Classical Music Wins Popular Vote

Radio Disest Revery III PROGRAMS WEEK III STEPOLOGIC CENTS

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

Vol. XV

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No. 10



Daredevils Risk Their Lives to "Mike" Bells; Non-Radiation Unit; Operating the Trirdyn; Willie the Weeper Confesses All; Women's Programs; How the CNR Serves Radio Enroute

UNIVERSITY COURSE NOW GIVEN BY WEAF

'MIKE' ARTS AND SCIENCES DIRECT FROM CAMPUS

Design Program to Meet Needs of Those Who Desire Study Along Cultural Lines

NEW YORK.—WEAF in cooperation with Columbia university in this city, is broadcasting evening lectures by noted speakers on the program of the Institute of Arts and Sciences, direct from the lecture halls on the campus.

Among the more distinctly cultural and recreational features may be mentioned the concerts, and lectures by well-known speakers on art, literature, drama and popular science.

The institute program is frankly popular in the best sense of that word and is designed to meet the needs of those who desire to employ their leisure hours for self-improvement along intellectual and cultural lines. The course covers a wide cultural lines. The course covers a wide range of subjects and many of the lec-tures will be devoted to a discussion of timely social, economic and political ques-tions of national and international im-portance, in order to promote a more en-lightened public oninion and to quicken lightened public opinion and to quicken a sense of individual and collective responsibility.

Schedule of Lectures

The schedule for these lectures is as

Monday afternoon, December 14, at 4:15 p. m., eastern time, Professor Rollo Walter Brown will lecture on "The Creative Spirit and Conduct." Thursday afternoon, December 17, 4:15 p. m., the same speaker will talk on "The Creative Spirit and the American Public."

American Public."
Thursday afternoon, January 7, 4:15
p. m., Dr. Kate Upson Clark will eleture
on "Can Personality Be Acquired."
Monday afternoon, February 8, 4:15
p. m., Miss Mary Proctor will give an
illustrated lecture on "Mythsa nd Marvels
of Astronomy."
Monday afternoon, Elbruary 45

Monday afternoon, February 15, 4:15
p. m., Dr. Montrose J. Moses will lecture
on "Current Events of the Theater."
Monday evening, March 29, at 8:15
p. m., Mr. Norman Angell will lecture on
"Democracy and the Main Street Mind."
Saturday evening April 10 at 10.15

"Democracy and the Main Street Mind."
Saturday evening, April 10, at 8:15
p. m., Mr. Horace J. Bridges will lecture
on, "Mr. Chesterton on America and Mr.
Leacock on England."
Beginning December 2, Dr. Dorothy
Brewster, Ph.D., began her series of talks
on "Modern European Fiction." This
series has created quite a sensation as

on Modern European Fiction." This series has created quite a sensation as Dr. Brewster is a noted authority on fiction writing. Her next lecture will be given January 6, and on the first Wednesday of each month themselve will Roster. day of each month thereafter until Easter. It is broadcast at 4:15 p. m.

Program for Housewives

During the day, a special program for housewives has been arranged through the cooperation of the school of practical arts, of teachers' college, Columbia university. From the various lectures given in teachers' college, WEAF has selected a group which are of special interest to housewives and mothers. These lectures are given in a popular form and are also broadcast direct from Columbia university through WEAF.

The morning schedule is as follows, and will continue throughout the year until Easter:

Monday morning at 11:30 a. m., is known as "Mothers' Day." At this time every Monday morning, Dr. Hugh Grant Rowell, A.B., M.D., lecturer on physical education at Columbia, will talk on the "Care of Infants and Small Children."

Course in Thrift

Wednesday mornings at 11:30 a. m., a course is given on "Income Management and Thrift Promotion." These lectures are given by Miss Ruth Parish, B.S., A.M., at the present time instructor in house

hold arts.

Wednesday morning at 12:00, chapel services will be broadcast. Chaplain Knox will be in charge of the services, composed of music by the student body and an address by the chaplain.

Thursday mornings at 11:30 a. m., the ousewives program will be in charge of the department of nutrition, foods and colery of teachers' college of Columbia niversity. This course will give housevives an opportunity to hear such wellnown specialists as Dr. Mary Swartz tose and Dr. Henry P. Sherman, both of hom are outstanding authorities on the hom are outstanding authorities on the cience of nutrition and the proper feedig of the family.

Fundamentals of Cookery

Fundamentals of Cookery
In the series of foods and cookery, lecires are given on the fundamental proires of cookery, the planning and serving
meals in the home, with special lecires on advanced cookery, planned to
ivelop a keener appreciation of cooking
of special knowledge of the value of
ivors and seasonings.

tvors and seasonings.
Friday mornings at 11:30, a subject

UKULELE LADY HAS PULCHRITUDE PLUS

O MANY inquiries were received Concerning the charming Ukulele Lady doing the hula hula on a feature page of Radio Digest last week that we are risking another picture of the beauty on the cover of this issue. Hope you like it. Her name is Miss Henryetta Turner. She lives in New York and often is heard over Station WEBJ there. Miss Turner, it is said, actually dances the hula hula while broadcasting and thus obtains while broadcasting and thus obtains the right mood to approximate the effect on the listeners that would be obtained from seeing her dance and play on the stage. The psychological effect is considered a parallel to that gained by the playing of music for motion picture actors in producing sentimental or pathetic scenes.

somewhat new to the Radio audience is broadcast by Mrs. Evelyn S. Tobey, B.S., instructor of millinery. Mrs. Tobey is a charming lecturer, whose knowledge and taste in millinery have made her famous throughout the country. She lectures on the selection and adaptation of millinery as suited to the individual woman and her costume.

KDKA Innovates New "Book Night"

Station Will Review Recent Books and Read and Discuss Standard Works

PITTSBURGH.—"Book Night" will from now on be used to designate the Monday night program from the University of Pittsburgh studio of Westinghouse KDKA. Each Monday the university period from 7:45 to 8:00 p.m., eastern time, will be devoted to a book program

Recent books will be reviewed once or twice a month, while on the remaining "book nights" readings accompanied by discussions of standard literary works will be given.

will be given.

"Public Speaking" Series

"Public Speaking" is the subject of a new series of talks on Tuesday nights. This series will be given by Wayland Maxfield Parrish, assistant professor of public speaking. Professor Parrish's. public speaking. Professor Parrish's talks will be broadcast as follows:

December 15, "The Basic Psychology of Public Speaking."

December 22, "Methods of Preparation."

January 5 "Effective Speaking." speaking.

December 22, "Methods of Preparation." January 5, "Effective Speech Style." January 12, "Conversational Delivery."

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Radio Digest, Illustrated, Volume XV, Number 10, published Chicago, Illinois, December 12, 1925. Published weekly by Radio Digest Publishing Company, 510 N. Dearborn Street, Chicago, Illinois. Subscription rates, yearly, Five Dollars; Foreign Postage One Dollar additional; single copies Ten Cents. Entered as second class matter at the post office at Chicago, Illinois, under the Act of March 3, 1879.

	·
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ı	"Willie the Weeper" Confesses All
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l	Canadian Lines Serve Concerts Envents
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	ing, by John G Byan Tube Super-Het, Part IV-Adjusting and Opened
	How Badly Does Your Receiver Bonesists 27
:	Directory of Radiophone Broadcasting Stations, Part V
	ing, by John G. Ryan

Looking Ahead

Jose Garcia with 40 Renegades Swept over the Small American Settlement of Topolobampo leaving death, burning embers and bitter anguish. Out of this desolation came Wilfred Glenn, star Radio artist of WEAF. The whole story

All Good Californians Who Listen in at the KLX Pond have to belong to the Lake Merritt Ducks of whom the two chief bills are Bill Royle and Bill Seroy. They are from two hard-shelled China eggs, because the fowl language they use is Pigeon English. See 'em and read about 'em in next week's issue.

Brownsville, Texas, Claims to Have the Southermost Broadcaster in the United States. They laugh at Florida's boasted climate and tell the whole northland to come to Brownsville where the warm gulf breezes blow. Read the story of

It's a Little Town and a Little College, but WEMC, "The Radio Lighthouse" of Berrien Springs, Mich., will soon be on the air with 5,000 watts and the Emanuel Missionary college with the Radio lighthouse will spread its beams up and down this far flung ether wave washed coast. We'll tell you and show you about it

A Super-Heterodyne Giving Selectivity on an Outside Aerial has been worked out by A. Christen, M.A., Dr. Sc., of Montreal, and its construction will be described beginning in the next issue. This receiver has eight tubes but the usual oscillator and mixer tubes have been combined. The set has been assembled in Digest style by Jacques Fournier who will write the articles.

Adjusting and Tuning of Counterphase is the subject of James McDonald's fourth and final article next week. This part is most important due to the necessity of adjusting the "trimmer" condensers and the "Mikro-mikes," both units of

Newsstands Don't Always Have One Left

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	Tublisher Hadio Digest, 510 N. Dearborn St., Chicago, Illinois.
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	Name
ı	Address
	City State

MAIN AIM OF RADIO MUST BE TO SERVE

CONFERENCE SAYS PUBLIC INTEREST IS DOMINANT

Reject Secretary Hoover's Proposal for Local Committees to Govern Industry

By Thomas Stevenson
WASHINGTON.—The fourth national
Radio conference has come and gone.
Many predictions was come and gone.

Radio conference has come and gone. Many predictions were made as to what it would do for the industry and for the fans. It was said that the conference would be the most important yet held. Did these predictions eventuate?

Secretary Herbert Hoover, Acting Secretary Stephen Davis, Chief Radio Supervisor W. D. Terrell, and Dr. J. H. Dellinger, chief of the bureau of standards Radio laboratory, have had a chance to analyze the conference recommendations analyze the conference recommendations. They all concur that, in its broad aspects, the conference did almost everything that could have been hoped for.

Public Interest Dominant
These four leading government authorities on Radio believe that by far the outence was the recognition that public interest and public service should be the dominant consideration.

This simple recommendation, if alone enacted into law, could give the secretary of commerce almost unlimited authority. Here are a few things it might enable him to do:

enable him to do:
Limit broadcasting stations, if by so doing the public would be better served through lessened interference.
Close down broadcasting stations which instead of rendering a public service merely interfere with other stations that actually serve the public.

merely interfere with other stations that actually serve the public.

Compel stations to maintain constant frequencies or close them down.

Prevent the broadcasting of advertising when it tends to rob programs of their

Must Yield to Demand

Adoption of the recommendation relating to public interest and public service held a significance which perhaps many of the delegates did not grasp. It meant

of the delegates did not grasp. It meant that the manufacturers and broadcasters present placed themselves on record that the public interest must be dominant; that when their own interests conflict with those of the public, they recognize that they, themselves, must yield.

Secretary Hoover does not believe that any one man should be entrusted with the task of interpreting the public will. For this reason he suggested that local regional committees be established to act in an advisory capacity in determining which stations are best capable of serving the public.

Let Region Decide Problem

Let Region Decide Problem

Let Region Decide Problem

In making the suggestion Secretary Hoover was looking forward to the day when it will be possible to license additional stations, and when there may be several applicants in a single locality for one broadcasting privilege. Mr. Hoover believes that it would be better for a local regional committee to make the delocal regional committee to make the decision as to which of these applicants might best serve the public.

Mr. Hoover's suggestion

Mr. Hoover's suggestion was rejected by the committee to which it was re-ferred. The basis for the rejection was that it might tend to inject local politics into Radiq.

Too Big a Job

Secretary Hoover said he did not feel that any government official should be burdened with a task of such proportions. The responsibility of deciding which of the stations seeking a license to accurate The responsibility of deciding which of two stations seeking a license to occupy a vacancy in the air would render the best public service would be tremendous. Inevitably, the decision would be challenged by the disappointed applicant. All sorts of things might be charged, such as prejudice, politics, and even graft.

Mr. Hoover believes it would be much better for a local or national advisory committee to assume this responsibility rather than an executive of the government.

English Fan Gets Florida Station, WGBU, Regularly

FULFORD-BY-THE-SEA, Fla.—When Radio station WGBU broke through the Florida static the latter part of August Florida station wobo broke through the Florida static the latter part of August and early September to be picked up in Eideford, North Devon, Great Britain, it may have been considered one of the usual freaks in Radio transmission, but a letter received recently by officials of the station shows that it is being picked up at an average of three nights a week. The report of reception in August and September came from H. F. Fluck and he verified his reception with the names of selections played on three different evenings. The letter received states that he listens to WGBU on alternate mornings from 5 to 7 a. m., Greenwich time, and that there is very little fading.

KING JAZZ TOTTERS ON THRONE

NEWS BRIEFS FROM THE BROADCASTERS

OLD-TIME HOLIDAY MUSIC REVIVED THROUGH RADIO

Christmas Carols at WTIC—Radio Cocktail at WJZ—Stage Drama at KGO

Songs of 1850, melodies of the North Carolina mountains and Christmas carols will make the program given by the Yale Glee club Saturday at WEAF an important Radio event. Tune in at 8:30 p. m. eastern time for this famous glee club.

Christmas carols as presented by singers of hundreds of years ago will be offered by WTIC at Hartford, Conn., on Friday evening, December 18, at 8 o'clock, eastern time. The Travelers Choral club, numbering 70 voices, an organization made up of the men and women employes of the Travelers Insurance company, will broadcast the carols, assisted by the Travelers Symphonic Ensemble.

The Radio Cocktail, a delicacy which fans formerly received from WJZ, New York on Wednesday nights, has become so popular, he has graduated into the class of a highball. Judge, Jr., the name of this very entertaining young man, will now have the permanent hour of 7 p. m., eastern time. Thursday nights ern time, Thursday nights.

A stage drama, "The Delinquents," has been revised for Radio and will be broad-cast by KGO, Thursday evening, Decem-ber 17, between 8 and 10 o'clock pacific time. Twelve players will speak the parts of the story. parts of the story.

Holiday music was given during the vesper services of St. Georges recently from WJZ. The choir of this church gave two anthems. Rebecca Pharo, soprano, and Harry T. Burleigh, baritone, were the

The return of Dr. Frank Sill Rogers to WGY's Sunday afternoon concerts has been welcomed by Radio fans. His fine organ recitals begin at 5 p. m. eastern time.

Students of the Cincinnati Conservatory of Music will meet at WKRC, Thursday, December 17, to give their annual program of Christmas carols. Between the hours of 9 and 10 p. m., central time, these old-time favorites will carry the Christmas spirit out over the ether.

Several thousand notices of the Radio course in international relations, recently instituted by the School of Foreign Service of Georgetown university by Station WRC, have been sent to former graduates of this school, together with others who might be interested. The course was inaugurated recently by Dr. Edmund A. Walsh, S. J., vice-president and regent of the School of Foreign Service, who will be the lecturer until the first of the year.

Proof that religion is keeping step with the times is shown in the announcement by Station WJZ that the Yale divinity by Station WJZ that the late with the school is conducting a series of six lectures on religion by members of the faculty of that school to be broadcast by WJZ every Sunday afternoon at 3:30 o'clock eastern time.

Listeners to the late Wednesday and Saturday night programs of WBBM, Chicago, are rewarded on hearing Spencer, Lavergne and Shayne, the kylophone "Harmony Kings," play the largest xylophone ever made. The unusual instrument measures fourteen feet in length and some keys are as much as two and one-half feet long.

"The Miracle," the superspectacle and the talk of New England, as well as the entire country, was broadcast recently by Stations WNAC, Boston, and WEAN, Providence, so that persons unable to go to the Boston Opera House might receive the inspiration of this spectacle.

Complete Report on Radio

Confab Is Being Prepared
WASHINGTON, D. C.—A comprehensive report on the "proceedings and sive report on the "proceedings and recommendations for regulation of Radio" of the fourth Radio conference is being prepared. This pamphlet will probably by available at the government printing office at 5 cents a copy and will contain the opening speech of Secretary of Commerce Hoover, the personnel of the various committees, and their recommendations, together with the resolutions finally adopted. finally adopted.

VOICE OF TALESTER DISCLOSES IDENTITY

B OSTON.—In a letter received by Westinghouse Station WBZ from Thornton W. Burgess, children's Thornton W. Burgess, children's story author, the director of the WBZ Radio Nature league, writes: "Last week I went to New York. When the Pullman conductor came to collect the fare, he said, 'This is Mr. Burgess, isn't it?' I admitted the charge. The conductor asked to shake hands and I incurred how he knew me. 'I reconstitution of the conductor asked to shake hands and I incurred how he knew me. 'I reconstitution of the conductor asked to shake hands and I incurred how he knew me. 'I reconstitution of the conductor asked to shake hands and I incurred how he knew me. 'I reconstitution of the conductor asked to shake hands and I incurred how he knew me.' inquired how he knew me. nized your voice, said he." 'I recog-

CLASSICAL MUSIC IS FAVORED BY MASSES KOA POLL SHOWS

Three Out of Every Five Fans Vote for Old School After Spectacular Competition Between **Exponents of Each Side**

GIVES TREAT TO WOR MICROPHONE



Shirley Booth, winsome star in "Laff That Off," showing at Wallack's theater, New York city, who was recently heard over Station WOR. The flood of silent applause that followed her broadcast testified that she has a Radio personality in addition to her beauty and stage talents.

CADMAN TO SPEAK ON

Chain Features for Week

NEW YORK.—Dr. S. Parkes Cadman has selected "History's Witness of Religion" as the subject of his address which will be broadcast through WEAF and four other stations at 3:45 p. m., and four other stations at 3:45 p. m., eastern time, Sunday, December 13. Dr. Cadman will answer questions before the

Cadman will answer questions before the microphone following his address.

The scene for the musical revue to be presented to the Radio audience of WEAF on Thursday, December 17, at 10 o'clock by the "Goodrich Zippers" is lain in Pekin, China. The title selected by Lieut. Gitz-Rice, who has arranged this series of musical revues which have proved so popular with the Radio audience, is "Pekin Cupid" and will feature music of the Orient.

"The Vogelhandler" will be the feature HISTORY OF RELIGION

HISTORY OF RELIGION

The Vogenhander will be the Reader at Reader to the program being broadcast by the Eagle trio on Friday evening, December 18, through WEAF at 8:30 p. m.

Station WEAF Announces Other Radio Program Is Feature of Train Dispatchers Meeting

FORT WORTH, Texas.—At a meeting FORT WORTH, Texas.—At a meeting of the Forth Worth assembly of the American Train Dispatchers association, held recently in the Longhorn room of the Texas hotel here, a Radio program from WBAP, Star-Telegram, was the main feature of the entertainment. From 9:30 to 11 o'clock the meeting listened to the concert through an eight-tube receiver operated by R. T. Rogers of the Buckwater corporation of Chicago.

The input will be taken as the sum of the watts in the filament and the plate circuits of the tube. The contest will close June 1, 1926.

Wilmington Fights Interference WILMINGTON, N. C.—The Wilmington Radio club has launched an extensive campaign against interference, giving free membership in the club and urging Radio dealers, listeners in and all other agencies interested in or in a position to

Radio College Opens in Vienna VIENNA, Austria.—A college which will broadcast all its lectures and instructions has been inaugurated here. The daily courses will start at 10 p. m. and will last approximately two hours.

DENVER.-King Jazz is slipping. Classical music, via loud speakers and earphones, is favored by the masses.
This trend, said to be completely con-

This trend, said to be completely contrary to all expectations, was revealed by a widely-heralded poll which was conducted by KOA, Denver station of the General Electric chain. Voting was heavily stimulated by a spectacular musical compatition between jazz and the neavity stimulated by a Spectacular infisi-cal competition between jazz and the classical school, staged as a program novelty over KOA. Leading artists and representative compositions of both fac-

tions were featured.

Broadcast listeners, representing all walks of life and sitting virtually as an international musical jury, voted three to two that jazz is falling behind in populations. lar favor and therefore will never re-place the works of conventional com-

Classics Win Three Out of Five

As judges of this studio clash, listeners were invited to vote jazz, classical or for a combination of both types of music. On the face of virtually complete returns from listeners, the classical camp won three of every five votes cast in the race

with jazz.

Of the total votes cast, more than 50 per cent favored the classical school, the remainder being split between proponents of jazz and those who lean to a combination of both racy tempos and conventional numbers.

tional numbers.

Upsetting the predictions of seasoned dopesters, all but five western states swung to the classical column. Arizona, Wyoming and North Dakota gave an overwhelming choice to rapid-fire syncopation. South Dakota, it was noted, gave its majority to classical. A further check of ballots received, indicates that Arizona and Idaho are on the fence with a tied vote between the opposing musical camps. Voting in Colorado was close.

vote between the opposing musical camps. Voting in Colorado was close.
Canadian voting, generally, was light. Listeners, however, gave their majority to conventional music.

Women Cast Half of Votes

The unique contest was arranged to test the relative popularity of the opposing musical schools. No estimate of the total vote will be available until all returns are in, although several thousand ballots already have been received. Likewise, it would be futile to attempt fixing the size of the audience for this special the size of the audience for this special program.

Women cast approximately half the total ballot, whereas, less than ten months ago, barely one-fifth of all mail addressed to KOA was written by women, it was said.

An unprecedented flow of communica-tions disclosed that the jazz-classic struggle was heard in restaurants, school houses, hospitals, barber shops, hotel lobbies, widely scattered mining camps and

GIVE JEWELL TROPHY FOR MILES PER WATT

Award Made to Increase Amateur Wireless Efficiency

CHICAGO.-To increase the efficiency of amateur transmission of wireless telegraphy, the Jewell Electrical Instrument company of Chicago will award a 21ell trophy for the amateur licensed by the United States and Canadian governments getting the most miles per watt. The input will be taken as the sum of the watts in the filament and the plate

agencies interested in or in a position to affect Radio to cooperate in an endeavor to eliminate interference.

The WEAF Grand Opera company is now appearing at 10 p. m., eastern time. Monday night instead of Tuesday.

Daredevil Radio Men Risk Lives For Bells



in broadcasting the music of this, the world's largest system of bell chimes. He says in part: "Bells or chimes are problems for

the Radio engineer. They are generally placed in inaccessible places such as high towers or belfries, making the placing of the microphones exceedingly difficult. Vibrations or sound waves sent out by bells are exceedingly strong and if the microphones are placed in the same tower which sup-port the bells two things happen which are not to be desired in perfect broad-casting. The powerful sound waves 'blast' or paralyze the microphone and also the action of the hammers and connecting rods give forth rattles and squeaks as they swing on their rusty hinges which mar the beauty of the bells. Therefore, the microphones cannot be placed too close to the bells.
"If, on the other hand, they are too

far away, the listener hears his bells with all the extraneous noises of the street-automobile sirens, traffic cop whistles, trolley and elevated traffic rumblings, such as were heard in the attempt to broadcast the Trinity church

chimes of last year.

"After much experimentation it was found that the roof of the adjoining building, generally the roof of the church itself is the best place to set the pick-up microphone. This place the pick-up microphones. This placement is done with considerable risk of life and limb to the engineers. Church roofs usually are of the steeply sloping variety and in icy weather are quite slippery. It so happens that the open season for chimes comes during the holidays when the church gables are

"A testing process is necessary to determine the exact point at which to locate the microphone. It must be just far enough away to escape the blasting, the noises of the mechanical processes and not so far as to pick up the street noises. Very often this is accomplished through the reflection of

"The operator hitches himself along astraddle of the jagged crest, scraping loose here and there a scale of melting ice which crashes to the street a hundred feet or more below, and finds a spot which is cut off from the street noises with surrounding walls and yet not in direct line with the belfry. He twists the microphone in various directions until he gets the proper sound reflected from one (Continued page 12)

Comes now the intrepid Radio encomes now the intrepid Radio engineer who must be a steeplejack
or what not to get "real atmosphere." Herbert Glover (tip-top)
testing carillon at Park Avenue
Baptist church, New York. Anton
Brees, carilloneur, holding mike.
Below, some of the smaller bells
and Glover.

E ARE used to finding ourselves on the brink of seething volcanoes, making dizzy airplane plunges, witnessing death and disaster in motor races from the viewpoint of the ubiquitous movie photographer and now we are experiencing the first thrills of the hazards of the Radio operator.

Our ears are our wings and we perch on dangerous, ice-coated parapets to hear the sounds that emanate from high places. Luckily for us we sit in comfortable chairs in our homes, flutter a dial or two for a few notches and we are there—a dozen blocks, ten miles, thousand. Not so, Mr. Operator, with the microphone and

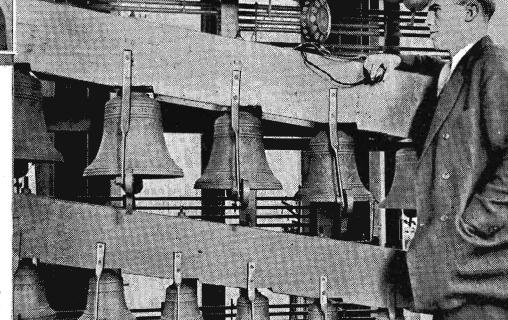
its trailing bit of cable.

He must be there in person. No matter how difficult the task or impossible it may seem, he sees it as a duty and performs it with the same pride in accomplishment as the daredevil camera man.

One of the most perilous feats now being practiced by these Radio pilots is the broadcasting of chimes for the Christmas carols and more particularly the carillon of the Park Avenue Baptist church

of New York city.

H. B. Glover of the WJZ-WJY Radio station writes to the Radio Digest concerning the experience their engineer-operators have had



"Willie the Weeper" Confesses Everything



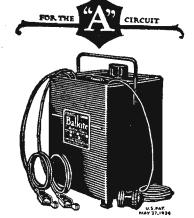
Stand By for King Tut at KFVE, St. Louis



Canadian Lines Serve Concerts Enroute



Simplify and improve radio reception with Balkite Radio Power Units



Balkite Battery Charger
This popular battery charger
is entirely noiseless and can be
used while the radio set is in operation. If your battery should
be low you merely turn on the
charger and operate the set.
Charging rate 2.5 amperes. Operates from 110-120 AC 60
cycle current. Special model for
50 cycles. Also for 25-40 cycles
with 1.5 ampere charging rate.

Price \$19.50 West of Rockies, \$20 In Canada, \$27.50



Balkite Trickle Charger

May be connected to any 6 volt radio "A" battery of 30 ampere hour capacity or more and left permanently on charge. Used in this manner it converts your "A" battery into a permanent "A" power unit that operates from the light socket and automatically furnishes full current to the "A" circuit at all times.

With any smaller battery (4 volt or small 6 volt) this charger may be used as an intermittent charger of the usual type. Can also be used as a trickle charger if a resistance is added to cut down the charging rate.

When used as a trickle charger, as an added convenience, some owners add a switch which cuts out the charger during operation. Switches of this type also turn on Balkite "B" when the set is turned on, thus providing an entirely automatic current supply for hoth circuits.

current supply for both circuits.
Size 5½ in. long, 2¾ in. wide,
5 in. high. May be put in the
usual dry cell compartment.
Charging rate .4 to .5 amperes.
Current consumption 1/10¢ per
hour. Operates from 110-120
AC 60 cycle current. Special
model for 50 cycles.

Price \$10 West of Rockies, \$10.50 In Canada, \$15 Balkite Radio Power Units simplify and improve radio reception. They reduce the amount of attention you must give your set. With their use your current supply is always exactly what is required for each circuit.

The popular Balkite Battery Charger is entirely noiseless. It can be used while the set is in operation.

The Balkite Trickle Charger converts your "A" battery into a permanent "A" power unit that supplies full "A" current at all times from the light socket.

Balkite "B" eliminates "B" batteries entirely and supplies plate current from the light socket. Balkite "B" for sets of 6 tubes or less. Balkite "B" II for sets of 6 tubes or more.

An ideal installation is a Trickle Charger and "A" battery, and Balkite "B." This enables you to operate your set entirely from the light socket.

Noiseless—No bulbs—Permanent

All Balkite Radio Power Units are based on the same principle. All are entirely noiseless in operation. They have no moving parts, no bulbs, and nothing to adjust, break or get out of order. They cannot deteriorate through use or disuse—each is a permanent piece of equipment with nothing to wear out or replace. They require no other attention than the infrequent addition of water. They do not interfere with your set or your neighbor's. Their current consumption is remarkably low. They require no changes or additions to your set. At your dealer's.

Manufactured by

FANSTEEL PRODUCTS COMPANY, Inc., North Chicago, Illinois

Balkite Radio Power Units





Balkite "B"

Eliminates "B" batteries. Supplies plate current from the light socket. Operates with either storage battery or dry cell tubes. Keeps "B" circuit always operating at maximum efficiency, for with its use the plate current supply is never low. Requires no changes or additions to your set. No bulbs—nothing to replace. Requires no attention other than adding water twice a year.

A new model, designed to serve any set requiring not more than 20 milliamperes at 90 volts—practically all sets of 5 tubes or less, and most 6 tube sets. Size 8½ in. long, 8 in. high, 3½ in. wide. Occupies about same space as 45 volt dry "B" battery. Operates from 110-120 AC 60 cycle current. Special model for 50 cycles.

Price \$35 In Canada, \$49.50



Balkite "B" II

The most outstanding development in radio last season. Same as the new Balkite "B" but will fit any set including those of 8 tubes or more. Current capacity 40 milliamperes at 90 volts. Size 9 in. high, 6½ in. wide, 7½ in. deep. Operates from 110-120 AC 60 cycle current. Special model for 50 cycles.

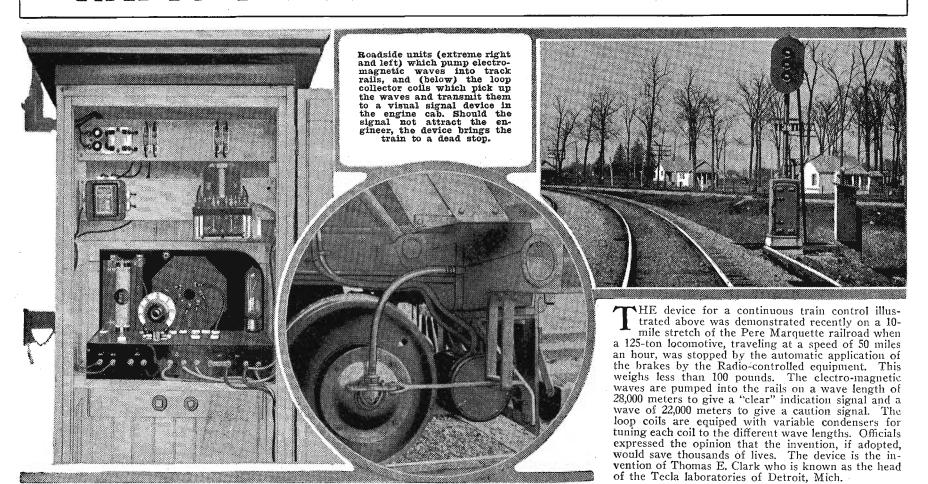
Price \$55 In Canada, \$75

The Gould Unipower, manufactured by the Gould Storage Battery Company, is equipped with a special Balkite Radio Power Unit

BALKITE BATTERY CHARGER · BALKITE TRICKLE CHARGER · BALKITE "B" · BALKITE "B"II

ALL BALKITE RADIO POWER UNITS ARE TESTED AND LISTED AS STANDARD BY THE UNDERWRITERS' LABORATORIES

RADIO BRAKE STOPS FAST TRAINS



RADIO BRIDGE LEADS **FALL BROADCASTING**

WSAI AND ASSOCIATE STA TIONS RECEIVE LETTERS

Fans from Coast to Coast Hear Experts
Expound Principles of Popular Card Game

CINCINNATI. — That Radio bridge games is one of the big features of broad-casting this winter is well attested by the hundreds of letters and telegrams received by WSAI and associate stations following the first game that went on the air from numerals of the powerful stathe air from numerals of the powerful stations featuring bridge by Radio. The following stations are featuring the series of games each Tuesday: WSAI, Cincinnati; WEAF, New York; WEEI, Boston; WFI, Philadelphia; WGR, Buffalo; WWJ, Detroit; WOC, Davenport; WCCO, Minneapolis-St. Paul; KFOA, Seattle; CW. Bortloyd, KHI, Los Angeles and KGW, Portland; KHJ, Los Angeles, and WGN, Chicago.

The New York hook-up including the first eight stations was handled through Paul A. Greene manager of WSAI who put the first game on the air from the studios of WEAF.

Can Follow Experts Play

The plan of playing the game is so arranged that those listening in on any of the twenty stations broadcasting are able to follow the bids and plays as executed

by the experts.

Representative bridge experts from New York and cities where broadcasting stations are located are playing each week against Milton C. Work and Wilbur C. Whitehead of New York who are considered the leading bridge authorities in sidered the leading bridge authorities in America. As the experts map out the game bid by bid and play by play, salient points in the hand will be illustrated. Each game broadcast is separate and distinct in itself.

The first game was played between M. C. Work, W. C. Whitehead, Sidney S. Lenz and E. V. Shepard of New York.

Even Coast Will Hear

WSAL and WGN Chicago are broad-

WSAI and WGN, Chicago, are broad-acting the entire series of twenty-four games in conjunction with the stations on the Pacific coast while on alternate Tuesdays the New York hook-up including WEAF, WEEI, WFI, WGR, WWJ, WOC and WCCO put on the odd-numbered

The contestants in the second game The contestants in the second game were Ralph J. Liebenderfer, New York, and Gratz M. Scott, New York, a prominent member of the Knickerbocker club, against Mr. Whitehead and Mr. Work. Following the second game the contestants are representatives from leading bridge clubs of other cities. The fol- ceive instruction.

Bridge by Radio

Broadcast by

WSAI, every Tuesday, 9-9:30 p. m., central time.

WEAF, WEEI, WFI, WGR, WWJ, WOC, WCCO, alternate Tuesdays, 10-10:30 p. m., eastern time.

KPRC, WFAA, WMC, WDOD, alternate Tuesdays, 9-9:30 p. m., central

WSB, alternate Tuesdays, 9-9:30 p. m., eastern time.

KFOA, every Friday, 8:30-9 p. m., Pacific time.

KGW, every 7 p. m., Pacific time. Tuesday, 8:20-8:45

KHJ, every Tuesday, 3:30-4 p. m.,

WGY, alternate Saturdays, 9-9:30

KGO, every Tuesday, 9:30-10 p. m., Pacific time.

p. m., eastern time.

WGN, every Wednesday, 3-3:30 p. m.,

central time. WNAC, alternate Tuesdays, 10-10:30 p. m., eastern time.

WEAN, every Tuesday, 10-10:30 p. m., eastern time.

WSOE, alternate Thursdays, 8-8:30 p. m., central time

lowing stations broadcast the second game: WSAI, WSB, KPRC, WFAA, WMC, WDOD, KFOA, KGW KHJ, KOA, WGY, KGO and WGN.

KOA of Denver Now Offers All-Winter Spanish Course

DENVER.—Monday evening is now educational night at KOA, General Electric station here, following announcethat an all-winter course sational Spanish, employing the Galeno natural method, would be featured every

Special text books to accommodate a Radio class of 10,000 listeners already are being distributed, succeeding the first two lessons. The demand indicates that an additional supply may be required. One class whose enrollment totals 27

members has been organized by a Spanish enthusiast of Denver, while a social club in New Mexico is arranging for a loud speaker class of a dozen students to re-

BOYCOTT OF KHJ IS ABOUT TO END

Mutual Interests of Station and Musicians Union to Bring Amiable Agreement

LOS ANGELES.—The boycott of Station KHJ, Los Angeles Times, here, by the local musicians' union, is about to end, according to all information that could be obtained at the station and musicians union headquarters. Union musicians are missing the bookings at the station and the station, to some extent at least, is missing the musicians so it is thought the boycott will soon end with an amiable

Station KFON at Long Beach, Calif. just recently raised in power to 500 watts, also has had some trouble with the union due to the fact that Long Beach comes under the jurisdiction of the Los Angeles federation. It is thought that KFON will also be freed of restrictions at the same time settlement is made with KHJ.

Jap Broadcasters New On Coast Fans' Dials

Oriental Stations Sound Like Static to Americans

SAN FRANCISCO.—Mail from Alaska, the South Seas, Australia, and Pacific coast states, received at KGO, here, now frequently mentions reception of Japanese

frequently mentions reception of Japanese broadcasting stations.

Station JOAK, Japanese government owned and located in Tokio; has been reported heard in San Francisco and other Pacific coast points. A recent letter from Nome, Alaska, says "aftering listening to KGO we tuned in Tokio, Japan, but the Jap announcer sounded like static. The music came from a good orchestra but was the wrong brand. Give us jazz instead." stead."

In Queensland, Australia, in the cities of Cairns and Townsville, listeners report intereference with American and even Australian stations by Japanese broad-

Peter MacArthur Goes on Announcing Staff of WOC

DAVENPORT, Iowa.—Peter MacArthur, Scotch baritone and a long-time favorite with WOC listeners, has been assigned to the announcing staff at the Palmer school station here. "Pete" is no stranger to the audience as he has been heard on many programs from the Davenport station, but he will in the future give more of his time in the WOC announcing room than heretofore.

|NO STATION LICENSE **GIVEN DURING WEEK**

CONGESTION IS SO BAD NO ROOM ON AIR REMAINS

Broadcasters Await Action of Radio Conference Before Making Application

WASHINGTON .- For the first time in almost a year, a week has elapsed with-out a new broadcaster being licensed by the department of commerce. Hereto-fore, there have been from three to ten

new licenses granted weekly.

The lack of new stations is directly due to the recommendations of the Radio conference that no further stations be licensed until much of the present congestion in the ether has been relieved.

There is reason to believe that there are a large number of prospective new broad-casters who have been holding off on demanding a wave length and a license because of the possibility of new channels being created by the conference.

Many Exert Pressure

With their hopes in this direction shat-tered, there is a likelihood that the prospective new broadcasters may try to exert pressure on the government in order to get a license before congress has a chance to act upon the matter.

The shortage of wave lengths is acute. new station, equipped to use 5,000 watts, is ready to broadcast at St. Louis. At the present time it seems almost impossible to provide a wave length for this station, although a desperate effort will be made to squeeze it in somewhere.

Then there is the case of Baltimore, WBAL, "The Voice of Baltimore," which was recently completed. It was constructed to operate on a class B wave length and considerable adjustment of apparatus would be necessary for operation below 280 meters.

Cannot Stay on 375 Meters

The station is working temporarily on 375 meters, but this is the wave length of KVOO, "The Voice of Oklahoma" at Bristow which will be ready to broadcast soon. If Bristow, Baltimore and Hot Springs could work satisfactorily on the same wave length, Baltimore would be allowed to continue on 375 meters. This is not the case, however, and WBAL will

be compelled to drop down to 246 meters.
WHT, Deerfield, had the same experience as the Baltimore station, but has temporarily overcome the situation. Constructed to operate on a higher wave, WHT was assigned 238 meters. The station is now using 400 meters, through the courtesy of WHAS, Louisville until it can adjust its apparatus for the lower

to the second control of the second control

KFVE, KING TUT'S OWN GIVES RADIO ENROUTE (Continued from page 7)

(Continued from page 6)
spirit photographs. If we can get you in the pictures and on the air both it certainly would be a very fine record for our wonderful Egyptian studios.

"Come right in and make yourself at home. We have tried to make the environment congenial. We will go directly to the small studio. It already has been announced that you are to speak tonight. Thousands of letters have been received from fans who are crazy to hear you. "Guess you never did broadcast before, did you? Nothing to it—just be yourself

Nothing to it—just be yourself and talk in your ordinary tone of voice. We have 500 watts, not so large as some stations but being in the center of the country it is great enough. They hear us stations but being in the center of the country it is great enough. They hear us from coast to coast. You don't have to shout or—excuse me, I almost forgot, you are not vocal. That will take an amplified cerebral wave—telepathic they used to call it. It's all mystery to me but the operator understands. He's a wizard. I just ask him and he does anything

I just ask him and he does anything.
"Well, let's step along, Your Majesty, and please notice the scenery as you pass down the fairway—the pylon, I mean."

Carved Columns Stand Like Sentinels

Thus they pass through the misty light. Carved columns flank them in serried ranks like giant sentinels whose heads are above the clouds. Through blue squares of lofty skylights twinkling stars may be seen in the district heads. may be seen in the distant heavens. Figured tapestries and hieroglyphs tell the history of ancient Egypt on every hand. All of this is pleasing to King Tut and he smiles an astral smile while his guide continues to tell him of the life and activities in the great building.

"It was conceived and constructed some

"It was conceived and constructed some years ago," explains Mr. Fielding, "by E. G. Lewis as the publishing house of the 'Woman's National Daily,' most widely delivered delivers the world delivers." the 'Woman's National Daily, most widely circulated daily in the world at the time. Mr. Lewis was an eccentric genius and sent a delegation to Egypt to get precise data from the originals created by your

"I see you are smiling. Doubtless you see in some of these hieroglyphics comic strips that amused the Egyptians when you were a boy. We still use the same jokes on the vaudeville stage and they go over as big as ever. Now take that one about the mother-in-law—"

one about the mother-in-law—"
"Excuse me, I believe I have heard that," interrupts Tut, "may I ask is this your broadcasting studio, as I understand it?" They enter a division of the big room.
"Oh, yes. This is the large one. We call it the 'Queen's Room.' We broadcast the concerts from this room. A hundred

call it the Queen's Room. We broaucast the concerts from this room. A hundred persons may sing or play here at one time. These musicians are the Washing-ton university orchestra starting the 8:30

King Tut Meets Queen Joan

"I should like very much to present our movie queen, Queen Joan Aries. I didn't tell her that you were companies. I didn't tell her that you were companies. ing. I hope she can see you as I do, with the astral eye—."
"Is that her royal robe?"

"Is that her royal robe?"
"Oh, no. She's playing a bride today and is wearing a stock bridal gown. But you should hear her sing—mezzo-soprano. She can always be counted on for a corking recital of classical music. Come on, let's try an introduction."

Fielding essays to present the Potentate.

Fielding essays to present the Potentate

of the Nile.

"Say, what's the matter with you. don't get this jargon about Tut at all. told you to make the bootlegger try

"Don't mind her, she can't see you," says the director as they back away. "She's temperamental but she's a peach when it comes to screen business. know how artists are."

In the small broadcasting room they find "Jack" David Franklin before the find "Jack" David Franklin before the mike as they open and close the door noiselessly. Jack has just changed his voice from that of an announcer to a singer and is throwing his soul into the

microphone.

Tut Broadcast? Not Much!

The spectral figure of King Tut comes to a dead halt.

"I can never do that, never. It won't work. Do you think I could get up in front of a little cup like that with a whole nation for an audience?" Tut gasps and a cold gust of air swayed the velvet draneries

velvet draperies.

"Now, don't get scared," Fielding answers in a soothing voice. "Just be yourself and talk in an ordinary tone of voice—oh, I keep forgetting. Operator!"

"No, thanks, I'm sorry but I never could get up before that thing—never. I-I-I'd die first, if I could. Listen, the boat . . . it's coming . . . 'bye . . ."

The director looks around. There is a sound in his ears as of a distant splash—

sound in his ears as of a distant splash-It may be an oar or a faucet in the wash room. Tut is gone. The operator stands in his place, his eyebrows screwed up

in his place, his eyebrows screwed up into two parallel question marks.

"Never mind," says the chief. "I just had an idea but we'll not bother about it now . . . Funny, isn't it, how some folks, even kings, get so frightened over a little microphone. What would they do with a microphone. What would they do with a megaphone?"

was on a train being tried out, it was my was on a train being tried out, it was my good fortune to happen to poke my nose into the matter. Of course it was none of my business, but human beings are the same the world over, and when I heard a singer coming in, along with razzes and rattles enough to make one want to kill himself or the singer, I let out a whoop of excited joy. I wanted to tell the world about it, but a few very pointed remarks from the men who were pointed remarks from the men who were doing the pioneer work in these experiments made me hold my tongue.

Radio Is Common Affair

Hadio Is Common Arair
However, time and experiments have passed, and apart from the regular research work, for the advancement of train Radio, the thing is not only an accomplished fact but it is a common affair now on this railroad.

accomplished fact but it is a common affair now on this railroad.

Experiment has determined locations for C. N. R. broadcasting stations, so that passenger trains will be free from interpolation.

Montreal CNRM is only

passenger trains will be free from interrupted service. Montreal, CNRM, is only 113 miles from Ottawa, CNRO, but was necessary due to difficulty in getting either Ottawa or Toronto at Montreal.

These broadcasting stations, opened and operated by the C. N. Rys., are located at Moncton, N. B., Montreal, Que., Ottawa, Ont., Toronto, Ont., Winnipeg, Man., Regina, Sask., Saskatoon, Sask., Edmonton, Alta., Calgary, Alta., and Vancouver, B. C.

Iron Bridges Have Their Joke

Tron Bridges Have Their Joke

The programs are what one would expect from a big organization. They come into the trains, going at anywhere from forty to sixty miles an hour, and do not seem to differ in any way whatever from the same thing, be it song or bedtime story, coming into a village home.

All this is very wonderful indeed,

All this is very wonderful indeed, especially when we consider that the amount of metal about engines and carre, which was responsible for much of the amount of metal about engines and cars, which was responsible for much of the early noises, has been overcome. It is true that absolutely every weakness has not been overcome; for instance, a singer coming in clear and sweet as a silver bell, when we were going along about forty-five miles an hour, suddenly faded almost entirely away and remained so for a few seconds and just as suddenly came back. This, of course, made everyone look at the operator for an answer one look at the operator for an answer and he just said, "Iron bridge." So heavy bridges have their little joke. It is as though they resented the failure of the passengers to notice them any more and have taken this means of protesting against the foolish and carefree ways of the modern passenger.
Children Sit Quiet as Mice

Freight yards, passing engines and trains and all the masses of metal one would think might bother the ears of the passengers, by jazzing up the program with noises, have been given a dose of Radio chloroform—in other words, careful experiment has cut them down to nothing.

ful experiment has cut them down to nothing.

Recently I saw some children on a transcontinental train (a long and trying trip for children and their parents and everyone else in the olden days) sitting as quiet as mice, getting bands, comic songs and nature stories. They were too funny for words, all in a row, tiny heads fitted with ear phones, the whole world outside going by the car windows. And there they sat, faces as serious as a courtroom, eyes unseeing, and not a move out of them, except for a sudden laugh or a dropped lower jaw when some serious business would be heard and the relieved shutting of the mouth as when a trapped animal has escaped from its trouble. The other passengers were greatly amused.

Sets Used Are Excellent

Trains from Montreal to Vancouver,

Trains from Montreal to Vancouver, Toronto to Winnipeg, Montreal to Quebec, and Montreal to Chicago are equipped and

and montreal to Unicago are equipped and in regular operation.

As high as 30 headsets to a car is not unusual and the loud speaker is used at the discretion of the operator in exactly the discretion of the operator in exactly the same manner as one would use it in the home, the uniformed operator and the finest Radio equipment it is possible to get probably putting the train Radio into a class of excellence unexpected by the general public for when we speak of the general public, for when we speak of the average Radio receiving set used by the public, the margin is rather an agree-able surprise when the public boards the Radio-equipped train and the closeness to perfection is seen and heard.

perfection is seen and heard.

