Revision of Patent System Urged by Hart

A basic revision in the federal patent system is being sought by Senator Phillip A. Hart on the grounds that the present system frustrates invention and ties up technology so the public cannot benefit from it.

Sen. Hart is sponsoring a bill to make the Patent Office an independent agency and to grant patents for a period of 12 years from date of filing plus whatever time elapsed while the patent examination was deferred.

Under this plan, that examination could be deferred a maximum of five years, with protection for the invention during the deferral period.

Hart said that in the current "corporation-dominated, technology-oriented world", only 20 of 100 patents are granted to individuals. In addition, the annual volume of patent applications has risen to 100,000.

The Patent Office, now part of the Commerce Department, has a 2½ year backlog of patent applications.!!

Also, the way patents are handled by this "crunky" system, 72 per cent of those litigated in Federal Courts of Appeal are held invalid and fewer than 20 per cent of the litigated patents are upheld as valid and infringed.

Microphone Award

The 1972 "Microphone Award" for outstanding contribution in the recording field was recently presented to DOLBY LABS for their work in the development of a noise reduction system for magnetic tape recording.

The system was perfected by Dr. Ray Dolby of England. The presentation was made by Oliver Berliner, grandson of Emil Berliner, inventor of the microphone and disc record.

U.S. MAIL

Members report receiving the CTB two days after mailing while others have waited two weeks. Sorry fellows, that is a situation AWA has little control over. We will continue to send ALL Bulletins FIRST CLASS and hope
Guest of Honor at AWA Spring Meet was Clarence Tuska (left) examining a receiver his company made 50 years ago -- a TUSKA SUPERDYNE licensed under Armstrong Patents. AWA President Charles Brelsford (WA5V) and ARRL Director Harry McConaghy (W3P) admire the workmanship. (W2EWK photo)

Spring Meet

SMASHING SUCCESS!

Success surely describes the Spring Meet with members attending from Ohio to Nova Scotia--Maryland to New Hampshire. A fair percentage were interested in the large receiver sale and open flea market. The brisk sale prior to the event almost exhausted available material from the Reber collection; however, members were not disappointed since many collectors brought all kinds of "goodies" for sale and swap.

Aaron Solomon, VE1CC, volunteered to head the judging committee for the best one tube receiver contest. Lauren Peckham stole 1st Place with a beautiful restored Kennedy with Bob Flanagan (Massachusetts) and Bill McGuire (Ohio) coming in close seconds.

Honored Guest

Clarence D. Tuska

A surprise guest was Honorary Member Clarence Tuska from Princeton, N.J. Clarence had the honor of presenting the prize and officially starting the Association's Public Museum Fund Drive.

Tuska's career is one of many highlights. He is co-founder of the ARRL (1914), President of the Tuska Radio Corporation, was a member of Atwater Kent's Staff and retired as Director of Research for the Radio Corporation of America.

Lauren Peckham (left) receives 1st Prize Award from Clarence at A.W.A. Spring Meet.
A new S.W.P. Chapter has been formed in the East as a result of a gathering held April 7th in Trenton, New Jersey. The Chapter will be named after pioneer EDMO PICKERILL. Charlie Mass, WEPV, is currently guiding the Chapter and invites S.W.P. members in New York, Connecticut, New Jersey and Pennsylvania to join. Charlie served with "Pick" in 1927 and 28 when the latter was Chief Radio Officer on the SS LEVIATHAN (WSN).

SUMMER MEET
June 16.
Breesport, N.Y.
(Lauren Peckham)
Dinner 12:30 P.M.
Meeting and old gear session 1:30 to 4:30 P.M.

M.T.C.
Meeting

Various Chapters of the Morse Telegraph Club again convened around the country and celebrated Prof. S.F.B. Morse's Birthday on April 28th.

A goodly number of A.W.A. Members found their way to Summit, New Jersey where the Vall Chapter holds forth. Here they enjoyed a fine beef dinner and a beautiful film provided by old time telegrapher Commander Quincy of the Mississippi "Delta Queen". An added attraction which aroused much interest was Art Goodnow's (W1DM) slide talk on San Francisco's fantastic 1000 foot Sutrow Tower.

PORTRAIT OF A PIONEER
ELMO C. PICKERILL

The 1973 Historical film production will cover the life of Elmo Pickerill. Members attending the 1967 Conference at the Ford Museum, Dearborn, will remember this famous pioneer who was guest Speaker. A resume of his life appeared on page 18 and 19, Vol. 8.

50TH ANNIVERSARY
of the AMATEUR RADIO REGULATIONS IN NEW ZEALAND

The title of this 94 page book does not exactly excite one until he starts to read it. Our copy was received from John Stokes (Auckland) and was set aside in the usual high pile of mail that accumulates daily.

When we finally got to it -- we couldn't put it down! It is without a doubt the best anniversary issue of any organization we've seen. I am not particularly interested in New Zealand radio activities --- and the Editor must have known this since he came up with everything under the sun to keep me reading...which I did! Material ranged from early commercial wireless history (both in Oceania and England) to old time amateur activity. Pages and pages of pictures, news items of the past, old time ham stations I had worked when I was a kid, story of Marconi receiving the letter "S" -- it is all there plus a breezy little story about the first ZL "YI".

Collectors? One illustrated article titled FAMOUS BOTTLES by the Chief Bottle Washer, gave the reader an idea what type of tubes were used for receiving and transmitting by "Zedders". It was a well written account. The author's real name appeared in small type at the end. A fellow by the name: John Stokes... (E.K.)

USS HARADEN KEY

pictured in the last OTB on page 2 prompted Al Blanco (Vienne, Va.) to write telling he too had a similar key in his collection. The name plate indicates it was made by the MARCONI WIRELESS AND TELEGRAPH CO. OF AMERICA and was rated at 5 KW. The serial number was #69 on Al's key which would lead one to believe quite a few were made.
The above masthead is a reprint from a well organized group of fellow radio historians and collectors in Canada. Their "paper" is just chock full of interesting items for the collector (24 pages!) and includes several pages of "Wants Ads" which are free to members. Membership is only $3 a year and includes The CAT'S WHISKER - a real buy for the radio historian. Application forms ARE necessary before sending money. Write: Sid Prior, 102 Parkhurst Blvd., Toronto 353, Ontario.

### Museum Fund Raising

At the Spring Meet in Canandaigua April 7th, I announced the establishment of a separate Museum Fund for the purpose of providing new and better quarters to house our historical collections. Mr. Clarence Tuska, our Guest of Honor, made the first contribution of $100 to this fund.

It is anticipated that Grote Reber will also be making substantial contribution to the fund now that he has sold his large collection of receivers. Others are invited to contribute to the fund. Just how many thousands of dollars will be needed may be determined by the Board of Directors at an early date. Contributions are tax deductible.

Charles Breilsford, President

### ORIGIN AND DEVELOPMENT OF MORSE CODE

In December ONB brought an interesting letter from old time Morse telegrapher Al Woody, W7WQ of Winslow, Washington. Al tells us, quote: "Line 11 in the first paragraph states that the space employed in the 'spaced letters' is equal to two units (dots), whereas the correct statement would be that the space in spaced Morse letters is equal to one dot."

Since there may be just the remotest chance he was wrong, W7WQ checked with Lou Moreau and others - they all agreed with him. Chalk up another credit to historians who want accurate information...
OLD TYME HAM ADS

OLD TYME ADS are FREE to members who are interested in collecting and restoring historical equipment as an amateur. They are not to be abused.

