

PUBLISHED BY THE CROSLLEY RADIO CORPORATION, FORMERLY THE PRECISION EQUIPMENT COMPANY AND CROSLLEY MANUFACTURING COMPANY, Manufacturers of Radio Apparatus, Cincinnati, Ohio.

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JUNE 2, 1924

Radio Set More Than Mile Away Provides Music At Infirmary

Aged Inmates Dance Light Fantastic While Superintendent Scours Country for Source of Music.

For several nights "joy reigned unconfined" in the Montgomery County Infirmary, located not far from Middletown, Ohio. The aged residents of that institution cast aside their crutches, forgot their rheumatism and "danced the light fantastic" to their hearts' content. Rules and regulations of the Home, heretofore strictly obeyed by the inmates, were ignored as the men and women danced until the small hours of the morning.

Naturally officials of the institution were "up in arms" and did everything they could to stop the dancing and at the same time locate the source of the mysterious music, which was having such an entrancing effect upon the men and women, who, it had been believed, were incapable of taking a fast step, let alone dancing. The music was there, that was certain, but whence came it? That was the big problem.

Guards and nurses were sent out on scouting expeditions, seeking some hidden phonograph or perhaps even an orchestra. But they were compelled to return "empty handed," because none were able to find the hiding place of the music makers who were wrecking the morale of the Home. And in the meantime, the dancing kept on, gray haired men and women gliding as gracefully as they could through the great halls of the Infirmary.

"Certainly something can be done to stop this," quoth the superintendent, who was rapidly becoming fearful of the results this dancing might have on the people who had been entrusted to his care.

And while he fumed and fussed, there came to him a mysterious "tip." It was to the effect that the music was radio music, being received on a loud speaker in a home a mile and a half from the Infirmary. Jumping into his flivver, the superintendent "beat it" to the home of this radio fan, and, after an hour of pleading, succeeded in convincing him that in order to save the residents of his institution from possible ruination of

(Continued to Page 3)

Obstacles Are Of Temporary Duration In Radio Progress Says George Lewis Talking Of Using Ground As Aerial

The recent experiment of the University of Illinois in which the ground was utilized as a better means of radio communication than the so-called ether, shows that obstacles are of temporary duration in the progress of radio.

George Lewis, of The Crosley Radio Corporation, was an important official in the radio division of the United States Navy, and he explained that transmission tests during the war were successful when utilizing the ground instead of the air. Because of the stress of the war, the experiments could not be carried out at that time and it is possible that the work now being carried on at the Illinois school is along these lines.

Experiments in ground transmission have received the serious attention of American, British and French scientists and, while they were conducted privately, the re-

sults showed a big advance since the discovery of the coherer as a detector of electro-magnetic waves and the discovery of the rectification of a particular family of crystals. Here is a great step toward greater efficiency but what does this mean in comparison to the even greater discovery of the modern vacuum tube?

Science, in all its branches, is but an orderly progress toward the more efficient new discoveries which present themselves in rapid succession, until a particular branch of the art suddenly evolves into something extraordinary—a new conception—and then the smaller refinements take place as before. It is not at all surprising to a radio engineer to hear of someone discovering something for this is the age of beginning and great things will be brought out in the years to come.

Crosley Radio Is Assisting Students Who Desire To Enjoy The Zoo Operas; Help From Listeners Is Necessary

You hear a great deal about this great America of ours not being as musical as it should be—not nearly so musical as European countries.

There may be some truth in this idea—For example, in Brussels and Paris the opera runs eleven months in the year—but nevertheless, musical appreciation in this country is blossoming into something very admirable. . . .

A notable example of this is found in the summer operas conducted in many of our foremost cities. Everybody knows that here in musical Cincinnati our operas at the Zoo are a thing of civic pride, and so radio station WLW, of The Crosley Radio Corporation, is very happy to assure you that we shall broadcast a complete performance each Monday evening of the series of eight weeks, beginning June 23rd.

But the thing we are leading up to is this: while you, especially those of you whom fortune has blessed with comfort and wealth, are sitting at home listening to these operas—in your homes in Avondale, Clifton, Dayton, Toronto or

poor student of music right here in New Orleans—there will be many a Cincinnati longing to see and hear these performances, but without the necessary fifty cents to admit him.

Apropos to this—surely you will all rejoice in hearing that, just recently, a group of music teachers, headed by Miss Thayer, have established a settlement school of music for talented young people who do not have money enough to pay the regular tuition prices. This settlement school is developing with astounding rapidity, having already one hundred students.

Don't you think it would be wonderful to help educate the students in this settlement school by sending them to the summer operas at the Zoo? Think of it in this way—one dollar will take two students to one performance—ten dollars will enable two students to see ten operas.

We have already received a number of contributions. Just mail yours to: THE SETTLEMENT SCHOOL OPERA FUND, Crosley Radio Corporation, Cincinnati.

Various Frequencies Explained By Lewis In Science Address

Their Application To Science Vividly Pointed Out By Engineer—Effects on Human Bodies Cited.

Frequencies and their application to science were explained by George Lewis, of The Crosley Radio Corporation, in a recent address. He had a large chart prepared in colors which showed the different frequencies from the audible sound waves to those of the ultra x-rays. Comparison was made between the frequencies of the powerful radio station in Annapolis, which utilizes between 200 and 300 waves in communicating with Europe, and a piece of cigarette paper with a small quantity of radium on top of it and the human hand beneath the piece of paper.

It was brought out that the latter would necessitate ten million waves to penetrate the paper as against the hundreds required to reach across the Atlantic. This means, then, that the shortest wave-lengths or frequencies, now detected, are about one-millionth million of a meter as found in the thorium family.

Scientists believe, but unfortunately have no means of measuring, that a stick of wood has frequencies. It is known, that sound waves have an audio frequency of from sixteen to twenty thousand cycles and therefore are placed in the first band of frequencies.

Longer waves than 25,000 meters cannot be utilized for radio, as the waves overlap into the audio-frequency zone. The commercial stations send in the zone of wave-lengths from 600 upward to the 25,000. From 600 down to 200 meters are used by the broadcasting stations while the meters below 200 are given over to the amateur radio operator although a conference is to be held which will give some of this zone to the better-class experimental stations.

Radio, as it is known today, is continually adding to the electro-medical dawn of the new science and affords an unexplored field for the experimenters. The medical scientists are just beginning to realize the possibility of using the frequencies in the treatment of disease.

The first manifestation of human

(Continued on Page 4)

Crosley WLW Programs For Week of June 1st

SUNDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 1st. Eastern Standard Time.
309 Meters.

9:30 A. M.—
School conducted by the Editorial Staff of Sunday School Publications of the Methodist Book Concern.
11:00 A. M.—
Services of the Church of the Covenant, Dr. Frank Stevenson, Minister.
7:30 P. M.—
Church Service of First Presbyterian Church of Walnut Hills. Rev. Fredk. N. McMillin, Minister.
8:15 P. M.—
Concert by the Western and Southern Orchestra, directed by William Kopp. (Under the auspices of the Western and Southern Life Insurance Co.)
Don Beddoe, tenor, soloist.

MONDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 2nd. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Babson Reports.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Trimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Program by the National Cash Register Co. trio.
Robert E. Kline, Piano
G. B. McClelland, Baritone
Herbert J. Sisson, Reader
8:30 P. M.—
Dance Program by
WOODY MEYER'S CINCINNATI ORCHESTRA.
Ted Kennedy, Violin and Director
Ernst Meyer, Drums and Manager
William Dinkel, Piano
Earl Vetter, Saxophone
Robert Seavers, Saxophone
Rudolph Schneider, Trombone
Cliff Yaeger, Trumpet
William Rieth, Banjo
William Wilde, Bass Tuba and Violin
9:00 P. M.—
Songs: by Miss Cora Belle Abernathy.
9:15 P. M.—
Crosley Theatrical Review followed by popular entertainment by George F. O'Connor.
(Baldwin Piano)

On April 22nd at Geneva, an international conference of broadcasting experts convened to discuss terms of an agreement to regulate broadcasting, eliminating conflicts between stations.

TUESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 3rd. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Topics of Interest to Women. Times-Star News. Talk: "Silver Black Fox" (courtesy of the Great Northern Fox Company).
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Trimpidis.
5:15 P. M.—Baseball Results.
10:00 P. M.—
Program by the Junior Choir of the St. John Evangelical Church of Bellevue, Ky.
Concert by the Junior Orchestra and Glee Club of the Hamilton County Knights of the Ku Klux Klan.
Sonata for violin and piano...Brahms
Michael Stewart and Mary Kelly.
Songs: by Mr. Richard Pavey, tenor.
Special Midnight Program by the Chubb-Steinberg Orchestra De Luxe.
Art Hicks, violin and director
Walter McDonald, piano
William Cook, saxophone and clarinet
Holman Becraft, saxophone
Rex Adkins, trumpet
Frank Bamberger, trombone
Leon Warren, banjo
Bud Ebel, drums
(Baldwin Piano)

WEDNESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 4th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—"Shut In" program given by the Wurlitzer Concert Company, under the direction of Mr. and Mrs. William Dunning.
4:25 P. M.—Lesson in French from Crosley University by Mme. Ida Trimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Recital of Sacred Song by the Lillian Aldrich Thayer Settlement School of Music, assisted by the Wurlitzer Cathedral Choir.
Program arranged by Miss Lillian Thayer.
Choir directed by Mr. and Mrs. William Dunning.
Accompanist, Miss Lucille Scharringhaus; violin obligato, Mr. Reuben Phillips.
Soloists:
Mrs. James Langdon, Soprano
Mrs. Harry Reese, Soprano
Miss Julia O'Neal, Soprano

Miss Edith Breistle, Soprano
Miss Helen Mueller, Contralto
Miss Loretta Nagel, Contralto
Miss Margaret Doerr, Contralto
Miss Hilda Dahman, Contralto
Assisting Soloists:
Mrs. Olive Keiser, Soprano
Mr. Richard Fluke, Baritone
Mr. F. Lee Pugh, Tenor
Mr. Gordon Outerout, Bass
A program of instrumental solos and ensemble numbers, played on unique celeste from Wurlitzer.
Concert of Italian music by
Mr. Sam Bova, Tenor
Mr. Cesar Baroni, Baritone
Mr. Angelo Bouno, Mandolin
(Baldwin Piano)

THURSDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 5th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Piano Solos by Miss Adelaide Apfel.
5:15 P. M.—Baseball Results.
10:00 P. M.—
Times-Star Radio Club of the World.
10:10 P. M.—
Special program from representatives of the Junior Chamber of Commerce of Atlanta, Georgia.
Concert by the Junior Choir of the Trinity Lutheran Church of Bellevue, Ky., under the direction of Mrs. S. P. Pence.
10:45 P. M.—
Songs: by Mrs. Julia Hammerler Wendell, accompanied by Mrs. Nettie W. Shaffer.
Popular Dance Program by the DOHERTY MELODY BOYS
F. A. Pendergast, piano and director
Ridge Bludau, trumpet
Leo Bludau, saxophone
Bake Holthaus, drums
J. L. Doherty, banjo and Manager.
(Baldwin Piano)

FRIDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

June 6th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Market Reports.
3:00 P. M.—Stock Quotations.
4:00 P. M.—Special Program. T. C. O'Donnell, Editor of Writers' Digest, lecture on "Practical Lessons in Writing."

NO SYMPATHY

Two hunters in the North Carolina woods had chased a wildcat to a clearing and were terrified to see the beast jump into a window of a cabin from which the sound of a

SATURDAY

RADIO PROGRAM

The Crosley Radio Corporation
Cincinnati, Ohio
WLW

June 7th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Market Reports.

DAILY PROGRAM

10:30 Weather Forecast.
A. M. Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond opening quotations, Foreign Exchange opening, Chicago opening grain quotations, Cincinnati and Chicago hog market reports.
Westheimer and Company, opening quotations of New York Stock Exchange.
Weather Forecast repeated.

P. M.
1:30 Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond, Foreign Exchange and Chicago grain noon quotations. Also closing Chicago cash grain quotations. Complete Indianapolis and Chicago live stock report; Cincinnati cattle market report.
Westheimer and Company, closing quotations Cincinnati Stock Exchange, giving the bid, offer and sale.

3:00 Henry W. Brown & Company, Cincinnati Cash Grain Market closing quotations with market conditions. Closing quotations of the Chicago Grain Market.
Westheimer and Company, closing quotations at New York Stock Exchange.
Bureau of Markets, United States Department of Agriculture, Chicago and New York Butter and Egg Market reports.
Special Half Hour Program and News at 4:00 each afternoon, except Saturday and Sunday, as announced by Radio.
Sunday School Services at 9:30 and Regular Morning Services of the Church of the Covenant, beginning at 11:00.
Special Program at 8:00 P. M.

woman's voice had just been heard. On the porch, rocking comfortably and apparently undisturbed, sat Friend Husband.

"For heaven's sake, is your wife in there?" screamed one of the hunters.

"Yeah."
"Good Lord, man, get busy! A wildcat just jumped into the window!"

"Yeah? Well, let him git out the best way he can. I got no use for the pesky critters and danged if I'm goin' to help him."—American Legion.

CONDENSED TIME TABLE OF WLW BROADCASTING STATION OF THE CROSLY RADIO CORPORATION

970 KILOCYCLES, 309 METERS EASTERN STANDARD TIME CINCINNATI, OHIO.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.
11:00 A. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.
7:30 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	
8:15 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	
	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.		

Crosley Radio Weekly

Published by The Crosley Radio Corporation, formerly The Precision Equipment Company and Crosley Manufacturing Company, Manufacturers of Radio Apparatus Colerain and Alfred Streets, Cincinnati, Ohio. Telephone, West 7600 Subscription Price, \$1.00 a Year Robert F. Stayman Editor Alvin R. Plough Associate Editor

RELIEF FOR THE DEAF

Instances of the deaf being relieved by radio are being called to our attention every day, scarcely a mail delivery being without a letter from some person whose hearing has been either improved or restored as a result of listening to music or voice by radio.

At first it was believed that this was true only in the cases of those who merely believed they were deaf, and were willing to "sacrifice" their ear troubles in order that they might enjoy listening in.

Investigations on the part of physicians, however, have proven that relief actually is brought to the deaf, providing, of course, that the ear drums are not seriously affected, by the vibrations in radio headphones. What the next year will bring to these sufferers remains to be seen, but it seems almost certain now that before long radio will be credited with another advancement in the fight to relieve the suffering of mankind.

RADIO IN INFIRMARIES

A news report from Middletown, Ohio, tells of an interesting incident taking place in an infirmary there. It seems that the aged residents of the institution danced until the small hours of the morning to radio music being received more than a mile away. Behind the story is proof that a radio receiving set will provide a tremendous amount of pleasure and recreation for the inmates of our public institutions and that every such place should be equipped with efficient receiving apparatus. In such places as infirmaries, these sets need not be operated every night, but it is certain that the aged men and women will enjoy life far more if they are permitted to listen to the music, speeches, etc., once or twice a week. Let's do all we can to place a receiving set in every public institution in the United States—and above all in every infirmary.

MUSIC STUDENTS AIDED

In other columns of this issue of the Crosley Radio Weekly there is a story pertaining to the efforts being made by our studio director

to provide a fund from which will be purchased Zoo opera tickets for deserving but needy students who are studying at the Cincinnati music schools. There are several hundred students who are fighting hard for a musical education—men and women who are not able financially to meet the requirements of the larger institutions here in Cincinnati. Assistance is given to them, however, from a fund raised just for that purpose, but no arrangement has ever been made to permit the students to hear the operas that come here. Operas mean a great deal to these men and women, and being able to hear them is a vital asset to the development of their studies. Any help that can be given in the campaign our studio director is carrying on will be greatly appreciated by those who are endeavoring against great odds to obtain a musical education.

Radio Set More Than Mile Away Provides Music At Infirmary

(Continued from Page 1)

morals he must "put on the dampers."

This radio fan, like all others, was willing to sacrifice volume for the good of those to whom dance music might mean something serious, and so he "tamed down" the loud speaker which was attached to his Crosley Trirdyn radio receiver. Then the dancing at the Infirmary ceased, and the inmates went to bed sorely disgusted with life.

The story is a true one, and is vouched for by the Wertz & Singer Company, of Middletown, Ohio, which sold the Trirdyn to the man who brought so much happiness to the aged men and women and so much trouble to the superintendent. But there is a suggestion offered by this, and that is that it might be a good plan to install a radio receiver and loud speaker in every infirmary and permit those inmates who desire to dance to do so at least once a week.

HE EARNED HIS DOLLAR

The newly-weds on their honeymoon had the drawing room. The groom gave the negro porter a dollar not to tell anybody on the train they were bride and groom. When the happy couple went to the diner for breakfast next morning, all the passengers snickered and pointed and eyed the couple knowingly. The groom called the porter and demanded, "Did you tell anybody on the train we were just married?" "No, sir," said the dusky porter, "I told 'em you all was just good friends."—The Blotter.

Interest In Radio Rapidly Developing In Every Country

Literally Reaching From "Greenland's Icy Mountains to India's Coral Strands"—Even Africa Enthused.

General interest in radio, especially in broadcasting, has circumnavigated the globe from west to east, and is now going over the top and bottom. Recent reports indicate that this means of universal and rapid communication has reached the northern and southern extremities of the world.

Literally radio now reaches from "Greenland's icy mountains to India's coral strands," and even to the southern tips of Africa and South America.

Denmark is installing four transmitting stations in Greenland to communicate with Iceland and the main land of Europe; the Radio Club of Bengal, at Calcutta, India, is licensed to broadcast, and has installed a powerful receiving station which brings in London broadcasts; publicity and advertising in Chile have increased radio interest and nightly programs are sent out for urban and rural residents; while in South Africa arrangements for the broadcasting of music, instructions, etc., are planned for the natives by stations in Durban, Johannesburg, and Cape Town.

Radio, however, is still unknown in some countries such as Sicily, barely introduced in Portugal, and slow to develop in Japan, despite the fact that this novelty-loving race seized upon the phonograph and camera with great interest. In other lands it is prohibited, in Jamaica for instance. Operations are controlled by the governments in England, Germany, Denmark, Spain and Lithuania. In some countries foreign interests are striving to secure a monopoly, according to consular reports received by the Department of Commerce almost daily.

Although practically every Amer-

ican from the age of seven to ninety-seven knows considerable about radio, there are still countries whose citizens do not know what the word "listening-in" means, and few of them have ever tuned a set. In Sicily, for example, the term "radio" usually means a new kind of talking machine, although perhaps there are a few who know it refers to wireless telephone, the use of which is forbidden by the Government. "It is practically impossible to impart to even the most intelligent, the real idea of radio," Vice Consul Leary at Palermo, writes, "because it has never been brought to their knowledge by literature or practical demonstration." Out of a population approaching 2,000,000 citizens, the Consul found only three of those interviewed who knew what he wanted, when he asked for tubes for a radio set. In the North of Italy, there are said to be a few hundred receiving sets which receive Eiffel Tower broadcasts, and probably Berlin, Brussels and London. The Italian Government is known to have issued only four permits for broadcast receivers in Palermo, and it is doubtful if more are authorized.

A few months ago, radio was scarcely heard of in Portugal. There was a complete lack of interest even when the papers reported that London was broadcasting and that America had been heard. There seemed to be a disposition to frown on such things as copper wires stretched from house tops through the medium of which far distant voices and sounds of gay music were mysteriously conjured into reality. One day a local shop imported a three-tube set from France and exhibited it in a window. The public inferred that the "thing to do" was to install a radio outfit. The machine was promptly marked "sold," and ever since a dozen or more people have been before the window. Lisbon woke up to the possibilities of listening-in. Shortly after an evening paper devoted a column to the possibilities of catching foreign programs, the heading stating in large type:

(Continued on Page 4)

SUBSCRIBE NOW!

Detailed information regarding the development of receiving and broadcasting, interesting news and feature stories and advance programs of WLW are to be found in the Crosley Radio Weekly. This is the most up-to-the-minute paper of its kind in the radio field, and should be in the home of every owner of a radio receiving set. Information contained in every issue is of the greatest value to you. The subscription price is but \$1.00 per year. Subscribe now.

Name

Street and Number

City and State

Attach \$1.00 and mail this to the Crosley Radio Weekly, The Crosley Radio Corporation, Cincinnati, Ohio.

Interest In Radio Rapidly Developing In Every Country

(Continued from Page 3)

"HERE IN LISBON WE CAN DANCE TO THE SOUND OF JAZZ MUSIC BEING PLAYED IN LONDON."

In Barcelona, Spain, a movement to develop the radio telephone has started, which may mean the opening of the market for apparatus to all countries. An association of radio dealers seeks to obtain a government concession to broadcast, which may be granted as restrictions are decreasing and the Marconi Company is becoming interested.

Regular broadcasting is expected to commence in Austria on July 1, 1924, a concession for the purpose having been granted to a group composed of banks and electrical firms. The Post and Telegraph Administration will soon issue radio regulations on the basis of the new contract.

Marking the inauguration of radio activities in the Canton of Zurich, the first broadcasting station is expected to be put into operation about June 1. This station is being erected by the Swiss Radio Association, the transmitting apparatus being mainly of American manufacture.

Two state-controlled stations are in operation in Lithuania, and the erection of a 2 KW broadcasting station at Sao Paulo has been authorized by the Brazilian Minister of Public Works. The Danish Radio Association is reported to have been unsuccessful in its efforts to raise funds for broadcasting by subscription, and broadcasting has consequently been curtailed. Last year, the "Dansk Radiofund" was established to broadcast concerts and the Danish Soloist Association offered close co-operation. The organization was to have been maintained through voluntary subscription from amateurs, dealers and manufacturers, but as sufficient funds were not received from amateurs, the Radiofund was unable to accomplish as much as was anticipated.

The Netherlands Indies Government intends to erect two new wireless stations in Sumatra, one of which will be located at Bongkalis, a free port and transfer point for that section of Sumatra. The erection will probably begin in June, and upon its completion, the installation of a station at Belawan will be undertaken and should be in operation sometime during the fall of this year.

A recent German decree, regulating wireless communication, stipulates, among other things, that the erection and maintenance of wireless sending and receiving apparatus for communication in any form may only be carried on with the permission of the National Telegraph Administration.

A new broadcasting station in Leipzig located in the "Johannes-hospital" began operation during the fair. This broadcasting station will be the second in Germany, but others are being constructed in Hamburg, Munich, Stuttgart, Frankfurt, Nuereberg, Breslau and Koenigsberg.

Various Frequencies Explained By Lewis In Science Address

(Continued from Page 1)

nerves of the body, as a whole, detecting waves, is found in the molecular motion or oscillation of heat waves. The amplitude of the oscillation is a function of temperature. A young scientist, Samuel Ruben, has worked out with great success a method of treating infections with heat waves.

Light waves have their frequencies and each distinct sensation of color conveyed to the brain is but the registration of a different frequency or wave length. When they are all projected together, a white light results. The proof of this may be confirmed by painting the seven primary colors on a disc, which, when rotated at a high speed, results in white.

An interesting experiment may be made with a piece of iron. Cold, the iron emits a frequency above the audible range, but undetected by our human nerves. Increase the temperature and our nerves detect the waves in the form of heat. Increase this temperature still further and our eyes begin to detect the higher frequencies, or longer waves, and so on through the visible spectrum.

There is a band of waves which George Lewis has called the "beyond the blue violet" and are found just beyond the ultra violet waves. These waves or frequencies are used in medical and photographic work and the ones which also give life to plants. It is here that a second advance of electro-medical science is unveiled, only to be followed by a dark, unknown zone.

The X-ray zone of frequencies is the great servant of mankind. At the Crocker laboratory there is

a tremendous modern machine capable of utilizing a direct current potential of 200,000 volts. The X-rays are transmitted between the atoms of the flesh. The first chapter of the wonderful story of the X-ray in modern science is well known as applied to medical diagnosis and the treatment of diseased tissues.

The newer application of the X-ray frequencies is found in the destruction of bacteria in food, such as oatmeal. A far more important factor in this work was disclosed by the application of this high voltage X-ray to the lung of a person having pneumonia. A five-second application of this great force was sufficient not only to dislodge the pneumonia bacilli, but to cause a hemorrhage. The experiment was successful, as have been several which have followed it. What the subsequent application of the X-ray will be, can best be imagined by the results of the past astounding discoveries.

Science is familiar with frequencies some three hundred times smaller than the X-ray, for example, the electron, used in radio work. As progress is made in understanding of electric waves, the small zone occupied by the radio art today will be greatly enlarged.

Life of a vacuum tube is from 1,000 to 3,000 burning hours.

A Washington amateur has built a miniature crystal set small enough to place within a single radio head-phone.

SODION TUBE



Called "The Golden Rule Tube," Crystal Tone Reception, not interfering with others. Operates on dry cells or storage battery, a detector tube unusually sensitive to weak signals. Price \$5.00. Send stamp for booklet of Sodian tube hook-ups.

Crosley Distributors
The Creaghead Engineering Co.
Established 1891
Radio and Electrical Supplies
327 Main St., Cincinnati, Ohio.

Genuine Radiotron Tubes

WD-11	\$5.00
WD-12	5.00
UV-199	5.00
UV-200	5.00
UV-201-A	5.00
UV-202	8.00

We carry a large stock of tubes at all times and will make prompt shipment of any of the above upon receipt of remittance to cover. We also are distributors of radio apparatus made by

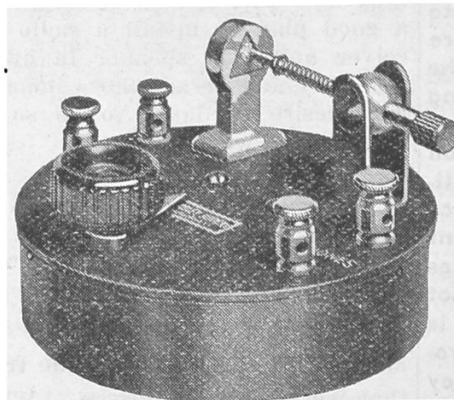
The Crosley Radio Corporation.

THE JOHNSON ELECTRIC SUPPLY CO.

232 East Fifth St., 331 Main St.
Dept. A. CINCINNATI, OHIO.

CROSLY

JUNIOR CRYSTAL RECEIVER



This is the new Crosley Junior Crystal Receiver, the ideal radio set for use in listening to local broadcasting stations and those within a radius of about 25 miles. Clear, undistorted reception is assured, this new set providing perfect reproduction of radio signals. No batteries or tubes are required, nothing to become disconnected, nothing to be damaged by the children.

With the advent of summer, the demand for crystal sets has increased tremendously. Crosley dealers and jobbers will find that this new set will meet immediate approval; and we suggest that you get your orders to us as soon as possible.

Price, without phones or aerial equipment,\$4.00

THE CROSLY RADIO CORPORATION

Powel Crosley, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

If you wish to BUY or SELL SECURITIES

Or own some about which you DESIRE INFORMATION COMMUNICATE WITH US

Our Statistical Department Is At Your Service

WESTHEIMER & CO

Members of—
The New York Stock Exchange
The Cincinnati Stock Exchange
Telephone Main 567

326 Walnut Street

Attractive Features Of Crosley Portable Set Are Pointed Out

Manager Of Jobbing House
Astounded When Informed
That New Receiver Is
to Cost But \$25.

Powel Crosley, Jr., president of The Crosley Radio Corporation, has sent the following letter to the thousands of radio dealers who are handling Crosley products:

"The Manager of the Radio Department of one of the leading electrical jobbing houses in the United States came into my office the other morning. There was a sample of the 51-P, our new two tube PORTABLE RADIO RECEIVER, on a table. It caught his eye the first thing. 'What is that?' he asked. I told him. He looked it over, examined the leatherette covered case and the attractive nickel trimmed hardware. Then he opened the upper part of the front. Of course I watched him. He was evidently pleased. Then he opened the lower part of the front, showing the big power plant, three full-sized, six-inch No. 6 dry cells and three standard, intermediate-sized 22½ volts 'B' batteries—not the short-life midget size. He instantly recognized the long battery life contained in the case.

"I said, 'What do you think of it?' His answer was most enthusiastic.

"'Just what we have all been waiting for,' said he.

"Well, what do you think we can sell it for?" I asked. Again he looked it over critically, and answered:

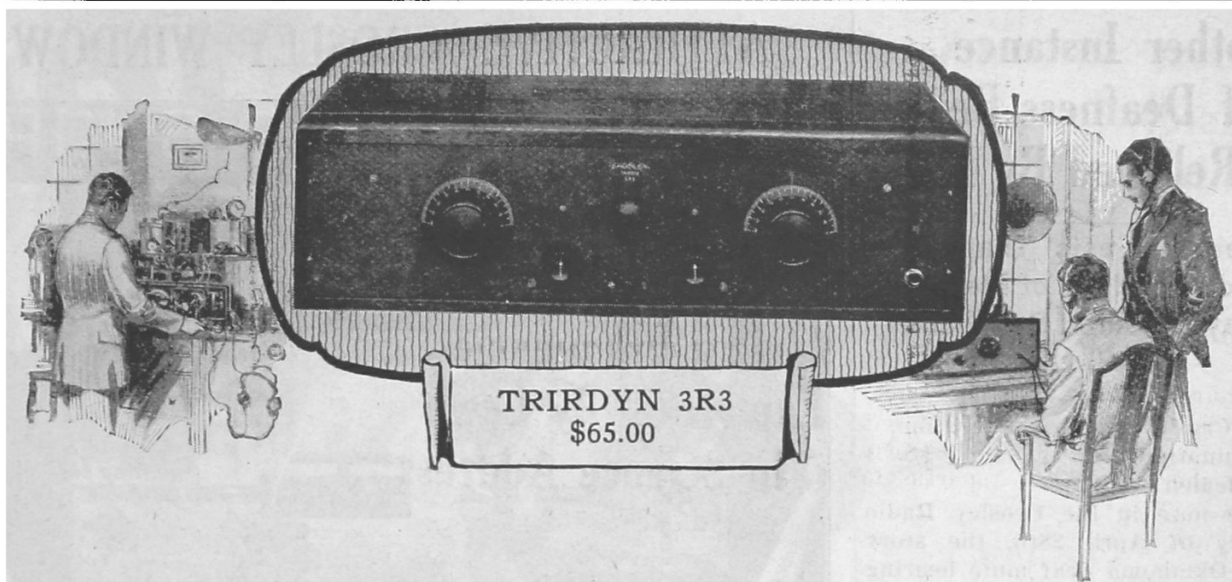
"'About \$65.00 without batteries, tubes or phones—then we can sell it complete for less than \$100.00.'

"I smiled.

"'Isn't that enough?' he asked, and then I told him that the price without batteries, tubes or phones was \$25.00. He believed for a moment that I was joking, and then I explained to him that the 51-P has the same panel as the standard 51, which sells at \$18.50, and that we were merely substituting a much more elaborate and attractive case. He still could hardly believe how it was possible for us to supply such a case at such a small difference in price, but we are able to do this.

"Now you know the wonderful popularity of the Model 51. You have been told how it was designed on February 4th, announced on February 5th, and we were producing 500 a day on February 28th, and have made over 30,000. Unquestionably, the 51 is the most popular radio receiver in the world, and it sells at the most popular price.

"Now if this Portable were to be
(Continued on Page 6)



New Crosley Engineering Achievement Approved By Over 200 Experts

A three tube set with five tube efficiency—the greatest selectivity with the minimum effort—positive calibration to any wave length between 200 and 600 meters. These are only a few of the many advantages offered in the remarkable new Crosley Trirdyn Radio Receiver.