The Moncton broadcasting station has been heard in Holland and England. Winnipeg also was heard very clearly in Holland. In other words, while the trains get Radio, it is a benefit to all within reach of the railroad's broadcasting stations. It does seem hard to better them that when you leave the ling stations. It does seem hard to beleve, though, that when you leave the family hearing a concert at home, take your grip and go to the train, you plug in and get it while departing.

Capitol Theater Celebrates

NEW YORK.—Last Sunday evening the Capitol theater "family" celebrated the third anniversary of its broadcasting activities by a special program in which each member of the "family participated.



DAILY CABLE BRINGS **EUROPEAN FASHIONS**

ELEANOR GUNN PREPARES LATEST WHT FEATURE

Intimate News of Famous Social Resorts Will Be Given to Milady in America

CHICAGO.—Milady can now use her Radio and receive the latest fashion notes cabled from European style centers and prepared by Eleanor Gunn, one of America's foremost fashion authorities.

America's foremost fashion authorities.

This special fashion service is a daily feature of WHT programs arranged by Jean Sargent and is broadcast daily from the Wrigley building studio (400), at 11:40 a. m. The broadcasting of these fashion reports is supplemented by a fashion question box and all inquiries are answered direct by Eleanor Gunn.

The reports take the listener to the famous European social resorts in Eng-

famous European social resorts in England, France, Spain and Italy as well as the style centers of America. They will tell who is there, what they wear, how they wear it, and what they are going to

Receiving Set for Show Built by Boston Woman

Claims Women Should Be Better Than Men in Radio

BOSTON, Mass .- This city can now BOSTON, Mass.—This city can now boast of a woman who is a Radio set builder. Miss Betty A. Mirick has achieved the distinction of being Boston's first woman Radio constructor. This just came to light through the entry of Miss Mirick in the amateur receiving set build-

Mirick in the amateur receiving set building contest held in connection with a Radio show. Miss Mirick's entry was a single tube regenerative set.

"I don't see why more women have not built receiving sets, and entered this contest. The work is more adapted to a woman than a man, I believe. Women's hands are smaller, more deft and better able to do the fussy work of wiring receiving sets than are men's." Miss Mirick declared that she is a dyed-in-the-wool Radio listener, and has been for several Radlo listener, and has been for several years. Previous to building this set herself, she had been using a single tube set that she bought.

King Used to Have Taster Who Took All the Chances

NEW YORK.—As the result of the many splendid recipes which Mrs. Julian Heath broadcasts from WJZ every morning, the staff of the station is having the opportunity to enjoy numerous concoctions of the culinary art.

The housewives who listen in daily to

the women's hour try out the recipes that are broadcast and then send gener-

that are broadcast and then send generous samples to the station for the inspection and approval of Mrs. Heath, who samples the product and then turns the balance over to the staff to consume, which they, in turn, do quite efficiently. One morning the following articles arrived to be sampled: One apple pie, one peach shortcake, two dozen cookies, one loaf of nut bread, one jar of chow chow, one chocolate pudding and numerous smaller items. All were tried by the staff with no bad effects.

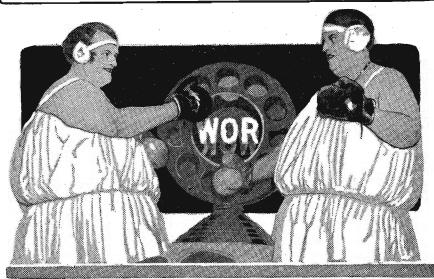
Key Pounders Worship St. Joan
LONDON.—Saint Joan of Arc was
sometime ago chosen in France as the
patron saint of Radio, doubtless on account of the voices she heard. Now, to
celebrate this new tribute to Saint Joan, the naval Radio operators at Toulon re-cently organized a pageant depicting Joan's entry into the city. Despite the burlesque character of the proceedings, the Radio operators have chosen their saint in all seriousness.

With additions being made at the rate of three hundred a month, the British Broadcasting company's collection of phonograph records is probably the finest and largest in Europe.

RADIO TALK BRINGS **OWNER LOST PURSE**

EW YORK.—Shortly after she had finished a short talk over Station WJZ in the interest of education week, Miss Mary Whittington, 510 West 124th street, was called to the phone by a woman who sald her husband had found a purse with Miss Whittington's name as the only mark of identification and she had despaired of ever finding the owner until she heard the name announced on the program.

TWO MAKE ONE-HALF TON AT WOR



"Mike" at Station WOR, New York, has witnessed many a pair of shaking knees as great and near great have made their bow before him, but when the two ladies shown in the above picture approached, he did a little shaking on his own account. They were "professional fat women." They were in the "Early Bird Gym Class." The casualties were slight although Dot (left) weighed in at 521 pounds broadside, and Elsie weighed 541 pounds.

Index to Women's Programs

SATURDAY, DECEMBER 12 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. WWJ (352.7) Tonight's dinner.

11 10 9 8

WEAR (389.4) Home service talk.

WHT (399.8) Women's club.

11:45 9:45 8:45

WCCO (416.4) Home Service talk, Betty Crocker.
12:35 pm. 11:35 10:35

KYW (536) Table talk. 4 3 2 KJR (384.4) Tonight's dinner.

MONDAY, DECEMBER 14

TUESDAY, DECEMBER 15 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. 7 3 6 KOA (322.4) Culinary hints. 6:15 5:15 4:15 KOA (322.4) Fashlon review. 3:15 4 7 6 5 KFOA (454.3) Today's recipe 8:30 7:30 6:30 KGO (361) As a Woman Thinketh.

WEDNESDAY, DECEMBER 16

WOC (483.6) Home Management schedule, Augustane,
WQI (447.5) Treating the Home to Reflect Your
Personality. 3:30 2:30 1:30
WLW (422.3) Cooking school, bints. 7
KFOA (454.3) Today's recipes.
KLX (598.2) Women's hour.
10:45 9:45 8:45 7:45
KFDJ (282.5) Christmas dinner.
11 10 9 8
KFDJ (282.5) Concealing Extra Pounds.

THURSDAY, DECEMBER 17 Jane,
WQJ (447.5) Party Suggestions for New Years. Wey (141.3) 1 atty Suggests 3
KFOA (454.3) Home helps.
KSD (545.1) Women's Hour.
5:30 4:30 3:30
KOA (322.4) Housewives matinee.
6 A (322.4) Culinary hints.
6:15 5:15 4:15
KOA (322.4) Fashion review.
7 6 5 2:30 3:15 KFOA (454.3) Today's recipe.

FRIDAY, DECEMBER 18 Eastern Central Mountain 9:30 a. m. 8:30 a. m. 7:30 a. m. WWJ (352.7) Tonight's dinner. WCCO (416.4) Women's hour.

4 3 2 1 p.m.

WOC (483.6) Home Management schedule, Aunt Jane.

WOJ (447.5) Home Economics program.

5 4 3 2

KJR (384.4) Home helps.

5:30 4:30 8:30 2:30

KOA (322.4) Housewives matinee.

WFOAA (475.9) Women's hour.

6 5 4 3

KOA (322.4) Culinary hints.

6:15 5:15 4:15 3:15

KOA (322.4) Fashion review.

7 6 5 4

KFOA (454.3) Today's recipe.

KLX (508.2) Women's hour.

11:305 (6:15 9:05 8:05 11:05 10:05 9:0 KFDJ (282.5) House heating. 8:05

THREE KOA CLASSES OFFERED TO WOMEN

BIG COURSE IS GIVEN IN MATINEE PROGRAMS

Styles, Fashions, Culinary Practice and Physical Education Are Features of Station

DENVER. — Authoritative information on styles and fashions!

Table talks which provide timely hints in culiarry practice!

Midafternoon relaxing and corrective These matinee attractions are the basis

of three Radio classes for western housewives now conducted by KOA, General Electric station, at Denver. They are conducted exclusively by women every Tuesday, Thursday and Friday after-

Gym, Music, Food Talks, Pashions Lessons in physical education are given at 3:15 o'clock by Ruth Drumm Witting of the Denver Turnverein. The course embraces character and interpretative dancing and a variety of exercises for reducing, cultivating poise and improving posture. This is followed by a half-hour studio program of miscellaneous vocal and instrumental selections.

Clara Hoover, culinary expert of Denver, next appears before the microphones with a fifteen-minute course in home

economics.

Her feature is billed at 4 o'clock and is followed by Radio fashion reviews which serve as a guidance in style selections.

What to Feed Hubby Is Told to Wife by WGY

Schenectady Station Inaugurates Food Preparation Talk

SCHENECTADY, N. Y.—That often perplexing problem of what to feed the male of the species after a bread-win-ning day in office, field, shop or store has been partly settled for the housewife here by WGY, General Electric company. Miss Jessie B. Lane, a graduate of Swarthmore college, gives a weekly talk to housewives suggesting menues and offering many suggestions for the preparation of various foods.

Miss Lane has had one year's experience in institutional work and house management and five years' experience in teaching domestic science. During the she was in charge of community cooking and canning demonstrations.

"Aunt Jane" Has Letters From 4,116 Club Members

DAVENPORT, Iowa.—"Aunt Jane," who ethereally presides over the Women's Exchange club Radio schedules at 3 o'clock, central time, every afternoon, with its headquarters before the WOC mirrophene here has counted her memmicrophone here, has counted her members, and finds that she has 4,116 members enrolled.

This figure represents over four thousand ladies of the city, of the farm, single, married, and all young and good cooks. Each one has sent "Aunt Jane" at least one letter. These letters, in most cases, have contained several recipes, household hints, etc.

"Things Talked About" New Feature for Women on WRC

WASHINGTON .- With the addition to WASHINGTON.—With the addition to its program of a new feature entitled "Things Talked About," which is presented every Friday afternoon by Mrs. Nina Reed, Station WRC, at Washington is now "covering" the weekly trend of current events for both its masculine and feminine audlences. Mrs. Reed's new series of weekly talks are of particular interest to women, and review those questions that are not covered by Frederic William Wile, in his weekly discussions of the political situation in Washington every Tuesday evening.

EDITOR IS CHAMPION OF MODERN WOMEN

EW YORK.—John B. Kennedy, well-known editor, has been conducting a series of short talks on spirited topics from Station WJZ. In the last, which was given December 4, he treated on the subject of the women of today. He championed the "weaker sex" and proved that rather than being on the down grade, the girls of today are climbing higher while the males are on "thin ice."

ASSESSMENT OF STREET OF A REAL PROPERTY OF THE STREET OF T

AUTOMATIC DEVICE FOR CALLING SHOWN

DIRECTION FINDER IS ALSO GIVEN TO ENGINEERS

Compact Lifeboat Set Designed to Ring Bell on Bridge of Steamer for Aid

LONDON, Eng.—Important demonstra-tions of an automatic Radio calling de-vice and a new direction-finding system, were given by Major B. Binyon, the newly-elected chairman, in his recent in-augural address to the Radio section of the Institution of Electrical Engineers

Major Binyon exhibited an extremely compact lifeboat set, which was water-tight and could be operated even when being drenched with water.

No Operator Needed
The automatic calling device will ring a bell on the bridge on receipt of a disa bell on the bridge on receipt of a dis-tress signal, even though no Radio oper-ator is on watch. It is capable of work-ing through very heavy interference from other signals. When such an arrange-ment is universally adopted in ships it will, said the major, greatly increase the safety of life at sea owing to a greater number of ships being on the watch to number of ships being on the watch to render assistance in case of disaster. The new direction-finding system dem-onstrated, although only in experimental

form, proves that it is possible to construct a laboratory instrument which will automatically point towards the direction of a distant-transmitting station. An instrument which would point automatically to a coast station or another ship would be of immense value to commanders of vessels when navigating through

"WILLIE THE WEEPER"

(Continued from page 5)

(Continued from page 5)
am dramatic editor of the Journal.
"Have been with the Journal four
years. Was first newspaper man to
receive an assignment by Radio. Got it
from WSB at the receiving set at Fort
McPherson long time ago. I was told to
write up the concert in which I was taking part at the fort. That's where I got my first complimentary newspaper no-

"Have played three vaudeville engagements, twice with Lambdin Kay, Journal Radio director-announcer, as a co-con-Also numerous club dates with

spirator. Also numerous club dates with and without Kay.
"My pet aversions are: New York city and song publishers. They are too honest, always sending my manuscripts

Ambition: To go to Turkey and start

world's worst voice although certain lady friends say it is cute. Play the guitar pretty good, but it stutters after the twenty-third drink."

That's all the information that could be extracted from my fellow newspaper and Radio colleague, some things will have to be taken from the records after

Ernest is probably the most popular reporter in the South with theatrical folk. From the lowest salaried stage hand to the highest priced opera star, he is popular with all alike. His particular pet on the Journal is the amusement section. When the Atlanta grand opera season is on, Mr. Rogers hobnobs with the great stars as with old friends, as indeed many of them are.

Ernest has been wielding a guitar and Ernest has been wielding a guitar and composing ditties since he can remember, but not until Radio came along did he get a chance to make any headway with them. Today his name is synomymous with nationally known and popular tunes, as "Willie the Weeper," his famous dope song; "Mythological Blues"; "My Red-Haired Lady"; "Forgiveness," "Tune in With My Heart," which was recorded by the Okeh Phonograph company; "Sea-Sickness Blues"; "The Dog-Catcher's Daughter," and his latest, "Let Me Be Your Man in the Moon." Your Man in the Moon."

When the Atlanta Journal installed its

broadcasting station, Ernest was introduced for the first time to an aerial audience. He found instant favor and today he is known from coast to coast as one of the most popular Radio personalities in the country.

In addition to filling the role of entertainer before WSB's microphone, Mr.

tainer before WSB's microphone, Mr. Rogers on occasion substitutes as announcer for Lambdin Kay, and uses the title he created for himself, "Old King Tut, the Radio Nut." In this role he is just as popular as in his others.

He conducts a column in the Sunday amusement section called "At the Screen Door," which tells bits of gossip around the local theaters. Another column is called "Folks, Facts and Fables." He is also called upon at all national celebraalso called upon at all national celebrations to compose a poem appropriate to the occasion.

An example of his versatility—Mr.

Rogers recently performed the unusual Rogers recently performed the unusual feat of composing a different song every day for six days. Many times he has begun the creation of a new song a few minutes before facing the "mike" and completed it while in the air.

After Radio placed him so prominently and favorably in the public eye, the Journal reporter-troubadour was sought after by local theater managers and thus employed.

by local theater managers, and thus came about his debut behind the footlights. Two of these stage appearances he filled in partnership with Lambdin Kay, featuring their original interpretation of "Rogers and Kay," sung to the tune of "Gallagher and Shean."

"Gallagher and Shean."

Ernest Rogers is the son of Dr. Wallace Rogers, well-known and beloved Methodist clergyman. Dr. Rogers is presiding elder of the LaGrange district North Georgia Conference Methodist Episcopal church, South. He is nationally known as an amateur photographer, specializing in ornithological studies. He is an ardent Radio enthusiast and keenly interested in all his son's activities.

Ernest, in company with his "brand."

Ernest, in company with his "brandnew, second-hand, seven-year-old guitar," with the 37 notches, frequently is on the air at WSB and before many days will probably have a string of brand-new homemade ditties to add to his collection.

WDAE On Air Again

TAMPA, Fla.—After a three month's silence during the summer months, Station WDAE, owned and operated by the Tampa Daily Times, is again on the air. The station's equipment has been overhauled and put in first-class shape

of the walls and this reflected sound is the one the listeners may hear through the broadcasting stations.

"Then he works his way back to the roof opening and hopes that he will not have to venture out there again until after the broadcasting has finished. But a stiff wind may suddenly develop, water congeals and the microphones become caked with ice. Out he crawls again, careful not to become entangled in the lines connecting the microphone. It may be pitch dark, above street lights and beneath lowering storm clouds. He carries blankets and other pieces of cloth which are to be draped over the microphone in a way to protect it from the swirling wind and at the same time not to obscure the sounds of the bells. He finds the place snaps on a pocket flash lamp, works with a screw driver, his fingers numb with cold, loosens the dead microphone and replaces it with a new one and then crawls back over the treacherous slope to his place of security. This process may have to be repeated several times in the course of a program."

Only a few days ago all the newspapers carried the story of how one of these operators did slip and fall only to catch himself by a fragile finger hold until rescued.

RISK LIVES FOR BELLS companies to broadcast Santa Claus arriving by air and this likely will evolve other thrilling hazards for the transmission operator in the near future.

Incidentally the Park Avenue Baptist church crillon consists of 53 bells, ranging in size from 100 pounds to 18,000 pounds. They are played by levers, similar to the property of the property ilar to piano keys and allow almost as much latitude as a piano. Both the bass and treble parts are played and it is possible to play runs up and down the scale in two or three octaves with all the sharps and flats. They were made in Europe for John D. Rockefeller in honor

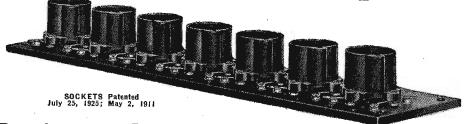
of his mother.

Anton Brees, the laureate of the Ant-Anton Brees, the laureate of the Antwerp cathedral, carilloneur, is the artist who plays the bells. He performs as an athlete, shutting himself into the loft and working the keys while dressed in the scanty costume of a track runner. The bells, because of their size are divided into three levels of the tower, the heavy bells below, small bells next and the middle-sized bells at the top.

6,561 Wires in This Cable

LONDON, Eng.—Among the outstanding features of the government's new high-power station at Rugby is a cable of remarkable construction which forms part of a variable inductance in the highpower radio frequency circuits. This cable contains 6,561 wires, each separately Broadcasting from airplanes has been successfully accomplished for the general public both from New York and Chicago. It was planned by one of the eastern with all the wires in parallel.

for easier building and better operation



Benjamin Cle-Ra-Tone Gang Sockets Shelf Type

A MOST desirable innovation in set building. Gives more compact construction, with ample room on and under the shelf for accessory parts. Made of black polished Bakelite in a number of combinations of sockets for almost any type of circuit, with holes drilled for binding posts and space for markers. Possesses all the wonderful features of the famous Shock Absorbing Cle-Ra-Tone Socket, balanced on four delicately adjusted springs, which improves reception by eliminating tube noises and preventing outside vibrations from being transmitted into microphonic disturbances.



SPRING SUSPENDED SHOCK ABSORBING

Patented July 25, 1925; May 2, 1911 Cle-Ra-Tone Socket for Separate Mounting



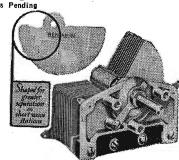
Patented July 25, 1925; May 2, 1911
Push Type Cle-Ra-Tone
Socket
For the new UX Push Type
Radio Tubes. Not used in
Gang Mounting



Shelf Brackets For use, in pairs, with Benjamin Gang Sockets For use

Maximum Range Condenser

First of all, a wonderfully well built condenser. The shape of the rotor blades eliminates bunching of stations on any part of the dial. Makes tuning easier and separates sharply over the entire broadcast range. Each user can adjust the turning tension to suit his personal wishes by means of a bearing adjustment disc, without throwing rotor blades out of alignment. Finished in dull silver. In three sizes: 13 plate for .00025 Mfd.; 17 plate for .00035 Mfd.; 25 plate for .0005 Mfd. Drilling template furnished with each condenser.



Double Amplification Tuned Radio Frequency Transformers

Built on the vital principle of space winding and maximum degree of air insulation. These coils show truly marvelous results and will positively cut through powerful local stations and bring in clear, strong signals from extreme distances. Careful tests show practically double amplification, compared with other coils, with greater range in tuning and improved tonal fidelity. Range Condensers, they have double most recoller signature. Range Condensers, the most popular circuits.



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BENJAMIN ELECTRIC MFG. CO.

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ADVANCE PROGRAMS FOR THE WEEK

Saturday, December 12

Headliners Today

Headliners Today

Eastern Central Mountain Pacific Pacific St.15 p. m. 7:15 p. m. 6:15 p. m. 5:15 p. m. 5:1

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

Eastern Time Stations

Eastern Time Stations
CNRO, Ottawa. Can. (435), 7:30 p. m.. Uncle Dick;
8, Chateau Laurier concert orchestra; 9, instrumental
trio; Gordon Moffat, violinist; Lillian Sharp, violinist; Hazel Jacques, planist; Elsie Gleave Howe,
contraito; G. D. Parely, soprano; instrumental quartet; Chateau Laurier dunce orchestra.
KDKA, Pittsburgh, Pa. (309.1), 7:15-8 a. m., exercises,
O. Shannon; 6:30 p. m., dinner concert, Westinghouse
band, T. J. Vastine, conductor; 9:30, concort, Westinghouse band, T. J. Vastine, conductor; West Leechburgh male quartet.
WAFD, Port Huron,
Mich. (275), 9-11 p. m., studio
program; 11:30-2 a. m., musical program, Addison
hotel.

program; 11:30-2 a. lu., musicas pros-ma, hotel.

WBBR, New York, N. Y. (272.6), 8 p. m., Dr. Hans, Haag, violinist; 8:10, L. Marton Brown, soprano; 8:20, Bible questions and answers, Judge Rutherford; 8:40, L. Marton Brown, soprano; 8:50, Dr. Hans Haag, violinist.

violinist.

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

WGAE, eithsburgh, Pa. (461.3), 3 p. m., music, Admie theater; 6:30, dinner 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), 6:45-7:20 a. m.,
Tower health exercises; 4-5 p. m., Norman Strutt and his Four Towers orchestra; 6-7, dinner music, Waldorf-Astoria; 7-7:10, William J. Fagan, barltone; 7:10-7:25, Hazel Grupte, planist; 7:25-7:35, William J. Fagan, barltone; 7:35-8:05, Walter Scott, violinist, accompanist, Mrs. Sara Wider; 8:05-8:15, talk, Angelo Patri; 8:15-8:30, Walter Scott, violinist; 8:39-10:15, concert, Yale Glee club; 10:15-10:30, Eugene Lepique, planist; 10:30-11:30, Fforida string trio and the Radio Dream Girl; 11:30-12, Vincent Lopez and his orchestra.

Lepique, planist; 10:30-11:30, Florida string trio and the Radio Dream Girl; 11:30-12, Vincent Lopez and his orchestra.

WFI, Philadelphia, Pa. (394.5), 1 p. m., Strawbridge and Clothier tea room ensemble; 3, musical program; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra; 8, program; 6:30, Rew York, N. Y. (315.6), 10-10:10 a. m., timely talks with Terese; 10:10-10:40, Cousin Eleanor and her Kiddie club program; 10:30-10:30, Lillian Mendetz, dramatic recitations; 10:50-11, Mme. Hall Deane, fashion talk; 1:30-1:35, m., Scripture reading; 1:33-2, Getreude Seidenman, planist; 2-3, Montclair Senators dance orchestra; 3:10-3:20, Ethel McKay, soprano; 6-6:30, Uncle Geelee; 6:30-7, Vincent Sorey's concert trio; 7-7:10, Arthur Murray, ballroom dance instruction; 7:10-7:10, Florence Loftus, soprano; 7:20-7:30, Jack Miller, violinist, Mildred Von Vliet, planist; 7:30-7:45, Judith Roth trio; 7:45-8, Robert Sherwood, tenor; 8:30-9, Tut Ankh Amen, Rene Landauer; 9-9:20, Elsa Hoehn and Ilsa Sherwood, duets; 9:20-10:30, Warner's theater program; 10:30-1:130, Arrowhead Inn orchestra.

WGCP, New York, N. Y. (252), 1:30 p. m., Mirror race

gram; 10:30-11:30, Arrowhead Inn orchestra.

WGCP, New York, N. Y. (252), 1:30 p. m., Mirror race
results half hourly; 3-3:15, Henry Rogers, planist;
3:15-3:45, John Landers and his Royal Aces; 3:45-4,
20th Century entertainers; 4-4:15, Johanna Cohen,
ukulele soloist; 4:15-4:30, Rust and Heinchsen, banioists; 4:30-5, stadio program.

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

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program.
WGY, Schenectady, N. Y. (379.5), 7:45 p. m., Brldge lesson, number 3; 9:30, dance program, Reed Hamaker's Hotel Van Curler 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.
WIP, Philadelphia, Pa. (508.2), 6:45, 7 a. m., setting-qup exercises, Dr. Francois D'Eliscu; 10:30, special reducing exercises; 1 p. m., organ recital, Germantown theater; 3, Dal Ruch and his Arcadians; 6:05, dinner music, Benjamin Franklin concert orchestra; W. Irving Oppenheim, director; 7, Uncle Why's bedtime story; 8, sports corner, Dr. Francois D'Eliscu; 8:15, "Thinking with Children," James Struthers; 8:30, concert, Eastern State Penitentiary.
WJAR, Providence, R. I. (305.9), 1:05 p. m., studio program.

WIAR. Providence, R. 1. (303.9), 1.00 p. m., security program.

WIR. Detroit, Mich. (517), 7 p. m., Jean Goldkette's Pettite symphony orchestra and soloists; 9, Jean Goldkette's serenadeks; soloists; 10, Jean Gofdkette's Victor Recording orchestra; 11:30, The Merry Old Chief with The Jewett Jesters.

WIZ. New York, N. Y. (454.3), 1 p. m., Irwin Abrains' KIZ. New York, N. Y. (454.3), 1 p. m., Irwin Abrains' Stotnick, banioists; 4:15. Nickels trio; 4:30. Hotel Lorraine orchestra; 7, Bernard Levitow's Hotel Commodore dinner concert; 8, Radio Novel, Cosmo Hamilton; 8:15. Liederkranz Society coveert; 10:30, Paul Specht's Moulin Rouge orchestra, volume orchestra; 12:30, Aradia cafe concert orchestra; 2, Aradia cafe concert orchestra; 4:30, Coll's stduic entertainers; 7:30, Benjamin Franklin hotel concert orchestra.

entertainers; 1.00, Decignation orchestra; 1.00, Decignation orchestra; 2.30-8:30 p. m., dance program, Royal Dellwood orchestra; 8:30-9, musical program; 9-10, program, Sunrise Point Development company.

WMCA, New York, N. Y. (340.7), 6-7 p. m., Olcott Vall and his Hotel McAlpin string ensemble; 7-8, The Amphions; 8-8-15, current events; 8:15-8:30, Catherine Harvey, soprano; 5:30-10:30, Chats Hotel McAlpln chestra; 11-12, Ernie Golden and his Hotel McAlpln

stra. Newark, N. J. (405.2), 3:15-4 p. m., Zit's to orchestra; 6:15-6:17, words often mispronounced; 7:15, Jacque Jacobs ensemble; 7:15-7:30, Bill ey, sport talk; 7:30-8:30, Van's Collegians; 11-12,

Ciro's orchestra.

WPG, Atlantic City, N. J. (299.8), 1:30 p. m., musle,
Hotel Morton, J. Leonard Lewis, director; 6:45, Arthur
Scott Brock, organist; 7, Hotel Ambassador dinner
music; 8, Kitty Mitchell's Irlsh sunshine; 8:20, banquet, New Jersey Association of Real Eslate Boards;
Roxy and his gang; Ambassador hotel; 10, Nick
Nichols' dance orchestra.

WRC. Washington, D. C. (468.5), 12 moon, organ recliat;
1 p. m., Hamilton hotel orchestra; 7, Hamilton hotel
orchestra; 7, Hotel Washington orchestra; 7:55, Zoological talk; 8:10, Bible talk; 8:30, aunounced; 10:30,

Crandall's Saturday Nighters; 12-1 a. m., Spanish | Village orchestra.

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

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

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

KLDS, Independence, Mo. (440.9), 8 p. m., classical program, Mrs. Elma Eaton Karr, violinist; Mrs. Margaret Longsdorf Flagg, planist; Amy Winning, organist; Helen E. Smith, soprano; Francis Heyser, tenor; Albert H. Karr, violinist.

KMA, Shenandoah, lowa (252), 11:30-12:30 p. m., rural program; music; "Garden," Earl E. May; "Domestic Science," June Case; 6, Pollyanna stories, Mrs. Nickols; Parnell, Mo., High School program; 9-11, Wm. Howie, organist.



Coo coo! Coo coo! This bright-eyed damsel does not look so but must be, as she is a regular member of the Coo Coo club which meets at WTAM, Cleveland, every Saturday night. Her name is Catherine A. Townley and she plays the piano during

Central Time Stations
KFAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., dinner concert; 8:30-9:30, Schmoller and Mueller muslcal.
KFEQ, Oak, Nebr. (268), 2-3 p. m., Kings Entertainers.

KFEU, Uak, Nebr. (200), 2-5 p. m., Kings Enter-tainers.
KFNF, Shenandoah, lowa (266), 7 p. m., concert, old tlme fiddling, St. Joseph, Mo. M. P. Elder, director. KFVE, University City, Mo. (240), 8:30 p. m., "Amuse-ment Review," Romaine Fielding; dance numbers; Gene Witacker's orchestra; comedy and jazz.

KPRC, Houston, Texas (296.9), 12:30 p. m., public health talk, Dr. A. H. Flickwir: 7:30, bible class, Rev. Claud L. Jones; 8, Frank Tilton, blind planist, 11, midnight entertainment.

midnight entertainment.
 KSD. St. Louis, Mo. (545.1), 7 p. m., Grand Central theater, orchestra; 8:30, St. Louis symphony orchestra concert.
 KTHS, Hot Springs, National Park, Ark, (374.8), 9-9:15 p. m., comedy program, "Come Ai" Reynolds, and Mrs. Sam Stone; 9:15-9:20, bedside story, the

High Lights of the Week

UMOROUS songs of 1850, peculiar songs of North Carolina mountaineers and Christmas carols will be sung by the famous Yale glee club, Saturday, at WEAF, New York. Marsnall Bartholomew, director of this organization collected the mountaineer songs during his vacation this summer. The program begins at 8:30 p. m. eastern time. The Golden Echo quartet will sing negro spirituals at WSM this same evening.

Sunday is a holiday, so why not travel with the "Hot Springs Radio Train" frolic of KTHS and go wherever Benny Ford and his orchestra lead the way. The Atwater Kent artists entertaining this week from WEAF and chain are Hulda Lashanska, lyric soprano, and Vincente Ballester, baritone, of the Metropolitan Opera company.

New Zealand artists may be heard Zealand broadcasters are still seeking reception here. Hamilton Hodges, bass, and Clifford Kemp, planist, are the two artists who will entertain so far from their native home at WBZ, Springfield. Jack Little may be found at WHO.

The Minneapolis Municipal chorus takes to the air Tuesday evening at 9 p. m. central time at WCCO. Han-

tion WBAL, Baltimore, makes to the Christmas season. The choir singing this familiar oratorio is from the Mt. Vernon Methodist Episcopal church and is directed by David S. Melamet.

Music by a thirty-piece saxophone band; a talk by Benjamin F. Stapleton, mayor of Denver; a one-act play by the famous KOA players, and dance music are only a few of the special features scheduled to entice every one to accept his invitation to tune in on KOA's first birthday party, Wednesday.

The Arrarat Temple Shrine serenaders gave a concert from WHB some time ago. This happy-go-lucky quintet plays a variety of peculiar instruments in such a unique manner that this station has been flooded with demands for their return. Tune in Thursday for the return engage-ment. The dramatic event of the "The Delinquents" at KGO, Thursday evening between the hours of 8 and 10 p. m., pacific time. This play includes a large cast of twelve

Friday one may choose the English drama, "The Mother Woman," at WGY, Schenectady, the light opera at WEBH, Chicago, or the Morning Glory club at WLIT, Philadelphia, and be sure of an enjoyable evening.

Medical Intelligence bureau; 9:20-10:30, dance concert, New Arlington hotel orchestra.

KYW, Chicago, III. (335.4), 8:30-7 a. m., exercises; 11:35, table talk, Anna Peterson; 1 p. m., concert, Commonwealth Edison company; 1-2, lunchoon concert; Joska DeBarbary and his orchestra; Coon Sanders Original Nighthawks; 6:10-6:40, musical concert, Commonwealth Edison company; 6:40-7, bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:30-8:30, Home Lover's hour; 8:30-11, Congress classic; 11-1 a. m., Congress carnival; 1-2, Insomnia club, Coon Sanders Original Nighthawks.

WAMD, Minneapolis, Minn. (243.8), 12 noon, studio program; 7:05 p. m., popular program; 11, Skyrocket

program; 7:05 p. m., popular program; 11, Skyrocket frolic.

WBBM, Chicago, 111. (225), 4-6 p. m., Harry Soanik, Sandy Meck, Valentino Inn orchestra; Court Banks, Johnny Black, Russel Myers; 9:30-11, Moultin Rouge orchestra; William E. Anderson, Sy Berg, Fred Jacobson; 11-2. Sunset male quartet, Nelson and Olson, Four Red Pepers; Harry Sosnik, Sandy Meck, Phillip Nilles, Vorris Worthley, Russell Duke, Moultin Rouge orchestra.

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

WCOO, Minneapolis-St. Paul, Minn. (416.4), 10:45 a. m., Gold Medal Flour home sevice talk, Betty Crocker.

"court jester."

WCCO, Minneapolis-St. Paul, Minn, (416.4), 10:45 a. m.,
Gold Medal Flour home service talk, Betty Crocker,
Gold Medal girls' club; 12:30 p. m., Golden Pheasant
concert orchestra; 2:30, concert; 6:15, Bliey's St. Paul
hotel concert orchestra; 8, Firestde Philosophies, Rev.
Boy L. Smith; 8:15, musical program; 10:05, Arnold
Frank's St. Paul hotel dance orchestra.

Frank's St. Paul hotel dance orchestra.

WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m.,
Star's string trio; 6-7, School of the Air; address,
Roger W. Babson; organ music; Trianon ensemble;
11:45-1 a. m., Nighthawk frolic; Plantution Players;
Billy Adair's and Orville Knapp's Kansas City club
orchestra; Earl Coleman's orchestra; Eddle Kuhn's
Kansas City Athletic club orchestra.

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

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Alex

Wayne Myers; Kay Ronayne.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Alex
Hughes, pianist; 3:30-4, Tom Fowler, Nat McKown,
stringed duet; 6:30-7:30, Don Bestor's orchestra; 8:309:30, the Treble Clef club, nusical and instrumental
artists; 11-12 midnight, the Adoiphus hotel orchestra,
Jack Gardner, director.

WGES, Oak Park, Ill. (250), 5-7 p. m., Marge Van,
organist; Ruth Kalthoff, mezzo-soprano; John Stanford, tenor; playlet, Miles Sullivan players; 8-9,
Doc Berendson and his Tiffin theater orchestra; Paola
Corado, baritone; Ellen Maurleo, planist; Remington
Welsh, organist; 11-1 a. m., the Coyne Serenaders
orchestra; Remington Welsh, organist; Sandy McTavish, Scotch comedian; Eddie Adams, the girl with
the uke; Rose Sweney and Loretta Clusman.

WHAD, Milwaukee, Wis. (275), 12 a. m., Andy Hertel,
planist; children's story, Faye McBeath; Margaret
Cunningham, child planist; Willard Kaleibe, tenor,
banjoist.

WHAS, Louisville, Ky, (399.8), 4-5 p. m., special musical selections, Harry Currie, director; Lorraine Decker, pianist; readings; Martha Pope, reader; 7:30-9, concert, Barney Rapp and hia orchestra; Miss Hassfurther, planist.

9, concert, Barney Rapp and hia orchestra; Miss Hassfurther, planist.

WHT, Chicago, III. (399.8), 10 a. m., Jean Syent's woman's club, Jelke Good Luck Girl; 11, special studio features; 12 m. Al Carney's organ hour; 1-2 p. m., special studio features; 6, final football scores, classical program, dinner organ redtal, Grayling's string trio; Eleanon Laplan, Fiolinist; Estell Stanley, soprano; Antoinette Bennett; W. A. Dyckman, bartione; Florence White Rush, soprano; 7:45-9:15 (238), nusical features; 9:30 (390.8), Jelke entertainers, Kitchen Klenzer Klassics, Harry Langdon, harmonica; Marie Wright, soprano; the Golden trio, Oscar Heather, tonor; Al Carney, organist; Badger Four male quartet; Clark Hawalian trio, Vic Fredericks, bartione; frenc Beasley, "The Girl from Dixle"; Marguerite Mortis, The Girl from Georgia"; Jacobson, humorist; 12, Pat Barnes and Al Carney.

W180, Chicago, III. (226), 2-4 p. m., shut-in program;

Pat Barnes and Al Carney.

WIBO, Chicago, III. (226), 2-4 p. m., shut-in program;

Jack Sprat and the Carl Sulzer orchestra; Ted Fiorito,

piano; Victor Young and Dan Russo, violinists; Verron,

Hayes, saxaphonist; 6-8, Walter Preston, request night;

Eugene Wallenius, tenor; Frances Schieb, soprano;

Ruth Buhi Flick, reader; old fashioned trio; male

quartet.

WIJD, Mooseheart, III. (302.8), 10 p. m., Robert
Duphiney; Rosemary Hughes; Marle Winters; Log Cabin
orchestra; 12 midnight; Jack Nelson; George Sparks;
Jack Mason; Fayette Miller; Court Banks; Dick Vail;
Log Cabin orchestra.

Log Cabin orchestra,

WKRC, Cincinnati, Ohio (422.3), 10 p. m.. Marion

McKay and his orchestra; 10:30, studio features; 10:45,

Marion McKay and his orchestra.

WLS, Chicago, III. (344.6), 12-12:45 p. m., Junior RFD

Roundup program; "Trapping;" S. T. Keshen; 7,

Iullaby time, Ford and Glenn; 7:15, Corphuskers,

regular Saturday night barn dance; 11-12, Joe Bren's

minatral show.

with the shows, to ohie (422.3), 7 p. m., U. C. Salt.

Mad Pepper boys, Raynold West, Gordan Buchanan;
7:20 organ concert, Johanna Grosse; 7:40, Seckatany,
Hawkins; 8, special concort, Band from the Otter-

Hawkins; 8, special concert, Danu from the Otterhein home.

WMAQ, Chicago, III. (447.5), 6 p. m., organ, Chicarotheater; 6:30, Hotel LaSalle orchestra; 8, Russer, Pratt and Frederick Daw; 8:30, Radio photologic "The Chicago Plan," Charles Wacker; 9, Chica, theater review, WMBB, Chicago, III. (250), 7-8 p. m., Trianon due, Beatrice Teiler, Preston Graves; 9-11, Trianon orchestra, Dell Lampe, Woodlawm theater orchestra, Earl Smith, popular program; artists.

WMC, Memphis, Tonn. (499.7), 8:30 p. m., Dr. George Towers.

Powers.

WOAW, Omaha, Nebr. (526), 8 p. m., Sandman's visit.
Val McLaughlin; 6:20, Rialto orchestra; 7, speakers.
musical program; sport talk, Ivan Gaddis; 9, program;
10:30, Frank Hodek and his Nightingale orchestra; 11.
Arthur Hays and his organ jubilee; Dr. Applesauce,
announcing.

10:30, Frauk Hodek and his Nightingale orchestra; 11, Arthur Hays and his organ jubilee; Dr. Applesauce, announcing.

WOC. Davenport, lowa (483.6), 5:45-6 p. m., chimes concert; 6:30, Sandman's bedtime stories; 9-10, musical program, Grace Huber-Lohmiller, soprano; Louls Goldis, baritone; Amy Orgatt, soprano; Lillian Murray, accompanist; 11-12, LeClaire hotel dance orchestra; Peter MacArthur, baritone.

WOL. Ames, lowa (278), 12:45 p. m., soil problems, Prof. W. H. Stevenson, Prof. W. H. Stevenson, Wo.K. Homewood, Ill. (217.3), 5-6 p. m., Gus C. Edwards and his orchestra; Capitol theater organ, Howard Will, tener; Bob Mokreis, planist; 10-1, Gus C. Edwards and his orchestra; Husk O'Hare Cocconut Grove orchestra; Capitol theater program; Tierney's Town club orchestra; Fred Wilmer, planist; Harold Morava, tenor; Herman Sinalko, violinist; Harold Morava, tenor; Herman Sinalko, violinist; Harold Morava, tenor; Herman Sinalko, violinist; Harold Coccontralio; Bill Hay, bass; Honolulu Serenadors; George Allen, tenor; Bob Mokreis, planist.

WOQ. Kansas City, Mo. (278), 8-9 p. m., musical program; I0-11, musical healing service.

WORD, Batavia, Ill. (275), 8-10 p. m., Webster hotel orchestra; Webster hotel concert trio, Chicago motor club speaker, Words News digest, director B. Cslllog, WOJ, Chicago, Ill. (447.5), 11-12 m., home economics program, Helen Harrington Downing; "The Work of the Braille Music Club," Mrs. Daisy Isbester; Marjorie Curry, director of the American Art Burcau; character readings, F. E. Ormsby; 3-4 p. m., koffee klatsch; Jerry Sulllvan, percolator; Rose Vanderbosch, soprano and pianist; Hal Lansing, with his demon ukulele; 7-8, concert, Ralph Willlams' (Continued on page 14)

(Continued on page 14)

WSM QUARTET TO SING SPIRITUALS

Saturday, December 12

(Continued from page 13)

(Continued from page 13)
orchestra; Fredrick Mueller, the German tenor; Kane
McDuffee, whistler; Raiph Keim, pianologues; Anne
Keim, mezze-soprano; 10 p. m.-5 a. m., Raiph Williams and his Rainbo Skylarks; Jerry Sullivan, singing; Rose Vanderbosch, soprano and pianist; HalLansing, ukulele; Everett George Opie, dramatic director and character reader; Bert Davis, The Clown
of the Afr; Clarence Thedors, tenor; Rita McFawm
and Mary Bieber, harmony duo; Geo. Thurn, kazoo
and uke; Anita Chellis, comedienne; Joey Stod,
tenor; Eddie Voge, baritone; Brundage and Kracmer,
harmony singers.

tenor; Eddie voge, Baritone; Brundage and Machen, harmony singers.

WSAI, Cincinnati, Ohio (326), 7:45 p. m., the Story lady, Mrs. Ethel Knapp Behrman; 8, Radio chime concert, Robert Badgley; 8:15, the Bicycle Playing Card sextet; 9:15, the Bicycle Playing Card sextet;



Mischievous and a little bit naughty is Jane Novak, above, who sings the latest songs from WCCO, Minneapolis-St. Paul. She is well known as a blues singer in this neighborhood.

She is well known as a blues singer in this neighborhood.

WSB, Atlanta, Ga. (428.3), 8 p. m., Sargeant Ryan and trio; 10:45; concert.

WSM, Nashville, Tenn. (282.8), 6:30-8 p. m., Francis Cralg's orchestra; 7, beddime story; 10-11, concert of spirituals, the Golden Echo quartet.

Mountain Time Stations

(FWA, Ogden, Utah (261), 5-6 p. m., Ogden Radlo Dealers program.

(KFWA, Ogden, Utah (261), 5-6 p. m., Rialto theater musicale; 9, Wurtzbach's orchestra.

Pacific Time Stations

FWB, Hollyweod, Calif. (252), 7:45 p. m., microphone brevities; 8-10, Radlo Doings revels; Bill Blake, tenor; Hollywood string tro; Emma Kimmel, sopranc; 10-11, Warner brothers frolic, direction Charlie Wellman; 11-12, Hollywood Roof dance orchestra.

KGO, Oakland, Calif. (361.2), 7:45, 8:15, 8:30 a. m., health training evereises, Hugh Barrett Dobbs; 11:30-1 p. m., luncheon concert; 4-5:30, concert orchestra, Hotel St. Francis, Vinton LaFerrera, conductor; 8. sport review, Al Santoro; 8:10, Oakland Y. M. C. A. concert orchestra, Edward Leslie, director; Marie Wallman, sporano; Ellen Clark, pianist; "The Signs of the Times," Dr. Edgar Lowther; Edwin Heinsohn, bartione; 10-12, Hotel St. Francis dance program.

KGW, Portland, Oc. (491.5), 12:30-130 p. m., Rose City trio; 6-7, dinner concert; 9-12, dance musle, Mulmomah hotel orchestra.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leghton's Areade cafetria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Annle Hooker, readings; Henrictta Poland and Uncle John; 7:15-7:45. Christmas carols, pupils of Lida Helen Thompson; 8-10, program, Young's Market company; 10-11:30, Don Clark's Billmore hotel dance orchestra; 11:30-2 a. m., Times Tom Cats Frolic ist Birthday Party.

KJR, Seattle, Wash. (384.4), 1-2:30 p. m., Post Intelligencer daily matinee program; "What to Prepare for Tonight's Dinner," Berulce Redington; 8:30-10. L. C. Warner company; 10-11:30, Don Clark's Billmore hotel dance orchestra; 11:30-2 a. m., Filmland Frolickers, direction Chet Boone.

KPO, San Fr

Sunday, December 13

Headliners Today

Headliners Today

Eastern Central Mountain Pacific
8:30 p. m. 7:30 p. m. 6:30 p. m. 5:30 p. m.
WCAU (277.6) Bonwit Teller Light opera company,
9:15 8:15 7:15 6:15
WEAF (491.5), WEEI (384.5), WGR (319), WCAE
(461.3) WCAP (468.5), WJAR (305.9), WTAG
(268), KSD (545), WCO (416.4), WGC
(483.6), WFI (394.5), WSAI (326), Atwater
Kent hour.
9:30 7:30 6:30
WFAA (475.9) Atwater Kent Grand opera program.
10:30 9:30 8:30 7:30
KYW (536) Classical concert.
WMCA (340.7) Daven Radio artists.
11 0 9 8
KTHS (874.8) Hot Springs Radio Train frolic.
12 10 9

VANUEL (250) California Savenadors.

12 16 10 9

KFWB (252) California Serenaders.

KNX (336.9) Caluon Luboviski, violinist.

Sunday, silent night for: CHIC, CKNC, CNRA, CNRC. CNRE, CNRM, CNRO, CNRR, CNRT, CNRV, CNRW,

KFAB, KFAU, KFDJ, KFMQ, KFOA, KFPG, KFVE, KFWA, KLX, KMA, KMTR, KOB, KSAC, KSO, KSQ, KWSC, PWX WAHA, WBAP, WCAU, WCX, WDAF, WGAO, WEBJ, WEBW, WGES, WGOF, WGST, WHAD, WHAS, WHAZ, WJAD, WJAZ, WKAR, WJBL, WJJD, WLIT, WMAQ, WMC, WNYC, WOI, WOK, WOR, WAG, WSAH, WTAM, WTIC.

Eastern Time Stations

Eastern Time Stations

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

WBAL, Balitmore, Md. (375), 6:30-7:30 p. m., twilight concert; WBAL concert orchestra, Gustav Klemm, conductor; Ann Baugher Marks, contralto.

WBBR, New York, N. Y. (272.6), 10 a. m., Watchtower orchestra; 10:20, L. Marion Brown, soprano; 10:30, Bible lecture, Judge Rutherford; 11, L. Marion Brown, soprano; 11:10, Watchtower orchestra; 9 p. m., I. B. S. A. choral singers; 9:10, violin duets, Prof. Charles Rohner, Carl Park; 9:20, Bible lecture, Judge Rutherford; 9:50, I. B. S. A. choral singers; 10:20, violin duets.

