America to Hear Europe's Programs

Radio Digest

EVERY WEEK **Illustrated PROGRAMS** TEN CENTS

REG. U. S. PAT. OFF. & DOM. OF CANADA

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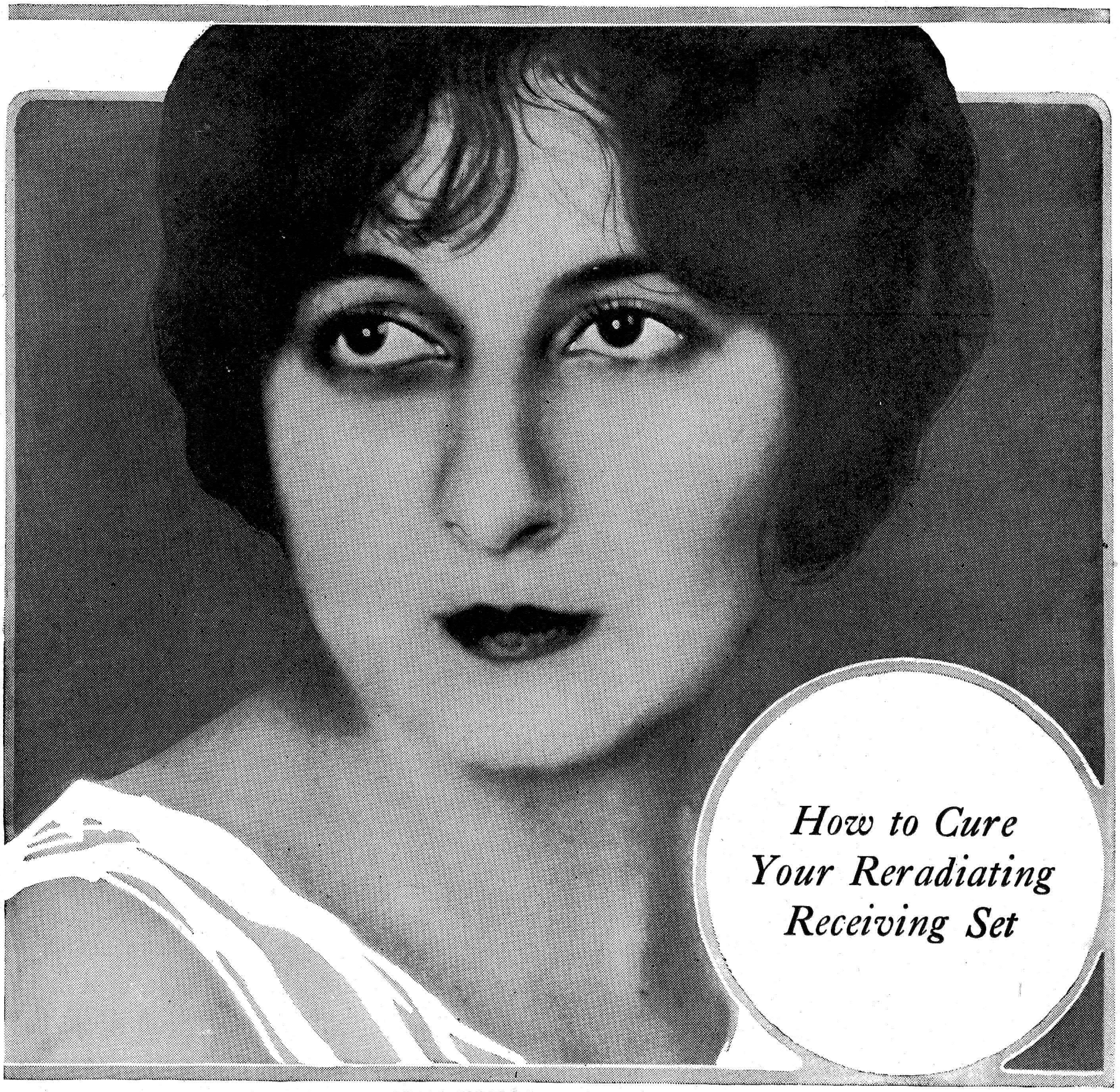

How to Cure Your Reradiating Receiving Set

The Story of the Mouth Organ; Ukulele Ladies You Should Know; Women's Page; WJZ-WJY Picture Page; Counterphase Receiver; Operating and Trouble Shooting

Law Recommended by the Radio Conference

THE following recommendations to Congress for a new law regulating Radio communication in all its phases, were made by the commitee on legislation at the fourth national Radio conference. The report of the committee was accepted and all its resolutions passed by the general conference. To make it a law Congress must pass and the president must sign a bill embodying the principles set forth herewith.

Because this law will affect millions of listeners, all Radio manufacturers, broadcasting, commercial, experimental and amateur stations, it is believed advisable to publish the complete report of this committee. The chairman of the committee was Judge S. B. Davis, solicitor for the department of commerce, and probably the best informed man on the subject of Radio in the department of commerce.—Editor's Note.

IT HAS been the pride of the Radio industry that it has been to a large extent self-regulating, most of the regulatory features necessary for its efficient functioning being discussed and agreed upon at these annual conferences rather than imposed by governmental authority. It is highly desirable that this condition shall continue to the greatest measure possible.

Nevertheless, it must be recognized that in the widespread network of stations that now exist throughout the country, each a potential destroyer of the messages of the other, regulation to keep open the traffic lanes is absolutely essential and that regulation can be imposed efficiently only by the central authority of the federal government, which must have the right through issue of licenses, control of power, assignment of wave lengths, and other appropriate measures, to handle as a whole, the interstate and international situation.

Government to Keep Free of Details

This power should be vested in the secretary of commerce, as it is to a limited degree at present. But governmental authority should not be extended to mere matters of station management, not affecting service or creating interference, nor should it under any circumstances enter the forbidden field of censorship.

That authority should exist to limit the number of stations in any community has already been determined by this conference, which has likewise recommended that **benefit to the listener must be the basis for the broadcasting privilege.** With these determinations, your committee is of course in hearty accord.

Not Strictly Public Utilities

We would, however, point out that recognition of the principle of public benefit does not bring the broadcasting stations into the category of recognized public utilities.

The owners of broadcasting stations have not dedicated them to public use in a legal sense, and such matters as regulation of rates and other similar features of supervision exercised by governmental bodies over public utilities generally, should still, in the judgment of your committee, remain under the exclusive control of the station owner.

In many respects, these provisions are inapplicable to broadcasting stations, by their very nature, and in any event we do not believe the time has come for their imposition.

Basis for Action

As to the specific matters referred to this committee, we respectfully submit the following report:

It is the opinion of this committee that:

(1) Existing federal statutes are inadequate to permit proper administration of Radio communication activities.

(2) The congress of the United States is empowered by the statutes to enact legislation necessary to provide such adequate administration.

(3) Present conditions and the public interest require that such legislation be enacted.

Recommended Legislation

Your committee therefore recommends that Congress do enact such legislation, incorporating therein the following principles:

(1) That the administration of Radio legislation shall be vested in the secretary of commerce who shall make and enforce rules and regulations necessary to the proper administration of the provisions of such legislation.

(2) Such administration shall be exercised by the secretary through the officers or employees of the department of commerce, except that the secretary may appoint such boards or committees as he may consider necessary or desirable to assist him in an advisory capacity in the administration of problems of national scope.

(3) **That the doctrine of free speech be held inviolate.**

(4) That those engaged in Radio communication shall not be required to devote their property to public use and their properties are therefore not public utilities in fact or in law; provided, however, **that a license or a permit to engage in Radio communication shall be issued only to those who** in the opinion of the secretary of commerce **will render a benefit to the public; or are necessary in the public interest; or are contributing to the development of the art.**

(5) That in time of war or other national emergency the president shall have the power to discontinue or commandeer existing stations, with just compensation.

Secretary of Commerce Hoover, "big boss" of Radio in all of its forms, again displayed that remarkable ability of his for getting things done, when he piloted the fourth national Radio conference. Now all he has to do is convince the lawmakers that a law is necessary.

(6) That no monopoly in Radio communication shall be permitted.

(7) That the legislation shall contain provisions for due appeal from final decisions of the secretary of commerce to the appropriate court.

(8) Except in the case of governmental stations, the secretary shall be empowered to classify all stations and to fix and assign call letters, wave length, power, location, time of operation, character of emission, and duration of license.

It is recommended that call letters shall be recognized as representing a property right and be treated accordingly, during the life of the license. The secretary shall not change call letters, wave length, power, time of operation, nor character of emission except on the application by, or consent of the licensee; provided however, that if in the opinion of the secretary such changes are **required as a public necessity,** any change or changes may be made.

Provided, further, that **the term of a license** to operate a broadcasting transmitting station, the character of which is to be defined in the Act, **shall be not to exceed five years,** with the privilege of renewal for like periods, and provided further, that the secretary **may suspend or revoke any license for failure to maintain regular operation** of a transmitting station without just cause.

(9) No license shall be issued to operate a transmitting station not already operating in Radio communication, except mobile or amateur stations, **unless** prior to the application for such license **there shall have been issued** by the secretary of commerce **an erection permit;** provided further that **an erection permit** to engage in Radio communication **shall be issued only to those who,** in the opinion of the secretary of commerce, **will render a benefit to the public; or are necessary to the public interest; or are contributing to the development of the art.**

(10) Each license to operate a transmitting station in Radio communication shall prescribe the responsibility of such station with respect to distress signals; but in any event all licenses shall provide that upon due and proper order from governmental authority such stations shall cease operation until released by the same authority.

(11) That the Act should define the following terms, to wit: Commercial Stations, Broadcasting Stations, Amateur Stations, and Experimental Stations.

(12) That the secretary shall have the power to revoke or suspend any license whenever he shall determine that the licensee has violated any of the terms of his license, regulation of the secretary, federal Radio law or international treaty.

(13) That in order to insure financial stability to Radio enterprises, **capital now invested must receive reasonable protection;** therefore all stations **which contribute to the public interest and benefit** shall be given a reasonable length of time **to conform to the provisions of the proposed Act** and the rules and regulations prescribed thereunder.

(14) That rebroadcasting of programs shall be prohibited except with the permission of the originating station.

(15) The secretary of commerce **shall be empowered to make and enforce such rules** and regulations as may be **necessary to prevent interference** to Radio reception emanating from Radio sources.

(16) Authority should be provided to prescribe and enforce, uniform regulations regarding the use of Radio transmitters on ships in territorial waters.

"LOOKS AS GOOD AS SHE SINGS," WEAF

CECELIA BRANZ, the sweet-faced and sweet-voiced contralto, is the original of the girl on the Radio Digest cover this week. Miss Branz is heard regularly over WEAF, New York. She is a recent recruit to the "Roxy Gang" which helps to make eastern nights merry over this New York station. Her voice, mellow and clear, has the quality that adapts itself most pleasingly to the mechanical limitations of the michrophone. The New York Radio music critics predict that she has a future with nation-wide fame as an air artist.

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Looking Ahead

Sometime Communication with the Dead May Be Established by Radio—Sometime. When that time comes Romaine Fielding will be all set to make King Tut feel at home for an evening of broadcasting at the KFVE studio, built like an Egyptian palace at University City, Mo. That's one for next issue, and then there will be, "Radio a la Carte," as it is conducted by the Canadian National Railways' ten broadcasting studios.

"Willie the Weeper," Caught Unguarded and Alone in the city room of the Atlanta Journal by a ruthless interviewer, is shown no mercy and compelled to tell his real name and reveal many of the most harrowing secrets of his life for Radio Digest readers next week.

Daredevil Radio Operators Scale New York Church Spire to broadcast chimes for Radio parishioners. How and why? Tell you next issue.

The Adjusting and Operation of DX-Seven will next week complete the series by John G. Ryan on this deluxe little super-heterodyne. Even though one has owned a super before, there are features of this set, such as a C battery in a detector grid return and a grid leak in the oscillator grid circuit, which make it almost imperative that one study the adjusting chapter carefully.

Counterphase, First of the Bridge Circuits for which parts are available on the market, gets to the wiring stage in next week's issue. Three stages of tuned and neutralized radio frequency amplification give a degree of selectivity that will suit the most critical while the volume on DX stations equals that of a super.

ALL CONFLAB PLANS MAY NOT WORK OUT

LACK OF LEGISLATION MAY BLOCK RESOLUTIONS

District Inspectors Feel Class Ratings Necessary; to Try for More Feasible Plan

WASHINGTON, D. C.—With the close of the fourth Radio conference officials of the department of commerce are giving their attention to the resolutions passed and to the possibility of enforcing some of the recommendations.

It will be impossible to enforce some of them because of lack of legislation.

It has been stated by some of the officials of the Radio section of the department that following the recommendations of the conference there will be no more division of time and no more licenses will be granted for broadcasting except in such places as there will be no possibility of interference. There are many stations being held up because of this attitude taken as the result of the recommendations of the conference.

Inspectors Feel Classes Necessary

There is question in the minds of some of the officials as to just what can and cannot be done relative to abolishing class A and class B stations. Some of the officials take the stand that there must be some differential between the two kinds of stations because the class A stations will immediately want to step up to class B and this would make conditions worse than they are at present.

Radio inspectors from the various districts who came here to help out at the conference have this matter under discussion at the present time in an effort to see if some feasible plan can be worked out.

Roxy Will Broadcast from Own New Theater

$8,000,000 Structure Is Equipped with Broadcasting Room

NEW YORK.—A broadcaster which will contain the latest in modern Radio equipment will be one of the features of the new Roxy theater, 50th street and 7th avenue, New York, where Roxy (S. L. Rothafel) and his gang will continue to delight Radio fans on a scale never before attempted.

The new theater, which is to cost $8,000,000, will not only be notable for the class of pictures presented but will be unique among motion picture houses in many respects. It will have a seating capacity of 6,000 and an orchestra pit which will accommodate 110 musicians. There will be an organ in the grand foyer and one in the broadcasting room.

Sixteen Orchestras at Once

CINCINNATI.—The Post Zoo cabaret program broadcast through Station WLW was the banner event in Cincinnati's contribution to the Radio art for the month of November. Sixteen orchestras broadcast on one program.

TO EXCHANGE OVERSEAS PROGRAM

POWERFUL STATION REACHES FAR IN DAY

WJZ USES 50,000 WATTS; HITS TEXAS AT NOON

New York Station Experiments with Strong Transmitter; To Have Many Features Later

NEW YORK.—Turn down your rheostats when you tune in WJZ on 455 meters. On November 9, this station went on the air experimentally with their evening program using 50,000 watts.

A few days later they dropped down to 25,000 watts, and daily since that time have increased their power back to 50,000 watts, which they are using at the present time.

The transmitting equipment for the new power is located at Bound Brook, N. J., approximately 40 miles from their studio, located in the Aeolian building here.

Towers 300 Feet High

Three 300-foot towers carry the aerial which can be observed for miles around the countryside. At high noon, observation posts located at Fort Worth, Texas, have reported excellent reception. Illinois and Indiana, in the Middle West, have reported the same conditions existing throughout that territory.

WJZ began November 9 to increase their power. One hour each evening the station switched over to the superpower and results compared to their regular equipment. Although no special schedule has been contemplated, WJZ will inaugurate a number of features for the coming months.

McNAMEE MAKES HIS STAGE DEBUT

Gold Cup Announcer Plays Part in Baseball Comedy at New York Opening

NEW YORK.—When the curtain rose on the last act of "Solid Ivory," which opened at the Central theater before a crowded house on a recent Monday evening, Graham McNamee, WEAF's most popular announcer, made his debut on the legitimate stage. The scene depicted a thrilling baseball game between the "Hyenas" and the "Blue Sox" and McNamee in his most inimitable manner described each play very earnestly before a "dummy" microphone.

While McNamee appeared only on the opening night, his place before the microphone throughout the further run of "Solid Ivory" has been assumed by A. V. Llufrio, one of WEAF's pioneer announcers and more recently with WGBS and WMCA, New York.

Atwater Kent Star to Visit Coast Station

Toscha Seidel Will Give Recital from Station KPO

SAN FRANCISCO.—Toscha Seidel, the famous Russian violinist, will appear in a recital before the microphones of KPO here, Sunday evening, December 6.

Seidel, who is one of a group of stars recently contracted to make Radio appearances by A. Atwater Kent, will arrive in California early in December on tour and will make his western Radio premier for KPO listeners. Accompanying the violinist will be a stellar pianist, yet to be named, the two artists contributing an hour of music.

Although Seidel is the only one of the Atwater Kent artists definitely "booked" for KPO, Oliver W. Tuttle, managing-director, stated that negotiations are in progress for appearances of others of similar rank.

Proposed New British Plant Would Exceed 2LO in Power

LONDON.—Immense interest has been aroused by the proposal for a new broadcasting station in southeast England, although no permission for such a station has yet been granted.

If the new station is erected, its power will certainly be greater than that of 2LO, whether 2LO is reduced or not.

The idea is that the new station should operate on a wave length of something between 400 and 500 meters at as great a clearance from 2LO's wave length as is convenient.

PRISON BARS DO NOT KEEP OUT AIR CHEER

WETHERSFIELD, Conn.—Through the ingenuity of a young inmate who constructed an eight-tube receiver the prisoners at the state penitentiary here are having their morale uplifted and their morals reclaimed by programs from WTIC, the Travelers Insurance company station at Hartford, according to Warden Henry K. W. Scott. Loud speakers are located in the hospital, insane ward, female department and cell houses.

BLIND BOY STUDIES BY WAVES OF WSUI

IOWA CITY, Iowa.—Among those who listened to the first lectures in the fall course of the University of Iowa "College of the Air" broadcast from WSUI, was a blind young man, William Klontz of Grundy Center, a graduate of the State School for the Blind at Vinton. It is through Iowa Radio education that he is working for a collegiate degree. He runs a typewriter by touch and hence can study by ear phone and report his progress without help.

TURN TALENTS TO MICROPHONES

Mme. Eva Gauthier (above), noted Canadian soprano, who recently sang in an Atwater Kent Radio Hour of Station WEAF, and Ruth Roland, screen beauty credited with a perfect broadcast voice, who entertains regularly from Station KNX.

Aladdin Outdone by London Inventor Who Directs Magic Lamp with Voice

LONDON, Eng.—Radio and electricity have combined to produce a marvelous lamp reminiscent of that of Aladdin in the "Arabian Nights." The lamp will light at the word of command and go out when ordered.

L. H. Pearson, a Nottingham Radio fan, is the inventor of this uncanny device. He made the discovery while transmitting from his own station (5CK) about a year ago. At that time he did not realize its commercial value, but he now has the device patented.

Describing his invention, Mr. Pearson said: "It is an electrical switch, which can be controlled by the human voice, or any vibration or sound."

He produced the wonderful lamp, which looks like an ordinary electric bulb.

Controlled by Voice

"On!" he commanded, and it was at once illuminated.

"Off!" he said, and the light was immediately extinguished.

The experiment was repeated several times, and the current "jumped to" the word of command on every occasion, to the astonishment of the onlookers, many of whom were unaware that the commands were spoken into a "mike."

WILL BRIDGE ATLANTIC BY RELAYS SOON

International Exchange Is Agreed to by Several Foreign Countries

Superpower to Be Used

Predicts Entire Country Will Hear Programs of Europe by Next Year

WASHINGTON.—An international exchange of broadcast programs is in prospect for the next year. This is the promise of David Sarnoff, vice president and general manager of the Radio Corporation of America.

"We have reached agreements with several countries," says Mr. Sarnoff, "for the exchange of programs. There remains the problems of getting the programs back and forth across the ocean with sufficient clarity to rebroadcast.

Receiving Station Under Way

"We are proceeding with an energetic program for the exchange of programs. We are building a receiving station at Belfast, Maine, because we have found that reception is better there. We can hear the foreign stations now, but we cannot get their signals well enough to rebroadcast them.

"Just as soon as our Boundbrook station is in regular operation we can get our programs across. A station is to be constructed in Germany with sufficient power to bring the German programs to us. The new British station at Daventry is equipped to use 40,000 watts, and, it is believed, will be able to furnish Americans with their programs.

Entire Country to Hear

"The programs picked up by our Maine station will be transmitted by wire to New York and from there sent out over the entire country either by land wire for rebroadcasting or by Radio."

AMERICAN RADIO HOMES INCREASE

Survey Shows Talking Machine and Autos Still Exceed Radio; Sets to Lead in Seven Years

CHICAGO.—Although the number of automobiles and the number of talking machines to each 100 people in the United States at present greatly exceeds the number of Radio sets in the same ratio, the great activity in the Radio industry since its start indicates that in not over seven years there will be more receivers per capita than phonographs. Recent surveys show that there are now sixteen Radio sets in every hundred homes as compared with fifty-two automobiles and thirty-six phonographs.

It is estimated that there are today 24,000,000 homes in this country equipped with some sort of a Radio set. This however is only about 84 per cent of the total number of homes in the land. Standardization, stabilization, and concentration in the Radio industry will make for a still better market, due to reduced prices, time payments and better products. Between 1,000,000 and 1,500,000 manufactured sets will be sold this season and it is believed that many thousands will be constructed by listeners in themselves.

Fur Country Indians Like Broadcasts of WCCO Radio

MINNEAPOLIS, Minn.—Up in the fur-trading country in northwestern Canada, 250 miles beyond civilization, Radio is the only link with the outside world, according to a letter received recently by Gold Medal Station WCCO, Minneapolis-St. Paul, from Harold Hemp, of the Revellon Trading company, Ltd., of Lac la Range.

"We are at fur post on the Churchill river, 250 miles from civilization, and have only monthly mail, so Radio is our only link with the outside. Wish you could drop in some night and see how big you go with some of our Indians."

You "Like-a" Ukulele Ladies Like These?

"If you like-a Uk-u-le-le lady
Uk-u-le-le Lady like-a you."

WONDER what you wondered, Mr. Man, when you tuned in on a soft, throaty voice humming and strumming that Ukulele Lady ng over your Radio during the late lamented ason of its popularity?

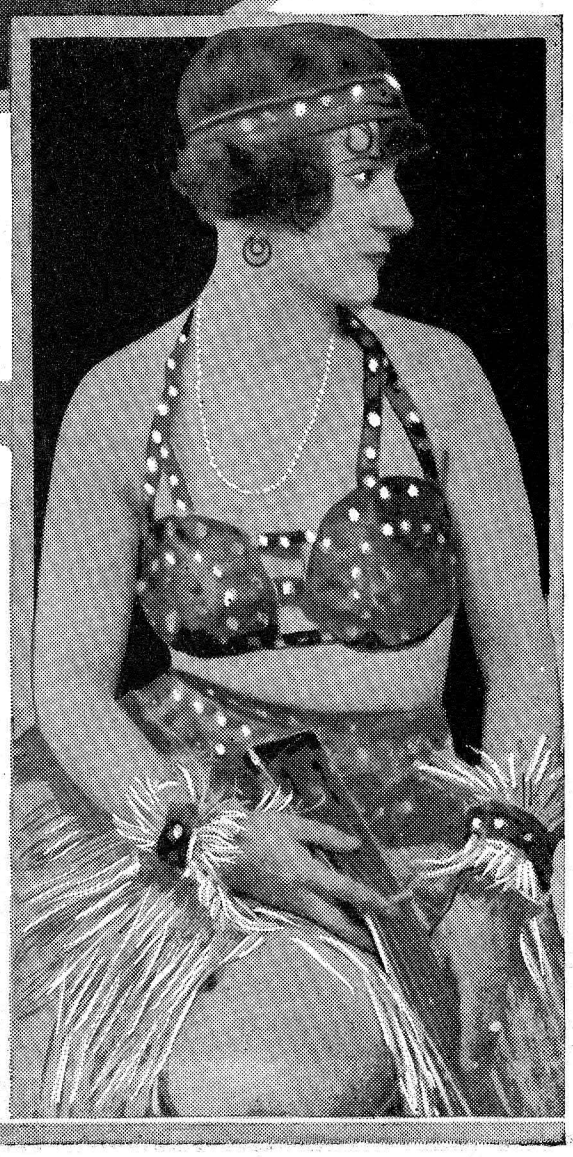
Didn't it just get you a wee tiny bit—give you a ght palpitation as you visioned in the fronded ores of Hawaii, mountain lakes by moonlight and some, exotic Hawaiian maidens with gently unded arms weaving and waving as they swayed id fluttered beneath the dancing shadows?

And that quaint, plaintive rhythm of sound—the tle night birds twittering themselves to sleep—hich was the ukulele, perhaps two, three or half a zen of them. Don't deny it. There's a charm to is Hawaiian stuff that stirs up dreams, a desire wander in tropic jungles where the world is imitive and unsullied by the clashing cymbals of gh life civilization.

What did you wonder, Mr. Man?

Did you catch the rush of the singer's breath tween the verses? Did you feel that she was ry, very near to the source of the sounds that

Oh happy day when you can see as well as hear these charming Ukulele Ladies by Radio! For instance, Henryetta Turner (in both the above poses) as she appears in the WEBJ studio, New York, a la Waikiki. And May Singhi Breen (below, left) of WMCA and Eunice La-Reeve (lower right), WBCN, Chicago.



came to your ears? Did you wish you could look through the receiver, right through everything to the very spot where that song came from? That you could look into a pair of melting, merry eyes—so near you could reach out and touch the brown, silky skin of the singer's hand as she strummed and twinged the baby guitar called a ukulele?

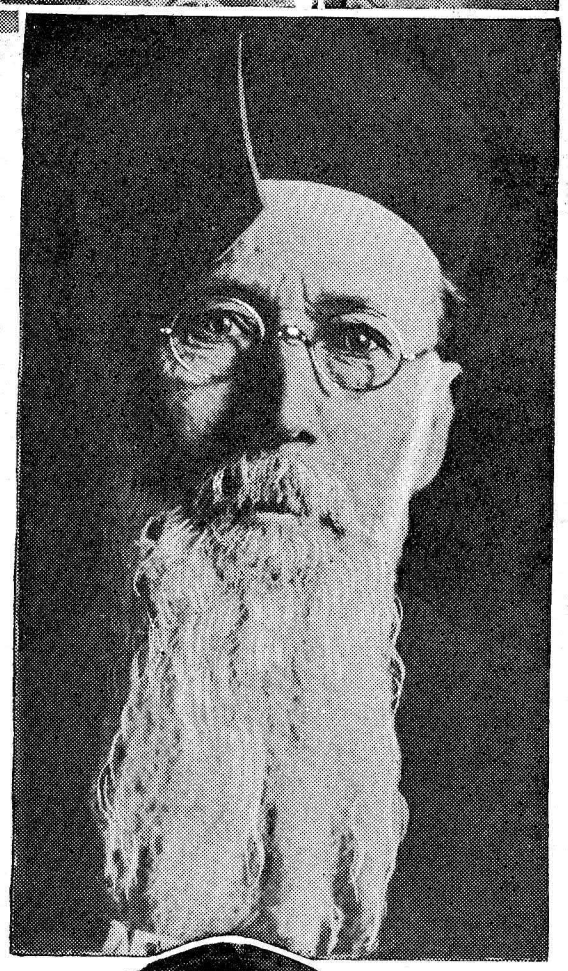
Confess, Mr. Man. Be not ashamed. Take a look at the fair ones shown in the pictures here. You were right. Your ears did not deceive you, for here you have the evidence of your eyes. These are just a few of the many beautiful maidens who have thrilled Radio listeners in every Radio home with their sweet Hawaiian music.

From New York to Frisco the ukulele ladies have entwined themselves into the hearts of their Radio listeners. Only a handful of those who hear them ever see them. But here they are as they look and, possibly, even more charming than you had imagined. There are scores of them along the ether lanes—too many to properly acknowledge in these columns.

Millions have (*Continued on page 11*)

Mouth Organ, "Child of Gods," Wins Fame

"Way Down Yonder in the Cornfield," by the New York Junior High School Harmonica band (right) playing at WOR. Walter Peterson (below) aids and abets his mouth organ concerts with a guitar. The harness discloses how he does it.



"MORE harmonicas are going into the Christmas stockings this year than ever before in the history of the mouth organ," states an item in the Detroit Free Press. For that let the mouth organ makers offer paeans of praise to the era of Radio broadcasting—mouth organ paeans.

A few short years ago a mouth organ was just "one of those things" in the life of every boy. It came along soon after the tin horn age at Christmas time and was to be endured for a week or two in justice to the rights of a growing boy. By the end of that time it was expected either to be lost or entirely blown out of commission.

But that was a few short years ago—before Queen Radio came into our lives and homes, bringing with her the mouth organ crowned with glory as a musical instrument of artistic attributes.

Please observe that we use the word "mouth organ." We do so advisedly. "Harmonica" is just a highfalutin name assumed for "professional reasons." There is no excuse for it in the dictionary. Look it up. You will find Webster's International says the harmonica was invented by Benjamin Franklin and consisted of a revolving series of hemispherical glasses played by putting the dampened finger on the edges.

Look up the mouth organ and you will find it is a direct descendant of the gods—an Arcadian nymph changed by Pan to a tuft of reeds, fashioned into a mouth organ that sings at the touch of her lover's lips.

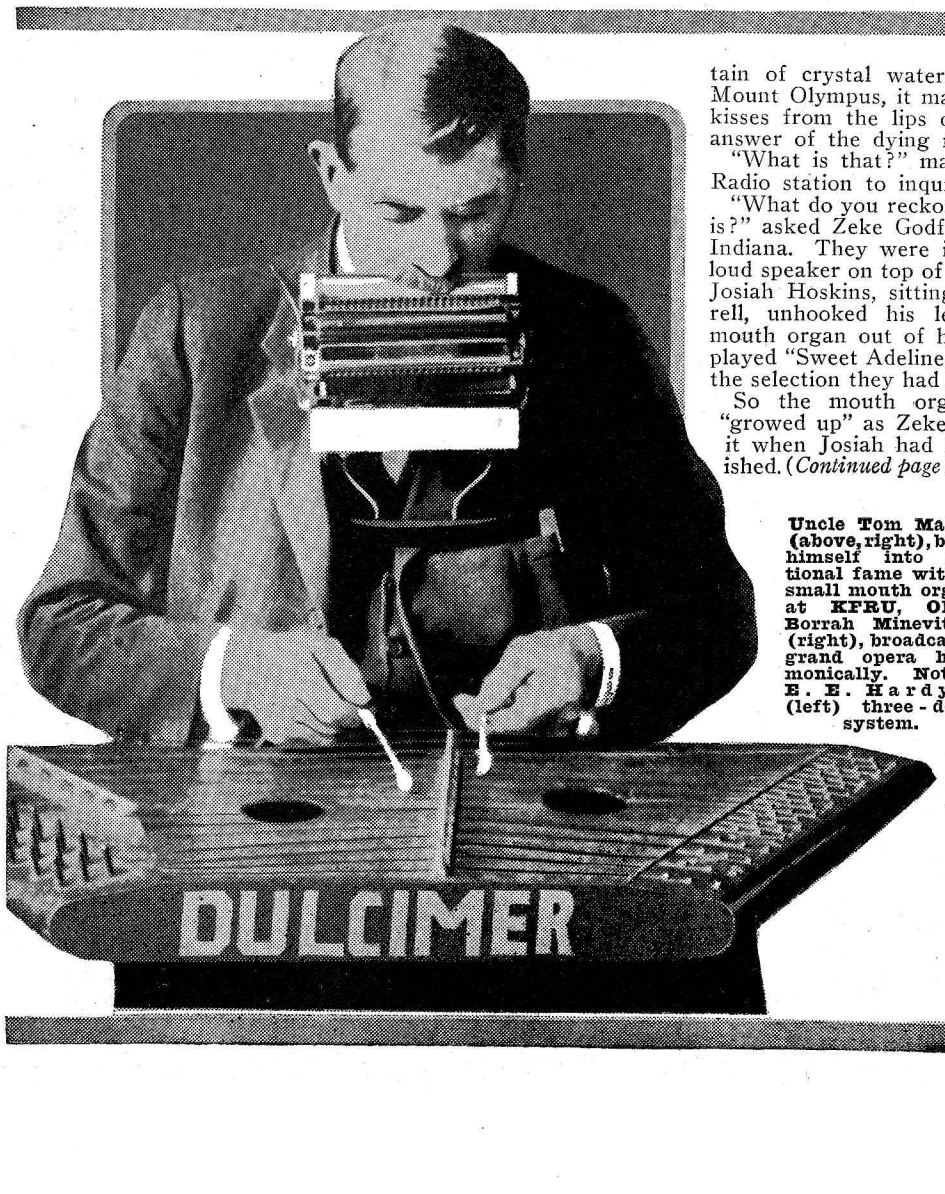
Now comes the age of broadcasting. All the symphonies of the musical world go on the air to the great delight of listening millions. Program directors ransack the entire known repertoire to answer the demand for "something new."

At last—the great discovery! Over the ether waves trembled a thin, piping melody of notes all sprayed together in harmony like a tinkling fountain of crystal waters. From the realms of Mount Olympus, it may have been, passionate kisses from the lips of Pan and the sobbing answer of the dying nymph.

"What is that?" many people wrote to the Radio station to inquire. And—

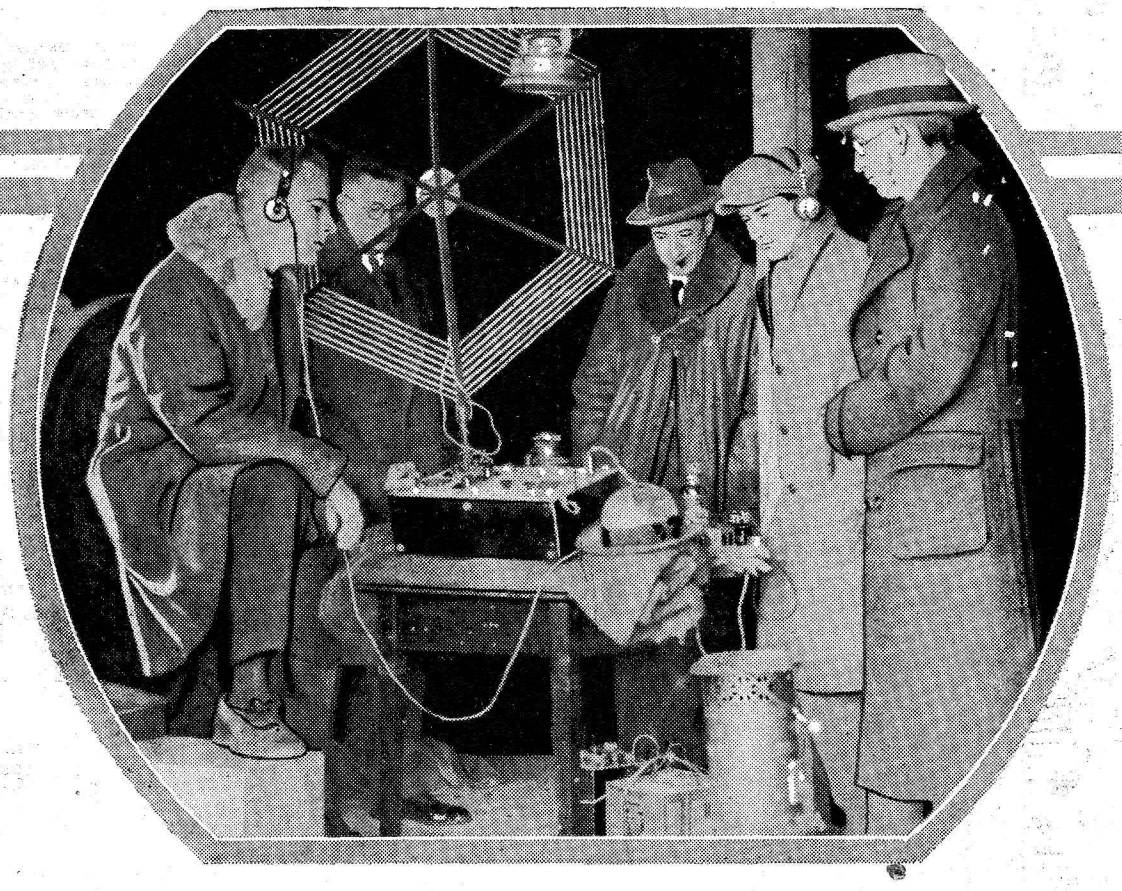
"What do you reckon that new fangled thing is?" asked Zeke Godfrey at Snider's Corners, Indiana. They were in Snider's store with a loud speaker on top of the cheese case. Young Josiah Hoskins, sitting on the cracker barrell, unhooked his legs and fished a mouth organ out of his pocket. He played "Sweet Adeline," an echo of the selection they had just heard.

So the mouth organ has "growed up" as Zeke put it when Josiah had finished. (*Continued page 12*)



Uncle Tom Marrs, (above, right), blew himself into national fame with a small mouth organ at KFRU, Okla. Borrah Minevitch, (right), broadcasts grand opera harmonically. Notice E. E. Hardy's (left) three-deck system.

WCAD Picks Its Programs "Out of the Air"



At the top of the page is shown the receiving room of the WCAD broadcasting station where programs are "picked from the air" 175 miles distant and rebroadcast. Left to right—H. K. Bergman, E. L. Manning, S. E. Barber, Charles Geyh and Professor Ward C. Priest.

Below is the transmission room of Station WCAD, St. Lawrence university, Canton, N. Y., showing how one man can sit at the microphone and run the entire station. Left to right are shown Mr. Bergman (at microphone), S. E. Barber, F. A Thompkins and Professor Priest, general supervisor of the station.

WCAD, "The Voice of the North Country," is probably the only one man broadcasting station in the world. It is another one of those highly efficient university student and professor stations similar to the WHAZ station described in Radio Digest last week. The "Voice of the North Country" comes from the St. Lawrence University at Canton, N. Y.

When there are exams next day or it is necessary to do a little remote control expermental work away from the university the station is turned over to one attendant-director-announcer-engineer-operator who takes care of the artists, picks up the outside stations, rebroadcasts and rests between times.

Canton isn't such a large place up there among the foothills of the Adirondacks that one broadcasting station, more or less, doesn't make any difference. When WCAD is off the air most of the Canton receivers are dumb. Also, one of the most serious problems at Canton is artist material—good what there is of it but not enough variety.

However, anything that resolves itself into a problem is duck soup for a school like St. Lawrence University whether it be watts, power or artists. Nobody kicks about the WCAD program—not even those who have receivers limited to WCAD programs only.

"Well, how do you manage for talent?" demanded the interviewer of Professor Ward C. Priest, of the physics department and general overseer of the station.

"Very simple," replied Professor Priest. "We get our programs out of the air just like anyone else."

Then he explained how it was done. They merely couple their own receiver which pulls down the WGY programs from Schenectady to their own broadcasting station and out go the WGY programs over WCAD to all the small set users in the countryside round about. Of course it is not the ordinary wave used in the home receivers. These programs come in on 1560 meters from the development transmitter of the General Electric company, near Schenectady. Canton, also will receive the benefit of WGY's increased facilities through the latter's wire connections with New York, Washington, Poughkeepsie, Albany, Buffalo, Rochester, Syracuse and Utica, now practically completed.

Various wave lengths have been tried out as the result of regular Radio research at the university. Canton is about 175 miles from Schenectady and it has been demonstrated that up to a distance of 300 miles the long wave lengths are most reliable and satisfactory. Observations of the transmission on each wave length were made over a long period of time and under widely different conditions. The experiments included changes in the amount of power used and also changes in the types of antenna.

As the result of these experiments it has been held out that the benefits of Radio may be extended to other communities now using low power and similarly situated for lack of home talent and artist material. Thus the best programs in the country may be relayed, it is claimed, to the humblest set owners in the most remote places. WCAD is a 250-watt station.

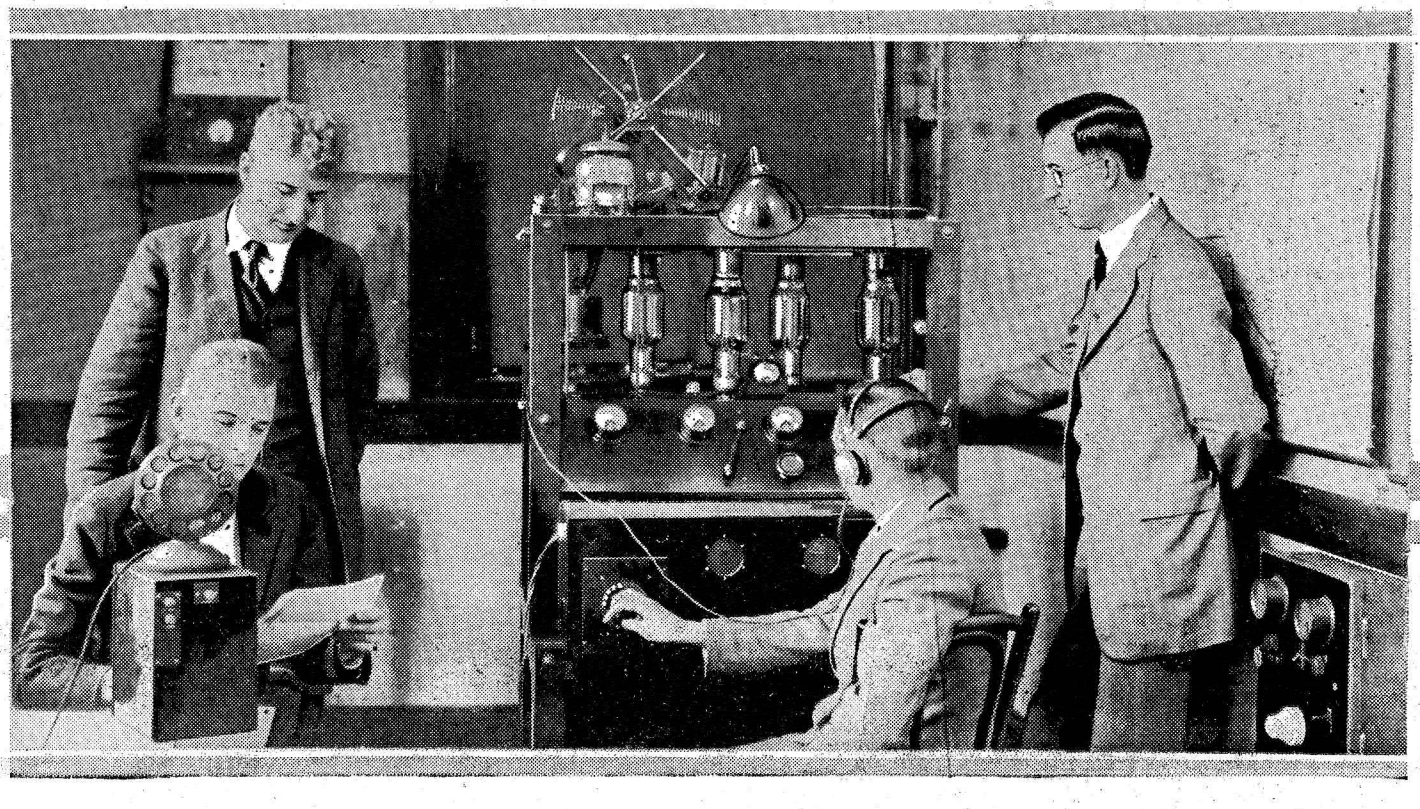
Canton, the home of St. Lawrence university, is the county seat of St. Lawrence and is only eighteen miles south of the St. Lawrence river. Its slogan, "The Voice of the North Country," is a tribute to a prominent St. Lawrence alumnus, Irving Bacheller, who immortalized this region in fiction as "The North Country."

WCAD grew from the need of the inhabitants of Canton and vicinity for Radio entertainment and for information on agricultural topics. The larger stations were available to those who had selective sets but not all who would appreciate broadcast programs could afford the type of set needed to pick up "distance."

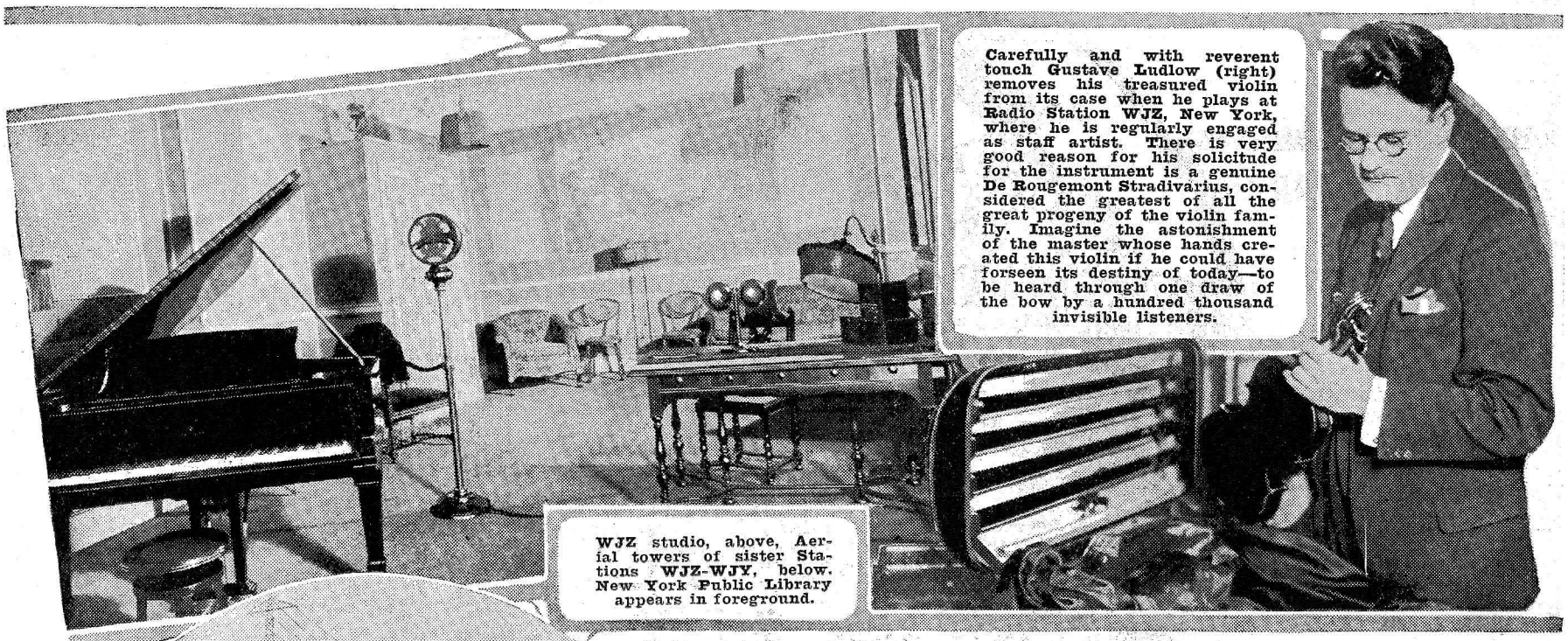
Professor Priest began the construction of the station in 1923. Harold K. Bergman, the Radio operator, was assisted by S. E. Barber of Canton, a Radio expert, in the preliminary plans and in designing and constructing the station.

Control of the speech amplifier is located in a shielded cabinet in front of the transmitter and through this arrangement it is made possible for the one man, alone, to conduct an evening of broadcasting.

Not such a bad idea, is it?



Visiting the New York Twins, WJZ-WJY



Carefully and with reverent touch Gustave Ludlow (right) removes his treasured violin from its case when he plays at Radio Station WJZ, New York, where he is regularly engaged as staff artist. There is very good reason for his solicitude for the instrument is a genuine De Rougemont Stradivarius, considered the greatest of all the great progeny of the violin family. Imagine the astonishment of the master whose hands created this violin if he could have forseen its destiny of today—to be heard through one draw of the bow by a hundred thousand invisible listeners.

WJZ studio, above, Aerial towers of sister Stations WJZ-WJY, below. New York Public Library appears in foreground.

HIGH up in the Aeolian building, overlooking Bryant park and a goodly portion of New York's interesting skyline, WJZ, while really situated in the heart of New York, seems to be apart from the great city.

Upon entering one of the reception rooms, a uniformed attendant relieves you of your wraps. Immediately you are impressed with the air of luxury, of peace and calm—it is indeed a different world. But you are not alone in the room. In one corner you recognize a popular novelist whose works you have read and whom you have often wished to see. And there is a famous contralto whom you have often heard at the opera and wished you could see "off stage."

In the background you are able to hear a piano solo very faintly. You look for the instrument but can find none. Suddenly the music ceases and you are able to hear the announcer telling the Radio audience of the selection played and the artist's name. It is all coming from a loud speaker hidden in the wall. Then a door opens on the far side of the room and a young man appears, nods pleasantly to the opera star who rises and follows him through the door.

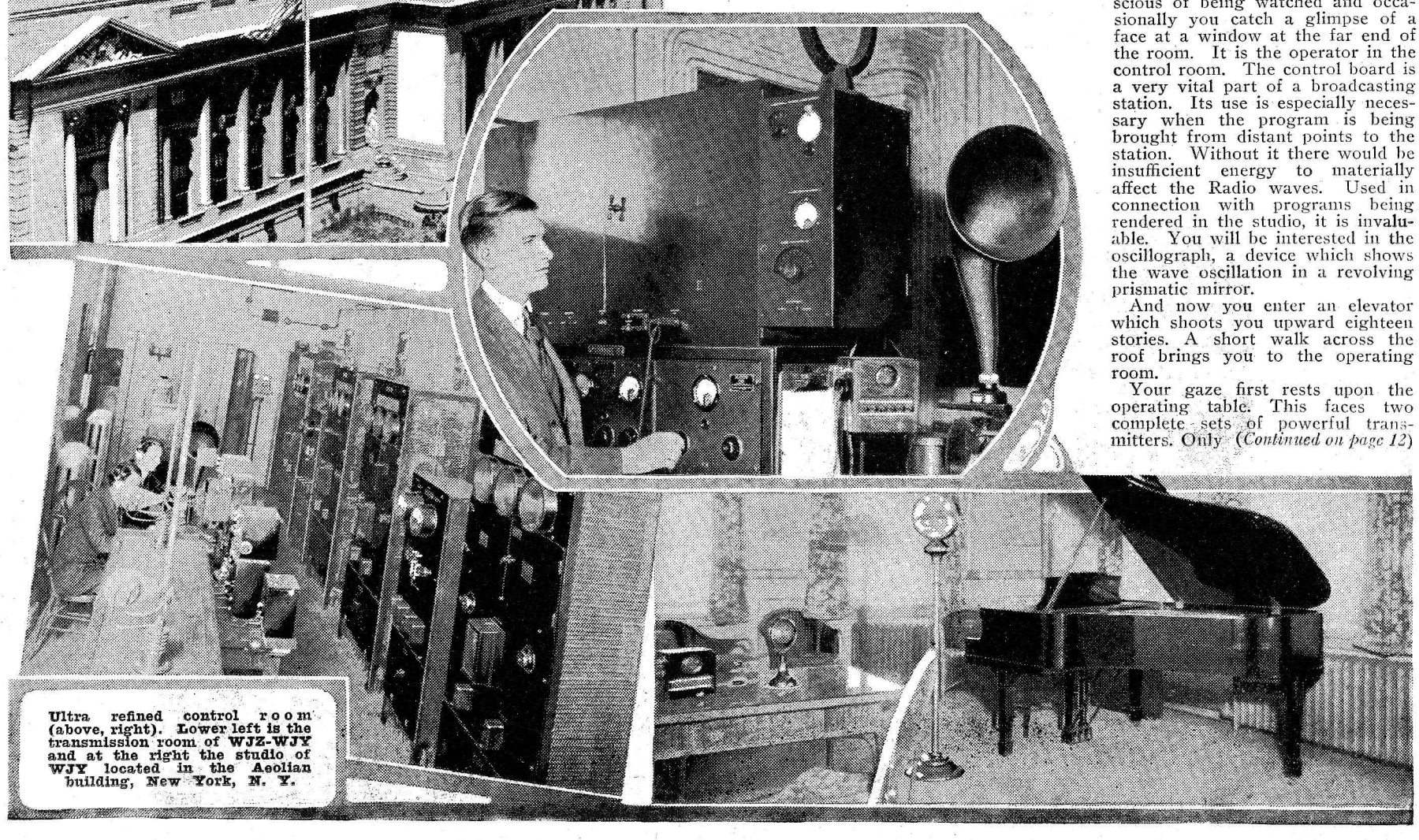
Passing through a door over which a small electric sign suggests caution, you find yourself in a vestibule and a sign over the next door requests silence as you pass into the studio. There is a strange stillness—an absence of those minute sounds which one does not ordinarily notice, but which become "audible" by their presence. This is explained by the unique construction of the walls. Touching them with the finger, you notice that the material is fabric treated with wax. Behind this is a layer of felt which absorbs all sound waves not intended for the microphone.

The room itself is delightfully harmonious in its dignified and restful beauty. The announcer's table, with its switch boxes and double microphone faces the entertainer from the left side of the room. From this position the announcer controls both his own microphone and the large movable one used by the artist.

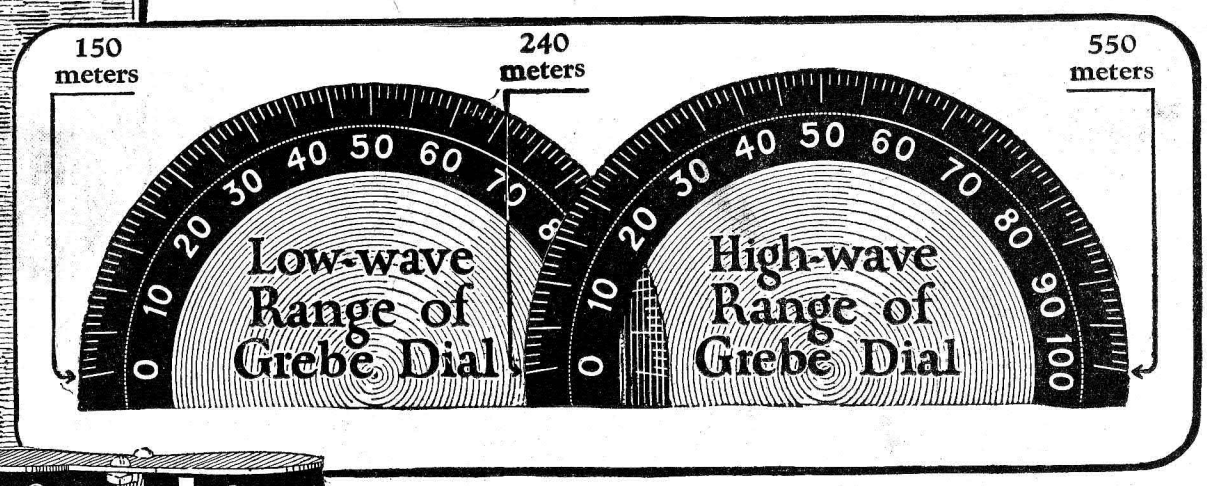
As you stand in the studio, you are conscious of being watched and occasionally you catch a glimpse of a face at a window at the far end of the room. It is the operator in the control room. The control board is a very vital part of a broadcasting station. Its use is especially necessary when the program is being brought from distant points to the station. Without it there would be insufficient energy to materially affect the Radio waves. Used in connection with programs being rendered in the studio, it is invaluable. You will be interested in the oscillograph, a device which shows the wave oscillation in a revolving prismatic mirror.