It was only after a year of constant experimenting, that our engineering department perfected this exceptional receiver. Thorough tests proved to us that it would out-perform any receiver ever before produced. But we were not satisfied with our own opinion. So we shipped out 200 of these sets to experts in every part of the United States. Their criticisms are one and the same—"tried out your new Trirdyn Receiver Saturday night and logged 13 stations, among them Cuba, New York and Omaha, between 9 and 10 o'clock. The set was very selective. During the time this test was on, local station KSD was operating and we went through them without any difficulty or interference whatever. The range of the local station was not more than three points variation in the dial setting."

"Tried one of these sets and obtained wonderful results. Were able to log all stations which we heard very successfully. This set should go over big." "The set has wonderful volume and is selective"—etc.

This new Crosley triumph is called the Trirdyn because of its original combination of the "R's"—Radio frequency amplification, Regeneration and Reflex. The first tube incorporates non-oscillating, non-radiating tuned radio frequency amplification; the second tube, a regenerative detector reflexed back on the first tube for one stage of audio frequency amplification. Then it has a third tube which acts as a straight audio frequency amplifier. It uses the ultra selective aperiodic antenna circuit and external selector coil, which adds to its wonderful selectivity.

The Crosley Trirdyn in range, volume and selectivity is the equal of any five tube receiver on the market. Greater volume will, of course, be obtained through the use of storage battery tubes, but it will function well in any type and can be used with either indoor or outdoor antenna.

The opinion of many experts have convinced us that the Trirdyn is the best receiver ever offered the public regardless of price.

Practically every radio dealer can furnish you Crosley Radio Sets, including not only the Trirdyn, but the Model 51, a two tube set for only \$18.50; the Model V, a single tube receiver at \$16.00; the Model VI at \$24.00; the Super VI at \$29.00; the Model X-J at \$55.00 and the Super X-J at \$65.00.

See This New Wonder At Your Dealers

All Crosley Regenerative Sets
are Licensed under Armstrong
U. S. Patent No. 1,113,149.

CROSLY
Better -- Cost Less

Crosley produces more Radio
Receiving Sets than any other
manufacturer in the World.

Radio Products

THE CROSLY RADIO CORPORATION

POWEL CROSLY, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

Another Instance Of Deafness Being Relieved By Radio

Dealer Suggests That Many
Who Are Hard of Hearing
May Be Cured By Means
of Wireless.

"The Crosley Radio Corporation,
"Cincinnati, Ohio.

"Gentlemen:

"We note in the Crosley Radio Weekly of April 28th, the story of an Oklahoma deaf mute hearing radio concerts.

"We are attaching hereto a little story of our own. If you care to use this it will be quite in order.

"Yours very truly,
"Radio Supply Co.,
"Moose Jaw, Sask."

The story follows:

"Last December word was sent to us by Mr. George Mercer, a farmer, to the effect that if we could install a radio outfit for him that he could hear, he was prepared to purchase the outfit. Mr. Mercer has been almost totally deaf for 22 years.

"It seemed like a wild goose chase but we were willing to try anything once so we loaded up a Crosley Model XJ and installed it in his home. Thinking that possibly head phones would not provide sufficient vibration, we started Mr. Mercer listening in by using the base of a loud speaker held right to his ear. Mr. Mercer heard music at once. We could notice that he was keeping time to it with his foot. It gave us quite a thrill and it no doubt was a greater thrill for his wife and family when they realized that he was hearing music for the first time in 22 years. The rest of us in the room could hear, of course, quite distinctly what was going on as there was enough volume leaked out of the loud speaker base to give the rest of us about all we required. After two or three hours Mr. Mercer announced that the loud speaker base was too loud and we attached the head phones. He then announced that he could hear almost as good with the head phones. Since then he uses the head phones only.

"In a little over a month his hearing was greatly improved that he could hear conversations. He tunes the receiver himself and we believe he is in a fair way to getting back to almost normal hearing.

"We have quite a number of instances where people who were hard of hearing and gradually becoming more so have been brought back to normal hearing through listening over their radio sets and it has occurred to us a great deal of this so-called deafness is caused by the person whose hearing has been affected through sickness or other

ATTRACTIVE CROSELY WINDOW



Above is a picture display arranged by C. H. Harrison, Jr., Crosley dealer at 201 West Water street, Elmira, New York. Mr. Harrison informs us that his business increased tremendously as a result of this display, which attracted many new customers to his store. All of which is proof that it pays the dealer to feature Crosley "Better—Costs Less" radio apparatus in their display windows.

causes ceasing to try to hear and, through disuse or lack of cultivation of the faculty of hearing, gradually becoming more deaf. But when they become radio enthusiasts they immediately begin to develop their hearing faculties which have fallen into disuse and it is only a matter of time until they will again arrive at that stage where their hearing was first affected by injury or disease.

"We believe that when this feature of radio is generally realized this world is going to lose a lot of its deaf and hard of hearing folk."

Attractive Feature Of Crosley Portable Set Pointed Out

(Continued from Page 5)

sold merely as a camping set, if we believed that its field were one where the Portable feature was the biggest sales argument, we might expect to sell a few thousand this summer, but, the 51-P is more than an ordinary Portable set. The Portable feature should be considered secondary. People will buy this receiver for their homes, knowing that if they wish to go visiting they can "TAKE THEIR ENTERTAINMENT WITH THEM!" Probably one of its most attractive features, from a sales standpoint, is the fact that the dealer can, in a few moments, install and connect the batteries, put the tubes in place, and hand the 51-P over the counter to the purchaser in a condition ready to attach the antenna and ground, eliminating the danger of improperly connecting up the batteries

and burning out tubes.

"If any trouble develops after some months, or when the batteries must be renewed, its owner can disconnect the antenna and ground from the 51-P, take it down in the morning and leave it at the dealers, call for it in the evening and take it home ready to go again for several months.

"The 51-P is equipped on the inside with marked connection wires so that it is easy to connect up the batteries and no additional wire equipment on that score is necessary. Of course, although the 51-P is primarily a set to be used in the home, and as you know, it will work a loud speaker even on distant stations under average conditions, many of these sets will be sold to traveling salesmen who wish to drop a wire out of the window to have entertainment in the evening when they are far from home in some strange hotel. The man who owns a big set will buy one to take away with him in the summer time. Another man will buy one all connected up to take to his aged mother in the country, perhaps.

"The 51-P is universal in its use; it is a wonderfully efficient little receiver, and when you see it you will wonder how we can produce it for \$25.00. It is not a mere Summer-seller, but is year-round-radio any place, any time.

"An intensive advertising campaign will be put behind the 51-P, so it is up to you to supply the demand that this advertising will create."

Great Britain has 580,000 broadcasting listeners compared with 30,000 a year ago.

For Radio Dealers

The first radio dealers' convention ever held in Texas recently closed at Dallas and proved to those who attended that radio was a live wire industry, full of enterprise and optimism. Dealers from all parts of Texas and Oklahoma made it their business to be present.

The convention was held under the auspices of the Radio Equipment Company of Texas, distributor in that territory of Crosley radio equipment. Louis Cohn, of the Radio Equipment Co., Lloyd Cohn, general manager, and James L. Wood, Jr., of The Crosley Radio Corporation, were in charge of the arrangements and saw to it that the visitors were repaid for their initiative in coming, in some cases, more than a thousand miles.

Broadcasting was the subject of a talk to the delegates by L. A. Henson, supervisor of radio of the Dallas News and Journal, which operates Station WFAA. After hearing the lecture and making the trip of inspection to the station, the radio men felt that they were conversant with one phase of the radio business upon which the rest of the great structure was reared.

The lighter side of broadcasting was ably represented by Harold Hough, one of the best known radio announcers in the country, who as "The Hired Hand," makes programmes interesting at Station WFAA. Mr. Hough talked entertainingly on broadcasting and the public.

Among the other speakers was H. Branner, engineer of the French Battery & Carbon Co., of Madison, Wisconsin, who gave a talk on radio battery construction, which was both instructive and interesting. A. Folsom, of the same company, talked on business ethics in radio.

The feature at the convention was the introduction of the new Crosley receiver, the Trirdyn, which was demonstrated by James Woods. Every dealer present evinced great interest in the new set, being greatly impressed by the results that could be obtained with it.

The convention was ended by a banquet. Every one attending expressed the opinion that it exemplified the spirit of enterprise in radio, a spirit which would insure the permanence of radio in American life. The convention will probably be made an annual event.

THE EDW. J. GOETZ CO.
Wholesale Distributors Exclusively
Radio—Electrical Supplies
See Our
"Edgco Buyers' Guide"
For a Copy Write
Office and Warehouse
2409 Harris Avenue, Norwood, O.

CROSLY

51-P ~ \$25.00

Take your entertainment with you



and individuals for a Portable 51. Here it is. The same wonderful little receiver that is now known so well as the 51, in a leatherette covered, portable case, with nickel plated trimmings and hardware.

Unlike most portable receivers, the case of the Portable 51—known as the Crosley 51-P—has ample room for a real power plant of batteries instead of a limited space for flashlight batteries, which have a very short life, even on dry cell tubes. The Crosley 51-P has ample space for three full sized six inch No. 6 dry cells to furnish the filament current for dry cell tubes. There is also room for three Eveready No. 764 vertical, intermediate 22½ volt "B" batteries, or the equivalent Burgess and French batteries, thus giving 67½ volts for the plates of the tubes, which means ample loud speaker volume under proper conditions. There is also ample room for a "C" battery, and provision is made for connecting in a "C" battery if desired. There is room for one or two coils of insulated flexible wire to be used as an antenna and ground wire, and there is a compartment for head phones.

The traveling salesman will take the Crosley 51-P with him to while away the evening hours when there is nothing else to do. He can drop a wire out of his hotel window, attach another wire to the radiator, and bring in stations within a reasonable range, and enjoy all of the pleasures of radio wherever he goes. The same is true of the camper and the automobile tourist. The farmer will use the Crosley 51-P in his home and when he goes visiting will take it along so that his neighbors, friends and relatives can enjoy the pleasures of radio when he comes to see them. Such organizations as Boy Scouts, Girl Scouts, and other clubs will find the Crosley 51-P an ideal receiver to round out the entertainment of the organizations.

The Crosley 51-P is so light and convenient, and can be used so efficiently on a small antenna, that it is recommended for canoes, motor boats, yachts, and for travelers on ocean voyages and on board trains.

The price of the Crosley 51-P is \$25.00. This does not include batteries, head phones, tubes or antenna equipment, which can be added at an additional cost of less than \$25.00.

SINCE the announcement of the Crosley 51, early in February, the popularity of this two tube set has grown by leaps and bounds. Selling at the price of \$18.50, it established an entirely new standard of value in the radio world. This receiver gives ample volume for a loud speaker on local receiving stations, and, under average receiving conditions, gives ample volume for a loud speaker on distant stations, frequently up to 1,500 miles or more. Under bad receiving conditions it is advisable to use head phones on distant stations.

Since the announcement of the regular Crosley 51, there has been an insistent demand on the part of jobbers, dealers

THE CROSLY RADIO CORPORATION

POWEL CROSLY, JR., President

200 ALFRED STREET

CINCINNATI, OHIO

Short Wave Radio Transmission During Daylight Is Success

Navy So Well Pleased With Experiments That Newly Designed Set Is Being Made for Huge Airship.

Radio engineers of the United States Naval Research Laboratory were so impressed with their results of recent experiments with short-wave transmission and reception in daylight, that they have designed a new short-wave transmitter for the Naval Airship Shenandoah, according to Dr. A. H. Taylor, chief of the Laboratory.

Through the co-operation of amateurs in over 40 states, some stations a thousand miles or more away, NKF, at Bellevue, D. C., has secured excellent results in two-way communications on 3000 kilocycles or 100 meters, in radio telegraphy and also in radio-phone transmission tests.

The reliability of short waves and their ability to carry for long distances, especially in the daytime, Dr. Taylor points out, has resulted in the construction of a transmitter which will go as low as 80 meters with a steady wave.

The short-wave Shenandoah set just completed and tested during the past week, is for use on 3000 kilocycles. This set was designed for use when the Shenandoah goes to the North Pole, where it will be daylight most of the time. It is operated by a 24-volt storage battery, kept charged during operation, but good for a number of hours transmission in an emergency. Telephone transmission for a short distance, as in making landings and mooring the ship, can be handled by this set, and also CW transmission. A motor generator will supply a plate voltage of 750 volts. In keeping with needs for economy in weight and space aboard the airship, this one-wave set is both small and light.

The aircraft also will be supplied with the most powerful transmitter ever installed in an airship. The big set operates AC CW over a range between 500 and 200 kilocycles, and may be operated simultaneously with the short-wave set. The airship will be able to receive anything between 135 meters and 25,000 meters.

"SHE DONE GONE"

A salesman, bringing his bride South on their honeymoon, visited a hotel, where he boasted of the fine honey.

"Sambo," he asked the colored waiter, "where's my honey?"

"Ah don't know, boss," replied Sambo, eyeing the lady cautiously. "She don't wuk here no mo'."—Sour Owl.

Be Sure Lead-in Is Right

One of the points which is sometimes overlooked by the experimenter in his quest for all possible volume and distance through the elimination of losses of high frequency current is the place at which the lead-in enters the house from the outside. Sometimes through ignorance or carelessness, the operator allows the lead-in to come in contact with the metal window screen or to touch the window sill. Although the contact with the window sill is about as bad a practice as can be imagined, if the wire is allowed to touch the window facing rain may wet the wood and short circuit the current to the earth. Some leakage takes place even if the wood is perfectly dry. Some experimenters allow the lead-in to travel in every direction around the walls before it is finally brought to the set. This is bad practice, for the additional wire makes it just that much harder for you to tune in distant stations because the energy is dissipated through contact with the walls.

The reason the beginner fails to provide a better connection between the set and the aerial is that he is usually ignorant of the tremendous waste of current through the poor connections. Many amateurs know that no great drain is caused by connecting the leads from a battery to a wet surface and they reason that radio frequency current will not escape in this manner. Nothing could be farther from the truth. The character of radio frequency currents is widely different from low frequency and leakage will take place much more readily in the case of the former.

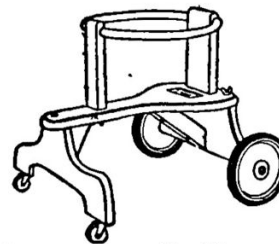
In planning your aerial be sure that your connections from the outside are not allowed to touch any-

thing except insulators on the way to the set. Try to avoid coming in close proximity to buildings, even if actual contact with the wood doesn't take place.

There are several effective methods by which the lead-in can be carried through the window or wall in such a manner that losses of energy will not take place. One method is to drill a hole in the window frame for the aerial and ground connections and to make use of the standard radio wall insulators. The use of the special radio insulator is recommended for they possess better insulation qualities than the porcelain insulators used for lighting wires.

Perhaps the most practical plan for solving this difficulty is to saw a board just the width of the window inside the strips which guide the sash. The strip should be about five inches high. Drill holes in this board for both the ground and aerial insulators and install them in the same manner that you would were they in the window frame. The board may be placed on the sill between the guides and the window let down until it touches the top of the strip. Thus you have an arrangement which prevents rain from beating in and obviates the necessity of drilling holes in the window frame.

The Go-bi-bi



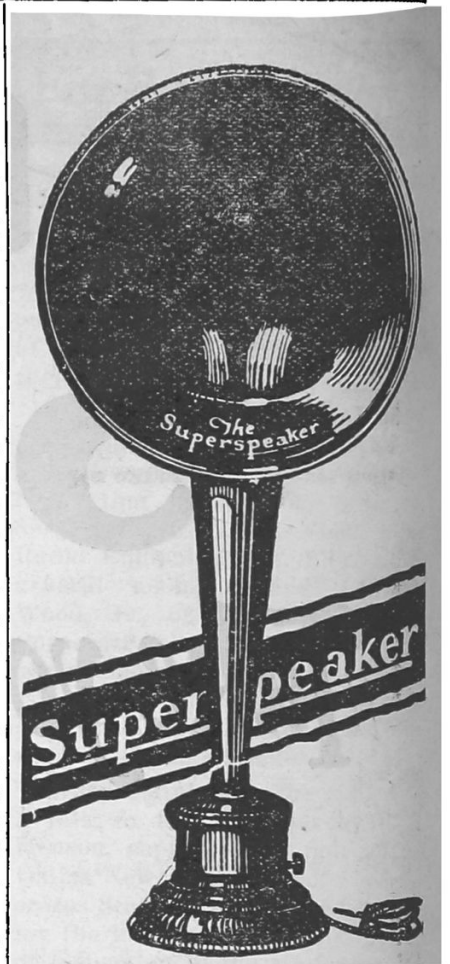
No longer does Daddy carry the infant about in his arms while mother prepares supper. Little brother and sister do not have to sacrifice their play hours to take care of the baby. And Mother—look at Mother, just as carefree as the children. All because the Tiny Tot in this home is learning to walk by means of the GO-BI-BI and needs little attention from anyone. On the contrary he is keeping the rest of the family entertained.

"My wife and I are 'tickled to pieces' over the GO-BI-BI we have for our ten months' old girl. It is just like a one ring circus to watch her." (Signed) Gordon B. Small, Springfield, Mass.

Every dealer in baby things or children's vehicles should stock the GO-BI-BI, and help to make healthy babies and happy homes in the community. Nothing like it for making satisfied customers.

CROSLEY MFG. COMPANY

1632 Vandalia St. Cincinnati, O.



"LIKE ADDING ANOTHER TUBE

of Audio-Frequency!" That's the way enthusiastic "Bugs" sum up The Superspeaker—that revolutionary reproducing instrument that is sweeping the market in Chicago, Detroit, Cleveland and wherever else it has been introduced. Just try it!

Superspeaker

No extra batteries or coils—Rigid, non-vibrating horn—cam-operated, micrometer adjustment to bring in extra-distant stations—Big, substantial and handsomely finished in glossy ebony—The quickest seller in Radio—Dealers, write!

JEWETT RADIO & PHONOGRAPH COMPANY

5680 Twelfth Street

DETROIT

MICHIGAN

We broadcast daily at 10:30 a. m. and 1:30 p. m.

Financial News

Market Reports

Government Bond

Quotations

Call Money Rates

Foreign Exchange, Grain

and Live Stock

Quotations.

Bond Department

THE

FIFTH-THIRD

NATIONAL BANK

of Cincinnati.

AND WLW-PROGRAMS

PUBLISHED BY THE CROSLY RADIO CORPORATION, FORMERLY THE PRECISION EQUIPMENT COMPANY AND CROSLY MANUFACTURING COMPANY, Manufacturers of Radio Apparatus, Cincinnati, Ohio.

VOL. III, NO. XXIII.

PRICE \$1.00 A YEAR. FIVE CENTS PER COPY ON NEWS STANDS.

JUNE 9, 1924

Dill Explains Bill That Makes Air Free For Broadcasting

Copyright Law Never Was Intended to Authorize Charging of Fee for Free Performances, He Says.

United States Senator C. C. Dill, of the state of Washington, does not believe the copyright law ever was intended to authorize the charging of a fee for the free public performance of music. Royalties on the sale of copies are the intent of the law, he believes. He has introduced a bill which would free broadcasting stations from the necessity of paying a license fee for the privilege of putting new music on the air.

Explaining his bill he says:

"Radio broadcasting is a comparatively new business. It is carried on primarily for the benefit of the owners of receiving sets. As radio broadcasting has developed, I have repeatedly asked myself, 'How can radio broadcasting be continued free to the owners of receiving sets?' Members of the National Association of Broadcasters tell me they consider broadcasting a public service, with no direct or tangible income to offset the expense of broadcasting.

"In order to make their programs interesting, they desire to broadcast up-to-date popular music, and owners of popular music copyrights have insisted upon a fee for the use of their music in the air. A great many complaints have been made about this practice. These complaints come especially from the owners of broadcasting stations that put on programs, largely as a public service. Unless these burdens are removed, the expense will become so great that certain small broadcasting stations will not be able to use popular up-to-date music, or will be driven out of business by the charges made upon them.

"Under the Constitution, congress has power 'to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries.' Upon this broad foundation, extensive copyright laws have been passed, which protect the creators of music. The present copyright law was passed in 1909. That was long before radiophone broadcasting became popular. Those

(Continued on Page 6)

Real Radio Bugs At Last!

Countless thousands of small green insects were attracted to the screens in the windows of the Crosley studio laboratory recently when George Lewis, well-known radio engineer, was experimenting with a Trirdyn radio receiver.

No attention was paid to the insects until the experiment was nearly over and the loud speaker was disconnected from the set. The insects had flown away. The loud speaker was moved to another part of the laboratory and the set again tuned to a radio broadcasting station. Back came the insects and the screens were once more covered with them.

Mr. Lewis has often expounded the theory of frequencies in everything and was experimenting with certain forms of high frequency when the insects were noticed. It was noted that when the loud speaker was operating and the station being heard was in the South, the bugs would emit a high-pitched sound. The noise became so great that it interfered with the experiment. It then occurred to Lewis that the movement of the loud speaker would send the bothersome insects away and so it was changed to another location in the room.

But the insects still continued their noise.

That the radio was attracting the insects was clearly shown by the next move of the experimenter who took a pair of long wires and connecting the loud speaker to the Trirdyn receiver, went from window to window in the laboratory. The insects followed the loud speaker.

It was noticed that the insects seemed to be more interested in the program from the Southern stations and Fort Worth in particular, than in the nearby ones. Dance music, with its rhythm, had the same effect as did the announcements, despite the fact that the music had higher frequencies than did the voice of the announcer.

What was attracting the insects to the music from the South and not from other parts of the country? Could this phenomenon be something heretofore unknown in the insect collecting world? Who knows but what the insects on the screens were all males and the frequencies of the female insects were not unlike those of the Fort Worth station's radio frequencies and they

(Continued on Page 4)

Workmen Completing \$150,000 Home Of The Crosley Radio Corporation; Tremendous Production Is Planned

Workmen are rapidly completing the new \$150,000 home of The Crosley Radio Corporation and occupancy is expected sometime during the early summer. When completed, this will be the finest equipped radio building in the Middle West, housing the general offices, the assembling departments and the WLW broadcasting studio. The new headquarters of the corporation is located at Colerain Avenue and Sassafras Streets.

Thousands of dollars are being spent in equipping the buildings with everything that will tend to permit greater production of radio receiving sets. A production of 5,000 a day will be possible by fall. The present factory will be retained for the making of the parts which go into the sets and the 30,000 square feet of floor space will be fully taken up. The new building has a floor space of 100,000 square feet.

The moving to larger headquarters and the retention of the present plants, proves that radio is a permanent business with a natural growth and not the passing fad that some would believe. Reports from the piano, phonograph and other kindred lines of home-entertainment report that radio has increased the sale of their instruments because of the manner in which the better-class music is broadcast to homes which would otherwise not get the incentive to own musical instruments.

Large quarters have been assigned to the experimental department and the engineering laboratory where new ideas in radio may be worked out. The Crosley laboratory is one of the finest equipped in the country and many interesting experiments are made there.

Several new ideas in a broadcasting studio also will be worked out.

W L W Is Heard In England, On Train And On Ocean Ship

Operator Of Station At Baggrave Hall, Leicestershire, Reports Listening to Concert from Cincinnati.

Many attempts have been made by stations in this part of the United States to reach England with their broadcasting but it remained for the WLW station of The Crosley Radio Corporation, with its 500 watt power, successfully to reach the goal. Henry Field, who operates Radio Station 6ZX, in Baggrave Hall, Leicestershire, England, heard the Cincinnati station clearly and it was the Chubb-Steinberg De Luxe Orchestra playing their regular midnight concert which was heard.

This is a remarkable achievement which marks a new era in broadcasting and must certainly be gratifying to those pioneers who had the vision of some day crossing the ocean with the voice. The recent success of sending photographs by wire will no doubt soon be possible with radio and then the dreams of the scientists will come true.

Another interesting reception of the broadcast concerts from the Crosley station was aboard the U. S. S. Orion. Stanley E. Wolf heard the music while his ship was 750 miles off the Florida coast.

In contrast to the reception of the Crosley station on the water, A. K. Almon, operator on the train between Vancouver and Montreal, heard the broadcast concert very clearly. This radio set was installed aboard the Canadian National Railways train and is a regular feature of the service for the convenience and entertainment of the passengers.

LET'S MAKE IT EASY

Teacher—"The trouble is you gentlemen don't know simple arithmetic. Now, if I were to give you six rabbits, then six more, and then multiply by six, how many would you have? Answer quickly."

Willie—"Let's use cows. They don't multiply so fast."

BUT HOW KEEP HER IN IT

WANTED—To rent private garage for woman. Call 584W.—Press Journal (Louisiana, Mo.)

Crosley WLW Programs For Week of June 8th

SUNDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 8th. Eastern Standard Time.
309 Meters.

9:30 A. M.—
School conducted by the Editorial Staff of Sunday School Publications of the Methodist Book Concern.
11:00 A. M.—
Services of the Church of the Covenant, Dr. Frank Stevenson, Minister.
7:30 P. M.—
Church Services of Emmaus Evangelical Lutheran Church, P. L. Dannfeldt, Pastor.
8:15 P. M.—
Concert by the Western and Southern Orchestra, directed by William Kopp, (Under the auspices of the Welfare Association of the Western and Southern Life Insurance Co.)

MONDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 9th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Market Reports.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Special Concert by the ARMCO BAND from Middletown, Ohio. MR. FRANK SIMON, Conductor.
Mr. Alex Drucker, Flutist
Mr. Stephen Gerber, Clarinetist
Miss Isabel Jones, Soprano
Mr. Frank Simon, Cornetist
1. March—"The Man of the Hour"
2. Overture—"Stadella"
3. (a) "Bull Trombone"
(b) "Lazy"
4. Flute and Clarinet Duett—"Lo, Hear the Gentle Lark"
5. Selection from "The Gingham Girl"
6. Scenes from "Fiddlers Three"
7. Humoresque "Barney Google"
8. Soprano Solo:
9. "Some Old Chestnuts," compiled by Lake.
10. Cornet Solo
11. March: "Middletown Triumphant"
A Montreal dealer is advertising "Free Storage Battery Service For a Year."

TUESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 10th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Topics of Interest to Women. Times-Star News. Lecture: "The Silver Black Fox" (through the courtesy of The Great Northern Fox Company).
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.
10:00 P. M.—
Pre-convention Concert by the Christian Endeavor Orchestra of the North Presbyterian Church of Cincinnati.
Tuxedo
When Love Shines In
Vocal Solo:
La Charmante
PROGRAM ANNOUNCEMENT OF THE OHIO STATE CHRISTIAN ENDEAVOR CONVENTION at Cincinnati, Ohio, June 24th, 25th, 26th and 27th. Mr. Earl Bernhard, Vice-Chairman.
Hamiltonian March—Violin, Saxophone and Clarinet
Erhard Trio with Miss Kathleen Molyneux, accompanist.
Cymbeline Overture
AT THE HO-DOWN with Jake Rutz's Pumpkin Vine Orchestra, featuring Mr. Donald Bain in Whistling selections and imitations.
Selections for violin and celeste.
Tunzi Melody Trio: piano-accordion, banjo and guitar.
Messrs. Tunzi, Connelley and Shay.
Soprano Solos: Miss Anne Kaufman.
Piano Solos: Mr. Gus Riherd.
Special Midnight Program by the CHUBB-STEINBERG Orchestra.
Art Hicks, violin and director, Walter McDonald, piano
William Cook, saxophone and clarinet
Holman Becraft, saxophone
Rex Adkins, trumpet
Frank Bamberger, trombone
Leon Warren, banjo
Bud Ebel, drums
(Baldwin Piano)

WEDNESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 11th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Concert for the "Shut Ins" by the Wurlitzer Concert Company, under the direction of

Mr. and Mrs. William Duning.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Program given by RICKER'S MEL-ODY TEN
Mr. Morris Abbot, Violin
Mr. Clifford Stitzel, Violin
Mr. Doyle Wehr, Saxophone
Mr. Carl Abbot, Clarinet
Mr. Paul Conrad, Trumpet
Mr. Wilfred Flint, Trombone
Mr. Robert Withrow, Cello
Mr. Dale Stitzel, Piano
Miss Marjorie Stitzel, Piano
Mr. E. Riker, Director.
8:30 P. M.—
Talk: "Bees" by Dr. W. C. Herman.
8:40 P. M.—
Original Compositions by H. H. Walker, songs by Miss Mary Steele and Pianologues by Miss Sade Elizabeth Huck.
9:00 P. M.—
One Act Play: "The String of the Samisen" by Rita Wellman.
Cast:
Katsu Mori, a rich merchant
Tama, his wife
Arinori Okubo
Sutsumi, teacher of the Samisen
Hatsee, Tama's maid
Pearl Rappaport
Selections for Celeste and Violin, Miss Rosemary Ellerbrock and William C. Stoess.
(Baldwin Piano)

THURSDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 12th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Piano Solos by Miss Adelaide Apfel.
5:15 P. M.—Baseball Results.
10:00 P. M.—
Times-Star Radio Club of the World.
10:10 P. M.—
Special Program arranged by Mr. James Robinson.
Glee Club, directed by Mr. N. W. Ryder.
The program will include spirituals and folk-songs.
10:45 P. M.—
Program by the Woodward High School Instrumental Trio.
Carlo Mastrapolo, violin; Mac Morris Houston, cello, and Rossini Arrico, pianist.
11:00 P. M.—
Popular entertainment by the DOHERTY MELODY BOYS.
F. A. Pendergast, piano; Ridge Bludau, trumpet; Leo Bludau, saxophone and clarinet; Bake Holthaus, drums; William Browne, trombone; J. L. Doherty, banjo and manager.
(Baldwin Piano)

Many fathers consider it their duty to buy radio sets for their youngsters so that they can hear educational programs.

FRIDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 13th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Language Lesson.
1:30 P. M.—Market Reports.
3:00 P. M.—Stock Quotations.
4:00 P. M.—Special Program. T. C. O'Donnell, Editor of Writers' Digest, lecture on "Journalism."

SATURDAY

RADIO PROGRAM

The Crosley Radio Corporation
Cincinnati, Ohio
June 14th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Market Reports.

DAILY PROGRAM

10:30 Weather Forecast.
A. M. Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond opening quotations, Foreign Exchange opening, Chicago opening grain quotations, Cincinnati and Chicago hog market reports.
Westheimer and Company, opening quotations of New York Stock Exchange.
Weather Forecast repeated.

P. M.
1:30 Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond, Foreign Exchange and Chicago grain noon quotations. Also closing Chicago cash grain quotations. Complete Indianapolis and Chicago live stock report; Cincinnati cattle market report.
Westheimer and Company, closing quotations Cincinnati Stock Exchange, giving the bid, offer and sale.

3:00 Henry W. Brown & Company, Cincinnati Cash Grain Market closing quotations with market conditions. Closing quotations of the Chicago Grain Market.
Westheimer and Company, closing quotations at New York Stock Exchange.
Bureau of Markets, United States Department of Agriculture, Chicago and New York Butter and Egg Market reports.
Special Half Hour Program and News at 4:00 each afternoon, except Saturday and Sunday, as announced by Radio.
Sunday School Services at 9:30 and Regular Morning Services of the Church of the Covenant, beginning at 11:00.
Special Program at 8:00 P. M.

There are only three broadcasting stations in Mexico, all operating from Mexico City.

