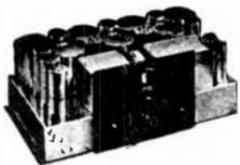


THE NEWSPAPER FOR
THE HOBBYIST OF VINTAGE
ELECTRONICS AND SOUND

THE HORN SPEAKER

The Classic Radio



BY J.W.F. PUETT

"A classic radio"—an interesting term, but what does it mean? If we consider the time period in which a radio was manufactured, one well known collector told me—"the classic period was from 1928 to 1939 and encompassed almost any ac set." But, are all ac sets classic radios? Turning to Webster's New World Dictionary, we find under the word classic—"superior, of highest class, most representative of the excellence of its kind." This dictionary definition, to my way of thinking, best describes those beautiful old radios produced by such manufacturers as McMurdo Silver and E. H. Scott. There were others too, such as the Lincoln, the Matthews, the Norton Hauck, and of course the Leutz—and perhaps we could go on and on with out list?

Not so many decades ago, when automobile collecting was in its infancy, the forefathers of this fascinating endeavor were faced with the task of formulating the terminology used in their area

of interest. Since radio collecting has seemingly progressed to this parallel today, it would seem proper that we set forth the terms which will be used by future generations who are destined to savor the wonderful nostalgia of radio. One such term would certainly be—"a classic radio".

Like a classic automobile, a classic radio should be an example of the very finest of its kind. The design of its circuitry should embrace the state-of-the-art at the time of its manufacture and the quality of all components, both electrical and mechanical, should be unsurpassed. The workmanship, inside and out, should be obviously that of master craftsmen. Here-with, gentlemen, is my definition of the term "classic radio," the idea being plagiarized from the generally accepted definition of a classic automobile.

Now, if we can all get together and pool our two cents worth, we will soon have a million dollars worth, so please send me your ideas on this subject along with the make and model numbers of radios you believe will qualify as classics. See you next month in the Classic Radio Column.

J. W. F. Puett (June)
3008 Abston Drive
Mesquite, Texas 75149

EDITOR'S NOTE: Column writer's use their own address and they are responsible for the column's content.

SIMPLE SOUND RECORDER.

BY GEO. M. HOPKINS.

The complex nature of sonorous vibrations is beautifully exhibited by the records made by the phonograph; but the instrument is so bulky, so expensive, and so inconvenient to use that few students are able to avail themselves of actual experiments in this direction.

The annexed engraving shows an exceedingly simple device, by means of which sounds may be autographically recorded fully as satisfactorily as with the phonograph. The main difficulty with this sort of apparatus seems to have been the propelling of the smoked plate at a uniform rate of speed under the stylus. In the instrument illustrated this is accomplished by simply inclining the support of the plate and allowing the plate to slide off quickly by its own gravity.

This apparatus consists of a wooden mouth-piece like that of a telephone, with a parchment diaphragm glued to its back, and provided with a tracing point, which is slightly inclined downward toward the guide for the plate.

This tracing point is a common sewing needle, having its pointed end bent downward. It is cemented at the eye end to the center of a diaphragm by a drop of sealing wax. The mouth-piece is attached to a base supporting the cross-piece upon which the smoked plate is placed.

A thin strip of wood fastened by two common pins—one at each end—serves as a guide for the smoked plate.

To prevent the needle from being deflected laterally by the moving glass a long needle is driven down into the baseboard in contact with the tracing needle; and to give the needle point sufficient pressure to keep it in contact with the smoked plate a very small rubber band is slipped over it and drawn down through a small hole in the baseboard, as shown in Fig. 2, until the necessary tension is secured.

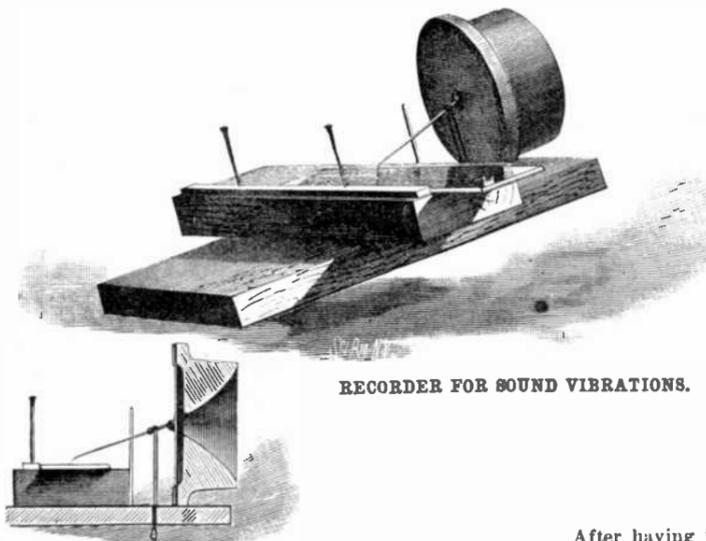
The best plates for the purpose of making the tracings are the microscope slide glasses with ground edges. They may be readily smoked over a gas jet turned down quite small, or over a candle or kerosene lamp. The flame in any case should be small and the film of smoke fine and very thin.

The smoked plate is placed on the support and against the guide and under the needle, and the instrument is inclined

until the plate rests against the guide. Now the mouth is placed near the mouthpiece, and a vowel is uttered, while the instrument is inclined sidewise at a sufficient angle to permit the glass to slide off quickly. Of course the glass should fall only a very short distance, and it is well to provide a soft surface for it to alight on.

If all this is done with the slightest regard for precision a beautiful tracing will be secured, which will show the composite nature of each sound wave. It is surprising how perfectly regular and uniform the entire tracing will be, considering the comparatively crude means employed in producing it.

The beginning of the sinuous line will be somewhat imperfect owing to the slow initial movement of the plate in its descent, but the greater portion will be found perfect.



RECORDER FOR SOUND VIBRATIONS.

Scientific American
MAY 27, 1882



AERIALS

BY WILLIAM E. HEMRICK

How many of you can remember the different types of aerials used in the 1920's and early 1930's? As we know, the purpose of the aerial is to collect the electromagnetic waves that is sent out from the broadcasting station. The electro-magnetic waves which radiate in concentric circles from every broadcasting outfit pass through the receiving aerial and set up an alternating current in the aerial. This current is carried along the aerial down the lead-in wire into the set, and hence to the ground.

All manufacturers claimed superior performance of their aerials. Lets look at a few. Perhaps, the most famous was the super-ball outdoor aerial. 10

inches diameter, mounted on top of a 10 foot pipe, binding post on ball for lead-in wire, four guy wires. "Perfect outdoor aerial, endorsed the country over by radio experts. Longer distance, clearer reception, less static, increased selectivity, non-directional. The ball has proven its superiority over any other aerial. The improved ball aerial represents one of the biggest sensations since radio become popular," were some of the aerial ball claims.

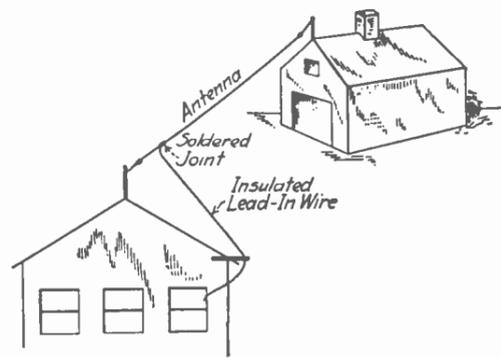
Another was the "American" all directional aerial, which consisted of a pure copper drum 14 inches in diameter with an under-structure that had a collar for mounting on wooden pole or pipe. "Especially recommended for short wave reception, will last

forever and is guaranteed to improve reception," were the promotional assertions.

Federal made an aerial that was buried in the ground, which was about 2-1/2 inches diameter and about 6 inches long. The effectiveness of the in-the-ground aerial is due to the scientific fact that the earth is practically free of static, and the aerial absorbs the radio waves from the ground and delivers them to your set pure and free from objectionable noise.

The three aerials I have described are just a few of the many that were made in that era. All were guaranteed by the manufacturers to improve reception.

Needless to say, these items are excellent to have in a collection or museum.



Simple outside antenna.

