

THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

MORE PAGES
EVERY QUARTER

THE HORN SPEAKER

To give more needed space in *The Horn Speaker*, especially after going to the smaller format, the March, June, September and December editions will be planned for 12 pages. During the period of a year the newspaper will have more space.

Fans of Yesterday By ONE OF THEM



These reminiscences of early radio should be dear to the old timers, and should prove interesting to the new amateurs, who have not known the thrills of adjusting a coherer for days, just to hear a few dots and dashes. Just the same, with a loose coupler and a crystal detector we had lots of fun!



A typical amateur station of the 1912 type. Note the numerous detectors and the variable condenser on the extreme left. The glass tubes on the wall constituted the high tension sending condenser.

A FEW days ago I met one of my old friends who had been abroad for the past four years. Ten years ago this man was one of the best known amateurs in the United States, and naturally radio was one of the first things that came under discussion. I started to talk about reflex circuits, super-regeneration, neutrodynes and some of the later developments of the radio art. Much to my surprise, my friend did not respond with the usual line of latest dope that he used to spout in the days gone by. Rather, he appeared sort of amazed and dumbfounded and, after admitting that he had been entirely out of touch with radio during his sojourn abroad, I knew that what I was trying to tell him was all "Greek," and so I drifted back a few years to the days when amateur radio was in its swaddling clothes. The things we talked over should be of interest to fellows today who have super-heterodynes with so many controls that they have to ride up and down in front of them on a bicycle to tune them.

FIRST PHILADELPHIA HAM

This particular person at one time owned and operated the first radio receiver in the city of Philadelphia. And what a curiosity it was! A few wires stretched on the roof in those days marked a residence as the abiding place of some mysterious wizard who had mastered the fundamentals of a black art, comparable in a way with that practised by the old alchemists who searched for the Philosopher's Stone in the depths of their musty laboratories. This man was using a coherer when he started. What would happen if our present fans had to employ an electric bell to keep their detectors detecting? What would happen if their

detectors got clogged up and refused to function for hours at a time?

When the coherer reigned, there was not a great deal of stuff on the air to listen to. Messages were as scarce as the proverbial hen's teeth, and if one patiently sat up all night he might be rewarded with a sound, which, if heard in a pair of modern telephone receivers, would sound something like the scratching of a match on the cellar wall. But, the peculiar part of it was that the sound was not heard in telephone receivers. A buzzer or an electric bell was the indicating device used.

At the time my friend started his career in radio, there were probably not over 25 transmitters in the entire United States, and perhaps not over 100 in the world. The reception of a message was an event fit to celebrate in a most elaborate manner. And it was practically impossible to get your inquisitive neighbors (who always regarded you as somewhat of a peculiar nut) to actually believe that you had pulled something out of space. In those days they thought Marconi was the only man in the world who really knew how to receive messages.

BACK IN 1905

I do not know how many amateur experimenters there were in the country at that time (1905), but it is safe to say the number did not exceed 50. Wireless apparatus could not be purchased for the Marconi com-

pany, which then controlled everything from soup to nuts. They guarded their patents with every legal instrumentality available. If you wanted to make a coherer you had to go to the drug store and buy a medicine dropper, and these, with a buzzer and relay and a few other odd pieces of junk made up the receiver. I dare say the average fan today would not recognize one of the old receivers as such, if it were brought to his attention. He might think that it was anything from a capillary electrometer to an electro-cardiograph.

EARLY PUBLIC ATTITUDE

Some idea of the public attitude toward radio at that time might be gained from the fact that the police investigated the business of the first man to retail radio apparatus in New York City back in the coherer days. When it became known that he was selling radio apparatus to the public, it was thought that he was some quack who was trying to make an illegitimate living, and the policemen who came went away half convinced that their original suspicions were still worth considering.

It was not until 1908 that amateur radio began to attract large numbers of experimenters. The boom came as a result of Pickard's discovery of the fact that the unilateral conductivity of crystals could be employed for the reception of radio telegraphic signals. This marked the second stage in the development of receiving apparatus—which stages divide themselves into five separate parts, as follows:

1. Marconi coherer.
2. Crystal.
3. Fleming Two-element valve.
4. DeForest Three-element valve.
5. Regenerative reception.



An early broadcasting station. In this picture Dr. DeForest is seen operating his arc Radiophone which could be heard in 1907 around New York; the lady is singing in the microphone.

The telephone receiver came into prominence in radio with the introduction of the crystal detector. At that time New England was the center of radio manufacturing. If I am not mistaken, there were three manufacturers up there turning out radio apparatus for amateurs. But, in those days the output was so small that any community that could sport three producers had to be regarded as the center of the industry.

DX WITH A CRYSTAL

It is surprising to know the distances the old timers used to get with their crystal outfits. The fan today thinks that 25 miles is about all that can be pulled out of a galena detector. I remember when 2,000 miles was a common accomplishment. I remember when ship operators would be fired if they could not work 1,500 miles under all conditions. Of course, we must remember that heavy spark transmitters with as much as a 15-kilowatt input were used by some of the commercial stations. Then, too, the fans of those days were slaves of circuits just as they are today. If they had been presented with one of the simple crystal receivers, as turned out by our manufacturers today, they would have looked upon it with contempt. Their circuits were elaborate and some of them had almost as many controls as a modern super-heterodyne. Coils! They had enough wire in them to string a telephone line from New York to Philadelphia. Of course, most of them were made for long wave reception and they usually had about 14 different circuits. There were instruments employed that the modern fan would not recognize as being part of a radio receiver. The writer well remembers the old "doughnut" tuners that were wound on a tube about the size of a beer keg, which incidentally is also extinct. Every fan had his pet circuit, which, quite naturally, was always better than the other fellow's—a further indication that this circuit business is some odd phenomenon of human nature.

TUNERS AND AERIALS

The single slide tuning coils that were built in those days were somewhat akin to tower you had to cut them up into four or five parts to get them into a room. Aerials were elaborate systems of wire that would easily cover a city lot, and most of them had a natural period so great that reception from the present day broadcast stations would be impossible. Instead of looking for hard or soft tubes, the search was constantly on for good pieces of galena. The crystals were bought by the ton, so that one or two pet pieces might be selected.

It was between 1908 and 1910 that some wisacre invented the electrolytic detector. Would some of our fans believe us today if we told them that we had to use a solution of sulphuric acid and water in a detecting device? Yet that is exactly what happened. The old electrolytic detectors were far more sensitive than the silicon or galena, but they were as hard to keep in adjustment as a 1902 automobile. If one did not hold one's mouth just right, the thing failed to operate.

THE VACUUM TUBE

When Fleming's valve was introduced to the art, no great stir was created—in the amateur field at least—for the

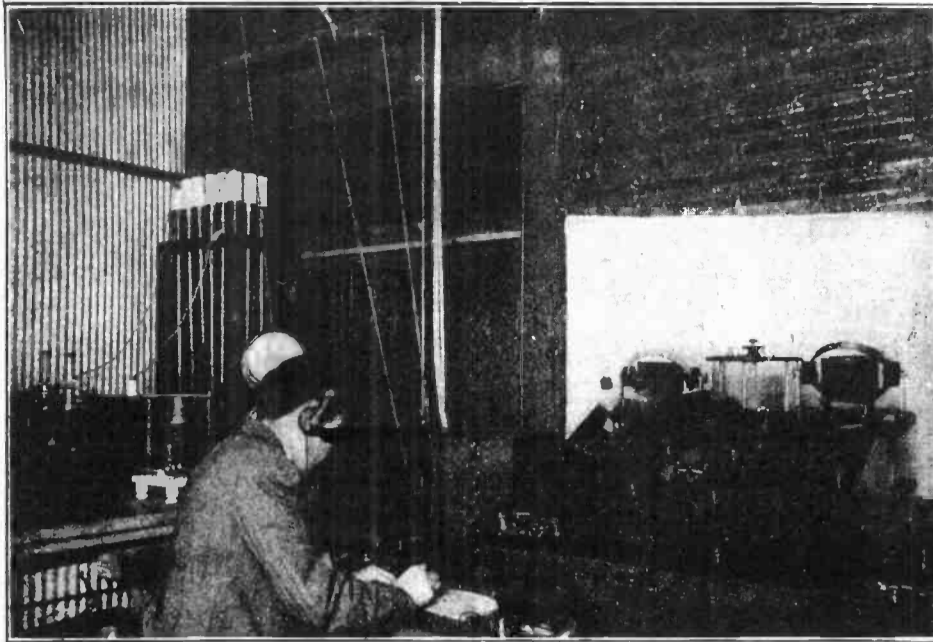
Continued on page 2

FANS OF YESTERDAY

Radio News for March, 1924

Fleming valves were very closely guarded and were not available for amateur use. In fact, I do not know of one of my friends who succeeded in obtaining one of these precious articles. It was not until DeForest made a real device out of it, that the vacuum tube was introduced generally. It was fortunate for amateurs that DeForest did this great piece of work and that it was kept out of the hands of those who would have cut off the amateur supply. DeForest had a place in his heart for the amateur, and he bent every effort to see that they were supplied with what was perhaps the outstanding invention of radio.