WBZ, Springfield, Mass. (933.1), 10:50 a. m., church services, Trinity church; 7 p. m., dinner concert, Copley Plaza orchestra, W. Edward Boyle, director; 8, Ford Hall Forum meeting; "The Man's Place in the Home," F. B. Gilbreth.

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

Kent.

WCAU, Philadelphia, Pa. (277.6), 5.20 p. m., Tabor male quartet; 5.25, undenominational, church service, Rev. John W. Stockwell; 5.45, "The Book of the Wise Men," Rev. John W. Stockwell; 5.55, recital; 6.05, "Getting Ready for Christmas." Rev. John W. Stockwell; 6.30, Clarence Scamau's orchestra; 7.30, Cathay concert orchestra; 8.30, Bonwit Teller Light opera company; 9, Potash and Perlmutter.

Irene Downing, below, gives the pleasing organ recitals Wednesday noons at WLW, Cincinnati. Note the Crosley pup watching her.

string ensemble; 10:30-11:30, Daven Radio artists.

WPG, Atlantic City, N. J. (299.8), 3:15 p. m., Arthur
Scott Brook, organist; Howard Clemons, tenor; 4:15,
program, St. James' Episcopal church, Rev. Wm.
Blatchford, rector; Wm. Stansfield, organist and choir
director; 9 Hotel Ambassador concert orchestra, Harry
Loventhal director; 10, Arthur Scott Brook, organist;
Mrs. Fred Plum, sopranc; Dr. B. Bertram Fenlmore,
bartione; Alice Warren Sachse, pianist.

WREO, Lansing, Mich. (285.5), 10 a. m., chimes, Belfty
Plymouth Congregational church; 10:30, First Baptist
church; 7, Central M. E. church.

WTAG, Worcester, Mass. (268), 3:45-5:30 p. m., men's
conference, Y. M. C. A.; 7:20-9:15, Major Edward
Bowes and Capitol Family; 9:15-10:15, Atwater Kent
Radio hour program, Hulda Lashanska, American lyric
soprano; Vincente Ballester, Spanish baritone.

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

Central Time Stations

Central Time Stations

Central Time Stations

KFAB, Lincoln, Nebr. (340.7), 4-5 p. m., vesper service, sermon and musle.

KFDM, Beaumont, Texas (315.6), 11-12 a. m., religious services.

KFEQ, Oak, Nebr. (268), 4:30-6 p. m., service, M. E. church, Franklin, Nebr.; 9-10:30, Kings Entertainers.

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

KFNF, Shenandoah, Iowa (266), 10:45 a. m., services, first M. E. church; 2:30 p. m., Golden Rule song service; 6:30, services, Golden Rule circle; 7:30, Christian church services, Golden Rule circle; 7:30, KFUO. St. Louis, Mo. (545.1), 4 p. m., "I Am the Good Shepherd," Rev. R. Jesse; 9:15, "The Messlah Comes."

Good Shepherd," Rev. R. Jesse; 9:15, "The Messlah Comes."

KLDS, Independence, Mo. (440.9), 11 a. m., Stone church service, sermon, Pres. Elbett A. Smith; 6:30 p. m., vesper service, Mrs. Glaud Smith, bass; Kenneth Morford, bass; Milford Nace, barttone horn soloist; Minnie Scott Dobson, pianist; sermonette, Ralph W. Farrell; 9, Walnut Park orchestra; Orlando Nace, director; Helen Bootman, soprano; Nace Family trilo; Della Nace, pianist; Minide Nace, director; Helen Bootman, soprano; Nace Family trilo; Della Nace, pianist; Miford Nace, cellist; Orlando Nace, violinist; Mrs. Luella Wight, contralto; sermon, Pres. Frederick M. Smith.

KMA, Shenandaah, lowa (252), 4-8 p. m., vesper service; musle; talk; G. H. Van Houten.

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

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., Radio service, Greater New York Federation of churches; 3:45-5:30, men's conference in the Bedford Brand Y. M. C. A. also through WEEI, WTAG, WCAE, WSAI; 7:20-9:15, musical program, Major Edward Bowes and the Capitol Family, Capitol thealer; WEEI, WCAP, WJAR, WTAG, WWJ, WCAE, KSD; 9:15-10:15, Atwater Kent Radio hour; Huida Lashanska, soprano; Vincente Ballester, WEEI, WCAP, WJAR, WGAE, KSD, WSAI, WTAG, WWJ, WOC, WCCO, WOO.

WEI, Boston, Mass. (348,6), 10:50 a. m., services, Old South church; 2:30 p. m., Chamber of Commerce organ recital; 3:45, Dr. S. Parkes Cadman; 7:20, Major Bowes and his Capitol theater family, WEAF; 9:15, Auxder-Kent hour, WEAF

WFI, Philadelphia, Pa. (395), 10:20 a. m., services, Arch Street Methodist Episcopal church, Rev. Harbod Nichols, D.D.; 4:30 p. m., chapel service; "Ready for the Coming of Christ," Rev. Ivan Murray Rose; quartet.

WGBS, New York, N. Y. (315.6), 3:30-4:30 p. m., WGCP, New York, N. Y. (315.6), 3:30-4:30 p. m., Warner's theater program.

WGCP, New York, N. Y. (352), 8-8:15 p. m., Charlotte Frystmann, planist and elecutionist; 9:45-10, Dicks Ukulelectub; 10-10:15, Isabelle Henderson, soprano; 10:15-10:30, Leslie McLeod, Irish tenor; 10:30-11, studio program; 11-12, Strickland's orchestra; 12-1 a. m., Richman entertainers.

WGR, Buffalo, N. Y. (319), 3 p. m., vesper service, Buffalo council of churches; 7:45, Central Presbyterian church service; 9:15, jonitly with WEAF, Atwater Kent program, Hulda Lashanska, American lyric soprano; Vincente Ballester, Spanish baritone of the Metropolitan Opera.

WGY, Schenestady, N. Y. (379.5), 10:30 a. m., services, First Lutheran church; Rev. Herbert D. Schmer, pastor;

Opera.

(GY, Scheneetady, N. Y. (379.5), 10:30 a. m., services, First Lutheran church; Rev. Herbert D. Shimer, pastor; 12:30 p. m., symphony orchestra, Rivoli theater; Dr. Hugo Riesenteld, conductor; W3Z; 5, organ rectal, Dr. Frank Sill Rogers; 7, Carillon program, Park Avenue Baptist church, WJZ; 7:30, services, First Lutheran church; 9, WJZ studio program; 10, Godfrey Ludlow, violinist, WJZ.

Hugo Riesenfeld, conductor; WJz, 5. organ recttal, Dr. Frank Sill Rogers; 7. Carillon program, Park Avenue Baptist church. WJz, 7:30, services, First Lutheran church; 9. WJz Studio program; 10, Godfrey Ludlow, violinist, WJz.

WHAR, Atlantic City, N. J. (275), 10:45 a. m., services; 2:15 p. m., Seaside hotel trio; 2:45, sermon; 7:50, Cheisea Baptist church; 9, Seaside hotel orecertices. Silland Radio Hotel oreceptions tra; 11:15, Strand theater organ recital.

WHN, New York, N. Y. (361-2), 1-1:30 p. m., Lexington organ recital; 2-3, Queens Country Christian Endeavor program; 3-4:30, Catvary Baptist church services; 5-5:30, Roseland dance orchestra; 7:30-10, Calvary Baptist church services; 10:45-11:15, Janssen's Hofbrau orchestra; 12-12:30 a. m., Club Richman entertainers.

WIP. Philadelphia, Pa. (508.2), 10:45 a. m., morning services, Holy Trinity church; Rev. Floyd W. Tomkins, rector; "The Inexcusable Lie." Harold R. Peat. WJAR, Previdence, R. I. (305.9), 7:20 p. m., Major Bows and the Capitol Family; 9:15, Atwater Kent Radio hour.

WLIT, Philadelphia, Pa. (308.2), 10:45 a. m., morning house and the Capitol Family; 9:15, Atwater Kent Radio hour.

WLIT, Philadelphia, Pa. (308.2), 10:45 a. m., morning house of the content or orchestra; 6:30, organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 7:30-8:30 organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 7:30-8:30 organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 7:30-8:30 organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 7:30-8:30 organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 6:30, organ recital, Ben Franklinhotcl; 7, Benjamin Franklin hotel orchestra; 7:30-8:30 p. m., Resense-Hughes orchestra.

WHOA, New York, N. Y. (340.77), 11-12 m., services, Fourth Day Adventist church, Dr. Robert J. Bryant, pastor; WGA, New York, N. Y. (340.77), 11-12 m., services; 7-30-8-30, Rudio Program for the kiddles; 11:15, shepherd time for the kiddles; 11:15, shepherd time church; 9, WJZ studio program; 10, Godfrey Ludlow, violinist, WJZ.

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

WHN, New York, N. Y. (361.2), 1-1:30 p. m., Lexington organ recital; 2-3, Queens Country Christian Endeavor program; 3-4:30, Calvary Baptist church services; 10:45:11:15, Janssen's Hofbrau orchestra; 12:12:30 a. m., Club Richman entertainers. WIP. Philadelphia, Pa. (508.2), 10:45 a. m., morning services; 10:45:11:15, Janssen's Hofbrau orchestra; 12:12:30 a. m., Club Richman entertainers. WIP. Philadelphia, Pa. (508.2), 10:45 a. m., morning services, 10:47 in the inexusable Lie. Harold R. Peat. WJAR, Providence, R. I. (305.9), 7:20 p. m., Major Bowes and the Capitol Family; 9:15, Atwater Kent Radio hour.

WLIT, Philadelphia, Pa. (385), 2:30 p. m. Argada orchestra; 2-10.

KTHS, Hot Springs, National Park, Ark. (374.8), 9-9:45 p. m., "classical hour," Meyer-Davis orchestra, Lon Chassy, directing: 9:45-10, organ recital, Lawson Reid; 10-11:30, Hot Springs Radio Train frolic, Benny Fords

9:45 p. m., "classical hour," Meyer-Davis orchestra, Lon Chassy, directing: 9:45-10, organ recital, Lawson Reid; 10-11:30, Hot Springs Radio Train frolic, Benny Ford's orchestra.

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

WAMD, Minneapolis, Minn. (243.8), 7:95 p. m., Radio Stock company; 9:30, Gayle Wood Harmony Hurricane, WBBM, Chicago, Ill. (226), 12:30-2 p. m. classical program; Wm. P. Zimmer, tenor; Harold Morava, lyric tenor; Kantor A., Kritz, Sandy Meek, Harry Sosilk; Edna Wheeler Ballard, harpist, little Carnso and the Moulin Rouge operatic quartet; 4-6, Ziegler sisters; Jack Garcia, Havalian gaitar; Harold Anderson, accordionist, Havalian gaitar; Harold Anne, barlione; Christian Grimm, accompanist; Phillip Nilles, tenor; string tho; Marie Morgott, harpist, Moulin Rouge orchestra; Law Rouge, Christian Grimm, accompanist; Moulin Rouge orchestra.

WEGA, Chicago, Ill. (266), 10:30-12 m., morning service, People's Liberat church; talk, Rev. Rufus A. White; 4-5 p. m., Dain & Son classical hour; Velma Cook, soprano; Oriental quartet; male harmony group; Robert Stronach, pipe organist; 7:45-9:15, evening service, Thoburn M. E. church, 40-piece Thoburn semi-symphony orchestra; S0-voice choir, special vocal solusits; speaker.

WGGO, Minneapolis-St. Paul, Minn. (416.4), 11 a. m., Plymouth Congregational church, Minneapolis, Rev. WGGO, Minneapolis, St. Paul, H. C. Swearingen, D. D., pastor; S:15, Atwater Kent propram, WEAF, Hulda Lashanska, American lyric soprano; Vicemte Rollester, Spanish baritone of the Metropolitan opera.

e. Chicago, III. (370.2), 10:40 a. m., Seventh h of Christ Scientist; 5-6 p. m., twilight musi-7-9, artists program.
Beliot, Wis. (263), 4:30 p. m., College vespcr

1:30, aerial girls program; 1:45, Radio rangers, boys' program; 2, Radio caporteur; 2:95, missionary program; 2:15, fellowship program; 2:50, afternoon services, Chicago Gospel tabernacle; 5:30, vespec concert; 5:45, Young women's council; 6:30, concert tabernacle band and choir, sermon, Paul Rader; 9:30, request program; 10:30, back home hour.

WIBO, Chicago, Ill. (226), 2-4 p. m., concert; Ted Florito, Victor Young, Dan Russo; 6-8, Walter Preston, sacred songs; Fred Nobel, cornetist, Earl Raymond Bigslow, R. G. Ball, Raymond Barker, Helen Snyder; 10, program, Hamilton Club of Chicago, WKRC, Cincinnati, Ohio (422.3), 6:45 p. m., songs and service; Walmut Hills Christian church, Dr. J. J. Castleberry, pastor; 10, classical program, WLS, Chicago, Ill. (344.6), 6 p. m., prelude; 7-7:55, WIS Little Brown church in the vale; choir; Ralph Emerson, organist; WLS trio.

WLW, Gincinnati, Ohio (422.3), 9:30 a. m., school, editorial staff, Sunday School Publications, Methodist Book concern; 11, morning worship, Seventh Presbyterian church, Jesse Halsey, minister; 7:30 p. m., services, First Presbyterian church, Dr. Frederlck Mc-Millau, pastor; 8:30, concert program, H. and S. Pogue company, Walter Esberger, director.

WMBE, Chicago, Ill. (250), 3-5 p. m., Trianon orchestra; Woodlawn theater orchestra; Bob Bennett, Earl Smith, Walter Duffy, James T. Carney; 7:40-9, Fifth Church of Christ Scientist; 9-11, Trianon orchestra, Woodlawn theater orchestra; F. T. Carney, Preston Graves, Earl Smith, Billie Allen Hoff, Scotty Welch and Madison sisters.

WMC, Memphis, Tenn. (499.7), 11 a. m., services, Earl Smith, Billie Allen Hoff, Scotty Welch and Madison sisters.

WMC, Memphis, Tenn. (499.7), 11 a. m., services, First Presbyterian church, Rev. P. D. Hill, pastor; 7:45, services, Central Christian church, Rev. Hugh McLellan, pastor; Services, Work, Memorial Lutheran church, Rev. R. Brown; Stanley Jan Letovsky, pianist; 6. p. m., Elble study period, Mrs. Carl Gray, director; 9. chapel service, Kountze Memorial Lutheran church, Co.

hymns, sacred songs, I. B. S. A. choral singers; 9.15. bible lecture, G. A. Hall; 3:40, Margaret Riedhauser, planist.

Wos, Jefferson City, Mo. (440.9), 9:30 a. m., religious services, Christian church, sermon, Rev. Haushalter, pastor; 7:30, First Presbyterian church.

Wgl. Chicago, Ill. (447.5), 9:30-11:30 a. m., services, People's church, Dr. Preston Bradley, officiating, choir; Clarence Eddy, organist; 3-4 p. m., program, Irving Park Lutheran church ehoir; Miss Helen Smith, sopranc; Harry T. Carlson, director; Mrs. M. Lundberg, pianist; 8-10, concert, Ralph Williams orchestra; Maria Dneprova, Russian soprano; Sheppard Levine, tenor; Helen Reed, accompanist; Madeline Ruff, pianist; stringed trio, Louis Perlman, violinist; Oscar LaPedus, cellist; John Zwick, pianist; Josear Carlson, celoratura soprano; Hernan Techentine, bartione; Helen Holman, soprano.

WSAI. Chrinnati, Ohio (326), 245-430 p. m., address, Dr. S. Parkes Cadman, pastor, Central Congregational church, N. Y. City; music, Gloria Trumpeters; 7:45. WSAI Radio chime concert, Robert Badgley; 8, sermonette, Press Radio Bible service, inc.; 8:15-9:15, Atwater Kent Radio hour; Hulda Lasharska, lyric soprano; Vincente Ballester, Spanish baritione; 9:15, Union Central Life Insurance company orchestra, Sigmund Clup, director; Daniel Beddos, tenor.

WSB, Atlanta, Ga. (428.3), 5 p. m., services, First Methodist church.

KOA. Denver, Colo. (322.4), 11 a. m., services, St. John's Episcopal cathedral; 3 p. m., Clarence Reyn-

Her remark-abie voice has given Mary Cornelia Ma-Cornelia Malone, soprano, a national reputation. Between her concert tours she will give recitals twice a month at WSM, Nashville, her home city.



olds, organist; 7:30, service, St. John's Episcopal cathedral.

Pacific Time Stations

olds, organist; 7:30, service, St. John's Episcopal cathedral.

Pacific Time Stations

KFWB, Hellywood, Calif. (252), 9-11 p. m., late news, Warner brothers movie frolic with California serenaders, California Blue Boys, Jack Kurtz, whistling planist; Albert Keglovich, violin, surprise visitors from the movie studios.

KGO, Oakland, Calif. (361.2), 11 a. m., services, First Unitarian church, Rev. C. S. Dutton, minister; 3:30 p. m., concert, KGO, Little symphony orchestra, Carl Rhodebamel, conductor; Mrs. Mark Sbwayder, contraito; 8, services, First Unitarian church, Rev. Dutton.

KHI, Los Angeles, Calif. (405.2), 4-5 p. m., musicale, Western Auto Supply company; 6:30-7, Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 7-7:30, First Methodist Episcopal church; 8-10, program, Martin Music company; 5:30-7, Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 7-7:30, First Methodist Episcopal church; 8-10, program, Martin Music company; John Martin, concert pianist; Ruth Pitts, soprano.

KNX, Hollywood, Calif. (336.9), 2-4 p. m., broadcast to nine city parks, L. A. Park board; 7-8, First Presbyterian church of Hollywood; 8-9, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 9-10:30, program, Beverly Hills nurseries, Calmon Lubovishi, master violinist; Raquel Nicto, coloratura soprano.

KPO, San Francisco, Calif. (428.3), 9:45-10:45 a. m., Undenominational and non-sectarian church service; "God Save American Homes," Dr. J. C. Reid; Clyde Diddle, bass; organ music, Uda Waldrop; 5-6 p. m., Marshall W. Giselman, organist; 6-6:30, Waldemar Lind and the States Restaurant orchestra; 6:35-7:30, Palace hotel concert orchestra, Cyrus Trobbe, director; 8:30-10, Rudy Seiger's Pairmont hotel orchestra.

KPA, Oakland, Calif. (420.3), 9:45-10:45 a. m., Pro-

chestra.

KTAB, Oakland, Calif. (240), 9:45-10:45 a. m., Professor E. G. Linsley, bible lecture; 11-12:30 p. m., church service; 7:45-9, church service; 9:30-11, after-concert wash. (305.9), 1-2 p. m., Henri Damski's concert whosh. (305.9), 1-2 p. m., Henri Damski's concert brickstra; 3-4, Charmed Land trio; 7:50-9:10, First Church of Christ Scientist; 9:10-10:10, International Bible Students' association.

(Continued on page 15)

MUNICIPAL CHORUS MEETS AT WCCO

Monday, December 14

	Headlin	ers Tod	ay '
	Central 7 p. m.	Mountain 6 p. m.	
WJAR (305) Double pi: .9) Coles Sr	appy Six.	
WHO (526)	7:30 Jack Little.	6:30	5:30
	Amherst Ch		6 6:30
WBZ (333.1	8:30 New Zealar	7:30 nd artists. R	0:30
	9 .8) Old Fav .6) Ivanhoe	orites night	
10:15	9:15 3) Galen tric	8:15	7:15
10:30	9:30 'Pagliacci	8:30	7:30
	Vaudeville.	9	8 .
	9.5) Interna	tional and	Transcontinental

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

Eastern Time Stations

Eastern Time Stations

CKNC, Toronto, Can. (357), 8 p. m., Toronto Conservatory of Music instrumental trio; Frank Blackford, volulinist; Leo Smith, cellist; Alberto Guerrero, planist; Verdl mixed vocal quartet; Madeline Bell, soprano; Ella McQuillan, contralto; Lawrence DeFoe, tenor; Edgar Smith, bass; Arthur Blight, baritone. WAFD, Port Huren, Mich. (275), 9-10 p. m., studio program; 10-12, musical program, Addison hotel. WAHG, New York, N. Y. (315.6), 12-1 p. m., musical program; 7:30-7:45, Hon. Maurice E. Connelly; 7:45-8:15, Synchrophase trio; 8:15-8:30, Harriet Youngs, soprano; 8:30-9, Rialto club orchestra; 9-9:10, Radio Santa Claus; 9:10-9:40, Synchrophase trio; 9:40-9:55, Harriet Youngs, soprano; 9:35-10, Horace J. Taylor, dramatic recitations; 10-10:15, Joe Zimmerman's orchestra; 10:15-12, Midnight dance orchestra.

WBAL, Balitmore, Md. (375), 6:45-7:45 p. m., dinner music, Robert Lula, conductor; 8-9, musical program; William G. Horn, baritone; Eleanor Chase Horn, soprano; Esther Love Polvogt, planist; 9, talk, Folger McKinsey; 9:10-10, Antonio Lanasa, tenor; Alma Mctcalf, violinist; Sol Sax; Frederick Gottlieb, futilst. WBBR, New York, N. Y. (272.6), 8 p. m., Jubilee entertainers; 8:10, world news digest; 8:20, Jubilee entertainers; 8:30, "The Harp of God;" 8:40, Jubilee entertainers; 8:30, "The Harp of God;" 8:40, Jubilee entertainers; 8:30, Springfield, Mass. (333.1), 6:30 p. m., Little

enterlainers, enterlainers, enterlainers, enterlainers.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., Little symphony orchestra; KDKA; 7:05, Psychology serles, Abraham Myerson; 7:30, Capitol theater orchestra; 8:30, organ recital, Rene Dagenais; 9, Aleppo drum corps or shriners' band; 9:30, concert, New Zealand artists; Hamilton Hodges, basso cantante; Clifford Kemp, planist; 10:05, Leo Reisman's Hotel Brunswick orchestra.

tra. WCAE, Pittsburgh, Pa. (416.3), 10:45 a. m., Gold Medal talk; 12:30 p. m., program for the day; 3, program from Loew's Aldine theater; 6:30, dinner concert, William Penn hotel; 7:30, Santa Claus; 8, Nixon orchestra; 9, studio eoneert, Blue Rambler orchestra; 10, grand opera; 11, program from Loew's Aldine theater. WCAII philadelphia Pa. (777.6), 20 m. Polladelphia

theater.

WCAU, Philadelphia, Pa. (277.6), 8 p. m., Radio talk, Wilson Durham; 8:15, Carolyn Thomas, soprano; Elmer Glasgow, bass-baritone; Ella Jaquette Kratz, planist; 9:10, Nokol man; 9:30, Delaware County serenaders; 10, Tom Houst, James Loughrey and Don Travalinc, popular songsters; 10:30, Parodians, WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel; 8, studio program.



Trombones may look dif-ficult to play to most people but not to Sal-vatore Julian, left, who wields his trombone in all sorts of un-usual capers usual capers at KTHS, Hot Springs Na-tional Park.

WEAF, New York, N. Y. (491.5), 6:45-7:20 a. m., Tower health exercises, through WEEI and WCAP; 10:45-11:05, Betty Crocker Gold Medal Flour Home service talk; 11:05-11:15, music; 11:15-11:30, talk; 11:30-12, lecture, ausplees of Teachers college of Columbia university; 4-4:15 p. m., Hazel A. Dudley, soprano; accompanist, Winifred T. Barr; 4:15-5, lecture, Prof. Rollo Walter; 6-7, dinner music. Waldorf-Astoria; 7-7:15, The Radio Dream Girl; 7:15-7:30, Adam Carroll, planist; 7:30-7:45, George O'Brien, tenor; 7-45-8, Clark and Silvornail, entertainers, through WOO; 8-8:15, Hans Barth, planist, also through WOO; 8-8:15, Hans Barth, planist, also through WOO; 8-8:15, Barr, also through WOO; 8:45-9, Tower health talk, also through WOO; 8:45-9, Tower health talk, also through WOO; WCAP; 9-10, music, A. and P. Gypsies, WEEI, WCAP, WVI, WVAR, WOO, WSAI; 10-11, Grand opera, WOO, WCAE, WJAR, WCAP, WTAG; 11-12, Ben Bernie and his Roosevel orchestra.

WEAO, Columbus, Ohio (293.9), 1:15 p. m., "Timoly Economic Information for the Farmer," C. J. West. WEI, Beston Mass. (348.6), 8:45 a. m., health exercises: 10:45, home service talk; 2, p. m., Happy Hawkins and his orchestra; 8:45, Big Brothers cllub; 7:30, E. B. Rideout, meteorologist; 7:45, Santa Claus; 8:15, "Business Education," 8:25, announced; 8:45, health, talk, WEAF; 0, WEAF, 4, and P. Gypsies; 10. Scotty Holmes and his orchestra; Imperial Marimba band.

WFI Philadelphia, Pa. (395), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (195), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philadelphia, Pa. (295), 10:30 a. m., solos; 10:40, WFI Philade

Scotty Holmes and his orchestra; Imperial Marimba band.
Wfl Philadelphia, Pa. (395), 10:30 a. m., solos; 10:40, home service talk, Betty Crocker; 1 p. m., Strawbridge and Clothier tea room ensemble, direction of Harold Micklin; 3, "The Oceon City Seashore Home for Bables;" Loretta Kerk, planist; 3:45, Eleanor Gunn fashion feature; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra. WGBS, New York, N. Y. (315.6), 6-8:30 p. m., Uncle Geebee; 6:30-7:30, Premier club orchestra. WGCP, New York, N. Y. (252), 1:30 p. m., Mirror race results half hourly; 3-3:15, Eva Rothenberg, planologue; 3:15-3:30, Perdiet on Moore; 3:30-4, studio program; 4-4:15, Jack Davis, songs; 4:15-4:30, Shritey Herman, songs; 4:30-5, Uncle Robert and his pals; 6-6:15, Littmann's orchestra; 6:15-6:30, Daddy Dingle and his Jingle machine; 6:30-7, Littmann's orchestra. 7-7:15, Ora Welsh, planist; 7:15-7:30, Wohn and Tracey; 7:30-7:50, Charles Phillips, planist; 7:50-8, Inspirational talk to boys; 8-8:30, Charles Schwartz or-

chestra; 8:30-8:45, Perry Broadford entertainers; 8:459, Gertrude Guarente, pianist; 9-9:30, orchestra; 9:3010, Bob Ward and three little Wards; 10-11, Stricklands orchestra; 11-11:30, Conries orchestha; 11:30-12,
Murphy entertainers.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's
afternoon program; 6:30, Clef Dwellers orchestra; 9,
Amherst choral club; 10, popular program, directed by
George Phelps; 11-1 a. m., Vincent Lopez Hotel Statler
dance orchestra, Harold Gleser, director.

WGY, Schenectady, N. Y. (379,5), 2 p. m., Asia Restaurant orchestra; 2:30, musle; household talks, cooking
lesson, Jessie B. Lane; "Accessories in Dress," Dora
Wetherhee; 6:30, dinner program, Reed Hamaker's
Hotel Van Curler orchestra; 7, WGY agricultural program, 7:45, Georgine T. A. Lasher, contraito; Estelle
Rogers, soprano; Mildred Hall, planist; E. Arthur
Hannay, tenor; Ollle Yettru, accompanist; "Literary
Appreciation Series," William L. Widdemer.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside
hotel trio; 7:30, fashion review; 8, Seaside hotel trio,
WHAZ, Troy, N. Y. (379,5), 9 p. m. concert, vocal
pupils of Professor A. Y. Cornell; 9:30, address,
Professor Grant K. Palsgrove; 11, International and
transcontinental program, Rensselaer Polytechnic Insitute studens' orchestra.

WHN, New York, N. Y. (361.2), 6-6:15 p. m., Littmann's dinner music; 6:15-6:30, Daddy Dingle and bls
Jingle box; 6:30-7, Mailboro state trio; 7-7:30, Joe
Ward's Swanee entertainers; 7:30-8, Storage battery
talk, H. B. Shontz; 8-8:05, Roseland dance orchestra;
8:05-8:30, Guardian entertainers; 7:30-11, standing by;
11-11:30, Cotton elub orchestra: 11:30-12, Silver Slipper orchestra; 12-12:30 a. m., Ted Lewis and his
orchestra.

WIP, Philadelphia, Pa. (508.2), 7 a. m., setting-up
exercises, Dr. Francois D'Eliscu: 1 p. m., lumcheon

orchestra.

WIP. Philadelphia, Pa. (508.2), 7 a. m., setting-up exercises, Dr. Francois D'Eliscu; 1 p. m., luncheon music, Gimbel Toa Room orchestra; 3, Fuhrman School of Music; 6:05, Benjamin Franklin orchestra; 7, Uncle Wip's bedtime story, dancing lesson.

WJAR, Providence, R. 1. (305.9), 10 a. m., housewives Radlo exchange; 1:05 p. m., studio program; 8, Coles Snappy Six; 9, A. and P. Gypsles; 10, WEAF grand opera company.

WIR, Ponfiae, Mich. (512), 7 p. m., Jean Goldkette's

opera company.

WJR, Pontiae, Mich. (517), 7 p. m., Jean Goldkette's
Petite symphony orchestra; soloists; 7:45, Goodwill
Oakland, Richards Oakland company; 9, Paige Six
and Jewett Six, Paige-Detroit Motor Car company;
11:30, the Merry Old Chief with the Jewett Jesters.

KSD, St. Louis, Mo. (545.1), 7 p. m., "Fur Hour;" Olivia Williams, Hilda Medatry, planists. KSO, Clarinda, lowa (242), 7-9 p. m., miscellaneous old

KSO, Clarinda, Iowa (242), 7-9 p. m., miscellaneous old time music.
KTHS, Hot Springs National Park, Ark. (374.8), 9-10, old favorites night, Meyer-Davis ensemble; 10-11, Rainbow Garden.
KYW. Chicago, Ill. (536), 6:30 a. m., momning exercises; 7:30, morning family worshlp; 11:15, "Who Needs Spareribs," John C. Cutting; 11:35, table talk, Mrs. Anna J. Peterson; 12:05 p. m., noon-day concert, Commonwealth Edison company; 1, luncheon concert, Commonwealth Edison company; 1, Suncheon concert, Commonwealth Edison company; 1, Suncheon concert, Commonwealth Edison company; 1, Suncheon concert, Commonwealth Edison concert, Osborn's Hotol Radisson orchestra; 7:05, classical program; 11, Skyrocket froile.
WBBM, Chicago, Ill. (226), 4-6 p. m., Valentino lnn orchestra; Sandy Meek, Harry Sosnik; Irene Beasly; Jack Pennywell and Freddy Palmiter, Court Banks; Joe McManus; Edna Wbeeler Ballard, harpist; 6-7, Harold Anderson, accordion; Kristine Gallen, cellist; Mribach, tenor; Ziegler sisters; Two Jays; WBBM string trlo; Moulin Rouge orchestra; Sieburg and Mowers, planists.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 9:30 a.

string trlo; Moulin Rouge occuesta, Mowers, pianists.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 9:30 a.

m., program for day; 10:45. "Gold Medal Christmas
m., program for day; 10:45. "Gold Medal Christmas
Presents," Betty Crocker; 12 m., concert, Donaldson's
orchestra; 2 p. m., woman's hour; 4, readers' club,
Mrs. Walter Stevens; 5:30, children's hour; 6:30,
concert, Gordon Cooke ensemble; 7:45. "Swine Raising;" 8, University of Minnesota program; 9, classial concert.

cal concert.

WDAF, Kansas City, Mo. (356.6), 10:45 a. m., Betty
Crocker, home service talk; 6-7, school of the air.
dlalect readings, C. M. Ragon; the Tell-Me-a-Story
lady; Trianon ensemble; 8-9, varied program; "Ten
Minutes with the Poets," Beryl Turley; 9-10, Ivanhoe band, Walter A. French, director; Ivanhoe glee

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Ben Stad, below, is the director of the WIP Little symphony orchestra whose Sunday concerts are so well liked at WIP, Philadelphia.

WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., Radio schoel, lectures on History, English, Sociology.

WLIT, Philadelphia, Pa. (385), 12:02 p. m., organ recital, Stanley theater; 12:30, Ben Franklin hotel concert orchestra; 2, Arcadia cafe concert orchestra, talk, Rev. A. Spooner; 4:30, magazine corner; 7:30, Dream Daddy; 8, short agro-waves, Charles P. Shofiner; 8:15, current events, George E. Raiguel; 9, Stanley theater hour; 10, Arcadia cafe dance orchestra; 10:30, vaudeville; 10:45, Ben Franklin hotel dance orchestra.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Otcott Vail and his Hotel McAlpin string ensemble; 6:30-7:30, Ernie Golden and his Hotel McAlpin orchestra; 7:30-7:45, Luclla Burns, soprano; 7:45-8, Dorothy Elydenburgh, planist; 8-8:45, Knickerbocker Family circle; 8:15-9, Barclay Radio program; 8:45-9, Lecture on Christian Science; 10:30-10:45, Jack Cohen, planist, WOR, Newark, N. J., (405.2), 3:46-4 p. m., Charm Magazine talk; 6:15-6:17, words often mispronounced; 6:17-7:15, Jacques Jacobs ensemble; 7:15-7:30, Bill Wathey, sport talk; 7:30-8:30, Ciro's orchestra; 8:30-9:30, Al Reld's hour; 9:30-9:45, Edward H. Bletstadt, talk; 10:15-10:30, Ballin and Raco, piano duel; 10:30-11:30, Archle Slater's Palais D'Or orchestra; 11:30-12, New Hofbrau Haus orchestra.

WFG, Atlantic City, N. J. (299.8), 4:30, p. m., afternoon tea music, Chalfonte-Haddon Hall; 6:45, Arthur Scott Brock, organist; 7, Hotel Morton trio dinner music, J. Leonard Lewis, director; 8, children's hour; 8:45, studio program; 9, Hotel Traymore enocent orchestra; 11:30-12, New Hofbrau Haus orchestra.

WTAG, Worcester, Mass. (268), 10:30 a. m., musical selections; 10:45, talk, Sherer staff nurser, Marjorie Woodman; 12:05-2 p. m., WTAG orchestra; 7, science talk, Fred D. Aldrieh; 8-10, Robin Hood orchestra; 10-11 grand opera, WEAF.

WTAG, Horton and Geology; Prof. William North Rice. WJ, Detroit, Mich. Genn. (475.9), 6:30 p. m., dinner music, Emil Heimberger's Hotel Bond trio; 7:45. "Crottestra; 6, dinner concert; 8, News orchestra and sol

Central Time Stations

Central 1 me Stations

(FAB, Lincoln, Nebr. (340.7), 5:30-6:30 p. m., Buick
Little sympbony; Belshaw's orchestra; 8:30-10:30, combell boys, violin and gultar; Jack Marshall, ragtime
kid; Ed Ellingson, songbird; Gloomy Gus, pianist and
vocalist: Belshaw's orchestra.

(FEQ. Oak, Nebr. (268), 2-3 p. m., Kings Enter-

tailors.

K MQ Fayetteville, Ark. (299.8), 7:30 p. m., farmers' night, "Tarm Filosofy," Cy Adams; "Making Hens Lay in Winter," Mrs. Ida Fenton; "Making Hens Lay in Winter," Mrs. Take Fenton; "Blow Your Own Stumps with Pyrotol," W. I. Ezell; "Making Christmas Candy," Emma Jobnson.

K NF, Shenandoah, lowa (260), 7 p. m., concert, Henry

Stumps with Pyrotol," W. I. Ezell; "Making Christmas Candy," Emma Jobnson.

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

KFUO, St. Louis, Mo. (545.1), 8 p. m., "The Frankincense of Prayer," Rev. E. Roschke.

KFVE, University City, Mo. (240), 8:30 p. m., Amusement Review, Romaine Fielding; concert, Brunswick-Balke-Collender company; Orchestra Romaine.

KMA, Shenandoah, Iowa (252), 11:30 a. m., 12:30 p. m., rural program; "Garden, Flower and Orchard," Earl E. May; music; travelogue, G. H. Van Houten; musical saw, J. A. Showers, 6; Pollyanna storles, Mrs. Nickols; Ciyde Hatch, retailers program; 9, Grady and Doc, How. do you do boys; Farnham trio.

club, Edward H. Gill, director; Julian Amelung, accompanist; 11:45-1 a. m., nighthawk frolic; Carl Nordberg's Plantation players; Ted Meyn, organist; Eddle Kuhn's orchestra; Earl Coleman's orchestra; Eddle Kuhn's orchestra; Earl Coleman's orchestra; Eddle Kuhn's orchestra; Earl Coleman's orchestra; Eddle Merchant Carlon, organist; Divol theater; 7-8, Hotel Patten orchestra; 8:15, special features.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., Lindsay Stephens, baritone; Leland Johnson, pianist; 6:30-7:30 p. m., Artic Collins' orchestra; 8:30-9:30, Sears-Roebuck Agricultural Foundation program.

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

WHAS, Coulsville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; fashion talk, Peggy True; editortal treadlings.

readings.

WHO, Des Moines, Iowa (526), 7:30-9 p. m., Jack Little, popular entertainer; Mrs. Perey Potter, soprano; Lenore Mudge, accompanist; Alex Lindblom, violinist; T. C. Thompson, planist; 11-12, Corn Sugar dance contest.

Lenore MUGGE, accompanist; Alex Lindblom, violinist; T. C. Thompson, pianist; 11-12, Corn Sugar danee orchestra.

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

WIBO, Chicago, Ill. (226), 2-4 p. m., shut-in program; Jack Sprat and the Carl Sulzer orchestra; Ted Fiorito, pianist; Victor Young, Dan Russo, violinists; Vernon Hayes, saxophonist; "Home Economics," Grace Viall Gray.

Hayes, saxophonist; "Home Economics," Grace Viall Gray.

WIBL, Decatur, III. (270), 9:30-11 p. m., Lee Homebrook's dance orchestra.

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

dours.

WLS, Chieago, III. (344.6), 12 m., W. L. S. trio; 6-7. blue ribbon concert.

WLW, Cineimati, 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 m., service, conducted by Rev. George H. Kase; 4 p. m., children's musical hour, pupils of Conservatory of Music; 4:45. "Mental Evolution." M. V. Whitacre, psychologist; 6, Santa Claus and his helpers; 6:45, "The Eyes Have 1t." Dr. C. H. Kaufman, 7. dinner hour concert, Hotel Gibson, Robert Visconti, director; 7:30, fifth in a series of basket ball talks, G. A. Richardson, "Offense, Passing and Shooting;" 7:40, Hotel Gibson concert; 10, The Cinclinati. Times Star concert, William J. Kopp, director.

WMAQ, Chicago, III. (447.5), 12:45 p. m., Radio farm school; 2, shut-ins program; 4, mothers in council; 4:30, "Folbles of the Moment," Mrs. Graham Aldis; 4:45, Glenn Dillard Gunn School of Music; 5, children's games, Glenn Adams; 5:15, topsy-turvy time; 6, Chicago theater organ recital; 6:30, Hotel LaSalle orchestra; 6:40, Family Altar league.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Harry Kohn.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program. WLS, Chicago, III. (344.6), 12 m., W. L. S. trio; 6-7.

grain.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., farm school; Hog day, "lodine Feeding is Good Insurance," Prof. John M. Evvard; 3-3:30, home management schedule, Aunt Jane; 5:45-6, chimes concert. WOS, Jefferson City, Mo. (440.9), 8 p. m., musical program, Conservatory of Music and Expression, Christian

gram, Conservatory of Music and Expression, Christian college.

WQJ, Chicago, III. (447.5), 11-12 m., home economics program, Helen Harrington Downing; "The Care of Dairy Products," Will A. Foster; "Etchings," Mrs. A. W. Slaughter; 3-4 p. m., talk, Helen Harrington Downing, director of home economics for the Calumet Baking Powder company; "Christmas Salads," Jean K. Rich; Rev. Fred J. Harrison, book review.

WSAI, Cincinnati, Ohio (326), 8-9 p. m., A. and P. Gypsics, New York; 9-10, Grand opera company, direction of Cesare Sodero; 10-12 midnight, Cincinnatic community program.



New York, where competition between artists is very strong, has recognized the undoubted ability of Carrie Cohen, above, as a planist. She takes to the ether from WEBJ.

WSB, Atlanta, Ga. (428.3), 8 p. m., Mt. Zion church program; 10:45, Vick Meyers orchestra.
WSOE, Milwaukee, Wis. (246), 2 p. m., cooking chats, Prudence Penny; 5:30, twilight hour, Aunt Happy; Laurine Ladwig, soprano; Elmer Ihrke, pianist; 6:48, "Hog Raising," F. B. Hansen; 9, "Send a Candygram" frolie, Alexander and his Briar Cliff orchestra; E. R. Erving, bartione; Van Buren's Hawaiians; Loraine Hug, pianist; Charles Bennett, blind accompanist; Maurice Kipen, violinist.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 8 p. m., Dean Bros. of Deans Muslc house; 10, concert, direction of Gladys Webb Foster; 11:30, special test program.

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

Dealers program.

KFXF, Colorado Springs, Colo. (259), 8:30 p. m., musl-cal selections; 8:35-9, educational series of talks, Mrs.

L. A. Miller; 9-10:30, dance program, Warner Stone's "Columbians."

A. Miller; 9-10:30, dance program, Warner Stone's "Columbians."
 KOA, Denver, Colo. (322.4), 12:15 p. m. musical, Rialto theater; 6:30, concert, Brown Palace string orclestra, Howard Tillotson, director; 7:30, sandman's hour, H. G. Knight, director; 8. "Conversational Spanish," Professor Amanda Lopez Knecht; "Pagliacci," opera; 10, dance program, George Morrison's colored orchestra.
 KOB, State College, N. M. (348.6), 7:30-8:30 p. m., "Farm Accounting," Mr. Haughter; "Suggestions for Christmas Presents," Edith Whitehurst.

"Tarm Accounting," Mr. Haughter; "Suggestions for Christmas Presents," Edith Whitehurst.

Pacific Time Stations

KFDJ, Corvallis, Ore. (282.5), 8 p. m., musical selections; 8:15, "Bordeaux Paint to Prevent Heart Rot," S. M. Zeller; 8:20, "The Land Settlement Problem in Oregon," H. D. Scudder; 8:35, musical selections; 8:45, "Pollination of Sweet Cherries and Grafting in Pollenlzers," C. E. Schuster; 9, "Handling Orchard Soils in Irrigated Districts," Clayton L. Long; 9:15-9:45, Christmas vacation plans.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7-8, microphone brevittes; 8-9, program, Globe Ice Cream and Weber Baking companies, Five Little Eskimos, Ray Bailey's trio; Peggy Mathews, blues singer; 9-10, program, Star Motor Car company, Million Dollar Four orchestra, Ray Kellogg and Bill Hatch; 10-11, Warner brothers froile, direction Charlie Wellman; 11-12, Hollywood Roof dance orchestra,

KGO, Oakland, Calif. (381.2), 7:15-7:30, 7:45, 8:15-8:30
a. m., heatth training exerelses; 10:40, vacation period; 11:30-1 p. m., luncheon concert; 3-4, musical program, classle interpretations, Wilda Wilson Church; 5:30-6, Aunt Betty stories, Kiddies' Klub, Ruth Thompson; 6-7, dinner concert, Baldwin Piano company; Knickerbocker trio; 8, educational program; health talk; "Physical Culture for the Family," Hugh Barrett Dobbs; "Chats About New Books," Joseph Jackson; "Better English," Wilda Wilson Church; "What to Give the Children for Christmas," Dr. Albertine Nash; "The Importance of the Spanish Language to the American people," Roberto Cabrera; "Collection and Analysis of Agricultural Data," Alex. Johnson.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and naborbood children; 7:15, Y. M.

Johnson. (MTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Simmons and naborbood children; 7-15, Y. M. C. A. program; 8-10, KMTR concert hour, the Turner orchestra, Loren Powell, director; Tom Mitchell, bari-

orchestra, Loren Powell, director; Tom Mitchell, barltone.

KNX, Hollywood, Calif. (336.9), 5-5:30 p. m., Sunny Jim's talk to children; 5:30-6:15, Wurlitzer pipe organ studio, Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent concert orchestra; 7:7-7:30, Mutual Motors mirth contest; 7:30-8, program, Columbia Outfitting company; 8-9, program, L. W. Stockwell company; 9-10, program, Ward Heating company; 10-11, Goodrich Silverton Cord dance orchestra, Lilyan May Challenger, contralto; 11-12, Ray West's Coccanut Grove dance orchestra, Ambassador hotel.

KPO. San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30, matinee program; banjo, ukulele, guitar solos and duets, Harry H. George and Velma Truett; 5:30-6:15, children's hour, Big Brother; 6:40-7, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-8:45, organ recital, Uda Waldrop; 8:45, "The Business Man's Physical Needs," 9-10, studio program; 10-11 Waldemar Lind and the States Restaurant orchestra.

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

KTAB. Oakland. Calif. (240), 9-9:30 a. m., prayer sorlee, Rev. E. L. Spaulding; 4-5 p. m., women's club notes; 8-9, program, Western States Life Insurance company.

(Continued on page 16)

YALE GLEE CLUB AT WEAF; KOA INV

Index to Popular Concerts

SATURDAY, DECEMBER 12 Eastern Central Mountain Pacific 7:30 p. m. 6:30 p. m. 5:30 p. m. 4:30 p. m. WFAA. 9 WBBM, WEAF, WENR, 7 WGBS, WLS, WMAQ, WNYC. 10 9 KFAB, KPRC, WBBM, WENR, WGN, WLS, WMBB, WREO. KFVE KFWB, KNX, KTHS, WBBM, WMBB, WOK, WQJ, WRC. KNX KOIL, KPO, KPRC, WBBM, WLS, WOAW, WOK, WQJ. i a. m. 12 m. 11 kFWB, WDAF, WBBM, WEBH, WENR, WOK, WQJ, WSAI. 2 I a. m. 12 m. KNX, WBBM, WENR, WQJ. SUNDAY, DECEMBER 13

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

MONDAY, DECEMBER 14 Eastern Central Mountain Pacific Pp. m. 6 p. m. 5 p. m. 4 p. m. WBBM, WFAA, WOAW.

TUESDAY, DECEMBER 15 Eastern Central Mountain Pacific
7 p. m. 6 p. m. 5 p. m. 4 p. m.
WMCA, WOAW. 5 WBBM, WEAR. WBBM, WEAR, WBZ, WSB. WBBM, WMBB, WOAW.

Eastern Central Mountain Pacific The mountain of the mountain of the miles of the miles of the mountain of the WOX, WGJ.

12 m. 11 10 9

KNX, KOIL, KPO, WBBM, WFAA, WKRC, WMC, WOK, WQJ. 1 a. m. 12 m. 11 10 KFWB, KNX, WFAA, WHT, WOAW, WOK, WQJ. 1<u>2</u> m.