Radio's Golden Age



FREE TO LISTENERS, the top-notch comedy broadcasts of radio's "Aldrich Family" cost \$4,500 a week for talent alone

JIMMY McCLAIN,
"Dr. I. Q."



After having made one line, the pins holding the guide are moved forward, placing the guide in a new position, when the operation of tracing may be repeated with another vowel. Monosyllables and

short words may be recorded. If the plate is made long enough it will, of course, receive an entire sentence.

These tracings may be covered with a second microscopic glass plate to

protect them, or they may be mounted as a microscopic object for a low power by putting a thin cover over them in the usual way. Used as a lantern slide they give fine results.

MART

EASY COST CHART

FOR CLASSIFIED ADS

No. Words	One Issue	Two Issues	Three Issues	Twelve Issues
1-25	1.25	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	10.65	15.15	54.00
111-120	6.60	11.65	16.30	57.00
121-130	7.20	12.65	17.85	60.20
131-140	7.75	13.50	19.25	63.25
141-150	8.25	14.45	20.65	66.30

Photo ads \$2.00 extra.

MISC.

NEED listings of craftsmen who restore items for others, especially in the New York area.

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.

PHONOGRAPH RESTORING, reproducer repairing a specialty. Alan Cobble, 826-9184.

SCOTT and McMurdo Silver radio lovers are welcome to contact J. W. F. Puett at 3008 Abston Dr., Mesquite, TX 75149

FOR SALE OR TRADE



ANTIQUA-Add extra class to your collection with a 50 year old J7A telegraph key! Dated 1923, it has a brass dome and keying arm, and a large Navy type knob-Flame Proof type. New, but not perfect because of years of storage in the Brooklyn Navy Yard. \$12.95ppd. Also, W. U. Tele Co. Main line sounders, good, used, type 17A and 15B, \$25.00ppd, each. Buy-Trade-Sell Telegraph, Radios, Books--what have you? Walt's Emporium, P. O. Box 19406, Dallas TX 75219.

WHO'S WHO of Radios/Wireless Collecting. No collector or dealer should be without or miss being in MIDCO'S NEW 1974 Radio/Wireless Antiquer's Directory & Collectors Guide. NOW AVAILABLE, over 650 names/addresses, call letters, phone numbers of buyers, traders, sellers, museums, clubs, associations, societies, collections, old radio reprints, experimenters projects & Hints for the beginner or advanced collector.

SERVICES OFFERED: Repairing, appraising, restoring & friendship. ONLY ONE KNOWN, experts keep at their fingertips & in autos when traveling. Order \$5 ppd., a little more than a hamburger nowadays. Got an old radio you want appraised? Send all details, Model No., photos. \$2 ea. plus return postage. Order MIDCO HS20, Box 15370, Long Beach, Calif. 90815.

FOR SALE OR TRADE

FOR SALE OR TRADE: Aprox. 600 early electric tubes 1920's & 30's. New in original boxes. Very reasonable-Package deal only. Would trade an exceptional horn type phono or quality battery radios & horn speakers. Also for sale 12 early electric table models-All complete some working-"cheap" SASE please. Wilford Wilkes, Box 43, Brisbin PA 16620.

ANTIQUA TELEVISIONS; 3" Pilot, 5" Andera, 7" Hallicrafters, 7" Crosley, 7" Philco, 7" Motorela, 7" Admiral, 7" Transvision, many more. Call Charles Seidel, (805) 962 3620 Santa Barbara CA.

FOR SALE: 6 old Radios; 2 horns; Western Elect. Amplifier; Cobra arm and turntable & misc. Bid. Charles Solgas, 821 Duchow Way, Folsom CA 95630.

SEND LARGE SASE for list number 74-1 showing old Radios, parts and Ham equipment I have for sale. David McKenzie, 1200 West Euclid, Indianola, Iowa 50125.

ANTIQUA TELEVISIONS from 1930's-1940's, 35 different Models, sell one or all send \$1.00 for Picture List. Charles Seidel, 767 Westwood, Santa Barbara CA 93109. (805) 962-3620.

REPLACE BULKY BATTERIES and noisy eliminators with solid state battery Radio Power converter. Send SASE - your needs. Gary Fischer, 6378 Pierce St. N. E., Fridley, Minn. 55432.

FOR SALE and TRADE: Battery radios and misc. equipment. Write for list or call; Jim Cirner, 13366 Pastel Lane, Mt. View, CA 94040. Pho: 415 967-7672.

VICTOR TRADEMARK Brass Belt Buckles, \$10.00 each. Postpaid. Three for \$25.00 Ppd. Dave Martens, 7 Constitution Blvd., New Castle, Delaware 19720.

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

1921-1931 schematics and service data where available \$2.00. Cecil Bounds, Pine Springs Rte., Carlsbad, N. M. 88220.

WANTED

WANTED: Sharp early 1920's lowboy such as Super Zenith VIII, Pfanstiehl Model #8, Ozarka Consolor (Page 149 - Vintage Radio 1st edition) or any other exceptional lowboy. I also want A-K Breadboards. Will buy outright or trade 1927 Neutrowound or Model #52 Crosley and cash. Mike White, 118 Countryview Drive, Naperville, Illinois 60540. Pho: 312 355-2580.

WANTED

WANT Fada K-G 60 cycle A. C. Chassis. Also need Vernier Dial as on Gilfillan Portable page 91 Vintage Radio. Have some parts, tube sockets, Dials, Var. Caps., trans., 4, 5, 6, prong, Excellent emission, old style envelope tubes. Sell or trade. Cecil Bounds, Pine Springs Rte., Carlsbad, N. M. 88220.

WANTED: Capehart or Farnsworth "turn over" changer--for parts or complete. Also early General Radio and Weston Instruments and Scott Radios. John Field, 117 Arroyo Place, Santa Cruz, Calif. 95060.

WANTED: Early Radio/Wireless Sets, Tubes, Book, Magazines and Associated items. Western Electric Telephone and Audio Equipment. Will Nangle, 761 No. 29th St., Milwaukee, Wisc. 93208.

EARLY DATE RADIO TEST EQUIPMENT WANTED. SUPREME, WESTON, JEWEL, ETC. WITH INSTRUCTION MANUAL. GIVE COMPLETE DESCRIPTION, MODEL NUMBER AND PRICE. William L. Poston, 3212 Peachtree Ct., Bakersfield CA 93301.

WANT TO BUY: Old Phonographs, parts machines, horns, parts, etc. Also want early Philco electric Radios (pre-cathedral) also want AK Breadboards. Have some Radios to trade for items wanted. L. M. Lackey, Jr., 505 Harmony Drive, Statesville, N. C., 28677. Pho: 704 873-4646.

WANT ATWATER KENTS ANY MODEL FROM 7 THROUGH 42: CROSLEYS ANY BATTERY MODEL AND GEMBOX AND SIMILAR ELECTRICS: ATWATER KENT SPEAKERS: ANY TYPE HORN SPEAKERS: WD11, O1A, 2O1A, ETC., TUBES. DESCRIBE & PRICE. YOUNG, 11 WILLOW COURT, TOTOWA, N. J. 07512.

WANTED: "Popular Radio" magazines for the year of 1922 and 1923; "Radio News" magazine for 1925 and earlier years; RCA Horn Speaker Model UZ1320 and UZ1325; Wiring B/P for Zenith 4R. Albert Warren, Box 279, Church St., Waverly PA 18471.

WANT TO BUY: Ghirardi Radio Troubleshooters Handbook, need several copies. Also need early date RCA, Sylvania etc. Tube manuals. State price and condition in first correspondence. William Poston, 3212 Peachtree Ct., Bakersfield CA 93301.