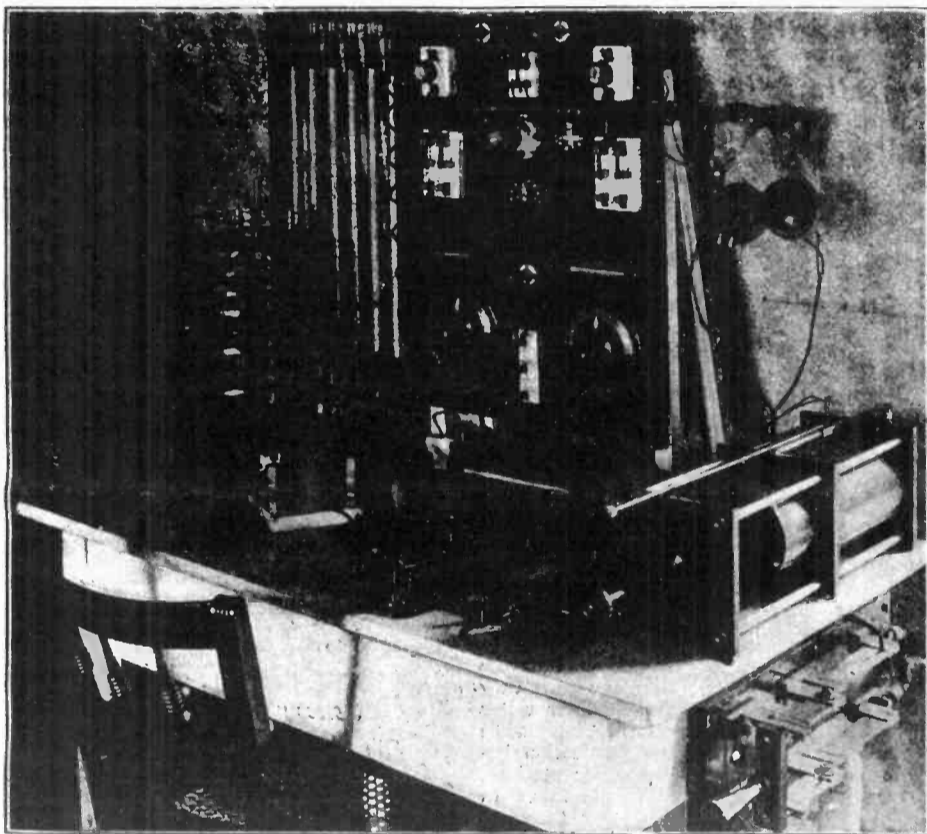
A DeForest tube in the old days was a thing to be protected with one's life. Although it looked like a huge dew drop hanging down on the front of the set, it was so far superior to the old silicon and galena detectors that there was no comparison. When the first tubes were brought out, little or nothing was known about amplification. Then someone insisted that tubes could be cascaded and it was a fine



One of the old-time commercial stations that had apparatus built like a battleship, much better in fact than some of the present-day stuff. Note the two DeForest audions perched atop the left-hand receiving set. Also the large transmitting condensers in the rack by the window.

idea with the exception of the fact that there was no such thing as an amplifying transformer. If you wanted a transformer, you had to go out and buy a spark coil, dismantle it and use the coil and some of the wire to wind your own transformer. The first audio-frequency amplifying transformer that I had was about the size of some of the cabinets that now hold crystal receivers. It weighed about 7½ pounds—but it amplified, so everything was lovely. What would happen today if our fans had to go out and buy raw materials to make their transformers? What a sorry plight radio would be in. What if our present transformers were as large and heavy as the first ones? A modern set with several stages of audio frequency amplification would have to be moved from place to place on a truck.

I hope that these few sentences will help our present fans to realize that they are skimming the cream off the experiences of thousands of predecessors, who, through the past 20 years, have perfected the art. The fellow who thinks he is clever today because he can go out and buy the parts and connect them up into a sensitive receiver should hark back to the time when 99 percent of the materials used had to be made. In those days the mere connecting up of a set was the easiest part. Today, if we connect up a set we have made it.



A real honest-to-goodness ham station of the pioneer days. No vacuum tubes here, but we venture to say that it was a star station in its day, judging from appearance. Note the tubular transmitting condenser and also the "power house" switch for breaking the "battery current!"

LETTERS

EDITOR'S MAILBAG

Dear Sirs:

I was wondering if you could help me out of a small problem. I have a RCA Coronado Radio model 400-A. My question is; where can I obtain batteries for the radio or are they available at all? The radio uses a 2 volt storage battery and 3 45 volt batteries. I hope you can help me.

Thank you,
Alan Fisher
1525 Webster Dr.
Mexico MO 65265



EDITOR: Batteries should be available from your local electronic parts dealers. The 2 volt storage batteries are getting hard to locate. They were plentiful in "surplus" electronic stores.

**50 YEAR OLD FLAME PROOF KEY
TYPE J-7-A**

Gov't Order No. 411082 Dated 1921



\$12.95

PPD

In 1966 the U.S. Navy closed the hugh Brooklyn Navy Yard and the City of New York purchased the property. The J7A Keys were discovered in a warehouse where they had been stored for the past 50 years. Corrosion has been corrected, however, there is some slight paint peel. New boxes have been provided.

Both keys are of heavy duty construction with a large Navy type knob. The keying arm and dome are brass... the contacts are ¼ inch coin silver. The J7A is 2½ x 5½ inches and the J5A is 2½ x 3¼ inches in size. The BULB, or Lamp is NOT supplied with the J7A.

**A RARE FIND!
ORDER TODAY!**

\$12.95

ppd

The J5A was made for the Signal Corps in 1941, and is the same type of Key except for the Dome housing the neon bulb. A real memento of WWII. Supply is somewhat limited... buy today!