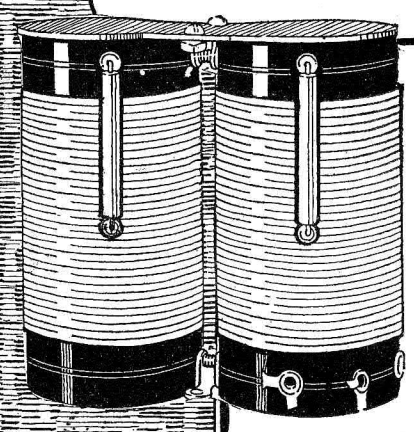
And now you enter an elevator which shoots you upward eighteen stories. A short walk across the roof brings you to the operating room.

Your gaze first rests upon the operating table. This faces two complete sets of powerful transmitters. Only (*Continued on page 12*)



Ultra refined control room (above, right). Lower left is the transmission room of WJZ-WJY and at the right the studio of WJY located in the Aeolian building, New York, N. Y.





Grebe Binocular Coils Reg. U. S. Pat. Off. *and Low-Wave Extension Circuits*

Can *Your* Set Receive ALL Stations?

OVER 100 stations are broadcasting on less than 240 meters. How many are beyond the reach of your set? The Synchrophase can get them all.

Grebe Low-Wave Extension Circuits make possible a range of from 550 down to 150 meters. This is accomplished by an automatic switch which enables *one* dial to cover *two* wave ranges. The first, from 550 to 240 meters, corresponds to the practical tuning range of the usual set. The second overlaps this and extends down to 150 meters. To change from one range to the other is simplicity itself. Simply move the center dial past the 100 mark for the high range and beyond the zero mark for the low range.

The Synchrophase is thus well-equipped to take care of future station assignments as well as all present ones.

Ask your dealer to demonstrate this and other Grebe advances in radio development

A. H. Grebe & Co., Inc., 109 West 57th Street, New York

Factory: Richmond Hill, N. Y.

Western Branch: **443 So. San Pedro Street, Los Angeles, Cal.**

"The Gods cannot help one who loses opportunities."

—*Mencius*

The wise man will provide against the future by securing a Synchrophase.

Doctor Thy

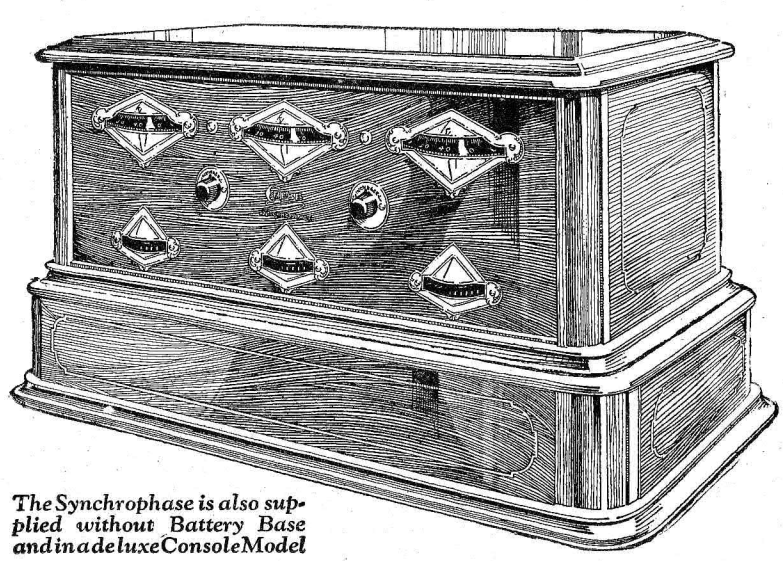
The GREBE SYNCHROPHASE

TRADE MARK REG. U.S. PAT. OFF.

This company owns and operates stations WAHG *and* WBOQ; *also low-wave rebroadcasting stations, mobile* WGMU, *and marine* WRMU.

GREBE RADIO TRADE MARK REG.U.S.PAT.OFF.

All Grebe apparatus is covered by patents granted and pending.



The Synchrophase is also supplied without Battery Base and in a deluxe Console Model

HERE ARE SOME OF THE "MIKE" MEN YOU OFTEN HEAR BUT SELDOM SEE

The two announcers on this side of the page are Snedden Weir, WMCA, New York, left, and C. B. Locke, WBAP, Fort Worth, Texas.

And these three gentlemen of the microphone are: W. G. Gorman, KFWA, Ogden, Utah, left; Preston Graves, WMBB, Chicago, right; and Alvin E. Hauser, WFBH, the "Voice of Central Park," New York, below.

NEWS BRIEFS FROM THE BROADCASTERS

PHILHARMONIC SOCIETY'S ORCHESTRA TO REPEAT

Peter Pan with Tinker Bell at WMC —Turnverein Milwaukee Makes Radio Debut

New York's Philharmonic society orchestra concerts have been so well applauded by fans that they will be continued during December. The two concerts for this month will be given in Carnegie hall, New York, broadcast by WJZ and relayed to WRC and WGY. Tune in December 5 and 19.

* *

Peter Pan and Tinker Bell have come to WMC, Memphis, to stay. Every night except Sunday and Wednesday at 7:15 p. m., central time, these two favorites will tell children's stories. Bob O'Brien, of the recreation department of the Memphis park commission, is in charge of the new children's hour. He is also instructing children in the building of inexpensive Radio sets so that they can tune in for the stories.

* *

Milwaukee enters upon the seventy-second season of the Turnverein concert season. This year marks the Radio debut of this well-known musical organization. Beginning at 3:15 p. m., central time, WHAD will broadcast the Sunday afternoon concerts. The season ends April 25, 1926.

* *

An oratorio, "The Holy City," by Alfred R. Gaul, will be presented on the latter half of the KGO program, Tuesday evening, December 8. Carl Anderson, known to listeners as "C. A.," will direct the twelve singers in the cast, and an orchestra especially arranged for Radio. "The Rainbow," comedy, will be given by the KGO players under the direction of Wilda Wilson Church, Thursday night, December 10. At the beginning, between the three acts, and at the end of the piece, the Arion trio will play music selected to divide the sound output into the necessary parts, create locale in the imaginations of listeners, and refresh their minds for action to follow.

* *

Convinced that there is still a large army of "distance hunters" not only in the East but in the Middle West, WRC, Washington, D. C., has arranged to present two midnight programs every week for the benefit of these listeners. The late entertainment will be presented on Tuesday night by Otto F. Beck, organist at the Tivoli theater, and the Meyer Davis La Paradis band, and on Saturday night by "Crandall's Saturday Nighter's," and one of the Capital's dance orchestras.

* *

College yells, songs, stories and campus gossip make up the Saturday programs of WBBM, Chicago. A different college will be heard from each week.

* *

The famous studio joke about an artist bringing his own piano along was actually enacted when Mme. Olga Samaroff, brilliant American concert pianist and Atwater Kent link program star, brought her own piano for use in WEAF's studios. This move was said not to be a slur on WEAF's piano nor a precedent for other artists to follow, but merely the prerogative of genius. The slightest dfference in the "touch" of a piano has been found disconcerting to many artists.

* *

The Davis saxophone octet whose director, Clyde Doerr, hopes to wipe out the stigma usually attached to the blaring saxophone, is doing missionary work through Station WSAI, Cincinnati, for its music is being broadcast every Tuesday evening at 6:30 p. m., central time, from that station.

* *

Dr. George Earle Raiguel, who broadcasts a "current topics" talk every Wednesday evening from WLIT, Philadelphia, is an international traveler and lecturer. He is the recipient of two letters from the White House, complimenting him on the quailty of his talks.

* *

The Goodrich Zippers, under the direction of Lieutenant Gitz Rice, made their debut from WEAF and chain recently. They will present a series of original musical comedies entitled, "A Whirl Around the World."

* *

The "Literary Appreciations," written and read by William L. Widdemar at WGY, Schenectady, Monday night are gaining steadily in popularity. Some listeners request copies of the lectures and others reading lists.

New Stations

Three new stations joined the ether family last week. They are: WJBQ, Lewisburg, Pa., 100 watts, 211:1 meters; KFYR, Bismarck, N. D., 10 watts, 248 meters, and KFUT, Salt Lake City, Utah, 100 watts, 261 meters. These stations were just under the line previous to the Radio conference ruling against licensing more broadcasters.

KFCY, Le Mars, Iowa, a 50-watt station, will be known in the future under the call KWUC.

A new 500-watt station is operating in Cedar Rapids, Iowa. This broadcaster is owned by H. F. Carr and may be heard on 278 meters.

Nebraska will have a new 1,000-2,500-watt station sometime in the near future. It will be located at Clay Center, Nebr., and will be dedicated to poultry raisers of America.

Navy Would Sell Station

PUGET SOUND, Wash.—By order of the secretary of the navy, the United States Naval Radio station at Kodiak, Alaska, is no longer to be operated by the government, but is to be turned over to commercial interests for operation under long term lease, or offered for sale subject to removal from the present location. Bids are open for either.

George Hay to Attract Fans to Atlanta Show

Announce December 7-12 as Dates of Georgia Exposition

ATLANTA.—George Dewey Hay, "The Solemn Old Judge," now back in Dixie as announcer of WSM, Nashville, will be one of the famous guest announcers who will talk to the world from the crystal studio during Atlanta's first national Radio exposition, December 7 to 12.

In addition to Mr. Hay, several more of the most distinguished personalities of the ether will be present at the Atlanta show.

As an innovation on this particular occasion, Lambdin Kay, WSB's director-announcer, is arranging special programs for each visiting announcer with the idea of capitalizing the particular type of entertainment that each spokesman is best qualified to handle.

KDKA HAS WEEKLY SACRED MUSIC TREAT

Anonymous Sponsor Believes It Entitled to Place on Program

PITTSBURGH.—A "Half Hour of Sacred Music" anonymously sponsored by a Pittsburgh church woman and philanthropist who believes that sacred music has an important place in the weekday Radio program along with popular songs, jazz and classic music, is being given over Westinghouse Station KDKA every Tuesday night at 8 o'clock, eastern time.

Most of the programs will consist of the singing by vocal ensembles, and soloists, of hymns and hymnal anthems. It is planned to have some of the famous hymn writers and gospel song leaders appear on the programs. To further add variety and interest to the programs, they will include occasional comments on the lives of the authors of the hymns or composers of the tunes, or account of the circumstances under which the song was written.

Rejuvenate Butte Fans' Club

BUTTE, Mont.—The Butte Radio club of this city recently held a rejuvenation meeting and is planning to hold semi-monthly meetings during the winter. It will work for better receiving conditions in and around this city.

CHAMBER MUSIC ON WJZ WINTER SERIES

EXCELLENT MUSICIANS TO GIVE HUNTER PROGRAMS

First Course in Music Appreciation to Be Offered to Public Without Expense

NEW YORK.—WJZ announces that it will broadcast the Lewisohn free chamber music concerts from Hunter college every Wednesday night during the 1925-1926 season.

The chamber music series was founded by Dr. Henry Fleck, of Hunter college and they are still under his personal direction. They comprise the first course on musical appreciation ever offered to the public and are in a progressive order by Dr. Fleck quite similar to a regular college course. The cost of the series is defrayed by the philanthropist, Mr Adolph Lewisohn and through his generosity the public is able to hear the finest compositions played by the best artists the world can offer.

Fine Artists Listed

In arranging the coming concerts, Dr. Fleck has devoted the first part of the program to the classical school of writers and they will be handled in a chronological order. The second part of the program will be left open to modern works regardless of how radical or ultra-modern they may be. By this method he covers the past, present and future. This is only possible through the use of the very finest musical organizations in America and with this in view, he has engaged for this year's work such organizations as the Press-Schultz quartet, the Lenox quartet, the Philharmonic quartet, the New York trio, the Lenox trio and the Thrane trio and a number of other organizations of equal importance and standing.

Loos Brothers Back on Air After Stage Tour

"Ernie and Billy" Now Exclusive KYW Studio Artists

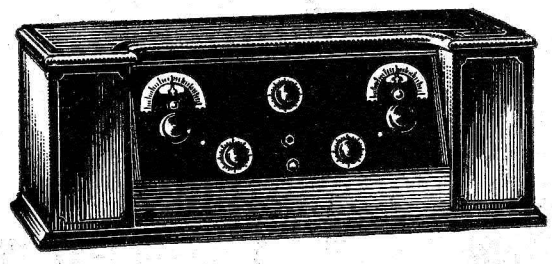
CHICAGO.—The return to Chicago of Radio's famous harmony boys, the Loos Brothers, Ernie and Billy, was celebrated recently at Westinghouse station KYW here, where they are exclusive entertainers.

For three weeks or more they have been skipping from pillar to post in the state of Michigan, where they took Radio fans by storm.

Ernie, the bigger one of the pair who packs the two hundred pound voice, and Billy, the little fellow who rattles his devious path o'er the ivories, can be heard by tuning in the Hearst square studio of KYW, during the afternoon frolics on Tuesday and Thursday as well as during the evening broadcasts.

KNX to Broadcast Coast Game

HOLLYWOOD, Calif.—One of the last football games of a very interesting season will be broadcast from Station KNX (336.9) here on December 5 when St. Marys plays the University of Southern California.



CROSLEY
Super-Tirdyn Special

The improved Super-Tirdyn panel is assembled in a new solid mahogany cabinet finished in duotone. This cabinet with its striking lines and simple detail decoration is of ample size to house all dry batteries required for dry cell tube operation..... **$60.00**

Performance That Has No Peer in Any Field of Radio

SINCE the announcement of the present new Crosley models, Crosley sales have been leaping to sensational figures, literally taxing the production facilities of all Crosley plants.

This new leadership in sales is based on Crosley's new leadership in value; and this latter resolves itself into two simple propositions:

Crosley sets consistently deliver a performance that has no peer in any field of radio—and this matchless performance is offered at the lower prices that only the economics of tremendous production make possible!

On this page are shown four of the new Crosleys—the two famous Super-Tirdyns and the two Special DeLuxe models. Not only do they offer an effective beauty and accurate workmanship but they provide a performance that cannot be surpassed in the $23.50 - $60 price range or many dollars above it!

Make your own comparison on the basis of selectivity, distance, clarity, and volume. Place the competing receivers side by side with lead-ins from the same antennae, and put them through their paces.

Forget the radical difference in price. Reach your conclusion solely on results. Then and only then will you understand why thousands upon thousands of radio buyers are singling these Crosleys out of the entire field—unwilling to pay more because a greater investment cannot provide greater enjoyment.

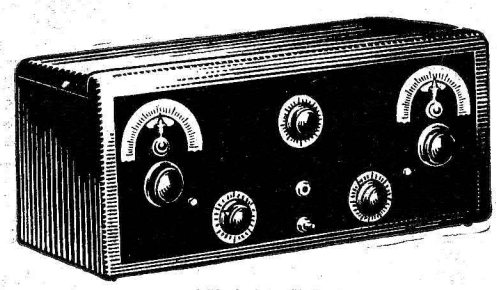
See the complete Crosley line at the nearest Crosley dealer's. Address Department 49 for his name and our illustrated catalogue.

THE CROSLEY RADIO CORPORATION, CINCINNATI, OHIO

Cable Address: Listenin-Cincinnati

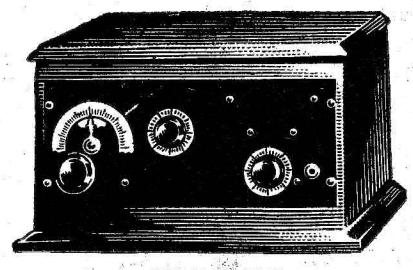
Owning and operating WLW, first remote control super-power broadcasting station

Crosley manufactures receiving sets which are licensed under Armstrong U. S. patent No. 1,113,149 and priced from $9.75 to $60.00 without accessories. None of the prices quoted include batteries, tubes, headphones, etc. Add 10% to all prices west of the Rocky Mountains.



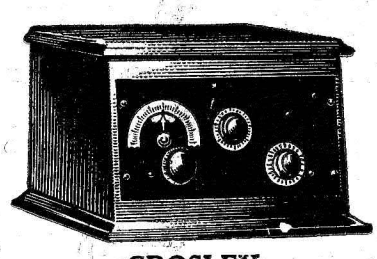
CROSLEY
Super-Tirdyn Regular

Incorporating the famous Trirdyn hook-up, this set brings in stations sharp, clear, and mellow on the Musicone. The cabinet is of oil rubbed solid mahogany, exquisitely simple in design and beautifully finished. For sheer performance under all conditions the Super-Trirdyn cannot be surpassed..... **$45.00**



CROSLEY
3-Tube 52 S. D.

In this improved model are introduced radical refinements that increase its general efficiency. Refinement of parts and improvements in design have made it a truly remarkable set considering its nominal price. Genuine Armstrong regeneration with the double circuit to reduce radiation to a minimum. Beautifully proportioned with attractive sloping panel. Cabinet holds all necessary dry cells. A genuine long range radio, easy to tune, easy to enjoy, and easy to pay for.. **$32.50**



CROSLEY
2-Tube 51 S. D.

This superb long range set combines Armstrong regeneration and one stage of audio frequency amplification. The handsome mahogany finished cabinet, with sloping panel, holds all required dry batteries. Improvements include new worm type tickler, new vernier plate condenser, and a double circuit to minimize radiation. Unusual selectivity and distance, extreme accuracy of control..... **$23.50**

CROSLEY·RADIO

BETTER · COSTS LESS

WORKING GIRLS USE MAGIC DIAL FOR JOY

TURN TO RADIO WHEN DAY'S WORK IS DONE

Prepare for Future Happiness By Listening to Home Economics Programs from KGO

SAN FRANCISCO.—The turn of a Radio dial offers the tired business woman a quick way out of this world of trouble, disappointment and tiresome routine; and the trip out and back often has many compensating advantages.

Such a state of woman's affairs is apparent to the keen vision of Miss Gertrude Matthew, executive in charge of the San Francisco Y. W. C. A. educational broadcasting over Station KGO.

"Thousands of city girls throw off their jobs at 5:00 p. m. as janitors doff their uniforms," said Miss Matthew. "Their daily tasks in store, office and factory are often uninteresting, giving nothing beyond a roof under which to sleep, clothes to wear and food to eat. But now when the day's work is done by the turning of a magic dial the working woman in business plunges into a new and refreshing existence.

"Many girls are taking our courses over KGO in 'Interior Decorating,' for instance, dreaming of the home and babies and love they some day hope to have. Some of them," added Miss Matthew thoughtfully, "may never have those things, but nearly all are applying the knowledge gained over the air in making their little rooms more beautiful."

Helen Harrington Downing Directs 35 Talks a Week

CHICAGO.—From twenty to thirty-five talks a week on subjects of interest to housewives are broadcast from WQJ, here, through cooperation with Helen Harrington Downing, head of the department of home economics of the Calumet Baking Powder company, assisted by a staff of competent experts. An arrangement that carries into distant homes the latest facts concerning many phases of culinary art, home-making and housekeeping.

WLS Resumes Homemaker's Hour

CHICAGO.—Homemaker's hour, which experienced a large vogue last winter over WLS, Sears-Roebuck station here, has been resumed. It is being given Wednesday afternoons from 3:45 to 4:45 o'clock central time. It is conducted under the direction of Ellen Rose Dickey, home advisor of the Foundation, assisted by Martha Meier.

YOU LIKE-A UKULELE?

(Continued from page 4)

heard Henryetta Turner, the bright scintilating ukulele lady of Station WEBJ, New York. She has achieved the art of breathing her magnetic charm through the microphone with her song and her perfectly tuned little instrument. Is she really beautiful? The question has been asked thousands of times by her unseen and unseeing audience. The answer is here. Let your eyes behold her as an Hawaiian, only more beautiful.

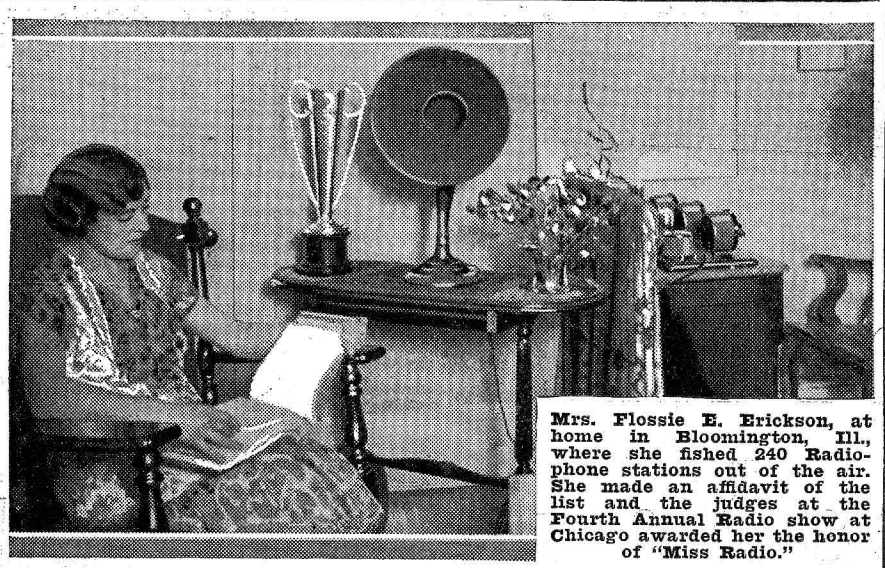
Then there is May Singhi Breen, also dainty and charming, not justly shown in this photograph. They have a ukulele club named for her in New York and not long ago this club, with 100 ukuleles, broadcast a program over WMCA.

Chicago audiences are familiar with the voice and ukulele refrains of Miss Eunice La Reeve, one of the WBCN artists. She achieves her highest artistic success when attired in the native Hawaiian costume. Another charming pair of "Ukulelians" are the Ziegler sisters, Pauline and Sarah, of WBBM, whose pictures were received too late to be published here.

MAN AID TO HOME IS NOW "COUSIN JOHN"

CHICAGO.—After having been known on the air for over two years as "Kitchen Aid," John C. Cutting, the man who tells the ladies how to hemstitch hamburger, what to do with a stew, and how to crochet steaks, from the Hearst Square studio of KYW here, has dropped that title. He did this because of the confusion in the minds of some women that he is to be classed with the pots and pans. His new title will be "Cousin John." His daily hints on the preparation of meats for the table should do much to discourage the "delicatessen meals" made famous by jokesters. Young housewives listening in to Cousin John's lectures will soon find that there are as many ways to serve steak as there are unknown ingredients in restaurant hash.

"MISS RADIO," QUEEN OF DX-ERS



Mrs. Flossie E. Erickson, at home in Bloomington, Ill., where she fished 240 Radiophone stations out of the air. She made an affidavit of the list and the judges at the Fourth Annual Radio show at Chicago awarded her the honor of "Miss Radio."

Battle Hymn Composer Made Known by WOR

Feature Program Brings Forth Interesting Data

NEWARK, N. J.—The origin of the "Battle Hymn of the Republic" was divulged in a WOR feature recently when John J. MacIntyre, a publicity man for the Cunard Line, told the story. Incidental songs connected with the telling of it were sung by others of the staff of the steamship company.

All the world knows that Julia Ward Howe wrote the verses bearing the title, the "Battle Hymn of the Republic," but few know that Thomas Brigham Bishop, a native of Wayne, Maine, wrote the music. As a rule, the music is referred to as having been used for "an old camp meeting song." This is very true, too, as Bishop wrote the camp meeting song, and later used the music for "John Brown's Body Lies a Mouldering in the Grave." Mrs. Howe set her verses to this music.

Index to Women's Programs

SATURDAY, DECEMBER 5

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
11	10	9	8	
				WEAR (389.4) Home service talk.
				WHT (399.8) Women's club.
11:45	10:45	9:45	8:45	
				WCCO (416.4) Home Service talk, Betty Crocker.
12 n.	11	10	9	
				WQJ (447.5) A Frozen Salad and Dessert for your Christmas.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talk.
5	4	3	2	
				KJR (384.4) Home helps.

MONDAY, DECEMBER 7

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
10	9	8	7	
				WJZ (454.3) Women's hour.
				WRC (468.5) Women's hour.
10:45	9:45	8:45	7:45	
				WCAE (461.3) Gold Medal talk.
				WEAF (491.5) Home service talk, Betty Crocker.
11	10	9	8	
				WEAR (389.4) Home service talk.
				WHT (399.8) Women's club.
				WNYC (526) Women's program.
11:45	10:45	9:45	8:45	
				WCCO (416.4) Gold Medal Christmas Candies, Betty Crocker.
				WDAF (365.6) Gold Medal Christmas Candies, Betty Crocker.
12	11	10	9	
				WQJ (447.5) Baking talk; Dairy products.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talk.
2:30	1:30 p. m.	12:30 p. m.	11:30	
				WGY (379.5) Cooking lesson; the Successful Kitchen.
3	2	1	12 n.	
				WCCO (416.4) Women's hour.
				WSOE (246) Cooking chats.
4	3	2	1 p. m.	
				WIP (508.2) Market hints for housewives.
				WOC (483.6) Home Management schedule, Aunt Jane.
				WQJ (447.5) Winter Pies. Care of the Hair.
5	4	3	2	
				KJR (384.4) Home helps.
7	6	5	4	
				KFOA (454.3) Today's recipe.
				KLX (508.2) Women's hour.

TUESDAY, DECEMBER 8

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
10	9	8	7	
				KDKA (309.1) The art of sewing.
				WIP (508.2) Menu.
				WJZ (454.3) Women's hour.
				WRC (468.5) Women's hour.
10:45	9:45	8:45	7:45	
				WTAG (268) Talks to Mothers.
11	10	9	8	
				WEAR (389.4) Home service talk.
				WHT (399.8) Women's club.
				WMCA (340.7) Homemaking hour.
				WTIC (475.2) 'Housewives' forum.
12 n.	11	10	9	
				WQJ (447.5) Hats for the Winter Sports; Your home—interior decorating.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talk.
4	3 p. m.	2 p. m.	1 p. m.	
				WOC (483.6) Home Management schedule.
				WQJ (447.5) Travelogue, Alaska. Christmas Saving clubs.
5	4	3	2	
				KJR (384.4) Home helps.
				WMAQ (447.5) Household art.
5:30	4:30	3:30	2:30	
				KOA (322.4) Housewives matinee.
6	5	4	3	
				KOA (322.4) Culinary hints.
6:15	5:15	4:15	3:15	
				KOA (322.4) Fashion review.
7	6	5	4	
				KFOA (454.3) Today's recipe.
8:30	7:30	6:30	5:30	
				KGO (361) As a Woman Thinketh.

WEDNESDAY, DECEMBER 9

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
10	9	8	7	
				WIP (508.2) Menu.
				WJZ (454.3) Women's hour.
				WRC (468.5) Women's hour.
10:45	9:45	8:45	7:45	
				WCAE (461.3) Gold Medal talk.
				WEAF (491.5) Home service talk, Betty Crocker.
11	10	9	8	
				WEAR (389.4) Home service talk.
				WHT (399.8) Women's club.
				WNYC (526) Women's program.
11:45	10:45	9:45	8:45	
				WCCO (416.4) Decorations for Christmas, Betty Crocker.
				WDAF (365.6) Decorations for Christmas, Betty Crocker.
12 n.	11	10	9	
				WQJ (447.5) Friday Fish dinner menu. The Runabout child.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talk.
4	3 p. m.	2 p. m.	1 p. m.	
				WOC (483.6) Home Management schedule, Aunt Jane.
				WQJ (447.5) How to Select Draperies and Furniture.
4:30	3:30	2:30	1:30	
				WLW (422.3) Cooking school, hints.
7	6	5	4	
				KFOA (454.3) Today's recipes.
				KLX (508.2) Women's hour.

THURSDAY, DECEMBER 10

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
10	9	8	7	
				WJZ (454.3) Women's hour.
				WRC (468.5) Women's hour.
11	10	9	8	
				WEAR (389.4) Home service talk.
				WHT (399.8) Women's club.
12 n.	11	10	9	
				WQJ (447.5) Meat Stews for Cold Days. Winter Hats.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talks.
4	3 p. m.	2 p. m.	1 p. m.	
				WOC (483.6) Home Management schedule, Aunt Jane.
				WQJ (447.5) Christmas Vacation Parties. Party Suggestions for Christmas.
5	4	3	2	
				KFOA (454.3) Home helps.
				KSD (545.1) Women's Hour.
5:30	4:30	3:30	2:30	
				KOA (322.4) Housewives' matinee.
6	5	4	3	
				KOA (322.4) Culinary hints.
6:15	5:15	4:15	3:15	
				KOA (322.4) Fashion review.
7	6	5	4	
				KFOA (454.3) Today's recipe.
8:43	7:43	6:43	5:43	
				KYW (536) Left Overs and their Possibilities.

FRIDAY, DECEMBER 11

Eastern	Central	Mountain	Pacific	
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.	
				WWJ (352.7) Tonight's dinner.
10	9	8	7	
				KDKA (309.1) Home Economics, cooking.
				WJZ (454.3) Women's hour.
				WRC (468.5) Women's hour.
10:45	9:45	8:45	7:45	
				WCAE (461.3) Gold Medal talk.
				WTAG (268) Food hints.
11:45	10:45	9:45	8:45	
				WCCO (416.4) Why is a Perfect Cake? Betty Crocker.
				WDAF (365.6) Why is a Perfect Cake? Betty Crocker.
				WEAR (389.4) Home service talk.
				WNYC (526) Women's program.
12 n.	11	10	9	
				WQJ (447.5) Sunday dinner menu.
12:35 p. m.	11:35	10:35	9:35	
				KYW (536) Table talk.
3	2 p. m.	1 p. m.	12 n.	
				WCCO (416.4) Women's hour.
4	3	2	1 p. m.	
				WOC (483.6) Home Management schedule, Aunt Jane.
				WQJ (447.5) Your Baby's Teeth.
5	4	3	2	
				KJR (384.4) Home helps.
5:30	4:30	3:30	2:30	
				KOA (322.4) Housewives matinee.
				WFAA (475.9) Woman's hour.
6	5	4	3	
				KOA (322.4) Culinary hints.
6:15	5:15	4:15	3:15	
				KOA (322.4) Fashion review.
7	6	5	4	
				KFOA (454.3) Today's recipe.
				KLX (508.2) Women's hour.

CHILDREN'S HEALTH NEW SERIES SUBJECT

COLUMBIA UNIVERSITY TO BROADCAST LECTURES

Experts Give Talk on the Care of the Young and Nervous Disorders

NEW YORK.—Mothers can not afford to miss the series of Monday morning lectures broadcast direct from the MacMillan theater at Columbia university every Monday morning by WEAF under the auspices of Columbia university. Dr. Hugh Grant Rowell, well-known child authority, will devote the series to a study of the health of the child in every stage of its life. Another series on Wednesday mornings on nervous troubles of children will be conducted by Dr. Pratt, psychiatrist of the national committee of mental hygiene.

On Monday, November 23, Dr. Rowell discussed the "Effect of the Health of the Unborn Child on its Future Health," showing the importance of maintaining the health of the mother during the period before birth. The remaining subjects will be as follows:

Nov. 30 to Dec. 12, inclusive—"The Infant in the Arms."

Dec. 19 to Jan. 30, inclusive—"The Runabout Child."

Feb. 6 to April 24, inclusive—"The Child of School Age," including mental and social hygiene, exercise, amusements, etc., as well as the physical aspect and disease prevention.

April 30, "Adolescence."

May 6, "First Aid."

May 13, Answers to collected questions.

Dr. Pratt is assistant to the medical director of the national committee for mental hygiene. His remaining subjects will be:

Dec. 2, "Temper Tantrums."

Dec. 9, "The Nervous Child in Reality."

Dec. 16, "Fears."

KSD WILL BROADCAST PROGRAM FOR WOMEN

New Afternoon Series to Be Started December 3

ST. LOUIS.—Station KSD will inaugurate a new series of programs in its winter schedule beginning December 3. These programs, which are to be broadcast from 4 to 5 o'clock, central time, every Thursday afternoon excepting during the Christmas holidays, will be given by the Wednesday club of St. Louis, the largest federated woman's club in the city.

The programs to be broadcast by Station KSD will cover such subjects as dramatics, history, science, music, travel and hygiene, and each will be under the direction of the chairman of the section which is presenting it.

The first program at 4 o'clock on the afternoon of December 3 will have as its subject, "The Newest Things in Dramatics," and will be conducted by Mrs. Everett W. Pattison, chairman of the dramatic section. On the following Thursday Mrs. Samuel P. Goddard, chairman of the poetic section of the club, will conduct the program.

This program is to be known as the "Women's Hour," and is broadcast especially for club women throughout the United States.

WBZ to Broadcast Hockey

BOSTON.—On Tuesday night, December 8, at 8 p m. eastern time, WBZ will broadcast a professional hockey game between the Boston Bruins and Montreals at the Boston Arena. Frank Ryan will announce as in the first game of this series.

PERFECT 36 RESULT OF RADIO EXERCISE

NEW YORK.—Exercise has a peculiar effect of making underweight people fatter and overweight victims thinner. A Brooklyn woman reports the loss of fifty pounds in six months during which she has not missed a day taking the "Tower Health Exercises," which Arthur Bagley broadcasts at 6:45 a. m. from the tower of the Metropolitan Life Insurance company through Stations WEAF, WEEI and WCAP. The joke seems to be on the woman's daughter. Formerly the mother weighed 197, had a 36-inch waist and wore a size 46 dress. Now she weighs 147, has a 27-inch waist and wears a size 36. "I can now wear all my daughter's clothes," she confides roguishly, "and you know I'm a lot better dressed than I formerly was."

BRITISH WOULD GIRD GLOBE OVER THE AIR

SCHEME IS TO USE SUPER-POWER FOR RELAYING

England to Canada to Australia to Straits Settlement to India Is Plan

LONDON, Eng.—In a speech just delivered here, Major Gladstone Murray, of the British Broadcasting company, said it was important that there should be an early adoption of some general scheme which would enable programs to be exchanged regularly and rebroadcast across all parts of the British Empire.

He regards 5XX, the Daventry high-power station, as the first link in the new Empire broadcast chain. By this chain it will be possible to transmit from 5XX to a listening post in the maritime provinces of Canada, whence it will be carried by land-line and Radio link to Winnipeg, and there be radiated by a central Canadian high-power station.

These signals will be collected again by the Pacific high-power station in British Columbia, which will reach New Zealand and Australia. Another high-power station in Australia will enable the messages to go forward to the Straits Settlements and thence be relaid from Rangoon, Burma, to Ceylon and India.

"CHILD OF GODS" BACK

(Continued from page 5)

Uncle Tom Marrs of Dale, Okla., supporting half a yard of patriarchial beard, lived 65 years without being known beyond his own county. But he played a mouth organ and fame found him, yanked him before a microphone at Station KFRU and now he is known from coast to coast. "Harmonica" (plague take the word) bands have been organized by New York and Chicago school boys. Walter Peterson, Elmer E. Hardy and other mouth organ artists have rigged up devices whereby they play the mouth organ and use their hands for accompaniment instruments.

Probably the very pinnacle of glory has been achieved for the newly arrived—or perhaps more properly "newly recognized"—mouth organ. Through Professor Borah Mimevitch of New York it has ascended to grand opera and the enthusiastic praise of the best known musical critic of the metropolis.

No wonder Santa Claus is going to have a hard time to fill the orders for mouth organs this year. They are in everybody's mouth, it seems—that is everybody is talking about them.

But, for the love of Mike, why not call it a MOUTH ORGAN, a child of the gods, as the family tree shows it to be!

WJZ-WJY, NEW YORK

(Continued from page 7)

one set is in use at a time, the other serving as a reserve unit should it be needed. On the operating table opposite the transmitters is the apparatus by which the operator may listen to the outgoing program at various stages of its progress.

The force required to maintain a broadcasting station the size of WJZ—and WJY, as her sister station is known—is between forty and fifty persons.

There are two large divisions of the staff—the administrative and program division under Mr. Charles B. Popenoe, and the operating division under Mr. Carl Dreher. The duties of the two main divisions are entirely separate and distinct. Assistants to Mr. Popenoe are Miss Bertha Brainard and Robert D. Newton.

Keith McLeod is the studio manager and cooperating with him in the announcing capacity are Milton J. Cross, J. Louis Reid and John B. Daniel. Godfrey Ludlow, famous throughout the country, is staff violinist to the station. Herbert B. Glover is the young man who tells the public all the inside information on the various artists who appear before the microphone at this station.

Then there are a number of unsung heros who travel out to remote places so that WJZ can broadcast important events that cannot be brought to the studio. They are the field operators.

Did you realize that behind the scenes there were so many people who serve unheralded—unsung—to make life just a little pleasanter for all the world? But they rejoice in their work for it is the finest one can do—to do good for others.

One of the most interesting features at Stations WJZ-WJY is Godfrey Ludlow and his famous Stradivarius violin, heard in the Sunday evening recitals. The instrument was acquired by its present owner after he had returned to London from a long internment in a German prison camp at the end of the war. The instrument came direct from the De Rougemont family through an English dealer. The De Rougemonts had owned the instrument for over 100 years. It was built by Antonius Stradivarius in Cremona, Italy, 1703. A recent examination of the instrument in New York revealed that the four interior supporting blocks remained and are just as Antonius Stradivarius left them when he glued the violin together 222 years ago.

Of course the neck, fingerboard and tail piece are all modern to fit the requirements of the present day hand, for in the days of Stradivarius the manual measurements were much smaller. The head, considered most important, and all other tone producing parts remain intact, as they were assembled by Stradivarius more than two centuries ago, even to the rich colorful varnish for which the master was so famous.

ADVANCE PROGRAMS FOR THE WEEK

Saturday, December 5

Headliners Today

Eastern	Central	Mountain	Pacific
8:15 p. m.	7:15 p. m.	6:15 p. m.	5:15 p. m.

WLS (344.6) Request nad Barn dance program.

8:25	7:25	6:25	5:25

WJZ (454.3), WGY (379.5), WRC (468.5) New York Philharmonic orchestra.

8:30	7:30	6:30	5:30

WIP (508.2) Two one-act plays.

9:30	8:30	7:30	6:30

KSD (545.1) St. Louis symphony orchestra.
WLW (422.3) Excerpts, "The Garden of the Shah."
WMC (499.7) WMC Opera quartet.

10	9	8	7

WOC (483.6) Murray Family orchestra.

11:10	10:10	9:10	8:10

KGO (361.2) "Merry Widow," comic opera.

2 a. m.	1 a. m.	12 m.	11

KNX (336.9) Film Land frolickers.

2:30	1:30	12:30 p. m.	11:30

KHJ (405.2) Times' Tom Cats.

Saturday, silent night for: CFAC, CFCA, CNRA, CNRC, CNRE, CNRM, CNRR, CNRT, CNRV, CNRW, KFDM, KFMQ, KFMX, KFRU, KFUO, KLDS, KLX, KMA, KOB, KSAC, KWSC, KTAB, WBAP, WBZ, WCAP, WCAU, WCX, WEAO, WEBJ, WEBW, WEEI, WGCP, WGR, WGST, WHAD, WHAZ, WHB, WHN, WHO, WJAD, WJAR, WJAZ, WKAR, WLWL, WOAI, WOI, WOS, WTAG, WTIC, WWJ.

Eastern Time Stations

CHIC, Toronto, Can. (356.9), 5 p. m., George H. Graham, organist.

CKNC, Toronto, Can. (357), 8 p. m., Charles E. Bodley and his dance orchestra; Elsie Addison, contralto; Gerrard J. Kelly, tenor.

CNRO, Ottawa, Can. (435), 7:30 p. m., Uncle Dick; 8, Chateau Laurier concert orchestra; 9, Irene Woodburn, pianist; Mrs. Orville A. Jarvis, soprano; Norman McKeever, violinist; Dr. P. L. Nesbitt, tenor; duologue, "The Eternal Masculine," Mary Edwards, Mrs. Bonnie Gorrell; Leslie McKenna, bass; Chateau Laurier dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 7:15-8 a. m., exercises, O. Shannon, physical director; 6:15 p. m., concert, Little symphony orchestra, direction of Victor Saudek; 7:30, Daddy Winkum; 8:30, concert, Westinghouse band, T. J. Vastine, conductor.

WAFD, Port Huron, Mich. (275), 9-11 p. m., studio program; 11:30-2 a. m., musical program, Addison hotel.

WBBR, New York, N. Y. (272.6), 8 p. m., Prof. Charles Rohner, violinist; 8:10, Fred Twaroschk, tenor; 8:20, Bible questions and answers, Judge Rutherford; 8:40, Fred Twaroschk, tenor; 8:50, Prof. Charles Rohner, violinist.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., music, Aldine theater; 6:30, concert; 7:30, children's period; 8, studio concert.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel.

WEAF, New York, N. Y. (491.5), 6-7 p. m., dinner music, Hotel Waldorf Astoria; 7-10, Banjo Boys, V. Lawnhurst, pianist; Lewis Williamson, tenor; Triangle club, Princeton university college songs, Irvine players, one-act comedy; talk, J. Edwin L. Garvin; J. Steingard, pianist; 10-11, Vincent Lopez and orchestra, Casa Lopez.

WEAR, Cleveland, Ohio (389.4), 11 a. m., home service talk; 7 p. m., Hotel Statler concert orchestra.

WEEI, Boston, Mass. (348.6), 6:45 a. m., tower health exercises; 7:45, morning watch, Estey organ studio.

WGBS, New York, N. Y. (315.6), 3-3:15 p. m., children of all nations program, direction, Mrs. Edward Thomas; 6-6:30, Uncle Geebee; 8-9, Wayside Troubadours; 9:30-10, Warner's theater; 10:30-11, Arrowhead inn orchestra.

WGCP, New York, N. Y. (252), 2:15-2:30 p. m., Mirror race; 2:30, results half hourly; 2:45-3, Henry Rogers, pianist; 3-3:45, John Landers orchestra; 3:45-4, 20th Century entertainers; 4-4:15, Johanna Cohen, ukulele; 4:15-4:30, Riest and Henricksen, banjoists; 4:30-5, studio program.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program.

WGY, Schenectady, N. Y. (379.5), 9:30 p. m., dance program, Hotel Ten Eyck orchestra.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, lecture period; 8, Seaside hotel trio.

WIP, Philadelphia, Penn. (508.2), 6:45 a. m., exercises, Dr. Francois D'Eliscu; 7, exercises, Dr. Francois D'Eliscu; 10:30, reducing exercises, Dr. Francois D'Eliscu; 1 p. m., organ recital; 3, Dal Ruch and his Arcadians; 6:05, music, Benjamin Franklin orchestra, W. Irving Oppenheim directing; 7, Uncle Wip's bedtime story and roll call; Ernest McCorkle, clarinetist; 8, "Romance of Medicines," Prof. Charles H. LaWall; 8:15, sports corner, Dr. Francois D'Eliscu; 8:30, the University of Pennsylvania Instrumental club; 9:15, two one-act plays, the Emilie Krider Norris Dramatic school; 10:5, Benjamin Franklin orchestra; 11:05, organ recital.

WJAR, Providence, R. I. (305.9), 1:05 p. m., Ideal orchestra; Annie Stockdale, soprano.

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's Petite symphony orchestra and soloists; 9, Jean Goldkette's Serenaders; soloists; 10, Jean Goldkette's orchestra; 11:30, "The Jewett Jesters," the "Merry Old Chief" presiding.

WJZ, New York, N. Y. (455), 1-1:50 p. m., Irwin Abrams' Knickerbocker Grill orchestra; 1:50-4, discussions, Dr. P. W. Kno and Charles C. Batchelder; 4, New York American News service; 4:30-5:30, Hotel Lorraine grill orchestra; 5:30-5:32, New York American News service; 5-8, Bernhard Levitow's Hotel Commodore dinner concert; 8-8:30, talk, Cosmo Hamilton; 8:30-9, Sherry's dance orchestra; 9-10:30, to be announced; 01:30-11:30, Paul Specht's Moulin Rouge orchestra.

WKAR, E. Lansing, Mich. (285.5), 12:30 a. m., dance program.

WLIT, Philadelphia, Penn. (394.5), 1 p. m., Strawbridge and Clothier tea room ensemble, Harold Micklin, director.

WMAK, Buffalo, N. Y. (265.5), 7:30-8:30 p. m., Royal Dellwood orchestra; 8:30-9, musicale; 9-10, program, Sunrise Point Development company.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7, Robert Soffer, pianist; 7-8, orchestra; 8-8:30, quartet; 8:30-8:45, Edward French, pianist; 8:45-9, Erva Giles, soprano; 9-9:15, Edward Morris, pianist; 9:15-9:30, Henry Burbig and Henry Kaye; 9:30-10, Cinderella dance orchestra; 10-10:15, Patrick O'Connor and Thos. Halloran, flutists; 10:15-10:30, Wm. Bonner, tenor; 10:30-10:45, Anna Daly, violinist; 10:45-11, Snedden Weir, baritone; 11-12, Ernie Goldens' Hotel McAlpin orchestra.

WNYC, New York, N. Y. (526), 7-7:30 p. m., dinner concert, Hotel St. George; 7:35-8, dinner concert, Hotel St. George; 8-9, Emily Harford Avery concert; 9-10, remote control event; 10-10:10, lecture, Board of Education; 10:35-11:35, dance program, Hotel St. George.

WOR, Newark, N. J. (405.2), 3:15-3:45 p. m., Zit's Central Park West Casino orchestra; 6:15-6:17, words often mispronounced; 6:17-7:30, Jacques Jacobs Hotel Shelton ensemble; 7:30-8, Van's Collegians; 11-12, Eddie Elkins' Ciro orchestra.

WPG, Batavia, Ill. (299.8), 1:30 p. m., Hotel Morton luncheon music; 6:45, 15-minute organ recital, Arthur Scott Brook; 7, Hotel Ambassador dinner music; 8, magazine review, Walter F. Greuninger; 9, Hotel Traymore concert orchestra; 10, dance orchestra.

WRC, Washington, D. C. (469), 12 m., organ recital, Homer L. Kitt studios; 1 p. m., orchestra, Hamilton hotel; 6, orchestra, Hamilton hotel; 7, orchestra, Hotel Washington; 7:55, zoological talk, Smithsonian institution; 8:10, Bible talk; 8:25, New York Philharmonic orchestra, WJZ and WGY; 10:30, "Crandall's Saturday Nighters."

WREO, Lansing, Mich. (285.5), 6-7 p. m., "Speed-Wagon Serenaders" and "Gold Standard" ensemble; 10-12, "Speed-Wagon Serenaders."

WTAG, Worcester, Mass. (268), 12:05-2 p. m., WTAG trio.

WWJ, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra.

Central Time Stations

KFAB, Lincoln, Neb. (340.7), 8:30-9:30 p. m., Schmoller and Mueller musicale.

KFJF, Oklahoma City, Okla. (261), 12:15-2:15, luncheon program; 6:30-7:30, music.

KFMX, Northfield, Minn. (337), 7-8 p. m., vesper service.

KFNF, Shenandoah, Iowa (266), 7 p. m., H. S. symphony orchestra, Princeton, Mo., director, Stephen LaMar.

KFVE, University City, Mo. (240), 8:30 p. m., "Amusement Review," Romaine Fielding; dance night; Gene Witacker's orchestra; comedy, jazz.

KLDS, Independence, Mo. (440.8), 5-8 p. m., organ request program, Herbert Johnson.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., garden, flower, orchard talks, Earl E. May; domestic science talk, Leona Teget, June B. Case; 6, Pollyana stories, Mrs. Dwight Nickols; chimes, William Howie; retailers program, Benedict Piano company; 9-10, William Howie, organist.

Russia contributes to the Atwater Kent program Sunday at WEAF and chain. Maria Kurenko is the New York coloratura soprano whose lovely voice has given her the title of the "New Patti from Siberia." Felix Salmond, cellist, also entertains.

High Lights of the Week

NEW YORK'S Philharmonic orchestra concerts have been enjoyed by so many fans that they are to be repeated during December. The first concert of the month is set for Saturday, December 5, and will be broadcast through WJZ, WGY, and WRC. Melodies reminiscent of Persia also float upon the ether this evening and may be found by dialing for WLW, Cincinnati. Excerpts from "The Garden of the Shah" will be given during the 8:30 p. m. central time program.

Atwater Kent artists appear on both coasts this Sunday. Maria Kurenko, soprano, and Felix Salmond, cellist, are at WEAF and chain; Toscha Seidel, violinist, at KPO.

Comic Swedish programs have been given by many stations but a simple concert given as it might be given in Sweden is infrequent. The Monday program at WOAW, Omaha, includes a Swedish Nobility program which will permit Americans to glimpse a Sweden they do not know.

From New York to the Azores, Gibraltar and Italy fans will travel with WTIC, Hartford, Tuesday evening. The Travelers Symphonic ensemble will give the musical background for all the scenes visited. KGO's program for Tuesday night includes the serious rendition of the oratorio, "The Holy City." Carl Anderson will direct the twelve singers in the cast.

Ladies of the Northwest will tune in KFDJ, Corvallis, Wednesday, to hear the second of the series of lectures on costume design. "The Three R's of Dressing Attractively" is the appealing title of the talk given by Lila M. O'Neale.

The value of our trees may be learned Thursday at WBZ, Springfield, during the 8 p. m. eastern time program. The second New England Forestry Congress meets, and talks will be given by all the important forestry experts of this country. Dr. C. A. Schneck of Darmstadt, Germany, will deliver an address entitled "What Forestry Means to America."

"Bear Hunting in the Rockies," an address by Dr. R. G. Davenport, will be one of the opening attractions Friday at KOA. It is even hinted that Dr. Davenport knows how to capture or kill the more dangerous grizzlies. "Captain Crossbones" is the title of the lively musical comedy all about pirates and the Carribean sea to be given this same evening at KOB, State College, by the music department.

KPRC, Houston, Texas (296.9), 12 m., public health talk, Dr. A. H. Flickwir; 7:30 p. m., Bible class, Rev. M. M. Wolf; 8, Frank Tilton, blind pianist; 11, Palace theater stock company and orchestra.

KSD, St. Louis, Mo. (545.1), 6:45 p. m., Abergh's concert ensemble; 9, Grand Central theater orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 12:30-1, orchestra; 9-10:30, dance concert, New Arlington hotel orchestra.

KYW, Chicago, Ill. (535.4), 6:30-7 a. m., exercises; 11:35, table talk, Anna Peterson; 1 p. m., concert, Commonwealth Edison company; 1-2, luncheon concert; Joska DeBabary and his orchestra; Coon Sanders Original Nighthawks; 6:10-6:40, musical concert, Commonwealth Edison company; 6:40-7, bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:30-8:30, Home Lover's hour; 8:30-11, Congress classic; 11-1 a. m., Congress carnival; 1-2, Insomnia club, Coon Sanders Original Nighthawks.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical program; Marion Latta, contralto; Carl Schmidt, tenor; Bayne Cummins, accompanist; Hal Keidal, pianist; 7 p. m., Harmony Twins; Fred and Bob; Robert Davis, tenor; Iva Arseneau, soprano; Donald Mensing, violinist; Wayne Hugaboom, accompanist; 11, Skyrocket frolic, George Osborn's Hotel Radisson Skyrockets.

WBBM, Chicago, Ill. (226), 4-6 p. m., Valentino Inn orchestra; Harry Sosnik, Sandy Meek; Court Banks, Johnny Black; Russell Meyers; 9:30-11, Harry Sosnik, Sandy Meek; Moulin Rouge orchestra; William L. Anderson, steel guitar; Fred Jacobson.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., shopping talk, Penny Wise; 3-5 p. m., tea time matinee; Clarence Jones, pianist and song writer; Cecelia and Johanna Arend, violinist and pianist; Marie Wright, soprano; 10-11:15, jazz jamboree, Midway Dancing Gardens orchestra; Cameron and Fett, "The Harmony Wizards," harmony duo; Albert Blaba, concertinist; Johnny Special, the harmonica acrobat; Elizabeth Emmett Malone, soprano; Jack Parker, tenor; 11:15-12, King Static's court; Frank H. McDonald, "King Static"; Mary Williams, "Queen Olive"; Harry A. Zook, Jr., "prime minister"; "Big Boy" Yagle, "court jester."

WCCO, St. Paul, Minn. (416.4), 9:30 a. m., program for day; 10:45, talk, Betty Crocker; 12:30 p. m., Emmet Long' Golden Pheasant orchestra; 2:30, concert; 6:15, Chadbourne' orchestra; 8, "Fireside Philosophies," Rev. Roy L. Smith; 8:15, musical program; 10:05, Wallie Erickson's orchestra.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., Star's string trio; 6-7, School of the Air; address, Roger W. Babson, organ music; Trianon ensemble, Hotel Muehlebach; 11:45-1 a. m., Nighthawk frolic; Plantation players; Johnnie Campbell's Kansas City club orchestra; Earl Coleman's orchestra; Eddie Kuhn's Kansas City Athletic club orchestra.

WEBH, Chicago, Ill. (370.2), 7-8 p. m., Oriole orchestra; Radio Sunday school lesson; 9-10, Oriole orchestra; James Murray, tenor; Marie Kelly, reader; Beulah Ladon, violinist; 11-1, Oriole orchestra; Marie Kelly, reader; Frank Greif, tenor; Rick and Snyder; Wayne Myers; Kay Ronayne.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Johnnye Davis, pianist; 6:30-7, Don Bestor's orchestra; 8:30-9:30, Schubert Choral club recital; 11-12 midnight, the Adolphus hotel orchestra, Jack Gardner directing.

WHAD, Milwaukee, Wis. (275), 11 a. m., Andy Hertel, pianist; children's story, Faye McBeath; Margaret Cunningham, child pianist; Willard Kaleibe, tenor, banjoist.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; reading, Martha Pope Robinson; 7:30-9, concert, vocal and instrumental, Arthur Findling, baritone directing.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's woman's club, Jelke Good Luck Girl; 11, pecial studio features; 12 m., Al Carney's organ hour; 1-2 p. m., special studio features; 6, final football scores, classical program, dinner organ recital, Grayling's string trio; Eleanor Kaplan, violinist; Estell Stanley, soprano; Antoinette Bennett; W. A. Dyckman, baritone; Florence White Rush, soprano; 7:45-9:15 (238), musical features; 9:30 (399.8), Jelke entertainers, Kitchen Klenzer Klassics, Harry Langdon, harmonica; Marie Wright, soprano; the Golden trio, Oscar Heather, tenor; Al Carney, organist; Badger Four male quartet; Clark Hawaiian trio, Vic Fredericks, baritone; Irene Beasley, "The Girl from Dixie"; Marguerite Morris, "The Girl from Georgia"; Jacobson, humorist; 12, Pat Barnes and Al Carney.