WEDNESDAY, DECEMBER 16
Eastern Central Mountain Pacific
8 p. m. 7 p.m. 6 p. m. 5 p. m.
KENF, WAHG, WEBJ, WEEI, WMCA. WBBM, WEBJ, WGCP, WNYC. 10 9 8 7 KFAB, KPRC, WBBM, WGCP, WHO, WMBB. II 10 9 8 KFAB, KFVE, KGW, KPO, KWSC, KYW, WBBM, WHN, WMBB, WOK, WQJ. KFWA, KFWB, KNX, KYW, WOK, WQJ, WSAI. 1 a. m. 12 m. 11 KNX, KYW, WBBM, WHT, WOK, WQJ. EFWB, KNX, WBBM, WOK, WQJ.

THURSDAY, DECEMBER 17
Eastern Central Mountain Pacific Eastern Central Mountain Pacifi.

8 p. m. 7 p. m. 6 p. m. 5 p. m.

WCAE, WEAF, WJAR, WMC, WOC, WSAI. WBBM, WHAD. 10 9 8 7 KMA, WBBM, WEEI, WHAD, WHN, WMBB, WMC, WNYC, WOAW, WSOE. KHJ, KMA, 10 KYW, WBBM, WMBB, WOK, WQJ. WQJ.

12 m. 11

13 m. 11

14 m. 11

15 m. 10

16 m. 10

17 m. 11

18 m. 12 m. 11

19 m. 11

10 m. 12

10 m

FRIDAY, DECEMBER 18
Eastern Central Mountain Pacific
8 p. m. 7 p. m. 6 p. m. 5 p. m.
WGCP, WJR. 8 p. m. yor. p. m. 6 p. m. 5 p. m. 9 woch, wgcp, wls, woc. 10 s. m. 8 kfab, wbbm, wmc, wdaf, whad, wmbb, woaw, wsoe. 11 lo s. kfwb, kfwa, khj, klx, kyw, wmbb, wok, wqj. 12 m. 11 lo s. kfwb, khj, knx, koil. wmc, wok, wqj. 12 m. 13 m. 12 m. 13 m. 12 m. 13 m. 14 m. 15 m. 15 m. 15 m. 16 m. 17 m. 18 m. 1 ton organ recital; 2:15-8:15, Loew's State theater: 3:15-4:30, Lexington orchestra; 6:40-7, talk, Billy B, Van; 7-7:30, Icaland dance orchestra; 7:30-8:30, Will Oakland's Chateau Shanley; 11-12, Caravan club orchestra; 12-12:45, Club Kentucky revue and orchestra. WIP, Philadelphia, Pa. (508.2), 10 a. m., menu, Mrs. Anna B, Scott; 1 p. m., organ recital; 3, Carolyn Schluminger, sopranc; Elizabeth Gear, planist; Babette Gerhab, contralto; Flora Ripka, planist; 6:05, Pagoda cafe orchestra; 7, Uncle Wip; Roll Call; 8, Elliott Lester, dramatic critic of WIP; 8:15, Henry Such, violinist; Beatrice Such, pianist; 9, Shapp instrumental quartet; 10:05, Emo's weekly morie broadcast, Eli M. Orontz; 10:30, Joe Ray and the California Night Hawks.

WJAR, Providence, R. I. (305.9), 1:05 p. m., Providence-Biltmore concert orchestra, Erwin White, director; 7:30, musical program, Florence Vanesse, director; 8, speaker, Providence Safety Council; 8:30, Gold Dust Twins; 9, Eveready hour.

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

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

WLIT, Philadelphia, Pa. (395), 11 a. m., Stanley theater: 12:30, Arcadia cafe concert orchestra; 2, "Household Helps and Hints"; 4:30, talk, Republican Women of Pennsylvania; 7:30, Dream Daddy; 7:50, plays, reviewed, Allyn C. Saurer.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcett Vail and Hotel McAlpin string ensemble; 6:30-7, Jack

plays, reviewed, Allyn C. Saurer.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott
Vail and Hotel MeAlpin string ensemble; 6:30-7, Jack
Wilbur's personalities; 8-9, Pace Institute program;
9-9:30, David Siegel, violinist; 9:30-10, Joyce Meredith, reader; 10:30-11, South American Troubadours;
11-12, Ernie Golden and his Hotel MeAlpin orchestra.

WOR, Newark, N. J. (405.2), 3:15-4 p. m., Fred Koester's Clifford Lodge orchestra; 6:15-6:17, Bill Wathey,
sport talk; 6-17-6:45, Man in moon stories; 6:45-7:30,
Jacque Jacobs Hotel Shelton ensemble.

WPG, Atlantic City, N. J. (299.8), 1:30 p. m., mustc,
Hotel Ambassador; 6:45, Arthur Scott Brook, organist;

Although only five feet tall, Loyal Underwood, above, can sing his "Buil Fighter" song in a very convincing manner. He is known to the listeners of KNK, Hollywood, as Abel Applebutter.

7. Hotel Morton trlo dinner music, J. Leonard Lewis, director; 8. Ethel Rattay Fowler's fashion flashes; 8:15, Cecile Steiner, violinist; Margaret Irwin, pianist; Ida Taylor Boile, contraito; Alice Warren Sachse, planist; 9, Chaifonte-Haddon Hall duni trio; 10, program to be announced; 11, Eddie McKnight's dance orchestra.

WTAG, Worcester, Mass. (268), 10:30 a. m., moust selections; 10:45, talk to mothers, Rosebeile Jacobus; 12:05-2 p. m., WTAG orchestra; 8-8:30, Ross Gorman and his Earl Carroll Vanities orchestra; 9-10, Eveready hour; 10:10:30, your hour; 10:30-11, Vincent Lopez and his orchestra.

WTIC, Hartford, Conn. (475.9), 11 a. m., Housawivee'

and his orchestra.

WTIC, Hartford, Conn. (475.9), 11 a. m., Housewives forum, J. M. Dean; 12:03 p. m., luncheon music: 6:30 Hub Restaurant trio; 7, Thomas McGill, barltone: 8 joint concert, Marchesi Ladles quartet; Colonial quartet; Travelers string quartet; 9:30, organ recital.

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

Central Time Stations
KFAB, Lincoln, Neb. (340.7), 5:30-6:30 p. m., coucert, Monte Mum, Bulck Little syuphony, Belshaws, 3:50-10:30, musical, University of Nebraska.

KFDM, Beaumont, Texas (315.6), 12:25-12:55 p. m. concert, Magnolia Petroleum company's refinery band 7-7:30, children's program; 8-10, Hudgen's Knigh Hawks orchestra; South Park Junior college glee KFEQ, Oak, Nebr. (268), 2-3 p. m., Kings Enter

KFMQ, Fayetteville, Ark. (299.8), 8 p. m., classica music, D. C. Hansard, violinist; Gien Sherman, ac-

FMX, Northfield, Minn. (337), 9:30-10 p. Locke Lawrence, pianist.

KFNF, Shenandoah, lowa (266), 7 p. m., concert. Underwood, Iowa, Albert Bondo, director. KFVE, University City, Mo. (240), 8:30 p. m., amusement review, Romaine Fielding; studio entertainers

ment review, Romaine Fielding; studio entertainers, plano selections.

KLDS, Independence, Mo. (440.9), 8 p. m., lecture course series, Dr. F. M. McDowell; 8:15, concert, Elizabeth Tanner Hitchcock, organist; Mildred Redfield Connoley, accompanist.

KMA, Shenandeah, Iowa (252), 11:30 a. m., -12:30 p. m., rural program; "Garden" Earl E. May; music: 6, May Flower trio; "Flowers," Lina Ferguson; 9, May's mandolin musicians; talk, G. H. Van Houten.

KSD, St. Louis. Mo. (545.1), 6:55 p. m., Good Will program, WEAF. KSO, Clarinda, Iowa (241.8), 7-8:30 p. m., program, vocal, instrumental; 8:30-10, orchestra.

WAMD. Minneapolis, Minn. (243.8), 12 noon, studlo program; organ recital, Jack Malerlok.

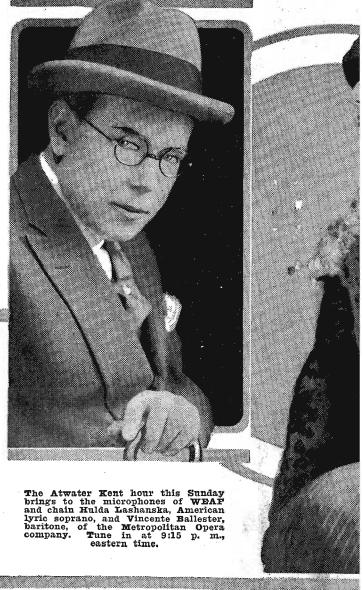
WBBM. Chicago, III. (226), 4-6 p. m., Sandy and Harry; Yalentino Inn orchestra: Arnold Stephenson; Sidney Nierman, pianist; Harold Morava, lyric tenor; Russell Meyers; 8-9, Sandy and Harry; Moulin Rouge orchestra; Phil Flemming, tenor; Jean St. Anne, baritone; Christian A. Grimm, composer-planist; Bob Tork, tenor; 9-10, vocal ensemble; Utilities Craftsmon Glee club; 10-12 midnight, Tip trio; Peter Kules; Four Red Peppers; Ziegler sisters; Moulin Rouge orchestra; Harry Bralisford; Vorris Worthloy, tenor; Marle Morgott, harpist; Burmeister and Flascone, Hawalian guitars; George Marbach; Maurice Silverman; Dave Handler, violinist; Boulin Rouge orchestra; Nick Probst; Jack Walsh.

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. Nelson, tenor; Ann Kelley, so, prano; Pearl Fairchild, planist; 10-12, jazz jamboree, Midway orchestra; Borden Brothers, harmony duo; Ed Dempsoy, tenor; Niesc and Nehr, banjo bimbos; Drexel quartet, vocal group; Marie Wright, soprano; Persel quartet, vocal group; Marie Wright, soprano; Pinney Briggs, column conductor, "Crazy Quilt" column; Marquette banjo four, string quartet; Frank M. McDonald, Radio talk; 12-2 a. m., pirate ship.

H. McDonald, Radio talk; 12-2 a. m., pirate ship.

MCCO, Minneapolis-St. Paul, Minn. (416.4), 9:30 a.
m., program for the day; 12 m., concert, Dick Long's
Dayton trio; 2 p. m., 'The World of Books,' H. A.
Bellows; 4, Readers' Club, Elcanor Pochler; 5:30,
children's hour; 6:15, concert, Dick Long's Nankin
Cafe orchestra; 7:30-3, Gold Dust Twins, WEAF;
8-9, Eveready Hour, WEAF; 9, musical, Minneapolis
municipal chorus, Harry Anderson, director.

WDAF, Kansas City, Mc. (365.6), 3:30-4:30 p. m., The Star's string trio, 6-7, school of the air; address; plano lesson, Maudellen Littlefield; 11:45-1, night-hawk frolie: Plantation players; Barl Coleman's orchestra; Eddic Kuhn's orchestra; Johnnie Cumpbell's



Monday, December 14

(Continued from page 15)

TCL, Seattle, Wash, (305.9), 9:45-10 a. m., Fraser-Paterson department store; 10-10:15, exercise over the air; 10-15-10:30, daily recipes; 7-8 p. m., New Method Laundry and Pantorium Dye Works company orchestra; 8-9, Seattle Police publication, Seattle Police band.

orchestra; 8-9, Seattle Police publication, Seattle Police band.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p m., vocal solos, Paul Christian; Rich Whitman, violinist; Della Crumpacker, pianist; "Refinishing Furniture for a Girl's Room," Gladys Gallup; "The Psychology of Efficiency, No. 2," Dr. F. F. Nalder; "Modern Maintenance Methods for Macadam Roads, No. 2," H. E. Phelps.

Tuesday, December 15

Headliners Today

Eastern Central Mountain Pacific 6:45 p. m. 5:45 p. m. 6:45 p. m. 5:45 p. m. 5:45 p. m. 6:45 p. m. 5:45 p. m. 5:45 p. m. 6:45 p. m. 5:45 p. m. 6:45 Headliners Today

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

Eastern Time Stations

CNRA, Monoton, Can. (291), 7 p. m., juvenilo program, Professor C. M. Wright; 8, studio program, direction of Mr. George Ross: 10, CNRA orchestra WAFD, Port Huron, Mich. (275), 8-10 p. m., Port Huron Boy Scout orchestra; 10-12, musical program, Addison hotel.

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

Zinmerman, planist.

WBAL, Ballmere, Md. (375), 8 p. m., musical program; Handel's 'Messiah,' Mt. Vernon Methodist Episcopat church, David Melamet, director.

WBZ, Springheid, Mass. (333.1), 6:30 p. m., Little symphony orchestra, KDKA; 7:30, Hotel Kimball dance orchestra, Bob Patterson, director; 8. Hockey game, Boston Arena vs. Boston Bruius, WCAE, Pittsburgh, Pa. (461.3), 12:30 p. m., program for the day; 3, program, Loew's Aldlne theator; 4:30, Sunshone Girl; 6:30, concert, William Pean hotel; 7:30, Davis Saxophone octet, WEAF; 8, program from

New York; 8:30, The Gold Dust Twins; 9, the Eveready hour; 10, studio concert; 10:30, Vincent Lopez and his orchestra; 11, Ralph Harrison and his Midnight Sons.

Evereaty hour; 10, studio concert; 10:30, Vincent Lopez and his orchestra; 11, Ralph Harrison and his Midnight Sons.

WCAU, Philadelphia, Pa. (277.6), 7:30 p. m., recital, N. Snelenburg, and company; S. Building and loan talk, F. Baruch; 8:10, Three Brothers; 8:25, Theater Digest, A. Lipschutz; 8:35, National Players; 8:55, Arline Smith, soprano; Sarah Snyder, pianist; 9:20, Robert Fraser, Blind Gospel singer; Elizabeth Holtz, planist; 9:40, popular songs, Harry Link; 10:30, Billy Hayes and his Catbay Tea Garden orchestra.

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

WEAF, New York, N. Y. (491.5), 6:45-7:20 a. m., Tower health exercises; 11:11:10, musical program; 11:10-11:25, lecture, auspices of the Lecture Bureau of the Board of Education; 11:25-11:35, musical program; 11:35-11:35, motion picture forecast, Adele Woodard; 11:35-12 m., musical program; 4-4:30, New York society trio; 6-7, dinner music, Waldorf-Astorla; 7-7:10, William O. Bell, baritone; 7:10-7:30, Columbia university French lecture, Dr. Thatcher Clark; 7:30-8, Davis saxophone octet; 8-8:10, weekly discussion of financial events, Dudley F. Fewler; 8:10-8:30, Ross Gorman and his Earl Carroli Vanlities orchestra; 8:30-9, The Gold Dust Twins; 9-10, Evercady hour; 10-10:30, your hour; 10:30-11, Vincent Lopez and orchestra; 11-12, dance orchestra. WEAO, Columbus, Ohio (293.9), 9 p. m., university orchestra; Earl Hopkins, director.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., university orchestra; Earl Hopkins, director.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Irwin Abrams Knickerbocker Grill orchestra; 7:45-8, Sara Turits, soprano; 8-8:15, talk, G. T. Geer; 8:15-8:30, Hondor Carlos, Prof. Firman E. Bear; 9:15, Ohlo State University orchestra, Earl Hopkins, director.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Irwin Abrams Knickerbocker Grill orchestra; 7:45-8, Sara Turits, soprano; 8-8:15, talk, G. T. Geer; 8:15-8:30, Bodd Dist Twins; 9, Eveready hour; 10, Your hour; 10:30, Vincent Lopez and

hour; 10, Your nour, 10,00, , and orehestra.

/FI, Philadelphia, Pa. (395), 1 p. m., Strawbridge and Clothier tea room ensemble; 3, Josh Saddlers Plantation serenaders, dance orchestra; 6:39, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra; 8, Ross Gorman and his Earl Carroll vanities orchestra; 8:30, the Gold Dust Twins; 9, Eveready hour; 10, your hour; 10:30, Vincent Lopez and his orchestra.

vanities orchestra; 8:30, the Gold Dust Twins; 9, Eveready hour; 10, your hour; 10:30, Vincent Lopez and his orchestra.

WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Unclo Geebee; 6:30-7, Bert Dixon, baritone; 7-8, Arrowhead Inn concert orchestra; 8-8:50, Y. M. H. A. Vocational forum; 8:50-9, Brayton Eddy, talk; 10-10:30, Straub and Lamprecht, guitar duets; 10:30-11:30, Arrowhead Inn dance orchestra.

WGCP, New York N. Y. (252), 1:30 p. m., Mirror race results half hourly; 3-3:15, Ova Weish, pianist; 8:15-3:30, Osborne and Meredith; 3:30-3:45, Isabelle Henderson, soprano; 3:45-4, Ukulele Bob McDonald; 4-4:30, Lesile McLeod, Irish tenor; 4:30-5, Stieger character players.

WGR, Buffale, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30, Vincent Lopez hotel Statel dance orchestra, Harold Gleser, directry; 8-11, jointly with WEAF, including Ross Gorman and his Earl Carroll Vanitles orchestra, Gold Dust Twins, Eveready hour, Your hour, Vincent Lopez and his orchestra from the Casa Lopez, N. Y.

WGY, Schenetady, N. Y. (379.5), 2 p. m., music; "Home Hygiene and Care of the Sick," Anna McGee; 6:30, dinner program, Reed Hamaker's Hotel Van Curler orchestra; 7:30, "Philosophy's Contribution to America," Prof. Harold Larrabee; 7:45, violin recital, Stanley E. Grabowski, Mrs. S. Grabowski, ecompanist; 8:15, organ recital, Elmer Tidmarsh; 9, WGY orchestra.

orchestra.

WHAR, Attantic 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., Lexing-

KTHS, Hot Springs National Park, Ark. (374.8), 9-9:20 p. m., accordion novelties, Joe Kuntz; 9:20-10:15, dance concert, New Arlington hotel orchestra. Lon Chassy, director, Clyde Foley singing.

KYW, Chicago, III. (536), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 12:05 p. m., studio concert, Commonwealth Edison company; 1, luncheon concert, Congress hotel; 6-7, dinner music, KDKA; 7:05-7:35, beddlme story, Uncle Bob; 7:35-7:35, specches, auspices American Farm Bureau federation; address, I. D. Goss; address, Wallace Rogers; 8-9, Congress hotel; 9-10, an hour of music; 10, evening at home; 1 a. m., Insommia club.

WAMD, Minneapolis. Minn. (243.8), 12

WAMD, Minneapolis, Minn. (243.8), 12 noon, studio program; organ recital, Jack Malerick.

WDOD, Chattanooga, Tenn. (256), 9-9:30 p. m., bridge

game.

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

WEBW, Beloit, Wis. (263), 8 p. m., concert hour;
vocal selections; whistling solos; vocal duet; violin
and organ numbers.

wFAA, Dallas, Texas (475.9), 12:30-1 p. m., Beaumont band, KFDM; 6:30-7:30, Don Bestor's orchestra; 8:30-9:33, Southern Methodist university school of music; bridge game; 11-12 midnight, the Foxtrotters, orchestra.

Foxtrottors, orchestra.

WGES, Oak Park, III. (250), 5-7 p. m., Lydia Werner, soprano; Miles Sullivan players, one-act playlet; Stenstrom sisters, vocal duo; Tiffin theater organ and orchestra; 8-9, Heten Frahm, soprano; Tiffin orchestra; 11-1 a. m., Serenaders orchestra; quartet; Remington Welch, organist; Sandy McTavish, Scotch comedian; Erwin Schmidt and his own song; Jack Goodwin, tenor. WHAD, Milwaukee, Wis. (275), 4 p. m., musical selections; 6-6:15, Bill Bennings Milwaukee Athletic club orchestra.

WHAS. Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; 7:30-9, concert. Carl Zoeller's Melodists; Benson trio; thrift tatk, Liberty Insurance bank.

DANCING

Central Time

Safurday, December 12:
S., Wir. Wnyc. Wog:
S:30, Wfaa::S:35, Wgy:
9, Webh, Weet, Wmbb,
Wnyc. Wreo: 9:10, Kths,
Wir. 9:30, Kths, Wgbs,
Wor. Wre: 10, Kfve,
Kfwa, Koa, Kpo, Weaf,
Wgn, Wir. Wkrc, Wmca,
Wnyc, Wor, Wqi, Wreo,
Wtam; 10:95, Wcco:
10:30, Wamd; 10:45,
Wls: 11, Kfvg, Kfwa,
Kfwb, Kpo, Webh, Wfaa,
Wgbu, Who, Woc: 11:30,
Kfoa; 11:45, Wdaf; 12,
Kfwa, Kgo, Kgw, Knx,
Wgbu, Wjdd, Wgbu, Wgbu, Wjar, Wor; 9:15, Wahg;
10, Kths, Wgbu, Wgbu,
Wjar, Wor; 9:15, Wahg;
10, Kths, Wgbu, Wgbu,
Who, Wge, Wgr, Whn;
Who; 11:45, Wdaf; 12,
Knx, Kpo, Wge, Wgr, Whn;
Who; 11:45, Wdaf; 12,
Knx, Kpo, Wge, Wgr, Whn;
Wrothin; 11, Kgw, Koli,
Wgbu, Wgcp, Wgr, Whn
Tuesday, Becember 15:
9, Webh, Wru, Wmbb;
9:30, Wcau, Wgbs, Wgr,
Wgs, Wge, Wgr, Whoh;
11:45, Wdaf; 12,
Knx, Kpo,
Tuesday, Becember 15:
9, Webh, Wru, Wmbb;
9:30, Wcau, Wgbs, Wgy,

Tuesday, December 15:

9. Webh, Wr'u. Wmbb:

9:30, Weau, Wgbs, Wgy,
Wip; 9:35, Wnye; 10.
Kfve, Wbbm. Weaf,
Webh, Wgbu Wgn, Whn.
Wmca, Wnye; 10:15,
Kfhs; 10:30, Kfhs, Whn;
10:45, Wsb; 11, Kgw,
Koll, Wgbu, Whn; 11:30,
Kfoa; 11:45, Wdaf; 12,
Kgw, Khj, Knx, Kpo,
Wdaf; 1, Wgi.
Wednesday, December

Wbb, Whp; 9:30. Wgbs, Wgy, Win; 9:35. Wnyc; 10, Kths, Whm, Waf, Wnyc; 10, Kths, Whn, Wmea, Wpg, Wgh; 10:30, Kths, Whn, Web, Wghu, Whn, Woc; 11:45. Wdaf; 12, Kgo, Khj, Knx, Kpo, Wjjd.

Friday, December 18: Wwi; 9, Wex, Webh, Wgcp, Wmb; 10, Kfve, Kpo, Kths, Weaf, Wgbu, Whn; 10, Kfve, Kpo, Kths, Weaf, Wgbu, Wgcp, Whn, Wgr, Wjar, Wgi; 10:36, Wgcp, Whn; 11, Kfwb, Knx, Kpo, Webh, Wgbu, Wgcp, Wgcp, Who; 11, Kfwb, Knx, Kpo, Webh, Wgbu, Wgcp, Wgcp, Whn; 12, Kfva, Khj, Wgch, Wgch, Wgb, Wgch, Wgch, Who; 12:45, Wdaf; 12, Kfoa, Khj; 12:30, Wdaf.

INVITES FANS TO BIRTHDAY PARTY



Gold Dust Twins, WEAF; 8-9, Eveready hour, WEAF; 9-9-45, "Around the World with B. J. Palmer," travelogue; 9:45-10:45, musical program, Crescent orchestra.

WOK, Chicago, III. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; organ, Capitol theater; Clement Laskowski, tenor; Bob Mokreis, planist; 10 p. m.

1:30 a. m., Gus C. Edwards' orchestra; Husk O'Hare's orchestra; Tierney's Town club orchestra; Capitol theater program; Bill Hay, bass: George Lailen, tenor; Harrlet Lee, contralto; Herman Sinaiko, violini; Bob Mokreis, planist.

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

WORD, Batavia, III. (275), 8 p. m., Webster hotel

MOQ, Kansas City, Mc. (278), 8-9 p. m., Devotional musical program.

WORD, Batavia, III. (275), 8 p. m., Webster hotel concert tric; 8:15, studio recital, Cosmopolitan school of musle; 9, bible questions and answers, B. M. Rice. WQJ, Chicago, III. (447.5), 11-12 m., "Home Economics," Helem Harrington Downing; "How a nomles," Helem Harrington Downing; "How a nomles," Helem Harrington Downing; "Salvan, J. Lillian Russell; "Christmas Salads," Mrs. E. B. Ranson; 3-4 p. m., talk, Helen Harrington Downing; "Rainier National Park," Mrs. Harry T. Sanger; 7-8, concert, Ralph Williams' orchestra; Park, "Mrs. Harry T. Sanger; 7-8, concert, Ralph Williams' orchestra; Loring, Daritone; the Fontella trid, Pegsy Jewett, soprano, Bertha McGrath, soprano; Gresser, Harry Harry Lavina Price, pianist; 10-1 midnight, Ralph, Hendricks, contraito; Lillian Melcher, accompanist; Lavina Price, pianist; 10-1 midnight, Ralph, Harry Eller, Soprano and pianist; Hal Lansing, Ukulele; Excit, Soprano and pianist; Hal Lansing, Ukulele; Excit, George Opie, dramatic director and character caeder; Bert Davis, the clown of the air; McTille, Carder, Bert Davis, the clown of the air; McTille, Carder, Bert Davis, the clown of the air; McTille, Shannabrook, soprano; Hollingsworth and Kraemer; Ha Shannabrook, soprano; Hollingsworth and Kraemer; Ha Shannabrook, soprano; Hollingsworth and Kraemer; Lichelues destroyers; Romo Vincent, boy baritone; other Badio artists to be announced; 1-2, Ralph Williams, the Ginger Man, and the Little Skylaris.

WSAI, Criennati, Ohio (326), 6:30 p. m., the Davis saxophone octet, N. Y. city; 7, Mabley and Carew orchestra, Reuhen Lawson, director; Waldene Johnston, violinist; 8, Eveready hour, N. Y. City; 9-9:30,

History, literature or fiction, whatever your interests, the book chats of WGY, Schenectady, are always well worth listening to. L. L. Hopkins, above, gives these on Thursdays.

Radio auctlon bridge, 9:30, music, WSAI; Austin Brothers: Hawaiian guitarists. WSB, Atlanta, Ga. (428.3), 8 p. m., concert; 10:45, Metropolitan theater artists.

Metropolitan theater artists.

WSOE, Milwaukee, Wis. (246), 5:30 p. m., S. O. S. club
Cousin Howard; Elmer Inrite, planist; 7:30, musical
musings, Miss Mercury; 8:45, philm phancies, Peggy
Patton; 9, classical music, Citadel band, Salvation
army.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 8:15-9:15 p. m., concert, Haydn male quartet, ladies trio.

CNRR, Regina, Can. (476), 8 p. m., studio program, Ted Franklin, baritone; Yera Geddes, violinist.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radlo Dealers program. Freeman Dust Absorber.

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

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

Pacific Time Stations

Pacific Time Stations

Pacific 1 Ime Stations
CNRV, Vaneouver, Can. (291), 7:30 p. m., Aunt Ruby;
8:30, studio program, Mrs. Howie Brydon, Mrs. Louis
Rambert, Mrs. Dora Brand, Mrs. James Hilloat,
10:30. Cabaret Belmont orchestra; Bebe Mullar, so-

prano.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7, talk on health, Dr. W. I. Schuster; 7:15, microphone brevities; 7:30-8, program, Eliner R. Sly company 8-9, program, Paralta Photographic studies; Drove Norton Lindsay, tenor, Paralta String tric; 9-10, program, H. L. Crockett company, Elite tric, Louise Sullivan, soprano, Watts and his ukuleie; 10-11, Warner Brothers frolic, direction Charlie Wellman; 11-12, Hollywood Roof ballroom dance orchestra.

Girection Charlie Weilman; 11-12, Hollywood Root ballroom dance orchestra.

KGO, Oakland, Calif. (361.2), 7.15-7:30 a.m., health
training exercises, Hugh Barrett Dobbs; 7:45. Pep
class; 8:15-8:30, exercises; 11:30-1 p. m., luncheon
concert; 4-5:30, concert orchestra, Hotel St. Francis,
Vinton LaFerrera, conductor; 5:30, "As a Woman
Thinketh, Louise Landd; 6-7, dinner concert,
Baldwin Planc company; Knickerbocker tric; 8, National Carbon company roogram; Antonio defrassi,
violinist; Bessie H. Woods, accompanist; Fanny
Bailey Scott, soprano; Meritanna Towler Denny,
pianist; George Garland, saxophonist; Albert Gillette,
baritone; 9:30, Auction bridge feature; 10-11, Hotel
St. Francis dance music.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade caeterla orchestra, Jack Cronshaw,
leader; 6:30-7:30, history story, Prof. Hortzog; weekly
visit of Queen Titania and Sandman from Fairyland;

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 12 Eastern Central Mountain Pacific
II: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 14

Eastern Central Mountain Pacific 1:15 p. m. 12:15 p. m. 11:15 a. m. 10:15 a. m. WEAO (293.0) Timely Economic Information for the Farmer.

WOC (428.3) Hog Day-Iodine Feeding Is Good Insurance.

1:45 12:45 11:45 WO1 (270) Farm topic. 7 WGY (379.5) Agricultural program 7:45 6:45 5:45 KFMQ (299.8) Farmers' night. WSOE (246) Hog Raising. 8:45 7:45 6:45 WCCO (416.4) Swine Raising, lesson II. 9:30 8:30 7:30 KOB (348.6) Farm accounting. 11:10 10:10 9:10 8:10 KFDJ (282.5) Farm reminders. Bordeaux Paint to Prevent Heart Rot.

11:45 10:45 9:45 8:45 KFDJ (282.5) Pollination of Sweet Cherries and Grafting in Pollenizers. Orchard Soils.

TUESDAY, DECEMBER 15 Eastern Central Mountain Pacific 1:15 p. m. 12:15 p. m. 11:15 a. m. 10:15 a. m. WOC (428.3) Poultry Day. The Egg Producing Breeds of Chickens.

1:45 12:45 11:45 10:45
WOI (270) Animal husbandry.
7:15 6:15 5:15 p. m. 4:15 p. m.
WKAR (285.5) Agriculture, engineering, soils. 8 WOC (428.3) Handling of the Worm Problem in

9 8 7 6 WEAO (293.9), "The Places for Potash." WEDNESDAY, DECEMBER 16

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. A Radio Dairy Cow Selection.

1:45 12:45 11:45 WOI (270) Poultry husbandry. 8:30 7:30 6:30 5:30 WLW (422.3) National Farm Council talk.

THURSDAY, DECEMBER 17 Eastern Central Mountain Pacific 1:15 p. m. 12:15 p. m. 11:15 a. m. 10:15 a. m. WOC (433.6) Legume Day. Red Clover Seed— WOC (483.6) Legume Good Sced Essential. 1:45 12:45 11:45 WOI (270) Farm crops. 7:15 6:15 5:15 p. m. 4:15 p. m. WKAR (285.5) Agriculture, engineering and soils.

8 7 8 5 WEAO (293.9) Farm topic, Growing Need for Complete Fertilizers. 8:30 7:30 6:30 WOI (270) Dairyman's short course.

9 WEAO (293.9) Soils. 9:30 8:30 7:30 KOA (322.4) Farm question box.

FRIDAY, DECEMBER 18 Eastern Central Mountain Pacific 1:15 p. m. 12:15 p. m. 11:15 a. m. WOC (428.3) Special farm service day. 10:15 a. m

1:45 12:45 11:45 WOI (270) Agricultural Economics. 8:45 7:45 6:45 WCCO (416.4) Bee Keeping, lesson III. 11:30 10:30 9:30 8:30 KWSC (348.6) Reducing Disease and Increasing Yield in Eastern Washington, Potato Field.

Louis F. Klein, auto-hard and harmonica soloist; Charles Leslie Hill, reader, Lenore Killian, contralto; 7:30, talk on dogs, H. M. Robertson; 8-10, program, Cochran Bros. company; 10-11, Don Clark's Biltmore hotel dance orchestra.

KMTR, Hollywood, Calif. (238), 5-6 p. m. home hour with Mammy Simmons, Billy Lord and Margaret Bond; 7:30, "Diamond Mines of Central Africa," E. P. Barclay; 8-10, KMTR concert orchestra, direction Loren Powell.

Barclay; 8-10, KMTR concert orchestra, direction Loren Povell.

KNX, Hollywood, Calif. (336.9), 5-5:30 p. m., Sunoy Ilm's talk to children; 5:30-6:15, Wurlitzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent concert orchestra; 7-41, 7:45, program, Roy L. Donley company; 7:45, talk 7:45, program, Roy L. Donley company; 7:40, talk 7:45, program, Zinke's Re-Bottomins Shoe company; 9-9:30, program, Zovaliter Shoe stores; 0:30-10, studio program; 10-12, movie night at the Ambassador, Ray West's Coconnut Grove dance orchestra.

KPO, San Francisco, Calif. (428.3), 7, 7:20, 8 a. m., cally dozen exercises; 10, "Domestic Science," Virginia Tappan; 1-2 p. m., Rudy Sejger's Fairmont hotel orchestra; 2:30-3:30, special matinee program; 3:30-4:30, Cyrus Trobee's Palace Hotel concert; 2:30-5:30, special matinee program; 3:30, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Sejger's Fairmont hotel orchestra; 8-9, minstrel show feature; 9-10, Mona Motor Oil trio; Gypsy and Marta, close harmony team; 10-11, Jack Coakley's Cabirlans.

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

KTCL. Seattle, Wash. (305.9), 9:45-10 a. m., Fraser-

service, Rev. Goo. W. Phillips; 8-10 p. m., program, Mutual stores.

KTCL. Saattle, Wash. (305.9), 9:45-10 a. m., Fraser-Paterson department store; 12:30-1:30, Mevos' cafeteria, Henri Danski's concert orchostra; 8-9, International Bible Students' association.

Markets and Weather Daily Except Sunday

D	aily	Exce	pt !	Sunda	y	
Eastern	Cer	ntral	Mo	ountain		acific
9:30 a. m.	8:30	a. m.	7:3	0 a.m.	6:3	30 a.m.
9:30 a. m. WFAA (475 WOAW (52	6) mai	kets.		_		
9:45 KDKA (309	8:45	5	7:4 grain.		6:	10
					7 1). m.
10 WLS (345) WOS <u>(</u> 440.9	livestoo	k, mar	kets,	fruit.		
10:25	9:23	•	8:3	25	. 7:	25
WWJ (352.' 10:30	026	n.	8:	30	. 7:	30
KFKX (288	3.3) liv	estock,	fruit,	, vegeta	bles,	nogs.
KTCL (305 WFAA (47) WOI (270)	.9) wea	ther, sh	ieep,	quota ti o	ns.	
	Weat	her.	۰.	45	7	:45
WCCO (478 WMC (498	9:4 5.9) ma	o rkets.			•	• • • •
11	10		mark 9		8	
WBAP (47 WEAR (38 WOS (440	5.9) m	arkets, eather.	quota	tions.		
	.9) we		10gs.	:15	8	:15
WTAG (26	8) mar	kets, w	eathe	r.		:30
11:30 KFKX (28	101 w (8.88	30 eather,	fruit,	:30 vegeta	bles.	
KFKX (28 WCCO (41 WEAR (33	6.4) m 89.4) m	arkets. arkets.	weatl	her.		
40	11.	a m	lives	la. m. tock, gi		a. m.
KDKA (3 KPRC (2	86.9) W	weather,	11,62	lo grai		
KDKA (3 KPRC (2 WBAP (4 WEAR (3	175.9) 89.4) n	weatner jarkets,	weat	lle, grai her.		
WEAR (3 WGBU (2 WHAD (2 WLS (345 WOS (44	78) we:	ather. ather, 1	narke	ts.	-	
WLS (345 WOS (44) poult 0.9) li	.ry, dai vestock,	ry, h poul	ogs, sne try, egg	eep. z, gra	in.
WUS (12 12:30 p. n KFKX (2 WCAE (WEAR (3 WFAA (4	n. 11	:30 a. m	ı. L	0:30 a.	m.	9:30 a. m. , dairy.
WCAE (88.3) I 461.3)	weather	, [ru:	it, roso	COLDITOR	
WEAR (384.4) r 175.9) r	narkets, narkets.	wear	птет.		
						0 a. m.
WBAP (40 WHT (40 WOS (44	0) frui	t, weat	her. weatl	her.		
1:30 p. i	n. 12	:30 р. п	1. [1:30 a. I	m. 1	0:30 a.m.
1:30 p. 1 KTHS (3 WFAA (74.8) n 475.9) 1	narkets, markets	weat -	ber.		
WFAA (WOAW (WOI (2)	526) m	arkets. eather,	livest	lock.		
1.0E m	m 12	•35 n f	n. I	1:35 a.	m.	(0:35 a.m. v.
KPO (42	12	1.45 m r	n I	1:45 a.	m.	10:40 a. m.
KOA (32	2.4) W	eather,	roads	, 1170910 1 2 пооп	оск, 1	oultry. [] a. m.
2 p. m. WOC (48 WOS (44	34) wea	ther, gi	rain,	livestoc	k, dai	iry.
2:30 p.	m. 1	1:30 p. I	n. 1	12:30 p.	III -	11:30 a.m.
2:30 p. WCCO (WFAA	416.4) (475.9)	markets markets	, wea	имет.		
3 p. m.	15) Kve	2 p. m. stock. 6	rain.	dairy.	fruit,	12 noon vegetables.
wos (4	40.9) li	vestock,	mar	kets, gr 1:30	ain.	12:30
3:30 KPO (4:	28.3) w	2:30 eather		1 200		
KPO (4: WFAA WMC ((475.91 499 . 7)	markets. markets	, wea	ther.		10.50
2 -50		2.50		1:50		12:50
WWJ (8 4 KFKX WCCO WCX (4:30	(000 0)	3	ole 177	2		ı
WCCO	(416.4)	market	S. d ara	in		
4:30	311) s	3:30	u gru	2:30		1:30
4:30 WEAR WFAA	(389.4) (475.9)	market market	ts, w	eather.		
				3:50 eather, 1	road r	2:50 eports.
WHAS	(399.8)) marke	ts.	4		3
6 KFAU	(278) 1	5 narkets,	weat			•
6.30		veather. 5:30		4:30		5:30
KSAC	(340.7)	market	s.	4:45		3:45
6:45 WIP (508.2)	5:45 ivestoch	, ma	rkets.		****
6:50 WHAT	(275)	5:50 market	в.	4:50		3:50
7:15	-	6:15		5:15		4:15
7:30		6:30		5:30		4:30
KSAC 7:45	(340.	7) mar! 6:45		5:45		4:45
_ KFW#	(261)	marke	t rep	orts.		5
KFKX	(288.3	7 3) mark	ets.	-	at ne k	poultry.
q	(322.4)	sneep,	шагке	7	over6#3	6
KJR (384.4)	weather 9	•	8		7
woc	(384) v	veather.		9		6
g II WCCC	(416.4	10 1) weath	ier, g			•

Wednesday, December 16

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

KSD (545.1) Irish songs.

8:10 7:10 MCAU (277.6) Dad Bailey and his family.

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

WHAS (399.8) Kentucky Night Owls.

9 8 7 WOS (440.9) Old Time Fiddlers.

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

WBZ (333.1) Tyrolean Ladies quarict.

10 (332.4) KOA's Errst Amiversary program.

KTHS (374.8) Melodies of the Southland.

11:30 (30.4) 9:30 8:30

KOA (322.4) "The Open Door," pluy
12 m. 11

KFWB (252) Hoot Owl Harbult.

1 a. 12 m. 12 m.

WOAW (526) Rialto Alarm. Mountain 6 p. m. Pacific 5 p. m. Eastern Central

Wednesday, slient night for: CHIC, CKNC, CNRA, CNRC, CNRE, CNRM, CNRR, CNRT, CNRV, KFAU, KFDM, KFXF, KLDS, KOB, KTAB, KTCL, KUOM, WBBR, WCAL, WCBD, WEBW, WFAA, WGBS, (Continued on page 18)

DANCING

Central Time
Saturday, December 12:
S. Wir, Wnye, Wpg:
S. 30, Wfan: S. 35, Wgy:
S. 30, Wfan: Wmbb,
Wnp: Wree; 9:10, Kths,
Wor, Wre; 10, Kfva,
Klya, Koa, Kpo,
Wgn, Wri, Wkre,
Wnn, Wir, Wkre,
Wnn, Wir, Wkre,
Wno, Wor, Wdi,
Wis, 11, Kfva, Kfva,
Klya, Kob, Web,
Klya, Kob, Web,
Klya, Kob,
Klya, Koa, Kpo,
Wis, 11, Kfva, Kfva,
Klya, Kpo, Web, Wfaa,
Wgbu, Who, Woe; 11:30,
Kfva, Kgo, Kgw, Knx,
Wgbu, Wild,
Monday, December 14: Central Time

Wgbu, Wjid.

Monday, December 14:

8, Wgcp; 9, Weet, Wgbu,

Wjar, Wor; 9:15, Wahg;

10, Kths, Wgbu, Wgc,

Wgr, Wnye, Wpg; 10:15,

Wor; 10:30, Kfoa, Wgcp,

Whn; 11, Kgw, Koli,

Wgbu, Wgcp, Wgr, Whn,

Who; 11:45, Wdat; 12.

Knx, Kbo.

Who: 11-45, Wdat: 12.
Knx, Kpo.
Tuesday, December 15:
9, Webh, Wr'u, Wmbb:
9:30, Weau, wgbs, Wgy,
Wip: 9:35, Wnyc: 10,
Kfve, Wbbm, Weaf,
Webh, Wgbu, Wgn, Whn,
Wmca, Wnyc, Wps; 10:15,
Kihs; 10:30, Kths, Whn;
10:45, Wgb; 11, Kgw,
Koil, Wgbu, Whn; 11:30,
Kfoa: 11:41, Wdat; 12,
Kgw, Khi, Knx, Kpo,
Wdaf: 1, Wgl.
Wednesday, December

Wdaf; 1, Wd.
Wednesday,
16: 9, Wcx, Weau, Webh,
Wgbu, Wgcp, Whn, Who,
Wmbb, Vugca, Wtic;
9:15, Wahe; 9:30, Wbap,
Who, Wor; 10, Kfve,
fybap, Weaf, Wgbu, Wgcp,
Wdi; 11:05, Whon;
10:30, Wbap, Whon; 11. Weeo; Woad, Whos; 11, Koo, Webh, Wgbu, Wgb, Wgb, Wgb, Whi; 11:45, Wdaf; 12; Kfwa, Knx, Kpo, Wjid.

wgcp, wgc, wgn; 11:49, wdaf; 12; Ktwa, Knx, Kpo, Wjjd.
Thursday, December 17:
8, Wir; 9, Webh, Weel, Wgbu, Whn, Wir, Whn, Wir, Why, Wir; 9:05, Wbz, Whn; 9:35; Wnc; 10, Kths, Wbbm, Weaf, Wgbu, Whn, Wbh, Wcbu, Whn, Wcbu, Whn, Wcbu, Wghu, Wgh, Khj, Knx, Kpo, Wjjd.
Friday, December 18; Wwi, 9, Ws, Wgh, Wgbu, Wgh, Wgbu, Wgh, Wgbu, Wgh, Wgbu, Wgh, Wgh, Wgh, Wgs, Wgh, Wgs, Wgs, Wgh, Wgs, Wgs, Wij; 10:05, Wgr, Wlar, Wgs, Wgcp, Whn; 11, Kfwb, Knx, Kpo, Wdaf, Wgcp, Whn; 11, Kfwb, Knx, Kpo, Wdaf, Wgh, Who; 11:45, Wdaf, Wgh, Who; 11:45, Wdaf, Lz, Kfoa, Khj; 12:30, Wdaf,

WHO. Des Moines, lowa (528), 7:30-8 p. m., Ralelgh quintet; 8-9, Bankers Life trio. Helen Birmingham, director; 11-12, Bankers Life Little symphonic or-chestra.

quintet; 8-9, Bankers Life trio. Helen Birmingham, director; 11-12, Bankers Life Little symphonic orehestra.

WHT, Chicago, III. (399.8), 10 a. m., Jean Sargent's program, woman's club; Borden health talk, Jelke Good Luck Girl; studio music; 11, speedal studio features, Magnus musical lecture; 12 p. m., A such ney's compilmentary organ recital; 1, speedal studio program; 6, classical program; dinnet organ recital; Grayling's string trio; Eleanor Gilmour, recital; Grayling's string trio; Eleanor Gilmour, of music; Alois Bragagnolo, basso; 7:45-9:15, (238), musical features; 9:30 (399.8), Jelke's entertainers; Kitchen Klenzer Klassics; Kenneth Clark's Hawaiian trio; Al Carney, organist; Husk O'Hare's orchestra; Ted Florito, July Chicago, III. (226), 2-4 p. m., shut-in program; Jack Sprat and the Carl Sulzer orchestra; Ted Florito, pianist; Victor Young and Dan Russo, violulist; Vernon Hayes, saxophonist; "Home Economics," Grace Viall Gray; 6-8, Wulter Preston, old-fashioned songs, Chester Newman, barltone; Ruth Buhl Flick, reader; Eugene Wallenlus, tenor; Lillian Jacobson, planist; Florence Osterman, contraito; 12, midnight jamboree Dan Russo, Ted Florito, Bob Northrop, John Segil, Floyd Revoir, Erwin Schmidt, Dixle Harris Bennet. WIJD, Mooseheart, III. (302.8), 10 p. m., Rushmore ensemble singers; 12 midnight; Lee sisters; George Sparks; rebroadcasting; Bill Traey; Sonny Duncan; Nonda Slusser.

Nonda Slusser.

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

WLS, Chicago, III. (344.6), 12 m., Ford and Glenn; 6:15, announcements; 6:30, Ralph Emerson, organist; 7, lutlaby time, Ford and Glenn; 7:20, W. L. S.

7, Iullaby time, Ford and Glenn; 7:20, W. L. S. trio.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, auspices of Parkway Y. M. C. A.; 12 m., organ concert, Petronella Trimbur; 12:30 p. m., concert, Robert Visconti Hotel Gibson orrhestra; 4:30, talk, Rev. Ralph Schmidt, Ft. Thomas, Ky.; 4:15, French lesson, Madame Ida Telmpidis; 6, Santa Claus and his helpers; 6:40, Art Gilham, the whisperlmg pianist; 7, accordion duets. Hediund and Hedlund; 7:15, special program, Carl Wunderle and Ilse Huebner; 7:30, accordion duets; 7:40, Carl Wunderle trio; 7:50, talk on dogs "Food and Water," F. W. Avery, Wansoon, 8:00, Crosley Burnt Corkers, Musicone male quartet; 8:45, Crosley Hello Boys, Bob Groenke and Jim Mischler; 9, concert program, auspices of the Formica Insulation company, the Formica concert orchestra, William C. Stoess, director.

chestra, William C. Stoess, director.

