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How to Make New Push Pull Resistance Coupled Amplifier; Story of WNAC Instructions for Operating Hetduogen Set; Winding Low Loss Inductances

Radio

Vol. XII

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SATURDAY, JANUARY 31, 1925

10 FADING IN NEW SET

MC CORMACK SONGS HELP RECORD SALES

BUSINESS PICKUP ASSURED BY VICTOR COMPANY

Famous Irish Tenor Satisfied with Results—Madame Bori Also Flattered by Response

NEW YORK.—Direct evidence that the McCormack-Bori broadcast on New Year's night caused a tremendous increase in the sales of Victor records, especially those of John McCormack, comes in the form of an announcement by the Victor Talking Machine company.

While no official figures have as yet been compiled, the recording company is happy in the very encouraging results of the broadcasting experiments and will continue indefinitely with the semi-inonthly concert.

One of the leading retail music shops here reported a large increase in the sale of records by both Victor artists. Particularly noticeable was the increased popularity of "All Alone," a McCormack record which had sold poorly since listening in became popular and until the New Year's

ACCOMPLISH NON-CARRIER BROADCASTS

Room for More Stations

H. A. Brown and C. A. Keener Perfect New Transmission System Giving Improved Radio

CHAMPAIGN, Ill. — Broadcasting without the use of a carrier wave has been accomplished at Station WRM of the University of Illinois in this city. By eliminating the carrier wave, the men responsible for the development of this system claim that all traces of fading are abolished.

The non-carrier system was perfected in the university laboratories by Hugh A. (Continued on page 2)



with great regularity from Station WEAR, Cleveland. Right, Phyllis Haver, Mack Sennett star, recently heard from Station WOR, Newark.

CONTEST RECEIVERS NOW BEING TESTED

FORTY-NINE SETS WAITING JUDGES' DECISION

Many Manufacturers Have Requested Opportunity to Inspect Sets Submitted-Winners Notified Soon

The Gold Award Set contest is now closed-receivers of all kinds and sizes are lined up for inspection—the judges are studying diagrams and letters. Few contests of interest to the Radio fraternity have created the interest that did this one. Many letters, accompanied by diagrams, came in with the request for an opinion as to whether the idea was worth submitting in set form.

Some of the writers were asked to refrain from going to the expense of sending their sets as nothing seemed to be embodied in their outfits. Others were advised to try for a patent on their apparatus before giving it to the Radio field. Still others wanted more money for divulging their developments and suggested a conference to settle a price. that had something that seemed to contain improvements were wired to send their sets immediately.

Forty-nine Receivers on Trial

Forty-nine receivers are therefore awaiting trial. Missouri, Kansas, New Jersey, Tennessee, Virginia, Montreal, Quebec, Pennsylvania—in fact, nearly every state in the Union and province of Canada—are represented in the collection. Whether anything that will warrant the attention of Radio engineers is among the ideas submitted, remains to be seen. If, somewhere between Alaska and the Canal Zone, there is a new departure in Radio receivers by an amateur, Radio Digest has done its best to bring it out.

There have been requests from manufacturers for an opportunity to inspect the sets now in. This matter now awaits decision by the owners of this publication. In all probability representatives from these concerns will be invited to a demonstration of sets at which time all sets

can be seen at once by all. It is hoped that winners can be announced next week. Receivers are complicated, and testing them fairly, under varying conditions, takes time. Winners will, however, be notified by wire when a decision is reached.

NO FADING IN NEW SET

(Continued from page 1)

Brown and C. A. Keener, and by its use. it is asserted, much transmitter noise is done away with and the sharpness of tuning by the receiver is increased.

When Mr. Brown and Mr. Keener first started working on the experiments which led to their non-carrier wave system, they were aware that other investigations had been carried on along similar lines but most of these had been devised for small power outfits. None of the systems were of the exact nature of the University of Illinois arrangement.

These two men simply set about trying out several different methods, first this one and then that, and finally concluded in their own minds what they considered the best and then settled on that. Since that time all their work has been towards idea they adopted.

Work Started Year and a Half Ago

Experimental work on the non-carrier system in the university laboratories was started by Mr. Brown about a year and a half ago, in conjunction with Professor Kneipp. It suggested itself when Mr. Brown and Mr. Keener-who later took up the work-were working on a comparison of various modern systems of modulation. The thing suggested itself on account of the large amount of unmodulated energy in all the conventional systems, that is, the amount of lost or wasted energy that was noticed in other systems which wasn't doing any work, but was causing interference with other stations.

Tests made show that it is possible to check the theoretical ratio of power required for the non-carrier system to that required for the carrier system, for the same intensity of signal at a distant receiver.

It was found, for instance, in tests over a considerable distance, that about onethird the power needed for a given signal using constant current modulation was necessary for the same signal strength using the non-carrier system.

Carrier Produces Interference

In the constant current system of modulation now in general use in broadcasting work, the practical limit of modulation is reached before the carrier wave is completely modulated, and consequently a listener may pick up the carrier or the carrier may produce interference even though the program may be audible. With the non-carrier system the program may be heard if the station can be heard at all. In other words, if your receiver can reach the station, the program can be

In this regard it may be said that the

DR. F. H. VIZETELLY **HELPS VOCABULARY**

WORD a day" is Dr. Vizetelly's idea of increasing the vocabulary of the Radiophans. Station WJZ is the proud dispatcher of this stimulating educational feature, and Dr. Vizetelly has

many hundreds of thousands of days ahead of him with his inexahustible supply of words.

Another feature that Dr. Vizetelly finds very valuable as an education dispenser is the WOR feature — 25-minute talks on the origin of the English language.

"There is only one grievance I nurse against the 25-min-ute talk," said Dr. Vizetelly. "Not enough time. I want to hold my audience, magnetize In order to them. do this, I've got to

make my talks interesting. Let me tell you, it is a very difficult thing to do in so short a time. My mail response has been very flattering, however, and I intend to continue with these talks as long as pos-

Dr. F. H. Vizetelly

tuning will be much sharper, and fading eliminated. Fading, according to the developers of the idea, can be traced directly to the carrier wave.

The additional selectivity of this new type of transmission might permit a closer spacing of stations in the broadcasting band without introducing additional heterodyning on account of the greater selectivity or sharpness of tuning possible with the receivers when the noncarrier system is used. However, no made by either Mr. Brown or Mr. Keener. know exactly where they were.

WENDELL HALL NOW ON WAY TO LONDON

TAVANA, Cuba. — Wendell Hall, "Red Headed Music Maker," and his wife are here now on their honeymoon tour. They have just completed their trip around the United States and to Hawaii, and will go to London next. The man who made "It Ain't Gonna Rain No Mo'," famous extends his best wishes for the New Year to all of his many friends.

Detroit News Replaces Its Luncheon Musical Program

DETROIT.—The Detroit News station, WWJ, is again broadcasting a luncheon musical program. This was dropped about a year ago, but owing to the many requests from the Radio audience of Detroit, it had to be placed on the schedule

The orchestra consists of five pieces. The News now employs three orchestras-Jean Goldkette's Victor recording orchestra, considered as one of the leading orchestras in the Middle West; The Detroit News orchestra, composed of members of the symphony orchestra, and the one named above. WWJ broadcasts on 516

Burr McIntosh at WAAM

NEWARK, N. J.-Burr McIntosh, the cheerful philosopher, whose voice and splendid stories have won for him a high regard from the Radio audience, is booked for an indefinite period at the I. R. Nelson company station here. Beginning January 9 at 9 o'clock Eastern time, he was on the air for forty-five minutes. He will continue to be on over WAAM every Friday evening at the same hour.

When search was being made for entombed men in the Killan colliery, Wales, Senatore Marconi foretold that the day would come when permanently adjusted positive statement to this effect would be sets would enable miners to let searchers

construction of Meco Tubes gives greater volume without impairing its clear, distinct receptive tone. All genuine Meco Tubes have Meco stamped on the base. Look for it. Your dealer has them in both 3 and 5 volt sizes or can get **Meco** Tubes for you from recognized radio jobbers.

"The Trouble

That is what many radiophans

have nicknamed their Meco

Tubes. The name gives its

own reason. Trouble started.

Batteries were tested or

changed. New extras were in-

troduced. All to no avail.

Then they standardized on Meco Tubes. The trouble

A radical improvement in the

stopped.

Stoppers"

Metropolitan Electric Co.





Looking Ahead

the perfection and development of the Another Series for Newcomers in Radio will start in the next issue. Edward T. Jones will start with the simpler apparatus and circuits, and take the beginner week by week to the long range, strong volume multi-tube outfits. The advice of one of the "old timers" is always worth getting, so fans, both novice and advanced should read this series carefuly.

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Radio Digest, Illustrated, Volume XII, Number 4, published Chicago, Illinois, January 31, 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 postoffice at Chicago, Illinois, under the Act of March 3, 1879.

All the Live News of Radio.....1 to 8

listen in for your favorite station.....

WNAC, Shepard Stores, in the Hub City.....

An Evening at Home with the Listener In, a popular chart showing when to

Winding Low Loss Inductances, by Jacques Fournier

Editorial; Indi-Gest, Condensed by Dielectric

Demonstrating Radio Principles at Home, Chapter VIII—Experimenting with

Push Pull Amplifiers, by J. E. Owen

Construction of the Hetduogen; Operating the Set, by C. E. Brush

Improvements on the De Forest Circuit, by M. C. Williams.....

Questions and Answers.

Radiophone Broadcasting Stations, Part I.......

More Detailed Information on the Radio-Theater Controversy. With the numerous artists taking the stand pro and con, this little war may mean the ultimate decision as to whether or not plays may be broadcast. The English producers are now having the same trouble across the Atlantic. Next week we will give the information from both "fronts."

The Do's and Don'ts of Home Construction are gone into in detail by W. S Standiford. There are so many things that the home builder can do wrong, which are hard to find later, that suggestions by Mr. Standiford should be remembered. The manufacturer can give you high quality parts, but the construction

The Knox Reflex Utilizes Plate Tuning and Reverse Feedback, which makes it one of the most selective long range "two tubers" that reflex adherents have yet known. W. H. Knox, the designer, lives in Los Angeles, where conditions are exceptionally trying, and a set that will give one "what you want when you want it" out there, is worth building.

Newsstands Don't Always Have One Left

WHEN YOU WANT

YOU WANT IT!

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

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Electrically and Mechanically the finest loop ever designed

R ADIO engineers designed Lincoln Collapsible Loop Aerials. That is the reason for their remarkable efficiency. They are electrically and mechanically correct. They combine with greater selectivity-volumeand clearness of reception—a graceful beauty which is the result of painstaking manufacturing.

The center-tapped loop can be used on any sets employing radio frequency amplification — particularly fine for use with certain superheterodynes requiring a center-tap. The 4-point tapped-loop—for any circuit where it is desired to vary the inductance of the loop—most super-heterodynes — neutrodyne receivers where outside aerial is impractical.

A better loop-for less money

Lincoln Loops cost less-and do Volume production—engineering efficiency—are the reasons. Fully guaranteed—sold by leading dealers.

Write for catalog Send your name and dealer's name for copy of the Lincoln Catalog fully describing Lincoln Radio products. To Jobbers and

Dealers

Lincoln Radio Products are sold only through the legitimate trade. Dealers please write us for the name of the nearest Lincoln jobbers. We will be glad to send our sales proposition to jobbers.

Lincoln Radio Corporation 224 North Wells St. CHICAGO

NEGRO REVIVAL CAN BE HEARD VIA WBAP

ENTIRE CEREMONY WILL BE BROADCAST

Whole Scale of Human Emotions to Be Run While Awaiting Coming of Holy Ghost

FT. WORTH, Texas.-Did you ever attend a "nigger camp-meeting?" More than likely if your home is way down in Dixie, you have witnessed one of these events in the church life of certain sects of the picturesque colored folk of the sunny South.

Just dial WBAP, the Star-Telegram station at midnight, Central time, on Wednesday, February 4, and hear the entire services of the Holiness Church of God in Christ (negro), broadcast direct from the church on the outskirts of the city of Fort Worth.

A short time ago, WBAP broadcast a sermon from a negro church and Radiophans who had never before heard the characteristic singing and fervent "amens" sent generous applause and requested WBAP to again put the church services

on the air. Expect One Thousand Negroes Present

Worship will commence with approximately one thousand negroes present, many of whom come from great distances and at great personal sacrifices. This number is expected to be greatly dccreased by 4 a. m., at which time possibly only four hundred worshipers will be present, the rest having become exhausted and carried out, "under the power of the Spirit."

The Hired Hand will forego his duties in the boiler room and will be in attendance as announcer. Overlooking no detail, WBAP has made provision for a second announcer to be present, as it is expected that the Hired Hand will "get religion" before many hours have elapsed. W. E. Branch will be on hand to make announcements when the popular announcer of WBAP "falls under the power of the Spirit" and is carried out.

To Broadcast Entire Service

The entire ceremonials will be broadcast. And while visual communication by Radio is not yet a possibility, listeners may hear the reverent shouting, sermons delivered as they never heard before, chantings, orchestra music, groanings, vociferous hand-clappings and songs of praise—outbursts of fervid worshipers in their emotional religion.

The whole scale of human emotions is run while the coming of the Holy Ghost is awaited. His coming-or rather the feeling of His presence—is the sign for lusty paens; songs of triumph straight from the hearts of the worshipers. Under the influence of His power, manifestations are made known by the resonant shouting of the cleansed. Collections are taken up under the watchful eye of the deacons, and to the accompaniment of hand-clapping

Canary, "Radio Joy," Wins Prize on Coast

Gets Practice Listening to Artists at Station KHJ

LOS ANGELES.-Who now can gainsay the fact that Radio is educating all of us to a better appreciation of fine music? Many listeners in have appreciated the fact that "Uncle John" at KHJ occasionally stops a program in the middle in order to allow one or more of the triumvirate of canaries, Radio Kindness, Radio Happiness, Radio Joy, to render solos, duets and trios as only well-trained canaries can sing.

Radio Joy, one of the birds, was entered in competition with a brilliant field at the Annual Los Angeles Roller show and received a special prize for an extraordinary fine exhibition of singing what is known as the "water roll."

SHENANDOAH CREW **HEARS SHENANDOAH**

HENANDOAH, Ia—It's a case of Shenandoah listening to Shenan-Shenandoan instanting doah when Aviation Chief Machinist Walter Johnson, of the giant dirigible U. S. S. Shenandoah, tunes in KFNF of this city. Mr. Johnson has written the Henry Field Seed company station from Lakehurst, N. J., naval air station that he listens in regularly to the broadcasts from Shenandoah.

MADAME ALDA MAKES **BROADCASTING DEBUT**

Heard from WEAF on Victor Talking Machine Program

NEW YORK.—The Radio public had its introduction to another of the world's famous operatic stars, January 15, when Madame Frances Alda, prima donna of the Metropolitan opera, appeared before the microphone for the first time in her career. Madame Alda's recital, given under the auspices of the Victor Talking Machine company, was broadcast from the studio of WEAF, New York, and relayed by telephone lines through seven other stations, WCAP, WJAR, WFI. WDBH, WGR, WCAE and WEEI.

The practice of sending reproductions of autographed photographs of the principals of the recitals to those who wrote in would be continued, it was stated, and it was announced that reproductions of Madame Alda's autographed photo would be sent upon request to the listeners in.

The recital included selections by Frank La Forge, pianist; the Victor Concert or-chestra. Rosario Bourdon, conducting, and the Florentine quartet.

Victor officials say letters are still coming into the office praising the McCormack-Bori broadcasting and that nearly 60,000 such communications have been received by the company and the two artists.

WSB Organist Honored by Fan; Boy Named After Him

ATLANTA .- Dr. Charles A. Sheldon. Atlantic City organist, whose regular Thursday night organ recitals relayed by WSB from the First Presbyterian church are one of the Journal's most popular attractions, was recently accorded a unique honor by a family of his admirers. A letter from Mr. and Mrs. Carey N. Shearer, of Alapaha, Ga., tells Dr. Sheldon that they have a new Radiowl in their home and in appreciation of Dr. Sheldon's music have named him Charles Sheldon Shearer. side WSB's staff has been so honored.

RADIO SUPPLIES ARE LISTED AS "SCOTCH"

RUFFALO, N. Y.—Here are a bunch of wild waves! One of those eases where they said it with "Scotch." Cases is right. Federal dry agents in Buffalo recently seized thirty-six cases of Scotch whiskey, so-labeled, at the American Express company's warehouse. It came from Newark, N. J., and was consigned under the billing of "Radio Supplies" and "Dry Goods."

High Prices Secret of Theater Failures

Boston Showman Lauds Radio and Criticises Shows

BOSTON, MASS .- "The American theater will be saved, and Radio and the motion picture are working for its preservation.

Thus speaks E. E. Clive, manager of the Copley theater, at a time when managers are sitting in conclave, in despair over the meagre houses New. York successes are experiencing on tour, as well as over the great list of productions Broadway has failed to support this season.

"Lower prices and crowded theaters; that's the answer," says Mr. Clive, "The fault is not with the people; it is with the managers. The majoriy of our pro-fessional classes cannot afford to pay \$5.50 for two seats, and the result is they stay away. (In New York the average price for a good seat has been \$5 per head.)

"They are blaming Radio for the poor attendance on New Year's night at the New York theaters. But why not blame the high prices, too? Radio is no menace to the theater. It is the high prices."

Station KSAC Puts College Into 9,000 Rural Schools

MANHATTAN, Kans .- Opening exercises by Radio for the 9,000 rural country schools in Kansas and a rural Radio Sunday service for the hundreds of communities without pastors are two innovations in Radio activity to be introduced by the extension service of the Kansas State Agricultural college, Sunday, February 1.

An unrivalled popularity for service is the mark of distinction accorded Station KSAC, judging the barometer of public opinion as expressed by a deluge of congratulatory communications received since its dedication December 1.

The British Radio association has instituted a fellowship for the members showing during the year the greatest This is the first time any member out-technical knowledge of the science of Radio.

JOHN GOLDEN SEES RADIO AS SHOW AID

NOTED PRODUCER WRITES ABOUT BROADCASTING

Says He Will Treat New Art of Communication as Useful Ally to Theater

By John Golden

R ADIO is not hurting the theater.
Instead of opposing Radio, it is my intention to try to find a way to utilize this new power for the benefit of the theater. I made these two statements in a



John Golden

They seemed commonplace enough, but the response has been electrifying. And still I do not understand W H Y people should marvel that Radio has NOT hurt the theater or that I am doing something revolutionary in trying to harness this new force for the benefit of the profession in which I happen to be interested. It is my candid

newspaper interview

a week or more ago.

opinion that Radio does nont hurt the theater as much as a

rainy night, for instance, or for that matter, petting parties, cross-word puzzles, the cook's night out and the crowded subways. Possibly Radio keeps a few persons away from the theater. But so also do these other things I have mentioned. If your show is not doing business and you are looking for an excuse—cuss the Radio!

Sees Radio as Benefit

On the other hand, why should I not use Radio for the BENEFIT of the theater? In the first instance, Radio is not essentially a means of entertainment, but a means of communication. We must remember that the present free broadcasting may not continue always-in all probability it will not. But Radio, conceived as a means of communication, is here to stay. So the theater manager, who heretofore has reached his audiences solely by the mails and by the printed page, now has another means of communication. There is a reading public and a Radio public, so dramatic reviewers for the broadcasting stations (around New York, at least) will be on my first night lists in the same manner as the reviewers for the newspapers.

It is my present belief that the American theater public is much larger than even we theatrical people imagine. I think the Radio audiences will be deeply interested in the personalities of the theater, the news of the theater, the legends and lore of the theater and even the technique of the theater when they are put on the air.

I am not so certain they will be so deeply interested in the broadcasting of plays. It is the actual physical presence which will always guarantee the existence of the spoken drama. Everyone thought the motion picture, twenty years ago, meant the doom of the spoken drama. But it didn't. The theatrical public is bigger than ever before, and the movies have helped. So Radio is the biggest potential aid to the theater. Instead of attempting to block progress by opposing Radio, I am going to let it help my plays.

Coal Miners Hear Program

MINNEAPOLIS .- Two hundred twentyfive feet below the surface of the earth, coal miners at Lincoln, Ill., recently heard the Gold Medal station, Saint Paul-Minneapolis, WCCO.







PENN STATE THESPIANS ON AIR

"Wooden Shoes," given by the Penn State college Thespians, was broadcast recently by WDAR—and is scheduled to be broadcast from five or six more eastern stations. The famous organization is made up entirely of men. The play may be presented during Easter week at KDKA. Right, "Martha Berry" in the play is really H. A. Pisey —a male student. Below, J. E. Kennedy in a sailor hat, Dutch chorus and C. E. Megargle.

THEATER MANAGERS ALARMED AT RADIO

BLAME NEW SCIENCE FOR HURTING BOX OFFICE

Madge Kennedy Anticipates Change in Theatricals Toward Psychological Element—Makes Radio Debut

NEW YORK .- Theatrical producers are alarmed at the position Radio has taken in the amusement field. Certain producers here blame the failures of this season on Radio, while it is a definitely ascertained fact that several good shows died on the road this year for this reason, the road refusing to accept even a Barry-

A leading Radio man has estimated the Radio audiences in New York city alone as more than a million. This represents very nearly the capacity attendance of the leading Broadway movie houses and theaters, and managers of these houses while refusing to comment upon the situation admit that Radio does affect the box office considerably.

With improvement in Radio programs, represented especially in the appearance before the inicrophone New Year's night of John McCormack and Lucrezia Bori from WEAF, Radio seriously threatens to encroach upon the solid position the theater has held. One of those who expresses a frank opinion in the matter is Miss Madge Kennedy, stage and screen star. who is at present co-starring with Gregory Kelly in "Badges" on Broadway. She anticipates a change in theatricals toward the psychological element.

Miss Kennedy will make her Radio debut Saturday, January 31, at 7:00 p. m., Eastern standard time, from WEAF. At that time, she will sing a group of songs, including the Vienese waltz.

Chickering Piano Program at WOR

Famous Pianists Play Recitals at Newark Station—One Given Each Wednesday

NEWARK, N. J .- The deferred concert program in the "Chickering Artists Series," which is the first of a stellar group of famed musicians who will broadcast through WOR, was given Wednesday evening, January 21. The series promises to develop into one of the outstanding events of broadcasting.

Extensive plans are at the point of completion by the WOR management working in collaboration with the Chickering firm, which will provide the Radio audience with the highest grade musical talent as a regular feature of the Wednesday evening programs. The broadcasting is done from the Chickering hall studio of WOR.

the effect that "the quality of the material to be sent over the air has never been excelled."

Ft. Worth Rotary Club Is Host at Big Celebration

FT. WORTH, Texas .-- Fans throughout the country heard the special Rotary club program broadcast from Station WBAP on January 6. The program included music, monologue, dialogue and entertainment typical of the popular Rotarians.

Amon G. Carter, president and publisher of the Fort Worth Star-Telegram, was acting as chief announcer.

A. C. Farmer, local manager of the Western Union, wired every Western Union Rotarian in the United States previously about the program. These men in turn passed the good word along to their cities in the manner of true Rotarians. That many of the clubs listened in "100 per cent" was the natural result.

WBAP was deluged with telegrams and messages during and following the pro-

Movie Criticism Popular

NEW YORK .-- Where to see the best pictures in town and what makes them worth seeing is embodied in the weekly advice to movie fans broadcast every Wednesday afternoon and evening from Station WHN here.

Judging from the mail received from listeners in, this service is proving very satisfactory to the countless number of people who are anxious to follow up the screen output. Movie gossip from the coast about the leading stars and players the WHN talk.

UNCLE REMUS GIVES RADIOPHANS TREAT



T ONE time or another there have probably been hundreds of Uncle Remus impersonators traveling about the country since the original B'rer Rabbit stories came into being, but so far as California is concerned, and particularly so far as California's listening public is concerned, there is one, and only one Uncle

Say "Uncle Remus" to a Los Angeles Radiophan and he will probably shout back, "KHJ!" Likewise, mention KHJ to the same bug and he will think at once of Uncle John, peerless announcer of that station, and in the next instant of Uncle Remus, for it is only when Uncle John and Uncle Remus get together before the 'mike" at KHJ that the fun really starts.

Uncle John together with Uncle Remus spent a couple of weeks last summer in the high Sierras on a fishing trip. Upon their return Uncle John spent the last day of his vacation at Catalina island, off the southern California coast. Major Mott, known to Radio experimenters everywhere, undertook to take Uncle John tuna fishing and it happened that John hooked a whale of a tuna, and after battling with it for nine hours and twenty-five minutes (so the story goes) lost the fish.

It was a terrible blow, and in true sportsman's spirit Uncle John confided to No definite announcement of the names Uncle Remus of the loss of the magnifiof the participating artists has come cent tuna. It was too much for Uncle from WOR, but a statement is made to Remus to withstand and for days afterward Radioland rocked with laughter whenever Uncle Remus got Uncle John in front of the microphone to tell his story of the tuna.

> Uncle Remus comes by his title honestly. For over twenty years he traveled with a minstrel show as blackface comedian, later going into the musical business. To hear Uncle Remus play old plantation melodies on the celeste from KHJ is enough to make a Connecticut Yankee vote bonds to erect a statue of Jefferson Davis.

Broadcast Series of Talks on Income Tax Preparation

SPRINGFIELD, Mass. - A series of talks on the preparation of individual Federal income tax returns by Thomas McCarry, public accountant, will be broadcast from Station WGY. The first talk was on January 15. The last will be on March 12.

These talks should be of special interest to the public in view of the fact that the correct preparation of a return this year will require the interpretation of a new tax law.

Mr. McCarry is well known to many Radiophans as he gave a similiar series of talks from this station in 1923 and last year. He is well qualified to explain the tax law, having been employed for five years by the bureau of internal revenue, preparing and auditing the Federal income tax returns.

Lafayette Offers Radio Course

EASTON, Pa.—Radio will be added next semester to the curriculum at Lafayette college here. A. W. Parkes, instructor in physics, who served as a Radio operator in the picture world is also included in with the aviation division of the Navy during the war, will instruct.



Amazing Simplicity The SetThat Is Already Logged

CAN you imagine anything more simple—more practical—than a radio set with all more practical—than a radio set with all the dial settings exactly identical for any station-regardless of where you live or what antenna you use?

The entire DAY-FAN line, comprising six models ranging in price from \$90 to \$285, is distinguished by this feature.

APPEARANCE. Every DAY-FAN set is a splendid example of the cabinet maker's art. Made of the finest materials, they have a finish and design which harmonize with the surroundings of the most tastefully furnished homes.

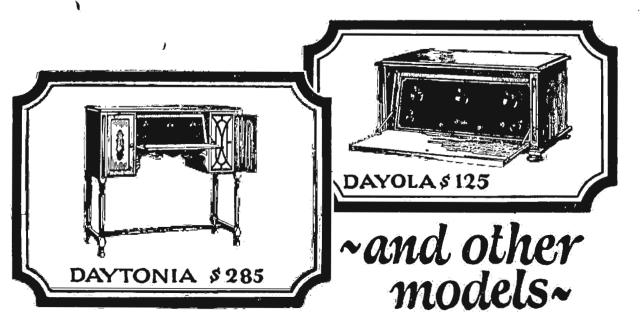
VALUE. In everything that you want-long range, selectivity, purity of tone, volume—there is no greater

PERFORMANCE. The age of technical discussion and experimenting in radio is past. Today a set must do certain definite things. You may want entertainment, business information, or an educational program. Whatever your desires, a DAY-FAN will get it for you, quickly and easily.

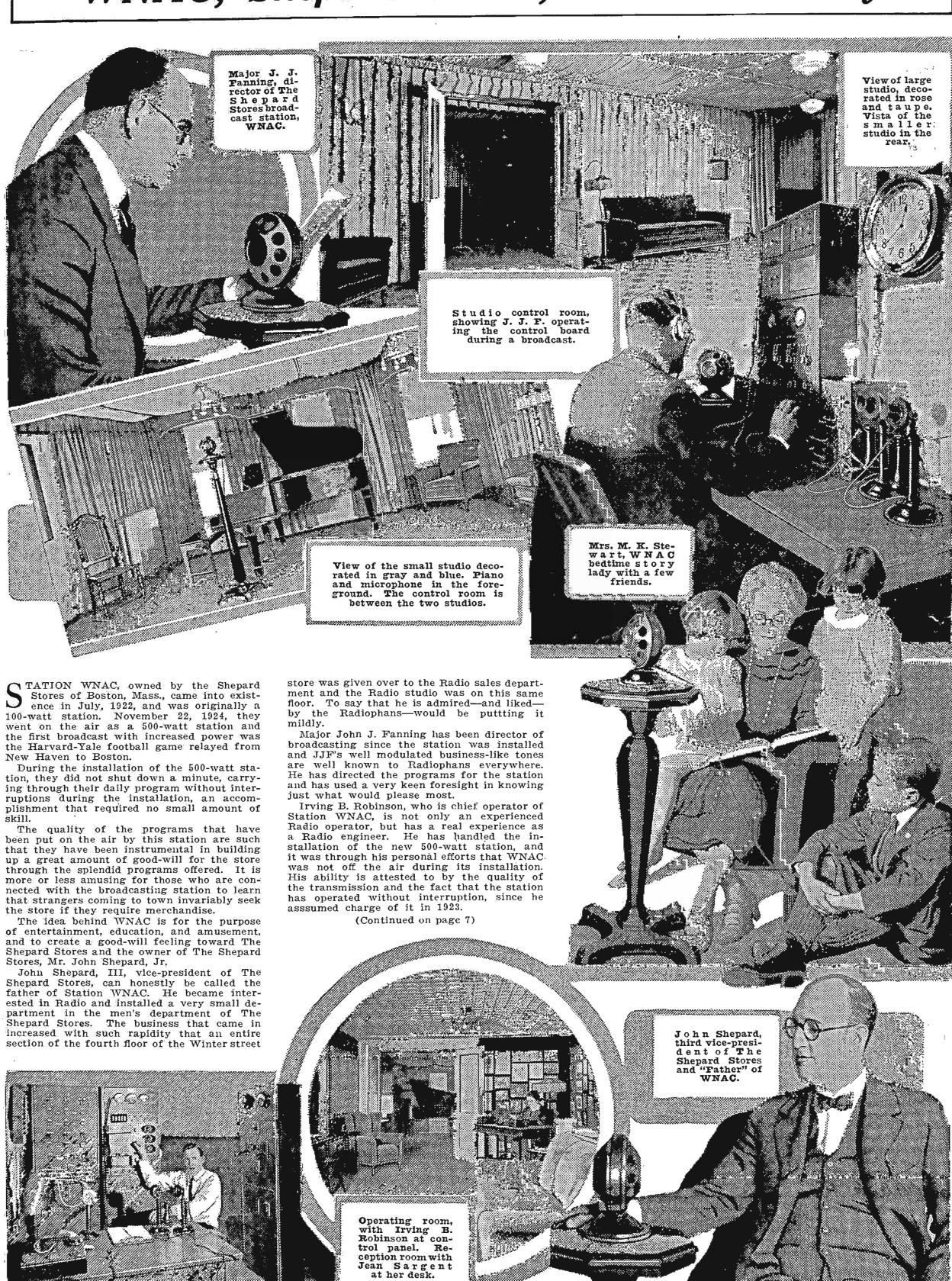
Sold by Leading Radio Dealers Almost Everywhere

The Dayton Fan & Motor Co. Dayton, Ohio

For 36 Years Manufacturers of High-Grade Electrical Apparatus.



WNAC, Shepard Stores, in the Hub City



ASSIGN NEW WAVES TO MANY STATIONS

LESS INTERFERENCE HOPE OF RADIO OFFICIALS

Thirty-Five Broadcasters on Different Lengths-List Showing Many Changes Is Given

WASHINGTON.—To make room for more clsss B stations, and give more exclusive wave lengths with less interference, a number of wave assignments have been altered. So that listeners may have a record of the old and new waves, both are listed below for the thirty-five stations making the changes:

	Old	-N
KOKA, East Pittsburgh	326	30
KFDM. Beaumont. Texas	306	31
KFKX, Hastings, Neb	291	28
KFOA, Sesttle, Wash	405	45
KFUO. St. Louis, Mo.	546	54
KGW, Portland, Ore	492	48
KOB, State College, N. M.	360	34
KSO. St. Louis, Mo.	5.16	54
KYW. Chicago	526	53
WBAP, Fort Worth, Texas	476	47
WBAV, Columbus	400	29
WCX, Detroit, Mich.	517	ร์เ
WEAR, Cieveland, Ohio	200	30
WFAA, Dallas, Texas	470	47
WHA, Madison. Wis.	310	53
WHAA. Iowa City. Iowa	404	49
		43
WHK. Cierciand, Ohlo	283	27
WHN. New York, N. Y.	360	30
WHO, Des Moines, Iowa	526	52
WIP. Philadelphia	509	50
WIID, Moosehcart, III.		30
WMC. Memphis. Tenn	500	50
WMH. Cincinnati, Ohio	309	32
WNAC, Boston	278	28
WNYC, New York	526	52
WOAL San Antonio, Texas	385	39
WOAW. Omaha. Neb	526	52
WOC, Davenport, Iowa	484	49
WOI, Ames, Iowa	360	27
WOO, Philadelphia	509	50
WREO, Lansing, Mich	288	28
WSAI, Cincinnati, Olilo	309	32
WTAM, Cleveland, Ohio		36
WTAS, Elgin	286	30
WWJ. Detroit, Mich		51

Terrell Authority on Rules WASHINGTON, D. C.—W. J. Terrell, chief of the Radio section of the department of commerce, has been asked for information concerning Radio inspection and administration in the United States by the government of New Zealand, which it is understood is just organizing its Radio work.



Loud and Clear with the Howe Radio Receiver

O you know that you can listen to every radio broadcasting station in and around your city with a Howe Radio Receiver costing only \$1.75? Thousands of folks-young and old -all over the country are having many hours of solid enjoyment listening to the wonderful and varied programsmusic, talks, sport and church services.

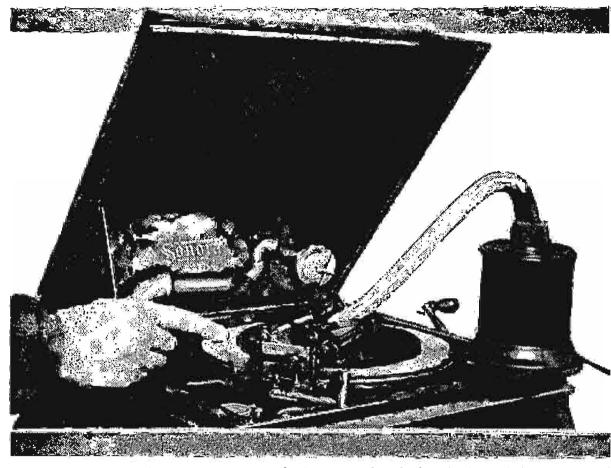
The Howe Radio Receiver is not a toy but a very sensitive, practical, radio set made of the best materials and furnished in a strong, steel case finished in a beautiful dark olive antique verde. It is fool and trouble proof. No Batteries to Buy. Guaranteed you can hear any broadcasting stations within 25 miles. One or more persons can "listen in" at the same time.