\$25.00

ppd

WALTS EMPORIUM

P. O. BOX 19406 DALLAS, TEXAS 75219

EVENINGS 214-262-7855

**SAVE FOR
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LIST**

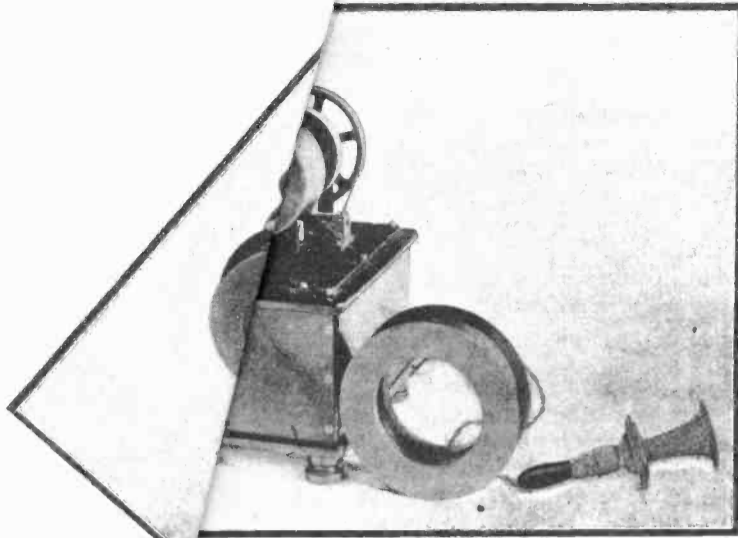
1975 ad

If your dealer does not carry "REGAL" RADIO PRODUCTS write us direct

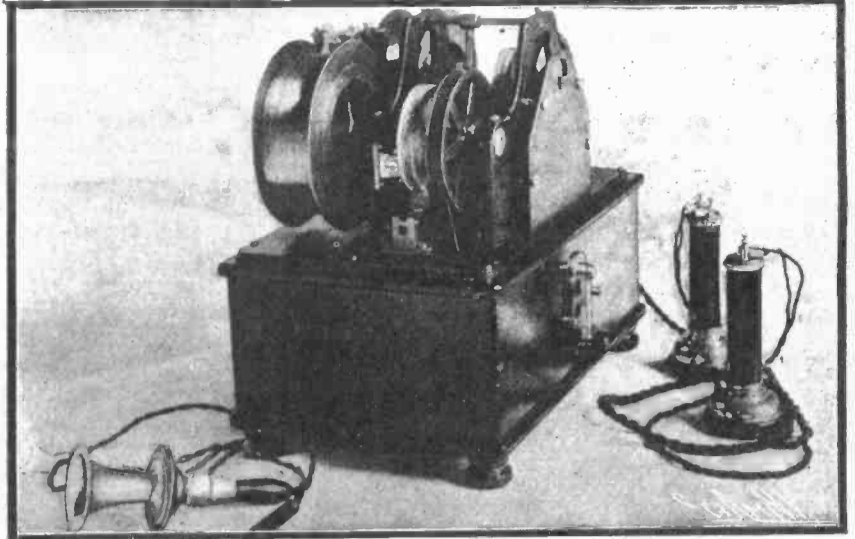


"REGAL" Jr. Crystal Receiving Set

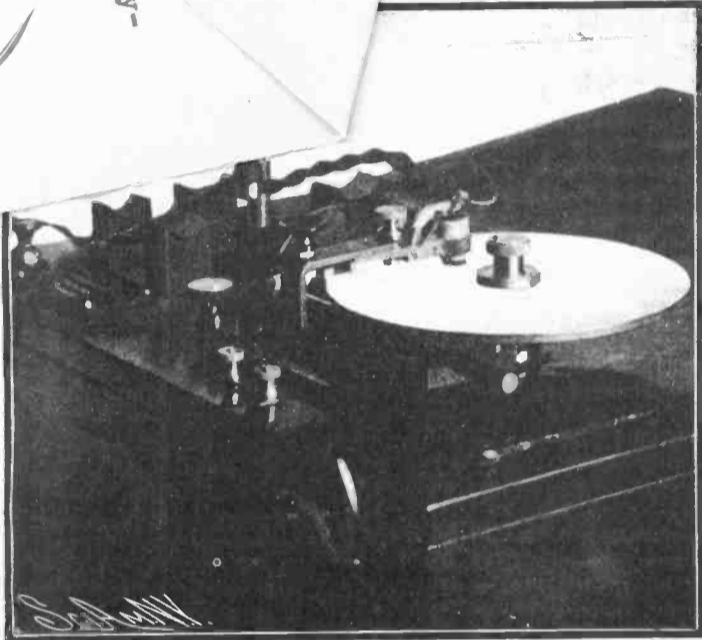
1922



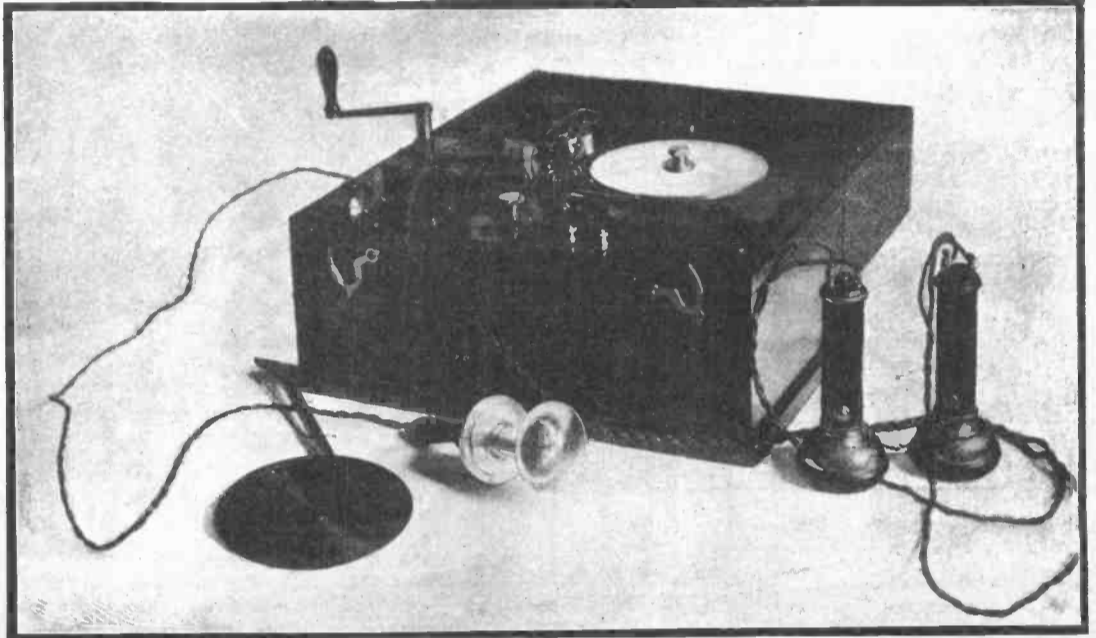
Phone with One of the Reels Removed.



End View of the Wire Telegraphophone.



Details of the Disk Type of Telegraphophone.



The Poulsen Telegraphophone.—Disk Type.

THE IMPROVED TELEGRAPHPHONE.

Gathered here are some pictures of some 1903 machines that record magnetically. One type resembles the Edison phonograph in general appearance and the other resembles the gramophone. The function of both machines, "disk" and wire, is described by Scientific American, October 3, 1903: "Each molecule of the steel surface is magnetized to a degree corresponding with the current variations set up by the voice in the speaking circuit."

Here is from the same source a comparison with an acoustic machine, "The records are not produced with the full loudness of the ordinary gramophone; still, they are entirely distinct and are singularly free from the scratching and hissing occasioned by the stylus as it passes over the wax surface."

ZON-O-PHONE—Type D. No. 45.



THE NEW PHONOGRAM FOR SEPTEMBER, 1907

9642 **Brother Noah Gave Out Checks for Rain** Arthur Collins

This Record, the music and words of which were written by Arthur Longbrake, is made in an amusing manner by Mr. Collins, and is one of the funniest songs he has sung for a long while. A darkey congregation met in an edifice which let in the rain, and this falling on the head of the Rev'rend Jackson Smith, aggravated him. Deacon Jones came to the rescue with the suggestion that on Emancipation Day a ball game should be played to "raise de dough to shingle up de leak. Does not de good book say"—



Dat Eve stole first and Adam second,
St. Peter umpired de game,
Rebecca went to de well wid a pitcher,
While Ruth in de field won fame:
Golliah was struck out by David,
A base hit made on Abel by Cain,
De Prodigal Son made one home run,
Brother Noah gave out checks for rain.

9643 **Herman and Minnie** Ada Jones and Len Spencer



These favorite artists may always be depended upon to make a good Record when they take part in a German character sketch, as this latest one is. Minnie starts by singing a verse of the song entitled "Herman,"



(written by William Jerome, music by Jean Schwartz). Thereupon Herman comes up in his automobile. "Ah, what a nice little runabout," says Minnie. "Yes, it runs about ten minutes and then breaks down," returns Herman, who has troubles of his own.

9644 **A Little Suit of Blue** Byron G. Harlan

This Record is the pathetic type of song rendered by Mr. Harlan with such sympathy and success. It describes the sorrow of a mother whose son, a little drummer boy, marched away to the wars to find a patriot's death. She is weeping over the little suit of blue—all that remains to her of the little lad who has gone. The words and music are by Thurland Chattaway.



THE NEW PHONOGRAM FOR SEPTEMBER, 1907

9645 **Red Wing Medley** Albert Benzler

A xylophone medley which introduces the following old friends: "Red Wing," (No. 9622); "You'll Not Be Forgotten, Lady Lou," (No. 9588), and "Ev'ry Little Bit Added to What You've Got Makes Just a Little Bit More," (No. 9611).

9646 **Everloving Spooey Sam** Bob Roberts

Spoony Sam is a colored gentleman whose one object it is to be a ladies' man; and he is more than willing to make love at all times if his intentions are not taken seriously. Directly he is questioned about bridal tours, settling down and such things as are not to his bachelor liking, he finds he has to catch a train.

Got no time to listen to no wedding bells,
Got no time to listen to no baby yells,
Just got time, rain or shine,
To hug and kiss, that's ma line.

The music is by Fred Fischer and the words by Andy Rice.

9647 **Flanagan at the Barber's** Steve Porter

One of Steve Porter's funniest Records and we follow Flanagan to the barber's, where he is, as usual, misunderstood, and gets off some of his quaintest sayings. Flanagan and barber both have the gift of repartee as the following conversation shows: "One time I went into a barber's shop and the barber

says to me, 'Do you want a hair cut?' 'I want more than a hair cut,' says I, 'I want them all cut.' 'That'll cost you fifty cents,' says the barber. 'How's that,' says I, 'your sign says "first-class hair cut twenty-five cents." 'I know,' says the barber, 'but you haven't got first-class hair.'"

9648 **The Blue Jay and the Thrush** Harlan and Belmont

A singing and whistling duet, very pretty and tuneful. Mr. Harlan sings about a bird, and what the bird said is whistled. The effect is uncommon and pleasing. The orchestra accompanies the duetists. Joe Fulton wrote music and words.

9649 **The 74th Regiment March** Edison Military Band

A fine, swinging military march, played with faultless time by the Edison Military Band, with bugle calls and other martial effects. The splendid precision of the brass in the second movement is particularly noticeable.

THE AMERICAN PHONOGRAPH SOCIETY

With T. A. Drogoskis suggestion, The American Phonograph Society is making plans to issue decals to their members as they said... "so that the membership can use them to identify their collecting interests to others of a like mind." The officers want members to send in designs for the decal no later than June 30, 1975.

According to the Society there is a long awaited book, His Master's Voice Was Elridge R. Johnson-- a shaking title--by his son E. R. Fenimore. The Horn Speaker has not reviewed the book yet, but it is available from Gold Star Publishing Company, 90 Cricket Avenue, Ardmore, Pennsylvania 19003.

The address for The American Phonograph Society is: Box 5046, Berkeley, California 94705.

In the "Community h... mall at the n... man Road and U... east edge of Ft. there will be a sw... a. m. May 17, 1975. There will be a spe... as well as displays, sw... an auction. Phonograph c... are invited although it is that none of their members h...

1923 ad

PROFESSIONAL
Quality at a
Rock Bottom Price

NOW ~~Was \$10.00~~ **\$7.65**



3000 Ohms
TRIMM HEADSETS

The same high quality demanded by expert radio operators is found in the Trimm Head Set at a price any amateur can afford--the lowest price for which a strictly high grade headset can be made and sold.

TRIMM Professional phones are guaranteed equal to other headsets selling for \$10.00 to \$15.00. Positively guaranteed for one year against any defect.

Accurately matched. Perfect reproduction and articulation at any range. Designed and built by highly skilled experts of long experience.

One-piece magnet, formed (not punched), guarantees uniform tempering and magnetizing. Cases and caps made entirely of high grade Phenol compound, free from sulphur and corrosive gases; odorless and warp-proof. New type head band insures perfect comfort.

Free Trial If you do not find the TRIMM Professional superior to any \$10.00 headset return it and your money will be refunded.

DEALERS: Our wholesale and retail distributors are fully protected. Write for quantity discounts and full particulars. We ship your first order on approval.

TRIMM RADIO MFG. CO.
DEPT. 36 24-30 S. CLINTON ST., CHICAGO

1975 ad




Latest Addition to Our Series

Morgan E. McMahon's
A FLICK OF THE SWITCH
your new 1930-1950 adventure.