CONDENSED TIME TABLE OF WLW BROADCASTING STATION OF THE CROSLY RADIO CORPORATION

970 KILOCYCLES, 309 METERS EASTERN STANDARD TIME CINCINNATI, OHIO.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.
11:00 A. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.
7:30 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	
8:15 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	
	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.		

Crosley Radio Weekly

Published by The Crosley Radio Corporation, formerly The Precision Equipment Company and Crosley Manufacturing Company, Manufacturers of Radio Apparatus Colerain and Alfred Streets, Cincinnati, Ohio.
 Telephone, West 7600
 Subscription Price, \$1.00 a Year
 Robert F. Stayman
 Editor
 Alvin R. Plough
 Associate Editor

RADIO AND EDUCATION

The Spanish lessons which were started three weeks ago from Crosley WLW, with hesitancy and uncertainty as to their possible reception by the radio public, have become so astonishingly popular that they will be continued as a regular feature.

Very probably the informal method of presentation employed in giving these lessons (daily at 12:45 except Friday and Saturday) has made them acceptable to the students who have already enrolled. The unique idea of having a small class in the studio with the instructor so that individually they may also participate, as it were, in the pronunciation, with the corrections of the teacher, has proved most commendable.

Fred Smith, studio director of WLW, is very enthusiastic about the great possibilities thus displayed. He points out how he has been assisted and helped by many who are likewise vitally interested in educational work by radio. While the idea of a personal element in the class was his originally, the entire scheme is being developed and rounded out by the invaluable suggestions of others. For example, it was George Lewis who suggested having a group of pupils in the studio in order that a complete lesson might be heard over the air.

And what a marvelously interesting "class" is brought before the mind's eye by an examination of the letters that come to the teacher! One man writes from his camp on the Licking river. Another from a housewife in Newport, Ky., states: "I have been listening in—at first in a wishful sort of way, thinking that I could not find the time for class each day on account of two hungry men coming in at twelve-fifteen—but I have found a way!"

Three girls in a down-town office listen in daily. A farmer "takes the lessons down, and then, when in the field in the afternoon, I go over them with the boys while resting the horses." Patients in St. Francis Hospital of Cincinnati and Stillwater Sanatorium of Dayton, Ohio, are studying in anticipation of the day when improved health will permit them to resume their normal lives. The youngest stu-

dent enrolled is nine, and the oldest is seventy-six.

The following down-town stores in Cincinnati have arranged to receive the lessons on loud speakers in order that those radio listeners who may not be at home at noon may take advantage of the classes during the noon hour: Beltzhoover Electric Company, 4th and Plum; Bolles Brendamour; Milner Musical Company, 40 West 6th street, and Milnor Electric Company, 29 Government Square.

Without any doubt, this experiment in the Spanish will open a way to a correct method for teaching by radio of great value in the unfolding of many subjects. Already the French class is developing under the instruction of Mme. Ida Tcimpidis. These latter lessons are given each Monday, Tuesday and Wednesday afternoon at 4:20. By Fall, we hope to have ready for enrollment classes in History, English and other subjects.

A NEW GIFT

If you are looking for a gift for your husband, father or brother, just pause a moment and consider a portable radio receiver, especially if this husband, father or brother is a traveling man. The portable receiver we have in mind is a two tube set, enclosed in a neat cabinet of suit-case effect, which, with all batteries and other necessary accessories, weighs less than 22 pounds. Stations many miles away may be heard by owners of this portable set, which may be operated in the hotel room as well as at home. A wire strung from one end of the room to the other will serve as an aerial, while a wire attached to the radiator will be a good ground. None but the traveling man knows what hotel lonesomeness means, and the person who gives to the traveler something that relieves this lonesomeness does him a great favor. The portable radio receiver accomplishes this, so get busy now and present one to your husband, father or brother.

COMMITTEE TO CONSIDER "B" BATTERY SPECIFICATIONS

Invitations have been sent out by Dr. G. W. Vinal, of the Bureau of Standards, to the representatives of producers and consumers of dry cell batteries to serve on a sub-committee which will make recommendations in regard to B battery specifications.

The sub-committee will also consider a standard set of designations for all types of dry cells so as to do away with the present confusion resulting from the fact that each manufacturer uses his own designations. The meetings of the sub-committee will probably be held in New York on a date yet to be determined.

Intelligence is not shown by witty words but by wise actions.

Type V Is Best Card In The Radio Deck, New Jersey Man Says

Many Far-Away Stations Are Heard On One Tube Receiver—Two-Stage Amplifier Being Added to Unit.

The Crosley Type V, one tube Armstrong Regenerative Radio Receiver, is the "best card in the radio deck," according to H. H. Harrod, chief clerk at the Ritz-Carlton Hotel, Atlantic City, N. J. In a letter to Powel Crosley, Jr., Mr. Harrod told of having donned the radio bug's first pair of long pants, which was his method of stating that he had added a two stage amplifier to his Type V. In his letter he included a list of broadcasting stations he had heard with this one tube receiver. The list follows:

Station	City	Distance In Miles
WTAY	Oak Park, Ill.	740
WWAE	Joliet, Ill.	...
WHAR	Atlantic City	...
WFAB	Syracuse, N. Y.	305
WBBG	Matapoisett, Mass	340
WQAF	Sandusky, O.	455
WVAO	Houghton, Mich.	810
WIAD	Philadelphia	65
WABM	Saginaw, Mich.	571
WEAN	Providence, R. I.	306
WTAS	Elgin, Ill.	759
WMAJ	Kansas City, Mo.	1,077
WKAR	E. Lansing, Mich.	570
WNAC	Boston, Mass.	334
WTAR	Norfolk, Va.	295
WCAD	Canton, N. Y.	590
WAAK	Milwaukee, Wis.	733
WHAM	Rochester, N. Y.	395
WPAB	State College, Pa.	...
WQAM	Miami, Fla.	1,113
KOP	Detroit, Mich.	508
WLW	Cincinnati, O.	560
MSAI	Cincinnati, O.	560
WGR	Buffalo, N. Y.	338
KDKA	Pittsburgh, Pa.	319
WBZ	Springfield, Mass.	275
6KW	Tuinucu, Cuba	1,300
KFKX	Hastings, Neb.	1,265
WLS	Chicago, Ill.	727

WCBD	Zion, Ill.	732
WCK	St. Louis, Mo.	877
WCAL	Northfield, Minn.	1,028
WDAP	Chicago, Ill.	727
WMAK	Lockport, N. Y.	365
WJAR	Providence, R. I.	306
WPAH	Waupaca, Wis.	833
WJX	New York City	144
WHN	New York City	144
WWAD	Philadelphia	65
WGN	Chicago, Ill.	727
WGY	Schenectady, N. Y.	274
WHAZ	Troy, N. Y.	272
WJAX	Cleveland, O.	425
WTAM	Cleveland, O.	425
WDAR	Philadelphia	65
WFI	Philadelphia	65
CFUC	Montreal, Can.	465
PWX	Havana, Cuba	1,300
WHAS	Louisville, Ky.	622
WJY	New York City	144
WOR	Newark, N. J.	140
CHYC	Montreal, Can.	465
WDAF	Kansas City, Mo.	1,077
WHB	Kansas City, Mo.	1,077
WSB	Atlanta, Ga.	725
CKAC	Montreal, Can.	465
CKCH	Ottawa, Can.	...
WOS	Jefferson City, Mo.	970
9XN	Chicago, Ill.	727
WJAZ	Chicago, Ill.	727
WMAQ	Chicago, Ill.	727
OKCE	Toronto, Can.	395
WJZ	New York City	144
WCAE	Pittsburgh, Pa.	319
WCAP	Washington, D. C.	173
WRC	Washington, D. C.	173
WFAA	Dallas, Texas	1,349
WOC	Davenport, Ia.	878
WHAA	Iowa City, Ia.	915
WEAF	New York City	144
WMC	Memphis, Tenn.	945
WOO	Philadelphia	65
WIP	Philadelphia	65
WCX	Detroit, Mich.	508
WWJ	Detroit, Mich.	508
KYW	Chicago, Ill.	727
KSD	St. Louis, Mo.	877

SUNDAY SYMPHONY CONCERTS FROM WLW ALL SUMMER.

Arrangements have been completed which will give the radio audience the Western and Southern Welfare Association's musical concerts every Sunday evening from the Crosley WLW. This symphony orchestra is composed of musicians from the famous Cincinnati Symphony Orchestra and is under the direction of William Kopp.

SUBSCRIBE NOW!

Detailed information regarding the development of receiving and broadcasting, interesting news and feature stories and advance programs of WLW are to be found in the Crosley Radio Weekly. This is the most up-to-the-minute paper of its kind in the radio field, and should be in the home of every owner of a radio receiving set. Information contained in every issue is of the greatest value to you. The subscription price is but \$1.00 per year. Subscribe now.

Name

Street and Number

City and State

Attach \$1.00 and mail this to the Crosley Radio Weekly, The Crosley Radio Corporation, Cincinnati, Ohio.

Owners Of Trirdyn May Be Benefited By Special Signals

Standard Frequency Signals
Transmitted Twice A Month
By Federal Bureau of
Standards.

Owners of Crosley Trirdyn radio receivers, which permit accurate calibration will be interested in knowing that the Bureau of Standards is transmitting special signals of standard frequencies about twice a month. The signals can be heard and generally utilized east of the Mississippi River. These special signals are transmitted by unmodulated continuous-wave telegraphy. A complete frequency transmission includes a general call, standard signals, and announcements. The general call is given at the beginning of the eight minutes' period and continues for about two minutes. This includes a statement of the frequency. The standard frequency signal is a series of very long dashes with the call letters WWV intervening.

This signal continues for about four minutes. The announcements are on the same frequency as the standard frequency signal just transmitted and contain a statement of the measured frequency. An announcement of the next frequency to be transmitted is then given. There is then a four minute interval while the transmitting set is adjusted for the next frequency. Here is a schedule of standard frequency signals from the Bureau of Standards in kilocycles, with the approximate wave lengths in parentheses:

Eastern Stand. Time	June 20	July 7
11:00 to 11:08 p. m.	550 (545)	1,363 (220)
11:12 to 11:20 p. m.	650 (461)	1,430 (210)
11:24 to 11:32 p. m.	750 (400)	1,500 (200)
11:36 to 11:44 p. m.	833 (360)	1,600 (187)
11:48 to 11:56 p. m.	940 (316)	1,700 (176)
12:00 to 12:08 a. m.	1,050 (285)	1,800 (167)
12:12 to 12:20 a. m.	1,150 (261)	1,900 (158)
12:24 to 12:32 a. m.	1,250 (240)	2,000 (150)

It is suggested that the Trirdyn owners, using the chart furnished with their set, make notations of the dial readings at the various wave lengths. This information will be of great value and assistance to them in operating their sets. Of course some understanding of code signals is necessary but those who are interested but do not understand telegraphy may obtain the services of some friend who is able to read this code.

RADIO GOSSIP FROM WASHINGTON

A radio broadcasting station will be installed in Austria, (Vienna) on July 1st on a permanent basis, according to reports to the Department of Commerce. While experiments in broadcasting have been conducted in Austria before, this is the first time broadcasting will be attempted on a permanent basis. The tax for a radio set will be 10 gold crowns. To cover the expenses of the broadcasting station, every owner of a radio set will have to pay around fifty gold crowns a year. The report states that radio is becoming more and more popular in Austria.

Although the importation of radio sets is absolutely prohibited in China, there are several hundred radio receiving sets in use at Shanghai, according to reports to the Department of Commerce. This is the first notice that has been received that local firms in China are able to manufacture or assemble radio sets. It is believed most of the sets were assembled from materials imported on various classifications.

The Dill bill to change the copyright law so as to permit the broadcasting of copyrighted matter without the payment of a license or fee was not taken up by the Senate Patents committee. Hearings have been concluded on the bill and Senator Dill had hoped to have it favorably reported. He believes it will be favorably reported to the Senate soon.

(Credit is given William H. Davis.

WHY YOUR SET LOSES PEP

When your detector "B" battery is new you may find that the tube functions best at, say, nineteen and a half volts. You connect the lead there and forget it, and later begin to wonder why the set is losing its pep. Quite possibly it is because the battery has run down noticeably in the meantime, and the nineteen and one-half volt tap now gives only eighteen volts. In that case, matters are easily remedied by using the next higher tap. This applies chiefly to dry batteries, since storage cells retain practically their full voltage until exhausted.

SPECIAL PLUG FOR RADIO

So thoroughly has radio found its way into the modern order of things that the wiring plan of an up-to-date home is not complete unless provision is made for plugging in a receiver in the living rooms. So-called convenience outlets lend themselves nicely to this purpose. Polarities are indicated in order that misconnections may not be made.

chairman of the emergency radio tax committee organized to fight the imposition of the tax on radio parts, to the National Association of Broadcasters, Mr. Paul Klugh, Executive chairman, the National Radio Trade Association, and the American Radio Association and Associated Manufacturers of Electrical Supplies for having contributed to the defeat of the provision.

President Coolidge has selected Ambassador Charles B. Warren, Representative Wallace White and Allan H. Babcock, electrical engineer of the Southern Pacific Railway as the American delegates to the Inter-American Electrical communications conference to be held in Mexico City. The conference is the result of a resolution passed at the 5th Pan-American Conference providing for it. The conference will probably develop a convention which might be of use in settling questions relating to telegraph and radio communications among the various nations of the Western Hemisphere. It is understood 17 American nationals have already accepted.

President Coolidge has ordered a new radio set for the White House. Naval officials are testing out three standard sets for Mrs. Coolidge to select from.

The Patent office is seven months behind in its work. Mr. C. D. Backus, examiner, says there are around 1,000 applications received yearly for strictly radio inventions.

Everybody is talking about a radio set to take to camp this year. "What's a camp without a radio?"

We broadcast daily at
10:30 a. m. and 1:30 p. m.

Financial News
Market Reports
Government Bond
Quotations
Call Money Rates
Foreign Exchange, Grain
and Live Stock
Quotations.

Bond Department
THE
FIFTH-THIRD
NATIONAL BANK
of Cincinnati.

Real Radio Bugs At Last

(Continued from Page 1)

were attracted to what they thought were their mates.

No apparatus has been designed which can record the frequencies of the insects to a point where their chirpings can be understood but a point between the audible frequencies of a given sound and the insects can be established.

It is just possible that some evening will find a crowd of bathing beauties clamoring to get into the Crosley studio when Mr. Lewis has tuned-in some California station. And Mr. Lewis is such a modest man!

HISTORY STILL REPEATING

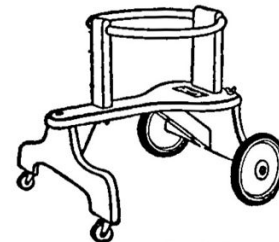
"Willie," asked the teacher, "what was it Sir Walter Raleigh said when he placed his cloak on the muddy road for the beautiful queen to walk over?"

Willie, the ultra-modern, gazed about the classroom in dismay, and then, taking a long chance, replied: "Step on it kid!"

Coed: "Your new overcoat is rather loud."

Frosh: "It's all right when I put on a muffler."—Mount Union Dynamo.

The Go-bi-bi



No longer does Daddy carry the infant about in his arms while mother prepares supper. Little brother and sister do not have to sacrifice their play hours to take care of the baby. And Mother—look at Mother, just as carefree as the children. All because the Tiny Tot in this home is learning to walk by means of the GO-BI-BI and needs little attention from anyone. On the contrary he is keeping the rest of the family entertained.

"My wife and I are 'tickled to pieces' over the GO-BI-BI we have for our ten months' old girl. It is just like a one ring circus to watch her." (Signed) Gordon B. Small, Springfield, Mass.

Every dealer in baby things or children's vehicles should stock the GO-BI-BI, and help to make healthy babies and happy homes in the community. Nothing like it for making satisfied customers.

CROSLY MFG. COMPANY

1632 Vandalia St. Cincinnati, O.

THEO. REICHEL, President

MOTOR CAR SUPPLY COMPANY**WHOLESALE AUTOMOTIVE EQUIPMENT
ELECTRICAL APPLIANCES****MACON, MISSOURI**

May 15th., 1924.

Crosley Radio Corporation,
Mr. James. L. Woods Jr.
Cincinnati,
Ohio.*Bob: This tells
the story - use it!
P.C. Jr.*

Dear Woods:-

The new Crosley "Trirdyn" has proven to be such a wonderful set that thought you might be interested in the results we have been obtaining.

We can operate a loud speaker on two tubes, on such stations as Chicago, Kansas City, Jefferson City, St. Louis and Cincinnati. The volume obtained on three tubes is equal to that of a five tube receiver. We can get more volume using three 199 tubes, than we can on a ~~receiver~~ with 301 A tubes.

The Trirdyn is almost uncanny in its selectivity. We can separate Louisville from Havana, and they are both on the same wave length. We can do this without hooking into the selector coil at all. The set can be made even more selective by using the selector coil.

KGO, Oakland, Calif., KFI, Los Angeles, and KHJ boom in like local stations. The Trirdyn, is indeed a super sensitive receiver, and is without a doubt the best receiver ever made, regardless of price.

This receiver will not re-radiate. We tested it for re-radiation by making it regenerate over the entire scale, and attempting to tune in the re-radiated wave with a super-heterodyne, placed 6 feet from the Trirdyn. No re-radiation could be noticed.

Yours very truly,

Motor Car Supply Company.
Radio Dept.*R.M. Blanchard*

Dill Explains Bill That Makes Air Free For Broadcasting

(Continued from Page 1)

who made the law had not even the remotest conception of the public service broadcasting would some day render. Today, broadcasting has an educational and entertainment value to millions of people.

"Broadcasting stations which have bought this music, and used it in their programs have found that the old copyright statute is being applied against them. I think the law is ambiguous in the first place, and should never be construed to apply to radio broadcasting, in the second place. For these reasons, I introduced senate bill 2600, by which I propose to amend the copyright law by providing that the copyright on musical productions shall not apply to reproduction and broadcasting by radio.

"The hearings on the bill have been set by the committee on patents at 10 a. m., April 9th, in the senate office building, Washington, D. C.

"An organization, known as the American Society of Authors, Composers and Publishers, is requiring broadcasters to pay heavy license fees. Of course, they do not represent nearly all of the music publishers and composers in the United States, who are estimated to exceed 5000 in number, but they are organized, and have a regional attorney in each of thirty districts, and whenever any broadcasting station plays any of their music, these lawyers begin immediate action against the offender.

"Three such lawsuits are now pending in the United States courts.

"I want it understood clearly that I have no desire to interfere with the ownership and control of copyrights within the intent and meaning of the fundamental purposes of the copyright act. I think the writers and producers of music are entitled to a special fee or royalty from every one who purchases copies of their music, but what I am objecting to and trying to correct, is the charging of fees for broadcasting this music by radio stations that can make no profit thereby. A great many newspapers and public organizations own and operate broadcasting stations, largely as a matter of public service, and their only return for this broadcasting is the advertising that the rendering of such public service gives them. These stations are scattered all over the United States. Their programs are heard far back in the country districts, miles from any city by literally hundreds of thousands of people, who would never hear these musical productions otherwise. I think the law should free the broadcasting stations from an extra license fee for the use of music by radio, and to

FOR RADIO DEALERS

Radio dealers in both the larger cities and in the small towns have found it profitable to concentrate on the Crosley line. There was a time when the dealer believed he must carry high priced sets to meet the demand of certain customers who believed it was necessary to invest \$400 or \$500 in a radio receiver in order to get satisfactory results.

But this time has passed. The buyer knows about the Crosley line and realizes he can get as good, if not better results from that than he can by investing a huge amount of money in a receiver of some other make.

It is but natural that certain persons of great wealth will come into a store and ask for the best radio set on the market. The dealer thinks immediately that he means the most expensive, but in this he is all wrong. The most expensive is not the best by any means. Wise dealers will demonstrate the Trirdyn to these prospective buyers. One trial is all that

that extent, encourage the broadcasting of the latest musical productions over the entire country.

"In fact, instead of working an injustice upon the writer or producer of the music by having it broadcast, I think it is a great advertisement for the music. Instead of destroying the value of the music produced, it will probably materially increase the sales of such music. I am not alone in holding this view, for I find that Judge Lynch of the United States District court at Newark, N. J., has given voice to a similar opinion. He says: 'Our own opinion of the possibilities of advertising by radio leads us to the belief that the broadcasting of a newly copyrighted musical composition would greatly enhance the sales of the printed sheet.'

Recently The Crosley Radio Corporation was sued by a member of the American Society for broadcasting a copyrighted selection. In the United States District court a decision was rendered in favor of The Crosley Corporation, but the plaintiff has carried the case to the United States Court of Appeals.

If you wish to BUY or SELL SECURITIES

Or own some about which you DESIRE INFORMATION COMMUNICATE WITH US

Our Statistical Department is At Your Service

WESTHEIMER & CO

Members of—
The New York Stock Exchange
The Cincinnati Stock Exchange
Telephone Main 567

326 Walnut Street

is necessary. Then this customer will say something about his believing it was impossible to get a good receiver for so small an amount of money. You have the proof that he has been laboring under a mishapprehension, and it requires but a few moments to close the deal.

Evidence of the value of concentration on the Crosley line is to be found right here in Cincinnati. There is a company located about eight squares from the heart of the city, but which handles this line exclusively. His store is crowded from morning to night. His turn-overs are exceptionally rapid and he has established a very profitable business. This merchant was face to face with disaster until he decided to handle Crosley apparatus. Now he is on "easy street."

Some time ago this publication conducted a Crosley Window Display Contest. Hundreds of radio dealers took part, and from a great many of these we received letters telling of the increased interest in Crosley apparatus as a result of the display. Business increased considerably and many sets were sold as a result of the interesting displays. Because of the interest taken in this contest, we have decided to repeat it during June. The prize of \$10.00 we are offering for the best display is immaterial. The

great thing is the crowds that will be attracted to the stores that have the most interesting display windows. So let's get started right away. Prepare an exclusive Crosley window. Send a picture of it to us. We will keep all of them until the first week of July when there will be a Crosley Jobbers' Convention in Cincinnati. These jobbers will be the judges and will award the prize to the dealer having the best display.

Don't forget the new Crosley 51-P portable radio receiver is an ideal home receiver that has the added attraction permitting it to be taken wherever you desire to go.

Genuine Radiotron Tubes

WD-11	\$5.00
WD-12	5.00
UV-199	5.00
UV-200	5.00
UV-201-A	5.00
UV-202	8.00

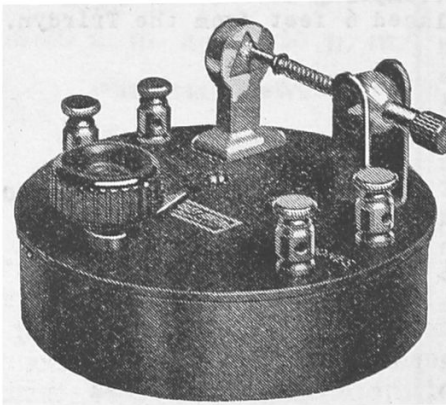
We carry a large stock of tubes at all times and will make prompt shipment of any of the above upon receipt of remittance to cover. We also are distributors of radio apparatus made by

The Crosley Radio Corporation.

THE JOHNSON ELECTRIC SUPPLY CO.

232 East Fifth St., 331 Main St.
Dept. A. CINCINNATI, OHIO.

CROSLY JUNIOR CRYSTAL RECEIVER



This is the new Crosley Junior Crystal Receiver, the ideal radio set for use in listening to local broadcasting stations and those within a radius of about 25 miles. Clear, undistorted reception is assured, this new set providing perfect reproduction of radio signals. No batteries or tubes are required, nothing to become disconnected, nothing to be damaged by the children.

With the advent of summer, the demand for crystal sets has increased tremendously. Crosley dealers and Jobbers will find that this new set will meet immediate approval, and we suggest that you get your orders to us as soon as possible.

Price, without phones or aerial equipment,\$4.00

THE CROSLY RADIO CORPORATION

Powel Crosley, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

CROSLEY

51-P - \$25.00

Take your entertainment with you



SINCE the announcement of the Crosley 51, early in February, the popularity of this two tube set has grown by leaps and bounds. Selling at the price of \$18.50, it established an entirely new standard of value in the radio world. This receiver gives ample volume for a loud speaker on local receiving stations, and, under average receiving conditions, gives ample volume for a loud speaker on distant stations, frequently up to 1,500 miles or more. Under bad receiving conditions it is advisable to use head phones on distant stations.

Since the announcement of the regular Crosley 51, there has been an insistent demand on the part of jobbers, dealers

and individuals for a Portable 51. Here it is. The same wonderful little receiver that is now known so well as the 51, in a leatherette covered, portable case, with nickel plated trimmings and hardware.

Unlike most portable receivers, the case of the Portable 51—known as the Crosley 51-P—has ample room for a real power plant of batteries instead of a limited space for flashlight batteries, which have a very short life, even on dry cell tubes. The Crosley 51-P has ample space for three full sized six inch No. 6 dry cells to furnish the filament current for dry cell tubes. There is also room for three Eveready No. 764 vertical, intermediate 22½ volt "B" batteries, or the equivalent Burgess and French batteries, thus giving 67½ volts for the plates of the tubes, which means ample loud speaker volume under proper conditions. There is also ample room for a "C" battery, and provision is made for connecting in a "C" battery if desired. There is room for one or two coils of insulated flexible wire to be used as an antenna and ground wire, and there is a compartment for head phones.

The traveling salesman will take the Crosley 51-P with him to while away the evening hours when there is nothing else to do. He can drop a wire out of his hotel window, attach another wire to the radiator, and bring in stations within a reasonable range, and enjoy all of the pleasures of radio wherever he goes. The same is true of the camper and the automobile tourist. The farmer will use the Crosley 51-P in his home and when he goes visiting will take it along so that his neighbors, friends and relatives can enjoy the pleasures of radio when he comes to see them. Such organizations as Boy Scouts, Girl Scouts, and other clubs will find the Crosley 51-P an ideal receiver to round out the entertainment of the organizations.

The Crosley 51-P is so light and convenient, and can be used so efficiently on a small antenna, that it is recommended for canoes, motor boats, yachts, and for travelers on ocean voyages and on board trains.

The price of the Crosley 51-P is \$25.00. This does not include batteries, head phones, tubes or antenna equipment, which can be added at an additional cost of less than \$25.00.

THE CROSLEY RADIO CORPORATION

POWEL CROSLEY, JR., President

200 ALFRED STREET

CINCINNATI, OHIO

Hoover Dictator Under Radio Bill Reported To House

Rigid Control Over Radio Communication Provided for—Monopolies Are Prevented.

Washington. — Herbert Hoover, Secretary of Commerce, is virtually made the dictator of radio, in a bill reported by the House Committee on Merchant Marine, following two years of study of this new problem to legislators. The measure would provide for rigid control of radio communication by the Government, with special provisions applying the anti-trust laws to any attempt to monopolize the ether or apparatus used in the operation of radiocasting stations.

There would be established, pursuant to the bill, a bureau of radio in the Department of Commerce, which would be assisted in enforcing the law by an advisory committee composed of one member each, representing the Secretary of State, Secretary of the Treasury, Secretary of War, Secretary of the Navy, the Secretary of Agriculture, Postmaster-General, Secretary of Commerce, the United States Shipping Board and several additional members of "recognized attainment in radio communication" from civilian pursuits.

License fees collectible by the federal bureau under the bill range from \$300 to 50 cents, a dozen or so classes of stations and operators being designated. Violations of the orders of the Secretary of Commerce would be subject to heavy fines. The anti-monopoly provision of the bill reads as follows:

"The Secretary of Commerce is hereby directed to refuse a station license to any person, company, or corporation, or any subsidiary thereof which, in his judgment, is unlawfully monopolizing or seeking to unlawfully monopolize radio communication directly or indirectly through the control of the manufacture or sale of radio apparatus, through exclusive traffic arrangements or by any other means. In addition, the general anti-trust laws are made applicable to the manufacture, sale and distribution of radio devices and equipment."

LUCKY FOR JOHNNIE

Teacher asked her class if they could compose a rhyme using the word "Nellie". Johnny Jones, being called up, arose much embarrassed. "There was a pretty little girl named Nellie, Who fell in the water and wet her little feet."

"Why, Johnny, that don't rhyme." "I know it doesn't. The water wasn't deep enough."—Ke-Nash-A Club News.

Definite Rules For Locating Troubles In Your Radio Receiver

The efficient operation of a radio set requires a certain amount of care and attention. There are little adjustments that the careful operator can perform once he has learned to detect where the trouble is liable to occur.

Five factors govern the operation of any radio set. First, there is the power of the transmission station, the position of its aerial, and the distance from the receiving station. It is quite natural that with the best of equipment the distant stations will be weaker than the local ones. Secondly, the location and design of the receiving station's aerial. The aerial should be erected so that the directional qualities are taken advantage of. The material used in its construction should be of the best.

Thirdly, the receiving set should be well constructed, containing the best and most efficient elements in its composition. The tuning elements having lowest loss component, least number of moving parts, and should be strongly constructed. An example of a high loss type of tuning coil is found among some of the high-priced apparatus where the wire is coated with shellac or with fancy coloring paints to make the articles more attractive, such as gold or aluminum paints.

Fourthly, the active elements in the set, the tubes, the "A" batteries, the "B" batteries and the telephone receivers or loud speaker as the case may be, must be of the best. The "A" and "B" batteries require special attention as most of the radio fans' troubles may be laid to them. If the batteries are weak the whole set is affected.

Fifthly, the operator must know his set. The novice should carefully study the instruction book that goes with his receiver and any of the many non-technical publications on radio in order to understand the reason underlying the manipulation of the dials, and the care of the various elements.

Many novices make complaint that their sets will not receive the stations they expect. The installation being a good one, the fault usually is with the novice and the experienced operator will pick up distant stations with ease.

The average operator should locate troubles in his set in the following manner:

No Signals—No Noises.

No Signals in Detector, No Noises—Phone condenser shorted; batteries run down; battery polarity reversed; broken wire in set; poor socket contact; phone cord broken; poor contact in phone jack.

Amplifier Weak or Dead, De-

tector O. K.

Amplifier Weak or Dead, Detector

O. K.—Phone condenser shorted; "A" battery low; transformers burned out; poor socket contact; detector tube in amplifier socket.

Signals in Detector Weak—Batteries run down; battery polarity reversed; tickler connections reversed; aerial or ground connections off; "B" batteries weak; grid condenser shorted; grid coil disconnected.

Knocking, Scraping, Popping Sounds

Affected by Tuning—Condenser out of order; too much "B" battery on detector; too much wire on tickler coil; detector filament voltage too high; too small an aerial; fingers touching metal while tuning.

Not Affected by Tuning—Any of the above and not enough grid leak; reversed connections; defective rheostat; poor ground or aerial connections.

Noises in Amplifier Only—Transformer burned out; moisture in transformer; poor contact in tube socket; loose or broken wire touching connection.

Howls, Hisses, Squeals, Whistles and Grunts

In Detector Circuit Affected by Tuning—Too much "B" battery on detector; too much wire on "tickler" coil; detector filament too high; too much grid leak.

Not Affected by Tuning—Poor contact in socket; grid condenser shorted; too much "A" battery; plate leads too near grid leads.

In Amplifier Circuit—Primary of transformer reversed; transformers too close together; no condenser across last transformer secondary.

