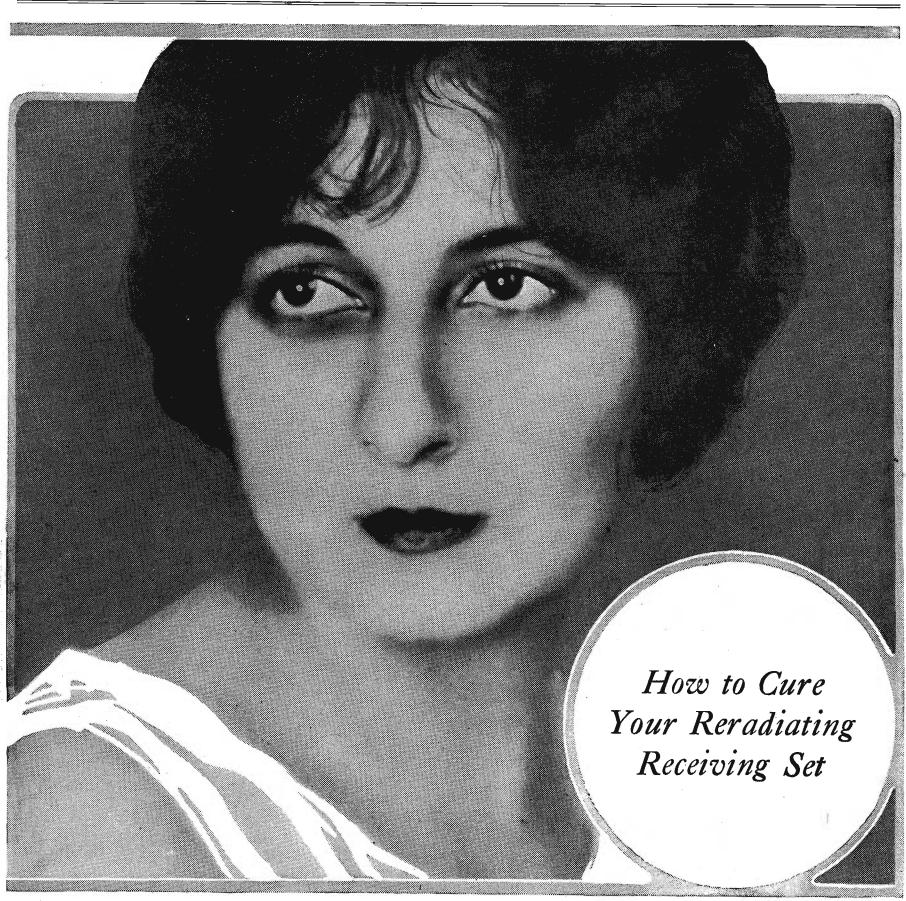
America to Hear Europe's Programs

Radio Disest EVERY LIPPROGRAMS TENTS

Vol. XV

Copyright 1925 By Radio Digest Publishing Co. SATURDAY, DECEMBER 5, 1925

No. 9



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 ses, were made by the committee on slation at the fourth national Radio ference. The report of the comtee was accepted and all its resolution as passed by the general conference. phases, were made by the committee 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.

T 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

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 tial 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 umber of stations in any community has already been determined by this conference, which has likewise recommended ence, 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 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 broadensting stations, by their very nature, and in any event we do not believe the time has come for their imposition.

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

(1) Existing federal statutes are in adequate 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 adéquate administration.

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

Recommended Legislation

Your committee therefore recommends Congress do enact such legislation incorporating therein the following prin-

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 legis-

(2) Such administration shall be exercised by the (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 hards or committees as he may consider necessary or desirable to assist him in an advisory capacity in the administration of problems of national

(3) That the doctrine of free speech be held in-

violate.

(4) That those engaged in Radio communication shall not be required to devote their property to



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 law-makers that a law is necessary.

(6) That no monopoly in Radio communication shall

permitted.
(7) That the legislation shall contain provisions for due appeal from final decisions of the sceretary of com-

eree 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 license; provided however, that if in the opinion of the secretary of commerce and rection permit to engage in haddo communication shall be issued only to those who, in the opinion of the secretary of commerce, will render however, that if in the opinion of the secretary of commerce, will render the opinion of the secretary of commerce who, in the opinion of the secretary of commerce will render to the public; or are necessary to the public changes are required as a public necessity, any change or changes may be mado.

"LOOKS AS GOOD AS SHE SINGS," WEAF

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 nationwide fame as an air artist.

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

(9) No license shall be issued to operate a transmitting station not already operating in Radio communi-

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. It out to commercial Stations. Broadcasting Stations.

to wit: Commercial Stations, Broadcasting Stations, Amateur Stations, and Experimental Stations. (12) That the sceretary shall, have the power to revoke of suspend any liceuse whenever he shall determine that the Heensee has violated any of the terms of his license, regulation of the secretary, federal Radio law or international treaty.

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.

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.

ALL CONFLAB PLANS

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. of the department of commerce are giv-ing their attention to the resolutions passed and to the possibility of enforc-ing 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 offi-

cials 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 distinctions with the conditions were at present.

tricts 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

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

The new theater, which is to cost \$8,000,000, will not only be netable 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

CONTENTS

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All the Live News of Radio..... You "Like-A" Ukulele Ladies Like These?..... Mouth Organ, "Child of Gods," Wins Fame..... WCAD Picks Its Programs "Out of the Air"..... Visiting the New York Twins. WJZ-WJY Women's Page; Index to Women's Programs..... Advance Programs for the Week..... Evening at Home with the Listener In, a chart in eastern time, showing when to listen in for your favorite stations..... Counterphase: Perfect Bridge Tuned R.F. Set, Part II—Drilling and Assembly of Panels, by James McDonald...... Seven: Selective D-Coil 7-Tube Super-Het, Part III—Six More Holes and the Wiring, by John G. Ryan How Badly Does Your Receiver Reradiate? 29

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 snit the most critical while the volume on DX stations equals that of a

SEND IN THE BLANK TODAY

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WHEN YOU WANT

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

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 rheo-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.

one 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

augurate a number of features for the

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 Scidel is the only one of the

Although Scidel 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

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

PRISON BARS DO NOT KEEP OUT AIR CHEER

ETHERSFIELD, 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

Towa 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





Aladdin Outdone by London Inventor Who Directs Magic Lamp with Voice Fur Country Indians Like

LONDON, Eng.—Radio and electricity can be controlled by the human voice, or have combined to produce a marvelous any vibration or sound."

lamp reminiscent of that of Aladdin in the "Arabian Nights." The lamp will looks fike an ordinary electric bulb. 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 "It is an electrical switch, 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 com-mands 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 empractice."

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 sta-

"Just as soon as our Boundbrook sta-tion 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.

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 duced 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.

Broadcasts of WCCO Radio

MINNEAPOLIS, Minn .-- Up in the furtrading 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?



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.



ORE 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 com-

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. 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 Renjamin 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 furth of reeds fashioned into a mouth organ.

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."

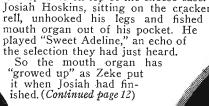
At last—the great discovery! Over the ether waves trembled a thin, piping melody of notes all

sprayed together in harmony like a tinkling foun-

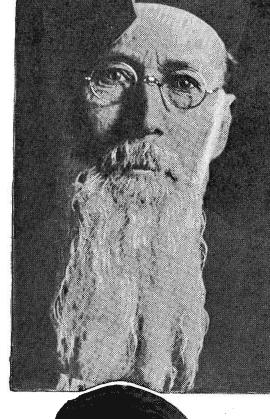
a tinkling fountain of crystal waters. From the realms of Mount Olympus, it may have been, passionate kisses from the lips of Pan and the sobbing answer of the dying nymph.

"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.



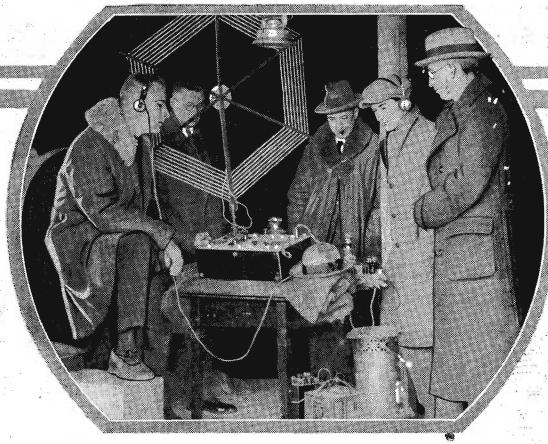
Uncle Tom Marrs, (above, right), blew himself into national fame with a small mouth organ at KFRU, Okla. Borrah Minevitch, (right), broadcasts grand opera harmonically. Notice E. E. Hardy's (left) three-deck system.







WCAD Picks Its Programs "Out of the Air"



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.

CAD, "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.

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.

Priest.

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. No-body kicks about the WCAD program—not even those who have receivers limited to WCAD pro-

grams 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.

Then he explained how it was doine. They merely country may be relayed, it is claimed, to the couple their own receiver which pulls down the humblest set owners in the most remote places. WGY programs from Schenectady to their own broadcasting station and out go the WGY programs over WCAD to all the small set users in is the country seat of St. Lawrence university, the countryside round about. Of course it is not eighteen miles south of the St. Lawrence river. These programs come in on 1560 meters from the tribute to a prominent St. Lawrence alumnus, declarement transmitter of the Congral Flectic Bedeller who inverted this region is 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 broadcasting. held out that the benefits of Radio may be ex-

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

Then he explained how it was done. They merely couple their own receiver which pulls down the WGY programs from Schenectady to their own WCAD is a 250-watt station.

Irving Bacheller, who immortalized this region in fiction as "The North Country."

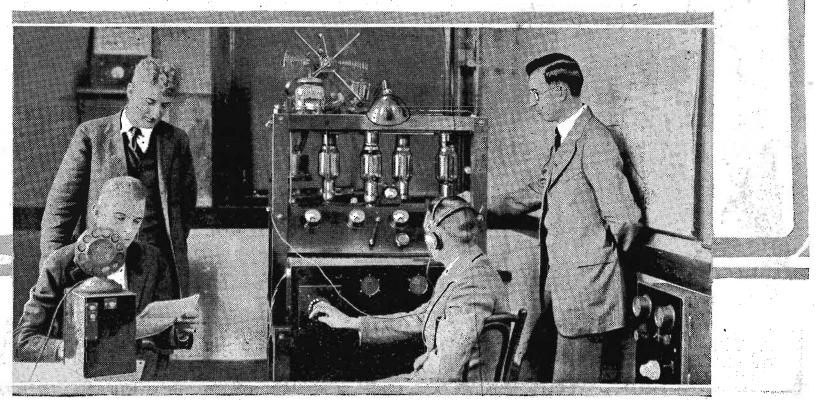
WCAD grew from the need of the inhabitants of Canton and vicinity for Radio entertainment and for information on agricultural topics. The larger stations were available to those who had selective sets but not all who would appreciate broadcast programs could afford the type of set needed to pick up "distance."

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.

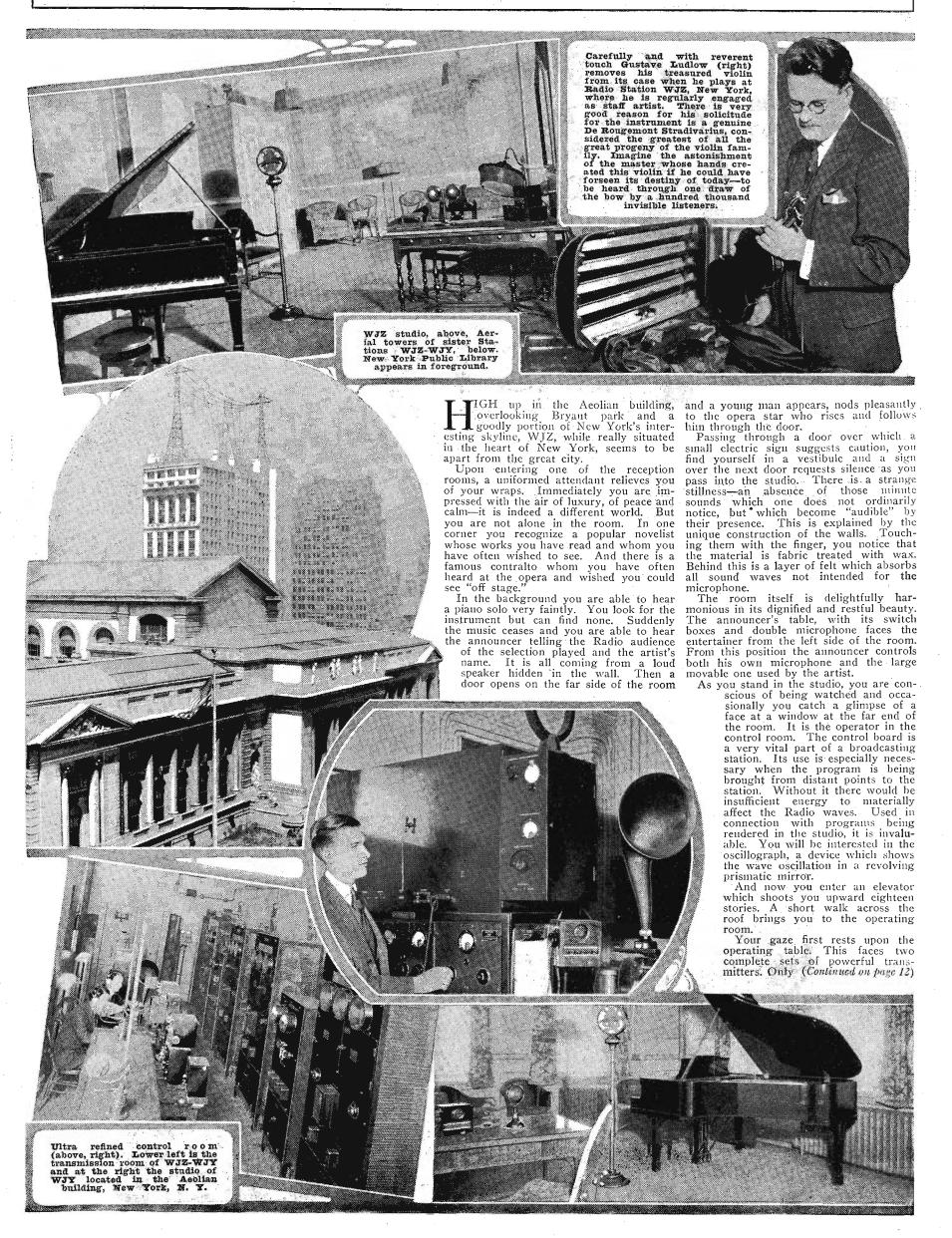
Control of the speech amplifier is located in a

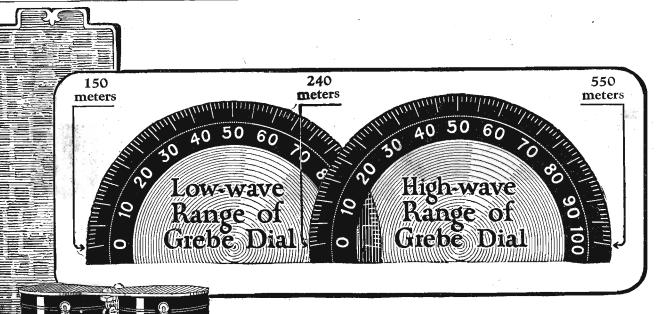
shielded cabinet in front of the transmitter and through this arrangement it is made possible for the one man, alone, to conduct an evening of

Not such a bad idea, is it?



Visiting the New York Twins, WJZ-WJY





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-Mencius

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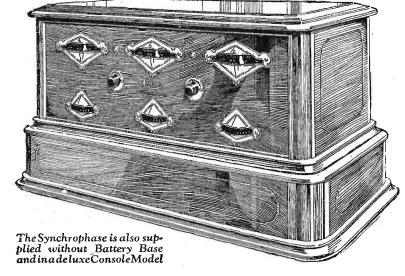




This company owns and operates stations WAHG and WBOQ; also low-wave rebroadcasting stations, mobile WGMU, and marine WRMU.



All Grebe apparatus is covered by patents granted and pending.



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



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 or-New York's Philharmonic society or-chestra concerts have been so well ap-plauded by fans that they will be con-tinued during December. The two con-certs 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 Mem-phis park commission, is in charge of the new children's hour. He is also instruc-ing children in the building of inexpen-sive 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. Milwaukee enters upon the seventy-sec-

An oratorio, "The Holy City," by Alfred R. Gaul, will be presented on the latter half of the KGO program, Tuesday evehalf 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 imaginasary parts, create locale in the imagina-tions 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 Transden pright by Otto 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, ally 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 "s piano nor a precedent for other

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 more broadcasters.

KFCY, Le Mars, Iowa, a 50-watt sta-tion, 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.

ative of genius. The slightest dfference in the "touch" of a piano has been found disconcerting to many artists.

The Davis saxophone octet whose direc-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 quality of his talks.

The Goodrich Zippers, under the direc-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."

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 locaartists to follow, but merely the prerog-tion. 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 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

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

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 Tues day night at 8 o'clock, eastern time.

Most of the programs will consist of the singing by vocal ensembles, and solo-ists, of hymns and hymnal anthems. It 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.

ists, 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 composers of the tunes, or account of the circumstances under which the song was

Rejuvenate Butte Fans' Club

BUTTE, Mont.—The Butte Radio club of this city recently held a rejuvenation meeting and is planning to hold semimonthly 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 1925-1925 cacon. 1926 season.

The chamber music series was founded

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 geerosity 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 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 freet musical organizations in American design of the covers the past was a present and successive the past was a present and successive the past was a present and present and present musical organizations in American design of the covers of the covers of the past musical organizations in American design of the present musical organizations in American design of the present musical organizations in American design of the present musical organizations in the present very finest musical organizations in America and with this in view, he has engaged for this year's work such organiza-tions 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 entertain-

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

Efficiency, 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. 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 (336.9) here on December 5 when St. Marys plays the University of Southern California,



CROSLEY Super-Trirdyn Special

The improved Super-Trirdyn 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 \$60.00

Performance That Has No Peer in Any Field of Radio

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-Trirdyns 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

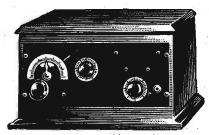
Cable Address: Listenin-Cincinnati

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-Trirdyn Regular



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, \$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 manolds 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 \$23.50

Approximation of the property of the property

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.

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. Al 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 turnwhen the day's work is done by the turning of a magic dial the working woman in business plunges into a new and refresh-

"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 thought-fully. "may never have those things but fully, "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 addison of the Foundation registed. home advisor of the Foundation, assisted by Martha Meier.

YOU LIKE-A UKULELE?

(Continued from page 4)
heard Henryetta Turner, the bright scinti-lating ukulele lady of Station WEBJ, New York. She has achieved the art of 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 here. Let your eyes behold her as an account of the second of t Hawaijan, only more beautiful.

Then there is May Singhi Breen, also

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 cos-

when attired in the native Hawaiian costume. Another charming pair of "Ukuletume. Another charming pair of "Ukule-lians" are the Ziegler sisters, Pauline and Sarah, of WBBM, whose pictures were re-ceived 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. 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 pats 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 beusewives 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. in restaurant hash.

"MISS RADIO," QUEEN OF DX-ERS



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 Grave, songs connected with the telling of it music.

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," bu few know that Thomas Brigham Bishop a native of Wayne, Maine, wrote the mua 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
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
WGI (447.5) A Frozen Salad and Dessert for your Christmas. Christmas. 12:35 p. m. 11:35 10:35 KYW (536) Table talk. Betty Crocker.
12 1 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 p. WCCO (416.4) Women's hour.
WCOB (246) Cooking chats.
4 3 It n.
WITH (508.2) Market hints for housewises.
WOC (488.6) Romo Management schedule, Aunt Jane.
WQJ (447.5) Winter Pies. Carc of the Hair.
5 5 KIR (381.1) Home helps

Eastern Central Mountain Pacific 10:43 a.m. 9:45 a.m. 8:45 a.m. 7:45 a.m. KFDJ (282.5) Christmas Confections. WCAE (461.3) Gold Medal talk. WEAF (491.5) Home service talk, Betty Crocker, WTAG (282.5) Three R's of Dressing Attractively. WHT (309.8) Women's club. WNYC (526) Women's club. WNYC (526) Women's program. 11:45 10:45 9:45 8:45 WCCO (416.4) Decorations for Christmas, Betty Crocker. Crocker.
WDAF (365.6) Decorations for Christmas, Betty Crocker. Crocker.

12 n. 11

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 Draperles and Furniture. Lure. 4:30 3:30 2:30 1:30 VLW (422.3) Cooking school, hints. 7 5 4 KFGA (454.3) Today's recipes. KLX (508.2) Women's hour. THURSDAY, DECEMBER 10 Eastern Central Mountain Padific 9:30 a. m. 8:30 a. m. 7:30 a. m. VWJ (352.7) Tonight's dinner. 8 7 WWJ (352.7) Tonight's dinner.
10 9 8 7
WIZ (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.
Hats. Jane. WOJ (447.5) Your Baby's Teeth. 2 2:30 3. 348 7 6 5
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 Mac-Millan 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

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

etc., as well as the physical aspect and disease prevention.

April 30, "Adolescence."

May 6, "First Aid."

May 13. Answers to collected questions.

Dr. Prait 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

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

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. matics," 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 be-tween the Boston Bruins and Montreals at the Boston Arena. Frank Ryan will announce as in the first game of this

PERFECT 36 RESULT OF RADIO EXERCISE

YEW YORK. - Exercise has peculiar effect of making under-weight 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 three tables at 15:45 a.m. from the table table tables to the Matanalitan Life the tower of the Metropolitan Life Insurance company through Stations WEAF, WEEL and WCAP. The joke W.B.F., W.E.F. and W.C.A.P. 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 deivered here, Major Gladstone Murray, of he British Broadcasting company, said t was important that there should be in early adoption of some general scheme

the 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 highower station, as the first link in the new Empire broadcast chain. By this shain it will be possible to transmit from XX to a listening post in the maritime. XX to a listening post in the maritime

XX to a listening post in the maritime rovinces 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 3ritish 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., sup-Uncle Tom Marrs of Dale, Okla, supporting half a yard of patriarchial beard, ived 65 years without being known beyond his own county. But he played a nouth organ and fame found him, yanked him before a microphone at Station KFRU and now he is known from coast o coast. "Harmonica" (plague take the vord) bands have been organized by New fork and Chicago school boys. Walter Peterson, Elmer E. Hardy and other nouth organ artists have rigged up devices whereby they play the mouth organ nd use their hands for accompaniment and use their hands for accompaniment nstruments.

Probably the very pinnacle of glory has been achieved for the newly arrived—or berhaps more properly "newly recognized"—mouth organ. Through Professor Borah Mimevitch of New York it has as-

cended 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

There are two large divisions of the staff—the administrative and program division under Mr. Charles B. Popenoe,

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.

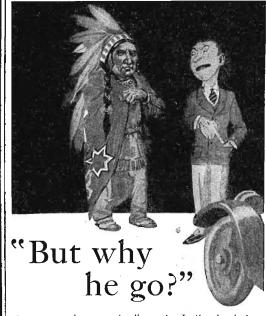
One of the most interesting features was so famous.

and the operating division under Mr. Carl Dreher. The duties of the two main divisions are entirely separate and distinct. Assistants to Mr. Popence 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 Luddow, 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 value and his famous Stradivarius violin, heard 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 vealed 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

TWATER KENT



When they struck oil on the Indian lands in Oklahoma many of the Indians became suddenly rich. One of them, anxious to begin his life of luxury, went to buy an automobile.

The salesman launched into a description of the car in detail. Technical term followed technical term in a bewildering stream. Finally the salesman thought his work was done. He produced an order blank and paused.

"Now," he asked, "is there anything else I can tell you?" The Indian scratched his head.

"Um," he said. "You tell me: He have no horse. Why he go?"

We could give you a description of the Atwater. Kent Radio Receiving Sets and Speakers that would fill hundreds of pages.

But what would be the use? You would still judge an Atwater Kent, as you should, by its performance. We want you to judge it that way, to compare it with any other radio.

By looking at it and listening to it, you will get some of its technical perfection. When you have owned it and lived with it, you will know how good it is.