Your Ticket From Static to Snow



A **FLICK OF THE SWITCH** is coming! Customer friends have been asking for an enjoyable and authoritative book on radio of the 1930's and 1940's. This book will be great reading, and its 1,000-plus pictures will make it the 1930-1950 standard reference for collectors and historians. It is well worth your time and money if you're interested in any of these:

- Re-living the 30's and 40's.
- Collecting radio-TV artifacts.
- Broadcast history.
- Early radio-TV programs.
- Ham radio.
- Shipboard radio.
- World War II electronics.
- Browsing.
- Circuitry.

This First Edition will be a real collector's item some day. It is already valuable as the 1930-1950 pictorial reference. An ideal companion to the other books in our series. Available in hard-cover for your library shelf and handbook for handy reference wherever you go.

ENJOY OLD RADIO-TV

Re-live those early days in
A FLICK OF THE SWITCH
--our new 1930-1950 book

Here's your time trip to the great days of radio broadcasting and the dawn of television. Revisit the Lone Ranger, Atwater-Kent radios, Will Rogers, Scott All-Wave, old "Ham" days and many more.

You'll read about the people and programs that swept us into a new era. You'll get a chuckle out of old-time radio ads. See over 1,000 sets that will become collector's items, and discover the rewards of collecting as a hobby.

You'll have a great time reading and re-reading this book. When you're through, put it on your shelf as the new standard collector's reference on 1930-1950 radio and television. High quality, 260 pages, \$9.95 deluxe hard-cover or \$6.95 handbook.



Meet the rest of our family--
VINTAGE RADIO is the fascinating 1887-1929 story and collector's photo reference. Over 1,000 photos. 263 pages, \$7.95 deluxe hard-cover. \$5.95 handbook.
RADIO COLLECTOR'S GUIDE is the collector's data book, with 50,000 facts, 1921-1932, 264 pages, \$4.95 handbook.
1927 RADIO ENCYCLOPEDIA is your technical book on wireless and early radio. High quality reproduction of the original. 175 pages. \$12.95 deluxe hard-cover. \$9.95 handbook.
MOST-OFTEN-NEEDED 1926-1938 RADIO DIAGRAMS covers 600 popular early radio models. 240 pages, \$7.00. ALSO: circuit diagram for any pre-1951 radio \$3.50.

Other Offers from Vintage Radio

We're proud of our growing series of books for collectors, historians and nostalgia hounds. In addition to the books listed in the middle column of this release we have these offers:

FREE AGE GUIDE with each order. This is a handy wallet-sized card with hints on how to tell the true age of a radio from patent numbers, tube types, style, etc. Keeps you from being skinned by sharpies.

RADIO DIAGRAMS SERVICE provides the circuit diagram and any other information we can find on pre-1951 radio sets. Just send us the model number and \$3.50. Your money back if we draw a blank.

MOST - OFTEN - NEEDED RADIO DIAGRAMS books from our previous offer are running low. We've reprinted the 1926-1938 volume, so there are plenty available at \$7.00. 1941, 42, 46, 48 and 50 are still available at \$4.00 each. all six volumes \$25.50.



VINTAGE RADIO SERIES

SEND TODAY to Vintage Radio, Dep't M, Box 2045, Palos Verdes Pnsln., CA. 90274
TEN-DAY GUARANTEE. WE PAY POSTAGE. Californians add 6% Sales Tax.

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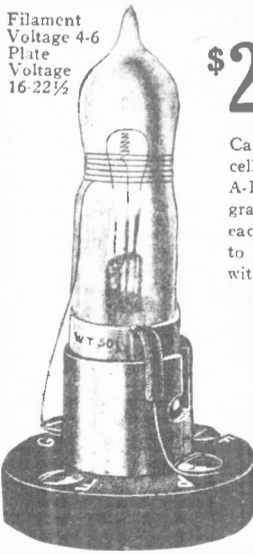
Total \$ _____

FREE! Radio Age Guide with Each Order. FREE!





WELSH PEANUT TUBE
W. T. 501
"The Tube That Cannot Squeal"
Sold for experimental use as a detector only.



Filament Voltage 4-6
Plate Voltage 16-22½

List Price **\$2.00** at your dealer or by mail postpaid.

Can be used on 3 dry cells or regular 6-volt A-Battery. Wiring diagram packed with each tube showing how to use the W. T. 501 with any crystal set.

Nickle-plated socket, moulded base, double spring contacts, 40c. extra. Adaptor for standard V. T. Socket, 75c. extra.

Actual size 2½ inches without base. Jobbers and dealers wire for merchandising plan. Packed 10 in a carton, 10 cartons per case. Orders filled in rotation. Please do not ask us to open an account to ship sample tubes. Samples shipped only at list price which will be credited towards your first stock order.

RADIO RESEARCH GUILD
9-15 Clinton Street Newark, N. J.

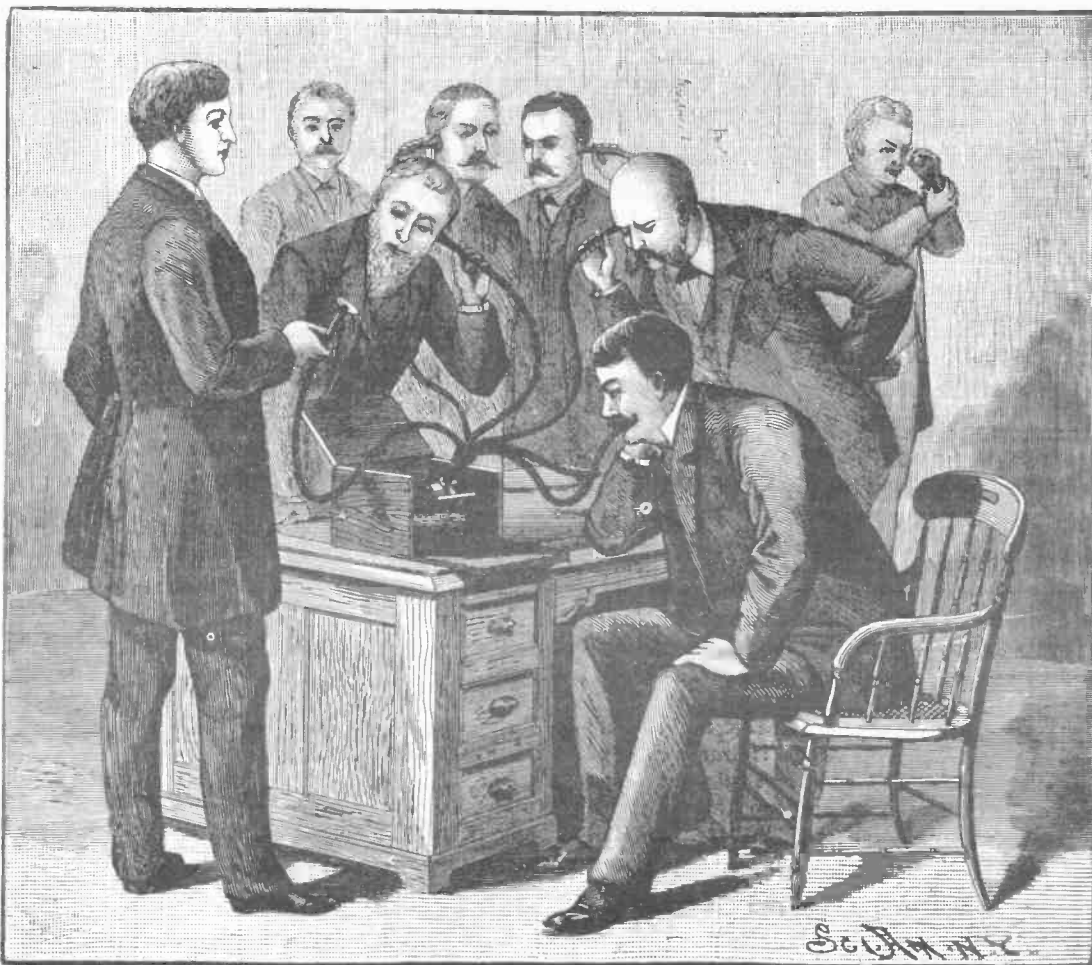
1923 ad

thing to trade at this time. Verify all information by writing Del Barrett, 1517 Pacific Drive, Fort Wayne, Indiana 46819. News came from Soundings, official publication of The Buckeye Antique Radio and Phonograph Collectors Club, Akron, Ohio.

THE SOUTHWEST VINTAGE RADIO AND PHONOGRAPH SOCIETY

This Society postponed the election of officers until the next meeting. All collectors are welcomed to participate at this meeting at 7 p.m. April 19, 1975, Electronics Center, 2929 N. Haskell, Dallas, Texas.

The Society has undertaken to become involved with a phonograph and radio exhibit at the Olla Podrida Shopping Center, 12215 Coit Road, Dallas, Texas. At the event radio station KERA-FM will be playing old radio music and drama. KERA will have a live broadcast with a man on the street asking radio trivia questions from 1 to 4 p.m. Saturday morning, May 3, from 11 to 12 a. m. there will be a talent show patterned after the radio shows during the golden age of radio. The entire event will be from April 29 to May 3.



PHONOGRAPH WITH MULTIPLE EARPIECE. 1887

J.W.F. Puett said that he will be back next month with his "Classic Radio" column.

