ago for commercial spark and early CW transmitters. The "ham" who was lucky to have 500 cycles was the envy of all. "Thorn" Hayen, W4AX, out in Shelbyville, Ind., has rigged up this outfit for sentimental reasons as well as to provide the opportunity to tape record the signal for posterity - hi!

INFORMATION WANTED about the William Marshall Co. of New York City. Have several items made by this company including large fixed condensers, switches, etc., all prior to 1900. Does anyone know anything about William Marshall or his products? Write: J.W. Stedensfeld, W2TFE, 26 Gibson Place, Washington, New Jersey (W2TBN)

VT-1 (Vacuum Tube #1) as designated by the U.S. Army Signal Corps is a tube that every collector should have. Made by the Western Electric during the first war, it was one of the first tubes to be manufactured on a large scale. As a matter of fact, over 300,000 of these tubes were made in 1917 and 1918.

After obtaining a contract in January, 1917, W.E. was making 15,000 per week by August 1918 - a remarkable feat even in today's mass producing economy. The tubes became available to the "ham" in the 1920's as a surplus item. The original cost to the Signal Corps was around $1 to $5 but in the late 20's it was a fraction of this value. (Tax - Fred Fenard)

HISTORIAN'S PICKEL NET - if you live in the W-1-2-3-6 call areas, join in or listen to the War historians and collectors when they get together every Monday on approx. 3950 kc between 7 and 8 P.M.

MORE ENLIGHTENMENT - it is interesting to note that several of the old time historians have traveled East in their attempt to obtain more enlightenment in their work. To date, we know of W1BB, W1AK, W1AFN, K1FF, W2CK, W2JR, W2CG, W2LM, W2ELW, W2JFJ and W7EWN.

NICE CALL LETTER obtained by John Boland, (ex-W2LCU) when he moved into the first call area in K1AA. John is with the Raytheon Corp.

W4AA belongs to "Wally" Heckscher; however, "Wally" operates mostly under his other call of W2ZGM out on Long Island.
A BRIEF HISTORY OF THE COHERER

by George Applegate, WZI

Many experimenters and scientists were involved in the genesis of the coherer. Contributions of some of the principal are here briefly described.

In Hertz's famous experiments of 1886 and 1887, he employed a very simple device for detecting high frequency radio impulses. A loop of wire with the ends open and spaced fairly close together acted as a spark gap. Minute sparks at the gap indicated a signal.

Twenty years before this, however, in 1866, Varley of England, had taken what was probably the first step in a long and gradual evolution of another type of detector which would prove to be the most indispensable device in the early period of wireless telegraphy.

In connection with some work on lightning protection for telegraph lines, Varley employed a small mass of dust between two electrodes as a shunting device to protect an indicating instrument against burning out. He conducted experiments with a number of substances ranging from pulverized carbon to ordinary house dust and observed a decreasing resistance to an increasing electrical tension. By 1870, over a thousand of his "lightning bridges" were in successful operation in England. But of course, the need for a radio detector was still to evolve.

Prof. Vincenzo Casci-ONESTI, an Italian scientist, in 1886 developed a device similar in principle consisting of copper filings between brass plates and later other models using metal filings in glass tubes. He demonstrated that the resistance of the filings decreased over a very large range when an inductive surge passed through. In addition, he found that the resistance remained at a low value if the filings were not mechanically disturbed. In the case of the glass tube model, high resistance was restored to the filings by rotating the tube with a small crank attached to the end of the tube. Whether Hertz knew about this device is unknown. But it was soon to be employed in its destined task.

In 1891, about five years after Cascio-ONESTI, Prof. Branly of Paris described a similar instrument which Sir Oliver Lodge called a "coherer", although Branly appears to have preferred the name "radioconductor". (DeForest named his device a "respondent".) Branly's coherer consisted of a glass or ebonite tube filled with metal filings, contacts with which were made by means of adjustable copper plugs at either end of the tube. A significant feature was a means of "de-cohering" the filings. This was accomplished by tapping the tube with a mechanical arrangement driven by clockwork or by a trembling electrical mechanism - a buzzer. Branly's vital discovery was that a spark discharge from a Leyden Jar external to his coherer circuit would cause his filings to "cohere" and conduct.