Hear the Atwater Kent Radio Artists every Sunday evening at 9.15 o'clock (Eastern Standard Time) through stations:

WEAF . New York WEEL . Boston WCAE . Pittsburgh woc . Davenport wfi | Philadelphia wgr. Buffalo woo Salternating wwy. Detroit wsa1. Cincinnati wjar. Providence ksd. St. Louis wtag. Worcester wsa1 . Cincinnati WCAP . Washington wcco . Minneapolis-St. Paul

Write for illustrated booklet of Atwater Kent Radio

ATWATER KENT MANUFACTURING CO. A. Atwater Kent, President 4708 Wissahickon Avenue · Philadelphia Pa





Model 10 (without tubes), \$80



Model 20 Compact, \$80



Model 24, \$100

Prices slightly higher from the Rockles west, and in Canada



friends - or the family! - with the clearest voiced of all reproducers, the international favorite of music

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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. 5:15 p. m. WLS (344.6) Request nad Barn dance program. 8:25 7:25 WZ (454.8), WGY (379.5), WRC (468.5) New York Philharmonic orchestra. 6:30 5:30

Saturday, silent night for: CFAC, CFCA, CNRA, CNRC, CNRE, CNRM, CNRR, CNRT, CNRV. CNRW, KFDM, KFMQ, KFMMX, KFRU, KFUO, KLDS, KLX, KMA, KOB, KSAC, KWSC, KTAB, WBAP, WBZ, WCAP, WCAU, WCAU, WCAU, WEAU, WEBW, WEBW, WEBW, WEBW, WGCP, WGR, WGST, WHAD, WHAZ, WHB, WHN, WHO, WJAD, WTAG, WTA

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 Wood-burn, pianist; Mrs. Orelile A. Jarvis, soprano; Norman McKecver, violinist; Dr. P. L. Nesbitt, tenor; duologue, "The Etornal Masculine," Mary Edwards. Mrs. Bonnie Gorrell; Leslie McKenna, bass; Chateau Laurier dunce orchestra.

Mrs. Bonnic Gorreit; Lestie Bleaning, Con-Laurier dance orchestra. KDKA, Pittsburgh, Pa. (309.1), 7:15-8 a. m., exer-ciscs. O. Shannon, physical director; 6:15 p. m., concert, Little symphony orchestra, direction of Victor Saudek; 7:30, Daddy Winkum; 8:30, concert, West-inghouse band, T. J. Vastine, conductor. WAFD, Port Huren, Mich. (275), 9-11 p. m., studio program; 11:30-2 a. m., musical program, Addison hotel.

hotel.

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

Charles Rohner, violinist.

WAE, Pittsburgh, Pa. (464.3), 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, planist; 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 orchestm 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.

of all nations program, direction, Mrs. Edward Thomas; 6-6:30. Uncie. Geebee; 8-9. Wayside Troubadours; 9:30-10, Warner's theater; 10:30-11, Arrowhead Inn orehestra.

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

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

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

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, lecture period; 8. Seaside hotel trio; 7:30, lecture period; 8. Seaside hotel trio; Tiso, lecture period; 8. Seaside hotel trio; Trancols D'Eliscu; 1 p. m., organ recital; 3. Dal Buch and his Arcadlans; 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. Francols D'Eliscu; 1:30, the University of Pennsylvania Instrumental club; 9:15. two one-act plays, the Emille Krider Norris Dramatic school; 10:5, Benjamin Franklin orchestra; 11:05, organ recital; NIA, Providence, R. I. (305.9), 1:05 p. m., Idcal orchestra; Annie Stockdale, soprano.

WIR, Pontiac, Mich. (517), 7 p. m., Jean Goldkette's Protice, Mich. (517), 7 p. m., Jean Goldkette's Orchestra; 11:30, "The Jewett Jesters," the "Merry Old Chief" presiding. Wiz, New York American News service; 4:39-5:39, Hotel Commodore dinner concert; 8-8:30, talk, Cosmo Hamilton; 8:30-9, Sherry's dance orchestra; 9-10:30, to be announced; 0:30-11:30, Paul Specht's Moulin Rouge orchestra.

WKAR, E. Lansing, Mich. (285.5), 1:2:30 a. m., adace program.

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

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

WLIT. Philadelphia. Penn. (394.5), 1 p. m., Strawbirdge and Clothler tea room ensemble. Harold Micklin, director. Y. (265.5), 7:30-8:30 p. m., Royal Micklin, director. Y. (265.5), 7:30-8:30 p. m., Royal Dellwood orchestra; 8:30-9, musicale; 9-10, program, Suntise Point Development company.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail; 6:30-7, Robert Soffer, planlst; 7-8, orchestra; 8:36-9, Guartet; 8:30-8:45, Edward French, planlst; 8:45-9, Erva Giles, soprano; 9-3:15, Edward Morris, planlst; 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; 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.

9-10, remote control control 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 Elikins Ciro orchestra.

WPG, Batavia, Ill. (299.8), 1:30 p. m., Hotel Morton uncheon music; 6:45, 15-minute organ recital, Arthur Sectt Brook; 7, Hotel Ambassador dinner music; 8, magazine review, Walter F. Greuninger; 9, Hotel Traymore concert orchestra; 10, dance orchestra. Hamilton, D. C. (469), 12 m. orchestra, Hamilton hotel; 6, orchestra, Hamilton hotel; 7, orchestra, Hotel Washington; 7:55, zoological talk, Smithsonian institution; 8:10, Biolo talk; 8:25, New York Philiammonic orchestra, WJZ and WGY; 10:30, "Grandall'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

wild, worcester, mass. (200), 12:09-2 p. m., wildo trio.

WWI, Detroit, Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statter 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, Dkla. (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. symorchestra, Princeton, Mo., director, Stephen

phony orchestra, Princeton, Mo., director, Stephen LaMar.

KAMar.

KPVE, Univorsity 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, lowa (252), 11:30-12:30 p. m., garden, flower, orchard talks, Earl E. May; domestic science talk, Leana Teget, June B. Case; 6, Pollyana stories, Mrs. Dwight Nickols; chimes, William Howie; retailers program, Benedict Plano 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

YEW YORK'S Philharmonic or-EW 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 back-ground 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.

in KFDJ, Corvallis, Wednesday, to hear the second of the series of costume design. "The Ladies of the Northwest will tune 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 field, 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, bilind planist; 11, Palace theater stock company and orchestra. KSD, St. Louis, Me. (545.1), 6:45 p. m., Abergh's concert ensemble; 9, Grand Central theater orchestra. KTHS., Hot Springs National Park, Ark. (374.8), 1:30-1, orchestra; 9-10:30, dance concert, New Arngeton hotel orchestra.
KYW. Chicago, III. (535.4), 6:30-7 a. m., exercises: 1:35, table talk, Anna Peterson; 1 p. m., concert. Commonwealth Edison company; 1-2, luncheon concert. Joska DeBabay and his orchestra; Coon Sanders Orlandal Nighthawks; 6:10-6:40, musical concert, Commonwealth Edison company; 6:40-7, bedtime stroy. Unclear Nighthawks; 6:10-6:40, musical concert, Compress classic; 1-1 a. m., Congress canival; 1-2, Insomnia classic; 1-2, I

Diamst, churen's story, Fave McBeath; Margaret Cumningham, child planist; Willard Kaleibe, tenor, bannioist.

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, Jelko Good Luck Girl; 11, pecial studio features; 12 m., Al Carney's organ hour; 1-2 m. special studio features; 6, final football scores, classical program, dinner organ recital, Grayling's string-ritio; Eleanor Kaplan, violinist; Pastell Stanley, soprano; Antoinette Bennett; W. A. Dyckman, baritone; Florence White Rush, soprano; 7:45-9:15 (2:39) musical features; 9:30 (399.8), Jelke entertainers, Kitchen Klenzer Klassics, Harry Langdon, harmonica; Marie tenor; Al Carney, organist; Badger Four male feather. Clark Hawailan trio, Vie Fredericks, baritone; Irene Beasicy, "The Girl from Dixie"; Marguerite Morris, "The Girl from Geoxgia"; Jacobson, humorist; 12, Pat Barnes and Al Carney, Will, Decatur, Ill. (270), 9:30-11 p. m., artists. Willo, Mooseheart, Ill. (302.8), 10 p. m., Rosemary Hughes, Robert Duphiney, Robert DeWar Marle Wiltors, Log Cablin orchestra; 12, Jack Nelson, Jack Mason, Fayette Miller, Courtland Banks, Dick Vail.

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

Hamm's orchestra; 11-12, Drake and Blackstone orchestras.

WLS. Chicage, III. (344.6), 0 a. m., announcements of R. F. D., program for day; home question box. Blien Rose Dickey; Sears Rocbuck agricultural foundation; 7 p. m., Lullaby time, Ford and Glenn; 7:15-12 p. m., program, Ford and Glenn; Raibh Emerson; Grace Wilson, contraito; Tony Corcoran, bartione; barn dance fiddlers; Joe Bren's minstrel company.

7:13-12 p. m. program. Ford and Glenn; Ralph Emerson; Grace Wilson, contraito; Tony Corcoran, bartione; 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, chorn from the Cincinnati Conservatory of Music; 8:30, excerpts, "The Garden of the Shah."

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

WMBB, Chicago, III. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Louise Reichert, Presion 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 Hodet and his Nightingale orchestra; 11, Arthur Hays and his organ iubilee, Dr. Applesauce announcing.

WOC, Davenport, Iowa (483.6), 5:45-6 p. m., chlmcs concert; 6:30-6:50, Sandman; 9-10, Murray family orchestra; 11-12, orchestra, LeClaire hotel; Peter MacArthur, baritone, 10:30, Frank Hodet and his Nightingale orchestra; 11, 21, orchestra, LeClaire hotel; Peter MacArthur, baritone, 10:30, Frank Hodet and his Nightingale orchestra; 11, 12, orchestra, LeClaire hotel; Peter MacArthur, baritone, 10:30, Frank Hodet and his Nightingale orchestra; 11, 12, orchestra, LeClaire hotel; Peter MacArthur, baritone, 10:30, Frank Hodet and his orchestra; Banks Kennedy, organist; Bob Mokreis, pianist; WOK string trio; 5:30-7, Howard Will, Lenor; Robert York, tenor; Gus C. Edwards and his orchestra; Banks Kennedy, organist; Bob Mokreis, pianist; Paul Vernon, Pioninist; WOK string trio; Bill Hay, bass: Banks Konnedy, organist; Bob Mokreis,

concert trio; solo artists; Chicago Motor club speaker; World, news digest.

WQI, Chicago, III. (447.5), 11-12 m., talk on art, Marjory Curry; "A Frozen Sahad and Dossert 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 hls Rainbo Gardens orchestra; Ralph Keim, planist; Anne Keim, mezzo soprano; Lavina Price, planist; Sheppard Levine, tenor; Helen Reed, accompanist; 10-3, Ralph Williams and hls Rainbo Skylarks; Ambrose Wyrick, tcnor; Jerry Sullivan; Rose Vanderbosch, soprano; Hal Lansing, ukulele soloist; Everett George Opie, reader; Jung Lee, comedienne; Bort Davis, Clown of the Air: Clarence Theders, tenor; Bita McFawn, Mary Bieber, harmony duo; George Thurn, kazoo and ukulele soloist; Devon, tenor; Brid McFawn, Mary Bieber, harmony duo; George Thurn, kazoo and ukulele soloist; Devision, tenor; Eddle Vogol, bartlone; Brundago and Kraemer, harmony supers.

WSAI, Cincinnati, Ohio (326), 7:45 p. m., ehildren'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 Bicvele Playing Card sextet; 9:15, the Bicycle Playing Card sextet; 9:15, the Bicycle Playing Card sextet; 8:001st, 4tlanta, 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 brevilles; 7:30-8, program, Elmer R. Sly company; Nathan Leetjesky, cellist; G. Davis Brillhart, planist; 8-10, Radio Doings Revels with music, entertainment and technical talks on Radio; 10-11, Warrer Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood roof baliroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15-7:30 a. m., health training exercises; 7:45, pep class; 8:15-8:30, health training exercises; 11:30-1 p. m., luncheon concert; 4-5:30, concert orchestra, Hotel St. Francis, Vinton. La. Ferrera, conducting; 8, sport review. A. Sanfor; 8:10, National Carbon company program; The Mrory Widow, "comic opera; Carl Anderson, director Vinton LaFerrera's concert orchestra; Efficiel Wynne, soprano; Grace LePage, soprano; Clais Wynne, with the solutions; 10-12, Hotel St. Francis, Vinton LaFerrera's concert orchestra; 12:30-1:30 p. m., Leighour, soprano; James Gerard, tenor, Albert Gillette, baritone; 10-12, Hotel St. Francis, Conshaw, leader; 0:30-7:30, history story, Prof. Hertzog; Dollie Wright, Henrietta Poland and Thele John, Sulmore hotel dance orchestra; 11:30-2 a. m., Times Tom Cats.

KMTR. Hollywood, Calif. (365.3), 2-5 n. m. play-by-play of Oregon Aggles vs. U. S. C.; 5:30-6:15 n. m., Wurlletter Dipe organ studio; Town Taxtler; 6:15, travol talk, W. F. Alder; 6:30-7, Manuer Kent Radio orchestra; 11:30-2 a. m., Filmland Frolickers, direction Chet Boone, M

Sunday, December 6

Headliners Today

Eastern Central Mountain Pacific
5 p. m. 4 p. m. 3 p. m. 2 p. n
CHIC (357) An hour with the organ.
WGY (379.5) Dr. Frank Sill Rogers, organist.
6 5 4 3

WSB (428.3) Sacred concerts.

Sunday, silent night for: CHIC, CKNC, CNRA, CNRC, CNRE, CNRM, CNRO, CNRR, CNRT, CNRV, CNRV, CNRY, CNRT, CNRV, CNRW, CRAB, KFAU, KFMQ, KFOA, KFVE, KFWA, KLX, KMA, KMTR, KOB, KSAC, KWSC, PWX, WAHG, WBAP, WCAU, WCX, WDAF, WAN, WGEJ, WGEJ, WGE, WGEJ, WHAD, WHAS, WHAZ, WGES, WJAD, WJAZ, WKAR, WJBL, WLIT, WMAQ, WMC, WNYC, WOI, WOR, WRC, WSAI, WSMB, WTAM, WTIG.

Eastern Time Stations

Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 11 a. m., church service;

p. m., Dr. Charles Heinroth, organist; 4:46, vespor service, Shadyside Presbyterian church; 6:80, dinner concert; 7:45, church service.

WAFD, Port Huren, 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., Watch-tower orchestra, Fred Twaroschk, tenor; 10:30, Blile lecture, Judge Rutherford; 11, Fred Twaroschk, tenor; 11:10, Watchtower orchestra; 9 p. 10; J. B. S. A. choral singers; 9:05, violin ducts, 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; 19.69, 2 B. S., 2 Country and Count

WTAG, Worcester, Mass. (268), S.45-5:30 p. m., address, Dr. S. Parkes Cadman; Gloria Trumpeters. George Betts, chimo soloist; 7:26-8:15, Capitol family; 9:15-10:15, Adwater Kent Radio hour, Maria Kurenko, Bussian soprano; Felix Salmond, violincellist.



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

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; Fellx Salmond, violin-cello artist.

WCAU, Philadelphia, Penn. (277.6), 5:20 p. m., R. Ployd Fox, bass; 5:35, undenominational Radio church service, Rev. John W. Stockwell; 5:35, recital; 6:05, "Finding Oneself," Rev. J. W. Stockwell; 5:55, recital; 6:05, "Finding Oneself," Rev. J. W. Stockwell; 5:35, recital; 6:05, "Firiding Oneself," Rev. J. W. Stockwell; 3:37, recital; 6:05, "Clarence Seaman's orchestra; 7:30, the Bonwit Teller concert company; 9, topics of the day; Potash and Petlmutter.

6:30, Clarence Seaman's orthestra, 7:30, the Bondyn Toller 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, Atwarter Kent Radio hour, Maria Kurenko, soprano.

WEEI, Boston, Mass. (348.8), 10:50 a. m., morning service, Old South church; 3:30 p. m., Chamber of Commerce organ recital; 3:45, pr. 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 McCarthey: 9:15, Atwater Kent Radio hour, Maria Kurenko, Russian coloratura soprano.

burg Cathedral." Dr. Clarence Edward McCarthey: 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 elub.

WGR, Buffalo, N. Y. (319), 3 p. m., vesper service, Buffalo Council of Churches; 7:45. Central Presbyterian church sorvice; 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. Carllion program; 8, First Unitarian church; 19:30 p. m., symphony orchestra; 5, organ recital, Dr. Frank Sill Rogers; 7. Carllion program; 10, Godfrey Ludlow, violinist.

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

lits entertainers.

WIP, Philadelpia, 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 Stat's Little symphony orchestra.

WIR, Pontiac, Mich. (517), 8:30 p. m., "The Merry Old Chief" and "Jewett Jesters" in a Badlo frolic WMOA, New York, N. Y. (3407), 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.

orchestra; 7:38-8, Olcott Vail; 10-11, Daven Radio en-tertainers. WREO, Lansing, Mich. (285.5), 10:30 a. m., chlmes, Plymouth congregational church; 10:39, services; 7:30, services.

7:20. Capitol theater gang, New York; 9:15, KFDM, Beaumont, Toxas (315.6), 8-9 p. m., sacre-

KFDM, Beaumont, 10xas (313.b), 8-9 p. m., sacuru program.

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

KFNF, Shenandaah, 10wa (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," Frof. W. Arndt, songs and music.

Resurrection and the Life," Rev. A. Korris; 9:15.
"The Messlah 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 Slegfried, Mrs. Madge Kueffer; Wesley Brocaw saxophone; Mrs. George Willis, soprano; sormonet, U. W. Greene; 6:30 p. m. service, music, First Carristian Church of Indopendence; Mrs. J. M. Scoton, soprano; Mrs. M. R. Leach, on trulto; W. J. Frost, tenor; J. M. Sexton, Wass; Camiel Johnston, organist; sermonet, U. W. Greene; 9, L. D. S. choli, Paul N. Craig, director; Stone church men's chorus; Mrs. John Watkins, soprano Mrs. James Gault, contralto; Robert Miller, organist; serinon, Dr. Frederick M. Smith.

KMA, Shenandah, 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.

D. Neibel, soloist; 9:30. Ray Mullins' orchestra. KSD. St. Louis, Mo. (545.1), 6:15 p. m., "Good Will" program, WEAF.

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., service, First Presbyterian church, Chauncey Hikok, programs, Presbyterian church, Chauncy Hikok, programs, Presbyterian church, Cale, organist; 10-10. G. Heyn, accompanist; Louis Culp, organist; 10-11.30, "Hot Springs Radio Special Train"; froile, Benny Ford's orchestra. KYW, Chicago, Ill. (355.4), 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, Minneapelis, Minn. (243.8), 2:30 p. m., musical program, Twin City bird contest winners; 9:30, Gayle Wood, harmony hurrleane; 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, Unelo Billy; 5-6, program, School of Gostel 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; Edmay Meeter Bullard, harpist; Harry Sosnik and Samy Meeter Bullard, harpist; Harry Sosnik and Samy Meeter, 4-6, Ziegler sisters; Jack Garcia, Hawalian guitarist; Harold Anderson, accordionist; Lester Anderson, hanjo; orchestra; Lew Russell; Les Skow; 8-10, Jeane St. Anne, baritone; Christian Grimm, accompanist; Joseph Lincoln, tenor; string trio; Marie Morgott, harpist; Moulin Bouge orchestra; 12-2 a. m., Nutry club; Moulin Bouge orchestra.

WBCN, Chicago, Ill. (266), 10:30-12 m., morning service, Peppie's Liberal church; talk, Rev. Burly A. Wilte; 4-5 p. m., Dain & Son classical hour; Velma; Sorice, Th

organ; celestial bell quartet; Erma Reynolds, soprano; Edith Carey, contralto; Hire string trio; Misses Wiedman, Ludlow and Donovan, vocal trios; Josephine Martin, planist.

WCCO, St. Paul, Minn. (446.4), 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 nusicale; 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 lour for farmers; 6:30-7:30, Bible class, Dr. William, M. Anderson, pastor, First Presbytarian charge, 7:30-8:30, service, First Baptist church, Dr. Georgo W. Truett, pastor; 9:30-11 p. m., Ligon Smith's orchestra.

church sérvices. WOAI; San Antonie, 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.

McLellan, pastor.

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

WOC, Davenport, 100a (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; soldists.

WOI, Ames, towa (270), 10:45 a. m., college chimes; 1. services, "The Greatest Thing in the World," W. R. Boyd.

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

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

WOK. Asassa Oity, Mo. (278), 11 a. m., 12:30 p. m., wervices 7:7(45, services), 10 a. m., hynns, sacred songs, 1 m., hynns, sacred ones, 2 m., hynns, and his fall hynns, hyn

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

Mountain Time Stations

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

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

Mrs. Faye Roswell, organist; 7:49, services. RUOM, Missoula, Mont. (244), 21:5 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, Charlle Cole, popular songs; Jack Kurtz, planist 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. Errin, guest artist.

KGW, Portiand, 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, Westorn 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, planist.

KMTR, Hollywood, Calif. (238), 6:30 p. m., Hollywood Christian church program, Rev. S. J. Mathleson, speakor; Charles W. Beam, baritione.

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

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; 17a D. Morgan, barlione; Uda Waldrop, organist; 10:45; "Yo Towne Cryer," amusement information service; 5-6 p. m., Farshall W. Gleslman, organist; 10:45; "Yo Towne Cryer," amusement information service; 6:35-7:40, Palace hotel concert orchestra, Cyrus Trobbe; 8:30-9, Blady Selger's orchestra; 9-10, Tosch et al. Markelle, Violinisk, direction of Ernest Ingold, Inc. KTAB, Oakland, Calif., (240), 9:45-10:45, a. m., Frosches, 7:45-9 p. m., chuych service; 9:30-11, concert. (Continued on page 15).

SEIDEL ON PROGRAM SUNDAY AT KPO

Monday, December 7

10. (31.) False Six and Jewett Six.

10. 9

KSD (545.1) Steindel string quartet.
WEAF (491.5), WCAE (461.3), WEEI (348.6),
WGR (319), WJAR (305.9), WTAG (268),
WCCO (418.4), Grand opera, "Rigoletto."

10.30 Sp. 30 Sp. 30 False Star Concert.

11 10 Sp. 30 Star Concert.

12 11 10 Star Concert.

12 KGW (491.5) Concert.

Monday, silent night for: CHIC, CNRA. CNRC, CNRE. CNRM. ONRO. CNRR, CNRT, CNRV. CNRW, KFDM, KFMQ, KFMX, KFRU, KHJ, KLDS, KTCL, KYW, PWX. WBBM, WCBD, WEAO, WEBH, WEBJ, WEBW, WENR, WGBS, WGR, WHAS, WHT, WJAZ, WJBL. WJJD, WLIB, WJS, 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, contraito; Ruth Allen Young, soprano; Billie Beil, soprano.

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

cert; S, 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 pregram; 7:30-8:30, Hon. Maurice E. Connolly; 7:45-8:15, Broadway Harmony Kinss; 8:15-8:30, recitations, Horace J. Taylor; 3:30-8:45, Synthrophase tric; 8:45-9, Radio Santa Claus; 9-9:15, Doris Sheldon, contralto; Cameron Emsile, pianist; 9:30-9:55, Snychrophase tric; 10-10:15, Doris Sheldon, contralto; Cameron Emsile, 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 Happ of God"; 8:30, Fred Franz, tenor; 8:30, vocal duets.

peter, soprano; \$1.0, world news; \$2.20, vocal duets, Irene Kleinpeter, Fred Franz; \$3.0, Bible instruction, "The Harp of God"; \$3.40, Fred Franz, tenor; \$3.50, vocal duets. \$3.50, vocal duets. \$4.0, Fred Franz, tenor; \$3.50, vocal duets. \$4.0, Fred Franz, tenor; \$8.50, vocal duets. \$6.20, Fred Franz, tenor; \$6.20, Fred Franz, tenor; \$7.00, Fred Franz, tenor; \$7.00, Fred Franz, tenor; \$7.00, Fred Franz, tenor; \$7.00, Fred Franz, \$7.00, Fred Fra

Economic information for the rainer, C. J. West, music.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Dan Barnott'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 Tes room ensemble; 3, Mrs. Rutherford, pianist; George Oumacht, barttone; Loretta Kerk, planist; George Alshion talk; 6:30, Belleyue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra.

George Oumacht, bartione; Loretta Kerk, planist; 3:43. fashion talk; 6:39, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance or chestra; 8:30 - 10:10-10:20, Jack Cohen, pianist; 10:20-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:20-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:20-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:30-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:30-10:30, talk, Helen M. Hill; 10:30-10:40, Jack Cohen, pianist; 10:30-10:30, Ballin and Regan; 10:55-2, Rosulfe Blanchard and Walter Croft, duets; 2-2:15, Bob Platz and Murray Miller, duets; 3-3:10, interview, Evelyn Wight; 3:10-32, Jack Cohen, pianist; 20:30-3:40, George jumor republic program; 3:40-4, Women Voters program; 6-6:30, Lucle Geobee; 6:30-7, Premiter club orchestra; 7:415, Beile Bart, astrologist.