1975 ad

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MAILING ADDRESS: LIST NUMBER 10
3008 Abston Drive Mesquite, Texas 75149

HOW TO ORDER:

- (1) ALL CHECKS OR MONEY ORDERS MUST BE MADE PAYABLE TO J.W.F. PUETT.
- (2) Please state whether new or used tubes are desired and whether a half-price used tube is desired when a new tube is out of stock. REFUNDS are mailed with your invoice for out-of-stock tubes, or when, by customer request, a used tube is substituted for an out-of-stock new tube.
- (3) All orders are shipped parcel post - no C.O.D. INCLUDE 15% FOR POSTAGE AND HANDLING. INSURANCE RATES ARE 30¢ for orders under \$50.00. TEXAS RESIDENTS ADD 5% STATE SALES TAX.

MINIMUM ORDER \$3.00

TABLE 1. OLD STYLE GLASS ENVELOPE TUBES			
all are used, thoroughly tested			
RADIOTRON	CUNNINGHAM	SYLVANIA	MAJESTIC
10 \$5.	C32L \$4.	SY22L \$4.	G-27 \$3.
UX210 \$5.	CX326 \$4.	SX227 \$3.	G27S \$4.
UY22A \$4.	C327 \$3.	SY551 \$3.	G35S \$4.
UY227 \$3.	CX332 \$3.	SX280 \$2.	A.P. \$5.
UY226 \$4.	CX345 \$4.		
35 \$3.	80 \$2.	PERRYMAN	PHILCO
37 \$3.	CX380 \$2.	N-281 \$5.	24 \$4.
UX240 \$5.		PA224 \$4.	27 \$4.
UX245 \$4.	NATIONAL		27 \$3.
71A \$5.	UNION	ACE	36 \$3.
UX280 \$2.	NU39T \$3.	Z2L \$4.	37 \$3.
866 \$3.	NY224 \$4.		71A \$5.
			80 \$2.
KEM RAD	UNKNOWN	TUNG SOL	
UX245 \$4.	BRAND	24 \$3.	CROSLLEY
56 \$3.	27 \$2.		56 \$3.
	D227 \$3.	WIZARD	
SPEED	245 \$3.	226 \$4.	SILVERTONE
27 \$3.			227 \$3.

TABLE 2. SPECIALS			
O1A new in original cartons (new style)	\$6.00		
Cunningham CX350 used	\$5.00		
Radiotron UX-290 new in original cartons	\$7.00		
Westinghouse projection bulb (very old)			
Type T20 C13F 500 watt new	\$4.00		
Western Electric WE212F used	\$15.00		
Type 852 used	\$15.00		
Arcturus Type 56 (blue glass) used	\$5.00		
Arcturus Type 27 (blue glass) new in original carton	\$7.00		

ALL TUBES ARE THOROUGHLY TESTED on a mutual conductance tube checker before shipment. **CUSTOMER SATISFACTION GUARANTEED** -- If you are not satisfied with your order for any reason, tubes may be returned within ten days for refund or replacement with exception of tubes which are shorted or have open filaments. It will be assumed that returned tubes with open filaments or shorts were damaged in shipment. Shipping damage claims will be handled promptly through the post office on insured orders. Puett Electronics assumes no liability for orders which are not insured, and no liability beyond that which is covered by postal insurance.

IN TABLE 3, THE SYMBOL n INDICATES THAT A TUBE IS AVAILABLE NEW AND THE SYMBOL u INDICATES THAT THE TUBE IS AVAILABLE USED.

TABLE 3. OLDER TYPE-NUMBER TUBES - prices listed for new tubes			
used tubes are half new price			
0	n	\$4.	523 nu \$2.
1A3	n	\$3.	524 nu \$2.
1A4	nu	\$3.	7A4 nu \$3.
1A5	nu	\$3.	7A5 n \$3.
1A6	nu	\$3.	7A6 nu \$3.
1A7	nu	\$3.	7A7 nu \$3.
1B4	n	\$2.	7A8 nu \$3.
1B5	u	\$3.	7A9 nu \$3.
1C5	nu	\$3.	7A7 nu \$3.
1C6	n	\$3.	7A7 nu \$3.
1C7	u	\$4.	7B4 nu \$3.
1D5	u	\$4.	7B5 nu \$5.
1D8	nu	\$4.	7B6 nu \$3.
1E5	u	\$3.	7B7 u \$3.
1E7	n	\$3.	7B8 nu \$3.
1F4	n	\$3.	7B8 nu \$3.
1G4	nu	\$3.	7C5 nu \$3.
1G5	u	\$3.	7C6 u \$3.
1G6	u	\$2.	7C7 nu \$3.
1H4	u	\$3.	7C7 nu \$3.
1H5	nu	\$3.	7C6 u \$3.
1B6	nu	\$2.	7C6 u \$3.
1LA4	n	\$3.	7C7 nu \$3.
1LA6	nu	\$3.	7C7 nu \$3.
1LB4	nu	\$3.	7C7 nu \$3.
1LC5	n	\$3.	7C7 nu \$3.
1LC6	n	\$4.	7C7 nu \$3.
1LD5	nu	\$3.	7C7 nu \$3.
1LE3	n	\$4.	7C7 nu \$3.
1LF3	n	\$4.	7C7 nu \$3.
1LG5	n	\$3.	7C7 nu \$3.
1LH4	nu	\$3.	7C7 nu \$3.
1LN5	nu	\$3.	7C7 nu \$3.
1M5	nu	\$3.	7C7 nu \$3.
1P5	nu	\$3.	7C7 nu \$3.
1Q5	nu	\$2.	7C7 nu \$3.
1R	n	\$4.	7C7 nu \$3.
2A3	n	\$5.	7C7 nu \$3.
2A4	nu	\$4.	7C7 nu \$3.
2A5	u	\$3.	7C7 nu \$3.
2A6	nu	\$3.	7C7 nu \$3.
2B7	nu	\$3.	7C7 nu \$3.
3C6	n	\$3.	7C7 nu \$3.
3LF4	n	\$3.	7C7 nu \$3.
3Q5	nu	\$2.	7C7 nu \$3.
5R4	u	\$2.	7C7 nu \$3.
5T4	nu	\$2.	7C7 nu \$3.
5U4	nu	\$2.	7C7 nu \$3.
5V4	nu	\$2.	7C7 nu \$3.
5W4	nu	\$2.	7C7 nu \$3.
5X4	nu	\$2.	7C7 nu \$3.
5Y3	nu	\$2.	7C7 nu \$3.
5Y4	nu	\$2.	7C7 nu \$3.

IN TABLE 4, THE SYMBOL n INDICATES THAT A TUBE IS AVAILABLE NEW AND THE SYMBOL u INDICATES THAT THE TUBE IS AVAILABLE USED.