WMAQ, Chicago, III. (447.5), 12:45, Radio farm school;
2, shut-in program; 4, Red Cross home nursing talk;
4:45, pupils of Maurice Rosenfeld; 6, Chicago heater
organ recital; 6:30, Hotel LaSalle orchestra; 8,
Columbia School concert, Orchestra Hall; 9, lecture,
University of Chicago; 9:20, program, Orchestra Hall.

University of Unicago; 9:20, program, Orenestra Hall.

WMBB, Chicago, III. (250), 7-8 p. m., Trianon duo,
Beatrice Teiler, Bob Bennett, Bob Duffy, Pat McGuire, Marie Wright; 9-11, Trianon orchestra, Woodlawn theater orchestra, Scotty Welsh, Madison sisters,
Babbe and Barr, Bob Duffy.

lawn theater orchestra; Scotty Welsh, Madison sisters, Babbe and Barr, Bob Duffy.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Hugh Sandidge; 9, bridge game; 11, Britlings orchestra.

WOA1, San Antonio, Texas (394.5), 8:30-9:30 p. m., musted program, Gebhart Mexican players.

WOAW, Omala, Nebr. (526), 12:45 p. m., Brandels Tea Room orchestra; 6, Sandman's visit, Val Mc-Tea Room orchestra; 6, Sandman's visit, Val Mc-Laughlin; 6:20, classical program; 6:45, Ed Meyers and his Peony Park orchestra; 9, classical program; 9:45, Francis Potter's Banjo orchestra; 10:30, Herb Feierman and his Omadala orchestra; 12, Rialto Alarm, Pete and Repete announcins.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., Farm school; "Poultry Day—Tho Egg Producing Breeds of Chickens:" 3-3:30, Aunt Jane's home management schedule; 5:45-0, chimes concert; 6:30-6:50, Sandman's bedtime stories; 7-7:10, farm talk, "Handling of Worm Problems in Pigs," R. E. Patrick; 7:30-8,

"THE DELINQUENTS" DRAMA AT KGO

Wednesday, December 16

(Continued from page 17)

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

can speech, Prof. C. M. McKnight; 8:15, Ohlo Statuniversity girls' quartet; 8:30, "Elementary Radio," R. C. Higgy; 9, May Furniture company girls' orchestra.

WEBJ, New York, N. Y. (272.6), 7-8:45 p. m., Red & Gray Melody boys; 8:45-9, Jeanne A'Dair, singing composer; 9-9:30, Knickerbocker Grill orchestra; 9:30-10, Roth trio.

WEEL, Beston, Mass. (348.6), 6:45 a. m., health exercises; 6:45, Big Brother club; 7:45. Santa Claus; 8, Huylor's Bon Bon Buddies; 8:30, Earl Nelson and his uke; 9, Ipana Troubadours, WEAF; 10, Roxy and his Gang, WEAF,

WFI, Philadina, Pa. (395), 10:30 a. m., solos; 10:30, home service talk, Betty Crocker; 1. Strawbridge and Clothier Tea room ensemble, direction of Harold Micklin; 3, Miss Craig, contralto, Edna Haight, planist; Bestrice Maccabe Reacer, Loretta Kerk, planist; 3:45, Eleanor Gunn fashion feature; 6:30, Bellevue Stratford hotel encoert orchestra; 7, Bellevue Stratford hotel encoert orchestra; 78 Bellevue Stratford hotel ance orchestra.

WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle Geebee; 6:30-7, Jersey Collegians' orchestra; 7-7:10, Norbert Lush, talk; 7:10-8, Jersey Collegians' orchestra.

WGCP, New York, N. Y. (522), 1:30 p. m., Mirror race results half hourly; 3-3:15, Henry Rogers, planist; 3:15-3:30, Bobby Grey, songs; 3:30-3:45; Frances O'Connor, ukulele; 3:45-4, Rose Baiglan, planist; 6-6:15, Littmann's orchestra; 6:15-6:30, Daddy Dingle and his Jingle machbue; 6:30-7, Littmann's planist; 6-6:15, Littmann's orchestra; 6:15-6:30, Daddy Dingle and his Jingle machbue; 6:30-7, Littmann's planist; 6-6:15, Littmann's orchestra; 6:15-6:30, Daddy Dingle and his Jingle machbue; 6:30-7, Littmann, planist; 6-6:15, Littmann's orchestra; 1:30-10-10; orchestra; 1:1-11-30, Connie's orchestra; 1:30-11, orchestra; 1:1-11-30, Connie's orchestra; 1:30-11, orchestra; 1:1-11-30, Connie's orchestra; 1:1-30-12, Stricklands orchestra; 1:1-30, Connie's orchestra; 1:1-30-12, Stricklands orchestra; 1:4-10, Lone Botton; 11, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, directo

Vincent Lopez Hotel statter dance orchestra, Barond Gleser, director.

WGV, Schenectady, N. Y. (379.5), 6:30 p. m., program for children; 6:45, dinner musie; 7:30, Book of Knowledge program.

WHN, New York, N. Y. (361.2), 6-6:15 p. m., Daddy Dingle and his Jingle box; 6:15-7, Littmann's dinner music; 7-8, Tcd Lewis and his orchestra; 10-10:30, Roseland dance orchestra; 11:30-13. Sliver Slipper orchestra; 11:30-12, Melody elub orchestra; 11:30-12, Melody elub orchestra; 11:30-12-12:30, Cotton Club orchestra; 12:30-1 a. m., Harry Richman and his Club Richman entertainers.

WIP, Philadelphia, Pa. (508.2), 6:45 a. m., exercises; 1 p. m., Giubel tea room orchestra; 3, Shapp instrumental quartet; 6:05, Benjamin Franklin concert orchestra; 7, Uncle Wip's bedlime story; Marie Bauer, planist.

mental quartet; 6:05. Benjamin Franklin concert orchestra; 7, Uncle Wip's bedtime story; Marie Bauer, planist.

WIAR, Providence, R. I. (305.9), 10 a. m., Housewires Radio exchange; Mrs. Wood; 1:05, studio program; 7:30, U. S. Army band; 9, musical program; 10, Roxy and his gang.

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

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

WLIT, Philadelphia, Pa. (395), 12 m., organ recital; 12:30 p. m., Arcadia cafe concert orchestra; 4:30, talk, White-Williams foundation; 7:30, Dram Daddy; 8, Melrose concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert orchestra; 4:30, talk, White-Williams foundation; 7:30, Dram Daddy; 8, Melrose concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert orchestra; 4:30, talk, White-William foundation; 7:30, Dram Daddy; 8, Melrose concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert orchestra; 4:30, talk, White-William foundation; 7:30, Poram Daddy; 8, Melrose concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert company recital; 9, Philadelphia Rapid Transtinght; 10, Arcadia cafe concert concert company recital; 9, Philadelphia Rapid Transtinght; 11, 12, Cartis Spanish lesson; 8-8:15, standard statistics; 8:15-9:15, George Walton King's Standard statistics; 8:15-9:15, Ge

WTAG, Worcester, Mass. (268), 10:45 a. m., food talk, Mrs. Lydia Flanders; 12:05-2, WTAG orchestra; 4:45, interesting talk, Robert K. Shaw; 7:40, Spanish leson, Mrs. John De la Parra; 8-10, concert program; 10-11, Roxy and his gang.
WTIG, Hartford, Conn. (475.9), 6:30 p. m., Hotel Bond trio, vocalists; 10, Emil Heimberger's Hotel Bond orchestra.

trio, vocalists; 10, Emil Heimberger's Hotel Bond orchestra.

WMJ, Detroit, Mich. (352.7), 7:30-8 a. m., exercises.

R. J. Horton; 9:30, "Tonight's Dinner," woman's
editor; 12:05 p. m., Jules Kieln's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra and soloists; 9, dance program.

Central Time Stations
CNRW, Winnipeg, Can. (384.4), 7:30, Aunt Aimee;

and vocalist; Joe O'Sullivan, pianist; Jack Seeley; Lew Russell; Sue Olmstead; Nate Caldwell; Charlio Garland; Two Jays, Jeske and Jordan; Harold Anderson, accordionist; Moulin Rouge orchestra; Spencer, Lavergne and Shayne, xylophone trlo.

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

WCCO, Minneapolis-St. Paul, Minn. (416.4), 9:30 a. m., program for day; 10:45, "Pretty Wrappings for Christmas Packages," Betty Crocker; 4, Readers

Index to Classical Concerts

SATURDAY, DECEMBER 12 Eastern Central Mountain 6 p. m. 5 p. m. 4 p. m. WCX, WEAF, WMCA, WREO. 7 6 5 KGO, KYW, WEAR, WENR, WMAQ, WNYC, WOAW, WOK, WRC. WOAW, WOK, WRC.

8 7 6 5

KDKA. KENF, KOUL, KSD, KYW, WBBR, WGN, WMBB, WNYC, WOAW, WQJ.

9 KFOA. KPRC, KHJ, KYW, WHAS, WIP, WUW, WORD, WSAI, WSOE
10 KNX, KYW, WEAF, WMAQ, WMC, WOAW, WOC, WORD, WSAI, WSOE
11 10 9 8 KGO. 12 m WOAW. SUNDAY, DECEMBER 13 Eastern 12 m 11 KHJ, KNX, WOC. 1 a. m. 12 m KNX. MONDAY, DECEMBER 14 Eastern Central Mountain Paeine 6 p. m. 5 p. m. 4 p. m. 3 p. m. KGO, WCX, WEAF, WMCA, WREO, WWJ. WTIC. WTAG, WJAR, WLW, WMBB, WTAG, 90 8 KHJ, KPRC, WBBB, WCCO, WBZ, WCAE, WEEI, WHAD, WHO, WJAR, WLW, WOBB, WSD, KPRC, KSD, KTHS, WCCO, WEAF, WHAD, WJAR, WOAW, WSUI, II. 11 10 8 KGW, KHJ, KMA, KSD, KTHS, KWSC, WHN, WSAI. 12 m | 10 KGW, WBAP, WSAI. | 10 kHJ. TUESDAY, DECEMBER 15 Eastern Central Mountain Paeife
WBZ, WCX, WEAF, WMCA, WREO, WWJ.
6 p. m. 5 p. m. 4 p. m. 3 p. m.
7 6 KGO. KMA, WEAR, WEBJ, WGBS, WHAD,
WJR, WMAQ, WOAW, WOK, WOR, WTIC,
8 7 6 5

Eastern Central Mountain Pacific 9 p. m. 6 p. m. 6 p. m. 6 p. m. WPDM KEOA KGO. KHJ. KLDS. KYW. WCAE. WCBD, WCCO, WEAF, WEEI, WGR. WHAS, WJAR, WLW, WMAQ, WOC, WORD. Eastern Central Mountain Pacific 6 p. m. 5 p. m. 4 p. m. 3 p. m. WCX, WEAF, WMCA, WREO, WWJ. 7 5 KGO, WEAR, WHAD, WJR, WMAQ, WOK, WTIC. KGO, WEAR, WHAD, WJR, WMAQ, WOK, WTIC.

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KFNR, KPRC, KSD, KYW, WBZ, WCX, WEAF, WEEL, WHT, WLW, WMBB, WMCA, WQJ, WTAG, WWJ.

9 8 8 7 6
KFOA, KGO, KPRC, KSD, KYW, WBZ, WCO, WDAF, WEEL, WGR, WHAD, WHAS, WJAR, WMAQ, WOR, WORD.

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KFMX, KMA, KNX, KTHS, WCCO, WEAF, WEEL, WGR, WHAD, WJAR, WLS, WMAQ, WIY, WOC, WSOE.

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KFMX, KMA, KNX, KTHS, WCCO, WEAF, WEEL, WGR, WHAD, WJAR, WLS, WMAQ, WIW, WGC, WSOE.

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KGO, KGW, KMA, KPO, KTHS, WCAE, WLS, WLW, WOC, WSAI.

10 9
KGW, KPO, WHAD, WLW.

1 a. m. 12 m 11 10 THURSDAY, DECEMBER 17

Eastern Central Mountain Pacific 6 p. m. 5 p. m. 4 p. m. 3 p. m.
WBZ, WCX, WEAF, WIP, WMCA, WREO, WWJ. 6 5 4 WHAD, WGBS, WHAD, WMAQ, WOAW, WOK, WWJ. 8 YW, WBB, WBZ, WCAU, WCCO, WCAR, WES, WLS, WLS, WLW, WMBB, WOAW, WJ, WTAG, WTIC. 9 WTIC.

8 7 6

8 HJ, KLDS, WBAP, WCAE, WCAU, WCBD, WCCO, WEAF, WEEI, WGR, WHAR, WHAS, WJAR, WNYCK, WOC, WORD, WRC, WSB, WTAG.

10 9 8 7

KNX, KPRC, KTHS, KYW, WGR, WHAD, WMC, WOAW, WOC, WSAI.

11 0 9 8

12 m 10 9

KGO, KPO, KTHS, WBAP, WKBC.

12 m 10 10 9

KGW, KPO, WHO, WKRC. KGW, KPO, WHO, WKRC.

FRIDAY, DECEMBER 18

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

KGO, WCX, WMCA, WREO, WWJ.

KGO, WEBJ WGY, WHAD, WJR, WMAQ, WOAW, WOK, WOR, WTIC.

8 YWAH, WAHG, WBZ, WCAU, WCX, WEBJ, WELL, WHT, WLS, WQJ, WTAG, WTIC, 9

7:50, farmers' agriculture service talk; 8, musical program, Irvine Plumm's orchestra; 8:40, studio program, Waterhouse string quartet; 10, dance program. Irvine Plumm and his Fort Garry hotel or-

chestra.

KFAB, Lincoln, Nebr. (340.7), 5.30-6.30 p. m., concert, Belshaw's orchestra and Buick Little symphony; 8.30-10.30, Belshaw's orchestra; Ralph Hall-Banjo, ukulele and voice; Olive Fietcher and Ruby Tcater, double piano; "Slick" Merriam, planist; Mareldine Sehmidt, blues singer.

KFEQ, Oak, Nebr. (258), 2-3 p. m., Kings Entertainers.

WWJ.

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7
KFNF, KSD, KYW, WBZ, WCAE, WCAU,
WCX, WEAR, WEEI, WGR, WHAR, WHT,
WLS, WMBB, WQJ, WRC, WTIC.

double piano; "Slick" Merriam, pianist; Mareidine Schmidt, blues singer. KFEQ. Oak, Nebr. (258), 2-3 p. m., Kings Enter-tainers. Merchanders. Mercha

club, Eleanor Poehler; 5:30, children's hour; 7, church service, Rabbi Albert G. Minda, Temple Israel Synagogue, Minneapolis; 8, Ipana Troubadours, WEAF; 10:35, dance program, Emmet Long's Golden Phessant orchestra.

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

WDOD, Chattanoga, Tenn. (256), 6:30-7 p. m., Tivoli theater organ; 7-8, Hotel Patten orchestra; 8:15, special features.

theater organ; 7-8, Hotel Patten orchestra; 8:15, special features.

WEBH. Chicago, III. (370.2), 7-8 p. m., Oriole orchestra; Florence Behrend, soprano; "Books of the Day," Lewellyn Jones; 9-10, Oriole orchestra; Florence Behrend, soprano; Frank Bordner, baritone; 11-1 a. m., Oriole orchestra; Florence Behrend, soprano; Frank Bordner, baritone; 11-1 a. m., Oriole orchestra.

WFAA. Dallas, Texas (475.9), 12:30-1 p. m., Sears-Boebuck Agricultural Foundation program.

WGES, Oak Park, III. (250), 5-7 p. m., Betty Bebb and Helen Cameron, vocal duo; McDevilt sisters; pianists; Tiffin theater organ and orchestra; 8-9, Ethel Glese, soprano; Ruth Kalthoff, contrallo; Peter Mathews, basso; John Stamford, tenor: Tiffin theater organ and orchestra; 11-1 a. m., Phillips twins, vocal duo and ukuele soloists; Tiffin theater organ and orchestra; Serenaders; Morris Hoffman, tenor.

WHAD. Milwaukee, Wis. (275), 4 p. m., "With the Humorists," John B. Wolf, the Journal paragrapher; Creole roef orchestra; 11:30-12:30, Edmund Fitch, organist. Louisulla, McC. (290.9), 4-5, p. m. musical

sin Moof Gartien, Deacet's "Creole roof orchestra; 11:30-12:39, Edmund Fitch, organist.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; 7:30-9, concert, Jake Seligman and his Kentucky Night Owls.

WHO, Des Moines, lowa (526), 6:30-7:30 p. m., Reese Hughes orchestra; 7:30-9, Santa Claus; Kate Miller, whistler; Maude Hughes, accompanist; Smith Sisters, harmony girls; The Larks, Rhena Hayward, director; 9-11:30, dance program.

WHT, Chicago, Ill. (399.8), 10 a. m., Jean Sargent's program, woman's club, Borden health talk, Jelke Good Luck Girl, studio music; 10:45, Betty Crocker home service; 11, special studio features; 12 p. m., Al Carney's compilmentary organ hour; 1-2, special studio program, Grayling's string trlo; 6-7:30, classical program, dinner organ recital, Pauline Cachs, Phyllis Burton, violinist; Pauline Peebles, pianist; Jean Carlson, soprano; Hugh Aspinwall, tenor; Grayling's string

trio: 7:45-9:15 (238), musical features; 9:30 (399.8), Borden request organ recital, Hickey and Johnson, harmony; Carl Strudel, barltone; Leota Laabe, soprano; Irene Beasley, the Girl from Dixie; Northland trio; Vic Fredericks, haritone; Chas. R. Hall, tenor; Badger Four male quartet; Ray Lawsen, tenor; 12, Pat Barnes and Al Carney.

WIBO, Chicago, Ill. (226), 2-4 p. m., shut-in program; Jack Sprat and the Carl Sulzer orchesita; Ted Fiorito, pianist; Victor Young, Dan Russo, violinists; Vernon Hayes, saxophonist; "Home Economics," Grace Viall Gray; 6-8, Walter Preston, popular American ballads; Dorothy Rae, soprano; Earl Raymond Bigelow, pianist; Charlotte Edwards, contralto; Joe North, baritone; Shepard Levine, tenor; 10, Erwin Cornelius, ukulele; male quartet; Wm. Molnaire, tenor; Hickey and Johnson; Alma Adair, soprano; Dorothy Aubrey, contralto; Fred Jacobsen; Dorothy Davic Dillow.

WIJD, Mosscheart, Ill. (302.8), 10 p. m., Winifred Konigsmark; Alols Bragagnola; Marle Winters; 12 midnight; Walter Fett, Les Cameron, George Sparks, Jack Nelson.

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

WLS, Chicago, Ill. (344.6), 12 m., Ford and Glenn; 6:15, announcements; 6:30, Ralph Emerson, organist; 7, Jullaby time, Ford and Glenn; 7:15, W. L. S. trio; 7:45, W. L. S. theater production; 8:15, Keltie quartet; 8:45, Rhodeheaver program; 9:15, Countess Zicha, soprano; 9:30, Amalie Birnbaum, violinist; 10, Umbrian glee club; 10:40, Ford and Glenn; 11 p. m.-2 a, m., W. L. S. "Cirrus program."

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, M. C. A.; 12:2, n., musical program, Irene Downing; 3:30 p. m., Crosley cooking school, "flints on the Art of Cooking and Some of My Best Recipes," Mrs. Ralph H. Auch, dietleian; 4, Shut-in concert, Hotel Glbson; Robert Visconti, director; 7:30, talk, representative of the National Farm Radio council

theater orchestra; Scotty Welsh, Madison sisters, Earle Smith, Billie Allen Hoff, Jimmy Eggert, Bob Bennett.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program; 8:30-9:30, Army night, musical program; 8:30-9:30, Army night, musical program; Ft. Sam Houston.

WOAW Omaha, Nebr. (526), 12:45 p. m., Phyllis Griswold, organist; 5:30, Sandman's visit, Val McLaughilln.

WOC, Davenport, Iowa (483.6), 12:15-12:25 p. m., farm school; 'Dairy Day—A Radio Dairy Cow Selection,'' Prof. H. G. Van Pelt; 33:30, home management schedule, Aunt Jane; 4-4:45, Jean DeVogelaere, Burnoll Shuler, piano duettists; Paul Vipperman, tenor; 5:45-6, chimes concert; 6:30-6:50, Sandman's bedtime stories; 9-10, Erwin Swindell, organist; Marcus H. Cohen, tenor.

WOK, Chicago, III. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; organ, Capitol theater; Ed Kemp, tenor; Bob Mokreis, pianist; Bryce Talbot, baritione; 10 p. m.-1:30 a. m., Gus C. Edwards' orchestra; rogram, Capitol theater; Tlerney's Town club orchestra; Nod Miller, tenor; Harriet Lee, contralto; Horman Sinaiko, violin; George Allen, tenor; Bob Mokreis, pianist;

WORD, Batavia, III. (275), 8 p. m., "Mebster hotel concert trio, 8:15, hymns and sacred songs, I. B. S. A. choral singer, 8:23, third lecture on The Great Pyramid, C. H. Swingle.

WOS, Jefferson City, Mo. (440.9), 8 p. m., "Insurance in Missouri," Ben C. Hyde; original poems, LeRoy H. Kelsey; Bill Caton, Ola Gathright, oldtime fiddiers.

in Missouri," Ben C. Hyde; original poems, LeRoy H. Kelsey; Bill Caton, Ola Gathright, oldtime fiddiders. Chicago, Ill. (447.5). 11-12 m., "Home Economies." Helen Harrington Downing; Frank Wendt, chef, Rainbo Sea Food Grotto, fish dinner for Friday; Heart Disease—The Nation's Scourge." Br. Alloe Conklin, program arranged by Dr. Lena K. Sadler; S-4 p. m., talk, Helen Harrington Downing; Lavina Price, planist; "Treating the Home to Reflect Your Personality;" Treating the Home to Reflect Your Personality; "Treating the Home to Reflect Your Personality;" Treating the Home to Reflect Your Personality; "As, Marvin Hinshaw Bartone, and artist pupils; concert, Kalph Williams and his Rainbo Stylarks; Lauric, Eddle, Bennle, the Melcians; Clarence Theders, tenor; Josy Stool, tenor; Eddle Vogel, barltone; Geo. Thurn; Anita Chellis, comedian; Harry Kendall, gultar and two harmonicas; other Radio artists to be announced; 1-2 a. m., Ralph Williams, the Ginger Man, and the Little Sylarks.

SYAI, Cincinnati, Ohie (326), 7-45 p. m., "Art Talk," Ernest Bruce Haswell; 8-9, Waterman Pen program, N. Y. City; 9-10, Ipana Troubadours, N. Y. City; 10, talk, professor, University of Cincinnati; 10:15, studio program; the Congress Playing Card string quartet.

WSOE, Altanta, Ga. (428.3), 10:45 p. m., melody artists. WSOE, Milwaukee, Wis. (246), 5:30 p. m., twillight hour, Aunt Julie, children's stories, Oliga LaBelle, planist; Agnes Rocts, marimba soloist; 9, Bertha Schaller, violinist; Helen Reynen, accompanist; "Contacts with our Students and Alumni;" current topics; 9:30 p. m., J. H. Brown, bass; Mary Helmilich, accompanist; the voices of our dumb animals, report of humane week, J. Hughe Maine, director.

humane week, J. Hughe Maine, director.

Mountain Time Stations

CFAC, Calgary, Can. (435.8), 4 p. m., address, Red
Cross; 8, program, St. Davids society.

KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio
Dealers program; 9-10:30, Olie Reeves and his orchestra; 5-6, Ogden Radio Dealers program.

KOA, Denver, Colo. (322.4), 12:15 p. m., musicale,
Rialto theater; 6:30, concert, Brown Palace string
orchestra, Howard Hillotson, director; 7:30, Book
of Knowledge, directed by H. G. Knight; 8, KOA's
first anniversary studio program; saxophone band,
Public Service company; invocation, Rev. Ernest W.
Wood; KOA orchestra; Ina Rains, soprano; "KOA's
First Anniversary, Robert L. Miller; "The Open
Door," KOA players; 10, dance program, Harmony
Peerless orchestra.

Door," KOA players; 10, dance program, Harmony Peerless orchestra.

Pacific Time Stations

KFDJ, Corvallis, Ore. (282.5), 7:30 p. m., musical selections; 7:45, "The Christmas Dinner," Amelia Burns; 8-8:15, "Concealing Extra Pounds," Helen Lee Dayls.:

KFWB, Hellywood, Calif. (252), 5-6 p. m., children's hour, Big Brother of KFWB; 7-7:30, Mutual Motors mirth contest; 7:30-8, microphone brevitles; 8-9, program, Cheek-Neal Coffee company, Maxwell House Coffee string quartet; Charles Beauchamp, tenor; Lee Kent and her terapache; 9-10, program, Hoot Owl Harbolt of Santa Monica, Bill Hatch's orchestra; Peggy Mathews, blues singer; Frank Steer, barttone; 10-11, Warner brothers frolie, direction Charle Wellman; 11-12, Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15-7:30 a. m., health training exercises; 7:45, Pep class; 8:15-8:30 exercises; 8:45, inspirational songs, Efficied Wynne; 11:30-1 p. m., luncheon concert; 3-4, thirty-piece orchestra program, Both Lackey, director; theme by Handel, "Thaddeus Maccabeus" oratorio; Yangze Christenson, violinist; Josephine Lind, soprano; speaker; Eva Garda, pianlst; Edward O'Dell, Betsy Pembrooke, artisis; 4-5:30, concert orchestra, Hotel St.

(Continued on page 19)

(Continued on page 19)

SHRINE SERENADERS RETURN TO WHB

nounced; 6:17-6:45, Bill Wathey, sport talk; 6:45-7:30, Jacques Jacobs' Hotel Shelton ensemble.

7:30, Jacques Jacobs' Hotel Shelton ensemble.
WTAG, Worcester, Mass. (268), 10:45 a. m., talk, Sherer staff nurse; 12:05-2 p. m., WTAG orchestra; 8-8:30, Larkinites; 8:30-9, Pop concert, WEAF; 0-10, Cliquot Club entertalners; 10-11, Goodrich Zippers.
WTIC, Hartford, Conn. (475.9), 6:30 p. m., Hub Restaurant trio; 7:30, "The Orlent," Mrs. P. Lee Clark; 7:45, dilnner mustc.
WWJ, Dotroit, Mich. (352.7), 9:30 a. m., "Tonight's

Wednesday, December 16

(Continued from page 18)

(Continued from page 18)

Francis, Vinton LaFerrera, conductor; 5:30, Mr. Fixit; 6-7, dinner concert; Knickerbocker trio.

KHJ, Los Angeles, Calif. (495.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Dick Winslow, ivenile reporter; Mickey McBan, screen juvenile; Carl Eastwood and Vivian Marple; 8, Dr. Mars Baumgardt, scientifie lecturer; 8:30-10:30, de luxe program arranged by J. Howard Johnson; 10:30-11:30, Don Clark's Biltmore hotel dance orchestra.

KMTR, Hollywood, Calif. (238), 5-6 p. m., home hour, Mammy Stimonons and pupils of Geraldine Kasai; 8-10, KMTR concert hour, the Turner orchestra, Loren Powell, director; Rondeau male quartet.

KNX, Hollywood, Calif. (338.9), 5-5:30 p. m., Sunny Jim's talk to children; 5:30-6:15, Wurlitzer pipe organ studio, Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent concert orchestra, Paul Finstein, leader; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 8-9, KNX feature program; 9-10, program, W. W. Rainey organization; 10-11, Buth Roland, screen star; G. Allison Phelps, The Radio Philosopher.

KPO, San Francisco, Calif. (428.3), 7, 7:30, 8 a. m., daily dozon exercises; 10, sewing talk; 1-2 p. m., and day Seiger's Fairmont hotel orchestra; 2:30, matinee program, Bennie Berman, tenor; Peggy McDonald, accompanist; 3:30, fashion talk; 5:30-6:15, children's hour, Big Brother; 6:40-7, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Atwater Kent artists, Ernest Ingold, director; 9-10, Goodrich Silvertown Cord dance orchestra; 10-11, Waldemar Lind and the States Restaurant orchestra.

KTAB, Oakland, Calif. (240), 9-0:30 a. m., prayer service, Rev. Geo. W. Phillips.

KTCL, Seattle, Wash. (305.9), 7:30-8:30 p. m., service company.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., special program, Colfax hith school; "Astronomy No. 2, 2 m. and program, Colfax hith school; "Astronomy No. 2, 2 m. and program, Colfax hith

Service company.

KWSC, Pullman, Wash, (348.6), 7:80-9:30 p. m., special program, Colfax high school; "Astronomy No. 2, The Planets," C. D. Calgoeris; "Contributions of Science to the Dairy Industry," E. V. Ellington,

Thursday, December 17

Headliners Today Headliners Today

Eastern Central Mountain Pacific Form. 6 p.m. 6 p.m. 6 p.m. 6 p.m. 4 p. r. w. y. 2 (454.3) Radio Cocktail. 8:45 5:45 6:45 5:45 WCAU (277.6) Tho Kandy Klds. 9 8 7 6 WBZ (333.1) Evening of Opera. WHB (365.6) Shrine Sternadders. 10 9 8 7 WKRC (422.3) Christmas Carols. 11 10 9 8 KGO (361.2) "The Delinquents," play. KHJ (495.2) World Famous Christmas carols. WHN (361.2) Swanee entertainers. WJAZ (322.4) Two plano classical recitals. 12 11 KFWB (252) Jazz twins. KPO (428.3) Two one-act plays.

Thursday, silent night for: CHIC, CKNC, CNRA, CNRE, CNRO, CNRR, CNRT, CNRV, CNRW, KFAB, KFAU, KFDJ, KFDM, KFMQ, KFMX, KFOA, KFU, KFUO, KFVE, KFWA, KGW, KLX, KOA, KOB, KTCL, KWSC, PWX, WAFD, WAHG, WCEE, WJAD, WBBJ, WBBW, WGCP, WHAD, WHAD, WJAD, WJ

CNRM, Montreal, Can. (441), 8:30 p. m., studio program, Markowski trio; Dorothy Dalton, recttations; G. R. Markowski, violinist; Lucien Labelle, cellist; Oscar O'Brien, planist; "Historical Montreal," Prof. W. H. Atherton.
WAHG, New York, N. Y. (315.6), 12-1 p. m., musical program.

program.

WBAL, Baltimore, Md. (375), 6:45-7:45 p. m., dinner concert, Rohert Jula, conductor; 8-10, musical program; Edith Gwinn, soprano; Neenah Woods, contralto; Ercelle Mitchell, pianist; Herbert Bangs, violinist; Georgo Bolek, planist; James Wilkinson, bartione

ner concert, Robert Jula, conductor; 8-10, musical program; Edith Gwinn, soprano; Neenah Woods, contralto; Ercelle Mitchell, pianist; Herbert Bangs, violinist; Georgo Bolek, pianist; Herbert Bangs, violinist; Georgo Bolek, pianist; James Wilkinson, baritone, WBBR, New York, N. Y. (272.6), 8 p. m., Watchtower instrumental trio; \$:10, Stanley Gohlinghorst, baritone; 8:20, Sunday school lesson, S. M. Van Sipma; 8:40, Stanley Gohlinghorst, baritone; 8:20, Sunday school lesson, S. M. Van Sipma; 8:40, Stanley Gohlinghorst, baritone; 8:50, Watchtower orchestra, KDKA; 7:05, "From Chaucer to Shakespeare," Prof. E. Charlton Black; 7:30, Hotel Kimball dance orchestra, Bob Patterson; 8, musical program, Noves Bulck company; 9, evening of opera, Madame Vinello-Johnson, director; Meastro Plerto Vallini, accompanist; 10:95, concert, Edwin J. McEnelly and hls singing orchestra.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., program, Loew's Aldine theater; 4:30, Sunshine Gtri; 6:30, concert, William Penn hotel; 7:30, Santa Claus; 8, Larkin period, N. Y.; 10, concert, Goodrich Zippers.

WCAU, Philadelphia, Pa. (277.6), 6:30 p. m., Billy Hayes and his Cathay Tea Garden orchestra; 7:30, Snellenhurg symphony orchestra. John Carroll, director; 8, Mitchell Gondoliers; 8:15, recital; 8:45, Kandy Kids; 9, Barry O'Moore, Irish tenor; 9:30, Musical Chefs; 10, Sesquí Centennial hour.

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

WEAF, New York, N. Y. (491.5), 6:45-7:20, a. m., Tower health exercises; 11-11:0, Harriet Youngs, soprano; 11:10-11:20, Mayfair extension talk; 11:20-11:30, lecture on cookery, Teachers college, Columbia university; 6-7, Waldorf-Astoria dinner music; 7-7:20, mid-week hymn sing, auspices of the Greater Federation of Churches; 7:20-8, Cushman's serenaders; 8-8:30, the Larkinites; 8:30-9, Pop concert; 9-10, Mayfair extension talk; 11:20-11:20, Mayfair extension talk; 11:20-11:20, Mayfair extension talk; 11:20-11:20, Mayfair extension talk; 11:20-11:20, Mayfair extension talk

WJR. Pontiae, Mich. (517), 7 p. m., Jean Goldkette's Petite Symphony orchestra; soloists; 9, Jean Goldkette's Secuaders; soloists; 10, Jean Goldkette's Secuaders; soloists; 10, Jean Goldkette's Secuaders; soloists; 10, Jean Goldkette's Victor recording orchestra; (285.5), 7:15 p. m., lectures on marketing, agriculture, English, solis p. m., organ recital; 12:30. Ben Franklin lotel concert orchestra; 2, Arcadia cafe orchestra; talk on dogs; 4:30, studio hour; 7:30, Dream Daddy.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail and his Hotel McAlpin string ensemble 6:39-7. Frank Gebbias Red Lion inn orchestra; 7:7:15, Happy Girl, Violet Kaye; Pace institute program; 7:19-7:30, Happy Girl, Violet Kaye; Pace inst

Doris Freeman, songs; 3:45-4, Constantion Ramos, saxophonist; 4-4:15, Frank Gallasi, ukulele; 4:15-4:30, Gertrude Greenblatt, violinist; 4:39-4:45, Harry Spear, songs; 4:45-5, Sylvia Schatz, planist, WGR, Buffale, N. Y. (319), 2:30-4:39, p. m., WGR's afternoon program; 6:30, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including the Larkinites and the Good-rich Zippers.

afternoon program; 6:30, Vincent Lopez' Hotel Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including the Larkinites and the Goodrich Zippers.

WGY, Schenetady, N. Y. (379.5), 2 p. m., musie; "Christmas Puddings," Jessie A. Boys; 6:30, dinner program, Ten Eyek concert trio; 7:30, book chat, William Jacob; 7:45, WGY orchestra; 9, U. S. Army band, WRC: 9, WJZ Royal hour; 10, WGY orchestra; 11:30, organ recital, Stepben E. Boisclafr.

WHAR. Atlantic City, N. J. (275), 2 p. m., Scaslde botel trio; 7:30, health talk, Dr. Henry Reik; 8, Seaside hotel trio; 9, concert.

WHN. Now York, N. Y. (381.2), 12:30-1 p. m., Lexington organ recital; 3:15-4:30, Lexington orchestra; 6:40-7, Sunshine talk, Billy B. Van; 7-8, Iceland dance orchestra; 8-8:30, Will Oakland's Chatheau Shanley; 8:30-9:30, Guardina Entertainers; 10:30-11, Club Kentucky orchestra; 11-11:30, Joe Ward's Swanee Entertainers; 12-12:30 a. m., Ted Lewis and his Parody club orchestra.

WIP, Philadelphia, Pa. (508.2), 10 a. m., menu, Mrs. Anna B. Scott; 1 p. m., Glmbel tea room orchestra; 3, Combs Conservatory of Music; 6:65, Joe Ray and the Callfornia Night Hawks; 8, Sesqui-Contennial; talk, Hon. Harry A. Mackey; 8:15, University of Pennsylvania; talk, George L. Lindsay; 9:15, Y. M. H. A. orchestra; 10:05, talk, member of the Philadelphia Real Estate board; 10:15, Pagoda cafe orchestra, J. Herbert Taylor, director; 9, Hudson-Essex orchestra; 10, Goodrich Zippers.



Like the little Italian maiden of the middle ages appears this modern "Mignon," above, Lucretia Goddard Bush, who sang the title role of this opera recently at WBZ, Springfield. She will take part Thursday in this week's opera productions at this station. Henrietta Johnson, left, is the assistant director of the Bureau of Research and Guidance of the Oakland public schools. She instructs classes of Oakland school teachers in the new art of "talking" a lesson so it will be clear when issuing from loud speakers in the ten schools of the city selected to listen in.

cinner," woman's editor; 12:05 p. m., Jules Klein's lotel Statler orehestra; 3. Detroit News orchestra; concert; 8, concert, WEΛF.

Central Time Stations

KFEQ, Oak, Neb. (268), 2-3 p. m., Kings Enter-KFEQ, Oak, Neb. (268), 2-3 p. m., Aings Entertainers.
KFMQ, Fayetteville, Ark. (299.8), 8 p. m., "Letsure, an Important Resourse," J. A. Dickey; "Objects of Electrification," W. B. Stelzner; "Food Factors that Influence Every Day Health and Vigor." Emma Johnson; "Greek Architecture," W. B. Allen; "Relation of Home Equipment to Health and Sanitation," D. G. Carter; "Minor Novelists," V. L. Jones; "The Protein Problem in Nutrition," J. W. Read; "The Psychology of Differences among People," G. C. Fraeker.

Psychology of Differences among People," G. C. Fracker.
KFNF, Shenandoah, lowa (266), 7 p. m., mixed program, Lafe Corbin, director.
KLDS, Independence, Mo. (440.9), 8 p. m., lecture (1988), 100 p. m., lecture

4-5, travelogue, G. H. Van Houten; 6-7, retailers program, Independent Oil company; 9, Nixon's Delmonteo Dreamers, dance orchestra.

KSD, St. Louis, Mo. (545.1), 4 p. m., women's hour: 6:05, Good Will program, WEAF.

KSO, Clarinda, 10wa, (241.3), 7-8:30 p. m., Snappy seven; 8:30-10, farmers band.

KTHS, Hot Springs, National Park, Ark. (374.8), 9-10:15 p. m., dance concert, New Arlington hotel orchestra. Lon Chassy, directing; 10:15-10:30, Mrs. Charles Caldwell, vocalist.

KYW, Chicago, Ill. (536), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 12-1 p. m., luncheon concert, Congress hotel; 2:35-5:45, afternoon frolic; 6-7, dinner concert, KDKA; 7-7:30, beddime story, Uncle Bob; 7:33-7:53, speeches, American Farm Bureau federation; "Learning by Doing," Frank B. White; 8, "Twenty Minutes of Good Readings," Rev. C. J. Pernin; 8:20-9, musical program; 9-10, classical: concert; 10-12, evening at home; 1 a. m., Insomnia club.

Pernin: S:20-9 musical program; 9-10, classical concert; 10-12, evening at home; 1 a. m., Insomnia cutb. 10-12, evening at home; 1 a. m., Insomnia cutb. 10-12, evening at home; 1 a. m., Insomnia program; 6 p. m. dinner concert, George Osborn's Hotel Radisson orchestra; 11, Skyrocket frolie.

WBM. Chicage, III. (226), 4-6 p. m., Sandy and Harry; Valentino Irm orchestra; William Dalton, baritone; Irene Beasley, Sidney Nireman, Russeil Meyers, 10-12 method of the Meyers, 10-12 method of the Meyers, 10-12 method of the Meyers, 10-12 midnisht, Harry and Sandy; Moulin Rouge orchestra; 10-12 midnisht, Harry and Sandy; Moulin Rouge orchestra; 10-12 midnisht, Harry and Sandy; Moulin Rouge orchestra; Feed Jacobson, Swedish alderman; Dolly Sterling and other stars, Moulin Rouge orchestra; Feed Jacobson, Swedish alderman; Dolly Sterling and other stars, Moulin Rouge cafe.

WBM, 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 Eaves Price, soprano; Alice McMahon, contratic; Margaret McArthur, planist; John Williams, barttone; 10-1 a. m., Elmer Jordan & Co., Owl Wollon, Chicago, III. (260), 12-10-10 midnin organist; John Williams, barttone; 10-1 a. m., Elmer Jordan & Co., Owl Minneapolis-St. Paul, Minn. (416.4), 9:30 a. m., program for day; 12 m., concert, Donaldson's orchestra; 2, "Among the Musiclans," H. A. Bellows; 4, Readers club, Eleanor Poehler; 5:30, children's hour; 7-7:30, the Larkinites, WEAF; 7:30-8, poponencer, WEAF; 8-9, WEAF ensemble; 9-10, Goodrich Zippers; 10:05, travel talk, National Director Travel bureaux; 10:30, dance program, Oxford theater orchestra; Eddie Kuhn's orchestra; Ted Meyn, orchestra; Eddie Kuhn's orchestra; Kathryn, Forbes, sochestra; 9-10, Oriole orchestra; Kathryn, Forbes, sochestra; 9-10, Oriole orchestra; Kathryn, Forbes, sochestra; St. 10, Oriole orchestra; Kathryn, Forbes, sochestra; St. 10, Oriole orchestra; Kathryn, Forbes, sochestr

chestra; Eddie Kuhn's orchestra; Ted Meyn. organist.

WEBH, Chicago, III. (370.2), 7-8 p. m., Oriole orchestra; 9-10, Oriole orchestra; Kathryn Forbes, soprano; Dick and Snyder, Ruth Flick, Frederick Agard; 11-1, Oriole orchestra; Wayne Myers, Buth Bull Flick.

WFAA, Dallas, Texas (475.9), 12:30-1 p. m., talk, DeWitt McMurray; Edmund F. Boettcher, tenor; Viola Cassidy, pianist; 6:30-7:30, Don Bestor's orchestra; 8:30-9:30, Choral club recital; 11-12 oriole orchestra; 8:30-9:30, Choral club recital; 11-12 oriole orchestra; 8:30-9:30, Choral club recital; 11-12 in light basso; Ross Oleghans, from Dallas Athletic club. WGES, Oak Park, III. (250), 5-7 p. m., Frederick Irving, basso; Ross Olech, soprsno; Stenstrom sisters, vocalists; Miles Sullivan players; John Brown, pianist; Wyzenbeck trio; Tilm theater organ and orchestra; 8:-9, Bemington Welsh, organist; Richard Dale, bartione; Ruth Kalthoff, mezzo-soprano; Wyzenbeck trio; Tilm theater organ and orchestra; 8:-9, Buth Kalthoff, mezzo-soprano; Wyzenbeck trio; Chica Gilari, 6:15-7, Bil Benning's Milwaukee Athletic club orchestra.

dians; 6:15-7. Bill Benning's Milwaukee Athletic club orchestra.

WHAS, Louisville, Ky. (399.8), 4-5 p. m., musical, Harry S. Currie; editorial readings; 7:39-9, concert, Connic's orchestra, Elks club; piano concert, Theodore Richbourg, faculty member of the Louisville Conservatory of Music; Sunday school losson.

WHB, Kansas City, Mo. (365.6), 8-11 p. m., return engagement, Arrarat Temple Shrine serenaders.

WHO, Des Moines, lowa (526), 7:30-8 p. m., Raleigh quintet; 8-9, Bankers Life trio, Helen Birmingham, director; 11-12, Bankers Life Little symphonic orchestra.

Herb Feierman and his Omadala orchestra, Horo,
WOC, Davenporf, lowa (483,6), 12:15-12:25 p. m., farm'school, 'Legume Day-Red Clover Seed-Good Seed-Esstential'': 3-3:30, home management schedule, Aunt Jane; 5:45-6, chimes concert; 6:30-6:50. Sandman's bedtime stories; 7-7:30, the Larkinites, WEAF; 9-10. Goodrich Zippers, WEAF; 11-12, LeClaire hotel orchestra; Peter MacArthur, bartione.
WOK, Chieago, Ill. (217.3), 5-7 p. m., Gus C. Edwards' orchestra; organ, Capitol theater; George Allen, tenor; Harriet Doty, contralto; Bob Mokreis, pianist; 10 p. m. 1:30 a. m., Gus C. Edwards' orehestra; Husk O'Hare's orchestra; Tierney's Town club orehestra; program, Capitol theater; Herman (Continued on page 20)

(Continued on page 20)

Thursday, December 17

(Continued from page 19)

Continued from page 19)

Sinaiko, violinist: George Allen, tenor; Harriet Lee, contraito; Bob Mokreis, planist.

WOQ, Kansas City, Mo. (278), 7-8 p. m., Unity cducational program; 3-9, concert program, WoRD, Balavia, ill. (275), 8 p. m., Webster hotel concert tric; \$:15, Lucille Stowick, planist; \$:20, I. B. S. A. orchestra, J. B. Stott, diroctor; \$:30, Sunday school lesson; \$:3:7, Clarence Draggert, violinist, word, Chicago, ill. (447.5), 11-12 m., home economics program, Helen Harrington Downling; "Planning the Christmas Dinner—Ham and Poultry," Erna J. Bertrams; "The Work of the Illinois Vigilance Association," Philip Yarrow; 3-4 p. m., talk, Helen Harrington Downling; "Party Suggestions for New Years," Julie Ueat; 7-8, concert, Ralph Williams, orchestra; Margaret Cade, coloratura soprano; Clement Laskowski, tenor; Cecillia Arends, violinist; Johanna Arends, accompanist; Carl Loewen, dramatist; 10-1 a. m., Ralph Williams and his Ralnibo Skylarks; Jeanette Van Lonnep, mezzo soprano; Mary Van Lennep, accompanist; Lorry Sullivan; Rose Vanderbosch, soprano and pianist; Hal Lausing; Bert Davis; Ralph Keim, planologues; Annie Keim, mezzo-soprano; Lew Butler; Parish and Ward, harnony singers; Dave Kupp, Paul Kapp, Harry Eller, Blues Destroyers trio; other Radio artists to be announced; 1-2 a. m., the Ginger Man and the Little Skylarks. WSAI, Cincinnati, Ohio (325), 7 p. m., program, New York studio; the Larkinites; 7:30, Pop concert; 8, WEAF ensemble; 9, Goodrich Zippers.

WSB, Atlanta, Ga. (428.3), 8 p. m., Dr. Charles A. Sheldon, Jr., organist; 10:45, entertainment.

WSOE, Milwaukee, Wis. (246), 5:30 p. m., twillight hour, Olga Labelle, pianist; "Jimmy the Bootblack," mouth-accordionist; S:35, auto trouble shooting, Doc Otto; P. popular musical program, Lakeview orchestra, Jerry Cermak, director; Mrs. Skobis-Muth, soprano; Helen Winding, planist; E. R. Erring, bartione.