RULES FOR ADS:
1. Material must be over 25 years old.
2. Ad MUST be written on separate sheet of paper --- not part of letter. For acknowledgement -- send S.A.S.E.
3. Give full address, zip number and call letters (if any).
4. AWA will not print repetitious ads or ones indicating regular sale for profit.
5. The Association is NOT responsible for any transaction.
6. AWA retains the right to reduce size of ad.
7. All ads must be received 5 weeks prior to mailing date.
8. Mail to Antique Wireless Assn., Main Street, Holcomb, N.Y. 14469

WANTED: Audio transformer and double rhodium panel assembly unit for AK-20 William Pierce, 15536 Talbair Avenue, Rocky River, Ohio 44116


HAVE: QST's from 1916, CQ's from 1946 to trade for magazines, books, catalogs or old radio and wireless gear. Erv Rasmussen, W6YPM, 164 Lowell St., Redwood City, Calif. 94062

FOR SALE: Selling large collection of antique radio, SASE for list. John Alley, W1DM, 43 Judson Street, Raynham, Mass. 02767

WANTED: Emerson multivalue, also QRS Red top A.C. tube. Condition and price, please. Floyd Lyons, 456 Post St., San Francisco, Calif. 94102

SWAP -- pair of National FB-7 coils (7.0 to 7.3 mc.) in fair condition for early radio parts or tubes. Leo Gibbs, W88HT, 701 Brookfield Rd., Dayton, Ohio 45429

NEED: Main tuning dial for RADA, R.F. transformer for AK breadboard Factory #1052 (see bottom page 3, March, 1973 QTH)

NEED: Main tuning dial for RADA, RF transformer for AK breadboard Factory #1052 (see bottom page 3, March, 1973 QTH) or information on how to repair transformer. Joseph Benne, 494 Hirsch Avenue, Calument City, Ill. 60409

TRADE: Radio Boys with the Iceberg Patrol, Of Mikes and Men (book), Tennis's Radio Engineering (1937), Riders Books, K4IM, 1201 Riverside Drive, Inlet Atlantic, Florida 32903

WANTED: Early Brush "Sound-Mirror" wire or tape recorder. Will pay any reasonable price. Also need book "Magnetic Recording" by S.J. Begun. Also want Volume 1 of Menlo Park Reminiscences" by Jebl. All letters answered. Gay Walling, Box 306, Breesport, N.Y. 14416

WANTED: 5 prong baseboard tube sockets (5) in number. Will buy or swap. Write: George Wall, RD #1 Box 66, Wall, New Jersey 07719

WANTED: Stenode Radiostet, any condition. Early super-hets, any make or model, radio magazines 1920 to 1928. Will buy or trade dupes. R. Lee Howard, Rte. 9, Box 209, Winston-Salem, North Carolina 27107

Deadline for next QTH ads: JULY 15

Warning: Word has come in again that a non-AMA member of questionable character has been answering Old Tyme Ads. Members are warned not to deal with strangers. If you're not sure he is a member and have not seen his name in the QTH within the past year (he was a member), write to either the Secretary or Treasurer to verify current membership. We can't give his name for obvious reasons plus the fact we don't know which one he is currently using! He has used at least three different names all from the same address! His activities may be investigated by U.S. Postal Authorities on Mail Fraud Charges. Hint: He has a New York address.
NEW MEMBERS

who are or have been in the communication field.

PETER TESTAN, W2HA, Chief Eng., WNNJ
J. W. WEBB, W6RCW, W7MAH, General Elec.
LELAND SMITH, W5KL-W4AGI, ex-4YE, K6CN
Radioman USN, Officer U.S.N.C.
MARCUS BARNES, W5COY, ex-VP5ME
HAROLD JOHNSON, K4GVB, eCHC, I.T.T. Lab
JERRELL SHEPARD, Owner/Manager of
broadcast station K6IX
TOM DVORAK, (Bola Benton, Fla.)
LOUIS VERMOND, VE3BDV, Co-Editor of
Canadian Vintage Wireless Assn.
H. J. WEILBE, K4HE, ex-3AE,
Retired AT&T Overseas Service
GRAHAM NEILLSON, VR3PO, ex-VF5AB, ex-VF5AK
Rogers Electric Ltd.
AL MILLSTEIN, K3EAX Radio Stat. WRTI-FM
GEORGE BROWN, W6XET, ex-SCUD Ship oper.
and Broadcast Engineer WSBD

HAROLD POWELL, (Hollywood, Calif.)
Eng., KFCC, KPRO, N.B.C., Chief Eng.
Hallen Corp., Klavier Record Co.
FRED BARRY, K6RTU/W4PZQ, ex-70FS,
ex-USOX, Engineer Philco/Ford
RICHARD BRUDDER, V.P., Engineering of
Holtzclaw Co.
DAN GAIDOSZ, WILFU, Eastern Electronics
and General Electric

JACK LARRABEE, W7HMA, ex-6UFB, W6W
U.S. Lighthouse Service, CAA, FAA,
WILLIAM BARK, Engineering Div. U.S.

HARVEY SWAVER, W3EZ, ex-W3RQO, WFM
Gordons Television
WILLIAM RUSSELL, (Van Nuys, Calif.)
Sr. Eng., Communications
Litton Ind.

THOMAS BRIGGS, (Orefield, Pa.)
Raytheon Tube Div., RCA at
Harrison, etc.

MECCANO CRYSTAL SETS

Crystal set collectors will find the
1923 model made by Meccano the most
difficult to find according to Frank
Pagan. It had few Meccano parts whereas
the No. 1 and 2 models made in 1922
were mostly original Meccano components
such as variable condensers, etc.
The Annual Historical Radio Conference will again be held at Sheraton-on-the-Lake, Canandaigua, New York. The location was selected as the result of numerous letters indicating they like the scenic beauty and privacy of this upstate location. In addition, off-season motel rates are almost half what one would pay in the large cities.

Inclue your Motel Reservation Card. We suggest you return the card promptly. If you wish confirmation, inclose a S.A.S.E. The final program and registration card will be mailed in July.

Some members may wish to travel by plane to the nearby Rochester Airport (30 miles). Tentative plans are to have several Rochester members transport out-of-towners to and from the airport. This will be done on a very limited basis. For information, write: Dexter Desley, 50 Rockingham St., Rochester, N.Y. 14620. Hertz cars are also available at the airport. Greyhound Bus Lines travel within two blocks of the Sheraton Inn, Canandaigua.

Programming For Everyone

FRIDAY AFTERNOON
Vacuum Tube Collectors Symposium
Old Time Transmitter Round-up

FRIDAY EVENING
Fisherman's Buffet
Society of Wireless Pioneers Meeting
Feature attraction: PORTRAIT OF A PIONEER
Elmo C. Pickerill

SATURDAY MORNING
Huge Auction and Flea Market
Old, Old Timers Club Meeting
Noon: Continental Smorgasbord

SATURDAY AFTERNOON
MINI-TALKS: Wireless Companies of United States 1899-1920
Hugo Gernsback: Pioneer Radio Publisher
Women's Program
Collector's Panel
Collecting Books

SATURDAY EVENING
Old Time Receiver Contest
Annual Banquet
Awards

SUNDAY MORNING
Farewell Breakfast
Visit to A.W.A. Amateur Museum

FINAL PROGRAM and REGISTRATION CARDS will be mailed in JULY

MAKE MOTEL RESERVATIONS NOW! (Special rates to A.W.A. Members)
COLLECTOR’S PANEL

Last year’s QUIZ PANEL proved so popular we’re repeating it again at the forthcoming Conference. Of course there will be different questions and the usual prizes will be given to the winning team. Members of the Indiana Historical Radio Society have volunteered to handle the panel and the electronic scoring.

RECEIVER CONTEST

will again be part of the Annual Conference. To commemorate Lee DeForest’s 100th Birthday, it has been decided to have a special entry class for DeForest equipment.

Mel Comery, with members of the Antique Radio Club of America, will handle the judging. Rules and different class entries will be given in the program scheduled for July mailing.

Between the lines

Some members have wondered how come they receive mail they didn’t ask for. Or, to the point—“How did I get on a mailing list?”

Very easy. All you have to do is advertise in AWA Bulletin. As a matter of fact, place in ad in ANY magazine or newspaper and you may end up on a list of one type or another.

This is old stuff for one wanting to build up a potential sales (sucker?) list and is used by numerous companies and organizations. Some individuals actually supplement their income by making up and selling lists.

In the case of the radio amateur—your call letters are sufficient since they too have a callbook. A quick and dirty way to have a self-made list is to merely lift names and addresses from a club membership listing.

We wish to reiterate—again and again—that the AWA membership list is never released to anyone—not even AWA members. This would make it too easy for list peddlers—and that might make a lot of AWA members mad.

If you want to know if so-and-so is a member, just write us and ask. The AWA membership list is not for sale or publication.

A.W.A. NET LISTENING

Letters pouring in indicate there are more AWA members LISTENING to the Sunday and Tuesday Nets than those actually participating. Listeners seem to agree on one point: Keep transmissions SHORT, particularly when a goody number call in. Sometimes it takes well over 1/2 hour before the same station can be heard the second time, agree?

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FROM HEADQUARTERS

A.W.A. ON FRONT COVER

The January issue of CQ magazine got fouled up in the U.S. mail and didn’t arrive in time until the last OTB was at the printer. Too bad since we wanted to comment on the fine picture cover taken by Bill Dewitt, W2ED. It shows George Botterson’s (W2GB) old 1 KW (?) rock crusher in operation. Somehow the torrid spark doesn’t show up too well, but all the ingredients are there.