TABLE 4. MORE RECENT TUBE TYPES - prices listed for new tubes			
used tubes are half new price			
0A2	n	\$2.	6AT6 nu \$2.
0A3	u	\$2.	6AU6 nu \$2.
0B3	u	\$2.	6AV6 nu \$2.
0C3	nu	\$2.	6BA6 nu \$2.
0D3	nu	\$2.	6BE6 nu \$2.
0T4	n	\$3.	6B6 nu \$2.
0Z4	nu	\$3.	6C4 nu \$2.
1L4	nu	\$4.	6A6 nu \$2.
1L6	n	\$5.	6A4 n \$2.
1R5	nu	\$2.	6A7 nu \$3.
1S4	n	\$1.	6B7 nu \$3.
1R5	nu	\$2.	6C7 nu \$2.
1T4	nu	\$2.	6D7 nu \$3.
1T5	nu	\$2.	6F5 n \$2.
1U5	nu	\$2.	6F7 n \$2.
2C26	u	\$3.	6G7 nu \$3.
2X2	n	\$3.	6H7 nu \$2.
3A4	nu	\$2.	6J7 nu \$2.
3A5	nu	\$2.	6K7 nu \$2.
3A8	n	\$3.	6L7 nu \$2.
3A4	nu	\$2.	6M7 nu \$1.
3V4	nu	\$2.	6Q7 nu \$2.
6AB4	nu	\$2.	6R7 nu \$2.
6AB7	nu	\$2.	6S7 nu \$2.
6AC5	nu	\$2.	6S7 nu \$2.
6AG7	nu	\$3.	6S7 nu \$2.
6AK5	nu	\$2.	6X4 nu \$2.
6AL5	nu	\$2.	6Y5 nu \$1.
6AL7	n	\$2.	6Y5 u \$2.
6AQ5	nu	\$2.	6Y7 u \$2.
12A5	nu	\$3.	12A6 nu \$3.
12A6	nu	\$3.	12A7 u \$2.
12A7	u	\$2.	12A7 u \$2.
12A8	nu	\$2.	12A7 u \$2.
12A9	nu	\$2.	12A7 u \$2.
12A10	nu	\$2.	12A7 u \$2.
12A11	nu	\$2.	12A7 u \$2.
12A12	nu	\$2.	12A7 u \$2.
12A13	nu	\$2.	12A7 u \$2.
12A14	nu	\$2.	12A7 u \$2.
12A15	nu	\$2.	12A7 u \$2.
12A16	nu	\$2.	12A7 u \$2.
12A17	nu	\$2.	12A7 u \$2.
12A18	nu	\$2.	12A7 u \$2.
12A19	nu	\$2.	12A7 u \$2.
12A20	nu	\$2.	12A7 u \$2.
12A21	nu	\$2.	12A7 u \$2.
12A22	nu	\$2.	12A7 u \$2.
12A23	nu	\$2.	12A7 u \$2.
12A24	nu	\$2.	12A7 u \$2.
12A25	nu	\$2.	12A7 u \$2.
12A26	nu	\$2.	12A7 u \$2.
12A27	nu	\$2.	12A7 u \$2.
12A28	nu	\$2.	12A7 u \$2.
12A29	nu	\$2.	12A7 u \$2.
12A30	nu	\$2.	12A7 u \$2.
12A31	nu	\$2.	12A7 u \$2.
12A32	nu	\$2.	12A7 u \$2.
12A33	nu	\$2.	12A7 u \$2.
12A34	nu	\$2.	12A7 u \$2.
12A35	nu	\$2.	12A7 u \$2.
12A36	nu	\$2.	12A7 u \$2.
12A37	nu	\$2.	12A7 u \$2.
12A38	nu	\$2.	12A7 u \$2.
12A39	nu	\$2.	12A7 u \$2.
12A40	nu	\$2.	12A7 u \$2.
12A41	nu	\$2.	12A7 u \$2.
12A42	nu	\$2.	12A7 u \$2.
12A43	nu	\$2.	12A7 u \$2.
12A44	nu	\$2.	12A7 u \$2.
12A45	nu	\$2.	12A7 u \$2.
12A46	nu	\$2.	12A7 u \$2.
12A47	nu	\$2.	12A7 u \$2.
12A48	nu	\$2.	12A7 u \$2.
12A49	nu	\$2.	12A7 u \$2.
12A50	nu	\$2.	12A7 u \$2.
12A51	nu	\$2.	12A7 u \$2.
12A52	nu	\$2.	12A7 u \$2.
12A53	nu	\$2.	12A7 u \$2.
12A54	nu	\$2.	12A7 u \$2.
12A55	nu	\$2.	12A7 u \$2.
12A56	nu	\$2.	12A7 u \$2.
12A57	nu	\$2.	12A7 u \$2.
12A58	nu	\$2.	12A7 u \$2.
12A59	nu	\$2.	12A7 u \$2.
12A60	nu	\$2.	12A7 u \$2.
12A61	nu	\$2.	12A7 u \$2.
12A62	nu	\$2.	12A7 u \$2.
12A63	nu	\$2.	12A7 u \$2.
12A64	nu	\$2.	12A7 u \$2.
12A65	nu	\$2.	12A7 u \$2.
12A66	nu	\$2.	12A7 u \$2.
12A67	nu	\$2.	12A7 u \$2.
12A68	nu	\$2.	12A7 u \$2.
12A69	nu	\$2.	12A7 u \$2.
12A70	nu	\$2.	12A7 u \$2.
12A71	nu	\$2.	12A7 u \$2.
12A72	nu	\$2.	12A7 u \$2.
12A73	nu	\$2.	12A7 u \$2.
12A74	nu	\$2.	12A7 u \$2.
12A75	nu	\$2.	12A7 u \$2.
12A76	nu	\$2.	12A7 u \$2.
12A77	nu	\$2.	12A7 u \$2.
12A78	nu	\$2.	12A7 u \$2.
12A79	nu	\$2.	12A7 u \$2.
12A80	nu	\$2.	12A7 u \$2.
12A81	nu	\$2.	12A7 u \$2.
12A82	nu	\$2.	12A7 u \$2.
12A83	nu	\$2.	12A7 u \$2.
12A84	nu	\$2.	12A7 u \$2.
12A85	nu	\$2.	12A7 u \$2.
12A86	nu	\$2.	12A7 u \$2.
12A87	nu	\$2.	12A7 u \$2.
12A88	nu	\$2.	12A7 u \$2.
12A89	nu	\$2.	12A7 u \$2.
12A90	nu	\$2.	12A7 u \$2.
12A91	nu	\$2.	12A7 u \$2.
12A92	nu	\$2.	12A7 u \$2.
12A93	nu	\$2.	12A7 u \$2.
12A94	nu	\$2.	12A7 u \$2.
12A95	nu	\$2.	12A7 u \$2.
12A96	nu	\$2.	12A7 u \$2.
12A97	nu	\$2.	12A7 u \$2.
12A98	nu	\$2.	12A7 u \$2.
12A99	nu	\$2.	12A7 u \$2.
12A100	nu	\$2.	12A7 u \$2.

TABLE 5 BALLAST TUBES - \$3.00 each - all are new

JFD Type A, B & C; K36A; K49B; K90C; K92B; K149B; L55B; 2B14; 3H7; 4P45; 7H11; 40A1; 100-77; 100-79; 165R; 165RA; 185RA; 250R; 6092A. AMPERITE 3TF7; VICTOREEN 1300-8

WE HAVE MANY MORE-RECENT-TYPE-NUMBER TUBES AND EARLY TV TUBES AT \$2.00 new and \$1.00 used. Send a self-addressed stamped envelope with your requests.

SCHEMATIC DIAGRAM SERVICE -- We can furnish schematic diagrams & technical data on almost any radio from 1920 to 1954 from our library of original manufacturers service data. Send a self-addressed stamped envelope and \$1.50 per radio set. This offer is limited to five photocopied pages. If your set exceeds five pages, we will send you a quote.

WANTED -- LITERATURE AND HISTORICAL DATA ON CLASSIC RADIO MANUFACTURERS IN THE NINETEEN THIRTIES. E.H. SCOTT, McMURDO SILVER, LINCOLN, FISHER AND OTHERS. WRITE J.W.F. PUETT

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Continued from last month.

McMurdo Silver

Early biography of the "youth" behind the Silver-Marshall and McMurdo Silver radios

By A. Henry

The spring of 1922 saw the radio broadcasting boom well under way, and the formation of the Griffin Radio Service—to become in a few months the Haynes-Griffin Radio Service, well known to all old-timers—and when the new store was opened Silver was on hand as first employe. The summer of 1922 brought the partnership of A. J. Haynes and John Griffin as the Haynes-Griffin Radio Service, and in the fall came the Haynes D.X. Tuner, one of the first kit-sets ever developed, and the work of A. J. Haynes.

Superheterodynes were almost unknown to the average listener of that day, but Silver's mind, always ranging ahead, realized the possibility of the superheterodyne circuit for broadcast reception. He "sold" both Haynes and Griffin of the idea; the result, in 1923, was the Haynes Superheterodyne, practically every experimental model of which was built and most of the actual testing work done by Silver. After this, he spent a month at Plattsburg training camp, "resting." Intensely interested in his job, Silver worked day and night. But he did not work blindly. He absorbed ideas like a sponge, always prying into things, asking "why?" And as soon as he was told, experimenting to see if he had assimilated the idea well enough so he could do the thing himself—always, always trying until he could. He soaked up merchandising, advertising, selling and engineering ideas with equal rapidity as a result of his intense interest and curiosity, and continuously stirred these ideas about in his mind until he produced a newer one from them.

GOING WEST

During this period a number of influential New York business men, caught by the radio craze and sensing Silver's ability, offered to finance him in a business venture of his own, but he would not leave Haynes-Griffin to start out on someone else's capital. In 1926 the unexpected death of a step-grandfather (Frederic Courtland Penfield, ambassador to Austria from the United States, just before the war years) and an equally unexpected bequest, gave Silver his chance. Sensing Chicago as the coming radio center of the country, Silver said goodbye to Haynes and Griffin, went to Chicago, and organized, with his distant cousin, John R. Marshall, the firm of Silver-Marshall, Inc. Silver gave the new firm five years to become a leader in the radio parts business—we shall see if his determination was to be as ill-fated as the earlier one, to jump from messenger boy to partner in the brokerage house in five years.

Silver and Marshall laid their plans well. In those chaotic days they realized that, if they were going to manufacture parts and kits, they must have a retail store to service them and help users, and they would also have to act as jobbers. So they opened a store on Wabash Avenue in Chicago and took the second story of the garage pictured. This was the first S-M "factory," of some 1,600 square feet, and in it Silver worked night and day to achieve his goal. The

spring of 1925 saw Marshall retiring from an active interest in the young concern and Silver carrying on alone. As the manufacturing business developed, the need for a wholesale business diminished, and it was abandoned. Soon it was possible to abandon the retail store also, and 1927 saw these two stepping-stones cast away, and Silver's whole attention devoted to manufacturing. The unexpected business slump of the fall and winter of 1926 hit Silver-Marshall hard, as it did other manufacturers. But the young concern pulled through a period of acute financial stringency, and by the fall of 1927 was well out of the woods, and with a not-to-be-forgotten lesson behind it.

In just four years after the opening of the S-M store, Silver had achieved the goal

of a rather mercurial temperament, given to ups and downs of feeling, this steady, never-yielding determination is one of his most interesting and contradictory characteristics, for this man's mind is never "made up." It is always open to suggestion—his mental attitude is always that of the true student, seeking to learn all he can from other men's thoughts and methods. To him the pride that will not allow a change of mind is unknown; if the humblest of his employes wishes to tell Silver that his decision upon one subject is wrong, he will listen attentively—and change his mind in a flash if the arguments advanced are better than those on which his original decision was based. He is never unwilling to take older counsel, and has steadily added to his organization

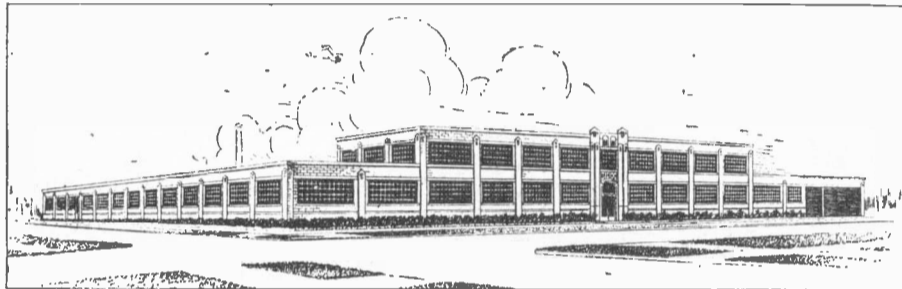
older men of far greater experience and wisdom than himself, that he may seek their advice.