WGCP, New York, N. Y. (252), 12:45-1, D. m., mirror race; 1, results half hourly; 3-3:15, Eva Rothenberg, Dianology, 3:40-4, D. m., Mirror race; 1, results half hourly; 3-3:15, Eva Rothenberg, Dianology, 3:40-4, D. m., Mirror race; 1, results half hourly; 3-3:15, Eva Rothenberg, Dianology, 3:40-4, D. m., Mirror race; 1, results half hourly; 3-3:15, Eva Rothenberg, Dianology, 3:40-4, D. m., Mirror race; 1, 1-11-10, Lucles of the program; 4-6-6:30, Lucle Robert and his little pals; 5-5:15, beath talk; 6-6:15, Littleman's orchestra; 6:15-6:30, Duddy Dingle and his Jingle Box; 6:30-7-30, Littleman's orchestra; 8:30-8:45, Percy Bradford cutertainers; 8:45-9, Charles Phillips, planist; 9-3:30, orchestra; 9:30-9-5, Bob Ward and three little Wards; 9:30-10, George Hirose, "rithous, "rithlem program, eligible program; 6:6-6:30, Charles Phillips, planist; 9-3:30, Dutch Master's program; 6; 30, Charles Phillips, 11, Vinent Looez, 10, Arts Club of Burfalo; 11, Vinent Looez, 10, Arts Club of Burfalo; 11, Vine

WHAZ. Troy. N. Y. (379.5), 9 p. m., recital, Mrs. Edith Cook Smith, planist; Mrs. Edward Brandow, violinist; Mrs. Marion V. Angus, soprano; Guinevers Rifenbergh, reader; 9:30, address, Dr. William P. Mason, professor of chemistry; 10:30, King Jazz and his orchestra; Botty King, vocalist; Katherine Shackford, planist.
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, Littman's dinner music; 7-7:30, Mariboro state trio; 7:30-8, Swanee orchestra; 8-8:05, talk, H. B. Shontz; 8:05-8:30, Roseland dance

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., RPD program; garden talks, Earl E. May; music, musical saw, J. A. Showers; 6-7. dinner program; Pollyanna stories, Mrs. Dwight Nickols; ptogram; 9-11, evening program; How Do. You Do Boys, Grady and Doe; Farnham trio.

KPRC, Houston, Texas (296.9), 12 m., Frank Tilton, blind planist; 5:30 p. m., Uncle Judd's Kiddles hour; 7:30, danco music; Malon Gunn's Texas Ramblers; 8:30, Dr. Earle J. Shay, tenor; J. Harry Kobusch,



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.

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.

orchestra; 8:30-9:30, Guardian entertainers; 11-11:30, Cotton club orchestra; 11:30-12, Silver Silpper revue and orchestra; 21-12:30 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, planist; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedlime story, dancing concert orchestra; 7, Uncle Wip's bedlime story, dancing lesson, Miller Conservatory of dancing.

WIR, Pontlac, Mich. (517), 7 p. m., Jean Goldkette's Petito symphony orchestra; solists; 7:15, Goodwill Oakland presented by the Richards Oakland company; 9, "Paige Six." 'It-solit; 5:15, Goodwill Oakland presented by the Richards Oakland company; 9, "Paige Six." 'Tevest 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, m., Olcott and the contestra; 7:30-8, lullaby mustc; 3-8:43, Knickerbocker family circle; 8:45-10:15, Barclay Radio cottentainers; 10:15-11:15, Radio Shack entertainers.

NYC, New York, N. Y. (326), 11-12:30 a. m., women's program; 6:20-6:30, plano selection; 6:30-7; German lessons, V. H. Berlitz; 7-7:30, advanced German lessons, V. H. Berlitz; 7-7:35-3:30, dance program; 8:30-0:10, instrumental feature; 10:10-10:30, lecture, Board of Education.

WOR, Newark, N. J. (405.2), 3:45-4 p. m., Talk, Winified Moses; 6:15-6:17, words often mispronounced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7:30, 2-20, 10:30, sports talk, Bill Wathey; 6:30-7:30, 3-20, 10:30, 10:30, 10:30-11, Archie Stater's Palais D'or orchestra; 11-12, Irving Aronson's Crusadors.

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

WRO, Lansing, Mich. (295.5), 6-7 p. m., concert, 7:5peed-Wagon Serenaders, "Gold Standard ensemble. WTAG, Wester Mass. (288), 10:445 a. m., talk, Marjorle Woodman; 12:05-2 p

composer-pianist; 9, Kulghts of Columbus band, W. J. Hartz, director.

(KSAC, Manhattan, Kans, (341), 9-9:25 a m., mustc, talks, agricultural premier, callsthenics; 9:55-10:25, readings, backyard gosslp, 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; 4:39-5, Second Year English literaturo, high school credit given; 6:30-7:30, talks, book review, current ovents; College credit course—Psychology; "Ways of Improving Production of Market Hogs," A. Weber; "Selection of Sorghum Seed and Storage," J. W. Zahniey.

(KSD. St. Leuis, Mo. (545.1), 7 p. m. "Tur bour."

high school credit given; 6:30-7:30, talks, book review, current ovents; College credit course—Psychology; "Ways of Improving Production of Market Hogs," A. Weber; "Selection of Sorghum Seed and Storage," J. W. Zahniey.

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

KSO, Clarinda, lowa (241.8), 7.9 p. m., old time music; 9-10, barn dance.

KTHS, Het 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, Ralnbow Garden frolic, California serenaders, 555 service station.

KYW, Chicago, III. (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.; 7:30, Morning Family Worship, Y. M. C. A.; 7:30, Morning Family Worship, Y. M. C. A.; 7:30, Leonhardt, Physical director, Y. C. Cutting; 11:35, table talk, Anna J. Peterson; 12:05 p. m., noonday concert, Commonwealth Edlson company; 1, luncheon hour concert, Congress hotel; Joska De Babarny 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; charles Sandberg, baritone; Trizah Ferguson, violinist; Grace Hawley, accompanist; Joy Nichols, soprano; Amy Hedburg, accompanist; Joy

12, abultets of gomery-Ward and company orchestra, Frank gomery-Ward and company orchestra, Frank WBBM, Chicago, Ill. (226), 4-6 p.m., Irene Beasly, Harry Sosnik; Sandy Meek; Valentino orchestra; Jack Penywell, twin six gultar; Court Banks; Russell Meyers; Joe McManus; Edna Wheeler Ballard, harpist; 6-7 p.m., Harold Anderson, accordiants; Kristine Gallen, cellist; Lillian Johnson, viloinist; Phillip-Nilles, tenor; Marle Margott, harpist; George Marbach, tenor; Zieglor sisters; Two Jays; Moulin Rouge orchestra.

tra. Minneapolis-St. Paul, Minn. (415.4), 9:80 2. m. WCCO, Minneapolis-St. Paul, Minn. (415.4), 9:30 2. 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, eoneert; 4. Reader's club, Mrs. Walter Stovens; 5:30, children's hour; 6:30, concert, Gordon Cook ensemble; 7:45, "Swipe Raising, Jesson 1; 3. University of Minnesota program; 9, classical concert.
WDAF, Kansas City, Mo. (356.5), 10:45 2. m., Betty Crocker, home service talk; 6-7, shool of the air, dialect readings, C. M. Ragou; the Tell-Mo-a-Story lady; Trianon ensemble; 8-9, musical program; Christian church orchestra; 11:45-1, 2, m., highthawk frolic; Carl Nordberg's Plantation players; Ted Meyn, organist: Eddle Kuhn's orchestra; Earl Coleman's orchestra.

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

razzini, Garuso and Mary Garden.

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

WGST, Atlanta, 6a. (270), 9-10 p. m., Mary Leffingwell, violinist; Mrs. William S. Taylor, planist; Mary Phillips, violinist; Rosina Asmus, planist.

WHAD, Milwaukee, Wis. (275), 4 p. m., Trixy Ann Troy, ukulele soloist; Olive Froehlich, planist; Perry Olds, Ilterary 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, direction of Dean Holmes Cowper; II-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, planist; John Clark, barttone; 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; Pat Barney; Helen Attel, soprane; John Clark, barttone; 7, Kitchen Klenzer Klassies.

Helen Axtel, soprano; John Chars, various, p. Actions, Klenzer Klassics.

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

dours.
WLS, Chicage, III. (344.6), 12 m.-1 p. m., R. F. D. farm program; W. L. S. trio; 6-7, blue ribbon con-

WLS, Chicage, III. (344.6), 12 m. 1 p. m., R. F. D. farm program; W. L. S. trlo; 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, "Defenses 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, III. (447.5), 12:45 p. m., Radio farm school; 2, shut-in program; 4, mothers in council; 4:30, "Folikes of the Moment," Mrs. Graham Aldis; 4:45, Glenn Dillard Gunn School of Music; 5:15, Topsylventy time; 6, organ Chicago theater; 6:30, Hotel Lasailo crchestra; 6:40, Family Altar loague, 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

WOAI, San Antonio, lexas (354.3), 5 p. m., massac, program.

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

WOC, Davenport, lowa (483.6), 12:15-12:25 p. m., Farm school; "Hog Day—The Hog" Own Answer to the Mineral Feeding Question," Prof. John M. Evvard; 3-8:30, home management schedule, Aunt Jane; 5:45-8, chlme concert.

Mineral Feeding Question." Prof. John M. Evvard; 3-8:30, home management schedule, Aunt Jane; 5:45-8, chlme concert.

**Wold Amos. fewa (270), 12:30 p. m., collège chinucs; 1014 Amos. fewa (270), 12:30 p. m., collège chinucs; 1024 Amos. fewa (270), 12:30 p. m., collège chinucs; 1024 Amos. fewa (270), 12:30 p. m., collège chinucs; 1024 Amos. fewa (270), 1024 Amos. f

Mountain Time Stations

Mountain Time Stations

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

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

KFXF, Celorado Springs, Colc. (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; 8:30, 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.

bridge.

KOB, State Cellege, N. M. (348.6), 7:30-8:30 p. m.

"The Water Supply," Prof. Botkin; "Mineral Freeds and Their Value to Uts." Miss Strong.

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

Pacific Time Stations

KFDJ, Corvellis, 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 Poulity Flock Management," Prof. A. G. Lunn; 8:35, musical (Continued on page 16)

NEW YORK PHILHARMONIC ORCHESTRA

Index to Popular Concerts

T ABULATED 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.

10	•		
		ECEMBE	
		Mountain	
7:30 p, m. WFAA.		5:30 p. m.	
WLS.	7 .		5
WBBM, WE.			
10 KFAB, KPF WMBB, W	REO.		
MEVE KEW WOK, WO	J, WRC.		
KNX KOIL, WOK, WQ	<u>.</u> .}.		
WQJ, WSA	.1.		IO ENR, WOK,
KNX, WBBX	i a. m. I, WENR, V	12 m. VQJ.	11
SUN	DAY, D	ECEMBEI	R 6

SUN	DAY, D	ECEMBE	R 6
Eastern	Central	Mountain	Pacif
9 p. m. WBBM.	8 p. m.	7 p. m.	6 p. m
WBBM, WMI	9 BB.	8	7
II WMBB,	10	9	8
KNX, KTHS		10	9
I a. m. KFWB, WB	12 m. BM.	lf p. m.	10
KFWB.	1 a. m.	12 m.	11

KFWB.			• • •	
MON	DAY, D	ECEMB	ER '	7
Easter n	Central	Mountai	n l	Pacific
7 p. m. WBBM, WFA	6 p. m.	5 p. m.	4	p. m.
8	7	6	5	,
WGBS.	8	7	6	
WCAU, WEAI	, wor,	WKRC, W	OK. 7	
KFAB, WGR, WSOE.	WKRC,	WMCA,	WOAW	, wok,
Hi I	0.	9	8	
KFAB, KFVE 12 m. KLX, KNX, 1	1	10 WOX	9	
ia.m. i	2 m.	11	10	
KEWB, KLX	, WAHG,	WDAF,	WHT,	WERC,
2 a. m. KFWB.	la.m.	12 m.	[]	

DE WD.				
TUES	DAY, D	ECEMBE	R	8
Eastern	Central	Mountain		Pacific
7 p. m. WMCA, WOA	6 p. m.	5 p. m.	4	p. m.
WMCA, WOA	W.	6	5	
WBBM, WEA	Ř.	U	_	
9	8	. 7	6	
WBBM, WEA	R, WBZ, 1	8	7	
WBBM, WM1	B, WOAN	7.		

De obtaine	u,			
Eastern	Central	Moun	tain	Pacific
II p. m. KEVE, KEV WOK, WQ	VB, KNX,	9 p. m WBBM,	WHT,	wmbb,
12 m. KNX, KOIL WMC, WO	. KPO. V	10 VBBM,	WFAA,	WKRC.
	12 m	WHT,	WOAW	, wok,
2	1	1,2 m.	H	

WEDNESDAY, DECEMBER 9
Eastern Central Mountain Pacific
8 p. m. 7 p. m. 6 p. m. 5 p. m.
KFNF, WAHG, WEBJ, WEEI, WMCA. WBEM, WEBJ, WGCP, WNYC. 1 a. m. 12 m. 11 NNX, KYW, WBBM, WHT, WOK, WQJ. 2 1 a. m. 12 m. KFWB, KNX, WBBM, WOK, WQJ. 11

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. WBEM, WHAD. 10 9 8 7 KMA. WBBM, WEEI, WHAD, WHN, WMBD, WMC, WNYC, WOAW, WSOE. 11 KMA, 10 9 8 WOK, WBBM, WMBB, WOK, WQJ. WQJ.
12 m. 11 10 10 9
KHJ, KTAB. KOIL, WBBM, WDAF, WEAA,
WKRC, WOC, WOK, WQJ.
1 a. m. 12 m. 11
KFWB, KHJ, WHT, WOK, WQJ.
1 a. m. 12 m. 12 m. 11

PRIDAY, DECEMBER 11
Eastern Central Mountain Pacific
8 p. m. 7 p. m. 6 p. m. 5 p. m.
WGCP, WJB. WGCP, WJR. 8
9
8
9
8
7
6
WBBM, WGR, WLS, WOC. 9
8
7
KEAB, WBBM, WMC, WDAF, WHAD, WMRE, WOAW, WSOE. 9
8
KPVE, KFWA, KHJ, KLX, KYW, WMBE, WOK, WQJ. 12 m. 11 m. 11 m. 11 m. 11 m. 11 m. 12 m. 14 m. 12 m.

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; 0:40, Harry Link, popular song writer; 10:30, Billy Hayes'

ponte will bo, Fiol. Finance of the program.

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

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, planist; 10:20-10:30, Phoebe Cole, household talk; 10:30-10:40, Gertrude Seldenman, pianist; 10:40-10:50, Margaret Santry, thrift talk; 10:50-11:50, Gertrude Seldenman, 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, Serona Husall, readings; 3:40-4, Dr. A. G. Robyn, piano lessons; 6-6:30, Uncle Geebec; 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.

Ortesta, 3-1, 18. A. Vocatolar Folialy, Storochestra.

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

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

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

Vincent Lopez, himelf, and his orchestra from Casa Lopez.

WGY, Schenectady, N. Y. (379.5), 2 p. m., "Home Hygione and Care of the Sick," Anna McGee, 2:30, Stephen E. Bolsclatr, 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; Mrs. William H. Rieser, soprano; 10, "Northern Italy, including Venice, the Italian Lakes and Milan," W.IZ; 10:30, Spencer Tupman's Heitel Mayflower orchestra, WRC.

WHAR, Allantic 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, Bill§ B. Van; 7-7:30, Iceland orchestra;

tin organ recital; 2:15-3:15, overture and vaudeville, State theater; 3:15-4:30, Lexington theater orchestra; 6:40-7, talk, Bills B. Van; 7-7:30, lesland orchestra; 7:30-8, Will Oakland's Chatheau Shanley; 8-8:10, talk, Litel McClung; 11-11:30, Caravan club orchestra; 11:30-12, Redde club orchestra; 12-12:45 a. m., Club Kentucky, Revue and 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 rectal; 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 Dec Brown; 9:10, matinee musical club opera class; 10:05, Emo's weekly movie broadcast, Eth M. Orowitz; 10:30, Joe Ray and the California Night Hawks.
WIR, Pentiac, Mich, (517), 7 p. m., Jean Goldkette's petite symphony orchestra; soloists; 9, Jean Goldkette's screnaders; soloists.
WKAR, E. Lansing, Mich. (285.5.), 7:15 p. m., Radio school, lectures on marketine, English, soils.
WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olectt Vail; 6:30-7, Frank Gebbias Red Lion Inn Orchestra;

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 Hone 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.

7-8, Jack Wilbur's personalities; 8-8:30. Pace institute program; 8:30-8:45 Hye Sorenson, Danish barltone; 11-12, Ernic Golden and his Hotel MeAlpin 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. Stircs, 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, beddime 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. Ritt studios; 1 p. m., Hotel Wushington orchestra; 6:50, "Show Shopping," Leonard Hall; 7, Lee Houso 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 Tapman's orchestra, WJZ, WGY; 11:30, Otto F. Beck, organist; 12 midnight, WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Waron 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 mothors, Rosebelle Jacobus; 12:05-2. WTAG orchestra;

director; vocal and instrumental solus.

WTAG. Worcester, Mass. (268), 10:45 a. m., talk to mothers, Rosebelle Jacobus; 12:05-2, WTAG orchestra; 8-8:30, WbAF, Vanities orchestra; 9-10, WbAF. Eveready hour; 8:39-9, "Long and Broad; "10:30-11, WbAF, Vincent Lopez and his orchestra.

WTIG, 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 Restauratirio; 7, Frances Nearling, contralto; 8, Travelers symphonic ensemble; 8:30, musical travelogue, W. H. Rinodes, 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-Klein Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, concert, New York through WEAF,

o, 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; Maurice
Gurse 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; Antolne Coniglio, soprano.

prano. KFDM, Beaument, Texas (315.6), 8-10 p. m., musical

KFDM, Beaumont, 1exas (310.0), 6-10 p. m., plano program.
KFMX, Northfield, Minn. (337), 9:30-10 p. m., plano 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, plano selections.
KLDS, Independence, Mc. (440.8), 6:30 a. m., service; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., lecture course series, Dr. F. M. McDowell; Sp. m., planother Karses City Civie

s p. m., lecture course sories, Dr. F. M. McDowell: St.15, classical program, members Kansas City Cite Grand Opera company; James Mack, tenor; Marv Becker, contralto; Alberta Blattman, soprano; Herbert Praher, baritone; Mary Green, contralto; Margaret Deam, soprano; Cleo Salisbury, contralto; Elma Czech, organist.

Deam, soprano; Cleo Saltsbury, contrato; 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 Babble Ross; flower talk, Lina Ferguson; 9-11, evening program; May's mandolin musicians, Harry Day, director.

KPRC, Heusten, Tex. (286.9), 12 m., Jack Willrich's orchestra; Mrs. Jack Willrich, accordion soloist; E. W. Rodgers, vacal entertainer; 5:30 p. m., Uncle Judd's Kiddles' bour; 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., musicialks, agricultural primer, calisthenies; 9:55-10:25, readings, question box; "Planning Today's meals;" 12:35-10 5 p. m., Preparation for Early Lambs, "C. G. Elling; "The Pesky Sparrows," A. E. Oman;

DANCING

Central Time

Saturday, December 5:
8. Wjr., Wnye, Wpg;
8:30, Wfaa; 8:35, Wgy;
9. Webh, Weei, Wmbb,
Wnye, Wreo; 9:10, Kths,
Wjr., 9:30, Kths, Wgbs,
Wor, Wre; 10, Kfve,
Kfwa, Koa, Kno, Weaf,
Wgn, Wjr, Wkre, Wmea,
Wnye, Wor, Wqf, Wreo,
Wama; 10:95, Weec,
10:30, Wamd; 10:45,
Wls; 11, Kfpg, Kfwa,
Kfwb, Kpo, Webh, Wfaa,
Wgbu, Who, Woe; 11:30,
Kfwa, Kgo, Kgw, Knx,
Wgbu, Wijd,
Monday, December 7: Central Time

Kiva, Keo, Kgw, Knx.
Wgbu, Wijd.
Monday, December 7:
8, Wgep; 9, Wee' Wgbu,
Wijd.
Word, Wist, Wort; 9:16 Wahg;
10, Kths; Wgbu, Wgep,
Wgr, Whoe, Wpg; 10:15,
Wor; 10:30, Kfoa, Wgep,
Whn; 11, Kgw, Koll,
Wgbu, Wgep, Wgr, Whn,
Who; 11:45, Wdaf; 12,
Knx, Kpo.
Tuesday, December 8:
9, Webh, Wgbu; Wgh,
Wgbu, Wgr, Wha;
19:30, Wcau, Wgbs, Wgx,
Wij; 9:35, Wnyc; 10.
Kree, Wbbm,
Wgbu, Wgn, Wha,
Who, Wyst, Wgr, Whi,
10:45, Wab; 11. Kgw,
Koll, Wgbu, Wnn; 11:46,
Khs; 10:30, Kths, Who;
10:45, Wsb; 11. Kgw,
Koll, Wgbu, Wnn; 11:46,
Wdaf; 1, Wqi,
Wednesday, December; 9:
10:30, Wcx, Wah; Wgbu,
Wdaf; 1, Wqi,
Wednesday, December; 9:
10:30, Wcx, Wha,
Who,
Who, Wgw, Whn,
Who,
Who, Wgw, Whn,
Who,
Who, Wgw, Whn,
10:30, Wdon,
Who, Wgw, Whn; 11:40,
Wgep, Whn; 11:40,
Wghu, Wgh,
Wgw, Whn,
Wgel, Wgh,
Wgw, Whn,
Wgsl, Wag; 30.5,
Why,
Wgy, Whn; 9:30, Wgby,
Wgy, Why; 9:30,

wgou, with was; 9.05, wbs, whip; 9.30; wgos, wgs, whi; 9.35; wgs, wgs, whi; 9.35; wgs, 10, Kths, who, wdi, 10.30, Kths, who, wdi, 10.30, Kths, who, webh, wgbu, wah, wec, khi, Knx, Kpo, wjid. Friday. December 11: wwi; 9 wex, webh, weed, wgbu, wgc, wmbb; 9.15, was, 9.30, weau, whn: 10, Kfve, Kno, Kths, was, wgr, who, Klis, Knx, Kpo, wgbu, wgc, who, Klis, wgc, who, klis, wgc, who, 10:30, wgc, whi; 11, Kfvb, Knx, Kpo, wdb, wgbu, wgc, wgc, who, wgbu, wgc, wgc, wgc, who, wgbu, wgc, wgc, wgc, who, wgbu, wgc, wgc, who, wgbu, wgc, wgc, wgc, who, wgbu, wgc, wgc, wgc, who, wgbu, wgc, wgc, who, wgbu, wgc, wgc, wdaf.

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Monday, December 7

(Continued from page 15)

selections; S: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, alumin 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; S-9, program, Star Motor Car company, Million Dollar Four orchestra, Sol Hoopil's tric; 9-10, program, Globe Ice Cream and Weber Baking companies featuring the Five Little Eskimos: 10-11, Warner Brothers frolic, direction Chacile Wellman; 11-12, Henry Haistead's Hollywood Roof ballroom orchestra.

KGO. Oakland, Calif. (361.2), 7:15 a. m., health train-

frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood Roof ballicom orchestra.

KGO, Oakland, Calif. (361.2), 7:15 a. m., health training exercises; 8:15, exercises; 8:30, daily strength, cheerio; 10:40, chassroom instruction, Oakland concert, schools, sixth grade; 11:30-1 p. m., luncheon concert, Paeiffe 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, dhner concert, Olds Wortman and King; 9-10, concert.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Elsle'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., bome 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., Wur-liver piles organ studio: Town Talliter: 6:15. travel

concert hour, Turner ornestra, Loren Fowen, director.

KNX, Hollywood, Galif. (336.9), 5:30-6:15 p m.., WurHitzer pipe organ studio; Town Tattler; 6:15, travel
talk, W. F. Alder; 6:30-7, Atwater Kent Radio or
chestra, Paul Finstein, leader; 7-7:30, Mutual Motors
mirth contest; 7:30-8, program, Columbia Outtling
company; 8-9, program, L. W. Stockwell company;

mirth contest; 7:30-8, program, Columna Ottating company; 8-9, program, L. W. Stockwell company; 9-10, program, Ward Gas Floor Furnace company; 10-11, Goodrich Slivertown Cord dance orchestra, Lilyan May Challenger, contraito; 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 Selger's orchestra; 8:45-9. "Exercise and Ikhyfinu," 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.

ance company.