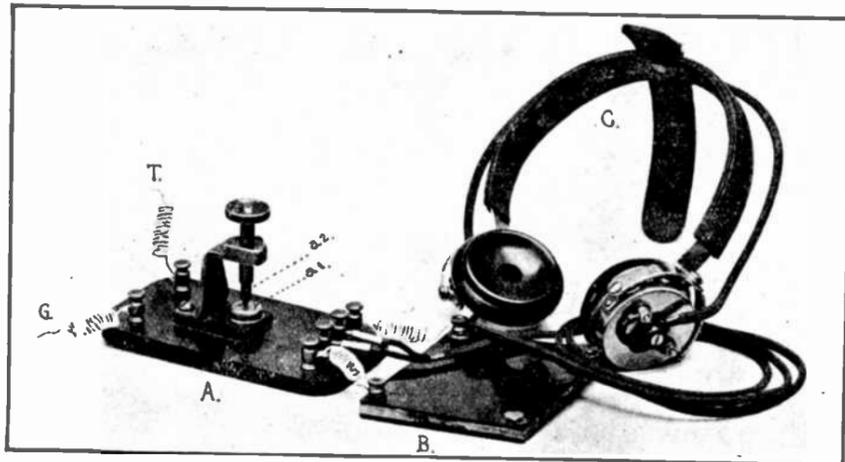
WANTED: Old radio books, catalogs, Gernsback manuals, Early test equipment. Give price in first letter. William Hemrick, Route 1, Terra Alta, West Virginia 26764.

WANTED: O1A and 45 tubes. New or good used, any quantity. William L. Poston, 3212 Peachtree Ct., Bakersfield CA 93301.

OLD MICROPHONES, 1920 to 1940. Also Microphone catalogs and specification sheets. Bob Paquette, 443 N. 31 St., Milw., Wis. 53208.

A Silicon Detector

BY A. C. AUSTIN, JR.



1908 VINTAGE

and very hard). Select the flattest side of the Silicon chip and grind on a fine emery wheel until it assumes somewhat the shape as shown in Fig. 7. There may be a few pits on the face of the Silicon after grinding, but if there are not too many it will be found to work

About a year ago the writer had the opportunity of examining a Pickhardt Silicon Detector, and after listening to it in operation, decided to build one himself. The operator, a friend, explained the action of the detector in detail, saying in part there were no batteries to run down, that the adjustment was very easy, and when once adjusted it could be depended upon not to get out of order, and that the connections were very simple.

From his explanation the instrument (hereinafter described) was built, at a cost of about \$3.00, and was afterward tested on one of the Fall River Line steamers, where it proved to be so sensitive that wireless telephone could be heard with it.

A silicon detector, when used with telephone receivers wound to 1,000 or 2,000 ohms resistance, is as sensitive, if not more so, than the electrolytic detector, and it does not get out of adjustment easily. However, telephones wound to a high resistance must be used, for without such telephones the advantages are not so appreciable.

The writer has experimented with a number of detectors, among them the Carborundum, of which a description will be given in a later issue, the carbon-mercury, microphonic, etc., but finds them all faulty at times, while the silicon detector seems to be the most constant, sensitive and satisfactory.

The illustration herewith shows all the receiving apparatus, except the tuning coil, "A" being the detector proper, "a 1" is the silicon and "a 2" the brass point resting thereon, "B" is the condenser and "C" the telephone receivers. "T" are leads to the tuning coil, thence to the aerial switch and aerial, and "G" through the same switch to the ground.

The materials for this detector may be obtained from any good supply or importing house, and directions for construction are as follows:

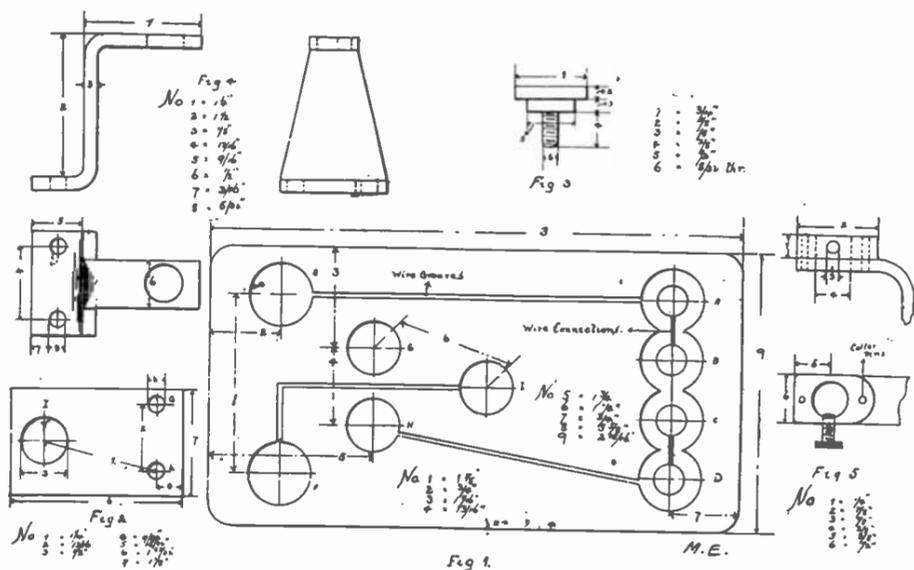
Procure a wooden base such as is used for pony relays, same to be of the dimensions as shown in Fig. 1; bore 9 holes, as per Fig. 1, large enough to accommodate 8/32" screws, countersinking them 3/16" so as to accommodate washers and screw heads, and then cut the grooves for the connections, making them of sufficient depth to allow the instrument to set flat when completed. There must also be six small binding posts to set in holes "a," "b," "c," "d," "e" and "f."

Procure a piece of hard rubber 1/8" thick and trim to size 1 1/8" x 1 27/32" and bore holes as per Fig. 2, "g" and "h" to be large enough to accommodate 8/32" screws. Also two round-head brass screws 8/32" thread, about 3/4" long.

Make a piece of brass of the dimensions shown in Fig. 3. Get three nuts 8/32" thread and three washers to fit the three last-mentioned parts.

Procure a piece of brass 3 1/2" long (this allows for wastage), 1/8" thick, 1 1/8" wide at one end and 1/2" wide at the other, and make up as per Fig. 4.

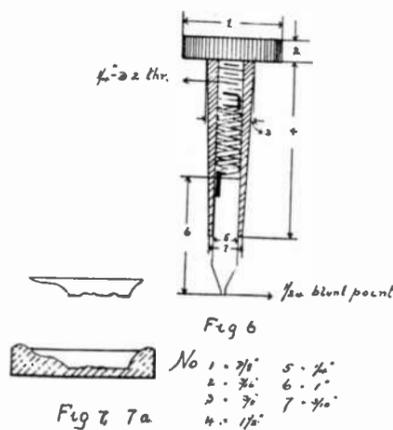
Also another piece of brass 1/4" x 1/2" x 3/8" and by pinning and soldering or brazing, fasten to the upper side of the 1 1/4" arm of the support just mentioned, rounding the corners to make a nice ap-



pearance, as shown by Fig. 5.

Bore a hole 3/8" in diameter, as shown in Fig. 5, through the boss, and then through the side of same, as shown, put a small hole, threaded with any convenient small thread, and put a set screw in same so as to clamp the adjustable brass point which rests on the silicon.

The point should be built as shown in Fig. 6. A small hole should be bored in the top of the point itself and the bottom of the milled head to receive the ends of a fairly stiff coiled brass spring,



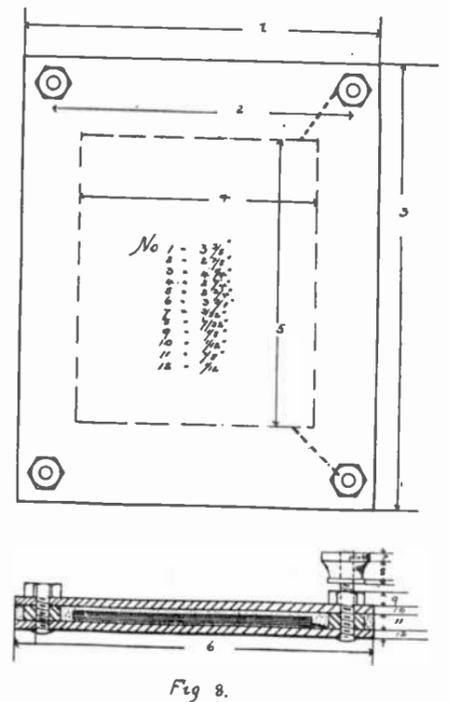
as shown. The point must slide freely in the tube so that when the set screw clamps the tube there will be a constant pressure from the spring, thus holding the point on the Silicon at the same pressure all the time.