Humming, Buzzing, Crackling Sounds

Aerial parallel with outside high tension transmission lines; grid condenser touching cabinet; ground and plate leads parallel; alternating current transformer nearby; electric motors running; street cars; X-Ray machines; battery run down; static disturbance in atmosphere.

Unsteady Signals

Too small aerial; defective rheostat; aerial leakage; coil loose and vibrating; poor ground contact.

Signals Fading

Low "A" and "B" batteries.

Over Long Period—Unsoldered joints in aerial or ground wires.

Note—Fading signals are usually ascribed to some atmospheric disturbance, such as a passing cloud.

(Radio Sales—Canada).

THE EDW. J. GOETZ CO.
Wholesale Distributors Exclusively
Radio—Electrical Supplies
See Our
"Edgco Buyers' Guide"
For a Copy Write
Office and Warehouse
2409 Harris Avenue, Norwood, O.



The Superspeaker

EXCLUSIVE MERIT

in this record breaking reproducing instrument is the result of positive, cam-operated, micrometer adjustment which brings in, sweet and clear, stations you have never before heard except through your headset. No rubber spring to harden and wear out.

Big, substantial, non-metallic horn, handsomely finished in ebony gloss—Nothing electrical but the performance—Makes good every recommendation of the dealer who sells it. Radio Merchants, get our highly profitable proposition.

JEWETT RADIO & PHONOGRAPH COMPANY
5680 Twelfth Street
DETROIT MICHIGAN

PUBLISHED BY THE CROSLEY RADIO CORPORATION, FORMERLY THE PRECISION EQUIPMENT COMPANY AND CROSLEY MANUFACTURING COMPANY, Manufacturers of Radio Apparatus, Cincinnati, Ohio.

VOL. III, NO. XXIV.

PRICE \$1.00 A YEAR. FIVE CENTS PER COPY ON NEWS STANDS.

JUNE 16, 1924

WLW To Broadcast National Republican Convention For The Benefit Of Owners Of Radio Receiving Sets

Dill Bill Defended In Letter Of Reply To New York Editor

Crosley Victory Over Publishers In United States Court Is Cited In Upholding Measure.

The following letter was reproduced in the New York Herald Tribune:

To The New York Herald Tribune:
 Several days ago, in an editorial entitled "Too Generous With the Radio," you referred to the Dill bill, now pending in Congress, as authorizing "a kind of legalized piracy." That bill seeks to amend the copyright law as to make it clear that musical compositions may be broadcast without payment of further royalties.

Confident of your desire to be entirely fair in this matter, I am venturing for publication by you this letter, which is the more timely in view of the decision of the United States District Court in Ohio, rendered last Friday in the case of Remick & Co. vs. The Crosley Radio Corporation, to the effect that broadcasting of a musical composition, even when the broadcaster is a manufacturer of receiving sets, is not a public performance thereof for profit within the meaning of the copyright act, and hence not an infringement of the copyright. I enclose a copy of the opinion for your reference, and you will see that under the law as therein laid down, it is not the broadcaster who is guilty of "piracy," but rather it is the music publisher, who is seeking to levy an illegal exaction upon the freedom of the air.

The object of the Dill bill, introduced before the above decision, is merely to clarify and define the application of the copyright act to the rights of the public and the broadcaster in radio—a discovery of science unknown when the act was adopted.

At common law an author had no exclusive right whatever in his published work, and even the copyright act, as stated by the Congressional committee which framed it,

(Continued to Page 3)

OLDEST RADIO FAN



Mrs. Katherine Steiger, 311 West McMicken avenue, Cincinnati, Ohio, is 97 years old. She is the oldest radio fan in Cincinnati and probably the oldest in the country. Although her hearing is not as good as it was in former years, she enjoys Crosley concerts regularly by using the ear-phones jacked into the loud-speaker connection. She uses a Crosley Trirdyn receiver.

Crosley System Of Definite Model Time Favored By Dealers

Poll Taken By Trade Paper Shows Overwhelming Majority Is In Favor of Regularity In Announcements.

The policy adopted by The Crosley Radio Corporation more than a year ago in regard to the announcement of new models at definite periods has met nationwide approval as is shown in a poll taken by Radio Merchandising, a monthly trade publication. This magazine asked its readers to express their opinion on the definite period plan, and of the 9,064 who replied, 8,538 voted in favor of its adoption.

The Crosley Corporation was the first of the radio manufacturers to realize the danger lurking in the shadows of kaleidoscopic changes, and long ago decided to announce

KENTUCKY WOMAN WINS GRAND PIANO CONTEST.

The winner of the Baldwin Grand Piano contest conducted recently from radio station WLW, was Mary M. Davis of Erlanger, Kentucky. Among the thousands of names submitted, that of RAYMOND was selected. There were hundreds each of HARDING, WASHINGTON and many other notable Americans. But in that of RAYMOND alone was there found an important historical story in close connection with the house of BALDWIN.

new lines only at certain periods of the year. Last July all Crosley jobbers were invited to attend a convention at the Cincinnati factory, at which a new line was introduced. This plan was approved by all present, and since then has been adopted by many other manufacturers.

Radio Merchandising also realized the value of the new system and in

(Continued on Page 8)

Music and Speeches Will Be Heard By Radio Listeners

Every Incident In Connection With Political Meeting In Cleveland Will Be Broadcast From Crosley Station.

Owners of radio receiving sets will have an opportunity of listening to all the proceedings of the National Republican Convention, in Cleveland, Ohio, beginning June 10th, if they tune in Station WLW, of The Crosley Radio Corporation, which will broadcast every incident in connection with this great event.

Arrangements have just been completed for this stupendous task, which will result in owners of receiving sets being able to hear everything that happens from the time the bombs are fired calling the convention to order until the next candidate for the Presidency is selected.

Imagine sitting in your library and listening to the blare of trumpets, the nominating speeches, the cheering of various delegations as their "favorite son" is mentioned, the counting of the votes, and last of all, the announcement of the name of the man who is to lead the Republican Party in the Fall campaign.

The American Telephone and Telegraph Company will arrange microphones throughout the convention hall so that every incident will be heard, and telephone wires connected to the Crosley studio will carry everything direct to the broadcasting instrument for transmission to the listening public. Handling of the wire work here in Cincinnati will be done by the Bell Telephone Company.

There will be thousands of interesting happenings that will be described as the convention proceeds. As the various delegations enter the hall, led by special bands, announcers will describe them, with personal touches here and there. Appointment of committees, so vital and of such great interest to the voters, will be dwelt upon and the work of the committee that drafts

(Continued on Page 6)

Crosley WLW Programs For Week of June 15th

SUNDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 15th. Eastern Standard Time.
309 Meters.

9:30 A. M.—
School conducted by the Editorial Staff of Sunday School Publications of the Methodist Book Concern.
11:00 A. M.—
Services of the Church of the Covenant, Dr. Frank Stevenson, Minister.
7:30 P. M.—
Church Service of First Presbyterian Church of Walnut Hills. Rev. Fredk. N. McMillin, Minister.
8:15 P. M.—
Concert by the Western and Southern Orchestra, directed by William Kopp. (Under the auspices of the Western and Southern Life Insurance Co.). Don Beddoe, tenor, soloist.

MONDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 16th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Spanish Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Babson Reports.
4:20 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Special program by the Hope Haven Singing Society, under the direction of Mr. Ed. Meyer.
8:30 P. M.—
STOP—LOOK and LISTEN to Hon. Senator Schultz.
8:45 P. M.—
Concert of solos and ensemble by the Mastropolo Trio.
Carlo Mastropolo, violin
MacMorris Houston, cello
Rossina Arrico, piano

9:15 P. M.—
Chosley Theatrical Review followed by WOODY MEYER'S CINCINNATI ORCHESTRA.
Ted Kennedy, Violin and Director
Ernst Meyer, Drums and Manager
William Dinkel, Piano
Earl Vetter, Saxophone
Robert Seavers, Saxophone
Rudolph Schneider, Trombone
Cliff Yeager, Trumpet
William Rieth, Banjo
William Wilde, Tuba and Violin.
(Baldwin Piano)

TUESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 17th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Spanish Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Topics of Interest to Women. Times-Star News. Talk: "Silver Fox Farming" (through the courtesy of the Great Northern Fox Company).
4:20 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.

10:00 P. M.—
Violin Solos:
(a) Rondino (on a theme by Beethoven)Kreisler
(b) Valse TristeSibelius
Mr. L. B. Dobie, accompanied by Alma L. Dobie.
Soprano Solos:
(a) Come to the Garden, LoveM. Turner Salter
(b) Wind SongJ. H. Rogers
Nelda H. Vibrans, accompanist
Eva S. Robison, accompanist

Piano Solos:
(a) Kiss WaltzStrauss
(b) Italian Fantasie
Eva S. Robison
Violin Solos:
(a) SerenadeGabriel Pierne
(b) AdorationF. Borowski
L. B. Dobie, accompanied by Alma L. Dobie.

Soprano (with violin obligato)
(a) "Sunset"Clare H. Kummer
(b) "Night Comes and the Day is Gone"G. E. Holmes
Nelda H. Vibrans, soprano
L. B. Dobie, violin
Alma L. Dobie, accompanist.
Dance Program by the NORTHERN HILLS Orchestra.
"Soldiers of Peace,"—The Cincinnati Fire Department Quartet.
SPECIAL MIDNIGHT PROGRAM BY THE CHUBB-STEINBERG ORCHESTRA.
Art Hicks, violin and director
Walter MacDonald, piano
William Cook, saxophone and clarinet
Holman Becraft, saxophone
Rex Adkins, trumpet
Frank Bamberger, trombone
Leon Warren, banjo
Bud Ebel, drums.
(Baldwin Piano)

WEDNESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 18th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Spanish Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Concert for the "Shut Ins" by the Wurlitzer Concert Company, under the direction of Mr. and Mrs. William Duning.
4:20 P. M.—French Lesson from Crosley University by Mme. Ida Teimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
Special program by instrumental trio from Richmond, Indiana.
Miss Mary Wray Jones, violin
Miss Mary Kathryn Gates, cello

Miss Mildred Schalk, piano
2. Entertainment by Mr. Harry Frankel, Gennett Record Artist.
3. "Un Giono in Venezia"Nevin
(a) Dawn
(b) Gondoliers
(c) Venetian Love Song
(d) Goodnight
Richmond Trio
4. Songs by Miss Irma McFarland, contralto of Springfield, Ohio.
5. Trio:Selected
6. Program by the Choral Department of the Clifton Music Club, under the direction of Mrs. Emma Beiser Scully.
(a) The SnowElgar
(b) Twenty-third PsalmSchubert
(c) In MayParker
7. Mr. Harry Frankel and his Ukulele, singing "The Old Black Crow in the Hickory Tree" and other feature songs.
8. Finale: Selections by the RICHMOND TRIO.
(Baldwin Piano)

THURSDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 19th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
12:45 P. M.—Spanish Lesson from Crosley University.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Talk: "Graphite" by Mr. Fred J. Brunner.
Piano Solos by Miss Adelaide Apfel.
5:15 P. M.—Baseball Results.

10:00 P. M.—
Times-Star Radio Club of the World.
10:10 P. M.—
Songs: (a) "Roses of Picardy"Wood
(b) "Where My Caravan Has Rested"Lohr
(c) "Old Fashioned Town"Squire
Mrs. Ida Elliot, accompanied by Miss Lillie Finn at the piano.

2. Reading: "Betty at Her First Ball Game" (request)
Miss Nora Beck
3. Songs:
"Dream"Bartlett
"Sweetheart"Romberg
"Mighty Like a Rose"Nevin
Mrs. Louise Phalsgraph Fappner

4. Piano Solo:
"Butterflies at Play"Sponagel
Miss Lillie Finn
5. Song:
"So, This is Love" (Miss Bluebeard)Goetz
Mrs. Margie Metz

6. Reading:
"How Miss Ceely Took the Cake"
Miss Nora Beck
7. Vocal Duets:
"Barcarolle"Offenbach
"When Twilight Weaves"Beethoven
Mrs. Ida Elliot and Mrs. Metz.

11:00 P. M.—
Special Entertainment by the DOHERTY MELODY BOYS
F. A. Pendergast, piano
Ridge Bludau, trumpet
Leo Bludau, saxophone
William Browne, trombone

Bake Holthaus, drums
J. L. Doherty, banjo and Manager.
(Baldwin Piano)

FRIDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 20th. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Market Reports.
3:00 P. M.—Stock Quotations.
4:00 P. M.—Special Program. T. C. O'Donnell, Editor of Writers' Digest, lecture on "Practical Lessons in Writing."

SATURDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 21st. Eastern Standard Time.
309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.

DAILY PROGRAM

10:30 Weather Forecast.
A. M. Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond opening quotations, Foreign Exchange opening, Chicago opening grain quotations, Cincinnati and Chicago hog market reports.
Westheimer and Company, opening quotations of New York Stock Exchange.
Weather Forecast repeated.

P. M.
1:30 Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond, Foreign Exchange and Chicago grain noon quotations. Also closing Chicago cash grain quotations. Complete Indianapolis and Chicago live stock report; Cincinnati cattle market report.
Westheimer and Company, closing quotations Cincinnati Stock Exchange, giving the bid, offer and sale.

3:00 Henry W. Brown & Company, Cincinnati Cash Grain Market closing quotations with market conditions. Closing quotations of the Chicago Grain Market.
Westheimer and Company, closing quotations at New York Stock Exchange.
Bureau of Markets, United States Department of Agriculture, Chicago and New York Butter and Egg Market reports.

Special Half Hour Program and News at 4:00 each afternoon, except Saturday and Sunday, as announced by Radio.
Sunday School Services at 9:30 and Regular Morning Services of the Church of the Covenant, beginning at 11:00.
Special Program at 8:00 P. M.

CONDENSED TIME TABLE OF WLW BROADCASTING STATION OF THE CROSLY RADIO CORPORATION

970 KILOCYCLES, 309 METERS EASTERN STANDARD TIME CINCINNATI, OHIO.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.
11:00 A. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.
7:30 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	
8:15 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	
	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.		

Crosley Radio Weekly

Published by The Crosley Radio Corporation, formerly The Precision Equipment Company and Crosley Manufacturing Company, Manufacturers of Radio Apparatus Colerain and Alfred Streets, Cincinnati, Ohio.
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 Robert F. Stayman
 Editor
 Alvin R. Plough
 Associate Editor

ENTERTAINING SHUT-INS.

Increased efforts to entertain the shut-ins—those men, women and children who are not able physically to enjoy life as we do—are being exerted by Fred Smith, studio director at WLW, and as a result of these efforts he is receiving hundreds of letters thanking him and urging him to continue his good work.

We who are strong of body know little, if anything, of the suffering endured by our blind, crippled or sick friends and seldom do we even pause to consider the manner in which they pass the long hours in their room that many are forced to regard as prison cells. We know we enjoy listening to a radio concert, but the amusement radio has given to us is nothing compared with that given to the shut-ins. Many have told us they feel like they are living in a new world—they have forgotten their infirmities and their suffering has been relieved.

Before the advent of radio, the shut-ins looked upon the evening hours with horror, especially if lonesomeness were added to their sufferings. But now the evenings are filled with entertainment, and added joy is provided when these people know that special concerts are being broadcast for their benefit. Mr. Smith has dedicated the Sunday evening concerts to his listeners who cannot leave their rooms, and is preparing several regular afternoon programs especially for them.

INCONSISTENCIES.

Those who have been attending the Senate Committee hearings on the Dill Bill have been unable to reconcile the statements of witnesses who have testified for the American Society of Composers, Authors and Publishers with their actions. This bill provides for an amendmet to the Copyright Law which will permit owners of radio stations to broadcast copyrighted music without payment of royalties to the publishers' association.

It has been stated by persons who have taken special interest in the committee proceedings that the Society, being strictly on the defen-

sive, realizes the fight is as good as lost and is using methods typical of the last trench stand. The witnesses exhausted themselves trying to prove radio ruins their songs and kills their business, but came back with the assertions that they were soliciting stations to become licensees and were using every known ruse to have their music broadcast.

The question immediately arose as to why the Society should be "urging broadcasting stations to ruin their songs and kill their business." But do not make any mistake about such an inconsistency failing to register with the lawmakers. One Congressman observed:

"If radio is so injurious to their business as they say, why don't they cancel what broadcasters' licenses they have, as they have the right to do under the terms of the licenses, and refuse to let any broadcasters use their music?"

UNIVERSITIES URGED TO OPERATE RADIO STATIONS.

Madison, Wis.—Establishment of radio broadcasting stations by universities, for the dissemination of learning by wireless, was recommended by Prof. W. H. Lighty of the University of Wisconsin at the meeting of the National University Extension Association, just held here.

"Radio communication constitutes one of the outstanding inventions that is destined to profoundly change our social institutions," Lighty says. "The radio once again buttresses home and family influences. In my boyhood the fireside lure may have been Arabian Nights, but now for my boy it is Radio nights.

"The public school system of a great city, the municipal or the state university and likewise all national universities for service to the times, should have the opportunity to serve their contemporary constituencies with such light and learning as the radio broadcast can freely supply.

"Numerous broadcasting stations in institutions of learning co-operating with one another or supplementing one another may make contributions of inestimable value in the happiness and progress of mankind."

Dill Bill Defended In Letter Of Reply To New York Editor

(Continued from Page 1)

was "not primarily for the benefit of the author, but primarily for the benefit of the public." The Dill bill, therefore, is not invasion of any inherent right whatever, but merely a necessary solution for the public benefit of the new problem presented by radio.

One of the leaders of the opposition to this bill has recently acknowledged that radio is "the greatest blessing ever conferred by science upon mankind," and in its broadcasting form is free to the public. Its educational, inspirational and recreational virtues can be enjoyed for the trifling expenditure a boy may make in the building of a receiving set. To the poor, the shut-ins and the isolated it opens opportunities for enjoyment and instruction otherwise available only to the rich or the favored. The vital question of public policy is, shall this great blessing and public service be kept free to the public or shall the cost of broadcasting be so augmented that either it must be discontinued or a way must be found (if it can be done) to compel the public to pay?

The chief spokesman of the American Society of Composers, Authors and Publishers has recently said that it controls "practically all" of the popular music that is broadcast. Were it not for this virtual monopoly the individual song writer and publisher would be more than delighted to offer his music without charge for broadcasting, in order that without expense to him it might be tried out in a single moment in the ears of millions of listeners. Thereby he would save the enormous expense of the present cumbersome method of popularization through hired singers, cabaret performers, vaudeville artists, musicians and orchestra leaders. But because of its virtual monopoly, the society feels able to insist that the broadcaster not only continue to af-

ford without charge this unparalleled opportunity for instantaneous publicity, but, in addition, pay its price, not for the individual piece broadcast, but for a general license to play music controlled by the society, thus insisting upon a wholesale purchase by the broadcaster, whether he desires to broadcast few pieces or many.

Obviously, once acceptance is yielded to this principle the performers, musicians and lecturers will follow the remunerative precedent, and the rapidly mounting costs will either destroy broadcasting or compel its commercialization by resort to the paid hawking of wares and the imposition of a tariff upon the listeners. Already broadcasting stations have closed through inability to meet the additional burden of exaction by the society.

Consequently, a grave question of public policy and public interest is presented. Is it wise statesmanship to permit an organized group of 326 persons to subvert the present free basis of this great public service to 100,000,000 people, particularly in view of the fact that but for broadcasting these same persons would have to make an immense expenditure to obtain a publicity far inferior to that which broadcasting offers to them free? Is it not plain why the public, who know what the freedom of broadcasting means to the poor, the sick and the isolated, are solidly behind the Dill bill as preventing uses of the copyright law which Congress never realized nor intended?

Furthermore, the average song writer is one of the poorest paid of the "white-collar" class. Having no means of his own for popularizing his music, he is at the mercy of the big publishers, who exact an assignment of his copyright. Radio, on the other hand, offers free to the song writer an opportunity for publicity far surpassing that which he can purchase of any music publisher by the sacrifice of his copyright. As an incentive to individual initiative and accomplishment by song writers, broadcasting on its present free basis is unparalleled.

Continued on Page Five.

SUBSCRIBE NOW!

Detailed information regarding the development of receiving and broadcasting, interesting news and feature stories and advance programs of WLW are to be found in the Crosley Radio Weekly. This is the most up-to-the-minute paper of its kind in the radio field, and should be in the home of every owner of a radio receiving set. Information contained in every issue is of the greatest value to you. The subscription price is but \$1.00 per year. Subscribe now.

Name

Street and Number

City and State

Attach \$1.00 and mail this to the Crosley Radio Weekly, The Crosley Radio Corporation, Cincinnati, Ohio.

DEALERS

For Immediate Delivery

CROSLY

Better—Costs Less

APPARATUS

EIGHT BIG WAREHOUSES

WAKEM & McLAUGHLIN, Inc.
CHICAGO.

Radio Will Improve Literary Quality Of Political Speeches

Professor Of Public Speaking Discusses Effects of Wireless On Political Campaigns.

Columbus, O.—Since the radio has become so popular in Ohio as a medium for political speeches many politicians are learning that the old method of oratory, with fist-shaking and hair-tossing, is of no avail and it is predicted that before the fall campaign opens teachers of public speaking will have many private pupils from among the leaders of political affairs.

Dr. Delbert Lean, professor of public speaking at Wooster college, predicts that the radio will do much to improve the literary quality of political speeches. Most of the old-time speakers depend much on their physical appearance, their bodily movements, gesticulations and facial contortions to stir their audience. Any important point was driven home with a resounding bang of the fist on a convenient table. A whole plank in the platform of the opposing party could be dismissed with a snap of the fingers. A shrug of the shoulders was sufficient to make a pigmy of an erstwhile gigantic opponent. Pantomime took the place of logic, and clear English was not necessary if the speaker was sufficiently athletic.

But with the radio these tricks are as useless as an icebox on a polar expedition. Fist-banging and finger-snapping are merely static interference to the radio fan, and the shrugs and grimaces are lost altogether. The speaker's ability to hold his auditors and convince them depends absolutely on what he says.

The swaying of the listeners' emotions is secondary to clear presentation of facts. Only the master of English, who depends solely on the power of his words and his ability to use them, will be able to convince.

It is said that in the old days many sat and listened to ranting demagogues because of inability to get out of crowded halls. The radio is a boon in this respect—instead of treading over dozens of feet and being ordered roughly to "sit down," the listener now can turn a knob and be transported to a concert hall.

THE GOODNIGHT MESSAGE.

The patter of tiny feet was heard on the stairs and Mrs. Blank raised her hand for stillness among the members of her bridge club.

"The babies are going to give me their goodnight message," she whispered. "Listen, it always gives me a feeling of reverence."

The silence was intense as the women listened: "Mama," came the shrill whisper, "Willie found a bug."

Series Of Suggestions Issued For Benefit Of Radio Listeners; Many Difficulties Are Eliminated

GETTING THE BEST OUT OF SUMMERTIME RADIO.

The extent to which this will be a radio summer is becoming apparent with the ever-increasing efforts made by broadcasters, manufacturers and other interests in the radio industry, to set a high-water mark of perfection for radio reception during the coming months. Requests from many parts of the United States have led the Radio Section of the Associated Manufacturers of Electrical Supplies, which includes in its membership all the leading elements in the radio industry, to issue a series of suggestions to the radio public.

Little difficulty should be experienced in securing good reception in the summer, it is pointed out, as during the past year the power of sending stations has been materially increased. This is expected to eliminate many of the previous difficulties noted during the summer months, not to mention the numerous improvements and refinements in receiving apparatus now on the market, all of which undoubtedly will result in greater satisfaction to the radio enthusiast.

The suggestions are as follows:

1.—Put your set in the pink of condition. Whether your radio receiver is to be used at home, at the seashore or in the mountains, see that the connections are gone over and tightened up, that old batteries are replaced and that a good set of tubes are installed.

2.—In camping with a radio, if your receiver is one of the antenna type, erect your aerial from the camp to a branch of one of the tallest trees in the immediate vicinity. If thunderstorms are prevalent, it will be found advisable to erect an additional antenna not over ten to twenty feet off the ground. That type of aerial is not so readily influenced by atmospheric disturbances. An aerial of this character can be of any length from 100 to 200 feet.

3.—Whether you use a receiver which operates from a loop, or a receiver which operates from an antenna, the sensitiveness of the receiver should be reduced in times of atmospheric disturbances either by reducing the filament temperature or by "loosening the coupling," so that the best results might be obtained from your local stations. On the other hand if atmospheric conditions are good the filament temperature should be readjusted to normal so that the sensitiveness of the receiver might be increased and reception obtained from broadcasting stations located at greater distances. The long low aerial or the loop type of receiver will give

marked relief this summer from atmospheric disturbances.

4.—See that you have a good ground connection when the aerial is used. If such cannot be obtained at the camp or at the seashore, the equivalent of a good ground connection can be had in the use of a piece of wire 100 to 200 feet in length laid over the surface of the ground and directly underneath the aerial.

5.—Receiving apparatus in the camp should be duly protected from moisture and dampness. A moderate amount of moisture and dampness may not interfere with the operation of the average type of receiving set, but at least the set should not be allowed to get wet by exposure to rain or inclement weather.

6.—Broadcast listeners should bear in mind that the electrical constant of aerials erected at the seashore or in camp, may be quite different from the electrical constant of the aerial used with the same set at home. This means that stations formerly heard at home will not come in at the same point on the dials in the camp. It should not be difficult to locate new positions for such sets after the first evening's operation.

7.—With regard to the head tel-

ephones be sure that the headset cord is not worn, that the connections are tight at the back of the headphone and that the caps are also screwed down tight.

To summarize: Install fresh batteries; tighten up all connections; protect the receiver from dampness; use a lower aerial when atmospheric disturbances are present and a longer aerial when reception conditions are favorable, and see that your headset is in good condition. Also watch your tubes carefully.

Mysterious listeners have been sending throat lozenges to the singers of station WLAG, Minneapolis.

Genuine Radiotron Tubes

WD-11	\$5.00
WD-12	5.00
UV-199	5.00
UV-200	5.00
UV-201-A	5.00
UV-202	8.00

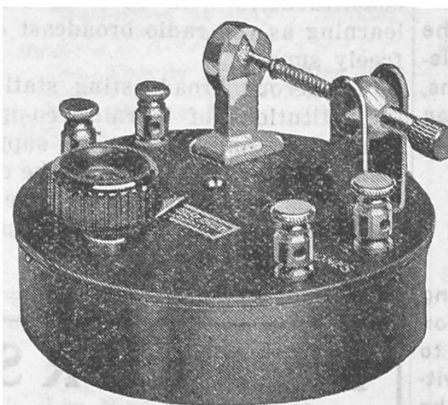
We carry a large stock of tubes at all times and will make prompt shipment of any of the above upon receipt of remittance to cover. We also are distributors of radio apparatus made by

The Crosley Radio Corporation.

THE JOHNSON ELECTRIC SUPPLY CO.

232 East Fifth St., 331 Main St. Dept. A. CINCINNATI, OHIO.

CROSLLEY JUNIOR CRYSTAL RECEIVER



This is the new Crosley Junior Crystal Receiver, the ideal radio set for use in listening to local broadcasting stations and those within a radius of about 25 miles. Clear, undistorted reception is assured, this new set providing perfect reproduction of radio signals. No batteries or tubes are required, nothing to become disconnected, nothing to be damaged by the children.

With the advent of summer, the demand for crystal sets has increased tremendously. Crosley dealers and jobbers will find that this new set will meet immediate approval, and we suggest that you get your orders to us as soon as possible.

Price, without phones or aerial equipment,\$4.00

THE CROSLLEY RADIO CORPORATION

Powel Crosley, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

Dill Bill Defended In Letter Of Reply To New York Editor

(Continued from Page 3)

The claim that radio kills the market for music is the reverse of the fact. No music would ever be sold unless brought to the ears of the public. The song "Marcheta," first published in 1913 and for ten years covered with dust upon the publisher's shelf, became one of the greatest hits of the season when introduced to the public by broadcasting. In its circular letter of April 1, 1924, accompanying the payment of a quarterly dividend of \$56,000 to its members, the society said that "the current dividend is the largest yet declared."

An effort has been made to represent the Dill bill as affecting the copyright of playwrights and authors of prose works. In point of fact, it concerns itself solely with musical compositions, and does not touch plays, operas or prose.

In short, unless protection of the public interest in preserving the present freedom of the air can be secured, either through legislation or the courts, the public is threatened with a further multiple tax for the enjoyment of popular music. For example, an orchestra leader purchases an orchestration. Necessarily he does so for the purpose of publicly performing the music. He pays a price which includes the royalty. Nevertheless, the society also requires the hotel, dance hall or other place where the orchestra plays to pay it for a license to give that very same performance; and it is now also claiming that if this performance is simultaneously broadcast a further license fee must be paid by the broadcasting station. It seems inconceivable that the copyright act ever intended such multiple taxation; and the public, who must in the end pay these charges, has a vital interest in preventing such an interpretation of that act.

I trust, therefore, that the foregoing will make clear that the Dill bill is sound in law and in policy; that it is the only means of preserving to the public the free service of radio; that it opens a new freedom to the song writers, and that it protects and vindicates the fundamental principles of the copyright law.

CHARLES H. TUTTLE,
Of counsel to the National Association of Broadcasters.
New York, April 30, 1924.

COUNTED OUT.

A Virginia gentleman of color tells us that he doesn't hit his wife any more since he got fined in police court.

"Nosah, from now on when dat wife zassperates me, I'se gwine kick her good—den she can't show it to de judge."—Whirlwind.



New Crosley Engineering Achievement Approved By Over 200 Experts

A three tube set with five tube efficiency—the greatest selectivity with the minimum effort—positive calibration to any wave length between 200 and 600 meters. These are only a few of the many advantages offered in the remarkable new Crosley Trirdyn Radio Receiver.

It was only after a year of constant experimenting, that our engineering department perfected this exceptional receiver. Thorough tests proved to us that it would out-perform any receiver ever before produced. But we were not satisfied with our own opinion. So we shipped out 200 of these sets to experts in every part of the United States. Their criticisms are one and the same—"tried out your new Trirdyn Receiver Saturday night and logged 13 stations, among them Cuba, New York and Omaha, between 9 and 10 o'clock. The set was very selective. During the time this test was on, local station KSD was operating and we went through them without any difficulty or interference whatever. The range of the local station was not more than three points variation in the dial setting."

"Tried one of these sets and obtained wonderful results. Were able to log all stations which we heard very successfully. This set should go over big." "The set has wonderful volume and is selective"—etc.

This new Crosley triumph is called the Trirdyn because of its original combination of the "R's"—Radio frequency amplification, Regeneration and Reflex. The first tube incorporates non-oscillating, non-radiating tuned radio frequency amplification; the second tube, a regenerative detector reflexed back on the first tube for one stage of audio frequency amplification. Then it has a third tube which acts as a straight audio frequency amplifier. It uses the ultra selective aperiodic antenna circuit and external selector coil, which adds to its wonderful selectivity.

The Crosley Trirdyn in range, volume and selectivity is the equal of any five tube receiver on the market. Greater volume will, of course, be obtained through the use of storage battery tubes, but it will function well in any type and can be used with either indoor or outdoor antenna.

The opinion of many experts have convinced us that the Trirdyn is the best receiver ever offered the public regardless of price.

Practically every radio dealer can furnish you Crosley Radio Sets, including not only the Trirdyn, but the Model 51, a two tube set for only \$18.50; the Model V, a single tube receiver at \$16.00; the Model VI at \$24.00; the Super VI at \$29.00; the Model X-J at \$55.00 and the Super X-J at \$65.00.