Professor Popoff of Russia in 1895 announced a further development. Using an "elevated wire" and ground he developed an arrangement for recording lightning discharges which employed a metal filings coherer and descohering tapper controlled by the received impulses themselves. The lightning impulses cohered the filings. The lowered resistance of the filings permitted the operation of a relay from a local battery of cells. The relay energized a self-interrupting bell (and clockwork driven recorder). The clapper of the bell tapped the coherer and caused the filings to descohere and restore the high resistance. This permitted the relay to release, opening the circuit to the bell - and the equipment was ready for the next impulse.

Popoff stated that his device was "applicable to the transmission of signals to a distance by means of rapid electrical vibrations". This - and actual communication demonstrations by Popoff - comprise the basis on which the U.S.S.R. claims the invention of wireless. As a matter of fact, the foregoing description of the operation of Popoff's equipment would also describe a good percentage of coherer-type receivers employed over the next several years by several of the early wireless telegraph companies.

Prior to the turn of the century, the coherer had become an experimenter's plaything in many laboratories in Europe and England, usually taking the form of a glass tube equipped with metal plugs and metallic filings - perhaps iron, nickel or silver or combinations of these. But because of its value in "wireless", it went through a period of rapid development and was brought to a stage of considerable sensitivity and reliability by the Marconi interests. Popoff had no transmitter. He "demonstrated" only by receiving lightning pulses (Editor).
The Old Timer's Bulletin

This paper is printed four times a year. It is strictly a non-profit publication and neither sponsored by nor formally affiliated with an organization of any kind. Editorial material comes from many sources which we believe are reliable but the accuracy of which we in no way guarantee.

Correspondence regarding old time radio is invited from all readers with the understanding that said material may be used gratis in the Bulletin.

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The publishing cost of this "Bulletin" has been set at $1 for the 1960-61 season. The cost for the 1961-62 season will be determined by circulation and number of pages and will be announced in September.

NOTE ON JAMES CLERK MAXWELL, 1831-79

This summer marks the 100th Anniversary of the first color photograph, achieved, not so incidentally, by James Clerk Maxwell, discoverer of magnetic and electrical waves from which we derive so much fun and frustration. Maxwell, a physicist at Edinburg and Cambridge, was organizer of the famous Cavendish laboratory at Cambridge whence have come so much knowledge, over the years, of radio wave propagation.

Maxwell was brilliant, his conclusion that magnetic energy travels in waves resulted not from guess but from the most sophisticated kind of mathematical deduction. His mentor was Faraday-another smart one-so he had a good start. But he surpassed all his predecessors when he pursued his magnetic wave theory to its logical conclusion - that light waves, too, were of the same nature as magnetic waves. His electromagnetic theory of light left as many optical scientists in his debt as his theory of magnetic waves indebted to his generations of electronic scientists.

Since photography is every ham's second hobby, we will amplify the color photograph item. Maxwell translated his theories on light waves into practical ideas on its color constituents. He developed chemical filters with which to separate white into its primary colors. He also figured out that if he could photograph each color separately, dye the plate, and put the plates into register, he'd have a full-color transparency. He further figured these would have to be the red, blue and green components. Using current slow-wet-plate processes and doing hundreds of experiments with filters, he made it...a full color transparency.

World War II bombings destroyed these plates. For the celebration of the Maxwell accomplishment in Europe this summer, one of the stunts on the program is to be the exhibition of a color transparency by a Kodak scientist made exactly the way Maxwell made his. It took months of study of Maxwell's notes. Colored solutions were the filters. A special slow-speed wet-plate emulsion was concocted. The original performance was finally duplicated exactly.

This brings to mind the endlessly fascinating work of more than one old timer engaged in re-creating early wireless apparatus and making it work. Noteworthy in WZAT's reproduction of the first successful Hertz experiment-As time goes on, the art of re-creating primitive gear will flourish, we trust-bringing back to life achievements in the field of radio which until now have been only words in a book.