KWSC, Pulman, 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. P. Nalder; "Molern Maintenance Methods for Macadam Highway—Highway Engineering," H. B. Pheips; "Getting Chiess That Will Lay," W. D. Buchanan.

Tuesday, December 8

	Headlin	ers Today	7.
		Mountain	Pacific
		6 p. m.	5 p. m
KFNF (266)			
WT1C (475.9) Musical t	ravelogue.	
8:15	7:15	6:15	5:15
WIP (508.2)			
9	8	7	6 .
	WRC (469) Edison hou	r.
	8:30		6:30
KPRC (296.9			0.00
		8:05	7:05
		Legion progran	
		8:30	
		cetjesky, celli	
J. FL	10	. 9	. 8
KGO (361.2)	'Holy Cli	ty," oratorlo,	orchestral.
KTHS (374.8) Conway N	light.	
12	11	10	9
WFAA (475.9) Mandolin	and Gultar el	lub.

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, WJBL, WLIT, WHAD, WHAZ, WJAD, WJBL, WLIT, WLWL, WOI, WOR, WSM, WSMB, WSUI, WTAM.

WSMB, WSUI, WTAM.

- Eastern Time Stations

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

WAFD, Pert Huren, Mich. (275), 8-10 p. m., Port Huren Boy Scout orchestra; 10:12, musical programo, Addison hote!

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

WBZ, Springfield, Mass. (333.1), 6:15 p. m., dinner concert; 7:95, Hotel Kimball dance orchestra; 7:35, Hotel Kimball dance orchestra; 10:05, American Legion program. Cyrll J. LaFrancis and his American Legion orchestra.

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

Lopez orchestra.

WOAP, Washington, D. C. (468.5), 6:45-7:45 a. m., excreises, Nietropolitan Tower, N. Y. C.

WOAU, Philadelphia, Pa. (227.6), 7:30 p. m., recital, N. Snellenburg and company; vocal trio; 8, "Building

ESTRA SATURDAY AT WJZ, WGY, WRC



DANCING

Central Time

Central Time
Saturday, December 5:
8, Wir, Wnyc, Wpg:
8:30, Wfaa; 8:35, Wgy;
9, Webh, Weei, Wmbb,
Wnyc, Wreo; 9:10, Kths,
Wlp; 9:30, Kths, Wgbs,
Wor, Wrc; 10, Kfve,
Kfva, Koa, Kpo, Weaf,
Wgn, Wjr, Wkre,
Wnyc, Wor, Wdi,
Wroo, Wam; 10:45,
Wis; 11, Kfpg, Kfwa,
Kfvb, Kpo, Webh, Wfaa,
Wgbu, Who, Woe; 11:30,
Kfvb, Kpo, Webh, Wfaa,
Wgbu, Kgo, Kgw, Knx,
Wgbu, Wijd,
Monday, December 7:

Woj; 10:05, Wcco; 10:30, Wbap, Whn; 11. Koil, Kpo, Webh, Wgbu, Wgep, Wgr, Whn; 11:45, Wdaf; 12, Kfwa, Knx, Kpo, Wjid.

Rendall and Derew, Josialo ducing the fluits; L. J. Hire, violinists.

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 Poobler; 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, (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, night-hawk frolie; Plantation players; Barl Coleman's orchestra; Eddle Kubn's orchestra; Johnnie Campbell's orchestra.

orchestra; Lyda Lochner, contralto; 9-10, Oriole orchestra; Lyda Lochner, contralto; 9-10, Oriole orchestra; Lydown theater; 11-1, Oriole orchestra; Jack
Penewell, twin guitarist; Kay Ronayne.
WEBW, Beloit, Wis. (263), 8 p. m., concert hour:



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

vocal selections; whistling solos; vocal duet; violin

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 Katwilk, dean; 11-12 midnight, Tom D. Collins, Gibson Mandolin and Gultar club.

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

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

WHO, Des Moines, lowa (526), 7:30-8 p. m., Raleigh Quintette; 8-9, the Bankers Life trio, Helen Birming-ham 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; 0. Sprano; Oscar Heather, tenor; Loftis half hour or music; 10. Sprano; Oscar Heather, tenor; Loftis half hour or music; 11, special studio features; 9:30 (399.8), Jelke's entertainers; Kitchen Klenzer Klassles, Kenneth Clark's Hawaitan trio; Al Carny, organist; Husk O'Hare's orchestra; 10:10, U. S. L., half hour dance music.

WJID, Mooseheart, Ill. (302.8), 7-8 p. m., dance program, Eight Dutch Masters, Mel Doherty, director; 10:30, popular song; 11, Alvin Roehr's orchestra; 10:10, Eleanor Gibro, George Sparks.

WLS, Chicago, Ill. (344.6), 12 m.-1 p. m., R. F. D. fann program; Ford and Glem; 6:15, announcements;

orchestras.

Orche

Iuliaby time: 7:15, melodies from famous operas, W. L. S. trio.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradman, Y. M. C. A.; 7:45 mornting devotions, auspines of Parkway Y. M. C. A.; 7:45. 12:15 p. m., organ concert, Petronella Trimbur; 4 French lesson, Madame Ida Telmpidis; talk, Rev. Ralph Schmidt, Ft. Thomas, Ky.; 7, the Trirdyn instruential trio; 7:30, Mary Barbara, sweetheart of Radio; 7:50, "A Collie's Early Losson," 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 lenor; Edwin Weldinger, baritone; John Dodd, bass; Howard Evans, accompanist; 9, concert program, Formica Insulation company, Formica concert orchestra, William C. Stoess, director.

10:45, concert, faculty, School of Gospel Music, Baptist seminary.

WBBM, Chicago, III. (226), 4-6 p. m., Harry Sosnik, Sandy Meek: Arnold Stephenson; Sidney Kireman; Harold Moravo; Valentino orchestra; 8-9, Harry Sosnikc, Sandy Meek: Moulin Rouse orchestra: Phil Flemminy; Jean St. Ann; Christian A. Grimm; Bob York: 9-12 p. m., trip trio: Pete Kules; Four Red Peppers; Zlegler sisters; Moulin Rouge orchestra; Harry Brailsford; Vorris Worthley, tenor; Marle Moravo; Larry St. Harry Brailsford; Vorris Worthley, tenor; Marle Moravot, Harry Strailsford; Vorris Worthley, tenor; Marle Moravot, Harry Strailsford; Vorris Worthley, tenor; Marle Moravot, Harry Strailsford; Vorris Worthley, tenor; Marle Moravot, Harry St. Harry St. Harris Houlin Rouge orchestra; George Marbach; Maurice Silverman; Duve Handler, violinist; Moulin Rouge orchestra.

WBCN. Chicago, III. (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. Nolson, tenor, Robert Sansone, cellist; Gordon A. Nolson, tenor, Large Jandborce, Midway orchestra; Borden Brothers, harmony duo; Moravot Gumpsey, tenor; Niess and Nehr, banjo bimbos; Drexel quartet, vocal group; Marie Wright, soprano; Finney Briggs, column conductor, "Crazy Quill" column; Marquette band; 12-2 a. m., pirate ship, Mrs. Faxton reader; Florence Farrar, contralto; E. B. Paxton, britten Messrs, Klawonn and Studebaker, clarinets; Am. mol Mrs. Richard Hire, violin duettists; Rendall and Delew, picollo duet; Alexander DePew, futist; 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., company, Formica concert orchestra, William C. Stoess, director.

WMAQ, Chicago, III. (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 Lassalle orchestra; 8, book talk, Harry Hansen; 8:20, musical; 8:40, travel talk, Clara E. Laughlin; 9, lecture, University of Chicago; 9:20, Metropolitan glecklib.

orcuestua; scotty Welsh, Madison sisters, Lionel Carter, Bubbe and Barr, Bob Duffy, Ceeli and Esther Ward.

WMC. Momphis, Tenn. (499.7), 8:30 p. m., Mazda
Crotto 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 MeLaughlin; 6:20, announced; 6:45, Ed Meyers and his
Penny orchestra; 9:40, Francis Potter's Banjo
orchestra; 9. Monthly Father and Son program;
address, J. Masters; 9:40, Francis Potter's Banjo
orchestra; 10:10, Radio review, Neal Jones; 10:30,
Helb, Peierman and his Omadaha orchestra; 12, Rialto
theater alarm, P. le an'l Benete announcing.

WOC, Davenport, Jowa. (483.6), 12:15-12:25 p. m., Farm
school; "Poultry Day," Prof. A. G. Philins; "The
Dual Turpose Freeds of Chickens;" 3-3:30, home
management schedule. Aunt Jane; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime storios; 7-7:10,
"Handling the Worm Problem in Pigs," R. E. Patrick; 9-9:30, Auction Bridge games, WEAF; 9:3010:15, "Around the World with B. J." in Eight
Months in Eight Nights," B. J. Palmer; 10:13-11-15,
musical program, Girls' glee club, Mt. Vernon High
School, Alice Cork, director.

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

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

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 WOI (270) soils, questions and answers.

MONDAY, DECEMBER 7

| Restern | Central | Mountain | Pacific | 135 p. m. | 1235 p. m. | 1135 a. m. | 035 a. m. | 185 p. m. | 1135 a. m. | 035 a. m. | 180 p. m. | 1135 a. m. | 180 p. m. | 115 p. m. | 180 p. m. | 18 TUESDAY, DECEMBER 8

9 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 KSAC (340.7) Fowl cholera. 1:45 12:45 11:45 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
1:15 p. m. 12:15 p. m. 11:15 a. m.
WOC (483.6) Legame Day. Sweet
Name Sounds Sweeter Every Year. 1:35 12:35 11:35 KSAC (340.7) Damming the Gullies. 1:45 12:45 11:45 WO1 (270) Farm crops. 7:15 6:15 p. m. 4:15 p. m.

WKAR (285.5) Agriculture, engineering and solls.

8 7 8 WEAO (293.9) Farm topic. Putting 5 Nitrogen

Where it Pays.

8:30 7:30 6:30 WOI (270) Dairyman's short course. 9 8 7 9 8 WEAO (293.9) Soils. 9:30 8:30 7:30 KOA (322.4) Farm question box. FRIDAY, DECEMBER 11

Eastern Central Mountain Pacific [: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. 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 11. 12 m. 11 10 9 KWSC (348.6) Getting Ready for the next Crop.

Markets and Weather Daily Except Sunday

Central Mountain Pacific 8:30 a. m. 9:45 8:45 7:45 KDKA (309.1) livestock, grain. 10 9 8 p. m. WLS (345) livestock, markets, fruit. WOS (440.9) hogs. 10:25 9:25 WWJ (352.7) weather. WWJ (352.7) weather.
10:30 9:30 7:30
KFKX (288.3) livestock, fruit, vegetables, hogs.
KPRC (296.9) weather.
KTCL (305.9) weather, sheep, quotations.
WFAA (475.9) markets.
WO1 (270) Weather. 10:45 9:45 8:45 WCCO (475.9) markets. WMC (499.7) weather, markets. WMC (499.7) weather, markets.

11 10 9

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

11:15 10:15 9:15

WTAG (268) markets, weather.

11:30 10:30 9:30

KFKX (288.3) weather, fruit, vegetables.
WCAR (389.4) markets, weather.

12 noon 11 a.m., 10 a.m., 15 WEAR (389.4) markets, weather.

12 noon II a.m. 10 a.m. 9 a.t

KDNA (309.1) weather, livestock, grain.

KPRC (286.9) weather, cattle, grain,

WEAR (389.4) markets, weather.

WHAD (275) weather, markets.

WLS (345) poultry, dairy, hogs, sleep.

WOS (440.9) livestock, poultry, ggss, grain. 12:30 p.m. 11:30 a.m. 10:30 a.m. 9:30 a.m. KFKX (288.3) Ilvestock, fruit, vegetables, dairy. WCAE (461.3) weather. WEAR (384.4) markets, weather. WFAA (475.9) markets. WFAA (475.9) markets.
1 p. m. 12 noon 11 a. m.
WRAP (475.9) markets.
WHT (100) fruit, weather.
WOS (410.9) Hvestock, weather.
1:30 p. m. 12:30 p. m. 11:30 a. m.
KTHS (374.8) markets, weather.
WFAA (475.9) markets.
WOAW (526) markets.
WOAW (526) markets.
WOAW (526) markets. 135 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. 12 noon 11 a.m. WOS (440.9) grain. 12 noon 11 a.m. WOS (440.9) grain. 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. 12 noon WLS (345) livestock, grain, dairy, fruit, vegetables. WOS (440.9) livestock, markets, grain. 3:30 2:30 1:30 12:30 3:30 2:30 1:30 KPO (428.3) weather. WFAA (475.9 markets. WMC (499.7) markets, weather. 3:50 2:50 1:50 WWJ (352.7) weather, markets. 12:50 4 3 2 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 KFAU (278) markets, weather. WIP (508.2) weather. 6:30 5:30 KSAC (340.7) markets. 3:30 6:45 5:45 4: W1P (508.2) livestock, markets 3:45 6:50 5:50 WHAD (275) markets. 0.30 (275) markets.
7:15 6:15 5:15
KTCL (305.0) weather.
7:30 6:30 5:30
KSAC (340.7) market review.
7:45 6:45 5:45
KFWA (261) market reports.
7 6 7 6 KFKX (288.3) markets. KOA (322.4) sheep, markets, livestock, poultry. 9 8 KJR (384,4) weather. WOC (384) weather. WCCO (416.4) weather, grain.

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

musical program.

WORD, Batavia, III. (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, III. (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 Strokere, Kenneth Sterling, baritone; Fontella trio; Elenor Wasserstras, whister; 10-1, Ralph Williams and his Rainbo Gardens orchestra, Kenneth Sterling, baritone; Fontella trio; Elenor Wasserstras, whister; 10-1, Ralph Williams and his Rainbo Skylarks; Dr. Carl Bertschinger, plantst; Jerry Sullivan, Rose Vanderbosch, soprano; Hal Lansing, ukulele soloist; Everett George Opie, dramatle director; Bert Davis. Clown of the Air; June Lee, comedienned. Merrill Carder; Will Rossiter, Daddy of them all Blues Destroyers trio; Romo Vincent, boy baritone; Bert Davis. Clown of the Air; June Lee, comedienned. Brundage and Kraemer, harmony singers; Ila Shannabrook, soprano; Hollingsworth and Altamore, guitarist; 1-2, Ginger hour, Ralph Williams the Gloger Man and the Little Skylarks.

WSAI, Cincinnati, Ohio. (325,9), 6:30 p. m., Davis Stering Rossing R

WSAI, Cincinnati, Ohio. (325.9), 6:30 p. m., Davls Saxophone cetet, WEAP; 7, Mabley and Carew or-chestra, Reuben Lawson, director; 8 Evercady hour, WEAF; 9:0:30. Auction bridge, WEAF; 9:30, musicale. WSB. Atlanta, Ga. (428.3), Sp. m., Crystal studio, Atlanta's First National Radio Electrical Exposition; rocal program, Gettrade Johnson, vocal instructor, director; 10:45. Metropolitan theater artists.

recor; 10:30. Alectropolital inector artists.

WSOE, Milwaukee, Wis. (246), 5:30 p. m., S. O. S. elub, Consin Howard, one of Unde Robert's little pals; Elmer Hirke, pinnist; 7:30. unisteal musings, Miss Mercury; 8:45; Phim Phanetes, Peggy Patton, 9, classical music, Milwaukee Federation of Women's Clubs.

Mountain Time Stations

son, director; 7:30, News-Times concert.

Pacific Time Stations

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

KFWB, Hollywood, Calif. (252), 5-6 p.m., chi'drei's
hour, Blg Brother of KFWB; 7, talk, Dr. W. I.
Schuster; 7:15, microphone brevitles; 7:30-8, program,
Elmer R. Sly company, featuring Nathan Leetjesky,
'cellist; 8-9, Joe Martin's Famous Studio S's dene
orchestra; 9-10, program, H. L. Crockett, Way Watte
and his ukelele. Elife trio, Louise Sullivan, soprand,
10-11. Warner Brothers Frolic, William Baudine, announcer; 11-12, Henry Habstead's Hollywood Roof ballroom orchestra.

room orchestra.
(KGO, Oakland, Calif. (361.2), 7:15 a.m., exercises;
7:15, pop class; 8:15, exercises; 8:30, daily strength.
Cheerin; 11:30-1 p.m., huncheon concert. Pacific State
Electric company; 4-5:30, concert orchestra, Hotel St.
Francis; 5:30, "As a Woman Trinketh." Louise
Landis; 6:7, twillight concert, Witey 1: Alten con(Continued on page 18)

FANS OF WTIC TAKE MYTHICAL TRIP

Tuesday, December 8

(Continued from page 17)

Continued from page 17)

pany; 8, Rourke concert orchestra; Gertrude Landram, soprano; Eva Garcia, planist; Gwynfi Jones, tenor; Albert Gillette, baritone; Annabelle Jones Rose, contralto; "The Holy City," oratorlo, Alfred R. Gaut Carl Andrson, director; Rourke concert orchestra; 9:30, auction bridge; 10-11, dance music. Hotel St. Francis, KGW, Portland, Orc. (491.5), 12:30-1:30 p. m., Rose City trio; 6-7, dinner concert; 7:45-8, talk, Oregon, Bankers association, 8-16, "Sound Investments," George H. Burr; auction bridge lessons, Conrad and Broom; "Style" talk, Sage of Yaushild county; music, McElroy quartet; 10-12, dance music, Indian Grill. KHJ, Los Angeles, Calif. (405-2), 6-6:30 p. m., Leighton's Arcade cafeterla orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hortzog; weekly visit of Queen Titania and Sandman from Fairyland, Louis F. Klein, auto-harp and harmonica, Chas. Lessibe Hill, readings; 7:30, talk on dogs, H. M. Robertson; 7:45, "Cruise of Radio Ship Wireless;" 8-10, program, Buflders' Finance association; 10-11, Art Hickman's Bilimore 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; Lorer Powell, director.

RMTR 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, Rot.
L. Donley company; 7:45, talk on health, Dr. Robt. T.
Williams; 8-9, program, Zinke's Re-Bottoming Shoc
company; 9-9:30, program, Cavalier Shoe stores; 9:3010, studio program; 10-12, movie night at the Amhassador, Ray West's Cocconut Grove dance orchestra.

KFO, 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 Cabbirtans.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo.

W. Phillips, prayer service; S-10 p. m., program,
Mutual stores.

Wednesday, December 9

	Headling	ers Today	
Eastern	Central	Mountain -	Pacific
8 p. m.	7 p. m.	6 p. m.	5 p. m.
WEBJ (272.	β) Special pr	ogram.	
8:30	7:30	6:30	5:30
KDKA (309,	1) Plectrum	trio.	
WGY (379.5) Mondelssuh	n club.	2.5
9	8	7	6
WDAF (365	Classical	musical recit	al.
WJZ (454.3)	, WGY (379.	5) Royal hour	
WMAQ (447	.5) WMAQ J	Players.	*
9:30	8:30	7:30	6:30
KFAB (340.	7) Regular a	rtists' popular	Browrom
WBZ (333.1)	Dean Work	's quartet.	DIOLIGIU.
10	9	8	7
KOA (322.4)	Kiwanis elu	h promen	•
KTHS (374.)	3) Light one	a night	
10:30	9:30	8:30	7:30
		rtists' progran	, ,,,,,,
11	10	9	8
KFDJ (282.)		e R's of Dre	coing Attuca
tively.	, Tue Time	c m of Die	same Attrace
KFWB (252)	String diag	tot	
11:30	10:30	9:30	8:30
KEDI (2824	i) ''Dressing	Attractively."	6.30
WLW (422.3) Cincinnati	Zither player:	and the state of
	, omennan	zamer prayers	

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, WGS, WHAR, WHAZ, WIP, WIAD, WJAZ, WJBL, WLWL, WMC, WOAI, WOAW, WOI, WORD, WPG, WRC, WREO.

wMC, WOAI, WOAW, WOI, WORD, WPG, WRC, WREO.

Eastern Time Stations

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

KD KA. Pittsburgh, Pa. (309.1), 6:30 p. m., dinner eon-cert; 3:30, 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, T:30-7:45, Helen Krentzlim, soprano; 7:45-8:13, Reo Ramblers; 8:15-8:45, Baujo Eddie; 8:45-9, Raymond Maher, baritone; 9-9:15, Radio Santa Claus; 9:15-9:30, 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., Locu's Radio four; 7:30, nature story, Thornton Burgess; 8, Diano recital, Sumer Printler; 8:15, Pauline Hammond Clark; 9:30, Dean Works quartet.

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

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., evercises. Metronolium Tower N. Y. C. 7:31 a. m.

Loew's Aldine theater; 6:30, concert. William Penn lootel; 7:30, children's period; 8:30, Pooley period, N. Y.; 9 concert.

WCAP, Weshington, 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. Stammard, leader; "Huyler's Bon Bon Buddies'; Ipana Troubadours; Ikoxy and His Gang, WEAP.

WGAU, Philadelphia, Pa. (277.6), 6:45 p. m., the Farodians; S. 'Prevention of Diptheria.' Dr. H. A. Lowenburg, 8:10, recital; University of Pennsylvania quartet; 9. Mr. Hill's Instrumental tric; 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. WCAP, New York, N. Y. (491.5), 6:45-7 and 7:20 a. m., Tower Health exercises, WEEL, WCAP; 10:45-7 li-165, Betty Crocker Gold Medal Flour Home Service talk; 11:05-11:16, health talk, Dr. Pratt; 11:15-11:30, lecture, auspices of Columbia university; 4-4:15-, Olga Pield, soprano; accompanist, Winifred T. Barr; 4:15-4:51, Ray Nichols Recording orhestra; 1:4:5-5, talk, Henen A. Ballard; 6-7, dinner music, Rose Room of the Walderf-Astoria; 7-7:30, synagogue services, auspices of the United Synagogue of America; 7:30-8, concert, United States Army band, direction of Cont. William J. Stannard, WCAP, WJAR; S-8:30, Huyler's Bon Bon Buddies, through WCAP, WOC WWJ, WCCO WGR, WSAI, KSD; 14-11, Royx and His Gang, WCAF and WJAR; 11-12, Ren. Bernits and orchestia.

WEAO, Columbus, Ohie (283.9), 4-10, R. M. ovy hour for shut-tas.

Gang, WCAP and WJAR: 11-12. Ben Bernis and orchestra orchestra.

WEAO, Columbus. Oble (283.9), 4-10 p. m. story hour for shut-ins, Prof. Sada Angls Harbareer 8 Elementary Radio, R. C. Higger, S. 155, Oblo. State university girls' giee club: S:30.17 Present Status of the Pure Food Law," Prof. E. H. Almy, S. 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.

WEBJ. New York, N. Y. (393), 10:15 a. m., Betty WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Badio

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 6 p. m. 5 p. m. 4 p. m. WCX, WEAF, WMCA, WREO. Pacific 3 p. m. KGO. KYW. WEAR, WENR, WMAQ, WNYC, WOAW, WOK, WRC. 12 m WOAW.

SUNDAY, DECEMBER 6
ern Central Mountain Pac
m. 5 p. m. 4 p. m. 3 p. Mountain Pacific 4 p. m. 3 p. m. WCAU.
7:20
WCAE, WCAU, WEAF, WEAR, WEEI, WJAR, WTAG, WWJ.
8
KYW. WBZ, WEAR, WGBS, WGCP, WKAQ, WLS, WORD.
9
KPDM, KPRC, KSD, WBZ, WCAU, WCSD, WCO, WEAR, WGY, WHAR, WHT, WNYC, WQJ. WCCO, WEAR, WG1, WHAI, WQJ, WQJ, S115 8:15 7:15 6:15
WEEL, WJAR, WTAG. 8 7
KHJ, KNX, KTHS, KYW, WCCO, WFAA, WNYC, WOC, WQJ, WSOE. 11 10 9
KFVE, KHJ, KNX, KPO, KTHS, KYW, WHN, WKRC, WOC. 12m 11 10 9 12 m 11 KHJ, KNX, WOC. 1 a. m. 12 m KNX.

EANX.

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 6 7 7 6 5 4
KMA, WCCO, WEAF, WEAR, WHAD, WJR, WOAW, WOK.
8 7 6 KFNF, KSD, WBBR, WBZ, WCAU, WCX, WHAR, WHT, WJAR, WLW, WMBB, WTAG, WTIC. WTIC. WILL, WJAR, WLW, WMBB, WTAG, 9

STORY OF THE WILLIAM OF THE WTAG.

11

10

9

8

KGW, KHJ, KMA, KSD, KTHS, KWSC, WHN, WSA1 WSA1. 12 m 10 KGW, WBAP, WSAI. 1 a. m. 12 m 11

TUESDAY, DECEMBER 8 Eastern Central Mountain Pacifie
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 8 5 WWJ. 8 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. KFIDM, KFOA, KGO, KHI KLDS, ICYW, WCAE, WCBD, WCCO, WEAF, WEBI, WGR, TAG. TAG.