Countless members have seen (and heard) this sync rotary set in operation at the Association’s Barn Museum. Other than changing the transformer oil, the set is exactly the way it was when the R.I. told George to pull the big switch over 50 years ago -- CW was here to stay. Long live King Spark!

ASSOCIATION NEWS

OLD TIMER NITE

The recent Annual OLD TIMER NITE sponsored by the Rochester Amateur Radio Assn. and the A.W.A. was highlighted with recognition of George Botterson, W2GB (ex-870A) as the GRAND OLD MAN of the year. A large framed picture (cover of March OTB) was presented to George by A.R.R.L. Director Harry McConnell, W5SW, who told of George’s 60 years in amateur radio service. An interesting sidelight was W2GB’s Boy Scout work -- he joined the B.S.A. in 1912 and became an Eagle Scout in 1914 making him the oldest Eagle Scout in the area.

Entertainment was provided by Bruce Kelley with the popular A.W.A. show titled "20 YEARS".

WNY Hamfest & VHF Conference

The Rochester Hamfest and Plea Market was another huge success with attendance well over 2000.

AWA members were counted from at least 10 different states and Canada. The AWA Booth and antique gear display was again a main attraction. Kelley presented one of the several AWA shows Friday PM and opened the Association's Museum Sunday AM for the "out-of-towners".

Change In Address?

Mail information to the Treasurer who handles current mailing list.
(NOT the Secretary)
L. A. CUNDALL, W2QY
69 BOULEVARD PKY
ROCHESTER, N.Y. 14612

Membership Application
and Dues

Members frequently write requesting an application blank for a friend. To save the member and A.W.A. time and postage, we’re encasing an application with this issue. As the result of computorized listing, AWA membership is now open for new members. Be sure and sign your name as sponsor.

Annual A.W.A. Dues are $4.50

ANTIQUE WIRELESS ASSOCIATION
MUSEUM
HOLCOMB, NEW YORK 14469

Member:
AMERICAN ASSOCIATION OF MUSEUMS
Affiliate:
AMERICAN RADIO RELAY LEAGUE

The A.W.A. provides facilities for member’s equipment and a photographic workshop for the amateur historian.

Open for special events or by advance appointment between May 1 and October 31. No charge.

TELEPHONE: 315-657-7489 or 716-663-0856
Club Radio Station: Amateur W2AN
Notes from the President’s Desk

A trip to the West this past winter made it possible to see some of our AWA friends in that area. At Barry Goldwater’s station, W7UGA, in Scottsdale, Arizona, Bob Chamberlin, W7EIG, showed me the equipment which has run as many as 2,500 phone patches in a month for our servicemen. Bob Gremor, WA7NBM, at the time was patching traffic from Thailand.

In Hemet, California, Mrs. Lee De Forest, W6ZJR, told me about Dr. De Forest and showed me some of his many awards. Then in Santa Barbara, my brother Ernie, KE7Z, took me to see Vance Phillips (W5GH) and Pete Longlo who have avid interests in early wireless.

At Saratoga, Thorn Mayes, W6AX, was a very gracious host and we visited the Foothills College Electronics Museum which opened January 27th. They have a fine building with items beautifully displayed and some which can be operated, much to the delight of students. The 1909 broadcast station, ham station, Poulsen arc, tube display and De Forest library were of special interest. Many more displays are being prepared by the talented staff. School students have been com- by the busload!

Virgil Coven, W7FNS, in Portland, Oregon, took me to see Bill Gibson, W7BVV, in Salem where he has refurbished some more early equipment to a high degree of perfection. I enjoyed talking to Jeff Nelson, K7RZZ, in Vancouver, Washington on the radio and on the phone line to Warren Green, W7JY, in Mercer.

All of these people are enthusiastic about AWA and in particular have the highest praise for the Old Timers Bulletin.

Chick Brelsford

ANTIQUE WIRELESS ASSOCIATION INC.
HOLCOMB, NEW YORK 14469

“An amateur organization devoted to the history of wireless”

OFFICERS

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<tr>
<th>Position</th>
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<tr>
<td>President</td>
<td>Charles Brelsford</td>
<td>K2WW</td>
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<tr>
<td>Vice Pres.</td>
<td>Kenneth Gardner</td>
<td>W2IGN</td>
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<tr>
<td>Secretary</td>
<td>Bruce Kelley</td>
<td>W2CE</td>
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<td>Treasurer</td>
<td>Lincoln Cundall</td>
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<td>Al Crum</td>
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<td>Harold Smith</td>
<td>W2GJ</td>
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Attorney: Sherwood Snyder, W2KPU
Photographer: Al Crum, W2BK

ADVISORY BOARD

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<td>W1HNE</td>
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<td>Bob Morris</td>
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<td>Lou Moreau</td>
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<td>7</td>
<td>Frank Wingard</td>
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<td>8</td>
<td>Joe Payeck</td>
<td>W8OFP</td>
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HONORARY MEMBERS

Marion Armstrong, Clarence Tuska
Lloyd Espenschied, Geo. Grammer
Paul Godley, Harry Houck

ROCK AWARDS: Bob Morris (Chairman)
Bill Gould, Thorn Mayes

AMATEUR STATION: W2AN

NEWS JOURNAL: OLD TIMERS BULLETIN
Editor: Bruce Kelley
Make-up Editor: Larry Triggs
Asst. Editors: Ken Gardner, Lauren Peckham
Printer: Don Bay

The BULLETIN is published quarterly and mailed in March, June, September and December. Send all news items to Secretary: MAIN STREET,
HOLCOMB, NEW YORK 14469

DUES AND ADDRESS CHANGES:
Lincoln Cundall
69 Boulevard Parkway
Rochester, N.Y. 14612
New Stamps
will be issued by the Post Office Department July 10 showing the "Pro-
gress in Electronics". The four stamps (40 cents a set) resemble somewhat the same foursome issued last year by the British Post Office (See ZTB 13-3-12).

As noted, one of the four stamps has a Marconi 10" spark coil similar to its British counterpart. Of partic-

ular interest is the 11 cent Air-

mail showing a spherical De Forest Audion. We understand some of the art work was done by Walter Einsel and his wife of Westport, Conn. Members continue to wonder why our Post Office Department continues to ignore the work of Maj. Armstrong.

VALUATION OF
DONATED PROPERTY
Publication 561
Department of the Treasury
Internal Revenue Service

Printed above is the heading of a 12 page publication which can be of great help to one donating property to a mu-

seum or non-profit organization and wish to claim tax deduction.

The booklet is broken into several sections and covers such items as:

"What is Fair Market Value", "Problems in Determining Fair Market Values", "Information on Tax Return in Re-

ference to Appraisals", "I.R.S. Review of Appraisals" and who is qualified to

make appraisals.

Items valued over $200 require a more lengthy report such as submitting a detail breakdown starting with "How and where did you acquire the article being donated, price, etc." The appraiser must give his qualifications and basis for his appraisal.

The Internal Revenue Service will re-

view appraisals and may question the value submitted in which case they will refer the Return to a Service Appraiser or valuation specialist.

For obvious reasons, the appraiser cannot be a leading officer of the mu-

seum or organization receiving the gift. The latter must be incorporated and status cleared with I.R.S.

Curators of the A.W.A. and the New England Wireless Museums have on occasions appraised equipment being donated to museums and/or to settle estates. They will not evaluate gear for sales purposes.

What's New
ANTIQUE WIRELESS ASSOCIATION

Written: Frank Pagano, Ted Duvall
Books: W2QO
Receivers: K2GMZ
Miscellaneous: W2ZNC, W2QLI and
Mel Coner

Through the efforts of ARRL Direct-

or Harry McGonaghy, W3SW, the Associa-
tion was able to obtain a valuable collection of early receivers and

other material from the estate of the former Patent Attorney and amateur

John Brady of Washington, D.C.

The material was given to W3SW by Brady's son, John Jr., W3EXP and transported (all 500 pounds !) in

35W's car to Holcomb. Much of the material was used in patent liti-
gation. In addition to receivers, there were two Telegraphophones --

forerunner to later wire and tape

recorders. An interesting addition to the A.W.A. Museum.