50 YEARS AGO

Few issues of Scientific American go by without some reference to old time wireless matters in that magazine's "50 and 100 Years Ago" column. Here are two recent ones:

"During the hearing of the case of Marconi v. the British Radio Telegraph and Telephone Company, in the King's Bench Division, London, the judge and lawyers will have practical demonstrations, permission having been granted for the conversion of the court into a 'wireless operator's office'. Messages will be sent and received. The arrangements will be carried out under the superintendence of Professor Boys."

"It was recently announced that the high-powered wireless telegraph station of the Navy Department is to be located on the southeast corner of the Fort Myers reservation. Here a number of towers, 450 feet high, will be erected for the purpose of supporting the antennas. They will be arranged either in a triangle or a quadrangle. The effective radius of the station will probably be 1,500 miles. It was originally proposed to use the Washington Monument for supporting the antennas, but owing to public sentiment the plans were changed."
The Antique Wireless Association was the recent recipient of this extremely rare Multiple Tuner from the archives of the British Marconi Co., Chelmsford, England. It is the result of an A.W.A. documentary film production covering the life and work of Marconi.

Research indicates it to be one of the oldest models in existence and the only one in North America. The ultimate in selectivity and sensitivity at the time, it was patented in 1907 by C.S. Franklin and used on Marconi ship outfits in conjunction with the magnetic detector. The detector, being of low resistance, works on current rather than voltage effects, and hence in this receiver, capacity effects predominate and inductance effects are small.

The tuner has three circuits: aerial, intermediate, and detector, each of which must be tuned, and the tuning switches are so connected together that the three circuits may be tuned roughly simultaneously. Finer adjustments are then made by the means of the variable condensers in the three circuits. These condensers are seen on top of the case. The degree of coupling may be altered by moving the axis of the coils on the intermediate circuit relatively to the aerial and detector circuit coils. This is affected by rotating a handle on the side of the case. The aerial loading inductance is adjusted by means of a multiple contact switch on the front of the case.

The instrument is designed to tune all wavelengths from 500 feet to 8000 feet. (Yes, feet — not meters!)
OLD TIMER'S NITE AT OAKLAND

W6 land has its share of old timers as was witnessed at the Oakland Radio Club's Old Timer's Nite. Guests included such celebrities as Hank Brown, W5H (left) and Horace Greer, W5T1 (right). Hank is the inventor of the butterfly condenser and is in charge of marketing Elmac products. However, he is better known in the amateur fraternity as one of the top men in the "moonbounce" project of last August. (See Sept. '60 EX)

Horace, W5T1, needs no introduction to the DX man. He has been the A.R.R.L. QSL Manager for the 6th district for over 25 years! He is past President of the Northern Calif. DX Club and will handle the forthcoming big DX meet to be held in Fresno, June 21. (Thu. W5EXW)

A BOOK TO READ - we have not seen the Irish book "A Track-iron Boy" by Arthur Stanley (Wayne, Ltd., Belfast, 1960) but it should be an important addition to the OT bookshelf. It is the life story of the late British scientist Eric Negus, G6H, whose experiments around the 33 Lord Antrim during 1926 revealed the extent to which low power shortwave radio was capable of keeping ships at sea in reliable communication with land.

Many O-land amateurs still possess QSL cards confirming contact with Negus operating as G6H2W. Before his death in 1956, Dr. Negus was chiefly known as the developer of the magnetron oscillator and for his work on atmospheric scatter. (G6H2W)

OLD OLD TIMER'S CLUB bears looking into by any of you old timers who have been licensed 40 or more years (amateur or commercial). Although a surprising number of our OT historian/subscribers already belong to the COTC, the rest of you should give the organization consideration if you already haven't. A fraternal group of old timers, it is presently headed by Earl Cline, W5PPJ. All correspondence and further information re the club should be directed to the secretary/treasurer; Earl Williams, W5EO, 507 Wayside Rd., Neptune, New Jersey

REVIEW OF THE 1961 I.R.E. SHOW as seen by the old timer was just a little short of breath-taking. Scheduled last month in New York City at the Coliseum and the Waldorf-Astoria, the radio engineer had an opportunity to spend a day watching the thousands of exhibits of the latest developments in the field of electronics.