Mountain Time Stations

CFCA, Calgary, Can. (435.8), 7, p. m., bedtime travel tale, the Radio lady; 9, Canadian National Rallways program; dance

GNRC, Calyary, Can. (435.8), 1 p. m., Almt Mary;
9 special request dance program, Jack Rushton's
Crimeters, 20 special request dance program, Jack Rushton's
Crimeters, 20 special request dance program, Jack Rushton's
Crimeters, 20 special request dance program, Rosemary Gardens,
KFXF, Colorado Springs, Colo. (323.9), 9-10:30 p. m.,
dance program, Rosemary Gardens,
COA. Denver, Colo. (322.4) 12:15 p. m., musicale,
Rialto theater; 3:15, exercises; 3:30, matineo for
housewives; 4, euilinary hints; 4:15, fushion review;
6:30, concert, Brown Palace string orchestra, Howard
Tillotson, director; 7:30, farm question box.

Pacific Time Stations

KFWB, Hollywood, Calif. (252), 7:10 p. m., "Safety
First," Sergt, Edgar Johnson of traffic bureau; 7:20,
Jack Boaz, fishing scout; 7:30, Eye-o-logue, Dr.
H. S. Marshutz; 7:40-S. microphone brevities; 3-9,
program, John Wright, the Right Tallor; California
Blue Boys; Hatch Graham and his banio; Ray Bailey's
string trio; 9-10, program, Western Super-Service;
garage; June Pursell and Ron Wilson, entertainers;
Ray Kellogg and Bill Hatch, the jazz twins; 10-11.
Warner Brothers froile, direction Charile Wellman;
11-12, Hollywood Roof ballroom orchestra.

KGO, Oakland, Calif. (361.2), 7:15-7:30 a. m., health
training exercises, Hish Dobbs; 7:45, Pep class;
3:15-3:50, exercises; 11:39-1 p. m., luncheon concert;
4-55-concert orchestra, Hotel St. Francis, Vinton
Ferrera,
Orchestra, St. The Delinquents, "4-act play,
Florence Browning Miller and Allena Kanka; KGO
players, Wilda Wilson Church Allena Kanka; KGO
players, Wilda Wilson Church Allena Kanka; KGO
players, Wilda Wilson Church Allena, Kanka; KGO
players, Wilda Wilson Church Allena, Kanka; KGO
players, Wilda Wilson Church
Ruh, Leighton's Arcade cafeteria orchestra, Lock Christmas eve program of world famous Christmas carols
and sacred music, Martin Music company, featuring
Ruth Pitts, soprano; 10-11, Don Clark's Biltmore
hotel dance orchestra.

KMTR, Hellywood, Calif. (336.9), 5-5:30 p. m., Sunny
Jim's talk to children; 5:30-6:15, Wur

players, buta winon Coakley's Cabilrians. Coakley's Cabilrians. KTAB. Oakland, Calif. (240), 9-9:30 a. m., prayer service, Rev. Phillips; 8-10 p. m., program.

Friday, December 18

	Headli	ners Tod	ay
Eastern	Central	Mountair	Pacific \
		6 p. m.	
) Second	Annual Chrls	tmas Carol con-
cert.	,	comour cina	imas carot com-
8:15	7:15	6:15	5:15
WHO (526)			0.10
WJAR (305.	9) Corman	'e Tolly Do	kora
9	8	5 90119 Da	6
WBZ (333.1		intmon Come	
WDAF (365.	B) Ott Par	a' band	ıs.
WGB (319)	Checount 3	a Dang.	
9:30	8:30		
		7:30	6:30
WEEI (348.6			_
	9	. 8	7
KOA (322.4)	Excerpts	from operas.	
WEBH (370)	Light Ope	ra company,	
WLIT (395)	Morning (
	9:30	8:30	7:30
KWSC (348.	6)_ Marimb		
11	10	9	8 .
WLTT (395)	Divertisem	ents.	

Friday, silent night for: CHIC, CKNC, CNRC, CNRM. CNRO, CNRR, CNRW, KFMQ, KFRU, KFUO, KFXF. KGO, KLDS, KPRC, KUOM, PWX, WAFD, WBBR, WCBD, WEAO, WEBW, WGBS, WGST, WHAZ, WIP, WIAZ, WJBL, WKRC, WLW, WLWL, WOI, WOR, WRC, WREO, WSAI, WSUI, WSMB, WTAM.

Eastern Time Stations

Eastern Time Stations
CNRA, Moneton, Can. (291), 7 p. m., Aunt Ida; 7:30,
Dominion department of agriculture Radio service;
8, studio program, Fabien Arsenault and his 'Old
Timers': 10, CNRA orehests.
CNRT. Toronto, Can. (356.9), 6:30 p. m., dinner concert; Luigi Romanelli and his King Edward hotel
concert orchestra; 3. Christmas music; Ye Old Waites,
directed by Alfred Heather; Kathlier Irwin, plaulat;
Jessie Bortwick, centralio; Florence McNair,
soprano; Beatrice Fitzpatrick, contralto; John Detwiler, bass; 11, dance program; Luigi Romanelli's
orchestra.

wiler, bass; 11, dance program; Luigi Addinances or orchestra.

WAHG, Now York, N. Y. (345.6), 12-12:15 p. m., Sid Cohen, planist; 7:30-7:45, Maude Mason, planist; 7:45-8, Prof. Richard E. Mayne, talk; 8-9, Skinner organ recital; 9-9:15, Radio Santa Claus; 9:15-9:30, Clara Lunley, soprano; 9:30-9:45, Manly Price Boone, tenor; 9:45-9:55, studio program; 10-10:15 Manly Price Boone, tenor; 10:15-10:25, Mrs. Bob Schafer, the Radio girl; Utopia dance orchestra; 10:25-10:55.

AN EVENING AT HOME WITH THE LISTENER IN IN CENTRAL TIME

1	IN CENTRAL TIME									
٠.	Call	Lesation	M et.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
el	AT9 CFCA	Fort Brayg, N. C Terento, Ont	435	Silent Silent	5:00- 6:00 7:00- 8:00		Silent Silent	Silent 7:15-10:45	7:00- 8:55	Silent
Ĭ. i- t.	CFCN CJCA	Calgary, Alta Edmonton, Can	434.5 516.9	11:00- 1:00	Silent 8:30-9:30	Silent 8:30-10:30	Silent	Silent	9:00-10:45 9:00-10:00 10:00-12:00	Silent Silent 9:00-12:00
8	CKAC	Montreal, Que Toronto, Ont	410.7 356.9	6:30-10:00 7:00-11:00	Silent Sllent	Silent 7:00-11:00	6:30-10:00 Silent	Silent Silent	7:30-10:00 Silent	Silent Silent
Γ. >- !-	CKY CNRO CYL	Winnipeg, Man Ottawa, Ont Mexico City, Mex		8:00-11:00 7:30-12:30 Silent	7:00-10:00 Silent 8:00- 9:30	8:00-12:00 Silent Silent	Silent Silent 8:00-9:30	7:30-11:00 7:30-12:30 Silent	9:00-11:00 Silent Silent	Silent Silent
s, it	KDKA KFAB	Pittsburgh, Pa Lincoln, Nebr	309.1	5:15- 8:55 5:30- 9:30	3:00- 7:45 4:00- 5:00	5:15- 8:55 5:30-10:30	5:15-11:30	5:15- 8:55	5:15-11:30	8:00- 9:30 5:15- 8:55 5:20-10:20
1	KFDM KFI	Beaumont, Texas Los Angeles, Calif.	315.6	Stient 8:45- 2:90	8:00- 8:00 8:00- 9:00 6:00- 1:00	Silent 8:45-1:00	8:00-10:30	Silent	Silent Silent 8:45-1:00	5:30-10:30 8:00-10:80 8:45- 1:00
n	KFKX KFMQ	Hastings, Nebr Fayetteville, Ark	288.3	Silent Silent	Silent Silent	9:00-11:00 7:30-8:30	Silent	Silent	Silent 8:00- 9:00	9:00-11:00 Silent
	KFMX	Northfield, Minn Shenandeah, la	266	Silent 7:00- 9:00	7:00- 8:00 6:30- 8:30			7:00- 9:00	Silent 7:00- 9:00	10:00-11:00 7:00- 9:00
;;	KF0A KFU0	Stattle, Wash St. Louis, Mo	545. f	8:00- 1:30 Silent	Silent 8:15- 9:15	8:00-12:00 8:00- 9:00	Silent	9:15-10:15	Silent	8:00- 1:30 Silent
₩ 3.	KFVE KFWB KGO	Univ'ty City, Mo. Hollywood, Calif Oakland, Calif	252	8:30-10:00 10:00-1:00 10:00-2:00	Silent 11:00- 1:00 5:30-11:00	8:30-10:00 8:00-1:00 10:00-12:00	8:00-1:00	8:00-1:00	Silent 9:30-1:00 10:00-2:00	8:30-10:00 10:00-1:00 8:00-9:00
l. F,	KGW	Pertland, Ore Los Angeles, Calif.	491.5		9:45-11:00 8:00-12:00	10:00-12:00 8:00-12:00	9:45- 2:00		9:45-10:00 7:30- 1:00	11:00-12:30 7:30- 1:30
i-); y	KIAF KJR	Sintipok, Minn Seattle, Wash	421	Silent 10:30-12:00	4:00- 5:00 9:15-11:00	9:00-10:00		9:00-10:00	Sllent 10:30- 2:00	9:00-10:00 10:30- 1:00
ň	KTX	Independence, Mo. Oakland, Calif	44 0.9 508.2	Silent Silent	6:30-10:00 Silent	Silent 8:00- 1:00	8:00- 9:00 Silent	Silent 8:00-1:30	8:00- 9:00 Silent	Silent 8:00-12:30
el '8	KNX KOA	Hollywood, Calif Denver, Colo	322.4	7:30- 4:00 10:00-12:00	9:00-12:30 5:00-10:00	8:30-2:00 7:30-10:00 8:30-9:30	7:30- 9:30	7:30-1:00 7:30-12:00	7:30- 1:00 7:30- 8:30	7:30-2:00 7:30-10:00
s	KOB KOIL KPO	State College, N.M. Council Bluffs, Ia. San Francisco, Cal.	278	Silent 7:30-12:00 8:35- 2:00	Silent 7:30- 9:00 7:00-12:00	7:30-12:00 8:30- 1:00	Silent 7:30-12:00 8:30- 1:00	Silent 7:30-12:00 8:30- 1:00	Silent 7:30-12:00 3:30- 1:00	Silent 7:30-12:00 9:00-1:00
0	KPRC KSD	Houston, Texas	296.9 545.1	7:30-12:00 6:45-10:00	8:00-11:00 6:15- 9:15	7:30-10:00 6:55-11:00	7:30-9:30 6:55-10:00	7:30-12:00 7:00- 9:00	7:30- 9:00 6:55-10:00	Silent 7:30- 9:00
,	KSL KTAB	Salt Lake City, Ut. Oakland, Calif	240	Silent	10:00-12:00 9:45- 1:00	10:00-12:00	10:00-12:00 10:00-12:00	9:00-12:00 Silent	9:00-12:00 10:00-12:00	10:00-12:00 10:00-12:00
r r	KTBI KTCL KTH8	Los Angeles, Calif. Seattle, Wash Hot Springs, Ark	293.9 305.9 374.8	Silent Silent 9:00-11:00	9:15-11:30 8:10-11:10 9:00-11:30	Silent 9:00-10:00 9:00-11:00	10:00-11:00 10:00-11:00 00:11:00:9	Silent Silent 9:00-11:00	10:00-11:00 Silent 9:00-11:00	Silent 9:00-2:00 9:00-11:00
ď	KTW	Seattle, Wash	455 261	Sllent 9:00-12:00	9:00-11:30 Silent	Silent 10:00- 3:00	Silent 9:00-12:00	Silent Silent	Silent	Silent
y	KWSC KYW	Puliman, Wash Chicago, Ili	348.6 535.4	Silent 7:00-10:00	Silent 4:00-8:00	9:30-11:00 Silent	9:00-12:00 Silent 7:00-12:30	9:30-11:00 7:00- 1:30	8:00- 9:00 Silent 7:00-12:30	Silent 9:30-11:00 7:00- 1:30
í.),	NAA PWX	Radie, Va Havana, Cuba	434.5 400	Silent 7:30-10:00	Silent Silent	6:45- 7:00 Silent	6:45- 7:00 Silent	6:25- 7:40 7:30-10:00	8:45- 7:00 Silent	6:45- 7:00 Silent
s e	WAHG	Richmond, N. Y Minneapolis, Minn. Fort Worth, Tex	243.8	11:00-1:00 10:00-11:00 7:00-8:00	Silent 2:00-10:00 11:00-12:00	6:30-1:00 Silent 7:30-12:00	Silent 10:00-11:00 7:30-10:45	6:30-11:00 10:00-11:30 7:30-10:45	Silent 10:00-11:30	7:00-10:00 10:00-11:00 7:90-10:45
	WBAP WBAR WBBM	Sisiht, Wis	408	Silent 8:00-12:00	10:00-11:00	9:00-10:00	8:00-12:00	8:00-9:00 8:00-10:00	7:30-10:45 7:30- 8:30	7:30-10:45 Silent
h	WBBR WBCN	Chicage, III Staten Island, N.Y. Chicage, III	272.6	7:00-12:00 9:00-1:00	8:00-10:00 8:00- 9:15 5:00-12:00	Silent 7:00-8:00 Silent	Silent 9:00-1:00	Silent 8:00-12:00	8:00-12:00 7:00- 8:00 9:00- 2:00	8:00-10:00 Silent 9:00- 1:00
n	WBZ WCAE	Springfield, Mass Pittsburgh, Pa	333.1 461.3	Silent 7:30-8:30	7:00-8:00 5:30-7:20	5:00- 9:15 7:30-11:00	5:00-9:15 7:00-10:00	5:00- 9:15 7:30- 9:00	5.00-9:15 8:00-10:00	7:00- 9:15 7:00- 8:30
5	WCAU	Washington, D. C Philadelphia, Pa	278	Silent Silent	8:00-8:15 4:00-10:20 8:00-10:30	6:00-9:30 7:00-10:00	Silent 6:30-11:00 8:00-10:30	6:00-11:00 6:30-10:00 Silent	Silent 5:30-11:00 8:00-10:30	6:45-11:00 6:45-11:80
;	WCCO	Minn-St. P., Minn.		Silent 6:05-11:00	4:10-10:15	Silent 6:00-11:00	6:30-10:00	7:00-12:30 5:00- 8:00	7:00- 9:00	8ilent 6:15-10:00
	WCX WDAF WDWF	Detroit, Mich Kansas City, Me Providence, R. 1	365.6	5:00- 6:00 6:00- 1:00 Silent	Silent Silent Silent	5:00- 8:00 6:00- 1:00 Silent	5:00- 1:00 6:00- 1:00 7:30- 8:30	6:00- 1:00 Silent	5:00- 8:00 6:00- 1:00 Silent	5:00-10:00 6:00- 1:00 Silent
S	WEAF	New York, N. Y Columbus, Ohlo	491.5 293.9	6:00-12:00 Silent	7:20-10:15 Silent	6:00-11:30 Slient	6:00-12:00 Silent	6:00-12:00 7:00- 8:00	6:00-12:00 7:00- 8:00	6:00-12:00 Silent
,	WEAR		370.2	6:00-7:00 7:30-12:30	1:30-6:00 7:00-9:00 Silent	6:00- 7:00 Silent	6:00-9:00 7:30-12:30	6:00-7:00 7:30-12:30 7:00-9:00	6:00-10:00 7:30-12:30	6:00-10:00 7:30-12:30
i	WEEL	Boston, Mass	348.6	Silent Silent	6:20- 9:20	7:30 - 9:00	7:00-9:00	7:00-10:00 6:00- 2:00	7:00-10:00	7:00- 8:00
;	WENR WFAA WFBH	Chicago, III Dallas, Tex New York, N. Y	266 475.9 272.6	6:00- 2:00 8:30-12:00 10:30- 1:00	2:00-11:30 6:30-11:00 4:00- 7:00	Silent 6:30- 9:30	6:00-10:00 6:30-12:00 10:30- 1:00	Silent	6:00-10:00 6:30-12:00 10:30- 1:00	6:00- 2:00 6:30- 9:39 10:30- 1:00
	WFI WGBS	Philadelphia, Pa New York, N. Y	394.5 315.6	7:00- 8:30 5:00-10:30	6:30- 7:80 7:00-8:00	Silent 6:00- 6:15	7:00-11:00 5:00-10:30	5:00-7:30	7:00-10:00 5:00- 7:45	Silent Silent
:Т	WGCP	Fulford, Fla New York, N. Y.	278 252	5:30-12:00 Silent	8:30-11:00 7:00-10:15	5:30-12:00 7:00-10:00	5:30-12:00 Silent	5:30-12:00 7:00-10:15	5:30-12:00 Silent	5:30-12:00 7:00-10:00
. 1	WGES WGHP WGN	Oak Park, III Detroit, Mich Chicago, III	270	10:30- 2:00 Silent 6:30-11:30	5:00-11:00 Silent 2:30-10:00	Silent 6:00-8:00 Silent	5:00- 1:00 6:00- 8:00 6:30-11:30	5:00- 1:00 6:00- 8:00 6:30-11:30	5:00- 1:00 8:00-10:00 6:30-11:30	5:00-1:00 8:00-10:00 6:30-11:30
t	WGR WGY	Buffalo, N. Y Schenectady, N. Y.	319	Silent 8:00-11:00	6:45- 9:15 5:30- 9:00	7:30-12:00 5:30- 7:30	7:00-10:00 6:00-10:00	7:00-12:00 Sllent	7:00-10:00 5:45-10:30	7:45-12:00 6:15- 9:30
	WHAD	Madison, Wis Milwaukee, Wis	535.4 275	Silent	Silent 8:15- 4:15	7:30- 9:00 8:00-10:00	Silent	7:30-9:00 10:30-12:00	Silent	7:30-9:00 8:30-10:00
-	WHAR		275 399.8	6:30-9:30 7:30-9:00	6:50-12:15 4:00- 5:00	6:30- 9:00 Silent	6:50-12:15 7:30- 9:30	Silent 7:30- 9:00	6:30-10:00 7:30- 9:00	6:30-12:15 7:30- 9:00
١ ء	WHAZ WHB WHN	Trey, N. Y Kansas City, Mo New Yerk, N. Y	379.5 365.6 361.2	Silent Silent 6:30- 9:00	Silent 8:00- 1:00 4:00- 4:30	8:00-11:00 7:00-8:00 7:00-11:00	Silent Silent 8:30- 9:00	Silent 7:00-8:00 9:00-10:30	Silent 8:00-10:30 7:00- 9:00	Silent 7:00- 8:00 6:30-11:30
1	WHO WHT	Des Moines, Ia	526 399.8	Silent 7:00-1:00	7:30-8:30 12:00-10:30	7:30-12:00 Silent	7:30-12:00 7:00-1:00	6:30-12:00 7:00- 1:00	7:30-12:00 7:00- 1:00	7:30-12:00 7:00- 1:00
Н	WIBO WIP WJAR		226 508.2 305.9	6:00- 8:00 7:00-11:05 Silent	6:00-12:00 Silent 6:20- 9:15	Silent Silent	6:00- 8:00 7:00-12:00	6:00-12:00 Silent	6:00- 3:00 7:00-12:00	6:00- 2:00 Slient
П	WJAR WJA8 WJAZ	Pittsburgh, Pa Chleage, III	275.3	6:00-11:00 Silent	6:20- 9:15 Silent Silent	7:00- 9:00 6:00-11:00 Silent	6:30- 9:00 6:00-11:00	6:30-10:00 6:00- 1:00	7:00-10:00 6:00-11:00 10:00-12:00	7:00-11:00 6:00-11:00
ıl	M1B all	Messcheart, III Pontiae, Mich	302.8 516.9	6:00-11:00 6:00-11:30	7:45-11:00 7:30- 9:00	Silent Silent 6:00-11:30	Silent 6:00-1:00 6:00-9:00	Silent 6:00-11:00 6:00-10:30	6:00-12:00 6:00-1:00 6:00-11:00	Silent 6:00-1:00 6:00-8:00
ll	WJY WJY	New Yerk, N. Y New Yerk, N. Y	405.2 454.3	Silent 6:00-10:30	7:15- 8:15 7:00-10:00	Sijent 7:15- 8:15	7:30-10:15 7:10-10:30	Silent 8:30-10:30	7:30-9:00 7:30-10:30	7:45- 8:45 7:15- 9:45
Ш	WKAR	San Juan, P. R., Lansing, Mich Cincinnati, O	285.5		Silent Silent	Silent 6:15-8:00 6:00-12:00	Silent 6:15- 7:00 10:00-12:00	6:00- 8:00 6:15- 8:00 8:00-10:45	Silent 6:15- 7:00 8:00-10:00	Silent 6:15-8:00 Silent
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Ш	WLS -	Chicago, III Cincinnati, O	344.6 422.3	7:45- 1:00 7:00- 9:00	6:30- 7:55 7:30- 9:30	Silent 7:00- 8:00	7:00- 8:00 6:30-10:00	7:00-11:30 7:00-11:00	7:00-8:55 8:00-12:00	7:00-11:30 Silent
П	WHAK	Lockport, N. Y	265.5	8:30- 9:00 8:00-10:00	6:30- 7:30 6:30- 7:30	7:00- 9:00 7:00- 9:00	Silent Silent	Silent 6:30- 9:00	7:00- 9:00 Silent	8:00- 9:00
Ш		Chicago, III	250	8:00-10:00 7:00-10:30 6:00-11:00	Silent 7:00-10:30 6:00-11:00	Silent Silent 6:00-11:00	8:00-10:15 7:00-10:80 6:00-11:00	8:00- 9:45 7:00-10:30 6:00-11:00	7:00-11:00 7:00-10:80 6:00-11:00	8:00-10:15 7:00-10:30 6:00-11:00
	WMCA	Memphis, Tenn New York, N. Y.	499.7 340.7	7:30-9:30 8:00-12:00	Silent 6:00- 9:00	7:30- 9:30 8:00-11:00	7:30-12:00 7:00-11:00	Silent 8:00-11:00	7:30-9:30 8:00-11:00	7:30-12:00 7:00-10:45
H١	WNAC	Besten, Mass New York, N. Y	280.2 526	7:00- 9:00 6:00- 9:30	2:00-8:30 8:00-10:00	7:00- 9:00 6:35- 9:30	7:00- 9:00 6:10- 9:30	7:00- 9:00 6:30-9:30	7:00- 9:00 6:85- 9:30	7:00- 9:00 6:30- 9:30
' ['	WOAI WOAN WOAW	San Antonio, Texas Lawrenceb'g, Tenn. Omaha, Nebr		Silent Silent 6:00-12:00	8:00-10:30 9:00-10:00 9:00-10:00	Silent 9:00-10:00 6:00-11:00	8:30-10:30 9:00-10:00 6:00- 1:00	8:30-9:30 9:00-10:00 Silent	Silent 9:00-10:00 6:00-10:00	8:30- 9:30 9:00-10:00 6:00-10:00
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Т	WOQ WOR WORD	Kansas City, Mo. Newark, N. J Batavia, III	278 405.2	8:00-11:00 5:15- 7:30 8:30-10:30	7:00- 7:45 Slient	Silent 5:15-8:30 Silent	8:00- 9:00 5:15- 6:30 8:30-10:00		7:00- 9:00 5:15- 6:30	Silent 5:15- 6:30
í	WORD WOS WPG	Jefferson City, Mo. Atlantic City, N. J		Silent 6:00-11:00	6:45- 8:00 8:00- 9:00 3:15-11:00	8:00-10:00 6:00-11:00	Silent 7:00-11:00	8:30-10:00 8:00-10:00 Silent	8:30-10:00 Silent 7:00-11:00	8:30-10:30 8:00-10:00 6:00-11:00
	WQJ WRC	Chicago, Hi Washington, D. C	447.5 468.5	7:00- 3:00 6:00-10:30	7:00-10:00 Silent	Sllent Silent	7:00-2:00 6:00-10:00	7:00- 2:00 Silent	7:00-2:00 6:00-10:00	7:00- 2:00 Silent
1	WRW	Tarrytown, N. Y	285.5 273	9:00-11:00 8:00-10:30	Silent 7:00-10:30	Silent 8:00-10:30	7:15- 9:00 8:00-10:80	8ilent 8:00-10:30	7:15- 9:00 8:00-10:30	Silent 8:00-10:30
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1	WTAG WTAM	Worcester, Mass	268 389.4	Silent 5:00-11:00	6:00- 8:15 Silent	7:00- 8:00 5:00-11:00	7:00-10:00 5:00- 6:00	7:00- 8:00 5:00-11:00	7:00-10:00 5:00- 6:00	7:00- 8:00 5:00- 6:00
}	ı. ı.w	Hartford, Conn Detroit, Mich	352.7	Silent. Silent	Silent 5:20- 9:15			5:30-10:00 5:00- 9:00	5:80-7:45 5:09-11:80	5:30-11:30 5:00- 9:00

Fred Fischer and Bob Schafer; 10:55-11:05. Utopia

Fred Fischer and Bob Schafer; 10:55-11:05. Utopia dance orchestra.

WBAL, Balltmore, Md. (375), 9-10 p. m., musical program; Novelty night, Mary Knox Fitz, pianist-contraito; Geneva Fitz, soprano; Amos Stidman, tenor.

WBZ, Springfield, Mass (333.1), 6:30 p. m., Little symphony orchestra; KDKA; 7:30, Ralph Greenleaf, tenor; 8, Edwin J. McEnelly and his orchestra; 8:30, concert, Musicians Supply company; 9, concert, Gibbs Fiano company; Old Christmas carols; Helen Triplet, soprano; Ruth Ekberg, contraito; William Spittal, icnor; Walter Marsh, bartione; instrumental trio; Ruth Ray, violinist; Arnold Janser, cellist; Dorothy Birchard Mulroney, accompanist.

WCAE, Pittsburgh, Pa. (461.3), 10:45 a. m., Gold Medal talk; 12:30 p. m., program for day; 3, program, Loew's Addine theater; 6:30, concert, William Penn hotel; 7:30, Santa Claus; 7:45, address, current motor topics, auto tours and rond conditions; 8:30, Pleasant Valley country club orchestra.

WCAU, Philadelphia, Pa. (277.6), 7:45 p. m., Clarence Seaman and his Hotel Pennsylvania orchestra; 8:15, chiropractic talk; 8:30, entertainment; 9, program; 9:30, Billy and his saxophone; 9:45, Ed Klefer, humorist; 10, musical program; 10:30, Jack Myers' Musical Architects.

WCX, Detroit, Mich. (517), 6 p. m., dlnner concert, Book-Cadillac hotel; 9, studlo program; 10, dance

ist; 10. musical program; 10:30, Jack Myers' Musical Architects.

WCX. Detroit, Mich. (517), 6 p. m., dlnner concert, Mosc. Cadillac hotel; 9, studio program; 10, dance WEAF, New York, N. Y. (491.5), 6:45-7:20 a. m., Tower health exercises; 10:45-11:05, Betty Crocker Gold Medial Flour Home service talk; 11:05-11:15, Louis Sawmell, planist; 11:15-11:30, talk; 11:30-12, Columbia university lecture on practical household arts; 4-4:15, Norman Secon, planist; 4:16-4:30, Joanne A'Dafr, soprano; 4:30-4:45, Alfonso Chattins, violinist; 4:45-5, talk, Ida Mellen; 6-7, Waldorf-Astoria dinner music; 7-7:30, Xmas fown, Santa Claus, James McCreey company; 7:30-7:40, Sir Hob Goblim shows a motion picture, Blancho E. Wade; 7:45-8, Milton Gersatnson, planist; 8-8:30, the Happiness boys; 8:30, Eagle Neutrodyne trio; 9-10, Spear and company hone entertainers; 10-10:15, Patterson Coutes, bartione; 10:15-11, musical program; 11-12, dance music.
WEBI, New York, N. Y. (272:6), 7-7:45 p. m., Lehigh serenaders; 7:15-8, W. C. Inlefeld, tenor; 8-8:30, Leon and Jda Fox, violinists; 8:30-9:30, Balconnades dance orchestra.
WEEI, Boston, Mass. (348.6), 6:45 a. m., health ex-

orchestra.

VEEI, Boston, Mass. (348.6), 6:45 a. m., health exercises; 10:45, home service talk; 3 p. m., "Habits in Children," Dr. H. J. Broughlon; 6:45, Big Brother club; 7:30, Whiting's Grade A Five; 8, Sager's half hour of hospitality; 8:30. Neapolitan Ice Cream company's program; 9, Radlo skit; 9:30, Carter's Incas; 10, Scotty Homes and his orchestra; Imperial Marimba hand.

band.

WFI, Philadelphia, Pa. (395), 10:30 a. m., solos; 10:40, home service talk, Betty Crocker; 1 p. m., Strawbridge and Clothler tea room ensemble; 3, Ophlela instrumental quartet; Caroline Hoffman, pianist; "Art in Philadelphia," Lilliam Meeser; 6:30, Bellevue Stratford hotel concert orchestra; 7, Bellevue Stratford hotel dance orchestra.

WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle Geebee: 6:30-7, Anzell's orchestra; 7-7:10, talk; 7:10-8,

Geebee 6:30-7, Anzell's orchestra; 7-7:10, talk; 7:10-8, Anzell's orchestra.

WGCP, New York, N. Y. (252), 1:30 p. m., Mirror race results half hourly; 3-3:15, Samuel Weber, blind pianist; 4:15-8:30, Osborne and Meredith, songs; 3:30-3:45, Leslie McLeod, Irish tenor; 3:45-4, Clarence Profit, pianist; 4:415, Hugo Angelo, tenor; 4:15-4:30, Rose Pomerantz, pianist; 4:30-4:45, studio program; 4:43-5, Charol de Thomee; pianist; 6-6:15, Littmam's orchestra; 6:15-6:30, Daddy Dingle and his Jingle machine; 6:30-7, Littmam's orchestra; 7-7:30, Richman entertainers; 7:30-8, studio program; 8-8:30, Ukulele Bob McDonald; 8:30-8:45, Richard Cheathams band; 8:45-9:15, Eva Rothenberg, pianologue; 9:15-9:45, Piotti and Val, songs; 9:45-10, Stricklands orchestra; 10-11, Connie's orchestra; 11-11:30, Murphys entertainers.

Plotti and Val, songs; 9:49-10, Strickiands orchestra; 10-11, Connie's orchestra; 11-11:30, Murphys entertainers.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30, Yankee Six club orchestra; 9, Winger's Crescent Park centertainers; 9:30, propgram, Albright Art Gallery; 10:30, "Thirty Minutes of Something Different," Hewitt Rubber company; 11, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director.

WGY, Schenectady, N. Y. (379.5), 2 p. m., Asia Restaurant orchestra; 2:30, music, health notes; Dr. C. W. Woodall: "The Two Cowards," one-act play; 6:30, International Sunday school lesson; 7, dinner music; 7:30, health talk; 7:40, French lesson, Leon A. Huguemont; 8:15, English drama, "The Mother Woman," Cosmo Hamilton; WGY players, Ten Eyek Clay, director; 10:30, WGY orchestra, Ruth Don, pianist. WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, talk; 8, Seaside hotel orchestra; 11:15, Strand theater organ recital.

WHN, New York, N. Y. (361.2), 6-6:15 p. m., Littmann's dinner music; 7-7:30, Larry Richman and his entertainers; 7:30-8:30, Melody club orchestra; 10:30-11, Roseland dance orchestra; 11:130, Caravan club orchestra; 11:30-12, Broadway Sanovar orchestra; 12-12:30 a. m., Silver Slipper orchestra.

11.30, Caravan cruo decreases, Albert Slipper orchestra.

Samovar orchestra; 12-12:30 a. m., Silver Slipper orchestra.

WIP, Philadelphia, Pa. (508.2), 1 p. m., Luncheon music. Gimbel tea room orchestra; 3, Charles Freiden, violinist; Edward Springman, flutist; Kathryn Seary, ballad singer; Flora Ripka, accompanist; 6:05, Betjamin Franklin concert orchestra; 7, Uncle Wip's bedtime story; banjo duets, Ralph Reeves, Merle Rogers.

WIAR, Providence, R. I. (305.9), 10 a. m., Mrs. Wood; 1:105, Woodstock entertainers; 7:30, Margaret Reld; 7:45, Beethoven quartet; 8:20, speaker, R. I. Medical society; 3:30, Gorman's Jolly Bakers; 9, program, Margaret Wigham, director; 11, Providence Blitmore dance orchestra.

Margaret Wightam, Modern James James John Goldkette's WJR, Pontiac, Mich. (517), 7 p. m., Jenn Goldkette's Petite Symphony orchestra; soloits; 7:30, Arctic-Condon trio; 8, Summerfield and Hecht. WKAR, E. Lansing, Mich. (285.5), 7:15 p. m., lectures on botany, English, forestry; 8, educational program, total department.

WKAR. E. Lansing, Mich. (285.5), 7:15 p. m., lectures on botany. English, forestry; 8, educational program, state department.

WLIT, Philadelphia, Pa. (395), 12:30 p. m.. Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Al Hughes dance orchestra; 7:30, Dream Daddy; 8, "Philadelphia Firsts; 8:15, concert music; 8:30, sports talk; 8:45, musical programs; 10, meeting. Morning Glory club; 10:30, Bufus and Rastus; 11, program, musical, comedy stars.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vall and his Hotel McAlpin string ensemble; 6:30-7:30. Ennic Golden and his Hotel McAlpin string ensemble; 6:30-7:30. Ennic Golden and his Hotel McAlpin orchestra; 8-8:15, O. G. Van Campen, course in public speaking; 8:50-9, Broadway association program; 9-10, Hardman hour of music; 11-11:16, Mario Alvarez, tenor; 11:15-11:30, Donald Flamm, dramatic critte.

WOR, Newark, N. J. (495.2), 6:15-6:17 p. m., words often mispronounced; 6:17-6:30, Bill Wathey, sport talk; 6:30-6:45, Man in the Moon stories; 6:45-7:30, Hotel Shelton ensemble.

WPG, Atlantic City, N. J. (299.8), 6:45 p. m., Arthur Scott Brook, organist; 7, Hotel Morton trio dinner music, J. Leonard Lewis, director; 8, "Educational Scries," Patrick J. Doran, chilef of police; 8:15, Dorothy Torchiana, soprano: Dr. Rerivam Fenlmore, organist. (268), 10:45 a. m., food

10, Nick Nichols' danco orchestra; 11, Jean victorial organist.
WTAG, Worcester, Mass. (268), 10:45 a. m., food hints, Mildred C. Thomas; 7:45, "Mechanics of Speaking," Meta B. Wade; 8, travel talk; 8:15, concert program; 8:30, current events, Gwendolyn Albee.
WTIC, Hartford, Conn. (475.9), 11 a. m., Housewives' forum, J. M. Dean; 12:03 p. m., luncheon music; 6:30, Young People's period; 7, Emil Helmberger's Hotel Bond trio; 7:30, H. H. Armstrong; 8, Second Annual Christmas carol concert; Travelers choral club, 70 voices; Travelers sympbonic ensemble; 10, LeBai voices; Travelers sympbonic ensemble; 10, LeBai 70 voices; Travelers symphonic ensemble; 10, LeBa Tabarin orchestra; 11:30, popular haif hour, Don Ram

Tabarin orchestra; 11:30, popular half hour, Don Ramsey's Four.

WWJ. Detreit, Mich. (352.7), 7:30-8 a. m., exercises, R. J. Horton; 9:30, "Tonlight's Dinner," woman's editor; 12:95 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, concert; 8, News orchestra and soloists; 3, dance program.

Central Time Stations

KFAB, Lincoln, Neb. (340,7), 5:30-6:30 p. m., Santa Claus, Monte Munn, Belshaw's orchestra; 8:30-10:30, Jos. J. Van Ackeren, violinist; Joe Bruhl and Vletorians orchestra; Gordon G. Deiney, fluitst, Richard Low, Chinese baritone; Mabel and Julius Ludlam, violinist and planist; Delney and Hembor, fluitists; Rose Neff, operatle whistler.

KFDM, Beaumont, Texas (315:6), 12:25-12:55 p. m., concert; Magnolia Potroleum company's refinery band; (Continued on page 21)

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MORNING GLORY CLUB THROUGH WLIT

Friday, December 18

(Continued from page 20)

7-7:30, children's program; 8-10, the Magnolla Petroleum company's refinery band.
KFEQ, Oak, Neb. (268), 2-3 p. m., Kings Entertainers.
KFMX, Northfield, Minn. (337), 10-11 p. m., organ recital.

cital. KFNF, Shenandoah, Iowa (266), 7 p. m., Sunday school

KFMF, Shenandoah, lowa (266), 7 p. m., Sunday school lesson; 7:30, organ concert.

KFVE, University City, Mo. (240), 8:30 p. m., amusement review, Romaine Fielding; studio entertainers; Orchestra Romaine.

KMA, Shenandoah, lwa (252), 11:30 a. m.-12:30 p. m., rural program; talk, G. H. Van Houten; "Horticulture," Earl E. May; music; 6, How Do You Doys, Grady and Doc, with Connie Forte and the Stumber Boat; 9, Tarkio Musical club, Tarkio, Mo. KSD, St. Louis, Mo. (345.1), 7 p. m., fur hour, I. L. Roy Stocker, cornetist; 7:30, commerce hour; Esmeralda Berry Mayes, violinist; 8, Mildred Kinaid, contralto; Grace A. Newman, pianist; 3, Ruth Hazlett Wunder, soprano; Paul Friess, planist.

KSO, Clarinda, lowa (241.8), 7-10 p. m., dance or chestra.

Wunder, soprano; Paul Friess, pianist.

KSO, Clarinda, lowa (241.8), 7-10 p. m., dance orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 9-9:40 p. m., concert, Arlington hotel orchestra; Edward Richter, cellist; 9:40-10, Lawson Reld, organist; 10-11, the Pooley Hour serenaders.

KYW, Chicago, Ill. (5366), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 12, noon-day concert, Commonwealth Edison company; 1, Congress hotel; 6-7, dinner concert, KDKA; 7:05-7:30, bedtime story, Uncle Bob; 9, musical concert, Commonwealth Edison company; 10-12:30, midnight revue, Henri A. Keates, organist: 1 a. m., Insommia club.

WAMD, Minneapolis, Minn. (243.8), 12 noon, studio program; 7:05, public school hour, Jordan Junior High; 8, Reception Five; 11, Skyrocket frolic.

WBBM, Chicago, Ill. (226), 4-6 p. m., Harry and Sandy; Valeutino Inn orchestra; Harold Morava, lyric tenor; William Daiton, barttone; Joe McManus; Ralph Botthof; 8-10, Tip trio; Manhattan quartet; David Handler; Morris Silverman; Kristi Kalleta, cellist; Moulin Rouge orchestra; Babbe and Barr; Mowers and Sieburg, two pianos.

WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, "The Shopper's Ready Helper," shopping talk; 5-5:15 p. m., police bulletins; 7-8, Fireside hour, WBCN, Chicago, Ill. (266), 10-10:30 a. m., Penny Wise, publishers," tenor and sonswriter; Harold Johnson, boy xylophonist; 10-12, request program; Midway dancing gardens orchestra; Eddle Matts and Billy Donovan, tenor and pianist; West End Harmony boys, instrumental duo; Ed Dempsey, "The Silken-Voleed Tenor;" Alice McMahon, contralto; "Big Boy" Yagle, pianlogist,

ovan, fenor and pianist; West End Harmony boys, instrumental duo; Ed Dempsey, "The Silken-Voieed Tenor;" Alice McMahon, contraito; "Big Boy" Yagle, pianologist.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 9:30 a. m., program for day; 10:15, "For the Gold Medal Christmas Basket," Betty Crocker; 12 m., concert, Dlek Long's Dayton trio; 2 p. m., woman's hour; 4, readers' club, Mrs. Walter Stevens; 4:45, tuher-culosis Radio taik; 5:30, court of Gold Medal; 6:15, dinner concert, Biley's St. Paul hotel orchestra; 7:45, "Bee Keeping"; 8, health talk; 8:15, musical program; 10:05, dance program, Arnold Frank's St. Paul hotel orchestra.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., Gold Medal flour cooking school; 6-7 p. m., school of the air; address, Kansas City children's bureau; the Tell-Mea-Story Lady; Trianon ensemble; 8-10, Olathe, Kan, program; Ott's boys' band, D. R. Ott, director; 11:45-1 a. m., Nighthawks frolle; the Plantation players; Earl Coleman's orchestra; Kuhn's orchestra. WDOO, Chattanoga, Tenn. (256), 6:39-7 p. m., Tivoli theater organ; 7-8, Hotel Patten orchestra; 8:15, special features; 11, popular request program.

WEBH, Chicaga, III. (370.2), 7-8 p. m., Oriole orchestra; Pauline Sachs, soprano; Eleanor Kaplan, violinist; 9-10, WEBH Light Opera commany; 11-1, Oriole orchestra; Pauline Sachs, soprano; Eleanor Kaplan, violinist; 9-10, WEBH Light Opera commany; 11-1, Oriole orchestra; Pauline Sachs, soprano; Heanor Kaplan, violinist; 9-10, WEBH Light Opera commany; 11-1, Oriole orchestra; Pauline Sachs, soprano; Heanor Kaplan, violinist; 9-10, WEBH Light Opera commany; 11-1, Oriole orchestra; Huterry review; 6:30-7:30, municipal bund, Crandall, Texas (475.9), 12:30-1 p. m., Sunday school lesson, Dr. Horace M. Whaling; 3:30-4, Sears-Roebuck Agricultural Foundation home-makers; 4:30-5, woman's hour, literary review; 6:30-7:30, municipal bund, Crandall, Texas, A. A. Cruz, directing; 8:30-9, Dm., Virginia Wiley, pianist; McKinney, Dallas, Jack Andrews, marimbaphonist.

WEBA, Louisville, Wy. (399.8), 4-5

hotel.

HO. Des Moines, Iswa (526), 7:30-8 p. m., Colored
Ladies' quartet; 8-9, Grand Junction band, Harry
Erwin, director; 11-12, Bankers Life Corn Sugar
dance orchestra.

dance orchestra.

WHT. Chicago, III. (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, elassical program, dinner organ recital, Grayling's string trio; Bob York, tenor; Bernice Taylor, soprano; Mina Smith, violinist; Leola Alkman, soprano; 7:45 (238), musical features; 9:30, Dutch Masters, Loftis half hour of music, Freddie Whitmer, planlst; Samuel G. Rowe, tenor; Oscar Heather, tenor; Pat Barnes, tenor; Helen Rauh, pianist; Husk O'Hare's orchestra; 12, Pat Barnes and Al Carney.

WiBO, Chicago, III. (226), 2-4 p. m., shut-in program; Jack Sprat and the Carl Sulzer orchestra; Ted Florito, planist; Victor Young, Dan Russo, violinists; Vernon Hayes, saxophonist; "Home Economics," Grace Viail Gray; 6-8, Waiter Preston, popular songs; Ottis Pike Jester, soprano; Mary Thrash House, planist; Joe North, barbitone; Sheperd Levine, tenor; Florence Osterman; Ray McKay, baritone; Evelyn Nelson, planist; 10, special Oh Henry; night, "Special Show." WJJD, Mosseheart, III. (302.8), 10 p. m., Senator Harold C. Kessinger, Jean St. Anne, Christian A. Grimm, Emma Butler, Cleo Mesner, Agnes Pringle; 12 midnight, Genova organ.
WLS, Chicago, III. (344.6), 12 m., Ford and Glenn; 6:15, announcements; 6:30, Ralph Emerson, organist; 7; 101 laby time, Ford and Glenn; 7:15, W. L. S. trio; 7:45, "Poet's Corner, Walace Bruce Amsbarny; S. R. F. D. farm program; 9, Apollo club; 10, Alice Forte, planist; 10:40, Ford and Glenn time; 11, Paul Ash and orchestra.
WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthful exercises, William Stradtman, Y. M. C. A.; 7:45, morning devotions, ausplees of Parkway Y. M. C. A.; 12:30 p. m., concert, Hotel Gibson, Robert Visconti, director.
WMAQ, Chicago, III. (447.5), 12:25 p. m., Y. M. C. A.

12:30 p. m., concert, Hotel Gibson, Bobert Visconti, director.

WMAQ, Chicago, III. (447.5), 12:25 p. m., Y. M. C. A. forum; 1, Radio farm school; 2, shut-in program; 4, talk on the preschool child; 4:30, "Todbles of the Moment." Mrs. Graham Aldis; 5, child life stories; 5:30, organ, Chicago theater; 6, Family Altar league; 6:15, Wide-Awake chub program; musical lecture, Mrs. Marx Oberdorfer; 8:30, Whitney trlo; 9, lecture, University of Chicago; 9:20, Elizabeth Stokes, soprano; 9:45, Christian Endeavor topics.

WMBB, Chicago, III. (250), 7-8 p. m., Trianon duc, Beatrice Teller, Frank Bordner; 9-11, Trianon orchestra, Dell Lampe, director; Woodlawn theater orchestra; Pat McGulre; Ed "Banjo" Hines; Jack Goodwin, Frank Carter, Fred Rose.

WMC, Memphis, Tenn. (499.7), 8:30 p. m., Mrs. David Wayne Maxwell; 11, frolic.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program, Kamma's Hawaiians; 8:30, musical program, Menger hotel trio.

WOAW. Omaha. Nebr. (526), 12:45 p. m., Sunshine

Menger hotel trio.

WOAW, Omaha, Nebr. (526), 12:45 p. m., Sunshine

Barkdoll, declaimist.

Mountain Time Stations

CFAC, Calgary, Can. (435.8). 7-8 p. m., salon broadcast. Gladys Webb Foster, director.

CNRE, Edmonton Can. (616.8), 7.30-8 p. m., children's had hour; 8:30-10:30, studio concert, Newsbord, Charles Concert, Newsbord, Charles Charles, Charles Charles, Charles Charles, Charles Charles, Charles Charles, Charles Charles, Charle

Pacific Time Stations

Pacific Time Stations

CNRV, Vancouver, Can. (291), 8:30 p. m., studio program, Rhena Marshall, sofranci Jessle Grant Munshaw, planist; Alice Wilma Metz, violinist; Florence L. Lyle, elocutionist; 10:30, Cabaret Belmont orchestra; Miss Bebe Mullar, soprano.

KFDJ. Corvallis, Ore. (282.5), 7:30 p. m., musical selections; 7:40, "Modern Accounting," F. L. Robinson; 7:55, musical selections; 8:05, "House Eating, How to Conserve Fuel and Cut Down Repair Bills," Earl C. Willey; 8:20, "Developments in the Production and Use of Engineering Materials," S. H. Graf; 8:35, music.

KFWB. Hollywood, Calif. (252), 7:30-8 p. m., program,

8:35 musle.

