

THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

THE HORN SPEAKER

AWA Will Meet Again At Canandaigua

The September 7, 8 and 9th meeting of the Antique Wireless Association for 1973 at Sheraton Inn, Canandaigua, New York, was scheduled to show a film covering the life of Elmo Pickerill, a pioneer of electronics. Thorn Mayes, recognized for his historical writings, will give a talk about the wireless companies of the USA. There will also be a talk about the pioneer electronics publisher, Hugo Gernsback.

NIKOLA TESLA

Nominated For Induction Into
The Electronic Hall of Fame



NIKOLA TESLA
1859-1943

Nick Basura and Leland I. Anderson have sponsored Nikola Tesla, a famous inventor in the electronics industries, for induction into the Electronics Hall of Fame, at the National Electronics Association annual convention in Kansas City.

The induction plans were scheduled to take place on August 24, 1973.

First Meet For ARCA



The first meet of the Antique Radio Club of America was a "hit" according to THE ANTIQUE RADIO GAZETTE, which is edited by John Drake. An address by George D. Greene featured his recollections as a radio pioneer and his experiences with Colin

B. Kennedy, an early manufacturer of radio sets.

The meet was held at Harrisburg, Pennsylvania on June 9, 1973.

Winners of the contest at the meet were:

Continued on page 6

SHOW ATTRACTS THOUSANDS



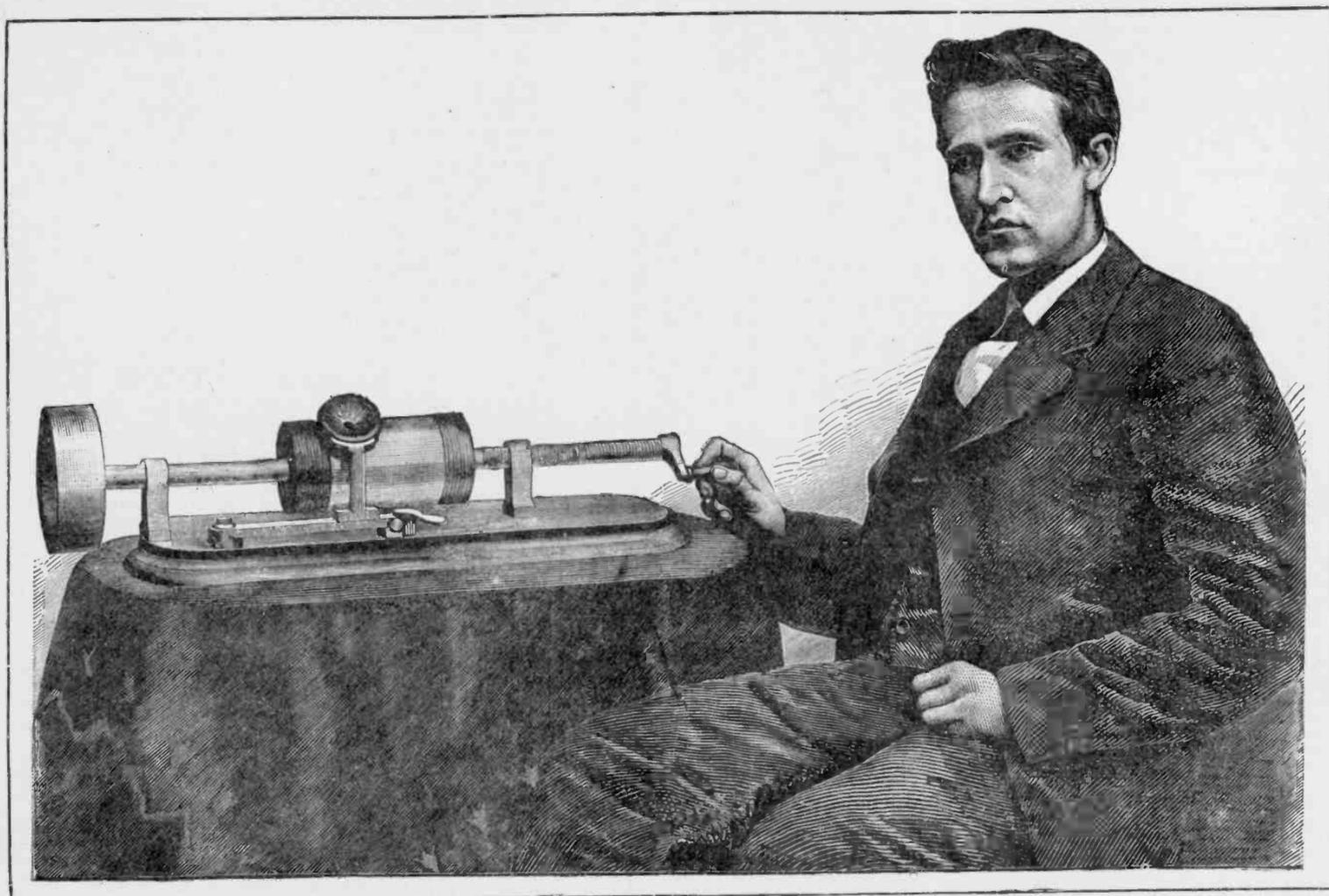
The Buckeye Antique Radio and Phonograph Collectors' Club attracted thousands of people to the Belden Village Mall in Akron, Ohio, on June 23 and 24, 1973 with a display of Edison phonographs, more than 50 antique radios, early cylinders and disc

recordings, and associated electronic gear.

Bob Houck supervised the display program. Others participating in the display were: Tom Brooker, Barb Spriggel, Joe Vitarella, Gary Strewlow, Walter Brown, Ken Spriggel, Jerry

Anderson, Rex T. Brown, and Bill Wiley.

The above information came from SOUNDINGS, which is edited by David A. Lieberth of Akron, Ohio.



Edison at the age of 31 years old

Scientific American, July 6, 1878

THE PHONOGRAPH AND ITS INVENTOR, MR. THOMAS A. EDISON.

NEW MUSICAL INSTRUMENT.

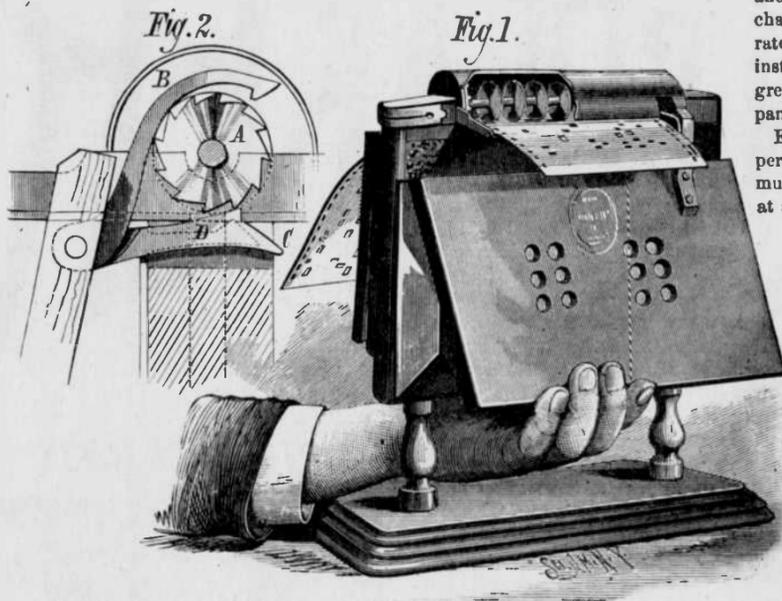
The novel musical instrument shown in the accompanying engraving is called the autophone, and is manufactured by the Autophone Company, of Ithaca, N. Y. It is a wonderfully simple instrument for one that accomplishes so much. It requires no special skill to operate it, and one kind of music may be played as well as another. The instrument, as will be seen by comparing it with the hand which is operating it, is quite small.

It consists of an upright rectangular board, having on one side a bellows, and upon the other a flexible air chamber, communicating with a set of reeds in the upper edge of the board. Above the reeds there is an apertured plate, and each reed has an aperture of its own. Above the plate there is a shaft carrying a series of thin disks, which serve to hold the perforated music sheet down upon the apertured plate. The shaft is pressed downward at each end by a spring, and carries at opposite ends toothed wheels which engage corresponding perforations in the music sheet.

The music sheet consists of a strip of Bristol board having perforations corresponding to the notes to be sounded. At one end of the shaft there is a ratchet wheel, A (Fig. 2), which is engaged by two pawls, B C, pivoted to an arm extending upward from the bellows. The pawl, B, always engages the ratchet wheel when the bellows is compressed, and the pawl, C, engages the ratchet wheel when the bellows expands, but it does not do so regularly, its movements being controlled by the arm, D, shown in dotted lines.

This arm has a triangular projection at one end, which rubs upon the under surface of the edge of the music sheet and holds the pawl, C, out of engagement with the wheel, A, except at such places in the music sheet as are perforated to admit the end of the arm, D, when the pawl, C, will engage the wheel, A, and assist in moving it forward. This ingenious device is for the purpose of executing the quick notes, and to economize space in the music sheet.

As the music sheet is propelled by the regular working of



THE AUTOPHONE.