10

8

KFAB, KFDM, KFMQ, KMA, KNX, KPRC.

KTHS, WCAE, WCCO, WEAF, WEAR, WEEI,

WLW, WMCA, WOC, WSAI, WSOE, WTAG.

11

KGO, KHJ, KMA, KYW, WSAI.

12 m

KPO, KYW, WHO, WMC.

WEDNESDAY, DECEMBER 9

Fastern Central Mountain Pacific

Eastern Central Mountain Pacific 6 p. m. 5 p. m. 4 p. m. 8 p. m. WCX, WEAF, WMCA, WREO, WWJ. 4 CO. WEAF, WHAD, WJR, WMAQ, WOK. WTIC.

7

KFNF, KPRC, KSD, KYW. WBZ, WCX.
WEEI, WHT, WLW, WMBB, WMCA, WQJ,
WTAG, WWJ.

KFOA, KGO, KPRC, KSD, KYW. WBZ,
WDAF, WEEI, WGR, WHAD, WHAS, WJAR,
WMAQ, WOR, WOS, WORD.

KFMX, KMA, KNX, KTHS, WCCO,
WEAF,
WEY, WOC, WSOE.

KGO, KGW, KMA, KPO, KTHS, WCAE, WLS,
WLW, WOC, WSAI,
12m 11 10 9

KGW, KPO, WHAD, WLW.
11 11 10

THUBSDAY, DECEMBER 10 THURSDAY, DECEMBER 10

Eastern Central Mountain Pacific 6 p.m. 5 p.m. 4 p.m. 3 p.m. WEZ. WCX, WEAF, WIP, WMCA, WREO, WWJ.

KGO, KSD, WEAF, WEAR, WGBS,
WJR, WMAQ, WOAW, WOK, WWJ.

KYW, WBBR, WBZ, WGAU, WCCO,
WEAR, WEEI, WGR, WGY, WHAR, WHT,
WLS, WLW, WMBB, WOAW, WQJ, WTAG,

9

8

KYW, WAHG, WIZ, WCAU, WCX, WEBJ, WWJ, WHT, WLS, WQJ, WTAG, WTIC, WWJ. WAG, WTIC, 9 8 7 6 KFOM, KFNF, KFOA, KGO, KHJ, KSD, KYW, WBAP, WBZ, WCAU, WDAF, WEEL, WHAD, WHAS, WJAR, WMAQ, WMCA, 10 9 8 8 8 7 KFAB, KFDM, KOA, WCCO, WHAD, WMAQ, WNYC. 11 10 9 KFMX, KHJ, KNX, KPO, KWSC. 12 m KPO. 9

Crocker service; 1 p. m., Strawbridge and Clothier tea room ensemble; 3, Mrs. Florence Dolan, soprano, Mabel Wint Ewer, cornetts; Loretta Kerk, planist; 3:45, fashlon talk; 6:50, Bellevue Stratford hotel con-cert orchestra; 7, Bellevue Stratford hotel dance or-chostra.

3:45. fashlon talk; 6:30, Bellevue Stratford hotel concept 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; 10:30-10:35, talk, Olive Koch; 10:45-11, Bernard Kalkin, 12:30-1:45, p. m., seripture reading; 1:35-1:40, Robert Softer, ptanist; 3-3:15, children hospital program with Pauline Splvack, 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, Henty Rogers, planist; 3:15-3:30, Youngman and Carroll; 3:30-3:30, Clarence Williams trio; 8:50-4, Rose Balklar, planist; 4-4:15, Frances O'Conner, ukulele; 4:15-4:30, Halres Good News party; 4:30-4:45, Charlotte Frystmann, planist; 7:30-8, Stieger Character players; 8-8:30, orchestra; 8:30-8:45, Charlot de Thomee, Junist; 8:45-9, Hock and Jerome, songs; 9-9:15, Frank Gallisi, ukulele; 9:15-9:15, Palisade dance orchestra; Willurgers, songs; 9:45-10, Constantino Romes, sanophonist; 10-10-10, Hughel Woolford, planist; 10:10-10, 10:30, Noredith and Osborne, songs; 10:20-10:30, orchestra; 10:30-11, Cumies orchestra; 11-11:30, Surlekland's orchestra; 11:30-12:30, Recliman entertalners.

WGPP, Detroit, Mich. (270), 8-10 p. m., Little symphony orchester; the WGHP male quartet; Madamo Gizi Szanto, pianist; Arthur Cooper, xylophonist; John Konceavy, tener; John Wommer, flutist.

WGR, Buffalo, N. Y. (349), 2:30, p. m., WGR's afternoon program; 6:30, Clef trio; 8, Adam, Meldrum and Anderson program; 8:30, Mendelssohn club, Harrold Gieser, director.

Harrold Gieser, director.

WGY, Schenectady, N. Y. (361-2), 6-6:15 p. m., Little bunn's dinner music: 6:15-10. Dudy. Withwester.

for children; 6:45. dinner music; 7:30, "Book of Knowledge," program; 8:30, Mendelssohn club. WHN, New York, N. Y. (361.2), 6:615 b. nt. Littimann's dinner music; 6:15-6:30, Daddy Winkum's Rhyme machine; 6:30-7, Liftmann's dinner music; 7-8, Cofton 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.

his orenesura; 12.30-1; mary tainers.

WIP, Philadelphia, Pa. (508.2), 1 p. m., kuncheon ouste, Glinbel Tea. réon orchestra; 3. Kurlz vecal saudlos; 6:05. Benjamin Franklin concrit crehestra 6:35. "The Farm Ray Makes Good," H. C. Fetterolf, 7; Uncle Wip's bedtime story; songs, Theodore

school, lectures on zoology, entomology, forestry; 8, musicale, WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcoit Vail and his Hotel McAlpin orchestra; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 8-9, Dr. George Walton King's Northminister services; 9:59, bg.30, talk, Frank G. Wadsworth; 11-12, Hofbrau Hausentertalners.

9:30, tark, Frank G. Wausworth; 11-12, Holdrau Haus entertainers.

WNYC. New York, N. Y. (526), 11-12:30 a. m., women's program; 6:20-6:30, plane 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; 9:15-8:30, lecture, George A. Keane; 9:30-10:30, remote control event.

Jecture, George A. Keane; 9:30-10:30, remote control lecture, George A. Keane; 9:30-10:30, remote control work.

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, manadolinis; 9:15-9:30, lecture, Dr. Frank H. Vizetelly; 9:30-9:45, Sam Siegel, manadolinis; 11-12, Vincent Lopez Pennsylvania orchestra. WRG, Washington, D. C. (468.5), 10 a. m., women's hour, WIZ: 12 in., organ, Homer L. Kitt studios; 1. p. m., Lee House trio; 5, Meyer Davis' orchestra; 6, Things Talked About," Nina Reed. WREO, Lansing, Mich. (283.5), 6-7 p. m. concert. "Speed-Wagon scrematers." (Gold Standard ensemble." WIAG. Worcester, Mass. (268), 10:45 a. m., talk to house trio; Mich. Speed-Wagon scrematers." (Gold Standard ensemble." WIAG. Worcester, Mass. (268), 10:45 a. m., talk to house trio; Rick, Robert K. Shaw, of the Public Library; 7:40, Spanish lesson, Mrs. De 19 Patra; S. concert. WIGE, Hartford, Conn. (475.9), 6:30 p. m., Hotel Bond

7-10. Spanish lesson, Mrs. De 19 ratra, o. teachingtogram.
WIIC, Hartford, Conn. (475.9), 6:30 p. m. Hotel Bond trio and vocalists; 10 p. m., dance music.
WWI, Ostroit, 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, Detrott News orchestra; 6, dinner concert; 8, News orchestra and soloists; 9, program through WEAF.

Central Time Stations

Central Time Stations

CNRW, Winnipen, Man., Can. (384.4), 7:30 p. m., Aunt Aimes bedtime story; 7:50, farmors agriculture service talk; 8, musical program, Fort Garry hotel orchestra. Irvine Plumm, directing; 8:40, selection from "Student Prince," trio, Emile Mignacea, violinist; Frank Redlich, cellist; Bort Hook, piunist; Mrs. S. Phinister, soprano: Frank Redlich, cellist; Wallace Lewis, baritone; Emile Mignacea, violinist; Wallace Lewis, baritone; Mrs. John Knos, 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, Buck Little symphony; Relshaw's orchestra; 8:30-8:30, 'Burt Ruberculosis,'' Dr. L. Van Es; 8:30-10:30, Mart Grauenhorst, banjolst and pianist; Ralph Hall, uke soloist and songster; Whitney sisters; Belshaw's orchestra; MarcIdine Schuidt, blues

singer; Buby Teater and Olivo Fletcher, double piano selections.

KFMX, Northfield, Minn. (337), 9-10 p. m., musical Shenandoah, Iowa (266), 7 p. m., concert, Henry

KFMX, Northfield, Minn. (537), 3-10 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 Hyuns," music and songs.

KFVE, University Gity, 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., RFI) program; carden talk, Earl E. May; music; 6:7, dinner program; comestic science topics; Le Ona Tescl. and June B. Case; program; 9:41, evening program; familiar songs and music; chimes, Wm. Howle, Bobbie Riddle; program and music; chimes, Wm. Howle, Bobbie Riddle; program, Gertrude May.

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

KSAC, Manhattan, Kansas (341), 9-9-28. music, talks, agricultural primor, calistheries 9:55-10-25, talks, agricultural primor, calistheries 9:55-10-25, talks, agricultural primor, calistheries 9:55-10-26. (12:35-1:05 p. m., "Fowl Cholera," Lumb; "Lessons from Club Records," M. H. Coe; 4:39-5, Wares on football; 6:30-7:30, lessons in football; 6:30-7:30, lessons in football; 6:30-7:30, lessons in football; 1:20-20, "Main England College eredit courses—Educational Sociology; "Salitary Sweet Systems for the Country," H. B. Walker; "Grain Binder Troubles and Their Remedies," R. H. Driffmier.

KSD, St. Louis, Mo. (545.1), 6 p. m., music, Missourl

College credit courses—Educational Sociology; "Sanitary Sewer Systems for the Country," H. B. Walker: "Grain Binder Troubles and Their Remedies," R. H. Driffmite association; 7. "Fur Hour," program, announced; 8. "Good Will" program, WEAF. (SO, Clarinda, 16wa (2418), 7-8:30 p. m., program, announced; 8. "Good Will" program, WEAF. (SO, Clarinda, 16wa (2418), 7-8:30 p. m., program, vocal, instrumental; 8:30-10, Sellard orchestra. KTHS, Het 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, III. (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 bedtline story, Walter Wilson; 7-7:30, dinner concert, Congress hotel; Congress hotel orchestra; 7:33, "Entertaining Plans," Vivette Gorman; 7:35, tall: 8-9, musical program, Congress hotel; 10-12:30, midnight revue; Paul Ash and his orchestra, McVickers theater; Art Linick announcing. WAMD, Minneapelis, Minn, (243.9), 12 noon, musical program, Margaret Leembuis, pianist; Dorothy Vanesck, soprano; D. Lindholm, barttone; Ruth Milgren, accompanist; 1rving Winslow, violinist; Harriet Johnson, accompanist; 7:05, Garrick theater program, symphony orchestra; Jorgan recital, Jack Malerick; 7:20, Olympian, tric; Leene Wood Taylor, accompanist; Colle 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 Stew.

son, accompanist; 7.05, Garrick theater pressure, symphony orchestra; Jorgan rectial. Jack Malerick; 7.20. Olympian trio; Leone Wood Taylor, accompanist; Collia Dare, contraito; Bee Lowell, accompanist; Adelino Wagner; 11. Skyrocket frolic, George Osborn's Skyrocket proceeds; 11. Skyrocket frolic, George Osborn's Skyrocket proceeds; 11. Skyrocket frolic, George Osborn's Skyrocket proceeds; 12. Skyrocket proce

concert.

WLW. Cincinnati. Ohio (422.3), 7:30 a. m., healthful
exercise, William Stradtman, Y. M. C. A.; 7:45,
norning devotions, auspices of Parkway Y. M. C. A.;
12:15, musteal program, Frem Downing; 3:39, Crosley
Cooking School, Mrs. Ralph H. Auch, dietician, "Hints

(Continued on page 19)

KOB TO GIVE "CAPTAIN CROSSBONES"

Wednesday, December 9

(Continued from page 18)

(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-th 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 Chicinnati; 10:30, Cincinnati Zither players, Ruth Hohe;
Chas, Hohe; A. Rochrich; 10:40, Trirdyn instrumentatrio; 10:50, The Cino male quartet; 11, Johanna
Grosse, organist: 11:15, pianologues, "Newport" Carl
Bamberger; 11:30, the Tricdyn instrumental trio,
WMAQ, Chicago, 111, (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 Fallyner; the Story Lady; 8, lecture, Northwestern university; 8:30, Lester Mather, Paul Breitweiser, pianists.
WMBB. Chicago. 111, (250), 7-8 p. m., Trianon duo,

versity; 3:30, Lester Mather, Paul Breitweiser, pianists.

WMBB, Chicago, III. (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 McLaughin.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., Farm school 'Dairy Day—Hew to Select a Dairy Stre,' Prof. H. H. Kildee; 4-4:45, musical program; Marian Peters, planist; A. E. Bodwards, baritone; Bad Morley, harmonica player; 9-10, Etwin 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, III. (217.3), 5-7 p. m., Gus C. Edwards'

WOK, Chicago, III. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; Capitol theater organ; Ed Kenp, tenor; Bob Mokrejs, pianist; Bryce Talbot, baritone; 10-1:30 a. m.,

Mountain Time Stations

CFAC, Caigary, Can. (435.9), 4 p. m., Red Cross address; 8-9, Ladies string trib.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio Dealers program; 9-10, studio program.

KOA, Denver, Cole. (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. Frark W. Hirth, centralto; Mrs. Dye G. Liggett, soprano; Lucille Fulton, Betty Gundler, Mrs. Dyseph Butterworth, accompanists; "Chll4 Welfare," E. C. VanDiest; KOA onchestra; 10, dance program, Harmony Peerless orchestra.

gram, Harmony Peerless orchestra.

Pacific Time Stations

(FD1, Corvallis, Ore, (282.5), 7:30 p. m., musical selections; 7:35, "Christmas Confections," Amelia Burms; 8-8:15, "The Three R's of Dressing A'tractively," 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, Warmer Brothers frolic, direction Charlie Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra. (SGO, Oakland, Calif. (3612.), 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.

high school band; 4-5:30, concert oregestra, Hotelstra, St. Francis; 6-7, Norman Woodside's Metropolitan orchestra.

KGW, Portland, Orc. (491.5), 12:30-1:30 p. m., Rose City tric; 6-7, dinner concert; 8-9, 7th United States Infantry band; 10-11, concert, Sterman, Clay and company studio.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Areade 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 Ine.; 10:30-11:30, Art Hickman's Bilmore hotel dance orchestra.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Elsic's Sunset matinee: 8-9, educational program, Roy Harrison Danforth, Ad Schuster, Harry Noyes Pratt, Madine Sh:phard, Professor E. R.

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 Lavole, baritone; Yvette Lauontagne, cellist; Blanche Archambault, soprano; Yvette Lamontagne, cellist; address, Victor Marin, president, Montreal Historical society,

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 studie; 8:30, half hours with famous composers, Gluseppe Verdi, Bichard Kountz; KDKA Little symphony orchestra; 9, KDKA Little symphony orchestra; 8, KDKA Little symphony orchestra; 11. Pittsburgh Post midnight revue.

WAHG, New York, N. Y. (315.6), 12-1 p. m., musical neuralm.

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 g. 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; 10:30-11, June Warren, pianist; 130-1:35 p. m., seripture reading; 1:35-1:35, 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, alak, Oliver Sayler; 9:30-10:30, Y. M. C. A. program; 10:30-11:30, Vanderbilt hotel orchestra. 8:30-9:30, Hotel Kinball dance orchestra; 8:30-9:30, Hotel Ki

WHN, New York, N. Y. (361.2), 6.30-6.30 p. m., Jack Cohen, pianist; 6:40-7, talks, Billy B. Van; 7-7.30 Jeeland orchestra; 7:30-8, Standing by; 8-8.39, Will Oakland's Chateau Shanley; 8:30-9, Guardian entertainers; 9:30-10:30, Congregation Brai Joshurun Centennial Jublitee 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), 16 a. m., menu, Mrs. Anna B. Scott; 1 p. m., Gimbel Tea Room orchestra; 3, Celste tric; Iris Viginia Gruber; soprano; 6:05, Pagoda cafe orchestra; 8, Sesqui-centennial, talk, Hon. Harry A. Mackey; 8:15, Etude hour, James



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 ow WEAF and chain attractive. Note Roxy at the piano.



Gay Melodies may be heard at KGO, Oakland, Tuesday at 8 p. m. Facific time, when Gertrude Landram, soprano, entertains from this station.

when Gertrude Handram, Sobrand, entertains from this station.

Gus C. Edwards' orchestra; Husk O'Hare's orchestra; Capitol theater program; Tierney's orchestra; Ned Miller, tenor; Harlet Lee, contralto; Hernan Sinalso, violinist; George Allen, tenor; Bob Mokreis, planist.

Word, Batavia, Hl. (275), 8 p. n., Webster hotel concert trio; 8:15, hymns, sacred songs, I. B. S. A. choral singers; 8:30, lecture "The Great Pyramid," C. H. Swingle.

WJ. Chieage, Hl. (447.5), 11-12 m., fish dinner menu. Frank Wandy; "The Run-About Child," Dr. Lena K. Saler; 3-4 p. m., "How to Select Draperies and Furniture," Sterling Bryan McDonald; Lavina Price, Dianist; 7-8, dinner concert, Ralph Williams and his Rainbo Gardens orchestra; Marvin Hinshaw and his numls; 10-1, Ralph Williams and his Rainbo Stylarks; Gertrude Wolf Quentin, soprano; Mclodians; Clarence Theders, tenor; J. Edwin Peterson, bass; Joey Stool, tenor; Eddie Vogel, baritone; George Thurn, kazoo and ukucle soloist; Harry Kendall, guitarist; Anita Chellis, comedienne; 1-2, Ginger hour.

WSAI, Cincinnati, Ohio (325.9), 7:45 p. nl., art talk, Percy Harover; 8-9, Wateman Pen program, WEAF; 10-10, longress Playing Card string quartet.

WSAI, Cincinnati, Ohio (325.9), 7:45 p. nl., crystal studio, Atlanta; Ga. (428.3), 10:45 p. nl., Crystal studio, Atlanta; Ga. (428.3), 10:45 p. nl., children's work of the concepts of the concepts

Thursday, December 10

deOng; 9-10, concert, Philomels of the Bushess and professional women's club; 10-11:30, Tom Genorich's baltroom entertainers.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Manny 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 or chestra, direction Loren Powell; Rondeau male quartet. KNX, Hollywood, Calif. (336-9), 5:30-6:15 p. m., Wrilliam or chestra, Josef Rosenfeld, leader; 8-10, program, Security Trust and Savings bank; 9-10, program, Security Order of Savings of Savings Sav W. Lardin period, N. Y.; 10, concert, Goodrich Zippers, W. Lardin period, N. Y.; 10, concert, Goodrich Zippers, W. Lardin Period, N. Y. C. (468.5), 6:45-7:45 a. m., excretes, Metropolitan Tower, N. Y. C. D. m., Billy Ha, es orchestra; recital, N. Stollenburg and company; Dr. James Davenport, tenor, Virginia Klein, pianist; 8, Mariory Watson, contralio; Florence Neale, pianist; 1, Howard McNeil, tenor; 9, Barry O'More, the Irish tenor; 9:30, the Musical Chefs; 10, Sesqui Centennial hour; 11, the Parodiaus; 11:30, Clum Dadix review, M. Y. (491.5), 6:45-7:20 a. m., Tower exercises; 11-11:10, Harriet Spink, soprano; 11:130, Harriet Spink, soprano; 11:30, Harriet Spink, soprano; 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, Midred Silverman, pianist; 4:30-4:35, Lestia Arnold, bass; 4:45-5, talk, Mrs. Maude Applebaum; 6-7, dimer music, Waldorf-Astoria hotel; 7-7:30, Midweek Hymn services, Federation of churches; 7:30-8, Cushman's servanders; 8-8:30 Larkinites; 8:30-9, pop concert; 9-10, music to be announced; 10-11, Goodrich Cippers; 11-12, Vincent Lopez orchestra, direct from Casa Lopez.

Zippers; 11-12, Vincent Lopez orenessia, universal Casa Lopez.

(FAO, 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. Butti; 10, Hotel Fort Hayes hour of music; Mary Holliday trio; C. C. Schiffler, baritone; Robert Derringer, tenor.

Holliday trio; C. C. Schiffler, baritone; Robert Derlinger, tenor.

Well, Philadelphia, Pa. (395), 1 p. m. Strawbridge and
Clothier tea room ensemble; 3, program, Sherwood
Country ciub; 6:30, Bellevue Stratord concert;
chestra; 7, Bellevue Stratord betel danord concert;
Carbintes: 9 Whalf seamble; 10, 2005ci.ed.

Larkintes: 9 Whalf seamble; 10, 2005ci.ed.

Well, New Carbintes: 9 Whalf hourly; 3-3-15. Mrs.

Elvira Rosa Geiger, planist; 3:15-3:30, Bert Dagmer,
roongs; 3:30-3:55 studio program; 3:45-4, Constantion
Rumos, axambonist; 4-4:15, Hughle Woodford, planist;
4:15-4:30, Doris Breeman, songs, 4:30-4:45, Frank
Callasi, ukulele; 4:45-5, Sylvia Schatz, planist, elocutionist,
WGHP, Betreit, Mich. (270), 10-12 p. m., the Midnight
Martners aboard the Good Ship Skylark, Skipper and
his crew, the Skylark dance band.

WGR, Buffale, N. Y. (319), 2:30 p. m., WGR's afterneon program; 6:30, Vincent Lopez Helsel Statler dance
orchestra, Harold Glescer director: 8-11, jointly with
WGN, Schenectady, N. Y. (379,5), 2 p. m., "Small

WEAF, including Larkinites and the Goodfich Zippers.

WGY. Schenectady, N. Y. (37-5), 2 p. m., "Small Kitchen Equipment," Ruth Kellogs; 6:30, dinuer program, Ten Byos concert brie; 7:30, "WGY Box Chet," L. L. Hopkins; 7:45, WGY erchestra; 8, U. S. Army band, WBC; 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, WGY phen E. Boisclair, organist.

WHAR, Atlantic City, N. J. (275). 2 p. m., Seaside hotel tric 7:30, health talk, Dr. Henry Reik; 8, Seaside hotel tric.

Francis Cooke; 9, Penn Mutual Glee club, William P. Bentz, director; 10:05, "Believe in and Invest in Philadelphita;" 10:15, Joe Ray and the California Nighthawks.

WJR, Pontiac, Mich. (517), 7 p. m., Tean Goldkette's petite symphony orchestra; soloists; 9, Jean Goldkette's serenaters; solists; 10, Jean Goldkette's orchestra.

WKAR. E. Lansing, Mich. (285.5), 7:15 p. m., Radio school; marketing, agriculture, English and soll lectures.

WKAR. E. Lansing, Mich. (285.5), 7:15 p. m., Radlo 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, WIZ; 12 m., organ, Homer L. Kitt studios; 1 p. m., Hotel Mayrlower rochestra; 6, Hotel Hamilton orchestra; 7, Smithsonian talk; 7:10, Shoreham hotel orchestra; 10:30-1130. Mayer Davis' "Swance" orchestra. WJZ; 9:30. Royal Salon orchestra, WJZ, WGY; 10:30-11:30. Mayer Davis' "Swance" orchestra, wisher wisher with the work of the wisher or the string quartet; vocal and instrumental solos.

WREO, Lansing, Mich. (285.5), 6-7 p. m., concert, "Speed-Wagon scremaders" "Gold Standard ensemble"; 8:15, Rec broadcasting orchestra, Carl Hall Dewey, director, Thos. E. Metzger, flutist; Rec string quartet; vocal and instrumental solos.

WTAG, Worcester, Mass. (266), 12:05-2 p. m., WTAG orchestra; 8-8:30. Larkinites; 8:30-9, WEAF pop concert; 2-10, program from WEAF; 10-11, Goodrich WJD, Detroit, Mich. (352.7), 6 p. m., dinner concert; 8, concert from New York through WEAF.