WJBL, Decatur, Ill. (270), 9:30-11 p. m., artists.

WJJD, Mooseheart, Ill. (302.8), 10 p. m., Rosemary Hughes, Robert Duphiney, Robert DeWar, Marie Winters, Log Cabin orchestra; 12, Jack Nelson, Jack Mason, Fayette Miller, Courtland Banks, Dick Vail.

WLIB, Chicago, Ill. (308.2), 7-8 p. m., dinner concert, Blackstone and Drake hotel orchestras; 9-10, popular, Hamm's orchestra; 11-12, Drake and Blackstone orchestras.

WLS, Chicago, Ill. (344.6), 9 a. m., announcements of R. F. D., program for day; home question box, Ellen Rose Dickey; Sears Roebuck agricultural foundation; 7 p. m., Lullaby time, Ford and Glenn; 7:15-12 p. m., program, Ford and Glenn; Ralph Emerson; Grace Wilson, contralto; Tony Corcoran, baritone; barn dance fiddlers; Joe Bren's minstrel company.

WLW, Cincinnati, Ohio (422.3), 7 p. m., organ concert, Johanna Grosse; 7:30, football results; 7:40, Seckatary Hawkins; 8, old-time songs, Crosley Community Fireside sing, chorus from the Cincinnati Conservatory of Music; 8:30, excerpts, "The Garden of the Shah."

WMAQ, Chicago, Ill. (447.5), 6 p. m., organ, Chicago theater; 6:30, orchestra, Hotel LaSalle; 8, Russell Pratt and Frederick Daw; 8:30, Radio photologue on "Africa," Prof. Frederick A. Starr; 9, Chicago theater review.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Louise Reichert, Preston Graves; 9-11, Trianon orchestra, Dell Lampe, Woodlawn theater orchestra, Earl Smith.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., WMC opera quartet.

WOAW, Omaha, Neb. (526), 6 p. m., Sandman's visit, Val McLaughlin; 6:20, Rialto orchestra; 7, after dinner hour, speakers, musical program; Chamber of Commerce historical anniversary; sports talk; 9, deluxe program; 10:30, Frank Hodek and his Nightingale orchestra; 11, Arthur Hays and his organ jubilee, Dr. Applesauce announcing.

WOC, Davenport, Iowa (483.6), 5:45-6 p. m., chimes concert; 6:30-6:50, Sandman; 9-10, Murray family orchestra; 11-12, orchestra, LeClaire hotel; Peter MacArthur, baritone.

WOI, Ames, Iowa (270), 12:45 p. m., discussion of soil problems, Prof. P. E. Brown.

WOK, Chicago, Ill. (217.3), 12-2 p. m., Bob Duffy, tenor; Gus C. Edwards and his orchestra; Banks Kennedy, organist; Bob Mokrejs, pianist; WOK string trio; 5:30-7, Howard Will, tenor; Robert York, tenor; Gus C. Edwards and his orchestra; Banks Kennedy, organist; WOK string trio; 10-1, Fred Witmer, pianist; Gus C. Edwards and his orchestra; Harold Morava, tenor; Herman Sinaiko, violinist; Harriet Lee, contralto; WOK string trio; Bill Hay, bass; Banks Kennedy, organist; Bob Mokrejs, pianist; Paul Vernon, violinist; WOK male quartet; Charles Lord, tenor; Henry Byler, tenor; Jack Keyes, baritone; N. Bartlett, bass; Honolulu Serenaders.

WOQ, Kansas City, Mo. (278), 8-9 p. m., musical program; 10-11, musical healing service.

WORD, Batavia, Ill. (275), 8-10 p. m., Webster hotel concert trio; solo artists; Chicago Motor club speaker; World news digest.

WQJ, Chicago, Ill. (447.5), 11-12 m., talk on art, Marjory Curry; "A Frozen Salad and Dessert for Your Christmas," Mrs. George M. Shirk; 3-4 p. m., Koffee Klatch, Jerry Sullivan, percolator; Rose Vanderbosch, soprano; Hal Lansing, ukulele soloist; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Ralph Keim, pianist; Anne Keim, mezzo soprano; Lavina Price, pianist; Sheppard Levine, tenor; Helen Reed, accompanist; 10-3, Ralph Williams and his Rainbo Skylarks; Ambrose Wyrick, tenor; Jerry Sullivan; Rose Vanderbosch, soprano; Hal Lansing, ukulele soloist; Everett George Opie, reader; June Lee, comedienne; Bert Davis, Clown of the Air; Clarence Theders, tenor; Rita McFawn, Mary Bieber, harmony duo; George Thurn, kazoo and ukulele soloist; Joey Stool, tenor; Eddie Vogel, baritone; Brundage and Kraemer, harmony singers.

WSAI, Cincinnati, Ohio (326), 7:45 p. m., children's stories, Mrs. Ethel Knapp Behrman; 8, Radio chime

(Continued on page 14)

WLW TO GIVE "GARDEN OF THE SHAH"

December Brings to WBZ, Springfield, a new pianist, Mary Louise Bacon, who will make her Radio debut during the first week of this month.

Saturday, December 5

(Continued from page 13)

concert, Robert Badgley; 8:15, the Bicycle Playing Card sextet; 9:15, the Bicycle Playing Card sextet; soloist.

WSB, Atlanta, Ga. (428.3), 8 p. m., entertainment; 10:45, Hired Help Skylark.

Mountain Time Stations

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio dealers' program; 9-12, dance music, Olie Reeves and his orchestra.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 9, Wurtzbach's orchestra.

Pacific Time Stations

KFOA, Seattle, Wash. (454.3), 8:30-9:30 p. m., program; 9:30-11:30, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 7:15 p. m., microphone brevities; 7:30-8, program, Elmer R. Sly company; Nathan Leetjesky, cellist; G. Davis Brillhart, pianist; 8-10, Radio Doings Revels with music, entertainment and technical talks on Radio; 10-11, Warner Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15-7:30 a. m., health training exercises; 7:45, pep class; 8:15-8:30, health exercises; 11:30-1 p. m., luncheon concert; 4-5:30, concert orchestra, Hotel St. Francis, Vinton LaFerrera, conducting; 8, sport review, Al Santoro; 8:10, National Carbon company program; "The Merry Widow," comic opera; Carl Anderson, director; Vinton LaFerrera's concert orchestra; Elfrieda Wynne, soprano; Grace LePage, soprano; Claire Harsha Upshur, soprano; James Gerard, tenor; Albert Gillette, baritone; 10-12, Hotel St. Francis dance music.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 9-12, dance music. Multnomah hotel.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Dollie Wright, Henrietta Poland and Uncle John; 8-10, program, White Motor company; 10-11:30, Biltmore hotel dance orchestra; 11:30-2 a. m., Times Tom Cats.

KMTR, Hollywood, Calif. (238), 8-10 p. m., KMTR concert hour, Turner orchestra, Loren Powell, director.

KNX, Hollywood, Calif. (336.9), 2-5 p. m., play-by-play of Oregon Aggies vs. U. S. C.; 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7, talk on insect life, H. W. McSpadden; 7:15, church announcements; 7:30-8, Wurlitzer pipe organ studio; 8-10, program, Commercial Construction company; 10-11, Ray West's Cocoanut Grove dance orchestra from Ambassador hotel; 11-2 a. m., Filmland Frolickers, direction Chet Boone.

KPO, San Francisco, Calif. (428.3), 7, 7:30, 8 a. m., daily dozen exercises; 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, matinee program, Otto Rauhut, violinist, director; 3:30, Palace hotel concert orchestra, Cyrus Trobbe, director; 6:35-7:30, Waldemar Lind and the States restaurant orchestra; 8:12, Cabiria cafe orchestra, Jack Coakley, director.

Sunday, December 6

Headliners Today

Eastern	Central	Mountain	Pacific
5 p. m.	4 p. m.	3 p. m.	2 p. m.
CHIC (357) An hour with the organ.			
WGY (379.5) Dr. Frank Sill Rogers, organist.			
6	5	4	3
WSB (428.3) Sacred concerts.			
9	8	7	6
WCAU (277.6) Potash and Perlmutter, comedy.			
9:15	8:15	7:15	6:15
WEAF (491.5), WEEI (348.6), WGR (319), WCAE (461.3), WCAP (468.5), WJAR (305.9), WTAG (268), KSD (545), WCCO (416.4), WOC (483.6), WFI (394.5), WSAI (326), Atwater Kent hour.			
10	9	8	7
KTHS (374.8) Classic hour.			
WMCA (340.7) Daven Radio entertainers.			
11	10	9	8
KTHS (374.8) Hot Springs Radio Special train.			
12 m.	11	10	9
KFWB (252) Roy-Al Saxophone sextet.			
KNX (336.9) Luboviski trio.			
KPO (428.3) Toscha Seidel, violinist.			

Sunday, silent night for: CHIC, CKNC, CNRA, CNRC, CNRE, CNRM, CNRO, CNRR, CNRT, CNRV, CNRW, KFAB, KFAU, KFMQ, KFOA, KFPG, KFVE, KFWA, KLX, KMA, KMTR, KOB, KSAC, KWSC, PWX, WAHG, WBAP, WCAU, WCX, WDAF, WEAO, WEBJ, WEBW, WGES, WGCP, WGST, WHAD, WHAS, WHAZ, WGES, WJAD, WJAZ, WKAR, WJBL, WLIT, WMAQ, WMC, WNYC, WOI, WOK, WOR, WRC, WSAI, WSMB, WTAM, WTIC.

Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 11 a. m., church service; 4 p. m., Dr. Charles Heinroth, organist; 4:45, vesper service, Shadyside Presbyterian church; 6:30, dinner concert; 7:45, church service.

WAFD, Port Huron, Mich. (275), 10-11:30 a. m., services; 7:30-8:30 p. m., musical program.

WBBR, New York, N. Y. (272.6), 10 a. m., Watchtower orchestra, Fred Twaroschk, tenor; 10:30, Bible lecture, Judge Rutherford; 11, Fred Twaroschk, tenor; 11:10, Watchtower orchestra; 9 p. m., I. B. S. A. choral singers; 9:05, violin duets, Prof. Charles Rohner, Carl Park; 9:15, Bible lecture, Judge Rutherford; 9:45, I. B. S. A. choral singers; 9:55, violin duets; 10:05, I. B. S. A. choral singers; 10:15, violin duets.

WBZ, Springfield, Mass. (333.1), 10:50 a. m., church services, Church of the Unity; Rev. Charles A. Wing, pastor; Philharmonic quartet; Robert W. Field, organist and director; 7 p. m., Sunday evening dinner concert, Copley Plaza orchestra, W. Edward Bowle, director; 8, program, Holy Cross college.

WCAE, Pittsburgh, Pa. (461.3), 3:45 p. m., talk, Dr. S. P. Cadman, New York; 6:30, concert, William Penn hotel; 7:20, Capitol theater gang, New York; 9:15, Atwater Kent.

WCAP, Washington, D. C. (468.5), 11 a. m., service, Rhode Island Avenue M. E. church; 4 p. m., service, Bethlehem chapel, Washington cathedral; 7:20, musical program, Major Edward Bowes, and "Capitol Family," Capitol theater, N. Y. C.; 9:15, Atwater Kent Radio hour; Maria Kurenko, Russian coloratura soprano; Felix Salmond, violin-cello artist.

WCAU, Philadelphia, Penn. (277.6), 5:20 p. m., R. Floyd Fox, bass; 5:35, undenominational Radio church service, Rev. John W. Stockwell; 5:45, "The Letters of Paul," Rev. J. W. Stockwell; 5:55, recital; 6:05, "Finding Oneself," Rev. J. W. Stockwell; 6:30, Clarence Seaman's orchestra; 7:30, the Bonwit Teller concert company; 9, topics of the day; Potash and Perlmutter.

WCX, Detroit, Mich. (517), 10:30 a. m., services, Central Methodist Episcopal church.

WEAF, New York, N. Y. (491.5), 2:45-3:45 p. m., Sunday Radio Service, auspices of the Greater New York Federation of churches; 3:45-5:30, men's conference in the Bedford Branch Y. M. C. A., Brooklyn; 7:20-9:15, musical program, Major Edward Bowes and the Capitol Family, Capitol theater; 9:15-10:15, Atwater Kent Radio hour, Maria Kurenko, soprano.

WEEI, Boston, Mass. (348.6), 10:50 a. m., morning service, Old South church; 3:30 p. m., Chamber of Commerce organ recital; 3:45, Dr. S. Parkes Cadman; 7:20, Major Bowes and his Capitol theater family; 9:15, Atwater Kent hour.

WFI, Philadelphia, Pa. (395), 7:30 p. m., Arch Street Presbyterian church, sermon, "The Clock in the Strassburg Cathedral," Dr. Clarence Edward McCartney; 9:15, Atwater Kent Radio hour, Maria Kurenko, Russian coloratura soprano.

WGBS, New York, N. Y. (315.6), 3:30-4:30 p. m., Warner's theater program; 9:30-10, Vanderbilt hotel orchestra; 10-10:30, Mendelssohn quintet club.

WGR, Buffalo, N. Y. (319), 3 p. m., vesper service, Buffalo Council of Churches; 7:45, Central Presbyterian church service; 9:15, jointly with WEAF, Atwater Kent program.

WGY, Schenectady, N. Y. (379.5), 11 a. m., service, First Unitarian church; 12:30 p. m., symphony orchestra; 5, organ recital, Dr. Frank Sill Rogers; 7, Carillon program; 8, First Unitarian church; 9, WJZ studio program; 10, Godfrey Ludlow, violinist.

WHAR, Atlantic City, N. J. (275), 10:45 a. m., services; 2:15 p. m., Seaside hotel trio; 2:45, sermon; 7:50, Chelsea Baptist church; 9, Seaside hotel orchestra; 11:15, Strand theater organ recital.

WHN, New York, N. Y. (361.2), 1-1:30 p. m., Loew's Lexington organ recital; 2-3, Queens County Christian Endeavor program; 3-4, Calvary Baptist church services; 5-5:30, Roseland Dance orchestra; 7:30-10, Calvary Baptist church services; 10:45-11:15, Janssens Hofbrau orchestra; 12-12:50 a. m., Harry Richman and his entertainers.

WIP, Philadelphia, Penn. (508.2), 4 p. m., "Passing the Buck," Josephus Daniels, Germantown Y. M. C. A.; 7:15, service, Holy Trinity church, Floyd W. Tokins, D. D., rector; 9:30, Ben Stad's Little symphony orchestra.

WJR, Pontiac, Mich. (517), 8:30 p. m., "The Merry Old Chief" and "Jewett Jesters" in a Radio frolic.

WMCA, New York, N. Y. (340.7), 11-2 p. m., services, Eighth Church of Christ Scientist; 6-7 p. m., Roemer's Homers; 7-7:35, Ernie Golden and his Hotel McAlpin orchestra; 7:35-8, Olcott Vail; 10-11, Daven Radio entertainers.

WREO, Lansing, Mich. (285.5), 10:30 a. m., chimes, Plymouth congregational church; 10:30, services; 7:30, services.

WTAG, Worcester, Mass. (268), 3:45-5:30 p. m., address, Dr. S. Parkes Cadman; Gloria Trumpeters, George Betts, chime soloist; 7:20-8:15, Capitol family; 9:15-10:15, Atwater Kent Radio hour, Maria Kurenko, Russian soprano; Felix Salmond, violin cellist.

WWJ, Detroit, Mich. (352.7), 11 a. m., St. Paul's Episcopal cathedral; 2 p. m., Detroit News orchestra; 7:20, Capitol theater gang.

Central Time Stations

KFAB, Lincoln, Neb. (340.7), 4-5 p. m., vesper service.

From Dixie comes this southern beauty, Irene Beasley. She sings character songs Tuesdays and Fridays at WEBH, Chicago. Her interpretations of the popular songs of the moment are new and unusual.

KFDM, Beaumont, Texas (315.6), 8-9 p. m., sacred program.

KFJF, Oklahoma City, Okla. (261), 10 a. m., Bible class, Rev. Lincoln McConnell; 11, church service; 7:30 p. m., church service.

KFNF, Shenandoah, Iowa (266), 10:45 a. m., services, First M. E. church; 2:30 p. m., Golden Rule song service; 6:30, services Golden Rule circle; 7:30, Christian church services.

KFUO, St. Louis, Mo. (545.1), 4 p. m., "I Am the Resurrection and the Life," Rev. A. Korris; 9:15, "The Messiah Came," Prof. W. Arndt, songs and music.

KLDS, Independence, Mo. (440.8), 11 a. m., studio service; quartet, Mrs. John Watkins, Mrs. James Gault, Mrs. Mark Siegfried, Mrs. Madge Kueffer; Wesley Brocaw saxophone; Mrs. George Willis, soprano; sermonet, U. W. Greene; 6:30 p. m., service, music, First Christian Church of Independence; Mrs. J. M. Sexton, soprano; Mrs. M. R. Leach, contralto; W. J. Frost, tenor; J. M. Sexton, bass; Cammie Johnston, organist; sermonet, U. W. Greene; 9, L. D. S. choir, Paul N. Craig, director; Stone church men's chorus; Mrs. John Watkins, soprano; Mrs. James Gault, contralto; Robert Miller, organist; sermon, Dr. Frederick M. Smith.

KMA, Shenandoah, Iowa (252), 4-6 p. m., services; music; talk, G. H. Van Houten.

KPRC, Houston, Texas (296.9), 3 p. m., Elks' memorial exercises; 7:55, service, First Church of Christ Scientist; Robert D. Hardcastle, Mrs. Estelle P. Wood, readers; Vivian G. Buchanan, organist; Mrs. Josephine D. Neibel, soloist; 9:30, Ray Mullins' orchestra.

KSD, St. Louis, Mo. (545.1), 6:15 p. m., "Good Will" program, WEAF.

KTHS, Hot Springs, Ark. (374.8), 11-12:15 a. m., services, First Presbyterian church, Chauncey Hikok, pastor; Frances Hardin, organist; 9-10 p. m., "Classic Hour," Meyer Davis grand ensemble; Lon Chassy, violinist; John G. Heyn, accompanist; Louis Culp, organist; 10-11:30, "Hot Springs Radio Special Train"; frolic, Benny Ford's orchestra.

KYW, Chicago, Ill. (535.4), 11 a. m., Central church services; 2:30 p. m., studio chapel service; 3:30, studio concert, Edwin Harper; 7-9:30, Chicago Sunday Evening club service; 9:30-11, classical concert, Commonwealth Edison company.

WAMD, Minneapolis, Minn. (243.8), 2:30 p. m., musical program, Twin City bird contest winners; 9:30, Gayle Wood, harmony hurricane; 11, Skyrocket frolic, George Osborn and his Hotel Radisson Skyrockets.

WBAP, Fort Worth, Texas (475.9), 11 a. m., First Methodist church, Rev. J. W. Bergin; 12:30, kiddies' hour, Uncle Billy; 5-6, program, School of Gospel music, Baptist seminary; 11-12, popular music, Shelly Lee Alley and his entertainers.

WBBM, Chicago, Ill. (226), 12:30-2 p. m., classical program, William P. Zimmer; Wheeler Harold Morava; Edna Wheeler Ballard, harpist; Harry Sosnik and Sandy Meek; 4-6, Ziegler sisters; Jack Garcia, Hawaiian guitarist; Harold Anderson, accordionist; Lester Anderson, banjo; orchestra: Lew Russell; Les Skow; 8-10, Jeane St. Anne, baritone; Christian Grimm, accompanist; Joseph Lincoln, tenor; string trio; Marie Morgott, harpist; Moulin Rouge orchestra; 12-2 a. m., Nutty club; Moulin Rouge orchestra.

WBCN, Chicago, Ill. (266), 10:30-12 m., morning service, People's Liberal church; talk, Rev. Rufus A. White; 4-5 p. m., Dain & Son classical hour; Velma Cook, soprano; Oriental quartet; male harmony group; Robert Stronach, pipe organist; 7:45-9:15, evening service, Thoburn M. E. church, 40-piece Thoburn semi-symphony orchestra; 80-voice choir, special vocal soloists; speaker.

WCBD, Zion, Ill. (344.6), 8 p. m., mixed quartet, organ; celestial bell quartet; Erma Reynolds, soprano; Edith Carey, contralto; Hire string trio; Misses Wiedman, Ludlow and Donovan, vocal trios; Josephine Martin, pianist.

WCCO, St. Paul, Minn. (416.4), 11 a. m., Plymouth Congregational church, H. P. Dewey, D. D., pastor; 4:10 p. m., House of Hope Presbyterian church, H. C. Swearingen, D. D., pastor; 8:15, Atwater Kent program, WEAF, Maria Kurenko, Russian coloratura soprano, Felix Salmond, celloist.

WEBH, Chicago, Ill. (370.2), 10:40 a. m., Seventh Church of Christ Scientist; 5-6, p. m., twilight musicale; 7-9, artists program.

WEBW, Beliot, Wis. (263), 4:30 p. m., College vesper services.

WFAA, Dallas, Texas (475.9), 2:30-4 p. m., Sunday hour for farmers; 6:30-7:30, Bible class, Dr. William M. Anderson, pastor, First Presbyterian church; 7:30-8:30, service, First Baptist church, Dr. George W. Truett, pastor; 9:30-11 p. m., Ligon Smith's orchestra.

WHAD, Milwaukee, Wis. (275), 3:15 p. m., Milwaukee Turnverein symphony orchestra.

WHAS, Louisville, Ky. (399.8), 9:57 a. m., organ prelude; 10, service, Fourth Avenue Presbyterian church, Dr. Charles W. Welch, pastor; choir, William E. Conen, organist, directing; Esther Metz, soprano; Virginia Shaefer Herrick, contralto; Williams Layne-Vick, tenor; William G. Meyer, baritone; 4:30-5:30 p. m., choral service, Christ church cathedral, Rev. Richard L. McCready, dean; Ernest Arthur Simon, organist and choir director, boys' choir.

WHO, Des Moines, Iowa (526), 11 a. m., church service; 7:30-8:30 p. m., Reese-Hughes orchestra.

WHT, Chicago, Ill. (399.8), 12 m., Sunday dinner sacred concert, vocal, instrumental and organ; 12:45 p. m., sunshine hour, special program for the shut-ins and the sick; 1:15, shepherd time for the kiddies; 1:30, aerial girls program; 1:45, Radio rangers, boys' program; 2, Radio caporteur; 2:05, missionary program; 2:15, fellowship program; 2:50, afternoon services, Chicago Gospel tabernacle; 5:30, vesper concert; 5:45, Young women's council; 6:30, concert tabernacle band and choir, sermon, Paul Rader; 9:30, request program; 10:30, back home hour.

WKRC, Cincinnati, Ohio (422.3), 6:45 p. m., songs and service; Walnut Hills Christian church, Dr. J. J. Castleberry, pastor; 10, classical program.

WLIB, Chicago, Ill., (308.2), 5-6 p. m., jazz scamper, Hamm's orchestra; 6:30-7, Edward Benedict, organist; 8-9, popular program Liberty orchestra.

WLS, Chicago, Ill. (344.6), 6 p. m., prelude; 7-7:55, Little Brown church in the vale; Ralph Emerson, organist; Little Brown church choir.

WLW, Cincinnati, Ohio (422.3), 9:30 a. m., school, editorial staff of Sunday school publications, Methodist Book concern; 11, morning worship, Seventh Presbyterian church, Jesse Halsey, minister; Dan Beddoe, soloist; Adolph Stadermann, organist; 7:30 p. m., services, First Presbyterian church, Dr. Frederick McMillan, pastor; 8:30, the H. and S. Pogue company concert, Walter Esberger, director; Helen Remley, soprano; Arthur Dondro, violinist; Arthur Bowen, cellist.

WMBB, Chicago, Ill. (250), 3-5 p. m., Trianon orchestra; Woodlawn theater orchestra; Bob Bennett, Earl Smith, Walter Duffy, Jame T. Carney; 7:40-9, Fifth Church of Christ Scientist; 9-11, Trianon orchestra, Woodlawn theater orchestra, F. T. Carney, Preston Graves, Earle Smith, Ed Hines, Billie Allen Hoff, Walter Duffy, Trianon harmonists.

WMC, Memphis, Tenn. (499.7), 11 a. m., First Baptist church services.

WOAI, San Antonio, Texas (394.5), 11 a. m., services, First Presbyterian church, Rev. P. D. Hill, pastor; 7:45, services, Central Christian church, Rev. Hugh McLellan, pastor.

WOAW, Omaha, Nebr. (526), 9 a. m., chapel service, Rev. R. R. Brown; 2:30 p. m., Bellevue, Nebr.; 6, Bible study period, Mrs. C. R. Gray, director; 9, chapel service, First Unitarian church.

WOC, Davenport, Iowa (483.6), 1-2 p. m., Palmer Little symphony concert; Erwin Swindell, conductor; Paul J. Vipperman, tenor; 6:30-7, services, Presbyterian church, Rev. H. A. Kirk; 8:15-9:15, Atwater Kent musical program; 9:45-11:45, Palmer Little symphony; Erwin Swindell, conductor; soloists.

WOI, Ames, Iowa (270), 10:45 a. m., college chimes; 11, services, "The Greatest Thing in the World," W. R. Boyd.

WOK, Chicago, Ill. (217.3), 1-2 a. m., Harriet Lee, contralto; Herman Sinaiko, violinist; WOK male quartet; 6:30-8:30 p. m., WOK string trio; Gus C. Edwards and his orchestra; WOK male quartet.

WOQ, Kansas City, Mo. (278), 11 a. m.-12:30 p. m., services; 7-7:45, services.

WORD, Batavia, Ill. (275), 10 a. m., hymns, sacred songs, duets, solos; 10:15, address, B. F. Hollister; 9 p. m., hymns, sacred songs, I. B. S. A. choral singers; 9:15, Bible lecture, L. M. Smith, 9:40, Ethel Flentye, pianist; I. B. S. A. choral singers.

WQJ, Chicago, Ill. (447.5), 9:30-11 a. m., sermon, Dr. Preston Bradley; Clarence Eddy, organist; 3-4 p. m., Maria Dneprova, Russian soprano; Saida A. Ballantine; 8-10, Ralph Williams and his Rainbo Gardens orchestra; Leonard F. Keller, violinist; Elsa Blasgen, lyric soprano; John Zwick, pianist; string trio, Bela Marta, violinist; Oscar La Pedus, celloist; John Zwick, accompanist; Helen Holman, soprano; Herman Techentine, baritone; Jean Carlson, soprano; Ambrose Wyrick, tenor.

WSAI, Cincinnati, Ohio (325.9), 2:45-4:30 p. m., address, Dr. S. Parkes Cadman, WEAF; Gloria Trumpeters; 7:45, chime concert, Robert Badgley; 8, sermon, Dr. Parkes Cadman, WEAF; 8:15-9:15, Atwater Kent hour, WEAF; Marie Kurenko, Russian coloratura soprano; Felix Salmond, violin-cello artists; 9:15, Union Central Life Insurance company orchestra, Sigmond Culp, director.

WSB, Atlanta, Ga. (428.3), 5 p. m., sacred concerts.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 11 a. m., First Baptist church, Rev. Dr. H. H. Bingham.

KFXF, Colorado Springs, Colo. (250), 7:30-9 p. m., First Methodist church service.

KOA, Denver, Colo. (322.4), 10:55 a. m., services, First Unitarian society of Denver, Unity church; 3 p. m., Mrs. Faye Roswell, organist; 7:45, services.

KUOM, Missoula, Mont. (244), 9:15 p. m., musical program, Jeanette Wayne, studio director.

Pacific Time Stations

KFWB, Hollywood, Calif. (252), 9-11 p. m., late news and Warner Brothers movie frolic, Roy-Al saxophone sextet, Charlie Cole, popular songs; Jack Kurtz, pianist and others.

KGO, Oakland, Calif. (361.2), 11 a. m., service, First Methodist Episcopal church, Dr. Edgar A. Lowther, pastor; 3:30, KGO little symphony; D. A. Ervin, guest artist.

KGW, Portland, Ore. (491.5), 10:15 a. m., Church of Our Father; 7:25-9 p. m., First Presbyterian church.

KHJ, Los Angeles, Calif. (405.2), 4-5 p. m., musicale, Western Auto Supply company; 6:30-7, Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 7-7:30, organ recital, Arthur Blakely, organist; 8-10, program, Martin Music company, Ruth Pitts, soprano; John Martin, pianist.

KMTR, Hollywood, Calif. (238), 6:30 p. m., Hollywood Christian church program, Rev. S. J. Mathieson, speaker; Charles W. Beam, baritone.

KNX, Hollywood, Calif. (336.9), 7-8 p. m., First Presbyterian Church of Hollywood; 8-9, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 9-10:30, program, Beverly Hills nurseries, Luboviski trio; Raquel Nieto, coloratura soprano.

KPO, San Francisco, Calif. (428.3), 9:45-10:45 a. m., "A Shelter in the Time of Storm," Dr. E. H. Smith, pastor, Epworth Methodist Episcopal church; Ira D. Morgan, baritone; Uda Waldrop, organist; 10:45, "Ye Towne Cryer," amusement information service; 5-6 p. m., Marshall W. Giselman, organist; 6-6:30, Waldemar Lind's orchestra; 6:30, "Ye Towne Cryer"; 6:35-7:30, Palace hotel concert orchestra, Cyrus Trobbe, director; 8-8:30, Palace hotel concert orchestra, Cyrus Trobbe; 8:30-9, Rudy Seiger's orchestra; 9-10, Tosch Seidel, violinist, direction of Ernest Ingold, Inc.

KTAB, Oakland, Calif. (240), 9:45-10:45 a. m., Professor E. G. Linsley, bible lecture; 11-12:30, church service; 7:45-9 p. m., church service; 9:30-11, concert.

(Continued on page 15)

SEIDEL ON PROGRAM SUNDAY AT KPO

Monday, December 7

Headliners Today

Eastern	Central	Mountain	Pacific
9 p. m.	8 p. m.	7 p. m.	6 p. m.

WCAE (461.3) Blue Rambler orchestra.
WEAF (491.5), WEEI (348.6), WCAP (468.5), WJAR (305.9), WSAI (326), WWJ (352.7), A. and P. Gypsies.
WGR (319) Symphonic Saxophone band.
WHAZ (379.5) Recital.
WJR (517) Paige Six and Jewett Six.

10	9	8	7

KSD (545.1) Steindel string quartet.
WEAF (491.5), WCAE (461.3), WEEI (348.6), WGR (319), WJAR (305.9), WTAG (268), WCCO (416.4), Grand opera, "Rigoletto."

10:30	9:30	8:30	7:30

WBAP (475.9) Trail Blazers' Anniversary.
WOAW (526) Swedish Nobility program.

11	10	9	8

WLW (422.3) Times Star concert.

12	11	10	9

KGW (491.5) Concert.

Monday, silent night for: CHIC, CNRA, CNRC, CNRE, CNRM, CNRO, CNRR, CNRT, CNRV, CNRW, KFDM, KFMQ, KFMX, KFRU, KHJ, KLDS, KTCL, KYW, PWX, WBBM, WCBD, WEAO, WEBH, WEBJ, WEBW, WENR, WGBS, WGES, WGN, WHAS, WHT, WIP, WJAZ, WJBL, WJJD, WLIB, WLS, WMAQ, WMBB, WOAI, WOC, WOK, WORD, WQJ, WRC, WREO.

Eastern Time Stations

CKNC, Toronto, Can. (357), 8 p. m., CKNC Chamber orchestra, Charles E. Bodley, director; Ernest Shildrick, baritone; Jessie Butt, contralto; Ruth Allen Young, soprano; Billie Bell, soprano.

KDKA, Pittsburgh, Pa. (309.1), 6:30 p. m., dinner concert; 8, Ruud light opera hour; 9, Spear's happy home hour.

WAFD, Port Huron, Mich. (275), 9-10 p. m., studio program; 10-12, musical program, Addison hotel.

WAHG, New York, N. Y. (315.6), 12-12:30 p. m., musical program; 7:30-8:30, Hon. Maurice E. Connolly; 7:45-8:15, Broadway Harmony Kings; 8:15 8:30, recitations, Horace J. Taylor; 8:30-8:45, Synchrophase trio; 8:45-9, Radio Santa Claus; 9-9:15, Doris Sheldon, contralto; Cameron Emslie, pianist; 9:30-9:55, Snychrophase trio; 10-10:15, Doris Sheldon, contralto; Cameron Emslie, pianist; 10:15-12, Joe Zimmerman's orchestra; 12 midnight, special dance music.

WBBR, New York, N. Y. (272.6), 8 p. m., Irene Kleinpeter, soprano; 8:10, world news; 8:20, vocal duets, Irene Kleinpeter, Fred Franz; 8:30, Bible instruction, "The Harp of God"; 8:40, Fred Franz, tenor; 8:50, vocal duets.

WBZ, Springfield, Mass. (333.1), 6:30 p .m., organ recital, Rene Dagenais, Capitol theater; 7:05, Pshcyology series, Abraham Myerson; 7:30, program, Capitol theater orchestra; 8, W. Edward Boyle's Copley Plaza orchestra; 8:30, Anthony Valentine, banjo-guitarist; George Nicholson, banjo-mandolinist; 9, Aleppo drum corps or Shriners' band; 9:30, Leslie Stearns, tenor; Alwyn E. Bach, baritone; Katherine Gravelin, pianist; 10:05, Leo Reisman's Hotel Brunswick orchestra.

WCAE, Pittsburgh, Pa. (461.3), 10:45 a .m., Gold Medal talk; 12:30 p. m., program for the day; library news; 3, program, Loew's Aldine theater; 6:30, concert, William Penn hotel; 7:30, children's period; 7:45, address, "Xmas Seals;" 8, Nixon orchestra; 9, studio concert, Blue Rambler orchestra; 10, Grand Opera; 11, program, Loew's Aldine theater.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Metropolitan Tower, N. Y. C.; 7-11, Y. M. C. A. chorus, WEAF; Tower health talk; "Rigoletto," A and P Gypsies, direction of Cesare Sodero, WEAF.

WCAU, Philadelphia, Pa. (277.6), 8 p. m., Carolyn Thomas, soprano; Ella Jaquette Kratz, pianist; 9:10, the Nokol Man; 9:30, Delaware County Serenaders; 10, songs, Tom Houston, James Loughrey, Don Travaline; 10:30, Parodians.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 8, studio program.

WEAF, New York, N. Y. (491.5), 6:45, 7 and 7:20 a. m., Tower health, exercises, WEAF, WEEI, WCAP; 10:45-11:05, Betty Crocker Gold Medal Flour home service talk; 11:05-11-15, musical program to be announced; 11:15-11:30, talk; 11:30-12, lecture, auspices of Teachers college; 2:30-4:15, p. m., Government club meeting, Mrs. George E. Owens, president; 4:15-5, lecture, Columbia university; 6-7, dinner music, Rose room of the Waldorf-Astoria; 7-7:15, Jan Van Bommel, Dutch baritone; Nina Gordon, accompanist; 7:15-7:25, talk, Theresa Helburn; 7:25-7:35, Jan Van Bommel; 7:35-7:45, Adam Carroll, pianist, David Berend, banjoist; 7:45-8:30, "Your Hour;" 8:30-8:45, Tower health talk, through WEEI, WCAP; 9-10, music, by the A and P Gypsies, WEEI, WCAP, WWJ, WJAR, WOO, WSAI; 10-11, grand opera "Rigoletto," the WEAF Grand Opera company, direction Cesare Sodero, through WOO, WCAE, WJAR, WCAP, WTAG; 11-12, Ben Bernie and his Hotel Roosevelt orchestra.

WEAO, Columbus, Ohio (293.9), 1:15 p. m., "Timely Economic Information for the Farmer," C. J. West; music.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Dan Barnett's orchestra; 7:45-8, Lillian Morlang Koehler, soprano, accompanist, Ruth Heinav; 8-8:15, talk, G. T. Geer; 8:15-8:30, Isabel Henderson, soprano; 8:30-9, Highland collegians.

WFI, Philadelphia, Pa. (395), 10:40 a .m., Betty Crocker service talk; 1 p. m., Strawbridge and Clothier Tea room ensemble; 3, Mrs. Rutherford, pianist; George Oumacht, baritone; Loretta Kerk, pianist; 3:45, fashion talk; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra.

WGBS, New York, N. Y. (315.6), 10-10:10 a. m., timely talks with Terese; 10:10-10:20, Jack Cohen, pianist; 10:20-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:40-10:50 fashion talk, Lillian Regan; 10:50-11, Jack Cohen, pianist; 1:30-1:35 p. m., Scripture reading; 1:35-2, Rosalie Blanchard and Walter Croft, duets; 2-2:15, Bob Platz and Murray Miller, duets; 3-3:10, interview, Evelyn Wight; 3:10-3:20, Dorothy Aber, soprano; 3:20-3:40, George junior republic program; 3:40-4, Women Voters program; 6-6:30, Uncle Geebee; 6:30-7, Premier club orchestra; 7-7:15, Belle Bart, astrologist.

WGCP, New York, N. Y. (252), 12:45-1 p. m., mirror race; 1, results half hourly; 3-3:15, Eva Rothenberg, pianologue; 3:15-3:30, Andy Pendleton and Allie Moore; 3:30-4:15, studio program; 4:15-4:30, Shirley Herman, child singer; 4:30-5, Uncle Robert and his little pals; 5-5:15, health talk; 6-6:15, Littlemann's orchestra; 6:15-6:30, Daddy Dingle and his Jingle Box; 6:30-7:30, Littmann's orchestra; 8-8:30 Charles Schwartz orchestra; 8:30-8:45, Percy Bradford entertainers; 8:45-9, Charles Phillips, pianist; 9-9:30, orchestra; 9:30-9:50, Bob Ward and three little Wards; 9:50-10, George Hirose, baritone; 9:50-10, Strickland's orchestra; 11-11:30, Connies orchestra; 11:30-12, Murphy entertainers.

WGHP, Detroit, Mich. (270), 8-10 p. m., Little symphony orchestra; T. Stanley Perry, tenor; August Babst, violinist; Marion Fossenkemper, clarinetist.

WGR, Buffalo, N. Y. (319), 2:30 p. m., WGR's afternoon program; 6:30, Clef Dwellers orchestra; 8:30, Dutch Master's program; 9, Allen Symphonic saxophone band; 10, Arts Club of Buffalo; 11, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGY, Schenectady, N. Y. (379.5), 2 p. m., Aeia Restaurant orchestra; 2:30, household talks, cooking lesson, Jessie B. Lane; "The Successful Kitchen," Grace Morin; 6:30, dinner program, Reed Hamaker's Hotel Van Curler orchestra; 7, WGY agricultural program; 7:45, Margaret DeGraff, harpist; Earl Hummel, violinist; Stuart Swart, pianist.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, fashion review; 8, Seaside hotel trio, orchestra; 8:30-9:30, Guardian entertainers; 11-11:30, Cotton club orchestra; 11:30-12, Silver Slipper revue and orchestra; 12-12:30 a. m., Ted Lewis and his orchestra.

WIP, Philadelphia, Pa. (508.2), 1:30 p. m., Gimbel tea room orchestra; 3, Skibinsky studios; Charles D. Long, bass; Flora Ripka, pianist; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime story, dancing lesson, Miller Conservatory of dancing .

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's Petite symphony orchestra; soloists; 7:45, Goodwill Oakland presented by the Richards Oakland company; 9, "Paige Six," "Jewett Six"; 11:30, The Merry Old Chief, with "The Jewett Jesters."

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio school; lecture on history, English, Sociology.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 7:30-8, lullaby music; 8-8:45, Knickerbocker family circle; 8:45-10:15, Barclay Radio entertainers; 10:15-11:15, Radio Shack entertainers.

WNYC, New York, N. Y. (526), 11-12:30 a. m., women's program; 6:20-6:30, piano selection; 6:30-7, German lesson, V. H. Berlitz; 7-7:30, advanced German lessons, V. H. Berlitz; 7:35-8:30, dance program; 8:30-10:10, instrumental feature; 10:10-10:30, lecture, Board of Education.

WOR, Newark, N. J. (405.2), 3:45-4 p. m., Talk, Winifred Moses; 6:15-6:17, words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7:30, Jacques Jacobs Hotel Shelton orchestra; 7:30-8, Eddie Elkins' Ciro orchestra; 8:30-9:45, Al Reid's hour; 9:45-10, talk, Edward H. Bierstadt; 10-10:30, Ballin and Race, duets; 10:30-11, Archie Slater's Palais D'Or orchestra; 11-12, Irving Aronson's Crusaders.

WRC, Washington, D. C., (468.5), 10 a. m., women's hour, WJZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., Shoreham hotel orchestra; 4:30, musical program.

WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Wagon Serenaders," Gold Standard ensemble.

WTAG, Worcester, Mass. (268), 10:45 a. m., talk, Marjorie Woodman; 12:05-2 p. m., WTAG orchestra; 7, talk, Fred D. Aldrich; 8-10, Robin Hood's orchestra; 10-11, grand opera, "Rigoletto," WEAF Grand opera company.

WTIC, Hartford, Conn. (475.9), 6:30 p. m., dinner music, Emil Heimberger's Hotel Bond trio; 7:45, "Interesting Location," Professor William Garland Foye, Wesleyan university.

WWJ, Detroit, Mich. (352.7), 7:30-8 a. m., setting-up exercises, R. J. Horton; 9:30, "Tonight's Dinner," woman's editor; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra, soloists; A. and P. Gypsies.

Central Time Stations

KFAB, Lincoln, Nebr. (340.7), 10:30-11 a. m., "Convenient Kitchen," Muriel Smith; 1:15-1:30 p. m., High School Convocation; 3-3:30, "The Younger English Novelists," Rowse B. Wilcox; 5:30-6:30, Belshaw's orchestra; Buick Little symphony; 8:05-8:30, "What Ails My Engine," C. W. Smith; "Baby Beeves for Boys and Girls," L. I. Frisbie; 8:30-10:30, Jack Marshall, ragtime kid; Ed Ellingson; Cow Bell boys, guitar and violin soloists; Gloomy Gus, pianist and singer; Belshaw's orchestra.

KFNF, Shenandoah, Iowa (266), 7 p. m., concret, Smith-Belding orchestra.

KFUO, St. Louis, Mo. (545.1), 8 p. m., Young People Prepare Their Christmas Gifts; "The Gold of Faith," Rev. R. Prange; songs nad music.

KFVE, University City, Mo. (240), 8:30 p. m., "Amusement Review," Romaine Fielding; Romaine orchestra.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talks, Earl E. May; music, musical saw, J. A. Showers; 6-7, dinner program; Pollyanna stories, Mrs. Dwight Nickols; program; 9-11, evening program; How Do You Do Boys, Grady and Doc; Farnham trio.

KPRC, Houston, Texas (296.9), 12 m., Frank Tilton, blind pianist; 5:30 p. m., Uncle Judd's Kiddies hour; 7:30, dance music; Malon Gunn's Texas Ramblers; 8:30, Dr. Earle J. Shay, tenor; J. Harry Kobusch, composer-pianist; 9, Knights of Columbus band, W. J. Hartz, director.

KSAC, Manhattan, Kans. (341), 9-9:25 a m., music, talks, agricultural premier, calisthenics; 9:55-10:25, readings, backyard gossip, question box; "Planning Today's meals; 12:35-1:05 p. m., readings, question box; "Fall Freshing Cows Make the Money," James Linn; "Seed Treatment of Vegetable and Truck Crops," D. R. Porter; 4:30-5, Second Year English literature, high school credit given; 6:30-7:30, talks, book review, current events; College credit course—Psychology; "Ways of Improving Production of Market Hogs," A. Weber; "Selection of Sorghum Seed and Storage," J. W. Zahnley.

KSD, St. Louis, Mo. (545.1), 7 p. m., "Fur hour"; program announced; 9, Ellis Levy, violinist; 10, "Dutch Masters Cigar Hour"; Steindel string quartet.

KSO, Clarinda, Iowa (241.8), 7-9 p. m., old time music; 9-10, barn dance.

KTHS, Hot Springs National Park, Ark. (374.8), 9-10 p. m., New Arlington stringed quartet; Lon Chassy, violinist; Edward Richter, cellist; Henry Haynes, bass; John G. Heyn, pianist; orchestra and organ; 10-11, Rainbow Garden frolic, California serenaders, 555 service station.

KYW, Chicago, Ill. (535.4), 6:30 a. m., morning exercises, Paul A. Leonhardt, physical director, Y. M. C. A.; 7:30, Morning Family Worship, Y. M. C. A.; 11:15, "Feeding Minerals to Minors," John C. Cutting; 11:35, table talk, Anna J. Peterson; 12:05 p. m., noonday concert, Commonwealth Edison company; 1, luncheon hour concert, Congress hotel; Joska De Babarry and his orchestra and Coon Sanders' Original Nighthawks; 6:35-7, children's bedtime story, Uncle Bob.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical program; organ recital; Charles Cordray, tenor; Dody Reimer, pianist; 6 p. m., dinner concert, George Osborn's Hotel Radisson orchestra; 7:05, classical program; Charles Sandberg, baritone; Tirzah Ferguson, violinist; Grace Hawley, accompanist; Joy Nichols, soprano; Amy Hedburg, accompanist; 11, Skyrocket frolic; George Osborn's Hotel Radisson Skyrockets.

WBAP, Fort Worth, Texas (475.9), 12:05-12:30 p. m., musical program; 6-6:30, Texas Hotel Tokio Royals; 7:30-8:30, College of Industrial Arts of Denton; 9:30-12, anniversary program, "Trail Blazers," Montgomery-Ward and company orchestra, Frank Maco, director.

WBBM, Chicago, Ill. (226), 4-6 p .m., Irene Beasly, Harry Sosnik; Sandy Meek; Valentino orchestra; Jack Penywell, twin six guitar; Court Banks; Russell Meyers; Joe McManus; Edna Wheeler Ballard, harpist; 6-7 p. m., Harold Anderson, accordianist; Kristine Gallen, cellist; Lillian Johnson, viloinist; Phillip-Nilles, tenor; Marie Margott, harpist; George Marbach, tenor; Ziegler sisters; Two Jays; Moulin Rouge orchestra.

WCCO, Minneapolis-St. Paul, Minn. (415.4), 9:30 a. m., program for day; 10:45, "Gold Medal Christmas Cookies," Betty Crocker; 12 m., Donaldson's orchestra; 2 p. m., woman's hour; 2:30, concert; 4, Reader's club, Mrs. Walter Stevens; 5:30, children's hour; 6:30, concert, Gordon Cook ensemble; 7:45, "Swine Raising," lesson 1; 8, University of Minnesota program; 9, classical concert.

WDAF, Kansas City, Mo. (356.6), 10:45 a. m., Betty Crocker, home service talk; 6-7, school of the air, dialect readings, C. M. Ragou; the Tell-Me-a-Story lady; Trianon ensemble; 8-9, musical program, Christian church orchestra; 11:45-1 a. m., nighthawk frolic; Carl Nordberg's Plantation players; Ted Meyn, organist; Eddie Kuhn's orchestra; Earl Coleman's orchestra.

Young and talented is the pianist who appears at WGHP, Detroit, each Wednesday night at 8 p. m. eastern time. Madame Gizi Szanto, who is establishing herself as one of the foremost Detroit artists, is an exclusive feature of this station.

Misha, which is Russian for Max, Gegna is one of the best known cellists in the world. Before settling in Hollywood to become a KNX artist, Mr. Gegna toured the country with such celebrities as Tetrazzini, Caruso and Mary Garden.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Lindsay Stephens, baritone; Gordon Bishop, pianist; 6:30-7:30, Artie Collins' orchestra; 8:30-9:30, Sears, Roebuck agricultural foundation program.

WGST, Atlanta, Ga. (270), 9-10 p. m., Mary Leffingwell, violinist; Mrs. William S. Taylor, pianist; Mary Phillips, violinist; Rosina Asmus, pianist.

WHAD, Milwaukee, Wis. (275), 4 p. m., Trixy Ann Troy, ukulele soloist; Olive Froehlich, pianist; Perry Olds, literary editor; 6:15-7, Bill Benning's Milwaukee Athletic club orchestra; 8-10, Marquette university studio program.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; Eleanor Huber, children's stories; fashion talk, Peggy True; editorial readings.

WHO, Des Moines, Iowa (526), 7:30-8:30 p. m., advanced students, Drake university of music; 8-9, faculty members, Drake university of music, direction of Dean Holmes Cowper; 11-12, organ recital.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club; Borden health talk, Jelke Good Luck Girl; Helen Raub, pianist; John Clark, baritone; 10:45, Betty Crocker home service; 11, special studio features; 12 p. m., Al Carney's organ hour; 1, special studio program, Grayling's string trio; 6, classical program, Linner organ recital; Helen Raub, pianist; Grayling's string trio; Pat Barnes; Helen Axtel, soprano; John Clark, baritone; 7, Kitchen Klenzer Klassics.

WKRC, Cincinnati, Ohio (422.3), 6 p. m., dance program, Alvin Roehr's orchestra; 8, Freda Sanker's orchestra; Norrine Gibbons, soloist; 9, program, Robert E. Bentley post, American Legion; 12 midnight, theatrical stars; 12:30 a. m., Wesley Helvey's troubadours.

WLS, Chicago, Ill. (344.6), 12 m.-1 p. m., R. F. D. farm program; W. L. S. trio; 6-7, blue ribbon concert.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12:15 p. m., service, Rev. George H. Kase; 4 p. m., children's musical hour, pupils of Cincinnati Conservatory of Music; 6:30, special theatrical feature; 7, Hotel Gibson concert, Robert Visconti, director; 7:30, fourth in a series of basketball talks, "Defense, Shifts and Interceptions," G. A. Richardson, Central Y. M. C. A.; 7:40, Hotel Gibson concert; 10, Cincinnati Times Star concert, William J. Kopp, director; Howard Hafford, tenor; Ernst Pack, violinist.

WMAQ, Chicago, Ill. (447.5), 12:45 p. m., Radio farm school; 2, shut-in program; 4, mothers in council; 4:30, "Foibles of the Moment," Mrs. Graham Aldis; 4:45, Glenn Dillard Gunn School of Music; 5:15, Topsy-Turvy time; 6, organ Chicago theater; 6:30, Hotel LaSalle orchestra; 6:40, Family Altar league.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Malcolm Urk's orchestra.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program.

WOAW, Omaha, Nebr. (526), 6 p. m., Sandman's visit, Val McLaughlin; 6:20, popular song period; 6:45, Randall's Royal Fontenelle orchestra; 9, Skeen trio; 9:45, Swedish Nobility program.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., Farm school; "Hog Day—The Hog's Own Answer to the Mineral Feeding Question," Prof. John M. Evvard; 3-3:30, home management schedule, Aunt Jane; 5:45-6, chime concert.

WOI, Ames, Iowa (270), 12:30 p. m., college chimes; 12:45, "Dairy Production," Prof. Earl Weaver; 7:30, "Why Every Egg Doesn't Hatch," Prof. H. A. Bittenbender; 7:50, program.

WQJ, Chicago, Ill. (447.5); 11-12 m., "Baking Talk," Cleve Carney; "Answers to Questions Frequently Asked About Dairy Products," Will A. Foster; "Christmas Breads," Jean K. Rich; 3-4 p. m., "Winter Pies," Helen Harrington Downing; "The Care of the Hair," Madame Huntingford.

WSAI, Cincinnati, Ohio (325.9), 8-9 p. m., A and P Gypsies, WEAF; 9-10, Grand opera company, "Rigoletto." Cesare Sodero, director; 10-12, Cincinnati community program.

WSB, Atlanta, Ga. (428.3), 8 p. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; Biltmore Salon orchestra; 10:45, entertainment.

WSOE, Milwaukee, Wis. (246), 2 p. m., cooking chats, Prudence Penny; 5:30, children's stories, Aunt Happy; Laurine Ladwig, soprano; Elmer Ihrke, pianist; 6:45, "Hog Raising," F. B. Hansen; 9, "Send a Candygram" frolic, Elmore Clemens Red Oak Country club orchestra; E. R. Erving baritone; Lorraine Hug, pianist; Maurice Kipon, violinist; Hildegarde Sell, pianist; Van Buron's Hawaiians; Charles Bennett, blind accordionist.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 8:30 p. m., Kiwanis club for Radio Sunshine Fund.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program.

KFXF, Colorado Springs, Colo. (250), 8:30 p. m., musical selections; 8:45, educational talk, Mrs. L. A. Miller; 9-10:30, Warner Stone's Columbians.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 6:30, concert, Brown Palace string orchestra, Howard Tillotson, director; 7:30, Sandman's hour; 8, instruction in conversational Spanish; KOA orchestra, Lewis H. Chernoff, directing; instruction in auction bridge.

KOB, State College, N. M. (348.6), 7:30-8:30 p. m., "The Water Supply," Prof. Botkin; "Mineral Feeds and Their Value to Us," Miss Strong.

KUOM, Missoula, Mont. (244), 8 p. m., program, Kiwanis club of Missoula.

Pacific Time Stations

KFDJ, Corvallis, Ore. (282.5), 8 p. m., musical selections; 8:10, farm reminders; 8:15, "Stem Rot of Legumes," Prof. H. P. Barss; 8:20, "Winter Poultry Flock Management," Prof. A. G. Lunn; 8:35, musical

(Continued on page 16)

NEW YORK PHILHARMONIC ORCHESTRA

Index to Popular Concerts

TABULATED below is a time table of the stations giving popular concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

SATURDAY, DECEMBER 5

Eastern	Central	Mountain	Pacific
7:30 p. m.	6:30 p. m.	5:30 p. m.	4:30 p. m.
WFAA.			
8	7	6	5
WLS.			
9	8	7	6
WBBM, WEAF, WENR, WGBS, WLS, WMAQ, WNYC.			
10	9	8	7
KFAB, KPRC, WBBM, WENR, WGN, WLS, WMBB, WREO.			
11	10	9	8
KFVE KFWB, KNX, KTHS, WBBM, WMBB, WOK, WQJ, WRC.			
12	11	10	9
KNX KOIL, KPO, KPRC, WBBM, WLS, WOAW, WOK, WQJ.			
1 a. m.	12 m.	11	10
KFWB, WDAF, WBBM, WEBH, WENR, WOK, WQJ, WSAI.			
2	1 a. m.	12 m.	11
KNX, WBBM, WENR, WQJ.			

SUNDAY, DECEMBER 6

Eastern	Central	Mountain	Pacific
9 p. m.	8 p. m.	7 p. m.	6 p. m.
WBBM.			
10	9	8	7
WBBM, WMBB.			
11	10	9	8
WMBB.			
12	11	10	9
KNX, KTHS.			
1 a. m.	12 m.	11 p. m.	10
KFWB, WBBM.			
2	1 a. m.	12 m.	11
KFWB.			