SCIENTIFIC AMERICAN, November 28, 1879

BORI, LUCREZIA, Soprano (Boh'-ree)

The exclusive engagement by the Victor of Lucrezia Bori is only another evidence of the Victor's policy of securing the best artists in the world for its customers.

Mme. Bori's real name is Lucrezia Borgia (or Borja in Spanish), but she prefers to be known as Bori. This young soprano is a native of Valencia, Spain, although she has some Italian blood in her veins. She received her musical education in Milan, and made her debut there five years ago as *Micaela*.

During her Italian season she sang many rôles, including *Manon*, *Marguerite*, *Gilda*, *Goose Girl* and *Butterfly*. A season in South America followed, and after the soprano had returned to Europe she was engaged for America. She is one of the youngest singers ever heard in opera in this country, and her youth and beauty, together with her lovely voice and dramatic ability, make her a unique artist indeed. Her Latin warmth and frankness tell only the more because they have gained the poise of the cultivation and the artistry that know no land.

The soprano has chosen for her Victor records eight well-known and popular airs, which are all exquisitely sung.

THE BORI RECORDS (Sung in Italian unless otherwise noted)		No.	Size	
Bohème—Mi chiamano Mimi (My Name is Mimi)	Puccini	88475	12	\$3.00
Danza—Tarentella Napolitana (Neapolitan Song)	Pepoli-Rossini	87181	10	2.00
I Hear You Calling Me In English	Marshall	87188	10	2.00
Malaguena In Spanish	Pagana	87190	10	2.00
Nina Pancha (Americana) In Spanish	Romea-Valverde	87189	10	2.00
Pagliacci—Ballata, Che volo d'augelli (Ye Birds)	Leoncavallo	88398	12	3.00
Paloma, La (The Dove) In Spanish	Yradier	88480	12	3.00
Traviata—Addio del passato (Farewell to the Bright Visions)	Verdi	87178	10	2.00
BORI CONCERTED NUMBERS				
Bohème—O soave fanciulla (Thou Sweetest Maiden)	with McCormack	87512	10	3.00
Traviata—Parigi o cara (Far from Gay Paris)	with McCormack	88453	12	3.00
Rigoletto Quartet—with Jacoby, McCormack and Werrenrath	Verdi	89080	12	4.00



1915 VICTOR RECORDS

USE TUNGS-TONE NEEDLES TO PROTECT YOUR RECORDS

You can even bend a point on the surface of a valued record without damage to the record

The Tungs-tone Stylus was announced by the Victor Talking Machine Company during the winter of 1916. Up to that time Victor Steel Needles had offered the only suitable and satisfactory means for playing Victor Records.

The new point had all of the advantages of the Victor Steel Needle with the added advantage that it would play from 100 to 300 records without changing. The need for such a point had been recognized for some ten or fifteen years, and during all of that time the experimental laboratories of the Victor Company had been patiently, laboriously, and scientifically searching for it. The answer to the problem was finally found in Tungsten, the metal which also revolutionized electric lighting.

From the first this new point obviously had advantages of pre-eminent merit.

Tungsten is dense. While it gradually, almost imperceptibly, wears away with each playing of the record, it always remains in perfect conformity with the record groove. It can accordingly be used for a large number of reproductions, thereby affording maximum convenience with the least possible injury to the record and with uniformly excellent musical results.

Tungsten is fibrous—uniformly fibrous and free from foreign particles of every kind. This quality of the metal still further safeguards the record from injury.

Tungsten is ductile. If a Tungs-tone Stylus were carelessly dropped on a record or scraped across its face, the Stylus point would bend but the record would not be injured.

Tungsten is smooth—exceedingly smooth, with a tendency to grow even smoother. Being dense, being fibrous, being ductile, being smooth, the Tungs-tone Stylus affords the highest measure of protection to the record.

From a musical point of view the Tungs-tone Stylus has advantages no less conspicuous. Tungsten, for instance, can readily be provided in a shape which exactly and fully fits the record groove, thus releasing delicate and yet vital tone values which would otherwise be lost.

Then, since the filament of Tungsten is of unvarying diameter it fits the groove as perfectly at the end of each record as it did at the beginning. This insures uniformly excellent musical results throughout the playing of each record.

A minor, but important consideration in the use of the Tungs-tone Stylus is that of economy. Since each point will play from 100 to 300 records, the economy of the Tungs-tone Stylus as viewed from a "perfect reproduction" standpoint is obvious.

There is today just one way to obtain a real Victor reproduction that is to use the Tungs-tone Stylus with a Victor Record on a Victrola instrument.

the bellows, it acts as so many valves controlling the escape of air from the reeds and thus producing the music.

The most remarkable feature of this invention is the regularity and perfection with which the music is rendered. All of the parts are played, and the music is of no mean order. While it is a very amusing thing, it is also of very great utility, for those who are without musical talents can play as well as those cultured in the art, and many who would not feel warranted in purchasing an organ or piano can, at a very moderate outlay, provide themselves with both an instrument and a player. It must also prove of great use in schools and other places, as an accompaniment to singing.

Each instrument is provided with a number of perforated music sheets, and we understand that music adapted to the instrument can be furnished at any time.

CONTINUED FROM COVER

EDISON'S PHONOMETER.

It is admitted that there is power in the human voice, but hitherto this power has been applied indirectly to produce mechanical results.

Mr. Edison in his telephone and phonograph experiments discovered that the vibrations of the vocal cords were capable of producing considerable dynamic effect. Acting on this hint he began experiments on a phonometer, or instrument for measuring the mechanical force of sound waves produced by the human voice. In the course of these experiments he constructed the machine shown in the engraving, which exhibits the dynamic force of the voice.

The machine has a diaphragm and mouth piece similar to a phonograph. A spring which is secured to the bed piece rests on a piece of rubber tubing placed against the diaphragm. This spring carries a pawl that acts on a ratchet or roughened wheel on the fly wheel shaft. A sound made in the mouth piece creates vibrations in the diaphragm which are sufficient to propel the fly wheel with considerable velocity. It requires a surprising amount of pressure on the fly wheel shaft to stop the machine while a continuous sound is made in the mouth piece.

Mr. Edison says he will have no difficulty in making the machine bore a hole through a board; but we consider such an application of the machine of very little utility, as we are familiar with voices that can accomplish the feat without the mechanical appliance.

SCIENTIFIC AMERICAN, July 27, 1878

REMINDERS FOR OWNERS OF EDISON CYLINDER PHONOGRAPHS

GENERAL HELPS

- Do not attempt to put on or take off a record with reproducer in playing position (down).
- Do not attempt to slide reproducer to left or right when in playing position (down).
- Do not play phonograph at very high or very low speed (see instructions under speed adjustment).
- Do not allow reproducer to drop onto record—it may be damaged by doing so.
- Keep phonograph and records free from dust as far as possible.
- Do not neglect to oil and grease the motor frequently.

REPRODUCERS

The reproducer is the most vital part of your phonograph. The sweetness, clearness and fidelity in reproducing music depend entirely on the speed adjustment and the reproducer. Edison reproducers present absolutely the harsh and metallic sounds so often noticeable in talking machines.

We have a special department for reproducers so that if one should become damaged through accident or other causes, it may quickly be put in first class condition again.

If the sapphire or diamond is in perfect condition, we make no charge other than return postage to repair a reproducer.

If a diamond is missing or out of order, our charge for repair is only \$3.65, including return postage.

SPEED ADJUSTMENT

All Edison Blue Amberol records are recorded at 160 revolutions per minute and should be played at the same speed. Each phonograph is carefully adjusted before it leaves our factory. However, in shipping or as a result of constant use, this adjustment is sometimes upset. Please test the speed of your phonograph from time to time as follows:

FIRST—Place a small piece of paper between cylinder and record so that one end of paper projects out into view.

SECOND—With record playing, count number of turns made by cylinder in one minute. (By allowing piece of paper to touch finger at each revolution, counting will be easier and more accurate.)

THIRD—If speed is not correct, make adjustments with speed adjusting screw until speed is exactly 160 revolutions per minute. (Speed adjusting screw will be found connecting with governor friction lever either on top or under the motor plate, or sticking up through or under the governor cover.)

OILING

A clean and properly lubricated mechanism will insure proper operation of your phonograph at all times. Use only Edison oil and grease, the use of inferior or unsuitable lubricants will invariably result in dissatisfaction.

About once a month lubricate the following parts:

- A—All bearings (with oil) and gears (with grease) beneath the top plate.
- B—The two bearings (with oil) at the end of governor and the governor shaft (with oil) and the gears (with grease).
- C—The two bearings at end of cylinder (with oil).
- D—Along feed screw beneath cylinder (with oil), slide rod in front of cylinder (with oil) and the slide bearing to rear of cylinder (with oil).

Edison Oil, per bottle.....\$0.25
Edison Grease, per tube..... 20
Edison Spring Lubricant, per tube. 20

**CYLINDER PHONOGRAPH DIVISION,
THOMAS A. EDISON, INC.,
ORANGE, N. J.**

SAVE CONVENTION

The Society of American Vintage-Radio Enthusiasts scheduled a 3rd annual award convention for September 7 and 8, 1973, at the Holiday Inn at Meriden, Connecticut at the intersection of I-91 and Conn. 15. Plans were made for radio stars, trade tapes, latest in recording equipment and seminars on radio dramas to be featured at the convention.