For perfect local reception use a Howe Radio Receiver crystal set.

For Sale by All Dealers

Howe Auto Products Co Radio Division Chicago, Illinois

RECORDS BROADCAST SPEECHES



Further advance in the science of Radio broadcasting is inevitable—it is also inevitable that broadcasting as we know it will eventually be discarded as too crude. And so, the device shown above has been perfected to record broadcasts on wax records so that they can be stored away for future use.

Radio trade in Australia is experiencing regulations permitting any type of set hook-up in which certain parts are changeto be used.

Pierre Hemardinguer of France has coma boom, following the adoption of new pleted a new diagram card for a standard



Herald Electric Co., Inc., 113 Fourth Ave., New York

Will Open Catholic Station in New York

Paulist Fathers Plan Others in Chicago and San Francisco

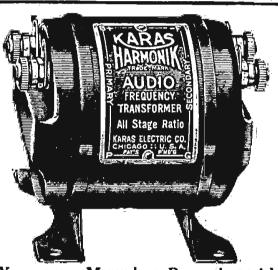
NEW YORK .- The Paulist Fathers, propagandizing organization of the Roman Catholic church, have completed plans for and are erecting a 500-watt broadcaster here for the purpose of "acquainting the public with the Catholic viewpoint on current affairs."

The station will be known as WPL and will use a wave length of 405 meters. Plans of the Paulist Fathers also call for similar stations in Chicago and San Fran-

Speaking of the new station, the Very Rev. Joseph MacSorley, superior general, has said: "Our station will be the official mouthpiece of everything catholic. We want especially to reach isolated communities where there is no Catholic church. We want owners of Radio sets everywhere to be in a position to understand Catholicism and the Catholic view-point."

Saves \$50,000 Necklace

NEW YORK -- A pearl necklace valued at \$50,000 was saved by Radio recently when the Marquise d'Orgeix of Paris, suddenly remembered while aboard ship bound for France, that she had left the jewels hidden under a pillow in her former apartments here. A Radiogram from her located the mere bauble which was then put in safe keeping.



You secure Marvelous Reception with these Scientifically Designed, New KARAS HARMONIK Audio Frequency Amplifying Transformers.

What Karas Harmoniks Do That Other

Transformers Cannot Do They amplify with GREAT VOLUME the ex-They amplify with GREAT VOLUME the extremely low frequency tones that other transformers fail to amplify at all—KARAS HARMONIKS also amplify EQUALLY all of the many vital harmonics and rich overtones that combine to form musical sounds.

With KARAS HARMONIKS there is no muffling of sounds—no fuzz on the edges of words—no thin, squeaky distorted tones. Instead, EVERY tone is clean-cut, separate and distinct from every other tone—natural.

The Results of Karas Harmoniks
The result from any radio set of any and all
efficient circuits is an outpouring from the loud
speaker of soft, rich, round, full, nucliow tones such
as you have never before heard from any radio—
a surprising volume of REAL MUSIC to which it is
a delightful pleasure to listen.



Scientific Evidence of Actual Performance

The secret of the strikingly wonderful reception of Karas Harmonik Transformers is disclosed by this Scientific Laboratory CURVE of their actual per-

Low frequencies represent low notes—high frequencies represent high notes and the harmonics of low notes. All musical sounds are composed of a fundamental harmonic and many other harmonics and overtones of varying and successively higher frequencies.

Equal Amplification

It is the combination of these many harmonics and overtones forming a single note that makes it a beautiful, pleasing, musical sound. The inability of ordinary transformers to fully and equally amplify all of these many harmonics and overtones is the cause of distorted and unnatural sounding tones in the land sneaker.

the loud speaker.
This Scientific Laboratory CURVE shows that Karas Harmonik Transformers amplify ail sounds and all harmonics and overtones of all sounds equally—delivering to the loud speaker a pure, natural sounding musical reception.

Structural Factors That Produce the Flat Curve

Flat Curve

LARGE COILS of many thousands of turns of wire giving a very high inductance: LARGE IRON CORE offering an easy path for the lines of magnetic force to influence the secondary windings: VERY HIGH IMPEOENCE to retain the full amplification delivered by the amplifier tubes: CONTROLLED AIR GAP insuring high amplification of low frequencies, volume-carrying, fundamental harmonics—this factor enables Karas Harmoniks to deliver more total amplification with a low ratio than cheap transformers do with a high ratio: LOW OISTRIBUTED CAPACITY insuring full amplification of high audio frequency harmonics and overtones: LOW HYSTER-ESIS LOSS insuring a maximum amount of energy for amplification of all frequencies: SCIENTIFICALLY SHIELOEO against intercoupling of electrostatic and electromagnetic fields: PERFECTLY MATCHEO insuring the same values of amplification in both first and second stages.

Price \$7 Each

If your dealer has not yet been able to secure a supply they will be sent direct upon receipt of price.

Karas Electric Company 4042 N. Rockwell St. Chicago, Ill.

RADIO TEACHES ART IN PUBLIC SCHOOLS

CALIFORNIA CHILDREN GET INSTRUCTIONS VIA ETHER

Judges Surprised at Quality of Work Turned in by the Pupils— Immediate Response

OAKLAND, Calif.—Successful drawing lessons by Radio is the latest development in the experiment to use broadcasting for classroom instruction being conducted by the Oakland public schools, co-operating with KGO, General Electric station here.

Children assembled under normal classroom conditions in eight different schools
in the city have just completed a course
of six drawing lessons. The problem assigned was to create an original design
for a Christmas card, using the Christmas
tree for a decorative motive and actually
produce individual work in response to
suggestions issuing from loud speakers.
Examination of the papers turned in reveals the fact that by Radio greater
originality is accomplished than when lessons are conducted in person by the
teacher before the class.

Collect and Judge Response

In sharp contrast to other lessons broadcast by KGO, when children only listened to lectures without responding, the course just completed was designed to bring a type of response which could afterward be collected and judged.

In the studio of KGO, miles away from the schools, the Radio teacher spoke her instructions before the microphone. She began by briefly suggesting the Christmas spirit and the beauty of its expression in art. Then, she proposed to her invisible pupils that they set about creating Christmas greeting cards for their friends.

In the minds of the examining judges, "the experiment revealed not only the latent emotional qualities of young people as artists, but offered a lesson on methods of teaching as to secure infellectual criticism and balance in children's creative art without bringing about the destruction of originality." By Radio lessons the children received suggestions through their ears, and sent out the response to create through eager busy fingers. No model was offered to the eye. "In the child's heart and mind alone took place that transmutation which makes out of spoken word the created image."

STATION OWNER IS POPULAR ON COAST



Earle C. Anthony, owner of the new KFI super station. Mr. Anthony is a pioneer in Radio on the Pacific coast.

OPERA HELPS SALES

(Continued from page 1)

That the famous Irish tenor was satisfied with the acclaim which greeted his Radio appearance was voiced by his secretary, who said:

"Mr. McCormack approves heartily of Radio broadcasting, entirely because it is such a pleasure-spreading medium. As to the commercial value effected, it is very difficult to venture an authentic reply so soon after the trial. The mail response was tremendous.

"The concert crowds have increased somewhat, but it is not fair to attribute it to Radio yet. When Mr. McCormack returns in March from his tour he shall be able to answer more definitely."

Mme. Bori also is in favor of Radio and says that the mail response has been very flattering.

Plans are now being laid for a broadcasting station in Bouzaria, Algeria, the studio being located in Algiers and connected to the station by ground wire.

PRODUCER BACKS UP STATEMENTS

John Golden Proves to Public When He Says a Thing, It Goes

NEWARK, N. J.—As though translating into action his spoken and written approval of Radio as an ally of the modern theatrical showmen, John Golden, producer of "Pigs," was a headline attraction of the WOR afternoon program last Friday, when he presented to the Radio audience, Anne Morrison and Patterson McNutt, co-authors.

In company with them were Lydia Westman and Wallace Ford, featured players in the successful laugh hit which is attracting capacity crowds to the Little theater, New York.

"Pigs" has done much to make theatrical history in New York. The unusual comedy has flourished throughout the present lean theatrical season and Mr. Golden, rated one of the most clever and discriminating American producers, has another hit to his credit. A feature of the performances at the Little theater is

another hit to his credit. A feature of the performances at the Little theater is the Radio concert, tuned in between acts to enable confirmed Radiophans to get an earful during the evening.

Present World's Greatest Accompanist in Recital

NEWARK, N. J.—Frank La Forge, composer-pianist and the artist to whom goes credit for being the greatest accompanist in the world, was presented in recital under his direction at WOR last Saturday evening, January 24, with Ernesto Berumen, pianist; Frances Fattmann, soprano; Valeriano Gill, tenor; Grace Demms, soprano; Zelina Bartholomew, soprano, and Madeleine Hulsizer, soprano. The latter artist will sing a complete program of the songs of Mr. La Forge with the composer at the piano

WNAC-THE HUB CITY

(Continued from page 5)

Jean Sargent, who is secretary of WNAC, and has charge of all of the detail work in connection with the station, is one of the few women announcers who have a complete program in their care. For some time Jean Sargent was known by the pen name only, before her first announcement came over the air and to the utter confusion of some of the masculine fans who had invited her to smokers, and on fishing and hunting trips, it was proclaimed that Jean was a woman and not

Mrs. M. K. Stewart, the bedtime story lady, is hostess of the Little Folks' store, of the Shepard stores and is a Southern woman, whose interest in, and love for children, made her an ideal person to tell the kiddies their good-night stories.

Some of the unique features of WNAC were the broadcasting of a circus, taking the microphone to the tent, and going so far as to taking the microphone in to the part of the circus where the animals were being displayed so that the public might hear them as they were transferred from cage to cage. The broadcast of plays. direct from the theaters with the amplifier in an upper stage box so that the operator might catch each portion of the drama or musical comedy, is another feature that has made WNAC popular. It has broadcast grand operas each season since its existence and one of the popular weekly features is the concert by the Boston American orchestra.

Dick Long Makes Record

MINNEAPOLIS.—The first Minneapolis orchestra to broadcast by remote control, and the first local orchestra to make Victor records are distinctions now held by Dick Long and his Nankin Cafe musicians.

Recently they were selected to record for the Victor company. The records were released last week when the Gold Medal station, WCCO, broadcast four special programs by Dick Long and his orchestra.



TRADE MARK REG.

"The Perfect Broadcast Receiver"

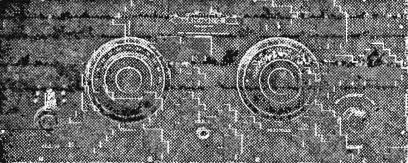
A New Superior Broadcast Receiver

Simple—Long Range—Highest Quality Non Radiating — Non Regenerative

> Two Stages Tuned Radio Frequency, Detector and Three Stages of Audio Frequency Amplification



Completey
Constructed
Without Accessories



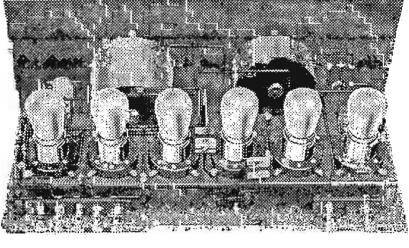
PLIODYNE 6

Front View Showing Simplicity of Control

PLIODYNE 6

Interior View Showing Compact and Efficient Design

Sold Direct
from
Manufacturer
to Consumer
Only
Sent C. O. D. Subject
to Examination



OUR GUARANTEE

We guarantee every Golden-Leutz "Pliodyne 6" to be the finest broadcast receiver that can be manufactured using 6 tubes or less and to be satisfactory to you in every way and to reach you in perfect condition.

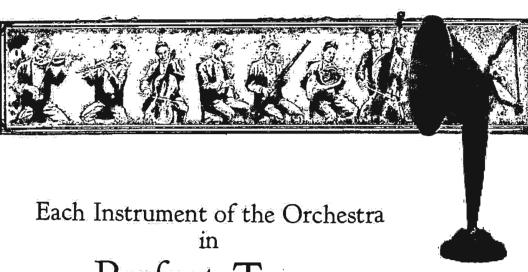
You take no risk whatever in sending us your order for unless you are completely satisfied with the receiver and with your saving you may return the receiver to us and we will refund your money.

GOLDEN-LEUTZ, Inc.

476 BROADWAY

NEW YORK CITY

Licensed under Farrand Agreement and Hogan Patent No. 1,014,002



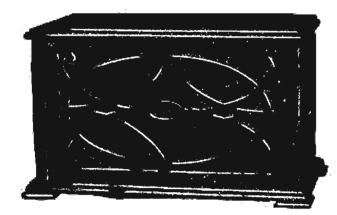
Perfect Tune

I T MAKES all the difference in the world with the enjoyment you get out of radio whether the high notes of voice and orchestra are in tune or just a little "off."

A big point of the Bristol Audiophone is that each instrument, and each vocal note, comes in in proper pitch. You will love your Audiophone for its pure harmony of reception.

There are five Bristol Audiophones, priced from \$12.50 to \$30.00. If not at your dealer's, write for Bulletins AY-3011, 3017 and 3022.

The Bristol Company, Waterbury, Conn.



\$30.00

Audiophone \$25.00

Rubber horn, 14%" in diameter. Cast metal throat. Velvet mat finished, mottled bronze and gold.

Beautifully finished mahogany. Full floating wooden horn. Cast metal throat. Size 17x10x10¾".

BRISTOL AUDIOPHONE Loud Speaker

- 14:

AN EVENING AT HOME WITH THE LISTENER IN (SEE INSTRUCTIONS FOR USE BELOW)

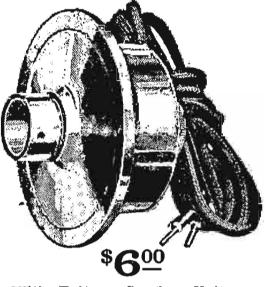
Station and City	Met.	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
AT9, Fort Bragg, N. C CFAC, Calgary, Alta	435 430	7:00- 8:55 Silent	7:00- 8:00 Silent	Silent 9:00-11:00 7:00-8:00	7:00- 8:55 Silent 7:00- 8:00	Silent 6:00- 7:00 7:00- 8:00	7:00-8:55 10:00-11:00 7:00-8:00	Silent 7:00- 8:00 7:00- 8:00
CFCA, Toronto, Ont	440 341	Silent 11:00- 1:00 Silent	6:00- 7:00 Sllent 8:00- 9:00	Silent Silent	12:30- 1:30 Silent	Silent 7:30 - 8:30	Silent Silent	Silent Silent
CKAC, Montreal, Que CKCD, Vancouver, B. C CKY, Winnipeg, Man	437 410 450	6:30-9:30 10:30-11:30 Silent	3:30- 4:30 Silent 7:00- 8:00	Silent	6:30-9:30 10:30-11:30 7:30-9:15	Silent 10:30-11:30 Silent	6:30-9:30 10:30-11:30 7:30-9:15	
CNRO, Ottawa, Ont	435 370 480	6:30-11:30 8:30-9:00	Silent Silent Sllent	Silent Silent Silent	Silent 8:30-9:00 10:00-11:30	6:30-11:30 Silent Silent	Silent 9:00-11:00 Silent	Silent Silent 10:00-11:30
CYL. Mexico City, Mex CYX. Mexico City, Mex KDKA, E. Pittsburgh, Pa	330 309.1	Silent Silent 5:30-8:00	Silent 6:30-7:30	9:00-12:00 5:30-8:00	Silent 5:30-10:00	Sllent 5:30-8:00	Sllent 5:30-10:00	8:00-10:00 5:30- 8:00
KFAE, Pullman, Wash KFAU, Boise, Idaho	275 215 C	Silent Silent Silent	Silent Silent 9:00-10:00	9:30-10:30 9:00-10:00 Silent	Silent Silent 8:00-11:00	9:30-10:30 Slient Silent	Silent Silent Silent	9:30-10:30 9:00-10:00 8:00-11:00
KFDM, Beaumont, Texas. KFI, Los Angeles, Callf KFKB, Milford, Kan	469 273	8:45- 2:00 6:00-11:00	8:45-1:00 8:00-10:00	8:45-1:00 6:00-11:00	8:45-1:00 6:00-11:00	8:45- 2:00 6:00-11:00	8:45- 1:00 6:00-11:00 9:30-11:00	
KFKX, Hastings, Nebr KFMQ, Fayetteville, Ark KFMX, Northfield, Minn.	$\frac{275}{283}$	Silent Silent Silent	Silent Silent 7:00-8.00	9:30-11:00 Silent Sllent	Silent 9:00-10:00 Silent	Silent Silent 9:00-10:00	7:30- 8:30 Silent	Silent Silent
KFNF, Shenandoah, Ia KFOA, Seattle, Wash KFPT, Sali Lake Cy., Utah	266 455 268	6:30-9:00 8:45-12:00 9:00-11:00	6:30-8:00 Silent 10:00-11:00	6:30-9:00 8:45-12:00 9:00-10:00	8:45-1:00 10:00-11:00	6:30-9:00 8:45-12:00 9:00-10:00	6:30- 9:00 Silent 9:00-10:00	6:30- 9:00 8:45- 1:00 10:00-11:00
KFOX, Seattle, Wash	238 312 485.1	7:15- 2:00 10:00- 3:00	Silent 9:45-11:00	9:15- 1:00	9:15- 1:00 10:00- 3:00	9:15- 1:00 Silent	Silent 10:00-3:00 Silent	9:15- 1:00 Silent 10:00- 1:30
KGW, Portland, Ore KHJ, Los Angeles, Callf KJS, Los Angeles, Callf	393 252	12:00- 2:00 10:00-12:00 Silent	10:00-12:00 9:15-11:30	Sllent Sllent	10:00-12:00 10:00-11:00	10:00-12:00 Silent	10:00-12:00 10:00-11:00	10:00-2:00 Silent
KLX, Oakland, Callf KNX, Hollywood, Calif KOA, Denver, Colo	337 322.4	Silent 8:00- 1:00 Silent	Silent 10:00-12:00 9:45-10:45	10:00-12:00 8:00-1:00 10:00-11:00	Silent 8:00- 1:00 Sllent	10:00-12:00 8:00- 1:00 10:00-11:00	Silent 8:00- 1:00 Silent	10:00-12:00 8:00-1:00 10:00-11:00
KOB, State College, N. M., KPO, San Francisco, Callf.	423	Silent 10:00- 2:00 Silent	Silent	8:30-9:30	Silent 9:00-1:00 Silent	8:30 - 9:30 9:00-12:00 7:00- 9:00	Silent 9:00- 1:00 Silent	8:30- 9:30 Silent 7:00- 9:00
KQV, Pittsburgh, Pa KSAC, Manhattan, Kan KSD, St. Louis, Mo	$340.7 \\ 549.1$	Silent 8:00- 9:00	Silent Silent	7:30-8:30 7:00-11:55	7:30 - 8:30 7:00-11:00	7:30-8:30 6:45-11:00	7:30- 8:30 Silent	7:30-8:30 8:00-9:00
KTHS, Hot Springs, Ark. KTW, Seattle, Wash KYW, Chicago, Ill	405	8:30-11:30 Silent 7:00- 2:00	8:30-11:30 9:00-11:30 7:00- 8:00	Silent	8:30-11:30 Silent 7:00-2:30	8:30-11:30 Silent 7:00- 2:30	8:30-11:30 Silent 7:00- 2:30	8:30-11:30 Silent 7:00- 2:30
NAA, Radio, Va	435	Silent 7:30-10:00	Silent Silent Silent	5:45- 7:20 Sllent 7:30- 9:00	6:05- 7:20 Silent Silent	6:25- 7:40 7:30-10:00 Silent	5:45- 7:40 Silent 7:30- 9:00	7:05-7:40 Silent Silent
WAAW, Omaha, Nebr WABL, Storrs, Conn WABN, La Crosse, Wis WAHG, Richmond, N. Y	275	Silent Silent Silent	Silent	6:00- 8:00 8:00-10:00	Sllent Silent	6:00- 8:00 Silent	Silent 9:00-11:00	6:00- 8:00 Silent
WAHG, Richmond, N. Y WBAP, Fort Worth, Tex WBAV, Columbus, O	472.9	11:00-12:00 7:00-8:00 9:00-11:00	Silent 11:00-12:00 Silent	6:30-1:00 7:30-10:45 7:00-9:00	Silent 7:30-10:45 Silent	Sllent	Silent 7:30-10:45 Silent	6:30-10:15 7:30-10:45 7:00-8:00
WBBG. Mattapoisett, Mass WBBR. Staten Island. N. Y.		Silent 7:00-8:00 6:00-1:00	Silent 8:10- 9:05 4:00-10:00	7:00- 9:00	Silent Silent 6:00-1:00	7:00- 8:00 7:00- 8:00 6:00- 1:00	Silent 8:10- 9:05 6:00- 1:00	6:00- 1:00 Silent 6:00- 1:00
WBCN, Chicago, Ill WBT, Charlotte, N. C WBZ, Springfield, Mass	360 337	Silent 6:40- 8:55	5:30- 6:30 6:00- 9:00	Silent 6:40-11:00	7:30- 8:30 6:40- 8:55	Silent 6:40-11:00	7:30- 8:30 6:40- 8:55	Silent 6:40-11:00
WCAE, Pittsburgh, Pa WCAL, Northfield, Minn WCAP, Washington, D. C	462 337 469	6:30- 8:30 12:00- 1:00 Silent	6:30-8:30 8:30-10:00 6:20-9:00	6:30-10:30 Silent 6:30-9:00	6:30-10:30 Silent Silent	6:30- 8:30 Silent 6:45- 9:00	6:30-10:30 9:00-10:00 Silent	6:30-8:30 8:30-9:00 6:30-11:00
WCAU, Philadelphia, Pa WCBD, Zlon, Ill WCBK, St. Petersburg, Fla	273 345 266	Silent Silent	5:00-6:00 2:30-6:00	5:00-6:00 8:00-10:30 6:00-7:00	Silent Silent	5:00- 8:00 Silent Silent	5:00-8:00 8:00-10:30 6:00-7:00	5:00-10:00 Silent Silent
WCCO, Minn St. P., Minn.	516	Silent 6:00- 9:00 Silent	8:00- 9:00 6:15- 7:15	6:00-9:00 7:30-9:00	6:00-7:30 10:00-11:00	7:00- 8:00 6:00- 9:00	7:00-10:30 6:00- 9:00	6:00- 9:00 6:00- 9:00
WDAF, Kansas City, Mo. WDAR, Philadelphia. Pa. WEAF, New York, N. Y	395 492	11:45- 1:00 6:30- 7:30 5:00-11:00	4:00- 5:00 Silent 6:20- 9:15	6:30-9:00 5:00-10:00	11:45- 1:00 6:30- 7:30 5:00-10:00	8:00-1:00 6:30-9:00 5:00-11:00	11:45- 1:00 6:30- 7:30 5:00-11:00	8:00-1:00 6:30-12:00 5:00-11:00
WEAO, Columbus, Ohio WEAR, Cleveland, O WEAY, Houston, Texas	294 364.3 360	Silent Silent Silent	Silent Silent 8:00- 9:00	Silent Silent Silent	Silent 6:00-10:00 8:30- 9:30	Silent Silent 8:30- 9:30	7:00-9:00 7:00-10:00 Silent	Silent Silent 8:30-9:30
WEBH, Chicago, III	370 273	7:30-12:30 Silent	7:00- 9:00 Silent	Sllent Silent	7:30-12:30 6:00- 8:00	7:30-12:30 6:00-8:00	7:30-12:30 Silent	7:30-12:30 Silent
WEEL, Boston, Mass WEMC, Berrlen Spgs., Mch.	$\begin{array}{c} 303 \\ 286 \\ 472 \end{array}$	Silent Silent 8:30-12:00	6:20- 9:00 7:00- 9:15 6:00-11:00	6:00- 9:45 7:00- 9:15 7:00- 9:15	6:00-11:00 Silent 8:30-12:00	6:00-11:00 7:00- 9:15 Silent	6:00-11:00 Silent 8:30-12:00	6:00-11:00 7:00-10:00 8:30- 9:30
WEL Philadelphia, Pa	273 395 263	6:00-11:30 Sllent 9:00-12:00	6:30-12:30 6:30- 7:30 Silent	10:30-12:15 Silent 9:00-12:00	10:30-12:30 7:00- 8:00 Silent	6:30-12:30 Silent 8:00- 9:00	6:00-12:15 7:00- 8:30 Silent	6:30-12:15 Silent Silent
WGAQ, Shreveport, La WGBS, New York, N. Y WGI, Medford, Mass	316 360	6:30-11:00 6:30- 9:00	Silent 7:30- 9:00	5:30- 6:30 Silent	5:30-11:00 6:30- 9:00	6:10-6:30 6:30-9:00	7:00-12:00 6:30- 9:00	5:30- 6:30 6:30- 9:00
WGN, Chicago, 111	370 319 270	6:00-11:00 5:30- 6:30 Silent	2:30-10:00 3:00- 7:30 Silent	Silent 5:30-11:00 9:00-10:00	6:00-11:00 5:30- 6:30 Silent	6:00-11:00 5:30-11:00 Silent	6:00-11:00 5:30-6:30 7:00-8:00	6:00-11:00 5:30-11:00 Silent
WGY, Schenectady, N. Y. WHA, Madison, Wis	380 535.4 498	8:30- 9:30 Silent 7:30- 9:00	6:30- 9:00 Silent Silent	6:45-9:00 7:45-8:45 Silent	6:45- 9:00 8:00- 9:00 8:00- 9:00	Silent 7:45- 8:45 9:00- 9:30	6:45- 9:00 8:00- 9:00 Silent	6:45-10:30 7:45- 8:45 Silent
WILAN MILICALINE, WIS	275	Silent 7:30- 9:00	Silent 4:00-5:00	Silent	Silent 7:30- 9:00	7:30- 8:30 7:30- 9:00	Silent 7:30- 9:00	Silent 7:30-9:00
WHAS, Louisville, Ky WHAZ, Troy, N. YWHB, Kansas City, Mo WHK, Cleveland, Ohio	1 410 1	Silent Silent 5:00-11:00	Silent 8:00-10:00 7:00-10:00	7:00- 8:00 5:00- 6:30	Silent 8:00-10:00 5:30- 6:30	Silent 7:00- 8:00 5:00- 6:30	Silent 8:00-10:00 5:00-11:00	Silent 7:00- 8:00 5:00-11:00
WHO, Des Moines, la	522.3	6:30-11:00 Silent 7:00-11:00	8:30-11:00 Silent 9:30-12:00	6:30-11:00 7:30-12:00 Silent	8:30-11:00 Silent 7:00-11:00	6:30-11:00 6:30- 9:45 Silent	8:30-11:00 Silent 7:00-11:00	8:30-11:00 7:30- 9:00 Silent
WIP. Philadelphia, Pa WJAR, Providence, R. I. WJAS, Plttsburgh, Pa	360 275.3	6:10- 7:10 Silent	Silent Sllent Sllent	7:00-8:00 7:30-10:00 7:15-8:15	7:00-8:00 7:30-10:00	7:00-12:00 7:30-10:00 7:15-8:15	Silent 6:30-9:00	6:30-10:00 6:30- 9:00 7:15- 8:15
WIY, New York, N. Y	405 455	7:15-12:00 Silent 6:00-10:30	7:15- 7:45 6:00-10:30	Silent 6:00-10:30	7:15-8:15 6:45-8:00 6:00-10:00	Silent 6:00-10:30	Silent 6:30- 9:30 6:00-10:30	6:30-10:30 6:00-10:30
WKAQ, San Juan, P. R WKBF, Providence, R. I., WLBL, Stevens Point, Wis.	286	Silent Silent Silent	Silent Silent Silent	Silent Silent Silent	7:00- 8:30 8:00- 9:30 8:00- 9:00	6:00- 7:30 Silent Sllent	6:30-8:00 Silent Silent	Silent Silent Silent
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WLW. Cincinnati, O WMAK, Lockport, N. Y WMAQ, Chicago, Ill WMC. Memphis, Tenn	448 503.9	Silent 6:00-10:00 8:30- 9:30	Silent Silent	Silent 8:30- 9:30	6:00-10:00 8:30-12:00	6:00-10:00 Silent	6:00-10:00 8:30- 9:30	6:00-10:00 8:30-12:00
WNAC. Boston, Mass	323.9 280.2 528.8	10:00-12:00 9:00-10:00 7:30-10:30	Silent 7:30- 9:30 Silent	8:00-10:00 6:00-10:00 7:30-10:30	Silent 8:00-10:00 7:30-10:30	8:00-11:00 6:00-10:00 7:30-10:30	8:00-10:00 8:00-10:00 7:30-10:30	Silent 6:00-10:00 7:30-10:30
WOAN, San Antonio, Texas.	394.5 522.3	Silent 6:00-12:15	7:30-10:30 6:00-11:00 Silent	Silent 6:00-11:00	8:30-10:30 6:00-11:00 8:15-10:00	Silent Silent Silent	9:30-10:30 6:00-11:00 Silent	Silent 6:00-11:00 8:00-10:00
WOAX, Trenton, N. J WOC. Davenport, Ia WOI, Ames, 1a	498 270	9:00-10:00 Sllent	7:00-11:00 Silent	10:00-1:00	Silent Silent	8:00- 9:00 Silent	9:00-11:00 8:15- 9:15	8:00- 9:00 Silent
WOO, Philadelphia, Pa WOR, Newark, N. J WORD, Batavia, 111	278	Silont 6:15-10:00 Silent	Silent Silent 7:00- 9:00	6:30-10:00 5:15-10:00 8:00- 9:00	Silent 5:15-10:00 8:00- 9:00	6:30-10:00 5:15-10:00 Silent	Silent 5:15- 6:30 8:00- 9:00	6:30-10:00 5:15- 6:30 Silent
WOS, Jefferson City, Mo	440.9 448	Silent 7:00-2:00 Silent	7:30-8:30 8:00-10:00 7:30-8:30	8:00-10:00 Silent 7:30-8:30	Silent 7:00-2:00 Silent	8:00-10:00	Silent 7:00-2:00 Silent	8:00-10:00
WRBC, Valparaiso, Ind WRC, Washington, D. C WREO, Lansing, Mich	288.5	6:00-10:30 7:15-10.00	Silent 6:00- 7:00	Silent Silent	6:00-10:30 7:15- 8:15	Silent Silent	6:00-10:30 7:15- 8:15	Silent Silent
WRW. Tarrytown, N. Y WSAC, Clemson Coll., S. C WSAI, Cincinnati, O	325.9	8:00-10:30 Sllent 8:00-10:00		Silent 10:00-12:00	8:00-10:30 Silent 7:00-10:00	8:00-10:30 7:00- 8:00 Silent	8:00-10:30 Silent 10:00-12:00	8:00-10:30 Silent Silent
WSB, Atlanta, Ga	429 364	8:00-12:00 8:00-11:00	7:30-9:15 Sllent 6:00-12:30	8:00-12:00 7:00- 9:00 6:00-12:30	8:00-12:00 Silent 6:00-12:30	7:00- 9:00 6:00-12:30	8:00-12:00 Silent 6:00-1:30	8:00-12:00 Silent 6:00-12:30
WTAS, Elgln, Ill WTAY, Oak Park, Ill WWJ, Detroit, Mich	250 516	6:45-10:00 6:45-10:00	Silent	Silent 6:00-7:00	6:45- 7:45	6:45-10:00	6:45- 7:45 6:45- 7:45	6:45-10:00

Instructions for Use. - All the hours above are given in Central Standard Time. If your city uses Eastern Time, add one hour to each of the periods stated; if your city uses Mountain Time, subtract one hour; if your city uses Pacific Time, subtract two hours. This table includes only the evening Radiocasts, and, on Sunday, the late afternoon program.

STATIONS IN ORDER OF WAVE LENGTHS USED

Meters	Call	Meters	Call Call	Meter	s Call	Meter	rs Call	Meter	s Call	Meter	rs Call
	KFQX		KFMQ	315.6	KFDM	360	WSAC	411	WDAF	469	WRC
	VOAX		WABL	316	WGBS	360.4	WHN	411	$\mathbf{W}\mathbf{H}\mathbf{B}$	472.9	\mathbf{WBAP}
	VABN		WHAD		WAHG	364	WTAM	417	wcco	472.9	WFAA
	VBBG	275.2	KQV	319	WGR	364.3	WEAR	423	KPO	480	CYL
	WTAY	275.3	WJAS	322.4	KOA	370	CYB	423	$\mathbf{w}\mathbf{L}\mathbf{w}$	485.1	KGW
252	KJS		VAAW	325.9	$\mathbf{w}_{\mathbf{MH}}$	370	WEBH	429	wsb	492	WEAF
	VGAQ	278	WLBL	325.9	WSAI	370	WGN	430	CFAC	498	WHAA
	VMAK		WORD	330	CYX	375	KTHS	435	AT9	498	WOC
	KENE	278	WRBC	330	KFAE	380	WGY	435	CNRO	503.9	WMC
	VBCN	280.2	WNAC	337	KNX	380	WHAZ	435	NAA	503.5	KLX
	VCBK	283	KFMX	337	WBZ	394.5	WOAI	437	CKAC		WIP
	KFPT		WEMC	337	WCAL	395	\mathbf{KHJ}	440	CFCN	509.9	
	WGST		WKBF	340.7	KSAC	395	WDAR	440.9	wos	509.9	woo
270	LO.1	288.3	KFKX	341	CHYC	395	WFI			516	WCX
	KFKB	288.5	WREO	345	WCBD	400	CFCA	448	WMAQ	516	wwJ
	VBBR	293.9	WBAV	345 348.6	WLS KOB	400	PWX	448 450	WQJ	522.3	who
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	$_{ m WEBJ}$	$\begin{vmatrix} 302.8 \\ 302.8 \end{vmatrix}$	WTAS	360	WEAY	405	KTW	455	WJZ	528.8	WNYC
273 273 V	VFBH		WEEI	360	WGI	405	WJY	462	WCAE	535.4	KYW
273	WRW	309.1	KDKA	360	WJAR	405	WOR	469	KFI	535.4	WHA
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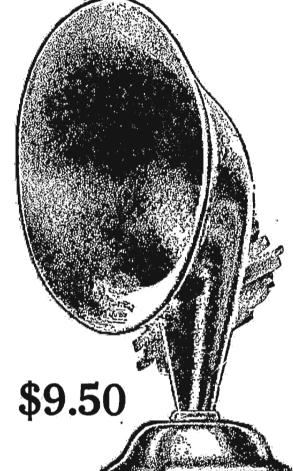
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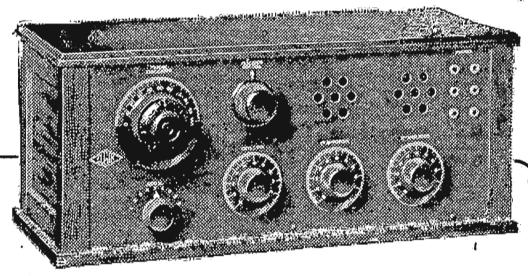


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ing set-mail the ooupon with your name and address and we

will send you the com-

plete working drawings of the Elgin Super-Reinartz—ab-

solutely FREE!