MONDAY, DECEMBER 7

Eastern	Central	Mountain	Pacific
7 p. m.	6 p. m.	5 p. m.	4 p. m.
WBBM, WFAA, WOAW.			
8	7	6	5
WGBS.			
9	8	7	6
WCAU, WEAF, WGR, WKRC, WOK.			
10	9	8	7
KFAB, WGR, WKRC, WMCA, WOAW, WOK, WSOE.			
11	10	9	8
KFAB, KFVE, WOK.			
12 m.	11	10	9
KLX, KNX, KOIL, WHO, WOK.			
1 a. m.	12 m.	11	10
KFWB, KLX, WAHG, WDAF, WHT, WKRC, WOK.			
2 a. m.	1 a. m.	12 m.	11
KFWB.			

TUESDAY, DECEMBER 8

Eastern	Central	Mountain	Pacific
7 p. m.	6 p. m.	5 p. m.	4 p. m.
WMCA, WOAW.			
8	7	6	5
WBBM, WEAR.			
9	8	7	6
WBBM, WEAR, WBZ, WSB.			
10	9	8	7
WBBM, WMBB, WOAW.			
11 p. m.	10 p. m.	9 p. m.	8 p. m.
KFVE, KFWB, KNX, WBBM, WHT, WMBB, WOK, WQJ.			
12 m.	11	10	9
KNX, KOIL, KPO, WBBM, WFAA, WKRC, WMC, WOK, WQJ.			
1 a. m.	12 m.	11	10
KFWB, KNX, WFAA, WHT, WOAW, WOK, WQJ.			
2	1	12 m.	11
KFWB, WQJ.			

WEDNESDAY, DECEMBER 9

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
KFNF, WAHG, WEBJ, WEEI, WMCA.			
9	8	7	6
WBBM, WEBJ, WGCP, WNYC.			
10	9	8	7
KFAB, KPRC, WBBM, WGCP, WHO, WMBB.			
11	10	9	8
KFAB, KFVE, KGW, KPO, KWSC, KYW, WBBM, WHN, WMBB, WOK, WQJ.			
12 m.	11	10	9
KFWA, KFWB, KNX, KYW, WOK, WQJ, WSAI.			
1 a. m.	12 m.	11	10
KNX, KYW, WBBM, WHT, WOK, WQJ.			
2	1 a. m.	12 m.	11
KFWB, KNX, WBBM, WOK, WQJ.			

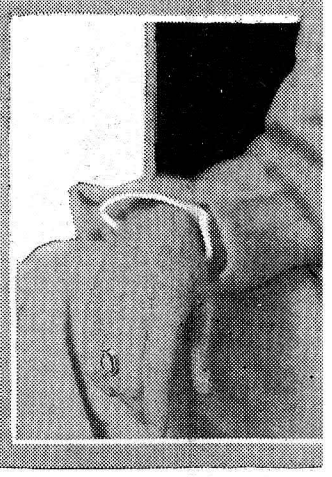
THURSDAY, DECEMBER 10

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
WCAE, WEAF, WJAR, WMC, WOC, WSAI.			
9	8	7	6
WBBM, WHAD.			
10	9	8	7
KMA, WBBM, WEEI, WHAD, WHN, WMBB, WMC, WNYC, WOAW, WSOE.			
11	10	9	8
KHJ, KMA, KYW, WBBM, WMBB, WOK, WQJ.			
12 m.	11	10	9
KHJ, KTAB, KOIL, WBBM, WDAF, WEAA, WKRC, WOC, WOK, WQJ.			
1 a. m.	12 m.	11	10
KFWB, KHJ, WHT, WOK, WQJ.			
2	1 a. m.	12.m.	11
KNX, WQJ.			

FRIDAY, DECEMBER 11

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
WGCP, WJR.			
9	8	7	6
WBBM, WGR, WLS, WOC.			
10	9	8	7
KFAB, WBBM, WMC, WDAF, WHAD, WMBB, WOAW, WSOE.			
11	10	9	8
KFVE, KFWA, KHJ, KLX, KYW, WMBB, WOK, WQJ.			
12 m.	11	10	9
KFWB, KHJ, KNX, KOIL, WMC, WOK, WQJ.			
1 a. m.	12 m.	11	10
KFWB, KHJ, WDAF, WHT, WOK, WQJ.			
2	1 a. m.	12 m.	11
KNX, WQJ.			

Nashville as a music center is being revealed through the microphone of WSM. Mrs. Daisy Hoffman, left, is one of the brilliant pianists who is giving this city a Radio reputation. Winifred Perry, above, has a rich contralto voice which may be heard during the Spear Happy Home hour at KDKA, Pittsburgh. A nightly feature which pleases fans is the dance music played by Earl Coleman's Ambassador hotel orchestra. Mr. Coleman is the nonchalant gentleman at the right.



Monday, December 7

(Continued from page 15)

selections; 8:45, "The Past Season for Vegetable Growing—Some Lessons Learned," A. G. Bouquet; 9, "Club Work for Girls During Winter Months," Helen Cowgill; 9:15-9:45, alumni program.

KFOA, Seattle, Wash. (453.3), 6:45-8:15 p. m., Sherman, Clay and company program; 8:30-10, Times studio program.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7-8, microphone brevities; 8-9, program, Star Motor Car company, Million Dollar Four orchestra, Sol Hoopii's trio; 9-10, program, Globe Ice Cream and Weber Baking companies featuring the Five Little Eskimos; 10-11, Warner Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15 a. m., health training exercises; 8:15, exercises; 8:30, daily strength, cheerio; 10:40, classroom instruction, Oakland city schools, sixth grade; 11:30-1 p. m., luncheon concert, Pacific States Electric company; 3-4, musical program, interpretation of the classics, Wilda Wilson Church; 5:30-6, Aunt Betty's stories; 6-7, twilight concert, Wiley B. Allen company studio; 8, health talk, California State Board of Health, Hugh Barrett Dobbs; "Chats About New Books," Joseph Henry Jackson; "Better English," Wilda Wilson Church; "Are Children People?" Dr. Albertine Richards Nash; "National Farm Radio Council;" Arion trio.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert, Olds Wortman and King; 9-10, concert.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Elsie's Sunset matinee; 8-9, concert, San Rafael Military academy band; 9-10:30, meeting of the Protective Order of Lake Merritt Ducks.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and naborhood children; 7:15, Los Angeles Y. M. C. A .musical program; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p m.., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30, Mutual Motors mirth contest; 7:30-8, program, Columbia Outttting company; 8-9, program, L. W. Stockwell company; 9-10, program, Ward Gas Floor Furnace company; 10-11, Goodrich Silvertown Cord dance orchestra, Lilyan May Challenger, contralto; 11-12, Ray West's Cocoanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7-7:30 a. m., exercises; 10:30, "Ye Towne Cryer," amusement information service; 12 m., scripture reading; 1-2 p. m., Rudy Seiger's orchestra; 2:30-3:30, matinee program; 5:30-6:15, children's hour, stories, Big Brother; 6:30-6:40, "Ye Towne cryer," amusement information service; 6:40-7, Waldemar Lind's orchestra; 7-7:30, Rudy Seiger's orchestra; 8-8:45, Uda Waldrop, organist; 8:45-9, "Exercise and Rhythm," director of Y. M. C. A. daily dozen; 9-10, studio program; 10-11, Waldemar Lind's orchestra.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo. W. Phillips, prayer service; 4-5 p. m., women's club notes; 8-10, program, Western States Life Insurance company.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., Betty Ransom, vocalist; Dee Stewart, pianist; Phi Epsilon steel guitar quartet; Horace Trimble, Ola Bain, Will De Neff, James Lumley; "The Psychology of Efficiency—The Growing Demand for Efficiency," Dr. F. F. Nalder; "Modern Maintenance Methods for Macadam Highway—Highway Engineering," H. E. Phelps; "Getting Chicks That Will Lay," W. D. Buchanan.

Tuesday, December 8

Headliners Today

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
KFNF (266) Graf Musical club.			
WTIC (475.9) Musical travelogue.			
8:15	7:15	6:15	5:15
WIP (508.2) Matinee Musical club.			
9	8	7	6
WJZ (454.3), WRC (469) Edison hour.			
9:30	8:30	7:30	6:30
KPRC (296.9) Cicle H Glee club.			
10:05	9:05	8:05	7:05
WBZ (333.1) American Legion program.			
10:30	9:30	8:30	7:30
KFWB (252) Nathan Leetjesky, cellist.			
11	10	9	8
KGO (361.2) "Holy City," oratorio, orchestral.			
KTHS (374.8) Conway Night.			
12	11	10	9
WFAA (475.9) Mandolin and Guitar club.			

Tuesday, silent night for: CFCA, CHIC, CKNC, CNRC, CNRE, CNRM, CNRO, CNRW, CNRT, KFAU, KFRU, KFUO, KFWA, KLX, KOA, KOB, KUOM, KWSC, PWX, WAHG, WAMD, WBBR, WCAL, WGCP, WGST, WHAD, WHAZ, WJAD, WJAZ, WJBL, WLIT, WLWL, WOI, WOR, WOS, WSM, WSMB, WSUI, WTAM.

Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 10 a. m., domestic science and arts for the housewife; 6:30 p. m., KDKA Little Symphony orchestra; 8, sacred song half hour; 8:30, world cruise by Radio, Ross H. Skinner; KDKA Little Symphony orchestra; 9, KDKA Little Symphony orchestra; Chester L. Sterling, baritone; 11:35, Grand theater.

WAFD, Port Huron, Mich. (275), 8-10 p. m., Port Huron Boy Scout orchestra; 10-12, musical program, Addison hotel.

WAHG, New York, N. Y. (315.6), 12-12:15 p. m., Joe Zimmerman, pianist.

WBZ, Springfield, Mass. (333.1), 6:15 p. m., dinner concert; 7:05, Hotel Kimball dance orchestra; 7:20, harmonica selections, James Nesworthy; 7:35, Hotel Kimball dance orchestra; 8, professional hockey game, Boston Bruins and Montreals; 10:05, American Legion program, Cyril J. LaFrancis and his American Legion orchestra.

WCAE, Pittsburgh, Pa. (461.3), 12:30 p. m., program for the day; 3, program, Loew's Aldine theater; 4:30, Sunshine Girl; concert, William Penn hotel; 7:30, Davis Saxophone octette, WEAF; 8, program from New York; 8:30, "The Gold Dust Twins;" 9, "The Eveready Hour;" 10, studio concert; 10:30, Vincent Lopez' orchestra.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Metropolitan Tower, N. Y. C.

WCAU, Philadelphia, Pa. (277.6), 7:30 p. m., recital, N. Snellenburg and company; vocal trio; 8, "Building and Loan," F. Baruch; 8:10, the Three Brothers; 8:25, National School of Oratory Players; 9:15, Robert Fraser, gospel singer; Elizabeth Holtz, pianist; 9:40, Harry Link, popular song writer; 10:30, Billy Hayes' orchestra.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 10, The Red Apple club.

WEAF, New York, N. Y. (491.5), 6:45, 7 and 7:20 a. m., Tower Health exercises, through WEEI and WCAP; 11-11:10, musical program to be announced; 11:10-11:25, Lecture, Board of Education; 11-25-11:35, musical program; 11:35-11:55 motion picture forecast, Adele Woodward; 11:55-12, musical program; 4-4:30, New York society trio; 4:30-5, women's program, auspices of United Synagogue of America; 6-7, dinner music, the Rose Room of the Waldorf-Astoria; 7-7:10, Columbia university French lecture, Dr. Thatcher Clark; 7:10-7:30, Davis saxophone octette, through WCAE, WOO, WSAI; 7:30-8, Financial discussion, Dudley F. Fowler; 8:10-8:30, Ross Gorman and his Earl Carroll Vanities orchestra, Earl Carroll theater through WEEI, WFI, WCAE, WGR, WWJ, WTAG; 8:30-9, The Gold Dust Twins, WEEI, WFI, WCAE, WGR, WWJ, WOC, WJAR, WCCO; 9-10, Eveready Hour through WEEI, WFI, WCAE, WGR, WWJ, WOC, WJAR, WCCO, WSAI, WTAG; 10-10:30, Radio Auction Bridge game, WEEI, WFI, WGR, WCCO, WSAI, WOC, WWJ; 10:30-11, Vincent Lopez and his orchestra from the Casa Lopez, through WEEI, WFI, WCAE, WGR, WWJ, KSD, WTAG; 11-12, dance orchestra.

WEAO, Columbus, Ohio (293.9), 9 p. m., University chimes, Allen McManigal; "Soils—What Acid Phosphate Will Do," Prof. Firman E. Bear; 9:15, Sorority program.

WFI, Philadelphia, Pa. (395), 1 p. m., Strawbridge and Clothier tea room ensemble; 3, program, Philadelphia music club; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra; 8, Ross Gorman and his Earl Carroll Vanities orchestra; 8:30, Gold Dust Twins; 9, Eveready hour; 10, Auction Bridge game; 10:30, Vincent Lopez and his orchestra.

WGBS, New York, N. Y. (315.6), 10-10:10 a. m., timely talks with Terese; 10:10-10:20, Gertrude Seidenman, pianist; 10:20-10:30, Phoebe Cole, household talk; 10:30-10:40, Gertrude Seidenman, pianist; 10:40-10:50, Margaret Santry, thrift talk; 10:50-11:00, Gertrude Seidenman, pianist; 1:30-1:35 p. m., scripture reading; 1:35-1:45, Fanille Davies, soprano, cellist; 3-3:30, talk, Betty Ross; 3:30-3:40, Serena Hutsall, readings; 3:40-4, Dr. A. G. Robyn, piano lessons; 6-6:30, Uncle Geebee; 7-8, Arrowhead Inn concert orchestra; 8-9, Y. M. H. A. Vocational Forum; 9-10; Paragon novelty trio; 10-10:30, Arrowhead Inn dance orchestra.

WGCP, New York, N. Y. (252), 12:30-12:45 p. m., Mirror race; 12:45, results half hourly; 3-3:15, Charles Phillips, pianist; 3:15-3:30, Meredith and Osborne, songs; 3:30-3:45, Isabelle Henderson, soprano, 3:45-4, Ova Welsh, pianist; 4-4:15, Ukulele Bob McDonald; 4:15-4:30, Gertrude Guarente, pianist; 4:30-4:45, Leslie McLeod, tenor; 4:45-5,, Stieger players.

WGHP, Detroit, Mich. (270), 8-10 p. m., the Skylark dance band; "Bernice," pianist; Leona E. Mitchell, soprano; William A. Kerrm, baritone; Jimmy Higgins, saxophonist; Harry Hayes, banjoist.

WGR, Buffalo, N. Y. (319), 2:30 p. m., WGR's afternoon program; 6:30, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including Earl Carroll Vanities orchestra, Gold Dust Twins, Eveready hour, Auction bridge, and Vincent Lopez, himelf, and his orchestra from Casa Lopez.

WGY, Schenectady, N. Y. (379.5), 2 p. m., "Home Hygiene and Care of the Sick," Anna McGee, 2:30, Stephen E. Boisclair, organist; 6:30, Reed Hamaker's Hotel Van Curler orchestra; 7:30, "Philosophy's Contribution to America," Prof. Harold A. Larrabee; 7:45, WGY orchestra; 8:15, Elmer Tidmarsh, organist; 9, WGY orchestra; Mrs. William H. Rieser, soprano; 10, "Northern Italy, including Venice, the Italian Lakes and Milan," WJZ; 10:30, Spencer Tupman's Hotel Mayflower orchestra, WRC.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, book review, Mrs. James Lord; 8, Seaside hotel trio; 11:15, Strand theater recital.

WHN, New York, N. Y. (361.2), 12:30-1 p. m. Lexington organ recital; 2:15-3:15, overture and vaudeville, State theater; 3:15-4:30, Lexington theater orchestra; 6:40-7, talk, Billy B. Van; 7-7:30, Iceland orchestra; 7:30-8, Will Oakland's Chatheau Shanley; 8-8:10, talk, Litel McClung; 11-11:30, Caravan club orchestra; 11:30-12, Reddo club orchestra; 12-12:45 a. m., Club Kentucky Revue and orchestra.

WIP, Philadelphia, Pa. (508.2), 10 a. m., menu, Mrs. Anna B. Scott; 1 p. m., organ recital; 3, Ruth Rile, contralto; Ada W. Craig, soprano; Flora Ripka, accompanist; 6:05, Joe Ray and the California Night Hawks; 7, Uncle Wip's roll call and birthday list; 8, Elliott Lester, dramatic critic of WIP; 8:15, matinee musical club opera class; 9, Dr. Harvey Dee Brown; 9:10, matinee musical club opera class; 10:05, Emo's weekly movie broadcast, Eli M. Orowitz; 10:30, Joe Ray and the California Night Hawks.

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's petite symphony orchestra; soloists; 9, Jean Goldkette's serenaders; soloists.

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio school, lectures on marketing, English, soils.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7, Frank Gebbias Red Lion Inn Orchestra; 7-8, Jack Wilbur's personalities; 8-8:30, Pace institute program; 8:30-8:45 Hye Sorenson, Danish baritone; 11-12, Ernie Golden and his Hotel McAlpin orchestra.

WNYC, New York, N. Y. (526), 7:10-7:30 p .m., The Canadians; 7:35-8, The Canadians; 8-9, studio feature; 9-10:30, dinner to Bishop Ernest M. Stires, Hotel St. George; 10:35-11:45, Harry Ash's orchestra.

WOR, Newark, N. J. (405.2), 3:15-3:45 p. m., Fred Koester's Clifford Lodge orchestra; 6:15-6:17, words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7, bedtime stories; 7-7:30, Jacques Jacobs Hotel Shelton ensemble.

WRC, Washington, D. C. (468.5), 10 a. m., women's hour, WJZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., Hotel Washington orchestra; 6, Hotel Hamilton orchestra; 6:50, "Show Shopping," Leonard Hall; 7, Lee House trio; 8:30, "The Political Situation in Washington Tonight," Frederic William Wile; 9, "N. Y. Edison Hour," WJZ; 10, "The Grand Tour," WJZ; 10:30, W. Spencer Tupman's orchestra, WJZ, WGY; 11:30, Otto F. Beck, organist; 12 midnight, Meyer Davis' Le Paradis band.

WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Wagon Serenaders," Gold Standard ensemble; 8:15, Reo Motor Car company band, Carl Hall Dewey, director; vocal and instrumental solos.

WTAG, Worcester, Mass. (268), 10:45 a. m., talk to mothers, Rosebelle Jacobus; 12:05-2, WTAG orchestra; 8-8:30, WEAF, Vanities orchestra; 9-10, WEAF, Eveready hour; 8:30-9, "Long and Broad;" 10:30 -11, WEAF, Vincent Lopez and his orchestra.

WTIC, Hartford, Conn. (475.9), 11 a. m., housewives forum, Mrs. J. M. Dean; 12 m., luncheon music, Travelers club; 6:30 p. m., music, Hub Restaurant trio; 7, Frances Nearing, contralto; 8, Travelers symphonic ensemble; 8:30, musical travelogue, W. H. Rhodes, the Travelers symphonic ensemble; 9:30, Esther Nelson, organist.

WWJ, Detroit, Mich. (352.7), 9:30 a. m., "Tonight's Dinner," woman's editor; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, concert, New York through WEAF,

Central Time Stations

KFAB, Lincoln, Nebr. (340.7), 10:30-11 a. m., "Day's Work with Poultry Flock," F. E. Mussohl; 1:15-1:30 p. m., High School Convocation; 3-3:30, "Lame-Duck Session in Congress," L. E. Alysworth; 8:05-10:30, University of Nebraska program; Mauriee Weseen, course in English; Lincoln string quintet; Blanche Martz, soprano; "Our American Forests," R. J. Pool; Harriet Cruise, Helen Hille, duettists; Thelma Sexton, pianist; Viola Forsell, violin; Antoine Coniglio, soprano.

KFDM, Beaumont, Texas (315.6), 8-10 p. m., musical program.

KFMX, Northfield, Minn. (337), 9:30-10 p. m., piano lesson, Frederick Locke Lawrence.

KFNF, Shenandoah, Iowa (266), 7 p. m., Graf musical club, Graf, Nebr., Thos. Frakes, director.

KFVE, University City, Mo. (240), 8:30 p. m., "Amusement Review," Romaine Fielding; studio entertainers, piano selections.

KLDS, Independence, Mo. (440.8), 6:30 a. m., service; 8 p. m., lecture course series, Dr. F. M. McDowell; 8:15, classical program, members Kansas City Civic Grand Opera company; James Mack, tenor; Mary Becker, contralto; Alberta Blattman, soprano; Herbert Fraher, baritone; Mary Green, contralto; Margaret Deam, soprano; Cleo Salisbury, contralto; Elma Czech, organist.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talks, Earl E. May; music; 6-7, dinner program; Mayflower orchestra, June and Jim Taylor and Bobbie Ross; flower talk, Lina Ferguson; 9-11, evening program; May's mandolin musicians, Harry Day, director.

KPRC, Houston, Tex. (286.9), 12 m., Jack Willrich's orchestra; Mrs. Jack Willrich, accordion soloist; E. W. Rodgers, vocal entertainer; 5:30 p. m., Uncle Judd's Kiddies' hour; 7:30, Billie Mack's orchestra; 8:30, Circle H Glee club, C. A. Hammond, director.

KSAC, Manhattan, Kansas (341), 9-9:25 a. m., music, talks, agricultural primer, calisthenics; 9:55-10:25, readings, question box; "Planning Today's meals;" 12:35-1:05 p. m., Preparation for Early Lambs," C. G. Elling; "The Pesky Sparrows," A. E. Oman;

DANCING

Central Time

Saturday, December 5: 8, Wjr, Wnyc, Wpg; 8:30, Wfaa; 8:35, Wgy; 9, Webh, Weei, Wmbb, Wnyc, Wreo; 9:10, Kths, Wip; 9:30, Kths, Wgbs, Wor, Wrc; 10, Kfve, Kfwa, Koa, Kpo, Weaf, Wgn, Wjr, Wkrc, Wmca, Wnyc, Wor, Wqj, Wreo, Wtam; 10:05, Wcco; 10:30, Wamd; 10:45, Wls; 11, Kfpg, Kfwa, Kfwb, Kpo, Webh, Wfaa, Wgbu, Who, Woc; 11:30, Kfoa; 11:45, Wdaf; 12, Kfwa, Kgo, Kgw, Knx, Wgbu, Wjid.

Monday, December 7: 8, Wgcp; 9, Wee Wgbu, Wjar, Wor; 9:15 Wahg; 10, Kths, Wgbu, Wgcp, Wgr, Wnyc, Wpg; 10:15, Wor; 10:30, Kfoa, Wgcp, Whn; 11, Kgw, Koil, Wgbu, Wgcp, Wgr, Whn, Who; 11:45, Wdaf; 12, Knx, Kpo.

Tuesday, December 8: 9, Webh, Wgbu, Wmbb; 9:30, Wcau, Wgbs, Wgy, Wip; 9:35, Wnyc; 10, Kfve, Wbbm, Weaf, Webh, Wgbu, Wgn, Whn, Wmca, Wnyc, Wpg; 10:15, Kths; 10:30, Kths, Whn; 10:45, Wsb; 11, Kgw, Koil, Wgbu, Whn; 11:30, Kfoa; 11:45, Wdaf; 12, Kgw, Khj, Knx, Kpo, Wdaf; 1, Wqj.

Wednesday, December 9: 9, Wcx, Weau, Webh, Wgbu, Wgcp, Whn, Who, Wmbb, Wmca, Wtic; 9:15, Wahg; 9:30, Wbap, Who, Wor; 10, Kfve, Wbap, Weaf, Wgbu, Wgcp, Wqj; 10:05, Wcco; 10:30, Wbap, Whn; 11, Koil, Kpo, Webh, Wgbu, Wgcp, Wgr, Whn; 11:45, Wdaf; 12, Kfwa, Knx, Kpo, Wjid.

Thursday, December 10: 8, Wjr; 9, Webh, Weei, Wgbu, Whn, Wjr, Wmbb, Wsai, Wtag; 9:05, Wbz, Wip; 9:30, Wgbs, Wgy, Whn; 9:35, Wnyc; 10, Kths, Wbbm, Weaf, Wgbu, Whn, Wmca, Wpg, Wqj; 10:30, Kths, Whn, Webh, Wgbu, Whn, Woc; 11:45, Wdaf; 12, Kgo, Khj, Knx, Kpo, Wjid.

Friday, December 11: Wwj; 9, Wcx, Webh, Weei, Wgbu, Wgcp, Wmbb; 9:15, Wahg, 9:30, Wcau, Whn; 10, Kfve, Kpo, Kths, Weaf, Wgbu, Wgcp, Whn, Wgr, Wjar, Wqj; 10:05, Wcco; 10:30, Wgcp, Whn; 11, Kfwb, Knx, Kpo, Webh, Wgbu, Wgcp, Wgr, Whn, Who; 11:45, Wdaf; 12, Kfoa, Khj; 12:30, Wdaf.

ESTRA SATURDAY AT WJZ, WGY, WRC

Soft and alluring is the mezzo-contralto voice of Thelma Bollinger, above, who is a favorite at Station WGN, Chicago.

DANCING

Central Time

Saturday, December 5: 8, Wjr, Wnyc, Wpg; 8:30, Wfaa; 8:35, Wgy; 9, Webh, Weei, Wmbb, Wnyc, Wreo; 9:10, Kths, Wip; 9:30, Kths, Wgbs, Wor, Wrc; 10, Kfve, Kfwa, Koa, Kpo, Weaf, Wgn, Wjr, Wkrc, Wmca, Wnyc, Wor, Wqj, Wreo, Wtam; 10:05, Wcco; 10:30, Wamd; 10:45, Wls; 11, Kfpg, Kfwa, Kfwb, Kpo, Webh, Wfaa, Wgbu, Who, Woc; 11:30, Kfoa; 11:45, Wdaf; 12, Kfwa, Kgo, Kgw, Knx, Wgbu, Wjid.

Monday, December 7: 8, Wgcp; 9, Wee' Wgbu, Wjar, Wor; 9:14 Wahg; 10, Kths, Wgbu, Wgcp, Wgr, Wnyc, Wpg; 10:15, Wor; 10:30, Kfoa, Wgcp, Whn; 11, Kgw, Koil, Wgbu, Wgcp, Wgr, Whn, Who; 11:45, Wdaf; 12, Knx, Kpo.

Tuesday, December 8: 9, Webh, Wgbu, Wmbb; 9:30, Wcau, Wgbs, Wgy, Wip; 9:35, Wnyc; 10, Kfve, Wbbm, Weaf, Webh, Wgbu, Wgn, Whn, Wmca, Wnyc, Wpg; 10:15, Kths; 10:30, Kths, Whn; 10:45, Wsb; 11, Kgw, Koil, Wgbu, Whn; 11:30, Kfoa; 11:45, Wdaf; 12, Kgw, Khj, Knx, Kpo, Wdaf; 1, Wqj.

Wednesday, December 9: 9, Wex, Wcau, Webh, Wgbu, Wgcp, Whn, Who, Wmbb, Wnca, Wtic; 9:15, Wahg; 9:30, Wbap, Who, Wor; 10, Kfve, Wbap, Weaf, Wgbu, Wgcp, Wqj; 10:05, Wcco; 10:30, Wbap, Whn; 11, Koil, Kpo, Webh, Wgbu, Wgcp, Wgr, Whn; 11:45, Wdaf; 12, Kfwa, Knx, Kpo, Wjid.

Thursday, December 10: 8, Wjr; 9, Webh, Weei, Wgbu, Whn, Wjr, Wmbb, Wsai, Wtag; 9:05, Wbz, Wip; 9:30, Wgbs, Wgy, Whn; 9:35, Wnyc; 10, Kths, Wbbm, Weaf, Wgbu, Whn, Wmca, Wpg, Wqj; 10:30, Kths, Whn, Webh, Wgbu, Whn, Woc; 11:45, Wdaf; 12, Kgo, Khj, Knx, Kpo, Wjid.

Friday, December 11: Wwj; 9, Wex, Webh, Weei, Wgbu, Wgcp, Wmbb; 9:15, Wahg, 9:30, Wcau, Whn; 10, Kfve, Kpo, Kths, Weaf, Wgbu, Wgcp, Whn, Wgr, Wjar, Wqj; 10:05, Wcco; 10:30, Wgcp, Whn; 11, Kfwb, Knx, Kpo, Webh, Wgbu, Wgcp, Wgr, Whn, Who; 11:45, Wdaf; 12, Kfoa, Khj; 12:30, Wdaf.

vocal selections; whistling solos; vocal duet; violin and organ numbers.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Beaumont band, KFDM, Dr. Harry Cloud, director; 6:30-7:30, Don Bestor's orchestra; 8:30-9:30, artist's musical program, Southern Methodist university, Paul Van Katwijk, dean; 11-12 midnight, Tom D. Collins, Gibson Mandolin and Guitar club.

WHAD, Milwaukee, Wis. (275), 4 p. m., musical selections; 6-6:15, Bill Bennings Milwaukee Athletic club orchestra.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; Eleanor Huber, children's stories; editorial readings; 7:30-9, concert, Eddie Rosson's orchestra, Jeffersonville, Ind.; Benson trio, Nathan A. Zimberoff, cellist; Robert Angus, pianist; Edwin Sinder, violinist; three-minute thrift talk.

WHO, Des Moines, Iowa (526), 7:30-8 p. m., Raleigh Quintette; 8-9, the Bankers Life trio, Helen Birmingham direction; 11-12, the Bankers Life Little symphonic orchestra, Leon A. Dashoff, directing.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club; Borden health talk, Jelke Good Luck Girl; studio music; 11, special studio features, Magnus musical lecture; 12 p. m., Al Carney's complimentary organ recital; 1, special studio program; 6, classical program; dinner organ recital; Grayling's string trio; Eleanor Gilmour, soprano; Oscar Heather, tenor; Loftis half hour of music; Alois Bragagnolo, basso; 7:45-9:15 (238), musical features; 9:30 (399.8), Jelke's entertainers; Kitchen Klenzer Klassics; Kenneth Clark's Hawaiian trio; Al Carny, organist; Husk O'Hare's orchestra; 10:10, U. S. L., half hour dance music.

WJJD, Mooseheart, Ill. (302.8), 10 p. m., Rushmore Ensemble singers; 12, Jack Nelson, George Givot, George Sparks.

WKRC, Cincinnati, Ohio (422.3), 10 p. m., dance program, Eight Dutch Masters, Mel Doherty, director; 10:30, popular song; 11, Alvin Roehr's orchestra.

WLIB, Chicago, Ill. (302.8), 7-8 p. m., dinner concert, Blackstone and Drake hotel orchestras; 9-10, popular, Hamm's orchestra; 11-12, Drake and Blackstone hotel orchestras.

WLS, Chicago, Ill. (344.6), 12 m.-1 p. m., R. F. D. farm program; Ford and Glenn; 6:15, announcements; 6:30, Ralph Emerson, organist; 7, Ford and Glenn, lullaby time; 7:15, melodies from famous operas, W. L. S. trio.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12:15 p. m., organ concert, Petronella Trimbur; 4, French lesson, Madame Ida Tcimpidis; talk, Rev. Ralph Schmidt, Ft. Thomas, Ky.; 7, the Trirdyn instrumental trio; 7:30, Mary Barbara, sweetheart of Radio; 7:50, "A Collie's Early Lesson," F. W. Avery, Wanseon, Ohio; 8, military band concert, tenth infantry band of Ft. Thomas, Ky., warrant officer, E. G. Fisher; 8:50, the Musicone quartet, William Drexillus, first tenor; Erwin Meyer, second tenor; Edwin Weidinger, baritone; John Dodd, bass; Howard Evans, accompanist; 9, concert program, Formica Insulation company, Formica concert orchestra, William C. Stoess, director.

WMAQ, Chicago, Ill. (447.5), 12:45 p. m., Radio farm school; 2, shut-in program; 4, "Household arts," Elizabeth O. Hiller; 4:45, pupils, Columbia School of Music; 6, organ, Chicago theater; 6:30, Hotel La-Salle orchestra; 8, book talk, Harry Hansen; 8:20, musical; 8:40, travel talk, Clara E. Laughlin; 9, lecture, University of Chicago; 9:20, Metropolitan glee club.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Preston Graves, M. Conrad, Ralph Elliott; 9-11, Trianon orchestra, Woodlawn theater orchestra; Scotty Welsh, Madison sisters, Lionel Carter, Babbe and Bart, Bob Duffy, Cecil and Esther Ward.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Mazda Grotto glee club; 11, frolic.

WOAI, San Antonio, Texas (394.5), 8:30-9:30 p. m., musical program, Gebhart Mexican players.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Brandeis Tea Room orchestra; 6, Sandman's visit, Val McLaughlin; 6:20, announced; 6:45, Ed Meyers and his Peony orchestra; 9, Monthly Father and Son program; address, J. G. Masters; 9:40, Francis Potter's Banjo orchestra; 10:10, Radio review, Neal Jones; 10:30, Herb Feierman and his Omadala orchestra; 12, Rialto theater alarm, Pete and Renete announcing.

WOC, Davenport, Iowa. (483.6), 12:15-12:25 p. m., Farm school; "Poultry Day," Prof. A. G. Philips; "The Dual Purpose Breeds of Chickens;" 3-3:30, home management schedule, Aunt Jane; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime stories; 7-7:10, "Handling the Worm Problem in Pigs," R. E. Patrick; 9-9:30, Auction Bridge games, WEAF; 9:30-10:15, "Around the World with 'B. J.'" in Eight Months in Eight Nights," B. J. Palmer; 10:15-11:15, musical program, Girls' glee club, Mt. Vernon High School, Alice Cork, director.

WOI, Ames, Iowa (270), 12:30 p. m., college chimes; 12:45, "Animal Husbandry," Prof. H. H. Kildee.

WOK, Chicago, Ill. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; Clement Laskowski, tenor; Bob Mokrejs, pianist; 10-1:30 a. m., Gus C. Edwards' orchestra; Husk O'Hare's orchestra; Tierney's orchestra; Capitol theater program; Bill Hay, bass; Herman Sinaiko, violinist; Harriet Lee, contralto; George Allen, tenor; Bob Mokrejs, pianist.

4:30-5, program for Women's clubs; 6:30-7:30, talks; "Better Speech—Overcoming Defects of Voice," J. G. Emerson; "Etiquette—Manners in Club Life," Mary VanZile; College credit course,—Community organization; "Substitute Value of Different Roughages," B. M. Anderson; "How to Gather Fresh Eggs Every Day in the Year," Loyal Payne.

KSD, St. Louis, Mo. (545.1), 6:55 p. m., "Good Will" program, WEAF.

KSO, Clarinda, Ia. (241.8), 7-8:30 p. m., program, vocal, instrumental; 8:30-10, orchestra.

KTHS, Hot Springs, Ark. (374.8), 9-10 p. m., jazz classic, 10-piece orchestra; Tony Cochard, Clyde Foley, jazz singers; 10-1, "Conway Night," 153 Infantry Military band, organ and other specialties.

KYW, Chicago, Ill. (535.4), 6:30-7 a. m., morning exercises, physical director, Y. M. C. A.; 7:30, Morning Family Worship, Y. M. C. A.; 11:35, table talk, Anna J. Peterson; 12:05-1 p. m., noon-day concert, Commonwealth Edison company; 1-2, luncheon concert, Congress hotel, Coon Sanders original nighthawks and Joska DeBarbery and his orchestra; 4, afternoon frolic; 6:10-6:40, musical concert, Commonwealth Edison company; 6:40-7, children's bedtime story, Uncle Bob; 7-730, dinner concert, Congress hotel; Coon Sanders original nighthawks; 7:33-753, speeches; 8-9, musical program, Congress hotel; 9-10, an hour of music, Commonwealth Edison company; 10-12, "Evening at Home" program; Coon Sanders original nighthawks, Congress hotel "Insomnia club," Coon Sanders original nighthawks.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical program, Garrick theater organ recital, Jack Maleriek; 12:30, Hal Keidal, pianist; Grace Norman, soprano; Leone Wood Taylor, accompanist.

WBAP, Fort Worth, Texas (475.9), 12:05-12:30 p. m., "Trail Blazers," Montgomery Ward and company orchestra; 6-6:30, dinner music, Texas Hotel Tokio Royals; 7:30-8:30, program, Mrs. J. E. Cooley; 9:30-10:45, concert, faculty, School of Gospel Music, Baptist seminary.

WBBM, Chicago, Ill. (226), 4-6 p. m., Harry Sosnik, Sandy Meek; Arnold Stephenson; Sidney Nireman; Harold Moravo; Valentino orchestra; 8-9, Harry Sosnick, Sandy Meek; Moulin Rouge orchestra; Phil Flemming; Jean St. Ann; Christian A. Grimm; Bob York; 9-12 p. m., trip trio; Pete Kules; Four Red Peppers; Ziegler sisters; Moulin Rouge orchestra; Harry Brailsford; Vorris Worthley, tenor; Marie Morgott, harpist; Burmeister, Fiascone, Hawaiian guitars; George Marbach; Maurice Silverman; Dave Handler, violinist; Moulin Rouge orchestra.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, the shopper's ready helper; 7-8, Ballatine Electric company classical hour; Robert Sansone, cellist; Gordon A. Nelson, tenor; Ann Kelley, soprano; Pearl Fairchild, pianist; 10-12, jazz jamboree, Midway orchestra; Borden Brothers, harmony duo; Ed Dempsey, tenor; Niese and Nehr, banjo bimbos; Drexel quartet, vocal group; Marie Wright, soprano; Finney Briggs, column conductor, "Crazy Quilt" column; Marquette banjo four, string quartet; Frank H. McDonald, Radio talk; 12-2 a. m., pirate ship.

WCBD, Zion, Ill. (344.6), 8 p. m., Ladies' chorus; Mrs. Paxton, reader; Florence Farrar, contralto; E. B. Paxton, baritone; Messrs. Klawonn and Studebaker, clarinets; Mr. and Mrs. Richard Hire, violin duettists; Rendall and DePew, picollo duet; Alexander DePew, flutist; L. J. Hire, violinist.

WCCO, St. Paul, Minn. (415.4), 9:30, program for the day; 12 m., concert, Dick Long's Dayton trio; 2 p. m., "The World of Books," H. A. Bellows' 4, Reader's club, Eleanor Poehler; 5:30, children's hour; 6:15, dinner concert, Emmet Long's Golden Pheasant orchestra; 7:30-8, Gold Dust Twins, WEAF; 8-9, Eveready hour, WEAF.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., The Star's string trio, 6-7, school of the air; address; piano lesson, Maudellen Littlefield; 11:45-1, nighthawk frolic; Plantation players; Earl Coleman's orchestra; Eddie Kuhn's orchestra; Johnnie Campbell's orchestra.

WEBH, Chicago, Ill. (370.2), 7-8 p. m. ,Oriole orchestra; Lydia Lochner, contralto; 9-10, Oriole orchestra; Uptown theater; 11-1, Oriole orchestra; Jack Penewell, twin guitarist; Kay Ronayne.

WEBW, Beloit, Wis. (263), 8 p. m., concert hour;

WOQ, Kansas City, Mo. (278), 8-9 p. m., Devotional musical program.

WORD, Batavia, Ill. (275), 8 p. m., Webster hotel concert trio; 8:15, recital, Cosmopolitan School of Music; 9, Bible questions and answers, B. M. Rice.

WQJ, Chicago, Ill. (447.5), 11-12 m., "Hats for the Winter Sports," Mrs. Lillian Russell; "Your Home," June Dunham; 3-4 p. m., "Alaska," Mrs. Harry T. Sanger; "Christmas Saving clubs," Jane Stroheker; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Kenneth Sterling, baritone; Fontella trio; Eleanor Wasserstrass, whistler; 10-1, Ralph Williams and his Rainbo Skylarks; Dr. Carl Bertschinger, pianist; Jerry Sullivan; Rose Vanderbosch, soprano; Hal Lansing, ukulele soloist; Everett George Opie, dramatic director; Bert Davis, Clown of the Air; June Lee, comedienne; Merrill Carder; Will Rossiter, Daddy of them all; Blues Destroyers trio; Romo Vincent, boy baritone; Brundage and Kraemer, harmony singers; Ila Shannabrook, soprano; Hollingsworth and Altamore, guitarists; 1-2, Ginger hour, Ralph Williams the Ginger Man and the Little Skylarks.

WSAI, Cincinnati, Ohio. (325.9), 6:30 p. m., Davis Saxophone octet, WEAF; 7, Mabley and Carew orchestra, Reuben Lawson, director; 8 ,Eveready hour, WEAF; 9-9:30, Auction bridge, WEAF; 9:30, musicale.

WSB, Atlanta, Ga. (428.3), 8 p. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; vocal program, Gertrude Johnson, vocal instructor, director; 10:45, Metropolitan theater artists.

WSOE, Milwaukee, Wis. (246), 5:30 p. m., S. O. S. club, Cousin Howard, one of Uncle Robert's little pals; Elmer Ihrke, pianist; 7:30, musical musings, Miss Mercury; 8:45, Phiim Phancies, Peggy Patton; 9, classical music, Milwaukee Federation of Women's Clubs.

Index to Farmers' Programs

Farmer Dinner Concerts

Daily Except Sunday

KFNF, 12:15-1:35 (central time).
WLS, 12 (central time).

Radio Farm School

WMAQ, 12:45 (central time); 12:10 on Friday.
WOC, 12:15-12:25 (central time).

Talks

SATURDAY, DECEMBER 5

Eastern	Central	Mountain	Pacific
11:30 a. m.	10:30 a. m.	9:30 a. m.	8:30 a. m.

KYW (536) Farm and home service.

1:45 p. m.	12:45 p. m.	11:45	10:45

WOI (270) soils, questions and answers.

MONDAY, DECEMBER 7

Eastern	Central	Mountain	Pacific
1:35 p. m.	12:35 p. m.	11:35 a. m.	10:35 a. m.

KSAC (340.7) Fall Freshing Cows Make the Money. Vegetable and Truck crop seeds.

1:15	12:15	11:15	10:15

WEAO (293.9) Timely Economic Information for the Farmer.
WOC (428.3) The Hogs' Own Answer to the Mineral Feeding question.

1:45	12:45	11:45	10:45

WOI (270) Why Every Egg Doesn't Hatch.

7	6	5 p. m.	4 p. m.

WGY (379.5) Agricultural program.

8:30	7:30	6:30	5:30

WOI (270) Why Every Egg Doesn't Hatch.

8:45	7:45	6:45	5:45

WCCO (416.4) Swine Raising, lesson 1.
WSOE (246) Hog Raising.

12:15 a. m.	11:15	10:15	9:15

KWSC (348.6) Getting Chicks that Will Lay.

TUESDAY, DECEMBER 8

Eastern	Central	Mountain	Pacific
1:35 p. m.	12:35 p. m.	11:35 a. m.	10:35 a. m.

KSAC (340.7) Preparation for Early Lambs. The Pesky Sparrows.

1:15	12:15	11:15	10:15

WOC (428.3) Poultry Day. The Dual Purpose Breeds of Chickens.

1:45	12:45	11:45	10:45

WOI (270) Animal husbandry.

7:15	6:15	5:15 p. m.	4:15 p. m.

WKAR (285.5) Agriculture, engineering, soils.

8	7	6	5

WOC (428.3) Handling of the Worm Problem in Pigs.

9	8	7	6

WEAO (293.9) Soils.

WEDNESDAY, DECEMBER 9

Eastern	Central	Mountain	Pacific
1:15 p. m.	12:15 p. m.	11:15 a. m.	10:15 a. m.

WOC (428.3) Dairy Day. How to Select a Dairy Sire.

1:35	12:35	11:35	10:35

KSAC (340.7) Fowl cholera.

1:45	12:45	11:45	10:45

WOI (270) Poultry husbandry.

8:27	7:27	6:27	5:27

KOA (322.4) National Farm Radio council talk.

8:30	7:30	6:30	5:30

WLW (422.3) National Farm Council talk.

THURSDAY, DECEMBER 10

Eastern	Central	Mountain	Pacific
1:15 p. m.	12:15 p. m.	11:15 a. m.	10:15 a. m.

WOC (483.6) Legume Day. Sweet Clover—Its Name Sounds Sweeter Every Year.

1:35	12:35	11:35	10:35

KSAC (340.7) Damming the Gullies.

1:45	12:45	11:45	10:45

WOI (270) Farm crops.

7:15	6:15	5:15 p. m.	4:15 p. m.

WKAR (285.5) Agriculture, engineering and soils.

8	7	6	5

WEAO (293.9) Farm topic. Putting Nitrogen Where it Pays.

8:30	7:30	6:30	5:30

WOI (270) Dairyman's short course.

9	8	7	6

WEAO (293.9) Soils.

9:30	8:30	7:30	6:30

KOA (322.4) Farm question box.

FRIDAY, DECEMBER 11

Eastern	Central	Mountain	Pacific
1:15 p. m.	12:15 p. m.	11:15 a. m.	10:15 a. m.

WOC (428.3) Special farm service day.

1:35	12:35	11:35	10:35

KSAC (340.7) Exhibition Poultry. A Few Don'ts About Pruning.

1:45	12:45	11:45	10:45

WOI (270) Agricultural Economics.

8:45	7:45	6:45	5:45

WCCO (416.4) Bee Keeping, lesson II.

12 m.	11	10	9

KWSC (348.6) Getting Ready for the next Crop.

Markets and Weather

Daily Except Sunday

Eastern	Central	Mountain	Pacific
9:30 a. m.	8:30 a. m.	7:30 a. m.	6:30 a. m.

WFAA (475.9) markets.
WOAW (526) markets.

9:45	8:45	7:45	6:45

KDKA (309.1) livestock, grain.

10	9	8 p. m.	7 p. m.

WLS (345) livestock, markets, fruit.
WOS (440.9) hogs.

10:25	9:25	8:25	7:25

WWJ (352.7) weather.

10:30	9:30	8:30	7:30

KFKX (288.3) livestock, fruit, vegetables, hogs.
KPRC (296.9) weather.
RTCL (305.9) weather, sheep, quotations.
WFAA (475.9) markets.
WOI (270) Weather.

10:45	9:45	8:45	7:45

WCCO (475.9) markets.
WMC (499.7) weather, markets.

11	10	9	8

WBAP (475.9) markets, quotations.
WEAR (389.4) weather.
WOS (440.9) weather, hogs.

11:15	10:15	9:15	8:15

WTAG (268) markets, weather.

11:30	10:30	9:30	8:30

KFKX (288.3) weather, fruit, vegetables.
WCCO (416.4) markets.
WEAR (389.4) markets, weather.

12 noon	11 a. m.	10 a. m.	9 a. m.

KDKA (309.1) weather, livestock, grain.
KPRC (286.9) weather.
WBAP (475.9) weather, cattle, grain.
WEAR (389.4) markets, weather.
WGBU (278) weather.
WHAD (275) weather, markets.
WLS (345) poultry, dairy, hogs, sheep.
WOS (440.9) livestock, poultry, eggs, grain.

12:30 p. m.	11:30 a. m.	10:30 a. m.	9:30 a. m.

KFKX (288.3) livestock, fruit, vegetables, dairy.
WCAE (461.3) weather.
WEAR (384.4) markets, weather.
WFAA (475.9) markets.

1 p. m.	12 noon	11 a. m.	10 a. m.

WBAP (475.9) markets.
WHT (400) fruit, weather.
WOS (440.9) livestock, weather.

1:30 p. m.	12:30 p. m.	11:30 a. m.	10:30 a. m.

KTHS (374.8) markets, weather.
WFAA (475.9) markets.
WOAW (526) markets.
WOI (270) Weather, livestock.

1:35 p. m.	12:35 p. m.	11:35 a. m.	10:35 a. m.

KPO (428.3) butter, eggs, cheese, poultry.

1:45 p. m.	12:45 p. m.	11:45 a. m.	10:45 a. m.

KOA (322.4) weather, roads, livestock, poultry.

2 p. m.	1 p. m.	12 noon	11 a. m.

WOC (484) weather, grain, livestock, dairy.
WOS (440.9) grain.

2:30 p. m.	1:30 p. m.	12:30 p. m.	11:30 a. m.

WCCO (416.4) markets, weather.
WFAA (475.9) markets.

3 p. m.	2 p. m.	1 p. m.	12 noon

WLS (345) livestock, grain, dairy, fruit, vegetables.
WOS (440.9) livestock, markets, grain.

3:30	2:30	1:30	12:30

KPO (428.3) weather.
WFAA (475.9 markets.
WMC (499.7) markets, weather.

3:50	2:50	1:50	12:50

WWJ (352.7) weather, markets.

4	3	2	1

KFKX (288.3) livestock, wool.
WCCO (416.4) markets.
WCX (517) stock and grain.

4:30	3:30	2:30	1:30

WEAR (389.4) markets, weather.
WFAA (475.9) markets.

5:50	4:50	3:50	2:50

WDAF (365.6) markets, weather, road reports.
WHAS (399.8) markets.

6	5	4	3

KFAU (278) markets, weather.
WIP (508.2) weather.

6:30	5:30	4:30	3:30

KSAC (340.7) markets.

6:45	5:45	4:45	3:45

WIP (508.2) livestock, markets.

6:50	5:50	4:50	3:50

WHAD (275) markets.

7:15	6:15	5:15	4:15

KTCL (305.9) weather.

7:30	6:30	5:30	4:30

KSAC (340.7) market review.

7:45	6:45	5:45	4:45

KFWA (261) market reports.

8	7	6	5

KFKX (288.3) markets.
KOA (322.4) sheep, markets, livestock, poultry.

9	8	7	6

KJR (384.4) weather.

10	9	8	7

WOC (384) weather.

11	10	9	8

WCCO (416.4) weather, grain.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 8-9 p. m., studio program, members of the Y. M. C. A.

CNRR, Regina, Saskatchewan, Can. (356), 8 p. m., Knox church concert orchestra, H. Rossons directing; Rossons' instrumental trio.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program.

KFXF, Colorado Springs, Colo. (250), 8:30-10 p .m., Freeman Dust Absorber musical program.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 3:15, exercises; 3:30, matinee for housewives; 4, culinary hints; 4:15, fashion review; 6:30, concert, Brown Palace string orchestra, Howard Tillotson, director; 7:30, News-Times concert.

Pacific Time Stations

KFOA, Seattle, Wash. (454.3), 6:45-8:15 p .m., Hopper Kelly company; 8:30-9:30, program; 9:30-11:30, Eddie Harkness dance orchestra.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7, talk, Dr. W. I. Schuster; 7:15, microphone brevities; 7:30-8, program, Elmer R. Sly company, featuring Nathan Leetjesky, 'cellist; 8-9, Joe Martin's Famous Studio Six dance orchestra; 9-10, program, H. L. Crockett, Way Watts and his ukelele, Elite trio, Louise Sullivan, soprano; 10-11, Warner Brothers Frolic, William Baudine, announcer; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15 a. m., exercises; 7:45, pep class; 8:15, exercises; 8:30, daily strength, Cheerio; 11:30-1 p. m., luncheon concert, Pacific States Electric company; 4-5:30, concert orchestra, Hotel St. Francis; 5:30, "As a Woman Thinketh," Louise Landis; 6-7, twilight concert, Wiley B. Allen com-

(Continued on page 18)

FANS OF WTIC TAKE MYTHICAL TRIP

Tuesday, December 8

(Continued from page 17)

pany; 8, Rourke concert orchestra; Gertrude Landram, soprano; Eva Garcia, pianist; Gwynfi Jones, tenor; Albert Gillette, baritone; Annabelle Jones Rose, contralto; "The Holy City," oratorio, Alfred R. Gaul, Carl Andrson, director; Rourke concert orchestra; 9:30, auction bridge; 10-11, dance music, Hotel St. Francis.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 7:45-8, talk, Oregon Bankers association; 8-10, "Sound Investments," George H. Burr; auction bridge lessons, Conrad and Broom; "Style" talk, Sage of Yamhill county; music, McElroy quartet; 10-12, dance music, Indian Grill.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; weekly visit of Queen Titania and Sandman from Fairyland, Louis F. Klein, auto-harp and harmonica, Chas. Leslie Hill, readings; 7:30, talk on dogs, H. M. Robertson; 7:45, "Cruise of Radio Ship 'Wireless;'" 8-10, program, Builders' Finance association; 10-11, Art Hickman's Biltmore hotel dance orchestra.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and Camp Fire Girls; 7:30, "Diamond Mines of Central Africa," E. P. Barclay; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Adler; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:45, program, Roy L. Donley company; 7:45, talk on health, Dr. Robt. T. Williams; 8-9, program, Zinke's Re-Bottoming Shoe company; 9-9:30, program, Cavalier Shoe stores; 9:30-10, studio program; 10-12, movie night at the Ambassador, Ray West's Cocoanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7-8 a. m., exercises; 10, domestic science talk, Virginia Tappan; 10:30, "Ye Towne Cryer," amusement information service; 12 m., scripture reading; 1-2 p. m., Rudy Seiger's orchestra; 2:30-3:30, matinee program; 3:30-4:30, Cyrus Trobbe's orchestra; 5:30-6:15, children's hour, stories, Big Brother; 6:30, "Ye Towne Cryer," amusement information service; 6:40, Waldemar Lind's orchestra; 7-7:30, Rudy Seiger's orchestra; 8-9, studio program; 9-10, Mona Motor oil trio; Gypsy and Marta; 10-11, Jack Coakley's Cabirians.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo. W. Phillips, prayer service; 8-10 p. m., program, Mutual stores.

Wednesday, December 9

Headliners Today

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.

WEBJ (272.6) Special program.

8:30 7:30 6:30 5:30

KDKA (309.1) Plectrum trio.

WGY (379.5) Mendelssohn club.

9 8 7 6

WDAF (365.6) Classical musical recital.

WJZ (454.3), WGY (379.5) Royal hour.

WMAQ (447.5) WMAQ Players.

9:30 8:30 7:30 6:30

KFAB (340.7) Regular artists' popular program.

WBZ (333.1) Dean Work's quartet.

10 9 8 7

KOA (322.4) Kiwanis club program.

KTHS (374.8) Light opera night.

10:30 9:30 8:30 7:30

KWSC (348.6) Special artists' program.

11 10 9 8

KFDJ (282.5) The Three R's of Dressing Attractively.

KFWB (252) String quartet.

11:30 10:30 9:30 8:30

KFDJ (282.5) "Dressing Attractively."

WLW (422.3) Cincinnati Zither players.