K:SFB, Hulywood, Calif. (252), 7:30-8 p. m., program
Elmer R. Sly company; 8-9, program, Starr Plant
company, Holywood Rythma Kings; Ina Mitchel
Butler, soprano; Estelle Shake, blues singer; 9-10
program; Don P. Smith, Inc., Diana-Moon orcheat
Sol Hoop's Hawailan trle; Ashley Sisters, close har-

WSOE, Milwaukee, Wis. (246), 5:30 p. m., twilight hour, Aunt Julie; Caroline Ramminger, soprano; Olga LaBelle, pinnist; Agnes Roets, marimba soloist; S:45, week's best books, Bookworm; 9, Wack's Iver-Johnson mandolin-guitar quintet; S. J. Newton, baritone; N. Barkdoll, deelalmist, TO BE HEARD AGAIN

TENNYSON TALK IS FIRST ON MUSEUM PROGRAM

British Will Radio Spoken Words of Those Long Silent in Tombs of Honor

LONDON .- One of the most interesting LONDON.—One of the most interesting broadcasting ideas ever suggested is about to be carried out by the British Broadcasting company. It is that a program of speeches, vocal and instrumental music, and recitations by distinguished persons now dead be broadcast from treasured old phonograph records.

The first broadcast in the series will be from a record made by Lord Tennyson, England's famous poet laureate, who was

De from a record made by Lord Tennyson, England's famous poet laureate, who was credited with a beautiful voice.

While unfortunately the most ancient records—and consequently the most fascinating to listeners of today—are in such poor condition that they will not stand reproduction, there exist in the British Museum collections from which a wonderful Radio hour of voices from the past **is** being compiled.

Beerbohm-Tree Also Proposed

Some of the records which have deterioriated, however, are being reconditioned by a process just perfected, the results of which are wholly satisfactory. Queen Victoria recorded on the old cylorian phanograph but it has been decided.

inder phonograph, but it has been decided not to broadcast any such record, as it would not give a true idea of the original.

Among the records of Sir Herbert Beer-bohm-Tree, the famous actor, which will be used, are Hamlet's soliloguy on death,

be used, are Hamlet's soliloquy on death, and another of Svengali mesmerizing Trilby. Theodore Roosevelt's great antitrust speech will also be transmitted. "Going to the Races," made by Dan Leno, probably the greatest comedian of all times, is the record most eagerly awaited by British fans. They want to hear the little inflections which made people scream with laughter 30 years ago.

Patti "Broke the Record"

Patti may also be heard in a number from "Figaro" made 20 years ago. When the record was played over to her, she was so enthusiastic that she embraced the phonograph and broke the record to fragments,
Twelve records of Tennyson's recita-

Twelve records of Tennyson's recitations from his works are in existence. The British Museum also has a collection of sealed matrices, which are not to be opened for a definite number of years. Some day in the future they will make a fascinating program of celebrities now living, including the Prince of Wales and King George.

The great disappointment about the phonograph is that it was not invented

The great disappointment about the phonograph is that it was not invented early enough. It would have been interesting to have heard Lincoln's Gettysburg address, Wellington saying that he didn't say, "Up, Guards, and at 'em," or, to go further back, to have heard Cromwell shouting, "Take away that bauble," or perhaps even Nero playing the fiddle!

Spokane Forms Club

SPOKANE, Wash .- Spokane and the Inland Empire will have a Radio listeners' club of its own, according to Dr. C. Hale Kimble, of this city. The organization of the club was completed at a recent meeting.

"Spokane needs a good Radio club for "Spokane needs a good kadio club loi the community service it can render," said Dr. Kimble. "Interference will be the big problem to be taken up at the club and suggestions will be received for the best manner of its elimination."

STATIONS IN ORDER OF WAVE LENGTHS USED

li	Meters Call	Meters C	all Meter	s Call	Meter	s Call	Meter	s Call	Meter	s Call
П	217.3 WOK	275 WO	RD 309.1	KDKA	361.2	KGO	406	WBAR	468.5	$\mathbf{w}\mathbf{r}\mathbf{c}$
ı	226 WBBM	275.3 WJ		KFDM	361.2	WHN	410.7		475.9	WBAP
ı	226 WIBO			WAHG	365.6	WDAF	416.4	wcco	475.9	\mathbf{WTIC}
П	240 KFVE	278 WC.	AU 315.6	WGBS	365.6	WHB	421	KIAF	475.9	\mathbf{WFAA}
ı	240 KTAB	278 WG		WGR	370.2	WEBH	422.3	w_{Lw}	480	CYL
ı	240 WOAX		OQ 319	WSMB	370.2	WGN		WKRC	483.6	WOC
1	243.8 WAMD	280,2 WN	AC 322.4	KOA	374.8	KTHS	428.3	WSB	483.6	WSUI
H	250 WGES	282.8 WO.	AN 322.4	WJAZ	379.5	WGY	428.3	KPO	491.5	KGW
H	250 WMBB	282.8 W	SM 325.9	WSAI	379.5	WHAZ	434.5	CNRO	491.5	WEAF
П	252 KFWB	285.5 WK	AR 333.1	WBZ	384.4	CKY	434.5	NAA	499.7	WMC
ı	252 WGCP	285.5 WR	EO 336.9	KNX	384.4	KJR	434.5	CFCN	508.2	KLX
Н	265.6 WMAK	288.3 KF		KFMX)		WMBF	435	AT9	508.2	WIP
١	266 KFNF	288.3 WLV	₩ L 340.7	KFAB	389.4	WEAR	440.9	KLDS	508.2	\mathbf{w} oo
ı	266 WBCN	293.9 KT		WKAQ		WTAM	440.9	WDWF	516.9	CJCA
1	268 WTAG	293.9 WE	AO 340.7	WMCA		WFI	440.9	wos	516.9	$\mathbf{w}\mathbf{c}\mathbf{x}$
ı	270 WGHP	296.9 KP		WCBD	394.5	WLIT		WMAQ	516.9	w_{JR}
П	272.6 WBBR	299.8 KF		WLS		WOAI	447.5	\mathbf{w}_{QJ}	526	$_{ m WHO}$
H	273 KWKH		SL 348.6	KOB		WHAS	454.3	KFOA	526	WNYC
ı	272.6 WEBJ		PG 348.6	KWSC:	399.8	\mathbf{WHT}	454.3	WJZ	526	\mathbf{woaw}
H	272.6 WFBH	302.8 WJ	TD 348.6	WEEI	400	PWX	455	KTW	535.4	$\mathbf{K}\mathbf{Y}\mathbf{W}$
1	273 WRW	302.8 WI	$_{1}$ B $ 352.7$	wwJ	405.2	$_{ m KHJ}$	461.3	WCAE	535.4	$\mathbf{W}\mathbf{H}\mathbf{A}$
H	275 WHAD	305.9 KT	CL 356.9	CFCA	405.2	WJY '	467	KFI	545.1	$_{ m KFUO}$
ı	275 WHAR	305.9 WJ.	AR 356.9	CKNC	405,2	WOR	468.5	WCAP	545.1	$_{ m KSD}$
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Sunday dinner monu, recipe service; 1, Randall's Royal Fontenelle orchestra; 4:15, Blah bunch; 6, Val McLaughlin, the Sandman; 6:20, musle review, Hester Bronson Copper; 6:45, Brandels Tea Room orchestra; 9, Deluxe program; 10:30, Frank Hodek and his Nightingale orchestra. 10:30, Frank Hodek and his Nightingale orchestra; 3-3:30, home management sehedule, Aunt Jane; 4-5, Crescent orchestra; 5:45-6, chinnes concert; 6:30-6:50, Sandman's bedtime stories; 8-9, muslcal program, Orville Rohlf, director; Burnell Shuler, organist; 9-3:45, travel lecture, "Around the World with B. J. Palmer."
WOK. Chicage, Ill. (217-3), 5-7 p. m., Gus C. Edwards' orchestra; organ, Capitol theater; Jean Carlison, soprano; Bob Mokrejs, planist; George Allen, tenor; 10 p. m.-1:30 a. m., Gus C. Edwards' orchestra; Teners's orchestra; Tienwards' orchestra; Capitol theater program; Arnold B. Stephenson, musical saw; Harriet Lee, contralto; Herman Sinako, violinist; George Allen, tenor; Bob Mokrejs, planist.
WORD, Batavia, Ill. (275), 8 p. m., Webster hotel concert trie; 8:15, Uncle Dan, Radio WORD study club; 8:30, Namette Blackstone, soprano; Ethel Schwertz-ler, violinist; Neille Allen, planist; 9:15, lecture, "Germ Theory," J. J. Mount, dental surgeon; 9:30, "Radio a Remedial Agent." Dr. Chester A. Morrito, of Missouri Roads; "Snakes, Good and Bad," Homer A. Wilson; Moniteau County Farm clubs, W. H. Schull, director; Mrs. Nanalee Thompson, planist.
WOJ, Chicago, Ill. (447-5), 11-12 m., Ted Wilmes, ehef, Rainbo Gardens, Sunday dinner menu; 3-4 p. m., talk, Helen Harrington Downing; 7-8, concert, Raiph Williams and his Rainbo Skylarks; Dr. H. Luclile Long, woman harmonica player; Eleanor Terry, Mario Pollette; Laurie, Eddie, Bennie, the Melodians; Lean Terrill, baritone; Edd McGinnis, accordion; Anita Chellis, comedienne; Lone; other Radio artists to be announced; 1-2 a. m., Raiph Williams, and the Little Skylarks, WSB, Attanta, Ga. (428.3), 8 p. m., concert; 10:45, Carter Electrie Radiola orchestra.

mony duo; 10-11, Warner Brothers frolic; Charley Ilch's Sunset Canyon Country club orchestra; 11-12, Hollywood Roof ballroom orchestra.

KGO, Dakland, Calif. (361.2), 7:20-7:30 a. m., health training exercises; Hugh Dobbs; 7:45, Pep class; 8:15-8:30, exercises; 11:10, home-making talk, Prudence Penny; 11:30-1 p. m., luncheon concert; 3-4, Muriel Bates Keast, soprano; Mary Mulvany, contralto; book review; Anna Lucchesi, pianist; Maybelle Morrison, violinist; 4-5:30, Hotel St. Francis concert orchestra, Vinton LaFerrera, conductor; 5:30-6, girls; half hour; 6-7, dinner concert, Baldwin Plano company; Knickerbocker trio.

KH, Los Angeles, Calif. (495.2), 6:30-8 p. m., KHJ's annual Christmas party for the Radio children; 8-10, program, Western Auto Supply company; 10-11, Don Clark's Rillmore hotel dance orchestra.

KMTR, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio; Town Tattler; 6:30-7, Atwater Kent concert orchestra, Paul Finstein, leader; 7-7:30, El Patio ballroom orchestra; 7:30-8, program, Eastern Outfitting company; 8-9, West Coast theaters; 9-10, program, Davis Perfection Bread company; 10-11, program, Walter G, Scheck; 11-12, Ray West's Coconnut Grove dance orchestra.

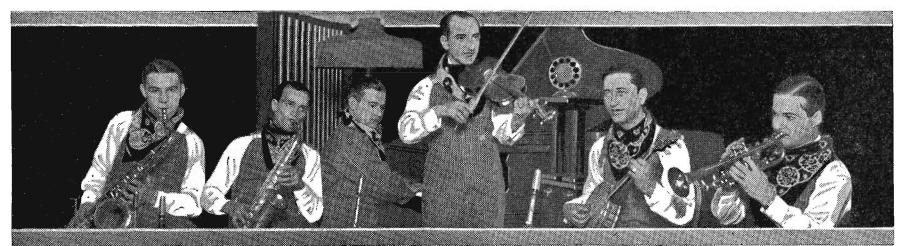
KPO, San Francisco, Calif. (428.3), 7, 7:30, 8 a. m., daily dozen exercises; 12:45, talk; 1:30-2, Rudy Seiger's Fairmont hotel orchestra; 5:10, Palace hotel dance orchestra, Gene James, director; Al Jacobs, planist; Maurice Gunsky, tenor.

KTCL, Seattle, Wash. (305.9), 8-8:10 p. m., Gerkes' music house; 8:10-8:20, Huteson-Donahey optical company; 8:20,8:30, Lucte's Errorch Duve Cleaners; 8:20,8.

program.

KTCL, Seattle, Wash. (305.9), 8-8:10 p. m., Gerkes' music house; 8:10-8:20, Huteson-Donahey optical company; 8:20-8:30, Louie's French Dry Cleaners; 8:30-8:40, City Transfer and Storage company; 8:40-8:50, Pants' Store; 8:50-9, Coast Shirt shop; 9:10, Western Giant Cord orchestra.

KWSC, Pullman, Wash. (348.6), 7:30-9:30 p. m., Marlmba trio, Cooper Sisters; "Reducing Disease and Inc'easing Yield in Eastern Washington Potato Field," George L. Zundel; "Electrical Pioneers No.," Charles P. Steinmetz,



Here is the hayseed orchestra or Glenn's Cornhuskers, the regular evening feature of WLS, Chicago. Left to right they are Phil Robinson, Billy Tortoriello, Glenn Rowell (at the piano), Solly Blitz, Jack Friedenberg and Rex Martin. They play all the latest barn dances including "Turkey in the Straw" and "Pop Goes the Weasel."

Radio Digest

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Vol. XV

Saturday, December 12, 1925

No. 10

Announcers and Sopranos

WONDER why it is that every time we criticise VV the announcing at some of our best stations, our readers immediately take the trouble to flood our mail with letters supporting our stand? There must be

with letters supporting our stand? There must be some terrible announcing on the air. Twisting the dials around a few times soon confirms our suspicions. Why is it that a large business house will invest from \$30,000 to \$150,000 in a broadcasting station and from \$25,000 to \$100,000 a year in station operating expense, and then cash in so poorly on the investment merely by overlooking the efficiency of the announcing? Is the name of the station a secret? Is the hypothetical business house really trying to act Santa Claus and GIVE the public entertainment, music and service without an iota of indirect advertising? We service without an iota of indirect advertising?

doubt the latter being the case.

Of course, when we say iota, we mean that the announcer should identify the broadcaster, but on the other hand, we do not recommend that the broadcasting firm, through its announcer, indentify too thoroughly just what goods his firm is interested in selling or promoting. The announcer is not supposed

to be a salesman.

Bruno Lessing, writer of national repute, insists that an announcer is nothing more than a Radio butler. His function is merely to tell the public what the numbers are, possibly include what they were, and indentify the artists and the station.

indentity the artists and the station.

In our opinion, Mr. Lessing has outlined very clearly what announcers need to do. He goes on to say that announcers, many of them, overstep this outline of duties and give boresome dissertations not necessary to the enjoyment of the public. We shall not enter this phase of his criticism at this time, although we are often inclined to agree with Mr. Lessing on this point also. However, we do maintain that there are many very poor butlers on the air.

But, just because an announcer must "buttle" he

But, just because an announcer must "buttle," he need not be unpopular. In fact, it is our idea that the better the butler, the more popular the announcer.

Now let us unrivet our gaze from announcers and travel to the heights of the coloratura soprano. And high many of them, far too many, can go when directly

high many of them, far too many, can go when directly in front of the microphone.

When you hear a trilling, high soprano in the concert hall you can appreciate her, that is, providing she has a voice worth your appreciation. But place the same voice in front of your favorite microphone and tune her in at home on the loud speaker.

Terrible! Why? There must be some very good

The cause is one of mechanical and electrical imperfections. The microphone at its best cannot keep up with the flourishes and runs of the coloratura soprano, especially when she is too close to the microphone. The microphone is said to "blast." That's one way of

saying that the soprano has mercilessly choked the poor, defenseless "mike." Another reason is that some of the soprano's highest notes are absolutely too high to be reproduced by Radio. Most broadcasting installations will not reproduce over 5,000 vibrations per second. Many will not do that well. So the high notes and overtones are

lost.

Therefore the Radio soprano sounds far different

from the way she did in the concert hall.

If broadcasting stations won't "soprano," or "coloratura" efficiently, why do some of our largest broad-

casters book this material, knowing in advance as they

do how poorly it is going to sound in the average loud speaker? That's just another efficiency problem.

One secret of transmission of high and complex notes lies in the distance separating the "mike" and the device or person originating such sounds. This saves much blasting and often makes possible the transdactions of corporate or shrill musical instruments. broadcasting of sopranos or shrill musical instruments that otherwise would be lost to Radio.

Have you ever noticed a studio director request an Have you ever noticed a studio director request an artist to step further away from the microphone? The wise studio director should know just how far away every voice, every instrument should be from "mike." Then he should apply this knowledge.

The way to remedy the soprano evil is either to bar them from the microphone, or put good studio direction principles in effect and keep the coloraturas, and other trilling high sopranos far away from the little

other trilling, high sopranos, far away from the little metal disk that forms the gateway to the public's favor

RADIO INDI-GEST

Why I Like Sopranos

When I first saw you standing there in the studio As I looked through the glass, but could not hear, I thought you were wasting your beauty on An audience that was not near.

They told me you were just a soprano and I thought, "Another to pierce the air with high C. She is like a picture to gaze upon, Not to hear, but always to see.

But then I tuned in by accident and heard them say, That you would sing next and I would have liked To tune you out before your voice could shatter The picture of you before the mike.

But the dials back-lashed and I chanced to catch A note or two of your song ringing clear, And now, thou, sweet of face and voice, Hast changed my ideas of sopranos I fear

Poor old Pinque, still raving about your Radio girl, Gee, we never even hear ours over the telephone since she left the mike for the footlights.

Tweet, Tweet, Correction

Editor, Radio Indi-Gest: Dear Sir: Your London correspondent committed a crime against this company when he wrote that the British Broadcasting company had broadcast the voice of a wild nightingale. This memorable feat was achieved by the British Birdcasting memorable feat was achieved by the British Britasting company, and I have no hesitation in declaring this is the highest Radio success yet attained in England (we got the bird in record time). However, as the game season has now opened, we purpose continuing our good work with pheasants and grouse. With these we are confident our successes will be higher still. Yours truly, CANARY SEED, Pres. British Birdcasting company.

Really, old topper, we consider your note well played and our mistake not exactly cricket. How about picking up and rebroadcasting the Prince of Wales riding horseback? You will not need an aerial for this. Use your ground wire

The News Reaches Wisconsin!

Transmitting Music by Radio Soon a Reality

(Headline in the progressive Wisconsin News, published daily in Milwaukee, the home of the Third Trombone Player and one other wide-awake guy, the Unknown one who sent this in.

It is respectfully suggested that the telegraph desk of the News watch their INS wire closely for news of the signing of the Declaration of Independence.

Ise Got de Feever

Ise got dat Radio feever, Gee-but Ise got it bad; I turns and turns dem dials, It makes mah wife so mad.

She wants ter talk 'bout dresses, Hats, and udder ting; But all I har is moosic, An opera ladies sing.

Now I is alone, Wid moosic far an near; De clock hand is, a-crawlin, De sound are very clear.

Mah eyes gits ter burnin, I almost starts ter nod; Mah feets is still a-prancin, Ter quit is awful hard.

I thought it 'bout midnight, But golly,—it was late; Ise sholy got de feever, De facks, I has to state.

ZED.

Funny Radio Joke
Capsule critique of the higher learning in these U. S. A., from the exchange advertisement column of the Shreveport Journal:

"One set Harvard Classics, 51 books, new, for Radio receiving set."—New York World.

Custard Pies at Twenty Paces

Dear Indi: Me and Big Nose Pete are startin a company to sell stock in a new invenshun wich will be a big bone to mankine. We thot you was a goof enuf to buy a phew milyuns of it so we will let you in on the basement floor. Here's the brilliant idear. This guy Junkins in Wash., D. C., has got the rajo movies down pritty gud so we are goin to cop his idear and establishe a husband watching service for diligent, neglected and buy a pnew milyuns of it so we will let you in of the basement floor. Here's the brilliant idear. This guy Junkins in Wash., D. C., has got the rajo movies down pritty gud so we are goin to cop his idear and establishe a husband watching service for diligent, neglected and suspishus wifes. We will sell them service at two suspishus wifes. We will sell them service at two (2) bucks a week and hide rajo movie mikerfones in all big cab arrays. Then we will flash the seens on the rajo movie screens in the homes and the wifes will get the lown down on the meal tickets and the blonde stenos and hungry chorines. Can we put you down for about a milyun. Yours in crime, RAINY DAY.

Go on, you're all wet. We are married and why should we stand to lose two more bucks out of our pocket every week. Another break like that and we

Of all sad things that have been said, How about, "No DX, my battery's dead."

U. S. Listeners Are Tax Free



Condensed BY DIELECTRIC

If you live in the East you repeatedly hear the assertion that all that is worth hearing by Radio comes from that section of the country, which is a statement many fans would dispute. Not ALL that is excellent is confined to eastern broadcasting, as anyone would have to admit who listened to a concert from WLW, Cincinnati, when the Cincinnati College of Music entertained a short time ago. Whatever may be said to the contrary I shall go on record as placing that orchestra concert as one of the best ever heard on the air. In balance of program, artistic playing and intelligent leading it should rank with the best presented on concert stages anywhere.

We all enjoy dance music when it is well played and that qualification was evident in the work of an orchestra at WOC, Davenport. After commenting on the orchestra so favorably it is a little onerous to have to make the following caustic allusion to announce-ments, or rather lack of them, but it is not of benefit to anyone to gloss over the things which make fans dissatisfied with broadcast procedure. Following each dance number we listeners heard only the applause of the visible audience, being forced to wait the call letters of the station until that part of the program had been reached which introduced a singer. Just the mere announcement of station call between numbers is sufficient to please and, though entailing a little more effort, should be done.

Quartet music has assumed its rightful place in Radio broadcasting—both vocal and instrumental—with the result that those delighting in this form of musical entertainment may satisfy their wish to hear it. Two broadcasting stations many miles apart presented quartet numbers, WQJ in Chicago and WFAA, sented quartet numbers, WQJ in Chicago and WFAA, Dallas, Texas, which merit some favorable mention. From WQJ we heard an old favorite splendidly adapted to part song arrangement, "Just Awearin' for You," and because it was so much superior in rendition it is singled out for applause. The concert given by a male quartet from WFAA was equally fine throughout and displayed a blending of voices which we like to hear we like to hear.

What is more tiresome than a succession of piano selections, particularly when they are chosen from among the less interesting compositions? While I listened to KFKX, Hastings, this impression was pronounced. The announcer was always ready at the conclusion of a piano number to announce the receipt of a "request" (or several) for other numbers. Wouldn't it be better to await a few of these requests before proceeding with a prolonged set program?

A symphony orchestra concert from Station WHO, a more popular group of selections, which were creditably given by the orchestra.

We listeners owe much to Station WSB, Atlanta, We listeners owe much to Station WSB, Atlanta, and Miss King, a teacher of music in that city, for as delightful a musical evening as has been offered in some time. Miss King arranged a song cycle, "Morning of the Year," which for musical content and suggestiveness would be hard to surpass, while its continuity was beautifully preserved by a quartet of carefully trained voices. I trust my complete enjoyment of the program was charad by music lovers in every of this program was shared by music lovers in every I state in the Union.

Interesting and Simple Explanation of Radio

Chapter VII—Vacuum Tubes and Amplification

By H. G. Tanner, Associate Professor, University of Oregon

ginning of this series of articles that all matter is composed of electricity and in the case of copper and other metals some electrons on the extreme exterior of these atoms are not tightly a hot wire surrounded by a metal plate bound. They are able to wander from and all enclosed in a vacuum, it would atom to atom very easily. Slight cur- serve very well as a one-way road or

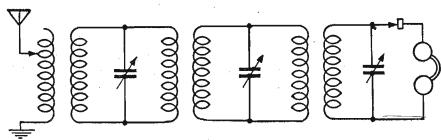
WAS pointed out in the very be-|pressed into the wire filament. assists evaporation because it increases

> Grid Makes Tube an Intensifier If the vacuum tube consisted merely of

This makes some difference in the results value we please by the use of a battery, reases For instance, a valve nearly wide open sometimes called a C battery.

would allow almost as much steam or electricity to pass as when completely open, or closed a trifle more.

In the case of a steam engine, variations in its speed would be small and perhaps not even noticed. On the other



be moved about.

It is likewise true that the atoms as a whole as well as a few detached electrons, are in a constant state of motion. The atoms (protons), however, are thousands of times heavier than the electrons and in solids their motion is more of a quiver. This quiver is very rapid at ordinary temperatures and becomes more rapid the higher the temperature.

Why Electric Light Illuminates

Why Electric Light Illuminates
When a crowd of electrons is forced
through a piece of wire they bump into
the atoms and cause great confusion. The
wire gets hot. If correctly dimensioned,
it becomes white hot and is used for

The atoms and electrons are bumping into each other at rifle bullet speeds. One might well expect some of them on the outside boundary of the wire to get bumped off occasionally. This really does In more refined language electrons and atoms evaporate from the wire. After a while the light "burns out." What really happened was that the wire entirely evaporated at one locality. The condensed vapor can be seen as a dark

film on the inside wall of the glass.

Dr. Langmuir conceived the idea of putting some nitrogen in the bulb to keep the atoms of the wire hammered into place. This gas also keeps the electrons from escaping.

Radio Uses Escaping Electrons
In a Radio vacum tube use can be made
of the electrons that evaporate. To facilitate their evaporation the gas in the bulb is pumped out as much as possible. That's the "why" of the vacuum.

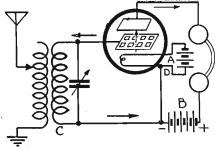


Figure 6

·A perfect vacuum has never been obtained, and the characteristics of the tube depend upon the degree of vacuum.
A tube exhausted to the highest obtainable vacuum is called a hard tube. One with a lesser degree of vacuum is called a soft tube. Both are pretty highly ex-

For Radio purposes it is desirable to have as many electrons and as few atoms evaporate from the wire as possible. Tungsten satisfies this requirement very well, but if it has dissolved in it a little thorium it is very much better—another contribution to Radio from Dr. Langmuir.

How Tube's Plate Aids Evaporation If the hot wire be surrounded by a metal plate the evaporated electrons become entangled in the plate and charge it negatively. In a short time the re-pelling action of this negative charge would prevent other electrons from evaporating from the wire and a state of rest

would occur. To prevent this the plate may be connected by a wire to the filament, and if a pump could be placed in this wire that would pump electrons from the plate over to the filament, so much the better. member that a battery is an electron pump. It is customary to call the battery used in this circuit a B battery.

The higher the pressure (voltage) developed by the pump, the more the elec-

rents in the ether will cause them to check valve (electrons are not evaporating from the plate to filament), and therefore could serve as a detector. But crystals make excellent detectors.

What Radio needed was an intensifier for reasons already mentioned.

This came when Dr. Lee De Forest placed a course wire mesh screen (grid) between the hot wire filament and the plate. The check valve became a valve of the ordinary type which is tremend-ously more useful.

The grid is placed quite close to the filament. When a very few electrons are put on the grid they can (by repulsion) prevent the evaporation of other electrons from the hot filament. This condition corresponds to a closed valve.

On the other hand if there are no electrons on the grid (neutral) or a deficiency (charged positively) then electrons have no difficulty in evaporating from the filament and are even helped along by a positively charged grid.

The evaporated electrons are traveling at a high speed (around 10,000,000 miles per hour!) and since the grid is a coarse mesh affair, not many of them are prevented from getting over to the plate. The valve is then in the wide open posi-

Tube Amplifies Signals

A valve is a device to allow tiny forces to control relatively large ones. The grid of this electrical valve is the gate and the electrons moved to and fro by ether waves sweeping the antenna, are made to open and close this gate. A glance at figure 6 will make this clear. Electrons are alternately sent onto the grid and removed in accord with the incoming ether waves. This opening and closing of the valve periodically interrupts the flow of electrons through the

The latter squads of electrons are proportional but much larger than those moving in the antenna circuit, and thus it is that amplification has been accom-

Attention is called to the wire CD of figure 6. This wire assists the grid in performing its function because during the time electrons are flowing onto the grid about as many are being sucked out of the filament. Obviously they cannot evaporate if they are in the wire CD.

The A battery merely serves to keep the filament hot. Any other method of heating might be used—a burning glass concentrating the sun's rays on it, for example—but the electrical method is usually preferred.

Amplification Offsets Selectivity Losses

Instead of sending the electrons in the telephone circuit through the phones they may be employed to open and close another valve. This second valve will open and close wider because the change in potential of the grid is greater (larger squads of electrons enter and pass off of it). The process may be repeated several times before imperfections become

Introducing these amplifying valves in the hook-up shown when discussing selectivity (figure 5 last week) makes it apparent how selectivity can be preserved without loss (in fact a gain) in energy reaching the phones.

Both hook-ups are given so as to make the comparison easy. It will be noted that separate A and B batteries are used with each tube. In practice only one set of batteries of each kind is used for all the tubes, but to picture this detail might confuse the comparison.

Grid Leak and Condenser

When it is necessary to open and close a valve more or less completely and do so with extreme rapidity, the position of trons removed from the plate and com- the valve gate when normally at rest

hand suppose the valve is almost closed | the filament bump into it. The condenser and the same amount of variation in posi-tion is given it is as in the former case.

prevents these electrons from escaping. It is desirable to have some of them escape and the grid leak regulates the



Note the quadruple core sur-rounding the coil, forming an

almost perfect path for the flux within the coil.

The core is a special grade of laminated silicon steel that

provides highest permeability

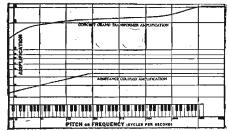
and lowest hysteresis loss, with

consequent maximum conduc-tivity in hemagnetic circuit of

the transformer, Price \$10.00.

Exacting laboratory tests show that amazing new audio gives greatly superior tone curve. Remarkably uniform and even amplification of all tones at frequencies from 32 to 10,000 cycles

Send Coupon



Note the smooth, even progression of the Concert Grand curve, revealing supreme uniformity of amplification, from lowest notes to highest in the musical scale.

NEW audio frequency transformer has been perfected, the Erla Concert Grand. It is built on a new principle and gives results far superior to any other system of amplification.

Amazing improvement

Ordinary designs permit too much leakage to amplify properly at low frequencies. So we use the "quadriform type," heretofore unknown in radio work. In this design magnetic leakage is practically eliminated by providing twice as many paths for the magnetic field and by a

West of Rocky Mts., \$10.50. better distribution of the core metal around the copper wire coils. Each of the four core units are complete magnetic circuits within themselves without breaks or joints to the main central core, and it will also be noticed that the central core section has a far greater area than conventional core types. The large area thus obtained reduces the effect of the direct "B" battery current on the pulsating voice currents and eliminates a cause of distortion common to transformers using

smaller core sections.



vides magnetic shielding. Finished in black crystalline lacquer and attractive in appearance.

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The Concert Grand saves you money, too. Resistance coupling depends solely upon the tubes for amplification. Consequently they must be operated at maximum for efficiency, requiring more "A" battery current and higher plate voltage — 135 to 150 volts. Filaments wear out more rapidly as result and bat-tery life is more than cut in half. The higher initial cost of Concert Grand amplification is therefore saved many times over not only in improved performance but also in lowered upkeep

Booklet sent FREE

Get the Audio Grand at your dealer's today. See what a tremendous difference it will make in your set. If you wish to return the coupon we will send you a new booklet giving the latest information on audio frequency amplification.

ELECTRICAL RESEARCH LABORATORIES

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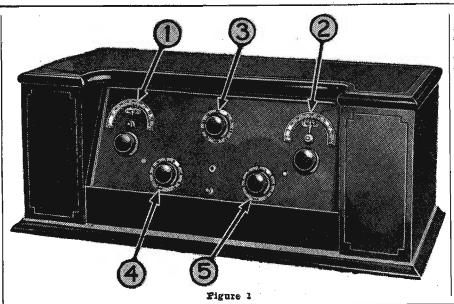
Send me information about th	he Erla Concert
Grand Audio. Also latest develop	pments on audic
frequency amplification.	

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 Crosley Trirdyn Receiver

HE Crosley Trirdyn is one of the most widely distributed, popular priced receivers now on the market, so it has been taken up next for discussion. A front view of this set is shown in figure 1, and it will be noted that there are two large dials and three knobs which appear on the face of the panel. The tuning from station to station is done by means of the two dials, while the center knob is the sensitivity control. The other two knobs are rheostats, which control the brilliancy of the filaments of



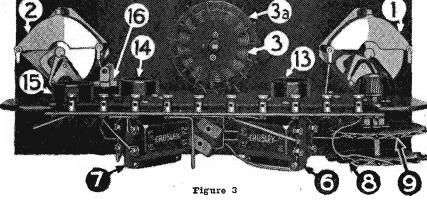
tube II, while socket 15 is to receive the tube shown as tube III.

The directions which accompany this receiver are very clear as to the antenna, ground, battery and loud speaker connections, so they will not be taken up here.

Let us presume that we wish to receive a station using a wave length of 375 meters (which is equivalent to a frequency of 800,000 cycles). The signals enter the antenna-ground circuit which includes coil 8, known as the primary, at a frequency of 800,000. We wish the tuned circuit, which is composed of coil and the variable condenser number 1, to absorb signals from this antenna circuit and, in order that it will do so, this circuit must be adjusted or tuned so that the three vacuum tubes employed.

Crosley Trirdyn is unique in the fact alternating at 800,000 per second. Turnthis coil, and variable condenser 2, form another tuned circuit, which must be adjusted to absorb frequencies of 800,000. This is done by turning the right dial, and signals which this tuned circuit absorbs will pass to the grid of the de-

In the output or plate circuit of this In the output or plate circuit of this detector tube is the coil which has been labeled 3, and which is controlled in its relation to 3A by the center knob on the panel. If this coil is too close to 3A a condition known as oscillation will be produced which prevents signals from being heard, while if this coil is too far away from 3A the valuable benefits of regeneration are not gained. It is desirable, therefore, to so adjust the relationship between these coils that regeneration will be increased to a point just before the point of oscillation is just before the point of oscillation is reached. This point can be recognized reached. This point can be recognized if the two dials are correctly adjusted, as the signals will increase in volume as the center knob is pulled out and will suddenly begin to be distorted or "mushy." This knob should, therefore, be pulled out until this point is reached and then pushed back slightly so that



as the primary, is connected to the output the volume is still present, but the disor plate of the first tube, and signals tortion is not noticed.

which have passed through tube 13 must go into part of this coil 3A. The rest of (Continued on page 28)

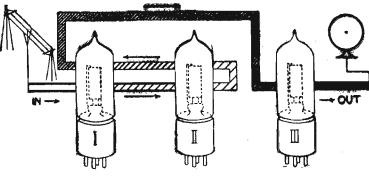


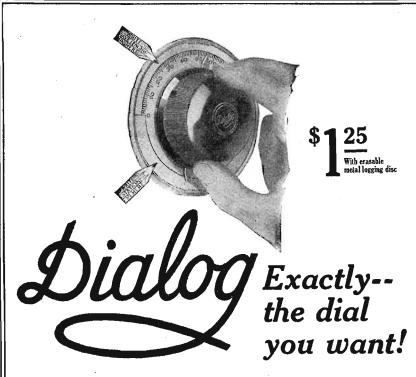
CHART OF CURRENT IN TRIRDYN RADIO PREQUENCY ZZZ AUDIO PREQUENCY ZZZ AMPLIFICATION IS DENOTED BY HEAVINESS OF SHADING

that it employs radio frequency amplifi-cation, a regenerative detector, reflexing and audio frequency amplification. In the left dial on the front panel does this. This circuit is connected at one end to the grid of the tube in socket 13

and audio frequency amplification.

Figure 2 shows the path of the current through the three tubes utilized in this receiver. Three tubes are caused to do the work of five.

Figure 3 shows the rear view of this receiver. Tube socket 13 is to take the tube which is shown in figure 2 as tube I, socket 14 takes the tube shown as



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Counterphase: Perfect Bridge Tuned R.F. Set

Part III-Wiring Made Easy

By James McDonald

N THE second article of this series, presented in last week's issue of Radio Digest, the writer described the drill-Digest, the writer described the drilling of the front panels and sub base and the assembly of the various pieces of apparatus on those panels. Presuming this has been done, we are ready to wire the assembled apparatus, which should be done carefully. done carefully.

This writer uses the bus bar wire known This writer uses the bus bar wife known as Celatsite, but the reader can use the usual bus bar, with spaghetti tubing where needed. As in wiring any set, the filament wires should be put on first, followed by the connections in the radio frequency stages, the last operations being on the detector and audio frequency portion of the set.

All wiring operations will be given con-All wiring operations will be given considering the set from the rear, with socket number 1 at the right-hand side, socket number 4 at the rear left-hand corner, and sockets 5 and 6 as the sockets between number 4 and the front panel.

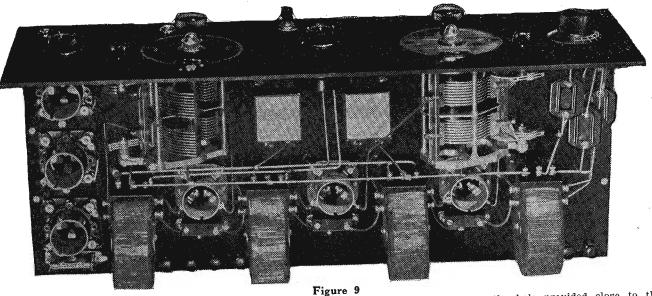
From the plus terminal of the socket at the right end drop a wire through the sub base, carry it to the left to the plus terminal of the third socket and bring it up through the sub base to that terminal. Where this wire passes under the plus terminal of the second socket put in a short wire to that terminal.

2. From the plus terminal of socket

2. From the plus terminal of socket number 6, which is that closest to the front panel, run a wire beneath the subbase 3½ inches to the right and then straight back 6½ inches, then bring it to

the left 1½ inches.

3. To this open end solder one end of the 4-ohm Carter resistance strip, which will bring the opposite end of the Carter unit very close to the positive terminal of socket number 4.



5. At the point where wire number 1 crosses wire number 2 solder these wires together, and also solder one end of another wire which is to go to the left and up through the hole provided to the positive terminal of socket number 5.

6. At the point where the positive terminal of socket number 2 is connected to wire number 1 run a short wire forward to the right-hand terminal of the filment switch

filament switch.
7. From the left-hand terminal of the 4. Run a short wire up through the switch run a wire 1¼ inches to the left sub base from this second end of the and up to the undersurface of the sub

Carter unit to the plus terminal of socket number 4.

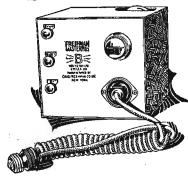
5. At the point where wire number 1 base, then straight back to the first bind-base to the hole provided close to the number 5, and to that terminal.

negative terminal socket number 1 run a long wire straight to the left on the underside of the sub

socket number 6 run a wire on the under-(Continued from page 26)

FRESHMAN MASTER"B" Battery Eliminator

61/2 inches square



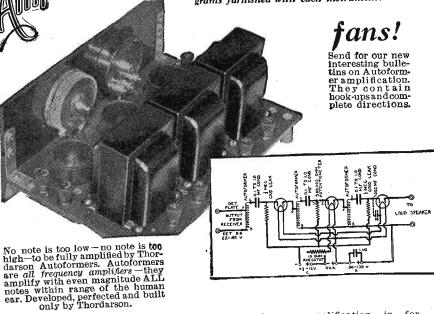
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The list price of the A. C. Model Freshman Master "B" Eliminator is \$20.00. However, a tube is required to rectify the alternating current into the required direct current for radio reception. And, as we desire to furnish the best rectifying tube that is obtainable, in our opinion, Freshman Master "B" Eliminators for alternating current are now furnished only with R. C. A. Rectron UX-216-B Tubes.



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FRESHMAN BUILDING, NEW YORK CHAS. FRESHMAN CO., Inc. 2626 W. Washington Blvd., Chicago

"COUNTERPHASE" SET

(Continued from page 25) of the sub base 4 inches to the right and then $6\frac{1}{2}$ inches to the rear, then 4 inches to the left and up through the hole provided close to the negative termi-

note provided close to the negative terminal of socket number 4.

10. Where wire 9 crosses wire 8 solder them together. Where wire 8 passes beneath the negative terminals of sockets 2 and 3 run a short lead up through the sub base to those terminals.

11. At the right end of wire 8, at the point where it bends upward to pass through the sub base, solder on a wire, which is to go diagonally to the rear and to the right to the second of the two pinding posts close to the right-hand

12. At the opposite end of wire 8, where it bends upward to go through the sub base to the negative terminal of socket 5, attach another wire, which is to continue 1¼ inches further to the left, then forward and up through the sub case to the left-hand terminal of the heostat.

13. From the right-hand terminal of the rheostat drop a wire through the sub base and carry it 61/4 inches to the right, then straight back to the second binding post from the right of the group

14. A hole was provided, in the drill-ng, beneath the left-hand terminal of he 1 mfd. condenser to the right, still ooking at the set from the rear, and a wire should be connected to that terminal and pass down through the hole provided and soldered to wire 8 at the point where the connection is taken off of socket

15. A similar hole was provided be-leath the left-hand terminal of the other mfd. condenser, and a wire should be lropped through the sub base, bent to he left 1% inches and connected to wire at a point where the lead is taken off or socket 3.

16. The rotor terminal of the switch at the lower left-hand side of the witch as viewed from the rear, and from ta wire is to be dropped through the ub base, then back to the first binding ost to the right at the rear corner.

17. On the variable condenser, directly

or front of socket number 1, there are two erminals provided on the right-hand ide, and from the rear of these two a vire is to be dropped to the top surface the sub base, and then straight back of the G terminal on socket number 1. Where this wire passes beneath the G erminal on the first torostyle coil run a ead up to that terminal.

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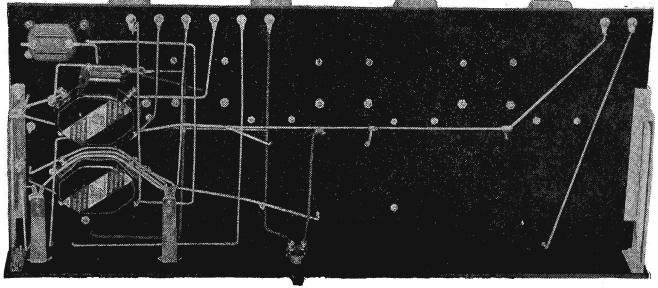


Figure 10

of the two and then down and to the left to the G terminal on socket number 2. Where this passes the G terminal on the second torostyle coil run a 2-inch wire to that terminal from it.

19. The same procedure is adopted in connection with the variable condenser in front of socket number 3, and a wire is connected to the front terminal on the right-hand side, which should go back to the G terminal on socket 3. A lead is connected to it, going to the G terminal

on torostyle 3.

20. From the rear terminal on the left hand side of this condenser a wire should be dropped 2 inches downward and to the be dropped 2 linenes downward and to the left almost to the sub base, and then straight back to the wiring hole ½ inch to the right of socket 4. It should go down through that hole and to the right hand terminal of a .00025 fixed condenser. Where this wire passes the G terminal of torostyle coil number 4 connect in a lead to that terminal. These wires can lead to that terminal. lead to that terminal. These wires can all be clearly seen in the photographs which accompany this article.

21. From the left-hand terminal of the .00025 condenser run a wire up

through the sub base to the G terminal

22. With the B-T kit there are included a number of wires cut to length, and there are six maroon colored wires, three 18. On the left-hand side of that con-enser are two more terminals, and a other three. These three shorter marcon

wire should be connected to the front one of the two and then down and to the left to the G terminal on socket number 2. Where this passes the G terminal on the second torostyle coil run a 2-inch wire to that terminal from it.

wires should be used to connect the P terminal on the P terminal on the P terminal on socket 1 to the P terminal on socket wire 25 passes the F terminals on torostyle 2 to the P terminal on torostyle 3, and the P terminal on socket 3 to the P terminals. Where It passes the C terminals from it. on torostyle 4.

23. The longer maroon wires are used

to connect the rear terminal of Mikromike 1, behind socket 1, to the M terminal on torostyle 2; the rear terminal on Mikro-mike 2 to the M terminal on toro-style 3, and the rear terminal on Mikro-

mike 3 to the M terminal on torostyle 4.

24. There are three short wires provided in the kit with a red and gold covering, and these are used to connect the T terminal on torostyle 1 with the right-hand terminal on Mikro-mike 1; the r terminal of torostyle 2 with the righthand terminal of Mikro-mike 2, and the T terminal of torostyle 3 with the righthand terminal of Mikro-mike 3.
25. From the F terminal on torostyle

1 run a wire to the left so that it passes about ¼ inch above the F terminals on the other three torostyle coils and then goes down through the sub base in front of torostyle 4, and then back to the right of the audio frequency transformer to that binding post second from the left of the group of six.

26. Where wire 25 passes behind the twin condenser to the right put in a

short lead connecting it to the terminal on the rear of that condenser. Where wire 25 passes the F terminals on torostyles 2, 3 and 4 put in short leads to those terminals. Where it passes the other twin condenser at the left drop a short lead to the binding post on the rear of that condenser.

27. From the point where the F terminal on torostyle 2 is attached to wire 25 drop another wire to the right-hand terminal of the right-hand 1 mfd. condenser.

December 12, 1925

28. Now connect the R terminal on torostyle 2 with the B terminal of torotorostyle 2 with the B terminal of torostyle 4, this wire to be about ¾ inch below wire 25. Where it passes the B terminal on torostyle 3 connect it to that terminal. Where it passes under the B terminal on torostyle 2 connect it to that terminal also. At a point directly in front of socket number 2 run a lead forward from this wire to the center terminal on the twin resistor in the center of the panel. From the point where this wire is connected to the B terminal on torostyle 3 drop a lead to the right-hand terminal of the left-hand 1 mfd. condenser.

29. From the R terminal on torostyle run a wire across to the right, so that it passes close to the R terminal on toro-(Continued on page 30)

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DX-Seven: Selective D-Coil 7-Tube Super-Het

Part IV—Adjusting and Tuning

By John G. Ryan

ing the instructions of Part III, we are

ing the instructions of Part III, we are now ready to connect the accessories to this set and adjust it for best operation. Any good make of loop antenna may be used, the only special requirement being that it have a center tap, although any loop can be altered to provide this arrangement if the user will count the number of turns, find the center turn, and solder on a lead at that point. The Aero and the Lincoln loops, both of which are advertised in Radio Digest, will work very advertised in Radio Digest, will work very well on this set, and the writer can also personally recommend the Ajax and the Volumax loops.

Connecting Accessories

The storage battery, also known as the A battery, is provided with two terminals—the negative and the positive. The positive terminal may be identified either by the letters "POS" stamped into the case close to the terminal, or with a + sign, or by a touch of red paint on the terminal

Looking at the receiver from the rear, the fourth binding post from the right is to be connected to the positive terminal, and the fifth binding post is to be con-nected with the negative terminal of the storage battery.

storage battery.

The B batteries for use with this set may be of either the storage battery or the multiple dry cell types. In either case two units of 45 volts each are required, and each unit will have a positive and a negative terminal. The negative terminal of one is to be connected to the sixth binding post, and the plus terminal of that same unit is to be connected to the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal of the seventh binding post and also to the negative terminal termi seventh binding post and also to the nega-tive terminal of the second 45-volt unit. This leaves only a positive terminal un-connected on the second B unit, and this goes to the eighth binding post at the rear of the set.

The two end terminals of the loop aerial are connected to the first and third binding posts near the right end of the set, while the center tap goes to the second

binding post.