Important

Would you like to help the CANADAIN NATIONAL HISTORIC SITES SERVICES outfit the former R.C.M.P. Artic Patrol vessel ST. ROCH 7? This historic vessel is being restored as a public muse-

um. There is need for a Marconi 200 watt SW xmt and Type 3V-8/4-5 revr and an early HRO loudspeaker, table model battery BC set circa 1935 plus several other items. The ST. ROCH was the FIRST ship ever to traverse the Northwest Passage from the west. Write for details: Wayne Colwell, Curator, National Historic Sites Services, 2630 Sheffield Road, Ottawa, Ontario K1A 0H4, CANADA.
Prof. Grover is dead at 96

Dr. Frederick Grover, Professor of Electrical Engineering at Union College died recently at the age of 96. Before accepting his position at Union he was with the U.S. Bureau of Standards and was a specialist in electrical measurements. He was the author of several books and numerous papers on the subject. (W4ZM)

Martin Codel Dies

Martin Codel died March 20 in Steamboat Springs, Colorado at the age of 70. He was founder and publisher of Broadcasting magazine and later Television Digest. In later years he became a consultant in international broadcasting. Codel was also of several books including "Radio and Its Future" published in 1930. (K3CL)

Fred Stein Dies

Pioneer radio manufacturer Fred Stein is dead at the age of 84 in Atchison, Kansas. Stein started in the electrical business in 1926. In 1921 he formed the Atchison Radio & Electrical Co. which later produced one of the first all-electric receivers under the name Steinite. (W6RXP)

Niles Trammell of N.B.C. Dies; Brought Stars to Radio in 30's

Niles was former president and chairman of the board of the National Broadcasting Co. He pioneered in network broadcasting and was responsible for making "Amos 'n' Andy" a regular nightly show. Other well known programs he helped create were "Fibber McGee and Molly", "Lum and Abner", "Ma Perkins" as well as helping establish radio favorites such as Eddie Cantor, Bi Wynn, Al Jolson and Phil Baker.

THINGS TO COME IN FUTURE OTH:
---"Unusual article on superhet development."
---Index supplement on all material for the past 3 years.

While thumbing through a 1914 MESCO catalog, Serge Krauss noticed a yellow sheet-- an original A.R.R.L. application form which apparently was inserted in all their 1914 catalogs. The two sided form seeks technical information on the applicant's station (Do you use an Audion detector? Do you use rotary, fixed or quench gap? They also wanted to know approximately what wavelength they operate on and ends by stating their objective is to facilitate relaying radio messages among radio amateurs.

The letterhead states that Hiram Percy Maxim was Chairman and Clarence D. Tuska, Secretary. A rare find and definitely a collector's item...
WITH THE COLLECTORS

Lauren A. Peckham
Orniston Road
Breesport, N.Y. 14816

HUGH ATKEN (Amerst, Mass.) found an unusual AK item labelled "Atwater-Kent Gasoline Measure", patented May 18, 1909. It is about 14 inches long and 1 inch wide and was used to measure gas in early automobiles.

ALAN KUKKENDHAL, now in the service, will be living in Reading Pa. However, he was able to get in on the Reber sale and now has a Radiola II.

CHRIS PETXIKOPOULOS (Athens, Greece) has practically a clear field in his country. Interesting items include a rare 1929 German crystal set made by Heligon and a 1928 English portable Neutroonic. Chris also found a French 30 glass cell battery made in 1908 by C. Chardin Co.

BOB BASE (Baltimore) is both an antique train and radio collector. Bob's prize possession is a beautiful Jenkin's scanning disc TV set.

BRUCE ROLOSON (Horseheads, N.Y.) is a tube collector who recently decided to try his luck with old receivers and now has a Westinghouse 80 and Radiola Model 25.

FLOYD BENNETT (Kirkville, N.Y.) adds a Music Master and Freed-Eisemann NR-215 to his collection.

JOHN PORTER (Hornbrook, Calif.) purchased 20 sets from the estate of W7KG. John also located an early De Forest transmitter/receiver using a spherical audion...very rare...

STAN ATKINSON (Cranston, R.I.) sent in a long list of early electrical/radio books he recently acquired. Stan's list includes several books well over 100 years old.

A.C. STODDARD (Lansing, Mich.) picked up several items at the AWA Spring Meet including a Radiola 26, AK-20 and Crosley 51.

JOHN DRAKE (New Canaan, Conn.) also picked up some equipment at the Canandaigua affair such as a Radiola III and an "Electricradio".

DICK RANSLEY (Sodus, N.Y.) also had good luck in the Syracuse area by adding a rare DeForest Radiophone one tube set to his collection.

GEORGE STARKEY has an exceptionally fine floor model McMurdo Silver Marshall Masterpiece II with a chrome chassis. George would like to sell it to a local collector (very reasonable) since he will not ship it. His address is: 612 James St.

Iatrobe, Pa. 15650

BILLY SHIBLEY (Bethel Park, Pa.) also picked up a nice Aeriola Sr. plus a Radiola V.

RICHARD BREWSTER (Fishkill, N.Y.) located a Kennedy V among the many items for sale at Canandaigua.

NOTICE: Write and tell me what you're doing in the collecting field--let us build up this column. Our next deadline is July 12.

--- Lauren Peckham

MARC HARNES (Austin, Texas) really hit the jackpot on a recent trip by picking up a Federal 58, Freed-Eisemann PE-15, Aeriola Sr. with amp. including elusive brass base WD-11's.

DEX DEELEY (Rochester, N.Y.) made a trip to Syracuse recently and came away with a Freed-Eisemann NR-6 and NR-7 plus an AK-20.

TED KERRICK (Horseheads, N.Y.) now has a Grebe Syneraphone and Radiola III with WD-11 tubes.

GAYLORD EVING (Breesport, N.Y.) expanded his Federal collection by adding an impressive Model 6.

DON DAYKIN (Vestal, N.Y.) came to Canandaigua and returned with a Westinghouse Aeriola Sr. with a brass base WD-11 (try and find these tubes!)

FRANK APPLE down in Florida has an interesting gadget few others can claim: It is of 1912 vintage, has gooseneck candelabra socket, etc. and is used to test De Forest Audions! He's not sure whether it is homemade or commercial.

VERN THOMPSON (Effingham, Ill.) vacationed in Florida where you would think there were not too many "goodies". Not so for he returned home with a mint ER tube.

(Continued on next page)
THORN MAYES (Saratoga, Calif.) in addition to historical research finds time to build up his commercial collection. The latest: a 1917 American Marconi Receiver Type CM-294 which covers 750 to 3100 meters and was built for the Bureau of Steam Engineering.

JOE MAYER (Dundee, N.Y.) sent A.W.A. a beautiful foto of his spark gear: huge OT, Benwood gap and Thor xfmr plus Mignon rx -- all nice and clean.

LAUREN PECKHAM (Breeseport, N.Y.) is happy to add a Zenith 1-R with matching 2 stage amp.

 BILL DENK (Devon, Pa.) now has one of the Westinghouse RC receivers from the Grote Reber sale.

JOE PAWEK (Minneapolis) without trying too hard has added a Marconi receiver, mint Kennedy 220, Adams-Morgan detector and tuner. His pride and joy, however, is an old mercury arc rectifier, cradle and all!

ERV RASMUSSEN (Redwood City, Calif.) is building up one of the finest libraries in the West. Erv’s latest count is 381 books and this number is not all “jupes”!

RON MC CLELLAN (Haverton, Pa.) now has a Radiola V in his collection.

BILL MC PHARSON (Ontario, Canada) came over and picked up a nice Grebe Synchrophase at the Cananaigus “Meet”.

BOB CARROLL (Madison, N.J.) is pleased with a nice AK Model 10B breadboard which are becoming increasingly hard to find.

BOB BASE (Baltimore) is a new collector to join the ranks. Bob started by building a Pilot Super Wasp in 1929, played with Jenkins scanning disc and then became a Scott fan.

VINCE HIGHMARK (Two Harbors, Minn.) now has a nice Al-R amp/horn combination but needs a horn. Vince also found a Federal 110.

A.R. LA RUE (WBNY) is another amateur who shows interest in OT radio having Grebe, Flewwling and other early sets in his collection.

LINC CUNNALL, our honorable treasurer, picked up a nice Radiola III-A from his postman! Three of the 4 WD-11 tubes were good!

FRED NICH (Philadelphia) has a Radiola Balanced Amp., Radiola 16 and a Pilot 3” TV less cabinet. Many of these goodies were found in the trash!

TED WOOLSTON (Shrewsbury, Mass.) is erecting a small building in the rear of his home as an amateur museum. Accent will be on the ’20s — music and all.

BOB O'NEILL (Ithaca, N.Y.) has proof that a relative in the antique business is good news for a radio collector... recent acquisitions include an Almar "double decker", Radiola III and a huge collection of brass binding posts, bus bar, tube sockets and even varicimeters... all new from an old radio store.

FLOYD HOMES (San Francisco) picked up a couple of very old tubes he can't identify: a double triode similar to a Tigemen and a miniature tubular triode 2" long and only 3/8" in diameter. Can anyone help?