Wednesday, silent night for: CHIC, CKNC, CNRA, CNRC, CNRE, CNRM, CNRR, CNRT, CNRV, KFAU, KFDM, KLDS, KOB, KTAB, KTCL, KUOM, WBBR, WCAL, WCBD, WEBW, WFAA, WGBS, WGST, WHAR, WHAZ, WIP, WJAD, WJAZ, WJBL, WLWL, WMC, WOAI, WOAW, WOI, WORD, WPG, WRC, WREO.

Eastern Time Stations

CNRO, Otawa, Ont., Can. (435), 7 p. m., Aunt Bessie; 8, Chateau Laurier concert orchestra; 9, Mme. Leda Gauthier Lund, cellist; E. George Taylor, tenor; Jardine Day, pianist; Mrs. A. S. Ponting, contralto; Henry J. Secker, bass; Jos. Howe, banjo; "The Crystal Gazer," Mrs. R. B. Selleck, H. Taggart; Chateau Laurier dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 6:30 p. m., dinner concert; 8:30, Plectrum trio.

WAFD, Port Huron, Mich. (275), 10-12 p. m., musical program, Addison hotel.

WAHG, New York, N. Y. (315.6), 12-1 p. m., musical program; 7:30-7:45, Helen Krentzlin, soprano; 7:45-8:15, Reo Ramblers; 8:15-8:45, Banjo Eddie; 8:45-9, Raymond Maher, baritone; 9-9:15, Radio Santa Claus; 9:15-9:30, Alfred H. Wertheim, violinist; 9:30-9:45, Arthur T. Cole, tenor; 9:45-9:50, Alfred H. Wertheim, violinist; 10-10:15, readings, Herman E. Fisher; 10:15-11, Glen C. Smith's Paramount orchestra.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:05, Don Ramsay's Radio four; 7:30, nature story, Thornton Burgess; 8, piano recital, Sumner Prindle; 8:15, Pauline Hammond Clark; 9:30, Dean Works quartet.

WCAE, Pittsburgh, Pa. (461.3), 10:45 a. m., Gold Medal talk; 12:30 p. m., program for day; 3, program, Loew's Aldine theater; 6:30, concert, William Penn hotel; 7:30, children's period; 8:30, Pooley period, N. Y.; 9, concert.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Metropolitan Tower, N. Y. C.; 7-11 p. m., concert, U. S. Army band, Capt. William J. Stannard, leader; "Huyler's Bon Bon Buddies"; Ipana Troubadours; Roxy and His Gang, WEAF.

WCAU, Philadelphia, Pa. (277.6), 6:45 p. m., the Parodians; 8, "Prevention of Diptheria." Dr. H. A. Lowenburg; 8:10, recital; University of Pennsylvania quartet; 9, Mr. Hill's instrumental trio; 9:30, Jones' Jolly four; 10, Hal Chase's Collegians; 10:45, songs of yesterday, Frank Cook.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 8, studio concert.

WEAF, New York, N. Y. (491.5), 6:45-7 and 7:20 a. m., Tower Health exercises, WEEI, WCAP; 10:45-11:05, Betty Crocker Gold Medal Flour Home Service talk; 11:05-11:15, health talk, Dr. Pratt; 11:15-11:30, lecture, auspices of Columbia university; 4-4:15, Olga Field, soprano; accompanist, Winifred T. Barr; 4:15-4:15, Ray Nichols Recording orchestra; 4:45-5, talk, Henen A. Ballard; 6-7, dinner music, Rose Room of the Waldorf-Astoria; 7-7:30, synagogue services, auspices of the United Synagogue of America; 7:30-8, concert, United States Army band, direction of Capt. William J. Stannard, WCAP, WJAR; 8-8:30, Huyler's Bon Bon Buddies, through WEEI, WCAP; 9-10, Ipana Troubadours, WEEI, WCAP, WOC, WWJ, WCCO, WGR, WSAI, KSD; 10-11, Roxy and His Gang, WCAP and WJAR; 11-12, Ben Bernie and orchestra.

WEAO, Columbus, Ohio (293.9), 4:10 p. m., story hour for shut-ins, Prof. Sada Anuis Harbarger; 8, "Elementary Radio," R. C. Higgy; 8:15, Ohio State university girls' glee club; 8:30, "Present Status of the Pure Food Law," Prof. E. F. Almy; 8, May Furniture company program, girls' orchestra.

WEBJ, New York, N. Y. (272.6), 8-10 p. m., special program, auspices of Harlem Board of Commerce.

WFI, Philadelphia, Pa. (395), 10:45 a. m., Betty Crocker service; 1 p. m., Strawbridge and Clothier tea room ensemble; 3, Mrs. Florence Dolan, soprano; Mabel Wint Ewer, cornetist; Loretta Kerk, pianist; 3:45, fashion talk; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra.

WGBS, New York, N. Y. (315.5), 10-10:10 a. m., timely talks with Terese; 10:10-10:20, Bernard Kalkin, organist; 10:20-10:30, talk, Kathleen M. Quinlan; 10:30-10:45, talk, Olive Koch; 10:45-11, Bernard Kalkin; 1:30-1:45 p. m., scripture reading; 1:35-1:40, Robert Soffer, pianist; 3-3:15, children hospital program with Pauline Spivack, soprano; 6-6:30, Uncle Geebee; 6:30-7:30, Jersey Collegians.

WGCP, New York, N. Y. (252), 12:45-1 p. m., Mirror race; 1, results half hourly; 3-3:15, Henry Rogers, pianist; 3:15-3:30, Youngman and Carroll; 3:30-3:50, Clarence Williams trio; 3:50-4, Rose Balglar, pianist; 4-4:15, Frances O'Conner, ukulele; 4:15-4:30, Haires Good News party; 4:30-4:45, Charlotte Frystmann, pianist; 7:30-8, Stieger Character players; 8-8:30, orchestra; 8:30-8:45, Charol de Thomee, pianist; 8:45-9, Hock and Jerome, songs; 9-9:15, Frank Gallasi, ukulele; 9:15-9:45, Palisade dance orchestra; Win Ungers, songs; 9:45-10, Constantino Romos, saxophonist; 10-10:10, Hughie Woolford, pianist; 10:10-10:30, Meredith and Osborne, songs; 10:20-10:30, orchestra; 10:30-11, Connies orchestra; 11-11:30, Strickland's orchestra; 11:30-12:30, Rechman entertainers.

WGHP, Detroit, Mich. (270), 8-10 p. m., Little symphony orchestra; the WGHP male quartet; Madame Gizi Szanto, pianist; Arthur Cooper, xylophonist; John Koneczny, tenor; John Wummer, flutist.

WGR, Buffalo, N. Y. (319), 2:30, p. m., WGR's afternoon program; 6:30, Clef trio; 8, Adam, Meldrum and Anderson program; 9-9:30, violin, piano and vocal, direction M. P. Mahoney; 9:30-10, Millicent Bancroft, pianist; 10, jointly with WEAF, Ipana Troubadours; 11, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGY, Schenectady, N. Y. (379.5), 6:30 p. m., program for children; 6:45, dinner music; 7:30, "Book of Knowledge," program; 8:30, Mendelssohn club.

WHN, New York, N. Y. (361.2), 6-6:15 p. m., Littmann's dinner music; 6:15-6:30, Daddy Winkum's Rhyme machine; 6:30-7, Littmann's dinner music; 7-8, Cotton club orchestra; 10-10:30, Roseland dance orchestra; 11-11:30, Silver Slipper orchestra; 11:30-12 a. m., melody club orchestra; 12-12:30, Ted Lewis and his orchestra; 12:30-1, Harry Richman and his entertainers.

WIP, Philadelphia, Pa. (508.2), 1 p. m., luncheon music, Gimbel Tea room orchestra; 3, Kurtz vocal studios; 6:05, Benjamin Franklin concert orchestra; 6:35, "The Farm Boy Makes Good," H. C. Fetterolf; 7, Uncle Wip's bedtime story; songs, Theodore Spector.

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's petite symphony orchestra; soloists; 7:45, program, Richards Oakland company; 9, "The Burroughs Hour;" 11:30, "The Jewett Jesters," with "The Merry old Chief."

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio school, lectures on zoology, entomology, forestry; 8, musicale.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail and his Hotel McAlpin orchestra; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 8-9, Dr. George Walton King's Northminster services; 9:15-9:30, talk, Frank G. Wadsworth; 11-12, Hofbrau Haus entertainers.

WNYC, New York, N. Y. (526), 11-12:30 a. m., women's program; 6:20-6:30, piano selections; 6:30-7, elementary Spanish lessons, V. H. Berlitz; 7-7:30, advanced Spanish lessons, V. H. Berlitz; 7:35-8:30, dance program; 8:30-9:15, studio program; 9:15-9:30, lecture, George A. Keane; 9:30-10:30, remote control event.

WOR, Newark, N. J. (405.2), 6:15-6:17 p. m., words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7:30, Jacques Jacobs Hotel Shelton ensemble; 8-8:15, talk, Spencer Armstrong; 9-9:15, Sam Siegel, mandolinist; 9:15-9:30, lecture, Dr. Frank H. Vizetelly; 9:30-9:45, Sam Siegel, mandolinist; 11-12, Vincent Lopez Pennsylvania orchestra.

WRC, Washington, D. C. (468.5), 10 a. m., women's hour, WJZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., Lee House trio; 5, Meyer Davis' orchestra; 6, "Things Talked About," Nina Reed.

WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Wagon serenaders," "Gold Standard ensemble."

WTAG, Worcester, Mass. (268), 10:45 a. m., talk to housewives, Mrs. Flanders; 12:05-2, WTAG orchestra; 4:45, talk, Robert K. Shaw, of the Public Library; 7:40, Spanish lesson, Mrs. De la Parra; 8, concert program.

WTIC, Hartford, Conn. (475.9), 6:30 p. m., Hotel Bond trio and vocalists; 10 p. m., dance music.

WWJ, Detroit, Mich. (352.7), 7:30-8 a. m., setting-up exercises, R. J. Horton; 9:30, "Tonight's Dinner" special talk Woman's Editor; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra and soloists; 9, program through WEAF.

Central Time Stations

CNRW, Winnipeg, Man., Can. (384.4), 7:30 p. m., Aunt Aimee's bedtime story; 7:50, farmers' agriculture service talk; 8, musical program, Fort Garry hotel orchestra, Irvine Plumm, directing; 8:40, selection from "Student Prince," trio, Emile Mignacca, violinist; Frank Redlich, cellist; Burt Hook, pianist; Mrs. S. Phimister, soprano; Frank Redlich, cellist; Wallace Lewis, baritone; Emile Mignacca, violinist; Wallace Lewis, baritone; Mrs. John Knox, Mr. Burt Hook, accompanists; 10, dance, Fort Garry hotel orchestra, Irvine Plumm, directing; Al. Kilgour.

KFAB, Lincoln, Nebr. (340.7), 10:30-11 a. m., "Children's Books," Edna Benson; 1:15-1:30 p. m., High School Convocation; 3-3:30, "Science of Fairy Tales," Dr. Hutton Webster; 5:30-6:30, Buick Little symphony; Belshaw's orchestra; 8:05-8:30, "Buy the Cow an Overcoat," H. P. Davis; "Bovine Tuberculosis," Dr. L. Van Es; 8:30-10:30, Mart Grauenhorst, banjoist and pianist; Ralph Hall, uke soloist and songster; Whitney sisters; Belshaw's orchestra; Mareldine Schmidt, blues singer; Ruby Teater and Olive Fletcher, double piano selections.

KFMX, Northfield, Minn. (337), 9-10 p. m., musical program.

KFNF, Shenandoah, Iowa (266), 7 p. m., concert, Henry Field Seed company.

KFUO, St. Louis, Mo. (545.1), 9:15 p. m., "Once He Came in Blessing," Prof. W. Polack; "Advent and Christmas Hymns;" music and songs.

KFVE, University City, Mo. (240), 8:30 p. m., "Amusement Review," Romaine Fielding; Paul and Jack Snyder; Romaine orchestra.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talk, Earl E. May; music; 6-7, dinner program; domestic science topics; Le Oma Teget and June B. Case; program; 9-11, evening program; familiar songs and music; chimes, Wm. Howie, Bobbie Riddle; program, Gertrude May.

KPRC, Houston, Texas (296.9), 12 m., luncheon program, Lion's club; 5:30 p. m., Uncle Judd's Kiddies' hour; 7:30, Fatty Martin's End O' Main dance orchestra; Victor record artists, dance program; Mark A. Westcott, vocal entertainer; 8:30, Rise Institute student band, Lee Chatham, director; 11, Rice Owls, vocal, instrumental; 8:30-10, Sellard orchestra.

KSAC, Manhattan, Kansas (341), 9-9:25 a. m., music, talks, agricultural primer, calisthenics; 9:55-10:25, readings, question box; "Planning Today's Meals;" 12:35-1:05 p. m., "Fowl Cholera," J. Lumb; "Lessons from Club Records," M. H. Coe; 4:30-5, lectures on football; 6:30-7:30, lessons in football, C. W. Bachman; "Inventions—Solar Motors," J. P. Calderwood; College credit courses—Educational Sociology; "Sanitary Sewer Systems for the Country," H. B. Walker; "Grain Binder Troubles and Their Remedies," R. H. Driftmier.

KSD, St. Louis, Mo. (545.1), 6 p. m., music, Missouri Athletic association; 7, "Fur Hour," program announced; 8, "Good Will" program, WEAF.

KSO, Clarinda, Iowa (241.8), 7-8:30 p. m., program, vocal, instrumental; 8:30-10, Sellard orchestra.

KTHS, Hot Springs, Ark. (374.8), 9-9:45 p. m., "Light Opera Night," Meyer Davis ensemble, Lon Chassy, directing; 9:45-10, Louis Culp, organist; 10-10:15 p. m., Clara Bridewell Sharp, violinist; 10:15-11, Southerners dance orchestra.

KYW, Chicago, Ill. (535.4), 6:30-7 a. m., morning exercises; 7:30, morning family worship, Y. M. C. A.; 11:35, table talk, Anna J. Peterson; 12:05-1 p. m., noonday concert, Commonwealth Edison company studio; 1-2, luncheon concert, Congress hotel, Joska DeBabary and his orchestra; Coon Sanders Original Nighthawks; 7, children's bedtime story, Walter Wilson; 7-7:30, dinner concert, Congress hotel; Congress hotel orchestra; 7:33, "Entertaining Plans," Vivette Gorman; 7:43, talk; 8-9, musical program, Congress hotel; 10-12:30, midnight revue; Paul Ash and his orchestra, McVickers theater; Coon Sanders Original Nighthawks, Congress hotel; Henri A. Keates, organlogue; McVickers theater, Art Linick announcing.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical program; Margaret Leemhuis, pianist; Dorothy Vanesek, soprano; D. Lindholm, baritone; Ruth Milgren, accompanist; Irving Winslow, violinist; Harriet Johnson, accompanist; 7:05, Garrick theater program, symphony orchestra; organ recital, Jack Malerick; 7:20, Olympian trio; Leone Wood Taylor, accompanist; Coilla Dare, contralto; Bee Lowell, accompanist; Adeline Wagner; 11, Skyrocket frolic, George Osborn's Skyrockets.

WBAP, Fort Worth, Texas (475.9), 12:05-12:30 p. m., popular selections, Dude Vance, pianist; Gerald Stewart, banjoist; 6-6:30, dinner music, Texas Hotel Tokio Royals; 7:30-8:30, Panther Hawaiian trio; 9:30-10:15, Texas Hotel Tokio Royals.

WBBM, Chicago, Ill. (226), 4-6 p. m., Harry Sosnik; Sandy Meek; Valentino Inn orchestra; Edna Wheeler Ballard, harpist; Harold Morava; Johnny Black; Court Banks; 8-10, WBBM, string trio; Moulin Rouge orchestra; 12-2 a. m., Farwell duo, banjo and piano; Russell Duke, piano and songs; Jack Seeley; Harry Sosnik, Sandy Meek; Lew Russell; Sue Olmstead; Nate Caldwell; Charlie Garland; Two Jays, Jeske and Jordan, Harold Anderson, accordion; Moulin Rouge orchestra; xylophone trio.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, the shopper's ready helper, shopping talk; 7-8, classical hour; Emily Stone, violinist; Ada Mae tenor; Ethel Eaves Price, soprano; Alice McMahon, Stone, accompanist; Lemmyon Amoureaux, French tenor; Ethel Eaves Price, soprano; Alice McMahon, contralto; Margaret McArthur, pianist; John Williams, baritone; 10-1 a. m., Elmer Jordan & Co., Owl matinee.

WCCO, St. Paul, Minn. (415.4), 9:30 a. m., program for the day; 10:45, "Decorations for Christmas" Betty Crocker; 2:30 p. m., concert; 4, Readers' club, Eleanor Poehler; 5:30, children's hour; 7, church service; Ipana Troubadours, WEAF; 10:05, dance, Wallie Erickson's orchestra.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., talk, Betty Crocker; 6-7 p. m., school of the air, address, auspices of Health Conservation association; address, Ralph E. Herrick; the Tell-Me-a-Story Lady; Trianon ensemble; 8-9:30, classical recital; 9:30-10, musical, Dutch Master cigars; 11:45-1 a. m., Nighthawk frolic; The Plantation players; Eddie Kuhn's orchestra; Earl Coleman's orchestra.

WEBH, Chicago, Ill. (370.2), 7-8 p. m., Oriole orchestra; Florence Behrend, soprano; 9-10, Oriole orchestra; Florence Behrend, soprano; **Frank Bordner,** baritone; 11-1 a. m., **Oriole orchestra;** Florence Behrend, soprano; songs; **Oriole** orchestra.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Sears-Roebuck agricultural foundation program.

WHAD, Milwaukee, Wis. (275), 4 p. m .,"With the Humorists," John B. Wolf, the Journal paragrapher; 6:15-7, Arthur Lichter, organist; 10:30-11:30, Wisconsin Roof Garden, Dexter's Wisconsin and Elger's Creole roof orchestra; 11:30-12:30, Edmund Fitch, organist.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; 7:30-9, Royal Peacock orchestra, Myron Schulz, Lyst Reynolds, managers, Richard Kent, director.

WHO, Des Moines, Iowa (526), 6:30-7:30 p. m., the Reese-Hughes orchestra; 7:30-8, talk by "Santa Claus;" Kate Miller, whistler; Maude Hughes, accompanist; 8-9, program courtesy of Carr and Young company; 9-11:30, dance program, Cotillion ballroom.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club, Borden health talk, Jelke Good Luck Girl, studio music; 10:45, Betty Crocker home service; 11, special studio features; 12 p. m., Al Carney's complimentary organ hour; 1-2, special studio program, Grayling's string trio; 6-7:30, classical program, dinner organ recital, Pauline Cachs, Phyllis Burton, violinist, Pauline Peebles, pianist, Jean Carlson, soprano, Hugh Aspinwall, tenor, Grayling's string trio; 7:45-9:15 (238), musical features; 9:30 (399.8), Borden request organ recital, Hickey and Johnson, harmony, Carl Strudel, baritone, Leota Laabe, soprano; Irene Beasley, The Girl from Dixie; Northland trio; Vic Fredericks, bartone; Chas. R. Hall, tenor; Badger Four male quartet; Ray Lawsen, tenor; 12, Pat Barnes and Al Carney.

WJJD, Mooseheart, Ill. (302.8), 10 p. m., Rose Kutta, Alois Bragagnola, Winifred Konigsmark, George Lee; 12, Jack Nelson, George Sparks, Les Cameron, Walter Fett.

WKRC, Cincinnati, Ohio (422.3), 8 p. m., book review; 8:15, Marion McKay's orchestra; 8:30, popular songs; 9, J. Henry Koenig Little symphony orchestra; Robert M. Visconti, tenor.

WLIB, Chicago, Ill. (302.8), 7-8 p. m., dinner concert, Blackstone and Drake hotel orchestras; 9-10, popular, Hamm's orchestra; 11-12, Drake and Blackstone hotel orchestras.

WLS, Chicago, Ill. (344.6), 12 m.-1 p. m., R. F. D. farm program, W. L. S. trio; 6:15, announcements; 6:30, Ralph Emerson, organist; 7, Ford and Glenn, lullaby time; 7:15, W. L. S. trio; 7:45, W. L. S. theater production; 8:15, English program, Kettie quartet; 8:45, Treble Clef choir and Rhodeheaver program; 9:15, Bohemian Orphan Boys' band; 9:45, Chicago Y. M. C. A. college glee club; 10:40, Ford and Glenn time; 11, Ralph Emerson's request organ concert.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercise, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12:15, musical program, Irene Downing; 3:30, Crosley Cooking School, Mrs. Ralph H. Auch, dietician, "Hints

(Continued on page 19)

Index to Classical Concerts

TABULATED below is a time table of the stations giving classical concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

SATURDAY, DECEMBER 5

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

WCX, WEAF, WMCA, WREO.

7 6 5 4

KGO, KYW, WEAR, WENR, WMAQ, WNYC, WOAW, WOK, WRC.

8 7 6 5

KDKA, KFNF, KOIL, KSD, KYW, WBBR, WGN, WMBB, WNYC, WOAW, WQJ.

9 8 7 6

KFOA, KPRC, KHJ, KYW, WHAS, WIP, WLW, WORD, WSAI, WSOE

10 9 8 7

KNX, KYW, WEAF, WMAQ, WMC, WOAW, WOC, WORD.

11 10 9 8

KGO.

12 m 11 10 9

WOAW.

SUNDAY, DECEMBER 6

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

WCAU.

7:20 6:20 5:20 4:20

WCAE, WCAU, WEAF, WEAR, WEEI, WJAR, WTAG, WWJ.

8 7 6 5

KYW, WBZ, WEAR, WGBS, WGCP, WKAQ, WLS, WORD.

9 8 7 6

KFDM, KPRC, KSD, WBZ, WCAU, WCBD, WCCO, WEAR, WGY, WHAR, WHT, WNYC, WQJ.

9:15 8:15 7:15 6:15

WEEI, WJAR, WTAG.

10 9 8 7

KHJ, KNX, KTHS, KYW, WCCO, WFAA, WNYC, WOC, WQJ, WSOE.

11 10 9 8

KFVE, KHJ, KNX, KPO, KTHS, KYW, WHN, WKRC, WOC.

12 m 11 10 9

KHJ, KNX, WOC.

1 a. m. 12 m 11 10

KNX.

MONDAY, DECEMBER 7

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

KGO, WCX, WEAF, WMCA, WREO, WWJ.

7 6 5 4

KMA, WCCO, WEAF, WEAR, WHAD, WJR, WOAW, WOK.

8 7 6 5

KFNF, KSD, WBBR, WBZ, WCAU, WCX, WHAR, WHT, WJAR, WLW, WMBB, WTAG, WTIC.

9 8 7 6

KFOA, KGO, KHJ, KPRC, WBBR, WCCO, WBZ, WCAE, WEEI, WHAD, WHO, WJAR, WLW, WORD, WOS.

10 9 8 7

KMA, KPO, KPRC, KSD, KTHS, WCCO, WEAF, WHAD, WJAR, WOAW, WSUI, WTAG.

11 10 9 8

KGW, KHJ, KMA, KSD, KTHS, KWSC, WHN, WSAI.

12 m 11 10 9

KGW, WBAP, WSAI.

1 a. m. 12 m 11 10

KHJ.

TUESDAY, DECEMBER 8

Eastern	Central	Mountain	Pacific
WBZ, WCX, WEAF, WMCA, WREO, WWJ.			
6 p. m.	5 p. m.	4 p. m.	3 p. m.
7	6	5	4

KGO, KMA, WEAR, WEBJ, WGBS, WHAD, WJR, WMAQ, WOAW, WOK, WOR, WTIC, WWJ.

8 7 6 5

KFNF, KSD, KYW, WBZ, WCAE, WCAU, WCX, WEAR, WEEI, WGR, WHAR, WHT, WLS, WMBB, WQJ, WRC, WTIC.

Eastern	Central	Mountain	Pacific
9 p. m.	8 p. m.	7 p. m.	6 p. m.

KFDM, KFOA, KGO, KHJ, KLDS, KYW, WCAE, WCBD, WCCO, WEAF, WEEI, WGR, WHAS, WJAR, WLW, WMAQ, WOC, WORD, TAG.

10 9 8 7

KFAB, KFDM, KFMQ, KMA, KNX, KPRC, KTHS, WCAE, WCCO, WEAF, WEAR, WEEI, WLW, WMCA, WOC, WSAI, WSOE, WTAG.

11 10 9 8

KGO, KHJ, KMA, KYW, WSAI.

12 m 11 10 9

KPO, KYW, WHO, WMC.

WEDNESDAY, DECEMBER 9

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

WCX, WEAF, WMCA, WREO, WWJ.

7 6 5 4

KGO, WEAR, WHAD, WJR, WMAQ, WOK, WTIC.

8 7 6 5

KFNF, KPRC, KSD, KYW, WBZ, WCX, WEAF, WEEI, WHT, WLW, WMBB, WMCA, WQJ, WTAG, WWJ.

9 8 7 6

KFOA, KGO, KPRC, KSD, KYW, WBZ, WCCO, WDAF, WEEI, WGR, WHAD, WHAS, WJAR, WMAQ, WOR, WOS, WORD.

10 9 8 7

KFMX, KMA, KNX, KTHS, WCCO, WEAF, WEEI, WGR, WHAD, WJAR, WLS, WMAQ, WNYC, WOC, WSOE.

11 10 9 8

KGO, KGW, KMA, KPO, KTHS, WCAE, WLS, WLW, WOC, WSAI.

12 m 11 10 9

KGW, KPO, WHAD, WLW.

1 a. m. 12 m 11 10

WLW.

THURSDAY, DECEMBER 10

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

WBZ, WCX, WEAF, WIP, WMCA, WREO, WWJ.

7 6 5 4

KGO, KSD, WEAF, WEAR, WGBS, WHAD, WJR, WMAQ, WOAW, WOK, WWJ.

8 7 6 5

KYW, WBBR, WBZ, WCAU, WCCO, WCX, WEAR, WEEI, WGR, WGY, WHAR, WHT, WLS, WLW, WMBB, WOAW, WQJ, WTAG, WTIC.

9 8 7 6

KHJ, KLDS, WBAP, WCAE, WCAU, WCBD, WCCO, WEAF, WEEI, WGR, WHAR, WHAS, WJAR, WNYC, WOC, WORD, WRC, WASI, WSB, WTAG.

10 9 8 7

KNX, KPRC, KTHS, KYW, WGR, WGY, WHAD, WMC, WOAW, WOC, WSAI.

11 10 9 8

KGO, KPO, KTHS, WBAP, WKRC.

12 m 11 10 9

KGW, KPO, WHO, WKRC.

FRIDAY, DECEMBER 11

Eastern	Central	Mountain	Pacific
6 p. m.	5 p. m.	4 p. m.	3 p. m.

KGO, WCX, WMCA, WREO, WWJ.

7 6 5 4

KGO, WEBJ, WGY, WHAD, WJR, WMAQ, WOAW, WOK, WOR, WTIC.

8 7 6 5

KYW, WAHG, WBZ, WCAU, WCX, WEBJ, WEEI, WHT, WLS, WQJ, WTAG, WTIC, WWJ.

9 8 7 6

KFDM, KFNF, KFOA, KGO, KHJ, KSD, KYW, WBAP, WBZ, WCAU, WDAF, WEEI, WHAD, WHAS, WJAR, WMAQ, WMCA, WOS, WSAI, WTIC.

10 9 8 7

KFAB, KFDM, KOA, WCCO, WHAD, WMAQ, WNYC.

11 10 9 8

KFMX, KHJ, KNX, KPO, KWSC.

12 m 11 10 9

KPO.

KOB TO GIVE "CAPTAIN CROSSBONES"

Wednesday, December 9

(Continued from page 18)

on the Art of Cooking and some of my best recipes"; 4, cooperating with Settlement Schools and all other institutions, William Duning, assisted by Cincinnati Exchange club, shut-in concert; 7, Hotel Gibson concert, Robert Visconti, director; 7:30, talk, representative of the National Farm Radio council; 7:40, Hotel Gibson concert; 10, "Pep" concert, Ohio Epsilon Chapter of Sigma Alpha Epsilon, University of Cincinnati; 10:30, Cincinnati Zither players, Ruth Hohe; Chas. Hohe; A. Roehrich; 10:40, Trirdyn instrumental trio; 10:50, The Cino male quartet; 11, Johanna Grosse, organist; 11:15, pianologues, "Newport" Carl Bamberger; 11:30, the Trirdyn instrumental trio.

WMAQ, Chicago, Ill. (447.5), 12:45 p. m., Radio farm school; 1, luncheon, Chicago Association of Commerce; 2, program, Radio show, Coliseum; 4, Cosmopolitan School of Music; 4:30, Red Cross talk on home nursing; 6, organ, Chicago theater; 6:30, Georgene Faulkner, the Story Lady; 8, lecture, Northwestern university; 8:30, Lester Mather, Paul Breitweiser, pianists.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Joseph Kreloff; 9-11, Trianon orchestra, Woodlawn theater orchestra; Scotty Welsh, Madison sisters, Earle Smith, Billie Allen Hoff, Jimmy Eggert, Bob Bennett.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Phyllis Griswold, organist, Rialto theater; 5:30, Sandman's visit, Val McLaughlin.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., Farm school "Dairy Day—How to Select a Dairy Sire," Prof. H. H. Kildee; 4-4:45, musical program; Marian Peters, pianist; A. E. Edwards, baritone; Bud Morley, harmonica player; 9-10, Erwin Swindell, organist; Clayton Meyer, baritone; 3-3:30, home management schedule, Aunt Jane; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime stories; 9-10, Erwin Swindell, organist; Clayton Meyer, baritone.

WOI, Ames, Iowa (270), 12:30 p. m., college chimes; "Poultry Husbandry"; 12:45, Professor H. A. Bittenbender.

WOK, Chicago, Ill. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; Capitol theater organ; Ed Kemp, tenor; Bob Mokrejs, pianist; Bryce Talbot, baritone; 10-1:30 a. m., Gus C. Edwards' orchestra; Husk O'Hare's orchestra; Capitol theater program; Tierney's orchestra; Ned Miller, tenor; Harriet Lee, contralto; Herman Sinaiko, violinist; George Allen, tenor; Bob Mokrejs, pianist.

WORD, Batavia, Ill. (275), 8 p. m. ,Webster hotel concert trio; 8:15, hymns, sacred songs, I. B. S. A. choral singers; 8:30, lecture "The Great Pyramid," C. H. Swingle.

WQJ, Chicago, Ill. (447.5), 11-12 m., fish dinner menu, Frank Wandy; "The Run-About Child," Dr. Lena K. Sadler; 3-4 p. m., "How to Select Draperies and Furniture," Sterling Bryan McDonald; Lavina Price, pianist; 7-8, dinner concert, Ralph Williams and his Rainbo Gardens orchestra; Marvin Hinshaw and his pupils; 10-1, Ralph Williams and his Rainbo Skylarks; Gertrude Wolf Quentin, soprano; Melodians; Clarence Theders, tenor; J. Edwin Peterson, bass; Joey Stool, tenor; Eddie Vogel, baritone; George Thurn, kazoo and ukulele soloist; Harry Kendall, guitarist; Anita Chellis, comedienne; 1-2, Ginger hour.

WSAI, Cincinnati, Ohio (325.9), 7:45 p. m., art talk, Percy Harover; 8-9, Waterman Pen program, WEAF; 9-10, Ipana Troubadours, WEAF; 10, Congress Playing Card string quartet.

WSB, Atlanta, Ga. (428.3), 10:45 p. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; Biltmore Salon orchestra.

WSOE, Milwaukee, Wis. (246), 5:30 p. m., children's stories, Aunt Julie; Agnes Roots, marimba soloist; Olga LeBelle, pianist; 8:30, travelogues, "Twice Travelled Tommy"; 9, Bertha Schaller, violinist; "Electric Spark" discharges; "Contacts," students and alumni; S. O. E. faculty, engineers, industrial executives; Radio dictionary; electrospect.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 4 p. m., Red Cross address; 8-9, Ladies string trio.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program; 9-10, studio program.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 6:30, concert, Brown Palace string orchestra, Howard Tillotson, director; 7:30, book of knowledge; 8, Kiwanis quartet selections; Mrs. Dye G. Liggett, soprano; Clarence C. Moore, baritone; Joseph Butterworth, tenor; Mrs. Frank W. Hirth, contralto; Mrs. Dye G. Liggett, soprano; Lucille Fulton, Betty Gundler, Mrs. Joseph Butterworth, accompanists; "Child Welfare," E. C. VanDiest; KOA orchestra; 10, dance program, Harmony Peerless orchestra.

Pacific Time Stations

KFDJ, Corvallis, Ore. (282.5), 7:30 p. m., musical selections; 7:45, "Christmas Confections," Amelia Burns; 8-8:15, "The Three R's of Dressing Attractively," Lila M. O'Neale.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7-7:30, Mutual Motors fun contest; 7:30-8, microphone brevities; 8-9, program, Cheek-Neal Coffee company, Maxwell House Coffee string quartet; Chas. Beauchamp, tenor; Lee Kent and her terapach; 9-10, program, Western Pacific Securities company of Santa Monica; 10-11, Warner Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 8:45 a. m., inspirational songs, Madame Elfrieda Wynne; 11:30-1, luncheon concert, Pacific States Electric company; 3-4, Oakland high school band; 4-5:30, concert orchestra, Hotel St. Francis; 6-7, Norman Woodside's Metropolitan orchestra.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 8-9, 7th United States Infantry band; 10-11, concert, Sherman, Clay and company studio.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Donald McKenzie nad Dorothy Graves, saxaphonists, Uncle John; 8, Dr. Mars Baumgardt, scientific lecturer; 8:30-10:30, program by Silverwood's Inc.; 10:30-11:30, Art Hickman's Biltmore hotel dance orchestra.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Elsie's Sunset matinee; 8-9, educational program, Roy Harrison Danforth, Ad Schuster, Harry Noyes Pratt, Madine Shephard, Professor E. R. deOng; 9-10, concert, Philomels of the Business and professional women's club; 10-11:30, Tom Gernovich's ballroom entertainers.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons in honor of birthday of Joel Chandler Harris of Br'er Rabbit fame; 7, "Health," Dr. Dain T. Tasker; 8-10, KMTR concert hour, Turner orchestra, direction Loren Powell; Rondeau male quartet.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 8-9, program, Security Trust and Savings bank; 9-10, program, W. W. Rainey organization; 10-11, dance music.

KPO, San Francisco, Calif. (428.3), 7-7:30 a. m., exercises; 10, sewing talk, Betsy Ross; 10:30 ,"Ye Towne Cryer," amusement information service; 12 m., scripture reading; 1-2 p. m., Rudy Seiger's orchestra; 2:30-3:30, matinee program; 3:30, fashion talk, "Breath of the Avenue," Ninon; 5:30-6:15, Big Brother; 6:30, "Ye Towne Cryer," amusement information service; 6:40-7, Waldemar Lind's orchestra; 7-7:30, Rudy Seiger's orchestra; 8-9, Atwater Kent artists; 9-10, dance music, Goodrich Silvertown Cord orchestra; 10-11, Waldemar Lind's orchestra.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo. W. Phillips, prayer service.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., special artists' program, faculty members; Mary Cameron, pianist; B. L. Robinson, vocalist; "The Selection of Breeding Stock," J. S. Carver; "Light and Electricity," Dr. H. E. Briggs.

Thursday, December 10

Headliners Today

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
WBZ (333.1) New England Forestry Congress.			
8:15	7:15	6:15	5:15
WIP (508.2) Etude hour.			
WREO (285.5) Rajoan trio.			
8:30	7:30	6:30	5:30
WHAS (399.8) Kentucky Ramblers.			
9:30	8:30	7:30	6:30
KPRC (296.9) Cantor Kaplan, lyric tenor.			
WHN (361.2) B'nai Joshurun Centennial Jubilee banquet.			
10	9	8	7
WKRC (422.3) Post Wurlitzer classical series.			
10:15	9:15	8:15	7:15
KMTR (238) Campus night, U. of California students.			
11	10	9	8
KDKA (309.1) Midnight revue.			
KGO (361.2) "The Rainbow," 3-act comedy.			
WJAZ (322.4) E. Warren K. Howe's classical program.			
12	11	10	9
WAMD (243.8) Skyrocket frolic.			

Thursday, silent night for: **CHIC, CKNC, CNRA, CNRE, CNRO, CNRR, CNRT, CNRV, CNRW, KFAB, KFAU, KFDM, KFMQ, KFMX, KFOA, KFRU, KFUO, KFVE, KFWA, KGW, KLX, KOA, KOB, KTCL, KWSC, PWX, WAFD, WAHG, WGEE, WEBJ, WEBW, WGCP, WHAD, WHAZ, WJAD, WJBL, WJJD, WLIT, WOAI, WOR, WOS, WSM, WSUI, WTAM.**

Eastern Time Stations

CNRC, Calgary, Alberta, Can. (435.8), 7 p. m., Aunt Mary; 9, Mrs. Boese, pianist; Gerald Fitzgerald, tenor; Pauline Johnson, accompanist; Clara Powell, accompanist; Mrs. Nickle, violinist; Gerald Fitzgerald, tenor; Mrs. Nickle, contralto.

CNRM, Montreal, Quebec, Can. (411), 8:30 p. m., Hercule Lavoie, baritone; Yvette Lamontagne, cellist; Blanche Archambault, soprano; Yvette Lamantagne, cellist; Emile Gour, tenor; Yvette Lamontagne, cellist; address, Victor Marin, president, Montreal Historical society.

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., KDKA Little Symphony orchestra; 8, program, National Stockman-Farmer studio; 8:30, half hours with famous composers, Giuseppe Verdi, Richard Kountz; KDKA Little symphony orchestra; 9, KDKA Little symphony orchestra; 11, Pittsburgh Post midnight revue.

WAHG, New York, N. Y. (315.6), 12-1 p. m., musical program.

WBBR, New York, N. Y. (272.6), 8 p. m., Hawaiian quartet; 8:10, Barbara Jonasch, soprano; 8:20, Sunday school lesson, S. M. Van Sipma; 8:40, Barbara Jonasch, soprano; 8:50, Hawaiian quartet.

WBGS, New York, N. Y. (315.5), 10-10:10 a. m., timely talks with Terese; 10:10-10:20, June Warren, pianist; 10:20-10:30, talk, Capitola Ashworth; 10:30-10:40, June Warren, pianist; 10:40-10:50, talk, Alide Clark Barnhill; 10:50-11, June Warren, pianist; 1:30-1:35 p. m., scripture reading; 1:35-1:45, Anna E. Seeley, soprano; 3-3:15, New York American in the home hour; 6-6:30, Uncle Geebee, 7-8, Voltaire music; 8-8:30, Crystal Palace orchestra; 8:30-9:30, talk, Oliver Sayler; 9:30-10:30, Y. M. C. A. program; 10:30-11:30, Vanderbilt hotel orchestra.

WBZ, Springfield, Mass. (333.1), 6:15 p. m., dinner concert, KDKA; 7:05, English literature series, "Norman Story Telling," Prof. E. Charlton Black; 7:30, Hotel Kimball dance orchestra; 8, opening program, second New England Forestry Congress; address, George Pratt; "Public Education in Forestry," Charles Pack; "What Forestry Means to America"; 9:15, musical program, Noyes Buick company; 10:20, McEnelly's Singing orchestra.

WCAE, Pittsburgh, Pa. (461.3), 12:30 p. m., program for day; 3, program, Loew's Aldine theater; 6:30, concert, William Penn hotel; 7:30, children's period; 8, Larkin period, N. Y.; 10, concert, Goodrich Zippers, WEAF.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Metropolitan Tower, N. Y. C.

WCAU, Philadelphia, Pa. (277.6), 6:30 p. m., Billy Hayes' orchestra; recital, N. Snellenburg and company; Dr. James Davenport, tenor; Virginia Klein, pianist; 8, Marjory Watson, contralto; Florence Neale, pianist; Howard McNeil, tenor; 9, Barry O'Moore, the Irish tenor; 9:30, the Musical Chefs; 10, Sesqui Centennial hour; 11, the Parodians; 11:30, Clun Dadix review.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 8, studio program.

WEAF, New York, N. Y. (491.5), 6:45-7:20 a. m., Tower exercises; 11-11:10, Harriet Spink, soprano; 11:10-11:25, talk, Mayfair Subject Plum Pudding; 11:25-11:30, Harriet Spink, soprano; 11:30-12, Columbia university cooking school, direction of Teachers College; 4-4:15 p. m., Madeline Hulsizer, soprano; 4:15-4:30, Mildred Silverman, pianist; 4:30-4:45, Leslie Arnold, bass; 4:45-5, talk, Mrs. Maude Applebaum; 6-7, dinner music, Waldorf-Astoria hotel; 7-7:30, Midweek Hymn services, Federation of churches; 7:30-8, Cushman's serenaders; 8-8:30 Larkinites; 8:30-9, pop concert; 9-10, music to be announced; 10-11, Goodrich Zippers; 11-12, Vincent Lopez orchestra, direct from Casa Lopez.

WEAO, Columbus, Ohio (293.9), 8 p. m., "Putting Nitroger Where It Pays," farm talk, Prof. Firman E. Bear; 8:15, children's story, Uncle Al; 8:30, "Individual Differences and their Measurement," Prof. H. E. Burtt; 10, Hotel Fort Hayes hour of music; Mary Holliday trio; C. C. Schiffler, baritone; Robert Deringer, tenor.

WFI, Philadelphia, Pa. (395), 1 p. m., Strawbridge and Clothier tea room ensemble; 3, program, Sherwood Country club; 6:30, Bellevue Stratford concert orchestra; 7, Bellevue Stratford hotel dance orchestra; 8, Larkinites; 9, WEAF ensemble; 10, Goodrich Zippers.

WGCP, New YORK, N. Y. (252), 2:15-2:30 p. m., mirror race; 2:30, results half hourly; 3-3:15, Mrs. Elvira Rosa Geiger, pianist; 3:15-3:30, Bert Dagmar, songs; 3:30-3:45, studio program; 3:45-4, Constantion Ramos, saxaphonist; 4-4:15, Hughie Woodford, pianist; 4:15-4:30, Doris Freeman, songs, 4:30-4:45, Frank Gallasi, ukulele; 4:45-5, Sylvia Schatz, pianist, elocutionist.

WGHP, Detroit, Mich. (270), 10-12 p. m., the Midnight Mariners aboard the Good Ship Skylark, Skipper and his crew, the Skylark dance band.

WGR, Buffalo, N. Y. (319), 2:30 p. m., WGR's afternoon program; 6:30, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including Larkinites and the Goodrich Zippers.

WGY, Schenectady, N. Y. (379.5), 2 p. m., "Small Kitchen Equipment," Ruth Kellogg; 6:30, dinner program, Ten Eyck concert trio; 7:30, "WGY Book Chat," L. L. Hopkins; 7:45, WGY orchestra; 8, U. S. Army band, WRC; 9, Royal hour, Royal Salon orchestra, WJZ; 10, "Europe and Ourselves, Where Do We Stand?" Herbert Adams Gibbons; 10:30, WGY orchestra; Matilda Biglow Russ, soprano; 11:30, Stephen E. Boisclair, organist.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, health talk, Dr. Henry Reik; 8, Seaside hotel trio.

WHN, New York, N. Y. (361.2), 6:30-6:40 p. m., Jack Cohen, pianist; 6:40-7, talks, Billy B. Van; 7-7:30 Iceland orchestra; 7:30-8, Standing by; 8-8:30, Will Oakland's Chateau Shanley; 8:30-9, Guardian entertainers; 9:30-10:30, Congregation B'nai Joshurun Centennial Jubilee banquet, Hotel Astor; 10:30-11, Club Kentucky orchestra; 11-11:30, Swanee club orchestra; 11:30-12; Rodeo club orchestra; 12-12:30 a. m., Ted Lewis and his orchestra.

WIP, Philadelphia, Pa. (508.2), 10 a. m., menu, Mrs. Anna B. Scott; 1 p. m., Gimbel Tea Room orchestra; 3, Celste trio; Iris Virginia Gruber, soprano; 6:05, Pagoda cafe orchestra; 8, Sesqui-centennial, talk, Hon. Harry A. Mackey; 8:15, Etude hour, James Francis Cooke; 9, Penn Mutual Glee club, William P. Bentz, director; 10:05, "Believe in and Invest in Philadelphia;" 10:15, Joe Ray and the California Nighthawks.

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's petite symphony orchestra; soloists; 9, Jean Goldkette's serenaders; soloists; 10, Jean Goldkette's orchestra.

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio school; marketing, agriculture, English and soil lectures.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7, Frank Gebbias Red Lion Inn orchestra; 7:15-7:45, Pace Institute program; 7:45-8:45, Lanson's orchestra; 9-9:15, Regalbuto sisters, pianists; 10-10:15, talk, Harry T. Rainess; 11-12, Ernie Golden and his Hotel McAlpin orchestra.

WNYC, New York, N. Y. (526), 7:10-7:30 p. m., dance program; 7:35-8, dance program; 8-8:15, talk, John B. Foster; 8:15-10:10, Dr. Sydney N. Ussher, talk.

WOR, Newark, N. J. (405.2), 6:15-6:17 p. m., words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7:30, Jacques Jacobs Hotel Shelton orchestra.

WRC, Washington, D. C. (468.5), 10 a. m., women's hour, WJZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., Hotel Mayflower rochestra; 6, Hotel Hamilton orchestra; 7, Smithsonian talk; 7:10, Shoreham hotel orchestra, WJZ; 9:30, Royal Salon orchestra, WJZ, WGY; 10:30-11:30, Meyer Davis' "Swanee" orchestra.

WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Wagon serenaders," "Gold Standard ensemble"; 8:15, Reo broadcasting orchestra, Carl Hall Dewey, director, Thos. E. Metzger, flutist; Reo string quartet; vocal and instrumental solos.

WTAG, Worcester, Mass. (268), 12:05-2 p. m., WTAG orchestra; 8-8:30, Larkinites; 8:30-9, WEAF pop concert; 9-10, program from WEAF; 10-11, Goodrich Zippers.

WTIC, Hartford, Conn. (475.9), 6:30 p. m., music, Hub restaurant trio; 7:30, talk.

WWJ, Detroit, Mich. (352.7), 6 p. m., dinner concert; 8, concert from New York through WEAF.

Central Time Stations

KFMQ, Fayetteville, Ark. (299.8), 8 p. m., "Water, Sanitation and Medicine," Harrison Hale; "Rural Electric Line Service and Rates," W. B. Stelzner; "Your Feeling Tone—Do You Want to Get Up in the Morning," Emma Johnson; "Books for Children," E. Purnell Wilson.

KLDS, Independence, Mo. (440.8), 8 p. m., lecture course series, Dr. F. M. McDowell; 8:15, Emily Cox, pianist; Mrs. Rudolph T. Wickman, soprano; Mildred Woolman, violinist.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talks, Earl E. May; music; 12 m., flower talk, Lina Ferguson; 6-7, dinner program; 9-11, evening program; Delmonico Dreamers, Walter Nixon, pianist, director.

KPRC, Houston, Texas (296.9), 12 m., station program of music; Houston public library book talk; 5:30 p. m., Uncle Judd's Kiddies' hour; 7:30, Blanchard's dance orchestra; 8:30, Cantor E. Kaplan, lyric tenor; Victor record artist, assisted by the boys' choir of Adath Yesburun congregation; 9, Gregor Jassel, violinist; Mrs. S. J. Pfeiffer, accompanist.

KSAC, Manhattan, Kansas (341), 9-9:25 a. m., music, talks, agricultural primer, calisthenics; 9:55-10:25,

(Continued on page 20)

Not a "ukulele lady" but a "banjo girl" is Mary Thompson (above), University of Iowa coed, who comes from Iowa City, to entertain at KOIL, Council Bluffs. This gay group of pretty ladies, left, belongs to Roxy's gang and has no little part in making his Wednesday programs on WEAF and chain attractive. Note Roxy at the piano.

Gay Melodies may be heard at KGO, Oakland, Tuesday at 8 p. m. Pacific time, when Gertrude Landram, soprano, entertains from this station.

Thursday, December 10

(Continued from page 19)

readings, question box; "Planning Today's Meals;" 12:35-1:05 p. m., "Damming the Gullies," Claude Dhedd; 4:30-5, Community Civics, high school credit; 6:30-7:30, music; College credit course, Business English; "Foot Comfort—What Your Feet Have to Say," Alene Hinn; "Electrifying Your Home," Harriet Allard.

KSD, St. Louis, Mo. (545.1), 4 p. m., "Women's Hour;" 6:55, "Good Will" program, WEAF.

KSO, Clarinda, Iowa (241.8), 7-8:30 p. m., Snappy seven; 8:30-10, farmers band.

KTHS, Hot Springs, Ark. (374.8), 9-9:40 p. m., choir and solo program, First Methodist church, Arthur Platz, directing; 9:40-10:30, dance, Meyer Davis artists.

KYW, Chicago, Ill. (535.4), 6:30-7 a. m., morning exercises; 7:30, Morning Family Worship; 11:35, table talk, Anna J. Peterson; 12:05-1 p. m., noonday concert, Commonwealth Edison company; 1-2, luncheon concert, Congress hotel, Coon Sanders original nighthawks; 4, afternoon frolic; 6:10-6:30, musical concert, Commonwealth Edison company; 6:40-7, children's bedtime story, Walter Wilson; 7-7:30,, dinner concert, Congress hotel; Coon Sanders original nighthawks; 7:33-7:53, "Unveiling the Draft Horse Future," W. S. Dunham; "Left Overs and Their Possibilities," Carolyn Carey; 8-8:20, good reading, Rev. G. J. Pernin; 8:20-9:15, musical program, Congress hotel; 10-12, "Evening at Home," including Coon Sanders, nighthawks; 1 a. m., Insomnia club, Coon Sanders original program; Armilla O'Brien, violinist; Ruth Huff, nighthawks.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical mandolinist; Harvy Burt, pianist; 6 p. m., George Osborn's Hotel Raddison orchestra; 7:05, Hamlin University glee club, John Yaeger, director; 10, Harmony Twins, Bob and Fred; Bob Lee, tenor; Katherine Wells, contralto; Gertrude King, soprano; 11, Skyrocket frolic, George Osborn's Hotel Radisson Skyrockets.

WBAP, Fort Worth, Texas (475.9), 12:05-12:30 p. m., "Trail Blazers;" 6-6:30, Texas Hotel Tokio Royals; 7:30-8:30, concert, John Tarleton Agricultural College of Stephenville; 9:30-10:45, program, W. T. Whitlock, violinist.

WBBM, Chicago, Ill. (226), 4-6 p. m., Harry Sosnik, Sandy Meek; Valentino Inn orchestra; William Dalton; Irene Beasley; Sidney Norman; Russell Meyers; 8-10, "Know Your World"; Ziegler sisters; Miriam Hadley, violinist; Jeane St. Anne, baritone; Christian Grimm; Moulin Rouge orchestra; 10-12 m., Harry Sosnik, Sandy Meek; Moulin Rouge orchestra; stars from Moulin Rouge cafe; Harry Brailsford; Pearl Jarrot; Fred Jacobson.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, the shopper's ready helper, shopping talk; 7-8, classical hour; Emily Stone, violinist; Ada Mae Stone accompanist; Lemmyon Amoureaux, French tenor; Ethel Eaves Price, soprano; Alice McMahon, contralto; Margaret McArthur, pianist; John Williams, baritone; 10-1 a. m., Elmer Jordan & Co., Owl matinee.

WCBD, Zion, Ill. (344.6), 8 p. m., mixed quartet, celestial bell quartet; P. B. Newcomer, cornetist; P. B. and Carl Newcomer, cornet and saxophone duettists; R. M. Steel, soprano; Mr. and Mrs. Sparrow, vocalists; Glenn Sparrow, tenor; Katherine Crow, contralto; Susie Barton-Smith, reader.

WCCO, St. Paul, Minn. (415.4), 9:30 a. m., program for day; 12 m., concert, Donaldson's orchestra; 2 p. m., "Among the Musicians," H. A. Bellows; 4, Readers' club, Eleanor Poehler, 5:30, children's hour; 7-7:30, the Larkinites, WEAF; 7:30-8, Pop concert, WEAF, 8-9, WEAF ensemble; 9-10, Goodrich Zippers, WEAF; 10:05, travel talk, National Director Travel Bureaus.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m., the Star's string trio; 6-7, school of the air; address; talk, Louis Mecker; the Tell-Me-a-Story Lady; Trianon ensemble; 11:45-1 a. m., Nighthawks frolic; Carl Nordberg's Plantation players; Earl Coleman's orchestra; Eddie Kuhn's orchestra; Ted Meyn, organist.

WEBH, Chicago, Ill. (370.2), 7-8 p. m., Oriole orchestra; 9-10, Oriole orchestra; Kathryn Forbes soprano; Dick and Snyder, Ruth Flick, Frederick Agard; 11-1, Oriole orchestra; Wayne Myers, Ruth Buhl Flick.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., address, DeWitt McMurray; Edmund F. Boettcher, tenor; Viola Cassidy, pianist; 6:30-7:30, Don Bestor's orchestra; 8:30-9:30, Edwin Lisman, bass; Julia Graham Charlton, pianist; 11-12 midnight, Texas Power and Light company's entertainers.

WHAD, Milwaukee, Wis. (275), 4 p. m., Four Arcadians; 6:15-7, Bill Benning's Milwaukee Athletic club orchestra.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; 7:30-9, concert, Keith Kanard's Kentucky Ramblers; Sunday school lesson; welfare talk.

WHO, Des Moines, Iowa (526), 7:30-8 p. m., the Raleigh quintet; 8-9, the Bankers Life trio; Helen Birmingham; 11-12, the Bankers Life Little symphonic orchestra, Leon A. Dashoff.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club, Jelke Good Luck Girl, studio features; 11, specialists from studio; 12 p. m., Al Carney's complimentary organ hour; 1-2, special studio program; 6-7:30, classical program, dinner organ recital, Franklin Hathaway, baritone; Ada May Hathaway, violinist; Edwin Kemp, tenor; Genevieve Barry Burnham, soprano; 7:45-9:15, musical features; 9:30, Jelke entertainers; Al Carney, organist; Husk O'Hare's orchestra; Howard Sershon, tenor; Rita McFawn, popular songs; 10:10, U. S. L. half hour of dance music; 12, Pat Barnes and Al Carney.

WJAZ, Chicago, Ill. (322.4), 10 p. m., chimes; Leo Braverman, violinist; Lester E. Spring, basso; Jacob Hannemann, pianist; 11, chimes; act 2 of Philemon and Baucis; Laura Turner, soprano; Wm. Hayden, tenor; Geo. Krueger, baritone; J. E. Martin, bass; 12 midnight, chimes.

WJJD, Mooheheart, Ill. (302.8), 10 p. m., Ruth Allanson, Mrs. Ruth Miller; 12, Jack Nelson, George Sparks, Larry Shay.