See This New Wonder At Your Dealers

All Crosley Regenerative Sets
are Licensed under Armstrong
U. S. Patent No. 1,113,149.

CROSLY
Better -- Cost Less

Crosley produces more Radio
Receiving Sets than any other
manufacturer in the World.

Radio Products

THE CROSLY RADIO CORPORATION

POWEL CROSLY, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

Texas Holds Lead With Forty-Two Radio Broadcasters

Pennsylvania Is Second With 41 Stations—Ohio Has 30—More Than 580 Now In Operation.

The question of the "survival of the fittest" in broadcasting is again before the public, and the Government for that matter, as radio broadcasting stations are almost as numerous as a year ago, and still increasing. Today there are 584 in operation, whereas the peak was only 591. Practically all wave lengths have been exhausted, necessitating a division of time.

The State of Texas leads in broadcasting, having 42 radio broadcasting stations; Pennsylvania is second, with 41; California, which used to be first, has 39; and Ohio has 30. New York and Illinois are tied with 29 each; Missouri has 28, Washington 24 and Iowa 23. Nevada, New Hampshire, and Porto Rico bring up the rear with one each, but every state is supplied with one or more stations.

Broadcasters by States:	
Alabama	4
Alaska	3
Arizona	3
Arkansas	8
California	39
Colorado	12
Connecticut	4
Delaware	2
District of Columbia	8
Florida	9
Georgia	7
Hawaii	3
Idaho	6
Illinois	29
Indiana	10
Iowa	23
Kansas	12
Kentucky	2
Louisiana	18
Maine	4
Maryland	3
Massachusetts	14
Michigan	18
Minnesota	14
Mississippi	3
Missouri	28
Montana	7
Nebraska	15
Nevada	1
New Hampshire	1
New Jersey	15
New Mexico	3
New York	29
North Carolina	3
North Dakota	4
Ohio	30
Oklahoma	8
Oregon	17
Pennsylvania	41
Porto Rico	1
Rhode Island	9
South Carolina	4
South Dakota	5
Tennessee	8
Texas	42
Utah	6
Vermont	3
Virginia	6
Washington	24
West Virginia	3
Wisconsin	10
Wyoming	8

TRIRDYN BEATS 'EM ALL.

The following letter is typical of the many received every day: "The Crosley Radio Corporation, "Gentlemen:

"I have tried out quite a number of different makes of radio receivers, with some costing four times as much as your Trirdyn, but I have yet to find a set that can compare with the Trirdyn in simplicity of operation, selectivity, sensitiveness, and volume. Speaking of volume, my receiver is often heard by people living at the edge of town about a mile away.

"While some people are complaining of poor reception, I am able to reach out and bring in clearly on my loud speaker such stations as Oakland, California, Chicago and Hastings.

"The Trirdyn is the only receiver I have ever tuned with which I have absolute confidence of bringing in any station I want.

"Yours very truly,
"J. R. Duncan, Madill, Okla."

WLW To Broadcast National Republican Convention Speeches

(Continued from Page 1)

the Republican Platform will be broadcast in detail. Naturally the complete platform will be broadcast as soon as it is approved.

Never before has the public had such an opportunity of "attending" a national convention. By the public, we mean the masses. Naturally there are a comparatively few who are able to gain admission, but there are millions who would enjoy listening to the nation's greatest speakers and who have an opportunity of doing so now for the first time. From an educational standpoint, the broadcasting of this convention will be of great value. There are thousands of people who really have no idea of the manner in which their President is nominated, and there are others who know but little concerning the proceedings of a political convention. From an entertaining standpoint, there are thousands of features we could itemize. Listeners will "hang on" to their head-phones or keep their loud speakers in operation from beginning to end, and will admit then that nothing more entertaining ever was broadcast.

In announcing that WLW would broadcast the convention proceedings, Powel Crosley, Jr., President of The Crosley Radio Corporation, said:

"The matter of broadcasting the National Republican Convention, to be held in Cleveland commencing June 10th, has been definitely arranged. It was decided that Cincinnati would be included as one of

the cities to be tied-in by telephone lines of the American Telephone and Telegraph Company, and inasmuch as both WLW and WSAI had made tentative application for performing this service, a division of time permitting both stations to handle a portion of the broadcasting of the convention was suggested. However, officials of WSAI—the United States Playing Card Company—decided that as most of the convention would take place in the day time, and as a division of time would, therefore, require the giving up of several of the regular daily periods of WLW, and also in consideration of the fact that probably one station handling the whole thing could do so with less complications, they would withdraw their application to handle all or a part of this work, leaving the entire broadcasting, so far as Cincinnati was concerned, in the hands of The Crosley Radio Corporation.

"Mr. P. A. Greene, of WSAI, informed me that wherever the broadcasting of the convention interfered with the programs of WSAI, WSAI would give up the time to WLW, which action will unquestionably be greatly appreciated by the listening public. This does not mean that there was any difficulty encountered in regard to a division of time in case both stations had undertaken to handle this work, as WLW was agreeable to an equal division of time.

"The expense involved on WLW for wire service is \$1,420. Special balance wires are required from Cleveland to Cincinnati and the Cincinnati Bell Telephone Company will have charge of the handling of the wires at the Cincinnati end of the line. In Cleveland every part of the convention will be picked up and transmitted into these wires to Cincinnati, where it will be put on the air by WLW. This will include the various sounds attendant upon the assembly of the convention, including the marching in of the delegates lead by their bands, the roll-call of delegates by States, the keynote speech, nominating speeches, and all of the business of the convention.

"This is the first time that the American people—except those few who are able to crowd into the comparatively small convention hall—will have an opportunity to hear the entire proceedings of a national political convention.

"Already people are tuning up their sets for this occasion. The demand for radio apparatus has increased. Every family should avail itself of the opportunity to hear the broadcasting of the convention."

THE EDW. J. GOETZ CO.
Wholesale Distributors Exclusively
Radio—Electrical Supplies
See Our
"Edgco Buyers' Guide"
For a Copy Write
Office and Warehouse
2409 Harris Avenue, Norwood, O.

Passage Of Radio Bill At The Present Session Doubtful

Canvass Said To Show It Has Not One Chance In Hundred of Being Approved By House.

After a thorough canvass of House leaders, it has been learned that the White Radio Bill has not one chance in a hundred of its being passed at this session.

Congress probably will adjourn within the next few days and there are pending many bills, passage of which the leaders of both parties believe would enhance their respective chances in the coming elections. Vigorous and aggressive action on the part of the sponsors of the White Bill might get it through, but such is lacking. Representative White is in Mexico City attending as a delegate the Pan-American electrical conference. While there is practically no opposition to the White Bill, on the other hand there is no concerted effort to bring it before the House.

Rules Chairman Snell and Republican Floor Leader Longworth believe the bill should be considered "IF there is time enough." But even if the House did pass the bill, it is doubtful whether it could get through conference in the short time remaining.

Without going into details, Secretary Hoover believes the radio broadcasting situation is about as bad as it could be and if the White Bill is not enacted full-hearted cooperation among the broadcasters will be necessary to prevent chaos. The trouble is primarily due to the large number of broadcasting stations compared to the limited number of wave lengths with the resulting interference. Mr. Hoover is going ahead with plans for a national conference of radio manufacturers, retailers and broadcasters as soon as Congress adjourns. He hopes agreements can be reached at it between all concerned to help the situation as much as possible until additional legislation is enacted.

If you wish to BUY or SELL
SECURITIES
Or own some about which you
DESIRE INFORMATION
COMMUNICATE WITH US
Our Statistical Department is At
Your Service

WESTHEIMER & CO
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The New York Stock Exchange
The Cincinnati Stock Exchange
Telephone Main 567
326 Walnut Street

CROSLY

51-P ~ \$25.00

Take your entertainment with you



SINCE the announcement of the Crosley 51, early in February, the popularity of this two tube set has grown by leaps and bounds. Selling at the price of \$18.50, it established an entirely new standard of value in the radio world. This receiver gives ample volume for a loud speaker on local receiving stations, and, under average receiving conditions, gives ample volume for a loud speaker on distant stations, frequently up to 1,500 miles or more. Under bad receiving conditions it is advisable to use head phones on distant stations.

Since the announcement of the regular Crosley 51, there has been an insistent demand on the part of jobbers, dealers

and individuals for a Portable 51. Here it is. The same wonderful little receiver that is now known so well as the 51, in a leatherette covered, portable case, with nickel plated trimmings and hardware.

Unlike most portable receivers, the case of the Portable 51—known as the Crosley 51-P—has ample room for a real power plant of batteries instead of a limited space for flashlight batteries, which have a very short life, even on dry cell tubes. The Crosley 51-P has ample space for three full sized six inch No. 6 dry cells to furnish the filament current for dry cell tubes. There is also room for three Eveready No. 764 vertical, intermediate 22½ volt "B" batteries, or the equivalent Burgess and French batteries, thus giving 67½ volts for the plates of the tubes, which means ample loud speaker volume under proper conditions. There is also ample room for a "C" battery, and provision is made for connecting in a "C" battery if desired. There is room for one or two coils of insulated flexible wire to be used as an antenna and ground wire, and there is a compartment for head phones.

The traveling salesman will take the Crosley 51-P with him to while away the evening hours when there is nothing else to do. He can drop a wire out of his hotel window, attach another wire to the radiator, and bring in stations within a reasonable range, and enjoy all of the pleasures of radio wherever he goes. The same is true of the camper and the automobile tourist. The farmer will use the Crosley 51-P in his home and when he goes visiting will take it along so that his neighbors, friends and relatives can enjoy the pleasures of radio when he comes to see them. Such organizations as Boy Scouts, Girl Scouts, and other clubs will find the Crosley 51-P an ideal receiver to round out the entertainment of the organizations.

The Crosley 51-P is so light and convenient, and can be used so efficiently on a small antenna, that it is recommended for canoes, motor boats, yachts, and for travelers on ocean voyages and on board trains.

The price of the Crosley 51-P is \$25.00. This does not include batteries, head phones, tubes or antenna equipment, which can be added at an additional cost of less than \$25.00.

THE CROSLY RADIO CORPORATION

POWEL CROSLY, JR., President

200 ALFRED STREET

CINCINNATI, OHIO

Crosley System Of Definite Model Time Favored By Dealers

(Continued from Page 1)

its editorial columns carried on a campaign that has resulted in so many dealers and distributors giving it their approval.

In the May issue of the above mentioned publication, the following article appears:

"Up to, and including April 15th, about forty-five per cent of the retail radio merchant readers of Radio Merchandising have voted on the question, 'Should there be a definite time for the announcement of new radio models to the trade?' The vote is overwhelmingly in favor of a definite model time: 8,538 radio retail merchants are for it and 526 against it.

"In addition to the votes recorded by the retail merchants, we have heard from hundreds of radio jobbers and they are practically unanimously in favor of the manufacturers having a definite time for announcing new models. Most of these jobbers complain of the difficulty they have had in the past in bringing out their catalogs. Price changes and model changes have made many of the jobbers' catalogs obsolete before they were off the press. These changes are the main reason for jobbers in many cases buying from 'hand to mouth.' The jobbers tell us that they do not know what minute prices or models will change, and they do not intend getting stuck with a lot of high-priced or obsolete stock on hand. The manufacturers tell us that this and that jobber is a broker ordering half a dozen after he has sold a half dozen, and the reason for both manufacturer and jobber dissatisfaction is that the jobber does not know where he stands from day to day.

"Having a given time to bring out new designs and the flat announcement that these designs and prices would stay put by these manufacturers for at least six months, would enable the jobbers to size up the field and make their decisions on lines in time to get out a complete catalog for that fall and winter. The retailer would also have a lot more confidence in the early catalog and the manufacturer could go into production much earlier and stay there. Today the retailer buys only what he has to from the earlier catalogs, believing that the next one along will have either newer things or lower prices, and he can, and frequently does, postpone buying much of anything from anybody.

"If the retailer knew that he was sure of protection for a few months, giving him time to move a respectable stock, he would feel better about buying, and so would the jobber."

Radio And The Presidential Campaign

Whether or not "radio elects the next President," as some enthusiasts have prophesied, it will play a tremendously important part in the Presidential campaign this year.

For the first time in history, radio will afford an opportunity for Presidential candidates to discuss issues and present their views to literally millions of persons as compared with the thousands they have been able to reach in previous campaigns.

But even more important than this will be the opportunity which radio will afford to citizens throughout the country, not only to hear the speeches of candidates, and to learn at first hand the views of statesmen, but also to enjoy the thrills of the big party conventions. Both the Republican National convention in Cleveland, and the Democratic National convention in New York City, will be broadcast.

All the public proceedings leading up to the selection of candidates, the nominating speeches, the doings of notables on the floor of the convention, and other picturesque, human interest aspects of the proceedings will be winged through the air to millions of listeners.

Presidential campaigns are one of the most appealing and human of American political institutions. The great political battles of the past have stirred the nation, developed leaders and made history. The intensity of the struggles makes them live vividly in memory. Men date their recollections by important political campaigns.

Following the conventions, this year, it is likely that the candidates of both parties, instead of making the traditional "swing around the

circle," which involves thousands of miles of hot and dusty travel and the nerve-racking excitement and fatigue of appearing before great public gatherings, will save their strength and yet reach more people by broadcasting their principal addresses. The fact that the last two Presidents of the United States succumbed to illness by which they were overtaken while on long tours, would indicate the wisdom of public men conserving their strength when possible by using radio.

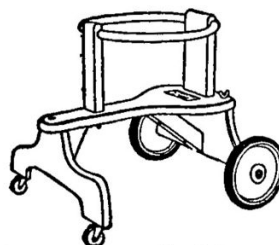
The educational effect on millions of American citizens listening to the proceedings of the forthcoming national conventions can scarcely be overestimated. Closer acquaintance with government and governmental and political procedures, will go a long way toward securing more active participation in government by the average citizen.

EX-ACTLY.

Sam: What am you doin' now?
Bo: I'se an exporter.
Sam: An exporter?
Bo: Yep, the Pullman Company just fired me.—Black and Blue Jay.

Shippers are asking restoration of the 450-meter wavelength for marine radio communication.

The Go-bi-bi

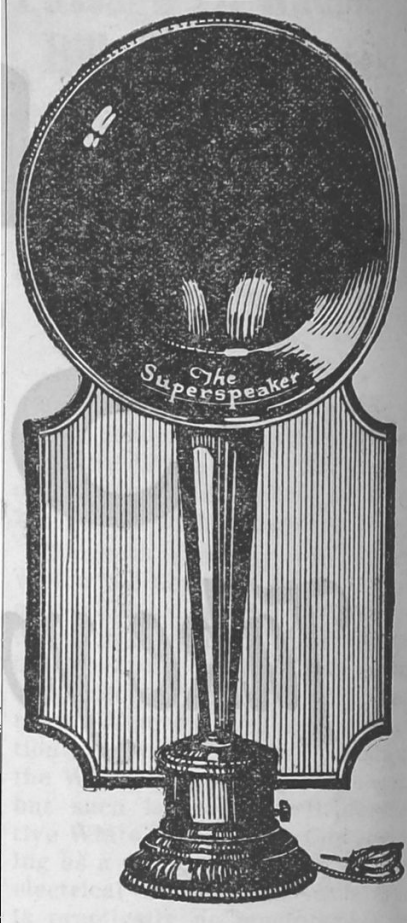


No longer does Daddy carry the infant about in his arms while mother prepares supper. Little brother and sister do not have to sacrifice their play hours to take care of the baby. And Mother—look at Mother, just as carefree as the children. All because the Tiny Tot in this home is learning to walk by means of the GO-BI-BI and needs little attention from anyone. On the contrary he is keeping the rest of the family entertained.

"My wife and I are 'ticked to pieces' over the GO-BI-BI we have for our ten months' old girl. It is just like a one ring circus to watch her." (Signed) Gordon B. Small, Springfield, Mass.

Every dealer in baby things or children's vehicles should stock the GO-BI-BI, and help to make healthy babies and happy homes in the community. Nothing like it for making satisfied customers.

CROSLY MFG. COMPANY
1632 Vandalla St. Cincinnati, O.



Superspeaker

MUSIC AND VOICE

contain no note to which the Superspeaker horn can possibly vibrate. Resonance—that bane of all reproduction—is thereby eliminated, leaving only the actual values of each note and tone, sent broadcast by the far-away station.

Micrometer adjustment to bring in extra distant stations—Needs no extra batteries or coils—A big, handsome, ebony-gloss finished musical instrument. Dealers, you can sell it!

**JEWETT RADIO &
PHONOGRAPH COMPANY**
5680 Twelfth Street
DETROIT MICHIGAN

We broadcast daily at
10:30 a. m. and 1:30 p. m.

Financial News

Market Reports

Government Bond

Quotations

Call Money Rates

Foreign Exchange, Grain

and Live Stock

Quotations.

Bond Department

THE

FIFTH-THIRD

NATIONAL BANK

of Cincinnati.



Distant Stations Heard Clearly By Trirdyn Owners

Iowa Man Listens To 100 Distant Stations While Cuban Tunes In Several In States.

Despite the fact that it is comparatively hard to bring in distant broadcasting stations at this time of the year, owners of the Crosley Trirdyn are experiencing very little difficulty, as is shown by the following letters which were picked from the many similar ones received daily. The first is from Fred H. Jess, of Holstein, Iowa, who went to the trouble of having his statement prepared in the form of an affidavit, while the other letter is from a Cuban physician to the Secretary of War and Navy of Cuba. A Crosley Trirdyn had been presented to the physician by the government official.

Mr. Jess's letter follows:

"May 31, 1924.

"The Crosley Radio Corporation,
 "Cincinnati, Ohio.

"Dear Sirs:

"When I sent in the card that came with my Trirdyn I informed you that as soon as I had received from one hundred stations I would send you the list.

"They are arranged as I received them. The first seventeen were brought in the first night I had the machine and it was not delivered until after ten o'clock.

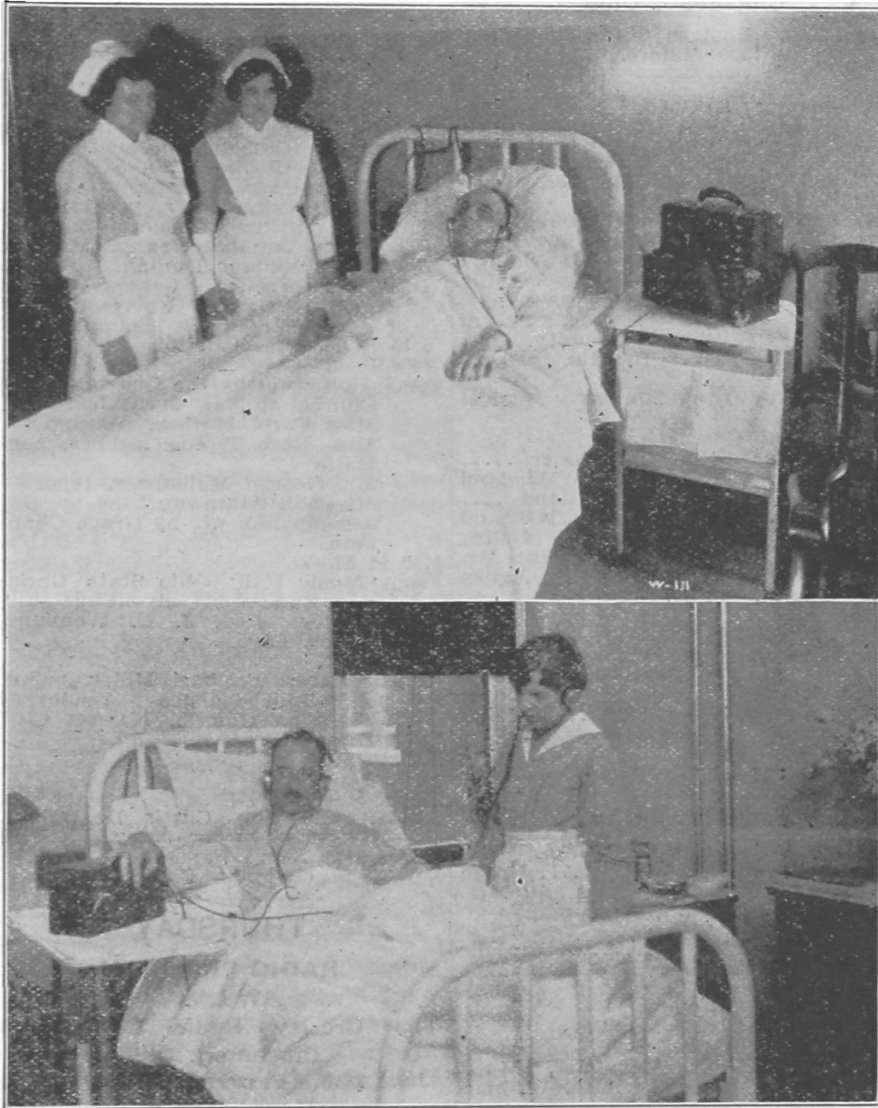
"You may draw your own conclusions as to whether or not I am satisfied with my purchase.

"Following are the stations I have heard:

- WFAA, Dallas, Texas; CFON, Calgary, Can.; WLAG, Minneapolis, Minn.; WDAF, Kansas City, Mo.; WMAQ, Chicago; KFI, Los Angeles; KYW, Chicago; KGW, Portland; KPO, San Francisco; KHJ, Los Angeles; WGAZ, South Bend, Ind.; WDAP, Chicago; WAAW, Omaha; WCAL, Northfield, Minn.; KGO, Oakland; WTAS, Elgin, Ill.; WSAI, Cincinnati; WOAW, Omaha; KFFV, Lamoni, Iowa; KFLZ, Atlantic, Iowa; WHB, Kansas City, Mo.; WOC, Davenport; WHAA, Iowa City, Iowa; WBZ, Springfield, Mass.; KFKB, Milford, Kansas; KLZ, Denver, Colorado; CKOK, Regina, Can.; WBAP, Fort Worth; WGR, Buffalo; KSD, St. Louis; WOS, Jefferson City; WSB, Atlanta; WHAZ, Troy; WCB, D.

(Continued to Page 3)

CROSLY RADIO SETS IN HOSPITALS



The pictures above show how Crosley radio receivers are being used in hospitals. The one on top shows James Vance, manager of the National Label Company, Cincinnati, enjoying a concert being received on a Crosley 51-P Portable Radio Set. He is recuperating from a serious operation performed at the Good Samaritan Hospital. Below is shown Eric G. Matchette, city salesman for the Milner Electric company, listening in with a Crosley 51 set. He is at Christ Hospital. Mr. Matchette specializes in the sale of Crosley radio apparatus.

Radio Promoting More Refined Taste In Furnishing Of The American Homes; Women Relying On Broadcast Information

Red plush photograph albums, parlor whatnots and horsehair furniture have largely vanished from the homes of the land along with the other decorative doodads of a few generations ago, but there are still many American homes where artistic decoration has continued to be conspicuous by its absence.

Toward correcting this situation radio is undoubtedly contributing more today than any other single factor. Not only has the new art brought thousands of homes into daily and intimate contact with the great outside world and its large

and varied interests, but it has brought into homes new ideas and additional knowledge of everyday household problems and interests which are helping to make the average home a much happier and more attractive place in which to live.

Housewives all over the land not only have an opportunity to hear the best of music and to keep abreast with the events of the day, but many features of radio programs are broadcast for their special enjoyment and help. Even more important than the menus for family

(Continued on Page 8)

Broadcasting Of Zoo Operas Is To Begin Monday, June 23rd

Series Of Eight Musical Plays to Be Heard By Those Who Tune In Station WLW.

Final arrangements have been made for the broadcasting from WLW, the radio station owned by The Crosley Radio Corporation, of the operas to be given at the Cincinnati Zoological Gardens during the summer. The first to be broadcast will be on Monday evening, June 23rd, starting at eight o'clock. Every Monday night thereafter, for eight weeks, these operas will be broadcast, much to the delight of those who appreciate and enjoy listening to such high class music.

The operas will be under the direction of Ralph Lyford, who is so well known in music circles both in the United States and abroad and who has selected the most delightful works of the greatest composers and artists. He has been successful in obtaining the services of a number of fine artists and a special chorus from New York to augment the special company now rehearsing here.

Those who owned radio receiving sets last summer well remember the wonderful operas broadcast by WLW, and thousands have sent in requests that we handle them in the same manner this year. On the other hand, those who have become interested in radio since last summer may look forward with the greatest anticipation to the broadcasting of these programs. While it is impossible just now to announce the name of the initial opera, it is certain that it will be a popular one, and we suggest that everyone who cannot be at the Zoo tunes in station WLW on the evening of June 23rd.

Add the broadcasting of these operas to the many other interesting programs prepared by Fred Smith, studio director at WLW, and it is readily seen that a wonderfully entertaining radio summer is ahead of the listeners. Every possible method of increasing the entertaining value of the WLW programs is being considered by Mr. Smith, who appreciates suggestions from everyone who enjoys listening to his programs.

Short-sighted Lady (in grocery)—Is that the head cheese over there?

Salesman—No, ma'am; that's one of his assistants.

Crosley WLW Programs For Week of June 22nd

SUNDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 22nd. Eastern Standard Time.
 309 Meters.

3:30 A. M.—
 School conducted by the Editorial Staff of Sunday School Publications of the Methodist Book Concern.
 11:00 A. M.—
 Services of the Church of the Covenant, Dr. Frank Stevenson, Minister.
 7:30 P. M.—
 Church Service of First Presbyterian Church of Walnut Hills. Rev. Fredk. N. McMillin, Minister.
 8:15 P. M.—
 Concert by the Western and Southern Orchestra, directed by William Kopp, (Under the auspices of the Western and Southern Life Insurance Co.), Don Beddoe, tenor, soloist.

MONDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 23rd. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 12:45 P. M.—Spanish Lesson from Crosley University.
 1:30 P. M.—Business Reports.
 3:00 P. M.—Market Reports.
 4:00 P. M.—Babson Reports. Violin solos by Thos. Gay, 15, violin, and Anna Gay, 13, piano.
 4:25 P. M.—French Lesson from Crosley University by Mme. Ida Tcimpidis.
 5:15 P. M.—Baseball Results.
 8:00 P. M.—
 Lt. Col. L. C. Butler "American Citizens Training Camp."
 8:20 P. M.—
GRAND OPERA FROM THE CINCINNATI SUMMER OPERA SEASON AT THE ZOO.
 Mr. Ralph Lyford, Director.
 Intermission of Opera:
 Talk by Mrs. Robert Taft, General Chairman of the Zoo Fete to be given 1st and 2nd of July for the benefit of the Zoo.
 Popular program by Woody Meyer's Dance Orchestra.
 Ted Kennedy, Violin and Director
 Ernst Meyer, Drums and Manager
 William Dinkel, Piano
 Earl Vetter, Saxophone
 Robert Seavers, Saxophone
 Rudolph Schneider, Trombone
 Cliff Yaeger, Trumpet
 William Rieth, Banjo
 William Wilde, Tuba and Violin
 Continuation of Opera.
 (Baldwin Piano)
 Naval broadcasting station at Washington sends out an average of 20,000 words daily.

TUESDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 24th. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 12:45 P. M.—Spanish Lesson from Crosley University.
 1:30 P. M.—Business Reports.
 3:00 P. M.—Market Reports.
 4:00 P. M.—Topics of Interest to Women, Times-Star News. Talk: "Silver Fox Farming" (through the courtesy of the Great Northern Fox Company).
 4:25 P. M.—French Lesson from Crosley University.
 5:15 P. M.—Baseball Results.
 10:00 P. M.—
 Program by the Monday Musical Club.
 Instrumental Quartette:
 (a) Last Rose of Summer Wiegand
 (b) Blue Bells of Scotland Wiegand
 Mrs. Helen Alexander, violin; Mrs. Robert Finch, violin; Mr. David B. Hall, cello; Mrs. Agnes Schath, piano.
 Vocal Solo:
 "A Birthday" Woodman
 Mrs. Clarence Bell accompanied by Mrs. Schath at the piano.
 Piano Solo:
 "Concert Mazurka" Friml
 Amelia C. Haeckle.
 Chorus:
 "Voices of the Woods" Rubenstein
 "Don You Cry Honey".....Selected
MONDAY MUSICAL CLUB
 Violin Duett:
 "Angels' Serenade" Braga
 Mrs. Helen Alexander and Mrs. Robert Finch.
 Vocal Duett:
 "Gypsies" Brahms
 Mrs. Clarence Bell and Mrs. Edna Stock.
 Instrumental Quartette:
 "St. Patrick's Day"
 "Torch Dance"
 Mrs. Helen Alexander, Mrs. Robert Finch, Mrs. Agnes Schath.
 10:30 P. M.—
 Popular Entertainment by MARVIN'S ORCHESTRA.
 A. W. Lloyd, violin and director
 Frank Coms, piano
 Jack Cyrkin, saxophone
 Joe Regan, trumpet
 Irvin Payne, trombone
 Denver Hertel, banjo
 Herb Kromholtz, drums
 Reading:
 "When Malinda Sings".....Dunbar
 Mr. J. Henry Fichter.
 Songs by Mrs. Clarence Boyer.
 12:00—
SPECIAL MIDNIGHT PROGRAM by the CHUBB-STEINBERG ORCHESTRA.
 Holman Becraft, Manager and saxophone
 Art Hicks, violin and director
 William Cook, clarinet and saxophone
 Rex Adkins, trumpet
 Frank Bamberger, trombone
 Leon Warren, banjo
 Walter McDonald, piano
 Ray Fetzter, tuba
 Bud Ebel, drums
 (Baldwin Piano)

WEDNESDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 25th. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 12:45 P. M.—Spanish Lesson from Crosley University.
 1:30 P. M.—Business Reports.
 3:00 P. M.—Market Reports.
 4:00 P. M.—"Shut In" program by the Wurlitzer Concert Company, under the direction of Mr. and Mrs. William Duning.
 4:25 P. M.—French Lesson from Crosley University by Mme. Ida Tcimpidis.
 5:15 P. M.—Baseball Results.
 8:00 P. M.—
 Special program by the Quartet of the Church of New Jerusalem.
 Miss Carol Mathes, soprano
 Mrs. Rose Tipton Kabbes, contralto
 Mr. George Mulhauser, tenor
 Mr. Will Atkinson, bass
 accompaniments by Grace Chapman.
 8:30 P. M.—
 From Music Hall: Ohio State Christian Endeavor Convention.
 Prayer, Rev. J. E. Weinland, Dover, Ohio.
 8:35 P. M.—
 Address: Rev. Raphael Miller, pastor of Independence Boulevard Christian Church, Kansas City, Missouri.
 9:25 P. M.—
 Special Music.
 1:30 P. M.—
 ADDRESS: Hon. Curtis D. Wilbur, Secretary of the Navy, U. S. A.
 Three Old Songs by Orienta Guleser.
 (Baldwin Piano)

THURSDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 26th. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 12:45 P. M.—Spanish Lesson from Crosley University.
 1:30 P. M.—Business Reports.
 3:00 P. M.—Market Reports.
 4:00 P. M.—Piano Solos by Miss Adelaide Apfel.
 5:15 P. M.—Baseball Results.
 10:00 P. M.—
 Test program of familiar musical selections for the purpose of awarding a One Hundred Dollar Scholarship for THE CINCINNATI CONSERVATORY OF MUSIC. Conducted by Burnet C. Tuthill, General Manager of the Conservatory.
 10:30 P. M.—
 Entertainment under the auspices of the Radio Company of HAMILTON, OHIO, featuring the Gaylord's Orchestra.
 11:00 P. M.—
 Popular entertainment by FRED HUGHES, the troubadour tenor.
 11:15 P. M.—
 Popular Program by the DOHERTY MELODY BOYS.