PHIL HOWELL (Nashville, Tenn.) is only 14 years old but is already well on the way to building a collection. Phil does his own restoration work and recently put an AK-62, AK-80 and Philco "Baby Gram" in working order. He gets old tubes from United Radio Co., 56 Ferry St., Newark, N.J.
Q. Was the Wunderlich tube of the early 1930's ever replaced with a later type using a number?

A. The Wunderlich tube, the invention of Norman E. Wunderlich, was made by Arcturus, and was a "Co-planar Grid" triode, intended for use as a full-wave detector. It was made for a few months in 1932, and there were two versions marketed, one with a 2.5 volt heater, the other with a 6.3 volt heater. As far as I have been able to determine it was not directly replaced by any numbered tube, although later other co-planar grid tubes appeared. I heard the patent was bought by RCA, which might account for the discontinuance of the tube.

The Wunderlich was not the first co-planar grid tube. The first such tube was the "Electronic Deviator" devised by Quirino Majorana, which was covered by German Patent DRP No. 281014, applied for Oct. 10, 1912, issued Dec. 4, 1914.

Q. I have three de Forest spherical Audions and would like to know approximately when they were made. One has double plates, the others have only one plate. Does the patent date on the little round paper seal have any bearing as to its age?

A. The date on the paper label is the date on which the patent on the grid-type Audion - U.S.P. No. 879,532 - was issued - Feb. 18, 1908. Its only significance is that this particular Audion was made after that date. It may have been made at any time up to 1916.

It is extremely difficult to determine when any given Audion was made. As made by McCandless (1907-1915), there are many variations, since the only requirement he had to meet was that there should be the correct number of electrodes and that the filament should be continuous. He was free to make any modifications in the structure that he wanted. Plates were cut from sheet metal with scissors. Grids were made by looping wire around nails driven in a board. Earlier Audions had approximately square plates. Later the corners were cut off. Some have the plate support wires threaded through holes on the upper corners and pinched flat. Others have the support wires spot-welded or hard-soldered to the back of the plate. Later, when de Forest started making tubes at High Bridge (1914-1918) the plates were punched using a die, which produced plates with neatly rounded corners of small radius. At one time, at High Bridge, both plate support wires were fastened near the middle of the upper edge of the plate, and one was bowed out in an attempt to stiffen the structure. When the various changes were introduced is unknown. At the A.W.A. Meet held at the Franklin Institute some years ago Howard Schrader had a display case containing thirty spherical Audions, no two of which were identical.

Q. One of my spherical Audions is larger than the other. What does this mean?

A. There were two sizes of Audions made at High Bridge. There were no bulb size restrictions on McCandless. Since he obtained his bulbs from an outside supplier, he might have used larger bulbs if the size he normally bought was in short supply.
Q. I understand some Audions have a Hudson filament. What is this? The filament in my tubes all look alike.

A. Early McCandless Audions used tantalum filaments. In use the tantalum filament sometimes warped, even to the point where the filament would touch the grid. Tungsten filaments were introduced to correct this, but they were not as good emitters as tantalum. Walter G. Hudson, an enthusiastic amateur who was also a chemist, devised a method of winding a coil of fine tantalum wire onto the upper part of a tungsten filament, at the top of the horseshoe. This became known as the "Hudson" filament. Hudson obtained U.S. Patent No. 1,190,312, application date Feb. 19, 1914, issued July 11, 1916, covering this structure. Since the manufacture of this filament was difficult, Hudson later substituted for the tantalum wire wrapping, a dab of paste, which consisted of tantalum powder mixed with an organic binder. McCandless told me that he used this paste extensively. There is some reason to believe that the bond between the tungsten filament and the paste was not too good, since few Audions have survived with this construction visible.

Q. I have seen pictures of old amateur stations where the operator placed a horseshoe magnet around the Audion detector tube. Did the magnet really make the tube work better?

A. A number of people have told me that it did. The effect of the magnet may have been to concentrate the electron flow into a narrower stream, or to increase its velocity, thus bringing about a form of localized ionization which increased the sensitivity, without causing the tube to become totally ionized and filled with paralyzing "blue glow".
LETTER DESIGNATIONS OF EARLY WESTERN ELECTRIC TUBES
Bob Morris, W2LV

Many of the early Western Electric vacuum tubes were known by a letter designation as well as a number. For example, the 205B was known as the "E" tube and the 215A was also called the "N" tube. According to information obtained from Gerry Tyne, the letter designations were early developmental identifications and preceded the number system.

It is interesting to note that another early amplifier tube was known as the "M" tube since instead of having leads emerging from the glass envelope, it was MOUNTED on a metal base to be plugged into a socket. Other early tubes were the "S", and "W" types built to be used in the NAA tests of radio telephony in 1915.

101F Vacuum Tube

The first designations were "A" and "B" which were early types of line or repeater amplifiers. These were the first models built by Western Electric after acquiring patent rights from DeForest in 1913. These models were superseded by the "L" tube, so designated since it was to be a LINE amplifier. There followed a "V" tube which was a high mu VOLTAGE amplifier tube. There also was designed a low mu high current tube for high audio OUTPUT and called the "G" tube. These tubes later were given the numbers 101(), 102(), and 104() respectively.

During World War I, the "J" tube and the "E" tube were built in large quantities for the Signal Corps and were known as the VT 1 and VT 2 respectively. The "J" tube became the 203(), and the "E" tube which had its bayonet pin turned fifty degrees from the position used in other tubes, became the 205(). With development after the war, the 50 watt "G" tube became the 211() and the "I" tube, the 250 watt 212() used in early W.E. broadcast transmitters.

(Editor's Note: The next OTB will list W.E. tubes by number and designation.)
Notes on the White Metal Problem

We got a good response to our cry for help about the white metal problem in the March QST. Suggestions ranged all the way from "toss it into the garbage" to some useful tips -- plus a copy of a metallurgical engineering article at 125 to 230 degrees F. Bob for white metal cracking and corrosion.

Robert E. Bese of Baltimore, a great collector of toy trains, has had his share of problems since most of the oldies were of early "pot metal" -- mostly zinc plus small amounts of impurities like aluminum, titanium or antimony.

According to an article in the Train Collector's Quarterly that Bob sent us, written by Prof. L. T. Jordan, U. of N. Carolina, the so-called corrosion that gives us the trouble is caused by the migration of impurities from within the grains of the white metal to the grain boundaries of the metal and the subsequent action of atmospheric moisture upon these stressed boundaries. Cracking and swelling are the result.

In any case, what to do? If it's only a matter of clearing the old piece up and protecting it, Prof. Jordan has had good results by dipping the piece in liquid thermosetting structural adhesive and curing at 225 to 250 degrees F. Other coatings might be equally well. Bob has even used shellac.

If it is a case of a shaft frozen in a journal bearing (such as a variable condenser), John B. Adams of Burlington, Mass., warns us not to try to loosen the shaft by twisting. This only promotes galling and makes matters worse! John recommends soaking the shaft and bearings in Liquid Wrench, Rust-Solve or even kerosene for a week or so and then PUSH the shaft out endwise without twisting.

What you really need for this is an arbor press, of course. But if you can't get the use of one, you can try supporting the bearing on your open vise jaws and tap the shaft with a soft hammer. Or use a light ball-peen hammer and protect the end of the shaft with a piece of lead or hardwood.

By slipping a bushing of some kind over the shaft and letting it take the impact or pressure rather than the journal bearing or casting, you can give maximum protection to the casting. If you succeed, you can ream the bearing slightly oversize and then use a good silicone grease in replacing the shaft.

We welcome additional suggestions on solving this thorny problem. Of greatest value would be some success stories on the kind of oil or penetrant which seems to work best in loosening the shaft or other part. Our thanks to Bob Bese and John Adams.

210 TNT TRANSMITTER

Members interested in getting an old time transmitter back on the air should read Bill Orr's (W5SAL) article in January issue QST magazine.

The xmr is a little cutie and built just like George Grammer (W1DF) designed it 43 years ago. Bill updates George's original article a bit with several valuable suggestions for modern use.

Hi. note: A similar transmitter was placed in operation a few years ago for the purpose of originating some authentic signals of the past to tape record. The author found it extremely stable -- so much so he had to place a 110 volt light bulb in series with the plate supply in order to get an old fashion chirp!!