1923-1973

Fifty years ago, as a lad of fifteen, I began in radio (that was to lead me through two wars, WW II and Korea, as an N. C. O. in radio communications) with a coil of 35 turns of number 18 D. C. C. (#18 double cotton covered try to find some today) wound on a four (4") inch Quaker Oatmeal carton, tuned by a 43 plate Cardwell Condenser. A Westinghouse WD 12 in a General Electric porcelain base, "UV" socket, a pair of brandes "Navy type" cans a pair of # 6 dry cells in parallel and an Eveready 22-1/2 Volt, tapped "B" Battery. (For use with the UV 200. Gas detector tube). A .00025 Dubilier Grid Condenser, shunted by a variable grid leak-I don't remember the make now. ("Electrad", I believe) naturally a long, high as possible double wire antenna separated by two broomsticks. (Looked like a ship's antenna). Four years later, I was licensed as a "Ham", call-5AVD. (Before prefixes). Now, after experiences in all phases, I am intensely interested in "Radio History" and the Antique Side of Collecting. Twenty-three years ago, I stood on the site of the Marconi Station at South Wellfleet, Mass. I saw the rusted remains of the towers on the edge of the eroding sand cliffs, by the ocean-side. I have a close-up picture of the stone and bronze tablet erected by RCA to commemorate the event of the first message between King Edward VII of England and President Theodore ("Teddy") Roosevelt of the U. S. Radio has been of unestimable value to me. To name just one, when I was drafted a short time after "Pearl Harbor" I was assigned to "Radio" and it kept me out of a "Rifle Company" into which many of my friends were-and never got back. I shall be eternally grateful for that alone. With kindest regards to the fraternity.

John T. Furlow, Sr.
P. O. Box # 5303
Bossier City, La. 71010
K5SMI, EX-5AVD-W5AY
A. R. R. L. Member, 1927
SFC USA Retired

EDITOR LETTERS

EDITOR'S MAILBAG

Dear Sirs:

We recently acquired an old RCA radio for our media collection. We inquired of RCA as to its approximate age, and they referred us to you.

This radio is an old Victor Micro-Synchronous, Serial Number 021423, another number UY 224.

Thank you for your kind attention to this request.

Yours very truly,
Donald P. Naetzer
Fairport Central School
38 West Church Street
Fairport, N. Y. 14450

Gentlemen:

We have just recently acquired a Victor Talking Machine and I was wondering if there is any possible way in which you could help us find the year the machine was manufactured.

The serial plate reads: Victor Talking Machine Co., Camden, New Jersey, Serial # VV-210 170722. If any additional information is needed please do not hesitate to contact me.

Thank you for your cooperation and help in this matter.

Sincerely,
Mrs. Edwin Nelms
505 Trailwood Drive
Euleus, Texas 76039

Dear Mr. Cranshaw:

I need some help. I have an old Westinghouse Radio that I would like to get working. If you can't help, maybe one of the readers will. Below is some information about the receiver-

I-Tuner: type, RA; style, 307 189; serial-24802; frequency range: 180-700 meter.

II-Detector Amplifier: type, DA, style 307190B, serial, 42 502.

III Tubes, three 201-A (01A) The latest patent date is 5-10-21. The cabinet measures 9-1/2 x 13-1/4 x 8-1/4.

Anything about this radio will be appreciated (Schematics, power, supply, etc.)

Sincerely,
Brent Robert Miller
1730 Magdalene Way
Johnston, Pennsylvania
15905

Dear Sir:

Mr. Benjamin I. French, Jr., of RCA suggested that I contact your newspaper for information concerning my old Victrola. I have an RCA Victrola made by the Victor Talking Machine Company of Camden, N. J. The style # is VV-VIII and the model or serial # is 27518C. I would appreciate any information you would have concerning the date of manufacture and its value.

Thank you.

Sincerely,
Mrs. F. Friedman
1356 E. 48 Street
Brooklyn, N. Y. 11234

Dear Sir,

Recently I purchased a Victrola in very good condition. With it came 30 records, original instructions booklet for unpacking and assembling, several metal and bamboo needles.

The nameplate inside of the machine reads: Victor, Reg. U. S. Pat. Off. Mde F., M. Ind. Retrda, Nos 4176Y 4180 1 de Febrero 1904. Victor Talking Machine, Camden, New Jersey U. S. A. VVIX, 489764. Patented in US and Foreign Countries.

Can you give me any information as to year manufactured and age of machine.

Many of the records are Fox Trots and states the No. and Year patented such as, Sept. 22, 1903. No. 749,092-etc. and ends August 11, 1908. Are these records newer than this 1908 date?

Thank you for any information you can give on this wonderful old jewel.

Our family has enjoyed many hours of listening.

Sincerely,
Agnes Moench
Rt. 1, Box 30
Terra Bella, Ca. 93270

Dear Editor:

Recently I wrote to RCA in New York and they directed me to write you (per their attached letter-copy) in regard to my question. Since we've cleaned out my grandmother's home when she left, we came across an old RCA Radio. The cabinet is 50" high x 26" long x 16" deep. It stands on 4 legs approximately half or less of the cabinet height. It is an RCA Radiola 62, Super-Hetrodyne, Model AR-892, range 550-1500 kilocycles, by Radio Corporation of America. Input volts 105/125 A. C. cyc. 50/60, Max. input watts 20, output volts 100 D. C., AHP. 0.1 D. C. There is a seal glued inside the cabinet which reads: "Federal Quality" "Cabinet by Irving, New York". It has swing open doors in the front and rear.

My questions to R. C. A., which you may be able to answer were:

Approximately what year was this radio manufactured, or introduced? Or what years did it appear on the market?

Roughly, what was it's selling price then?

What value does it now have? Thank you for any and all your help. If you have any further questions, do not hesitate to write and ask. My address is:

Mr. Robert Calabrese
75 Fenway Street
Stamford, Connecticut 06902

Sincerely,
Bob Calabrese
Thank you again!!



6:00 PM UNDERGROUND
Thrilling stories of Europe's underground.



8:15 AM DO YOU KNOW THE ANSWER
Music and money prizes to listeners who "know the answer."



8:30 PM TEXACO STAR THEATRE with James Melton, Joan Roberts, Al Goodman's Orchestra, and Jimmy Wallington.



6:05 PM NEWS, by STEINKOFF
He was a U. S. newsmen in Hitler's Germany for 8 years.



8:00 PM LUX RADIO THEATRE Cecil B. DeMille directs Hollywood's stars in Hollywood's greatest stories.



6:00 AM and 4:00 PM PAUL GIBSON Constructive and instructive talks on "everything."



4:45 PM IRENE RICH Stories filled with deep human understanding.

CBS Programs 1943



8:00 PM BURNS AND ALLEN Grace's up to her old tricks. George is long-suffering! You'll howl as millions do!



3:30 PM THE PAUSE THAT REFRESHES Music by Andre Kostelanetz, with famous guests.



9:00 PM SCREEN GUILD PLAYERS Screen stars and stories on "The Stars' Own Theatre."



9:30 PM BLONDIE Try as they may, the Sum-tead family can't stay out of hilarious trouble.



6:30 PM NEWS, CLIFTON UFFLEY Today's vital war news expertly given.



2:00 PM NEW YORK PHILHARMONIC Music of the masters, played by the famed New York Philharmonic-Symphony from Carnegie Hall.



10:30 PM NEWS, by HARLAN READ Expert analyst of the full day's most important news. Monday thru Friday.

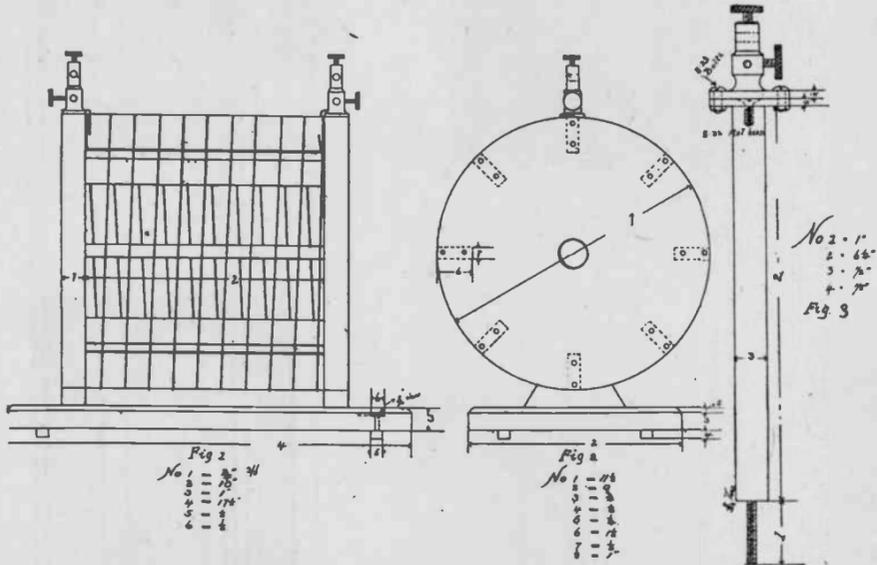


6:15 PM HARRY JAMES Favorite of millions, voted best swing band; he swings out in a program of popular music. Three times weekly.