Don't pay the other fellow for doing that you can do yourself. Build what you can do yourself. Build your own Radio set—and have the fun of building it! The Elgin Super-Reinartz is supplied "knocked down." But it is different from the average so-called knocked

Every thing is drilled, the panel is engraved—and there is absolutely nothing to solder. The parts as-semble just like building blocks, all wires "clip" into place and the panel slides in the grooved cabinet and fits! Nothing to do but drive a few screws!

If you can use a screw driver you can build this highly efficient receiving set in an hour or so. Then call in your friends and show them the set you built yourself! Show them how easy

it is to tune in the stations they have been unable to get with ordinary sets.

The Elgin Super-Reinartz is the set that has repeatedly tuned in 2LO, the hard-to-get London station. This same set has logged every worth-while station in the United States, Canada, Mexico and Cuba.

Canada, Mexico and Cuba.
The parts supplied you are exact duplicates of the parts we used in the original model, the hook-up is the same and an exact simplified working drawing is supplied. You can't go wrong!
We guarantee every part in the Elgin Super-Reinartz to be the utmost in efficiency. We guarantee the drawings furnished you to be duplicates of the same set that

cates of the same set that heard London. We guarantee reception that is only possible on other sets twice the size and price, providing our drawings are followed and the set is properly constructed as we direct! Read our FREE offer to you FREE offer to you.

Super-Reimartz The Ford of Radio



- - - - Tear This Off - - - - -Elgin Radio Supply Company, Suite A, 207 E. Chicago St., ELGIN, ILL.

I want to know all about the set that heard London. Send the working drawings of the Elgin Super-Relnartz set by return mail-Freel I am enclosing a stamp to cover postage.

WCBD OPENS HIGH POWER STATION

Saturday, January 31

Saturday, silent night for: CFAC, CFCA, CKY, KFAE, KFDM, KFKX, KHJ, KOB, WBAP, WBAV, WBBG, WCAU, WCBD, WEAO, WEBJ, WEEI, WEMC, WHA, WHB, WHO, WJY, WKAQ, WLW, WOI, WOO, WTAY.

CHIC, Toronto, Can. (Eastern, 350), 7:30-8:30 p. m., instrumental quintet; Arthur E. Vandervoort, baritone; Lawrence DeFoe, tenor; Hazel Hall Vandervoort, soprano; 9:30-11, Charles E. Bedley and his

orchestra.
CHNC, Toronto, Can. (Eastern, 350), 9-11 p. m., dance music, Charles E. Bodley and his orchestrs; Jack Gourlay, Scotch monologuist; Dwight Wilson, baritone, CKAC, Montreal, Can. (Eastern, 425), 7 p. m., klddies' stories in French and English; 7:30, Windsor hotel dinner concert; 8:30, studio variety program; 10:30, Windsor hotel dance orchestra.
CNRO, Ottawa, Can. (Eastern, 435), 7:30 p. m., bedtima story and lullaby, Aunt Agnes; 8, "William Tell," 'Danse des Enfants," "Danse des Galants," "The Mikado," Chateau hotel orchestra; 8:30, "Homing,"

Forbes W. Van Why; 5:30, Town Crier and Village Urchins; 6-7, dinner hour music; 7-7:30, D. B. Carpenter's musicsl half hour; 8-10, program, Salisbury and Alexander, Captain Edward Salisbury, lecturer; 10-11, Abe Lyman'a Cocoanut Grove dance or chestra from Ambasssdor hotel; 11-12, program, The Green Mill.

Green Mill.

KOA, Denver, Colo. (Mountain, 322.4), 9-12 midnight, Joe Mann and his Rainbow-Lane orchestra.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., setting-up exercises, Bernard Drury; 1-2 p. m., Rudy Selger's Fairmont hotel orchestra; 2:30-3:30, musical mstinee, Puckett's dsnclng academy orchestra; 3:30-5:30, tea dansant, E. Max Bradfield's Versatila bsnd; 8-12, Art Weldner's dance orchestra.

KSD, St. Louis, Mo. (Central, 549.1), 8 p. m., City club glee club and orchestra.

KTHS, Hot Springs National Park, Ark. (Central, 375), 8:30-10 p. m., concert, McAfferty sextet and other artists; 10:30-11:30, New Arlington Meyer Davis orchestra.

artists; 10:30-11:30, New Arms...
chestra.

KYW, Chicago, III. (Central, 535.4), 6:30 a. m., mornlng exercises, Y. M. C. A.; 11:35, table talk, Mrs.
Anna J. Peterson; 6:35-7 p. m., children's bedtime
story, Uncle Bob; 7-7:30, dinner concert, Congress
hotel; 8-8:58, Ann H. Swenson, contralto; Oscar
Heather, tenor; Indiana male quartet; 9:35-11:30,
Congress classic; 12-2 a. m., Congress carnival.
PWX, Havana, Cuba (Eastern, 400), 8:30 p. m., concert,

orchestra, Prof. Antonio M. Romeu.

WAHG, Richmond Hill, L. I. (Eastern, 316), 12 p. m., 2 a. m., Ascultto Brothers dance orchestra.

WBBR, New York, N. Y. (Eastern, 273), 8 p. m., violin duets, Georga Twaroschk, Carl Park; 8:10, Carl Park, violinist; 8:15, Blble questions and answers; 8:45, violin duets, George Twaroschk, Carl Park, WBCN, Chicago, Ill. (Central, 266), 6-6:30 p. m., Purple Herons orchestra; 6:30-7, American trio; Bernard Schweitzer, tenor; 7-8, fireside hour, George R. Cleveland Walt Goodwin's band; 8-12, Midway Dancing Gsrden orchestra; George Forsyth, tenor; Southtown harmonizers; Triangle trio; Will Dillon, tenor; Englewood string quintet; Les Cameron, tenor.

WBZ, Springfield. Mass. (Eastern, 337), 6 p. m., Leo Reisman's Hotel Lenox ensemble; 7:05, bedtime story for the klddies, Hotel Kimball; 7:15, sketches, naval history, E. S. R. Brandt, Lieut. Commander U. S. N.; 7:30, concert Hotel Kimball trio; 8, Boston Arena of the B. A. A. track and field gsmes.

WCAE, Pittsburgh, Pa. (Eastern, 462), 2:30 p. m., teadansant, Nixon restaurant; 4:30, orchestral program, Ed Lally's Rendezvous cabaret orchestra; 6:30, dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, inside movle chats; 8:30, Royal entertainers.

WCAL, Northfield, Minn. (Central, 337), 9:45 a. m., chapel services; 12 midnight, Herbert Hauge, saxophonist; Reuben Benson, banjoist; Luther Noss, pianist

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., home service, Betty Crocker; 8 p. m., "Fireside Philosophies," Rev. Roy L. Smith, pastor; 8:15, opening of Twin City Automobile Show and Trade week.

week.
WDAF, Kansas City, Mo. (Central, 411), 3:30-4:30
p. m., The Star's Radlo orchestra; 6-7, School of the
Air, address, Tell-Me-a-Story Lady; Trianon ensemble,
Hotel Muehlebach.
WDAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m.,
dally almanac; 12:02 p. m., Stanley theater organ
recital; Arcadia cafe concert orchestra; 2, Arcadia
cafe concert orchestra; 2:30, Charles Silverthorne,
baritone; Mrs. Paul R. Gibson, soprano; 4:30, Cotton
Pickers dance orchestra; 7:30, Arcadia cafa dance
orchestra.

baritone; Mrs. Paul R. Gibson, soprano; 4:30, Cotton Pickers dance orchestra; 7:30, Arcadia cafa dance orchestra dance orchestra; 7:30, Arcadia cafa dance orchestra.

WEAF, New York, N. Y. (Eastern, 492), 4-5 p. m., Dart's Brooklake orchestra; 6-7, dinner music, Waldorf-Astoria hotel; 7-7:30, Madge Kennedy, screen and stage star; 7:45-8, Phillips Steele, baritone; 8-8:30, talk, "A Home for Every Child," Sophie Irene Loeb, President of Child Welfare committee of America; 9:30-10:30, concert, Waldorf-Astoria hotel; 10:30-10:45. Ida Davenport, soprano; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.

WFAA, Dallas, Texas (Central, 472.9), 12:30-1 p. m., address, G. F. Thomas; 8:30-9:30, Baylor University Alumni's Founder's day progrsm; 11-12, Adolphus hotel orchestra.

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3, zither solos, Leonard Zaph; Ethel Polick Eckard, soprano; Bernard Poland, tenor; Edna Lerieux, contralto, Loretta Kerk, pianist; 4:30, Rey Eirae dance orchestra; 6:30, Meyer Davis Believue Stratford concert orchestra; 8:30, program from WEAF.

WGN, Chicago, Ill. (Central, 370), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 3, rocking chair time; 5:30, Skeezix time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintet; 8-9, classical concert; 10-11, dance numbers, Don Bestor Drake danca orchestra, Jerry Conley Blackstone dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Hotel Statler concert ensemble; 6-7:30, dinner music, Hallpryd string quartet; 8:30-11:30, New York city banquet of the Metropolitan Life Insurance company, jointly with WEAF.

WGY, Schenettady, N. Y. (Eastern, 380), 7:30 p. m., international intercollegiate night, auspices Edison club: chorus selections, entire assembly; "Cavatina," Abe J. Moore, violinist; instrumental selections, Union college instrumental club; songs and cheers, alumni of Cornell uni



"Wait," Ircne Babin, soprano; "Saxophohla," A. Lewis; monologue, "The Speil of the Yukon," Gordon Rogers; "I Am a Frlar of Orders Grey," Frank A. Simm; "Gavotta and Variations," C. C. Ballantyne Fuller; plsy, "Suppressed," Ottawa drama players; "Why Is the Geological Survey," E. D. Ingall; "Bird of Love Divine," Irene Babin, soprano; "Nola," A. Lewis, saxophonist; monologue, "Pledged," Gordon Rogers; "Tha Lost Cord," Frank A. Sim, tenor; "Nocturne in C Major," C. C. Ballantyne Fuller; Chateau Laurier hotel orchestra; Jack Grace.

KD KA, E. Pittsburgh, Pa. (Eastern, 309, 1), 1:30 p. m., Daugherty's orchestra; 6. dinner concert, Charlie Gaylord's orchestra; 7:30, Richard, the riddler; 8:30, banquet, Westinghouse Veteran's association.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk, news; 5:30-6, Examiner's musical half hour: 6:45-7, speaker; 7-7:45, dance orchestra; 7:45-8, The Bookshelf; 8-9, song recital; 9-10, Examiner, Placentla, California, Chamber of Commerce program; 10-11, Packard Radio club.

KFNF, Shenandoah, lowa (Central, 266), 6:30 p. m., concert, Maitland, Mo., H. L. Lecper, director.

KFOA, Seattle, Wash. (Pacific, 455), 8-10:30 p. m., U. S. S. Nevada orchestra, Pantages vaudeville.

KFQX, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour program, conducted by Mrs. McPherson; 3:30-4:30 p. m., lmpromptu studio program, Roy Reid Brignall, planist; G. N. Nichols, cornetlst; 7:30-9:30, auditorium service, sermon on Divine Healing, Almea Semple McPherson, pastor.

KGO, Oakland, Calif. (Pacific, 455), 10:30-11:30 a. m., sunshine hour program, conducted by Mrs. McPherson; 3:30-4:30 p. m., lmpromptu studio program, Roy Reid Brignall, planist; G. N. Nichols, cornetlst; 7:30-9:30, auditorium service, sermon on Divine Healing, Almea Semple McPherson, pastor.

KGO, Oakland, Calif. (Pacific, 455.1), 10 p. m., George Oison's Metropolitan orchestra; 2:30-5, Charlle Wellman's Saturday affernoon frolic; 6-6:30. Art Hickman's Blitmore hotel concert orchestra, Ed

12, Earl Burtnett's Biltmore hotel dance orchestra; 12-2 a. m., Tha Lost Angels of KHJ, with Majestle Six orchestra.

KNX, Los Angeles, Callf. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, "Radio Talk to Radio Fans,"

Headliners of the Week

ATURDAY night the new Northern Electric company's station, CHIC, opens at Toronto. America's new Passion Play, "Vision," which will probably be the outstanding Radio event of 1925 will be given this same evening at WIP by the Villanova players. WRC is featuring this evening the Elena de Sayn string quartet, a group of artists well known in America and Europe.

For the first time in the history of the Rocky mountain territory complete Roman Catholic services will be broadcast in the morning and evening by KOA, Denver. Bishop J. Henry Tihen will preach in the morning and Rev. Hugh L. McMenamin in the evening.

WCBD will give a special program Monday to dedicate its new high power station. All the Radio artists of this station will appear and the program will last from 8-12 midnight. WCBD is well known for its good music. Dixie melodies will be sung at WEMC by Dixie members of this college.

Tuesday night the American Pen Women of the Atlantic coast will give a program at WJY, New York. Tune in and hear some of your favorite authors. Mr. "Bones" and Mr.

"Tambo," well-known characters of the American minstrel show, will make their Radio debut at KGO tonight.

At midnight Wednesday tune in for WBAP and get religion with the Hired Hand broadcasting from the Negro Holy Ghost Camp meeting. The Hired Hand will broadcast direct from the church.

"Il Trovatore," an opera popular for its beautiful music, will be given by the WGY Opera company, Thursday at WGY, Schenectady. The entire opera will be given. Later in the evening at 9-10 p.m., Pacific time, the American Pen Women of Santa Clara will take charge of the KPO program. If you prefer something frivolous, dial for KSAC and listen to two professors give a "Swede" program.

The original Peggy O'Neil, character singer, will be on the air for the first time Friday at WAHG, Richmond. Whether he will sing "Peggy O'Neil" is still unknown. W. T. Mc-Dermidd will give an interesting talk at KFAE, Pullman, on the art of the northwest.

KFQX may soon change its call letters to KSND. Do not be surprised if you hear this call from Seattle.

B. K. Swartz, tenor; Edison club quartet; songs, graduate engineers, British Empire colleges and universities from New Zealand, Australia, South Africa, India, Canada, British Isles; comedy skit, "Burlesque on Radlo Brosdcastlng," Massacbusetts Institute of Technology; songs and cheers, Kansas State college, Washington State college, University of California, Leland Stanford; Edison club string orchestra; "Laddie Buck O' Mine." E. W. Baughman, barltone; address, J. G. Barry; songs and cheers, alumni of Clemson college, "Springtime," S. A. Clark, clarinetist; songs and cheers, University of Vermont; Union college glee club; "Springtime," S. A. Clark, clarinetist; songs and cheers, University of Kansas, California Tech.; address, Frsncis C. Pratt; guitar and banjo duet, "Southern Melodles," E. O. Ricker, George Ricker; reading; songs and cheers, alumni of University of New Haupshire, Georgia Tech., Virginia Poltechnic Institute; trumpet and flute duet, "An Evening on the Sea." A. F. Sellers, E. L. Hempker; songs and cheers, alumni of Worchester Polytechnic Institute, University of Colorado, University of North Carolina; "Native Songs," General Elec. Chinese engineers; "A Test Man's Opinion of Test Men," A. E. Marshman; songa and cheers, alumni of Texas Agricultural Mechanical college, University of Texas. Pa. State college, University of Nebraska; "The Trumpeter," R. E. Welton, bass; chorus selections; songs and cheers, alumni of University of Mississippi, Auburn Polytechnic institute, Tulsne, Oregon State college; Edison club.

WHAS, Louisville, Ky. (Central, 400), 4-5 p. ni. selections, Alamo theater organ; 7:30-9, concert, Barnev Rapp's orchestra; fifteen-minute specisity, Wendell Hall.

WHK. Cleveland, Ohio (Eastern, 273), 6 p. m., dinner music, Radlograms; 9, Rslnbow club entertainers, Billie

Hall.

WH K. Cleveland, Ohio (Eastern, 273), 6 p. m., dinner music. Radlograms; 9, Rslnbow club entertainers, Billie Bugbee, Violet Owens, June Farley, Bobble and Dede Fitzpatrick, Lucilia Phillips, Dean Smith, John Peattie, Art Cooke; McCroy entertainers; 10, Emerson Gili and his Ramboo Cardon entertainers.

Fitzpatrick, Luclia Philips, Dean Smith, John Peattie, Art Cooke; McCroy entertainers; 10, Emerson Gili and his Bamboo Garden entertainers.

WHN, New York, N. Y. (Eastern, 360.4), 6;30-7;30 p. m., Vincent Catanese and his Hotel Alamse orchestra; 7:30-8, Hotel Carlton Terrance orchestra; 8:30-9, Strand Roof Entertainers; 9:10-9:20, Alfred Dulin, concert, planist; 11-11:30, Jimmy Clarke and his entertainers; 11:30-12, Roseland dance orchestra.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Ksrl Bonawitz, organist; 5:05, Hotel St. Jsmes dinner dance orchestra; 7, Uncle Wip's beddime stories; America's new "Passion Play:" "Vision." presented by Villnova players, Robert Christis, Peter Smith, Howard Brady, Josephine Burella, Mae Dougherty, Louis Memminger, John Larkin, Kenneth Cook, James McFaddn, M. Gilbert Johnson, James Phelan, Joseph McGuinn Arthur Farren, James Downey, William Foley, Michael Foley Thomas Graney, Philip Danahy, John Cronin, James Judge, Mortimer Sullivan, Francis Kane, John Callahan and Pluir Plazzl; singing hy St. Mary's double quartet; 10:05, Art Coogan and his Club Madrid orchestra; 11:05, Karl Bonawitz, organist.

WJD, Mooseheart theater orchestra; 9-12, Log Cabin danca music.

WJZ, New York, N. Y. (Eastern, 455), 1-2 p. m., Mooscheart theater orchestra; 4-4:30, Hock and Jerome, songs; 4:30-5:30, Sherry's Tea orchestra; 7-8, Joseph Knecht's Waldorf-Astorla dance orchestra; 8-8:15, "Art for Laymen," Walter M. Grant; 8:15-8:30, Letitia Graham, soprano; Paul Haenssler, accompanist; 8:30-8:45, "With Baron Von Humboldt in the Wonderland of South America," Harry Chapin (Continued on page 10)

(Continued on page 10)

NEGRO CAMP MEETING AT WBAP

Saturday, January 31

(Continued from page 9)

Plummer; 8:45-9:15, Elena DcSayn string quartet; 9:15-9:30, "Radio as a Vacation," J. H. Dellinger of Bureau of Standards; 9:30-10, Silvio Sidell, baritone; 10-10:30, Dittborn Howard's string orchestra; 10:30-11:30, Freddle Rich and Hotel Astor dance

orchestra.
WLBL, Stevens Point, Wis. (Central, 278), 12 midnight,

WLBL, Stevens Point, Wis. (Central, 278), 12 midnight, "Encmies of Sleep."

WLS, Chicago, III. (Central, 345), 7 p. m., Ford and Glenn's trip to Paris; 7:20, national barn dance, Isham Jones and his College Inn orchestra; Ralph Emerson, organist; Walter Peterson; Grace Wilson; Harmony Girls; Glenn's Corn Huskers; Ford and Glenn; Barn dance fiddlers; 11:15-12:45, Senate theater review.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical excreises, William Stradtman, Instructor; 3 p. m., dance program, Marco Melody boys, Fred Lindeman, director; other features; 6, dinner hour concert, Cincinnati Post, featuring Seilnsky quintet. Lafafone, E. D. Leonard.

WMAQ, Chicago, III. (Central, 447.5), 2 p. m., Union League club forum; 6, Young Folks' Catholic association; S, LaSalie hotel orchestra; 8:30, "World Reporting," Junius B. Wood; 9, weekly Chicago theater revue.



Stephen E. Boisclair is the organist who plays on the late Tues-day and Thursday programs at W G Y, the General Electric station at Schenectady, New York. Mr. Boisclair is the official organist of this station.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program. O. K. Houck Piano company; 8 p. m., bedtlme story. Uncle Percy; 8:30, classical program, Gladys Barber.

WNJ, Newark, N. J. (Eastern, 233), 10:30-1 a. m., dance revue, Paradise dance palance.

WNYC, New York, N. Y. (Eastern, 528.8), 5:30-6:30 p. m., Frederick Benson and his orchestra; 6:30-7:30, Sam Wooding and his Club Alabam orchestra; 7:35-8, Chateau Four; 8:30-9, Police quartet; 9-10, instrumental noveities and recitals; 10:10-10:30, New York public lecture.

mental novelties and recitals; 10:10-10:30, New York public lecture.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. in.,dramatic hour, Davis Studio of Expression; 6:45, Sammy Heiman's orchestra; 9:30, program, quartet; 11, Frank Hodek and his Omaha Nightingales; 11:30, organ music. Arthur Hays, World theater.

WOC. Oavenport, Iowa (Central, 498), 12 m., chimes; 7 p. m., sandman's visit; 9, Lonis Conor and his LcClairc hotel orchestra; songs and novelty numbers, Peter MacArthur, baritone.

WOI. Ames, Iowa (Central, 270), 12:30 p. m., college chimes; "Feeding and Management of Chicks," Prof. W. H. Lapp.

chimes; "Feeding and Management of Chicks," Prof. W. H. Lapp.

WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. in., organ recital, Mary E. Vogt; 12:02 p. in., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; band concert. John Wanamaker Commercial Institute band.

WOR, Newark, N. J. (Eastern, 405), 2:30-4 p. m., children's program; 6:15-7:30, "Music While You Dine." Freddie Sieckman and his Green Mt. 1dlers; 8:30-8:45. Winifred DeWitt Vogelius, contraito; 9:15-9:30, Winifred DeWitt Vogelius; 9:30-10:30, concert, Somerville male chorus.

9:30, Winifred DeWitt Vogellus; 9:30-10:30, concert, Somerville male chorus.

WQJ. Chicago, III. (Central, 448), 11-12 m., home economics. Helen Harrington Downing; "Eve-Evolved," Mrs. Darius T. Phillips; taik, J. W. Foley; "Fancy Cookies," Bertha M. Harrls; 3-4 p. m., Koffee Kiatsch, special musical features; 7-8, dinner concert, Ralph Williams and his Rainho Garden orchestra; Otls Pile Jester, soprano; Mary T. House, accompaulst; George Sippel, planist; 10-2 a. m., Ralph Williams and his Rainho Skylarks; Jerry Sullivan, songs; George A. Little and Larry Shay, harmony singers; Alfred Tweed, harmonica selections; the Meiodians; Clarence Theders, tenor: Yukona Cameron, soprano; June Lee, comedienne.

harmonica selections; the Mciodians; Clarence Theders, tenor; Yukona Cameron, soprano; June Lee, comedienne. WRC, Washington, D. C. (Eastern, 469), 6:45 p. m., children's hour, Marjorle Tucker; 7, dinner music, Hotel Washington-Irving Boernsteln orchestra; 8, Bihie taik; 8:45, concert of chamber music, Elena do Sayn string quartet; 9:15, music; 10:30, dance program, Astor hotel orchestra; 11:15. Otto Beck, organist. WREO, Lansing, Mich. (Eastern, 288.5), 9-12 midnight, Frank Logan and his orchestra.
WSAI, Cincinnati, Ohio (Central, 325.9), 8 p. m., chimes; 8:15, Bicycle mixed quartet; 9, weekly news review, Allison F. Stanley; 9:15, Bicycle male quartet; 12, WSAI midnight entertainers; 12:30, Freda Sanker's Toad Stool orchestra. Toad Stool orchestra.

Toad Stool orchestra.

WSB, Atlanta, Ga. (Central, 429), 6 p. m., songs, Bonnie Barnhardt; 8-9, orchestra; Mrs. Rose Matthews, soprano; 10:45. Ed and Grace McConnell.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Mauricc Spitainy's Hotel Statler orchestra; 9, WTAM dance orchestra, Ev Jones, director.

WWJ. Oetroit, Mich. (Eastern, 516), 8 a. m., setting-up exercises, 18. J. Horton; 9:30, tonight's dinner; 3 p. m., the Detroit News orchestra.

Sunday, February 1

Sunday, silent night for: CFAC, CHNC, CKAC, KFAE, KFDM, KFOA, KFKX, KFQX, KOB, KSD, PWX, WAHG, WBAV, WBBG, WCAU, WDAF, WEAO, WEBJ, WHA, WHAS, WHO, WJJD, WKAQ, WLBL, WMAQ, WNJ, WOI, WOR, WTAY.

CFAC, Calgary, Can. (Eastern, 430), 11 a. m., morning

service.

CFCA, Toronto, Can. (Eastern, 400), 11 a. m., services, Bloor Street Presbyterlan church, Rev. George C. Pidgeon. pastor; 5:55-6 p. m., Bible story for small children; 7. service, Timothy Eaton Metoorial church, preacher, Dr. Trevor 11. Davies.

CKAC, Montreal, Can. (Eastern, 425), 4:30 p. m., band

CKY, Winnipeg, Can. (Central, 450), 7 p. m., service, Grare Methodist church.

KOKA, E. Pittsburgh, Pa. (Eastern, 309.1), 11 a. m., services, Point Breeze Presbyterian church, Rev. Percival H. Baker; 2:30 p. m., concert; 4, Dr. Charles Helnroth, organist; 4:45, vesper services. Shadyside Presbyterlan church, Rev. Hugh Thomson Kerr, minis-6:15, dinner concert, Scalzo's orchestra; 7:30, ces, Calvary Episcopai church, Rev. E. J. Van

Etten, pastor.

KFI, Los Angeles, Calif. (Pacific, 469), 10-10:45 a. m.,
L. A. Church Federation service; 4-5 p. in., vesper
service, L. A. Church Federation inusicians; 6:45-7,
musical appreciation talk; 7-8, stage acts, specialities
and orchestra from Metropolitan (heater; 8-9, Electa
Pelt Ferry, suprano and trio of women's voices; 9-10,
Examiner, Anton Lada's Louislana Five dance orchestra; 10-11, Thereon Bennett and his orchestra.

KFNF, Shenandoah, Jowa (Central, 266), 10:45 a. m., regular church service; 3 p. m., program, Baptist church; 6:30, concert, Smith-Belding Harmony or-

KFNF, Shenandoah, Iowa (Central, 266), 10:45 a. m., regular church service; 3 p. m., program, Baptist church; 6:30, concert, Smith-Belding Harmony orchestra.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-12:30 p. m., complete morning religious services of Angelus temple, Almee Semplo McPherson, pastor; Esther Fricke Green, organist; 2:30-4:30 p. m., afternoon service of the temple, semon by pastor-evangelist, music by temple choir and Silver band; 7-9:45, complete evening services of Angelus temple, including special opening musical hour, evangelistic semon, Almee Semple McPherson; 10-11, organ recital, Esther Fricke Greon, KGO, Oakland, Calif. (Pacific, 312), 11 a. m., service, St. Luke's Episcopal church, Arthur McHoul, organist; Rev. W. Jennings, rector; 3:30 p. m., KGO Little Symphony orchestra, "Comique," sciections from "Alda," orchestra; "By the Waters of Babylon," "Beyond the Dawn," "A Sunset Song," Irwin Johnson, baritone; violin solos, Glenn W. Halik; "Scotch Poem," orchestra, preceded by talk on life and work of MacDowell, Arthur S. Garbott; four Mexican dances, orchestra; "Sancta Lucia," "Sweet Genevieve," Irwin Johnson; "Clarice," orchestra; 8, musical service, St. Luke's Episcopal church, Rev. W. W. Jennings, rector.

KGW. Portland, Orc. (Pacific, 485.1), 10:30 a. m., services, Portland Council of churches; 7, dinner concert, Colburn concert orchestra.

KHJ, Los Angeles, Calif. (Pacific, 395), 10 a. m., Dr. H. C. Culbertson, pastor Plymouth Congregational church; 10:30-12:30 p. m., complete morning services and organ recital, First Methodist Episcopal church, E. E. Helms, pastor; Arthur Blakely, organist; 6:30-7. Art Hickman's Blitmore hotel concert orchestra; Edward Fitzpatrick, director; 7-7:30, organ recital, Arthur Blakely, organist; 8:30-7. Arthur Blakely, organist; 8:30-7. Arthur Blakely, organist; 6:30-7. Arthur Blakely, organist; 6:30-7. Arthur Blakely, organist; 8-10, Zenith Radio concert company, Rola quartet.

KJS, Los Angeles, Calif. (Pacific, 337), 7-7:45 p. m., International Bible

8:30-10, concert, Rudy Seiger's Fairmont hotel orchestra.

KSAC, Manhattan, Kans. (Central, 340.7), 8 p. m., piano voluntary; 8:05, special sacred music; 8:10, prayer of affirmation; 8:15, hynn; 8:20, "Common Folks," understanding them; 8:35, song of benediction.

KTHS, Hot Springs National Park, Ark. (Central, (375), 11 a. m., services, First Presbyterian church, Rev. Chauncey Hickok, pastor; 8:30-10:30 p. m., vocal solos, Mrs. Harry A. Jones; New Arlington Meyer Davis ensemble, Jack Renard, director; 10-11:30, jazz concert, Phil Baxter and his singing orchestra.

KYW, Chicago, III. (Central, 535.4), 11 a. m., Central church service, Dr. Frederick F. Shannon; 4-5 p. m., studlo concert; 7, Chicago Sunday Evening club, speaker, Bishop Thomas F. Galior.

WBAP, Fort Worth, Texas (Central, 472.9), 11 a. m., services, St. Paul's M. E. church, Rev. C. D. Meade, pastor; Mrs. F. L. Jaccard, organist; 4 p. m., concert, Rialto theater; 11-12, midnight, frolics, Ted Miller's

6. W. I. Oppenhelm's Ben Franklin hotel concert orchestra.

WEAF, New York, N. Y. (Eastern, 492), 7:20-9:15
p. m., musical program, Roxy and his Gang, Capitol theater; 9:15-10:15, organ recital.

WEAR, Cleveland, Ohio (Eastern, 334.3), 1 p. m., Philip Spltainy's Allen theater symphony orchestra.

WEBH, Chicago, III. (Central, 370), 5 p. m., twilight musicale; 7-9, selected artists program.

WEEH, Boston, Mass. (Eastern, 303), 3:45-5:30 p. m., men's conference, Bedford Branch, Y. M. C. A.; 7:20-9:15, "Roxy and his Gang," Capitol theater.

WEMC, Berrien Springs, Mich. (Central, 286), 11-11:20
a. m., Radio Lighthouse choir; 11:20-11:30, Scripture reading and prayer, Pastor W. R. French; 11:30-11:40, Thelma Abel, soprano; Nelva Mundt, contralto; 11:40-12, sermon, Pastor V. R. French; 8:15-8:40 p. m., Radio Lighthouse choir; 8:40-8:45, Scripture reading, Pastor John Knox; 8:45-8:55, vocal duet, Mrs. Gertrude Hanson, contralto; Mrs. H. B. Taylor, soprano; 8:55-9:25, Bible lecture, Pastor John Knox.

WFAA, Oallas, Texas (Central, 472.9), 6-6:30 p. m., Radio Bible class, Dr. William Anderson, pastor; 6:30-7:30, Chrlstian Endeavor Unlon service; 7:30-8:45, scrvice, First Baptist church, Dr. George W. Truett, pastor; 9-11, Grace Methodist church male quartet and orchestra.

WFI, Philadelphia, Pa. (Eastern, 395), 4:30 p. m.,

orchestra.

WFI, Philadelphia, Pa. (Eastern, 395), 4:30 p. m., Central Y. M. C. A. services; 7;30, services, Arch Street Presbyterian church.

WGN, Chicago, III. (Central, 370), 11 a. m., Uncle Walt reads the comics to the children; 11:45, program, Chlcago theater, twin organ recital, Mr. and Mrs. Jesse Crawford; 2 p. m., organ recital, Lyon & Healy; 3, Tribune Master artist concert, Margaret Anderson, pianlst; 3:30, program, faculty artists, Chicago Musical college; 9-10, special program, "Sir Edgar Elgar, British Composer," Charles H. Gahriel, Jr.

WGR, Buffalo, N. Y. (Eastern, 319), 3-4 p. m., vesper service; 4-5, John F. Gunderman, Jr., organist; 7:15, Central Presbyterian church service and organ recital, William Wall Whiddit, organist, and Dr. Robert J. MacAlpine, speaker.

William Wall Whiddit, organist, and Dr. Robert J. MacAlpine, speaker.

WGY, Schenectady, N. Y. (Eastern, 380), 10:30 a. m., Flrst English Lutheran church, Rev. Herbert D. Shimer, pastor; 3:35 p. m., WGY symphony orchestra; Roger H. Stonehouse, soloist; Dr. Frank Sill Rogers, organist; 7:30, service, First English Lutheran church. WHAS, Louisville, Ky. (Central, 400), 9:57 a. m., organ music; 10, church service, auspices Fourth Avenue Presbyterian church, Rev. Dr. Charles W. Welch, pastor; 4 p. m., George Latimer, organist; 4:30-5, choral evensong service, Christ church cathedral. WHB, Kansas City, Mo. (Central, 411), 9:45-11 a. m., Linvood Christian church services; 8-9:15 p. m., M. E. church services; 12, program of dance and popular music,

music,

WHK, Cleveland, Ohio (Eastern, 273), 10:30 a. m., morning services, Old Stone cburch, Rev. W. H. Foulkes, pastor; 4:30 p. m., vesper service, Cleveland Federated churches, Rev. E. R. Wright, conductor; current reilgious topics; hymns, sermon; 7:30, evening service, Epworth-Euclid Memorial church, Rev. Louis Wright, pastor; 9, Conn symphony orchestra, Ralph E. Story, director; Fred W. Hinz, baritone; Roy J. Crocker, pianist; A. E. Clark, trombone soioist; Elizabeth Weidemann Kelly, soloist.

WHN, New York, N. Y. (Eastern, 360.4), 3-4 p. m., Queens County Christian Endeavor program; 5-5:30, Roseland dance orchestra; 5-5:30, Olcott Vail and his string trio; 10-10:45, Gem Razor entertainers; 11-11:30, Vanity club revue; 11:30-12, Connic's Inn revue,

WCX, Oetroit, Mich. (Eastern, 516), 7:15 p. m., church services.

WOAF, Kansas City, Mo. (Central, 411), 4-5 p. m., classical music. Star's orchestra.

WOAR, Philadelphia, Pa. (Eastern, 395), 2:30 p. m., Arcadia cafe concert orchestra, Feri Sarkozi, director; 6, W. I. Oppenhelm's Ben Franklin hotel concert orchestra.

WEAF, New York, N. Y. (Eastern, 492), 7:20-9:15 p. m., musical program, Roxy and his Gang, Capitol theater; 9:15-10:15, organ recital.

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WEEI, Boston, Mass. (Eastern, 303), 3:45-5:30 p. m., men's conference, Bedford Branch, Y. M. C. A.; 7:20-9:15, "Roxy and his Gang," Capitol theater.

WEMC, Memphis, Tenn. (Central, 503.9), 11 a. m., services, First Baptist church, Rev. A. U. Boone, pastor.

WAYC, New York, N. Y. (Eastern, 528.8), 9-11 p. m., services, First Presbyterian church; 7:30 p. m., services, Central Christian church; 7:30 p. m., services, First Presbyterian church; 7:30 p. m., services, Central Christian church; 7:30 p. m., services, First Presbyterian church; 7:30 p. m., services, Central Christian church; 7:30 p. m., services, First Presbyterian church; 7:30 p. m., services, Central Christian church; 7:30 p. m., services, Central Chri

9:30, Palmer Littlo symphony, Erwin Swinder, conductor.