WKRC, Cincinnati, Ohio (422.3), 8 p. m., violin, piano, vocal soloists, Hotel Alms; 9, classical program, Burnet C. Tuthill, director.

WLIB, Chicago, Ill. (308.2), 7-8 p. m., dinner concert, Blackstone and Drake orchestras; 9-10, popular, Hamm's orchestra; 11-12, dance, Drake and Blackstone orchestras.

WLS, Chicago, Ill. (344.6), 12 m.-1 p. m., R. F. D. farm program, Ford and Glenn; 6:15, announcements; 6:30, Ralph Emerson, organ concert; 7, Woodshed theater, Ford and Glenn; 7:30, concert.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12:15, organ concert, Mildred Prigge; 12:30, health talk, Dr. Carl Wilzback; 4, piano recital, Adelaide Apfel and pupils; 6:30, lesson in solitaire, Lucy Blackburn; 6:40, talk, "The Eyes Have It," Dr. C. H. Kaufman; 7, Hotel Gibson concert, Robert Visconti, director; 10, Doherty Melody boys; 10:40, Irene Downing and Temperamental Tommy Reynolds; 11, Crosley Salon orchestra; selection, WLW Wurlitzer organ.

WMAQ, Chicago, Ill. (447.5), 12:45 p. m., Radio farm school; 2, shut-in program; 4, program, Illinois Federation of women's clubs; 4:45, musical; 5:15, Topsy-Turvey time; 6, organ, Chicago theater; 6:30, Hotel LaSalle orchestra; 8, to be announced; 8:30, talk, Association of Commerce; 8:40, to be announced; 9, lecture, University of Chicago; 9:20, Mayfair M. E. church choir.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Robert Malone, Presotn Graves; 9-11, Trianon orchestra, Woodlawn theater orchestra, Jack Goodwin, Jack Daly, Bob Bennett; Earle Smith, J. T. Carney; Walter Duffy.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Laurent Chaveaux.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Brandeis Tea Room orchestra; 6, Sandman's visit, Val McLaughlin; 7:20, classical; 6:50, Randall's Royal Fontenelle orchestra; 9, Sunshine program; 10:30, Herb Feierman and his Omadala orchestra.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., Farm school; "Legume Day Sweet Clover, Its Name Sounds Sweeter Every Year," Prof. J. C. Hackelmann; 3-3:30, home management schedule, Aunt Jane; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime stories; 7-7:30, musical program, the Larkinites, WEAF; 7:30-9, WEAF program; 9-10, Goodrich Zippers, WEAF; 11-12, LeClaire hotel orchestra; Peter MacArthur, baritone.

WOI, Ames, Iowa (270), 12:30 p. m., college chimes; 12:45, "Farm Crops," Professor H. D. Hughes; 7:30, dairyman's course; 7:50, program.

WOK, Chicago, Ill. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; Capitol theater organ; George Allen, tenor; Harriet Doty, contralto; Bob Mokrejs, pianist; 10-1:30 a. m., Gus C. Edwards' orchestra; Husk O'Hare orchestra; Capitol theater program; Tierney's Town club orchestra; Herman Sinaiko, violinist; Harriet Lee, contralto; George Allen, tenor; Bob Mokrejs, pianist.

WOQ, Kansas City, Mo. (278), 7-8 p. m., Unity educational program; 8-9, concert program.

WORD, Batavia, Ill. (275), 8 p. m., Webster hotel concert trio; 8:15, Sunday school lesson, C. E. Schiller; 8:30, Donald Rice, trombonist; William Loblaw, cornetist; WORD orchestra, W. H. Stott, director.

WQJ, Chicago, Ill. (447.5), 11-12 m., "Meat Stews for Cold Days," Erna J. Bertrams; "The Winter Hats," Jane Heddon Loewen; 3-4 p. m., "Christmas Vacation Parties," Helen Harrington Downing; "Party Suggestions for Christmas," Julia Deal; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Margaret Cade, soprano; Clement Laskowski, tenor; Marvyl Larson, soprano; 10-1, Ralph Williams and his Rainbo Skylarks; Jeanette Van Lennep, soprano; Mary Van Lennep, accompanist; Jerry Sullivan; Rose Vanderbosch, pianist; Hal Lansing, ukulele soloist; Bert Davis, Clown of the Air; Ralph Keim, pianist; Anne Keim, soprano; Lew Butler; Parish and Ward Blues Destroyers trio; 1-2, Ginger hour.

WSAI, Cincinnati, Ohio (325.9), 7 p. m., The Larkinites, WEAF; 7:20, "Pop concert; 8, WEAF ensemble; 9, Goodrich Zippers.

WSB, Atlanta, Ga. (428.3), 8, p. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; Dr. Charles Sheldon, Jr., organist; 10:45, concert.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 7 p. m., bedtime travel tale, Radio Lady; 9-11, C. N. R. W.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program.

KFXF, Colorado Springs, Colo. (250), 9-10:30 p. m., Rosemary Gardens dance program.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 3:15, exercises; 3:30, matinee for housewives; 4, culinary hints; 4:15, fashion review; 6:30, concert, Brown Palace string orchestra.

KUOM, Missoula, Mont. (244), 8 p. m., University symphony orchestra, direction of Professor A. H. Weisberg.

Pacific Time Stations

KFWB, Hollywood, Calif. (252), 7 p. m., "Plastic Surgery," Dr. T. Floyd Brown; 7:15, microphone brevities; 7:30-8, program, Elmer R. Sly Co., featuring Ruth Lee, pianist and blues singer; 8-9, program, Starr piano company, Hollywood Rhythm Kings; Estelle Shake, blues singer; 9-10, program, Don P. Smith, Inc., Sol Hoopii's Hawaiian Trio, Diana-Moon orchestra, Ashley sisters, vocal duets; 10-11, Warner Brothers frolic, direction Charlje Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 11:30 p. m., luncheon concert; 4-5:30, concert orchestra, Hotel St. Francis; 5:30-6:30, George W. Ludlow, friend to boys; 8, "The Rainbow," KGO players; Arion trio; 10-12, Ben Black's orchestra.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 7:45-8, lecture, Catholic Truth society.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Dickie Brandon and Joyce Coad, screen starlets, Uncle John; 8-10, program, "Trees;" Frank Meline company; 10-11, Art Hickman's Biltmore hotel dance orchestra.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and pupils of Carter Weaver; 7:15, campus nite students of University of California, Southern branch; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, program, H. L. Crockett with Way Watts and his ukulele; H. L. Crockett, baritone and others; 8-9, program, Willys-Overland dealers; 9-10, program, M. Weinstein, dealer in precious stones; 10-11, Ray West's Cocoanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7-7:30 a. m., exercises; 10, domestic science talk, Virginia Tappan; 10:30, "Ye Towne Cryer," amusement information service; 12 m., scripture reading; 1-2 p. m., Rudy Seiger's orchestra; 2:30-3:30, matinee; 3:30-4:30, Cyrus Trobbe's orchestra; 5:30-6:15, Big Brother; 6:30, "Ye Towne Cryer," amusement information service; 6:40-7, Waldemar Lind's orchestra; 7-7:30, Rudy Seiger's orchestra; 8-9, a play, Pacific Coast Radio players; 9-10, studio program; 10-11, Jack Oakley's cabirians.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo. W. Phillip; prayer service; 8-10 p. m., program, Richmond male chorus.

AN EVENING AT HOME WITH THE LISTENER IN
IN EASTERN TIME

Call	Location	Met.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
AT9	Fort Bragg, N. C.	435	Silent	6:00- 7:00	Silent	Silent	Silent	8:00- 9:55	Silent
CFCA	Toronto, Ont.	356.9	Silent	8:00- 9:00	Silent	Silent	8:15-11:45	9:00-11:45	Silent
CFCN	Calgary, Alta.	434.5	12:00- 2:00	Silent	Silent	Silent	Silent	10:00-11:00	Silent
CJCA	Edmonton, Can.	516.9	11:00- 1:00	9:30-10:30	9:30-11:30	9:30-10:00	8:00-10:00	11:00- 1:00	10:00- 1:00
CKAC	Montreal, Que.	410.7	7:30-11:00	Silent	Silent	7:30-11:00	Silent	7:30-11:00	Silent
CKNC	Toronto, Ont.	356.9	8:00-12:00	Silent	8:00-11:00	Silent	Silent	Silent	Silent
CKY	Winnipeg, Man.	384.4	9:00-12:00	8:00-11:00	9:00- 1:00	Silent	8:30-12:00	10:00-12:00	Silent
CNRO	Ottawa, Ont.	434.5	8:30- 1:30	Silent	Silent	Silent	8:30- 1:30	Silent	Silent
CYL	Mexico City, Mex.	480	Silent	9:00-10:30	Silent	9:00-10:30	Silent	Silent	9:00-10:30
KDKA	Pittsburgh, Pa.	309.1	6:15- 9:55	4:00- 8:45	6:15- 9:55	6:15-12:30	6:15- 9:55	6:15-12:30	6:15- 9:55
KFAB	Lincoln, Nebr.	340.7	6:30-10:30	5:00- 6:00	6:30-11:30	6:30-11:30	6:30-11:30	Silent	6:30-11:30
KFDM	Beaumont, Texas	315.6	Silent	9:00-10:00	Silent	9:00-11:30	Silent	Silent	9:00-11:30
KFI	Los Angeles, Calif.	467	9:45- 3:00	7:00- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00	9:45- 2:00
KFKX	Hastings, Nebr.	288.3	Silent	Silent	10:00-12:00	Silent	Silent	Silent	10:00-12:00
KFMQ	Fayetteville, Ark.	299.8	Silent	Silent	Silent	10:00-11:00	8:30- 9:30	8:30- 9:30	Silent
KFMX	Northfield, Minn.	337	Silent	8:00- 9:00	Silent	10:30-11:00	10:00-11:00	Silent	11:00-12:00
KFNF	Shenandoah, Ia.	266	8:00- 9:00	7:30-10:00	8:00- 9:00	8:00- 9:00	8:00- 9:00	8:00- 9:00	8:00- 9:30
KFOA	Seattle, Wash.	454.3	9:00- 2:30	Silent	9:00- 1:00	9:00- 2:00	9:00- 1:00	Silent	9:00- 2:30
KFUO	St. Louis, Mo.	545.1	Silent	9:15-10:15	9:00-10:00	Silent	10:15-11:15	Silent	Silent
KFVE	Univ'ty City, Mo.	240	9:30-11:00	Silent	9:30-11:00	9:30-11:00	9:30-11:00	Silent	9:30-11:00
KFWB	Hollywood, Calif.	252	11:00- 2:00	12:00- 2:00	9:00- 2:00	9:00- 2:00	9:00- 2:00	10:30- 2:00	11:00- 2:00
KGO	Oakland, Calif.	361.2	11:00- 3:00	6:30-12:00	11:00- 1:00	11:00- 1:00	9:00-10:00	11:00- 3:00	9:00-10:00
KGW	Portland, Ore.	491.5	1:00- 3:00	10:45-12:00	11:00- 1:00	10:45- 3:00	11:00- 2:00	10:45-11:00	12:00- 1:30
KHJ	Los Angeles, Calif.	405.2	8:30- 5:00	9:00- 1:00	9:00- 1:00	8:30- 2:00	8:30- 2:30	8:30- 2:00	8:30- 2:30
KIAF	Sihtipok, Minn.	421	Silent	3:00- 4:00	8:00- 9:00	Silent	8:00- 9:00	Silent	8:00- 9:00
KJR	Seattle, Wash.	384.4	11:30- 1:00	10:15-12:00	10:00- 2:00	11:30- 1:00	10:00- 1:00	11:30- 3:00	11:30- 2:00
KLDS	Independence, Mo.	440.9	Silent	7:30-11:00	Silent	8:00- 9:00	Silent	8:00- 9:00	Silent
KLX	Oakland, Calif.	508.2	Silent	Silent	9:00- 2:00	Silent	9:00- 2:30	Silent	9:00- 1:30
KNX	Hollywood, Calif.	336.9	8:30- 5:00	10:00- 1:30	9:30- 3:00	9:30- 3:00	8:30- 2:00	8:30- 2:00	8:30- 3:00
KOA	Denver, Colo.	322.4	11:00- 1:00	6:00-11:00	8:30-11:00	8:30-10:30	8:30- 1:00	8:30- 9:30	8:30-11:00
KOB	State College, N.M.	348.6	Silent	Silent	9:30-10:30	Silent	Silent	Silent	Silent
KOIL	Council Bluffs, Ia.	278	8:30- 1:00	8:30-10:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	8:30- 1:00	8:30- 1:00
KPO	San Francisco, Cal.	428.3	9:35- 3:00	8:00- 1:00	9:30- 2:00	9:30- 2:00	9:30- 2:00	9:30- 2:00	10:00- 2:00
KPRC	Houston, Texas	296.9	8:30- 1:00	9:00-12:00	8:30-11:00	8:30-10:30	8:30- 1:00	8:30-10:00	Silent
KSD	St. Louis, Mo.	545.1	7:45-11:00	7:15-10:15	7:55-12:00	7:55-11:00	8:00-10:00	7:55-11:00	8:30-10:00
KSL	Salt Lake City, Ut.	299.8	10:00- 1:00	11:00- 1:00	10:00- 1:00	11:00- 1:00	10:00- 1:00	10:00- 1:00	11:00- 1:00
KTAB	Oakland, Calif.	240	Silent	10:45- 2:00	11:00- 1:00	11:00- 1:00	Silent	11:00- 1:00	11:00- 1:00
KTBI	Los Angeles, Calif.	293.9	Silent	10:15-12:30	Silent	11:00-12:00	Silent	11:00-12:00	Silent
KTCL	Seattle, Wash.	305.9	Silent	12:10- 9:10	10:00-11:00	11:00-12:00	Silent	Silent	10:00- 3:00
KTHS	Hot Springs, Ark.	374.8	10:00-12:00	10:00-12:30	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00	10:00-12:00
KTW	Seattle, Wash.	455	9:30-10:30	Silent	Silent	9:30-10:30	Silent	9:30-10:30	Silent
KWKH	Shreveport, La.	261	10:00- 1:00	Silent	11:00- 4:00	10:00- 1:00	Silent	9:00-10:00	Silent
KWSC	Pullman, Wash.	348.6	Silent	Silent	10:30-12:00	Silent	10:30-12:00	Silent	10:30-12:00
KYW	Chicago, Ill.	535.4	8:00-11:00	5:00- 9:00	Silent	8:00- 1:30	8:00- 2:30	8:00- 1:30	8:00- 2:30
NAA	Radio, Va.	434.5	8:00-11:00	Silent	7:45- 8:00	7:45- 8:00	7:25- 8:40	7:45- 8:00	7:45- 8:00
PWX	Havana, Cuba	400	Silent	Silent	Silent	Silent	8:30-11:00	Silent	Silent
WAHG	Richmond, N. Y.	315.6	12:00- 2:00	Silent	8:00- 2:00	Silent	7:30-12:00	Silent	8:00-11:00
WAMD	Minneapolis, Minn.	243.8	11:00-12:00	3:00-11:00	Silent	11:00-12:00	11:00-12:30	11:00-12:30	11:00-12:00
WBAP	Fort Worth, Tex.	475.9	8:00- 9:00	12:00- 1:00	8:30- 2:00	8:30-11:45	8:30-11:45	8:30-11:45	8:30-11:45
WBAR	Sisiht, Wis.	406	Silent	11:00-12:00	10:00-11:00	Silent	9:00-10:00	8:30- 9:30	Silent
WBBM	Chicago, Ill.	226	9:00- 1:00	5:00-11:00	Silent	9:00- 1:00	9:00-11:00	9:00- 2:00	9:00-12:00
WBBR	Staten Island, N.Y.	272.6	8:00-10:00	9:00-10:15	8:00- 9:00	Silent	Silent	8:00- 9:00	Silent
WBCN	Chicago, Ill.	266	10:00- 2:00	6:00- 1:00	Silent	10:00- 2:00	9:00- 1:00	10:00- 3:00	10:00- 2:00
WBZ	Springfield, Mass.	333.1	Silent	8:00- 9:00	6:30-11:05	6:30-10:02	6:30- 9:45	6:30-10:00	6:30-11:05
WCAE	Pittsburgh, Pa.	461.3	8:30- 9:30	6:30- 8:20	6:30-12:00	8:00-11:00	8:30-10:00	9:00-11:00	8:00- 9:30
WCAP	Washington, D. C.	468.5	Silent	4:00- 9:15	7:00-10:30	Silent	7:00-12:00	Silent	7:45-12:00
WCAU	Philadelphia, Pa.	278	Silent	5:00-11:20	8:00-11:00	7:30-12:00	7:30-11:00	7:30-12:00	7:45-12:30
WCBD	Zion, Ill.	344.6	Silent	9:00-11:30	Silent	9:00-11:30	Silent	9:00-11:30	Silent
WCCO	Minn-St. P., Minn.	416.4	7:05-12:00	5:20-11:15	7:00-12:00	7:30-11:00	8:00- 1:30	8:00-10:00	7:15-11:00
WCX	Detroit, Mich.	516.9	6:00- 7:00	Silent	6:00- 9:00	6:00-11:00	6:00- 9:00	6:00- 9:00	6:00-11:00
WDAF	Kansas City, Mo.	365.6	7:00- 2:00	Silent	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00
WDWF	Providence, R. I.	440.9	Silent	Silent	Silent	8:30- 9:30	Silent	Silent	Silent
WEAF	New York, N. Y.	491.5	7:00- 1:00	8:20-11:15	7:00-12:30	7:00- 1:00	7:00- 1:00	7:00- 1:00	7:00- 1:00
WEAO	Columbus, Ohio	293.9	Silent	Silent	Silent	Silent	8:00- 9:00	8:00- 9:00	Silent
WEAR	Cleveland, Ohio	389.4	7:00- 8:00	3:30- 7:00	7:00- 8:00	7:00-10:00	7:00- 8:00	7:00-11:00	7:00-11:00
WEBH	Chicago, Ill.	370.2	8:30- 1:30	8:00-10:00	Silent	8:30- 1:30	8:30- 1:30	8:30- 1:30	8:30- 1:30
WEBJ	New York, N. Y.	272.6	Silent	Silent	Silent	8:00- 9:00	8:00-10:00	Silent	7:00- 9:00
WEEI	Boston, Mass.	348.6	Silent	7:20-10:20	8:30-10:00	8:00-11:00	8:00-10:00	8:00-11:00	8:30-11:00
WENR	Chicago, Ill.	266	7:00- 3:00	3:00-12:30	Silent	7:00-11:00	7:00- 3:00	7:00-11:00	7:00- 3:00
WFAA	Dallas, Tex.	475.9	9:30- 1:00	7:30-12:00	7:30-10:30	7:30- 1:00	Silent	7:30- 1:00	7:30-10:30
WFBH	New York, N. Y.	272.6	11:30- 2:00	5:00- 8:00	11:30- 2:00	11:30- 2:00	11:30- 2:00	11:30- 2:00	11:30- 2:00
WFI	Philadelphia, Pa.	394.5	8:00- 9:30	7:30- 8:30	Silent	8:00-12:00	Silent	8:00-11:00	Silent
WGBS	New York, N. Y.	315.6	6:00-11:30	8:00- 9:00	7:00- 7:15	6:30-11:30	6:00- 8:30	6:00- 8:45	Silent
WGBU	Fulford, Fla.	278	6:30- 1:00	9:30-12:00	6:30- 1:00	6:30- 1:00	6:30- 1:00	6:30- 1:00	6:30- 1:00
WGCP	New York, N. Y.	252	Silent	8:00-11:15	8:00-11:00	Silent	8:00-11:15	Silent	8:00-11:00
WGES	Oak Park, Ill.	250	11:30- 3:00	11:30- 3:00	Silent	11:30- 3:00	11:30- 3:00	11:30- 3:00	11:30- 3:00
WGHP	Detroit, Mich.	270	Silent	Silent	7:00- 9:00	7:00- 9:00	7:00- 9:00	9:00-11:00	9:00-11:00
WGN	Chicago, Ill.	370.2	7:30-12:30	3:30-11:00	Silent	7:30-12:30	7:30-12:30	7:30-12:30	7:30-12:30
WGR	Buffalo, N. Y.	319	Silent	7:45-10:15	8:30- 1:00	8:00-11:00	8:00- 1:00	8:00-11:00	8:45- 1:00
WGY	Schenectady, N. Y.	379.5	9:00-12:00	6:30-10:00	6:30- 8:30	7:00-11:00	Silent	6:45-11:30	7:15-10:30
WHA	Madison, Wis.	535.4	Silent	Silent	8:30-10:00	Silent	8:30-10:00	Silent	8:30-10:00
WHAD	Milwaukee, Wis.	275	Silent	4:15- 5:15	9:00-11:00	Silent	11:30- 1:00	Silent	9:30-11:00
WHAR	Atlantic City, N. J.	275	7:30-10:30	7:50- 1:15	7:30-10:00	7:30- 1:15	Silent	7:30-11:00	7:30- 1:15
WHAS	Louisville, Ky.	399.8	8:30-10:00	5:00- 6:00	Silent	8:30-10:30	8:30-10:00	8:30-10:00	8:30-10:00
WHAZ	Troy, N. Y.	379.5	Silent	Silent	9:00-12:00	Silent	Silent	Silent	Silent
WHB	Kansas City, Mo.	365.6	Silent	9:00- 2:00	8:00- 9:00	Silent	8:00- 9:00	9:00-11:30	8:00- 9:00
WHN	New York, N. Y.	361.2	7:30-10:00	5:00- 5:30	8:00-12:00	9:30-10:00	10:00-11:30	8:00-10:00	7:30-12:30
WHO	Des Moines, Ia.	526	Silent	8:30- 9:30	8:30- 1:00	8:30- 1:00	7:30- 1:00	8:30- 1:00	8:30- 1:00
WHT	Chicago, Ill.	399.8	8:00- 2:00	1:00-11:30	Silent	8:00- 2:00	8:00- 2:00	8:00- 2:00	8:00- 2:00
WIBO	Chicago, Ill.	226	7:00- 9:00	7:00- 1:00	Silent	7:00- 4:00	7:00- 4:00	7:00- 4:00	7:00- 3:00
WIP	Philadelphia, Pa.	508.2	8:00-12:05	Silent	Silent	8:00- 1:00	Silent	8:00- 1:00	Silent
WJAR	Providence, R. I.	305.9	Silent	7:20-10:15	8:00-10:00	7:30-10:00	7:30-11:00	8:00-11:00	8:00-12:00
WJAS	Pittsburgh, Pa.	275.3	7:00-12:00	Silent	7:00-12:00	7:00-12:00	7:00-12:00	7:00-12:00	7:00-12:00
WJAZ	Chicago, Ill.	322.4	Silent	Silent	Silent	Silent	Silent	11:00- 1:00	Silent
WJJD	Mooseheart, Ill.	302.8	7:00-12:00	9:45-11:00	Silent	7:00- 2:00	7:00- 2:00	7:00- 2:00	7:00- 2:00
WJR	Pontiac, Mich.	516.9	7:00-12:30	8:30-10:00	7:00-12:30	7:00-10:00	7:00-11:30	7:00-12:00	7:00- 9:00
WJY	New York, N. Y.	405.2	Silent	8:15- 9:15	Silent	8:30-11:15	Silent	8:30-10:00	8:45- 9:45
WJZ	New York, N. Y.	454.3	7:00-11:30	8:00-11:00	8:15- 9:15	8:10-11:30	9:30-11:30	8:30-11:00	8:15-10:45
WKAQ	San Juan, P. R.	340.7	Silent	Silent	Silent	Silent	7:00- 9:00	7:30- 9:00	8:00- 9:00
WKAR	Lansing, Mich.	285.5	12:30- 2:00	Silent	7:00- 8:00	Silent	8:00- 9:15	Silent	7:00- 8:00
WKRC	Cincinnati, O.	422.3	11:00-12:00	7:45-12:00	7:00- 1:00	11:00- 1:00	9:00-11:45	9:00-11:00	Silent
WLIB	Chicago, Ill.	302.8	8:00- 1:00	8:00-10:00	Silent	8:00- 1:00	8:00- 1:00	8:00- 1:00	8:00- 1:00
WLIT	Philadelphia, Pa.	394.5	Silent	Silent	7:30-11:00	Silent	7:30-11:00	Silent	7:30-11:00
WLS	Chicago, Ill.	344.6	8:45- 2:00	7:30- 8:55	Silent	8:00- 9:00	8:00-12:30	8:00- 9:55	8:00-12:30
WLW	Cincinnati, O.	422.3	8:00-10:00	8:30-10:30	8:00- 9:00	7:30-11:00	8:00-12:00	8:00- 1:00	Silent
WLWL	New York, N. Y.	288.3	Silent	7:00- 8:00	8:00-10:00	8:00- 9:00	Silent	8:00-10:00	Silent
WMAK	Lockport, N. Y.	265.5	7:30-10:00	7:30- 8:30	8:00-10:00	Silent	7:30-10:00	Silent	9:00-10:00
WMAQ	Chicago, Ill.	447.5	9:00-11:00	Silent	Silent	9:00-11:15	9:00-10:45	8:00-12:00	9:00-11:15
WMBB	Chicago, Ill.	250	8:00-11:30	8:00-11:30	Silent	8:00-11:30	8:00-11:30	8:00-11:30	8:00-11:30
WMBF	Miami Beach, Fla.	384.4	7:00-12:00	7:12-12:00	7:00-12:00	7:00-12:00	7:00-12:00	7:00-12:00	7:00-12:00
WMC	Memphis, Tenn.	499.7	8:30-10:30	Silent	8:30-10:30	8:30- 1:00	Silent	8:30-10:30	8:30- 1:00
WMCA	New York, N. Y.	340.7	9:00- 1:00	7:00-10:00	9:00-12:00	8:00-12:00	9:00-12:00	9:00-12:00	8:00-11:45
WNAC	Boston, Mass.	280.2	8:00-10:00	3:00- 9:30	8:00-10:00	8:00-10:00	8:00-10:00	8:00-10:00	8:00-10:00
WNYC	New York, N. Y.	526	7:00-10:30	9:00-11:00	7:35-10:30	7:10-10:30	7:30-10:30	7:35-10:30	7:30-10:30
WOAI	San Antonio, Texas	394.5	Silent	9:00-11:30	Silent	9:30-11:30	9:30-10:30	Silent	10:30-11:30
WOAN	Lawrenceb'g, Tenn.	282.8	Silent	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00	10:00-11:00
WOAW	Omaha, Nebr.	526	7:00- 1:00	10:00-11:00	7:00-12:00	7:00- 2:00	Silent	7:00-11:00	7:00-11:00
WOAX	Trenton, N. J.	240	Silent	9:30-11:30	Silent	Silent	Silent	Silent	Silent
WOC	Davenport, Ia.	483.6	10:00- 1:00	9:00-12:30	Silent	7:30-10:00	10:00-11:00	8:00- 1:00	9:00-10:00
WOK	Homewood, Ill.	217.3	11:00- 2:00	7:30-9:30	7:00- 2:00	11:00- 2:00	11:00- 2:00	11:00- 2:00	11:00- 2:00
WOO	Philadelphia, Pa.	508.2	Silent	7:30- 8:30	6:00- 7:00	7:30- 8:30	7:30-12:00	7:30- 8:30	7:30-12:00
WOQ	Kansas City, Mo.	278	9:00-12:00	9:00-10:15	Silent	9:00-10:00	Silent	8:00-10:00	Silent
WOR	Newark, N. J.	405.2	6:15- 8:30	Silent	6:15- 9:30	6:15- 7:30	6:15-10:00	6:15- 7:30	6:15- 7:30
WORD	Batavia, Ill.	275	9:30-11:30	7:45- 9:00	Silent	9:30-11:00	9:30-11:00	9:30-11:00	9:30-11:30
WOS	Jefferson City, Mo.	440.9	Silent	9:00-10:00	9:00-11:00	Silent	9:00-11:00	Silent	9:00-11:00
WPG	Atlantic City, N. J	299.8	7:00-12:00	4:15-12:00	7:00-12:00	8:00-12:00	Silent	7:00-12:00	7:00-12:00
WQJ	Chicago, Ill.	447.5	8:00- 4:00	8:00-11:00	Silent	8:00- 3:00	8:00- 3:00	8:00- 3:00	8:00- 3:00
WRC	Washington, D. C.	468.5	7:00-11:30	Silent	Silent	7:00-11:00	Silent	7:00-11:00	Silent
WREO	Lansing, Mich.	285.5	10:00-12:00	Silent	Silent	8:15-10:00	Silent	8:15-10:00	Silent
WRW	Tarrytown, N. Y.	273	9:00-11:30	8:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30	9:00-11:30
WSAI	Cincinnati, O.	325.9	9:00- 1:00	4:00- 5:00	11:00- 1:00	8:45-11:30	11:00- 1:00	8:00-11:00	Silent
WSB	Atlanta, Ga.	428.3	9:00- 1:00	8:30-10:15	9:00- 1:00	9:00- 1:00	11:45- 1:00	9:00- 1:00	9:00- 1:00
WSM	Nashville, Tenn.	282.8	8:15-12:00	8:30- 9:30	8:00-12:00	Silent	8:00-12:00	Silent	Silent
WSMB	New Orleans, La.	319	9:30-11:30	Silent	9:30-12:30	Silent	9:30-11:30	9:30-12:00	Silent
WSUI	Iowa City, Ia.	483.6	Silent	8:00-11:00	8:30-10:00	Silent	Silent	Silent	Silent
WTAG	Worcester, Mass.	268	Silent	7:00- 9:15	8:00- 9:00	8:00-11:00	8:00- 9:00	8:00-11:00	8:00- 9:00
WTAM	Cleveland, O.	389.4	6:00-12:00	Silent	6:00-12:00	6:00- 7:00	6:00-12:00	6:00- 7:00	6:00- 7:00
WTIC	Hartford, Conn.	475.9	Silent	Silent	6:30- 9:00	6:30-10:00	6:30-11:00	6:30- 8:45	6:30-12:30
WWJ	Detroit, Mich.	352.7	Silent	6:20-10:00	6:00- 9:00	6:00- 9:00	6:00-10:00	6:00-12:30	6:00-10:00

Friday, December 11

Headliners Today

Eastern	Central	Mountain	Pacific	
7:15 p. m.	6:15 p. m.	5:15 p. m.	4:15 p. m.	WBZ (333.1) Ippolito quartet.
7:30	6:30	5:30	4:30	WHO (526) Salvation Army program.
8:15	7:15	6:15	5:15	WGY (379.5) The Hidden Idol, musical comedy.
8:30	7:30	6:30	5:30	KSD (545.1) Old Fashioned songs. WTIC (475.9) Community night.
9	8	7	6	CNRT (365.9) Old Folks at Home night. WEBH (370.2) WEBH Light Opera company. WMCA (340.7) Hardman hour of music.
9:30	8:30	7:30	6:30	KOB (348.6) "Captain Crossbones."
10	9	8	7	KOA (322.4) "Bear Hunting in the Rockies." KTHS (374.8) All Nations' hour.
10:45	9:45	8:45	7:45	WSB (428.3) Nunnally's Minature symphony.
11	10	9	8	KFWB (252) Russian Gypsy trio. KNX (336.9) West Coast theaters.

Friday, silent night for: CHIC, CKNC, CNRC, CNRM, CNRO, CNRR, CNRW, KFMQ, KFRU, KFUO, KGO, KLDS, KPRC, KUOM, PWX, WAFD, WBBR, WCBD, WEAO, WEBW, WGBS, WGST, WHAZ, WIP, WJAZ, WJBL, WKRC, WLW, WLWL, WOI, WOR, WRC, WREO, WSAI, WSUI, WSMB, WTAM.

Eastern Time Stations

CNRT, Toronto, Can. (356.9), 6:30 p. m., Luigi Romanelli and his King Edward hotel concert orchestra; 9, violin piano recital, Geza de Kresz, director; Flora Matheson, violinist; Virginia Knott, pianist; 11, Luigi Romanelli and his King Edward hotel dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 10 a. m., domestic science and arts, Stockman Farmer studio; 12:20 p. m., Sunday school lesson, James C. Mace; 6:30, dinner concert; 9, Teaberry time.

WAHG, New York, N. Y. (315.6), 12-12:30, p. m., Sid Cohen, pianist; 7:30-7:45 p. m., talk, Prof. Richard E. Mayne; 7:45-8, Edgar Gruen, baritone; 8-9, Skinner Organ recital; 9-9:15, Radio Santa Claus; 9:15-9:30, Edgar Gruen, baritone; 9:30-9:45, Branfield trio; 9:45-9:55, Betty and Helen Lasner, piano duets; 9:55-10:15, Branfield trio.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:15, Ippolito quartet; Mary Anderson, soprano; Irdine Maddox, contralto; Thomas Kelly, baritone; Charles Hancock, tenor; Harry G. Starr, accompanist; 8, Edwin McEnelly and his orchestra; 8:30, evening of opera, Madame Vinello-Johnson, director; 9:30 "Whatdoyoucallit club."

WCAE, Pittsburgh, Pa. (461.3), 12:30 p. m., program for day; 3, program, Loew's Aldine theater; 6:30, concert, William Penn hotel; 7:30, children's period; 7:45, address, current motor topics, auto tours and road conditions; 8:30, Pleasant Valley country club orchestra.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Metropolitan Tower N. Y. C.; 7-12 p. m. "Radio Transmission of Music" Professor Dayton C. Miller; Mozart string quintet; concert men's club of

(Continued on page 21)

BEAR HUNTING LESSON FRIDAY AT KOA

Friday, December 11

(Continued from page 20)

All Saints church; Chevy Chase, Md.; dance music, Boernstein's orchestra.

WCAU, Philadelphia, Pa. (277.6), 7:45 p. m., Clarence Seaman's orchestra; 8:15, chiropractic talk, Doughty Marsh; 8:30, smoker entertainment, Houston Hall; 9, Mr. Hill's instrumental trio; 9:30, Billy and his saxophone; 9:45, Ed Kiefer, the Radio humorist; 10, Walter A. McClatchy's Lads O'Melodie; 10:30, Jack Myers' Musical Architects.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 9, studio program; 10, dance music, Graystone ballroom.

WEAF, New York, N. Y. (491.5), 6:46-7-7:20 a. m., "Tower Health Exercises"; 10:45-12, home service talk, Betty Crocker; musical program to be announced; "Practical Household Arts," Columbia university; 4-5 p. m., Alfred Dulin, pianist; talk to be announced; 6-12 p. m., music, rose room, Hotel Waldorf-Astoria; "A Trip With Santa Claus Through Toyland," James McCreery company; "Sir Hobgoblin Story," Blanche Elizabeth Wade; "The Happiness Boys"; story teller, G. R. Kinney company; Eagle Neutrodyne trio; Mears and company; Thomas Hughes, pianist; Meyer Davis' Lido Venice orchestra.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Blenheim theater ensemble, direction, Sol Klein; 7:45-8, Kathryn Connolly, soprano; 8-8:15, Radio mystery talk; 8:15-8:30, Carrie Cohen, pianist; 8:30-8:45, A. Wayne, reporter; 8:45-9, Rudolph Moskowitz, violinist, accompanist, Norman Hennefeld.

WFI, Philadelphia, Pa. (395), 10:40 a. m., home service talk, Betty Crocker; 1 p. m., Strawbridge and Clothier tea room ensemble; 3, Helen Bader Yose, pianist; Kathryn Beard, soprano; Ruth Walker Hallowell, reader; Caroline Hoffman, pianist; 3:45, fashion talk, Eleanor Gunn; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra.

WGBS, New York, N. Y. (315.5), 10-10:10 a. m., timely talks with Terese; 10:10-10:20, Mary Miller pianist; 10:20-10:30, talk, Bertram Taylor; 10:30-10:40, Mary Miller, pianist; 10:40, to be announced; 1:30-1:35 p. m., scripture reading; 1:35-1:45, Atlas string trio; 3-3:10, interview, Evelyn Herbert, Harry Welshman; 3:10-3:30, Helen J. Johann, soprano; 3:30-3:45, Mrs. E. R. Thomas, songs and stories; 3:35-3:40, Dr. A. G. Robyn, theory lesson; 6-6:30, Uncle Geebee; 6:30-7:30, Jule Anzwell's orchestra.

WGCP, New York, N. Y. (252), 1-1:30 p. m., mirror race; 1:30, results half hourly; 3-3:15, Edna Josephs, pianist; 3:15-3:30, Osborne and Meredith, songs; 3:30-3:45, Leslie McLeod, 3:45-4, Samuel Weber, blind pianist; 4-4:15, Hugo Angelo and Len Gray; 4:15-4:30, Rose Pomerantz, pianist; 4:30-4:45, May Bellin, ballads; 4:45-5, Charol de Thomee, pianist; 5-6, Clarence Profit entertainers; 6-6:15, Litmann's orchestra; 6:15-6:30, Daddy Dingle and his Jungle box; 6:30-7, Richman entertainers; 8-8:30, orchestra; 8:30-9, Richard Cheatham's band; 9-9:15, Uukulele Bob McDonald; 9:15-9:30, Eva Rothenberg, pianologue; 9:30-9:45, Clarence Williams, trio; 9:45-10, Piotti and Val; 10-11, Strickland's orchestra; 11-11:30, Connies orchestra; 11:30-12, Murphys entertainers.

WGHP, Detroit, Mich. (270), 10-12 p. m., the Skylark dance band; WGHP mixed quartet; Mildred Carney Johnson, contralto; Leona E. Mitchell, soprano.

WGR, Buffalo, N. Y. (319), 2:30 p. m., WGR's afternoon program; 6:30, Yankee Six Club orchestra; 8:45-9:30, program by Blanche Langhans; 9:30-10:15, program by Charles F. Adams and daughters, Frances and Lucille; 10:15-10:30, W. Carl Brownjohn, baritone; 10:30, Hewitt Rubber company program, "Thirty Minutes of Something Different;" 11, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGY, Schenectady, N. Y. (379.5), 2 p. m., Asia Restaurant orchestra; 2:30, "Health Notes," Dr. C. W. Woodall; "Don't Sing before Breakfast," WGY matinee players; 6:30, international Sunday school lesson; 7, dinner music; 7:30, health talk; 7:40, "French by Radio," Leon A. Huguemont; 8:15, "The Hidden Idol," WGY players; WGY orchestra; 10:30, WGY orchestra; Sidney W. Ashe, speaker.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, talk; 8, Seaside hotel orchestra; 11:15, Strand theater organ recital.

WHN, New York, N. Y. (361.2), 6-6:15 p. m., Littman's dinner music; 6:15-6:30, Daddy Winkum's Rhyme machine; 6:30-7, Littmann's dinner music; 7-7:30, Harry Richman and his entertainers; 7:30-8:30, Melody club orchestra; 10:30-11, Roseland dance orchestra; 11-11:30, Caravan club orchestra; 12-12:30 a. m., Silver Slipper orchestra.

WIP, Philadelphia, Pa. (508.2), 1 p. m., Gimbel Tea room orchestra; 3, artist recital; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime story; St. Matthews M. E. church choir.

WJR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's petite symphony orchestra; soloists; 7:30, Arctic-Condon trio; 8, Summerfield and Hecht.

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio school, lectures Botany, English, Forestry; 8 educational hour.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7, Ernie Golden and his Hotel McAlpin orchestra; 8-8:30, talk, O. G. Van Campen; 8:30-8:50, talk; 8:50-9, Ralph O. Liesno, baritone, Cecile Arnold, soprano; Hon. Leon C. Weinstock; 9-10, Hardman music hour; 11-11:15, Ukulele Bob McDonald; 11:15-11:30, critic, Donald Flamm.

WNYC, New York, N. Y. (526), 11-12:30 a. m., women's program; 6:20-6:30, piano selections; 6:30-7, elementary German lessons, V. H. Berlitz; 7-7:30, advanced German lessons; 7:35-8 Board of Estimate meeting; 8-9:15, concert program; 9:15-10:10, recital and talk, Herman Newman; 10:10-10:30, talk, Prof. J. G. Carter Troop.

WOR, Newark, N. J. (405.2), 6:15-6:17 p. m., words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-6:45, bedtime stories; 6:45-7:30, Jacques Jacobs Hotel Shelton ensemble.

WRC, Washington, D. C. (468.5), 10 a. m., women's hour, WJZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., New Willard hotel orchestra; 5, W. Spencer Tupman's orchestra; 6, book reviews.

WREO, Lansing, Mich. (285.5), 6-7 p .m., concert, "Speed-Wagon serenaders," "Gold Standard ensemble."

WTAG, Worcester, Mass. (268), 10:45 a. m., food hints, Mildred C. Thomas; 12:05-2 p. m., luncheon music, WTAG orchestra; 8, concert.

WTIC, Hartford, Conn. (475.9), 11 a. m., Housewives forum, Mrs. J. M. Dean; 6:30 p. m., young people's half hour; 7, music, Emil Heimberger's Hotel Bond trio; 8:30, community night, Bristol, Conn.; New Departure brass band; Springmakers male chorus; Bristol brass quartet; Bristol saxophone quartet; Mrs. L. L. Beach, organist; Elizabeth Gleason, soprano; Hazel Porter Snow, contralto; Phillip Shailer, baritone; "Historical Sketch," Judge Epaphroditus Peck; 11:30, Clockmakers serenaders.

WWJ, Detroit, Mich. (352.7), 7:30 and 8 a. m., setting-up exercises, R. J. Horton; 9:30, "Tonight's Dinner," special talk, Woman's Editor; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra; 9, dance program.

Central Time Stations

KFAB, Lincoln, Nebr. (340.7), 10:30-11 a. m., "Prove Your Textiles," Elizabeth Rutherford; 1:15-1:30 p. m., High School Convocation, musical; 3-3:30, "Queen of Sheba," Paul H. Grummann; 5:30-6:30, dinner hour concert; Buick Little symphony; Belshaw's orchestra; 8:05-8:30, "National Wealth Income," Dean J. LeRossignol; 8:30-10:30, Mabel and Julius Ludlam, violinist and pianist; Joe Bruhl and Victorians orchestra; Gordon G. Dewey and Hember, flute soloists and duettists.

KFDM, Beaumont, Texas (315.6), 8-10 p. m., Magnolia Petroleum company's refinery band.

KFMX, Northfield, Minn. (337), 10-11 p. m., organ recital.

KFNF, Shenandoah, Iowa (266), 7 p. m., Sunday school lesson.

KFVE, University City, Mo. (240), 8:30 p. m., "Amusement Review," Romaine Fielding; studio entertainers; Romaine orchestra.

KMA, Shenandoah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talks, Earl E. May; music; 6-7, dinner program; 6:30, How do you do boys, Grady and Doc, Connie Forte and the slumber boat; 9-11, mixed musicale; R. D. Morris, director.

KPRC, Houston, Texas (296.9), 12 m., Frank Tilton, blind pianist.

KSAC, Manhattan, Kansas (341), 9-9:25 a. m., music, talks, agricultural primer, calisthenics; 9:55-10:25, readings, question box; "Planning Today's Meals;" 12:35-1:05 p. m., readings, question box; "Exhibition Poultry," J. H. McAdams; "A Few Don'ts About Pruning," W. R. Martin; 4:30-5, Legson in Color and Design; 6:30-7:30, travelog, H. T. Hill; "Speaking in Public; College credit course; English literature; "Order Inquiry and Acknowledgment Letters," J. O. Faulkner; "Conservation and Value of Stable Manure," P. L. Gainey.

KSD, St. Louis, Mo., (545.1), 7 p. m., "Fur Hour;" Eggert Instrumental quintet; 7:30, "Commerce Hour;" Arthur Joseffy, baritone, old fashioned songs.

KSO, Clarinda, Iowa (241.8) 7-10 p. m., dance orchestra.

KTHS, Hot Springs, Ark. (374.8), 9-10 p. m., "All Nation's Hour," Meyer Davis ensemble, Lon Chassy, conducting; 10-11, the Pooley Hour serenaders, Rainbow Garden.

KYW, Chicago, Ill. (535.4), 6:30-7 a. m., morning exercises; physical director Y. M. C. A.; 7:30, Morning Family Worship; 11:15, "Rooting Piggishly for Nourishment," John W. Cutting; 11:55, table talk, Anna J. Peterson; 12-1 p. m., noonday concert, Commonwealth Edison company; 1-2, luncheon concert, Congress hotel, Joska DeBarbary and his orchestra; Coon Sanders, original nighthawks; 6:35-7, children's bedtime story, Walter Wilson; 7-7:20, dinner concert, Congress hotel; Joska DeBarbary and his orchestra; Coon Sanders original nighthawks; Joska DeBarbary and his orchestra; 9-10, musical program, Commonwealth Edison company; 10-12:30, midnight revue; Coon Sanders original nighthawks; Henri A. Keates, organlogue, Art Linick, announcing; 1-2 a. m., Insomnia club, Coon Sanders original nighthawks.

WAMD, Minneapolis, Minn. (243.8), 12 noon, musical program, Cobe Sheffell, Bob Edlund entertainers; Oscar Belham pianist; 7:05, Minneapolis Public School hour, T. P. Giddings, director; 8, Reception Five; 11, Skyrocket frolic, George Osborn's Hotel Radisson Skyrockets.

WBAP, Fort Worth, Texas (475.9), 12:05-12:30 p. m., musical program; 6-6:30, Texas Hotel Tokio Royals; 7:30-8:30, Northern Texas Traction company; 9:30-10:45, Will Foster, organist.

WBBM, Chicago, Ill. (226), 4-6 p. m., Harry Sosnik, Sandy Meek; Valentino Inn orchestra; Harold Morava; William Dalton; Joe McManus, Moulin Rouge orchestra; 8-10, Tip trio; Four Crows quartet; David Handler; Morris Silverman; Kristi Kalleta, cellist; Mowers and Seaburg, two piano soloists.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, "The Shopper's Ready Helper," shopping talk; 5-5:15 p. m., police bulletins; 7-8, Fireside hour, WBCN hobby club; George R. Cleveland, "Big Boy" Yagle, pianist; Will Rossiter, "The Daddy of the Song Publishers," tenor and songwriter; Harold Johnson, boy xylophonist; 10-12, request program; Midway dancing gardens orchestra; Eddie Matts and Billy Donovan, tenor and pianist; West End Harmony boys, instrumental duo; Ed Dempsey, "The Silken-Voiced Tenor;" Alice McMahon, contralto; "Big Boy" Yagle, pianologist.

WCCO, St. Paul, Minn. (415.4), 9:30 a. m., program for day; 10:45, "Why is a Perfect Cake," Betty Crocker; 12 m., Concert, Dick Long's Dayton trio; 2 p. m., woman's hour; 4, Readers' club, Mrs. Walter Stevens; 5:30, court of Gold Medal; 6:15 concert, Chadbourne's Nicollet hotel orchestra; 7:45, "Bee Keeping," lesson 2; 8:15, musical program; 10:05, dance, Dick Long's Nankin Cafe orchestra.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., Gold Medal flour cooking school; 6-7 p. m., school of the air; address, Kansas City children's bureau; the Tell-Me-a-Story Lady; Trianon ensemble; 8-10, The Star's Radio orchestra, soloists; 11:45-1 a. m., Nighthawks frolic; the Plantation players; Earl Coleman's orchestra; Kuhn's orchestra.

WEBH, Chicago, Ill. (370.2), 7-8 p. m., Oriole orchestra; Pauline Sachs, soprano; Eleanor Kaplan, violinist; 9-10, WEBH Light opera company; 11-1, Oriole orchestra; Rita McFawn, soprano; Jack Penewell, twin guitarist.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., "The Sunday School Lesson," Dr. Horace M. Whaling, farmer topic; 3:30-4, Sears-Roebuck agricultural foundation home-makers' program; 4:30-5, woman's hour, literary review; 6:30-7:30, municipal band, Grapevine, Texas, Josef Ruvolo, conductor; 8:30-9:30, musical program, United Chemical company.

WHAD, Milwaukee, Wis. (275), 11 a. m., pianologue, Andy Hertel; 4 p. m. Ira Schnell, baritone; 6-7, Arthur Richter, organist; 7, Bill Juhre's Radio Cartoon game; 8:30-10, Wisconsin theater revue; 35-piece Wisconsin theater concert orchestra; Dexter's Wisconsin roof orchestra.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; 7:30-9, concert, Gene Klingman, ukulele soloist, pianist and director; Sara King, pianist; civil service talk, O. A. Beckman.

WHO, Des Moines, Iowa (526), 7:30-8:30 p. m., Salvation army program; 8-9, Lions club quartette, Marshalltown, Iowa; 11-12, dance program, Bankers Life Corn Sugar orchestra, Leon Dashoff.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club, Jelke Good Luck Girl, studio features; 10:45, Betty Crocker home service; 11, special studio features; 12 p. m., Al Carney's complimentary organ hour; 1-2, special studio program, Grayling's string trio; 6, classical program, dinner organ recital, Grayling's string trio; Bob York, tenor; Bernice Taylor, soprano; Mina Smith, violinist; Leola Aikman, soprano; 7:45 (238), musical features; 9:30, Dutch Masters, Loftis half hour of music, Freddie Whitmer, pianist; Samuel G. Rowe, tenor; Oscar Heather, tenor; Pat Barnes, tenor; Helen Rauh, pianist; Husk O'Hares orchestra; 12, Pat Barnes and Al Carney.

WJJD, Mooseheart, Ill. (302.8), 10 p. m., Agnes Pringle, Cleo Mesner, Jean St. Anne, Christian A. Grimm, Senator Harold C. Kessinger; 12, Geneva organ.

WLIB, Chicago, Ill. (302.8), 7-8 p. m., dinner concert, Blackstone and Drake hotel orchestras; 9-10, popular, Hamm's orchestra; 11-12, dance, Drake and Blackstone hotel orchestras.

WLS, Chicago, Ill. (344.6), 12 m.- 1 p. m., R. F. D. farm program, W. L. S. trio; 6:15, announcements; 6:30, Ralph Emerson, organist; 7, Ford and Glenn, lullaby time; 7:15, songs of the season, W. L. S. trio; 7:45, "Poet's Corner," Wallace Bruce Amsbarny; 8, R. F. D. farm program; 9, South Elgin's mandolin and guitar orchestra; 9:30, Margaret Anderson, pianist; 9:45, Bethel church choir; 10:40, Ford and Glenn time.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12:30, noonday concert, Hotel Gibson, Robert Visconti, director.

WMAQ, Chicago, Ill. (447.5), 12:25 p. m., Y. M. C. A., forum; 1, Radio farm school; 2, shut-in program; 4, talk, "the Preschool Child;" 4:30, "Foibles of the Moment," Mrs. Graham Alds; 5, Child Life stories; 6, organ, Chicago theater; 6:20, Family Altar league; 6:30, Wide-Awake club program; 8, musical lecture, Mr. and Mrs. Marx Oberndorfer; 8:30, Whitney trio; 9, lecture, University of Chicago; 9:20, Elizabeth Stokes, soprano; 9:45, Christian Endeavor topics.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Frank Fordner, Preston Graves; 9-11, Trianon orchestra, Dell Lampe, director; Woodlawn theater orchestra; David Boyd, Louise Richert, J. T. Carny, Clyde Hager.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Atwater Kent program; 11, midnight frolic.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program, Kamma's Hawaiians; 8:30, musical program, Menger hotel trio.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Sunshine Sunday dinner menu, recipe service; 1, Randall's Royal Fondenelle orchestra; 4:15, Blah bunch; 6, Sandman's visit, Val McLaughlin; 6:20, music review, Hester Copper; 6:50, Brandeis Tea Room orchestra; 9, program, Union Pacific Railroad company; 10:30, Frank Hodek and his Nightingale orchestra.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., farm service day; 3-3:30, home management schedule, Aunt Jane; 4-5, Crescent orchestra; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime stories; 8-9, Glenn Shaver, baritone; Forty Finger recital, Edna G. Riggs; Earl Davis, Grace Gawthorpe, Chester Cable; 9-9:45, "Around the World with 'B. J.' in Eight Months in Eight Nights," B. J. Palmer.

WOI, Ames, Iowa (270), 12:30 p. m., college chimes; 12:45, "Agricultural Economics," Professor C. L. Holmes.

WOK, Chicago, Ill. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; Capitol theater organ; Jean Carlson, soprano; Bob Mokrejs, pianist; 10-1:30 a. m., Gus C. Edwards' orchestra; Husk O'Hare orchestra; Capitol theater program; Tierney's Town club orchestra; Arnold B. Stephenson, musical saw; Harriet Lee, contralto; Herman Sinaiko, violinist; George Allen, tenor; Bob Mokrejs, pianist.

WORD, Batavia, Ill. (275), 8 p. m., Webster hotel concert trio; 8:15, Uncle Dan; 8:30, studio recital, La-Porte Van Sant, director; 9:30, "Radio a Remedial Agent," Dr. Chester A. Morris.

WQJ, Chicago, Ill. (447.5), 11-12 m., Sunday dinner menu, Fred Mann; 3-4 p. m., Helen Harrington Downing; "Your Baby's Teeth," Dr. F. B. Nayes; 7-8, Ralph Williams and his Rainbo Gardens orchestra; Henrietta Nolan, violinist; Everett G. Mitchell, baritone; Muriel Keneally, soprano; 10-1, Dr. H. Lucille Long, harmonica player; Eleanor Terry, Marie Pollette; Melodians; Lean Terrill, baritone; Ed McGinnis, accordionist; Romo Vincent, boy baritone; 1-2, Ginger hour.

WSB, Atlanta, Ga. (428.3), 8 p. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; concert; 10:45, Nunnally's Minature symphony orchestra.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 7-8 p. m., Salon broadcast.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program; 9-10, musical program, Lion Coal company; Ellis Fuel company.

KOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musical; 3:15, exercises; 3:30, housewives matinee; 4, culinary hints; 4:15, fashion review; 6:30, concert, Brown Palace string orchestra, Howard Tillotson, director; 7:30, Sunday school lesson; 8, KOA orchestra; "Bear Hunting in the Rockies," Dr. R. G. Davenport; semi-classical program, courtesy Mr. and Mrs. Robert D. Kenworthy.

KOB, State College, N. M. (348.6), 7:30-8:30 p. m., musical comedy, "Captain Crossbones;" College chorus, orchestra; trio; Miss Holt, soloist; Leslie Weight, J. T. Alexander, duettists; Pirates' chorus, songs; quartet; Bob Monical, Margaret Baca, duettists.

Pacific Time Stations

KFDJ, Corvallis, Ore. (282.5), 7:30 p. m., musical selections; 7:45, "Is the League of Nations a Success?" F. A. Magruder; 7:55, musical selections; 8:05, "House Heating—A Few Fundamentals We Should Know Before Building a New Home," Earl C. Willey; 8:20, "Good Books for the Children's Christmas Stocking," Bertha Herse; 8:35, program of music.