FOR YOUR COLLECTION OR MUSEUM

The Construction of a Transmitting Tuning Coil

By A. C. AUSTIN, JR.



Some few months ago the writer constructed an inductance, or tuning coil for the transmitting circuit, which has proved very efficient, making possible the use of many different wave lengths in transmitting, either with open or closed circuits, and opening up a wide field of experimentation in tuned transmission in which many interesting phenomena have been noted.

The construction was very easy and the cost so slight, that in face of the great efficiency of the instrument, the writer has often wondered why he did not build one before.

The details of construction are as below:

Procure a piece of hard wood one inch thick and about 18x9 1/2 inches, and bevel the edges on one side, truing up to 17 1/2 x 9 inches. Get another piece of 3/4-inch hard wood about 12x 28 inches and from same cut two discs 11 1/2 inches in diameter. Do not cut around the entire circle, but leave a base 3 1/2 inches wide at the line of the periphery, and spreading in triangular form to 3 3/4 inches wide on the

bottom. The distance from the line of the periphery to the bottom should be 3-4 inch. Now in the center of each disc bore a hole 1 1/4 inches in diameter, same being for the spark balls to pass through. Of course, it is understood that if the spark balls are larger than those described herein that the holes must be correspondingly larger.

Now make eight strips of hard wood 1-2 inch thick, 11-2 inches wide and 10 inches long. Get thirty-six round head brass screws about 1 1/2 inches long, and placing the strips at equal distances between the two circles, with the 1-2 inch face on the circumference, fasten by two screws in each end of each strip.

Figures 1 and 2 will explain the foregoing directions.

Obtain four double binding posts, and flattening the top edge of each circle so as to make a flat base for the posts, place one on each, screwing same down firmly. Be sure that the posts are both on a line with the top strip. Now starting at the left hand side of

the coil, measure 1-8 inch from the end of the top strip, and turning the coil toward you, 1/4 inch from the end on the next. 3-8 inch on the next, and so on, adding 1/8 inch each time you move to a new strip, making guiding marks, afterward cutting a groove at each of the marks, being sure to make same slightly diagonal on each strip instead of straight across, so that there will be a continuous spiral of grooves on the coil. These measurements will give exactly ten turns of wire on the inductance coil, spaced one inch apart.

As close to the inner side of the circle as possible bore a hole 1/8 inch in diameter, 3/4 inch from the top of the top strip. Give the frame two coats of shellac, and also the base.

Obtain thirty-five feet of No. 8 B. & S. gauge bare copper wire, if possible tinned, and holding the frame so that when winding the wire it will wind away from you, take the end of the wire and push it through the hole in the top strip, left hand side, and bring the end up to the lower hole in the binding post, screwing same down tight, and then proceed to wind the wire on the coil, finishing off at the other end in the same way. This method takes the strain from the binding posts.

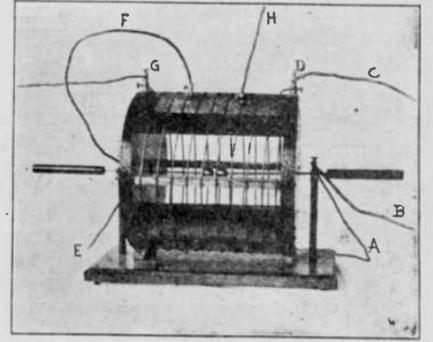
Procure two pieces of rubber rod 1/2 inch in diameter and 6 1/4 inches long, also a piece of rubber 1/8 inch thick and two or three inches square, from the last named piece cutting two pieces to fit the bases of the two remaining binding posts. Now screw the rubber bases on to the rubber rods, and then screw the binding posts on the top of the same, as shown by Figure 3.

Obtain two pieces of brass rod 7 inches long and large enough to take an 8/32 thread, and put 1/2 inch of thread on each end, on one end of each rod putting a rubber handle about 3/4 inch in diameter and 5 1/2 inches long, and on the other after putting through the binding posts last mentioned, a brass ball one inch in diameter. Bore a hole 1 1/2 inches from the end of the base, one on each end 1/2 inch in diameter and 1/4 inch deep, and then in the center of same another hole large enough to put an 8/32 screw through. Now embed in the free end of the rubber standards an 8/32 screw, letting

same project about 1 inch, and after screwing the coil to the base, centering same carefully, place the rubber standard for the spark gap in the holes, and putting a nut on underneath, screw same down tightly. On each corner of the base put a small rubber standard about 1/2 inch high, so that the base will not rest directly on the operating table. This gives the instrument a finished appearance.

Obtain two double connectors, and slot one end of each down to the hole so that it may be slipped onto the wire on the coil and screwed fast, a slight turn of the thumb screw enabling it to be removed from any one turn and placed on another quickly and conveniently.

One method of connection is shown in the cut, connections being made with "Pirelli" cable, "a" leading from



Assembled Coil.

the secondary of the induction coil to one side of the spark gap, "b" leading from the same side of the spark gap to the adjustable condenser, "c" leading from the condenser to binding post "d" on the inductance coil; "e" leads from the other side of the secondary of the induction coil to the other side of the spark gap, and "f" from there by a flexible connection to any point on the inductance coil. Binding post "g" on the inductance coil is directly grounded, and the aerial "h" is placed, by means of the other flexible connection, between points "f" and "d". The inductance of the closed circuit is varied by moving flexible connect "f", and the capacity by varying the condenser, and tuning is accomplished by moving the flexible connection leading to the aerial.

Each turn of wire on this coil is about equal to fifty feet of wire, and by using this coil in various ways it is possible to add approximately 500 feet to your sending wave length.

This coil may also be used for open circuit tuning, and, in fact, the wireless experimenter who builds this coil will find many different ways of tuning possible with same, and, provided the inductance and capacity are properly balanced, will also find that the distance he is capable of sending will be increased from 50 to 100 per cent.

MODERN ELECTRICS, September 1908

Metallic Audion
(No. 1,230,874, issued to Lee de Forest.)
Dr. de Forest, the well-known radio inventor, has here developed grid and filament

1917
Metal flask winged filament

an especially desirable form of Audion tube, which is made of metal so as to stand transportation better than glass. Moreover, the metal flask containing the grid and filament elements serves as the wing or plate. The grid support is preferably all glass, and the patent contains details of assembling the flask and other parts. Finally a metal bottom is welded to the open end of the flask, and the completely inclosed receptacle thus formed is connected to a vacuum pump, and thereby exhausted of air thru the usual tip.

Clark's Wireless Telegraph Apparatus.
Write for anything in Wireless Telegraph Apparatus and Supplies, special or separate parts, as required. Spark Coils, Coherers, Relays, Registers, Recorders, Automatic Tappers. Let us quote prices on Special College Sets and Commercial Sets for long or short distance. Circular free.
Thos. E. Clark Wireless Telegraph-Telephone Co.
71 MICHIGAN AVE., DETROIT, MICH.

1903 Ad

on the Air

It is encouraging that more museums are making provisions for antique electronic exhibits. The general public in many areas are recognizing antique gear as a reliable means of teaching technical history.

Probably, the hobby of radio collecting is fortunate in not having experienced the "wild pricing" as happened to radio premium collecting.

At Last!
Electromagnetic waves of any length from an incandescent lamp.

TYPE OJ3—\$400.00 COMPLETE
Oscillation Telegraph, capable of transmitting the voice 15 miles, or telegraphic messages 40 miles. Larger transmitters for greater ranges.

TYPE "S"—\$60.00
De Forest "Oscillon"
(Oscillating-Audion)
Generator of absolutely undamped oscillations of any frequency. Permits Radio Telephone speech surpassing in clearness that over any wire. For Laboratory and Research Work has a field utterly unfilled. Patents issued and pending.

MANUFACTURED BY:
DE FOREST RADIO TELEPHONE AND TELEGRAPH COMPANY
NEW YORK CITY

TYPE EJ2—PRICE, \$32.00
NEW AUDION AMPLIFIER FOR INCREASING STRENGTH OF RECEIVED SIGNALS 25 TIMES.
It is not a detector in any form.

TYPE RJ11—2500—12000 METERS, \$35.00
THE DE FOREST LOADING INDUCTANCE

TYPE VC4—PRICE \$20.00
VARIABLE CONDENSER
This Condenser is similar to our commercial type but is enclosed in an oak cabinet. It has 35 semi-circular aluminum plates. The maximum capacity is approximately .0025 M. F.

Office and Factory
1391 SEDGWICK AVE.

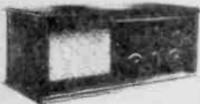
Cable Address:
RADIOTEL, N. Y.



TRADE NAME: Federal.
MODEL: 59.
TYPE: One-stage transformer coupled radio, detector and two audio.
TUBES: Four.
BATTERIES: None furnished.
CONTROLS: Four.
AERIAL: Outside or inside.
PRICE: \$177.00 without accessories.
MANUFACTURER'S NAME: Federal Telephone & Telegraph Corp.