WOI, Ames, Iowa (Central, 270), 10:45 a. m., coilege chimes; 11, chapel services, Dean Mathews, Dean of Divinity school, University of Chicago.

WOO, Philadelphia, Pa. (Eastern, 509.9), 10:30 a. m., services, Bethany temple; 2:30 p. m., Sunday school exercises, Bethany temple; 6:05, organ recital, Clarence K. Bawden; 7:30, services, Bethany temple; sermon, Rev Gordon A. MacLennan; organ recital, Carolino Quigg.

Quigg.

WQJ, Chicago, III. (Central, 448), 10:30 a. m., sermon, Dr. Preston Bradley; 100 voice choir; Ciarence Eddy, organist; 8-10 p. m., Raiph Williams and his Rainho orchestra in concert; Miriam Burns, sporano; Lois

Sandy Meek is a wandering minstrel of the air. His the air. voice may be heard Satur-day and Wednesday at
WQJ, Tuesday
at WTAY,
Thursday at
WGN, and Friday at WEBH
and WTAY. He sings his own songs.



Mackey, pianist; Milford Burdsall, tenor; Marldean Borresen, baritone; Fern Denicke, accompanist; Oscar H. Williamson, tenor; Harry Abernathy, accompanist; Rick Whalen and Gardner, "Rainbo Greetings" com-

pany.

WREO, Lansing, Mich. (Eastern, 288.5), 10 a. m., chimes, Belfry Plymouth Congregational church; 10:30, services, Plymouth Congregational church, Dr. Edwin W. Bishop, pastor; 7 p. m., services, Central M. E. church, Dr. Frank Kingdon, pastor.

WSAI, Cincinnati, Ohio (Central, 325.9), 3 p. m., sermonette; 3:10, sacred chimes.

WSB, Atlanta, Ga. (Central, 429), 11 a. m., scrvice, First Presbyterian church; 5-6 p. m., sacred service, Georgia Railway and Power company quartet; 7:30, Memorial church scrvice.

WWJ, Oetroit, Mich. (Eastern, 516), 11 a. m., church services; 2 p. m., the Detroit News orchestra.

Monday, February 2

Monday, silent night for: CFAC, CFCA, CKAC, CKY, KFDM, KFSG, KJS, KYW, PWX, WBCN, WCAL, WCAU, WEAO, WEBH, WEBJ, WFI, WGN, WHAS, WIP, WJY, WKAQ, WLBL, WLS, WMAQ, WNJ, WOAI, WREO.

CHNC, Toronto, Can. (Eastern, 350), 8:30 p. m., CHNC instrumental trio, Frank Biachford, violinist; Lionel H. Bilton, cellist; Simeon Joyce, pianist; the Schuch singers, Vernon Gearing, Harvey Blnns, Hamilton Hill, Lois Erle Waters, Evelyn Hall, Marion Simons. CKAC, Montreal, Can. (Eastern, 425), 1:45 p. u., Vindsor hotel trio; 4:30, 110 lessons.

KOKA, E. Pittsburgh, Pa. (Eastern, 3091), 7 a. m., morning exercises, O. Shannon; 8, morning exercises; 12:15 p. m., Scalzo's orchestra; 6:15, concert KDKA Little symphony orchestra; 7:30, children's period; 8, Girl Scout meeting; 8:15, address, University of Pittsburgh; 8:30, concert.

Little symphony orchestra; 7:30, children's period; 8, Girl Scout meeting; 8:15, address, University of Pittsburgh; 8:30, concert.

KFAE, Pullman, Wash. (Eastern, 330), 7:30-9 p. m., Kappa Alpha Theta sorority program; Kathryn Fowler, pianist; Geraldine Guertin, soprano; Phyllis Benefel, pianist; vocal solos, Eva LaFoliette; group songs; mechanical engincering talk, Prof. G. E. Thornton; "Masefield's Poetry," Prof. T. M. Raysor; "Rural Women and the Past Year," Maud Wilson; book chat, Alice L. Webb.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner, musical half hour; 8-9, Evening Herald Radiolians dance orchestra; Charlie Meison, tenor; 9-10, program, Walter M. Murphy Motors company; 10-11, Examiner, Ray West's Alexandria hotel orchestra.

KFKU, Lawrence, Kans. (Central, 275), 6:50 p. m., piano tuning-in number; 7, nusic; 7:15, Spanish lesson V; 7:30, basketbail game, K. U. vs. Okia. U.; 8:30, debating, "Dellvery," Prof. B. A. Gilkinson; 8:45, "Team Offense." Dr. F. C. Allcn.

KFKX, Hastings, Nebr. (Central, 288.3), 9:30-11 p. m., program, York Amateur musicale of Yck, Nebr.

KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. m., studio music, educational talks, today's recipe; 6:45-8:15, Sherman, Ciay & company program; 8:30-10, Seattle Times studio program.

KFQX, Scattle, Wash. (Central, 238), 6:30-7:15 p. m.,

studio music, educational talks, today's recipe; 6:45-8:15, Sherman, Clay & company program; 8:30-10, Seattle Times studio program.
KFQX, Scattle, Wash. (Central, 238), 6:30-7:15 p. m., topics of the day; 7:15-8, bedtime story, Aunt Vlvien; 8-9, Earl Gray and his Butler hotel orchestra; 9-10, concert hour; 10-11, Earl Gray and his orchestra.
KGO, Oakland, Calif. (Pacific, 312), 9 a. m., music and lecture. California State Department of education; 11:30-1 p. m., iuncheon concert, Pacific States Electric company; 4-5:30, Henry Halstead and dance orchestra; 5:30-6, Aunt Betty storics and KGO kiddies' klub; 8, "Raymond Overture," song of love from "Blossom Time," Arion trio; "Some Principies and Facts Concerning Pruning," Prof. H. Mf. Butterfield; celo solos. Margaret Avery; "A Lesson in English," Wilda Wilson Church; "March of the Tin Soldiers," Arion trio; "The High School Student," Dr. Aurelia Henry Reinhardt; "Clam as the Night," "Gavotte," Arion trio; "Chats About New Books," Joseph Henry Jackson; "Aloha Oc," Arion trio; 10-1 a. m., dance music, Henry Haistead's orchestra.
KGW, Portland, Ore, (Pacific, 485.1), 5 p. m., children's program, story, Aunt Nell; 8, concert, Orcgonian concert orchestra; 10, Colburn's Melody men, Hotei Portland; Sheffer's string orchesiva.
KHJ, Los Angeles, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's mornlng message; 10:30, hone economics, Mrs. Kato

KNX, Los Angeles, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, home economics, Mrs. Kato Brew Vaughn; 6:30-7:30 p. m., program John A. Evans corporation of Hacienda Park; 8-10, program, Western Auto Supply company; 10-11, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador hotel.

KOA, Denver, Colo. (Mountain, 322.4), 8 p. m., "My Old Kentucky Home," KOA orchestra, Lewis H. Chernoff, director; "Valse in E." Mary Marzyck, pianist; "The Garden of Your Heart," Ina Mae Ralns, soprano; Raiph Freese, lenor; G. Ralph Crowder, accompanist; "At the Spring," "Sonnet," Mary Marzyck, pianist; (Continued on Dage 11)

(Continued on page 11)

contralto. This Sunday, February 1, they will sing "Gallia." WBBR, New York, N. Y. (Eastern, 273), 9:10 p. m., 1. B. S. A. choral singers; 9:20, vocal duet, Thyra Lundberg, Fred Twaroschk; 9:30, Blbie lecture, "The Night and Morning of Man's Experience," W. L. Pelle; 10, Fred Twaroschk, tenor; 10:20, 1. B. S. A.

Here are four of the popular WOAI Entertainers of WOAI, San Antonio, Texas, in costume as they sang "In a Persian Garden." They are, left to right, Mrs. Fred Jones, soprano; Charles Stone, tenor; Warren Hull, bass; and Mrs. Guy Simpson,

Pelle; 10, Fred Twarosche, tenor; 10:20, 1. B. S. A. choral singers.

WBCN, Chicago, III. (Central, 266), 10:30-12 m., People's Liheral church, Dr. R. A. White, pastor; 4-5, p. m., classical concert, Lain & Son chapel; 5:15-6:15, vesper service, Emeraid Avenue Presbyterian church, Rev. Richard D. Hughes; 7-8, Walther League classical program; 8-10, Ned Santry, tenor; J. W. King, announcer of WTBZ; Midway Dancing Gardens orchestra; Borden brothers; Bobbie Mehr.

WCAE, Pittsburgh, Pa. (Eastern, 462), 10:45 a. m., services, Rodef Shalom temple; 3 p. m., People's Radio church services; 4, Prof. Otto Kaltels, pianist; 6:30, dinner concert, William Penn hotel.

WCAL, Northfield, Minn. (Central, 337), 8:30 p. m., sacred program, sermon, J. J. Thompson, dean of men; J. D. Gay, organist.

WCAU, Philadelphia, Pa. (Eastern, 278), 5:14 p. m., recital; 5:30, talk; Dr. John W. Stockwell; 6. Meyer Davis Hotel Pennsylvania dinner orchestra, direction Lon Chassey. chorai singers.

Lon Chassey.

WCBO, Zion, III. (Central, 345), 8 p. m., mixed quartet; celestial bells; G. Mason. cornetist; Richard Hire. Sidney Stewart, violinists; Mrs. J. D. Thomas, soprano; M. P. Barton, tenor; Mrs. i'. M. LaRose, contraito; Erwin Rendali, fluilst; Mrs. Grace Lund, planist;

Hadden' trio.

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:30 a. m., Plymouth Congregational church, Rev. H. P. Dewey; 4:10 p. m., House of Hope Presbyterlan church, Rev. H. C. Swearingen; 7:45, Central Lutheran church, Rev. J. A. O. Stub; 9:15, classical concert.

featuring Leroy Smith's orchestra; 12-12:30 a. m., Harry Richman and his entertainers with Eddie Elklns and his orchestra.

WHO, Oes Moines, Iowa (Central, 522.3), 11 a, m., service, sernion, Dr. C. S. Medbury.

WIP, Philadelphia, Pa. (Eastern, 509.9), 4 p.m., services, auspices Germantown Y. M. C. A.; lecture, "Our Nation's Greatest Need," Dr. Francls H. Green; 7:15, services, Holy Trinity church; 9:30, Ben Stad and his Wip symphony orchestra; Karl Bonawitz, organist; Arlon Singing society, Johanne Kramer, Ulric Wols, tenor; Edwin Henry, bass.

WJJD, Mooseheart, III. (Central, 302.8), 7:45-8:40 a. m., Roman Catholic services; 8:40-0:40, organ recitai, Albert F. Brown; 9:40-11, Protestant services; 3-4 p. m., regular concert.

Albert F. Brown; 9:40-11, Protestant services; 3-4 p. m., regular concert.

VJZ, New York, N. Y. (Eastern, 455), 9-10 a. m., children's hour; 11-12, church services direct; 12:45-2:30 p. m., Sunday Symphonyle society; Josiah Zuro, contraito; 2:30-3:30. Radio Bible class, auspices of Federation of churches of Greater New York; 3:30-4, "Practical Religion," Rev. Dr. Harry Emerson Fosdick; 4-5:45, vesper services, St. George's church; 5:45-7, "The Metropolis of Mankind," Edgar White Burrili; Tom Morgan, haritone; 7-8, Nathan Abas' Hotel Pennsyivania orchestra; 8:30-9, Josephine Evans, contraito. WLS, Chicago, III. (Central, 345), 6:30-7 p. m., Ralph Emerson, organist; 7-8, Waither League musical program.

gram.

WLW, Cincinnati, Ohio (Central, 423), 9:30 a.m., school, editorial staff of Sunday school publications, Methodist Book concern; 11, services, Church of Covenant, Dr. Frank Stevenson; 7:30 p.m., services, First Preshyterian church of Walnut Hills, Dr. Frederick McMillan; 8:20, Western and Southern orchestra, William Kopp, director; Dan Beddoe, tenor; Thomis Prewitt Williams, accompanist,

AMERICAN PEN WOMEN MEET AT KPO

Monday, February 2

(Continued from page 10)

(Continued from page 10)

setections from "The Mikado," KOA orchestra; 'How Do You Do," "Nancy," "Pickanninny Blues," Blue Bell trio; "Lies," Harry Barris, tenor; "Blue Eyed Sally," "Waiting for the Love Light in Your Eyes," "Back in Hackensack, New Jersey," Blue Bell trio; "On My Ukulele," "Onion Time in Bermuda," Blue Bell trio; concert, Denver Lions glee club: "Medley of Old Time Songs," giee club; banjo solos, medley of sonthern songs, "Hustlers' March," Charles H. Spencer; chorus with soprano obligato, "The World Is Waiting for the Sunrise," Mrs. Rusself J. Brown and glee club; "Old Uncle Moon," "Airs, Winslow's Soothing Syrup," "Old Uncle Moon," "Airs, Winslow's Soothing syrup," "Old Uncle Moon," "Airs, Winslow's Soothing male quartet; "Old Plantation Melody," club; saxophone selections, "Asleep in the Deep," "Margie-Marie," Lions' saxophone sextet; "The Winter Song," glee club; "Radio March," KOA orchestra.

KOB, State College, N. M. (Mountain, 348.6), 7:30-8:30 p. m., "Water Supply and Sewerage in Rural Communities," C. W. Gerber; Alice and Sam Marshall, readers; Mrs. Burke, accompanist; Alice M. Marshall, contralto; Alice Marshall Willis, soprano; Sam Marshall, tenor; Burton Marshall, baritone.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., dally dozen, Bernard Drury; 10, town crier; 10:15, "What Is Playing at Local Theaters;" 11, chat to the housewives, Prudence Penny; 12-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories, Big Brother of KPO; Frederica Levinne, planist; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories, Big Brother of KPO; Frederica Levinne, planist; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; Fairmont hotel orchestra;

P. Barton, tenor; Zlon orchestra; euphonium solo, W. C. Dunn; contralto and tenor duet, Mr. and Mrs. Glenn R. Sparrow; Richard F. Hire, violinist; E. B. Paxton, haritone; Miriam Hollingshead, flutist; brass quartet; Mrs. H. E. Mayfield, soprano; Arthur B. Rendall, clarinetist; Hermann Becker, cellist; Fred Faassen, organist.

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 2 p. m., "Among Good Books," Eleanor Poehler; 2:30, matinee musicale; 4, magazine hour, excerpts from 'In the Beauty of the Purple;" 5:30, children's hour, Mrs. R. G. Cargill; 8, "Radio and Agriculture," Dean W. C. Coffey; 8:30, Twin City Auto show; Art Landry's Victor recording band; style talk, Lucile Babcock; 10:30, dance program.

WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., musical program; 8:30, musical program.

WOAF, Kansas City, Mo. (Central, 411), 3:30-4:30 p. in., program, Newman and Royai theaters; 5-5:30, weekly Boy Scout program; 6, school of the air; banking talk, C. H. Cheney; request story night, story lady; Trianon ensemble, Hotel Muehlebach; 8-9:15, around the town with WDAF; 11:45-1 a. m., Nighthawk' frolic; the Merry Old Chief and Plantation players.

WOAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m.,

hawk' frolic; the Merry Old Chief players.

WOAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., daily almanac; 12:02 p. m., Stanley theater organ recttal; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 4:30, Clara Zagar, violinist; Marcella North, pianist; 7:30, Dream Daddy's bedtime stories; 7:55, "Short Agro-Waves," Chas. Shoffner; 8:30, Pottstown night; 9:30, Stanley theater symphony orchestra, Sydney Lowenstein, director; 10:03, Arcadia cafe dance orchestra; vaudeville features, Fay's Knicker-bocker theater.

wear, New York, N. Y. (Eastern, 492), 6-7 p. m., dinner music, Waldorf-Astoria hotel; 7:15-9, musical program, Mark Strand theater; 9-10, A and P Gypsies; 10:30-11:30, Ben Bernie and his Hotel Roosevelt or-

WHO, Oes Moines, Iowa (Central, 522.3), 7:30-8 p. m., Mrs. Robert Finch, contralto; speech, Rev. Muriel Adams; 8-9, classical program, Dean Holmes Cowper,
WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Gimbel tea room orchestra; 6:05, Hotel St. James dinner dance orchestra; 7, Uncle Wip's hedtime stories, dancing lessons, Miller Conservatory of Music.

WJJO, Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., music, Mooseheart children, assembly; talks; 6:45-7:15, Albert Brown, organist; 7:15-8:15, Novelty orchestra; talk, Ben Oswalt; 11:30-12:30, request organ music, Albert Brown

Albert Brown.

WJZ, New York, N. Y. (Eastern, 455), 10:20-10:30 a. m., "Laundry Experience," Mrs. Julian Heath; 10:30-10:40, Home beautiful, Dorothy Ethel Walsh; 10:40-10:50, talk, John C. Cutting of Meat Council of New York; 10:50-11, fashion talk, Eleanor Gunn; 1-2 p. m., Henry Vander Zanden's Hotel Ambassador trio; 4:30-5:30, Fred Hall's, Royal Terracc orchestra; New York Stock Exchange reports, Evening Post News; 7-8, Bernhard Levitow's Hotel Commodore dinner concert; 8-8:10, Wall Street Journal review; 8-10-8:30, "American History," N. Y. U. Air college, Dean M. S. Brown; 10:45-11:45, Jacques Green and his Club Deauville orchestra with Clark's Hawaiians.

WLS. Chicago, III. (Central, 345), 12-1 p. m., R. F. D.

WLS, Chicago, III. (Central, 345), 12-1 p. m., R. F. D. program; music numbers, George Simons, tenor; 3:45-4:45, homemakers' hour, music.

4:45, homemakers' hour, music.

WLW. Cincinnati, Ohio. (Central, 423), 8 a. m., physical exercises, Y. M. C. A., Wm. Stradtman, instructor; 12:15 p. m., Williamson revue and entertainment; 6, dinner hour concert, Selinsky Instrumental quintet; 8, Times-Star program, Indra Consistory Choir of Covington, Ky., J. Lincoln Newhall, director; Erich Sorantln, celebrated Viennese violinist; Lyrle male quartet, Howard Evans, director; Howard Hafford, tenor; entertainment, the Ragamuffins from Liberty theater, Covington, Kentucky.

Tuesday, February 3

Tuesday, silent night for: CHNC, KFAE, KFKY, KFNF, KOA, KOB, PWX, WAHG, WBAV, WBBG, WBBR, WCAL, WCBD, WCCO, WEAO, WEMC, WHO, WOC, WOI, WOO.

CFCA, Toronto, Can. (Eastern, 400), 8:15 p. m., "The Romance of Science," Dr. E. F. Burton.

CKAC, Montreal, Can. (Eastern, 425), 7 p. m., kiddics' stories in French and English; 7:30. Windsor hotel dinner concert, Harry Salter, director; 8:30, studio variety program; 10:30, Windsor hotel dance program, Ben Leonard; 12, frolics.

Ben Leonard; 12, frolics.

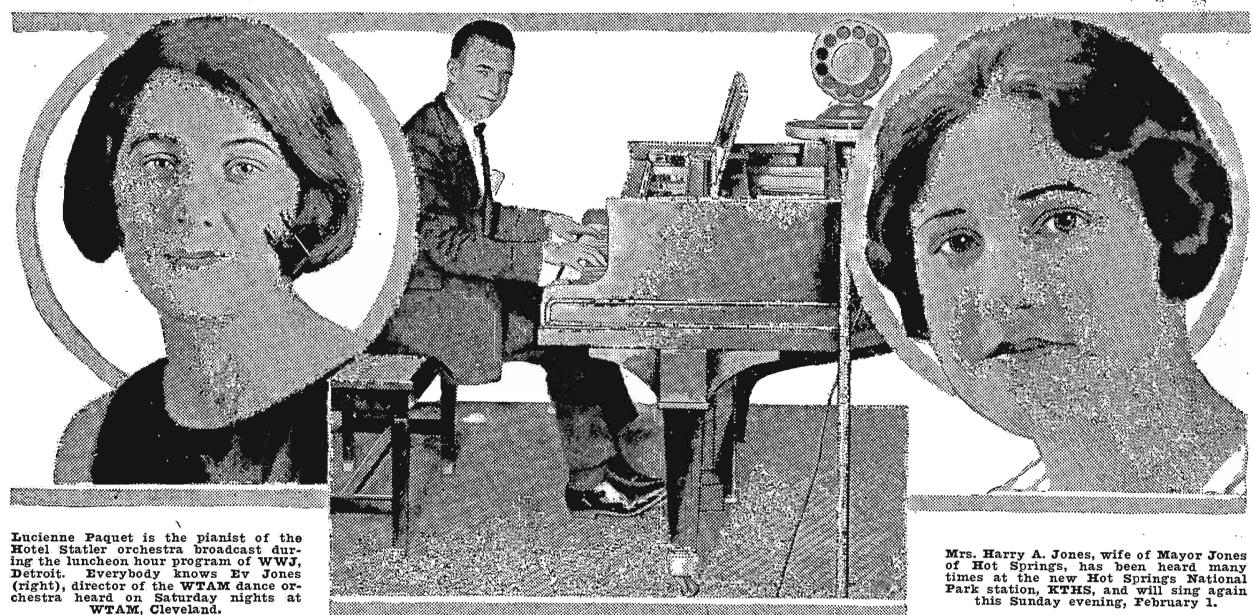
CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., university lecture; 8:15, concert, "Toc H;" 9, half-hour program, Capitol theater; 9:30, Roseland dance gardens.

KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:20 p. m., Institute from the Trinity church; 6:15, dinner concert; 7:30, children's period; 8:30, concert; 11, concert, Pittsburgh Post studio.

KFDM, Beaumont, Tex. (Central, 315.6), 8 p. m., nuslcal concert.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner, musical half hour; 6:45-7, speaker; 7-8, program, Hills Brothers company; 8-9, Aeollan residence pipe organ recital, Dan McFarland, organist; 9-10, Examiner, program arranged by Jane of the Examiner; 10-11, Packard ballad hour.

KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. m., Olympic hotel concert orchestra; today's recipe; 6:45-8:15, Rhodes' Department store program; 8:30-10, Seattle Times orchestra; 10:05-11, Olympic hotel dance music.



tra: 8-9. Theodore J. Irwin, organist: talk on rythm. Hazel Johnson, soprano; 9-10, old ballad night, Mrs. Lessor, pianist; Mrs. Mark, contralto; T. Shawyder, accompanist; Theodore J. Irwin; Victor Vogel, hass; n Post Trowbridge, soprano; 10-11, E. Max Bradfield's Versatile band.

New Yorkstile Band.

KSAC, Manhattan, Kans. (Central, 340.7), 9 a. m., march; 9:02, music lesson; 9:07, music for singing exercises; 9:15, Inspirational talk; 9:20, calisthenics; 10, back yard gossip; 10;05, ali around the house; 10;20, "Suggestions for Today's Meals," Amy Kelly; 12:30 p. m., readings, Osceola Hall Burr; "Legume as a Feed," J. W. Linn; "Plans for Summer Pasture," A. W. Knott; 7:20, college bell and quartet; 7:30, "Spotted Poland China, Hampshire and Berkshire Breeds," A. D. Weber; 7:50, "Keeping of Herd Records," J. B. Fitch.

KSD, St. Louis, Mo. (Central, 549.1), 7 p. m., music, Missourl theater; 9, Grand Central theater; 10:45, studio recital, Mrs. Evelyn Fraley, soprano; Lila Harrison Cantor, pianist, KTHS, Hot Springs National Park, Ark. (Central, (375),

8:30-10 p. m., Hot Springs artists; 10-11, concert. Charles L. Fisher and his 11-piece Eastman hotel or-

chestra.

KYW, Chicago, III. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob.

WAHG, Richmond Hill, L. I. (Eastern, 316), 8-8:30 p. m., Gordon's orchestra; 8:30-8:45, Emery Deutsch, violinist; 8:45-9, Jean Gordon, soprano; 9-9:10, St. Valentine of WAHG; 9:10-9:45, Synchrophase string trio; 9:45-10, Irving Firstenberg, planist; 10-10:10, Emery Deutsch, violinist; 10:10-10:20, Jean Gordon; 10:20-10:35, Bessie Leihowitz, planist; 10:35-11 Synchrophase string trio; 12-2 a. m., special midnight dance program.

chrophase string trio; 12-2 a. m., special mining and dance program.

WBAP, Fort Worth, Texas (Central, 472.9), 12:05-12:30 p. m., musical program; 7:30-8:30, dance music, Frensley Moore's Black and Gold serenaders; 9:30-10:45, musical program, Montgomery Ward and company entertainers; 12-1 a. m., popular dance music, Swayne's Southern serenaders.

WBAV, Columbus, Ohio (Eastern, 293.9), 8 p. m., WBAV orchestra, Frances Handlheau, director.

WBBG, Mattapoisett, Mass. (Eastern, 248), 8 p. m., Blitmore orchestra.

WBBG, Mattapoisett, Mass. (Eastern, 248), 8 p. m., Blitmore orchestra.

WBBR, New York, N. Y. (Eastern, 273), 8 p. m., Syrlan Orlental music, Toufic Mouhaid, Etizaheth Awad; 8:10, Irene Kleinpeter, soprano; 8:20, world news digest, editor of Golden Age magazine; 8:40, Irene Kleinpeter, soprano; 8:45, Syrian Orientai music, Toufic Mouhaid, Elizabeth Awad.

WBCN, Chicago, III. (Central, 266), 6-6:30 p. m., juvenile period, Lucila Drew Wilson, director, WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybec; 7:45, address; 8, musical program; 9, concert, A. & P. Gypsy string ensemble; 10, music; 11, concert, artists and orchestra, Nixon restaurant.

A. & P. Gypsy string ensemble; 10, music; 11, concert, artists and orchestra, Nixon restaurant.

WCBO, Zion, III. (Central, 345), 8 p. m., special dedicatory Itadio program for new high-power station; Zion band; male quartet; marimha solos, George Beem; Zion choir; McElroy saxophone quintet; trio, violin, viola, piano, itichard F. Hire, Mrs. and Mrs. L. J. Hire; soprano and contraito duet, Mrs. J. D. Thomaa, Mrs. P. M. LaRose; Carl Newcomer, saxophonist; M.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7 p. m., muslcal program, Loew's State theater.

WEEI, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston Edison Big Brother club; 7, Dok-Elsenbourg and his Sinfonians; 8, Loulse Noera, mezzo-soprano; 8:15, Manuel Silveira, pianist; 8:30, Buddy's Bostonians; 9:30, Mendelssohn Choral Union, C. F. Woods, director. WEMC, Berrien Springs, Mich. (Central, 286), 8:15-9:15 p. m., program, Dixie men and women, Emanuel Missionary college.

WFAA, Oallas, Texas (Central, 472.9), 12:30-1 p. m., address, Judge Charles F. Greenwood; 6:30-7:30, vesper musicale, Buddy's Blue Melody hoys; 8:30-9:30, Mag-

nolia Petroleum company's Dallas band. WF1, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford orchestra concert orchestra; 3, talk, Doylestown Library company; double quartet. Swarthmore Women's cluh; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim.

WGN, Chicago, III. (Central, 370), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artist series, Lyon & Heaty; 3, rocking chair time; 5:30, Skeezix time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintet.

Drake concert ensemble, Blackstone string quintet.

WGR, Buffalo, N. Y. (Eastern, 319), 10:45 a. m., Gold

Medal home service talk by Betty Crocker; 12:30-1
p. m., Hotel Statler concert ensemble; 2:30-4,30, Radio Dealers' program; 6:30-7:30, dinner music, Vincent
Lopez Hotel Statler orchestra; 8:25-8:40, Francis Bush,
tenor; Margaret Peirce, pianist; 8:40-8:55, Erich Hechtcr, violinist; Norman F. Taher, pianist; 9-10, Hewitt
Ruhher company concert, direction of Jack Brindley;
10-11, Robertson Cataract company concert, direction of
A. J. "Al" Erisman; 11:30, supper dance music,
Vincent Lopez Hotel Statler dance orchestra, Harold
Gieser, director.

WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m., "A Study Place for Children," George M. York; 6:30, sport talk, Harold Anson Bruce; 7:45, "The Criminal and the Napanoch Plan," Walter M. Thayer; 8, prograin, Hawaiian Four.

WHA, Madison, Wis. (Central, 535.4), 7:45 p. m., Mary Watts, vlolinist, playing "Allegro Brilliante," "Cavatina," "Gavotte;" Mary Mckitrick, contralto; address, "Health in the Home," Dr. Herman Bundeson.

WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater organ.

tions, Alamo theater organ.

WHB, Kansas City, Mo. (Central, 411), 2-3 p. m., ladles' theatrical hour; 7-8, Gilbert Jaffy's music masters; dental talk, Dr. H. A. Potter; automotive talk, Sweeney instructor.

WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., music, Radiograms; 7, heddlime story, Ethel O. Hawes.

WHN, New York, N. Y. (Eastern, 360.4), 5-5:45 p. m., Charles Taylor and his Southerneers orchestra; 6:30-7-10, Vincent Cataneso and his Hotel Alamac orchestra; 7:10-7:20, fashion chats, Mme. Belle; 7:20-7:30, Hotel Carlton Terrace orchestra; 8-8:05, "Storage Batterles," H. B. Shontz; 8:05-8:30, Roseland danco orchostra; 8:50-9:20, Littmann'a Employees' orchestra; 9:30-10, Dan Gregory and his Crystal Palace orchestra; 10-11, Jack Shack and his Crystal Palace orchestra; 10-11, Jack Shack direct from Radio Shack.

WMAQ, Chicago, III. (Central, 447.5), 4 p. m., mothers in council, Mrs. Frances M. Ford; 6, Chicago theater organ recital; 6:30, Hotel LaSalle orchestra.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program, O. K. Houck Plano company; 8 p. m., bcddirector; 11:15-12 midnight, L. Carlos Meier, organist. time story, Uncle Jerry; 8:30, Hotel Gayoso orchestra.

WNYC, New York, N. Y. (Eastern, 528.8), 7-7:30 p. m., Harry Ash and his Royal orchestra; 7:35-7:40, health talk; 7:40-8:15, Harry Ash and his Royal orchestra; 8:15-9:25, vocal and instrumental recitals; 9:25-10:30, Riesenfeld's Rialto theater; 10:35-10:40, Trend of Times, Dr. Sydney Neville Usher.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. m., Arthur Hays, organist; 6:45, Pat's Melody Boys; 9:30, concert program, 17th U. S. Infantry hand, Herman Wehel, bandmaster.

WOC, Oavenport, lowa (Central, 498), 7:20 p. "Function of the Liver," K. G. Stephan; 8, Troy Laundry Machine company band; Nora Jorgensen, pian-iste; 10, W. R. Van Ailen, reader; Black and White

WOI, Ames, lowa (Central, 270), 12:30 p. m., college chimes; 10, program, popular music.

WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelorl's Fronch Room ensemble, Hotel Adelphia; 8:25, concert, Fox theater studio; 9:30, WOO orchestra; 10:03, Willam Bove's Royal Palm dance orchestra; 10:30, Vincent Rizzo's Hotel Sylvania dance orchestra.

WOR, Newark, N. J. (Eastern, 405), 2:30-2:45 p. m., Y. M. C. A. talk; 3:45-4, talk, Charm magazine; 6:15-7:30, "Music While You Dlne," Dave Harman's Cinderella orchestra; 8:15-9:30, Branford theater musical program; 9:30-9:45, talk, Dr. Frank H. Vizetelly, editor of New Standard dictionary; 9:45-10:45, Dr. Sigmund Spaeth, his studio party and music reviews; 10:45-11:15, Carolinians orchestra, under Charles M. Koch; 11:15-12, Perry and Russell, two man singing orchestra.

WQJ. Chicago, III. (Central, 448), 11-12 m., home economics, Helen H. Downing; "Ice Cream Gossip," L. L. Jones; "Antiseptics," Madeline Gregory; "Ladles' Coiffeures for 1925," Leon Tryon; 3-4, "Carefully Planned Breakfasts," Helen H. Downing; "Care of the Hair," Madame Huntingford.

WSAI, Cincinnati, Ohio (Central, 325.9), 10 p. m., songs, Malle and Stept; Cliff Burns' Country club

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment 5-6 p. m., songs and hedtime story, Bonnie Barnhardt, 8-9, Elk Royal Purple band; 10:45, Warner's Seven aces.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Guy Lomhardo's Royal Canadians orchestra; 8, studio program.

WWJ, Detroit, Mich. (Eastern, 516), 8 a. m., setting-up exercises, R. J. Horton; 9:30, tonight's dinner; 12 m., Jules Klein's Statler orchestra; 6 p. m., Jules Klein's Statler orchestra; 7, the Detroit News orchestra; Stanley Perry, tenor; Ina M. Lockhart, contralto...

KFQX, Seattle, Wash. (Central, 238), 6:30-7:15 p. m., news; 7:15-8, bedtime story, Aunt Vivien; 8-9, Earl Gray and Hotel Butler orchestra; 9-10, concert hour; 10-11, Earl Gray and his orchestra.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshlne hour; 3:30-4:30 p. m., organ recital, Esther Fricke Green and assisting artists; 6:30-7:30, children's hour, Harry James Beardsley (Cousin Jim) and others.

and others.

KGO, Oakland, Calif. (Pacific, 312), 11:30 a. m., luncheon concert, Pacific States Electric company; 4-5:30 p. m., concert orchestra, Hotel St. Francis; 8, Sclots' mlastrels, Arthur C. Toft, director; 10-1 a. m., dance music, Henry Halstead's orchestra.

KGW, Portland, Ore. (Pacific, 485.1), 12:30 p. m., concert; 5, children's program, story, Uncle Dave; 8, lecture, Oregon Agricultural college extension service; 8:30, concert; 10, Multnomah hotel strollers.