Central Time Stations

Central Time Stations

KFMQ, Fayetteville, Ark. (299.8), 3 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." Enmis Johnson; "Books for Children," E. Purnell Wilson, Mc. (440.8), 8 p. m., lecture ourse series, Fr. M. McDowell; 8:15, Emily Cox, Wantst Ary, Rudolph T. Wickman, soprano; Mildred Wallson, T. Wickman, soprano; Mildred Wallson, Shenandeah, Iowa (252), 11:30-12:30 p. m., RFD program; garden talks, Earl E. Mar; music: 12 m., flower talk, Lina Ferguson; 6-7, dlnner program; 9-11, evening program; Delmonico Dreamers. Walter Nixon, pianist, director. Walter Aller Station public library book talk; 5:30 p. m., the Content of the

(Continued on page 20)

Thursday, December 10

(Continued from page 19)

readings, Question box; "Planning Today's Meals;" 12:35-1:05 p. m., "Damming the Guilles," 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," Harriot Allard.

o.30-2/.30, musis; College credit course. Business English; "Foot Comfort—What Your Feet Have to Say," Alene Hinn; "Electrifying Your Home," Harriet Allard.

(SD, St. Louis, Mo. (545.1), 4 p. m., "Women's Hour;" (5.55, "Good Will" program, WEAF.

(SO, Clarinda, Iowa (241.8), 7-8-30 p. m., Snappy saver, 8:30-10, farmers band.

(KIS, Hot Springs, Ark. (374.8), 9-9:40 p. m., choir as sold program, First, Methodist church, Arthur Hatz, Girecting; 9:40-10:30, dance, Meyer Davis Hists, Girecting; 9:40-10:30, dance, Meyer Davis Hists, Girecting; 9:40-10:30, dance, Meyer Davis Hists, Girecting; 9:40-10:30, p. m., noonday concert, Congress Peterson; 12:05-p. m., noonday concert, Commonwealth Edison company; 1-2, luncheon concert, Congress telloson company; 1-2, luncheon concert, Congress Helpison, 12:05-musical concert, Commonwealth Edison company; 1-2, luncheon concert, Congress helpison company; 1-2, luncheon concert, Congress helpison consert, 30, dinner concert, Congress hotel; Con Sanders original nighthawks; 4, afternoon frolte; 6:10-6:30, musical concert, Congress hotel; Con Sanders original nighthawks; 1-2, missens of the structure of the story, Walter Wilson; 7-30, dinner concert, W. S. Dunban; "Left Overs and Their Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities," Carolyn Carey; 8-8:20, good reading, Possibilities, "Carolyn Carey; 8-8:20, good reading, Possibilities,"

rathony lynns, doe and freq, bod hees, tends, hadderine wells, contralto; Gertrude King, soprano; 11, 8kyrockets.

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. Whittock, violinist.

WBBM, Chicago, III. (226), 4-6 p. m., Harry Sosnik, Sandy Meek; Valentino Inn orehestra; William Dalton; Irrne Beasley; Sidney Norman; Russell Meyers; 8-10, "Know Your World"; Ziegler slsters; Mirlam Hadley, violinist; Jeane St. Anne, barltone; 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, III. (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 Eawes Price, soprano; Alice McMahom, contralto; Margarat McArthur, planist; John Williams, barltone; 10-1a. m., Elmer Jordan & Co., Owl matinee.

WCBD, Zion, III. (344.6), 8 p. nl., mixed quartet, elestial bell quartet; P. B. Newcomer, cornetist; P. B. and Carl Newcomer, cornet and saxophone duettlsts; Glem Sparrow, tenor; Katherine Crow, contralto; Susie Barton-Smith, reader.

WCCO, St. Paul, Minn, (415.4), 9:30 a. m., program (Anson, Sparrow, Vocalists; Glem Sparrow, tenor; Katherine Crow, contralto; Susie Barton-Smith, reader.

WCAD, Tavel Laker, Connect, Donaldson's orchestra; 2 p. m., "Among Sparrow, tenor; Katherine Crow, contralto; Susie Barton-Smith, reader.

WCAD, Stavel Laker, Connect, Donaldson's orchestra; 2 p. m., "Among Sparrow, Conference, Star's String trio; 5-7, 460-16, chiedren's hour; 7-7:30, the Lakers of Sparrow, Sparrow, Sparrow, Vocalists; Consense of Star's String trio; 5-7, 460-16, chiedren's hour; 7-7:30, the Lakers of Sparrow of the Arrivator orchestra; Eddie Kuhn's orchestra; Ted Myrn, orcanist.

WBAF, Chicago, III. (370-2), 7-8 p

ganist. Grands orchestra; Ted Mcyn, or-WEBH, Chicago, III. (370.2), 7-8 p. m., Orlole or-chestra; 9-10, Orlole orchestra; Kathryn Forbes so-prano; Dick and Snyder, Ruth Flick, Frederick Agard; II-1, Orlole orchestra; Wayne Myers, Ruth

Buhl Flick,

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., address,
DeWitt McMurray; Edmund F. Boettcher, tenor; Vloia
Cassidy, planist; 6:30-7:30. Don Bestor's orchestra;
8:30-9:30, Edwin Lisman, bass; Julia Graham Charlton,
planist; 11-12 mildnight, Texas Power and Light company's entertainers. pany's entertainers.

WHAD, Milwaukee, Wis. (275), 4 p. m., Four Arcadians; 6:15-7, Bill Benning's Milwaukee Athletic club

pianist; 11-12 midnight, Texas Power and Light company's entertainers.
WHAD. Milwaukee, Wis. (275), 4 p. m., Four Arcadians; 6:13-7, Bill Benning's Milwaukee Athletic club orchestra.
WHAS. Louisville, Ky. (399.8), 4-5 p. m., musical, Harty S. Currie; editorial readings; 7:30-9, concert, Keith Kanard's Kentucky Ramblers; Sunday school lesson; welfare talk.
WHO, Des Meines, Iowa (526), 7:30-8 p. m., the Raleta quintet; 8-9, the Bankers Life Little symphonic orchestra, Leon A. Dashoff.
WHT, Chicago, III. (399.8), 10 a. m., Jean Sargent's program, woman's club, Jetke 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, barltone; Ada May Hathaway, violinist; Edwin Kemp, tenor; Genevieve Barry Burnham, soprano; 7:45-9:15, musical features; 9:30, Jetke entertainers; Al Carney, organist; Husk O'Hare's orchestra: Howard Sershon, tenor; Rita Mc-Pawn, popular songs; 10:10, U. S. L. half hour of dance music; 12, Pat Barnes and Al Carney.
WJAZ, Chicago, III. (322.4), 10 p. m., chimes; Leo Braverman, violinist; Lester E. Spring, basse; Jacob Hannemann, planist; 11, chimes; act 2 of Philemon and Bauets; Laura Turner, soprano; Wm. Hayden, tenor; Geo. Krueger, baritone; J. E. Martin, bass; 12 midnight, chimes.
WJ10, Mooheheart, III. (302.8), 10 p. m., Ruth Allanson, Mrs. Ruth Miller; 12, Jack Nelson, George Sparks, Larry Shay.
WRBC, Cliennati, Ohio (422.3), 8 p. m., violin, plano, vocal soloists, Hotel Alms; 9 classical program, Burnet C. Tuthill, director.
L18, Chicago, III. (308.2), 7-8 p. m., dinner concert, Blackstone and Drake orchestras; 9-10, popular, Bamm's orchestra; 11-12, dance, Drake and Blackstone necets, Mildred Prigge; 12:30, health talk, Dr. Carl Wilzback; 4, piano recital, Adelaide Apfel and pupils; 6:30, lesson in solitatre, Lucy Blackburn; 6:40, talk, "The Eyes Have It," Dr. C. H. Kaufman; 7, Hotel Gibson concert, Robert Visconti, director; 10, Doherty Meddy

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, musicai; 5:15, Topsy-Turvey time; 6 organ, Chicago theater; 6:30, Hotel LaSaile 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 cholr.

WMBB, Chicago, Ill. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Robert Malone, Preson 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 Cheveaux.

Carney; Watter Duny.

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 McLaughin; 7:20, classical; 6:50, Randall's Royal Fontenelle orchestra: 9, Sunshine program; 10:30. Herb Felerman and his Omadala orchestra.

WOC. Davenport, Iowa (483.6), 12:15-12:25 p. m., Furm school; 'Legume Day Sweet Clover, Lts Name Sounds Sweeter Every Year,'' Prof. J. C. Hackelmonn: 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: 17:30-9, WEAF program; 9-10, Goodrich Zipners, WEAF: 11-12, LeClaire hotel orchestra: Peter MacArthur, baritone.

WOI, Ames. lowa (270), 12:30 p. m., college chimes;

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December 5, 1925

12:45, "Farm Crops," Professor H. D. Hughes; 7:30, dairyman's course; 7:50, program.

WOK. Chicago, III. (21/3), 5-7 p. m., Gus C. Edwards; orchestra; Capitol theater crgan; George Allen, tenor; Harriet Doty contraito; Bob Mokreis, pianist; 10:136 a. m., Gus C. Edwards orchestra; Hosk O'Hare orchestra; Capitol theater program; Tierney's Town club orchestra; Homan Sinako, violinist; Harriet Lee, contraito; George Allen, tenor; Bob Mokreis, pianist.

WOQ, Kansas City, Mo. (278), 7-8 p. m., Unity educational state of the contraitor of the contraitor

Welsberg.

Pacific Time Stations

KFW6, Hollywood, Calif. (252), 7 p. m., "Plastic Surgery. Dr. T. Floyd Brown; 7:15, microphone breviles: 7:30-8, program, Elmer R. Sly Co., featuring Ruth Lee, planist and blues singer; 8-9, program, Starr plane company, Hollywood Rhythm Kings; Estelle Shake, blues singer; 9-10, program, Don P. Smith, Inc., Sol Hoopii's Hawalian Trio, Diana-Moon orchestra, Ashley sisters, vocal duets; 10-11, Warner Brothers froile, direction Charlje Wellman; 11-12, Henry Halstoad's Hollywood Roof ballroom orchestra.

Non orchestra, Ashley sisters, vocal duets; 10-11; Warner Brothers frolle, direction Charlle Wellman; 11-12, Henry Halstead's Hollywood Roof ballroom orchestra Hollywood Roof ballroom orchestra Hollywood Roof ballroom charles well and Calif. (361.2), 11:30 p. m., luncheon orchestra Holls. Francis; 5:30-6:30, concert orchestra, Holc St. Francis; 5:30-6:30, concert orchestra, Holls St. Francis; 5:30-6:30, concert orchestra, Holls St. Francis; 6:30-6:30, concert orchestra, Holls D. M., Born Black's orchestra. Gr. (491.5), 12:30-1:30 p. m., Bose City trio; 6-7, dinner concert; 7:45-8, lecture, Catholia trio; 6-7, dinner concert; 7:45-8, lecture, Catholia ton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Herk Cronshaw, leader; 6:30-7:30, history story, Prof. Herk Cronshaw, leader; 6:30-7:30, history story, Prof. Herk Cronshaw, leader; Art Hickman's Blitmore hotel dime company; 10-11, Southern branch; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director. 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, travet talk, W. F. Alder; 6:30-7, Atwater Kent Radio; The talk, W. F. Alder; 6:30-7, Atwater Kent Radio; In predous stones; 10-11, Ray West's Coccanut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7-7:30 a. m., exercises; 10, domestic seience 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; 8-9, a play, Pacific Coast Radio players; orchestra; 8-9, a play, Pacific Coast Radio players; orchestra; 8-9, a play, Pacific Coast Radio players; orchestra; 8-9, a play,

cabirians.

KTAB, Oakland, Calif. (240), 9-9:30 a. m., Rev. Geo.

W. Phillip; prayer service; 8-10 p. m., program,

Richmond male chorus.

Friday, December 11

Headliners Today Headliners Today

Eastern Central Mountain 7:15 p. m. 6:15 p. m. 5:15 p. m. 4:15 p. m. 4:15 p. m. 7:30 6:30 5:30 4:30

WHO (326) Salvation Army program. 8:15 7:30 6:30 5:30

WHO (379 5) 7:15 Hidden 1dol. musical comedy. 8:30 (351 1) 10 Hidden 1dol. musical comedy. 8:30 (373 1) 10 Hidden 1dol. musical comedy. 8:30 (373 1) 10 Hidden 1dol. musical comedy. 9:30 (361 1) 10 Hidden 1dol. musical comedy. 8:30 (373 1) 10 Hidden 1dol. musical comedy. 8:30 (361 1) 10 Hidden 1dol. musical comedy. 9:30 (361 1) 10 Hidden 1do

KOA (322.4) "Sear Hunting in the Rockies."
KOA (322.4) "Sear Hunting in the Rockies."
KTHIS (374.8) All Nations' hour.
10:45 9:45 8:45 7:45
WSB (428.3) Nunnally's Minature symphony.
11 9
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, WBR, WCBD, WEAQ, WEBW, WGBS, WGST, WHAZ, WIP, WJBL, WKRC, WLW, WLW, 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.

Matheson. vlotinist: Virginia Knott, planist; 11, Luigi Romanelli and his King Edward hotel dance orchestra.

KDKA. Pittsburgh, Pa. (309.1), 10 a. m., domestic sclence 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, planist; 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, plano duets; 9:55-10:15, Branfield trio.

WZ. Springfield, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:15, Ippolito quartet; Mary Anderson, soprano; Irdine Madox, contralto; Thomas Kelly, baritone; Charles Hancock, tenor; Harry G. Starr, accompanist: 8, Edwin Mefnelly and his orchestr; 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 Aldline theater; 6:39, concert, William Penn hotel; 7:30, children's period; 7:45, address, current notro 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.,

road conditions, 8:30, rreasant variety country coordestra.

WCAP, Washington, D. C. (468.5), 6:45-7:45 a. m., exercises, Mctropolitan 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

All Saints church; Chery Chase, Md.; dance music, Buernstein's orchestra.

WCAU. Philadelphia, Pa. (277.6), 7:45 p. m. Clarcuce Seaman's orchestra; 8:16, chiropractic talk, Doughty Marsh; 8:30, smoker entertainment. Houston Hall; 9, Mr. Hill's instrumental trie; 9:30, Billy and hils saxophone; 9:45, Ed Kiefer, the Radio humorist; 10, Watter A. McClatchy's Lads O'Melodle; 10:30, Jack Myers' Musical Architects.

WCX. Detreit, 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 bo announced; 'Practical Household Arts.' Columbia university; 4:5 p. m., Alfred Dulin, planist; talk to be amounced; 'Flactical Household Arts.' Columbia university; 4:5 p. m., Alfred Dulin, planist; talk to be amounced; 6-12 p. m., music, rose room, Hotel Waldorf-Asteria; 'A Trip With Santa Claus Throught Story,' Blanche Elizabeth Wade; 'The Happiness Boys',' story teller, G. R. Kinney company; Eagle Neutrodyne trio; Mears and company; Thomas Hughes, Danist; Meyer Davis' Lido Venice orchestra.

WEBI, New York, N. Y. (272.6), 7-7:30 p. m., Blenheim thoater 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 Clothler tea room ensemble; 3, Helen Bader Yose, planist; Kathryn Beard, soprano; Ruth Walker Hallowell, reader; Caroline Hoffman, planist; 3:45, fashion talk, Eleanor Gunn; 6:39, Bellewue Stratford hotel concert orchestra.

WGBS, New York, N. Y. (315.5), 10-10:10 a. m., timely talks with 'Terese; 10:10-10:20, Mary Miller planist;

Ciothier tea room ensemble; 3, Helen Bader Yose, planist; Kathryn Beard, soprano; Ruth Walker Hallowell, reader; Caroline Hoffman, planist; 3:45, fashion talk, Eleanor Gunn; 6:30, Bellewe Stratford hotel concert orchestra; 7, Bellewe Stratford hotel concert orchestra; 7, Bellewe Stratford hotel concert orchestra; 7, Bellewe Stratford hotel concert orchestra; 10:10-10:20, Mary Miller planist; 10:20-10:30, talk, Bertram Tayler; 10:30-10:40, Mary Miller, planist; 10:40, to be announced; 1:30-135, p. m., scripture reading; 1:35-1:45, Allas string Irlo; 3-3:10, interview, Evelyn Herbert, Harry Welshman; 3:10-3:30, Helen J. Johann, soprano; 5:30-3:45, Mrs. E. R. Thomas, songs and storles; 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., mlrror race; 1:30, results half hourit; 3-3:15, Edna Josenhs, planist; 3:15-3:30, (8b-rnc and Mercdith, songs; 3:30-3:45, Leslie McLond; 3:45-4, Sanuel Weber, blind planist; 4-4:15, Higo Angelo and Len Gray; 4:15-4:30, Rose Pomerantz, planist; 4:30-4:45, May Bellin, ballads; 4:45-5, Charol de Thomee, planist; orchestra; 6:15-6:30, Dardty Dingle and his Jungle box; 6:30-7, Richand entertainers; 8-8:30, orchestra; 8:30-9, Richard Cheatham's band; 9-9:15, Unkulele Box; 6:30-7, Richard Cheatham's band; 9-9:15, Unkulele Box; 9:30-9:30, Program by

Condon Stio; 8 Summerfield and Hoeht.

KAR 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 prehestra; 8-8:30, talk, O. G. Van Campen; 8:30-8:50, talk, S50-9, Ralpi O. Liesno, baritone, Cecile Armold, soprano; Hon. Leon C. Weinstock; 9-10, Hardman music hour; 11-11:15, Ukulele Bob McDonald; 11:15-11:30, critic, Donald Flamm.

NYC, New York, N. Y. (526), 11-12:30 a. m., women's program; 6:20-6:30, plano selections; 6:30-7, elementary 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, "Sheed-Wagon serenaders" "Gold Standard ensemble."

WTAG, Worcester, Mass. (258), 10:45 a. m., food hints, Midred C. Thomas; 12:05-2 p. m., luncheon music, WTAG, worcester, Mass. (258), 10:45 a. m., food hints, Midred C. Thomas; 12:05-2 p. m., luncheon music, WTAG, 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; Haistorical Sketch," Judge Epaphroditus Peek; 11:30, Clockmakers serenaders.

WJ, 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 Eddior; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Dotroit News orchestra; 6, dinner concert; 8, News orchestra; 9, dance program.

Central Time Stations

Central Time Stations

KFAB, Linceln, 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; Bulek Little symphony; Belshaw's orchestra; 5:05-8:30, "National Wealth Income," Dean J. Le-Rossignol; 8:30-10:30, Mabel and Julius Ludlam, violinist and planist; Joe Bruhl and Victorians orchestra; Gordon G. Dewey and Hember, flute soloists and ductists.

KFDM, Beaumont, Texas (315.6), 8-10 p. m., Magnolia Petroleum company's refinery band.

KFMX, Nerthfield, Minn. (337), 10-11 p. m., organ recital.

cital. 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, Shenandeah, Iowa (252), 11:30-12:30 p. m., BFD 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), 9-0:25 a. m., music, talks, agricultural primer, calisthenics; 9:55-10:25; readings, question box; "Exhibition Poultry," J. H. McAdams; "A Few Don'ts About Pruning," W. R. Martin; 4:30-5, Lesson 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;" 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

Chestra (THS, 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.

Nation's Hour," Meyer Davis ensemble, Lon Chassy, conducting; 10-11, the Pooley Hour serenaders, Rainbow Garden.

KYW, Chicago, III. (535.4). 6:30-7 a. m., morning exercises; physical director Y. M. C. A.; 7:30, Morning Faulty Worship; 11:15. "Rooting Piggishly for Nourishment," John W. Cutting; 11:55, table talk, Anna J. Peterson; 12-1 p. m., noonday eonectt, 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; 10:38 DeBarbary and his orchestra; 0-10, musical program, Commonwealth Edison company; 10-12:30, midnight revue; Coon Sanders original nighthawks; Henri A. Keates, organlogue, Art Linick, amnouncing; 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 Osbern's Hole Radisson Skyrockets.

Osear Belham planist, 7.05, Minneapoils Public School hour, T. P. Giddings, director; 8, Reception Five; 11. Skyrocket frolic, George Osborn's Hotel Radisson Sky-Wards.

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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 Capati.

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Wall Foster Capati.

Sandy Meek: Valentino Inn orchestra; Harold Morava; William Dalton; Joe McManus, Moulin Rouge orchestra; 8:10, Tip tric; Four Crows quartet; David Handler, Morits Silverman; Kristi Kalleta, cellist; Mowers and Scaburg, two plano soloists.

WBCN. Chicago, III. (266), 10-10:30 a. m., Penny Wisc. The Shopper's Ready Helber, 'shopping talk: 5:13.9 m., police bulletins; 7-8. Fireside hour, WSCN hobby. Chub George R. Cleveland, 'Big Boy' Yagle, planististers.' texas and the planes of the plants of the Song Papings of the Song Papings

game; 8:30-10, Wisconsin theater revue; 35-niese Wisconsin theater concert orchestra; Doster's Wisconsin
roof orchestra;
WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical,
Harry S. Currie; editorial readings; 7:30-9, concert,
Gene Kilngman, ukulele soloist, planist and director;
Sara King, planist; civil service talk, O. A. Beckman,
WHO, Des Moines, lowa (526), 7:30-8:30 p. m., Salvation army program; 8-9, Lions elub 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; Bo York, tenor;
Bernlee Taylor, soprano; Mina Smith, violinist; Leola
Aikman, soprano; 7:45 (238), musical features; 9:30,
Dutch Masters, Loftis half hour of music, Freddie
Whitmer, planist; Samuel G. Rowe, tenor; Oscar
Heather, tenor; Pat Barnes, tenor; Helen Rauh, planist; Husis O'Harcs orchestra; 12, Pat Barnes and Al
Carney,
WJJD, Mooseheart, Ill, (302.8), 10 p. m., Agnes Pringle,

1st; Husk O'Harcs orenestra; 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., dipner concert, Blackstone and Drake hotel orchestras; 9-10, popular, Hamm's orchestra; 11-12, dance, Drake and Blackstone hotel orchestras.

WLS, Chicago, III. (344.6), 12 m.- 1 p. m., R. F. D. farm program, W. L. S. tric; 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,

mandolin and guitar orenestia, 9.30, Margaret Anderson, pianist; 9.43, Bethel clurch clorif; 10:40, Ford and Glem 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, III. (447.5), 12:25 p. m., Y. M. C. A.; 67cm; 1, Radio farm school; 2, shut-in program; 4, talk, "the Preschool Child: 4:30, "Pobles 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 league; Mr. and Mrs. Marx Oberndorfer; 8:30, Whitney trio; 9, lecture, University of Chicago; 9:20, Elizabeth Stokes, soprane; 9:45, Christian Endeavor toples. WMBB, Chicago, III. (250), 7-8 p. m., Trianon duo, Beatrice Teller, Frank Fordner, Preston Graves; 9:11, Trianon orehestra, Deli Lampe, director; Woodlavn theater orchestra; David Boyd, Louise Richert, J. T. Carny, Clyde Hager.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Atwater Kent program; II, midnight frolic.

WOAM, Ana Antonio, Texas (394.5), 3 p. m., musical program, Kamma's Hawaiians; 8:30, musical program, Monger hotel trio.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Sunshine Sunday dinner menu, recipe service; 1, Randsill's Royal Fontonellie orchestra; 4:15, Bilah bunch; 6, Sandman's visit, Val McLaughlin; 6:20, music review, Hester Copper, 6:50, Brandels Fea Room orchestra 9, program, Union Pacific Ralroad company; 10:30, Frank Block and prit, Nuchritigale orchestra; 2:25 p. m., farm service and prit, Nuchritigale orchestra; 2:25 p. m., farm service and prit, Nuchritigale orchestra; 2:25 p. m., farm service and prit, Nuchritigale orchestra; Capitol Anderson, Program; Timere, Sandiam Service, Sandiam Ser

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 or-

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 7-8 p. m., Salon broad

CFAG, Calgary, Can. (435.8), 7-8 p. m., Salon broadeast.

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, cullnary hints; 4:15, fashion revlew; 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 Cellege, N. M. (348.6), 7:30-8:30 p. m. musical comedy, "Captain Crossbones;" College chorus, orchestra; too; Miss Holt, soloiat; Leslie Welght, J. T. Alexander, ducttists; Pirates' chorus, songs; quartet; Bob Monical, Margaret Baca, ducttists.

Pacific Time Stations

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 Bulding 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 Tailof, Russian Gypsy tho, 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 taiks, Prudence Penny; 3-4 p. m., Ellen Booker, soprano; vlolin 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.

KGM, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City tric; 6-7, dinner concert; 9-10:30, concert, Sherman, Clay and company; 10:30, hoot owls.

KHJ, Les Angeles, Calif. (460.2), 4-6:30, concert, Sherman, Clay and company; 10:30, hoot owls.