TRADE NAME: Federal.
MODEL: 58.
TYPE: One-stage transformer coupled radio, detector and two audio.
TUBES: Four.
BATTERIES: None furnished.
CONTROLS: Four.
AERIAL: Outside.
PRICE: \$123.00 without accessories.
MANUFACTURER'S NAME: Federal Telephone & Telegraph Corp.



TRADE NAME: Federal.
MODEL: 142.
TYPE: Built-in loud speaker.
TUBES: Five.
BATTERIES: None furnished.
CONTROLS: Two.
AERIAL: Outdoor or indoor.
PRICE: \$230.00 without accessories.
MANUFACTURER'S NAME: Federal Telephone & Telegraph Corp.



TRADE NAME: Federal.
MODEL: 143.
TYPE: Built-in loud speaker.
TUBES: Five.
BATTERIES: None furnished.
CONTROLS: Two.
AERIAL: Outdoor or indoor.
PRICE: \$330.00 without accessories.
MANUFACTURER'S NAME: Federal Telephone & Telegraph Corp.



TRADE NAME: Federal.
MODEL: 144.
TYPE: Built-in loud speaker.
TUBES: Five.
BATTERIES: None furnished.
CONTROLS: Two.
AERIAL: Outdoor or indoor.
PRICE: \$330.00 without accessories.
MANUFACTURER'S NAME: Federal Telephone & Telegraph Corp.



TRADE NAME: Federal-Danersk.
TYPE: Two radio frequency detector and two audio.
TUBES: Five.
BATTERIES: "A" 6-volt storage; "B" 90 volts.
CONTROLS: Two.
AERIAL: Outdoor or indoor.
PRICE: \$325.00 with accessories.
MANUFACTURER'S NAME: Musical Products Distributing Company, New York.

TRADE NAME: Freshman Masterpiece.
TYPE: Self-balanced tuned radio frequency receiver.
TUBES: Five.
BATTERIES: None furnished.
CONTROLS: Three.
AERIAL: Indoor, outdoor.
PRICE: \$60.00.
MANUFACTURER'S NAME: Chas. Freshman Co., Inc.



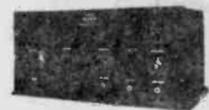
TRADE NAME: "Garod."
MODEL: RAF.
TYPE: Neutrodyne.
TUBES: Four.
BATTERIES: "A" and "B" needed.
CONTROLS: Three.
AERIAL: Outside or inside.
PRICE: \$135.00 without accessories.
MANUFACTURER'S NAME: Garod Corporation.



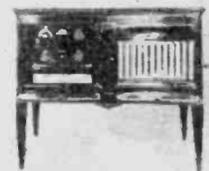
TRADE NAME: "Garod."
MODEL: V.
TYPE: Neutrodyne; two tuned radio, detector and two audio.
TUBES: Five.
BATTERIES: "A" and "B" needed.
CONTROLS: Three.
AERIAL: Inside or outside.
PRICE: \$195.00 without accessories.
MANUFACTURER'S NAME: Garod Corporation.



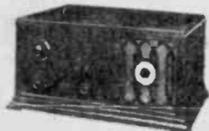
TRADE NAME: "Giblin Broadcast."
MODEL: RL.
TYPE: Two radio frequency, detector and three audio.
TUBES: Six.
BATTERIES: "A" 6-volt storage; "B" 90 volts; "C" 4½ volts.
CONTROLS: Two.
AERIAL: Loop.
PRICE: \$125.00 without accessories.
MANUFACTURER'S NAME: Standard Radio and Electric Corporation.



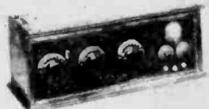
TRADE NAME: "Giblin Phonograph Broadcast Receiver."
MODEL: TM.
TYPE: Radio frequency with loop aerial.
TUBES: Two radio, detector and two audio.
BATTERIES: "A" 6-volt storage; "B" 90 volts; "C" 4½ volts.
CONTROLS: Two.
ANTENNA: Loop.
PRICE: \$425.00 without accessories.
MANUFACTURER'S NAME: Standard Radio and Electric Corporation.



TRADE NAME: "Giblin Broadcast Receiver."
MODEL: C.
TYPE: Coupled radio frequency.
TUBES: Six, 2 radio frequency, detector and 3 audio frequency.
BATTERIES: "A" 6-volt storage; "B" 90 volts; "C" 4½ volts; space provided for batteries in cabinet.
CONTROLS: Two.
AERIAL: Loop.
PRICE: \$185.00 with loud speaker.
MANUFACTURER'S NAME: Standard Radio and Electric Company.



TRADE NAME: "Giblin Broadcast Receiver."
MODEL: 2RA3.
TYPE: Coupled radio frequency.
TUBES: Six, 2 radio frequency, detector and 3 audio frequency amplifiers.
BATTERIES: "A" 6-volt storage; "B" 90 volts; "C" 4½ volts.
CONTROLS: Two.
AERIAL: Loop.
PRICE: \$110.00 without accessories.
MANUFACTURER'S NAME: Standard Radio and Electric Company.



TRADE NAME: "Gibllan."
MODEL: GN-2.
TYPE: Neutrodyne.
TUBES: Five.
BATTERIES: "A" and "B" needed.
CONTROLS: Three.
AERIAL: Inside or outside.
PRICE: \$140.00.
MANUFACTURER'S NAME: Gibllan, Inc.



TRADE NAME: "Gibllan."
MODEL: GN-1.
TYPE: Neutrodyne.
TUBES: Five.
BATTERIES: "A" and "B" needed.
CONTROLS: Three.
AERIAL: Inside or outside.
PRICE: \$175.00 without accessories.
MANUFACTURER'S NAME: Gibllan, Inc.



TRADE NAME: "Grandette."
MODEL: V-50.
TYPE: Neutrodyne.
TUBES: Five.
BATTERIES: Not furnished.
CONTROLS: Three.
AERIAL: Indoor or outdoor.
PRICE: \$125.00 without accessories.
MANUFACTURER'S NAME: R. E. Thompson Mfg. Co.



TRADE NAME: Grebe Synchronphase.
MODEL: V.
TYPE: Two tuned radio, detector and two audio, last stage parallel tubes.
TUBES: Six, 199 type.
BATTERIES: None furnished.
ANTENNA: Inside or outside.
CONTROLS: 3.
PRICE: \$155.00.
MANUFACTURER'S NAME: A. H. Grebe & Co.
NOTE: This same set furnished with tubes of the 201A type (Model NU-1).



TRADE NAME: Grebe Synchronphase.
MODEL: NU-2.
TYPE: Two tuned radio, detector, and two audio, last stage parallel; with battery case.
TUBES: Six, 199 type.
BATTERIES: None furnished.
ANTENNA: Inside or outside.
CONTROLS: 3.
PRICE: \$170.00.
MANUFACTURER'S NAME: A. H. Grebe & Co.
NOTE: This same set furnished with tubes 201A type (Model NU-1).

TRADE NAME: "Gundlach Crystal Receiving Set."
TYPE: Crystal receiver; no batteries or tubes needed.
CONTROLS: Two.
AERIAL: Outside.
PRICE: Without antenna or phones \$6.00.
MANUFACTURER'S NAME: Gundlach Manhattan Optical Company.



TRADE NAME: "Hetro Magnetic."
MODEL: 5-H.
TYPE: Two-stage tuned radio, detector and two audio.
TUBES: Five. "A" and "B" needed.
CONTROLS: Three.
AERIAL: Outside, inside.
PRICE: \$75.00 without accessories.
MANUFACTURER'S NAME: Sidbenel Electric and Mfg. Company.



TRADE NAME: "Halldorson 4-Tube Set."
MODEL: RD 400.
TYPE: One stage of tuned radio, detector and two stages of audio frequency amplification.
TUBES: Four.
BATTERIES: Not furnished.
CONTROLS: Two.
AERIAL: Outdoor, indoor.
PRICE: \$75.00 without accessories.
MANUFACTURER'S NAME: The Halldorson Company.



TRADE NAME: "Halldorson 5-Tube Set."
MODEL: RF 500.
TYPE: Two radio, detector and two audio.
TUBES: Five.
BATTERIES: Not furnished.
CONTROLS: Three.
AERIAL: Indoor, outdoor.
PRICE: \$115.00 without accessories.
MANUFACTURER'S NAME: The Halldorson Company.



TRADE NAME: "Hallerio."
MODEL: HI.
TYPE: Crystal receiver; no tubes or batteries needed.
CONTROLS: Two.
AERIAL: Outside.
PRICE: \$3.00 without telephone receivers or antenna.
MANUFACTURER'S NAME: W. B. Haller.



TRADE NAME: "Hallerio."
MODEL: V.
TYPE: Crystal detector; no tubes or batteries needed.
CONTROLS: One.
AERIAL: Outside.
PRICE: \$5.00 without telephone receivers or antenna.
MANUFACTURER'S NAME: W. B. Haller.