8:30, concert; 10, Multnomah hotel strollers.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., Major and his Forum Roof orchestra; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, iittle stories, American history, Prof. Walter Sylvester Hertzog; weekly visit of Queen Titanla; Sandman of Fairyland; Louis F. Klein, auto-harp and harmonica soloist; Uncle VISIT OF Queen Titania; Sandman of Fairyland; Louis F. Klein, auto-harp and harmonica soloist; Uncle John; 8-10, program, Globe Ice Cream company; 10-11, Earl Burtnett's Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 252), 8-9:30 p. m., program of vocal and instrumental numbers, members of the Church of the Open Door, Dr. Book, director

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, State Board of Education musical program for schools; 10, Hired Hand's morning message; 10:30, Mrs. Kate Brew Vaughn, home economics; 5:30, Town Crier and Village Urchins; 6; 5port talk; 6:30-7:30, program sponsored by R. C. "Cliff" Durant; 8-9, program, Peerless Products company; 10-11, feature program; 11-12, Abe Lyman's Cocoanut Grove dance orchestra from Amhassador hotel.

pany; 10-11, feature program; 11-12, Abe Lyman's Cocoanut Grove dance orchestra from Amhassador hotel. KOA, Denver, Colo. (Mountain, 322.4), 3 p. m., "When Song Is Sweet," "Rejoice Greatly from the Messiah," Olive Riley, soprano; "How Everything Started," "Courtship of Miles Standish," Iris Ruth Pavey, reader; piano solos, Bonnie Veeder.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., daily dozen; 10, town crier; 10:15, "What Is Playing at the Various Theaters;" 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories, Big Brother of KPO; Natalie Heyman, cellist; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories, Big Brother of KPO; Natalie Heyman, cellist; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-8:30, Woodrow Wilson memorial program; address, Jaines Phelan; 8:30-10, program, Oakland Real Estato glee club; 10-11, E. Max Bradfield's Versatlle band. KSAC, Manhattan, Kansas. (Central, 340.7), 9 a. m., march; 9:02, music lesson; 9:07, music for singing exercises; 9:15, inspirational talk; 9:20, calisthenics; 10, back yard gossip; 10:05, all round the house; 10:10, question and answers; 10:20, "Suggestions for Today's Meals," Amy Kelly; 12:30 p. m., Osceola Hall Burr, reader; "Making Plans for the Farmstead," Walter G. Ward; "Seed Experlences," H. R. Sunner; 7:20, colloge bell and music; 7:30, "Varletles of Alfalfa," S. C. Salmon; 7:10, music, Mrs. G. W.

(Continued on page 12)

CHIC, NEW TORONTO STATION, HA

Where to Hear Concerts

Central Standard Time

THESE are the stations for music lovers to dial, and you can hear, providing you dial correctly and read the programs carefully, everything from jazz to opera.

Saturday, January 31: 6, KGO, WEAF, WLW, WRC; 6:30, CHIC, CKAC, KFNF, WBZ, WBCN, WDAF, WGN, WGY; 6:35, WNYC; 6:45, WJZ; 7:20, WLS; 7:30, CKAC, KDKA, PWX, WCAE, WFI, WGR, WHAS, WEAF; 7, KYW, WBBR; 7:15, WJJD, WHN, WNYC, WOR; 7:45, WBBR, WRC; 8, KHJ, KSD, KYW, WGN, WSAI; 8:10, WHN; 8:15, WOR; 8:30, KTHS, WEAF, WFAA, WJZ, WMC, WOR; 8:45, KFOA; 9, KNX, WMAQ; 9:30, KTHS, WEAF, WOAW; 9:35, KYW; 10, KFI, KGO, KHJ, KNX, WQJ; 10:30, KFOA; 10:45, WSB; 11, KFQX, KGO; 11:15, WLS; 11:30, WOAW; 12, WCAL.

Sunday, February 1: 6:20, WEAF, WEEI; 6:30, WLS; 7, KYW, WBCN, WLS, WREO; 7:30, WBZ, WJZ; 8, KSAC, WBCN, WCBD, WGY, WHK, WNYC; 8:10, WBBR; 8:15, WEAF, WEMC; 8:30, KTHS, WBZ, WCAL, WIP; 8:45, WEMC; 9, KFI, KGW, KHJ, WBBR, WFAA, WGN, WGY, WOAW; 9:15, WCCO; 9:30, KTHS, WOAI, WOC; 10, KFI, KHJ, KNX; 10:30, KPO; 11, KNX; 12, KFSG, WHB.

Monday, February 2: 6, WEAR, WGN, WJZ, WMAQ; 6:15, WEAF, 6:30, KFNF, WFAA, WGN, WOO; 6:45, WJJD: 7, KSD, WBBG, WBBR, WCAE, WEEI, WGY, WHB, WTAM; 7:15, WEEI WNYC, WOR; 7:20, KSAC; 7:25, WGR, WOO; 7:30, CHNC, KDKA, KFI, WAHG, WBZ, WDAR, WHO: 7:45, WHA; 8, WAHG, WBZ, WCAE, WCBD, WDAF, WGR, WHO, WOC, WSB: 8:10, WAHG; 8:15, WEMC; 8:25, WNYC; 8:30, KNX, KTHS, WCOO, WDAR, WEEI; 8:45, KFOA, WAHG; 9, KOA, KOB, KSD, WAHG, WCAE, WCAE, WCBD, WGR, WOAW; 9:20, WAHG; 9:30, KFAE, KFKX, KTHS, WBAP; 9:35, WAHG; 10, KGW, KHJ, KNX, KPO, WCAE, WCBD, WOC, WOI, WSAI; 10:30, KFOA; 10:45, KSD; 11, KFI, KFQX, KPO, WCBD; 11:15, WHO; 11:30, WJJD.

Tuesday, February 3: 6, KGO, KSD, WGN, WMAQ; 6:25, WOAW; 6:30, CKAC, WCCO, WDAF, WFAA, WGN, WLS, WMAQ; 6:45, WJJD; 7, KYW, WBCN, WCAU, WEHN, WEBJ, WEAF; 7:15, CKY, WCAU, WGY, WIP, WJJD, WKAQ, WLS; 7:20, KSAC; 7:25, WJZ; 7:30, CKAC, KDKA, KFI, WBAP, WCAE, WEAF, WHAS, WSAI; 8, CKY' KFD, KHJ, KYW, WBCN, WCAE, WEAF, WEEI, WFI, WGN, WGR, WHB, WLBL, WSB; 8:30, KGW, KNX, KTHS, WFAA, WMC, WNYC, WOAI; 8:45, CFAC, KFOA, KYW; 9, KFI, KSD, WCAE, WEBH, WGY, WHN, WJY, WLS, WSAI; 9:15, WMAQ, WREO; 9:30, WBAP, WJY, WOAW; 10, KDKA, KFI, KGO, KHJ, KJS, KNX, KPO, KSD, KYW, WQJ; 10:30,

KPO, WGY; 11, KFI, KFQX, WEBH, WFAA; 12, KNX, WLS.

Wednesday, February 4: 6, KGO, WGN, WKAQ WMAQ; 6:30, KFNF, WDAF, WGN, WHO, WKAQ, WLS, WOO, WTAY; 6:45, KSD, WCAE, WJJD; 7, KYW, WBBR, WBCN, WBZ, WCAU, WEAO, WEBH, WHB, WQJ, WTAM; 7:15, WEEI, WGR, WJJD; 7:30, KDKA, KFI, WBZ, WCAE, WCAU, WHAS, WHO, WOO; 7:40, WBBR, WLS; 7:45, WHA; 8, KHJ, KSAC, KYW, WBCN, WDAF, WEEI, WGN, WOC; 8:15, WBZ, WEMC; 8:30, WFSG, KNX, KTHS, WBAP, WMAQ; 8:45, CFAC, KFOA; 9, KOA, KYW, WCCO, WEBH, WEEI, WHO, WLS, WMAQ, WTAY; 9:15, WTAY; 9:30, KFAE, KFI; 9:45, KYW; 10, KGW, KNX, WEEI, WLS, WNJ, WQJ; 10:30, KFOA, KHJ, KYW; 11, KFI, KFQX, KNX, WEBH; 11:30, KYW; 12, WBAP, WTAY; 12:30, KYW; 2, KYW.

Thursday, February 5: 6, KGO, WEAR, WEEI, WGN, WMAQ; 6:15, WTAY; 6:30, KFNF, WCCO, WQJ, WDAF, WFAA, WGN, WLS, WMAQ, WTAY; 6:45, WCAE; 7, CKY, KDKA, KYW, WBCN, WEAF, WEAR, WEBH, WEEI, WGY, WHK; 7:20, WLS; 7:30, CKAC, KDKA, KFI, WBAP, WCAE, WHAS, WJZ, WNYC; 7:45, WHA, WJY, WOR; 8, KHJ, KSAC, WBCN, WCBD, WCCO, WEAF, WFI, WGN, WHB; 8:10, WBBR; 8:15, WOI, WOR, WREO; 8:30, KNX, KTHS, WFAA, WMAQ, WMC; 9, WBBR, WCAL, WEBH, WHN; 9:05, KYW; 9:30; KFI, KFKX, WBAP, WOAW; 10, CFAC, KDKA, KFI, KGO, KHJ, KJS, KNX, KPO, KYW, WQJ; 10:30, WGY; 10:45, WSB; 11, KFI, KNX, KPO, WEBH, WFAA; 11:15, KFSG; 11:30, KHJ.

Friday, February 6: 6, KGO, WEAR, WEBJ, WGN, WJZ, WMAQ; 6:30, KFNF, WCCO, WEEI, WFAA, WGN, WLS, WMQA, WOO, WTAY; 6:45, WJJD: 7, KYW, WAHG, WBAV, WECN, WCAU, WEAR, WEBJ, WEAF, WEEI, WHB, WOR, WQJ; 7:15, WGR, WJJD, WLS; 7:25, WAHG, WOO; 7:30, CNRT, KDKA, KFI, WBAP, WCAE, WDAR, WEBJ, WHAS, WJY, WNYC, WOR; 7:40, WJZ; 8, CFAC, CKY, KFDM, KHJ, KSD, WAHG, WBCN, WCCO, WDAF, WEAF, WGN, WGR, WMAQ, WSB; 8:15, WEMC; 8:30, KNX, KTHS, WDAR, WFAA, WMAQ, WMC; 8:45, KFI, KFOA, WAHG; 9, KOA, KTHS, KYW, WCCO, WEBH, WEEI, WLS, WOR; 9:10, WHN; 9:15, WMAQ; 9:30, KFAE, WAHG, WBAP, WOAW; 10, KHJ, KNX, WLS, WNJ, WQJ; 10:30, KFOA; 10:45, WSB; 11, KFI, KFKX, KHJ, KNX, KPO, KYW, WEBH; 11:15, KFSG, KNX, KYW; 1, KYW; 2, KYW.



stories.

WHB, Kansas City, Mo. (Central, 411), 2-3 p. m., ladies' hour of classical and operatic music; 8-9, program, University church, direction, Harding Wing-WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., Radio-

WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., Radiograms. music.

WHN, New York. N. Y. (Eastern, 360.4), 12:30-1 p. m., (Charles Strickland and his Palals D'Or orchestra; 2:15-3:15, overture and vaudeville, Loew's State theater, New York city; 6:30-7, Strand Roof orchestra; 10-10:30, Loew's vaudeville headliners; 10:30-11, New Rockwell Terrace revue; 11:130, Club Rose revue; 11:30-12, Sam Wooding and his Club Alabam orchestra; 12-12:30 a. m., Ted Lewis and his orchestra with Revue Intime from Parody club.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Karl Bonawitz, organist; 4:20, "Market Hints for Housewives," auspices Penna. Bureau of Markets; 6:05, songs by Mark Fisher and Joe Burke; 6:15, Harvey Murburger and his vaudeville dance orchestra; 7, Uncle Wip's bedtime stories; 8, "Timely Talks for the Motorist." Gene Hogle; 8:15, Philadelphia Police band; 10:05, "Emo's Weekly Movie Broadcast." Eli M. Orowtiz; 10:30, Harvey Marburger and his vaudeville dance orchestra.

M. Orowitz; 10:30, Harvey Marburger and his vaude-ville dance orchestra.

WJJD. Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., music, Mooseheart children, assembly; talks; 6:45-7:15, Albert Brown, organist; 7:15-8:15, concert band, "Child Care," M. P. Adams.

WJY, New York, N. Y. (Eastern, 405), 8:15-10:15 p. m., "Mrs. Wiggs of the Cabbage Patch," comedy drama,

"Mrs. Wiggs of the Cabbage Patch." comedy drama, WGY players; 10:15-11, Hotel St. George trlo, Francisco P. Cortez, director.

WJZ, New York, N. Y. (Eastern, 455), 10:20-10:30 a.m., "Etiquette," Vogue magazine; 10:40-10:50, "Tribune Institute," Bertha Baldwin; 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4-4:30, Gwendolyn Leach, soprano; 4:30-5:30, Bernhard Levitow's Hotel Commodore tea orchestra; 5:30-6:30, agricultural, home, finance, etc., reports, Evening Post News; 7-7:15, "Dogs," Frank Dole; 7:15-8, Joseph Strissof's Hotel Vanderbilt orchestra; 8-8:10. Wall Street Journal review; 8:10-8:25, "Business Economics," N. Y. U. Air college, Reid L. McClung; 8:25-9, Mme. Maria Gabriells Leschetivky, planist.

WKAQ, San Juan, P. R. (Intercolonial, 360), 9-10 p. m..

WKAQ, San Juan, P. R. (Intercolonial, 360), 9-10 p. m. Euterpe Jazz band.

WKAQ, San Juan, P. R. (Intercotonial, 360), 9-10 p. m., Euterpe Jazz band.

WLBL, Stevens Point, Wis. (Central, 278), 8 p. m., neighborhood talent.

WLS, Chicago, Ill. (Central, 345), 12-1 p. m., R. F. D. program; Ned and Ches, harmony singers; "Farm Questlon Box," E. B. Heaton; 3:45-4:45, homemakers' hour; "What Are You Dolng For Your Ex-Service Men?" H. W. Hardy; "Feedling the Family," Mrs. Wilbur E. Fribley; music; 6:30, Ralph Emerson, organlst; 6:50, Senate studio; 7, lullaby time, Glenn Rowell and Ford Rush; 7:15, Edouard Hesselberg, pianist; James D. Westbrook, tenor; 7:45, WLS theater presents a Saddler feature; 8-9, R. F. D. program; 9, Florence K. White, soprano; 9:10, WLS theater; 9:30, Kenneth Clark, Hawaiian gultarist; 9:40, Art Kahn, Senate theater; 10, Bratton concert; 10:30, Isham Jones orchestra; 10:40, Ford and Glenn time; 11, vaudcville; 12, WLS revue.

WLW. Cincinnati, Ohio (Central, 423), 8 a. m., physical

11, vaudcville; 12, WLS revue.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, Y. M. C. A., Wm. Stradtman, instructor; 12:15 p. m., program, Delta Omieron sorority; 4, pupils of William Kyle in recital; storics, Samuel Maas; 6, dinner hour concert, Selinsky Instrumental quintet; 10, concert, Radio division, Ohio Rubber and Textile company, Ohio Rubber Male Quartet and Instrumental trio; Keefer Kocker orchestra, popular program.

WMAQ, Chicago, III. (Central, 447.5), 12 m., weekly program, auspices Illinols Manufacturers' association: 4 p. m., American Red Cross talk, Estelle Weltman; 4:30, Hathaway Concert company; 5, Iullaby lady, Mrs. Gene Davenport; 6, Chicago theater organ; 6:30, Hotel

4:30, Hathaway Concert company; 5, lullaby lady, Mrs. Gene Davenport; 6, Chicago theater organ; 6:30, Hotel LaSalle orchestra; 8, book review, Harry Hansen; 8:20, travel talk, Clara E. Laughlin; 8:40, weekly talk, Clara E. Laughlin; 8:40, weekly talk, Association of commerce; 8:50, University of Chicago, lecture; 9:15, musical program, Church Athletic association.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program, O. K. Houck Piano company; 8 p. m., bed-time story, Uncle Joe; 8:30, musical program, Enoch Walton; 11, midnight frolic.

WMI. Newark, N. J. (Eastern, 233), 10:30-11 p. m..

WNJ, Newark, N. J. (Eastern, 233), 10:30-11 p. m., Frank Daily and his Meadowbrook orchestra; 11-11:30, Jimmy Clark and his Broadway Entertainers; 11:30-12, Original Dixleland jazz band; 12-12:30 a. m., Frank Dally and his Meadowbrook orchestra.

WNYC. New York, N. Y. (Eastern, 528.8), 7:35-7:45 p. m., sports analysis, Thornton Fisher; 8:30-9:30. Paragon orchestra; 9:30-10:10, vocal and instrumental recitals; 10:10-10:30. New York public lecture. WOAI, San Antonio, Tex. (Central, 394.5), 8:30 p. m., WOAI entertainers, Beethoven program; WOAI trio;

9:30, Jimmle Joy's Hotel St. Anthony orchestra.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. m., "Advice to Levelorn" period conducted by Cynthla Grey, editor of "Please Tell Me" column of the Omaha Daily News; 6:25, dinner program, transmitted from WOAW's remote control studio in the May Sced & Nursery building. Shenandoah, Iowa; 9:30, program, courtesy of the Omaha Typographical union, address, Donald McMillan, arctic explorer.

WOI. Ames, Iowa (Central, 270), 12:30 p. m., college chimes.

W00, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt.

WOR, Newark, N. J. (Eastern, 405), 3:15-3:30 p. m., Mae Jacobus Fleming, Bamberger's book reviewer; 6:15-6:30, "Muslc While You Dine," Halsey Miller and his orchestra; 6:30-7, "Man in the Moon Stories for Children;" 7-7:30, Halsey Miller and his orchestra.

for Children;" 7-7:30, Halsey Miller and his orchestra.

WQJ. Chicago, III. (Central, 448), 11-12 m., home economics, Helen H. Downing; "Scalloped Dishes," Agnes M. Olson; "Spring Millinery," Lillian Russell; "Ancient Art of Candy Making," A. G. Morse; 3-4 p. m., "Round the World Recipes," Josephlne Naylor; 7-8 p. m.; dinner concert, Ralph Williams and his Ralnbo Gardens orchestra; playlct, Dorothy Davie Dillow, soprano; 10-2 a. m., Ralph Williams and his Ralnbo Skylarks; Harry Gelse, songs; Nubs Allen, contralto; Nate Caldwell, pianologues; Will Rossiter, University trio, Edna Solomon, contraito.

WREO, Lansing, Mich. (Central, 288.5), 7:45 p. m., basketball game, Michigan Aggies vs. Hope college; 9:15, musical program, Reo band, glee club.
WSAI, Cincinnati, Ohio (Central, 325.9), 7 p. m., Hotel Gibson orchestra; 7:30, chimes; 7:45, children's story. Ethel Knapp Behrman; 8, Hotel Gibson orchestra; 9, musical program, Malie and Stept.

musical program, Malie and Stept.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment;
5-6 p. m., songs and bedtime story, Bonnio Barnhardt;
8-9, women's division, Atlanta Chamber of commerce program; 10:45, Vick Meyers Melody orchestra.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Maurice Spitalny's Hotel Statler orchestra.

WWJ, Detroit, Mich. (Eastern, 516), 8 a. m., setting-up exercises, R. J. Horton; 9:30, tonight's dinner; 12 m., Jules Klein's Statler orchestra; 3 p. m., the Detroit News orchestra; 6, Jules Klein's orchestra; 7, the Detroit News orchestra; Jane Robinson, contralto; S. J. Shone, tenor.

Wednesday, February 4

Wednesday, silent night for: CHNC, CKAC, CKY, KFDM, KFKX, KGO, KJS, WBAV, WCAL, WCBD, WEBJ, WFAA, WFI, WGY, WIP, WJY, WLBL, WMC, WOAW, WOI, WREO, WSAI.

CKAC, Montreal, Can. (Eastern, 425), 1:45 p. m., Windsor hotel luncheon concert.

KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 7 a. nn., morning exercises; 8, morning exercises; 12:20 p. nn., Institute, Trinity church; 6:15, dinner concert, Pittsburgh Athletic association; 7:30, children's period: address, University of Pittsburgh studio; 8:30,

concert.

KFAE, Pullman, Wash. (Eastern, 330). 7:30 p. m., Margery Segessemmann, planist; basketbail game, W. S. C. vs. Pacific university; Gladys Fraser, violinist; "Shlelding," Dean H. V. Carpenter; "Pointers on Dairy Farming," Prof. E. V. Ellington; "Overcoming Farm Flock Obstacles," C. M. Hubhard.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examinor, musical half hour; 6:45-7:30, Nick Harris, dotective stories; 7:30-8, program, Goodwind, Kilnger and MacKay company; 8-9, Evening Herald, Flsher's Melo-Jazz orchestra, Sophie Cooper, vocalist; 9-10, Examiner, "Wampus" club program presenting many of the screen's famous players; 10-11, Patrick and Marsh's dance orchestra.

KFNF, Shenandoah, lowa (Central, 266), 6:30 p. m., program, Henry Field Seod company.

Tuesday, February 3

(Continued from page 11)

Sallsbury; 7:50, "Artificial Method and Some ProbksD. St. Louis. Mo. (Central, 549.1). 6 p. m., Benjamin Rader's orchestra; 9. studio recital, E. T. Trovo; address, Dr. A. G. Pohlman; 10. Mrs. F. Ingalls, soprano; F. Ingalls, harltone; Mrs. Frank Neal,

KTHS, Hot Springs National Park, Ark. (Central, (375),

KTHS, Hot Springs National Park, Ark. (Central, (375), 8:30-10 p. m., concert, Eastman hotel ensemble, Charles Fisher. dlrector.

KYW. Chicago, III. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 2:35-4 p. m., studio frolic; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress story, Uncle Bob; 7-7:30, dinner concert, Congress lotel; 8-8:20, Chicago Muslcal college; 8:20-8:45, speeches, direction of American Farm Bureau federation; "Booster Stations," E. P. Taylor; 8:45-9:30, muslcal program; 10-11:30, evening at home program. WBAP, Fort Worth, Texas (Central, 472.9), 12:05-12:30 p. m., popular muslc, Montgomery Ward and company's "Trail Blazers;" 7:30-8:30, program, Manufacturers' association of Fort Worth; 9:30-10:45, McDowell sistes.

facturers' association of Fort Worth; 9:30-10:45, Mc-Dowell sistes.

WBCN, Chicago, III. (Central, 266), 6-6:30 p. m., juvenile period, Buella Drew; 7-8, classical program, David Crueger, violinist; R. P. Silas, tenor; Mrs. Muldcy, reader; Victoria Swanson, planist; Harold Cone, reader; F. E. Hathaway, baritone; Ady May Hathaway, violinist; 8-8:30, popular program, Harry Bundy; F. E. Hathaway, haritone; George Forsyth, tenor; Midway Daneing Gardens orehestra; 8:30-9, Walton School of Commerce program; 9-10, Wonderland Wonder orchestra; 10-12, popular program, Finney Brace, reader; Famous Four, F. H. McDonald, A. M. William, soprano; Will Rossiter's Melody Girls, Al Phillips, tenor; Buster Graves, hoy soprano; Blanch Robinson, planist; Alex Santry, tenor; 12-1, Pirate ship.

WCAE. Pittsburgh, Pa. (Eastern, 462). 8:30 p. m., dinner concert. William Penn hotel; 7:30, Uncle Kayhee; 7:45, address; 8:30, Stephen Sutch, planist; 9. Eveready hour; 10. concert, Goodrich Silvertown Cord

WCAL. Northfield, Minn, (Central, 337), 9:45 a, m., St. Olaf college chapel services.

WCAU, Philadelphia, Pa. (Eastern. 278), 6 p. m., Meyer Davis Hotel Pennsylvania dinner dance orchestra; 7, series of short talks; 8, reeltal; 8:15, Meyer Davis Hotel Pennsylvania concert trio.

WCCO, Minneapolls-St. Paul, Minn. (Central, 417).
10:45 a. m., "The Recipe Exchange." Betty Crocker;
2 p. m., woman's hour, League of Women Voters;
4, magazine hour, "A Special Purpose;" 5:30, children;
hour, Mrs. Charles Ramsdell; 6:30, dinner concert,
Reinmuth trlo; 7:30, lecture, "Personal Exemptions

and Credits on Independent Income Tax Returns," J. A. McHardy; 7:45, current events, W. P. Lemon. WCX, Detroit, Mich. (Eastern, 516), 4:15 p. m., muslcal program; 8:30, muslcal program; 10, the Red Apple

club.

WDAF. Kansas City, Mo. (Central, 411), 3:30-4:30
p. m., Star's Radlo trlo; 5-5:30, weekly child talent
program, arranged by Florence M. Woodward, Missourl Federation Music clubs; 6-7, piano tuning-in
number on Duo-Art; Tell-Me-a-Story Lady; Radlo
piano lesson, Maudellen Littlefield; 11:45-1 a. m.,
Nighthawk frelig Newman theater

number on Duo-Art; Tell-Me-a-Story Lady; Radlo piano lesson, Maudellen Littlefield; 11:45-1 a. m., Nighthawk frolic, Newman theater.

WDAR, Philadedphia, Pa. (Eastern, 395), 11:45 a. m., daily almanae; 12:02 p. m. Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafo concert orchestra; 4:30, Lola Harley Weber, soprano; Martha Harley Krips, soprano; Marcella North, accompanist; 7:30, Dream Daddy; 7:50, play review, Arnold Abbott.

WEAF, New York, N. Y. (Eastern, 492), 6-7 p. m., dinner music. Waldorf-Astorla hotel; 7:30-7:45, talk, Bank of America; 8:30-9, Gold Dust Twins; 9-10, "Eveready Hour;" 10-11, Silvertown Cord orchestra under Joseph Knecht.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7:30 p. m., E. C. Bacon, bedtline story; Radlo cartoon talk, Don Palmer; 8, Welsh male chorus, W. A. Hughes, director; 10, Joe Smith-Martha Lee club dance program from

Martha Lee club dance program from Martha Lee club rooms.

WEBH, Chicago, III. (Central, 370), 7-8 p. m., Oriole concert orchestra; Pat Barnes, tenor and reader; Rivicra theater; 9-10, Radlo Age program. Dennis Sisters, Cougle, accompanist; Oriole dance orchestra: 11-12, Loos Brothers, Riviera revue, Oriole orchestra.

WEBJ, New York, N. Y. (Eastern, 273), 7-8 p. m., Nat Martin and his I'll Say She Is orchestra; 8-8:15, Minna Wessel, soprano; 8:15-9, May Singhi Breen and her Syncopaters.

wesel, sorrano, 6:13-3, May Singhi Breen and her Syncopaters.

WEEI, Boston, Mass. (Eastern, 303), 2 p. m., Paul Davicr and his orchestra; 6:30, Boston Edison Big Brother elub; 7, Dok-Elsenbourg and his Sinfonians; 8, program, New York studio; 9, Eveready hour; 10,

8. program, New York studio; 9, E Goodrich Silvertown Cord orchestra. WFAA, Dallas, Texas (Central, 472.9), 12:30-1 p. m., address, Charles E. Oshorne; 6:30-7:30, vesper musl-cale, Tommy's Texans; 8:30-9:30, Tom D. Collins and the mandolin and guitar club; 11-12, Dwight Brown,

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:05, Carolino Hoffman, planist; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim; 9, Eveready

hour; 10, Goodrich Silvertown Cord orchestra. WGN, Chlcago, Ill. (Central, 370), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artist series, Lyon & Healy; 3, rocking chair time; 5:30, Skcezlx time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintet; 8-11, De Wolf Hopper at Great Northern theater.

WGR, Buffalo, N. Y. (Eastern, 319), 11:30 a. m., Mrs. Katherine Norton Britt, home economics talks of the season; 12:30-1 p. m., Hotel Statler concert ensemble; 2:30-4:30, Radio Dealer's program; 6-7:30, dinner

Saturda Clinc, c sb, Wt 8, Wsb, 9, Kfi, Wr 9, Kn, Woc, Wr 9:30, Ck Kfg 9:30. Ck i W 10, Kfon, Ep Weaf, Wa o 183 Kfoa, Ki o W II, Kths. We Woaw; i w Kgo, Ks i K Kyw, Wi i 23 Kfoa; Ly is Knx, Kyt ii

Monday Weaf 9: 10 Kfl Wsai; 10 Wbz, We Wbz, 10:45, 11:45, Kfqx, Wbap.

Tuesday W Weaf. W 9. Kpo Wcaf, V Wbz; 9: Wip, W Wnj; 10 Wnic. Wn 12, Kfi. K Khj. Kpo 1, Knx.

Wednesd may
8, Woo; wy;
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10:45, Web; 10, I Kths 10:30, 10:45, Whn, Whn, Wry K

Thursday my 8. Woc. 1: 8 Wreo: 8:30: 8 Kfi: 9. Kf d. W

INAUGURAL PROGRAM SATURDAY



KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. m., Olympic Hotel concert orchestra; today's recipe; 6:45-8:15, Hopper-Kelly Company studio program; 8:30-10, Seattle Times dance program.

KFQX, Seattle, Wash. (Pacific, 238), 6:30-7:15 p. m., news; 7:15-8, bedtime story, Aunt Vivien; 8-9, Earl Gray and his Hotel Butler orchestra; 9-10, concert hour; 10-11, Earl Gray and his orchestra.

hour; 10-11, Earl Gray and his orchestra.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30
a. m., sunshino hour program for sick and afflicted;
2:30-4:30 p. m., auditorium service with sermon on
Divine Healing, Aimee Semple McPherson, pastor;
6:30-7:30, children's hour presenting Helen Edwina
and Mary Elizabeth Hughes, Mrs. Rose, pianist.

KGO, Oakland, Calif. (Pacific, 312), 11:30-1 p. m.,
luncheon concert, Pacific States Electric company; 3,
musical program, Cora L. Williams institute speaker;
4-5:30, concert orchestra, Hotel St. Francls.

KGW, Portland, Ore. (Pacific, 485.1), 12:30 p. m.,
concert, Novak's Vaudettes; 5, children's program, story,
Aunt Nell; 8, concert; 10, Mültnomah hotel strollers.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., Martin Music company program, arranged by J. Howard Johnson: 2:30, Claire and Mel, an illustrated musical review on Bethoven: 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Prof. Walter Sylvester Hertzog; Dick Winslow, invenile reporter: Bally Murial MacCommac seven stories. juvenile reporter; Baby Muriel MacCormac, screen star-let; Uncle John; 8-8:30, Dr. Mars Bumgardt, scien-tific lecturer; 8:30-10, program, Gordon and Harrlson; 10-11, Earl Burtnett's Biltmore hotel dance orchestra.

mary 2:

Kths,

Wahg;

10:45. Whn, Wdaf;

nye; 9, r Woo;

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Wis: Ksd, Kfi,

Wnye;

| 11:45, | Khj,

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Wis, Wmc, if; 12, Kfoa;

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Knx.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, Mrs. Kate Brew Vaughn, home economics; 5:30. Town Crier and Village Urchins; 6, sports talk; 6:30-7:30, dinner hour music; 8-9, program, Gordon and Harrison; 9-10, feature program; 10-12, Hollywoodland dance orchestra.

10-12, Hollywoodiand dance orchestra.

KOA, Oenver, Colo. (Mountain, 322.4). Sp. m., "Herd Girl's Dream," KOA orchestra; "Nani," "Ua Like No a Like," Edwin Akina, guitarist; "Hawall, the Paradlse of tha Pacific," Eben G. Fine; "Wallana Waltz," Aloah Oe, Edwin Aklna, guitarist; "Prelude," "Valcik," Fern Johnson; "Mulligen Musketeers," "Mary Had a William Goat," Olinger quartet; "Invictus," "Friend O'Mine," James R. Youngs; "Sextet from Lucia," "Kiss Me Goodnight," Nick Palizzl, accordion soloist; "To the Rising Sun," "Waltz in C Sharp Minor," Fern Johnson, pianlst; "I Got a Robe," "Massa's in the Cold, Cold Ground," "Carry Me Back to Old Virginny," "Ollnger quartet; "Charity," "Gao to Sleep," Hazle Engle Youngs; "Jealons," "Lady of My Clgarctic," "Bringin' Home the Bacon," "Virto Old Virginny," "Ollnger quartet; "Charity," 'Gae to Sleep," Hazle Engle Youngs; "Jealons," 'Lady of My Clgarette," 'Bringin' Home the Bacon," 'Virginia Lullaby," Nick Palizzl, accordionist; "Duna," "Three for Jack," James R. Youngs, bass; "John, Get Up and Shut the Door," 'Dried Apple Pie," "Tha End of a Perfect Day," "Olinger quartet; "Dream Tryst," "Curly Headed Baby," Hazla Engle Youngs; "March Alla Turka," orchestra.

KOB, Stata College, N. M. (Mountain, 348.6), 7:30-8:30 m., international code course, lesson 5, Dean R. W. Goddard.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., daily dozen; 10, town erier; 10:15, "What Is Playing at the Various Theaters;" 1-2 p. m., Rudy Selger's Falrmont hotel orchestra; 2:30-3:30, matlnca program, Johnnie Buick's Amphlans; 4:30-5:30, Rudy Selger's Fairmont hotel orchestra; 5:30-6:30, children's hour stor-late. Visual program, John and John les; Marlanne De Smet, pianist; 6:30, "What Is Playing at the Various Theaters;" 7-7:30, Rudy Selger's Fairmont hotel orchestra; 8-11, E. Max Bradfield's Versatila

mont hotel orchestra; 8-11, E. Max Bradfield's Versatila band; Gertrude Mortin, planist.

KSAC, Manhattan, Kans. (Central, 340.7), 9 a. m., march; 9:02, music lesson; 9:07, music for singling exercises; 9:15, inspirational talk; 9:20, calisthenics; 10, backyard gossip; 10:05, all around tha house; 10:10, questions and answers; 10:20, "Suggestions for Today's Meals," Amy Kelly; 12:30 p. m., readings, Oscola Hall Burr; "Farrowing Houses for the Spring Litters," Walter G. Ward; "How to Make a Germination Test," H. R. Sumner; 7:20, college hell and music; 7:30, "Financing State Hoad Work," L. E. Conrad; 7:40, vocal solos, Harold Flamm; 7:50, farm homa, W. G. Ward; 8-9, classical musical program, Dept. of Music.

WBBR, New York, N. Y. (Eastern, 273), 8 pa m., Watchtower orchestra; 8:20, Bible lecture, Norman Woodworth; 8:40, Watchtower orchestra.

Woodworth; 8:40, Watchtower orchestra.

WBCN. Chicago, III. (Central, 266), 6-6:30 p. m., juvenlla period; 7-8, Mrs. Kathrinc Bly Utesch; 8-9. Amber Furnlture company, E. Parker, tenor; Midway Dancing Gardens orchestra, Florence Tenney, soprano; Bernard Sweltzer, tonor; 9-10, popular Englewood Overland company; South Town Harmonizers, Englewood quintot; 9-10, Les Cameron, tenor; automobile talk, Merle Yagle, pianologuist; 10-10:15, Midway Dancing Gardens orchestra.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, special feature, 8:30, artists and orchestra, Nixon restaurant.

bee; 7:45, special feature, 8:30, artists and orchestra, Nixon restaurant.

WCAL, Northfield, Minn. (Central, 337), 9:45 a. m., St. Olaf college chapel services.

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. u., Micyer Davis Hotel Pennsylvania dinner dance orchestra; 7:30, recital, N. Snellenburg and company; 8, Breyer Ice Cream company concert; 8:30, recital, WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., "How to Entertain Easily," Betty Crocker; 2, woman's hour, "The Romance of Rings." George F. Kunz; 2:30, matinee musical; 4, MacPhali's Little Theater company, John Samen, Garns

Phali's Little Theater company, John Seaman Garns, director; 5:30, children's hour, Alpha Stalson; 7, midweek church service; 9, Twin City Auto Show and Market week; style talk, Lucile Babcock; 10:30, dance program. WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., musiwox, betroit, mich. (Eastern, 510), 4:15 p. m., musical program; 8:30, musical program.