The loud speaker is provided with a long cord, at the end of which are two nickeled cord, at the end of which are two measures terminals known as phone tips. These are to be inserted in what is called a phone plug, by which the speaker can be connected to the set by inserting the phone plug in either of the two jacks at the lower right corner of the front panel. For this initial tryout we will insert it in the second jack, which is that closest to the right edge.

Seven hard tubes of the A type are used on this set, and these should now be inon this set, and these should now be inserted in the sockets, which is accomplished by pushing straight down and then giving a slight twist to the right. The flament switch is now pulled out, and the small lamp which is part of this set should light up. The rheostat, which is the lower of the two small knobs below the meters, should now be turned to the right as far as it will go and then slightly back so the tubes will be lit nearly but not quite to maximum brilliancy.

Preliminary Operations

The potentiometer, which is the upper of the two knobs just below the meters, should now be turned pretty well over to the left, although the best position for this instrument cannot be determined until we have tuned in a station.

Tuning is accomplished by means of the two Mar-co dials attached to the variable condensers. That at the left controls the frequency of the oscillations developed by the oscillator tube, while the dial at the right controls the condenser across the loop antenna and permits variation of the tuning of the loop antenna circuit, so that the loop circuit will be adjusted for the reception of any wave length between 200 meters and 550 meters.

Tuning the DX-Seven

As a starter try setting the right hand dial at 40 and swing the right hand dial slowly back and forth between 20 and 60. After you have done this once or twice and no signals are heard, shift the posi-tion of the potentiometer knob slightly either to the left or right and again re-volve the left dial. This may have to be tried three or four times before a signal be brought in.

The voice or music will be heard faintly at first, and the volume can be increased on slight readjustment of the right dial, and also careful adjustment of the potentiometer. After the program has been brought to maximum strength by these refinements, try adjusting the rheostat and the potentiometer together. A combination of their settings will be found

which gives maximum volume and quality.

The potentiometer can be turned too far to the left, in which case there will be

Perfecting Resistor Values

While a resistor of .05 megohm was specified for use in the grid circuit of the oscillator tube, this value was presented as the correct average value after a long series of tests with different tubes. It may be that your particular oscillator tube would work better with a cartridge having a value of .1 or .025 megohm resistance sistance.

In no case was it found possible to use a resistor having a value of .25 megohm. and the use of this cartridge caused all signals to stop at once.

You can either shift your tubes around in the sockets in an endeavor to find one that works best with the .05 cartridge, or you can purchase the other two values mentioned, namely, the .1 and the .025 megohm resistors, and try them with the same tube.

The only other unit about which there might be any question is the 5-megohm leakandenser. This was specified by the writer after a great deal of super-heterodyne experience as the most used value for a grid leak in that position. Here again you have the option of shifting tubes to find the one which will work best as a detector with that particular leak-andenser, or purchasing additional cart-ridges of 4-megohm and 7-megohm values. It is highly probable, however, that you will secure most excellent results with the value specified.

C Battery Voltage

The writer has not as yet seen a model of this set nor a combination of tubes used in one of these sets where there was any advantage in using other than the full 7½ volts supplied by the C battery. The use of a lower voltage merely increased the current draw from the B

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consumption.

After you have chosen the best tube of those which you have for use as second detector and as oscillator, the remaining five tubes should be shifted around a bit in their sockets to determine the three which are the most closely alike in their which are the most closely alike in their characteristics for use in the third, fourth and fifth sockets, in which case they are known as the intermediate frequency amplifiers. After that has been determined by carefully observing the range and volume with different combinations, you should determine which of the two remaining tubes makes the best first de-

tector or mixer in the second socket.

In this matter of socket position the writer is considering the set as viewed from the front. The remaining or seventh tube is, of course, used in the seventh socket as the audio frequency amplifier.

Logging Stations Received

For each position of the right dial or loop dial at which a signal is brought in with maximum strength there will be found two corresponding positions on the left or oscillator dial. This is always the case with super-heterodynes, as the generated frequency heterodynes the incoming signal at a predetermined frequency difference either above or below the fre-

PRESUMING that the reader has assembled the DX-Seven as described in back slightly. Once the correct combination has been found, further adjustment of the instructions of Part III, we are now ready to connect the accessories to sary.

distortion, and it will have to be brought batteries, as indicated on the milliameter, quency of the incoming signal. If, for and cut down the volume. The use of any example, intermediate transformers are more voltage gave no increase in either range or signal strength, and gave only a very slight decrease in B battery current frequency of 1,000,000, signals will be cycles, and the incoming signal has a frequency of 1,000,000, signals will be heard when the oscillator system is adjusted to give either 960,000 cycles or 1,040,000 cycles.

It would be a good idea, after about five stations have been tuned in and the dial settings noted, to obtain a piece of graph paper and plot the wave lengths indicated across the bottom line of the sheet and condenser settings on the left edge of the sheet, with zero at the

Making Curves of Dial Settings

Thus, when you have a station you can Thus, when you have a station you can determine the wave length used by that station from the directory in Radio Digest, and locate this wave length on the bottom line of your graph paper. Since you have determined the condenser settings at which you receive that station, move your pencil up from the bottom edge on the correct wave length line until you reach the horizontal line corresponding to the dial settings.

responding to the dial settings.

You will thus have three intersection points for each station, and after about five stations have been brought in you. will find that three long lines can be drawn through your triplets of dots, one of which will give you the loop setting for any wave length, while the other will

(Continued on page 28)

W AorB Batteries mes as fast

TO longer is it necessary to wait several days for your battery to become fully charged. The new 5-ampere GOLD SEAL HOMCHARGER charges 150% faster than most other chargers - - - will fully charge the average battery OVERNIGHT!

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D-XSEVEN SUPER-HET

(Continued on page 27) give you the upper and lower oscillator dial setting for any wave length. These lines are known to Radio men as curves, and from them the tuning up of other stations is easy.

On local stations it may be found desirable to insert the phone plug attached to the speaker in the first jack, as the volume may be too great when used in the second. You may also prefer to tune for distant stations with a pair of head receivers, which it will be found better

to use in the first jack.

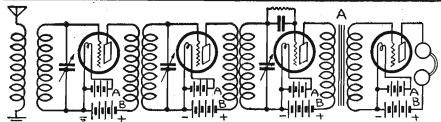
Do not forget that the loop antenna is directional, and that the plane of the loop must be parallel to the direction of the station from the point where you are located for maximum energy pickup from that station. The loop will not pick up energy from a station located in a direction at right angles to its plane. City dwellers will find that steel buildings will deflect the path of the energy, so that while a station may in reality be northwest of you, the loop may have to be pointed east and west for best reception of that station.

One might even be so surrounded by steel buildings that all stations come in with the loop in but one plane. In other words, it may be perfectly audible from all directions with the loop pointing northeast and southwest. The writer regrets that he cannot give

you a definite value for the two resistor cartridges mentioned, but until the happy time when all tubes are exactly alike in their characteristics, such direction would be impossible. On all other points, however, the directions given are best, and if you have followed them carefully you cannot go wrong.
(CONCLUSION)

Many people have the mistaken notion that the resistance of head phones is a measure of their quality. Actually, head phones of 2500 ohms resistance may be much better than others of 5000 ohms resistance. The resistance is determined by the length size of the resistance. by the length, size, and kind of wire used in their construction. Their performance is a matter of proper engineering design and the use of good materials.

AMPLIFIERS AND AUDIO FREQUENCY



(Continued on page 23)

closed) it has the effect of amplifying the big waves (audio) more than the smaller (Radio) waves. Perhaps this is why it is called a detector for in a sense. it "detects" the big waves and neglects the little ones.

If, after detection, the audio impulses are not as intense as may be desired they may be amplified still further by the same method. See figure 8.

What an Audio Transformer Is
The audio transformer at A is another broadcasting and receiving station as be-fore. The chief difference in construction is in the use of iron between the coils. fron has a directional effect on the ether waves and causes all this wave energy to go where desired. This makes it de-cidedly more efficient than when air is between the coils.

The reason why iron core transformers were not used when the radio frequency ether waves were being broadcast from one coil to another (along with the audio waves) is because there is an inertia effect in the iron. This prevents one from sending high frequency (radio frequency)

ether waves through it.
This concludes the story of Radio, the purpose of which was to explain the fundamental features to those who have had little or no opportunity to study along this line. Much has been left un-

Some readers may be left wondering about potentiometers, heterodynes, dis-

EXPLANATION OF RADIO tributed capacity, etc., but discussion of these and many other details has been intentionally omitted in order to make the truly essential principles stand out in greater relief. It is hoped the reader will follow up these details, for after all, it is attention to detail, in addition to generalities, that distinguishes the learned from the pretentious.
(CONCLUSION)

OPERATING "TRIRDYN"

(Continued on page 24) tection, passes through tube 13 a second time, but now at audible frequencies. It passes to the jack which is shown on the front panel between the rheostats and below the knob 3. A pair of head receivers can be plugged into this jack and If the receivers are not plugged in, the energy goes to audio long.

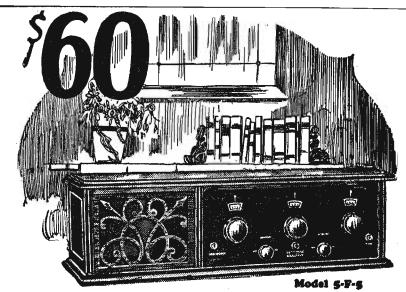
ransformer 7, shown at the left end of the shelf in figure 3, and finally is amplified again through tube 15, which was tube III in the original explanation. From this tube it goes to the two binding posts labeled "output," to which a loud speaker is to be connected.

The adjustment of the two rheostats

4 and 5 will not be found particularly critical, but once signals have been brought in, as outlined above, these rheo-stats should be adjusted for maximum volume and clearness. The piece of apparatus which has been labeled 16 in figure 3 comprises two units, one of which is known as the grid condenser and the other as the grid leak. The grid leak, which is the small glass tube held in two clips, will be found worthy of some attention in the way of changing it. Grid leak cartridges, as they are called, come in various values, such as called, come in various values, such as 2 megohms, 3 megohms, etc., up to 7 megohms. Since the tubes on the market vary considerably in their characteristics, no definite value can be given for this unit and it would be a good idea to purchase one of each value from 3 to 7 megohms. One of these will be found to give considerably better results, both in volume and clearness, than any of the others, and it should be left in the clips.

(Another well-known manufactured receiver will be studied next week.—Editor's Note.)

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How Badly Does Your Receiver Reradiate?

OW the reader can build himself a unit that will free his set from radiating to the detriment of his neighbors, and how that unit, the Thatcher unit it is called, will make his set tune more sharply and reach out farther was told briefly in last week's jewel's j ther, was told briefly in last week's issue.

It is the purpose of this article to amplify the details for construction of the Thatcher device. Figure 1 (last week) showed the circuit. Figure 2 shows the panel drilling layout and figure 3 shows the arrangement of parts on the panel and baseboard.

Constructional Details

Use number 26 dsc. wire for winding the coils. On the 3" tube 2 4" long wind 65 turns with a tap at the fifteenth turn, on the 3" tube 4" long, starting ½" from the end. Winding ½" from the end, wind 30 double turns by using two lengths of wire and winding both at the same time as a single wire. Thirty turns of this double wire will make a coil of 60 turns with four ends make a coil of 60 turns with four ends and is really composed of two coils of 30 turns each tightly coupled together. The beginning of one coil is connected to the end of the other coil, forming the positive B connection, while the two remaining terminals go to the plate and balancing condenser. It does not make any difference which terminal is connected to plate or condenser.

In order to check the double coil to determine the proper terminals, use a dry cell and head phones. From 1" to 114" from the double turn coil wind the output coil of 10 turns.

Mounting Apparatus

Mounting Apparatus

The various parts should now be mounted on the standard 7"x9" panel. The tube socket may be mounted on a bracket attached to the panel or fastened to the baseboard. The condenser, rheostat and binding posts are mounted on the panel. The binding posts are the panel. The binding posts may be mounted at the rear of the baseboard, if desired, on a strip of insulating material.

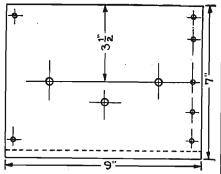
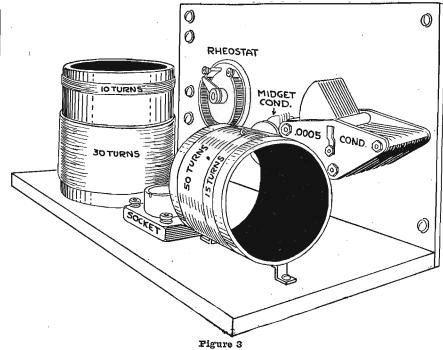


Figure 2

The 65-turn coil is mounted horizontally and the double turn coil is mounted vertically, both the same distance from the panel, and as far apart as possible. It is also important that the 65-turn coil is centered on the 30-turn section of the double turn coil. These coils are fastened by means of small brackets to the baseboard.



is in the negative A lead and the 15-turn | initial adjustment but stations 50 to 100 tap is connected to the rotor plates of the .0005 variable tuning condenser and to the negative A and ground binding posts.

The aerial binding post is connected to the outside of the 15-turn coil with the other end of the 50-turn coil going to stator condenser plates and to grid.

A. 005 mfd. bypass condenser is con-

A .005 mfd. bypass condenser is connected from the positive B terminal to negative A terminal. In attaching the radio frequency unit to a receiving set, bring loads from the radio at the radio frequency unit to a receiving set,

bring leads from negative A and positive A terminals on the receiving set to the corresponding terminals on the radio frequency unit. Augment the B battery of the receiving set until it totals 45 to 90 volts (or take a tap on the positive 90-volt point of your B battery) and bring this to the positive B connection on the radio frequency unit, leaving the positive B connection from the reaction from the positive B connection from the positive B co nection from the receiving set at its original value on the B battery. Connect the output terminals to the aerial and ground connections of the receiving set and connect the aerial and ground to the aerial ae proper binding posts on the radio frequency unit.

Balancing the Unit

After these connections are made, light the tubes of the receiving set and radio frequency unit and turn the tuning con-frequency unit and turn the tuning con-denser of the radio frequency unit to about 40. Increase the feedback of the receiving set until it oscillates and tune the receiving set for a signal by tune the receiving set for a signal by means of its tuning condenser. The signal will be the customary whistle. Then turn the tuning condenser of the radio frequency unit for maximum intensity. Vary the setting of the small balancing condenser until, when turning the tuning condenser of the radio frequency unit through the receivable. The small neutralizing condenser is mounted on the baseboard unless it is of the rotary type in which case it is mounted on the panel. Use number 14 in intensity and not in pitch. The set round tinned bus bar wire for connections. The output coil should be connected to the output binding posts. The rheostat

miles away should be used for the final refinement as local stations have so

powerful a signal as to make it difficult to tell when the pitch varies.

This radio frequency unit will work wonders with a single circuit and other receivers and the selectivity is such that vernier controls may be necessary. In connecting to any other set than a single circuit, the same general scheme may be followed until the selectivity becomes too great. For instance, with a honeycomb coil receiver, connecting the output coil to the tuned primary will make an ex-tremely selective set having three to the tuned primary will make an extremely selective set having three controls which will make the set difficult to tune. This may be corrected by disconnecting the primary condenser and using a 25-turn primary coil, winding 25 turns on the output coil. These two coils using a 25-turn primary coil, winding 25 turns on the output coil. These two coils will constitute a link and reduces the number of controls to two. Another way is to connect the output coil in series with the secondary coil disregarding the primary circuit giving the effect of a single circuit tuner. It is best where possible to connect the output coil in the sible to connect the output coil in the tuned secondary circuit.

Trouble Shooting

Any standard receiving tube may be used but 5-volt tubes are recommended. If signals can be received with the radio frequency tube turned off, that tube is not properly neutralized or the aerial wire is runing too close to the receiving

set and is passing the signals direct without going through the radio frequency

If the receiver tunes too sharply, wind the output coil closer to the 30-turn double coil, and if the proper wave lengths cannot be received, wind more turns on the output coil.

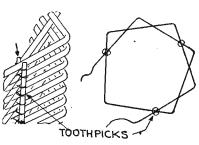
Another method of neutralizing the unit to follow the standard practice used ith neutrodynes. Darken the radio frewith neutrodynes. Darken the radio frequency tube with a piece of paper over one prong of the filament contacts. Tune in a signal and adjust the neutralizing condenser until the signal disappears or becomes a minimum.

It is necessary to be able to control oscillations on the receiving set over the entire broadcast wave band and it may be found that certain taps on the primary will not oscillate, while on other taps the oscillations cannot be controlled. This condition is corrected by changing the number of turns on the output coil and also moving the output coil closer to the 30-turn double coil. 30-turn double coil.

(CONCLUSION)

Basket Coil Supports

If, when winding basket coils, a tooth-pick is placed on each side of the place where the wires intersect and these are sewed together with silk thread, you will have a very rigid coil when it is removed



Only three intersections need be fixed in this way. The rest are to be tied with thread alone. If this is done, especially when using small gauge wire, you will be surprised at the result.—D. Harrington, Holstein, Iowa.

Enameled Wire Best

Because bare wire quickly collects soot, vhich causes certain electrical losses, and fabric covered wire absorbs moisture that also causes losses, it is recommended that enameled wire be used for constructing aerials. Only the best grade of copper should be used and while it is theoretically more efficient it is hard to give prac-tical proof that stranded wire is more efficient than the same size of ordinary round wire.



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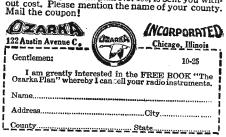
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"COUNTERPHASE" SET

(Continued from page 26)

style 3, and at a point in front of socket number 2 bend the wire toward the front of the set and connect it to the right-hand terminal of the three on the twin

30. From the left-hand terminal on the twin resistor drop a wire through the sub base and then to the left to the bottom spring of the four-spring jack.
31. From the P terminal on socker

number 4, which is that in the rear left-hand corner, drop a wire through the sub base and then to the right to the P terminal on the rear audio frequency transformer.

From the B terminal on that same transformer run a wire to the right 2% inches and then straight back to the third binding post from the right in the group

33. From the G terminal of socket number 5 drop a wire through the sub base to the G terminal on the rear transformer.

34. The P terminal of socket number is to be connected, through the sub base, by a wire passing to the right around the front audio transformer to the top spring on the four-spring jack. The P terminal on this front transformer is to be connected to the next spring on the jack. The B terminal of the transformer goes to the third spring on that jack. Now connect the frame terminal on the single-spring jack to the bottom spring on the four-spring jack and carry this wire to the rear to the third binding post from the left of the group of six.

35. The G terminal of socket number 6 is to be connected to the G terminal on the front audio frequency transformer. From the F terminal on the front audio transformer run a wire to the rear to the last binding post to the left of the group of six. Where this wire passes group of six. Where this wire passes close to the F terminal on the rear transformer connect it to that terminal. The P terminal of socket number 6 is to be connected to the single spring of the

connected to the single spring of the single-spring jack.

36. The left end of the 3-megohm cartridge resistor, which is directly behind socket number 4, is to be connected by a very short lead to the G terminal of that socket. The right end of this resistor is to be connected by a wire gaing straight forward to the plus terminal connected by a connected by a wire straight forward to the plus terminal connected by a wire straight forward to the plus terminal connected by a wire con going straight forward to the plus terminal on socket number 4. Directly behind the rear audio transformer we will place the .001 mfd. fixed condenser, and it is to be set vertically. Its left end is connected to the P terminal on the rear audio transformer, while its right end is connected to the plus filament circuit at

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the right end of the 4-ohm filament re-

sistor.

37. From the number 1 terminal at the right side of torostyle 1 drop a wire to the right and almost to the sub base then straight forward to that terminal on the 9-point switch which is close to the sub base and the right end of the panel. From the second terminal on the switch put in a ½-inch lead, straight back, and connect it to one terminal of a .0025 mfd. condenser. To the other terminal of that condenser connect a short lead, which goes to the wire just put in connecting to terminal number 1 on the torostyle.

38. From terminal number 2 on the torostyle run a wire about 1½ inches downward and to the right and then straight forward to terminal number 3 on the 9-point switch. From the fourth terminal of that switch a wire is put in pointing straight to the rear and about 2 inches long, the other end being connected to a second .00025 fixed condenser. The rear end of the condenser is connected to the wire just put in going to terminal number 3 on the switch.

39. From terminal number 3 on toro-

style 1, a wire goes to the right about two inches and then forward to the fifth terminal on the switch. The sixth terminal is then connected to the front end

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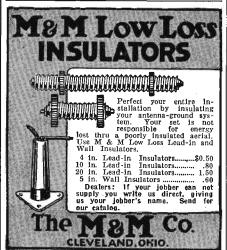


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of a .00025 fixed condenser, the rear end of which is connected to the wire just put in connecting to the fifth terminal of (The last of the series of four articles) the switch. The seventh point on the switch is connected to terminal 4 on the torostyle, and the eighth point is connected to the front end of a fourth .00025 fixed condenser. The rear end of this condenser connects to the wire attached to switch point 7.

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by Mr. McDonald on Counterphase appears in next week's issue and will cover adjusting and tuning.—Editor's Note.)

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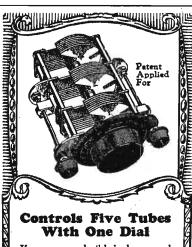
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Fort Dodge, KFJY
Iowa City, KFQP, WSUI
Lamoni, KFFVY
Le Marshalltown, KFJB
Muscatine, KTNT
Oskaloosa, KFHL
Shenandoah, KFNF, KMA
Sloux City, KFMR, WEAU
Waterloo, KFXE

Kansas:

Kansas:
Independence, KFVG
Junction City, KFJC
Lawrence, KFKU
Manhattan, KFVH, KSAC, WTG
Wichita, KFOT, WEAH

Kentucky:
Louisville, WHAS, WLAP

Louisiana:
Baton Rouge, KFGC
Kennońwood, KFDX, KWKH
New Orleans, WAAB, WAAC,
WABZ, W B B S, WCBE,
WOWL, WSMB, WWL
Plneville, KFWU

Maine: Bangor, WABI
Ellsworth, WHBK
Orono, WGBX
Portland, WCSH

Maryland:
Baltimore, WBAL, WCAO,
WCBM, WFBR
Takoma Park, WBES

Takoma Park, WBES

Massachusetts:
Boston, WBZA, WDBR, WEEI,
WNAB, WNAC, WTAT
Fail River, WSAR, WTAB
New Bedford, WNBH
South Dartmouth, WMAF
Springfield, WBZ
Taunton, WAIT
Webster, WKBE
Worcester, WCUW, WTAG

Michigan: Michigan:
Bay City, WSKC
Berrien Springs, WEMC
Dearborn, WWI
Detroin, KOP, WCX, WGHP,
WJR, WMR, WWM
East Lansing, WKAR
Escanaba, WRAK State, City, Call Michigan (Continued)

Flint, WFDF
Grand Rapids, WBDC, WEBK
Houghton, KFMW, WWAO
Lansing, WREO
Mt. Clemens, WABX
Owosso, WSMH
Petoskey, WBBP
Port Huron, WAFD
Royal Oak, WAGM
Ypsilanti, WJBK

Minnesota:
Breekenridge, KFUJ
Collegeville, WFBJ
Minnespolis, KFDZ, WAMD,
WCCO, WHAT, WHDI, WLB,
WRHM
Northfield, KFMX, WCAL
St. Cloud, WFAM
St. Paul, AV7, KFOY
Slhtipok, KIAF
Welcome, KFVN

Mississippi:
Coldwater, WREC
Oxford, WCBH

Oxford, WCBH

Missouri:
Butler, WNAB
Cape Girardeau, KFVS
Carterville, KFFW
Columbia, KFRU
Independence, KLDS
Jefferson City, WOS
Kansas City, KWKC, WDAF,
WHB, WOQ
Kirksville, KFRZ
Moberly, KFFP, KFOJ
St. Louis, KFQA, KFUO,
KFWF KSD, WEW, WIL,
University City, KFVE

Montana: Havre, KFBB Missoula, KUOM

Nebraska:
David City, KFOR
Hartington, KFRZ
Hastings, KFKX
Lincoln, KFAB, WFAV
Norfolk, WJAG
Oak, KFEQ
Omaha, KOCH, WAAW, WNAL,
WOAW
University Place, WCAJ

New Hampshire:
Hanover, WDCH
Laconia, WKAV

Adantic City, WHAR, WPG Camden, WFIBS Gloucester City, WRAX Lambertyille, WTAZ Newark, WAAM, WNJ, WOR. New Brunswick, WEBA North Plainfield, WEAM Paterson, WODA Red Bank, WJBI Salem, WDBQ Trenton, WOAX

New Mexico: Albuquerque, KFLR, KFVY State College, KFRY, KOB

State College, KFRY, KOB

New York:
Bay Shore, WRST
Buffalo, WEBR, WGR, WJBP,
WPDQ
Canton, WCAD
Cazenovia, WMAC
Flushing, WIBI
Freeport, WGBB
Ithaea, WEAI
Jamestown, WOCL
Kingston, WDEZ
Lockport, WMAK
New York, WBBB, WEAF,
WEBJ, WEBL, WFBH, WFRL,
WGBS, WGCP, WHAP, WHN,
WJY, WJZ, WKBK, WLWI,
WM CA, W NY C, WOKO,
W Q A O, W R M U, WRNY,
WSDA
Richmond Hill, WAHG, WBOQ,
WGMU, WWCIL
Rochester, WABO, WHAM,
WHEC

State, City, Call New York (Continued)

Schenectady, WGY Syracuse, WFBL Tarrytown, WRW Tonodi, WONK Troy, WHAZ Utica, WIBX

North Carolina: Asheville, WABC Charlotte, WJBG Fort Bragg, AT9 Henderson, WIBV Raleigh, WRCO

North Dakota:
Bismarck, KFYR
Devils Lake, KDLR
Fargo, WDAY, WPAK
Grand Forks, KFJM

Ohio:
Akron, WADC
Bellefontaine, WHED
Canton, AQ6, WHBC
Cambridge, WEBE
Charlotte, WBE
Charlotte, WBE
Charlotte, WBR
WHAD, WHAD, WHAG,
WHBR, WKRC, WLW, WSAI
Cieveland, KDPM, WPEK,
Clieveland, WHAU, WBAV, VCAH,
WEAR, WHK, WTAM,
Columbus, WAIU, WBAV, VCAH,
WEAGO, WMAN,
Dayton, AW5, WEBT, WSWK
Granville, WID
Hamilton, WRK, WSRO
Lima, WOAC
Newark, WBBA
Pomeroy, WSAZ
Springfield, WCSO
Toledo, WABR, WTAL
Wooster, WABW
Yellow Springs, WRAY
Oklahoma; Ohio:

Oklahoma: Chickasha, KOCW
Fort Sill, KFRM
Norman, WNAD
Oklahoma City, KFJF, KVOO,
WKY
Tulsa, WLAL

Oregon:
Astoria, KFII
Corvalits, KFDJ
Portland, KFEC, KFIF, KFJR,
KFWV, KGW, KQP, KTER

FORGAND, KEEC, KFIF, KFIR,
KFWV, KGW, KQP, KTBR

Pennsylvania:
Allentown, WCBA, WSAN
Harrisburg, WBAK, WHBC

WPRC
Haverford, WABQ
Johnstown, WGBK, WHBP,
WTAC
Lancaster, WDBC, WGAL
Lewisburg, WJBQ
Oli City, WHBA
Parkesburg, WJAA
Paliadelphia, WABY, WCAU,
WFBD, WFI, WHBW, WIAD,
WIF, WLIT, WNAT, WOO,
WWAD,
WCAE, WJAS
Reading, WRAW
Scranton, WGBI, WQAN
State College, WPSC
Wilkes-Barre, WBAX, WBRE

Rhode Island:

Rhode Island:

Cranston, WKAP
Providence, WCBR,
WDWF, WEAN,
WJAR

South Carolina: Charleston, WBBY

South Dakota: Brookings, KFDY
Rapid City, WCAT
Vermillon, KUSD
Yankton, WNAX

Tennessee: Chattanooga, WDOD

Knoxville, WFBC, WNOX

Lawrenceburg, WOAN

Memphis, WGBC, WHBQ, WMC,

Nashville, WCBQ, WDAD, WSM State, City, Call

Amarillo, WDAG, WQAC
Austin, KUT
Beaumont, KFDM, KFXM
Beeville, KFRB
Brownsville, KFWP, KWWG
College Station, WTAW
Dallas, WFAA, WRR
Denison, KFQT
Dublin, KFPL
El Paso, KFYH Dudin, KFPL
EI Paso, KEXH
Fort Worth, KFQB, KFJZ, WBAP
Galveston, KFLX, KFUL
Greenville, KFPM
Houston, KFVI, KFYJ, KPRC
Orange, KFGX
San Antonio, WCAR, WOAI
San Benito, KFLU
Waco, WJAD

Utah: Logan, KFXD Ogden, KFUR, KFWA Salt Lake City, KDYL, KFOO, KFUT, KSL

Vermont: Burlington, WCAX Springfield, WQAE

Virginia: Norfolk, WBBW, WTAR Radlo, NAA Richmond, WBBL, WRVA Roanoke, WDB3

Washington:
Everett, KFBL
Lacey, KGY
North Bend, KFQW
Olympia, KFRW
Pullman, KFRX, KWSC
Seattle, KFOA, KJR, KTCL,
KTW
Snokane KFIO, KFDV, WIO KTW Spokane, KF10, KFPY, KHQ Tacoma, KFBG, KGB, KMO Walla Walla, KFCF Yakima, KF1Q

West Virginia: Weirton, WIBR

Wisconsin: Wisconsin:
Beloit, WEBW
Camp Lake, Wild
Fond du Lac, Efiz
Madison, WHA, WIBA
Marshfield, WGBR
Menomonie, VGBQ
Milwaukee, WHAD,
WSOE
Osseo, V.AQ
Peneta, WIBU
Sishit, WBAR
Stevens Point, WLBL
Superior, WEBC
West de Pere, WHBY

Wyoming: Laramie, KFBU Alaska:

Juneau, KFIU

Hawaii: Honolulu, KGU Philippine Islands:

Baguio, KZUY Manila, KZKZ, KZRQ Porto Rico: San Juan, WKAQ

Argentina: Buenos Aires, Bl. LOR, LOV, LOW, LOX, LOY, TCR

Australia: Adelaide, 5CL Melbourne, 3AR Perth, 6WF Sydney, 2BL, 2FC Austria:

Vienna, Radio Wien Graz, Relay

Belgium: Brussels, 8RB Haeren, OPVH

State, City, Call Brazil:

Bahia, Sociedade do Bahia Belle Horizantes, Nat'l Teig. Service Rio de Janeiro, SPE Sociedade de Rio de Janeiro Sao Paulo, Radio Bondeirantes

Sao Faulo, Radio Bondeirantes

Canada:

Burketon Junction, CKCW

Burnaby, CJKC

Calgary, CFAC, CFCN, CNEC

Charlottetown, CFCY

Edmonton, CFCK, CJCA, CNRE

Hamilton, CFCU, CHCS, CKOC

Iroquois Fails, CFCH

Kingston, CFMC, CFRC

London, CJGC

Moncton, CJGC

Moncton, CNRA

Montreal, CFCF, CHYC, CKAC,
CNRM

New Westminster, CFXC, CFYC

Ottawa, CHXC, CKCO, CNRO

Regina, CKCK, CNR

Saskatoon, CFQC, CHUC, CJWC,
CNRO

Thoroid, CFKC

Toronto, CFCA, CHIC, CHNC,
CJEC, CJCD, CJCC,
CKCL, CKNC, CNRT

Unity, CHSC

Vancouver, CFCQ, CKCD, CKFC,
CNRY

Victoria, CFCT

Winnipeg, CKY, CNRW

Cuba:

Cuba:

Camaguey, 6YR, 7AZ, 7BY, 7CX, 7DW, 7SR
Santa Clara, 6BY, 6DW, 6EV, 6GR, 6GT, 6HS, 6JQ
Colon, 5EV
Havana, PWX, Q2LC, 1AZ, 2AB, 2BB, 2BY, 2CG, 2CX, 2EP, 2HP, 2JL, 2JP, 2LR, 2MG, 20K, 20K, 20K, 20K, 20K, 20K, 2TW, 2UF, 2WW, 2XX
Mantanzas, 5AZ, 5BY
Santiago, 8AZ, 8BY, 8FU, 8IR, 8JQ
Tuinucu, 6JK, 6KW

France: Lyons, YN, Radio-Lyon Paris, FPTT, Le Petit Parisien

Germany:
Berlin, Vox Haus, Telefunken Co.
Breslau, Schlesische, Rundfunk
Cassel, Sudwestdeutscher Rund-

Breslau, Schlesische, Rundfunk Cassel, Sudwestdeutscher Rund-funk.
Drosden, Mitteldeutsche Rundfunk.
Frankfort-on-Main, Sudwest-deutsche Rundfunkfienst
Hamburg, Norag.
Konigsberg, Ostmarken Rundfunk Leipzig, Mitteldeutsche Rundfunk Munich, Deutsche Stunde Munster Station
Nuremberg, relayed from Munich Stuttgart, Station

Great Britain:

Great Britain:
Aberdeen, 2BD
Belfast, 2BE
Birmingham, 51T
Bournemouth, 6BM
Bradford, 2LS
Cardiff, 5WA
Dundee, 2DE
Edinburgh, 2EH
Glasgow, 5SC
Hull, 6KH
Leeds, 2LS
London, 2LO
Manchester, 2ZY
Newcastle, 5NO
Nottingham, 5NG
Plymouth, 5PY
Sheffield, 6FL
Stoke-on-Trent, 6ST

Mexico:

Mexico City, CYA, CYB, CYG, CYH, CYL, CYA, CYZ, CZA, CZE, XDA
Montery, CYB, CYF, CYZ, CZA, CZE, XDA
Montery, CYS
Oaxaca, CYF

STATION SCHEDULES

(Continued from last week)

Cuba

PWX, Havana, Cuba. 400 meters. 500 watts. Cuban Telephone Co. International Tel. & Teleg. Corp. Wed, Sat, 8:30-11 pm, music. Eastorn. Q2LC, Havana, Cuba. 250 meters. 50 watts. Luis Casas. IAZ, Havana, Cuba. 275 meters. 5 watts. Antonio Sarasola. 28B. Hustamante. 2BB, Havana, Cuba. 255 meters. 15 watts. Bernardo Barrie. 2BY, Havana, Cuba. 315 meters. 100 watts. Electrical Equipment Co. of Cuba. Mon, Thurs, 7:00-8:00 pm. 2CG, Havanna, Cuba. 350 meters. 15 watts. Humberto Glquei. 2CX, Havanna, Cuba. 320 meters. 10 watts. F. W. Borton. Borton.

2EP, Havana, Cuba. 355 meters. 400 watts. El Pals.

2HP, Havana, Cuba. 295 meters. 400 watts. Credito

2HP, Havana, Cuba. 275 meters. 5 watts. Jose Leiro.

21P, Havana, Cuba. 270 meters. 20 watts. Julio Power.

21P, Havana, Cuba. 235 meters. 10 watts. Julio Power.

21P, Havana, Cuba. 280 meters. 10 watts. Manuel

2MG, Havana, Cuba. 280 meters. 20 watts. Manuel

2MG millermo Salas Music Store. Announcer, Roger

Morales. Dally, 3-4 pm, music. One day each week,

3-4 meters. 20 watts. R. V. 2MK, Havana, Cuba. 85 meters. 20 watts. K. v. 7
Waters.
20 K. Havana, Cuba. 360 meters. 100 watts. Marlo
García Velez.
20 L. Havana, Cuba. 300 meters. 100 watts. Columbus
Cycle Radio Co.
27 K. Havana, Cuba. 195 meters. 10 watts. George A.
Lindeaux.
2RK, Havana, Cuba. 310 meters. 100 watts. Raoui
Karman. Casa De La Porte.
2RM, Havana, Cuba. 210 meters. 10 watts. Rogello
Morales. 2RM, Havana, Cuba. 210 meters. 5 watts. Salvador de la Torre.
2SZ, Havana, Cuba. 180 meters. 10 watts. Homero Sanchez.
2TW, Havana, Cuba. 230 meters. 20 watts. Roberto E. 21W, Havana, Cuba. 265 meters. 10 watts. Roberto E. Ramirez. 2XX, Havana, Cuba. 150 meters. 5 watts. Antonio A. Ginard. 5AZ, Mantanzas, Cuba. 200 meters. 20 watts. Ernesto V. Figueroa.

5BY, Mantanzas, Cuba. 190 meters. 10 watts. Leon Gonzalez Velez.
5EV, Colon, Cuba. 360 meters. 10 watts. Leopoldo V. Figueroa. Sun. 9-11 pm. Eastern. 6BY, Santa Clara, Cuba. 260 meters. 200 watts. Jose Ganduxo.
6DW, Santa Clara, Cuba. 250 meters. 10 watts. Eduardo Terry.
6EV, Santa Clara, Cuba. 250 meters. 100 watts. Maria Josefa Alvares. Daily, 10:30 pm. 6GR, Santa Clara, Cuba. 250 meters. 10 watts. Luis del Castillo. 6GT, Santa Clara, Cuba. 250 meters. 10 watts. Juan Pablo Ros. 6HS, Santa Clara, Cuba. 190 meters. 5 watts. Juan Pablo Ros. 6HS, Santa Clara, Cuba. 275 meters. 10 watts. Frank H. Jones. 38 and Clara, Cuba. 275 meters. 10 watts. Frank H. Jones. 100 watts. Frank H. Jones. 100 watts. Frank H. Jones. Slogao, "If You Hear the Koo of the Cuekoo You Are in Tune With Tulnucu." Daily, 3-10:15 pm. Eastern. 6YR, Camaguey, Cuba. 225 meters. 20 watts. Diego Iborra.
7AZ, Camaguey, Cuba. 225 meters. 20 watts. Eduardo V. Figueroa. Nogueras.

7BY Camaguey, Cuba. 235 meters. 20 watts. Eduardo
V. Figueroa.

7CX, Camaguey, Cuba. 85 meters. 10 watts. Leonard
B. Fox.

7DW. Camaguey, Cuba. 90 meters. 10 watts. M. L.

Quintana.

7SR, Camaguey, Cuba. 300 meters. 500 watts. Salvador
C. Rionda. Slogan, "Cuba, the Land of Sunshine,
Sugar and Tobacco." Mon, Tues, Thurs, 8:30 pm. astern. , Santiago, Cubs. 240 meters. 20 watts. Alfredo 8AZ, Santlago, Cuba. 240 meters. 20 watts. Alfredo Brooks.
8BY, Santiago, Cuba. 250 meters. 190 watts. Alberto Ravelo.
8FU. Santiago, Cuba. 225 meters. 15 watts. Andres Vinent.
31R, Santlago, Cuba. 190 meters. 20 watts. Ceferino Ramos.
8JQ, Santiago, Cuba. 275 meters. 20 watts. Jose Fernandez Heredia.

France

FPTI, Paris, France. 458 meters. 500 watts. Superior School P. T. T. Announcer, M. Chanton.
YN, Lyons-la-Doua, France. 340 meters. French Government.
Lyons, Radio-Lyon, 284 meters. 600 watts.
Paris, France, Le Petit Parisien. 345 meters. 500 watts.

Germany Berlin, Germany. 505 meters. 1,500 watts. Vox Haus. Berlin, Germany, 290 meters. 100 watts. Telefunken Berlin, Germany, 290 meters, 1,000 watts. Telefunken Co.
Breslau, Germany, 418 meters. 1,500 watts. Schlesische Rundfunk, A. G.
Cassel, Germany, 288 meters. 1,500 watts. Schlesische Rundfunk, A. G.
Cassel, Germany, 280 meters. 1,500 watts. Sudwest-deutscher Rundfunk. A. G. (Mirag).
Frankfort-on-Main, Germany, 470 meters. 1,500 watts.
Sudwestdeutsche Rundfunklenst.
Hamburg, Germany, 395 meters. 500 watts, Nordscher Rundfunk, A. G. Announcer, Hans Bodenstedt.
Konigsberg, Germany, 463 meters. 1,500 watts. Ostmarken Rundfunk, A. G.
Leipzig, Germany, 444.5 meters. 1,500 watts. Mitteldeutsche Rundfunk, A. G. (Mirag).
Munich, Germany, 414 meters. 10,000 watts. Deutsche Stunde in Bayern.
Munster, Germany, 410 meters. 5,000 watts.
Norenberg, Germany, 293 meters. Relayed from Munich, Stuttgart, Germany, 443 meters. 1,500 watts.

Great Britain

BD, Aberdeen, Scot. 495 meters. 1,500 watts. Brit
"ish Broadcasting Co. Announcer, H. M. Fitch.

2BE, Belfast, Ireland. 438 meters. British Broadcast
"ing Co., Ltd. Announcer, W. T. Guthrie, Capt. T. O.

Corrin.

2DE, Dundee, Scot. 330.5 meters. British Broadcasting **Co.

2EH, Edinburgh, Scot. 328 meters. British Broadcasting Co.

2LO, London, Eng. 365 meters. 3,000 watts. British
*Broadcasting Co., Ltd.

2LS, Leeds and Bradford, Eng. 342 and 310 meters.
*British Broadcasting Co., Ltd.

2ZV, Manchester, Eng. 377.5 meters. British Broadcasting Co.

5IT, Birmingham, Eng. 477.5 meters. British Broad*casting Co.

5NG. Nottlingham. Eng. 326 meters. British Broad-517. Birmingham, Eng. 477.5 meters. British Broadeasting Co.
SNG, Nottingham, Eng. 326 meters. British Broadeasting Co.
SNO, Newcastle, England. 403.5 meters. British Broadcasting Co.
5PY, Plymouth, Eng. 338 meters. 200 watts. British
Broadcasting Co., Ltd. Announcer, J. E. C. Langham.
SSC, Glasgow, Scot. 422 meters. British Broadcasting
Co.
SWA, Cardiff, Wales: 353 meters. British Broadcasting
Co. Co.
6BM, Bournemouth, Eng. 386 meters. British Broad"casting Co.

6FL, Sheffield, Eng. 303.5 meters. British Broadcasting 6KH, Hull. Eng. 334 meters. British Broadcasting *Co., Ltd. 6LV, Liverpool, Eng. 314.1 meters. British Broadcast-6ST, Stoke-on-Trent, Eng. 306 meters. British Broad-casting Co.

Mexico

CYA, Mexico City, Mex. 320 meters. Partido Liberal Avanzado. CYB, Mexico City, Mex. 270 meters. 500 watts. El Buen, Tono. Tues, Thurs, Sat, 7:30-9 pm, concert. Mexican.

Mexican.

CYF, Oaxaca, Oax., Mex. 260 meters. Federico Zorrilla.

"The Voice from South of Mexico." Tues, Thurs, 7-8
pm. Sun, 8:30-10 pm. Mexican.

CYG, Mexico City, Mex. 300 meters. 1,000 watts.

Secretara de Guerra y Marina.

CYH, Mexico City, Mex. 325 meters. 100 watts. High
Life. Siegan, "Los Provendores del Caballero Que
Viste Bien." Announcer, Jo. 2e Chulla Mallet. Fri.

8:30-10 pm. Mountain.

83:0-10 pm. Mountain.
CYL. Mexico City, Mex. 480 meters. 500 watts. La Casa del Radio. Announcer, George Marron. Siogan: The Land of Eternal Summer. Daily ex Sun, 1:30-2 pm, weather, financial reports, music. Tues, Fri, 8-9:30 pm. Sun, 8-9:30 pm, church. Mexican.

CYS, Monterey, Mexico. 314.5 meters. 250 watts. Tarnava. & Cia. Slogan. "The Industrial Center of the Mexican Republic." Daily and Sun, 7:55-8:05 pm. Mon, 8-9:30 pm. Mountain.

8-9:30 pm. Mountain.

CYX, Mexico City, Mex. 333 meters. 500 watts. Excelsion & Cia. Parker. Announcer, Rafael Hermandes dez Dominguez. Slogan, "Land of the Aztecs." Mon, 8-9:30 p. m. Fri. 8:30-9:30 pm. Mexican.

CYZ, Mexico City, Mex. 400 meters. Liga Central Mexicana de Radio.

CZA, Mexico City, Mex. 70-500-1,070 meters. Aviation Dept., War Ministry. Announcer, Ricardo S. Bravo. Dally, 12:30-1 pm. time, weather, news: 6:30-7:30, time, markets, music. Mexicanous CZE, Mexico City, Mex. Secretary Public Education.

CZF, Chihanhau City, Mexico. 325 meters. 255 watts, nouncer, C. A. Nieto. Slogan, "United by Radio." Tues, 8-9:30 pm. Mountain.

XDA, Mexico City, Mexico. Variable wave. 4000 watts. Government station. Slogan, "Radio Chapultepse."

www.americanradiohistory.com



WE will pay \$500 cash for a name best describing the New Tower Diaphragm—the Most Important Discovery in Over 50 Years of Experimental Work the Acoustical Field. Over 1000 other valuable prizes will be awarded to persons submitting names of merit.

Over fifty years ago Alexander Graham Bell invented the telephone receiver with its all-metal Diaphram. Until now the world's greatest acoustical experts have been unable to effect any radical improvement on this type.

Now—after exhaustive experiments, Dr. Herman Fisher, the eminent Russian Scientist and acoustical expert of the Tower Co., has perfected a marvelous new Diaphram—revolutionary in principle and unparalleled in performance.



Dr. Jisher

Eminent Scientist

Dr. Herman Fisher, the famous Russian inventor and designer of the new Tower diaphragm, first won world fame by discovering the tone secrets of the master violin makers. In tone tests in Paris, Fisher violins out-scored genuine Stradivarius and Guadagnini instruments, Dr. Fisher, retained by the Tower Mfg. Co., now applies to radio his wonderful new discoveries exclusively employed in the new Tower Speakers.

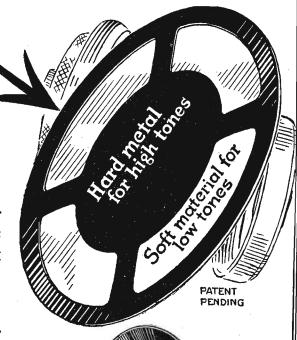
The Diaphragm consists of two different materials, one of which reproduces the upper register of the scale, and the other, the lower, making it a veritable double Diaphragm which brings out ALL the notes with an amazing mellowness of tone, increased volume and COMPLETE absence of distortion, hitherto never attained in a radio loud speaker.

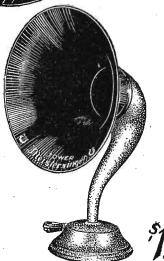
The name "High-Low-Tone" has been suggested but we believe some one can suggest a better one. Let us have yours—it may win the \$500 prize or one of the 1,000 additional awards.

Your Chance To Win As Good As Anyone's

Names must be submitted on U. S. postcards with name and address of sender clearly printed—no others will be considered. Send as many names as you wish. Contest closes February 15th, so act promptly. Decision of Tower Company officials will be final. In event the winning name is suggested by more than one person, the prize will be divided equally.

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*Little Spitfire
Headset - - 1.95

*Reg. U. S. Pat. 0fl.

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