ARCA WINNERS

CLASS I Regenerative Receivers

FIRST PLACE
Cutting & Washington Type 12
by Ralph Muchow

SECOND PLACE
Kennedy Portable Type 311
by John Drake

THIRD PLACE
Mitchell BDI
by John Caperton

CLASS II Tuned Radio Frequency

FIRST PLACE
Charles R. Leutz Transoceanic
by John Drake

SECOND PLACE
Grebe AC Six Tube
by Wilford Wilkes

THIRD PLACE
Leutz Plio-6
by John Caperton

CLASS III Superhetrodynes

FIRST PLACE
Norden Hauck 10 Tube Navy
Super
by John Caperton
(No other entries in this class)

CLASS IV Crystal Sets

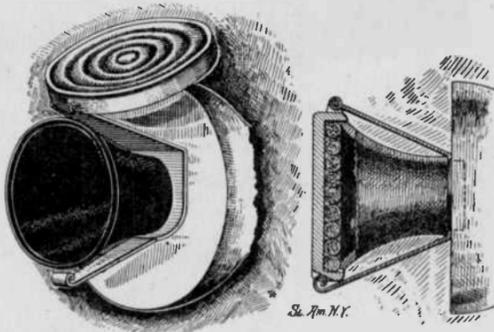
FIRST PLACE
Chas. H. Stoelting Co., Chicago
by Ralph Muchow

SECOND PLACE
Kilburn and Clark
by Bill Baker

THIRD PLACE
Clock Radio Crystal Set
by William E. Denk

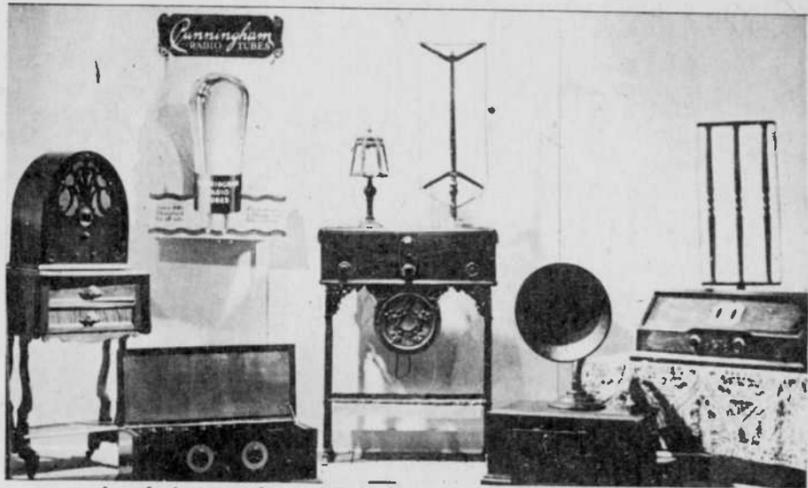
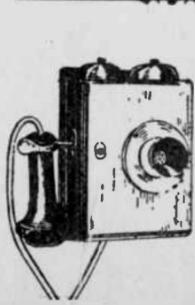
CLASS V Special Awards
Special awards were granted to
Larry Whitlock, Bridgewater,
Conn., for his Rotary Spark Trans-
mitter, and to Tom Brooker,
Akron, Ohio, for his 1912 Clapp-
Eastham Audion Receiver.

ANTISEPTIC ATTACHMENT FOR TELEPHONE MOUTH-
PIECES.—The mouthpiece of a telephone, which is in



ANTISEPTIC ATTACHMENT FOR TELEPHONE
MOUTHPIECES.

constant use by a large number of persons, is apt to become charged with filthy and even contagious accumulations from the breath of the users. To remedy this evil two Californians have devised a simple little attachment designed to deodorize and disinfect the mouthpiece. A small bracket is employed, consisting of a plate with two outwardly-projecting arms. This plate is provided with a central opening adapted to fit over the threaded shank of the mouthpiece, and it is firmly held between a shoulder on the mouthpiece and the receiver proper. Hinged to the upper projecting arm of the bracket is a cap adapted to normally close over the mouthpiece. This cap is provided with any suitable absorbent material, saturated with a sterilizing or antiseptic substance, which will deodorize and disinfect the mouthpiece. The cap is held tightly against the mouthpiece by the lower projecting arm of the bracket, which serves as a spring catch therefor. In use the cap may be easily swung up clear of the mouthpiece, as shown in our illustration.



An interesting exhibit displayed by the Indiana Historical Radio Society at the Indiana State Museum. They have shown how well a radio exhibit can gain public favor...many favorable comments.

A REINCARNATION OF THE VOICE
TONE QUALITY UNRIVALLED. VOLUME
MOST POWERFUL. RENDERS INSTRUMENTAL
MUSIC WITH ORCHESTRAL EFFECT.



VICTOR

TALKING MACHINES are the most perfect reproducing devices in the world. Built by Science and built on Honor. We would like you to send for our Valuable Literature mailed FREE. We want you to know all about this Valuable Pleasure Giver. Hundreds of thousands of glad possessors proclaim its superiority.

Send for Catalogue

VICTOR TALKING MACHINE COMPANY - - - PHILADELPHIA, PA.

1903 Ad



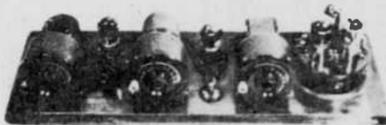
TELEGRAPH BOOK. "History, Theory & Practice of the Electric Telegraph." The orig. copy of this book was first printed in 1860 by George Prescott, Supt. of Electric Telegraph lines. Over 500 pgs. of information on the telegraph & many illus. of early telegraph equipment. Reprints of this book \$7.50 ea., ppd.

JUST OFF THE PRESS



NEW 1973 VINTAGE RADIO

Enthusiastic readers bought out our first edition. Now you can send for the fascinating new edition of this pictorial history of wireless and radio, 1887-1929. It's the collector's bible, with 263 pages and over 1,000 illustrations. Available in handbook or deluxe hard cover.



McMAHON'S 1921-1932 GUIDE

Be an instant expert. Lists 9,000 radio models by maker and year introduced, with original price, description and circuit type. A must for every radio buff or antique collector.

Vintage Radio, handbook \$4.95
Vintage Radio, hard cover 6.95
McMahon's 1921-32 Radio Guide 3.95

THE FABULOUS
PHONOGRAPH

From Edison to Stereo

Ever since 1877 when Thomas Edison invented a curious tin-foil apparatus to reproduce sound, the phonograph has provided entertainment and the delights of music for millions of listeners.

Roland Gelatt's history of this truly fabulous invention is a classic work in its field, and this revised edition covers new developments in stereo, recordings, and tapes.

\$6.95

All postpaid

- 1906 Columbia Graphophone Catalog, 32 pp., @ \$3.25
- 1909 Babson Bros. Edison Phonograph Catalog, 16 pp., 8x10, @ \$3.50
- 1896 Berliner Gramophone Instruction Manual, 8 pp. @ \$1.50
- 1900 Eldridge Johnson Gramophone Catalog (Consolidated), 40 pp. @ \$3.50
- 1902 Berliner Gramophone Catalog, 32 pp., @ \$3.25
- 1909 Victor Talking Machine Catalog, 32 pp., @ \$3.95

Edison Cylinder Records, 1889-1912, With an Illustrated History of the Phonograph, by A. Koenigsberg, 8 1/2 x 11, 200 pages, coll-binding, @ \$12.95

The Phonograph and How to Use It, Edison Lab Manual, orig. pub. 1900, Facsimile Edition, hard bound, 182 pp., @ \$12.95

1899 Chicago Talking Machine Catalog, 64 pp. @ \$3.25

1907 Edison Phonograph Catalog, 32 pp., @ \$2.95

Set of 5 Antique Phonograph Posters, 12" x 17", 1877-78, @ \$5.00

- EDISON 1901 CATALOG \$1.50
- 1902 ZONOPHONE PHONOGRAPH CATALOG \$1.00
- 1902 VICTOR CATALOG \$1.00 NO COLOR
- 1906 VICTOR CATALOG \$1.00
- 1906 COLUMBIA GRAPHOPHONE CATALOG \$1.50

1901 IVER JOHNSON TALKING MACHINE SUPPLIES, 80 pp., @ \$4.50

1905 EDISON PHONOGRAPH OPERATING INSTRUCTIONS, 8 pp., @ \$1.75

1898 COMBINATION CATALOG (EDISON, COLUMBIA, PATHE, and BETTINI), 64 pp., @ \$4.95

Send _____ PLEASE PRINT _____

 Enclosed is \$ _____
Name _____
Address _____
City _____ State _____ Zip _____



EDISON PHONOGRAPHS 1912-13 (Cylinder Models), illustrated 5 x 8" catalog reprint. \$3.00 ppd. Satisfaction guaranteed.

The Horn Speaker Book Sales

Box 12 Kleberg, Texas 75145

MART

No. Words	One Issue	Two Issues	Three Issues	Twelve Issues
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

MISC.

A BRASSPOUNDER from DOWN UNDER collects MORSE KEYS as a hobby and would like to hear from anyone with a similar interest. He is looking for 'spark' keys or early marine but seeks all types and in any condition. Will swap or buy. Please write to Alan Shawsmith, VK4SS., 35 Whynot St., West End, Brisbane, Q 4101 AUSTRALIA.