F. A. Pendergast, piano
 Ridge Bludau, trumpet
 Leo Bludau, saxophone
 William Browne, trombone
 Bake Holthaus, drums
 J. L. Doherty, Manager and banjo.
 (Baldwin Piano)

FRIDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 27th. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 1:30 P. M.—Market Reports.
 3:00 P. M.—Stock Quotations.
 4:00 P. M.—Special Program, T. C. O'Donnell, Editor of Writers' Digest, lecture on "Practical Lessons in Writing."

SATURDAY
RADIO PROGRAM
WLW
 The Crosley Radio Corporation
 Cincinnati, Ohio
 June 28th. Eastern Standard Time.
 309 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
 1:30 P. M.—Market Reports.

DAILY PROGRAM
 10:30 Weather Forecast.
 A. M. Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond opening quotations, Foreign Exchange opening, Chicago opening grain quotations, Cincinnati and Chicago hog market reports. Westheimer and Company, opening quotations of New York Stock Exchange. Weather Forecast repeated.
 P. M.
 1:30 Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond, Foreign Exchange and Chicago grain noon quotations. Also closing Chicago cash grain quotations. Complete Indianapolis and Chicago live stock report; Cincinnati cattle market report. Westheimer and Company, closing quotations Cincinnati Stock Exchange, giving the bid, offer and sale.
 3:00 Henry W. Brown & Company, Cincinnati Cash Grain Market closing quotations with market conditions. Closing quotations of the Chicago Grain Market. Westheimer and Company, closing quotations at New York Stock Exchange. Bureau of Markets, United States Department of Agriculture, Chicago and New York Butter and Egg Market reports.
 (Continued on Page 5)

CONDENSED TIME TABLE OF WLW BROADCASTING STATION OF THE CROSLY RADIO CORPORATION

970 KILOCYCLES, 309 METERS EASTERN STANDARD TIME CINCINNATI, OHIO.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.	10:30 A. M.
11:00 A. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.
7:30 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	
8:15 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	
	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.	8 P. M. to 10 P. M.	10 P. M. to 12 P. M.		

Crosley Radio Weekly

Published by The Crosley Radio Corporation, Manufacturers of Radio Apparatus
 Colerain and Alfred Streets, Cincinnati, Ohio.
 Telephone, West 7600
 Subscription Price, \$1.00 a Year
 Robert F. Stayman
 Editor
 Alvin R. Plough
 Associate Editor

ENTERTAINING SHUT-INS

Sunday evening concerts broadcast by WLW have been dedicated to those men, women and children who are physically unable to leave their rooms or their homes. These people have been referred to so many times since radio became popular as shut-ins and they are the ones to whom radio is bringing real pleasures. We who are able to get out and enjoy life THINK we enjoy listening to radio concerts, but the pleasures they bring to us are nothing compared with those brought to our sick, crippled, infirm or blind neighbors.

Fred Smith, studio director at WLW, places special stress every Sunday evening on making the concerts entertaining to these shut-ins. He talks to them, cheers them, sympathizes with them. He has performers in the studio play numbers requested by some person whose sole happiness in life lies in listening to the music which seems to him as if it were being played for his special benefit.

Every Monday there come to Mr. Smith many letters from those unfortunates he had entertained the night before, and in each there is a story that touches the very heart of everyone who is interested in the development of radio. If it were possible we would devote an entire issue of the Crosley Weekly to the publication of these letters, because we know there are thousands of our readers who would enjoy hearing the messages from the bedsides of these people to whom life meant nothing before the advent of radio. In this week's mail, however, there were two that are of special interest, and we are reproducing these. They follow:

"Last September I lost my husband, which fact shrouded my soul in deepest sadness, and immediately afterward a mastoid developed which added intense physical suffering. I am telling you of my personal afflictions, so that you may know what radio has meant to me. I was not sufficiently convalescent so that I could use radio until sometime in March, and oh what a revelation, wonder and pleasure it has been to me. I have heard such helpful sermons from the pulpits of different churches, instructive lectures, music of all kinds, vocal and instrumental solos, duets, quar-

tets, and, not having lost my sense of humor, have enjoyed the comic songs and speeches from the different stations, but the orchestras have given me the greatest pleasure.

"Perhaps I should not discriminate, but I feel that I must tell you that the most inspiring and uplifting has been the music of the Western & Southern Orchestra directed by Mr. Wm. Kopp. There is finish and rhythm about their execution, not often heard outside of a Symphony. I look forward to Sunday evening concerts all through the week with the most pleasurable anticipation.

"Mrs. Laura M. Whaley,
 "2630 Euclid Ave.,
 "Mt. Auburn, City."

"I wish to say that radio has indeed been a blessing and has brought sunshine into our home. For the past 15 years we have had nothing but sickness, trouble and worry. Mother has trouble with both eyes, the sight of one is gone entirely. She enjoys the church services very much; also all the other programs as she says she sees and thinks of nothing while listening in.

"Father is unable to work as he has heart trouble and other ailments. I myself had a severe breakdown about 12 years ago and have never fully recovered. The only work I am able to do is at home—amateur finishing and coloring and selling cards.

"You can see from the above how much we enjoy the programs, as we have no other pleasures.

"The Sunday evening program brings to us music we would never have heard if it had not been for the radio. I myself enjoy the readings by Mrs. Schuster-Martin, Mrs. Goldenburg and Mr. Afsprung.

"I wish to thank all those taking part in trying to make life more cheerful for the poor and the sick.

"With best wishes to all, I am,
 "Very sincerely,
 "Alvin H. Johnson,
 "2633 Beekman St.,
 "Cincinnati, O."

RADIO INTERCOMMUNICATION IS FORECAST BY HOOVER.

Radio intercommunication is the next and most vital step in the field of all human communication, Secretary Herbert C. Hoover declared recently, speaking to members of the electrical profession.

By "radio intercommunication", he means the interconnection of remote radio stations, either by telephone wires or through re-transmission by radio, so that many localities and millions of listeners may be served by one speaker, orchestra or entertainer.

The main point of this new system is that it will carry radio broadcasts from distant points to all set owners who now are forced to rely upon their local or nearby stations for radio entertainment and news.

Distant Stations Heard Clearly By Trirdyn Owners

(Continued from Page 1)

Zion; WBAH, Minneapolis; KFKN, Hastings; WOO, Philadelphia; WCAE, Pittsburgh; WEAU, Sioux City; WJAG, Norfolk, Nebraska; WTAM, Cleveland; KDKA, Pittsburgh; WHAS, Louisville; WHO, Des Moines; WOX, Detroit; WMC, Memphis; WNAD, Norman, Okla.; WGN, Chicago; WJAX, Cleveland; OKY, Winnipeg; WLW, Cincinnati; WWJ, Detroit; WGY, Schenectady; WDAR, Philadelphia; KFOP, Dallas; KFFQ, Colorado Springs; WFAH, Port Arthur, Tex.; WBBM, Lincoln, Ill.; WTAY, Oak Park; WOAI, San Antonio; WLS, Chicago; WJAD, Waco; WJAN, Peoria; WKAR, East Lansing; WFI, Philadelphia; WOR, Newark; WWAE, Joliet; WCAD, Canton, N. Y.; WHAM, Rochester, N. Y.; WOAG, Belvidere, Ill.; WOI, Ames, Iowa; KFAF, Denver; 8XBV, Cincinnati; KFNF, Shenandoah, Iowa; CHOM, Calgary; CKAC, Montreal; CJOA, Edmonton; KFGZ, Berrien Springs, Mich.; WHK, Cleveland; CFQC, Saskatoon; CKCD, Vancouver; KFOA, Seattle; WEAJ, Vermillion, S. D.; KFEX, Minneapolis; WFAM, St. Cloud, Minn.; KFMX, Northfield, Minn.; KFCEY, Le Mars, Iowa; WOQ, Kansas City, Mo.; WFAH, Hutchinson, Minn.; WFAV, Lincoln, Neb.; OKCX, Calgary; OKOH, Ottawa; WEB, St. Louis; KFJZ, Omaha; WABV, Nashville; KFJM, Grand Forks, N. D.; WOAR, San Antonio; WQJ, Chicago; WCK, St. Louis.

"These stations came in on the dial from number eleven to number eighty-nine. More than one station for each mark.

"Very truly yours,
 "Signed Fred H. Jess,
 "Holstein, Iowa.

"State of Iowa,
 "County of Ida.

"I, Fred H. Jess, being first duly sworn, on oath depose and say that the above and foregoing state-

ments and allegations are true and correct.

"Signed Fred H. Jess.
 "Subscribed and sworn to before me this 31st day of May A. D. 1924.
 "Signed Calvin F. Besore, Jr.
 "Notary Public in and for
 Ida County, Iowa."

The letter from Cuba follows:
 "Santiago de Cuba,
 "May 22, 1924.
 "Secretary of War & Navy,
 "Mr. Andres Vincent,
 "City.

"I am pleased to tell you about the satisfaction I received upon the acquisition of the TRIRDYN which you sent me. In spite of all the static I have been able to hear, with sufficient clearness and volume, various stations, among which are KDKA, WGY, PWX, WKIAQ, WBZ, WQAM and others.

"I obtained complete satisfaction from my previous receiver which was a XJ, since without a doubt it possessed all the necessary conditions of the most exacting radio fan—range, volume, selectivity, etc. I immediately recognized the superiority of the TRIRDYN, which I consider a true marvel.

"As you know I am an admirer of the Crosley house and I do not wish to delay longer without communicating my impressions and this is the motive of this letter, which I authorize you to make use of as you see best.

"Dr. Pedro T. Azcarate.
 "Capitan Veterinario del
 Ejerci to National.
 "c-o Sta Lucia Alta 51,
 "Santiago de Cuba."

FORETASTE

Little Bob: (about to go out with mother)—"Mamma, you must take some money with you."

Mother—"No, Bob, I'm not going to use any."

Little Bob—"Yes, you must have money for chocolate; I might start crying on the street, you know."—
 Detroit News.

Professor (in engineering class)—
 "What's a dry-dock?
 Stude—A physician who won't give out prescriptions.

SUBSCRIBE NOW!

Detailed information regarding the development of receiving and broadcasting, interesting news and feature stories and advance programs of WLW are to be found in the Crosley Radio Weekly. This is the most up-to-the-minute paper of its kind in the radio field, and should be in the home of every owner of a radio receiving set. Information contained in every issue is of the greatest value to you. The subscription price is but \$1.00 per year. Subscribe now.

Name

Street and Number

City and State

Attach \$1.00 and mail this to the Crosley Radio Weekly, The Crosley Radio Corporation, Cincinnati, Ohio.

Gigantic Radio Net Being Prepared For Use In Case of War

Uncle Sam Making Elaborate Plans for Immediate Dissemination of News In Time of Emergencies.

Washington.—A gigantic radio net of transmitting stations is being developed throughout the United States, which eventually will connect every city and town, and practically every household, so far as reception is concerned. Under the supervision of the Department of Commerce, this means of disseminating important information, especially in times of emergency, would reach more individuals than there are telephone subscribers, and a larger number than the combined newspaper readers of the nation. For transmission alone it would link up more radio stations than there are telegraph stations, and, considering that they would broadcast, the distribution would be available to all owners of radio sets—almost to every citizen.

This proposed radio net is partially in operation today, of course, with the number of broadcasting stations now in every state increasing each week, and fans estimated anywhere between five and twenty million, but despite its growth, the present system only transmits news and entertainment at scheduled intervals.

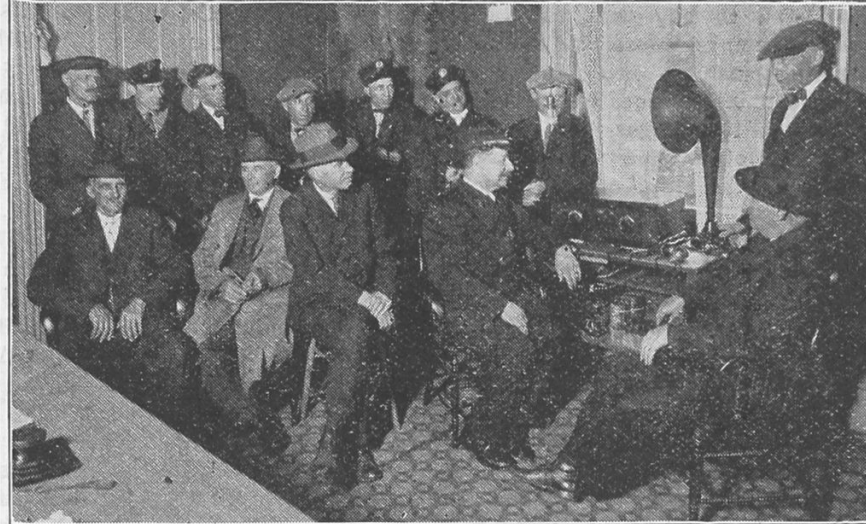
What the Government wants ultimately is a system that, in emergencies, such as the declaration of war, the call to arms of the nation's man power, or the disruption of continental communications and traffic lines, could call upon all transmitting stations to take the air either locally, by district groups or throughout the country simultaneously, and handle urgent traffic.

Details of such a gigantic scheme, the like of which has never been attempted anywhere, are already being worked out by the Department of Commerce, with the close co-operation of all radio interests. The germ of the idea was started at the Amateurs' Convention in Chicago last fall, when representatives of their organizations offered to co-operate with railroads when regular communication systems failed. This work has already gone into the test stage. In several instances operating amateurs have aided in the transmission of railway messages successfully.

(Copyright, 1924, by Carl H. Butman)

The value of radio business amounts to nearly three-fourths of the jewelry business as a whole, including clocks, watches and novelties.

CROSLY TRIRDYN FOR FIREMEN



A great amount of human interest is attached to the pictures shown above. They were taken in one of the fire engine houses at Oil City, Pa., and show city firemen and their friends listening to radio concerts being received on a Crosley Trirdyn Special. The one above shows two "old timers" enjoying the music. No, the one at the left is NOT suffering from a tooth ache. Below a group of city officials and newspapermen is shown sharing the firemen's pleasure. The pictures were submitted by the Lalonde Electric Company, 105 State street, Oil City, Crosley radio dealers.

WAVES TEAR THROUGH "DEAD SPOTS" TO CROSLY RECEIVERS.

Owners of Crosley radio receivers have no fear of "Dead Spots" in which few, if any, other types of receivers will operate. Scientists have admitted there are certain of these in various parts of the United States—areas through which radio waves were believed to have difficulty in penetrating. Numerous instances of Crosley receivers operating in these localities after other sets had failed have been cited in this publication, and now two more have been called to our attention. These new spots are in Colorado and Utah, the former being above the reservoir on Pike's Peak. People living in these localities have made efforts to operate radio receivers without success until C. L. Titus, Crosley representative, installed Trirdyn sets in each. Waves from distant broadcasting stations tore through the "Dead Spots" and were "caught" by the Trirdyns, music and voice coming in clearly and loudly. Thus the new Trirdyn has eliminated all fear of "Dead Spots".

WOOD SAW ARTIST, IN BOSTON, HEARS WLW ON TRIRDYN.

Robert Alter, whose marvelous playing upon a regular wood saw has been heard by millions throughout the world since his first offering at the Crosley WLW station, was in Boston listening to an announcement broadcast by WLW of the fact that he would perform through the WBZ studio the following evening. He telegraphed to the Crosley studio that the reception was perfect and a Trirdyn was used. The weather was rainy and the air full of static but the WLW station came in loud and clear.

Fifty-one Great Lakes ships are replacing their crystal receivers with tube sets.

THE EDW. J. GOETZ CO.
Wholesale Distributors Exclusively
Radio—Electrical Supplies
See Our
"Edgco Buyers' Guide"
For a Copy Write
Office and Warehouse
2409 Harris Avenue, Norwood, O.

Value Of Armstrong Regenerative Radio Circuit Is Described

"Hows" and "Whys" of Principles Embodied In Certain Crosley Receivers Are Explained.

Study of the development of radio to its present state in the art will show a multitude of inventions and patents, among which one stands out as the very basis of our receiving system—the regenerative circuit contributed by Edwin Armstrong. The Armstrong circuit is incorporated in certain of the receiving sets made by The Crosley Radio Corporation.

Without the regenerative circuit our radio could not have possibly reached its present state of usefulness. It is often asked "what is the real basis of the regenerative circuit," as well as "how is the regenerative circuit different from any other radio receiving circuit?" The regenerative circuit makes a tube talk back to itself, an operation not accomplished in any other receiving circuit.

"How is this talking back accomplished?" We know that a small change in the grid circuit of a vacuum tube makes a great change in the plate circuit. Now, it is possible to place an inductance in the grid circuit and a second inductance in the plate circuit and so arrange these two inductances so as to become magnetically coupled, that is, having the lines of force from one coil cut the lines of force of the other coil. This arrangement produces a still greater effect in the grid circuit, which in turn is handed back to the plate circuit. This operation of feeding back energy is continued until the effect reaches the greatest possible value in the plate circuit.

How much this feeding back and building up takes place depends upon the shape of the windings and the distance between the feed-back, or coupling coils. Now, as the coils are brought nearer and nearer together (which is the same thing

(Continued on Page 6)

DEALERS

For Immediate Delivery

CROSLY

Better—Costs Less
APPARATUS

EIGHT BIG WAREHOUSES

WAKEM & McLAUGHLIN, Inc.
CHICAGO.

Radio Recognized As a Medium For Universal Education

More Music Lovers Made Since
Broadcasting Was Started
Than In Generation Pre-
ceding, Editorial Says.

The following editorial appeared in Radio, a monthly magazine published in San Francisco:

"The desire of every musician is to have people interested in music. This comes from no selfish motive but is inspired by the generous impulse that all people may derive the same inspiration and joy from music as do the musicians. It is generally realized that, as chief among the fine arts, music should be increasingly established and recognized as an important national asset. Musicians have longed for and welcomed anything that would popularize music.

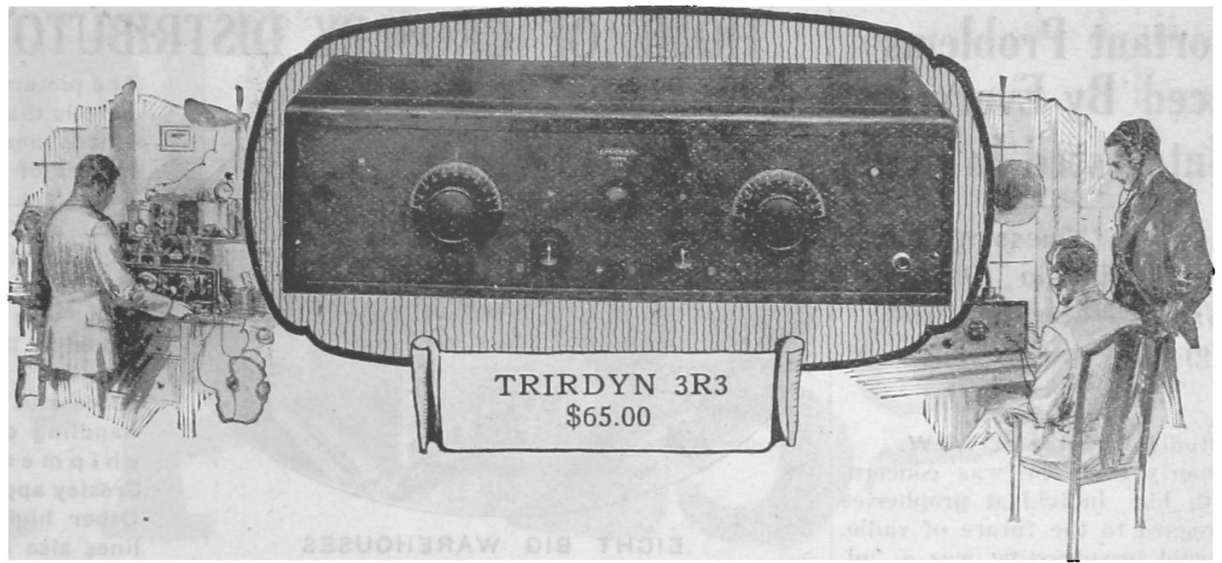
"Radio is doing this more than any medium yet devised. It is taking music to the masses. In the three short years since broadcasting was started, more new music lovers have been made than in the generation preceding.

"Heretofore, radio, like a wild flower, has grown without cultivation by the great majority of musicians. Some few have even regarded it as a weed and tried to eradicate it. But radio is too hardy and too useful a plant thus to be eliminated. Nothing else in history has ever taken such a rapid and firm hold on the public favor. Literally and figuratively, radio has the public ear. Whereas the public eye, surfeited with books, papers and moving pictures, is nearly saturated in its ability to transmit thought to man's inner consciousness, the ear offers quick and easy access to the mind, especially so with radio where the sound comes to the listener instead of the listener's going to the sound.

"Few people have yet sensed the ultimate value of radio. Direct evidence of this is given by recent misdirected efforts to distort the meaning of the copyright law so as to require payment for the broadcasting of copyrighted music. But this month the United States District Court in Cincinnati ruled that the rendition of a selection by radio is not a public performance for profit and consequently dismissed a suit brought on this account.

"Already the church, the school and other far-seeing institutions have recognized the value of radio as a medium for universal education and it is to be hoped that the musicians will do likewise."

A large department store displays its radio apparatus in a roomy cottage placed on one of the floors. It is called "Radio Hut."



New Crosley Engineering Achievement Approved By Over 200 Experts

A three tube set with five tube efficiency—the greatest selectivity with the minimum effort—positive calibration to any wave length between 200 and 600 meters. These are only a few of the many advantages offered in the remarkable new Crosley Trirdyn Radio Receiver.

It was only after a year of constant experimenting, that our engineering department perfected this exceptional receiver. Thorough tests proved to us that it would out-perform any receiver ever before produced. But we were not satisfied with our own opinion. So we shipped out 200 of these sets to experts in every part of the United States. Their criticisms are one and the same—"tried out your new Trirdyn Receiver Saturday night and logged 13 stations, among them Cuba, New York and Omaha, between 9 and 10 o'clock. The set was very selective. During the time this test was on, local station KSD was operating and we went through them without any difficulty or interference whatever. The range of the local station was not more than three points variation in the dial setting."

"Tried one of these sets and obtained wonderful results. Were able to log all stations which we heard very successfully. This set should go over big." "The set has wonderful volume and is selective"—etc.

This new Crosley triumph is called the Trirdyn because of its original combination of the "R's"—Radio frequency amplification, Regeneration and Reflex. The first tube incorporates non-oscillating, non-radiating tuned radio frequency amplification; the second tube, a regenerative detector reflexed back on the first tube for one stage of audio frequency amplification. Then it has a third tube which acts as a straight audio frequency amplifier. It uses the ultra selective aperiodic antenna circuit and external selector coil, which adds to its wonderful selectivity.

The Crosley Trirdyn in range, volume and selectivity is the equal of any five tube receiver on the market. Greater volume will, of course, be obtained through the use of storage battery tubes, but it will function well in any type and can be used with either indoor or outdoor antenna.

The opinion of many experts have convinced us that the Trirdyn is the best receiver ever offered the public regardless of price.

Practically every radio dealer can furnish you Crosley Radio Sets, including not only the Trirdyn, but the Model 51, a two tube set for only \$18.50; the Model V, a single tube receiver at \$16.00; the Model VI at \$24.00; the Super VI at \$29.00; the Model X-J at \$55.00 and the Super X-J at \$65.00.

See This New Wonder At Your Dealers

All Crosley Regenerative Sets
are Licensed under Armstrong
U. S. Patent No. 1,113,149.

CROSLY
Better -- Cost Less

Crosley produces more Radio
Receiving Sets than any other
manufacturer in the World.

Radio Products

THE CROSLY RADIO CORPORATION

POWEL CROSLY, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

Important Problems Faced By Everyone Interested In Radio

Period Of "Guessing" Has Passed, Studio Director Writes — Better Programs Are Forecast.

By Fred Smith,
Studio Director at WLW.

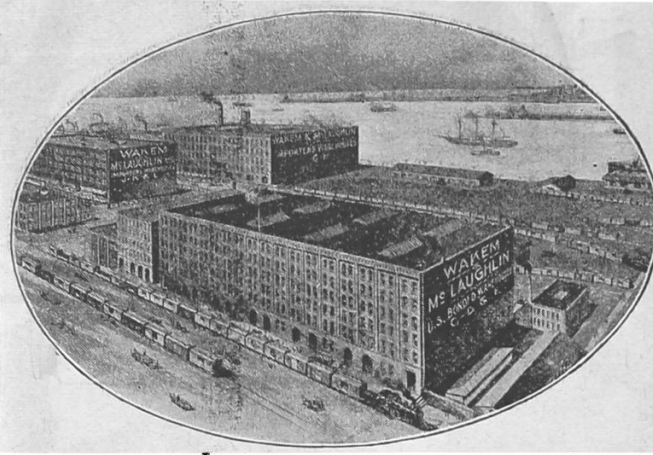
Formerly everyone was concerned with his individual prophecies with regard to the future of radio. Some said broadcasting was a fad, and that it would die out. Many clung to the indefinite and valueless estimate that "radio was just in its infancy and no man could foretell its development." But there have always been those who saw, with clear vision, the probable curves of development to be winged by this most marvelous means of communication, and they are becoming the stable pillars in the great construction of the radio industry and the broadcasting art.

As we approach Summer Number Four in the life of popular radio broadcasting, we no longer need to content ourselves with guessing, or even the possible accuracy of clear sightedness. We are now in a position to draw up summaries, to analyze public opinion, and set down the most marked tendencies in this field. We no longer need to guess at the most popular features on our programs. We do not need to worry about radio "dying out" in the summer time. We have simply to keep before us the problems of radio as they have manifested themselves clearly and definitely.

The first great problem is that of power. Note this tendency during the past three years: first ten watts, then fifty, then five hundred, followed by one and two thousand, and now comes CKAC of Montreal with an announcement of seven thousand! This is an unmistakable tendency toward the use of more power. Another problem presenting itself, and which reveals its own marked tendencies, is that of propaganda. The public does not want radio given over to any particular propaganda. Radio must instruct and entertain—it may broadcast a convention, but no radio station could possibly hope to sustain itself on the definite policy of supporting a particular political platform.

The third great problem is that of maintaining the cost of the station. Remote control has become an important item in the way of expense. The lines bringing the Republican Convention from Cleveland to Cincinnati, to be thrown out into the air like sunshine or rain, cost more than fourteen hundred dollars. Lines connecting churches and banquet halls to radio stations cost thousands of dollars yearly. This is a real problem. It

HOME OF CROSLY DISTRIBUTOR



EIGHT BIG WAREHOUSES
Established 1886

has its own tendency toward solution which is working out most satisfactorily. And so it is with the programs broadcast from the studio itself.

These are becoming better and better throughout the entire land. The tendency is toward professional performances. The solution for defraying the cost is being made gradually, but surely. And as for the industry of manufacture of receiving sets, that has become as certain as the industry of automobile manufacture. Radio has taken its place as a reality in our lives, a reality as natural and expected in every day existence as the newspaper, the theatre, the motion picture.

PROPER RESISTANCE

When you connect two or more tubes in parallel for control by one rheostat, make sure not only that it is of proper resistance but also that it will carry sufficient current to operate the tubes at full efficiency without heating. The maximum amperage of the better grades of rheostats is specified by the manufacturers and usually appears on the cartons. Roughly, a rheostat for use with three similar tubes will need to have three times as much current capacity and one-third as much resistance as a rheostat for one of the tubes.

If you wish to BUY or SELL
SECURITIES
Or own some about which you
DESIRE INFORMATION
COMMUNICATE WITH US

Our Statistical Department Is At
Your Service

WESTHEIMER & CO

Members of—
The New York Stock Exchange
The Cincinnati Stock Exchange
Telephone Main 567

326 Walnut Street

The picture shown here is that of the offices and warehouses of Wakem and McLaughlin, Inc., of Chicago, Ill., Crosley distributors. This firm was established in 1886 and has been very successful in the handling of large shipments of Crosley apparatus. Other high grade lines also are distributed by this progressive organization, which sells exclusively to the dealer, having no retail store of its own. Their motto is "Fair Treatment, Prompt Shipments and 100% Co-operation With All Crosley Dealers."

TREMENDOUS DEMAND FOR CROSLY PORTABLE RECEIVER.

The demand for the new Crosley 51-P, the utility receiver which permits the owner to "take your entertainment with you," has swamped the production department of The Crosley Radio Corporation. This is the receiver made in portable style, employing detector and one-stage of audio frequency amplification and the regenerative hook-up. The large space provided for the power plant of standard size dry cell batteries has made a hit with the radio fans who desire to take their receiver away and not have to renew the batteries for a long time. The flexible leads to the batteries are conveniently marked with metal tags, so the novice will have no difficulty in hooking-up the receiver. The outfit, with batteries, phones and aerial equipment weighs only 21 pounds.

We broadcast daily at
10:30 a. m. and 1:30 p. m.

Financial News
Market Reports
Government Bond
Quotations
Call Money Rates
Foreign Exchange, Grain
and Live Stock
Quotations.

Bond Department

THE
FIFTH-THIRD
NATIONAL BANK
of Cincinnati.

Value Of Armstrong Regenerative Radio Circuit Is Described

(Continued from Page 4)

as increasing the coupling between these coils) the effect in the plate circuit will be increased until a point is reached where we have a continuous feed-back, or, as commonly called, the receiver breaks into oscillations. The maximum receiving efficiency of the circuit is reached at a point just before the oscillations takes place.

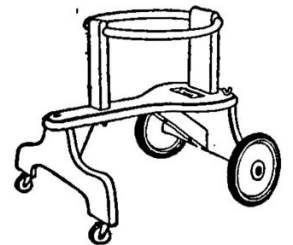
No doubt marked progress will be made in the development of radio circuits but today it is impossible to find a more efficient receiving circuit than that embodying the regenerative principle, which is being utilized in practically all of the commercial receivers throughout the world.

DAILY PROGRAM

(Continued from Col. 2)

Special Half Hour Program and News at 4:00 each afternoon, except Saturday and Sunday, as announced by Radio
Sunday School Services at 9:30 and Regular Morning Services of the Church of the Covenant, beginning at 11:00.
Special Program at 8:00 P. M.

The Go-bi-bi



No longer does Daddy carry the infant about in his arms while mother prepares supper. Little brother and sister do not have to sacrifice their play hours to take care of the baby. And Mother—look at Mother, just as carefree as the children. All because the Tiny Tot in this home is learning to walk by means of the GO-BI-BI and needs little attention from anyone. On the contrary he is keeping the rest of the family entertained.

"My wife and I are 'tickled to pieces' over the GO-BI-BI we have for our ten months' old girl. It is just like a one ring circus to watch her." (Signed) Gordon B. Small, Springfield, Mass.

Every dealer in baby things or children's vehicles should stock the GO-BI-BI, and help to make healthy babies and happy homes in the community. Nothing like it for making satisfied customers.