KFOA, Seattle, Wash. (453.3), 6:45-8:15 p. m., Sherman, Clay and company, studio program; 8:30-10, Times studio program; 10-11:30, Eddie Harkness and his orchestra.

KFWB, Hollywood, Calif. (252), 7:30 p. m., "Eye-ologue," Dr. H. S. Marshutz; 7:40, microphone brevities; 8-9, program, John Wright, The Right Tailor, Russian Gypsy trio, Hatch Graham, singing banjoist; California Blue Boys; 9-10, program, Western's Superservice garage; June Pursell and Ron Wilson, Frank Stever, baritone; 10-11, Warner Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 11 a. m., home-making talks, Prudence Penny; 3-4 p. m., Ellen Booker, soprano; violin solos, pupils of Sigmund Anker; 4-5:30, concert orchestra, Hotel St. Francis; 5:30-6, girls hour; 6-7, Norman Woodside's Metropolitan orchestra.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 9-10:30, concert, Sherman, Clay and company; 10:30, hoot owls.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Richard Headrick and Vyola Von, screen juveniles, bedtime story by Uncle John; 7:30, "Romance of Santa Fe Trail," Gladys De Witt; 8-10, program, Western Auto Supply company; 10-11, Art Hickman's Biltmore hotel dance orchestra.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Elsie's Sunset matinee; 8-9:45, program, Western Auto Supply company; 9:45-10:30, Tom Gernovich's ballroom entertainers.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and naborhood children and grown-ups; 7, "Color Photography," Chas. W. Beam; 7:30, "Wonders of Nature," Prof. Alfred Cookman; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30, El Patio ballroom orchestra; 7:30-8, program, Eastern Outfitting company; 8-9, West Coast theaters by remote control; 9-10, Order of Optimistic Donuts, Davis Perfection Bread company; 10-11, dance music; 11-12, Ray West's Cocoanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7-8 a. m., exercises; 10:30, "Ye Towne Cryer," amusement information service; 12 m., scripture reading; 12:45, talk; 1:30-2 p. m., Rudy Seiger's orchestra; 5:30-6, children's entertainment; 6-6:10, "Ye Towne Cryer," amusement information service; 6:30-7, Waldemar Lind's orchestra; 8-12, Palace hotel dance orchestra, Gene James director; Maurice Gunsky, tenor; Merton Borfes, pianist; Al Jacobs, pianist.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. E. L. Spaulding, prayer service; 8-10 p. m., program, Breuner's.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., Gladys Anderson, violinist; Vay Kerns, vocalist; Edith Johnson, pianist; "Getting Ready for the Next Crop," Leonard Hegnauer; "Electrical Pioneers—Thomas Edison," R. D. Sloan.

STATIONS IN ORDER OF WAVE LENGTHS USED

Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call	Meters	Call
217.3	WOK	275	WORD	309.1	KDKA	361.2	KGO	406	WBAR	468.5	WRC
226	WBBM	275.3	WJAS	315.6	KFDM	361.2	WHN	410.7	CKAC	475.9	WBAP
226	WIBO	278	KOIL	315.6	WAHG	365.6	WDAF	416.4	WCCO	475.9	WTIC
240	KFVE	278	WCAU	315.6	WGBS	365.6	WHB	421	KIAF	475.9	WFAA
240	KTAB	278	WGBU	319	WGR	370.2	WEBH	422.3	WLW	480	CYL
240	WOAX	278	WOQ	319	WSMB	370.2	WGN	422.3	WKRC	483.6	WOC
243.8	WAMD	280.2	WNAC	322.4	KOA	374.8	KTHS	428.3	WSB	483.6	WSUI
250	WGES	282.8	WOAN	322.4	WJAZ	379.5	WGY	428.3	KPO	491.5	KGW
250	WMBB	282.8	WSM	325.9	WSAI	379.5	WHAZ	434.5'	CNRO	491.5	WEAF
252	KFWB	285.5	WKAR	333.1	WBZ	384.4	CKY	434.5	NAA	499.7	WMC
252	WGCP	285.5	WREO	336.9	KNX	384.4	KJR	434.5	CFCN	508.2	KLX
265.6	WMAK	288.3	KFKX	337	KFMX	384.4	WMBF	435	AT9	508.2	WIP
266	KFNF	288.3	WLWL	340.7	KFAB	389.4	WEAR	440.9	KLDS	508.2	WOO
266	WBCN	293.9	KTBI	340.7	WKAQ	389.4	WTAM	440.9	WDWF	516.9	CJCA
268	WTAG	293.9	WEAO	340.7	WMCA	394.5	WFI	440.9	WOS	516.9	WCX
270	WGHP	296.9	KPRC	344.6	WCBD	394.5	WLIT	447.5	WMAQ	516.9	WJR
272.6	WBBR	299.8	KFMQ	344.6	WLS	394.5	WOAI	447.5	WQJ	526	WHO
273	KWKH	299.8	KSL	348.6	KOB	399.8	WHAS	454.3	KFOA	526	WNYC
272.6	WEBJ	299.8	WPG	348.6	KWSC	399.8	WHT	454.3	WJZ	526	WOAW
272.6	WFBH	302.8	WJJD	348.6	WEEI	400	PWX	455	KTW	535.4	KYW
273	WRW	302.8	WLIB	352.7	WWJ	405.2	KHJ	461.3	WCAE	535.4	WHA
275	WHAD	305.9	KTCL	356.9	CFCA	405.2	WJY	467	KFI	545.1	KFUO
275	WHAR	305.9	WJAR	356.9	CKNC	405.2	WOR	468.5	WCAP	545.1	KSD

Wants KOA's Help in Curbing Nature

Mountain Farmer Asks Odd Question for Radio Station Feature Department to Answer

DENVER, Colorado—Three Irish potatoes, tipping the scales at slightly less than eight pounds and of sufficient size to feed a family of fourteen persons, are on exhibit today at KOA, Denver broadcasting station of the General Electric company.

The prizes, which were grown high up on the western slope of the Continental divide, were sent to officials in charge of the farm question box at the Rocky Mountain broadcasting station.

"Please tell me," reads an accompanying letter, "how to grow potatoes of regular size. Almost everything I've dug this year ranges from two to six pounds. Besides being poor sellers, they are hard to ship and handle.

"Also, is there any way to check the growth of vegetables? I have a beat that weighs forty-six pounds and carrots that weigh five and a half pounds each."

In response to these inquiries, agricultural experts on the KOA staff recommended a change of variety in answer to this puzzle and announced a general discussion would be scheduled soon on problems of potato and vegetable growers.

Hears Rhode Island, WJAR, in African Diamond Mine

PROVIDENCE, R. I.—It was a voice from home, carried more than 8,000 miles through the air to where he was working, 640 feet below the surface, that brought C. M. Manchester from the diamond mines in Kimberly, South Africa, back to Rhode Island recently. The voice came from WJAR, The Outlet company, Providence, and on his return to Providence Mr. Manchester was the guest of WJAR where he checked his reception on the various programs received on the neutrodyne receiver used in the mines employing the cables of the high speed elevators for an antenna. Mr. Manchester also reported for three other Rhode Islanders in the Kimberly Mines; Jack Conlon, Jimmy Murphy and C. M. Richards.

New Mexico College Gives KOB Agricultural Series

STATE COLLEGE, N. M.—KOB, owned and operated by the New Mexico College of Agriculture and Mechanic Arts at State College, New Mexico, is putting on a special agricultural program each Monday night. The hour between 7:30 and 8:30, mountain time, is given over to lectures by members of the college faculty, who talk on subjects of interest to farmers and farmers' wives and daughters.

Solitaire Card Games Will Be Broadcast Over WLW

CINCINNATI.—There are thousands of shut-ins with Radio receiving sets who do not always have someone with whom they can play cards, and probably know but one or two ways of amusing themselves with playing cards. Now, as a part of its work for shut-ins, the Crosley WLW broadcasting station here has arranged to broadcast a weekly lesson in solitaire, every Thursday at 6:30 p. m.

WTIC Entertains Big Crowd

HARTFORD, Conn.—Picking up the football game reports being broadcast from WTIC and sending them out through ten amplifying horns so that the broadcast could be heard by an immense crowd, was the recent experiment successfully tried by the Hartford Times here.

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Read This to Your Senator

ALTOGETHER, it was a most successful conference which recently concluded its business at Washington. Radio for the present, and even for the future, was well taken care of by the recommendations made by the representatives of the people, the broadcasters and the Radio manufacturers present.

The keynote, announced by Secretary of Commerce Herbert Hoover, in his opening speech at the meeting, was service to the public. "Service to the public," then, shall be the guiding and ruling factor in the administration of Radio.

That is good. Service to the public has proven beneficial, in fact necessary, to the welfare of many large enterprises, and the popular pastime of broadcast listening should prove no exception.

"He Who Serves Best Profits Most," is the motto of the Rotarians. They, and kindred organizations with that thought in mind, have proven its truth.

The public interest must be served.

The conference resolutions, which have been given wide publicity in this and other publications, are purely cooperative in nature. For four years Radio has been regulated only by pure cooperation of the interested parties. But now we need some sort of law—now that we are fairly sure of what is wanted—to make the conference's rulings stick.

And before we can have a law we must go to the senate and house of representatives with a bill. This bill must be passed by both houses and signed by the president.

Representative White of Maine, sponsor of the Radio bill for several years back, will present a new or amended bill shortly after congress convenes December 7.

Will it be passed? What selfish interest will block its path? Or will the bill, as it should, be passed by both houses with overwhelming majorities and receive the president's signature?

We hope, for the benefit of Radio that the latter course will be the case. We should not want to begin an investigation, in the "interest of the public"—note the phrase—as to why certain congressmen voted against, amended, or voted down the bill. If it passes and is signed we will be happy and content.

If it DOES NOT, we shall get busy and investigate the records of the congressmen "conscientiously objecting" to what the Radio industry, the Radio public and the broadcasters have asked to be made into a law of this great country.

Selfish interests of congressmen, be they senators or mere representatives, cannot be tolerated when the interest of the nation's public is at stake.

Buy the Kiddies Their Set

BUY the kiddies their own set so that they can listen in whenever they want and to whatever they wish.

Radio is the greatest potential educational medium ever invented since the printing press. It is greater in one sense for the kiddies, because the average child can understand the spoken word before he or she can read. The bedtime story or lullaby hour of nearly every station has proven itself indispensable, and many a mother has been caused to write applause letters to the lullaby heroes and heroines to satisfy the worship of the little ones.

But childish fingers and curiosity have wrecked many a perfectly good receiver. If the kiddies had their own little set, the family Radio receiver's (and tubes') life would be lengthened, we believe.

Besides, the kiddies can't listen in with the older folk and enjoy what they do. Vice versa, we grown-ups sometimes want to hear other than a continuous stream of children's programs.

Buy the kiddies their own little set!

Superpower and Supersuperpower

ONE year ago we were thrilled to learn that a half a dozen or more broadcasting stations were planning to install five thousand watt stations. Now the style is trending toward fifty thousand watters. WGY and WJZ are at it with their giant stations and many more similar plants will follow. Some day, perhaps, the supersuperpower stations will get enough power to cut through the summer reception interferences.

RADIO INDI-GEST

"Silent Night"

(With due apologies and all respect to the poet mentioned.)

The whistle's blown the end of parting day,
I've hied me home to old four thirty-three,
With switches, knobs and dials I will play
To find what wintry air will bring to me.

Now fades the glimm'ring landscape on the sight
And "Silent" eve forecasts DX galore,
With pencil, log, my pouch and Jimmy Pipe,
I'll tune them all and then I'll try for more.

Full many a song of purest tones and theme
The unseen waves of ether clearly bear,
With quips of wit and opera too, and melodies serene
They'll come to me from out the frosty air.

But as I turn with care the knobs,
No voices do I hear,
Tough luck has come to me in gobs,
'Tis "silent night" no fear.

If Thomas Gray could scan this lay,
He'd surely turn his head,
Then he'd reverse, my thoughts are worse,
The Blank Blank "A" is dead. **D. B. M.**

Our Own Q and A

Dear Indi: What to do? Being an old reader and faithful follower of Radio Digest, I am at loss how to follow this hint from your October 31 issue.

"Gas pipes have rubber and other insulting materials at the joints."

If I should connect my ground wire to a gas pipe do you suppose I would get any of that insulting material over my set? Please advise me on this because if so, I do not want to connect my ground to a gas pipe when I have a lot of company. A. S.

We have taken this matter up with John G. Ryan and his advice is that you only use this connection when the landlord calls to complain about your aerial on the roof being unfit for use as a clothes line on account of the corrosion on it turning the clothes green.

A Radio Tourist

In winter when the north winds blow
And drift the thickly falling snow,
Far from their chilly blasts I roam,
Although I do not leave my home.

I travel far by Radio,
And move to San Antonio
Where lingers still the summer time,
And whence come songs in Spanish rhyme.

Los Angeles to Florida's coast
I travel with the tourist host:
The snow may fall outside my door,
But inside summer reigns once more.

GEORGE.

Your poem sure hits an old sunshiner like Indi, George. We once lived in a land of perpetual summer and for some reason or other we returned to this city of crowded air lanes. Now everytime we hear the rustle of the palms coming over the loud speaker we long for sunshine, the Southern Cross, and the land of manana.

How About Solomon?

Dear Indi: This was copied from one of the papyrus rolls found in the Valley of the Kings. Please publish it for the benefit of the history students who read your column.

Old King Tut was a Radio nut,
And a merry old nut was he,
He called for his grid,
He called for his plate,
And he called for his Shebadyne III.

SCOTTY.

Recent reports have it that King Tut was only fifteen years old when he signed off. It is rumored that an old copy of the Radio section of the Daily Egyptian states that he was one of those boy "hams" who made the air singe with a spark set and that he got his early in life. When they planted him in that tomb they encased him in gold so he would not reradiate.

We Know Him!

Dear Indi:

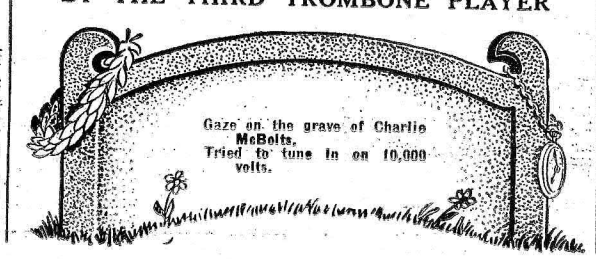
Story of WSM (Nov. 7) mentions the "lovely announcer's table"—Now, let's have a contest for the "loveliest" announcer!

MAMA HAYMES.

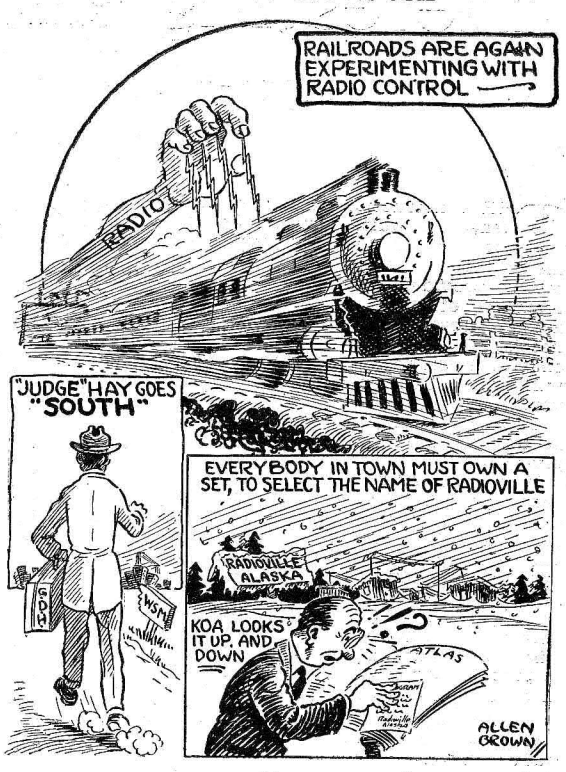
Good idea Mama, but we think we should bar those with those cute little moustachios that get caught in the mike.

Of all sad words that have been spoken
Are these—no concert, our tubes are broken.

RADIO EPITAPHS NO 5
BY THE THIRD TROMBONE PLAYER



News of the Week



Condensed

BY DIELECTRIC

When WJZ came through the air with its tremendous power there were some despairing fans abroad in the neighborhood of New York City. No possibility of tuning them out for any station except on a very low wave length, they seemed to think. The inability of a great many fans to get out of that metropolis with their receiving sets, because of continuous nightly programs from a group of broadcasting stations, already made silent nights a subject of intense interest. WJZ's transmission on high power apparently disturbed very little the quality of music or speech and permitted reception where before it had been very weak or unobtainable. Silent nights in New York, on some workable basis, are certainly needed and may be secured by persistence of the listeners.

KDKA, Pittsburgh, possesses an orchestra in their little symphony which will stand comparison with any of the studio orchestras in the country, surpassing some of them by a fair margin. Their playing of Suppe's "Light Cavalry" was particularly enjoyable in a program which comprised many popular numbers. Another number of unusual merit was provided by two members of the orchestra, a trumpet duet of "Sweet and Low," that for beauty of tone emission was all one could ask. Should any of you readers be without first hand information of the band of musicians mentioned I suggest you watch for their next appearance.

Armistice Day was suitably observed by almost every station on the air both in music and speeches commemorative of this day in history. Those tuned to WNAC, Boston, in the evening heard a program arranged and presented through the efforts of the Veterans of Foreign Wars. As in most other instances, the selections chosen for the entertainment were popular songs during the war and brought back memories to thousands of listeners in. Dance numbers of the usual order followed.

As the New York stringed quartet played gracefully through a Haydn number it seemed as if the four instruments were but so many strings of one, so perfect the ensemble and certain the interpretation. These Steinway concerts, coming originally through WJZ, New York, are one more evidence of a growing realization of the importance of utilizing Radio to further musical appreciation. This is something one may, and does, refer to days after the concert with keen pleasure. So thorough a musical artist as Ernest Hutcheson could have given no greater pleasure than to have chosen the master works that he did and perform with the ease and surety characteristic of this pianist.

A medley of airs of purely American origin played with spriteliness by an orchestra in the studio of WEBH, Chicago, was a feature of merit, as was the singing of that dramatic song "There is no death." These were the leading numbers of an otherwise ordinary program.

It is quite possible that the Fox theater programs which come to us through WOO, Philadelphia, will include some features of real value such as the Ten Royal Hussars, whose singing is excellent. Violin and cello solos were good but nothing more. The single detraction to this particular broadcast was the announcer's lack of familiarity with music and composers, otherwise we would not have heard that Ave Maria was composed by "Gu-nod." These programs are to be a regular feature on the schedule of Wanamaker's store in the Quaker City.

Interesting and Simple Explanation of Radio

Chapter VI—More Efficient Tuning and the Variable Condenser

By H. G. Tanner, Associate Professor, University of Oregon

THE construction of a variable condenser is quite simple. It usually consists of two or more sets of metal plates facing each other, with a means provided to move one set away from the other, or sideways so that the areas exposed may be varied. By connecting the two sets of plates to the two ends of a coil the rate at which electrons will freely oscillate in the coil can be varied.

The functioning of a condenser might be made clearer if the illustration were given first.

Were you ever served a cup of hot coffee and in hastening to cool it blew across the top of the cup? Perhaps during some idle moments you blew in puffs and watched the waves spread to the opposite side and be reflected back. If the puffs were well timed the waves would be quite high. (The author never did this himself but saw someone else do it!) The significant thing is that resonance is produced by the reflection of the waves in tune with the puffs.

Developing Resonance Waves

Consider a trough containing some water, and that some means be provided to blow air upon this water at regular intervals, first in one direction and then in the other. If the trough be just the right length, resonance waves will develop, or if not, the length can be adjusted to suit these puffs.

This is but another illustration of tuning by the adjustment of length. But suppose the length of the trough cannot be changed conveniently and that it is too long to develop resonance. Its effective length can be shortened by bending it upward. A wave of water approaching an end will build up a head a little earlier than it did before and consequently start back sooner.

Regulation by Abruptness

By making the abruptness of the ends of this trough variable the natural period of the water oscillations can be regulated between fairly wide limits.

An electrical condenser of the variable type just described is a devise by which the abruptness of the ends of a wire can be regulated. (Of course the word abruptness is being used here in an electrical sense and not physical.) The two ends of the wire whose abruptness is to be controlled are connected to the two sets of condenser plates respectively.

How Condenser Works

In figure 4, H is one set of plates and I the other. They are connected to the two ends of the coil EF. When an ether wave strikes the antenna A and if BC

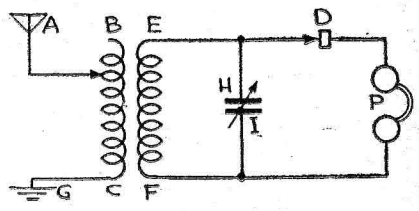


Figure 4

is properly adjusted as to length, resonant oscillations of electrons will be set up in the circuit ABCG. It will be noticed that the coil BC has the abruptness of its ends modified by their connection to the ground and antenna. For this reason one frequently reads that the antenna and ground act like a condenser, which is true.

The electronic oscillations in BC develop alternating ether puffs which blow electrons in EF into oscillation. These oscillating squads of electrons are virtually waves of electricity. These waves of electrons splash into the plate H, build up a head just like the water waves did in the trough, and then run out through the coil EF, which is the trough, to the plates I, and return. If the abruptness of the coil (area of the condenser plates exposed to each other) is just right, resonant waves of these electrons are developed in tune with the ether puffs coming from the coil BC, which in turn are in tune with the waves coming from the broadcasting station.

Condenser as a Reservoir

A portion of the electron waves in the circuit HEFI splash over through the detector and phones with the results already described.

In closing this discussion of a condenser, attention is called to the common comparison of a condenser to a reservoir. This analogy is correct provided one always has in mind a reservoir above the piping system.

The position of the reservoir (abruptness of the pipe system) is the important consideration. The cubical content is but a confusing detail. The emphasis frequently placed upon a condenser "holding" electricity is unwarranted.

Because of the efficiency of a transformer as compared with a variocoupler, and because a transformer can be tuned with a condenser, more energy reaches

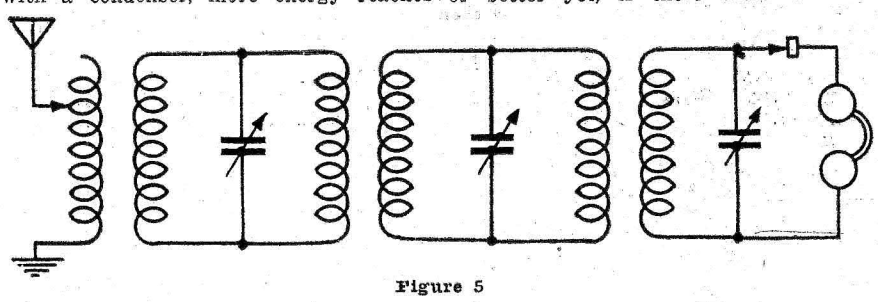


Figure 5

the phones. This permits more circuits of like construction to be added with corresponding increase in selectivity. Such a circuit might be as in figure 5.

Although more efficient than some circuits there are still big energy losses and the gain in selectivity when employing too many circuits is apt to be offset by the decrease in signal strength.

What is really needed is a means of pumping some additional energy into these circuits to make up for the loses, or better yet, if there could be more energy added than to make up for the losses the very faintest of signals could be made comfortably audible. We could add as many circuits as we pleased and our selectivity worries would be over.

Vacuum Tube Adds Energy to Set

For many years Radio receivers had to depend entirely upon the energy absorbed from the waves by the antenna to actuate the phones after passing through the various circuits. The only thing to do was to make the set as efficient as possible and to build gigantic sending stations in order that there might be sufficient energy at the receiving station. Finally an American, Dr. Lee De Forest, made the epochal invention of the three electrode vacuum tube.

Although the major amount of credit is due Dr. De Forest, several others have made very important contributions to the development of the tube, especially Thomas Edison, Dr. Fleming, an English scientist, and Dr. Irving Langmuir, an eminent American chemist and electrical expert.

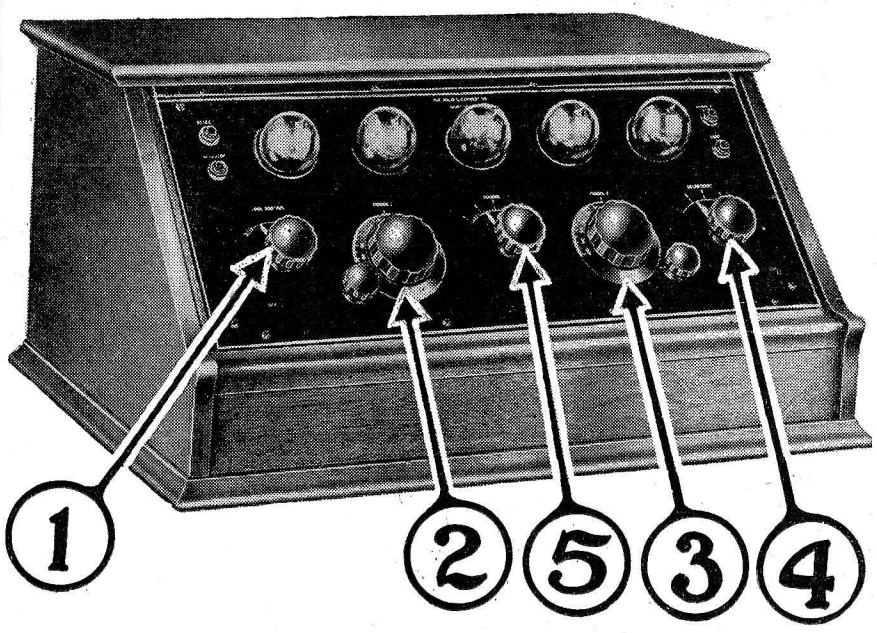
(Vacuum tubes and amplification will be explained next week by Mr. Tanner in the concluding article of his excellent series on "painless" Radio.—Editor's Note.)

A variable B battery will help get the correct B battery potential for a soft detector tube.

OPERATING AND TROUBLE SHOOTING

OPERATING and Trouble Shooting, is a Radio Digest feature the purpose of which is to give practical information on the operation, care and cure of simple troubles in every kind of receiver. Standard Radio receivers of wide distribution and use are studied from the standpoint of instructions for installing and connecting, tuning and operating, and remedying little difficulties. The suggestions below, if executed faithfully, will make winter broadcast listening yield all there is to yield to the reader and give your set a fair chance to show its worth.

For the Owner of a Kennedy Model XV Receiver



KENNEDY engineers have long known that tuned radio frequency amplification used in a Radio receiver would have two especially desirable advantages, namely, ability to pick up very weak signals and great selectivity. Many of the sets on the market today, embodying some variation of this system are, however, rather too complicated for the average person, as they require three principal controls for tuning-in stations. Long development and experimental work in the Kennedy factory finally produced in the Model XV a Radio receiver that anyone can operate regardless of whether he or she has ever operated a set of any kind before.

The controls necessary to tuning the Model XV have been reduced to a minimum and are so connected in the circuit that even though no previous instructions have been given or read anyone can tune in and receive different stations without one interfering with the other; something that can be done with few other five tube tuned radio frequency receivers. The Model XV Kennedy set is truly a two-handed set; and uses but two tuning controls. These are always set about the same for any given stations; therefore, it is only necessary to log the settings for one dial in order to accurately record a definite station. This setting will always remain the same even though different antennas are used.

There are six principal features on the Model XV: the antenna is loosely coupled to the first radio frequency tube and this coupling is variable, giving extreme selectivity when desired. Both stages of tuned radio frequency amplification are controlled by one dial; the new Kennedy method of utilizing tuned radio frequency enables the tubes to operate at maximum efficiency at all wave lengths and under all conditions. A jack is provided so that a loop antenna may be used; this makes the set a combination for either antenna and ground or loop. A control is provided so that volume may be regulated; this control is a coupling coil in the second step of radio frequency and uses no current as is the case in many sets where a potentiometer is used for volume control. This receiver cannot be made to howl or squeal regardless of the tubes used or how the controls are operated. Model XV functions equally well on either dry cell or storage battery tubes, requiring no readjustment other than the insertion of adapters.

The set is constructed on a rugged aluminum frame minimizing the chance of anything getting out of alignment and causing trouble. It has the familiar Kennedy sloping panel, that makes for easy tuning, of polished black formica and engraved. Controls are symmetrically placed and the unit is mounted in a solid mahogany cabinet with piano finish.

The controls of the Kennedy receiver are: (1) Tube control; this is a rheostat that regulates the current supply to the filaments of all the tubes. (3) Antenna tuning condenser; this tunes the secondary circuit when operating with antenna and ground and tunes the loop when the loop plug is inserted in loop jack. (2) Radio frequency control, which tunes two stages simultaneously. (4) Selectivity control, which makes it possible to adjust the set to fit local conditions and the antenna with which it is to be used. (5) Volume control that enables the user to bring the volume up to tremendous strength yet cannot cause the set to oscillate or radiate.

Space is provided within the cabinet for two forty-five volt batteries or four twenty-two volt units, and if dry cell tubes are used three additional 1½ volt cells can be housed inside without crowding. All binding posts are mounted on a Bakelite strip inside the cabinet and to the rear of the apparatus making them convenient to get at, yet out of sight.

Connecting the Receiver

First connect the antenna and ground to their proper binding posts, connect the positive and negative leads of the A battery, then the negative B battery lead, the 22½ volt positive B lead and the 90 volt positive B lead. Now insert the plug connected to the loud speaker in the jack marked stage 2 and insert the tubes in the sockets. The order of the tubes is as follows, looking at the set from the front: the first tube socket at the left is the detector, the next is the second radio frequency, the third is the first audio amplifier, the fourth is the first radio frequency amplifier and last is the second audio amplifier.

Operation of the Set

To operate the set first turn the knob 1 to the right about three-quarters of its

(Continued on page 26)

Counterphase: Perfect Bridge Tuned R.F. Set

Part II—Drilling and Assembly of Panels

By James McDonald

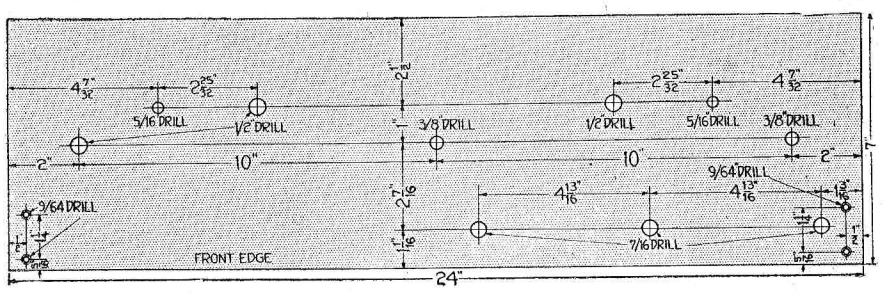


Figure 5

DUE very largely to the fact that most of the wiring of the radio frequency portion of this set is above the sub base and all units on the panel are of the single hole mounting type, there is comparatively little drilling. To the newcomer at set building it may seem like a great deal but there really is but little when the writer thinks of some of the sets he has put together.

Figure 5 is the layout for the front panel. Considering that illustration, and are accustomed to making their templates from small reproductions or those who wish to try it for the first time, the writer is presenting these small diagrams with this article. Each must be enlarged to full size with ruler and pencil and a little care is necessary if you want the parts all to go on without trouble.

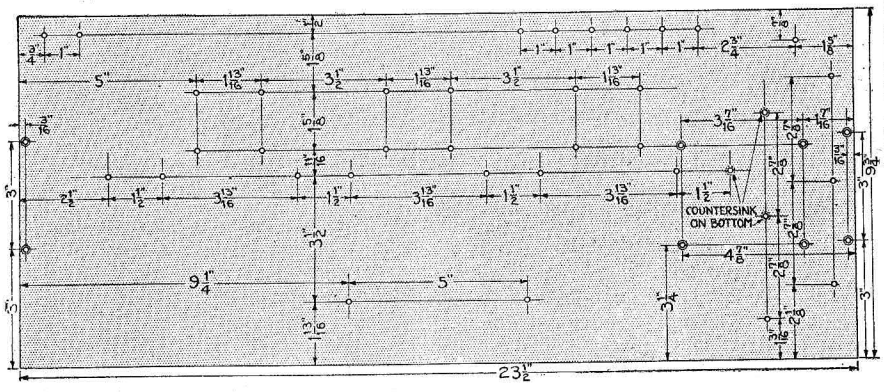


Figure 6

As usual, Radio Digest will have full size drilling templates for those not so sure of their ability as draftsmen, which may be obtained by writing to Dept. 5 Radio Digest, 510 North Dearborn street, Chicago, and asking for the Counterphase blueprints. With the letter, enclose 25c in cash, stamps or M. O. For those who reading from left to right, the two holes in the lower left corner are for one of the Benjamin brackets which support the sub base, while the large single hole above them, and 2 inches in from the edge, is for the Carter switch. Above it and further to the right are two holes for the first of the B-T twin condensers. The shaft hole is the larger of the two while the 5/16-inch hole is for the vernier control of the front condenser. In the center of the panel, and on a line with the switch hole, is the place for the dual resistor which is part of the Counterphase kit.

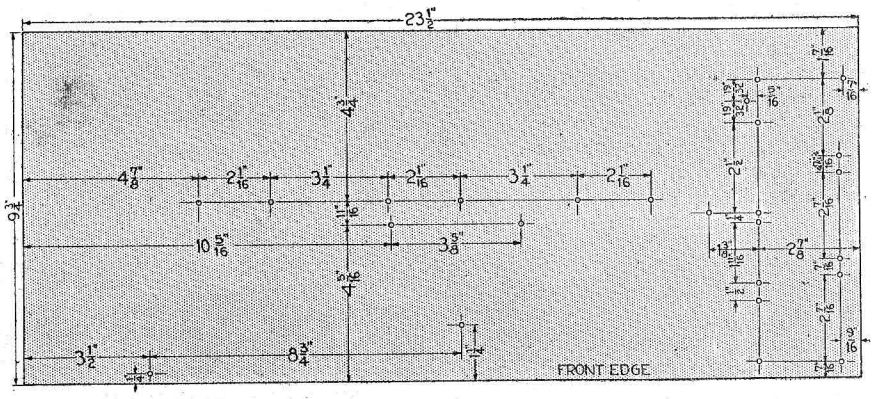


Figure 7

Two more holes at the right are for the second B-T twin while the hole which balances that for the switch is for the Carter Imp rheostat. In the lower part of the right half of the panel are holes for the filament switch, first stage jack and final output jack and the last two holes are, of course, for the other Benjamin bracket. The 9-point Carter switch is to be placed with the rotor terminal swung up slightly to the right as, if it were placed squarely at the bottom, the sub base could not come tight up against the front panel.

Two front panel holes have purposely been omitted from the drawing so they will not be put in if not needed. Dials are the only item on this set in which there is any leeway. If you do not have dials, get the Mar-co as specified and drill a hole with a 9-64 or 5-32 drill just 25/32 inch below shaft hole center for each of the B-T twins. If you have dials already, a different hole, as shown on the slips with those dials, will be necessary or possibly none at all. The Mar-co pin holes are not to be countersunk.

To use either the Radio Digest template or that which you may make yourself, trim it close to the outer edge all the way around and lay on the front surface of the panel. It can be temporarily secured against slipping either with a drop of paste in each corner or with small "C" clamps. Lay panel and template flat on a solid surface and, with hammer and center punch mark the center for each hole. One moderate tap of the hammer should be sufficient for each. Be careful on the placing of the center punch, as all the accuracy of your drawing will be lost if holes are not started exactly where they

(Continued on page 26)

"COUNTERPHASE" SET

(Continued from page 25)

should be. Look the sheet over carefully before removing template to be sure none are missed.

The same procedure is to be followed when laying out figure 6 and getting the holes in the sub base. The two holes in the rear left corner are for aerial and ground binding posts, in that order. The pair of holes close to the left edge are for the flange on the Benjamin bracket. There are six holes on a line and 2⅛ inches in from the rear edge, and placed in pairs. These are for the mikro-mikes and the end with the adjusting screw on top is to be placed at the right in each case.

In front of each pair of holes is another pair, which three pairs are for the Cutler-Hammer sockets. Place these with G and P terminals to the rear. In front of these, 11/16 inch, is a long horizontal line on which are four pairs of holes, each pair 1½ inch apart, for the torostyle coils. That which does not have a separator within the coil, about ¼ way around, is to go to the left while the choice on the rest do not matter. We now come to the audio transformers which go underneath the sub base. First, locate on figure 6 the hole 3¼ inches from front edge and 4⅞ inches in from right edge. Got it? To the right of that hole 3 7/16 inches is another; both are countersunk on top. The 2.2-1 transformer is secured beneath sub base by these holes with P and B terminals toward the front.

Straight back from each of these holes about 2 inches is another, and this new pair of holes is for the 4.7-1 transformer, also mounted with P and B posts forward. Close to the right edge of this sub base are two countersunk holes 3 inches apart for the flange of the second Benjamin

(Continued on page 30)

OPERATING KENNEDY 15

(Continued from page 24)

possible rotation and, if connections have been rightly made, the filaments of the tubes will light. Now place the knobs 4 and 5 at 1 on their respective scales, the left hand on dial 2 and right hand on dial 3. Turn both over slowly keeping them at approximately the same numbers on the dials. The better way to tune is to use the verniers; they are the little knobs at the right and left of the tuning dials 2 and 3. Just push them in lightly and turn. By accustoming oneself to using them instead of the larger dials one will develop and get a more sensitive "feel" and will not pass over distant stations while tuning.

The first thing to do when using the Model XV is to get familiar with the controls and practice tuning out local stations. After carrier wave of a station has been picked up adjust the selectivity control by moving it to the right; as this control is moved, the station will get weaker so that dial 3 will have to be readjusted slightly either to the right or left. The selectivity control 4 has no effect on control 2 so it is not necessary to retune this control after it is once adjusted to its correct position.

The degree of selectivity attained by the operator of the set depends upon the adjusting of control 4; this should be made with great care, especially in the metropolitan districts where four or more powerful broadcasting stations may be operating at the same time. The Model XV will positively "go through" the locals and pick up distant stations regardless of where the set may be.

Aerial Installation

To obtain best operation of this or any receiver, an outdoor antenna suspended well above the ground should be used, its length not less than 50 feet nor more than 150 feet, if a single wire is used. Several wires supported by wooden crosspieces, may, of course, be substituted for a single wire antenna, in which case it may be somewhat shorter than the dimensions given. All wires must be carefully insulated at the points of support by means of the commonly available antenna insulators. The part of the antenna known as the lead-in, which runs from the antenna proper to the receiving set, should be no longer than is necessary. Where it passes through the walls of the house, use should be made of some form of insulating tube, and wherever supported along the sides of the building, insulating cleats are necessary. Where it is impractical to erect a good outdoor antenna, wires inside of the building can be substituted at but a slight loss of range.

If no other type of antenna can be installed, the electric light or telephone wires may be found useful. In such cases, so-called socket antenna plugs are necessary.

DX-Seven: Selective D-Coil 7-Tube Super-Het

Part III—Six More Holes and the Wiring

By John G. Ryan

IN STUDYING over figure 3, which was part of last week's article, the writer noticed that two dimensions on the lower part of that figure were omitted, which are essential to the placing of the transformers. The lower part of that illustration shows the small, vertically placed panel on which the Celco intermediate transformers are mounted and, across the top are four holes 3 1/16 inches apart. No dimension was given as to how far from the top edge they are to be. This distance is 5/16 inch. The four holes near the bottom edge are also 5/16 inch from that edge.

With this lower line drawn on your template, put four more holes on it, in addition to those shown, for the wiring. Working across from the left, the first is to be 4 3/16 inches from the left end, the second is to be 5/16 inch from the first hole. The third goes 6 inches further to the right while the fourth goes 1 1/8 inches from the third. These will, when wiring, pass plate and grid leads. The fifth hole is to be in the upper left corner and 3/4 inch from the left edge and 5/8 inch from top edge. The sixth hole is also 5/8 inch down and is 2 inches to right of the fifth.

Referring now to figure 5, you will note in the lower right corner, quite a vacant space to the right of the last intermediate transformer. The Daven Leakandenser is to be mounted on the back of the transformer strip so that it projects back into that space. The fifth and sixth holes mentioned in the preceding paragraph are used for mounting the two clips with the Leakandenser. The Dubilier 1.0 mfd. bypass condenser is mounted on the front side of the strip, flat against it. Referring to figure 5, the terminals are to the left and one of the mounting lugs is slipped under the nut holding the third intermediate transformer from the left. The Dubilier grid condenser with clips is mounted on the under side of the tube shelf behind the oscillator coupler by loosening the nut on the machine screw which holds the Amperite on the upper side. This Amperite is just in front of the first tube socket from the left, looking at the set from the top with panel toward you. This will put the grid condenser squarely behind the oscillator coupler.

1. The first wire to put in is in the negative filament circuit. With the rear of the set toward you, a wire is put in on under side of shelf from the fourth binding post from the right, going forward between under side of shelf and the transformer strip, then to left until opposite filament switch, forward and down to lower terminal on the switch.

2. From upper terminal of switch proper, next wire parallels the first along under side of shelf but continues straight across to the Amperite at right end. Remember, all directions as to right and left are with rear of set toward you. This wire we are putting in goes up through hole at left end of Amperite.

3. Where wire number 2 passes under right end of the other Amperite, that behind the audio transformer, run a short extension up through hole to the Amperite.

4. On upper side of shelf, run short wire back from left end of left hand Amperite to negative terminal on Benjamin socket nearest to left end.

5. Run short wire back from right end of right hand Amperite to negative terminal on the socket nearest right end of shelf.

6. Where wire number 2 passes back of the rheostat, run a lead from that wire toward panel and down to left terminal of rheostat (still looking at set from rear).

7. From negative terminal of second socket from right end, drop wire through the eyelet and across on under side of shelf to negative terminal of sixth socket. Wire goes up through eyelet.

8. Where this wire passes under the negative terminals of third, fourth and fifth sockets from right, run short wire from it up through eyelet to those terminals.

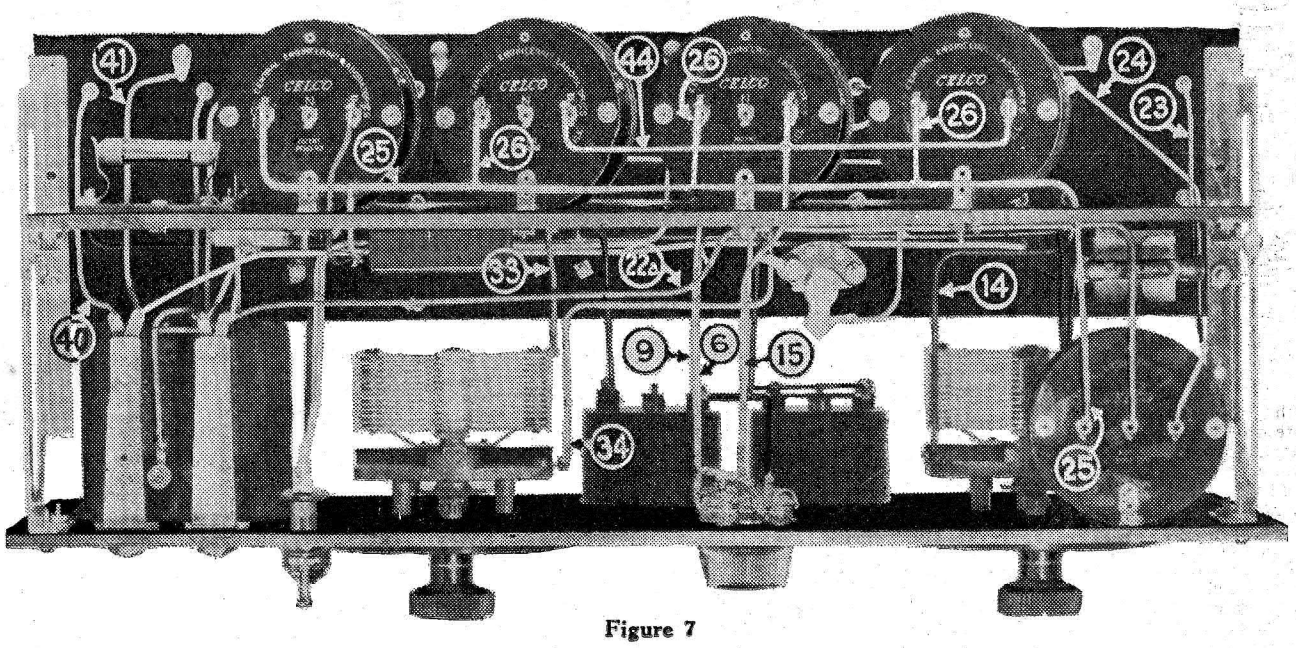


Figure 7

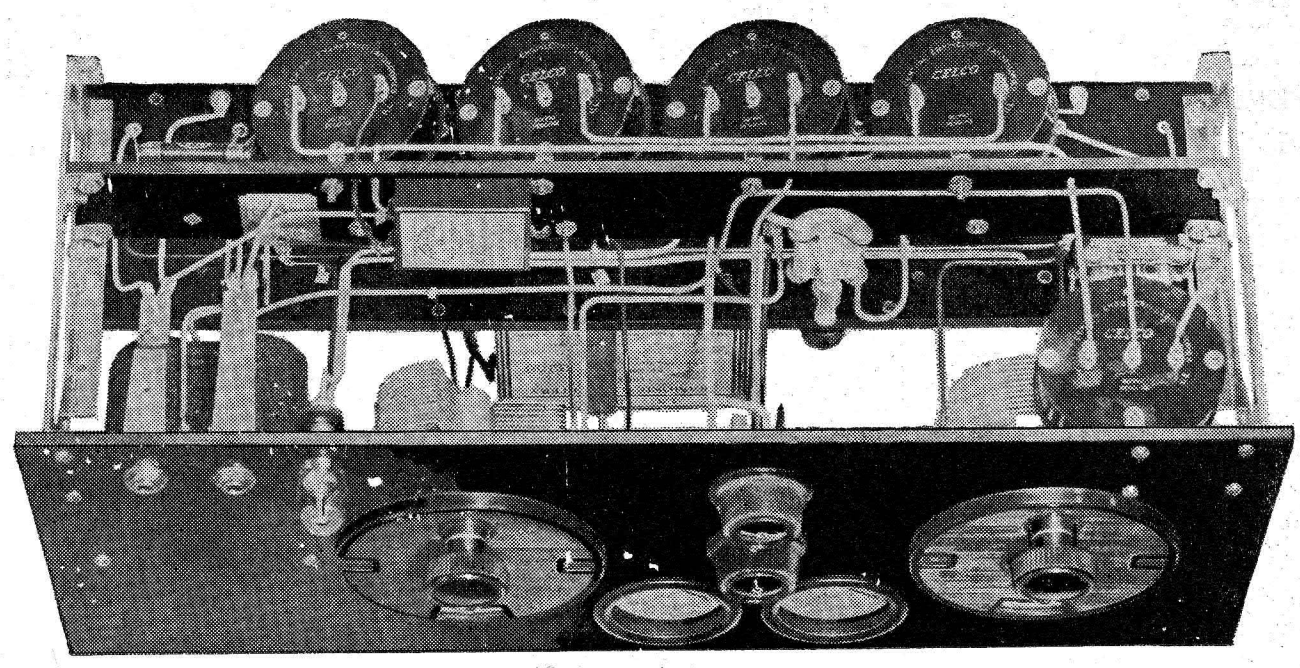


Figure 8

9. The right terminal of rheostat is to be connected to wire 7 by wire paralleling wire 6 part of the way.

10. Where wires 2 and 6 come together run a wire up through shelf to right end of the C battery (the plus binding post).

11. From left terminal of rheostat run wire straight up to left terminal of potentiometer.

12. From plus terminal of socket at left end of shelf, run wire across in front of transformer strip to plus terminal of socket at right end of shelf.

13. Where wire 12 passes under the plus terminals of the five intervening sockets run a short lead up through each eyelet to the plus terminals of those sockets.

14. On the front end plate of the variable condenser at right end of set just above oscillator coupler, there are two soldering terminals. From the one at left side of plate run wire straight down and back to wire 12.

15. From wire 12 run a wire forward and up to the right hand (plus) terminal of the right hand meter. Run wire across to right hand terminal of the left meter. Run wire down from this last named terminal to the right hand terminal on the potentiometer. From left hand terminal on right hand meter run wire to wire 7.

16. From left terminal on left hand meter run wire down, beneath shelf and back to transformer strip, to left, and back to negative B binding post, fourth from right at rear edge of shelf. (Passes between upper edge of transformer strip and shelf.)

17. At top of the combination filament switch and lamp there is a third terminal. Run wire straight back from this to wire 12.

18. The Dubilier fixed .002 mfd. condenser is placed against front surface of transformer strip with terminals vertical so that upper terminal is soldered to the joint of wires 17 and 12. At the same time run short wire to upper terminal of the 1.0 mfg. bypass condenser. From the upper terminal of the 1.0 bypass condenser drop a wire to the hole just to right of the transformer mounting screw,

(Continued on page 28)

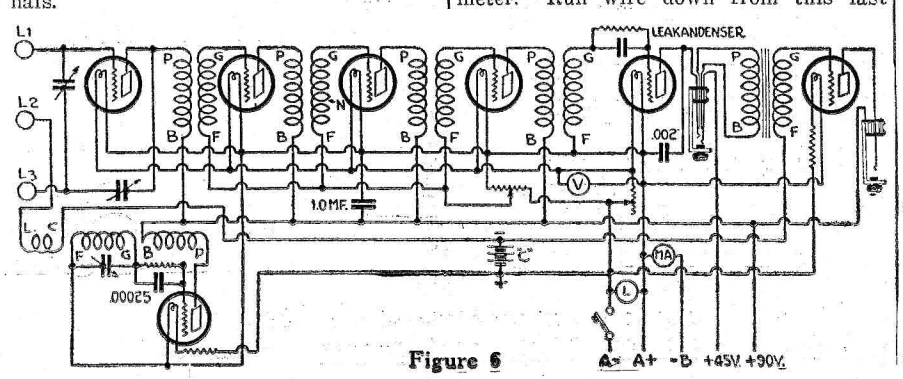


Figure 6

DX-SEVEN SUPER-HETERODYNE PLATE AND GRID WIRING

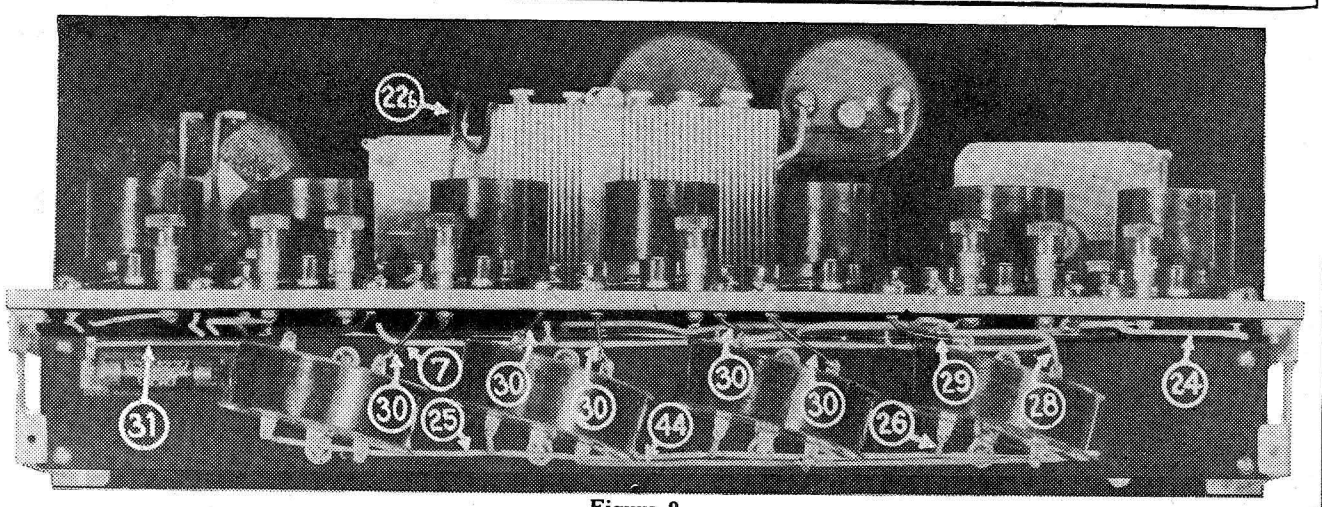


Figure 9

DX-SEVEN SUPER-HET

(Continued from page 27)

through it and back to the F terminal on the under side of the first Celco transformer to left.

19. Going back to the condenser mentioned in operation 14, put in a wire from the end plate terminal at right down to the F terminal on upper side of oscillator coupler.

20. From the L terminal next to it, put in wire going back under shelf to the center of the three loop binding posts, the second from the right at rear edge of shelf.

21. From the soldering terminal on back stator plate of the condenser at right end of set (still looking at it from rear) drop a wire to G post on upper side of oscillator coupler and continue it back under shelf to left end of the Dubilier grid condenser with clips, which has been secured to under side of shelf.

22. On under side of oscillator coupler is a C terminal. Wire is to be put in from this post, across to left close to front edge of shelf and then up in front of shelf to the F terminal of the Erla audio frequency transformer. Where this wire passes under the left end of the C battery, connect a wire from it, up through hole in shelf to the binding post at left end of C battery.

23. The next wire is to go from the right end of the Dubilier grid condenser, referred to in operation 21, toward the rear on under side of shelf and up through eyelet to the G terminal of first socket at right.

24. From the P terminal of this same socket, drop wire through eyelet, then forward and down to P terminal on the under side of the oscillator coupler.

25. This next wire is to be a long one starting at the B terminal, also on the under side of the oscillator coupler, straight back through hole provided in transformer strip, then to left about ½ inch behind strip to the B terminal on the last Celco transformer to left.

26. Where wire 25 passes the B terminals on the under sides of the other three transformers connect wire 25 with those terminals by short 1-inch connectors.

27. Plate of the second tube from right is to be connected to the rotor (lower) terminal of the Gleason midget condenser.

28. Where wire 27 comes down through eyelet, and on under side of shelf, put in a short wire to the left to the P terminal on upper side of first Celco unit.

29. Also on the upper side of that Celco unit is a G terminal. Connect with G terminal on third socket by short wire running up through eyelet.

30. Connect P terminal of second Celco to P terminal of third socket. Connect G terminal of second Celco to G post on fourth socket. Connect P terminal on third Celco to P terminal on fourth socket. The G terminal of this third Celco goes to G post on fifth socket. The P post on fourth Celco goes to P post on fifth socket.