NOSTALGIA AT ITS BEST: "Remember When" is a new monthly magazine with photos and articles on the Golden Age of Radio, movies, comics, etc. If you remember the '30s, '40s and '50s, you'll enjoy "Remember When." Four issues \$2.50, eight issues for \$4.50 from: NOSTALGIA INC., Box 34305, Dallas TX 75234.

GOT AN OLD RADIO? Want it repaired or restored? Write for free estimate to fix your Crystal set or 1940 Superhet. Bob Lucas, 9014 Mahoning, Houston TX 77036.

PROFESSIONAL CW operators, retired or active, commercial, Military, Gov't, police, etc., invited to join Society of Wireless Pioneers, W7GAQ/6, Box 530, Santa Rosa, CA 95402.

SEND FOR free list of old radio magazines, pamphlets, books, etc. Also carry many old radio parts. B. W. Noyes, 162 Tuttle Rd., Cumberland, ME. 04021.

FREE Catalogs of Piano Rolls, Records or Sheet Music. State list wanted. Stamp please. Musical Notes, 12 Grafton Street, Greenlawn, N. Y. 11740.

FOR SALE OR TRADE

WE HAVE a considerable quantity receiving tubes for old radios. Complete inventory not practical, send list of your needs. Wm. L. Poston, 3212 Peachtree Ct., Bakersfield, CA 93301.

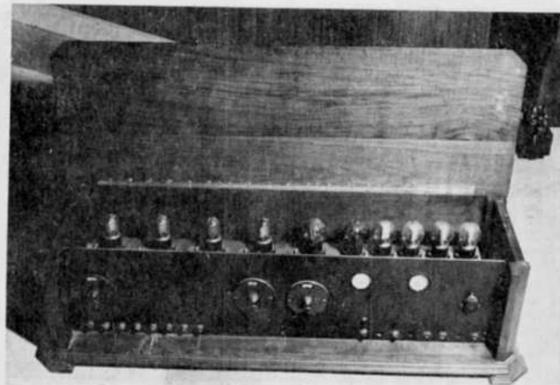
FOLLOWING RADIOS for parts or restoration; Radiola 25, RCA Borgia I, Kodak C-14, AK-44, unknown-looks like AK, no cabinets except AK-44 and unknown \$20.00 ea. plus shipping. Cecil Bounds, Pine Spring Rte., Carlsbad, N. M. 88220.

TRADE: Complete set of Rider Manuals; Vol 1 (Vol. 1 through Vol. 5 abridged) through Vol. 22 for McMurdo Silver Masterpiece II, but will consider others. 214 239-2155, George Miller, 6537 Turner Way, Dallas Tx.

FOR SALE: 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.

FOR SALE: QST Magazines, 1917 through 1925. Also Wireless Age, 1913 through 1916. Send for list. Paul Giganti, W6GVY, 2429 San Carlos Ave., San Carlos CA 94070.

FOR SALE: 50 radios, no list, stop in. Pat Cutini, 969 Genesee St., Buffalo, N. Y. 14211.



FOR SALE: Antique Communications Receiver, plus in coils, battery operated ten tubes, 4-RZZ1 D, 2-102 D, 4-216 A, each by Northern Electric. Frequency 14 megahertz to 21 megahertz. Price \$275.00 as is with tubes. Ronald C. Robinson, 334 Burlington Crescent, London, Ontario, Canada N5 3G7.

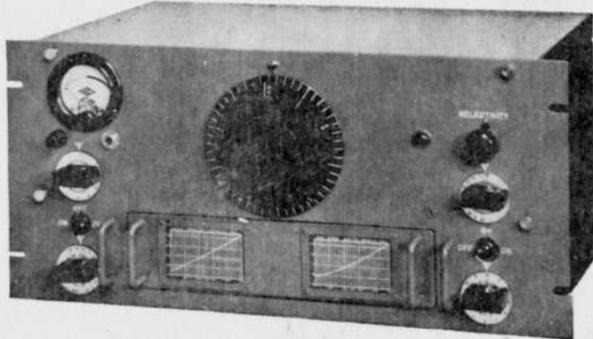
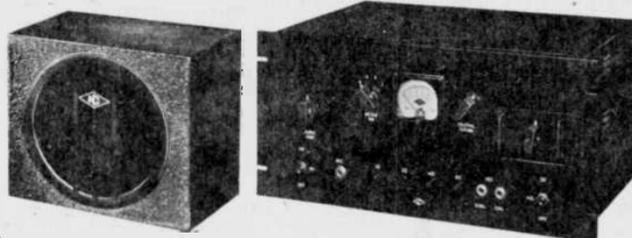
FOR SALE: Radio Collector moving, lots of items for sale, radios, tubes, books, magazines, speakers and more. List for 50¢ and SASE, list available end of July. Frank Krantz, 101 Atlantic Ave., Voorhees Township, N. J. 08043.

FOR SALE: RCA pre 1925 Radio Service Bulletins, including schematics \$3.00 each reproduction. RADA, RS, AC, AR 1300, AR 1400, AR 1520, RAD II, III, IIIA, IV, V, VI, VII, VII-B, VIII, IX, X, regenflex. RAD 20, 25, 28, \$5.00 each. Write for group prices. R. Brewster 1 Concord Rd, Fishkill N. Y. 12524.

FOR SALE: Victor belt buckles-showing Nipper and Berliner phonograph. Heavy brass with Tiffany hallmark. Satisfaction guaranteed, \$21.50 postpaid. Dave Martens, #7, Constitution Blvd., New Castle, Delaware 19720.

FOR SALE: Old phonograph horns \$25.00 each. Packing extra. Open Thursday, Friday, Saturday. Pat Cutini, 969 Genesee St., Buffalo, N. Y. 14211.

The following items are for sale, at the best offer or trade for items that would better help my collection express periods of progress in sound and electronics.



National MTE-B exciter and speech amplifier, new in original shipping crate, about 10% of crinkle paint has fallen off, National HRO receiver, smooth gray enamel, no cabinet, used but good condition, 3 sets of coils (7.0-14.0, 1.7-4.0, 3.5-7.3 MCS) National Speaker, The three illustrations are catalog pictures of the original items.

New Standard telephone, good condition.

Electronic fake healing device using 01A tube, beautiful black panel, built by Ellis Research Laboratories, Chicago, type D 110-125 V AC-DC. Feet and hand electrodes included.



HERE'S A REAL BUY!
U. S. Army Signal Corps, 1/4" solid
coin silver contacts, flameproof

LESS
BULB

50 YEAR OLD FLAME PROOF KEY
TYPE J-7-A
Gov't Order No. 141082 Dated: 1921

\$12.95
PPD.



Beautiful heavy duty construction, in new working condition. For the collector, antique buff and antique gear museums. An unusual conversation piece, curio, desk weight and gift.

SATISFACTION
OR YOUR
MONEY
REFUNDED

A RARE FIND! LIMITED SUPPLY!
ORDER TODAY!

WALTS EMPORIUM

P. O. BOX 19406

DALLAS, TEXAS 75219
EVENINGS - 214-262-7855

Eugene T. Turney tuning unit good except for missing print on center window, sloping front.

Crosley Dynacone speaker.

1924 Radiola IIIA AR 806 Regenerative, detector, one step audio, one step push pull audio receiver with brass base WD 11's, good condition.

NEW, Sonotron Audio Amplifier, 3 stage resistance coupled with original red white and blue tube in original sales box with original literature.

Brass base UV202
3-216A's 1-205B

Send or call offer to Jim Cranshaw, 9820 Silver Meadow Drive, Dallas TX 75217, Ph: 214 286-1673.

FOR SALE: Antique Televisions from 1930's, 1940's, 35 different models, sell or trade for Horn Phonographs, Radios. Splitdorf Radio \$40.00. Charles Seidel, 767 Westwood, Santa Barbara CA 93109.

FOR SALE: Display your Radio's Schematic along with it. The perfect compliment of every set, \$1.00 each. Cecil Bounds, Pine Springs Route, Carlsbad, N. M. 88220.

WANTED

WANTED: Crystal Radio Receiver Schematics from early 1920's including details of construction, wire sizes, etc., also Tesla coil, Jacob's Ladder, etc. George Seidel, 1201 Powell St., Norristown PA 19401, Pho; 215-275-6333.

WANTED: December 1926 issue Citizen's Radio Callbook, need not be perfect. Edward Crosby, 441 Cedar Ave., East Greenwich, R. I. 02818.

WANTED: Power transformer for Atwater Kent model 84. Also base with phone for Atwater Kent horn speaker type H. R. F. Hill, 386 Roosevelt Ave., Lyndhurst, N. J. 07071.

WANTED TO BUY: Collection of Battery radios, horn speakers or phonographs. Please state as much information as possible. Wilford D. Wilkes, Box 43, Brisbin, PA 16620.

WANTED: UP 591 resistor and 216B rectifier tube. Jim Cranshaw, 9820 Silver Meadow Dr. Dallas TX 75217.

TUBE PRICE LIST NO. 6 -- Tube prices in this list supersede prices in Lists No. 1 through 5.