Now we come to the most important part of the detector, namely the Silicon itself, and its holder. Great care must be taken in the making of this part, and twice out of every three times it will be necessary to make it over again, for the reason that Silicon differs, one piece not being as sensitive as another in the detection of the waves.

Get the mainspring case from a watch, take out the coiled spring, leaving the brass cup with cogs on the bottom; file off the projecting cogs and make the cup smooth all around. Now take a lump of FUSED Silicon, and chip off a piece not over 3/16" thick at any point, and about 1/2" across the face (care must be taken when chipping, as Silicon is very brittle

all right. Now take the brass cup and place the Silicon in it, flat face up, and heat with a blow torch, laying the cup on a surface which will prevent the solder from escaping through the hole in the bottom. When quite hot apply the solder using soldering paste as a flux.

When the cup is full of solder press the Silicon down in same, being careful to keep the face of the Silicon as level as possible, and allow to cool for about a minute, then immerse in water to entirely cool it, and finally file off the superfluous solder on the bottom of the cup, and sand-paper perfectly flat. The finished part should appear somewhat as shown in Fig. 7a. This cup sets on the part shown in Fig. 3, and is made separate for the reason that it is advisable to have two or more such cups in order to



replace in case of accident or damage to one, the substitution being easily effected by simply raising the brass point and slipping another cup under it. Now assemble the various parts placing them

May 26, 1906 Ad



A PORCH CONCERT WITH THE EDISON PHONOGRAPH

WHAT can be more delightful than fine music outdoors on summer evenings? One of the many good points of the Edison Phonograph is its portability. Unlike any other automatic musical entertainer, it can be moved to the porch, or taken with you on your summer vacation.

Its music sounds even better outdoors than in the house. You can have your own band concert or summer comic opera, grand opera, or vaudeville in the coolness of the summer night, without leaving your home.

When it is too warm to play the piano or other indoor instruments, the Phonograph is always available, and a child can operate it.

To appreciate the superiority of the Edison Phonograph of to-day over the old phonographs, and over other talking machines, hear it at the dealer's, free of charge.

Write for booklet, "Home Entertainments With the Edison Phonograph," and name of nearest dealer.

National Phonograph Co., 11 Lakeside Ave., Orange, N. J.
New York: 31 Union Square Chicago: 304 Wabash Avenue



TRADE MARK
Thomas A. Edison

March 27, 1909 Ad

The EDISON PHONOGRAPH



Imagine an entertainment where every performer is a star and every number a selection of your own

THAT describes the entertainment of an Edison Phonograph. You need not dress for it, go out after it, arrange your time for it or pay for admission to it. It takes place in your home, at your convenience, as often as you like.

You listen—that is the extent of your effort. You hear Manuel Romain sing just as you would if he stood before you. You hear Maurice Levi's Band play under his spirited direction and forget the medium by which his artistic efforts are brought to you.

Or you enjoy the talents of such clever entertainers as Ada Jones, Cal Stewart, Byron G. Harlan, Billy Murray and Steve Porter.

Do you doubt this excellence in the Edison Phonograph? Then hear it. Go to an Edison store; select the Record of a singer you have heard and a song you know. This test has placed the Edison Phonograph in a million homes.



Ask particularly to hear an Amberol Record, Mr. Edison's latest contribution to Phonographic entertainment; a Record that preserves the sweet, clear tones of the Standard Edison Records, yet plays or sings twice as long and costs but a trifle more.

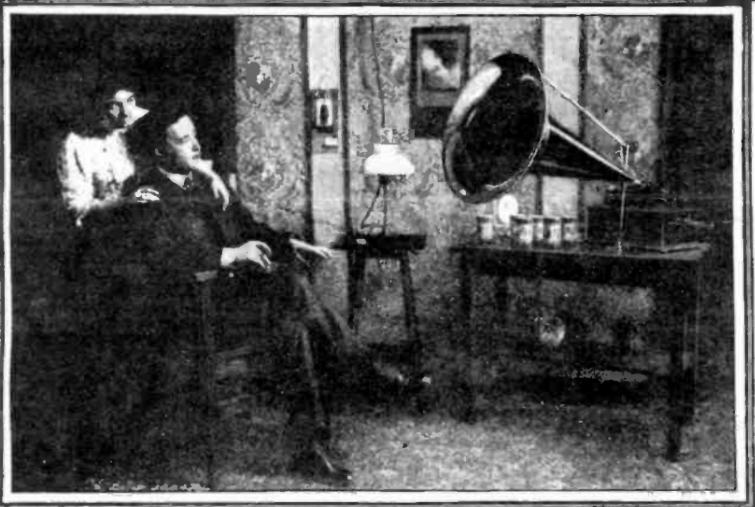
Edison Phonographs are sold at the same prices everywhere in the United States, \$12.50 to \$125.00. Amberol Records, 50c.; regular Edison Records, 35c.; Grand Opera Records, 75c. Ask your dealer or write to us for catalogues of Edison Phonographs and Records.

With the Edison Business Phonograph you dictate at your convenience and the typewriting-department does the rest.

National Phonograph Co., 11 Lakeside Ave., Orange, N. J.



Maurice Levi



"JUST A SONG AT TWILIGHT"

"When the lights are low,
And the flickering shadows
Softly come and go."

THE happiest hours of life are those spent in the home, in easy enjoyment of pleasing melodies. No need for husband, wife, or children to go to clubs, theatres, or other places of amusement when home is made bright and attractive by

THE EDISON PHONOGRAPH

In the long evenings by the fireside, on the porch, or in the summer camp it talks, laughs, or sings at your pleasure. It renders band, orchestra, or instrumental solos; quartettes, duets, or vocal solos; sacred, classical, sentimental, or ragtime music; grand or comic opera; minstrel or vaudeville skits with equal facility.

What other automatic entertainer affords such variety, such quality, at so little cost?

Hear the improved Edison Phonograph at your nearest dealer's and you will understand why thousands are now buying it, who were once prejudiced against any form of "talking machine."

Write for free booklet, "Home Entertainments with the Edison Phonograph," and name of nearest dealer.

National Phonograph Co., 11 Lakeside Ave., Orange, N. J.
31 Union Square, New York 304 Wabash Ave., Chicago



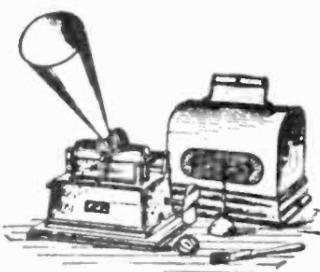
TRADE MARK
Thomas A. Edison

April 21, 1906 Ad

Edison Phonographs 1906

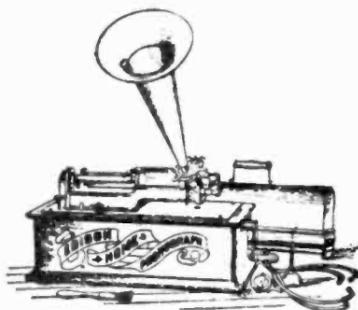
Price \$10.00 Catalogue No. A 1000 Code Word Gem

Size: { Height, 8 3/4 inches
Base, 9 1/2 by 7 1/2 Net Wt. 13 lbs. Gross 22
Packed in one case



Price \$50.00 Cat. No. A 2000 Code Word Home

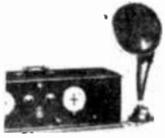
Size: { Height, 12 1/4 inches
Base, 18 by 9 Net Wt. 28 lbs. Gross 35
Packed in one case



Price \$75.00 Cat. No. A 4000 Code Word Concert

Size: { Height, 16 1/2 inches
Base, 18 1/2 by 12 1/2 Net Wt. 59 lbs. Gross 126
Packed in two cases





TRADE NAME: "Radiola Receiver."
 MODEL: Super-Heterodyne.
 TYPE: Six UV-199.
 TUBES: Contained in cabinet.
 AERIAL: Small loop built into set.
 PRICE: \$229.00 without accessories, \$269.00 with tubes and loud speaker.
 MANUFACTURER'S NAME: Radio Corp. of America.