WOAF. Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., Star's Radio trlo; 6-7, School of the Air, address, story lady, Trianon ensemble, Hotel Muchle-

bach; 8-9:15, program, pupils of Ola Hon of I. O. O. F. WOAR. Philadelphia, Pa. (Eastern, 395), 11:45 a. m. dally almanac; 12:02 p. m., Stanley theater organ recital, Arcadia cafe concert orchestra; 2, Arcadia cafe

concert orchestra; 7:30, Dream Daddy; 8:15, reading travel talk; 10:03, Arcadia cafe dance orchestra.

WEAF, New York, N. Y. (Eastarn, 492), 6-7 p. m., dinner music, Waldorf-Astoria hotel; 7-7:30, services, United Synagogue of America; 11-12, Club Lido-Venice

WEAO, Columbus. Ohio (Eastern, 294), 8 p. m., chimes concert, Prof. A. P. McManlgal; 8:15 p. m., Radio talk, A. M. Rose; musical program, Ohio State university alumni artists.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7 p. m., Hotel

Cleveland orchestra, Ivan Franciscl, director.
WEBH, Chicago, Ill. (Central, 370), 7-8 p. m., Orlola concert orchestra; Riviera theater, Dean Romick, pianlst; 9-10, Langdon Brothers, Hawailan gultarists; Ma-

rie Kelly, readings; Frederick Agard, tenor; Bob Cougle, accompanist; Oriole dance orchestra; 11-12, Langdon Brothers, Hawailan guitarists; Maria Kelly, readings; Edna Solomon, contralto; Oriola dance or-

readings; Edna Solomon, contralto; Oriola dance orchestra.

WEEI, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston
Edison Big Brother club; 7, Sid Relmherz and his
orchestra; 8, Harry Einstein, tha bad boy from the
good home; 8:15, musicale; 9, Gilletto Safety Razor
concert orchestra; 10, musicale; 11, Fenway theater
organ recital, Lloyd G. Del Castillo.

WEMC, Berrien Springs, Mich. (Central, 286), 8:159:15 p. m., Radio Lighthouse Music Makers, "Our
Favorita Regiment," "You Can't Drivo My Dreams
Away," "At Sunset," "Three Quotations," "I'm Forever Thinking of You," "Miss Liberty," "Spanisb
Waltz," "Stars and Stripes Forever."

ever Thinking of You," "Miss Liberty," "Spanish Waltz," "Stars and Stripes Forever."
WFAA, Dallas, Texas (Central, 472.9), 12:30-1 p. m., musical featuras, Dallas theater performers.
WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Moyer Davis Bellevua Stratford concert orchestra; 3:05, reading, Walter Gray; 6:30, Meyer Davis Bellevua Stratford concert orchestra; 7, Sunny Jin.
WGN, Chicago, III. (Central, 370), 1:40 p. m., lunchcon concert. Draka concert expemble. Blackstona string

concert. Draka concert ensemble, Blackstona string quintet; 2:30, artist series, Lyon & Healy; 3, rocking chair time; 5:30, Skeezix time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Draka concert ensemble, Blackstone string quintet; 6-9,

classical concert ensemble, Blackstone string quinter; 6-9, classical concert, Lyon & Healy artists.

WGR, Buffalo, N. Y. (Eastern, 319), 10:45 a. m., Gold Medal homa service talk by Betty Crocker; 12:30-1 p. m., Hotel Statler concert ensomble; 2:30-4:30, Radlo Dealers' program; 4:30, Icctura, "What the Honey Bee Does for Agriculture," E. F. 1'hillps; 6:30-7:30, dinner music, Vincent Lopoz Hotel Staticr dance or-

Where to Hear Talks

Central Standard Time

TALKS, instructive, serious, humorous and even frivolous, are Radiocast daily and below are listed the stations.

Saturday, January 31: 6, WDAF, WMAQ, WOAW; 6:15, WBZ; 6:45, WCAE; 7, WBCN, WEAF, WJZ, WRC; 7:15, WBBR; 7:45, WJZ; 8, WCCO; 8:30, KHJ, WMAQ; 8:15, WJZ; 9:05, KYW; 9:15, KJS; 9:30, KFSG; 9:45,

Sunday, February 1: 8:20, KSAC; 8:30, WBBR; 8:45, KFI; 8:55, WEMC; 9, WJY.

Monday, February 2: 6, WCCO, WDAF; 6:10, WHN; 6:15, WBZ; 6:35, WNYC; 6:45, WCAE, WGY; 6:55, WDAR; 7, KDKA, WHN, WJZ; 7:15, KDKA; 7:20, WOC; 7:30, KSAC, WHB; 8, WCCO; 8:30, KOB, WOR; 9.35, WNYC; 10, KFAE, KGO.

Tuesday, February 3: 6, WCAU, WDAF, WJZ; 6:15, WBZ; 6:30, CKY, WBZ, WEAF, WJY; 6:45, WCAE, WGY; 6:50, WDAR, WJZ; 7:15, CFCA; 7:30, KSAC, WCCO; 8, WHA, WLS, WMAQ; 8:20, KYW, WMAQ; 9:30, KHJ; 8:45, KFI; 8:50, WMAQ; 9:05, WIP; 9:10, WNYC; 10, KGW; 11:05, KYW.

Wednesday, February 4: 6, WCCO, WDAF, WEAF; 6:15, WBZ; 6:30, WBZ, WHN; 7, WAHG, WGR, WJZ, 7:15, KDKA, WBZ, WDAR; 7:20, WBBR; 7:30, WJZ, WNYC; 8, WHA, WLS, WMAQ; 8:30, KHJ, KOB, KYW; 8:45, KFI; 9:05, KYW; 10, KHJ; 12, WBAP.

Thursday, February 5: 6, WDAF, WEAF; 6:30, CKY; 6:45, WGY; 6:55, WJZ; 7, WEAF, WIP, WJZ; 7:15, WJY; 7:30, KSAC, WCCO; 7:45, WCCO, WHA; 8, KYW, WHA, WMAQ; 8:15, WMAQ; 8:30, KHJ; 8:40, WBBR; 9:15, KVW; 9:20, KFI; 9:20, KHJ; 9:15, KYW; 9:20, KFI; 9:30, KHJ;

Friday, February 6: 6, WCAU, WCCO, WDAF; 6:30, CKY, WCAU; 6:45, WGY; 7, WDAR, WGY; 7:10, WJZ; 7:15, KDKA, WDAR; 7:20, WGY, WOC; 7:30 KGO KSAC, WCCO; 8, KNX, KYW, WLS; 8:30, KHJ, KOB, WCAL; 8:55, WEMC; 9, WHN; 9:25, WHN; 9:30, KHJ; 10, KGW.

chestra, Harold Gieser, director; 8-8:15, Iccture, "Some Frogs, Toads, and Salamanders of western New York," Prof. William P. Alexander of the Buffalo Society of Natural Sciences; 8:15-10:15, Philharmonic concert jointly with WEAF: 11:30, supper dance music. Vincent Lopez Hotel Statler dance music, Harold Gieser, director.

WHA, Madison, Wis. (Central, 535.4), 7:45 p. m., Clcf club; "The Need for a Rational Land Policy," John G. Jones, Jr.

G. Jones, Jr.
WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater organ; 7:30-9, concert, Tropical Hawaiian sextet, Frank Plada, director; a chapter of the "Billy and Jane" stories.
WHB, Kansas City, Mo. (Central, 411), 2-3 p. m., ladies' hour; 7-8, special program, Parent-Teachers' association.

whb, kansas city, mo. (Central, 411), 2-5 p. in., ladies' hour; 7-8, special program, Parent-Tcachers' association.

WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., Radiograms, music; 7, bedtime story. Ethel O. Hawes.

WHN, New York, N. Y. (Eastern, 360.4), 6:30-7, Vincent Catanese and his Hotel Alamac orchestra; 7-7:30, Harry Richman and his entertainers with Eddie Elkins and his orchestra; 7:30-7:35, "Spring Styles," fashion expert of Haas Brothers Fabric corporation; 12-12:30 a. m., Strand Roof orchestra.

WHO, Oes Moines, lowa (Central, 522.3), 6:30-7:30 p. m., Reese-Hughes orchestra; 7:30-9, Bankers Life Radio orchestra, W. L. Marsh, director; Don Merchant, cornetist; 9-9:45, Des Moines Theater Symphonic orchestra, Leon A. Dashoff, director.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Gimbel tea room orchestra; 6:05, Art Coogan and his Club Madrid orchestra; 7. Uncle Wlp's bedtlme stories.

WJJO, Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., nusic, Mooseheart children, assembly, talks; 6:45-7:15, Albert Brown, organist; 7:15-8:15, Philharmonic orchestra, Junlor band.

WJZ, New York, N. Y. (Eastern, 455), 10:50-11 a. m., fashion talk, Eleanor Gunn; 1:15-2 p. n., luncheon unusic; 4-4:30, Myrtle Holmes Purdy, contralto; Norman Curtis, accompanist; 4:30-5:30, Hotel Belmont teamusic; 7-8, Cafe Boulcvard orchestra; 8-8:10, Wall Street Journal review; 8:10-8:30, N. Y. U. Air college; 8:30-9:30, "Jewish History and Literature," anspices of Rabbinical assembly of Jewish Theological seminary, Dr. Elias Margolis; 10:30-11:30, Billy Wynne's Greenwich Villaga Inn orchestra.

WKAQ, San Juan, P. R. (Intercolonial, 360), 8-9:45 p. m., Munleipal band.

WKAQ, San Juan, P. R. (Intercolonial, 360), 8-9:45 p. m., Municipal band.

WLS, Chicago, III. (Central, 345), 12-12:30 p. m., R. F. D. program, Nubs Allan, contralto; muslc numbers; 3:45-4:45, "Growth of Amercan Palnting," C. R. Dalrympic; "American Ideals," Mrs. O'Neill; "Suggestions for Lincoln's Birthday," Julia Deal; inusic; 6:30, Ralph Emerson, organist; 6:30, Senate theater studio; 7, Iuliaby time, Ford and Glenn; 7:15, WLS Lona Scout tribe; 7:40, Sandy Meek, Scotch tenor; 7:50, WLS harmony aces; 8-9, R. F. D. program, music; 9, Donald Foster, trombonist; 9:10, Saddler fcature; 9:30, program, Dixon, III., artists; 10, Senate theater symphony; 10:10, Beverly trio; 10:30, Isham Jones orchestra; 10:40, Ford and Glenn.
WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, Y. M. C. A., Wm. Stradtman, instructor; 12:15 p. m., program, Mu Phi Epsilon sorority; 4, program for "Shut-Ins;" 6, dinner hour concert. Selinsky quintet; 8, Wyoming Presbyterian church quartet, Mrs. Lillan Arkel Rixford, director and organist; Clifford Lang, planist; Milnor Instrumental trio; "Money, How It Has Developed Since the Days of Barter," Harry J. Plogstedt.

WMAQ, Chicago, III. (Central, 447.5), 1 p. m., speechas, WLS. Chicago, III. (Central, 345), 12-12:30 p. m., R.

of Barter," Harry J. Plogstedt.

WMAQ, Chicago, III. (Central, 447.5), 1 p. m., speechas, weekly luncheon, Association of commerce; 4, beauty talk, Madame Grace Earl; 4:30, program, pupils, Cosmopolitan School of music; 5:30, Armour institute musical clubs; 6, Chicage theater nrgan recital; 6:30, stories for children, Georgena Faulkner, the story lady; 8, weekly lecture, Northwestern university; 8:30, piano concerto; 9, WMAQ players.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program, O. K. Houck Piano company.

WNJ, Newark, N. J. (Eastern, 233), 10:30-11 p. m., Frank Daily and his Mcadowbrook orchestra; 11-11:15, Victor Wilbur, haritone; 11:15-12, Original Dixieland jazz band; 12-12:30 a. m., Frank Daily and his Meadowbrook orchestra.

WNYC, New York, N. Y. (Eastern, 528.8), 8:30-9:45 p. m., "Appreciation of Music," Dr. Henry T. Fleck, Hunter college; 9:45-10:30, danca program.

p. m., "Appreciation of Music," Dr. Henry T. Fleck, Hunter college; 9:45-10:30, danca program. WOC. Davenport, Iowa (Central, 498), 8 p. m., Erwin Swindell, organist

Ames, lowa (Central, 270), 12:30 p. m., collage

chimes.

WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's Hotel Adelphia: 8:30, recital, Harrietta G.

4:45, organ recital, Mary E. Vogt; 7:30, A. Candelorl's ensemble, Hotel Adelphia; 8:30, recltal, Harrietta G. Ridley; 9, WOO orchestra, Robert E. Golden, director; 10:03, William Bove's Royal Palm orchestra; 10:30, Vincent Rizzo's Hotel Sylvania dance orchestra.

WOR, Newark, N. J. (Eastern, 405), 3-4 p. m., Kenneth Kitchen's club orchestra; 6:15-6:30, Albert E. Sonn, technical editor, Newark Sunday Call; 6:30-7:30, "Music While You Dine," Jimmy Lent's orchestra.

WQJ, Chicago, III. (Central, 448), 11-12 m., home economics, Helen H. Downing; "Preparing for Valentine," Mary Martin; "Short Cuts in Spring Sewing," Mrs. W. E. Fribley; "California," Mrs. E. T. East; 3-4 p. m., domestic scienca course, "Helping a Child Through School," Clara Sommerville; 7-8, concert, Ralph Williams and his Rainbo Garden orchestra; Adelaide Steeg, contraito; Howard Hanks, planist: 10-2 a. m., Raiph Williams and his Rainbo Skylarks; soprano; Jamos Mitchall, baritone; Rogers boys, Clara Mitchall, School, "Marting Recommendation of the Mitchall Control of the Control o soprano; Jamos Mitchall, baritone; Rogers boys, Claronce Thedors, tonor; Alfred Tweed, harmonica and

gultar; melodians, Harmony singers, Fred Jacobson,

monologues.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., Bonnie Barnhardt; 10;45, Georgia Tech. Marionette orchestra.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Philip Spitalny's Music Box orchestra; 8, Cleveland Plain Dealer concert program; 10:30, Philip Spitalny's Music Box orchestra.

Box orchestra.

WTAY, Oak Park, III. (Central, 250), 6:30-7:30 p. m.,
Oak Park night; 9-9:15, organ, Parthenon theater;
9:15-10, Spencer, Laverne, Shayne, Xylophone Harmony Kings; the Melody Girls; Dr. W. P. Zimmer,
tenor; Lester Kelsey, tenor; 12-1, organ.

WWJ. Oetroit, Mich. (Eastern, 516), 8 a. m., setting-up
exercises, R. J. Horton; 9:30, tonight's dinner; 12 m.,
Jules Klein's orchestra; 3 p. m., the Detroit News orchestra; 6, Jules Klein's orchestra; 7, the Detroit News
orchestra; Charles Coates, baritone; E. B. Curtis,
tenor.

Thursday, February 5

Thursday, silent night for: CHNC, KFAE, KFDM, KFOA, KFQX, KGW, WOA, KOB, KSD, PWX, WAHG, WBAV, WBBG, WBZ, WCAU, WEAO, WEBJ, WEMC, WGR, WHO, WJJD, WLBL, WNJ,

AT9, Fort Bragg, N. C. (Eastern, 435), 8 p. m., Mabelle New Williams, soprano; Margaret Cotton, contraito; Rev. Sam K. Phillips, tenor; Mr. Sheets, bass; Francis Green, accompanist; Mrs. Henry Spears, pianist; Mrs. McElveen, violinist.

CKAC, Montreal, Can. (Eastern, 425), 4:45 p. m., musical tea; 8:30, Canadian National Railways using call letters CNRM.

call letters CNRM.

CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., lesson in French diction, A. C. DeLalande; 8, Canadian National Railway's program, Fort Garry hotel.

KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:20 p. m., Institute, Trinity church; 6:15, dinner concert, KDKA Little Symphony orchestra; 7:30, children's period; 8, program, National Stockman and Farmer studio; 8:30, concert; 11, concert, Pittsburgh Post studio.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk, news; 5:30-6, Examiner, musical half hour: 6:45-7:20. Bon Ton orchestra: 7:20-

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk, news; 5:30-6, Examiner, musical half hour; 6:45-7:20, Bon Ton orchestra; 7:20-7:30, Y. M. C. A. speaker; 7:30-8, vocal recital; 8-9, program, Standard Oil Company of California presenting play with music; 9-10, Examiner, pupils of Louis Ferrazzano; 10-11, vocal and instrumental.

KFKU, Lawrence, Kans. (Central, 275), 6:50 p. m., piano tuning in number; 7, music; 7:15, "The Child Labor Law and It's Relation to Industry," Prof. F. W. Blackmar; 7:30, "Science, Old and New," Dr. H. M. Elsey; 7:45, educational psychology, lesson V, Dean R. A. Schwegler.

KFKX, Hastings, Nebr. (Central, 288.3), 9:30-11 p. m., program, Immaculate Conception academy.

KFNF, Shenandoah, Iowa (Central, 266), 6:30 p. m., concert from Randolph, Iowa, Mrs. I. G. Bliss, director.

KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. un., Olymple Hotel concert orchestra; today's recipe.

KFSG, Los Angels, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshina hour; 3:30-4:30 p. m., afternoon organ recital, Roy Reid Brignall; 7:30-9:15, auditorium service and baptismal service, Aimee Semple McPherson, pastor; 9:15-10, concert by Silver band, G. N. Nichols, director; 10-11, organ recital, Esther Fricke Green, organist.

KGO. Oakland, Calif. (Pacific, 312), 10:40 a. m. class-

organist.

KGO, Oakland, Calif. (Pacific, 312), 10:40 a. m., classroom instruction, Oakland Public schools; 4-5:30 p. m.,
concert orchestra, Hotel St. Francis; 8, farce, "Mrs.
Temple's Telegram; Arion trio; 10-1 a. m., Henry Halstead's orchestra.

KGW, Portland, Ore. (Pacific, 485.1), 12:30 p. m., con-

cert, Civie Music club; 5, children's program.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m. (HJ, Los Angeles, Calit. (Pacific, 395), 12:30-1:30 p. m., Martin Music company program, arranged by J. Howard Johnson; 6-6:30, Art Hickman's Biltmore hotel concert orchastra, Edward Fitzpatrick, director; 6:30-7:30, little stories American history, Dickie Brandon and Jane Hughes, screen juvoniles, bedtime story, Uncle John; 7:30, Harold Swartz of Otls Art institute, talk on "Art;" 7:45, Care of Body." Dr. Phllip M. Lovell; 8-9:30, program, West Coast theaters; 9:30-10, Hatch Graham, banjoist and singer; 10-11, Early Burtnett's Billimore hotel dance orchestra.

Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 252), 8-9:30 p. m., vocal recital with plane and organ numbers of classical

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, Mrs. Kata Brew Vaughn, home economics; 5:30, Town Crier and Villaga Urchins; 6, sports talk; 6:30-7:30, dinner hour music; 8-9, program, Globe Ice Cream company; 9-10, program, Carson-Baruch company; 10-11, Abe Lyman's Cocoanut Grovo danca orchestra from Ambassador hotel.

KOA, Oenver, Colo. (Mountain, 322,4), 3 p. m., matinco for housewives. "Danny Boy," "Friend O'Minc," "Beloved, 1t 1s Morn," Mrs. Irving Green; "Essentlals of the Group Mind," Mrs. Kuskulis; "Whims," "Plutos Revels," "Etudo Mignounc," Mablo Garvin Baber.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., dally dozen; 10, town crier; 10:15, "What Is Playing at the Various Theaters;" 1-2 p. m., Rndy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's storles; 6:30,

(Continued on page 14)

CHIC, NEW TORONTO STATION, HAS INAUGURAL PROGRAM SATURDAY

DANCING

Where to Hear Concerts

Central Standard Time

THESE are the stations for music lovers to dial, and you can hear, pro-yiding you dial correctly and read the programs carefully, everything from jazz to opera.

Tuesday, February 3



Wednesday, February 4

Where to Hear Talks

Central Standard Time

 $T^{
m ALKS}$, instructive, scrious, humorous and even frivolous, are Radiocast daily and below are listed the stations:

Thursday, February 5

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Lither and Later and the

m., entertainment; 45, Georgia Tech.

), 6 p. m., Philip , Cleveland Plain ,p Spitalny's Music

Parthenon theater; , Xylophone Har-r. W. P. Zimmer,

gan.
8 a. m., setting-up
it's dinner; 12 nl.,
2 Detroit News or
, the Detroit News
3; E. B. Curtis,

Jary 5

KFAE, KFDM. DB, KSD, PWX, WCAU, WEAO. ID, WLBL, WNJ,

35), 8 p. m., Magaret Cotton, con-Mr. Sheets, bass; enry Spears, pian-

25), 4:45 p. m., al Railways using

7:30 p. m., icsson (; 8, Canadian Na-y hotel. (09.1), 12:20 p. m., er concert, KDKA ildren's period; 8, rmer studio; 8:30, y studio. studio, 8:30, studio, 99), 5-5:30 p. in., 5:30-6, Examiner, on orchestra; 7:20-vocal recital; 8-9,

California prosent-r, pupils of Louis lental. 17:15, 6:50 p. m., 17:15, "The Child stry," Prof. F. W. New," Dr. H. M., 10sson V, Dean

3), 9:30-11 p. m.,

3), 9:39-11 p. m., ademy.
266), 6:30 p. m., G. Bliss, director.
3), 4-5:15 p. m., ay's recipo.
278), 10:30-11:30
a., afternoon organ
5, auditorium scrv-semple McPherson Semple McPherson, nd, G. N. Nichols, her Fricke Green,

10:40 a. m., class-ools; 4-5:30 p. m., s; 8, farce, "Mrs.)-1 a. m., Honry

12:30 p. m., conprogram.

, 12:30-1:30 p. m.,
nged by J. Howard
tmore hotel concert
or; 6:30-7:30, little
Brandon and Jane
edtime story, Uncle John;
Otis Art institute, talk on
Body," Dr. Phllip M. Lovell;
B-9:30, program, West Coast theaters; 9:30-10, Hatch
Graham, banjoist and singer; 10-11, Early Burtnett's
Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 252), 8-9:30 p. m.,
vocal recital with plano and organ numbers of classical
nature.

vocal recital with piano and organ numbers of classical nature.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, Mrs. Kato Brew Vaughn, homo economics; 5:30, Town Crier and Village Urchins; 6, sports talk; 6:30-7:30, dinner hour music; 8-9, program, Globo Ice Cream company; 9-10, program, Carson-Baruch company; 10-11, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador liotel.

KOA, Denver, Colo. (Mountain, 322,4), 3 p. m., matinoo for housewlves, "Danny Boy," "Friend O'Minc," "Beloved, It Is Morn," Mrs. Irving Green; "Essentials of the Group Mind," Mrs. Kuskulis; "Whims," "Plutos Revols," "Etudo Mignonne," Mable Garvin Baber.

Baber.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. in., daily dozen; 10, town crier; 10:15, "What Is Playing at the Varlous Theaters;" 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 4:30-5:30, Rudy Sciger's Fairmont hotel orchestra; 5:30-6:30, children's stories; 6:30,

(Continued on page 14)

KOB, State College, N. M. (Mountain, 348.6), 7:30-8:30 p. m., International code course, lesson 5, Dean R. W. p. m., in Goddard.

8:15, 8:45, Woc, Wnye; Wcco, Wip;

6: 8, 30, 9:03, Wahg; Wnj, 9:45, Kyw, 10:30, Wis, Wmc, f: 12, Kfoa;

A IX.

Goddard.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., daily dozen; 10, town crier; 10:15, "What 1s Playing at the Various Theaters;" 1-2 p. m., Rudy Selger's Fairmont hotel orchestra; 2:30-3:30, matinee program, Johnnie Buick's Amphians; 4:30-5:30, Rudy Selger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories; Marianne Dc Smet, pianist; 6:30, "What Is Playing at the Various Theaters;" 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-11, E. Max Bradfield's Versatile band; Gertrude Mortin, pianist.

KSAC, Manhattan, Kans. (Central, 340.7), 9 a. m., march; 9:02, music lesson; 9:07, music for singing exercises; 9:15, inspirational talk; 9:20, calisthenics; 10, backyard gosslp; 10:05, all around the house; 10:10, questions and answers; 10:20, "Suggestions for Today's Meals," Ainy Kelly; 12:30 p. m., readings, Osceola Hall Burr; "Farrowing Houses for the Spring Litters," Walter G. Ward; "How to Make a Germination Test," H. R. Sumner; 7:20, collego bell and music; 7:30, "Financing State Road Work," L. E. Conrad; 7:40, vocal solos, Harold Flamm; 7:50, farm homo, W. G. Ward; 8-9, classical musical program, Dept. of Music.

organ recital, Lloyd G. Del Castillo.

WEMC, Berrien Springs, Mich. (Central, 286), 8:15-9:15 p. m., Radio Lighthouse Music Makers, "Our Favorite Regiment," "You Can't Drive My Dreams Away," "At Sunset," "Three Quotations," "I'm Forever Thinklng of You," "Miss Liberty," "Spanish Waltz," "Stars and Stripes Forever."

WFAA, Dallas, Texas (Central, 472.9), 12:30-1 p. m., musical features, Dallas theater performers.

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchostra; 3:05, reading, Walter Gray; 6:30, Meyer Davis Bellevue Stratford concert orchostra; 3:05, reading, Walter Gray; 6:30, Meyer Davis Bellevue Stratford concert orchostra; 3:05, reading, Walter Gray; 6:30, Meyer Davis Bellevue Stratford concert orchostra; 7, Sunny Jim.

WGN, Chicago, Ill. (Central, 370), 1:40 p. in., iunchcon concert, Drake concert ensemble, Blackstono string quintet; 2:30, artist series, Lyon & Healy; 3, rocking chair time; 5:30, Skeezix time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintot; 6-9, classical concert, Lyon & Healy artists.

WGR, Buffalo, N. Y. (Eastern, 319), 10:45 a. m., Gold Medal home service talk by Betty Crocker; 12:30-1 p. m., Hotel Statler concert ensemble; 2:30-4:30, Radio Dealers' program; 4:30, lecture, "What tho Honey Bee Does for Agriculture," E. F. Phillilps; 6:30-7:30, dinner music, Vincent Lopez Hotel Statler danco or-

Swindell, organist

Swindell, organist

WOI, Ames, Iowa (Central, 270), 12:30 p. m., college chimes.

wol, Ames, lowa (Central, 270), 12:30 p. m., college chimes.

Woo, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's ensemble, Hotel Adelphia; 8:30, recital, Harriette G. Riddey; 9, Woo orchestra, Robert E. Golden, director; 10:03, William Bove's Royal Palm orchestra; 10:30, Vincent Rizzo's Hotel Sylvania danco orchestra.

Wor, Newark, N. J. (Eastern, 405), 3-4 p. m., Kenneth Kitchen's club orchestra; 6:15-6:30, Albert E. Sonn, technical editor, Newark Sunday Cali; 6:30-7:30, "Music While You Dine," Jimmy Lent's orchestra.

Wol, Chicago, III. (Gentral, 448), 11-12 m., home economics, Helen H. Downing; "Preparing for Valentine," Mary Murtin; "Short Cuts in Spring Sewing," Mrs. W. E. Fribley; "California," Mrs. E. T. East; 3-4 p. m., domestic science course, "Helping a Child Through School," Clara Sommerville; 7-8, concert, Ralph Williams and his Rainbo Garden orchestra; Adelaide Steeg, contralto; Howard Hanks, planist; 10-2 a. m., Ralph Williams and his Rainbo Skylarks; soprano; James Mitchell, baritone; Rogers boys, Claronce Theders, tenor; Aifred Tweed, harmonica and

Thursday, February 5

(Continued from page 13)

(Continued from page 13)

"What is Playing at the Various Theaters;" 7-7:30, Rudy Seiger's Fairment hetel orchestra; 7:30-8, Home Town Synco-Symponists; 8-9, Theodore J. Irwin, urganist; 9-10, program, Sunta Clara branch, American Pen Women; 10-11, E. Max Bradtield's Versatile band.

KSAC, Manhattan, Kans. (Contral, 340.7), 9 a. m., march; 9:02, minsic lesson; 9:07, music for singing exercises; 9:15, inspirationat talk, 9:20, calisthenles; 10, backyard gossip; 10:05, all around the house; 10:10, questions and answers; 10:20, "Suggestions for Today's Meals," Any Kelly; 12:30 p. m., readings, Oscola Hall Burr; "Farm Management," I. N. Chapman; "Making the Boy a Partner," M. H. Coe; 7:20, collego bell and music; 7:30, "Adjusting Equipment to the Individual," Harriet W. Allard; 7:40, music, Mrs. G. W. Sallsbury, director; 7:50, "The Milk Way; the Health Way," Emily Bennett; 8-9, "Swede Songs and Stories," music, direction of Prof. P. Brainard; stories, Dr. H. T. Hill.

KSO, St. Louis, Mo. (Central, 549.1), 4 p. m., home

KSO, St. Louis, Mo. (Central, 549.1), 4 p. m., home

KTHS, Hot Springs National Park, Ark. (Central, (375), 8:30-10 p. m., concert, Mrs. J. M. Frisbee, director. KYW, Chicago, III. (Central, 535.4), 6:30 a. m., morning excreises; 11:35, table talk, Mrs. Anna J. Peterson; 2:35-4 p. m., studio frolic; 6:35-7, children's bedtime story; 7-7:30, dinner concert, Congress hotel; 8-8:20, "Twenty Minutes of Good Reading," Rev. C. J. Pernin; 8:20-9:05, musical program; 9:15, "Safety First" talk, Bert Vanderwark; 10-11:30, evening at home.

S:20-9:05, musical program; 9:15, "Safety First" tafk, Bert Vanderwark; 10-11:30, evening at home.

WBAP, Fort Worth, Texas (Central, 472.9), 12:05-12:30 p. m., musical program; 7:30-8:30, musical program, artists, Texas Christian university, Prof. H. D. Guellek, director; 9:30-10:45, Wylbert Brown's violin ensemble.

WBBR, New York, N. Y. (Eastern, 273), 9:10 p. m., Malcolm Carment, clarinetist; 9:20, Genevieve Ford, planist; 9:30, Prof. Pietro Marzen, tenor; 9:40, International Sunday school lesson, S. M. Van Sipma; 10, tenor-solos; 10:10, Robert Young, planist; 10:20, Malcolm Carment, clarinetist.

WBCN, Chicago, III. (Central, 266), 7-8 p. m., Walthor league; 8-8:30, Chicago trio, Ethel Merriam, reader; Midway Dancing Gardens orchestra; 8:30-9, Walton School of Commerce; 9-12, popular concert, Eluer Jordon & company, Midway Dancing orchestra, Leona fay, violinist; Larry Loser, tonor; Lindsey McPhail, John Williams, baritone; Al Phillips, tenor; Mort Green, composer; Ralph Norris, planist.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybec; 7:45, special feature; 8:30, concert, artists from Moores' cafeteria, E. T. Moores, manager.

WCAL, Northfield, Minn. (Central, 337), 9:45 a. m., chapel services; 9 p. m., College quartet.

WCBO, Zion, III. (Gentral, 345), 8 p. m., string quartet; celestial belis; Fred Faassen, organist; J. D. Thouas, baritone; M. P. Barton, tenor; Mrs. Athol Heath, planist; Mrs. H. E. Mayfield, soprano; Arthur Rendall, elarinetist.

WCCO, Minneapolis-St, Paul, Minn. (Central, 417), 10:15 a. m., "More About Meat," Betty Crocker; 2

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:15 a. m., 'More About Meat,' Betty Crocker; 2 p. n... 'The Popular Concert,' Mrs. Agnes Fryberger; 4, magazine hour, 'Marringe Insurance;' 5:30, children's hour. Gold Medai Lady: 6:30, dInner concert, 7:30, 'Farnu Planning for 1925,' Andrew Boss; 7:45, licalth talk; 8, municipal organ concert, Hugo Goodwin; 10, dance program.
WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., musical program: 8:30, musical program.

work, Detroit, Mich. (Casterii, 1977, 1978). Inc., Indistant program: 8:39, musical program.

WDAF, Kansas City, Mo. (Central, 411), 3:30-4:30 n. m., Star's Radio trio; 6-7, School of the Air, reading, Cecile Burton; address, Louis Mecker; story lady; Trianon ensemble, Hotel Muchlebach; 11:45-1 a. m., Nighthawk frolic, the Merry Old Chief and Plantation places.

WDAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m.

WDAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., daily almanac; 12:02 p. m., Stanley theater organ reeltal, Arcadla eafe eonocrt orehestra, "Care of Children," Mrs. Louis Love; 4:30, Helen Bates Wilson, contralto; 7:30, Dream Daddy.

WEAF, New York, N. Y. (Eastern, 492), 6-7 p. m., dInner musle, Waldorf-Astoria hotel; 7-7:30, services, Greater New York Federation of churches; 8-8:30, "Touring with a Packard Elght," George Elliott Cooley; 9-10, Victor hour: 10-11, Silvertown Cord orchestra; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7 p. m., Midday cluh musical program; 8, eonect.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7 p. m., Midday cluh musical program; 8, eoncert.

WEBH, Chicago, III. (Central, 370), 7-8 p. m., Oriole orchestra, Dean Remlck, pianlst; John Stamford, tenor; 9-10, golf lcsson, Amber Andrews; Belle F. Cutler, soprano; John Stamford, tenor; Oriole orchestra; 11-12, Harry Davis, barltone; Loos Brothers, songs; Banks Kennedy, planologues; John Stamford, tenor; late revue.

WEEI, Boston, Mass. (Eastern, 303), 1 p. m., assembly luncheon. Boston Chamber of commerce; 6:30, Boston Edison Big Brother club; 7, Sadrian trio; 8, program, New York studlo.

New York studio.

WFAA, Oallas, Texas (Central, 472.9), 12:30-1 p. m., Edmund F. Boettcher, tenor; William H. McRaven, pianist; DeWitt McMurray; 6:30-7:30, Paul Cretien and his banjo quintet; 8:30-9:30, Second Avenue Baptlst church entertainers; 11-12, Jefferson theater

wfl. Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Dayls Bellevue Stratford concert orchestra; 3:

Davis Bellevue Stratford concert orchestra; 3:05. Housewives' Radio exchange, Mabel Swint Ewer; talks, Delaware County Federation of clubs; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7. Sunny Jim; 9, Atwater Kent program from WEAF.

WGN, Chicago, III. (Central, 370), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artist series, Lyon & Healy; 3, rocking chair time; 5:30, Skeezix time; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintet; 3-9, classical concert. Herman T. Bacr. baritone; 10-11, Don Bestor semble, Blackstone string quintet; 8-9, classical concert, Herman T. Bacr, baritone; 10-11, Don Bestor Drake dance orchestra; Ned and Ches.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Hotel Statler concert ensemble; 2:30-4:30, Radio Dealers' program; 6-7:30, dinner muslc, Hallpryd string

ers' program; 6-7:30, dinner music, Hailpiyd string quartet.

WGY, Sehenectady, N. Y. (Eastern, 380), 2 p. m., "Sball Our Young People Go to College," Prof. George M. York; 6:30, dinner concert, Hotel Ten Eyck; book chat, William F. Jacob; 8, grand opera, "Il Trovatore," WGY opera company.