As an old timer and historian we found 3 exhibits of particular interest; namely, the original 1909 spark transmitter of Harry Hock's at the Measurement Booth. A charter member of the Radio Club of America, Harry needs no introduction. The transmitter on display was the same one seen in the Radio Club's "Golden Anniversary" Yearbook as well as heard on the RCA Anniversary recording. In immaculate condition, it was worth a Kodachrome pictures by the author!

Of equal interest was an old Navy receiver of unusual design exhibited at the Vitro Corp. booth. This receiver (similar to the TP-500) was manufactured during WW-I by the old National Electric Supply Co. (which later became Nema-Clarke Corp. and more recently the Vitro Corp.) Management felt that this well designed receiver of yester-year would make an excellent contrast with their present day products - and that it did with the able assistance of Ed Duvall, ex-W5W, who was assigned the task of placing it back in shaps.

Of interest to some of our Marconi Historians was an exhibit by Marconi Instruments (Booth #702). Here the Marconi Co. exhibited some very fine present day measuring instruments such as professional signal generators, bridges, etc. Headquarters for the company here in America is: 111 Cedar Lane, Englewood, New Jersey.

AUSTIN C. LESCARSBOUIA, a name well known to the radio historian, recently celebrated his 50th Anniversary in the radio field. Starting out as an amateur in 1907, he worked for the old E.I. Co. as well as the Telefunken Wireless Telegraph Co. We know him primarily for his work in the radio publishing field which included several editorships of magazines such as "Modern Electrics" and "Scientific American". His writings were well known during the 1920's when he wrote such books as "Radio for Everybody", etc.

"AC", as he is known, is a member of the Radio Club of America and a Senior Member of the I.R.E. Now in retirement, this pioneer can surely reminisce over the "Golden Age of Radio"!

WORSE CLUB instead of decreasing its membership as one might think in the amateur ranks appears to be increasing! A new member is Ed Raser, W2Z1. (A note to the layman - it was practically a must over 50 years ago to know both the Morse and Continental codes since both were used in wireless plus the fact that the shore operator frequently had to handle land instruments as well as the wireless set !)

NEWS WANTED - this is a "Bulletin" for you Old Timers and Historians. Send us news on your activities as well as any other notes of general interest. NO NEWS - NO BULLETIN.
OLD TIME HAM-ADS

Each reader is entitled to one old time ham - ad per issue without cost. All articles MUST be over 25 years old.

ANTIQUE RADIOS FOR SALE - send for list. Paul Gigante, W4GY, 2229 San Carlos Ave., San Carlos, California.

WANTED to complete collection of magazine "Everyday Engineering" - November 1917 and May 1918. Also any issues of Electrical Experimenter. Thorn Mayes, W4AX, RR 2, Shelbyville, Indiana.

OLD TUBES wanted: 88-21, 82-11, 1B000 - all companions to the 7D-11 made by Westinghouse in 1922. Also looking for RCA Radiotron Manual #5. Bill Slade, P.O. Box 369, Tabor, New Jersey.

SOFTWARE and components - buy, sell or swap. Have several in mint condition. Need 88-1-2-4-5-6 Jack Gray, W4JDV, 500 Church St., Mason, Ohio.

W.E. GOOA microphone stand wanted. Write to: J. W. Neuman, 2041 Colonial Ave., S.W., Roanoke 17, Virginia.

OLD QST's wanted - 1930 and before:
Al Beville, W9WE, 702 B North Filmore St. Amarillo, Texas

SWAP or SELL early 30 sets such as Crosley 41, Day Fan, Radiola IIIA, Kolster 85, Federal 1-A & 110 & D-10, Osarka, 2041 of each French Rl (one 500B). Also have a few horn speakers, etc, auxiliary shipboard speaker units, xtal sets, etc, plus books. Write W4ORA, 77th Sterling Ave., San Bernardino, California.