But though he seeks advice on all matters, important or unimportant, Silver possesses to a marked degree that first requirement of a great executive—the ability to make an instantaneous decision, later to be revised, maybe, if they prove wrong, but made so quickly

that the wheels of his organization are seldom stopped "waiting for the president to make up his mind." He can make up that mind in a flash, and the accuracy of his instantaneous decisions is a by-word with his associates. Yet there is nothing at all phenomenal in this—it is simply the instantaneous summing up of the facts that have been gleaned and continuously mulled over in a mind which is never still, waking or sleeping. Both conscious and sub-conscious mind are always working at top speed—yet a speed that is possible to any other boy once his interest is really aroused.

AN INTERPRETER OF RADIO

Silver is best known to the public as a writer of technical articles. Editors everywhere, of magazines and newspapers alike, learned that articles sent them by McMurdo Silver and published over his name, were found to be intensely interesting to their readers; and when an editor wakes up to such a realization, it requires no button-holding, or sending of flowers or beverages to induce him to publish the "stuff." One of the things which editors liked most was the completeness of the information which Silver gave in his articles as to how the radio sets he wrote about could actually be built. Little things which most writers passed over as being "clear to anybody without explanation" Silver explained carefully; for he realized that in order to be of greatest value, articles must be such that the reader need not be an expert in order to understand them. True, his articles contained, as a part of the unusually complete information they supplied, a list of parts which would be required to build the radio set described, and in these parts one was sure to find several of the "S-M" make. This was in large measure the kind of "advertising" which caused the Silver-Marshall business to grow by leaps and bounds—and it was published



Five years later: the most modern factory architecture characterizes the extensive plant which Silver-Marshall will occupy in their fifth year.

he had given himself five years to attain—Silver-Marshall had become one of the largest manufacturers of radio kits and parts distributed through jobbers and dealers in America. In 1928 the firm's position was further strengthened, and leadership in the parts business was lifted well beyond the reach of competition—in a market in which the gross sales had fallen almost forty per cent. a year for every year that Silver had been in it for himself. And—his goal attained... a new one which had always been in his mind's eye was quickly set.

Such is the story of a young man who has not ridden to success overnight on a wave of gambler's luck, but who has worked very step of his way upward in a business that has decreased greatly each year. Had the radio parts business increased each year, it would be difficult to estimate Silver's position today, but no favorable boom of general business in his line ever gave him a boost.

AS A LEADER

What, then, is the man like who at the age of twenty-six is the youngest executive to have obtained the much-coveted R.C.A. manufacturing license which many an old, established corporation has not been able to secure? Over six feet tall, of lean build, he is a combination of nervous energy at one moment and almost phlegmatic calm at the next. But through all runs the determination that is his secret of success—the will to do what he sets out to do, in one honest way or another. This determination is seldom expressed, but it is evident at every moment in a grimness of purpose that never brooks the excuse, "It can't be done because no one has ever done it before." No man in the S-M organization can ever come, discouraged, to the president, and say, "It can't be done," but Silver will reply, "It can be done—but maybe in another way," and then work to find the way. For a man

by the newspapers and magazines without cost to Silver; simply because editors discovered that if—in deference to what are ordinarily considered good principles of journalism—they omitted all mention of manufacturers' names in publishing these articles, the articles thereby became much less interesting to their readers.

But above all, Silver's articles met the final test that every editor always applies to every contribution: "Is it news?" Decidedly, his articles were news, news that the public wanted, and so Silver's writings became more and more in demand. With a little publicity-seeking, Silver's name might have become much more of a household word than it is, but he shunned the spotlight. Unlike many another executive, his name has seldom appeared in print except over technical articles, and until the issuance of the R.C.A. license sent reporters scurrying for "human-interest" stories and pictures, his picture had been seldom published. It was only with considerable effort that material for this story could be drawn from him.

Silver maintains, and apparently with very decided truth, that his success has not been due to any divine inspiration, or any special spark of genius. It has been due rather to the fact that he paid no attention to the five o'clock bell, but worked eight to twelve hours per day for his employers—was often sent home by them so that they could lock up for the night—and eight to ten hours more for himself. Few boys today have the necessary energy and determination to do this—perhaps for the same reason few of them are as far ahead at the age of twenty-six. And, if Silver is correct, then the requisite for success for any boy seems to be only the ability to be intensely interested and curious; for if interested he will work without thought of time, and if curious he will surmount every obstacle to learn.

And, speaking of learning, in the early days when Silver first studied radio there were no radio engineering courses in any of the colleges, and the path to knowledge was a hard and original one. Had there been radio correspondence courses such as there are today, had there been radio engineering college courses, it is difficult to estimate how much faster this young man might have developed.

Silver is a man who never talks about his past successes—he is always living for tomorrow, working for the future. A thing once done is no longer food for his active mind—it is dead, to be put out of his thoughts to leave his mind free for the future. But if he will not consider what he has already accomplished, others can at least do so; and, judging from his past performance, they prophesy for this young man who has already reached what most men would call the top of the ladder, a future of the most brilliant accomplishment. He has had but a few years; give him a few more, and—but the surprising thing is that almost any boy today can do as much.

Radio News for June, 1929

1929 ad

SHORT WAVES

without the expense of a new set!

The Submariner



WILL CONVERT YOUR RADIO SET INTO AN EFFICIENT SHORT-WAVE RECEIVER

Simply remove a tube from the set and place it in the "Submariner," then insert plug from "Submariner" in the socket from which tube was taken, attach aerial and ground to clips of "Submariner." Write for our money-back guarantee. Enthusiastic owners have written us from all parts of the world. Stations 8,000 miles away have been received. Vernier dial 32 to 1 ratio. Users are getting foreign stations the year around. There is very little static and short waves carry a much greater distance.

FOUR MODELS

20 to 65 meters for battery tubes. \$15.00. For all electric, \$17.50. Interchangeable coil model, 10 to 160 meters, \$22.50, for A.C. or D.C. receiver. No. 4 coil, 100 to 340 meters, \$2.00 additional. In ordering, be sure and state name of set and the number on each tube. Ask your dealer for one. If he does not carry them, he will get one for you.

If you are unable to get one locally, it will be sent postpaid upon receipt of money order or certified check. Sent C.O.D. only if \$1.00 accompanies order. This is to insure carrying charges. Price in Canada and some other foreign countries, 80c. additional. Cannot be sent C.O.D. outside U. S. ORDER TO-DAY.

J.-M.-P. MANUFACTURING CO., Inc.
3413 Fond du Lac Ave. Milwaukee, Wis., U. S. A.

The biography of McMurdo Silver will be continued as soon as information about his later life can be gathered.

MART

EASY COST CHART

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1-25	1.35	2.45	3.45	12.75
26-30	1.70	2.90	4.15	15.30
31-35	1.95	3.40	4.80	17.80
36-40	2.25	3.90	5.50	20.35
41-45	2.50	4.40	6.15	22.95
46-50	2.75	4.80	6.85	25.45
51-55	3.05	5.30	7.55	28.00
56-60	3.30	5.80	8.25	30.55
61-65	3.65	6.30	8.95	33.05
66-70	3.90	6.75	9.65	35.60
71-75	4.15	7.25	10.30	38.20
76-80	4.45	7.75	11.00	40.75
81-85	4.70	8.20	11.70	43.25
86-90	5.00	8.70	12.35	45.80
91-95	5.25	9.20	13.05	48.40
96-100	5.50	9.65	13.75	50.90
101-110	6.05	10.85	15.15	54.00
111-120	6.60	11.85	16.50	57.00
121-130	7.20	12.85	17.85	60.20
131-140	7.75	13.85	19.25	63.25
141-150	8.25	14.85	20.65	66.30

5c per word per issue over 150 words

Photo ads \$2.00 extra.

MISC.

PHONOGRAPH COLLECTORS, join the American Phonograph Society. Receive the quarterly Journal and four Newsletters. Receive free reprints and stereoscopic phonograph cards. For more information send 10¢ stamp. For one year membership, send \$6.50. The American Phonograph Society, P.O. Box 5046, Berkeley CA 94705.

WILL DUPLICATE exactly, the mutilated panel for your antique radio. Send sketch or rubbing for quotation, or will trade for antique radios of equal value. Norman A. Parsons, 22 Forest St., Branford CT 06405.

WILL REPAIR, restore, refinish, renew or rebuild your old radio. Buy, sell or trade tubes, parts and radios. Bob Lucas, 9014 Mahoning, Houston TX 77036.

FOR SALE OR TRADE

FOR TRADE: Atwater Kent Model 10 Breadboard, w/201A's, which slides into original Pooley secretary-type cabinet with built-in horn. Missing is the original AK type TL driver, otherwise set works fine, cabinet in good shape with original log sheet. Will trade for or towards Scott Philharmonic complete in cabinet or similar set. Warren Dewey, 5021 Ambrose Ave., Los Angeles CA 90027. Pho: 213-661-2675.