J.W.F. PUETT 3008 ABSTON DRIVE MESQUITE, TEXAS 75149

SEPTEMBER 1973

ALL TUBES ARE THOROUGHLY TESTED ON A MUTUAL CONDUCTANCE TUBE CHECKER BEFORE SHIPMENT. REFUNDS are mailed with your order for out-of-stock tubes. INCLUDE 10% FOR POSTAGE AND HANDLING. TEXAS RESIDENTS ADD 5% STATE SALES TAX. Tubes are priced from \$2.50 to \$1.00 in the following tables:

NEW TUBES IN ORIGINAL CARTONS -- \$2.50 EACH:																	SPECIAL (used)	
2A3	2A4	2A5	2B7	30	31	32	33	34	35/51	36	41	45	46	48	49	58	77	Brass base WD 11's \$15.00 OIA's \$3.00 - UV 99's \$4.00

NEW TUBES IN ORIGINAL CARTONS -- \$2.00 EACH:																	
3C6	6B4	6D6	6F8	6K7	6L7	7A4	7X7	24A	39/51	56	70L7	79	85	100-79	117Z3	5881	XXL
6A8	6B7	6F6	6K6	6L6	6N5	7F8	19	38	55	70A7	76	80	89	117L7	117Z6	XXB	XXFM

NEW TUBES IN ORIGINAL CARTONS -- \$1.50 EACH:																
0A2	1C7	1LB4	1T5	5W4	6AL5	6C7	6N7	6SH7	6X5	7B8	12A6	12K7	12SQ7	14J7	35Z5	
0B3	1D5	1LC5	1U4	5X4	6AQ5	6C8	6P5	6SJ7	6ZY5	7C5	12A7	12K8	12SR7	14N7	50B5	
0C3	1D7	1LC6	1U5	5Y3	6AT6	6D7	6Q7	6SK7	7A5	7E6	12AH7	12L6	12V6	14Q7	50C5	
0D3	1E4	1LD5	3A4	5Y4	6AT8	6D8	6R7	6SL7	7A6	7E7	12AT6	12Q7	14A4	14R7	50L6	
0Y4	1E5	1LE3	3A5	5Z3	6AU6	6E6	6S4	6SQ7	7A7	7F7	12AT7	12SA7	14A7	14W7	50Y6	
0Z4	1E7	1LQ5	3A8	5Z4	6AV6	6F5	6S7	6SS7	7A8	7K7	12AU6	12SC7	14AF7	25A6	50YT	
1A3	1F4	1LH4	3LF4	6A4	6B5	6G6	6S8	6SU7	7AD7	7L7	12AU7	12SF5	14B5	25A7	5686	
1A4	1G4	1LN5	3Q4	6A5	6B6	6H6	6SA7	6SV7	7AF7	7N7	12AV6	12SF7	14B6	25L6	5691	
1A5	1G6	1N5	3Q5	6A6	6B8	6J5	6SB7	6T7	7AG7	7R7	12AX7	12SG7	14B8	25Z5	5751	
1A6	1H5	1P5	3S4	6AB7	6BA6	6J6	6SC7	6T8	7AH7	7S7	12BE6	12SH7	14C5	25Z6	5814	
1A7	1H6	1Q5	3V4	6AC5	6BE6	6J7	6SD7	6U8	7B4	7V7	12C8	12SJ7	14C6	35A5	5879	
1B5	1J6	1R5	5T4	6AC7	6C4	6K5	6SF5	6V6	7B5	7W7	12F5	12SK7	14F7	35B5	6842	
1C5	1L4	1S5	5U4	6AD6	6C5	6L5	6SF7	6V7	7B6	7Y4	12J5	12SL7	14F8	35C5	6973	
1C6	1LA4	1T4	5V4	6AF6	6C6	6N6	6SG7	6X4	7B7	12A5	12J7	12SN7	14H7	35L6	7-H-11	

NEW TUBES IN ORIGINAL CARTONS -- \$1.00 EACH:																
1B3	3CB5	4DT6	5CG8	6AK5	6AX5	6BN6	6CG7	6DQ6	8AW8	12BY7	19AU4	25DN6	45Z5	955		
1D21	3EN6	5AN8	5CL8	6AK6	6BC5	6BQ6	6CG8	6DX8	10DE7	12CA5	19BG6	26A7	50A5	1633		
1X2	3BZ6	5AQ5	5J6	6AN8	6BD6	6BQ7	6CM7	6SN7	12AX4	12DQ6	25AC5	28D7	50C6	2050		
2EN4	3CB6	5AT8	5KE8	6AS5	6BJ6	6BY6	6CQ8	6W4	12BD6	12W6	25AX4	32L7	185R8	2051		
2W3	3GK5	5B8	5X8	6AU4	6BK5	6BZ7	6CS6	6W6	12BF6	12Z3	25BK5	35Z3	809	9002		
2X2	4BQ7	5BQ7	6AG7	6AW8	6BK7	6CB6	6CU6	6Y6	12BH7	17AX4	25BQ6	35Z6	884	9003		
3AU6	4CB6	5BR8	6AJ5	6AX4	6BN4	6CD6	6CUB	7AU7	12BQ6	17DQ6	25CD6	45Z3	930			

USED TUBES IN CARTONS -- THOROUGHLY CHECKED -- \$1.00 EACH:													
1A4	1LB4	1S4	3B4	6B6	6Z4	7S7	12V6	24A	40A1	75	CK1005	1614	K-49-A
1D5	1LC6	1T4	3Q4	6D6	7AK7	12A8	14A7	33	42	78	K1148	1625	L-55-C
1D8	1LD5	1U5	3Q5	6K8	7C6	12K7	14Q7	35Y4	43	84	1273	1626	VT52
1H4	1LN5	2C26	6A7	6P5	7H7	12Q7	14H7	37	57	100-77	1299	1635	FM1000
1J6	1Q4	2W3	6AR6	6Y7	7Q7	12SG7	15	70L7	807	161Z			L-42-B

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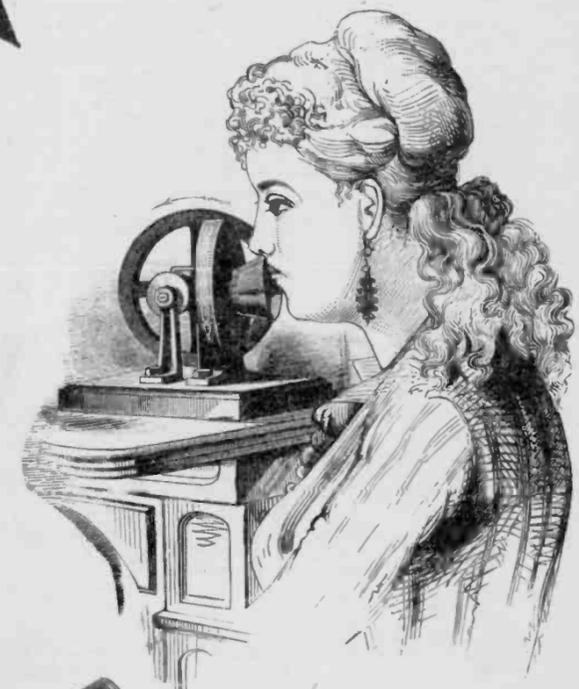
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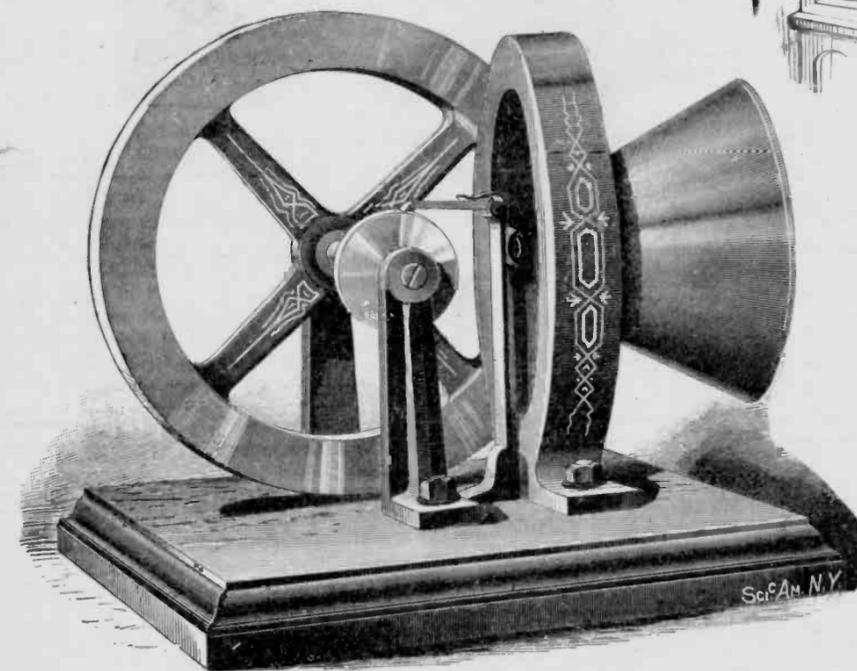
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