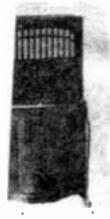
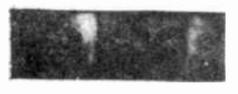


TRADE NAME: Radyne.
 MODEL: A.
 TYPE: Two stages radio frequency, detector and two audio frequency amplification.
 TUBES: Five UV-199.
 BATTERIES: Dry cells. Space provided for batteries in cabinet.
 CONTROLS: Three.
 AERIAL: Inside or outside.
 PRICE: \$130.00 without accessories, f. o. b. San Francisco.
 MANUFACTURER'S NAME: Great Western Radio Corp.



TRADE NAME: "Ray-odyne."
 MODEL: C-15.
 TYPE: Two stages of radio frequency amplification, detector and two stages of audio frequency amplification.
 BATTERIES: None furnished.
 CONTROLS: Three.
 AERIAL: Indoor or outdoor.
 PRICE: \$75.00.
 MANUFACTURER'S NAME: Brown Radio Corp.

TRADE NAME: Rich.
 MODEL: J-T-22
 TYPE: Reflex.
 TUBES: Three.
 BATTERIES: None furnished.
 AERIAL: Outside.
 CONTROLS: Three.
 PRICE: \$50.00 without accessories.
 MANUFACTURER'S NAME: George H. Rich.



TRADE NAME: "Radiola Receiver."
 MODEL: Super VIII.
 TYPE: Super-Heterodyne. Console.
 TUBES: Six UV-199.
 BATTERIES: Contained in cabinet.
 CONTROLS: Three.
 AERIAL: Concealed large loop built into set.
 PRICE: \$425.00 with tubes and built-in loud speaker.
 MANUFACTURER'S NAME: Radio Corp. of America.

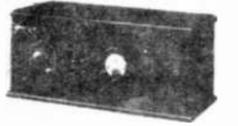


TRADE NAME: Radyne.
 MODEL: F.
 TYPE: Two radio frequency, detector and two audio frequency.
 TUBES: Five.
 BATTERIES: Not furnished. Room for "B" and "C" batteries in cabinet.
 AERIAL: Inside or outside.
 CONTROLS: Three.
 PRICE: \$140.00 without accessories, f. o. b. San Francisco.
 MANUFACTURER'S NAME: Great Western Radio Corp.



TRADE NAME: "RMP."
 MODEL: 50.
 TYPE: Tuned radio frequency.
 TUBES: Six.
 BATTERIES: "A," storage or dry; "B," 90 volts.
 CONTROLS: Three.
 PRICE: \$100.00.
 NOTE: Model 51 contains two mounted jacks and switch at same price. Model 52 hand-rubbed walnut cabinet, plate glass front, two mounted jacks and switch. Price \$135.00.
 MANUFACTURER'S NAME: Radio Products Mfg. Company.

TRADE NAME: Sears.
 MODEL: Standard
 TYPE: Reflex.
 TUBES: Four.
 BATTERIES: None furnished.
 CONTROLS: One.
 AERIAL: Outside.
 PRICE: \$160.00
 MANUFACTURER'S NAME: Sears Mfg. Co.



TRADE NAME: Radyne.
 MODEL: H.
 TYPE: One-stage radio frequency, detector and two stages of audio frequency amplification, one-stage being reflexed.
 TUBES: Three.
 BATTERIES: Not furnished.
 CONTROLS: Two.
 AERIAL: Outside or inside.
 PRICE: \$70.00 without accessories, f. o. b. San Francisco.
 MANUFACTURER'S NAME: Great Western Radio Corp.



TRADE NAME: Radyne.
 MODEL: Console table.
 TYPE: Two stages of radio frequency, detector and two audio frequency.
 TUBES: Five.
 BATTERIES: Not furnished, but room provided for all batteries in cabinet.
 CONTROLS: Three.
 AERIAL: Inside or outside.
 PRICE: \$275.00 without accessories, but including built-in loud speaker.
 MANUFACTURER'S NAME: Great Western Radio Corp.



TRADE NAME: Rich.
 MODEL: 7-T-12.
 TYPE: Reflex.
 TUBES: Two.
 BATTERIES: Not furnished.
 CONTROLS: Two.
 AERIAL: Indoor or outdoor.
 PRICE: \$29.50 without accessories.
 MANUFACTURER'S NAME: George H. Rich.

TRADE NAME: Sears.
 MODEL: Standard.
 TYPE: Acme reflex.
 TUBES: Five.
 BATTERIES: None furnished.
 CONTROLS: Two.
 AERIAL: Outside or inside.
 PRICE: \$200.00
 MANUFACTURER'S NAME: Sears Mfg. Co.



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

Announcing: New limited reprint of S. Gernsback's 1927 RADIO ENCYCLOPEDIA, a priceless record of old-time wireless and radio. Choice of hard-cover or handbook. 175 pages, 1,000 subjects. Radio Encyclopedia, handbook 9.95
 Radio Encyclopedia, hard cover 12.95

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.



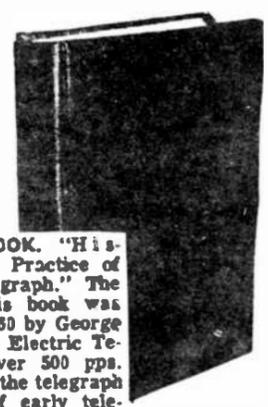
McMAHON'S 1921-1932 GUIDE

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



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



TELEGRAPH BOOK. "History, Theory & Practice of the Electric Telegraph." The orig. copy of this book was first printed in 1880 by George Prescott, Supt. of Electric Telegraph lines. Over 500 pps. of information on the telegraph & many illus. of early telegraph equipment. Reprints of this book \$7.50 ea., ppd.

The Horn Speaker Book Sales

Box 12 Kleberg, Texas 75145

This Room Is Equipped With
Edison Electric Light.

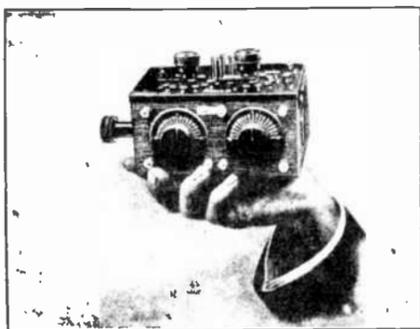
Do not attempt to light with
 match. Simply turn key
 on wall by the door.

The use of Electricity for lighting is in no way harmful to health, nor does it affect the soundness of sleep.

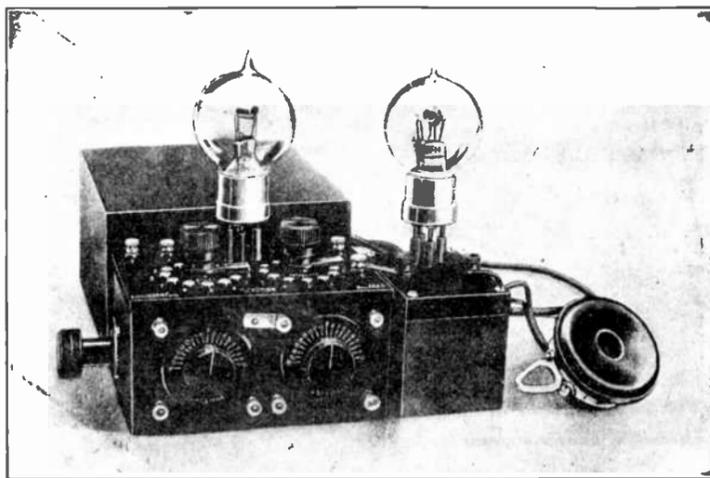
Now you can have an exact 1890 EDISON ELECTRIC LIGHT PLAQUE REPLICA as used when electric lights were first installed anywhere. . . You can MOUNT and DISPLAY this PLAQUE on any SURFACE because of its ADHESIVE BACK. . . just remove paper from back and mount as desired. . . All design and lettering are ENGRAVED and seated in black. . . A special process added to the GOLD-IN-COLOR Aluminum plate makes it impossible to CORRODE or OXIDIZE. . . Unlimited uses and ideas in the Antique field, makes an EYE-CATCHING DISPLAY, HUMOROUS, but serious. . . A fine gift for any occasion. . . ORDER NOW, ONLY \$4.95 Postpaid. . . MIDCO HS20 BOX 15370, LONG BEACH, CA 90815.