'n

"Sball Our Young People Go to College," Prof. George M. York; 6:30, dinner concert, Hotel Ten Eyck; book chat, William F. Jacob; 8, grand opera, "Il Trovatore," WGY opera company.
WHA, Madison, Wis. (Central, 275), 7:45 p. m., honorary recognition exercises, "Developing a Rural Comminity." George W. Marvel.
WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater organ; 7:30-9, concert, auspices Mirs. Robert K. Van Pelt.
WHB, Kansas City, Mo. (Central, 411), 2-3 p. m., ladles' program, 8-9, varied vocal musle, Seott Shawgo, director; Walt Wood and his orchestra.
WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., Radiograms, music; 8, the Cleveland Press, concert program. WHN, New York, N. Y. (Eastern, 300.4), 12:30-1 p. m., Charles Strickland and his Palais D'Or orchestra; 6:30-7:10, Vincent Catanesc and his Hotel Alamac orchestra; 9:30-10, O'Meara Gardena baliroom; 10-10:30, Loew's vaudeville headliners; 11-11:30, Connie's Inn revue featuring Leroy Smith'a orchestra; 12-12:30 a. m., Ted Lewia and his orchestra from Parody clubs.
WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m., Glmhel tea room orchestra: 6:05, Art Coogan and his Club Madrid orchestra; 7, 1'ncle Wlp's bedtime atorics; 8, talk, George G. Calhoun; 11:05, Harvey Marburger and his vaudevillo orchestra.
WIZ, New York, N. Y. (Eastern, 455), 10-10:20 a. m., housewives league menu, Mrs. Julian Heath; 10:20-10:30, Review of Reviewa; 10:30-10:45, household equipment, Ethel R. Peyser; 10:50-11, fashion talk, Eleanor Gunn; 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4:30-5:30, Bernhard Levitow's Hotel Commodore tea orchestra; 7:55-8, "Curse of Courtesty," John B. Kennedy of Collier'a; 8-8:10, Wall Street Journal review: 8:10-8:30, N. Y. U. Alr college; 8:30-8:15, night with Thomas Moore; 10:30-11:30, Waldorf-Astorla dance orchestra.
WKAQ, San Juan, P. R. (Intercolonial, 360), 8:30-10 p.m., concert, La Cafetera.
WLS, Chicago, Ill. (Central, 345), 12-1 p. m., farm program; Kenneth Clark, Hawallan gultarist; "Farm Question Box," E. B. Hea

operetta.

WLW, Cincinnati, Dhio (Central, 423), 8 a. m., physical exercises, Y. M. C. A., Wm. Stradtman, instructor; 12:15 p. m., noonday concert; 4, French lesson, Madame ida Telmpidis; plano recital, Adelaide Apfel; 6, dinner hour concert, Selineky instrumental guintet; 8:30, ban-

RADIO DIGEST—Illustrated

quot of stationary engineers at Hotel Grand; 9:15, Orphous club concert, Prower Symond, director; soloist, Cecella Hansen, violinist; 10, three minute message, United States Civil Service department; 10:03, concert program, Cooper corporation; quartet, orchestra, Doherty Mclody Boys.

WMAQ, Chicago, III. (Central, 447:5), 4 p. m., househuld hour, Mrs. Elizabeth O. Hiller, director; 4:30, Illinois Federation of Women's clubs; 6, Cheago theater organ recital; 6:30, Hotel LaSalle orchestra; 8, talk, auspices Western Railways committee; 8:15, Boy Schut talk; 8:30, program, lunior Association of com-

talk, auspices Western Rallways committee; 8:15, Boy Scuut talk; 8:30, program, Junior Association of commerce.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program, O. K. Houck Plano company; 8 p. m., bed-time story, Uncle Percy; 8:30, urgan recital, Scottish Rito cathedral, Harry O. Nichols.

WNYC, New York, N. Y. (Eastern, 528.8), 7:35-7:45 p. m., sports unalysis, Thornton Fisher; 8:30-9:30, Burough Night program; 9:30-9:40, "Timely Topics," Francis P. Bent.

WOAL San Antonio, Tex. (Central, 394.5), 9:30 p. m..

Francis P. Bent.

WOAI, San Antonio, Tcx. (Central, 394.5), 9:30 p. m.,

Jimmle Joy's Hotel St. Anthony orchestra.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. m., every
child's story hour conducted by Graco Sorenson; 6:45,

Randall's Royal Fontenelle orchestra; 9:30, program
transmitted from WOAW's 'remote control studio in
the May Seed & Nursery company building, Shenandoub. Lowa doah. lowa.

WOC, Oavenport, Iowa (Central, 498), 9 p. m., program, Schuster Sisters California orchestra; 11, Lonis Connor

Schuster Sisters California orchestra; 11, Lonis Connor and his LeClaire hotel orchestra; song and novelty numbers, Peter MacArthur.

Wol, Ames, Jowa (Central, 270), 12:30 p. m., college ehlmes; 8:15, musleal program.

Woo, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker erystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt.

Wor, Newark, N. J. (Eastern, 405), 2:30-2:45 p. m., Anna Rose, eoloratura soprano; 2:45-3, Harold Sutler, violinist; 3:15-3:30, Anna Rose; 3:45-4, Harold Cutler; 6:15-7:15, "Musie While You Dine," Harry Cox hotel Robert Treat orchestra; 8-8:30, Gene Ingraham's Notch inn orchestra; 8:30-8:45, "Topics of the Day," Literary Digest; 8:45-9:15, Helen O'Shea, eoloratura soprano; 9:15-9:30, Helen O'Shea; 10:45-12, popular jazz program.

9:15-9:30, Helen O'Shea; 10:45-12, popular jazz program.

WQJ, Chicago, III. (Central, 448), 11-12 m., home economics, Helen H. Downlng; "Valentine Party Refreshments," Erna Bertrams; "Dressmakers' Hints," Eleanor Chalmers; "Spring Flowers," C. P. Binner; 3-4 p. m., "What Is So Rare as a Perfect Pie," Josephino Naylor; talks; 7-8, eoncert, Ralph Williams and his Rainbo Garden orchestra; Manuel Rodriguez, Spanlsh tenor; Lydia Lochner, eontralto; Edith Buckmaster, accompanist: 10-2 a. m., Ralph Williams and his Rainbo Skylarks; June Lee, comedienne; Axel Christensen, pianologues; Edna Solomon, eontralto; Three Muskctcers, Rosemary Hughes, soprano.

WREO, Lansing, Mich. (Central, 288.5), 8:15-9;45 p. m., Reo orchestra; quartet, local talent.

WSAI, Cincinnati, Ohio (Central, 325.9), 10 p. m., Uberto Neely, violinist; Richard Fluke, baritone; Frederick J. Hoffman, planist; Russell Dunham, tenor; popular songs, Malie and Stept.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs, and bedtime story, Bonnte Barnhardt;

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. in., songs and bedtime story, Bonnte Barnhardt; 8-9, Mrs. Reynolds Clark's girls' orchestra; 10:45, Dr. Charles A. Sheldon, organist.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Maurice Spltalny's Hotel Statler orchestra.

WTAY, Oak Park, III. (Central, 250), 6:15-6:30 p. m., organ, Parthenon theater; 6:30-7:30, Hugh Anderson, bass; Bella Marta, violinist; Howard Hanks, pianlst.

WWJ, Detroit, Mich. (Eastern, 516), 8 a. m., setting-up exercises, R. J. Horton; 9:30, tonight's dinner; 12 m., Jules Klein's Statler orchestra; 3 p. in., the Detroit News orchestra; 6, Jules Klein's Statler orchestra; 7, the Detroit News orchestra; May F. Cowperthwaite, the Detroit News orchestra; May F. Cowperthwaite, soprano; H. T. Rlee, tenor; 10, dance musle, Jean Goldkette's Victor recording orchestra.

Friday, February 6

Friday, silent night for: CHNC, CKAC, KFKX, KJS, PKO. PWX, WBBR. WCBO, WEAO, WIP, WKAQ, WLBL, WLW, WOI, WREO.

CKAC, Montreal, Can, (Eastern, 425), 1:45 p. m., Windsor hotel trio; 5:30, Ilo lessons, CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., university lecture; 9, concert, choir, St. Matthews Angelians of the constant of the c

versity lecture; 9, concert, choir, St. Matthews Angelican church.

CNRT, Toronto, Can. (Eastern, 400), 6:30-8 p. m., Luigl Romanelll and his King Edward hotel concert orchestra; 8:30-10, studio program, "Come Where the Lilies Bloom." "Annie Laurle," Le Olde Tyme Village quartet; "A Deceitful Man," "A Flapper's Sunday Morning Breakfast," Pearl Carter; "The Standard on the Braes O'Mar," W. H. Norris, bass; "Drink to Me Only with Thine Eyes," "Cousin Jeddadlah," Ye Odle Tyme Village quartet; "Comin' Thro' the Rye," Dalsy Larush McAdam; "Venlee and Naples," Edward Magee, pianist; duet, "Whispering Hope," Daisy Larush McAdam, Ruth Hamilton; "Swanee River," quartet; "Little Moceasin," "The Proposal," Pearl Carter, reader: "The Kerry Dance." Ruth Hamilton; Edward Magee, pianist; "Will Ye No Come Back Again," A. C. Chapman, tenor; 10:30-12, Luigl Romanelli and his King Edward hotel dance orchestra. KOKA, E. Pittsburgh, Pa. (Eastern, 309.1), 7 a. m., poorling evertiess: 8 morning evertiess: 2 morning everties norning exercises; 8, morning exercises; 12:20 p. m., Sunday school lesson for February 8, James C. Mace; 6:15, Charlie Gaylord's orchestra; 7:30, children's perlod; 8:15, address, University of Plttsburgh; 8:30, concert

KFAE, Pullman, Wash. (Eastern, 330), 7:30 p. m., Paul Christen, barltone; Mary Wyman, pianist; "Art in the Northwest," W. T. McDermidd; "Essentials of Successful Farm Management," Prof. George Severance; "Results of Extension Work," W. W. Underwood; talk on new books, Alice L. Webb.

KFOM, Beaumont, Tex. (Central, 315.6), 8 p. m., band concert.

concert.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk, news; 5:30-6, Examlner, musical half hour; 6:45-8, Aeolian residence pipe organ recital, Dan McFarland, organist; 8-9, Evening Herald, Owen Fallon's Californians, Clarabelle Beck, vocalist; 9-10, Examiner program; 10-11, Alma K. Moss, contralto; Mrs. Arthur Bliss Carpenter, pianist; Oswald Knilling, vio-cello and Billie Moss, haritone.

KFNF, Shenandoah, lowa (Central, 266), 6:30 p. m., program, Boy Scouts, Red Oak, Iowa, M. A. Pratt, director. concert. program, director.

KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. m., Olymple hotel concert orchestra; today's recipe; 6:45-8:15, Sherman Clay & company program; 8:30-10. Seattle Times studio program; 10:05-11, Olymple hotel

Olymple hotel coneert orchestra; today's recipe; 6:45-8:15. Sherman Clay & company prograin; 8:30-10. Seattle Times studio program; 10:05-11, Olymple hotel danco music.

KFQX, Seattle, Wash. (Central, 238), 6:30-7:15 p. m., news; 7:15-8, bedtime story, Aunt Vivien; 8-9. Earl Gray and his Hotel Butler orchestra; 9-10, concert hour; 10-11, Earl Gray and his orchestra.

KFSG, Los Angeles, Calif. (Paeifie, 278), 10:30-11:30 a. m., sunshine hour personally conducted by Mrs. McPherson; 3:30-4:30 p. m., organ recital, Roy Reid Brignall; 7:30-9:15, auditorium service, young people's service, testimonials, aermon by evangelist-pastor, Aimee Semple McPherson; 9:15-10, concert by Silver band, G. N. Nichols, director; talk on technical Radio subject, N. E. Brown; 10-11, organ recital, Roy Reid Brignall, assisted by G. N. Nichols.

KGO, Oakland, Calif. (Pacifie, 312), 11:30-1 p. m., luncheon concert, Pacific States Electric company; 4-5:30, concert orchestra, Hotel St. Francis; 5:30-6, glrl's half hour, Esther Wood Schneider.

KGW, Portland, Dre. (Paeifie, 485.1), 12:30 p. m., eoncert; 5, children's program, Aunt Nell; 8, lecture, University of Oregon extension division; "Permanent Court of International Justice," Dean William G. Hale: 10:30, Hoot Owls.

KHJ, Los Angeles; Calif. (Paeifie, 395), 12:30-1:30 p. m., Perry's orchestra; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, little atorics American bistory, Prof. Walter Sylvester Hertzog; Catherine Cotter, reader; Riehard Headrick, screen juvenile; little David Durand with Uncle John; 7:30, "The Romance of the Santa Fc Trail," Gladya De Witt; 8-9, Marian Raiston, eomposer-pianist; 9-10, Piggly Wilegly girls trio; 10-11, Earl Burtnett's Biltmore hotel dance orchestra.

KNX, Hollywood, Calif. (Paeifie, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, talk for women, Estelle Lawton Lindsey; 5 p. m., closing markets; 6, travelogue, Richfield Oil company; 6:30-7:30, program, Columbia

cital; 11-12, Abo Lyman's Cocoanut Grove dance orchostra from Ambassadur hotel.

KDA, Denver,, Colo. (Mountain, 322.4), 3 p. m., "Thirteenth Hungarian Rhapsody," "Rondo Brilliante,"
Margaret Stubbs, pianist; "Electrical Illumination in
the Home," S. W. Bishop; "The Prinees," "Odallske,"
"Thanks for Thy Hand," Ralph Freese, tenor; 8, KOA
orehestra; "Hall to the Dawn," Denver concert quartet;
vocal duet, "Solenne in Quest 'Ora, from La Forza del
Destino," Cornelius DeBey, J. Allen Gruhb; Lullaby
from "Jocelyn," "Friend of Mine," Bernice W.
Doughty, soprano; "Vake, Miss Lindy," "Wood, Thou
Sweet Music," Denver concert quartet; "A Pleasant
Half Hour at the Beach," Elsie Webb, reader; "Arla,
Celeste Alda," "Drink to Me Only with Thine Eyes,"
J. Ailen Grubb, tenor; "Etude en Forme de Vaise,"
"Polonalse," Margaret Day Grubb, pianlst; "Road
Troubles with the Auto," H. L. Johnson; "Carry Me
Back to Old Virginla," "Sweet and Low," "Sweet
Genevieve," quartet; Romance from "Mignon," "Dawn
in the Desert," "Birth of Morn," Laura Kemp
Anderson; "Teddly, a Christian Soldier," Eisle Webb,
reader; voeai duet, "Tho Voyagers," Bernice W.
Doughty, J. Allen Grubb; "Non e Ver," "Calm as
tho Night," Cornellus DeBey, barltone; "The Sextette
from Lucia," quartet; "Habanera," KOA orchestra.
KOB, State College, N. M. (Mountain, 348.6), 7:30-8:30
p. m., popular science course, lesson 3, member of the
englneering faculty.
KPO, San Francisco, Calif, (Paeific, 423), 7 a. m., dally
dozen; 10, town crier; 10:15, "What is Playing at the

engineering faculty.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., dally dozen; 10, town crier; 10:15, "What is Playing at the Varlous Theaters;" 12:45 p. m., talk, Commonwealth club luncheon; 1-2, Rudy Selger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, dance music, Cleveland Slx orchestra; 9-10, one act play, Theater Arts elub, Talma Zetta Wilburg director.

chestra; 4:30-5:30, Rudy Seiger's Falrmont hotel orchestra; 8-9, dance musie, Clevcland Six orchestra; 9-10, one act play, Theater Arts elub, Talma Zetta Wilbur, director.

KSAC, Manhattan, Kans. (Central, 340.7), 9 a. m., mareh; 9:02, nusic lesson; 9:07, musie for singing exercises; 9:15, Inspirational talk; 9:20, callsthenics; 10, back yard gossip; 10:05, all around the house; 10:10, questions and answers; 10:20, "Suggestions for Today's Mcals," Amy Kelly; 12:30 p. m., Osceola Hall Burr, reader; "Sweet Clover for Dairy Pasture," James W. Linn; "Givo the Pig a Chance," C. G. Elling; 7:20, college bell and quartet; 7:30, "Relation of Insects to Kansas Agriculture," J. W. McColloch; 7:40, Radio college quartet; 7:50, "Relation of Botany to Agriculture," L. E. Melchers.

KSD, St. Louis, Mo. (Central, 549.1), 8 p. m., fillinols college glee club, Garnett Hedge, director.

KTHS, Hot Springs National Park, Ark. (Central, (375), 8:30-9 p. m., plano selections, Phil Wall; 9-10, Meyer Davis New Arlington hotel ensemble.

KYW, Chicago, Ill. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7 p. 11., children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 8, speeches, auspiecs American Farm Bureau federation; 9-10, midnight revue; 11-2:30 a. m., midnight revue

WAHG, Richmond Hill, L. I. (Eastern, 316), 12-1 p. m., Brooklyn Federation of churches; 8-8:15, Charles Vollmer, Jr., pianist; 8:15-8:25, James M. Sevell, baritone; 8:25-8:45, Morningside string quartet; 8:45-9, Aron Farbman, violinist; 9-9:10, St. Valentine of WAHG; 9:10-9:25, Arnold T. Koch, cellist; 9:25-9:45, Morningside quintet; 9:45-9:55. James M. Sevell; 9:55-10:05, Charles Vollmer; 10:05-10:30, Ascuitto hrothers dance orchestra; 10:30-10:45, original Peggy O'Neill character singer; 10:45-11:15. Ascultto brothers dance orchestra.

WBAP, Fort Worth, Texas (Central, 472.9), 12:05-12:30 p. m., popular music, Montgomery Ward & company's 'Trail Blazcrs;' 4, edueational leeture, "Corn Planting and

Ralph's Red Hot ramblers.

WBAV, Columbus, Ohio (Eastern, 294), 8 p. m., Dispatch program, talent from Capital university, Columbus, Frederick L. Lewis, director.

WBCN, Chicago, III. (Central, 266), 7-9 p. m., Becker Ryan & company, Lollta Koch, reader; Julius Flsher, one string fiddler; Zander and Roblnson; Lee Darnelle, banjoist; Roy Miller and George Dlek; Edna McGusslin, pianist; Merle Yagle, pianist; Will Rossiter; 9-10, W. W. Tegtmeier and eompany; 10-10:15, Midway Dancing Gardens orchestra.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m.

Dancing Gardens orchestra.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 8:30, coneert, Oxford entertainers.

WCAL, Northfield, Minn. (Central, 337), 9:45 a. m., chapel servlees; 9:30, book talk, "Son of Italy," "A Twentleth Century Childhood," Dr. George Weida Spobn, reviewer.

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Meyer Paris Ballayus Strafford concert orchestra: 7, serles of

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Meyer Davis Bellevue Stratford concert orchestra; 7, series of health, household and fashion talks; 7:30, fashion talk, Mile. Madelaine; 8, concert.

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., "Meal Planning," Betty Crocker; 2 p. m., "Happy Times at Sheltering Arms," Mrs. W. S. Swinnell; 2:30, matinee musical; 4, magazine hour, "The Lame Duck," Josephine Dodge Doskam; 5:30, children's hour; 6:30, dinner concert; 7:30, lecture, "Taxpayers' Association;" 7:45, lecture; 8, Beethoven ladies' string quartet; 9, "F. and R. Family."

WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., musical program; 8:30, musical program; 10, dance music for 2 hours.

WOAF, Kansas City, Mo. (Central, 411), 3:30-4:30

2 hours.

WOAF, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., Star's Radio orchestra; 6-7, school of the air; plano; message, Roger W. Babson; story lady; Trianon ensemble, Hotel Muehlebach.

WOAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., daily almanac; 12:02 p. m., Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 7:30, Dream Daddy's bedtime stories; 8, book review, Arnold Abbott; 8:15, "Fifteen Minutes of Humor." Sam Wingfield; 8:30, play, WDAR players; 9:30, Stanley theater symphony concert; 10:03, Arcadia cafe dance orchestra; Morning Glory club concert.

WEAF, New York, N. Y. (Eastern, 492), 6-7 p. m.

WEAF, New York, N. Y. (Eastern, 492), 6-7 p. m., dinner music, Waldorf-Astoria hotel; 7-7:30, children's stories, Elizabeth Wade of G. R. Kinney Shoe company; 8-9, Happiness boys; 9-9:30, Hohner Harmony hour; 11-12, Meyer Davis Lido Venice orchestra.

WEAR, Cleveland, Ohio (Eastern, 364.3), 7 p. m., Edwin Arthur Kraft, organ recital from Cleveland Public auditorium.

WEBH, Chicago, III. (Central, 370), 7-8 p. m., Hazel O'Neil, soprano; Oriole orchestra, Riviera theater; 9-10, dance orchestra; Frederick Agard, tenor; Rita McFawn, soprano; 11-12, Oriole dance orchestra, Three Musketeers, songs; Sandy Meck, tenor.
WEBJ, New York, N. Y. (Eastern, 273), 7-8 p. m., Bert Roborns' Blue Bird trio, fcaturing Jack Wheatin, saxoplonist; 8-8:15, Judith Ruth and Peter DeRose; 8:30-9, Leon H. Fox, violinist, accompanied by Norman Hennefeld.

Hennefeld.

WEEI, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston Edlson Big Brother club; 7:30, program, Whiting Milk company; 8, program, Neapolitan Ice Cream company; 8:30. Gilchrist quartet; 9, Green Dragon orchestra; 10, Hains and Scott, evangelists.

WEMC., Berrien Springs, Mich. (Central, 286), 8:15-8:35 p. m., Radio Lighthouse choir; 8:35-8:45, Ernest Hurd, tenor; 8:45-8:55, Ardice Detamore, pianist; 8:55-9:15. Bible chat.

9:15, Bible chat.

WFAA, Dallas, Texas (Central, 472.9), 12:30-1 p. m., address, Dr. Robert Stewart Hyer; 4:30-5, woman's hour; 6:30-7:30, orchestra recital, Blue Bonnet aeronaders; 8:30-9:30, Mrs. William Echols and Prof. Julius Wanek.

Julius Wanek.
WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford eoncert orchestra; 3:05, Caroline Hoffman, planist; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim.
WGN, Chieago, III. (Central, 370), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artist seriea, Lyon & Healy; 3, rocking chair time; 5:30, Skeezlx time for the children; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert, Drake concert ensemble, Blackstone string quintet; 8-9, classical concert; 10-11, Don Bestor Drake dance orchestra.

classical concert; 10-11, Don Bestor Drake dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 10:45 a. m., Gold Medal home scrvice talk by Betty Crocker; 12:30-1 p. m., Hotel Statler concert ensemble; 2:30-4:30, Radlo Dealers' program; 6:30-7:30, dlnner music, Vineent Lopez Hotel Statler dance orchestra, Harold Gieser, director; 8:15-8:30, W. L. Manning, baritone; 9-10, banquet of the Buffalo Trust company; 10-11, Larkin string orchestra, director, John Lund; 11:30, supperdance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m., "A Guide to Better Homes," Mildred G. Bowen; 7:45, "Berceusc," WGY orchestra; 8, "Dog Psychology," Dr. John March; "Song," orchestra; "A Slamese Wedding," orchestra; 8:20, "From Burma to Java," Dr. Slgel Ronsh; 10:30, WGY orchestra; Harrlette Crannell Brookmen, pianlst.

auspices Baptist: Seminary and Training school, Rev. E. A. Burnette, director; WHAS stock company. WHB, Kansas City, Mo. (Contral, 411), 2-3 p. m., request program; 7-8, musical program, Peking cafe; "Personal Magnetism," Zenola Randell.
WHK, Cleveland, Ohio (Eastern, 273), 6 p. m., music, Radlograms; 7, bedtime story, Ethel O. Hawes; 8, musical program and educational forum.
WHN, New York, N. Y. (Eastern, 360.4), 6:30-7 p. m., Vincent Catanese and his Hotel Alamae orchestra; 7-7:30, Harry Richman and his entertainers with Eddie Eikins and his orchestra; 9:30-10, Dan Gregory and his Crystal Palace orchestra; 10-10:10, fashion chats, Mmo. Belle; 10:10-10:25, Bob Miller, popular songs; 10:25-10:35, "Storage Batteries," H. B. Shontz; 10:35-11, Rosciand dance orchestra; 11-11:30, Vanity club revue; 11:30-12, Sam Wooding and his Club Alabam orchestra; 12-12:30 a, m., Ted Lowis and his Parody elub orchestra.

WHO, Oes Moines, lowa (Central, 522.3), 7:30-9 p. m., Williamson brothers; J. W. Fletcher, tenor; Emilie

Ritchie orchestra.

WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m., Glmhel tea room orehestra; food talk, Anna B. Scott; 6:05, songs by Mark Flsher and Joe Burke; 6:15, Harvey Marburger and his vaudeville orchestra; 7, Uncle Wip's bedtime stories

Marburger and his vaudeville orchestra; 7, Uncle Wip's bedtime stories.

WJJD, Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., music, Mooseheart ehlldren, assembly, talks; 6:45-7:15, Alhert Brown, organist; 7:15-8:15, solos, orchestra, talk; 11:30-12:30, request organ music, Albert Brown.

WJY, New York, N. Y. (Eastern, 405), 8:15-10 p. m., "Travelogue from Burma to Java," Dr. Sigel Roush with musical accompaniment; 10-10:30, "How Motion Pictures Are Made," Dr. A. B. Hitchens.

WJZ, New York, N. Y. (Eastern, 455), 10:20-10:40 a. m., "Books," Graco isabel Colbron; 10:40-10:50, Arts and decorations, Mrs. Mary Roberts; 1-2 p. m., Henry Vander Zanden's Hotel Ambassador trio; 2/4:30, City Federation of Women's elubs; 7-8, Savarin ensemble; 8-8:10, Wall Street Journal review; 8:10-8:20, "Public Speaking," N. Y. U. Air eollege, R. C. Borden; 8:40-9:25, sea songs, Chief Steward Ballyn uf "Berengarla;" 9:25-10, Michael Markels orchestra; 10-10:30, Old Guard Ball direct; 10:30-11:30, Duke Yellman and his Irene Castle orchestra direct from Kniekerbocker grill.

WLS, Chicago, III. (Central, 345), 12-1 p. m., R. F. D.

nan and his Irene Castle orchestra direct from Kniekerbocker grlll.

WLS, Chicago, III. (Central, 345), 12-1 p. m., R. F. D. program, Harmony aces, 'Book Farmer' series, G. C. Blggar; 3:45-4:45, homemakers' hour, elub contest; 6:30, Ralph Emerson, organist; 6:50, Senate theater studio; 7, lullaby time Glenn Rowell and Ford Rush; 7:15, Chicago Association of Credit Men, quartet, trlo and doubles; 8, R. F. D. program, Ford and Glenn, Hawailan guitarists; 'John Turnipseed,' series; 9; Henrietta Greenfield, violinist; 9-10, Saddler feature; 9:30, Janet Simons, planist; 9:40, Art Kahn, Senate theater; 10, Senate Symphony orchestra; 10:30, Isham Jones orchestra; 10:40, Ford and Glenn time.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, Y. M. C. A., Wm. Stradtman, instructor; 12:15 p. m., program Delta Omicron sorurity; 4, lesson in French, Madame Teimpidis; pupils of Leo Stoffregen in recital.

WMAQ, Chicago, III. (Central, 447.5), 4 p. m., talk on English, Mrs. J. Elliott Jenkins; 4:30, pupils, Bush conservatory; 5, lullaby lady, Mrs. Gene Davenport; 6, organ recital, Chicago theater; 6:30, Hotel LaSalle orchestra; 8, weekly Wide-Awake elib program, Mrs. Frances M. Ford; 8:30, musical geography, Mr. and Mrs. Marx E. Oberndorfer; 9:15, Chicago Heights Women's elub chorus.

WMC, Memphis, Tenn. (Central, 503.9), 12 m., musical program, O. K. Houek Piano company; 8 p. m., bedtlme story; 8:30, concert, Britlings' Novelty orchestra; 11, midnight frolic, Bob Miller.

WNJ, Newark, N. J. (Eastern, 233), 10:30-11 p. m., Frank Daily and his Meadowbrook orchestra; 11-11:30, Wolfe Gilbert and company; 11:30-12, Original Dixieland Jazz band; 12-12:30 a. m., Frank Daily and his Meadowbrook orchestra.

WNYC, New York, N. Y. (Eastern, 528.8), 7:30-7:35 p. m., pollee alarms; 7:35-8, resume of meeting of board of estimate; 8:30-10:30, concert program from studio.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. m., story hour conducted by Doris Claire Second.

studio.

WOAW, Omaha, Nebr. (Central, 522.3), 6 p. m., story hour, conducted by Doris Claire Second, daughter of "Unele Ross" of the World-Herald; 6:30, Harry Brader, violinist-eonductor, and Frank Strawn, planist, of the Rialto symphony orchestra; 7:15, current sport events, by Ivan L. Gaddis, sports editor of the Omaha Daily News; 9:30, program arranged by Thelma Skeen Swauger, harpist and planist.

WOC, Oavenport, lowa (Central, 498), 7:20 p. m., "Alfalfa," Charles W, Lau; 8, "Tri-City Night Hawks" orchestra.

orchestra.
WOI, Ames, Iowa (Central, 270), 12:30 p. m., college

chimes.
WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanumaker crystal tea room orchestra, Rohert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's ensemble, Hotel Adelphia; 8:25, Erno Rapee's intimate concert from Fox theater; 9:30, WOO orchestra; 10:03, William Roye's dayse orchestra. Hotel Adelphia; 10:20

concert from Fox theater; 9:30, WOO orchestra; 10:03, William Bove's dance orchestra, Hotel Adelphla; 10:30, Vincent Rizzo's dance orchestra.

WOR, Newark, N. J. (Eastern, 405), 2:30-2:45 p. m., Anne M. Flsher, soprano; Paul M. Yeaton, cornetist; 3-3:15. "Nietzsche," John Romiser; 3:30-4, Joe Brown and hls orchestra; 6:15-7:30, "Music While You Dine," Ernie Krickett's orchestra; 8-8:30, Schubert string quartet; 8:30-9, program, Mahelanna Corby; 10-10:30, Mabelanna Corby. Mabelanna Corby.

WQJ, Chicago, III. (Central, 448), 11-12 m., Sunday dinner menu; 3-4 p. m., "A Valentine Party," Dorothy Dickens; 7-8 p. m., concert, Ralph Williams and hls Ralnbo Garden orchestra; Lois Mackey, accompannis Rainbo Garden orchestra; Lois Mackey, accompanist; Mirlam Burns, soprano; S. Levine, tenor; Efficoverson, accompanist; 10-2 a. m., Raiph Williams and his Rainbo Skylarks; Rogers boys, West Brothers, steel gultarists; Lauretta Giles, soprano; Monogram trlo, Nate Caldwell, pianologues.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs and bedtime story, Bonnie Barnhardt; garden talk, William B. Deckner; 8-9, Tech. High school band; 10:45, program, students of Hoke Smith school.

WTAM, Cleveland, Ohio (Eastern, 364), 6 p. m., Guy Lombardo's Royal Canadians orchestra. WTAY, Oak Park, III. (Central, 250), 6:15-6:30 p. m., organ, Parthenon theater; 6:30-7:30, Atlas night; Black Cat orchestra.

organ, Parthenon theater; 6:30-7:30, Atlas night; Black Cat orchestra.

WWJ, Oetroit, Mich. (Eastern, 516), 8 a. m., settling-up exercises, R. J. Horton; 9:30, tonight's dinner; 12 m., Jules Klein's Statler orchestra; 3 p. m., the Detroit News orchestra; 6, Jules Klein's Statler orchestra; 7, the Detroit News orchestra; Anne Campbell, the Detroit News poet; Harry E. Parker, tenor.

STATION KFSG PLANS CHURCH FOR INVALIDS

Engraved Membership Cards to Be Issued Members

LOS ANGELES.—Aimee Semple Mc-Pherson, evangelist and pastor of Angelus Temple, known to Radiophans through her 500-watt station, KFSG, is planning to establish a Church of the Air for shutins, invalids and others out of contact with any religious organization.

Engraved membership cards will be issued to those desiring membership and regular services will be held.

Mrs. McPherson has made many unusual uses of her station, one of which was the Radiocasting of services to congregations assembled in tents in nearby towns.

Incidentally, the problem of who shall pay for the upkeep of KFSG is no problem at all. Members of the church deem it a privilege to donate enough for the maintenance of the transmitter. Any person may make contribution enough for Brookmen, planist.

WHA, Madison, Wis. (Central, 535.4), 7:45 p. m., addresses, Wisconsin Press association banquet.

WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater organ; 7:30-9, one-hour concert. one day's broadcast, there being a long list of members waiting their turn to

www.americanradiohistory.com

Winding Low Loss Tuned R. F. Inductances

Radiophan Can Make Own Transformers

By Jacques Fournier

N THE Radio Digest of November 22, the writer described a low loss inductance of the basket weave type for use in a three circuit regenerative receiver. There have been many requests from readers since then for a low loss inductance of this type that might be used in tuned Radio frequency receivers. In this article the writer will therefore give the complete data for the construction of such a unit.

The Winding Form
The form for winding this transformer is shown clearly in figures 1 and 2.

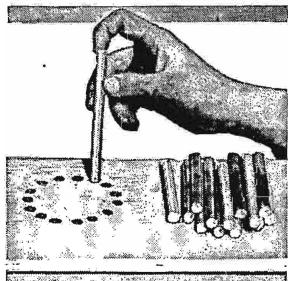


Figure 2

will be seen in figure 1, a square block of wood, bakelite, hard rubber or metal is necessary, 4 inches on a side and from % to 1 inch thick. A circle is drawn in the center of this 234 inches in diameter and divided into nine parts so that holes will be drilled 40 degrees apart around the circle. The form shown in figure 2 but the construction is similar; the form the inductance which we are going to about 6 inches long and twist this loop

dowel pins as shown, and should be 3 | mmfd.) condenser. they can be put in by making the holes a little smaller and driving the pins through.

One-Over, One-Under

The method of winding is shown in figures 3 and 4, although figure 4 shows the two-over, two-under system. As will be seen in figure 3, the wire goes under pin 1, over 2, under 3 and over 4. Since there are an odd number of pins, the second turn will go over the pins that the build the one-over, one-under method is so it will not loosen. Resume winding where it goes around the last turn and

EQUIPMEN

The rods on which the wire is and add 68 more turns, which will be wound may be either large nails or wood correct for use with a .0005 mfd. (500

inch in diameter and 4½ inches long. If The wire used is to be number 20 double metal pins are used they can be soldered cotton covered, hard drawn, as the soft to the metal block which forms the base; copper has not enough resiliency to it if wood pins are used they can be glued to hold its shape well after the coil is to the wooden base; or, if metal pins are completed. Using this number 20 wire used with a bakelite or hard rubber base, wound as shown, the length of the coil will be 3 inches and you will have a coil such as is shown in figure 5. This coil is to be held together with heavy thread, preferably waxed, and the method of holding the wires in place with one continuous piece of thread is shown in figure 6.