FOR SALE: Electrolytic Capacitors, FP tubular, single and multiple types, 10 for \$1.00; Volume controls, some with switches 10 for \$1.00; IF transformers 8 for \$1.00; Tubular capacitors 30 for \$1.00; Power resistors 25 for \$1.00; Precision resistors 60 for \$1.00; Ceramic & Mica condensers 60 for \$1.00. C. Elmer Nelson, 824 S. Pleasant St., Princeton, Ill. 61356.

FOR SALE OR TRADE

FOR SALE: New tubes in original boxes \$3.00 ea., 324, 335, 224, 227, 56, 30, 27, used tubes \$2.00 each 324, 327, 227, 224, 335, 124, 127, 56, 71A. Westinghouse cabinet portable voltmeter style #492419, new \$20.00, Beiden 5 foot speaker cord new, \$4.00. Please add \$1.00 for postage. Gary Probst, 336 West Church St., Lock Haven PA 17745.

FOR ALL your requirements in British & European vintage radio, 1920 to 1950, contact "Tudor Rees." Our full 1975 Catalogue now available, sent via airmail to the U.S.A. for two dollars. Tudor Rees, Antique Wireless Service, 64 Broad Street, Staple Hill, Bristol, BS16 5NL, Great Britain.

WD11 adaptors, use UX199, 120, VT24. No wiring changes, Radiola III's battery hook up included \$5.25 pp., 2 for \$9.25. Keith Parry, 17557 Horace St., Granada Hills CA 91344.

TUBES FOR EARLY RADIOS and TV's. Send want list for lowest prices, trade in some types for others. Jim Farago, 247 W. Park St., So. St. Paul MN 55075.

FOR SALE OR TRADE: Aeriola Sr. receiver and amplifier. Best offer over \$150. K. Pobanz, 339 Greenbrier Lane, Ballwin, Missouri 63011.

FOR SALE: Spring and Summer Sale Antique Radio Items. Large SASE for list. F. A. Nichols, 720 E. Eldorado St., Appleton, Wisconsin 54911.

TAPES OF OLD RADIO PROGRAMS: Reel-to-Reel-8 Track-Cassettes. Free list. The Radio Tape Library, P.O. Box 805, Bakersfield CA 93302.

FOR TRADE: Grebe CR-8, Aeriola Sr., Radiola III, for early radio or wireless gear. Art Harrison, 1021 Falcon Dr., Columbia MO 65201.

HOWARD W. SAM'S number 1 through 1973 for sale. Additional volumes and file cabinets. Ralph Schaefer, 306 So. Lincoln, O'Fallon, ILL. 62269.

FOR SALE: UX199s in original boxes unused (RCA). \$6.00 postpaid. Julian Castiglia, 246 Van Buren St. Newark, N.J. 07105.

NEW, Robert Gelatt's book about the history of the phonograph, The Fabulous Phonograph, out of print price \$9.95, damaged \$5.00. THE HORN SPEAKER, Box 12, Kleberg TX 75145.

FOR SALE OR TRADE

FOR SALE: Rubber stamp with your name and address plus AK Radio and speaker \$3.00 pp. James Fred, P.O. 42, Rossville IN 46065.

WANTED

WANTED: Loose couplers; Arlington, Murdock or Clapp-Eastman or what have you. Norden Hauck Navy Super. Grebe type CR-6, CR-3, CR-5, CR-8 or CR-9. Wireless Speciality Navy type IP-501 or IP-501-A. Kennedy type 110 or 220. -Need parts for DeForest Interpanel Set, have two one step amplifiers type MP-200 and Audion Control Panel type MP-100 but need the RF tuning panel containing the three Honey Comb Coils, also need wiring diagrams for above set. Ralph Maddox, Purgitsville, W. VA 26852.

WANTED: AK-Breadboards, Radios before 1926, early Disc TV's, Radio magazines before 1927, outside horn phonographs, etc. Please give prices and condition in first letter. Thanks: Charles D. Rakes, Box 445, Bentonville, Ark. 72712.

WANTED: Knobs for R.C.A. Radiola R-43 and Zenith 65-128, or similar. Also old light bulbs and radio tubes, from early experimental to the 1930's. Bruce Harbeck, Box 1172, Sioux City, Iowa 51102.

WANTED: 21" Magnavox horn speaker. Would prefer to trade one of the following: RCA IV, V, VIIB, VIII, 25, 28, RADA, or Zenith Super 7. W. Wiley, 282 Highland Ave., Wadsworth, Ohio 44281.

WANTED: Radiola RC, tuning condenser & knob for Federal 61, small knob & rheostat for Kennedy V. Robert Lozier, 318 E. Houston St., Monroe, N. C. 28110.

WANT-DIAGRAMS, Parts list, anything on early 1920s, W. E. Telephone 2A Carrier Systems. Will buy copies or swap radio schematics. Cecil Bounds, Pine Springs Rte., Carlsbad N. M. 88220.

WANTED: Scott Radios, good or parts sets, Scott News or any other literature. Also Worlds Record 8, 9, or 10. J. Clark, 1617 Roselawn, Lansing, Michigan 48915.

WANTED: Telegraphone, Magnecorder SD-1, pre-1946 wire recorders; books on recording and pre-1936 television. Buy or trade. H. Layer, AV-SFSU, 1600 Holloway San Francisco CA 94132.

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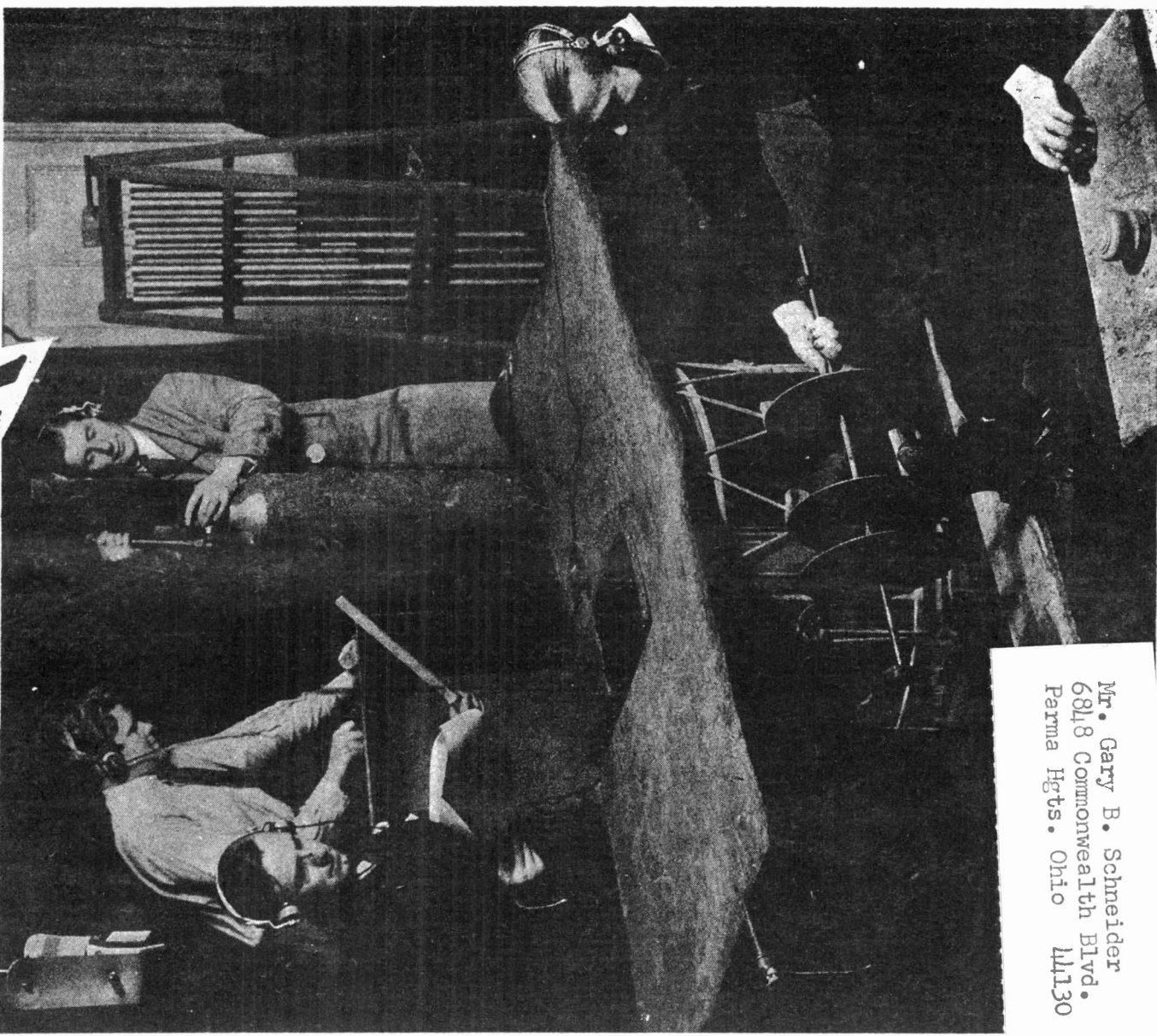
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Scene in the Sound Effects Studio, where these wide-awake young fellows, happy in the knowledge that they are adding to your enjoyment of the radio programs, are busily engaged making the sounds of tram and boat whistles, horses galloping, airplanes buzzing, chains rattling, the bustle of traffic, etc., to accompany the oral text of a broadcast playlet. There is not an easy task, as they have to listen-in with headphones for their cues, which must be followed immediately by the proper sound, made in the proper way upon the correct "gadgets"