Vintage Radio

1922



This Ultra Compact Regenerative Receiver of French Make May Be Carried Everywhere, as It Weighs Only Seven Pounds, Including the Batteries, Which Are of the Dry Type. The Vacuum Tubes Are Especially Designed, and Consume only 0.13 Amperes for the Filament. On the Right the Picture Shows the Set with a One-Stage Amplifier Connected to It.



LETTERS

EDITOR'S MAILBAG

Dear Jim,
I would like my subscription renewed and I would also like some information from you or your readers. I have a midget cathedral radio called a "Crown". It is a 4-tube TRF with a Nat'l H. Baldwin speaker. If you know who made it or can supply a diagram it would be appreciated.

Thanks Very Much,
Richard Hallett
10817 Jefferson Blvd.
Culver City, Ca. 90230
213-836-8557

EDITOR'S NOTE: Help!!

Dear Sir,
I have a subscription to your magazine "The Hornspeaker" and I enjoy it very much. I look forward to it.

I wonder if you or one of your readers could answer the following questions?

1. When did the magazine "Popular Radio" start and end publication?

2. When did the magazine "Radio News" start publication?

Thank You,
Sincerely Yours,
Albert Warren
Box 279
Church Street
Waverly, Pa. 18471

EDITOR'S NOTE: The beginning of these periodicals deserve a full-size article. The first periodical to achieve widespread attention for the hobbyist of electronics and the grandfather of the later magazines of the 20's was the Modern Electrics of 1908 and later. We plan to print a good answer to this letter.

Popular Radio, Vol. 1 No. 1 was May 1922, a bow to radio amateurs. Finish, not sure.
Radio News, Vol. 1 No. 1 should be July 1919.

1922 Ad

RADIO DETECTORS
Size 3 1/2 x 2"
An improved detector of real merit. Nickel-plated posts.
Price 75 cents, post paid
Dealers get our prices on Panel Switches and Binding Posts.
SYMPHER MFG. CO.
Dept. R., TOLEDO, OHIO

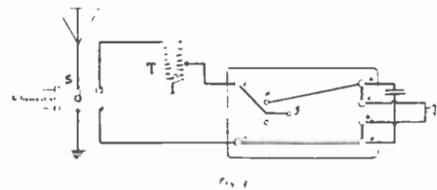
A SILICON DETECTOR.

Continued from Page 2

together in the order given in Fig. 9, but before clamping the binding posts, connect with No. 22 wire, "e" to "a" and "a" to "b," "c" to "d" and "d" to "h," and "f" to "j." File off all projecting metal on the bottom of instrument, and fill in the holes with paraffine if desired, covering the bottom with leather or felt. The brass work may be finished to suit the taste.

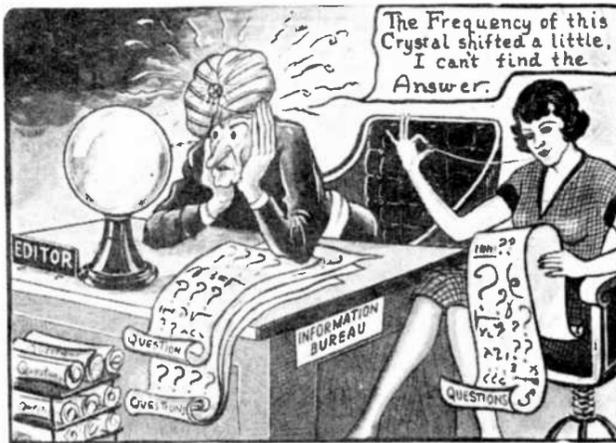
Have made by some electrical supply or importing house a mica condenser of .01 + microfarads capacity, the condenser to be about 2 1/4" x 2 3/4" by about 1/12" thick. Now procure two pieces of rubber 1/8" thick, which should be trimmed to 4 1/4" x 3 3/8". Get four battery binding posts (such as are used on the carbons of dry batteries) 8 nuts to fit same 1/8" thick, and two clamping heads. Bore holes in each corner of each rubber plate as close as possible to the corners allowing for the screw heads and nuts so as not to project over the edges. Now put the screws through the holes in one plate and screw on two nuts, clamping under same the two wires from condenser, which should be placed in the center of the plate. Then screw on each of the other screws one nut and then put on the other rubber plate. On the screws which connect with the condenser screw a nut and the clamping heads, and file the screws off flush with the tops of heads. Then on the other two screws put the remaining two nuts, and file these screws flush with the top of the nuts. Now bind the edges of the condenser frame with passe-partout tape, leaving on one edge a hole big enough to pour in melted wax and also another hole to allow the air to escape. Fill the frame full of hot wax, and allow to cool, when the tape may be taken off and the rubber cleaned up. Fig. 8 shows the construction of the condenser.

This completes the apparatus, and to operate a double pole double throw aerial switch S is used; connections should be made as shown in Fig. 9, there being only the one switch to take care of when receiving.



The adjustment is accomplished by slightly pressing the brass point down on the Silicon, and clamping with the set screw, and then moving the Silicon around under the point until the signals are heard loudest. More or less pressure should be given on the point, according to the sensitiveness of the particular piece of Silicon, but when the adjustment has been found it will not be necessary to bother with it again, unless the instrument should be jarred or the Silicon moved, in which case it may be necessary to readjust. The tuning coil T is described elsewhere in this issue.

MODERN ELECTRICS, June 1908



RADIO-CRAFT for AUGUST, 1933

1922 Ad

BASCO CRYSTAL DETECTOR \$12.00
IMMEDIATE SHIPMENT
LIST

PHONES
2000 OHM
\$6.00 List
3000 OHM
\$7.50 List

DISTRIBUTORS AND DEALERS! We have a proposition that will net you big returns. Get in touch with us today.
BRIGGS & STRATTON CO.
MILWAUKEE, WIS.

1922 Ad

PARAGON

TRADE MARK REGISTERED

the
PIONEER

- 1915 First regenerative receiver ever manufactured bore the name PARAGON.
- 1916 First Trans-continental Amateur Reception (California from New York; not pre-arranged) effected with a PARAGON Type RA-6 Receiver.
- 1916 First Trans-continental Amateur Transmission (New York to California; not pre-arranged) effected by PARAGON designed transmitter.
- 1917-1918 PARAGON acknowledged supreme on Western Front.
- 1921 First Trans-Atlantic Amateur reception effected with PARAGON receiving equipment, at which time 27 different amateurs scattered thruout the Eastern section of the United States registered signals at Ardrossen, Scotland—3500 miles.

THERE'S A REASON!

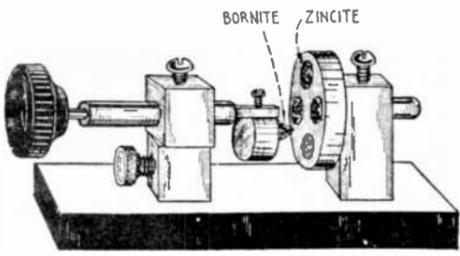
The ADAMS-MORGAN CO.

Manufacturers

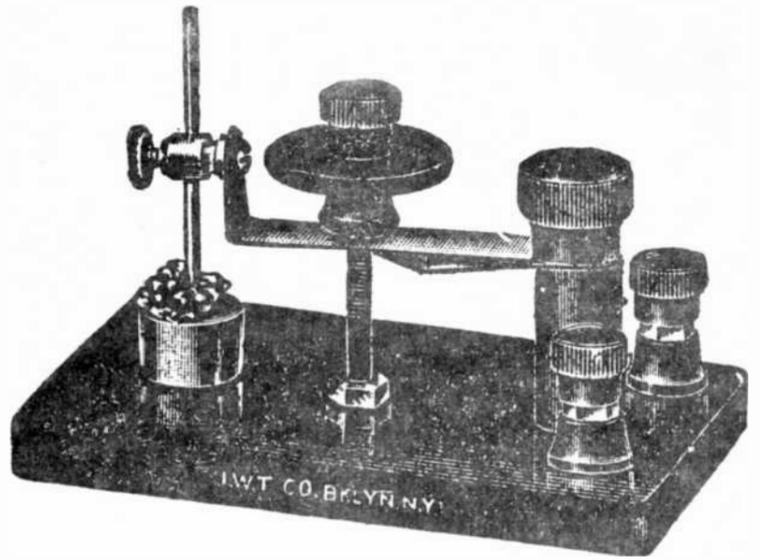
UPPER MONTCLAIR, N. J., U. S. A.