RME-69
Variations on a Theme by Roy Weagant

by A. H. Roberts

Roy Weagant devised his clever regenerative circuit to overcome that old bug-a-boo of early dial-twisters, hand capacity. As indicated in Fig. 1, the plate feedback (tickler) coil is on the cold or ground end of the grid coil and the regeneration control variable condenser rotor is connected to ground. Usual construction practice was to wind the grid coil in the customary manner, then, loose wind about 25 turns of coil wire and place this inside and at the bottom of the coil form. This coil, Fig. 2, was Weagant's tickler. Some adjustment in the number of turns was necessary to get smooth regenerative operation. The actual number of turns depended upon the coil construction, type of tube and plate voltage.

The Weagant circuit makes an interesting junk box project because it is possible to duplicate the set, electrically at least, with modern components. If you don't care to wind your own coils, the open type "universal" coils available from Calectro and sold by most supply houses are authentic enough and work quite well. If you use this type coil, the tickler is wound on a smaller diameter cambric or similar tube as shown in Fig. 3. This type construction is quite authentic. A 1925 'how to do it' book states the inner coil form for the tickler should be one-half the diameter of the outer form.
Operation of the Weagant, once the proper number of tickler turns has been determined, is smooth as silk. With a vernier drive on the regeneration control, the set goes in and out of regeneration over a fairly large portion of the dial, making for easy and stable adjustment.

The next step is to add a tuned radio frequency amplifier. In my set, I had to resort to gang tuning (horrors!) because the faithful junk box failed to produce a matched set of 365's. The schematic in Fig. 4 was developed to employ TRF with the Weagant detector. Note the change in the grid leak connection.

In constructing this set, I used one of the Callectro universal RF coils with the addition of a tickler winding as in Fig. 3. The primary winding must be as loosely coupled as possible. The TRF stage will regenerate, demanding extremely careful adjustment of the TRF filament rheostat. Less critical operation can be obtained by reversing the TRF plate and B plus connections, as in Fig. 5.

Although my receiving antenna runs under a canopy of large trees and is located below average terrain level, the little set regularly logs Toronto, New York City, Havana, Denver and lots of others from home base here in Nashville, Tennessee. The receiver can be built out of the junk box, plus whatever modern components you may need, and still remain authentic in concept, circuitry and operation. So build the set, enjoy it and drop me a line and let me know what sort of DX you've logged because this variation on the Weagant is a hot item and it becomes a red-hot DX'er with the addition of the audio amplifier shown in Fig. 6.
OLD TIME TRANSMITTER CONTEST

We have a three times winner! Bob Morris did it again! W2LN wins the top spot over tough competition which includes two new OT xmttrs and rovs: W2IEG and W2BFI. Congratulations Bob for a fine score in spite of the Aurora problems on Feb. 22/23.

Al, W2IEG, turned in a nice score in spite of transmitter loading problems. Fran, W2BFI, racked up points even though he only operated on Feb. 22 and 23 while the Aurora made all signals sound as if they took several turns around the North Pole on their way from the transmitter to receiving antennas.

QRM was rampant again and many participants plead for the gang to spread out in frequency. Greater use of OT receivers makes this a must and someone suggests that high power modern transmitters move further off.

This year we discover that there are still Hams who are early risers. W2IR, W4JT, W6BKM, W8EIF, W2WS and VE3EDV operated 4:00-6:00 A.M.!! Lou, VE3EDV, put Canada on the AWA map this year. We hope there will be others also.

Conditions prevented Warren, W7JY, from being heard in the East except by W2TBG although he heard W2BGN and W7JF and QSOed W5TOS. He easily wad W6GC and threatens to put in a pair of 8521s self-rectified at 4000 v.!!

Bud, W6GC, QSOed Bob, W2LN on 40 where Bob told him the gang were all on 80. W2LBB started a pileup by working Bud and the others just lined up and took turns keeping him busy from 0329 to 0525. All this on 80 with the Aurora streamers bating the sky back and forth across the sky. Some fun, eh Bud?

W5TOS (who is ex-W2HET) now in Roswell, New Mexico, tried hard to work W2AN. He says Bruce had the outstanding signal both on Feb. 22/23 and on 14/15.

1927 transmitter used by Yardley Bcr, W6JF, Boulder, Colorado. UX-210 osc. driving 203-A rf amplifier

W5DM, with the oldest transmitter, also has a most interesting one. It is patterned in part after the '24 and '25 developmental excitors at Rocky Point and Bolivia and the ET-3626 converted spark set. To simulate "ship mains", Art used a modern silicon rectifier to produce 120 volts DC at 10 amps. This was fed thru a starting box to the DC motor which drove a 500 cycle generator of the Holtzer-Cabot D-1 0.5 KW set. The 500 cycle AC was keyed and fed to a Marconi rewired D-16 spark transformer. The high voltage was then rectified by a pair of UV-217A's and filtered. Just enough ripple leaked thru to give a distinctive note which made many ears prick up!

Cliff, W2AFE, says he never heard of an "1800" xmttr so lets drop the 19 from our xmt tr date. The 19 always comes thru clear and the 24 or 39 always gets clobbered by QRN, QR4 or QSB. Good idea...

Do you see the handwriting on the wall? More OT xmttrs are appearing and with the new multiplier -- more OT rovsrs. Watch the OTR for the next announced contest/QSO party. DON'T MISS THE FUN!
### Call, Ext Yr., Type, Wtts In.

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### Receivers

- **W2LE**: Mackey Radio 104-B
  - Untuned 32 RF, double reg. det., with (2) 30 tubes, 2 step Aud. 30's
- **W2BJI**: Hammarlund HQ20X super.
- **W3AN**: HRD with 2.5 V. tubes
- **W3QY**: HRO ""
- **W2NX**: S-3 and early HRO
- **W7JY**: HRO super.
- **W2FW**: National FB-7X

* OT RX or TX appearing for first time in contest.

### STATISTICS

- Number of participants: 37
- Number of OT transmitters: 18
- Number of OT receivers: 7
- Contacts on 50 meters: 353
- Contacts on 40 meters: 44
- Contacts on 20 meters: 0
- Points scored Feb. 14/15: 510
- Points scored Feb. 22/23: 283


**Oldest xtn:** 1925 W2LM

**Only motor-generator set:** W2LM

**Oldest battery receiver:** 1932 W2I3G

**Lowest power:** 3 w.tts. UX-201A W2AX

**Highest power:** 150 w.tts. 203A W2BP

**Greatest DX:** W5CG - W2LM

**Shortest DX:** W2JF - W2JF

**Greatest miles/watt:** 160: W2AX - W3B

**Probable 2nd M/watt:** K2LEB/W6CG

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### CALL, TX, RX, SCORE, 2-14/15, 2-22/23

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<td>23</td>
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<td>W2LE</td>
<td>7337</td>
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<td>25.5</td>
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<td>W2AE</td>
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<td>W1DM</td>
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<td>W2AX</td>
<td>30</td>
<td>31.5</td>
<td>19.5</td>
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<tr>
<td>W2LM</td>
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<td>28.5</td>
<td>28.5</td>
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<tr>
<td>W2JF</td>
<td>27</td>
<td>30's</td>
<td>27.5</td>
</tr>
<tr>
<td>W2BB</td>
<td>68</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>W3XJ</td>
<td>57</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>W6CG</td>
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<td>21</td>
<td>21</td>
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<tr>
<td>W3BP</td>
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<td>41</td>
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<tr>
<td>W2JE</td>
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<tr>
<td>W2BE</td>
<td>35</td>
<td>18</td>
<td>18</td>
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<tr>
<td>W2BP</td>
<td>71</td>
<td>18</td>
<td>18</td>
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<tr>
<td>W2AT</td>
<td>36</td>
<td>16.5</td>
<td>10.5</td>
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<td>W2B6V</td>
<td>40.35</td>
<td>15.5</td>
<td>7.5</td>
</tr>
<tr>
<td>W2FW</td>
<td>36</td>
<td>10</td>
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</tbody>
</table>


Unusual Mackey Radio 104-B receiver used by W2LE. Manufactured by Federal Telegraph Co., it is described on back cover of Feb. 1934 QST and page 4 of May, 1934 QST.

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### AWA NETS

**PHONE**

- 3902 KC. -- Tuesday 8 P.M.
- 7227 KC. -- Sunday 12 Noon

**CW**

- 3584 KC. -- 8 P.M. First Wed. each month
- 4 P.M. Daily
HISTORY OF ELECTRONICS: BIBLIOGRAPHY

by George Shiers

It is not often we get excited over a book; in fact, it is seldom we even buy a book. However, the $8.50 spent for this bibliography was well worth the price.

Without a doubt, "History of Electronics: Bibliography" is now No. 1 reference book on our shelf. It is hard to believe one man (George Shiers) could have gathered so much reference material in 323 pages! Material ranges from early electricity to radio astronomy. He covers all known radio books (past and present), authors, radio magazines, inventions, manufacturers, telegraphy, sound recording, patents, wireless history, broadcasting, etc.