CROSLY MFG. COMPANY

1632 Vandalla St. Cincinnati, O.

CROSLEY

51-P \$25.00

Take your entertainment with you



SINCE the announcement of the Crosley 51, early in February, the popularity of this two tube set has grown by leaps and bounds. Selling at the price of \$18.50, it established an entirely new standard of value in the radio world. This receiver gives ample volume for a loud speaker on local receiving stations, and, under average receiving conditions, gives ample volume for a loud speaker on distant stations, frequently up to 1,500 miles or more. Under bad receiving conditions it is advisable to use head phones on distant stations.

Since the announcement of the regular Crosley 51, there has been an insistent demand on the part of jobbers, dealers

and individuals for a Portable 51. Here it is. The same wonderful little receiver that is now known so well as the 51, in a leatherette covered, portable case, with nickel plated trimmings and hardware.

Unlike most portable receivers, the case of the Portable 51—known as the Crosley 51-P—has ample room for a real power plant of batteries instead of a limited space for flashlight batteries, which have a very short life, even on dry cell tubes. The Crosley 51-P has ample space for three full sized six inch No. 6 dry cells to furnish the filament current for dry cell tubes. There is also room for three Eveready No. 764 vertical, intermediate 22½ volt "B" batteries, or the equivalent Burgess and French batteries, thus giving 67½ volts for the plates of the tubes, which means ample loud speaker volume under proper conditions. There is also ample room for a "C" battery, and provision is made for connecting in a "C" battery if desired. There is room for one or two coils of insulated flexible wire to be used as an antenna and ground wire, and there is a compartment for head phones.

The traveling salesman will take the Crosley 51-P with him to while away the evening hours when there is nothing else to do. He can drop a wire out of his hotel window, attach another wire to the radiator, and bring in stations within a reasonable range, and enjoy all of the pleasures of radio wherever he goes. The same is true of the camper and the automobile tourist. The farmer will use the Crosley 51-P in his home and when he goes visiting will take it along so that his neighbors, friends and relatives can enjoy the pleasures of radio when he comes to see them. Such organizations as Boy Scouts, Girl Scouts, and other clubs will find the Crosley 51-P an ideal receiver to round out the entertainment of the organizations.

The Crosley 51-P is so light and convenient, and can be used so efficiently on a small antenna, that it is recommended for canoes, motor boats, yachts, and for travelers on ocean voyages and on board trains.

The price of the Crosley 51-P is \$25.00. This does not include batteries, head phones, tubes or antenna equipment, which can be added at an additional cost of less than \$25.00.

THE CROSLEY RADIO CORPORATION

POWEL CROSLEY, JR., President

200 ALFRED STREET

CINCINNATI, OHIO

Radio Is Promoting More Refined Taste In Home Furnishing

(Continued from Page 1)

meals, dressmaking and millinery hints, and bedtime stories for the children are the talks broadcast on home decoration and furnishing. These talks are given by experts whose artistic taste may safely be followed and who make suggestions so concrete and practical that they are among the most popular and useful features of radio programs today. Through them the housewife in the smallest village or on the remotest farm comes in touch with current ideas in the metropolitan centers as to home furnishing and decoration. Not only does she learn that fringed tidies, seashells with ribbons tied around them, and dried ferns under glass have "passed out", but she also is informed what has "come in" to take their place.

The radio brings her up-to-date and reliable information on color schemes, curtains, draperies, wall paper, hangings, pictures, upholstery, and types of furniture. Helpful hints are offered for her guidance in decorating and furnishing every room in the house. Letters to broadcasting stations in all sections of the country indicate the popularity of these talks.

This phase of radio is only another indication of the indispensable place which it is assuming in the home. One reason for the popularity of radio in the home and the rapid increase in the use of the receiving sets is that simple types of sets, such as the Crosley Trirdyn, which any member of the family can set up and operate, are available at reasonable prices. The tendency of the newest advance in the radio art is toward simplicity of control. No longer is radio a complicated maze of wires and controls which confuses women and discourages their use of it. Circuits have been developed which require fewer operations and controls than ever before. A Trirdyn set is as easy to operate as a phonograph. It requires less tubes than ordinary sets, and the control is simple and dependable. Its characteristics of simplicity and loud and clear reception of distant as well as nearby

stations strongly commend it to women.

Perhaps women were a little slower in taking up radio than the men folks, but they are now making up for lost time, and it is a safe prediction that no woman who has become accustomed to a radio receiving set in her home will ever again do without one and the number of women availing themselves of the benefits and enjoyments of radio is bound to increase rapidly.

NEW "DRESSES" DONNED BY CROSLY TRANSFORMERS.

The efficiency of the Sheltran Audio Frequency Transformer, made by The Crosley Radio Corporation, could not be improved so the engineers devoted their energies to designing a new cover for them.

In its new dress, the transformer is very compact and will fit in a space 2 inches by 2½ inches. The base is drilled and threaded so as to make it easily fastened to a panel

or base with only a small machine screw. The leads now come from one end and are plainly marked for both primary and secondary and numbered P1 and P2 and S1 and S2.

The new arrangement of the leads from the primary and secondary makes it possible to use less wire in connecting to other apparatus and the soldering to these four terminals is quickly done. Nuts are furnished for those who do not desire to make permanent connections to the transformer.

The ratio of this transformer remains the same, 9 to 1, and the price is still \$4.00 despite the improvements. These transformers are used in all the receiving sets made by The Crosley Radio Corporation.

An Australian experimenter reports he has heard some 500 American amateur stations.



Superspeaker

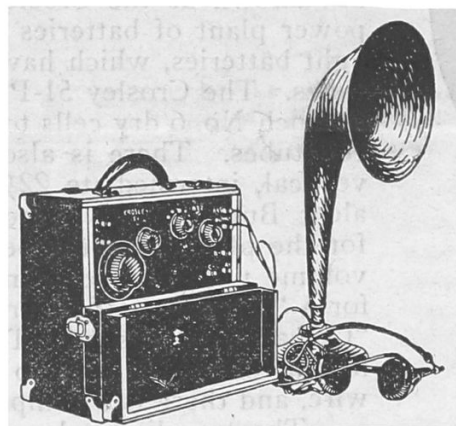
**EVEN WITH
LOW VOLTAGE**

from your B-Battery, The Superspeaker will continue to operate because of its remarkable electrical efficiency, and its highly receptive micrometer air-gap adjustment. Where other reproducers fail The Superspeaker brings in distant stations, sweet and clear.

A big, substantial, ebony-gloss finished instrument that sells and stays sold on its unequalled performance—Supremefor work with one tube sets. Nothing electrical but the sensation it gives those who hear it—Leads every market it has ever entered. Good dealers, write!

**JEWETT RADIO &
PHONOGRAPH COMPANY**
5680 Twelfth Street
DETROIT MICHIGAN

CROSLY 51-P



\$25

The Crosley 51-P is an ideal home receiver with the portable feature. Its efficiency is unquestionable, because the set itself is the same as the famous Crosley 51, more than 30,000 of which have been sold. The Armstrong Regenerative detector and one stage of amplification will bring in local stations on a loud speaker at all times. Distant stations will be heard on the loud speaker under reasonably good atmospheric conditions. There are separate compartments for all accessories, so the complete set can be carried from one place to another without the least difficulty. Your dealer will install the batteries, etc., so you can carry your set home ready to attach antenna and ground and tune in. In case trouble should arise at some future time, you can carry the entire receiver to your dealer, who will make the necessary corrections and have it ready for you to carry home in the evening. Owners of the 51-P will take their sets with them when they go visiting, traveling, camping, touring, etc. The traveling man will have one with him all the time to help him while away the long evenings in the hotel. But above all it is an ideal home receiver, by means of which you can "take your entertainment with you" when you go away.

Manufactured under Armstrong U. S. Patent No. 1,113,149

The Crosley Radio Corporation

POWEL CROSLY, Jr., President
DEPT. CINCINNATI, OHIO

Above is a reproduction of an advertisement of the Crosley 51-P portable radio receiver which will be furnished free to Crosley dealers for use in their local newspapers. This will be sent in mat form. We suggest that every dealer take advantage of this method of increasing the demand for the portable set. We will also furnish mats of similar size for advertisements of the Crosley Model 51 and the Crosley Trirdyn. Stereotypes, for use in smaller town newspapers, will be furnished at cost—50 cents.

RADIO DISTRIBUTORS

Large stock of Sets and parts including

Genuine Radiotron Tubes
Magnavox Reproducers, General Radio Instruments, Brandes Table Talkers and Headsets, Eveready and Burgess Batteries

The Johnson Electric Supply Co.

Dealers wanted in all localities.
232 E. 5th St. 331 Main St.
CINCINNATI, OHIO.

We supply dealers with Crosley Apparatus.

AND WLW PROGRAMS

PUBLISHED BY THE CROSLEY RADIO CORPORATION, MANUFACTURERS OF RADIO APPARATUS, CINCINNATI, OHIO.

VOL. III, NO. XXVI.

PRICE \$1.00 PER YEAR.

JUNE 30, 1924

New Wave Length Of 423 Meters Assigned To Crosley Station

WLW To Divide Time With WBAV of Columbus—WSAI and WFBW to Remain On 309.

WLW, the radio station of The Crosley Radio Corporation, is now broadcasting on its new wave length—423 meters—final plans for the change having been made as a result of a special request made by Powel Crosley, Jr., owner of the station, to officials of the Department of Commerce.

This wave length is the same as is used by KPO, at Oakland, Cal., but because of the great distance between the two stations and the difference in time, there will be no interference. It also is the same as will be used by WBAV, of Columbus, O., but that station and WLW will divide operating time. Friday night will remain silent ~~night so far as Cincinnati is concerned.~~

This change was necessitated by the addition of a third Class B broadcasting station in Cincinnati, which had been assigned a wave length of 309 meters, the same as was used by WLW and WSAI. It had been suggested that a three-way division of time be worked out, but Mr. Crosley realized that this would be impossible, citing the fact that there is but one other instance of three stations dividing time on the same wave, and that the others involved also were in Ohio, the Columbus station being one of them. He immediately suggested that a new wave length be assigned to WLW, and asked for the same as is used by KPO, declaring that if the Columbus station were assigned the same "two birds could be killed with one stone."

As soon as the final plans were completed, he "went on the air" at WLW and announced the change to the thousands of radio listeners. His message follows:

"When there was talk of a third Class B broadcasting station being assigned the same wave length—309 meters—up to that time used by WSAI and ourselves, we felt sure that such an arrangement could not work out, knowing full well that there is only one other place in the United States where an attempt has been made to operate three broadcasting stations on the same wave length with a division of time, and as that experiment has

(Continued on Page 6)

Quantity Production, Advertising And Efficient Management Result In Saving To Crosley Customers

By G. A. Nichols.

(The following article appears in the current issue of Printers' Ink. It explains in detail the efforts being exerted by Powel Crosley, Jr., president of The Crosley Radio Corporation, to lower production costs in order that greater savings may be divided among his customers. Owing to the scarcity of space it will be necessary for us to run this in two installments. The first follows.—The Editor).

Advertising that produces volume has solved the price-making and profit-getting problems of any number of manufacturers. Where advertising has not had this effect, the failure can usually be traced to one or two causes:

1. The advertising has been insufficient or inconsistent.
2. It has not been made a part of the manufacturing program.

Leading producers of merchandise, happily, are seeing the light in the first respect in greater numbers than ever. But many of them have the spirit, while lacking the understanding. That is to say, they make their manufacturing plans without sufficient reference to, or regard for, the selling end. This creates a difficult situation. It may be fatal, and often is. The

place for an advertising campaign to begin is back in the factory. When it is worked this way the article can be made to fit the requirements of the situation and to meet the price that the producer hopes will be justified by the demand which the advertising is expected to create.

When advertising is not given proper consideration at the same time the production plan is being perfected, a situation is likely to be created which later will result in stubborn sales resistance. The commonest outcome is for the initial price to be placed too high, the price being based on what it costs to make the article rather than upon what the price can profitably be if a certain sales volume is attained.

There are manufacturers, of course, who appeal frankly to the people having plenty of money and who therefore are not much interested in obtaining sales volume as it is generally understood. It is up to the manufacturer to make his choice in this respect. If he is

(Continued on Page 4)

Millions "Attend" G. O. P. Convention As Proceedings Are Broadcast By WLW; Music And Voice Are Heard Plainly

For the first time in the history of the United States millions of people "attended" a National Republican Convention, this being made possible through the broadcasting, by WLW and several of the other high powered radio stations, of the entire proceedings of that great political meeting.

There were thousands of receiving sets in operation in public places, where throngs gathered to hear the speeches, balloting, music, etc., and there were millions of home sets in operation, proving that never before has anything been broadcast that attracted such widespread attention.

Here in Cincinnati, for instance, newspapers, banks, music stores, radio stores, etc., kept receiving sets in operation during the convention, and at all times there were crowds listening to the events as they took place. Many owners of sets invited their friends to their homes, and in lodges, clubs, etc., enthusiastic voters gathered to hear

how the Republicans selected the man who is to carry their banner in the fall campaign.

"On every hand people were saying how wonderful it was that they could hear the party leaders extolling their favorite aspirants and how remarkably clear the voice was received despite the fact that they were hundreds of miles away from the speaker. Others who were better acquainted with radio commented on the efficient manner in which all signals were detected despite the fact that most of them were received during the day time. Certainly the broadcasting of this convention proved to many that a large amount of the talk about poor summer reception is "Tommyrot."

It was interesting to note the method in which metropolitan newspapers are relying more and more every day upon the radio in the collection of news. At the Cincinnati Enquirer a Crosley Trirdyn

(Continued to Page 3)

Democratic Meeting In New York To Be Broadcast By WLW

Speeches, Music, Etc., Will Be Heard By Everyone Who Tunes In Crosley Station During Convention.

Proceedings of the National Democratic Convention, to convene in New York City on June 24th, will be broadcast by WLW, the radio station operated by The Crosley Radio Corporation, for the benefit of the hundreds of thousands, and perhaps millions, of people who enjoy listening to the speeches, music, etc., that precede the nomination of a candidate for the Presidency.

Those who listened in during the broadcasting of the Republican Convention appreciated being able to "attend" this meeting, and without doubt will be overjoyed to learn that they will be able to hear everything that goes on at the New York gathering.

While there was a tremendous amount of interest in the G. O. P. Convention, the proceedings were more or less cut and dried, everyone knowing that President Coolidge would be renominated. But at the Democratic meeting, no one knows what will happen. Even the greatest political authorities in the United States have refused to predict who would be chosen to run against President Coolidge, and so it is needless to say that there will be plenty of interesting news for those who tune in Station WLW during the meeting.

There will be the bands, the blare of trumpets, the calling of the rolls, the key-note and nominating speeches, the reports of committees, the reading of the Democratic platform, which every voter should be deeply interested in no matter whether he is a Democrat or Republican, and the balloting for the presidency and vice presidency.

WLW is but one of several of the higher powered radio stations throughout the country that will broadcast the proceedings of the Democratic Convention, so it will be possible for nearly every person in the country to hear everything that happens. There are thousands of men and women who paused at public demonstrations of radio reception during the Republican meeting and who became deeply interested in radio as a result thereof. These people certainly will be radio fans

(Continued on Page 8)

Crosley WLW Programs For Week of June 29th

SUNDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 29th. Eastern Standard Time.
423 Meters.

9:30 A. M.—
School conducted by the Editorial Staff of Sunday School Publications of the Methodist Book Concern.
11:00 A. M.—
Services of the Church of the Covenant; Dr. Frank Stevenson, Minister.
7:30 P. M.—
Church Service of First Presbyterian Church of Walnut Hills. Rev. Fredk. N. McMillin, Minister.
8:15 P. M.—
Concert by the Western and Southern Orchestra, directed by Erwin Bellstedt (Under the auspices of the Western and Southern Life Insurance Co.) Don Beddoe, tenor, soloist.

MONDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
June 30th. Eastern Standard Time.
423 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Market Reports. Piano Recital by pupils of Miss Anne Cockburn.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Tcimpidis.
5:15 P. M.—Baseball Results.
8:00 P. M.—
GRAND OPERA FROM THE CINCINNATI SUMMER OPERA SEASON AT THE ZOO.
Mr. Ralph Lyford, director.
Intermission of Opera.
WOODY MEYER'S CINCINNATI ORCHESTRA
Ted Kennedy, violin and director
Ernst Meyer, Manager and drums
William Dinkel, piano
Robert Seavers, saxophone
Rudolph Schneider, trombone
Cliff Yaeger, trumpet
William Rieth, banjo
William Wilde, tuba and violin
Continuation of Opera.
(Baldwin Piano)

TUESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
July 1st. Eastern Standard Time.
423 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Talk: "The Progress of Man" by Mr. M. V. Whittacre, Writer and Scientist.
Topics of Interest to Women.

Times-Star News.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Tcimpidis.
5:15 P. M.—Baseball Results.
10:00 P. M.—
Special Entertainment by George Conner and Earl Wintersohle.
The TUNZI TRIO: Piano accordion, banjo and guitar.
Mr. H. J. Tunzi
Mr. B. Shay
Mr. J. Connelly
Songs: by Evelyn Valin Bowman.
"Swing Your Partners" with Jake Rutz' Pumpkin Vine Orchestra.
Calls by Mr. Morton Stutson.
Special Midnight Program by the CHUBB-STEINBERG Orchestra.
Holman Becraft, saxophone and Manager
Art Hicks, violin and director
William Kock, saxophone and clarinet
Rex Adkins, trumpet
Frank Bamberger, trombone
Leon Warren, banjo
Bud Ebel, drums
Ray Fetzer, tuba.
(Baldwin Piano)

WEDNESDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio

July 2nd. Eastern Standard Time.
423 Meters.
10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—"Shut In" program given by the Wurlitzer Concert Company.
4:25 P. M.—French Lesson from Crosley University by Mme. Ida Tcimpidis.
5:15 P. M.—Baseball Results.
7:00 P. M.—
Program by the American Legion Minstrels and Aurora Boosters.
Opening: "Minstrel Chorus."
Vocal Solo: "Dream Daddy" with orchestra. Master Arthur Binder, age 10 years.
Violin Solo: Selected Professor Frank Hubbard.
Selections by the Hoosier State Quartet.
Talk: "What's What in Aurora."
Voice: "Where the Candle Lights Are Gleaming."
Mr. J. Suerman, baritone with Chorus and Orchestra.
Duett: "Somebody Knows."
Messrs. Glen Ruble, tenor and Arthur Voit, bass.
Selections by the Jazz Babies.
Voice: "Where the Colorado Wends Its Way."
Mr. Arthur Voit, tenor.
Double Quartet with solo by Charles Klinghoffer.
Voice: "At the Bottom of the Deep Blue Sea."
Mr. Glen Ruble, Bass.
Finale: "A Smile Will Go A Long, Long Ways."
Hoosier State Quartet.
Talk: "Bees" by Dr. W. C. Herman.
Popular Entertainment by the VIRGINIA ENTERTAINERS.
Jack Bauer, Director, violin, trumpet and saxophone
Dick Rye, saxophone, clarinet and trumpet
O. V. Speybrook, saxophone and clarinet
Fred Brill, trumpet and saxophone

A. H. Spelgner, trombone, saxophone and Manager
Perry Bechtel, banjo
V. A. Johnston, piano
A. F. Joseph, drums and effects.
Songs by Dorothy Maher Winterberg and Marie Seimer with accompaniments by Mrs. Nettie Shaffer.
(Baldwin Piano)

THURSDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
July 3rd. Eastern Standard Time.
423 Meters.

10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Business Reports.
3:00 P. M.—Market Reports.
4:00 P. M.—Talk: "Why We Are Interested in Ethers" by Mrs. Winifred Ellerbrock. Piano Solos by Miss Adelaide Apfel.
5:15 P. M.—Baseball Results.
10:00 P. M.—
"The Great Divide" arranged in Raddario form by Mr. and Mrs. Henry Florsheim.
Cast:
Mr. and Mrs. Henry Florsheim
Miss Carmen Kahn
Mr. Gordell Gross
Mr. Bert Gross
Incidental music by Instrumental Trio.
11:15 P. M.—
Popular Program by the DOHERTY MELODY BOYS.
Frank Pendergast, piano
Ridge Bludau, trumpet
Leo Bludau, saxophone
William Browne, trombone
Bake Holthaus, drums
J. L. Doherty, banjo and Manager.
Songs by Joe Richards, tenor.
(Baldwin Piano)

FRIDAY

RADIO PROGRAM WLW

The Crosley Radio Corporation
Cincinnati, Ohio
July 4th. Eastern Standard Time.
423 Meters.

Silent.
SATURDAY
RADIO PROGRAM
WLW
The Crosley Radio Corporation
Cincinnati, Ohio
July 5th. Eastern Standard Time.
423 Meters.
10:30 A. M.—Weather Forecast and Business Reports.
1:30 P. M.—Market Reports.

DAILY PROGRAM

10:30 Weather Forecast.
A. M. Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond opening quotations, Foreign Exchange opening, Chicago opening grain quo-

tations, Cincinnati and Chicago hog market reports.
Westheimer and Company, opening quotations of New York Stock Exchange.
Weather Forecast repeated.

P. M.
1:30 Fifth-Third National Bank Bond Department Report; financial letter, call money rates, on Cincinnati and New York, Liberty Bond, Foreign Exchange and Chicago grain noon quotations. Also closing Chicago cash grain quotations. Complete Indianapolis and Chicago live stock report; Cincinnati cattle market report.
Westheimer and Company, closing quotations Cincinnati Stock Exchange, giving the bid, offer and sale.
3:00 Henry W. Brown & Company, Cincinnati Cash Grain Market closing quotations with market conditions. Closing quotations of the Chicago Grain Market. Westheimer and Company, closing quotations at New York Stock Exchange.
Bureau of Markets, United States Department of Agriculture, Chicago and New York Butter and Egg Market reports.
Special Half Hour Program and News at 4:00 each afternoon, except Saturday and Sunday, as announced by Radio.
Sunday School Services at 9:30 and Regular Morning Services of the Church of the Covenant, beginning at 11:00.
Special Program at 8:00 P. M.

EXPERTS ARE PESSIMISTIC REGARDING WIRELESS PHOTOGRAPHS.

Government experts are pessimistic regarding the chances for success in sending photographs by wireless. They point out several obstacles, including static, interference, steady current which governs the amount of light that passes through a revolving film, etc. Contrasting the performance over wire between Cleveland and New York, the Government experts say the apparatus would be impracticable for such a purpose because a good photographic machine would record the slightest interference. For military purposes and commercial purposes, the radio photographic system may be valuable, but it is doubted whether the near future will witness its use on a broadcast scale. In addition, it is said the radiophotographic apparatus greatly interferes with other broadcasting.

Customer—"I want to buy three lawn mowers."
Dealer—"You must have a big place."
Customer—"No . . . but I have two neighbors."

CONDENSED TIME TABLE OF WLW BROADCASTING STATION OF THE CROSLY RADIO CORPORATION

709 KILOCYCLES, 423 METERS CENTRAL DAYLIGHT SAVING TIME

CINCINNATI, OHIO

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9:30 A. M.	11:00 A. M.	11:00 A. M.	11:00 A. M.	11:00 A. M.	11:00 A. M.	11:00 A. M.
11:00 A. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.	1:30 P. M.
9:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	3:00 P. M.	
	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	4:00 P. M.	
	8:00 P. M.	10 P. M. to 12 P. M.	8 P. M. to 10 P. M.	10:00 P. M.	Silent Night	

Crosley Radio Weekly

Published by The Crosley Radio Corporation, Manufacturers of Radio Apparatus

Colerain and Alfred Streets, Cincinnati, Ohio.

Telephone, West 7600

Subscription Price, \$1.00 a Year

Robert F. Stayman

Editor

Alvin R. Plough

Associate Editor

Broadcasting Republican Convention

Broadcasting of the National Republican Convention by WLW, operated by The Crosley Radio Corporation, and by several of the other powerful stations throughout the country, has been proclaimed by hundreds of thousands, and perhaps millions, of radio listeners as the greatest achievement in the history of wireless so far as the broadcasting of interesting news events is concerned. It is impossible to estimate the number of people who listened to the speeches, music, balloting, etc., but judging from the throngs attracted by the public demonstrations in every city, village and hamlet, there must have been millions who appreciated the opportunity of hearing how the political chieftains of their country handle the tremendous amount of work incident to a national convention.

Many newspapers, banks, music houses, radio stores, etc., had receiving sets and loud speakers in operation, not a few of them having added power amplifiers so people within a radius of a square or more could hear everything being received. Traffic was blocked in many places in the business districts, proving that few people were too busy to pause to listen to the proceedings of the meeting. In addition to those who attended the public demonstrations, there were thousands and thousands of people who listened in at their homes, or at the homes of friends, hearing, for the first time in their lives, the nomination of a President of the United States.

All in all it was a wonderful feat for radio, and there is not the least doubt but what thousands of people were enlisted in the great army of radio fans as a result thereof.

SAVED BY RADIO

Out in Silverton, Ohio, a suburb of Cincinnati, there resides a man who admits radio saved him from possible insanity, when he was at the very verge of that terrible condition due to worry over the death of his wife, who was killed when in an automobile accident.

He was seriously injured himself, and did not know, until several weeks after the accident, that his

wife had been fatally hurt. Only those who have passed through similar tragedies can realize what he suffered, the terrible misery that was added to his own physical pains.

Recovery was slow, and for a while it was feared he was at the brink of insanity. Then his physicians suggested that a radio receiving set be installed in his room. This was done, and almost immediately, a marked improvement in his condition was noticed.

Listening-in occupied the time that he had passed worrying over the tragedy. Now he is back at work, a broken man and still one who has taken a new grasp on life. He admits freely that radio has saved him.

AN ECSTATIC LOVER

(Dedicated to Mr. Good Night Smith of W L W)

When the sunlight is kissing the softness

Of your dear mouth's tender curve—

When the wind and the waves are petting you

With such familiar nerve,

Then I'm jealous of the elements,

And wishing I could be Your elemental sweetheart

For you are that to me.

When the radio phone is caressing

The pink of your lovely ear,

When the loud speaker is boldly holding

Your breathless attention, my dear,

Then I'm jealous of your listening,

And wishing I could be Your favorite radio sweetheart

And you'd tune in with me.

—Norton Stutson.

3362 Reading Rd., Cincinnati, Ohio.

G. O. P. Convention

(Continued from Page 1)

was installed by the Milnor Electric Company, Crosley distributors, a power amplifier was added and loud speakers were placed so crowds on the streets could hear the speeches, etc. Another loud speaker, attached to the same set, was placed in the office of Everett Boyd, telegraph editor, in order that he might keep in touch with the proceedings at all times. This was especially valuable during the balloting, the results being known by the editor several minutes before he was informed by telegraph. On a newspaper a few minutes mean a great deal, and the radio receiving set was of tremendous value to him.

No one believes at this time that wireless will compete with the telegraph in the collection of news, at least for years to come, but the experiment proved that in cases of emergencies, or when immediate action is necessary, a radio receiving set is a mighty handy thing to have around.

Radio And Education Certain To Be Linked, U. S. Official Asserts

Greatest Serious Contribution of Broadcasting to Human Life Will Be Education, He Declares.

Just outside of Washington, D. C., there is located the Bureau of Standards of the Department of Commerce, which handles, among many other subjects, the standardizing and scientific development of radio, both for the Government and the people. The radio laboratory of this Bureau, headed by Dr. J. H. Dellinger, undertakes research on radio principles, standards and standardization projects and special radio engineering problems for the Government, other than in military and naval developments.

Its work deals more with fundamentals and with scientific phases of radio than with specific applications embodied in apparatus on the common market. It keeps in touch with advances made elsewhere in radio and electrical communication generally, but does not attempt to police the air, that being done by the Radio Division of the Bureau of Navigation, another branch of the Department of Commerce under Secretary Hoover.

In a special interview, Dr. Dellinger declared that even the term "radio" was not fully understood by many, let alone its many applications and phases. In this connection he said:

"To most of the radio fans, and even to radio experts, who flourish all over the land, radio means receiving apparatus and that alone. The reception of broadcasting is the most extensive phase of radio today, but it is not the whole of radio. The serious effort of radio science and engineering is far less engaged with broadcasting than is commonly supposed.

"Relatively speaking, and from the technical development viewpoint, the problems of broadcasting and of broadcast reception are solved, and other things are being

developed. The real work of broadcasting development was done three to ten years ago. Of course there is great commercial and technical progress being made in this line but the processes of fundamental development work are being directed to such things as trans-oceanic radio-telephone service, radio aids to navigation on the seas and in the air, directed radio transmission, radio distant control, conquering of atmospherics, and reduction of interference."

Having no desire to decry broadcasting, Dr. Dellinger points out that in it, radio is certain to reach its highest function. The greatest service radio will eventually render, is its part in the processes of education, in a broad sense, he says; and while the widest use of radio broadcasting is entertainment, its greatest serious contribution to human life will be education. The Bureau of Standards has been identified with the development which has established the present broadcasting service. In 1920, at the request of the Department of Agriculture, the Bureau ran a four-month experimental trial of daily broadcasting of market reports. The extensive market report system of today was established on the basis of the results of this trial.

The extremely practical importance of scientific work on standards is illustrated by radio interference, Dr. Dellinger said, adding that much has been done to solve this great problem. Instead of the common attitude of complaint whenever a code message or other noise disturbs reception, an attitude of wonder and praise over the relative absence of interference would be more appropriate, he feels.

There are each night several hundred radio messages simultaneously going through the ether from as many stations. Yet each reaches its hearers. There would be much conflict and pandemonium if each of these stations was not kept on, or very near, the assigned wave length. This close adjustment of the station frequencies requires very accurate standards of frequency and constant vigilance to keep the stations and the measuring instruments in harmony with established standards.

SUBSCRIBE NOW!

Detailed information regarding the development of receiving and broadcasting, interesting news and feature stories and advance programs of WLW are to be found in the Crosley Radio Weekly. This is the most up-to-the-minute paper of its kind in the radio field, and should be in the home of every owner of a radio receiving set. Information contained in every issue is of the greatest value to you. The subscription price is but \$1.00 per year. Subscribe now.

Name

Street and Number

City and State

Attach \$1.00 and mail this to the Crosley Radio Weekly, The Crosley Radio Corporation, Cincinnati, Ohio.

Radio Legislation Again Sleeping In House Pigeon-Hole

Great Conference Of Everyone
Interested to Be Called By
Hoover—Bills to Be Re-
vived At Next Session.

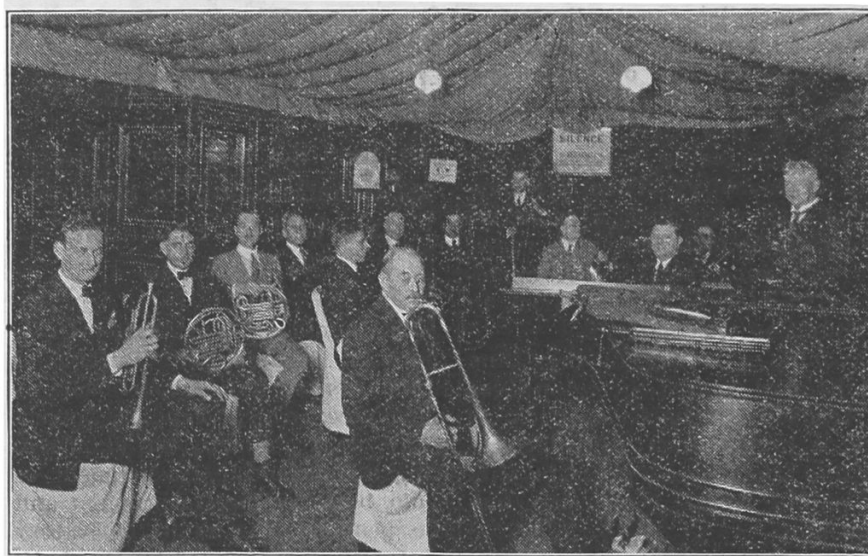
With the closing of the doors of Congress, Saturday, all hopes for the enactment of radio legislation at this session were terminated. In the fall, two things may happen to the revised White Bill, now known as the Howell Bill which sleeps in a pigeon-hole until December. Either it will be revived then or new bills may be introduced in the Senate or House, or both.