Early Detectors

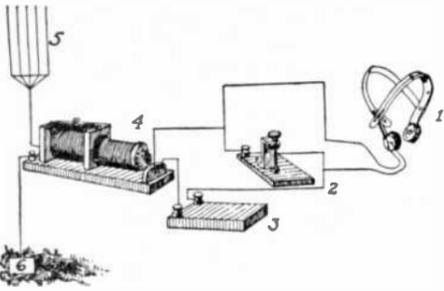
Before 1920



The Zincite Bornite Detector.

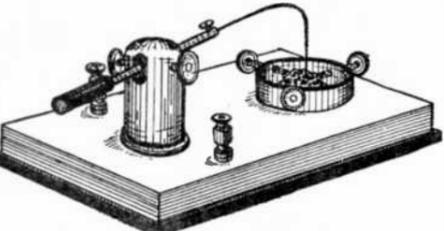
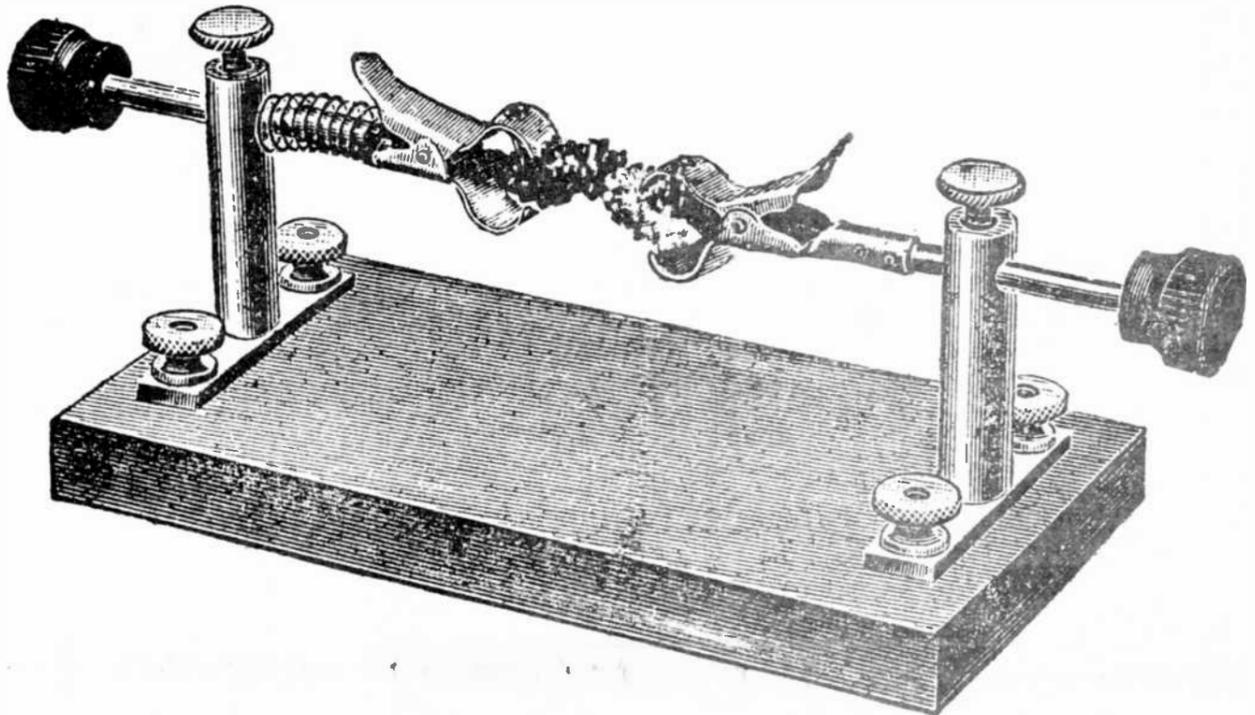


Crystal detector with double adjustment. This instrument is particularly designed to readily allow the delicate adjustment of any crystal or mineral. The very finest micrometer adjustment can be had by simply turning the hard rubber knob. It has two adjustments, one by means of the sharply pointed rod which can be lifted up or down and the other by the knob.



RECEIVING APPARATUS

1, receivers for ears; 2, detector; 3, fixed condenser; 4, loose coupler; 5, aerial; 6, copper plate in ground.



Detector Holder for Galena and Silicon Crystals.

1908
MODERN ELECTRICS premium



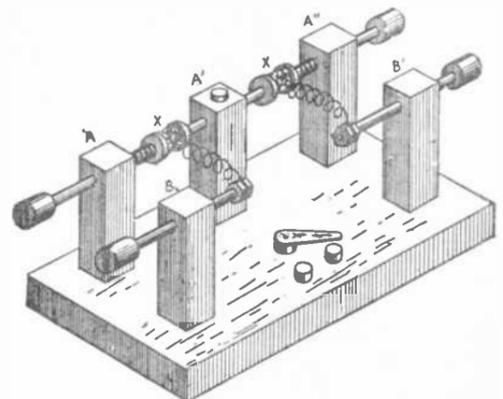
ELECTRO-LYTIC DETECTOR

Latest improved type. Homogenous carbon cup. Micrometer thumb screw carrying fine Wollaston wire 0.0001 inch diameter. Will catch messages from 500-800 miles. Most sensitive type ever gotten up. Sells everywhere for \$8.00.



Crystal detector. When the hard rubber knob at the top of the detector stand is turned, the needle point, which presses into the crystal is moved up or down. This allows of a variable adjustment which may be tight or loose, as desired. The spring shown helps to push the crystal up against the needle point.

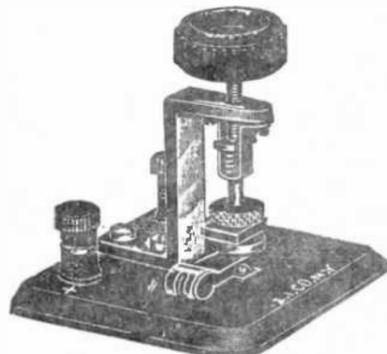
Double Crystal detector. Two crystals in contact often form a very sensitive detector, especially if one be an inactive substance and the other sensitive. This is the feature of the "perikon" detector. Carbon and carborundum may be used in this detector stand.



Combination galena detector. This detector is used in case a quick change is necessary. If one of the points of this detector happen to be knocked out of adjustment by static or other means, the other detector can be easily thrown in the circuit by making use of the two point switch. The arm of the switch is connected to one side of the circuit while the points are connected to B and B'. The base of this detector, or A, A', A'', are all connected together and led to the other side of the circuit. The detector can be adjusted to the highest degree of sensitiveness, and is easy to construct. Make uprights of one-half inch square brass rod, each one inch high. The distance between A and A' is 1 1/4 inches, and one inch between A and B. The springs between X and A will hold the mineral in tight adjustment, while the check nut in A' holds the other rod from slipping.



Electrolytic detector invented by Fessenden. It is probably the most sensitive of all detectors excepting the audion and the valve detectors. It consists of a carbon cup connected to a binding post and an adjustable standard which holds a very small hair-like platinum wire which dips into a 20% diluted solution of nitric acid. The high resistance of this acid detector is somewhat reduced by incoming wireless waves and when a telephone is shunted around it, the varying resistance is sufficient to vibrate the diaphragm but not strong enough to work a telegraph relay. When a potentiometer and battery are connected with the electrolytic detector and telephone, the sensitiveness is increased. The electrolytic detector is capable of operation with about three hundred micro-ergs; the magnetic detector with about four hundred micro-ergs; the silicon and most crystal detectors with about one thousand micro-ergs, and the manufactured carborundum detector with about nine thousand micro-ergs. Notwithstanding this very considerable difference in the sensitiveness of the electrolytic and carborundum detectors as measured by the C. G. S. system of units, in the actual practice of wireless telegraphy the receptive difference is hardly perceptible over similar distances. A great deal depends upon the adjustment of the detector which is a "cut and try" procedure until the most sensitive point is arrived at which will best respond to incoming signals.