KHJ, Les Angeles, Calif. (465.2), 6-6:30, m., Leighton's Areade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Richard Headrick and Vyola Yon, sereen 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 Bilmore hotel dance orchestra.

KLX, Oakland, Calif. (508.2), 4-5 p. m., women's hour; 5-5:30, Aunt Eisle'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 bour, Mammy Simmons and naborhood children and grown-ups; 7, "Color Photography." Chas. W. Beant; 7-30, "Wonders of Nature." Prof. Alfred Cookman; 8-10, KMTR concert hour, Turner orchestra, Loren Powell, director, KNX, Hollywood, Calif. (336-9), 5-39-6-15 p. m., Wurthizer pipe organ studio; Town Tattler; 6-15, travel talk, W. F. Alder; 6-39-7, Awater, Kent Radio orchestra, Paul Finstein, leader; 7-7-30, El Padio ball-room orchestra, T-39-8, program, Eastern Outliting, company; 8-9, West Coast theaters by remote control; 9-10, Order or T-39-8, program, Eastern Outliting, Company; 8-9, West Coast theaters by remote control; 9-10, Order or Chestra, State of Coast Coas

Spaulding, prayer service; 5-10 p., Browner's, KwSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., Gladys Andorson, violinist; Vay Kerns, vocalist: Edith Johnson, piantst; "Getting Ready for the Next Cronton, Chemard Hegnauer; "Electrical Pioneers—Thomas Edison," R. D. Sloan.

Wants KQA'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

divide, were sent to officials in charge of the farm question box at the Rocky Moun-tain broadcasting station. "Please tell me," reads an accompany-ing letter, "how to grow potatoes of regu-lar size. Almost everything I've dug this year ranges from two to six pounds. Besides being poor sellers, they are hard to thin and landle.

"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 dis-cussion would be scheduled soon on prob-lems 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 re-ceiver 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, 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 selves with playing cards. 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.

STATIONS IN ORDER OF WAVE LENGTHS USED

l 					
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		434.5' CNRO	491.5 WEAF
252 KFWB	285.5 WKAR			434.5 NAA	499.7 WMC
252 WGCP	285.5 WREO			434.5 CFCN	508.2 KLX
265,6 WMAK	288.3 KFKX			435 AT9	508.2 WIP
266 KFNF	288.3 WLWL			440.9 KLDS	508.2 WOO
266 WBCN	293.9 KTBI	340.7 WKAQ		440.9 W DWF	516.9 CJCA
268 WTAG	293.9 WEAO	340.7 WMCA		440.9 WOS	516.9 WCX
270 WGHP	296.9 KPRC	344.6 WCBD		447.5 WMAQ	516.9 WJR
272.6 WBBR	299.8 KFMQ			447.5 WQJ	526 WHO
273 KWKH	299.8 KSL	348.6 KOB		454.3 KFOA	526 WNYC
272.6 WEBJ	299.8 WPG	348.6 KWSC		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		461.3 WCAE	535.4 WHA
275 WHAD	305.9 KTCL			467 KFI	545.1 KFUO
275 WHAR	305.9 WJAR	356.9 CKNC	405.2 WOR	1468.5 WCAP	545.1 KSD

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Vol. XV

Saturday, December 5, 1925

No. 9

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

The keynote, announced by Secretary of Commerce

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

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 re-

oth nouses 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.

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 the congress of the congression of the

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 cver 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 appliance letters to the lullaby heroes and heroiver thereties. letters to the lullaby heroes and heroines to satisfy

letters to the lullary neroes and neronics 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.

Decides the hiddies can't listen in with the older

Besides, the kiddies can't listen in with the older look 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 suppurer reception interpower to cut through the summer reception inter-

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.

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 l 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"

at the joints.'

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.

SCOTTY.

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.

Recent reports have it that King Tut was only lifteen 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!

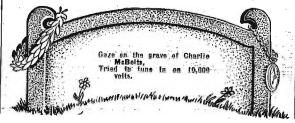
Dear India Story of WSM (Nov. 7) mentions the "lovely announcer's table"—Now, let's have a contest for the "loveliest" announcer!

MAMA HAYMES.

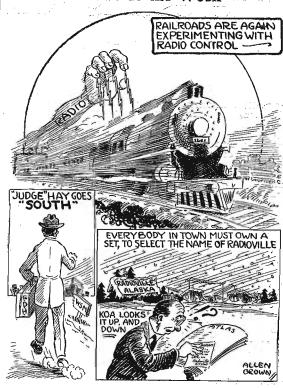
Good idea Mama, but we think we should bar those with those cute little monstachios that get caught in

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. 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 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 Vetcrans 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. the usual order followed.

As the New York stringed quartet played gracefully through a Haydn number it seemed as if the fully 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 charache did and perform with the ease and surety charac-teristic 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 include some features of real value such as the Len Royal Hussars, whose singing is excellent. Violin and cello solos were good but nothing more. The single detraction to this particular broadcast was the amounter'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 Wanaare to be a regular feature on the schedule of Wana-maker'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

metal plates facing each other, with a 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

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 ad-

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.

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 that it described in a dayie by which

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 elec-trical 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

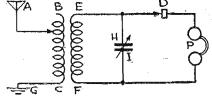


Figure 4

is properly adjusted as to length, reso nant 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 The electronic oscillations in BC de-

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 con-denser, attention is called to the com-mon comparison of a condenser to a reservoir. This analogy is correct proreservoir. This analogy is correct provided one always has in mind a reservoir above the piping system.

The position of the reservoir (abrupt-ness of the pipe system) is the important consideration. The cubical content is but a confusing detail. The emphasis fre-

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 or better yet, if there could be more

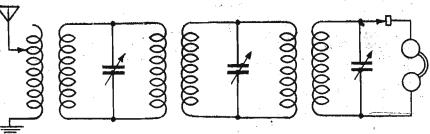


Figure 5

responding increase in selectivity. Such a circuit might be as in figure 5.
Although more efficient than some cir-

cuits there are still big energy losses and the gain in selectivity when employing

the phones. This permits more circuits energy added than to make up for the of like construction to be added with corresponding increase in selectivity. Such 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 tector tube.

HE construction of a variable conquently placed upon a condenser "holding" too many circuits is apt to be offset by depend entirely upon the energy absorbed the decrease in signal strength.

The decrease in signal strength the decrease in signal strength.

What is really needed is a means of the phones after passing through the 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 experts.

(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

A variable B battery will help get the correct B battery potential for a soft de-

Earn 50 to 200 a Week

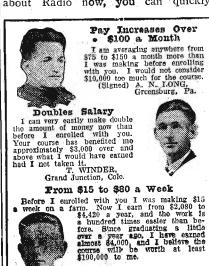
You can! Hundreds of ambitious men are already earning thousands of dollars in this wonderful new industry—you, too, can get your share. Mail coupon below for Free Book which describes fully the amazing money-making opportunities in Radio and tells you how YOU can earn from \$5,000 to over \$10,000 a year.

THE astounding growth of Radio has created thousands of big money opportunities. Millions of dollars were spent during the past year on Radio, and thousands of young men are needed right now to meet the ever-increasing demand of work.

Men are needed to build, sell and install Radio sets-to design, test, repair-as Radio engineers and executives—as operators at land stations and on ships, traveling the world over—as operators at the hundreds of broadcasting stations. And these are just a few of the wonderful opportuni-

Easy to Learn Radio at Home in Spare Time

No matter if you know nothing about Radio n**ow, you c**an quickly



(Signed) GEO. A. ADAMS, Tamaqua, Pa.

become a Radio Expert, by our marvelous new method of practical instruc-tion--instruction which includes all the material for building the latest up-todate Radio apparatus.

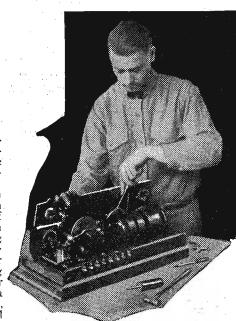
Scores of young men who have taken our course are already earning from \$75 to \$200 a week. Merle Wetzel of Chicago Heights, Ill., advanced from lineman to Radio Engineer, increasing his salary 100% even while taking our course! Emmett Welch, right after finishing his training, started earning \$300 a month and expenses. Another \$300 a month and expenses. Another graduate is now an operator of a broadcasting station—PWX of Havana, Cuba—and earns \$250 a month. Still another graduate, only 16 years old, is averaging \$70 a week in a Radio

Wonderful Opportunities

Hardly a day goes by without our receiving urgent calls for our graduates. "We need the services of a competent Radio Engineer." "We want men with executive ability in addition to Radio knowledge to become our local managers." "We require the services of several resident demonstrators"—these are just a few small indications of the great variety of opportunities open to our graduates.

Take advantage of our practical training and the unusual conditions in Radio to step into a big paying position in this wonderful new field. Radio offers you more money than you probever dreamed possible abiy ing, easy work—a chance to travel and see the world if you care to, or to take any one of the many Radio positions all around you at home. And Radio offers you a glorious future!

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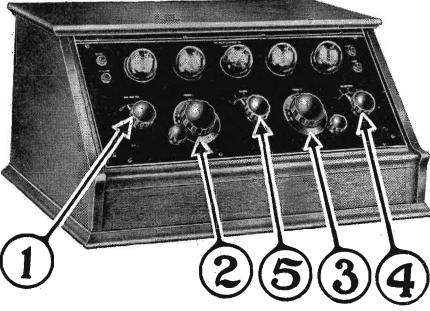
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OPERATING AND TROUBLE SHOOTING

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

K ENNEDY engineers have long known that tuned radio frequency amplification used in a Radio receiver would have two especially desirable advantages represent a billion. vantages, 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.



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 trols. 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 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 method of utilizing tuned radio frequency amplification are controlled by one dial; the new Kennedy mum and are so connected in the circuit method of utilizing tuned radio frequency.

quency enables the tubes to operate at quency 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 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 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 blug is inserted in loop jack tenna 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) Selec-tivity 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 the

uscd. (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

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

Operation of the Set

To operate the set first turn the knob to the right about three-quarters of its (Continued on page 26)

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DX-SEVEN D-COIL RECEIVER



D-COIL

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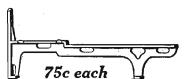
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Counterphase: Perfect Bridge Tuned R.F. Set

Part II—Drilling and Assembly of Panels

By James McDonald

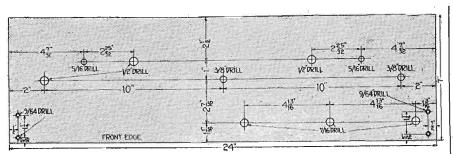


Figure 5

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 little core is reconservity. 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 togother.

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 5 is the layout for the front panel. Considering that illustration, and

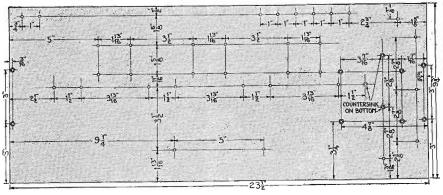
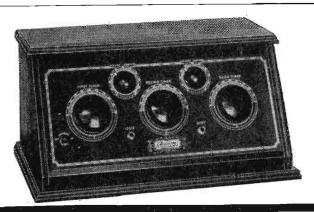


Figure 6

may be obtained by writing to Dept. 5 Radio Digest, 510 North Dearborn street, Chicago, and asking for the Counterphase the Carter switch. Above it and further blueprints. With the letter, enclose 25c to the right are two holes for the first of the cash, stamps or M. O. For those who the B-T twin condensers. The shaft hole

As usual, Radio Digest will have full reading from left to right, the two holes size drilling templates for those not so ure of their ability as draftsmen, which 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



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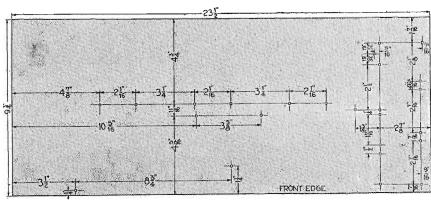


Figure 7

panel, and on a line with the switch hole, is the place for the dual resistor which is part of the Counterphase kit.

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 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

is the larger of the two while the 5/16-1 the Mar-co as specified and drill a hole inch hole is for the vernier control of with a 9-64 or 5-32 drill just 25/32 inch the front condenser. In the center of the 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 around and lay on the right strate 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)



Ting Transformers—the identical transformers sold by dealers everywhere and used in a majority of quality sets—have been the exclusive choice of MacMillan on his Arctic expedition.

Surely no greater tribute can be paid to the actual supremacy of Thordarson Transformers, product of the world's oldest and largest exclusive transformer specialists.

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THORDARSON ELECTRIC MANUFACTURING CO. world's oldest and largest exclusive transformer makers Chicago. U.S.A.

"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 found 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 heles on a line and 21½ 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 see four resident. 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 toils. 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 4½ 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.

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 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

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 single wire antenna in which care. a single wire antenna, in which case if 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 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 intractical to erect a good outdoor antennal 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



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Part III—Six More Holes and the Wiring

By John G. Ryan

N STUDYING over figure 3, which was 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 3½ inches apart. No dimension was given as to how far from the top edge they are to be. This distance is ½ inch. The four holes near the bottom edge are also ½ inch from that edge.

distance is & inch. The four holes near the bottom edge are also & 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% inches from the left end, the second is to be % inch from the first hole. The third goes 6 inches further to the right while the fourth goes 1% 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 % inch from the left edge and % inch from top edge. The sixth hole is also % 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

graph 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. 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 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 proper, next wire parallels the first along

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.

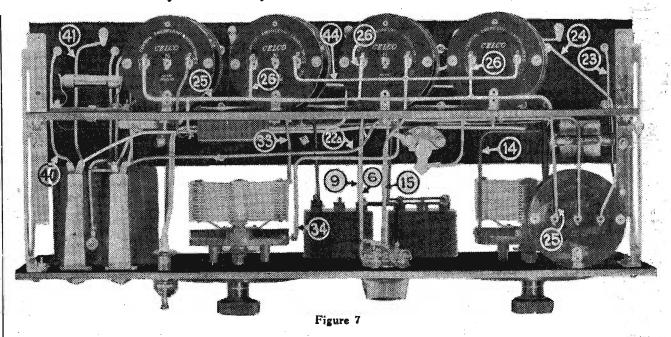
where this wire passes under the negative terminals of third, fourth and fifth sockets from right, run short wire from it up through eyelet to those terminals

0000 B0000

1.0MF.

E

Figure §



leling 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 coelects. 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 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

0

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 to
11. The right terminal of rheostat is named terminal to the right hand terminal to the right hand terminal wire 12.

12. Run wire straight back from this to wire 12.

13. The Dubilier fixed .002 mfd. condenser is placed against front surface of 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

At top of the combination filament switch and lamp there is a third terminal.

denser 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 denser drop a wire to the hole just to right of the transformer mounting screw,

(Continued on page 28)



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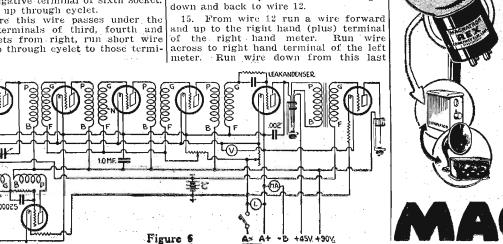
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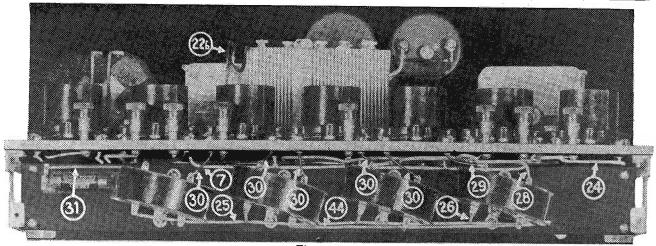


Figure 9

DX-SEVEN SUPER-HET

(Continued from page 27)

through it and back to the F terminal on the under side of the first Celco trans-former 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 counter.

coupler.
20. From the L terminal next to it, 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.

From the soldering terminal on 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

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

audio irequency 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 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

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

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Standard Type

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
Celeo to P terminal of third socket. Connect G 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 Celco goes to G post on fourth Celco goes to B post on fourth S post on fifth socket. 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.

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 34 inch and forward so it.

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

(lower) terminal of the Gleason midget 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.

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 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,

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

43. From that same lower by-pass condenser terminal run a wire to the left to the lower terminal of the end jack.

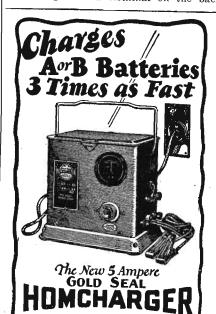
to wire 25.

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 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.)



wait for days while your batteries charge. The new 5. ampere GOLD SEAL HOM-CHARGER charges A or B batteries three times as fast as old-fashioned 2-ampere chargers - - It fully charges the average radio battery OVERNIGHT!

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and Volume in Radio"—
16 pages of helpful radio
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HE Loud Speaker that has the whole country talking. An exact replica of the microphone used in broadcasting stations.

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See the new Kodel Microphone Loud Speaker -hear it—at any radio dealer's. Two Models for your selection—one contains the highly efficient Kodel Junior unit, the other, the super-sensative Kodel Giant unit.

Write for descriptive literature

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Owners of Broadcasting Station W K R C

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DEALERS: Watch for the KODEL double-page advertisements appear-ing every other week in LIBERTY MAGAZINE.

How Badly Does Your Receiver Reradiate?

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 careat the conference as a result of a care-lessly worded report filed by the inter-ference committee. But the report was corrected before the resolutions were ac-cepted by the general conference.

One of the worst of the offending re-radiating receivers that sets up squeals

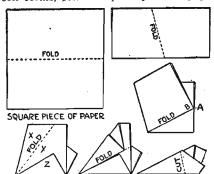
List of Parts	'
1 Variable condenser .0005 mfd\$	5.00
1 Midget variable condsenser	
.000010 mfd	1.50
1 Rheostat 30 ohm	1.00
1 Socket	1.00
7 Binding posts	1.05
1 Panel 7"x12"	1.20
1 Piece of 3" tubing 2¾" long	.50
1 Piece of 3" tubing 4" long	.70
1 Fixed mica condenser .005 mfd.	.60
1 Spool ¼-lb. No. 26 dsc. wire	.85
Miscellaneous, bus bar, screws,	
etc	1.00
Total cost\$1	14.40

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.

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

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. opened there are 14 points, taking every one, or 7, if every other one is counted. Marvin Shreffler, Kankakee, Ill.



MULTIVIDER CO. ST. JOHN and ASKEW MO. KANSAS CITY, MO.

T THE recent fourth national Radio left. Don't run the test more than three the Thatcher unit are 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 sta-tions, 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 pains-takingly slow turning of the dials, with the filaments burning just below the os-cillation or "spill over" point. The lat-ter 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 re-radiation. It consists of a single stage of radio frequency amplification, so arranged as to make its going into oscilla-tion 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.

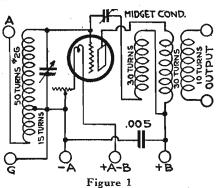
After having determined that your set DOES reradiate assuming that you still

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 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 sharp-ness of tuning stations should be noted. The list of parts necessary to make

The coil which is connected to aerial and The coil which is connected to aerial and ground is wound on the 2½" 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 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



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 posi-

tive connection.
From 1" to 1%" from the double coil, wind the output coil of ten turns.

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 tables. and spaced apart as far as is practical— at least two or three inches. It is also important that the antenna coil be cen-tered on the thirty double turn section of the other coil.

ges any make and size of storage battery ra-dio "A" and auto bat-teries, and "B" batter-les as high as 96 volts

Prices wo ampere size \$18.00 ive ampere size \$28.00

60 cycles . . 110 volts

in series

ment 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" ques-

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

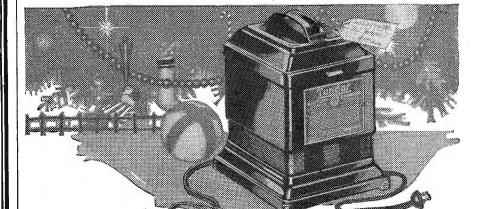
"If the publishers of Radio magazines throughout the country are organized each will take up the question and pub-lish some blank form for a guide for each Is some blank form for a guide for each fan to follow and if each fan will write a personal letter to his or her member of congress and to each of 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 and the society while the society while the society while the society while the society will be society with the society while the society will be society with the society will be so will be society with the society will be society with the society will be society will be society will be society. ciety 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."S., Elmwood, N. C. S., Elmwood, N.

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 (A more detailed explanation of the firm and tell them where to go and what construction of the Thatcher unit, together with instructions for its adjust- Weyburn, Sask., Canada.



What to give the radio fan

Give him a two-ampere Tungar if he has a storage battery of any kind. It will charge all his radio batteries and his auto battery, too.

Or, for bigger jobs, give him a five-ampere Tungar -built to do the same work but to do it more than

Every man who has a storage battery wants a charger. And every man who wants a charger wants the original General Electric bulb charger-



Tungar—a registered trademark—is found only on the genuine. Look for it on the name plate. Merchandise Division General Electric Company, Bridgeport, Conn.

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Full, sweet, mellow and natural, without the slightest indication of distortion, is another achievement that is making the APEX SUPER FIVE the most popular of all receiving sets.



VOLUME

That supplies dance music or entertainment without any loss, is a feature for which the APEX SUPER FIVE is world famed.



DISTANCE

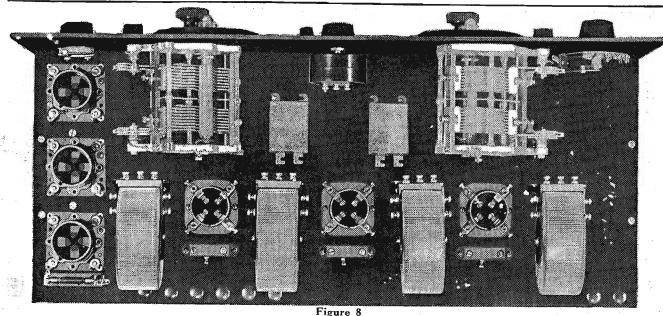
Lends added enjoyment to radio with an indescribable fascination of tuning-in far away stations, which is always possible with the APEX SUPER FIVE.

Ask your dealer for a demonstration. Your eyes and your ears will tell you that APEX stands at the high point of perfection in both performance and appearance. \$80 whout accessories.



APEX ELECTRIC MFG. CO. Dept. 1205 CHICAGO 1410 W. 59th St.

LOOKING DOWN ON SUB BASE OF "COUNTERPHASE"



"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 % 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 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 1% 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 for 6-32 screws and a 5/32 or 9/64 drill is used.

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Make Your Own B-Eliminator with our imported French parts, high quality, minimum cost. Send stamp for details. B-Free Co., 6453 Bosworth, Chicago.

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Ryan's Simplest Super-Het 14 pages, full size working drawings; Neutrodyne, 24 pages with blueprints; Reinartz, 14 pages with blueprints; Radio Circuits, 28 pages with 48 hook-ups; Reflex De Luxe, 16 pages with blueprints; Miloplex, 16 pages with blueprints; Flewelling, 12 pages with blueprints; Flewelling, 12 pages with blueprints. 3 for one dollar. 50 cents each. Book Department, Radio Digest, 510 North Dearborn Street, Chicago.

BOOKS

Slightly soiled books on Radio. Write for list and prices. Book Dept., Radio Digest, 510 North Dearborn Street, Chicago, Ill.

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Long Distance Radio \$2.95. Lambert's newest crystal success. No tubes. No batteries. No grief. Always ready. Works 600 miles. Fully guaranteed. We pay postage. Order direct from this ad. Leon Lambert, Wichita, Kansas.

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Telegraphy—Both Morse and Wireless taught thoroughly. Big salaries. Wonderful opportunities. Expenses low; chance to earn part. School established fifty years. Catalog free. Dodge's Institute, Sixth St., Valparaiso, Ind.

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Canadian, and European stamps. (colors), each with call letters of a station, FREE with latest Ideal 48-page Radio Stamp Album and Log. Also contains complete list of stations both alphabetically and by call letters. As you hear new stations, just put proper stamps in album. A fascinating hobby. Album and stamps, become permanent record of stations you hear. You and your children will enjoy it. Complete album, 8"x11", heavy cover, 1.00 plus postage.

Pay postmen after album and FREE stamps arrive. We prepay postage if you prefer to pay with order. MONEY REFUNDED if not DE-LIGHTED. Send order today—NOW. Postal will do. IDEAL CO., Dept. 4419, 366 Wrigley Bldg., Chicago

Near the center of the sub base cross wise, and near the front edge, are two holes 5 inches apart for the Sangamo 1.0 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

Few directions are necessary in connection with figure 7. The holes shown

Enjoy perfect reception regard-less of weather conditions: The Static Eliminator—the newest and most startling thing in Radio— cuts out practically all static without loss of volume!