OLD WIRELESS GEAR and early broadcast receivers wanted. Have duplicates to trade. Also have model Railroad magazines to swap for early QSTs or radio gear. Write to: Dave McKenzie, K6VJ, 406 S. Main St., Leon, Iowa.


BUY, SWAP or SWAP all kinds of early wireless and electrical magazines. Write to: Joe Simpson, 85-39 152nd St., Jamaica 32, Long Island, N.Y.

TUBE COLLECTORS: have several new DeForest audions in original unopened cartons. This is the type with the Candelabra base and that may have been made anytime from 1908 on. Tubes are brand new with serial numbers attached to base with sealing wax. Write: Erv Rasmussen, W8FPM, Box 612, Redwood City, California.


NOTES ABOUT QST is the title of a group of QSTs and radios sheets made up by W4AA. It summarizes all the highlights of QST from 1925 thru 1927. Wayne has done a terrific job in noting all the "firsts" in advertising as well as a complete breakdown on the page layout, etc. The complete listing may be obtained free by sending him a large self-addressed envelope with 8 cents postage.

Wayne Nelson, W4AA
P. O. Box 72, Concord, North Carolina.

W2QY and W4AX are two amateur historians in our group that recently joined the "Old Timer's Club" - congrats!

NOTT INGHAM, N.H., the QTH of W1WQ, proves as difficult a place to find for W210X as it did for W4AX and others; however, everyone agrees that it was worth the trouble.

"Sherm" (ex-2ME, W4RA) visited Bert a couple years ago and enjoyed old time reminiscing as well as the present day station layout and antenna farm at W4Q. W2PL thinks there should now be some kind of a 50 year club - hi! He would like to correspond with old friends whom he worked with years ago while he was with Marconi and Tropical Radio. His full QTH is: Sherman Booth, Radio W2PL, Riverview Terrace, St. Michaels, Talbot County, Maryland.

VALIDATION LISTING: at this writing, a few more valuation listings are still on the way, so the end result will not be known until the next issue. With a few exceptions, all values seem to fit a pattern. Suff said.

SATYLLER (WE2L) operator for awhile "say back then" he was a Naval operator in the W4BCX. A real old timer, he started like many of us with a one inch spark coil; however, the tuning coil on the receiver was some-what unorthodox - it was wound on a section of a fence post with 818 bell wire! All this, of course, way back in 1909.

JOE SIMPSON, ardent historian and collector with whom any of you may have corresponded has an interesting writeup in the July, 1931 issue of "SHUITE CRAFTS". He had to really dig back to find this one, but it was interesting to note that so many of our readers are also authors!

SAN BERNARDINO has a new historian and collector in Jack Cowley, W6OBA. Don't list Jack's call W4A fool you. He is ex-2ME, W6JIA, WA2EE, K6US and C9SHD.

EPSONIA with EPS03 Li loading unit is now in operation at W6X. "Tate" planned to donate it to the Marine Museum but he likes it so well he may keep it - hi! Copying on W6X seems like 414 times.
The A.W.A. specializes in developing historical film shows for entertainment at Amateur and Professional gatherings. Following is a list of the current shows available:

1. "The First 30 Years of Amateur Radio" 30 minutes - glass slides.
2. "The First 30 Years of Amateur Radio" 30 minutes - cardboard mounted slides.
   Shows #1 - 4 are available only to affiliated A.R.R.L. radio clubs and may be obtained by writing direct to the A.R.R.L., West Hartford, Conn.
5. "Pioneers of Wireless" 43 minutes - glass mounted slides.
   Shows #5 and 6 are at present the property of the A.W.A. and loaned out only on special occasions.

7. "The World Above 50 Kc.* 30 minutes - glass slides. This show is being revised for the A.R.R.L. Write to the A.R.R.L. after April.

With the exception of #10, all shows consist of 35 MM. Kodachrome slides and are accompanied with magnetic tape sound track commentary, music and sound effects. All tapes are "half track" at 7 1/2 IPS except #6 which is also available on stereophonic tape. Cardboard mounted slides will fit all projectors whereas the glass mounted ones may not fit slides magazines.