31. The G terminal of the fourth Celco is handled differently. From it a wire goes straight forward to the transformer shelf, then to left to the left terminal of the Leakandenser.

32. From the right terminal of the Leakandenser pass a wire to the right and up through the eyelet of the G terminal of the sixth socket.

33. There are three loop binding posts on rear right corner of shelf. From the one nearest to right end run a wire to left about ¾ inch and forward so it passes under G terminal of second socket, then to the left until under a point midway between the fourth and fifth sockets. Then bent forward passing between top of strip and under side of shelf until in front of shelf, then up to the right hand terminal on the back plate of the left hand variable condenser.

Put in a short wire connecting this last wire with G of second socket.

34. The third of the three loop binding posts is to be connected, by a wire running to the left and forward, to the upper terminal of the Gleason midget and the wire is continued forward and then to the left to the right hand terminal on the front plate (the heavy plate close to panel) of the condenser mentioned in operation 33.

35. We go now to the jack with four springs and four terminals which is the one next to the switch. The upper terminal is connected to the P terminal of the sixth socket.

36. The next spring connects to the P terminal on the Erla transformer.

37. Third spring is to be connected to the B post on the Erla unit.

38. The fourth or bottom spring goes to the next to the last binding post from the left end of the row in back. On page 28 of the November 28 issue, when discussing the assembly, the copy read to put plus 90 binding post in this position and plus 45 at the end. This was a typographical error which can easily be rectified by switching posts if they are engraved, putting + 90 at end.

39. Going back to the upper terminal of this jack mentioned in operation 35, drop a wire to the lower terminal of the .002 mfd. fixed condenser.

40. The upper terminal of the two terminal jack at the left end is to be connected with the P terminal of the last socket at the left.

41. The lower jack terminal connects to the last binding post at the left, plus 90.

42. A short wire is to go straight back from the lower terminal of the 1.0 mfd. bypass condenser, through the strip to wire 25.

43. From that same lower by-pass condenser terminal run a wire to the left to the lower terminal of the end jack.

44. On the under sides of the first three intermediate transformers to the right is an F terminal. Connect the F terminals on the first and third.

45. Now run a wire forward from the F post on the second one, through the strip until almost at the front panel, then up to the center post on the potentiometer. Where it crosses the wire connecting the F posts on transformers 1 and 3, solder it to that wire.

46. Connect G terminal of last socket to left with G post on Erla transformer.

(Next week Mr. Ryan will explain the operation of this set.—Editor's Note.)

How Badly Does Your Receiver Reradiate?

AT THE recent fourth national Radio conference, held in Washington, D. C., at the request of Secretary of Commerce Hoover, much stress was laid upon the evils of reradiating receivers. Readers must not gain the impression that "regenerative" receivers are the only offenders.

The latter mistake was even prevalent at the conference as a result of a carelessly worded report filed by the interference committee. But the report was corrected before the resolutions were accepted by the general conference.

One of the worst of the offending reradiating receivers that sets up squeals and howls for several miles radius is the super-heterodyne when coupled to ground and aerial instead of to the conventional loop aerial. If you think your receiver doesn't "bloop" or reradiate, arrange a test with your neighbor.

List of Parts

1 Variable condenser .0005 mfd...	$ 5.00
1 Midget variable condsenser .000010 mfd.	1.50
1 Rheostat 30 ohm	1.00
1 Socket	1.00
7 Binding posts	1.05
1 Panel 7"x12"	1.20
1 Piece of 3" tubing 2¾" long....	.50
1 Piece of 3" tubing 4" long.....	.70
1 Fixed mica condenser .005 mfd.	.60
1 Spool ¼-lb. No. 26 dsc. wire....	.85
Miscellaneous, bus bar, screws, etc.	1.00
Total cost	$14.40

Have him listen in on, say, 260 meters at a prearranged time while you bring your set up and into oscillation at that wave length or close by. Then slightly tune and detune the dial closest to the antenna. If a five tube set, this will usually be the first tuning dial from the left. Don't run the test more than three minutes, as it might be so successful as to ruin some other neighbor's Radio evening. After doing the above, telephone or visit the neighbor assisting you in the test and learn what he heard.

He can tell you if your set reradiated. And we'll bet it did, almost regardless of what manufacture it happened to be.

Reradiation is an evil of poor operation of receivers, of burning the filaments too brightly in an effort to catch distant stations, and of twisting the dials rapidly too and fro for no reason at all.

Experienced station loggers will advise you that their success came with painstakingly slow turning of the dials, with the filaments burning just below the oscillation or "spill over" point. The latter point on the rheostats, as a matter of fact, is the most satisfactory for the operation of nearly any receiver.

The Thatcher Unit, as it was called when described previously in this magazine, is one fairly positive cure for reradiation. It consists of a single stage of radio frequency amplification, so arranged as to make its going into oscillation practically impossible.

The circuit of the Thatcher non-radiating unit is shown here as figure 1. The whole unit can be constructed by the average fan, or by nearly any Radio shop for the reader, for fifteen dollars or less.

After having determined that your set DOES reradiate, assuming that you still want to be a member of the community in good standing, build the Thatcher unit, connect it ahead of your present receiver, and live to die a natural death!

Although only the hook-up for the unit and its constants are given here, a view of the back panel and baseboard layout, and a panel drilling diagram will be given next week. However, those readers who wish to go ahead with the construction of the unit from the circuit shown, may do so without going amiss. Its building is not difficult.

Not alone will the unit make a receiver non-radiating, but it will, if properly made, increase the set's range and selectivity. A marked increase in the sharpness of tuning stations should be noted.

The list of parts necessary to make the Thatcher unit are given herewith. The coil which is connected to aerial and ground is wound on the 2¾" length of 3" tubing. Using No. 26 dsc. wire, start ½" from the end and wind 15 turns, take a tap, and continue winding for fifty more turns. On the 4" length of 3" tubing, starting ½" from the end, wind thirty DOUBLE turns, by using two lengths of wire, and winding them side by side at the same time as ordinarily with a single wire. This gives a double coil, sixty turns in length, thirty turns of which are in each of two coils. Connect the

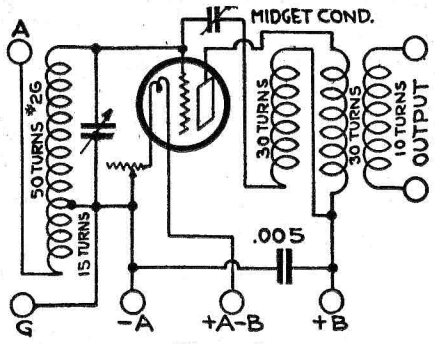


Figure 1

wire marking the beginning of one coil to the wire marking the end of the other coil. This point, where the two coils are connected together, forms also the B positive connection.

From 1" to 1¾" from the double coil, wind the output coil of ten turns.

The two coil units, the one consisting of 65 turns tapped at the fifteenth, and the other consisted of a thirty double turns and ten output turns, are to be mounted at right angles to one another and spaced apart as far as is practical—at least two or three inches. It is also important that the antenna coil be centered on the thirty double turn section of the other coil.

(A more detailed explanation of the construction of the Thatcher unit, together with instructions for its adjustment and connection ahead of the radiating receiver, will be published in next week's issue.—Editor's Note.)

The Reader's View

"Let Them Have a Million?"

So many letters in reference to the editorial in our issue of October 31, headed as above, have come into this office that it will be impossible to find space to print them all. Therefore we are running a few paragraphs from a few of the letters to show the attitude of the real Radio fans on the "Starving Composer" question.

From the West

"Wonderful programs, music and other features can be arranged without the assistance of either musicians or the Hod Carriers Union."—E. C., Highmore, S. D.

From the East

"If the publishers of Radio magazines throughout the country are organized each will take up the question and publish some blank form for a guide for each fan to follow and if each fan will write a personal letter to his or her member of congress and to each of their senators, we can get the law. Make them think we mean business. I am willing to act and do all I can."—F. S., Oneida, N. Y.

From the South

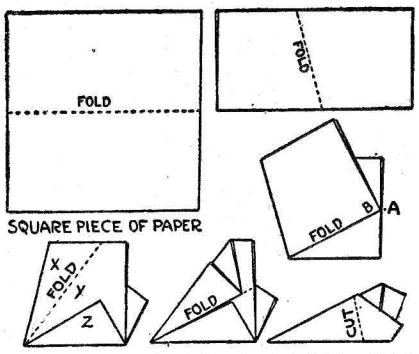
"I for one am willing to pledge myself not to listen to any station who announces that what they are using is by permission of that society until the society agrees to be reasonable. It seems to me that the pay ought to come from the society to the stations rather than from the stations to the society."—T. E. S., Elmwood, N. C.

From Canada

"If you ask me and act accordingly just tell them (the music trust) to take a big jump in the lake. The stuff that is copyrighted these days, at least what goes under the name "popular," is 97 per cent blah, etc., and so on. Be polite but firm and tell them where to go and what to do. Then ignore them."—H. C. W., Weyburn, Sask., Canada.

To Get Sevenths of a Circle

The attached drawing shows a method of making a heptagon by folding paper, which will help many Radio fans in finding the sevenths of a circle when making coil forms, etc. A square piece of paper



is used; at the fourth stage, fold in thirds so that section z is equal to section x or y, then fold between x and y. The final stage is folding between y and z. When opened there are 14 points, taking every one, or 7, if every other one is counted.—Marvin Shreffler, Kankakee, Ill.

LOOKING DOWN ON SUB BASE OF "COUNTERPHASE"

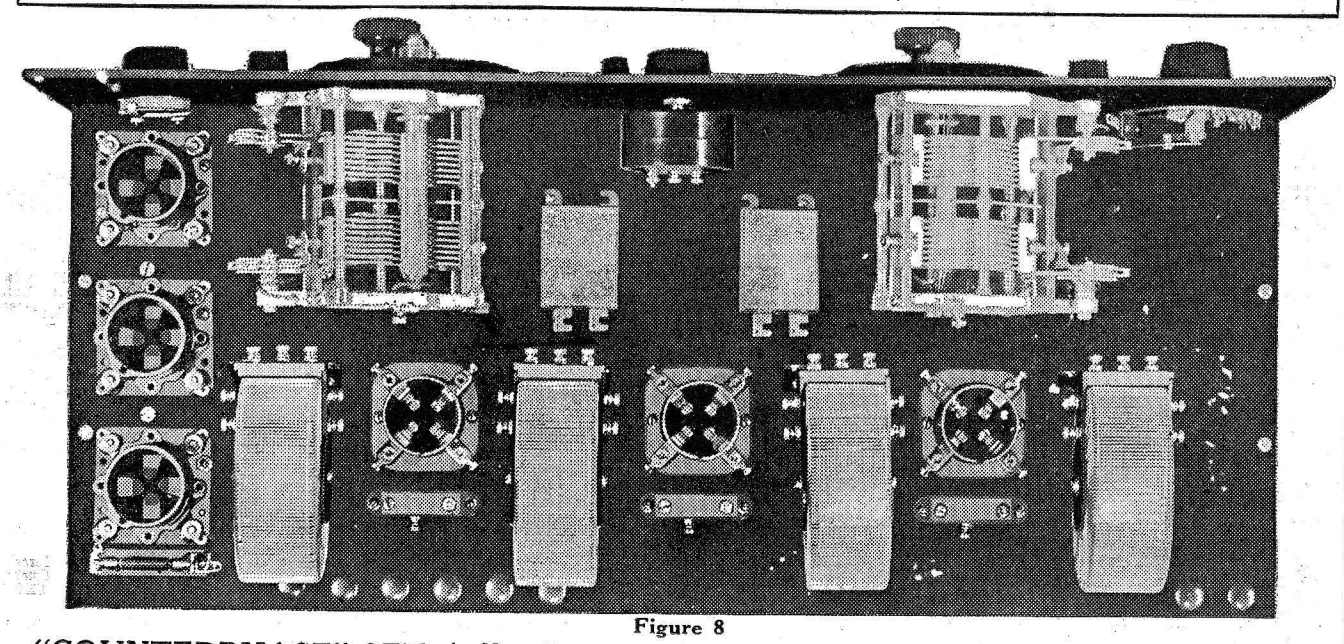


Figure 8

"COUNTERPHASE" SET

(Continued from page 26)

bracket. Slightly further in from the edge is another line running from front to back with three holes on it. This should have been indicated as ⅝ inch from the right edge. A little further to the left is another line with 3 holes on it which is to be 2½ inches from the right edge. The rear holes on each line go together as a pair for mounting a Benjamin socket with P and G to the right. The center holes also go together for a second socket of this make, similarly mounted, while the two front holes are for the third Benjamin. The single hole in the rear right corner 1⅝ inch from right edge is for the Daven No. 50 mounting which is to go crosswise just behind the rear Benjamin socket. All holes are for 6-32 screws and a 5/32 or 9/64 drill is used.

Near the center of the sub base crosswise, and near the front edge, are two holes 5 inches apart for the Sangamo 1.0 mfd. bypass condensers. They are put in with terminals to the rear and, on the left hand condenser, the left mounting lug is secured beneath the head of a round head screw, while, on the right hand condenser, the right hand lug is used.

Few directions are necessary in connection with figure 7. The holes shown are for wiring to pass through the sub base and any size drill giving a hole large enough to pass bus bar will do. These holes have been shown on a separate drawing to avoid confusion as to sizes and that which might result from having too many dimensions on one sheet. The completed assembly is shown in figure 8 and this photo should prove of great help when placing apparatus in the proper places.

(Because of the number of illustrations necessary with this article of Mr. McDonald's series there is insufficient room even to start the wiring instructions, so the complete wiring will form the third article in next week's issue.—Editor's Note).

Radiophone Broadcasting Stations

Corrected Every Week—Part IV

FIND MISTAKES AND YOU'LL GET DOLLAR

ONE DOLLAR will be paid to the Radio fan reader of Radio Digest submitting the most errors in any one station's listing in the Directory of Radiophone Stations, which appears in six parts, serially continuously on the next to last page. Letters must reach Radio Digest's office not later than one week from date of issue corrected. Readers are not limited to correcting one station, but such corrections must be verified by the stations themselves, and NOT by comparison to other so-called accurate Radio directories or lists. Verifications must accompany corrections. Turn in corrections for as many stations as you can find—if you can find errors! Use separate sheet of paper for each station submitted and place name and address on each sheet. In case of tie, duplicate awards will be made. Asterisks have been placed in front of corrected listings and new stations in order to distinguish them.

United States (Cont'd)

NOTE.—The fourth part of the schedule list appears below. Part five appears next week.

WOAX, Trenton, N. J. 240 meters. 500 watts. F. J. Wolff. Slogan, "The Voice from Trenton." Daily, 12:15 pm, 1:15, weather; Wed, 1:15 pm, midweekly crop report. Sun, 9:30-11:30 pm, orchestra. Eastern.

WOC, Davenport, Iowa. 483.6 meters. 5,000 watts. The *Palmer School of Chiropractic. Slogan, "Where the West Begins and in the State Where the Tall Corn Grows." Daily ex Sat. Sun, 12:15 pm, Radio Farm school; 1:55 pm, time; 1, weather; 2, closing markets; 3, home hour; 5:45, chimes, 6, sports. Tues, 6:30-7 pm, 7:30-9; New York program, 9-10. Wed, 4-4:45 pm; 9-11. Thurs, 7-10 pm, 11:12. Fri, 4-5 pm. Crescent orchestra; 6:30, 8-9. Sat, 12:55 pm, 1, 5:45, 6, 6:30, 9-10 pm; 11-12. Sun, 1-2 pm. Sun, 6:30-7:30 pm, church; 8:15-9:15, program; 9:45-11:45. Central.

WOCG, Sycamore, Ill. 205.4 meters. 10 watts. Triple Alliance Radio Station.

WOCL, Jamestown, N. Y. 275.2 meters. 15 watts. Hotel Jamestown, Inc. Announcer, William A. McCutcheon. Slogan, "We're on Chautauqua Lake." Mon, 9 pm. Sun, 10:30 am, 7:30-9. Eastern.

WODA, Patterson, N. J. 224 meters. 250 watts. O'Dea Temple of Music. Slogan, "A Voice from the Silk City." Daily ex Sun, 12-1 pm; 5-7, 8:30-11. Eastern.

WOI, Ames, Ia. 270 meters. 750 watts. Iowa State College. Announcer, H. B. Deal. Daily ex Sun, 9:30 am, weather reports; 12:30 pm, chimes, market, weather, educational talks; 9:30, weather. Central.

WOK, Homewood, Ill. 217.3 meters. 5,000 watts. Neutrowound Radio Mfg. Co. Announcer, George W. Allen. Daily ex Mon, Sun, 12-2 pm, 5:30-7. Daily ex Sun, Mon, 10-1 am. Sun, 1-2 am, 6:30-8:30 pm, 6-1 am. Central.

WOKO, New York, N. Y. 233 meters. 50 watts. The * Dyckman Radio Shop. Announcer, Eugene Delman. Mon, Thurs, Sat, 8-10 pm. Eastern.

WOO, Philadelphia, Pa. 508.2 meters. 500 watts. John *Wanamaker. Announcer, Jos. N. Nassau. Daily ex Sun 11 am, organ recital; 11:55, time; 12-1 pm, concert; 4:30, weather; 4:45, organ recital; 7:30, police reports; 9:55, time; 10:02, weather. Mon, Wed, Fri, 7:30-11 pm, music, concert. Sun, 2:30 pm, Sunday school; 6, organ recital; alternate am and pm services, 9:15, alternate Sundays. Eastern.

WOQ, Kansas City, Mo. 278 meters. 1,000 watts. Unity *School of Christianity. Tues, 8-9 pm. Thurs, 7-7:45 pm, 7:45-9. Sat, 8-9 pm, 10-11 pm. Sun, 7-9:15 pm. Central.

WOR, Newark, N. J. 405.2 meters. 500 watts. L. Bamberger & Co. Announcer, J. M. Barnett. Daily ex Sun, 6:45 am, 2:30-4 pm. Mon, Wed, Sat, 6:15-12 midnight. Tues, Thurs, Fri, 6:15-7:30 pm. Eastern.

WORD, Batavia, Ill. 275 meters. 5,000 watts. Peoples * Pulpit association. Announcer, B. M. Rice. Solgan, "Watchtower Station WORD." Daily ex Sun, Mon, 8-10 pm. Sun 10 am, 9-10:30 pm. Central.

WOS, Jefferson City, Mo. 440.9 meters. 500 watts. Mis- * souri State Marketing Bureau. Slogan, "Watch Our State." Daily ex Sun, first 15 min. of every hour from 9 am-8 pm, markets; 3, N. Y. stock and bond markets. Daily ex Sat, Sun, 5 pm, markets. Mon, Wed, Fri, 8-10 pm, concert. Sun, 8-9 pm, church service. Tues, Fri, 5 pm, children's story hour. Central.

WOWL, New Orleans, La. 270 meters. 10 watts. Owl * Battery company.

WOWO, Fort Wayne, Ind. 227 meters. 500 watts. Main Auto Supply Co.

WPAK, Fargo, N. D. 275 meters. 100 watts. N. D. * Agricultural College. Announcer, Gordon Laing. Mon, Wed, Fri, 7:30 pm. Central.

WPDQ, Buffalo, N. Y. 205.4 meters. 50 watts. Hiram L. Turner.

WPG, Atlantic City, N. J. 299.8 meters. 500 watts. Municipality of Atlantic City. Slogan, "World's Playgrounds." Mon, Tues, Fri, 7 pm. Tues, Thurs, Fri, Sat, 9 pm; 10, classics. Mon, 8 pm, Thurs, 11 pm. Sat, 6:30 pm, concert; 10. Sun, 3:15 pm, organ; 4:15, service; 10, service. Eastern.

WPRC, Harrisburg, Pa. 215.7 meters. 100 watts. Wilson Printing & Radio Co.

WPSC, State College, Pa. 261 meters. 500 watts. Pa. State College. Slogan: "The Voice of the Nittany Lion."

WQAA, Parkesburg, Pa. 220 meters. 500 watts. Horace A. Beale, Jr. Temporarily discontinued.

WQAC, Amarillo, Tex. 234 meters. 100 watts. Gish Radio Service. Irregular schedule.

WQAE, Springfield, Vt. 246 meters. 50 watts. Moore Radio News Station. Announcer, Ernest S. Newell. Slogan, "Boost Springfield." Sat, 11-1 am. Sun, 10:30 am, church service; 7 pm, service. Eastern.

WQAM, Miami Fla. 263 meters. 100 watts. Electrical Equip. Co. Announcer, Frederick W. Mizer. Slogan, "The Most Southern Radiocasting Station in U. S." Daily ex Sun, 8:30-9:30 pm. Tues, Thurs, Sat, 10:30-11:30 pm. Eastern.

WQAN, Scranton, Pa. 250 meters. 100 watts. Scranton * Times. Announcer, T. V. Nealon. Slogan, "The Voice of the Anthracite." Daily ex Sun, 12:30-1 pm, 4:30-6, news, reports, sports, music. Tues, Fri, 8 pm, entertainment. Sat, 10-12 midnight, dance music. Eastern.

WQAO, New York City, N. Y. 360 meters. 100 watts. Calvary Baptist Church. Announcer, R. E. Bogardus. Slogan: "The First Church Owned and Operated Broadcasting Station in the World." Sun, 11:30 am, 7:30 pm, church services. Eastern.

WQJ, Chicago, Ill. 447.5 meters. 500 watts. Calumet *Baking Powder company—Rainbo Gardens. Announcer, Jerry Sullivan. Daily ex Sun, 11-12 m., women's hour. Daily ex Sat, Sun, 3-4 pm. Daily ex Sun, Mon, 7-8 pm, 10-1, 1-2, Ginger hour. Sat, 1:45-2:45 pm; 3-4, 10-3 am. Sun, 3-4 pm; 8-10, General.

WRAF, La Porte, Ind. 224 meters. 100 watts. Radio * Club, Inc. Announcer, Charles Middleton. Slogan, "The Voice of the Maple City." Mon, Thurs, Sun, 8:30 pm. Sun, 10 am, church services. Central.

WRAK, Escanaba, Mich. 256 meters. 100 watts. Economy Light Company. Announcer, Ken Voght. Slogan, "The Gateway to Cloverland." Mon, Fri, 8:30 pm. Eastern.

WRAM, Galesburg, Ill. 244 meters. 100 watts. Lombard *College. Mon, 7-11 pm. Central.

WRAV, Yellow Springs, O. 263 meters. 100 watts. Antioch College. Announcer, Charles Hoffman. Wed, 8 pm, music; 9, educational. Sun, 7 pm. Central.

WRAW, Reading, Pa. 238 meters. 10 watts. Avenue *Radio & Elec. Shop. Slogan, "The Schuylkill Valley Echo." Announcer, C. M. Chafey. Thurs, 10-11:30 pm. Eastern.

WRAX, Gloucester City, N. J. 268 meters. 500 watts. * Flexon's Garage. Announcer, A. D. Flexon.

WRBC, Valparaiso, Ind. 278 meters. 500 watts. Im- *manuel Lutheran church. Announcer, Forrest Jones. Slogan, "World Redeemed by Christ." Mon, 7:30 pm. Sun, 7:30 pm, church service. Central.

WRC, Washington, D. C. 468.5 meters. 1000 watts. Radio Corp'n. of America. Announcer, Norman Brokenshire. Slogan, "The Voice of the Capitol." Mon, Wed, Fri, 10 am-6:30 pm. Tues, Thurs, Sat, 10 am-12, midnight. Eastern.

WRCO, Raleigh, N. C. 252 meters. 100 watts. Wynne * Radio Co. Mon, Fri, 7-8 pm. Wed, 9-10 pm. Sun, 11 am, church. Eastern.

WREC, Coldwater, Miss. 254 meters. 10 watts. Wooten's Radio & Elec. Co. Announcer, S. D. Wooten. Slogan, "The Most Powerful 10-Watt Station in the World." Sat, 9:30-10:30 pm; Sun, 4-5 pm. Central.

WREO, Lansing, Mich. 285.5 meters. 500 watts. Reo Motor Car Co. Announcer, Roy E. Davis. Slogan, "Watch Reo." Daily ex Sun, 6-7 pm, dinner concert; 10, weather, sports. Tues, Thurs, 8:15-10 pm. Sat, 10-12 midnight. Sun, 10 am, chimes; 10:30 am, 7:30 pm, church. Eastern.

WRHF, Washington, D. C. 256 meters, 50 watts Washington Radio Hospital. Daily ex Sun, 11 am, police reports, news. Eastern.

WRHM, Minneapolis, Minn. 252 meters. 50 watts. *Rosedale Hospital, Inc. Announcer, Troy S. Miller. Thurs, 9-11 pm, music. Sun, 1:30-2:30 pm, children's hour; 2:30-4:30, music, lectures. 9:15-10:30 pm. Central.

WRK, Hamilton, O. 270 meters. 200 watts. Doron Bros. Elec. Co. Slogan, "The Oldest Station in Existence." Fri, 8:15 pm, music, lecture. Sun, 10:15 am, 7:30 pm, church services. Central.

WRM, Urbana, Ill. 273 meters. 500 watts. Univ. of Ill. Irregular schedule.

WRMU, New York, N. Y. 236 meters. 100 watts. A. H. Grebe & Co., Inc. Motor Yacht "MU-1."

WRNY, New York, N. Y. 258.5 meters. 500 watts. Experimenter Pub. Co. Daily ex Sat, Sun, 9:44 am, 12:29 pm, 4:14, 6:59. Sat, 9:44 am, 2:29 pm, 6:59, 12-1. Sun, 3-5 pm. Eastern.

WRR, Dallas, Texas. 246 meters. 500 watts. City of * Dallas. Announcer, John Thorwald. Slogan, "City of Achievements." Daily ex Sun, Wed, 12-1 pm; 6:30-7:30; 8-9. Thurs, Sat, 12-2 am. Fri, 11-12 midnight. Sun, 8-9 pm. Central.

WRST, Bay Shore, N. Y. 215.7 meters. 250 watts. Radiotel Mfg. Co., Inc.

WRVA, Richmond, Va. 256 meters. 1,000 watts. Larus *& Bro. Co., Inc. Announcer, Elmer G. Hoelzle. Slogan, "Carry Me Back to Ole Virginny." Mon, Thurs, 9-12 midnight. Eastern.

WRW, Tarrytown, N. Y. 272.6 meters. 500 watts. Tarrytown Radio Research Laboratory. Announcer, Frederick Koenig. Slogan, "Everything in Radio." Daily ex Sun, Wed, 9-11:30 pm. Mon, 7-8 pm. Wed, 10-11:30 pm. Sun, 8-9 pm, 10:30-11:30. Eastern.

WSAI, Cincinnati, O. 325.9 meters. 5,000 watts. *United States Playing Card Co. Announcer, P. A. Greene. Mon, 10-12 m. Tues, 7-10 pm. Wed, 10-12 midnight. Thurs, 8-10 pm. Sat, 8-10, 12-1:45 am. Sun, 3-4, 8-10 pm. Central.

WSAJ, Grove City, Pa. 229 meters. 250 watts. Grove City College. Announcer, H. W. Harmon. College activities. Wed. 7:30-9 pm, music, irregular programs. Eastern.

WSAN, Allentown, Pa. 229 meters. 100 watts. Allentown Call Pub. Co. Announcer, C. Fred Ritter. Tues, Thurs, 8:15 pm. Sat, 8:15 pm, 11:30. Eastern.

WSAR, Fall River, Mass. 254 meters. 100 watts. Doughty & Welch Elec. Co., Inc. Announcer, Barton G. Albert. Daily ex Sun, 12-1 pm. Sun, 10:30-12 m. Eastern.

WSAX, Chicago, Ill. 268 meters. 100 watts. Zenith Radio Corp. (Portable.)

WSAZ, Pomeroy, Ohio. 244 meters. 50 watts. Chase * Elec. Shop. Announcer, Glenn E. Chase. Sat, 2 pm. Sun, 10:30 am, 2:30 pm. Eastern.

WSB, Atlanta, Ga. 428.3 meters. 1,000 watts. Atlanta Journal. Announcer, Lambdin Kay. Slogan, "The Voice of the South." Daily ex Sun, 12-1 pm, music, weather; 2:30, reports; 5, orchestra, time story; 8-9, concert (ex Wed) 10:45-12, concert. Sun, 5-6, 7:30-9:15, church services. Central.

WSBC, Chicago, Ill. 209.7 meters. 500 watts. World * Battery Co.

WSBT, South Bend, Ind. 275 meters. 250 watts. *South Bend Tribune. Announcer, C. G. Livengood. Mon, Wed, Fri, 7:15-9:30 pm, concert. Central.

WSBF, St. Louis, Mo. 273 meters. 250 watts. Stix Baer & Fuller Dry Goods Co. Announcer, Helen G. Hatfield. Daily, 12-12:30 pm, 3-3:30. Mon, Wed, Fri, 7:30-9 pm. Tues, 8 pm. Mon, 12-1 am. Tues, Thurs, Fri, 11-1 am. Sun, 9-10 pm; 11-1 am. Central.

WSDA, New York, N. Y. 263 meters. 250 watts. City Temple. Thurs, 7:45-9:30 pm. Sat, 10:45-1 pm. Sun, 7:30-9:30 pm. Eastern.

WSKC, Bay City, Mich. 261 meters. 100 watts. World's *Star Knitting Co. Announcer, L. M. Nims. Slogan, "Where the Summer Trails Begin." Mon, Wed, Fri, 9-11 pm. Eastern.

WSM, Nashville, Tenn. 282.8 meters. 1,000 watts. *National Life and Accident Insurance Company. Announcer, George Hay. Sat, Wed, 6:30-8 pm; 10-11. Mon, 6:30-9, 10-11. Sun, 10-11 pm. Central.

WSMB, New Orleans, La. 319 meters. 500 watts. Saenger Amusement Co. and The Maison Blanche Co., Daily ex Sun, 12:30-1:30 pm, 6:30-7:30. Mon, Wed, Thurs, Sat, 8:30-10:30 p.m. Central.

WSMH, Owosso, Mich. 240 meters. 20 watts. Shattuck * Music House. Announcer, Don Shattuck. Wed, 8 pm. Sat, 10 pm. Sun, 10 am. Eastern.

WSMK, Dayton, Ohio. 275.2 meters. 500 watts. S. M. Krohn, Jr. Slogan, "The Home of Aviation." Daily ex Sun, 12-1 pm; 4-4:30. Daily ex Sun, Tues, 6-7 pm. Sun, 8-12 midnight. Central.

WSOE, Milwaukee, Wis. 246 meters. 500 watts. School * of Engineering of Milwaukee. Announcer, O. W. Meissner. Slogan, "In the Land of the Sky-blue Waters." Daily ex Sat, Sun, 5:25 pm, 5:30, 5:45, 6:05. Daily ex Sun, 9-10 pm. Tues, 7:30 pm; 8:45. Wed, 8:30 pm. Thurs, 8:30 pm; 8:45. Fri, 8:45 pm. Sat, 2 pm, reports; 2:05, 8:30, 9. Mon, 2 pm, cooking chat. Sun, 9:30 am; 11. Central.

WSRO, Hamilton, Ohio. 252 meters. 100 watts. Radio Co. Announcer, Harry W. Fahrlander. Slogan, "We Sell Radio Only." Wed, Fri, Sun, 10-12 midnight. Central.

WSUI, Iowa City, Ia. 483.6 meters. 500 watts. Univ. of *Iowa. Announcer, Carl Menzer. Mon, Tues, Wed, Thurs, Fri, 12:30-1 pm. Mon, 7:30 pm. Wed, 9-9:30 am; 7:45 pm. Alternate Mon, 4 pm. Sun, 9-9:30 pm. Central.

WTAB, Fall River, Mass. 266 meters. 100 watts. Fall * River Daily Herald. Daily, 6 pm, organ. Tues, Thurs, 7:30 pm. Mon, Thurs, 10:45 am. Eastern.

WTAC, Johnstown, Pa. 267.8 meters. 100 watts. Penn. Traffic Co. Announcer, D. B. Cole. Mon, Fri, 7:30-10 pm. Eastern.

WTAD, Carthage, Ill. 236 meters. 50 watts. Robert E. Compton.

WTAG, Worcester, Mass. 268 meters. 500 watts. Worcester Telegram. Announcer, Chester Gaylord. Slogan, "The Voice from the Heart of the Commonwealth." Daily ex Sun, 10:30-2 pm, music, reports; 4-5, music, stocks. Mon, Wed, Fri, 7:15 pm. Tues, Thurs, Sat, 5:15 pm, "The Twinkle-Twinkle Story Teller." Daily ex Sat, 8 pm. Eastern.

WTAL, Toledo, Ohio. 252 meters. 10 watts. Toledo Radio & Elec. Co. Announcer, E. R. Frank. Slogan, "The Gateway to the Sea." Daily ex Sun, 7:30 pm. Eastern.

WTAM, Cleveland, Ohio. 389.4 meters. 3,500 watts. Willard Storage Battery Co. Announcer, A. R. Herske. Slogan: "The Voice from the Storage Battery." Daily ex Sun, 12:15-1:30 pm, 6-7 pm, dinner program. Mon, 8-12 pm, concert. Wed, 8-1 am. Sat, 8-12 midnight, dance. Eastern.

WTAP, Cambridge, Ill. 242 meters. 100 watts. Cambridge Radio & Elec. Co. Announcer, B. Talbot.

WTAQ, Osseo, Wis. 254 meters. 100 watts. S. H. Van Gorden & Son. Announcer, Mrs. C. S. Van Gorden. Slogan: "The Voice of the Wilderness." Daily ex Sun, 10:30 am, 12:15 pm, 6:15, weather, markets; 6:30, code. Tues, 8 pm. Fri, Sun, 7:30 pm. Central.

WTAR, Norfolk, Va. 261 meters. 100 watts. Reliance Electric Co. Announcer, J. K. Bohannon. Slogan, "Down in Old Virginia." Closed down temporarily.

WTAT, Boston, Mass. 244 meters. 100 watts. Edison Elec. Illuminating Co. (portable). Announcer, Leon B. Hentz.

WTAW, College Station, Tex. 270 meters. 250 watts. Agricultural and Mechanical College of Texas. Wed, Fri, 8 pm. Sun, 11 am. Central.

WTAX, Streator, Ill. 231 meters. 50 watts. Williams * Hardware Co., Radio Division. Announcer, N. B. Williams. Slogan: "Tappa Kegga Nails." Thurs, 8-12 pm. Central.

WTAZ, Lambertville, N. J. 261 meters. 15 watts. Thomas J. McGuire. Mon, 8-10 pm, music. Eastern.

WTG, Manhattan, Kan. 273 meters. 50 watts. Kan. State Agri. College. Daily, 9:55 am, 4 pm, weather. Central.

WTIC, Hartford, Conn. 475.9 meters. 500 watts. The *Travelers Insurance Company. Slogan, "The Insurance City." Mon, 6:30-8:30 pm. Tues, 6:30-10 pm. Wed, 6:30-8:30; 10-11 pm. Thurs, 6:30-8 pm. Fri, 6:30-12 pm. Eastern.

WWAD, Philadelphia, Pa. 250 meters. 250 watts. Wright & Wright, Inc. Announcer, H. W. Feyhl. Slogan, "Penn City Station." Mon, 7:45 pm. Thurs, 7 pm. Every other Sun, 9:30 pm. Eastern.

WWAE, Plainfield, Ill. 242 meters. 5,000 watts. Electric Park. Announcer, Harry B. Ohlhaver. Daily ex Sun, 12:30-1:30 pm; 9-12, midnight, orchestra. Sun, 10:50-12:15 pm, Methodist church; 3:30-4:30, popular program. Central.

WWAO, Houghton, Mich. 263 meters. 250 watts. *Michigan College of Mines.

WWGL, Richmond Hill, N. Y. 212.6 meters. 500 watts. Radio Engineering Corp.

WWI, Dearborn, Mich. 266 meters. 500 watts. Ford Motor Co. Wed. 8-10 pm, music, lectures. Eastern.

WWJ, Detroit, Mich. 352.7 meters. 1,000 watts. The *Detroit News. Announcer, E. L. Tyson. Mon, Wed, Fri, 7:30-8 am, 8-8:30 am, setting-up exercises; 9:30-9:45, household hints; 10:25-10:30, weather; 11:55-12, time; 12:05-12:45 pm, music; 3-3:55, music; 3:55, markets. Daily ex Sat, Sun, 6-7, dinner concert; 8, music. Mon, Wed, Fri, 9 pm, orchestra. Wed, 10 pm, orchestra. Sun, 11 am, church service; 2-3 pm, concert; 7:20, Capitol theater; 9:15. Eastern.

WWL, New Orleans, La. 275 meters. 100 watts. Loyola Univ. Announcer, O. L. Abell. Sat, 7:30-8:30 pm. Central.

Argentina

B-I, Buenos Aires, Argentina. Francisco J. Brusa.

LOR, Buenos Aires, Argentina. 350-410 meters. 500 watts. Cia Radio Argentina.

LOV, Buenos Aires, Argentina. 350 meters. 1,000 watts. Francisco J. Brusa.

LOW, Buenos Aires, Argentina. 300 meters. 1,500 watts. * Grand Splendid Theater. Announcer, Federico A. Dominguez.

LOX, Buenos Aires, Argentina. 375 meters. Radio Cultura.

LOY, Buenos Aires, Argentina. Radio Nacional. Announcer, Osvaldo P. Valla.

TCR, Buenos Aires, Argentina. 325-300 meters. 100 watts. Francisco J. Brusa.

Australia

2BL, Sydney, Australia. 350 meters. 5,000 watts. Broadcasters Limited.

2FC, Sydney, Australia. 1,100 meters. 5,000 watts. Farmer & Co., Ltd.

3AR, Melbourne, Australia. 480 meters. 1,600 watts. Associated Radio Co., Ltd.

5CL, Adelaide, South Australia. 395 meters. 5,000 watts. Central Broadcasters, Ltd.

6WF, Perth, Australia. 1,250 meters. 5,000 watts. Westralia Farmers, Ltd.

Belgium

OPVH, Haeren, Belgium. 1,100 meters. 1,500 watts. Daily, 12 m, weather.

RADIO-BELGIQUE, Brussels, Belgium. 265 meters. *1,500 watts.

Brazil

SPE, Rio de Janeiro, Brazil. 250 meters. 500 watts. Dept of National Telegraphs.

Bahia, Brazil. Radio Sociedade do Bahia.

Belle Horizontes, Brazil. 50 watts. National Telegraph Service.

Rio de Janeiro, Brazil. 6,000 watts. Marconi (Radio Sociedade do Rio de Janeiro.

Sao Paulo, Brazil. 320 meters. 20 watts. Radio Bondeirantes.

Canada

CFAC, Calgary, Alta, Can. 434.5 meters. 500 watts. * Calgary Herald. Announcer, Fred Carleton. Daily ex Sun, 1 pm, news, markets, music. Mon, Tues, Wed, 8-9 pm. Thurs, 9-11 pm. (CNRC) Fri, 7-8 pm. Mountain.

CFCA, Toronto, Ont., Can. 356.9 meters. 500 watts. *Toronto Star. Announcer, E. J. Bowers. Daily ex Sun, 12 m., weather, news, stocks; 5:30-6 pm, news, stocks, weather, bedtime story. Daily ex Sun, Fri, 8-9 pm. Thurs, 8-11:30 pm, popular program. Fri, 8-9 pm, (CNRT) Sun, 11 am, 7 pm, church services. Eastern.

CFCF, Montreal, P. Q., Can. 410.7 meters. 1,650 watts. Canadian Marconi Co. Announcer, C. Walter Darling. Daily ex Sun, 12:45-1:40 pm, stocks, music. Mon, Fri, 7-7:30 pm, bedtime stories; 7:30-8:30, music; 9-10; 10:30-11:30, orchestra. Wed, 7-8 pm, orchestra. Eastern.

CFCH, Iroquois Falls, Ont., Can. 499.7 meters. 250 watts. Abitibi Power & Paper Co., Ltd. Slogan. "The Call of the North." Experimental station for forest protection.

CFCK, Edmonton, Alta., Can. 516.9 meters. 100 watts. Radio Supply Co., Ltd. Daily ex Sun, 4-5 pm. Wed, 9-10:30 pm. Sun, 4-5:30 pm. Mountain.

CFCN, Calgary, Alta., Can. 434.5 meters. 1,800 watts. W. W. Grant, Ltd. Slogan, "Voice of the Prairies." Tues, 11:30 pm, Bronco Busters; Wed, 9 pm, Fri, Sat, 10 pm, Sun, (alternate) 11 am, 7:30 pm, service. Mountain.

CFCQ, Vancouver, B. C. 410.7 meters. 5 watts. Radio Specialties, Ltd.

CFCT, Victoria, B. C., Can. 329.5 meters. 500 watts. *The Deaville Station. Slogan, "The Mecca of Tourists." Wed, Fri, 8-9:30 pm. Every second Thurs, 10:30 pm, 12 midnight. Night Birds, Sat, 10-11 pm. Sun, 11 am, 7:30 pm. Pacific.

CFCU, Hamilton, Ont., Can. 483.6 meters. 500 watts. Jack V. Elliot, Ltd.

CFCY, Charlottetown, P. E. I. 312.3 meters. 50 watts. Island Radio Co.

CFKC, Thorold, Ont., Can. 247.8 meters. 75 watts. D. J. Fendell. Daily ex Sun, 12-12:30 pm; 5-6. Tues, Thurs, Sat, 8:30-10:30 pm. Sun, 11 am, church service; 2-4 pm, 8 pm, sacred concert, music.

CFMC, Kingston, Ont., Can. 267.7 meters. 20 watts. Monarch Battery Co.

CFQC, Saskatoon, Sask., Can. 329.5 meters. 500 watts. * The Electric Shop, Ltd. Announcer, Grant Stevenson. Slogan, "The Hub City of the West Where No. 1 Northern Hard Wheat Grows." Daily ex Sun, 9-10 am; 1:15-2 pm, markets, reports, music. Wed, 8-10 pm. Fri, 9-11:30 pm, dance program. Sun, 11 am, church service. Mountain.

CFRC, Kingston, Ont., Can. 267.7 meters. 500 watts. Queen's University. Discontinued temporarily.

CFXC, New Westminster, B. C. 291.1 meters. 20 watts. Westminster Trust Co. and Hume & Rumble, Ltd. Announcer, F. Sterling. Slogan: "Voice of the Fraser River." Mon, Wed, Fri, 7:30-8:30 pm. Pacific.

CFCY, New Westminster, B. C. 291.1 meters. 1,000 * watts. Commercial Radio, Ltd. Slogan, "Canada's Flourishing Young City."

CHCM, Calgary, Alta., Can. 434.5 meters. 750 watts. Riley & McCormick, Ltd. Slogan, "Western Canada's Leading Leather Goods Store." Thurs, 8-9 pm. Mountain.

CHCS, Hamilton, Ont., Can. 340.7 meters. 10 watts. Hamilton Spectator. Announcer, H. Earnshaw. Daily ex Sun, 6:45 pm, news, markets, baseball. Sat, 10-12 midnight, dance. Sun, 11 am, 7 pm. Eastern.

CHIC, Toronto, Can. 356.9 meters. 500 watts. Northern Electric Company. Announcer, R. W. Lowman. Mon, 8-10 pm. Sat, 8 pm. Eastern.

CHNC, Toronto, Can. 356.9 meters. 500 watts. Toronto Radio Research society. Announcer, R. H. Combs. Mon, 8:30 pm, concert. Programs CHIC CKNC through this station. Eastern.

CHSC, Unity, Sask., Can. 356.9 meters. 250 watts. Horace N. Stovin.

CHUC, Saskatoon, Sask., Can. 329.5 meters. 200 watts. *International Bible Students' association. Announcer, E. G. Esson. Tues, Thurs, 8-9:30 pm. Sun, 1-2 pm; 7:30-9:30.

CHXC, Ottawa, Ont., Can. 434.5 meters. 250 watts. J. R. Booth, Jr. Fri, 8:30-1 am.

CHYC, Montreal, Que., Can. 410.96 meters. 850 watts. Northern Elec. Co. Announcer, N. S. Richards. Wed, 8:30 pm. Sun, 7 pm. CNRM programs occasionally. Eastern.

CJBC, Toronto, Can. 356.9 meters. Jarvis St. Baptist Church.

CJCA, Edmonton, Alta., Can. 516.9 meters. 500 watts. Edmonton Journal, Ltd. Announcer, R. A. Rice. Slogan: "The Sunniest Spot in Sunny Alberta." Club, "Igloo Hut." Daily ex Sun, 12:45-1:30 pm, weather, markets. Mon, Tues, Thurs, Sat, 7:30-8 pm. Mon, 8:30-9:30 pm. Wed, 6-8 pm. Sat, 9-11 pm. Fri, 8:30-10:30, CNRE. Sun, 7:30-9 pm. Mountain.

CJCD, Toronto, Can. 356.9 meters. 50 watts. The T. Eaton Co., Ltd.

CJGC, London, Ont., Can. 329.5 meters. 500 watts. *London Free Press. Daily ex Sun, 1-2 pm, news, stocks, music. Tues, Thurs, Fri, 7:15-8:40 pm. Fri, 11-12 midnight. Sun, 11 am, 7 pm, church services. Eastern.

CJKC, Burnaby, B. C., Can. 410.7 meters. 500 watts. Pyramid Temple society.

CJSC, Toronto, Can. 356.9 meters. 500 watts. The Evening Telegram.

CJWC, Saskatoon, Sask., Can. 329.5 meters. 250 watts. Wheaton Elec. Co.

CJYC, Toronto, Can. 291.1 meters. 500 watts. De-Forest Radio Corp.

CKAC, Montreal, Que., Can. 410.7 meters. 1,200 watts. La Presse. Announcer, Jacques Cartier. Mon, Wed, Fri, Mon. 1:45 pm, orchestra. Daily ex Sat, 4 pm, weather, markets, stocks, reports. Tues, Thurs, Sat, 7 pm, piano lessons; 7:30, concert; 8:30 pm, studio concert; 10:30, dance. Sun, 4:30 pm, sacred concert. CNRM programs 3 first Thursdays of each month. Eastern.

CKCD, Vancouver, B. C., Can. 410.7 meters. 1,000 watts. Vancouver Daily Province. Announcer, William Rose. Slogan, "Canada's Western Gateway." Daily ex Sun, 8:30-9:30 pm, music, news, entertainment. Pacific.

CKCK, Regina, Sask., Can. 476 meters. 500 watts. *Leader Pub. Co. Announcer, A. W. Hooper. "The Queen City of the West." Daily ex Sat, Sun, Tues. 9:45-10:30 am; 1-1:45 pm; 7:30-8:15, music, news, markets. Tues, 9:45-10:30 am; 1-1:45 pm; (CNRR) 8-10 pm. Sat, 9:45-10:30 am; 1-1:45 pm. Sun, 9 pm, service. Mountain.

CKCW, Burketon Junction, Ont., Can. 329.5 meters. 5,000 watts. Canadian Broadcasting Corp.

CKCL, Toronto, Can. 356.9 meters. 500 watts. The *Dominion Battery Co., Ltd. Daily ex Sat, Sun, 10:30 am; 3-4:30 pm. Mon, Wed, Fri, 7 am, 7:15, 7:45, 8, exercises. Tues, Thurs, Sat, 7 pm. Sun, 3-4:30 pm. Eastern.

CKCO, Ottawa, Ont., Can. 434.5 meters. 100 watts. Dr. G. M. Geldert (Ottawa Radio Assn.) Announcer, Dr. O. K. Gibson. Slogans, "Ottawa's Radio Voice." "The Community Voice of Canada's Capital." Tues, 8-10 pm. Sun, 7 pm, services; 9, sacred concert. Eastern.

CKFC, Vancouver, B. C., Can. 410.7 meters. 50 watts. First Congregational church.

CKNC, Toronto, Ont., Can. 356.9 meters. 500 watts. *Canadian National Carbon Co., Ltd. Mon, Sat, 8-12 midnight. Eastern.

CKOC, Hamilton Ont., Can. 340.7 meters. 50 watts. Wentworth Radio Supply Co., Ltd. Announcer, H. Slack. Slogan: "In the Garden of Canada" Mon. Fri, 8-9 pm, music entertainment. Sun, 7-8 pm, church services. Eastern.

CKY, Winnipeg, Man., Can. 384.4 meters. 500 watts. *Manitoba Tel. System. Announcer, D. R. P. Coats. Slogan, "Manitoba's Own Station." Daily ex Sun, 10:50-11 am, time, weather; 12:30-1:30 pm, music, lectures, livestock; 2:15 pm, grain markets; 4-5, news, kiddies story. Mon, Sat, 8 pm, lecture; 8:30, music. Wed, 7:30 pm, CNRW program. Sun, 7 pm. Central.

CNRA, Moncton, N. B., Can. 291.1 meters. 500 watts. *Canadian National Railways. Announcer, W. V. George. Slogan, "Voice of the Maritimes." Daily ex Sun, 2:45-3:45 pm. Tues, Fri, 8 pm. Atlantic.

CNRC, Calgary, Alta., Can. 434.5 meters. 750 watts. Canadian National Railways. Thurs, 9 pm. Mountain.

CNRE, Edmonton, Alta., Can. 516.9 meters. 500 watts. Canadian National Railways. Fri, 7:30-8 pm, 8:30-10:30. Mountain.

CNRM, Montreal, Que., Can. 410.7 meters. 1,000-1,650 *watts. Canadian National Railways. Announcer, J. S. McArthur. Thurs, 8:30 pm. Eastern.

CNRO, Ottawa, Can. 434.5 meters. 500 watts. Canadian National Railways. Announcer, A. W. Ryan. Wed, Sat, 7:30 pm, markets, bedtime story; 8, 10:30, dance program. Eastern.

CNRR, Regina, Sask., Can. 435 meters. 1,000 watts. Canadian National Railways. Tues, 7:30-9:30 pm. Mountain.

CNRS, Saskatoon, Sask., Can. 329.5 meters. 500 watts. *Canadian National Railways. Daily, 2:30-3:30 pm. Mountain.

CNRT, Toronto. Ont., Can. 356.9 meters. 500 watts. *Canadian National Railways. Announcer, E. W. Jackson. Fri, 6:30-12 midnight. Eastern.

CNRV, Vancouver, Can. 291.1 meters. 500 watts. Canadian National Railways. Announcer, G. A. Wright.

CNRW, Winnipeg, Man., Can. 384.4 meters. 500 watts. *Canadian National Railways. Wed, 7:30 pm, bedtime story, farmers' talk; 8, dinner concert; 8:30, studio; 10, dance. Central.

(The above listings complete the stations in the United States and part of the foreign broadcasters. Part V consists of a complete location index of stations and the remainder of the foreign list. This appears next week.)

RADIO 'RITHMETIC

as an example

How *Near* are the *Far* Stations?

That's an easy one. They're not far away at all; they're right with you, performing antics on your aerial, trying to make themselves heard.

Give them a real chance by keeping your batteries full of pep. That's another easy one! Just put the job up to a Westinghouse Rectigon.

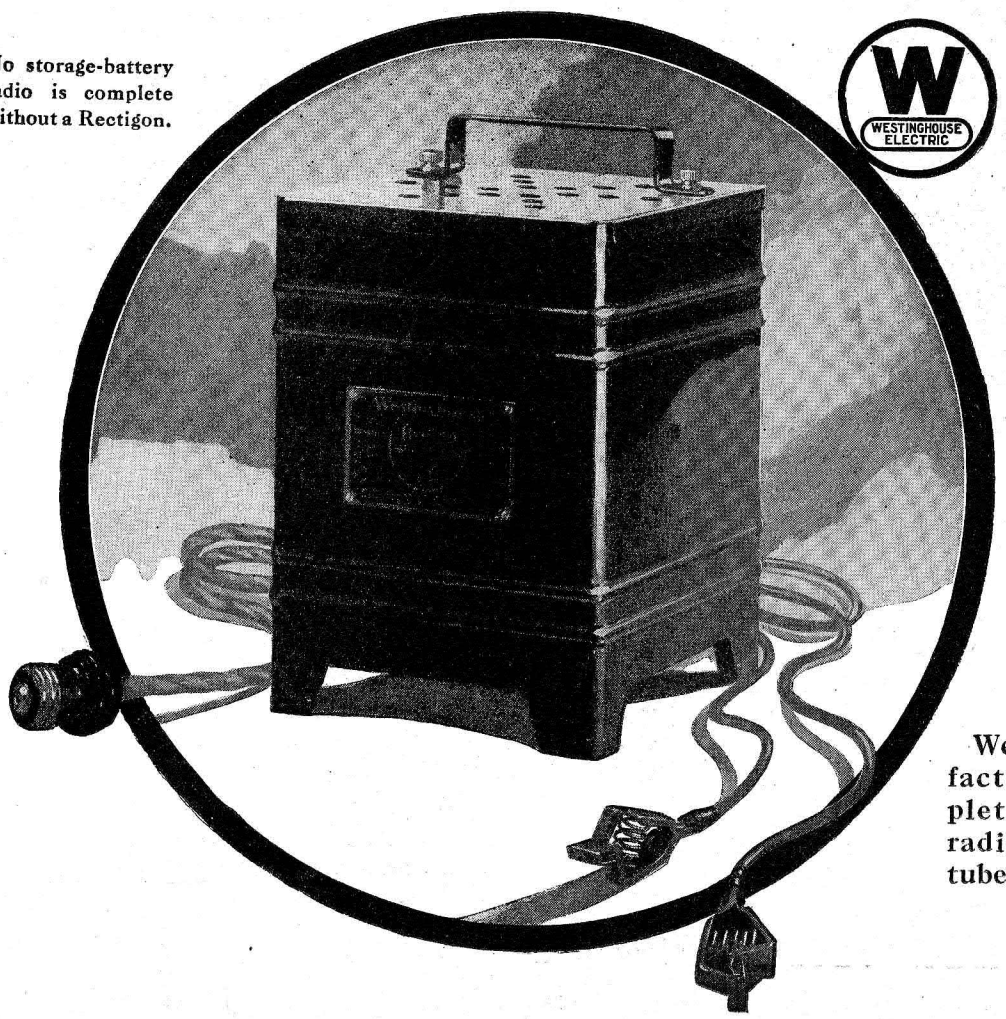
It's for "A" batteries and "B" batteries; and your automobile battery will get a full kick out of this handsome little helper.

There's no muss or fuss when you use the Rectigon. No acids or chemicals. No moving parts and no noise! It's a high-quality Westinghouse Product throughout, guaranteed to make your storage-battery radio set satisfying and *complete*.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY
SOUTH BEND, INDIANA

The Westinghouse Rectigon Battery Charger

No storage-battery radio is complete without a Rectigon.



Westinghouse manufactures, also, a complete line of Micarta radio panels, Micarta tubes and instruments.