And in addition it will help increase selec-tivity, tune out local stations, sharpen signals, remove noises, lessen interference and prevent re-radiation!

Use it with any receiving set-simply hook up to your aerial lead-in and enjoy perfect reception unmarred by static \$1.00 postpaid. Satisfaction guar-anteed. Money re-funded at once if re-turned within 5 days.

613

Takes Place of Tube

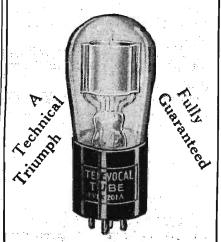
The Towner Radio Mfg. Co., 2620-C Victor St., Kansas City, Mo., has manufactured a real Fixed Detector known as RADETEC which is Highly Successful in both Crystal and Tube Sets.



Tested to Stand TUBE VOLTAGE and lasts in-definitely.

It is a Crystal Set in itself with greater distance Recoption. Wonderful for Reflex—Save A and B Battery. Prolong Tube Life. Get better detection. Every one guaranteed, Money Back if not satisfied. Price \$1 Postpaid including WRITE TODAY

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are for wiring to pass through the sub base and any size drill giving a hole

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Factory prices save you 3-3-4-2. Users
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Z4 voits Lasis Inactinucty—P'Ays for Itself Economy and performance unheard of before. Recharged at a negligible cost. Approved and listed as Standard by Fading Radio Authorities, including Pop. Radio Laboratories, Pop. Sci. Inst. Standards, Radio News Lab., Lefax, Inc., and other important institutions. Equipped with Solid Rubber Case, an insurance against acid and leakage. Extra heavy glass jars. Heavy, SEND NO MONEY was the state number of batteries. Sector over Sery Just etate number of batteries. Far offer: 4 hotteries inseries (89 voits), 12:76. Fay expressman after examining batteries. 6 per cent discount for each with order. Mail your order now!

cash with order. Mall your order now!

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Makers of the Famous World Radio "A" Storage Battery

Prices: 6-volt, 100 Amp. \$11.25; 120 Amp. \$13.25; 140 Amp. \$14.00.

All equipped with Solid Rubber Case.

World

Set your Radio Dials at 21
motors for the new 100
watt World Storage Batters
Storage BattersES

Watch for announcements

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 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. Mc-Donald'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).

Where you see these signs in circuits — use 4 Potter

Condensers At your dealer's Potter Manufacturing Co., North Chicago, Ill.

CARTER Latest Improved Radio Parts For All Circuits Carter Radio Co. 300 S. Racine Ave. CHICAGO

More Radio Pleasure

SEND NO MONEY

Two pages of Tuning Suggestions is just one advantage in the new 64-page loose leaf perpetual log. Corrected sheets may be secured as changes in calls, wave lengths, owners, addresses, etc. occur.

Holds 504 stations with 4 dial settings, the station list numerical by wave lengths in meters and kilocycles—another list alphabetical by states, etc. Dictionary of Radio Terms. Trouble Finders. Repair Hints. Trouble Aids. Full of other valuable information. So convenient. Worth twenty times-small cost, Only \$1. Large Colored

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Send no money. Pay postman after log and FREE map arrive. Postpaid if you prefer to pay with order Money refunded if not delighted. Order today—NOW. Radio Printers, Dept. 4419, Marengo, Ill.

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Interference Eliminator No Radio Set Complete Without It

Now you can select stations at will, cut out interference and undesired stations—tune in loud and clear. Wonderful results with any tube or crystal set using any kind of aerial except loop antenna. Partially absorbs static.



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Select Stations At Will Try this Interference Eliminator on your set—no tools—nothing to add—attached in 2 minutes to aerial. Doesn't disturb present log. Directions easy to follow. Two big banks testify to our reliability. Order today—dollar bill, will do—we take the risk—money back if you say so.

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64 illustrated pages containing thousands of bargains in radio sets, semi-finished sets and radio kits of all styles, sizes and approved circuits. Beautiful models of the very latest designs and types. Elaborate console models with loud speakers built right into cabinets of genuine mahogany and walnut. ALL SETS GUARANTEED.

Our line includes all popular sets, such as Superheterodyne, Neutrodyne, Refex and all the styles are superheterodyne, Neutrodyne, Radio Frequency, Browning-Drake, Refex and all the styles are superheterodyne, Neutrodyne, Columbia and others.

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Radiophone Broadcasting Stations

Corrected Every Week-Part IV

FIND MISTAKES AND YOU'LL GET DOLLAR

NE 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 direc-tories 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 cor-rected listings and new stations in order to distinguish them.

United States (Cont'd)

United States (Cont'd)

NOTE.—The fourth part of the schedule list appears below. Part five appears next week.

WOAX. Tremon, N. J. 240 meters. 500 watts. F. I.
Voint. Slogan, "The Voice from Trenton." Daily, 12:15 pm, 11:15, weather: Wed, 1:15 pm, midweekly, crop report. Sun, 9:30-11:30 pm, orchestra. Eastern, WOC, Darenport, Iowa. 483.6 meters. 5,000 watts. The "Palmer School of Chiropractic. Slogan, "Where the West Begins and in the State Where the Tail 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, 4-435 pm; 9-11. Thurs, 7-10 pm, 11:12. Fri, 4-6 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; 9:45-1145. Central.

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 Slik 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, ehimes, market, weather, educational talks; 9:30, weather. Central.

WOK, Homewood, Ill. 217.3 moters. 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, 11:55, time; 12-1 pm, concert; 4:30, weather; 4:45 organ recital; 7:30, pplice 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, Ransas City, Mo. 278 meters, 1,000 watts. Unity School of Christianity, Tues, 8-9 pm. Thurs, 7:45-9 pm, 7:45-9, Sat, 8-9 pm, 10-11 pm. Sun, 7-9:15 pm. herger & Co. Announcer, J. M. Parnett. Daily ex Marker & Co. Announcer, J. M. Parnett. Daily ex Marker & Co. Announcer, J. M. Parnett. Daily ex Marker & Co. Announcer, J. M. Parnett. Daily ex Marker & Co. Announcer, J. M. Parnett. Daily ex Marker & Co. Announcer, J. J. Parnett. Daily ex Marker & Co. Announcer, J. J. Parnett. Daily ex Marker & Co. Announcer, J. J. Parnett. Daily ex

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. Dally 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, III. 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. Missouri 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. 500 watts. Main.

Tues. Fri. 5 pm, children's story nour. Central. Owl
Nowl., New Orleans, La. 270 meters. 10 watts. Owl
Battery company.
Yowo, Fort Wayne, Ind. 227 meters. 500 watts. Main
Auto Supply Co.
PPAK, 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, 11 pm.
Sat. 6:30 pm, concert; 10. Sun, 3:15 pm, organ; 4:15,
service: 10, service. Eastern.
WPRG, Harrisburg, Pa. 215.7 meters. 100 watts. Wilson Printing & Radio Co.
WPSG, State College, Pa. 261 meters. 500 watts. Pastate College. Slogan: "The Voice of the Nittany
Tion."

State College. Slogah: "The Voice of the Nittany Fion."

WQAA. Parkeshurg, 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 Fis. 263 meters. 100 watts. Electrical Equip. Co. Announcer, Frederick W. Mizer. Slogan, "The Most Southern Radiocasting Station in U. S." Daily ax Sun, 8:30-9:30 pm. Tues, Thurs, Sat, 10:30-11:30 pm. Eastern.

WGAN. Scranton, Pa. 250 meters. 100 watts. Scranton

11:30 pm. Eastern.

WQAN. Scranton, Pa. 250 meters. 100 waits. Scranton

Times. Announcer, T. V. Ncalon. Slogan, "The

Voice of the Anthracte." Daily ex Sun, 12:30-1 pm.

4:30-5, news, reports, sports, music. Tues, Fri, 8

pm, entertainment. Sat, 10-12 midnight, dance music.

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 sorvices. Easterp.

WOI, Chicago, Ill. 447.5 meters. 500 watts. Calumet "Baking Powder company—Rainbo Gardens. Announcer, Jerry Sullivan. Daily ex Sun, 11:12 m., women's bour. Daily as Sat, Sun, 3-4 pm, 11:12 m., women's 500 m., 3-4, 10-3 am. Sun, 3-4 pm; 8-10. Ceneral.

WRAF, La l'o'te, Ind. 224 meters. 100 watts. Radio Club, Inc. Announcer, Charles Middloton. Slogan. "The Voice of the Maple City." Mon, Thure, Sun, 3:30 pm. Sun, 10 am, church services. Central.

VRAK, Escanaba, Mich. 256 meters. 100 watts. Economy Light Company. Announcer, Ken Voght. Slogan, "The Gateway to Cloverland." Mon, Fri, 8:30 pm.

WRAK, Escanaba, Mich. 256 meters. 100 watts. Economy Light Company. Announcer, Ken Yoght. 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. 100 watts. Arenue "Radio & Elec. Shop. Slogan, "The Schuylkill Valley Echo." Announcer, C. M. Chafoy. Thurs, 10-11:30 pm. Eastorn.
WRAX, Gloucester City, N. J. 268 meters. 500 watts. WRBC, Vulparaleo, Ind. 278 meters. 500 watts. In-manuel Lutheran church. Announcer, Forrest Jones. Slogan, "World Redeemed by Christ." Mon, 7:30 pm. Sun, 7:30 pm. church service. Central. 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.
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.
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.
WRCO, Lansing, Mich. 285.5 meters. 500 watts. Moore "Sologan, "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. 50 watts. Moore "Sologan, "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. 50 watts. Rogon, "Watch Reo." Daily er Sun, 6-7 pm, dinner concert; 10, weather, sports. Tues, Thurs, S:15-10 pm. Sat, 10-12 midnight. Sun, 10 am, chimes; 10:30 am, "Watch Reo." Daily er Sun, 6-7 pm, dinner concert; 10, weather, sports. Tues, Thurs, S:15-10 pm. Sat, 10-12 midnight. Dastern.
WRHO, Minneapolis, Minn. 252 meters. 50 watts. WRHM, Minneapolis, Minn. 252 meters. Solva

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.

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. Eleo. 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., Grebo & Co., Inc. Motor Yacht "MU-1."

WRNY, New York, N. Y. 238.5 meters. 500 watts. Experimenter Pub. Co. Dally 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, Toxas. 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 Mo Back to Ole Virginny." Mon. Thurs, 9-12 midnight. Eastern.

WRW, Tarrytown, N. Y. 272.5 meters. 500 watta. Tarrytown Radio Research Laboratory. Announcer, Frederick Roenigs. Slogan, "Everything in Radio." Daily ex Sun, Wed, 9-11:30 pm. Mon, 7-8 pm. Wed, 10-12 midnight. Thurs, 8-9 pm, 10:30-11:30. Eastern.

WSAI, Cincinnati, O. 325.9 meters. 500 watts. Grove City College. Announcer, H. W. Harmon. College activities. Wed, 7:30-9 pm, music, irregular programs. Eastern.

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, St., 8:15 pm, 11:30. Eastern.

WSAR, Fall River, Mass. 254 meters. 100 watts. Doughty & Welch Elec. Co., Inc. Announcer, Bastern. Doughty & Welch Elec. Co., Inc. Announcer, Barton Co. Learner, Co. Learner,

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. 7:45-3:30 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, Twee the Sunner Trails Ecgin." Mon, Wed. Fri. 9-11 pm. Eastern.

WSM. Nashville, Tenn. 282.8 meters. 1,000 watts. "National Life and Accident Insurance Company. Announcer, Ceorge 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. Dally ex Sun, 12:30-1:30 pm, 6:30-7:30. Mon, Wed. Thurs, Sat, 8:30-10:30 pm. 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, Olifo. 275.2 meters. 500 watts. S. M.

WSMK. Dayton, Olifo. 275.2 meters. 500 watts. S. M.

Sat, 10 pm. Sun, 10 am. Eastern.

WSMK, Dayton, Olifo. 275.2 meters. 500 watts. S. M. Kroln, Ar. Slogan, "The Home of Aviation." Daily ox 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. Amounter, O. W. Meissner. Slogan, "In the Land of the Sky-blue Waters." Daily ex Sat, Sun, 5:25 pm. 5:39, 5:45. 6:05. Daily ex Sat, Sun, 5:25 pm. 5:39, 5:45. Wed, 8:30 pm. Thurs, 8:30 pm; 8:45. Fr1, 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, Frt, Sun, 10-12 midnight. Central.

Central.

WSUI, Iowa City, Ia. 483.6 meters. 500 watts. Univ. of flowa. Announcer. Carl Menzer. Mon. Tues, Wed. Thurs, Fri, 12:30-1 pm. Mon. 7:30 pm. Wed. 9:30 am; 7:45 pm. Alternate Mon. 4 pm. Sun. 9.9:30 pm. Central.

WTAB. Fail River, Mass. 266 meters. 100 watts. Fail River Dnily 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-th. WTAC, Carthage, 111. 236 meters. 50 watts. Robert E. Compton.

WTAD, Carthage, III. 236 meters. 60 watts. Boort E. Compton.
WTAG, Worcester, Mass. 268 meters. 509 watts. Worcester Telegram, Announcer, Chester Geylord. Slozen, "The Voice from the Heart of the Commonwealth." Daily ex Sun. 10:30-2 pm, music, reports; 4-3, music, stocks. Mon. Wed, Fri, 7:15 pm. Tues. Thurs. Sat. 5:15 pm. "The Twinkle-Twinkle Story Tellor.!! Jaily ex Sat. 8 pm. Eastorn.
WTAL, Toledo, Ohio. 252 meters. 10 watts. Toledo

Eastern.

WTAM, Cleveland, Ohio. 389.4 meters. 3,500 watts.

Willard Storage Battery Co. Announcer, A. B.

Herske, Slogan: 'The Voice from the Storage Battery' Daily ex Sun, 12:15-1:30 pm. 6-7 pm, dinner

pretram Mon, 8-12 pm, concert. Wed, 8-1 am. Sat,
8-12 midnight, dance. Eastern.

WTAR, Norfolk, Va. 251 meters. 100 watts. Reliance. Electric Co. Announcer. B. 7:30 pm. 6:15, weather, markets. 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 & Son. Announcer. Mrs. C. S. Van Gorden & Son. 10:30 am, 12:15 pm, 6:15, weather, markets: 6:30, code. Tues. 8 pm. Fri, Sun, 7:30 pm. Ceutral. WTAR, Norfolk, Va. 261 meters. 100 watts. Reliance. Electric Co. Announcer. J. K. Bohannon. Siogan, "Down in Old Virginia." Closed down temporarily. WTAT, Boston, Mass. 244 meters. 100 watts. Reliance. Electric Co. Announcer. Announcer. Leon B. Hentz.

Elec. Huminating Co. (portable). Announcer, Leon B. Hentz.

WTAW, College Station, Tex. 270 meters. 250 watts. Agricultural and Mechanical College of Texas. Wed, Frl, 8 pm. Sun, 11 am. Central.

WTAX, Streator, Ill. 231 meters. 50 watts. Williams. Hatdware 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. Dally, 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 pm. Thurs, 6:30-8 pm. Fri, 6:30-12 pm. Eastern.

Caty. 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. 2:50 meters. 2:50 watts. Wright & Wright, Inc. Announcer, H. W. Feyhl. Slogan, Tenn City Slation." Mon, 7:45 pm. Thurs, 7 pm. Every other Sun, 9:30 pm. Eastern.

WWAE, Plainfield, Hl. 2:42 meters. 5:000 watts. Electric Park. Announcer, Harry B. Ohlhaver. Daily ex Sun, 12:30-1:30 pm; 9-12, mldnight, orchestra. Sun, 10:50-12:15 pm, Methodist ehurch; 3:30-4:30, popular program. Central. WWAO, Houghton, Mich. 2:63 meters. 2:50 watts. "Michigan College of Mines.

WWGL, Richmond Hill, N. Y. 212.6 meters. 5:00 watts. Radio Engineering Corp.

WWI, Deathorn Mich. 2:63 meters. 5:00 watts. Ford with State of State o

Argentina

Argentina
B-1, Buenos Aires, Argentina. Francisco J. Brusa.
LOR, Buenos Aires, Argentina. 350-410 meters. 500
watts. Cla Radio 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

Cultura.
LOY, Buenos Aires, Argentina. Radio Nacional. Announcer, Osvaldo P. Valla
TCR, Buenos Aires, Argentina. 325-800 meters. 100
watts. Francisco J. Brusa.

Australia

Australia

2BL, Sydney, Australia. 350 meters. 5,000 watts.

Broadcasters Limited.

2FC, Sydney, Australia. 1,100 meters. 5,000 watts.

Farmer & Co., Lid.

3AR, Melbourne, Australia. 480 meters. 1,600 watts.

Associated Radio Co., Ltd.

Associated Radio Co., Ltd.

watts. Central Broadcasters, Ltd.

6WF, Perth, Australia. 1,250 meters. 5,000 watts.

Westralia Farmers, Ltd.

Belgium

OPVH, Haeron, Belgium. 1,100 meters. 1,500 watts Daily, 12 m, weather.

RADIO-BELGIQUE, Brussels, Belglum. 265 metors.

*1,500 watts.

Brazil

SPE, Rio de Janeiro, Brazil. 250 moters. 500 watts.
Dept of National Tolegraphs.
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.

Sao Paulo, Brazil. 329 meters. 20 watts. Radio Bon-deirantes.

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) Frt, 7-8 pm. Mountain.

CFGA, 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, Brt, 8-9 pm, Thurs, S-11:30 pm, popular program. Frt. 8-9 pm, (CNRT) Sun, 11 am, 7 pm, clurch services. Eastern.

CFGF, Montreal, P. Q. Can. 410.7 meters. 1,650 watts. Canadian Marconi Co. Announcer, C. Walter Darling. Daily ex Sun. 12:45-1:40 nm, stocks, music. Mon. Frt. 7-7:30 pm, bedtime stories; 7:30-8:30, music; 9-10; 10:30-11:30, orchestra. Wed, 7-8 pm, orchestra. Eastern.

CFGH, Iroquois Falls, Ont., Can. 499.7 meters. 250 watts. Abilibi Power & Paper Co., Ltd. Slogan. "The Cail of the North." Experimental station for forest protection.

GFCK, 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. Graut, Ltd. Slogan. "Yolee of the Prairies." Tues, 11:30 pm, Bronce Busters; Wed, 9 pm, Frt. Sat. 10 pm. Sun, (14ternate) 11 am, 7:30 pm, service. Mountain.

CFCQ, Vencouver, B. C. 410.7 meters. 5 watts. Radio Specialties, Ltd.

CFGT, Tytictoria, B. C., Can. 329.5 meters. 500 watts. "The Deaville Station. Slogan, "The Meece of Tourists." Wed, Frt, 8-9:30 pm. Every second Thurs, 10:30 pm, 12 midnight. Night Birds, Sat. 10-11 nm. Sun, 11 am, 7:30 pm, service. Mountain.

CFCR, Cheriotteiown, P. E. I. 812.3 meters. 50 watts. Jank y. Elliot. Ltd.

GFGY, Cheriotteiown, P. E. I. 812.3 meters. 50 watts. Lsland Radio Co.

CFKC, Thorold, Ont., Can. 247.8 meters. 75 watts. Monarch Battery Co.

Radio & Elec. (b. Announcer, E. R. Frank. Slogan, "The Gateway to the Sea." Daily ex Sun, 7:30 pm. Eastern.

Eastern. Cleyeland, Onio. 389.4 meters. 3,500 watts. Willard Storage Battery Co. Announcer, A. R. Herske. Slogan: "The Voice from the Storage Battery Co. Announcer, A. R. Perske. Slogan: The Voice from the Storage Battery Co. Announcer, A. R. Daily ex Sun, 12:15-1:30 pm, 6-7 pm, dinner service. Mountain.

CFRC, Kingston, Ont., Can. 267,7 moters. 500 watts. Queen's University, Discontinued temporarily.

Cucen's University. Discontinued temporarity.

CFXC, New Westminster, B. C. 291.1 'meters. 20 watts.

Westminster Trust Co. and Hume & Rumule, Ltd.
Announcer, F. Storling. Slogan: "Voice of the Fraser
River:" Mon. Wed, Fri, 7.30-8.30 pm. Facific.

CFCY, New Westminster, B. C. 291.1 meters. 1,000

watts. Commercial Radio, Ltd. Slogan, "Canada's
Flourishing Young City."

CHCM Calcary, Atta. Can. 434.5 meters. 750 watts.

CHCM, Calgary, Alta., Can. 434.5 meters. 750 watts. Rlley & McCormick, Ltd. Slogan, "Western Canada's Leading Leather Goods Store." Thurs, 8-9 pm. Moun-tain.

CHCS, Hamilton, Ont., Can. 340.7 meters. 10 watts. Hamilton Speciator. Announcer, H. Earnshaw. Dally er Sun. 6:45 pm, news, markets, baseball. Sat, 10-12 midnight, dance. Sun, 11 am, 7 pm. Eastern.

CHIC. Toronto, Can. 355.9 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.

*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 ani.
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.

Toronto, Can. 356.9 meters. Jarvis St. Baptist

ClCA, Edmonton, Alta., Can. 516.9 meters, 500 watts, Edmonton Journal, Ltd. Announcer, R. A. Ricc. Slogan: "The Sunniest Spot in Sunny Alberta." Clinb, "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.

CIGC, London, Ont., Can. 329.5 meters, 500 watts.

London Free Press. Daily ex. Sun, 1-2 pin, 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 Tomple 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.

Forest Radio Corp.

CKAC, Montreal, Que., Can. 410.7 meters. 1,200 watts. La Presse. Announcer, Jacques Cartior. 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. CNIRM 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 warrs.

*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. ness. 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. Canadlan Broadcasting Corp. CKCL, Toronto, Can. 336.9 meters. 500 watts. The Pominion Battery Co., Ltd. Dally ox 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.

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." Tirce, 8-70
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. 894. 8-12 mldnight. Eastern.

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 entortainment. Sun, 7-8 pm,
church services. Eastern.

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, wenther; 12:30-1:30 pm, music.
Lectures, livestock; 2:15 pm, grain markets: 4-5, news,
kiddles story. Mon. Sat, 8 pm, lecture; 8:30, nusic.
Wed, 7:30 pm, CNRW program. Sun, 7 pm. Central.

CNRA, Moneton, N. B., Can. 291.1 meters. 500 watts.
"Canadian National Railways. Announcer. W. V.
George. Slogan, "Volco of the Maritimes." Daily ex
Son, 2:45-3:35 pm. Tues, Fri, 8 pm. Addantic.

CNRC. Calgary, Alia. Can. 434.5 meters. 750 watts.

Son, 2340-335 pm. Tues, FTI, o pm. Adonate. CNRC, Calgary, Alta, Can. 434.5 meters. 750 watts. Canadian National Railways. Thurs, 9 pm. Mountain. CNRE, Edmonton. Alts., Can. 516.9 meters. 500 watts. Canadian National Railways. Fri, 7:30-8 pm, 8:30-10:30. Mountain.

CNRM, Montroal, Quo., Can. 410.7 motors. 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. Cana-dian National Railways. Announcer, A. W. Ryan. Wed. Sat. 7:30 pm. markets, bedtime story; S, 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.

Mountain.

CNRT. Toronto. Ont., Can. 358.9 meters, 500 watts.

*Canadian National Railways. Announcer, E. W. Jackson. Fri, 6:30-12 midnight. Easten.

CNRV. Vancouver, Can. 391.1 meters. 500 watts. Canadian National Bailways. Announcer, G. A. Wright.

CNRW, Winnipeg, Man., Can. 384.4 meters. 500 watts.

*Canadian National Bailways. Wed, 7:30 pm, bedtimestory, 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, legation 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 jobuptoa Westinghouse Rectigon.

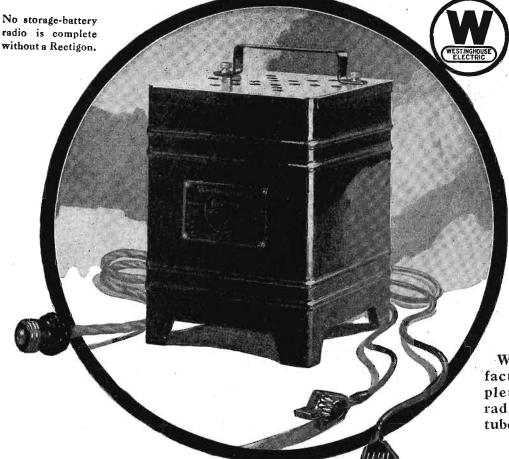
It's for "A" batteries and "B" batteries;

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.

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Westinghouse manufactures, also, a complete line of Micarta radio panels, Micarta tubes and instruments.