We feel every serious radio historian, collector and engineer will find this book the most valuable reference bibliography in his library.

Send $8.50 to book dealer:

A. D. Santomaso
1255 Boulevard
New Haven, Conn. 06511

CODE SPEED STANDARDS

April issue of "Ham-Radio" magazine

As a followup to the recent CTH article on code speeds, we advise interested members to read another by V22ZK. He goes into technical detail on how to count "words-per-minute".

Very interesting. Seems FCC and ARRL set their automatic keyers to what is known as a 50-baud word standard with the word PARIS as base. Most military stations use a 60-baud word standard with the word CODEZ as base.

What does this mean? Simply, that 10 wpm using 50-baud standard is only 8.33 wpm with a 60-baud standard. In other words, you can copy faster with words having i, e, s etc than words with an abundance of y, q, x etc. Good reading for the CW man.

The current world record, by the way, is still held by the late Ted McElroy at 75.2 words per minute!

STEREO

One of the British magazines that I read (called the NEW SCIENTIST) has been conducting a long argument in its Letters To The Editor column about stereo vs mono recordings and playback.

A few weeks ago a letter appeared that said, "So far as one can ascertain, the earliest radio-stereophony experiments were successfully carried out by a small amateur station (G2FQ) at Tunbridge Wells in 1923 or 1924. The results were communicated to P.P. Eckersley -- at the time Chief Engineer to the BBC." See NEW SCIENTIST, December 21, 1972, page 722.

(Perry Ferrell)

FIRST WIRELESS IN ALASKA

Radio historians interested in early commercial history must read an article in April HAM-RADIO magazine telling of the first wireless stations in Alaska.

The reviewer was surprised to learn that Congress had given the U.S. Army Signal Corps money as early as 1900 to improve communication in this area. By 1903 the Corps had several stations in operation after having experimented with several systems including DeForest.

The article is exceptionally well written with much technical detail. The author (pioneer B. Marriner, W6HLZ) is to be complimented, especially for the fine illustrations.

VINTAGE RADIO

Morgan McMahon writes that an updated version of Greenwood's book, now titled VINTAGE RADIO, will soon be available. Morgan has made many corrections, added a special section on E.H. Armstrong plus a listing of significant receiver manufacturers from 1921 through 1930.

The number of pages has been increased and the book will be available in hardback as well as soft cover. All told, the collector (and radio historian) will find the new additions well worth the money. More info in next OTB.
FALL MEET

NEW ENGLAND WIRELESS MUSEUM
Fremont Rd.
East Greenwich, R.I.

SATURDAY, OCT. 13
Program for radio historians and collectors...open house at the Wireless and Steam Engine Museum

FULL DETAILS IN SEPTEMBER BULLETIN

WHAT HAPPENED?

"Electronics Digest", the well edited magazine published by the Tandy Radio Shack people, phased out the publication last year and changed the name to LEISURE ELECTRONICS. Only one issue was printed (Nov./Dec. '72). They then arranged with ELEMENTARY ELECTRONICS (A Davis Publication) to take over the remaining subscriptions. We understand that Editor Bill Palmer, W5SPF, is still with Tandy and is editing an employee magazine.
Communications news

Continental Electronics Reorganized by Weldon

Members who attended the 1970 Conference still talk about the fabulous show presented by Mark Bullock of Continental Electronics (Dallas, Texas). Million watt stations and miles of antenna are commonplace with this highly technical organization (NAA-Cutler, Me., Jim Creek, etc.).

The company was founded by James Weldon in 1946. During the intervening years the firm was acquired by James Ling, rode up the conglomerate ladder with him to a peak of more than 700 employees, and finally was sold to RasaLab in 1969.

Under RasaLab's management, employment declined to about 170. Recently the firm's management decided to phase out its electronics business and concentrate on coin-operated laundries !!

Now (1973) the company is back in the hands of Weldon and again will focus on high-power radio frequency transmission equipment.

---

New Transmitter Rules

One of the most exciting topics of interest to broadcasters is the FCC's lifting of its freeze on applications for new standard broadcast stations. Rules governing the assignment of new AM stations and major changes in existing stations have been adopted, and are effective April 10, 1973.

The new regulations, while more restrictive than the rules in force before the FCC imposed the AM freeze in July 1968, are less stringent than those proposed by the commission in a rulemaking notice released September 13, 1969.

The rules require that an AM applicant for either daytime or full-time service must provide a first service to at least 25 percent of the area or population receiving primary service. As an alternative, an application could be considered if it proposes to supplement existing "inadequate" service to a community.

Service is considered inadequate if 20 percent or more of the area or population of the community receives less than two interference-free aural services. The aural services would be of the grade normally required to be provided by a station assigned to the community—at least a 5-mV/m signal from an AM station, or at least a 70-dB (1.5-mV/m) signal from an FM station.

Service by existing FM stations, as well as by AM stations, must be specifically considered in determining whether an application will be accepted. Even when existing service is shown to be inadequate, an AM application will not be accepted if an FM channel is available on which a station may be assigned.

To insure that existing service will be provided by comparatively nearby stations, the rules provide that stations located more than 50 miles from the community will not be included in the evaluation. This excludes service provided by powerful stations with extensive coverage areas, since such stations could not be expected to devote appreciable amounts of programming to each of the many separate communities in their service areas.

Old time broadcast engineers may wish to read the entire article which may be found on page 29 of COMMUNICATIONS NEWS / APRIL, 1973.

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DE FOREST 100TH BIRTHDAY

Members of DE FOREST PIONEERS, an organization dedicated to the memory of Dr. Lee de Forest, are in conjunction with A.W.A. celebrating his 100th Birthday. (1873-1973)

The Pioneers, under the guidance of their President J.R. Poppele and Secretary K. Richardson, are urging the Post Office Department to issue a commemorative stamp. An earlier stamp had been issued celebrating the 50th Anniversary of the triode tube (1906-1966). A.W.A. members interested in this fine organization and their projects should write: Ken Richardson, 254 Vincent Ave., Lynbrook, N.Y. 11563

---

SPARK OPERATORS

Were you exposed to spark radiation and/or ozone in the old days while operating spark transmitters? A survey is being made to determine if exposure had any effect one one's health. If you wish to contribute to the survey, write Ken Richardson, 254 Vincent Ave., Lynbrook, N.Y. 11563

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Radar a Billion Dollar Market

Spending on the ground and shipboard radar market will exceed $1 billion in fiscal years 1973 and 1974 and will remain at $800 million from 1975 through 1977, a just-completed Frost & Sullivan market study concludes.
Chart of the early wireless companies formed by stock promoter Dr. Gustav Gehring of Philadelphia, Penn. The American Wireless Telephone & Telegraph Co. was the first wireless company to be formed in the United States having been incorporated under the laws of the Territory of Arizona Nov. 10, 1899, just 12 days before the Marconi Wireless Telegraph Co. of America.

The boxes include incorporation date, state and capitalization in millions of dollars. Information submitted to A.W.A. by Thorn Mayes, 3-26-73

Farsighted-- another A.W.A. member who is thinking of the future is Maurice Stahl (Canton, Ohio) who is making arrangements to have his valuable collection in the Stark County Historical Center. So many members neglect to provide a future for their collection and when the time comes (as it will for all of us), many fine historical items which the owner had cherished will be given or thrown away. Stahl, by the way, recently retired from the Hoover Company as engineer/chemist. He is also an "organ buff".
Alfred Grebe was born at Richmond Hills, Long Island in 1895. He started manufacturing receivers around WWI and peaked in the 1920's. The company went downhill like others during the depression years. Al Grebe, W2ZQ, became a Silent Key Oct. 24, 1935. (See OTB Vol. 3, #4 for complete story of the Grebe Company)

His CR-7 longwave set was and is today a "classic". Try and find one! The CR-9 is similar to the CR-5 with 2 step audio. A popular set with early amateurs. The CR-18 was Grebe's first venture in real shortwave and is likewise a hard set to find. In addition to receivers, the Grebe Company made rotary spark gaps and other components.
The CR-14 broadcast receiver using 199 tubes was Grebe's answer to early broadcast reception. The CR-13 was a popular "tuber" among early "hams" since it tuned all the way down to 80 meters!
Listed below are dates which actual production started on early Atwater-Kent receivers and components. Some of the units are "strangers" to collectors (at least to us) while others are disguised by a part number. (Info from Frank Atlee)