In the meantime, Secretary Herbert C. Hoover is planning a general radio conference to which he will invite representatives of all walks of the radio industry, including manufacturers, commercial and amateur operators, broadcasters and associations interested in radio development.

The purpose of this, the third radio conference, will be two-fold: Efforts will be made to improve present conditions relating to interference, assignment of wave lengths, and time distribution among the commercial, amateur and broadcasting interests, all of which are now operating on a voluntary agreement, and also to review pending legislation to get expressions of opinion from the many radio users and listeners, before any new regulatory laws are enacted. An agreement between the several interests for stronger voluntary self-regulation is hoped for by Mr. Hoover, whose only authority is contained in a law enacted twelve years ago before radio was used generally throughout the country.

Representatives of the Department of Commerce are now working out in detail the scope of the conference, securing advices from those affected as to a suitable date for the Washington meeting. At first, Secretary Hoover planned to hold the sessions in June, but difficulties arose. Some time in July appears to be the earliest possible date, but the question now before the Department is whether it would not

Sunday Evening Entertainers



The Western and Southern Orchestra, directed by William Kopp, has been playing at the WLW studio every Sunday evening, and will continue to do so throughout the Summer. This orchestra is composed of members of the first stands in the Cincinnati Symphony Orchestra.

be more agreeable to all parties to avoid the summer months and call the meeting in September. An early announcement is expected on the date and scope.

Quantity Production And Efficiency Help Crosley Customers

(Continued from Page 1)

going after the one class he will have to sacrifice the other. If huge volume means anything to him, then he must develop his manufacturing and advertising in programs at one and the same time and see that they go along together in peace and harmony. On the producing end he must cut out all the frills and standardize his methods so far as possible to keep down the manufacturing cost.

Such a policy does its share toward keeping down the price to a place where advertising will have a real opportunity to produce a volume of business that will justify the price and make a profit. The two elements work together. They can't be unscrambled. Hence the value of starting them together at the beginning. All this is a sound merchandising principle for every element of which chapter and verse can be given. Business volume cannot be produced on theory. There is a reason for everything, and all manufacturing and selling steps looking toward the production of volume should be taken with the knowledge that the coming of pay day is inevitable.

It is a generally recognized fact that the selling price of most kinds of merchandise these days is too high. Nobody knows this better than does the retailer who is in daily contact with the consumer. Prices have to be reduced and there is no use in pretending otherwise.

Even though we may admit, for the sake of supplying a basis for argument, that advertising increases the cost of selling goods (and there are, most certainly, two sides to this question), does it make the selling price higher?

It does not. On the contrary it makes, or can make, selling prices lower.

If it were not for a conversation which the writer had recently with an executive of a prominent automobile concern, he would feel like apologizing for assuming this somewhat pedagogical manner in stating a proposition that everybody ought to know about by now.

But the automobile gentleman made some remarks that would lead one to suspect that knowledge and recognition of this function of advertising are not so nearly universal, after all. He confirmed a report about his company making a large extension on its advertising program, but expressed the fear that it might not be a good thing to talk about.

"You know," he said, "most people believe advertising outlay means higher cost for goods. And, as a matter of fact, it does represent something that has got to be got back in some way. If we should authorize you to say we had added several hundred thousand dollars to our appropriation wouldn't our distributors and retailers have pretty good cause for thinking that if we didn't spend so much for advertising we could sell our cars for less money? I can't help thinking under the circumstances, that the less we have to say about our advertising program, the better it is going to be for us."

Enough said. No apology is necessary. Let the primer class in merchandising step forward.

First, we shall consider the case of Powel Crosley, Jr., Cincinnati radio manufacturer.

Late in 1919, Mr. Crosley, then a manufacturer in another line, was

approached by his young son with the proposition that he purchase a radio set. Crosley had been waiting for some sort of an excuse to buy a set. He took the boy out to a radio-making concern (which he since has purchased, by the way, and amalgamated with his own company) but decided the price asked was entirely too high for the set. Those were pioneer days in radio and the set, while probably as good as any, was admittedly far from perfect.

The two Crosleys went back home and, at trifling cost, made for themselves a simple set that did practically everything that could be expected of the more elaborate article.

The incident made Mr. Crosley think. Why couldn't that company sell its set (and remember the set was not much of a set) at a considerably lower price? He decided the inability was caused, among other things, by the fact that the unit price necessarily had to be made high to enable the company to get by at all. If something could be utilized to swell the volume to real proportions then, he reasoned, the selling price could be cut to a more attractive figure.

Mr. Crosley kept on thinking along these lines until, when he himself went into the radio manufacturing business in 1920, he had decided upon these three principles to guide him in his production and merchandising:

1. Simplicity in design.
2. Quantity production.
3. Low price.

Now then, it takes more than mere dictum to make possible a low price on a quality product. Every manufacturer knows that production costs, selling expenses and a lot of other things have to be considered. There is not a great deal of difference as to the application of the principles until the most important thing of all is reached, namely: the proposition of getting a satisfactory profit. Right here comes the parting of the ways for every person who produces merchandise. His product may have unquestioned merit and there may be a real market for it, actual or potential. Yet upon the means he takes to realize his profit depends absolutely whether his success is going to be moderate or great or

Continued on Page 8)

DEALERS

For Immediate Delivery

CROSLY

Better—Costs Less
APPARATUS

EIGHT BIG WAREHOUSES

WAKEM & McLAUGHLIN, Inc.
CHICAGO.

RADIO DISTRIBUTORS

Large stock of Sets and parts
including

Genuine Radiotron Tubes
Magnavox Reproducers, General
Radio Instruments, Brandes Table
Talkers and Headsets, Eveready
and Burgess Batteries

The Johnson Electric Supply Co.

Dealers wanted in all localities.
232 E. 5th St. 331 Main St.
CINCINNATI, OHIO.

We supply dealers with Crosley
Apparatus.

Crosley Trirdyn 3R3 Radio Receiver

CROSLY TRIRDYN 3R3

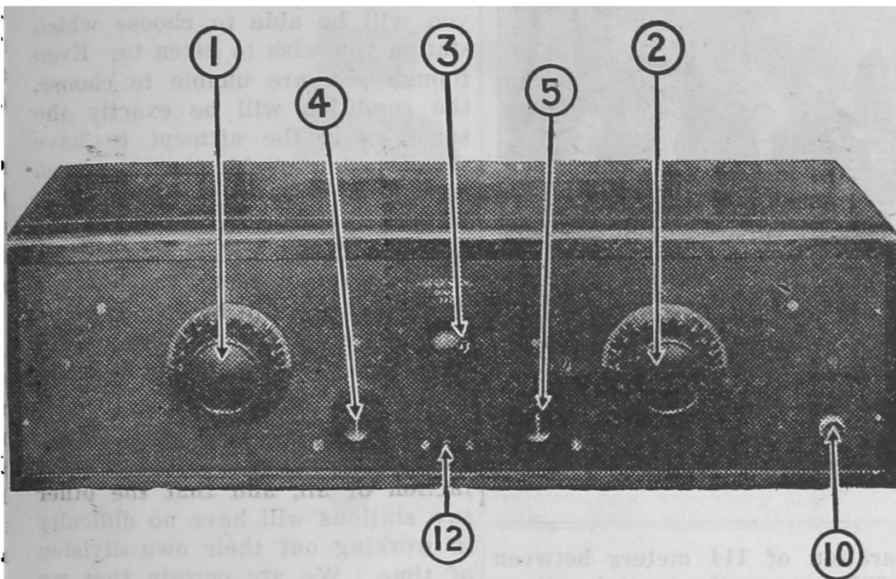


Figure 1

CROSLY TRIRDYN 3R3

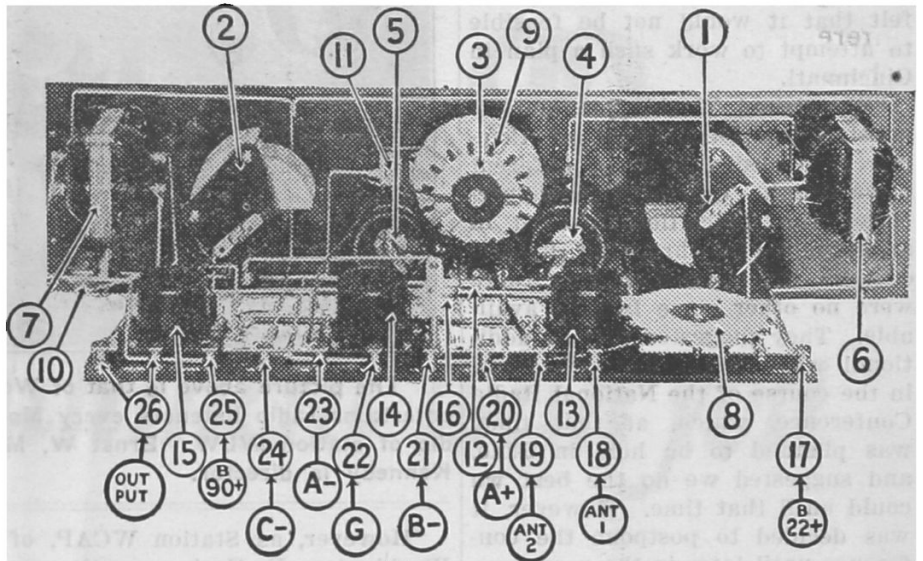


Figure 2

INSTANT broadcasting stations may be heard with the new Crosley Trirdyn 3 R 3 radio receiver while local stations are in operation. This selectivity makes an ideal set for use in any home and is designed for year-round service.

Three vacuum tubes are employed through the novel application of them a volume equal to any five tube receiver is obtained. The provision of a jack makes it possible to use but two tubes when headphones are employed and when the plug is removed, the set automatically operates a loud speaker, using the three tubes.

Four important principles are accomplished in the design of this receiver: tuned radio frequency amplification with the first tube; regenerative detector action with the second tube; reflex amplification by employing the first or radio frequency tube as an audio amplifier, and another stage of audio frequency with the third tube.

An important feature of the Trirdyn is the fact that it will not radiate when receiving, due to the fact that the antenna is very loosely coupled to the secondary circuit and a non-oscillating radio-frequency amplifier is employed before the regenerative detector, as a barrier to prevent oscillations generated by the detector upon reaching the antenna.

Accurate adjustment to the signals of broadcasting stations is possible and tuning simplified with this receiver, because the antenna circuit is aperiodic or un-tuned, which permits the secondary circuit and the tuned radio frequency amplifier to be calculated in wave-lengths. For example: the WLW station of The Crosley Radio Corporation, Cincinnati, broadcasting on a wave length of 309 meters, is found at 21 on the first dial and near that figure on the second dial, while the KDKA station would be found just a trifle above those marks. It is only necessary to learn the dial readings to again hear that or other calibrated stations, if they are operating.

Excellent results with any type of antenna will be found in operating the Trirdyn and loud-speaker volume, even on long distance stations, has been obtained without using any antenna, but with a good ground connection.

Vacuum tubes employing dry batteries for filament give satisfactory results but volume will be greater with standard tubes requiring six volts of "A" battery. Ninety volts of "B" battery are required for the plate and provision has been made for using a "C" battery, if desired.

The Crosley Trirdyn is enclosed in a handsome natural mahogany cabinet to retail at \$65.00.

- An explanation of figure 1 shows:
- 1—tunes the grid circuit of the radio frequency amplifier.
 - 2—tunes the grid circuit of the detector tube.
 - 3—varies the position of the tickler coil thus changing its coupling with the grid coil; pull out and push in the knob to operate.
 - 4—controls both of the amplifier tubes.
 - 5—operates the filament current for the detector tube.
 - 10—phone jack, when plug is inserted, operates only the first stage of audio frequency amplification. When set is tuned and phone plug removed, loud speaker is automatically operated on two stages of audio amplification.
 - 12—filament switch turning on and off the filament current for all tubes.
- transformer.
- 7—second stage audio frequency transformer.
 - 8—antenna coupler.
 - 9—radio frequency transformer.
 - 11—by-pass condenser.
 - 13—radio frequency amplifier tube socket also reflexed for first stage of audio frequency amplification.
 - 14—detector tube socket.
 - 15—audio frequency tube socket.
 - 16—grid condenser and clips for lead.
 - 17—"B" battery plus 22½ volts.
 - 18—antenna, sharp tuning.
 - 19—antenna, broad tuning.
 - 20—"A" battery plus.
 - 21—"B" battery minus.
 - 22—Ground.
 - 23—"A" battery minus.
 - 24—"C" battery minus.
 - 25—"B" battery plus, 90 volts.
 - 26—output for loud speaker.

An explanation of figure 2 shows, in addition to those given in figure 1:

- 6—first stage audio frequency

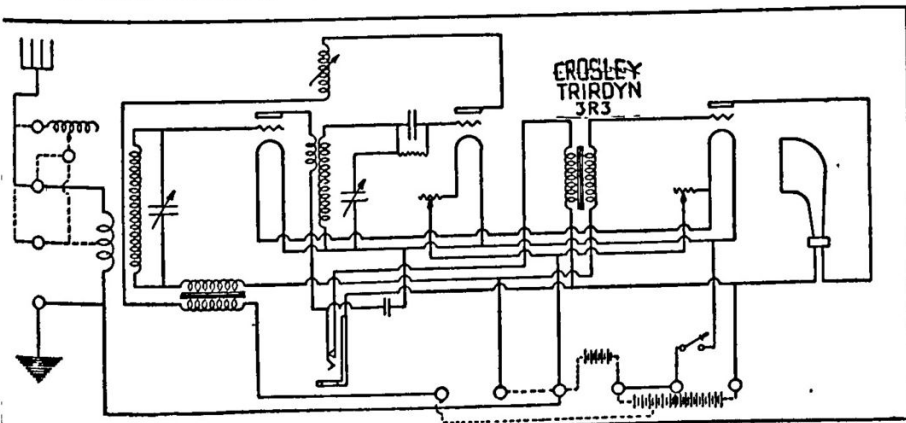


Figure 3

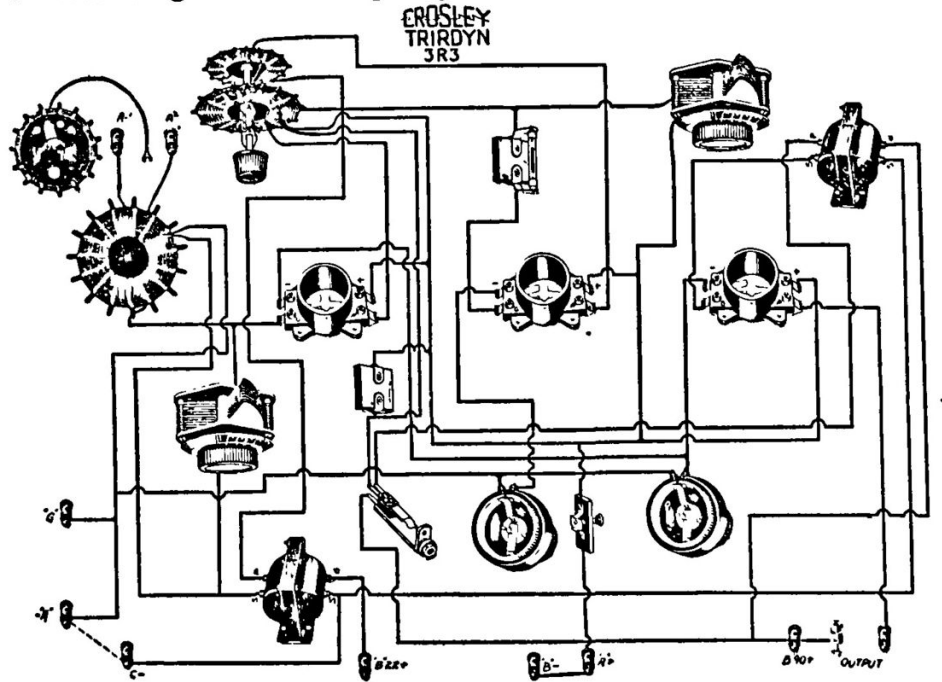


Figure 4

New Wave Length Of 423 Meters Assigned To Crosley Station

(Continued from Page 1)

not worked out satisfactorily we felt that it would not be feasible to attempt to work such a plan in Cincinnati.

"We visited Washington and requested the Department of Commerce to assign to us a different wave length. Officials there appreciated the difficulties involved in an attempt of a three-way division of time, but showed us that there were no other wave lengths available. They suggested that an additional wave might be worked out in the course of the National Radio Conference, which, at that time, was planned to be held in June, and suggested we do the best we could until that time. However, it was decided to postpone the conference until later in the year.

"In the meantime, a rather unpleasant condition became evident in Cincinnati, which required some immediate action. Now remember that there is only one other place in the country where three Class B stations are attempting to divide the same wave length; there are two stations in Cleveland, WTAM, the Willard Storage Battery Company, and WJAX, the Cleveland Trust Company, who are assigned the same wave length as WBAV, Erner-Hopkins Company, of Columbus, O. These three stations are dividing time, but it has not worked out at all satisfactorily for any of the stations. Chicago has five different Class B wave lengths, with seven broadcasting stations.

"One station in Chicago has a wave length all to itself, and the others divide time with not more than two stations on any one wave. The same condition is true in New York. Pittsburg has two Class B broadcasting stations, neither of which is dividing time with the other.

"There are many other Class B stations in the country that do not divide time with any other station, and yet, here in the State of Ohio, there seemed the possibility that there would be two localities in which three stations would be asked to divide time on the same wave length, with such a condition not existing in any other state in the Union. The Department of Commerce recognized this condition.

"They did not like it any better than we did, but they had no other wave lengths available. However, about a week ago I visited Washington again, and it was finally decided to assign this station the same wave length used by KPO, Oakland, Cal., namely, 423 meters. Heretofore the department has not assigned any station west of the Allegheny Mountains on the same wave length as a West Coast station.

Woody Meyer's Dance Orchestra



The picture above is that of Woody Meyer's Dance Orchestra which entertains radio listeners every Monday evening by playing in the studio of station WLW. Ernst W. Meyer, in inset, is manager and Ted Kennedy is director.

"However, as Station WCAP, of Washington, D. C., is operating on the same wave length as KFI in Los Angeles, and there is very little if any, interference between the two stations, on account of the great distance apart, even in the winter time, it was felt that this arrangement might well be made to put us on the same wave length as KPO, especially during the summer months, with the probability of a different arrangement before the winter.

"So 423 meters was assigned to WLW, with the understanding that we would divide time with the Erner-Hopkins Company, of Columbus, O., thus, it was possible for the Department of Commerce to 'kill two birds with one stone.' It is no longer necessary for the two Cleveland stations to work with a third station in Ohio on the same wave length, and it is no longer necessary for any attempt to be made for a division of time between three stations in Cincinnati.

"There is no place in the country where any three local stations are attempting to divide time. We have not as yet taken up in detail with the Columbus station the matter of division of time, but there is no question but that this can be worked out very satisfactorily. This matter will be arranged within the next few days, so that we can go on our new wave length as soon as possible, probably before the beginning of next week.

"Now the question has been brought up as to interference between any two Cincinnati stations operating at the same time on different wave lengths. You will notice that there is a wave length

separation of 114 meters between the 309 meters—the wave length at which the other stations in Cincinnati will operate—and 423 meters—the wave length on which we will be operating shortly. With such a wide separation there should not be any serious interference where non-selective receivers are used.

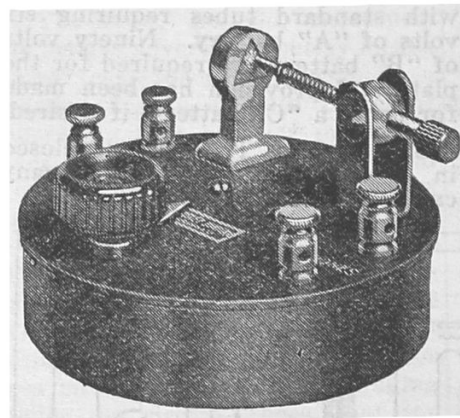
"We believe that with even the simplest type of receivers, located at a point where the two Cincinnati stations operating simultaneously are of equal volume, that either station can be tuned in. On the other hand, if the owner of a non-selective receiver is located very

close to one or the other station, the user will probably be unable to hear that station located at the greater distance. However, we believe that on the whole there will be very little interference. You will be able to hear one station or the other, and in some instances, you will be able to choose which station you wish to listen to. Even though you are unable to choose, the condition will be exactly the same as if the attempt to have three stations divide time had been carried through, when you would be able to listen to one station at a time. Things will simply be bettered to this extent: Under some conditions you will be able to make your choice of two stations, where otherwise you would be able to hear one.

"We feel sure that this matter has been worked out to the satisfaction of all, and that the other two stations will have no difficulty in working out their own division of time. We are certain that we will have no difficulty in a division of time between our station and the station in Columbus, O. There will, of course, be no necessity for Columbus to maintain the same 'silent night' that we will, namely, Friday, but we ask the radio public to bear in mind that this whole matter has been worked out in the fairest possible way—the same way that has been done in every other place in the country.

"We wish to add that our efforts to bring this about have been at no time designed to embarrass any other station, nor to prevent the operation of any other station in Cincinnati."

CROSLY JUNIOR CRYSTAL RECEIVER



This is the new Crosley Junior Crystal Receiver, the ideal radio set for use in listening to local broadcasting stations and those within a radius of about 25 miles. Clear, undistorted reception is assured, this new set providing perfect reproduction of radio signals. No batteries or tubes are required, nothing to become disconnected, nothing to be damaged by the children.

With the advent of summer, the demand for crystal sets has increased tremendously. Crosley dealers and jobbers will find that this new set will meet immediate approval, and we suggest that you get your orders to us as soon as possible.

Price, without phones or aerial equipment,\$4.00

THE CROSLY RADIO CORPORATION

Powel Crosley, Jr., President

200 ALFRED STREET

CINCINNATI, OHIO

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CROSLEY

51-P ~ \$25.00

Take your entertainment with you



SINCE the announcement of the Crosley 51, early in February, the popularity of this two tube set has grown by leaps and bounds. Selling at the price of \$18.50, it established an entirely new standard of value in the radio world. This receiver gives ample volume for a loud speaker on local receiving stations, and, under average receiving conditions, gives ample volume for a loud speaker on distant stations, frequently up to 1,500 miles or more. Under bad receiving conditions it is advisable to use head phones on distant stations.

Since the announcement of the regular Crosley 51, there has been an insistent demand on the part of jobbers, dealers

and individuals for a Portable 51. Here it is. The same wonderful little receiver that is now known so well as the 51, in a leatherette covered, portable case, with nickel plated trimmings and hardware.

Unlike most portable receivers, the case of the Portable 51—known as the Crosley 51-P—has ample room for a real power plant of batteries instead of a limited space for flashlight batteries, which have a very short life, even on dry cell tubes. The Crosley 51-P has ample space for three full sized six inch No. 6 dry cells to furnish the filament current for dry cell tubes. There is also room for three Eveready No. 764 vertical, intermediate 22½ volt "B" batteries, or the equivalent Burgess and French batteries, thus giving 67½ volts for the plates of the tubes, which means ample loud speaker volume under proper conditions. There is also ample room for a "C" battery, and provision is made for connecting in a "C" battery if desired. There is room for one or two coils of insulated flexible wire to be used as an antenna and ground wire, and there is a compartment for head phones.

The traveling salesman will take the Crosley 51-P with him to while away the evening hours when there is nothing else to do. He can drop a wire out of his hotel window, attach another wire to the radiator, and bring in stations within a reasonable range, and enjoy all of the pleasures of radio wherever he goes. The same is true of the camper and the automobile tourist. The farmer will use the Crosley 51-P in his home and when he goes visiting will take it along so that his neighbors, friends and relatives can enjoy the pleasures of radio when he comes to see them. Such organizations as Boy Scouts, Girl Scouts, and other clubs will find the Crosley 51-P an ideal receiver to round out the entertainment of the organizations.

The Crosley 51-P is so light and convenient, and can be used so efficiently on a small antenna, that it is recommended for canoes, motor boats, yachts, and for travelers on ocean voyages and on board trains.

The price of the Crosley 51-P is \$25.00. This does not include batteries, head phones, tubes or antenna equipment, which can be added at an additional cost of less than \$25.00.

THE CROSLEY RADIO CORPORATION

POWEL CROSLEY, JR., President

200 ALFRED STREET

CINCINNATI, OHIO

Democratic Meeting In New York To Be Broadcast By WLW

(Continued from Page 1)

In the near future, and our advice to them is to purchase receiving equipment in order to have it for the broadcasting of the Democratic meeting.

The Crosley Radio Corporation is broadcasting these conventions for the benefit of radio listeners, incurring considerable expense in order that those who own radio receiving sets may be able to get first-hand information regarding these great events. Microphones are being installed in the hall in New York which will pick up every sound. Special telephone wires will carry these to the broadcasting station of The Crosley Corporation, whence they will be transmitted far and wide.

Quantity Production And Efficiency Help Crosley Customers

(Continued from Page 4)

whether he shall gain success at all.

Here is the way Mr. Crosley worked it to keep his quality up, his price down and to make for himself a living profit:

His first venture among the line of radio manufacturers was the production of a porcelain socket to be used in radio sets for the reception of tubes. His marketing methods for this article show that low price can mean a larger net profit than a high one.

The Crosley socket was perhaps no better than others on the market at that time. But it stood out by itself because of its sensationally low selling price. This price was below the actual cost of production at the time. Every socket sold meant a loss to the manufacturer. But this was not an accident. Neither was it the outcome of slipshod production methods, wherein a lot of hidden leaks drained away the profit. It came from deliberate planning on the part of the manu-

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SECURITIES

Or own some about which you
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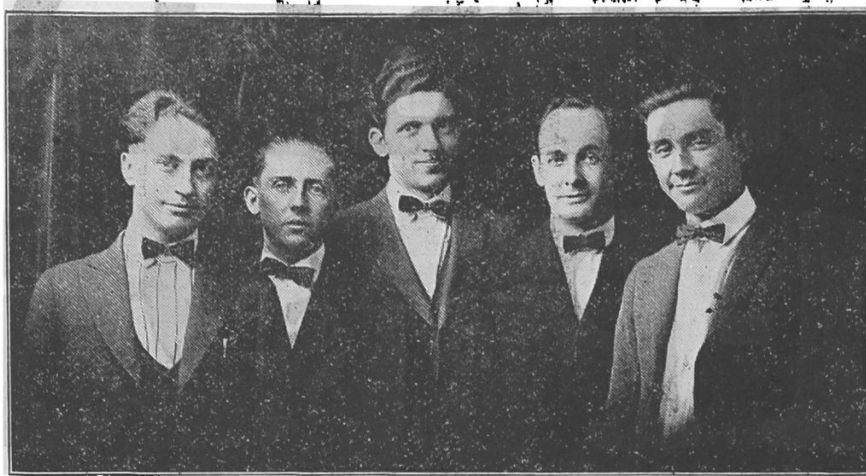
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Entertain WLW Listeners



The male quintet representing God's Bible School has entertained Crosley WLW radio listeners on several occasions. A picture of the quintet appears above. From left to right, the singers are: J. M. Meighen, director and first tenor; Mr. Mullens, second tenor; Mr. Martin, barytone; Mr. Lewis, first bass and Mr. Ash, second bass.

facturer who built his business on the principle that eventual and not present profit is the thing to be considered.

"I knew I was losing money at that price," says Mr. Crosley, "and also knew how much I was losing. But at the same time I realized that if I could push up my sales volume to a certain mark within a year I then would be making a profit through selling the socket at a figure which, in the beginning represented a loss.

"Would it be better for me to make a profit from the first sales, continue making a profit on every subsequent sale and be on the safe side all the way along? I wanted the business to grow. I wanted big volume. But could I make more money out of selling a comparatively small volume at a high price than from selling huge volume at a low price?

"It was a matter of cold dollars and cents to me, all sentiment left

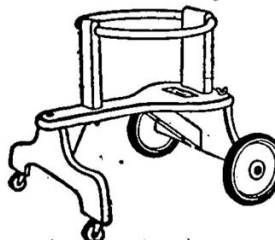
out. I decided in favor of the large volume and the low price. And the reason I fixed upon the low price was that without it there would be heavy selling resistance which probably would prevent my gaining the desired volume."

(To Be Continued.)

He—"If you hadn't taken so long getting ready, we should have caught that train!"

She—"Yes, and if you hadn't hurried me so, we shouldn't have had so long to wait for the next one!"

The Go-bi-bi



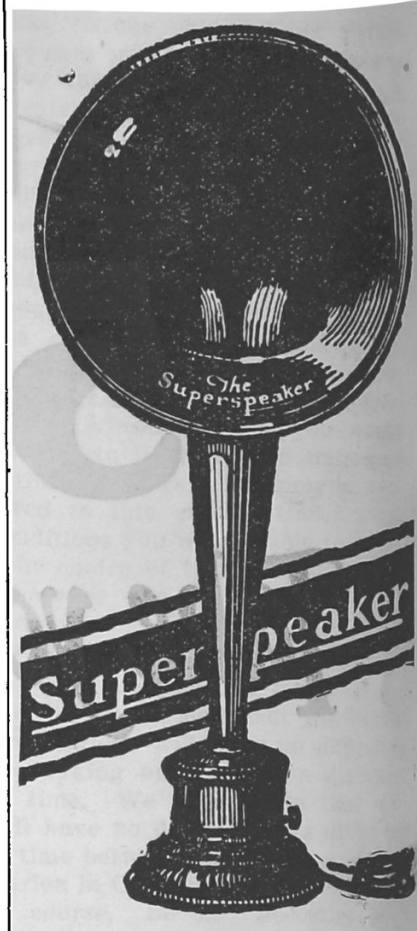
No longer does Daddy carry the infant about in his arms while mother prepares supper. Little brother and sister do not have to sacrifice their play hours to take care of the baby. And Mother—look at Mother, just as carefree as the children. All because the Tiny Tot in this home is learning to walk by means of the GO-BI-BI and needs little attention from anyone. On the contrary he is keeping the rest of the family entertained.

"My wife and I are 'tickled to pieces' over the GO-BI-BI we have for our ten months' old girl. It is just like a one ring circus to watch her." (Signed) Gordon B. Small, Springfield, Mass.

Every dealer in baby things or children's vehicles should stock the GO-BI-BI, and help to make healthy babies and happy homes in the community. Nothing like it for making satisfied customers.

CROSLY MFG. COMPANY

1632 Vandalla St. Cincinnati, O.



IT'S ADJUSTABLE

but, if it wasn't, the Superspeaker would still be the King of all Reproducers. For the resonance it reproduces is all music—there is no vibration of the big, substantial horn at any musical pitch.

Natural reproduction, without extra batteries or coils—A handsome musical instrument, built by musical instrument people and covered by patent applications—Thousands in use—Sweeps every market—A satisfaction to sell it. Radio Merchants, here's your opportunity!

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