Peroxide of lead detector. A flat piece of peroxide of lead is clamped between a platinum surface and a flat piece of lead. Binding posts connect to these two electrodes and are marked + and -. The positive pole of a battery is connected to the platinum electrode at the binding post marked +.

Sources for illustrations:

- Hawkins Electrical Guide No. 8, 1917.
- Practical Wireless Telegraphy, Elmer E. Bucher, 1921.
- Modern Electrics, August, 1908.

Puett electronics



TUBE PRICE LIST no. 88 -- SPECIAL EDITION - All prices subject to change without notice.

MAKE ALL CHECKS OR MONEY ORDERS PAYABLE TO J.W.F. Puett 3008 Abston Drive Mesquite, Texas 75149

PLEASE NOTE ** Due to increased purchasing costs and the scarcity of certain tube types, we will be forced to increase prices. Our main Tube Price List No. 8 was published in the Jan. & Feb. Horn Speaker. The \$2.00 new & \$1.00 used prices shown in List No. 8 will continue through 31 March 1974. Beginning 1 April 1974, we will have more types to offer, but all tubes will be priced individually in List No. 9 which will appear in the April Horn Speaker. If you do not have List No. 8, send a self-addressed stamped envelope.

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 shorts or open filaments 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. Tubes are mailed parcel post - no C.O.D. please. **INCLUDE 10% FOR POSTAGE & HANDLING.** Insurance rates are 30¢ for orders under \$50.00. **TEXAS RESIDENTS ADD 5% STATE SALES TAX.**

VERY OLD-STYLE-GLASS-ENVELOPE TUBES - priced individually - all are used, thoroughly tested.

Acce	Gunlungnam	Ken Rad	National	Radiotrons	Radiotron
A224	(Cont'd.)	(Cont'd.)	Union (Cont'd.)	10	71A
Arcturus	CX345 \$3.00	36 \$2.00	227 \$3.00	UX210 \$5.00	UX71A \$5.00
(Blue glass)	CX350 \$5.00	UX245 \$3.00	39 \$2.00	UX112A \$5.00	UX280 \$3.00
No. 124	56 \$3.00	26 \$3.00	Perryman:	UY224 \$3.00	UX281 \$5.00
27	CX371 \$5.00	26 \$3.00	P.A.-224	26 \$3.00	UX120 \$4.00
No. 127	CX371A \$5.00	A.P. \$3.00	P.A.-227	UX226 \$4.00	Raytheon:
No. 30	28U \$2.00	G24 \$3.00	Phlicco:	UY227 \$3.00	UX226 \$4.00
No. 48	CX380 \$3.00	G26 \$3.00	24 \$2.00	231 \$4.00	ER51 \$3.00
57	Direlates (delist)	G27 \$3.00	26 \$3.00	232 \$2.00	ER52 \$5.00
R-80	No. 11U \$4.00	G45 \$3.00	27 \$2.00	235 \$2.00	UX171A \$5.00
Gunlungnam	De Forest	G6A7S \$3.00	36 \$2.00	45 \$3.00	Sylvania:
C344	Audion:	71A \$4.00	37 \$2.00	UX245 \$3.00	SY224 \$3.00
26	427 \$3.00	National	42 \$2.00	46 \$3.00	SY227 \$3.00
C346	Ken Rad:	UY224	44 \$2.00	47 \$4.00	SX171A \$5.00
C347	27 \$3.00	226 \$4.00	71A	247 \$5.00	SX280 \$3.00
CX332			80	56 \$3.00	
C333					

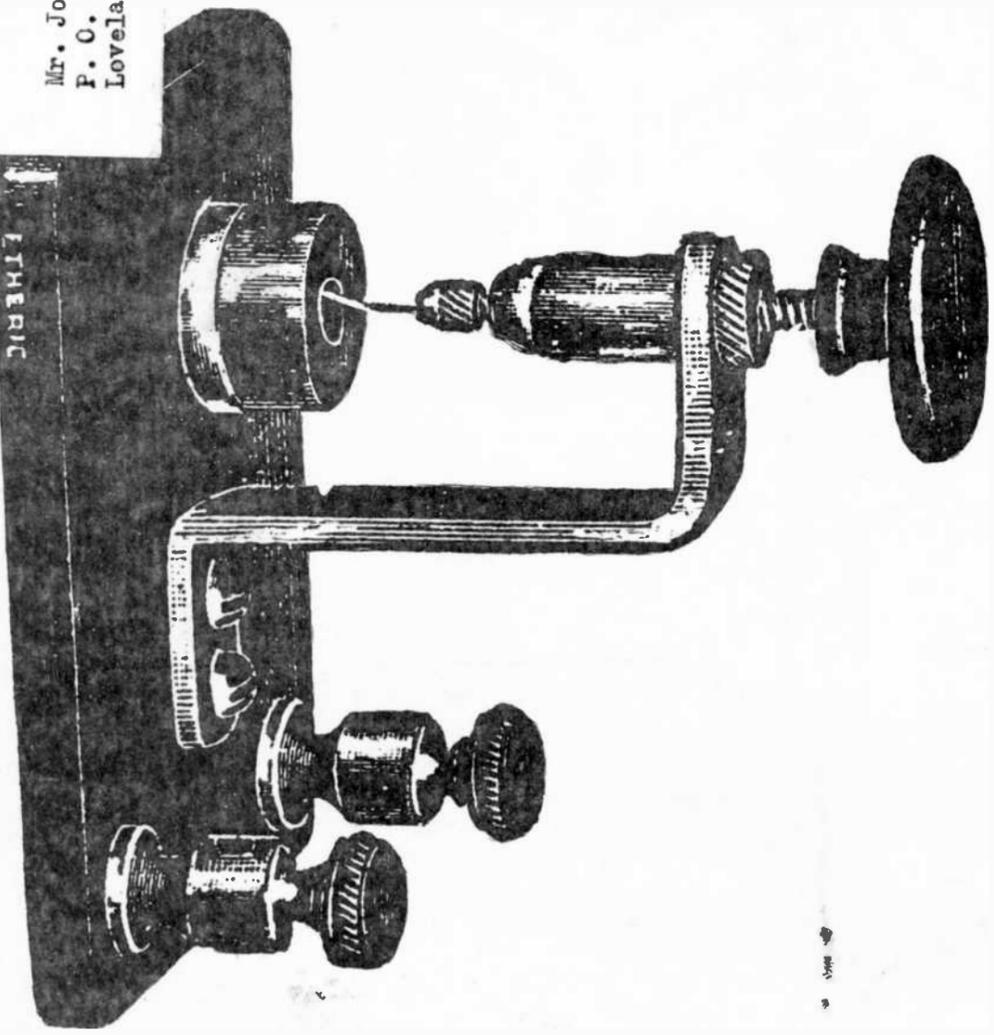
We also offer -- Saxon 180-\$3.00, Silverstone 112A-\$5.00 224-\$3.00 26-\$3.00, Tung Sol 24-\$3.00, Alzaru 245-\$3.00, Unmarked brands 224-\$2.00 227-\$2.00 245-\$2.00 227-\$2.00, We have only one new in original carton VISITRON photo cell type 71A-\$4.00 (do not confuse with tube type 71A). We offer tube collectors -- type 12-\$4.00, WRE505D-\$3.00, WRE212F-\$3.00, 401-\$8.00, & 852-\$25.00.

WANTED ----- Literature produced by and information on Mc Murdo Silver, Inc. and the E.H. Scott Radio Laboratories. Will purchase literature, or trade page-for-page Xerox copies of same.

NOTE ----- Our tube price lists are revised frequently as we receive new tubes, especially old types. If you would like to automatically receive a revised copy of our lists, send a self-addressed stamped envelope. We will place the envelope in our files, and you will receive the revised lists as soon as they are produced.

FOR SALE -- LAPES OF OLD RADIO SIGNS - send self-addressed stamped envelope for price list.

THE HORN SPEAKER



Electrolytic detector invented by Fessenden.

45508 Colo. Telephone
 171 Box O. P.
 Mr. John J. Lovelace