<table>
<thead>
<tr>
<th>Date</th>
<th>Part No.</th>
<th>Model and description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-26-22</td>
<td>3590</td>
<td>Det. plus 2 stage amp. in wooden cabinet</td>
</tr>
<tr>
<td>11-23-22</td>
<td>3925</td>
<td>Tuner, detector and amplifier</td>
</tr>
<tr>
<td>11-27-22</td>
<td>3945</td>
<td>Tuner, detector and 2 stage amplifier</td>
</tr>
<tr>
<td>12- 2-22</td>
<td>3955</td>
<td>Tuner, detector unit and 2 stage amplifier</td>
</tr>
<tr>
<td>12- 4-22</td>
<td>3960</td>
<td>Same</td>
</tr>
<tr>
<td>12-23-22</td>
<td>3975</td>
<td>Vario-conoler, variometer, detector and 2 stage amplifier</td>
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<tr>
<td>1-24-23</td>
<td>4066</td>
<td>Single cir. tuner, 2 RF trans., 2 tube units (det. &amp; 2 stage amp.)</td>
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<tr>
<td>1-17-23</td>
<td>4052</td>
<td>Tuner, pot., 2 RF trans., 2 tube units (supplied from 4275)</td>
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<tr>
<td>3-15-23</td>
<td>4120</td>
<td>Single circuit tuner, RF trans., tube unit, det. unit</td>
</tr>
<tr>
<td>4-30-23</td>
<td>4205</td>
<td>Same as 4066 (4135 tube unit for use with $\frac{1}{8}$ amp. tubes)</td>
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<tr>
<td>5- 8-23</td>
<td>4207</td>
<td>Same as 4066 (Cabinet board)</td>
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<tr>
<td>5-15-23</td>
<td>4220</td>
<td>Model 15 cabinet receiver (4066)</td>
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<td>6-5-23</td>
<td>4275</td>
<td>Single cir. tuner, pot., 2 RF trans., tube unit (1) det. &amp; amp.</td>
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<tr>
<td>9-7-23</td>
<td>4325</td>
<td>Model 8 Duplex</td>
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<tr>
<td>9-7-23</td>
<td>4333</td>
<td>Single circuit tuner, det. and 2 stage amp.</td>
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<tr>
<td>9-7-23</td>
<td>4340</td>
<td>Model 10 set (plain gray)</td>
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<tr>
<td>10- 9-23</td>
<td>4415</td>
<td>Model 9 (cable type) 2 tuners (5 tubes)</td>
</tr>
<tr>
<td>11- 1-23</td>
<td>4480</td>
<td>Model 9 in 4217 console with cable</td>
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<tr>
<td>11- 9-23</td>
<td>4490</td>
<td>Model 10 in 4427 cabinet with cable</td>
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<tr>
<td>12-14-23</td>
<td>4535</td>
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<tr>
<td>12-14-23</td>
<td>4540</td>
<td>Model 10 in console with cable</td>
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<tr>
<td>12-14-23</td>
<td>4550</td>
<td>Model 10 in brown finish, cabinet</td>
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<tr>
<td>1-31-24</td>
<td>4560</td>
<td>Model 10 in black finish, cable</td>
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<tr>
<td>2-16-24</td>
<td>4590</td>
<td>Model 10 on Pooley board</td>
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<tr>
<td>2-22-24</td>
<td>4600</td>
<td>Model 10 brown finish</td>
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<tr>
<td>2-28-24</td>
<td>4610</td>
<td>Model 10-B in 4217 console</td>
</tr>
<tr>
<td>3- 3-24</td>
<td>4620</td>
<td>Model 12 six tube set</td>
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<tr>
<td>4-18-24</td>
<td>4660</td>
<td>Model 9 &quot;C&quot; set, 2 var. condensers and 2 RF trans.</td>
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<tr>
<td>4-30-24</td>
<td>4640</td>
<td>Model 20 set in cabinet (large)</td>
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<td>5- 6-24</td>
<td>4650</td>
<td>Model 10-B brown set in 4427 cabinet</td>
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<td>5-29-24</td>
<td>4700</td>
<td>Model 10-C set</td>
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<td>7-23-24</td>
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<td>Model 12 set (early type)</td>
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<td>7- 7-24</td>
<td>4880</td>
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<td>4920</td>
<td>Model 20 Deluxe</td>
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<td>4930</td>
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<td>8-25-24</td>
<td>4950</td>
<td>Model 10 Pooley set</td>
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<td>3- 2-25</td>
<td>7570</td>
<td>Model 20 compact</td>
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<td>6-17-25</td>
<td>7780</td>
<td>Model 21 dry cell type</td>
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<td>7-30-25</td>
<td>7800</td>
<td>7780 set with 7790 dry cell container</td>
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<td>7950</td>
<td>Model 30 set (one rheostat)</td>
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<td>8000</td>
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<td>Model 35 set (metal cabinet)</td>
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<td>5-15-26</td>
<td>8270</td>
<td>Model 32 set (seven tubes)</td>
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<td>8100A</td>
<td>Model 35-A</td>
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<td>11-12-26</td>
<td>8000A</td>
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<td>3-16-27</td>
<td>8820</td>
<td>Model 50 console set</td>
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<tr>
<td>5-11-27</td>
<td>8930</td>
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<td>9040</td>
<td>Model 30 console set</td>
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<tr>
<td>5-24-27</td>
<td>9050</td>
<td>Model 33 console set</td>
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<tr>
<td>6-29-27</td>
<td>9090</td>
<td>Model 31 set (?)</td>
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</table>

See page 18, Vol. 7, No. 3 OLD TIMERS BULLETIN for more description of most sets. Frank suggests the collector not look for all models listed since some were low production runs with very few going on the market.
THE O.T. LINE

AUSTRALIAN OVERLAND TELEGRAPH LINE

One of the earliest and most difficult communication projects took place just over 100 years ago when a single telegraph line was built across Australia. AWA Member, Norm Burton, sent us a detailed account of this momentous task. We reprint a few excerpts and a map. It reminds us of the problems encountered when stringing the first line across the United States at a slightly earlier date. The same path is now covered with a multi-channel microwave link via Queensland.

CONSTRUCTION

The story of the construction of the overland telegraph line is of epic proportions.

To contemporaries, it was first and foremost the means of obtaining quick communication with Britain.

To the South Australian government, it was a top business deal and a political triumph.

THE TASK

The task was to build a single-wire telegraph line 2,000 miles long north and south across Australia. The line was to join with a submarine cable from Java, and so integrate into the growing world telegraph service.

THE COUNTRY

Tough and treacherous; harsh and hostile; parched, arid and relentless — these and a dozen other similar adjectives are the stock-in-trade of every writer on inland Australia.

THE MEN

The sweat of many men went into the building of the OT line. But of them all — engineers, surveyors, explorers, adventurers and labourers — the name that history knows is Charles Todd.

A.W.A.

AMALGAMATED WIRELESS AUSTRALASIA Ltd. Members may be interested in a brief history of the company which bears the same initials as our organization. The A.W.A. was incorporated in 1913 with Australian and British capital with both Marconi and Telefunken patent rights. It became the leading wireless organization in Australia and New Zealand and followed somewhat the same path as our Radio Corporation of America, i.e., they established commercial radio stations and became a manufacturer of radio transmitters, receivers, TV sets, tubes and components. They are a leader in the southern hemisphere in electronic research and development and export their products throughout the world.
SEE HOW EASY IT IS
to Get the Radio Broadcast from all
over the Continent If You Have a
DE FOREST RADIOPHONE!

First
Light the tubes

Second
Turn the Dial and
Pick up Any Station
you want

Third
Increase the Sound
Volume as much as
you want

That's All
there is to it!

No Outdoor Antenna—The Loop as shown is all you need, though the De
Forest Reflex can be used with outdoor aerial if desired.
No Outside Batteries—All Dry Cells go inside the box, although the set can be
used with the storage batteries if desired.
No Ground—No outside wires or connections of any sort. The set gets cross-
continent broadcast just as you see it with great clearness.
The world famous De Forest Reflex Radiophone. Type D-10 is a 4-tube set with
a range on indoor loop of 8,000 miles (record range 5,000 miles). It has a reputa-
tion for the clearest reception of broadcast in existence. Uses either head
phones or loud speaker. The simplest long-distance set made; low in first cost;
economical to operate. Price for set and loop, $150.00, plus 8% for territories
west of the Rockies.

FREE RADIO CATALOGS. Send us your name and address and we will send you
the new De Forest Catalog with full details and prices on sets, audions and parts

DE FOREST RADIO TEL. & TEL. CO.
Dept. R7
JERSEY CITY, N. J.

De Forest Radiophones
“Made By the Man Who Invented Broadcasting”