Securing with Thread

The alternate turns cross each other diagonally at 9 points around the coils and it is at these 9 points that the thread holds the turns together. Following the is not the one used for this inductance, first turn went under. Twelve turns are thread in figure 6, it will be noted that but the construction is similar; the form wound in this way and these form the it goes across to the left under the odd shown has more pegs and the two-over, primary of our transformer. At the turns, around the end of the wires, and two-under method of winding is used. In twelfth turn make a large loop in the wire then under the even turns and over the odd turns to the opposite end of the coil

comes back under the odd turns and over the even turns. Thus the thread forms one complete loop and is carried across, as denoted by arrows 7 and 8, to the next intersection, where a loop is wound in the opposite direction as shown by arrows 9, 10, 11, 12 and 13. When the thread has been carried clear around the coil in this way and the ends tied together the coil can be slipped from the form either by removing the pins one at a time or slightly squeezing them together at the free ends and slowly sliding the coils from the pins. A strip of bakelite or hard rubber is

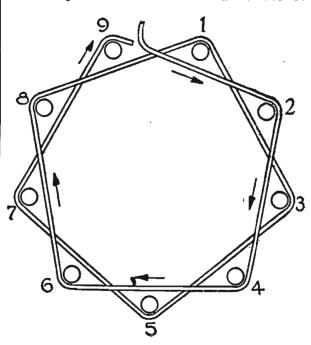
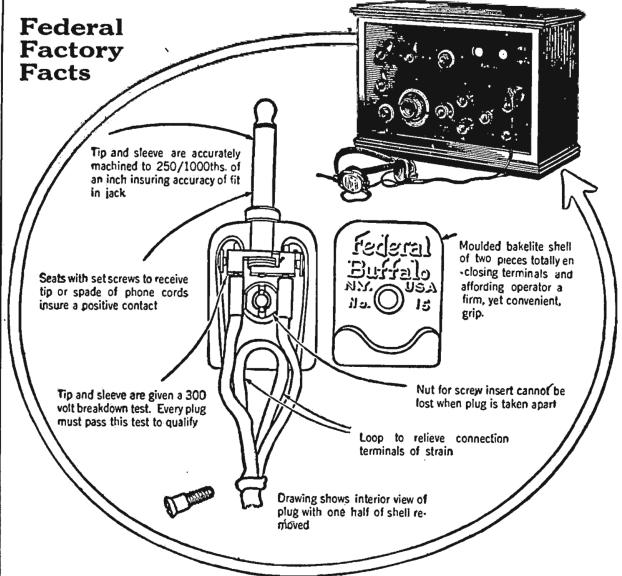


Figure 3

now cut as shown in figure 6 and measures 4 inches long, ½ inch wide and 3 inch thick. Holes are drilled 1/4 inch from each end large enough so that the coil can be mounted on the rear end plate of variable condensers. Before slipping this piece of bakelite through one of the points of our 9 pointed star coil, it would be well to smooth off the corners with a file so (Continued on page 18)

Satisfies every demand Type 6-D meets the most exacting requirements. Here you will find generous volume, an uncommon absence of distortion, unlimited range, ease of tuning and the highest degree of selectivity. And the handsome appearance of this receiver gratifies the desire for good taste in the home. Price \$125.00 without accessories EISEMANN MAGNETO CORPORATION 165 Broadway, New York DETROIT SAN FRANCISCO CHICAGO Authorized Distributors in Principal

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Vol. XII Chicago, Saturday, January 31, 1925 No. 4

Private Property

The Thing We Own We Call the Best

DERHAPS the world would be a better place to live I in if there was no such a thing as private property. It might be better but it would be flatter. Anyhow, there would be no novelists in it.

A large part of our interest in life comes from making distinctions. You are not much interested in books, for instance, so long as all books look alike to you, nor in dogs, nor in automobiles, nor in Radio sets, until you begin to perceive individual differences. And there is nothing that heightens this power of perception like a sense of ownership—a feeling that this thing belongs to you and to nobody else.

It's odd, too—no doubt it would amuse a man from Mars—the way we carry on over this sense of the uniqueness of our possessions to inanimate things, manufactured things, utterly standardized things.

No boy ever built a Radio set, although its materials were merely the crystal, the cat's whisker, the oatmeal box, a little wire and some nails, that was not endowed with qualities inherent in itself alone; this particular set, he knows, whatever the experts may say, will do things that no other set, supposedly like it, can do. He got PDX or SPQR on it one night and his conviction that he did is unshakeable.

And in this field, so new and strange and mysterious, cause and effect are such distant cousins anyway that the banker who by the day looks with a skeptical eye at collateral, or the lawyer whose cross-examination is the terror of disingenuous witnesses, becomes, when he puts on the head phones at night, as much of a boy as his twelve year old son.

Even when he boasts, it is not the big fish that he boasts about. The great opera singer and the famous political orator, roaring by from a two-kilowatt station on a five hundred meter wave, he disregards—or attempts to disregard—while he chivalrously tunes his applause ear to the cheepings of some little five watt station down in the corn belt. When his friend Jones boasts "We heard Galli Curci last night as if we had been right in the auditorium," he answers proudly, "I got the Presbyterian church choir at Altoona, Pennsylvania."

There is a new wrinkle in the game now. If you can prove you heard SPQR last night you send the proof, along with ten-cents, to that station, and they send back an imposing stamp with the mystic letters surcharged upon it. You stick that stamp in an album and invite Jones in. "I wrote them," you tell him, "that I heard the announcer say, 'stand by a moment, please. Jackie has just broken a string on his banjo but he will be ready for you in another minute.' He had said that, so I got the stamp." Poor Jones! There is no come back to that.

It seems rather cruel, at first, this putting bright romance to the touch of cold reality, but our confident belief is that it will take more than a postage stamp to deprive Jones of a conviction that there is something about a possession of his that makes it different from, and better than, his neighbor's. After all, if you really want a thing, you get it-even a proof of reception.

Profanity on the Air

Now the Air Is Polluted with a Different Dirt

R ECENTLY a noteworthy judge in our courts allowed himself to become so angry that he swore at the state's attorney. This somewhat lowered the dignity of the judicial bench, not only for those concerned in the trial but in the general public mind when they read about it in the morning paper.

Not so very long ago in the excitement of a football game profanity spilled forth in the regular street lingo, and into the microphone, which was done purposely to lay stress on the plays, but this coming forth from a receiving set at the fireside was abominable. It is anything but gratifying to hear men of obvious culture and education lowering themselves to admit incompetency of expression by resorting to profanity as a means of forceful delivery, and it is awfully embarrassing to have a burst of profanity pour out of a loud speaker into the midst of a family not it makes it none the more acceptable.

RADIO INDI-GEST

Expedition Leaves Next Week to Open Indi's Station BLAH

The broadcasting station owned by Indi-Hisself, and located on the beautiful island of Walla Walla, in the South Seas, will open again in the near future. This station has been closed for some time owing to alterations and repairs being made to the equipment. With all the new features added, this will be the most powerful station in existence—and we haven't paid a license fee. (A. T. & T. please note.)

Don't forget to watch for the experiences of the hardy adventurers who are making the trip, as the story will read more like fiction, but, it will be the whole truth and nothing but the truth.

Followers of Indi-Gest desiring to secure reservations for the trip should write direct to Indi-Hisself as soon as possible, because the number of passengers will be

The expedition will sail for the gem—"Walla Walla"—of the South Seas next week. Photographs will be take to show those who stay at home all the beauties of this little island. Watch for them!

My Radio

By Rev. Marcus L. Gray My Radio's the stuff, Though static may be rough: For it I've paid my dough, And it is sure a go.

It climbs out in the sky, And keeps a weather eye On sermons, tunes and songs, And forks them on its prongs.

It calls to lands afar, Entices music's bar, And thrills my very soul, My heart it doth console.

My lonely hours are gone, I fish around till dawn, Sometimes the strain's sublime, Sometimes not worth a dime.

This time it's all a jinx, Acts like it had the drinks, And then it soars on wings, Like angels then it sings.

Anon it sounds a wheeze, It isn't worth a cheese, And then it sings so fine, It's worth a whole gold mine.

Eckersley Being the Cheese

Dear Indi: Captain Eckersley, chief engineer of the British Broadcasting company, hopes that some day it will be possible for Radiophans to receive programs by following these instructions:-

"Take a clothes' line, damp it slightly. Stick a knife into one end and the other end into a piece of cheese. Put a pair of 'phones across it. Finis.' LONDON BOBBY.

The "DX" Bug

The clock on the wall goes tick-tick-tock, The Radio-bug stung me. The broadcasters send them thick and hot, The Radio-bug got me.

The night speeds on on wings of time-The Radio's fine you see. The programs are better after nine, I'm a Radio fan; get me?

The anouncer just said, "until" 2 a. m. A program fine you'll hear; So tune her in to WTAM (Cleveland), And your bed you'll not get near. J. B. JAMES.

He Went to Stop the Little Rain Drops

Indi, u ole seamp: Wendall Hall, dry weather specialist, has just returned from CUBA! Answer me: Did he go to CUBA to BROADCAST? DID HE? Or didn't he? I know a lotta friends who've gonc to Cuba in the past five years, BUT-they did not go to broadcast.

Broadcasting for You Tonight

I'm broadcasting my thoughts for you tonight. Across the miles and miles; I'm trying to say, how glad I would be, For just one of your smiles.

I'm sending a message across the waves, That's full of love and cheer; And though you are many a mile away, I'm sure that you will hear.

I'm crowding the air full of thoughts of you, Thoughts that are rich and free; For I know if my message reaches you, That you will think of me.

WILLIAM O. WINKLER.

He May Not Have Selectivity, But He Isn't Missing a Thing

Dear Indi: I know a fella who has a set so good that it'll receive three stations at onct. SECOND FIDDLE.

That "Chi-CAW-go" Will Wear 'em Out

Dear Indi: How many cans of Calumet Baking Pow-

Up to the Minute News



Condensed

By DIELECTRIC

Los Angeles fans were given a pleasant surprise when KFI's new super station came on the air early in January. Prior to the time the new set began operation it was predicted widely that the use of increased power by a station situated as KFI is, in the central business district, would result in blanketing for a radius of several miles. Some went so far as to state that crystal sets would be unable to tune out the new giant. The contrary turned out to be true. The new super set actually tunes sharper locally than the old 500-watt transmitter and is gaining thousands of listeners at distant points.

Another Radiocast station to put on some French concerts is WOC. The piano accompaniment to these songs was just about what it should be. Many times a voice or instrument is at great disadvantage because of the volume of the accompaniment. Very agreeable indeed was the singing of the great aria of Salome in the opera of Herodiade.

I don't know that many listeners could classify orchestras rendering dance music into bad, good and best—I admit my inability. It is not so difficult to judge of the ensemble work or quality of the tones produced, but if it's dance music why-that's what it is. Still I could find no fault with the dance program put on at WHB recently. The numbers followed with no waiting and the musicians were capable.

I listened to a program from WSAI, which had the marks of careful arrangement. Both instrumental and vocal solos were interspersed in a way to break any possible monotony. One of the vocal numbers is a melodious song and was very well rendered, so well indeed, that had I been able to applaud, a repetition would have been demanded for "Old Irish Mother O' Mine." It got down behind one's vest!

Sporting events have no appeal to some of the Radio public, yet to others it is the spice of all Radiocasting. Most sports are represented in the list of features sent through the ether, although at times it is necessary to be content with a second-hand description. One of the latter type was the marvelous race of Nurmi whose style of running and progress in the races was depicted through WGBS.

The Pacific coast has been entertaining by Radiocast for a long time, I mean pleasure resorts, but only recently has the foremost eastern resorts come on the air so as to be heard at a distance. "The World's Playground," WPG, the municipal Radiocast station at Atlantic City, has been fortunate to have the Traymore hotel orchestra to open their programs. The quality of transmission is good.

At the request of one of our readers I am calling the attention of WCX to what seems to be an error in program arrangement, or is it to afford respite for the announcer? In other words, why is it necessary to interpose five-minute waiting periods between numbers during the dinner concerts and afternoon programs? There are others to tune to.

For those who find great enjoyment in listening to jazz numbers, especially if they like them to follow one another with as little intermission as possible, the station to tune in is WCX. Out there in Detroit they der would it take to raze the towers of WQJ, if it seem to have every jazz selection at their finger tips circle. Whether it comes from a college bred man or took me thirty-five minutes to figure out this question? and the musicians go from one to another without DUKE X. pause—except for the station announcement.

Demonstrating Radio Principles at Home

Chapter VIII—Experimenting with Push Pull Amplifiers

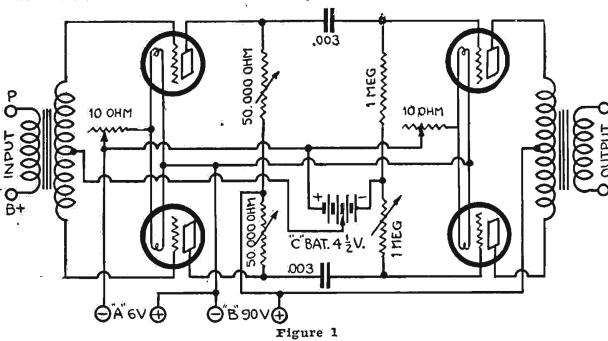
By J. E. Owen

of satisfactory audio frequency amplification. Until recently, the public has been obliged to content itself with these limits, however, distortion is negative the writer has ever tried can commonly used in storage battery tubes. much joy and the general standing of two stages is not lessened, but is amplified audio frequency amplification was raised in the same proportion that the desired considerably, it being possible to obtain signal is. This is evidently, then, a poor greater volumes with less distortion. Sadly practice.

ADIO has suffered because of a lack success to a marked degree, yet trans- isfactory results than it is possible to from storage cell tubes stage for stage of satisfactory audio frequency am- formers still distort at the upper and obtain from one using the same number and is proportionately less when more than either of two forms of amplifiers, namely, ligible unless more than two stages of loud speaker the writer has ever tried can transformer or resistance coupled. These amplification are used. When a push pull handle all this amplifier can put into it were both straight cascade. The advent of amplifier is added to a two stage amplifier when only moderately strong signals are the push pull amplifier was heralded with of the straight type, distortion of the first in the input circuit. Most loud speakers

will rattle on strong signals. Others may only buzz. Strong signals, regardless of their purity, may make any loud speaker | might appear that this is a rather extrav-

commonly used in storage battery tubes. Figure 2 is a modification of the circuit of figure 1 in which dry cell tubes of the 299 and 399 type are paralleled in the second stage. This requires the use of six tubes in a two stage amplifier. At first, it agart method of handling the audio fre-



enough, though, the standard two stage amplifier was retained and the push pull amplifier was added only to obtain more

Transformers inherently distort. Resistance coupled amplifiers are lower in efficiency. Push pull amplifiers use two tubes per stage. This reads like a pessimist's and the output. Between the stages a account of a shipwreck, but these are the push pull resistance coupling is used. account of a shipwreck, but these are the facts that the experimenter must face Any standard brand transformers may be when he enters the field of audio frequencies. The larger manufacturing concerns have spent enormous sums in an effort to improve audio frequency transformers. While their efforts have been crowned with

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selective.

AMERICAN CREST.....\$150.00 This we believe to be the best 6-Tube loop set on the market.

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5 TUBE RECEIVER

GOLDFINCH\$75.00

Two Stage Amplifier

An arrangement that will give excellent volume with a minimum of distortion is shown in figure 1. This is a two stage amplifier of the push pull type using transformer coupling between the input used. The writer suggests that variable resistance be used in this circuit and there are several good makes of variable resistances on the market.

This amplifier will give much more sat-

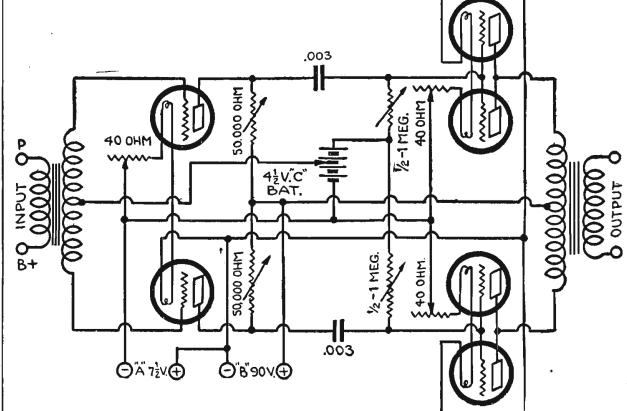


Figure 2

Combines best features

Storage Battery Tubes

The circuit of figure 1 is intended primarily for tubes of the storage battery cell tube arrangements is not equal to that

quency amplifier, but it is not unusual to see a nine tube set, five tubes of which are used directly or indirectly as Radio type. However, dry cell tubes may be frequency amplifiers. The British almost used. The amplification resulting from dry ridicule the attitude of American Radio-(Continued on page 20)



Since the inception of radio, the results obtained with Armstrong Regenerative Receivers have been the goal of comparison for all others. Trick circuits have been designed to get around the Armstrong Patent, hoping to obtain re-sults "just as good." This has re-sulted in the use of more tubes, necessary without, but unnecessary with regeneration.

The Crosley Trirdyn, because it employs Armstrong Regeneration and tuned radio frequency amplification, needs only three tubes. The results obtained in selectivity, volume, ease of tuning and logging cannot be excelled.

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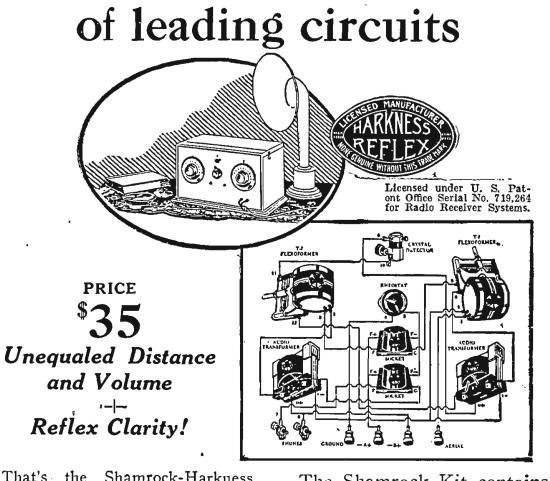
Reflex Clarity!

Operates a loud speaker. Two tubes do the work of five. Cuts battery costs 60 per cent. Does not squeal or radiate. Stations can be logged. Amazing clarity and volume.

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The Shamrock Kit contains all parts necessary to make the marvelous Shamrock-Harkness Two Tube Reflex. Avoid all imitations—insist on the genuine Shamrock parts, specially designed to give you maximum results. Build your own set and know your radio!

	and know your radio!
	SHAMROCK MFG. CO., Dept. 23-C, Market St., Newark, N. J. Pleaso send me a copy of "Shamrock Radio Builder's Guide Book" containing diagrams and complete instructions for building 10 sets at price ranging from \$15 to \$50. I enclose 10 cent (U. S. stamps or coin.)
- 1	Name
	Address
1	Dealer's Name

Bronze panel and Gold dials—Beautiful Mahogany Cabinet with space for B Batteries. This set looks and performs like a Million Dollars. We cannot offer anything better. For further descriptions Dealers and Jobbers—Our line is interesting and profitable.

THE ANTENNA BROTHERS

Spir L. and Lew P.

We Agree with Mr. Hoover



(Continued from page 15)

that the insulation on the coil will not be injured. After slipping this piece of bakelite into the coil the loop made at the twelfth turn can be untwisted and cut at its middle point. We will then have two separate windings, one of 12 turns and one of 68 turns.

The method of mounting this coil on condensers cannot be shown, as this will vary with every type of condenser used. It is suggested, however, that small right



Figure 4

angle brackets be made of heavy brass or aluminum, to be attached to the bakelite or hard rubber strip at the ends and to the rear end plate of the condenser. The condenser will then have to be mounted on the pancl in such a way that the coil just described will be at an angle of 57.4 degrees with the baseboard. In the near future the writer hopes to give full details for the construction of a receiver

LOW LOSS INDUCTANCES condenser in shunt to the secondary, is a of the dial and a vernier adjustment is dial. This device is inexpensive, easy real pleasure, as the selectivity is remark- necessary to get on the very sharp reso- to apply and it gives a delicate touch

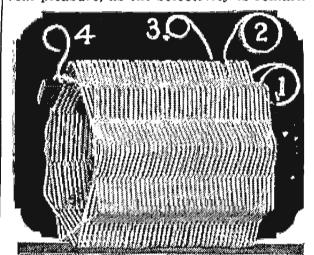
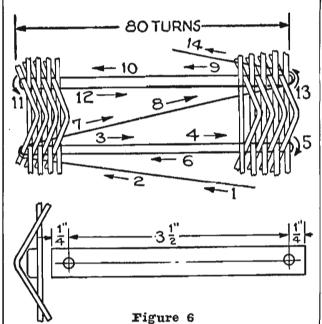


Figure 5



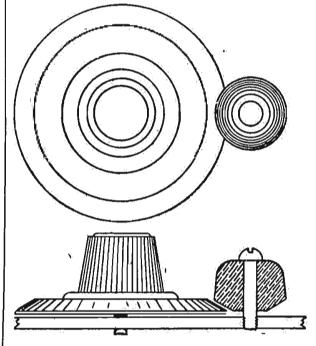
ably good and stations that were formerly utilizing these inductances. Tuning with found over 10 or 15 degrees on the dial these inductances, and a good low loss will then be found on only 2 or 3 degrees

nance peak.

This unit, as described above, can be used as the antenna coupler and the air core transformer in a receiver comprising one stage of tuned Radio frequency detector and audio frequency. If more than one stage of tuned Radio frequency is utilized, and three of these units must be built into the set, care should be taken to see that they are well spaced and all at exactly the same angle to the baseboard. It may prove necessary also to remove from one to four turns of the primary of the second or third unit to prevent oscillation on low wave lengths. Another method of preventing oscillation might be that shown by the writer in the issue of December 20, utilizing three neu-

Vernier Attachment

A plumber's fitting called the Fuller ball when mounted on a screw with some play to touch the edge of the dial makes a very desirable vernier attachment. When used for a vernier it is pushed toward the panel front so that it will without cramping the fingers.-H. W. come in contact with the edge of the Brown, Cleveland, Ohio.



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ORDER BY MAIL If your dealer cannot supply you we will ship you a complete DIET-ZEN JR-65 speaker ready for use Written money back guarantee with each loud speaker.

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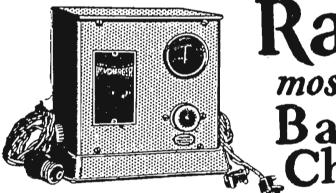
No batteries necessary.

Specially constructed adjust-able unit with gold plated diaphragm.

Unconditionally guaranteed for one year from date of purchase against mechanical defects of any kind.

Diameter of Horn - 9 INCHES 17 INCHES

Handsome - Saje - Fast Radio's most popular Battery/ Charger



VER 250,000 Radio fans have found the big capacity 5 ampere GOLD SEAL HOMCHARGER ideal for keeping their Radio bat-teries fully charged and operating at top efficiency. Connects to any lamp socket and charges all Radio "A" and "B" and Auto Storage Batteries over night for a nickel.

Simple, reliable, fool-proof. Can be operated by any one. Contains no bulbs, acids or fast wearing carbon

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Construction of the Six Tube Hetduogen

Part VI—Adjusting and Operating

By C. E. Brush

fortunate for those in rural districts who have some difficulty in obtaining parts locally as it takes several days to secure

A satisfy positive and B satisfy negative, B positive 90 volts, B positive 90 volts, last two for C battery.

The aerial recommended for this set is parts by mail.

condenser indicated in figure 2, and con- water pipes, radiator pipe, or rod driven nected across the oscillator B+ lead and into moist earth. A+ lead. We are indebted to Mr. Michael our attention in his letter of January 15,

As to placing it, refer to figure 11. Just to the right of holes 4 and 5, and above binding post Z, is a space on the under-side of the baseboard. The condenser can be secured there with its terminals to the left. One terminal connects to post Z the other to the +A bus where it goes up through hole 8.

We can all feel indebted to M. Joseph Murry, of Titusville, Pa., for a first-class suggestion on soldering tinfoil. To quote his letter of January 12, "I find the opera-tion is simplified by having the foil pressed against a cold metal surface, when, after a little practice, a drop of solder may be applied from the point of the iron without melting the tinfoil." The writer tried this today and it facilitates the operation greatly. Try it first on some foil scraps and then on the foil segment of your filter condenser.

We have left to this chapter two points which some might say more rightly belong to the wiring explanation. These are the use of two extra binding posts shown, and the high resistance unit at the right

of the sub-panel.

The two binding posts are shown so that the builder may use C battery grid bias on the audio amplifier tubes, if it should be found to be of benefit. As to whether the C battery is a necessity or not depends a great deal upon the particular transformers used and, while it is considered good practice to use the C battery, the writer has found that when using certain transformers, the third stage of audio amplification has been more easily controlled without it. The use of three stages of audio has usually been the occasion for the insertion of some method of doing away with the howl which is almost invariably produced in the third stage bulb. Several methods of connecting-in condensers and high resistance leaks are prescribed for this condition, any one of which may produce the desired result.

Controlling Three Stages

The method we will recommend in this instance is to connect the variable high resistance directly across the grid and plate of the third audio tube. One side of the unit is to be connected to the grid post of the socket, and the other side of the unit should go to the plate post of the

Referring back to the use of the C battery, it has been found that with some transformers, this method will not produce as good a result as if the C battery is not used. Therefore, we advise leaving out the C battery for the initial try-out, and if it can be found to be of advantage during later trials you may make, the C battery can be connected in.

Now assuming that the set is completely wired, and ready for the first tryout, the first thing to be done is to connect denser a little at a time towards the mini-

N looking over the preceding article up the batteries, aerial and ground. Readof this series the writer notes that ing from left to right, the binding posts at a very important item was omitted the rear edge of the sub-panel are as fol-both from the list of parts and figures 10 lows: Aerial, ground, A battery negative, and 11, the wiring layouts. This is un- A battery positive and B battery negative,

a single wire 50 to 75 feet long, exclusive The item in question is a .5 mifd. fixed of lead-in. The ground should be the usual

Hook up aerial, ground and batteries as Diller of Buffalo, N. Y., for calling this to above and with the loud speaker plugged in at the second stage jack, and the filter in time to be included in this concluding | coil primary as close to the secondary as possible, we are ready to pull the filament switch and get into operation. It is assumed that no errors have been made in wiring, and that from the mechanical point of view we are actually ready to adjust and tune the set.

Pull the battery switch, and turn the rheostats full on. The dials are assumed to have been placed in position such that when the condenser plates are entirely out, the dials are at zero.

First Regeneration

Starting with the center dial, we find that as we rotate this dial there is no noticeable result until it is turned in to about 15 to 20, when a change is noted in the sound coming from the horn. If followed closely, this change will be noted to take place with a distinct thud, produced when the dial reaches a certain position. This thud denotes the fact that the first detector has been thrown into the oscillating condition, by result of over-sufficient feedback or regeneration. This is as it should be, and shows that we will be able to control the amount of regeneration (and volume) with this 3-plate condenser.

Now with the 3-plate condenser turned in far enough to produce the oscillating condition in the first detector, if we turn either of the other two dials we will note a series of distinct clicks as the dial is rotated, which in slow motion are noted to be individual whistles. These whistles are the result of the oscillations from the oscillator tube mixing with those present in either or both of the detectors, by reason of over sufficient feedback, or regeneration, in either of the detectors. These are not carrier wave whistles and cannot be tuned in, and before any station can be tuned in, it will be necessary to adjust at least the second detector feedback to a point just below the oscillating condition.

The special condenser built into the filter coil is for controlling the feedback or regeneraton in the second detector, and the adjustment of this condenser is the next thing to be explained. By setting the center dial on the panel at zero, we know that we are not producing oscillations in the first detector, and in this position we can make the adjustment on the regeneration in the second detector.

Adjusting Second Regeneration

Move the copper plate section of the special condenser until the copper plate is covering the tinfoil plate completely. This is the maximum capacity position, and the amount of regeneration produced by this setting of the condenser has brought the second detector to the oscillating point, which is evidenced by the series of whistles noted when the right hand dial on the panel is rotated. We must reduce the feedback in the second detector until we get the tube just out of the oscillating position. By adjusting the special con-

Introducing Mr. E. T. Jones

In THE next issue, Radio Digest will publish the first of a series of articles on Radio theory and practice, written by Edward T. Jones of New Orleans. The author of this series is a practical Radio man, much of whose knowledge was gained in the "ham amateur" days before 1912 and in service as a "brass pounder" on the United Fruit boats. His explanations and suggestions, as contained in these articles, can therefore be taken as facts, not theory, and may be followed without hesitation. During the war he was in charge of the Naval Radio School and later transferred to research work on underground antennas. Mr. Jones has written technical articles for nearly all the Radio publications and is the author of several books on Radio. Like other

old timers, his favorite sport is experimental work. Among the many attributes attached to Mr. Jones we might mention that Leatrice Joy, well-known motion picture star, is a cousin, and has set a high goal for Mr. Jones to live up to.

mum capacity position, we gradually re- be kept at a position just below the point duce the regeneration, until at a certain where the oscillating condition is pro-

point the tube will cease oscillating, which condition can be known by the loss of the whistles which were found when turning the oscillator condenser dial, and which are now absent.

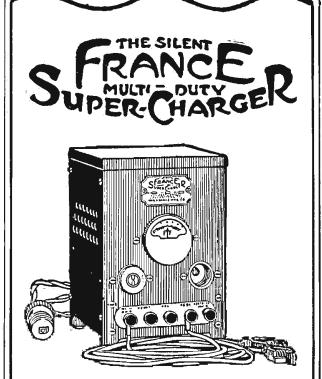
Having adjusted the feedback in the second detector to the point where the tube stops oscillating (a few trials will show the point of best operation for this setting), we can forget this particular part of the apparatus and the rest of the tuning will be done with the dials on the panel.

Dials Tune Together

As is the case with other regenerative sets, the feedback control should always

duced. We are now referring to the center dial on the panel. With this dial set at a point near to the oscillating point of the tube, we begin our hunt for stations on the other two dials. These two dials run approximately even (or together) for a particular wave length or station, and should be rotated slowly in unison until a station is heard. If you are within a few miles of a broadcasting station, you will have no trouble in tuning it in, but even on the nearby stations you will note immediately the sharpness of the tuning,

(Continued on page 20)



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phans towards sensitivity and quality. Their claim is that the tendency is too much towards sets of sensitivity and not good tonal quality.

is variable, consequently, the amplifier may be adjusted for best reception. The theory of this amplifier is that the signals towards sets that give outputs of really are first fed through push pull and then fed back, the tubes operating in parallel.

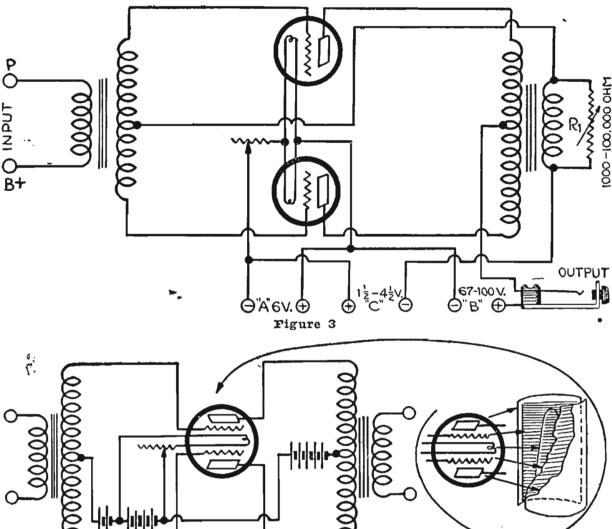


Figure 4

The filament arrangement, it will be no- | As usually operated, this amplifier is ticed, is out of the ordinary. In the fila- rather unstable. ment circuits, the tubes are connected in series in groups of two. This gives the same amperage through them, but requires amplification only. There are a few Radio a higher voltage across the A battery line. | men in the country who have the appara-The total current draw for these six tubes tus for experimenting with vacuum tubes. is .18 amperes. Each tube requires across In figure 4 is a hint. It is a push pull its filament terminals a drop of only 3 volts, but 3 volts of battery is not sufficient since the voltage of a cell diminishes with use. With tubes in series, and allowing 11/2 volts for drop in the cells themselves, due to internal resistance and deterioration, the line voltage should be only 71/2 and only five cells will be required. With the usual arrangement, to obtain the same battery life operating the same number of tubes, six dry cells are necessary. The series arrangement, then, results in a considerable gain in A battery economy.

Storage Battery Pressure

Another advantage of this filament arrangement is that a 6-volt storage battery may be used. When the battery is nearly discharged, the ouput may not have the desired volume, but 6 volts is permissible for a storage battery since there is not an appreciable dropping off in the terminal voltage due to internal resistance and deterioration of the battery. Storage batteries, as previously mentioned in this series, when fresh from the charger often test over 7 volts.

There has been developed within the past few months an audio frequency amplifier from which good results may be obtained experimentally. It is shown in figure 3, except in this figure there is added a resistance R1. Its function is to

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213 Euclid Arcade Annex CLEVELAND, O.

DEMONSTRATING RADIO
(Continued from page 17)

(Continued from page 17) double grid construction is not to be confused with that of the Solodyne tubes which were recently offered to the American public for the first time.

(CONCLUSION)

SIX TUBE HET-DUO-GEN

(Continued from page 19)

and on further stations, the points at which the stations will be found will be quite critical, and a vernier arrangement of some sort will be found to be an absolute necessity.

As with other sets it will be a matter of patience and careful tuning to get your first list of stations logged, after which the others will be more easily located. The center dial is to be used as a volume control, turning the condenser towards the maximum position for more sensitivity and

The position of the primary coil of the filter, in its relation to the secondary coil, will have the following effects on the operation of the circuit: When placed as close to the secondary as possible, the tuning on the dials will be somewhat less critical than when moved further away along the rod. In others words, the selectivity can be adjusted to your particular requirement, according to your distance from local stations. You will find that at each position in which you may try the primary coil, the setting of the special regeneration control condenser will have to be changed for best results in each position. When the primary winding is closely coupled to the secondary, more capacity is required to produce feedback to the oscillating point; while, when loosely coupled, or moved further away (with resulting sharper tuning), less capacity is needed. The sensitivity of the second detector is controlled by the amount of regeneration produced and, while not critical in adjustment, best re-

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the electronic flow shift from side to side. a distinct thud will be noted when the two Connections to this tube are shown. Its tuning dials are rotated to a resonant point for a particular wave length. To use the third stage, move plug to last jack. No doubt you will immediately be greeted by a tremendous howl which is the result of overloading the third tube by reason of the three audio stages used. If so, to eliminate this howl, it is only necessary to adjust the high resistance unit at the right hand end of the sub-panel to the point where the howl disappears.

(CONCLUSION)

Antenna Circuit

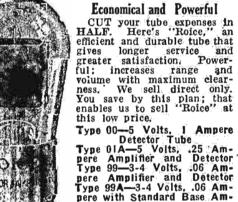
If your primary circuit does not tune sharply do not become discouraged, for this is due to the high resistance of the antenna circuit, and beyond making sure that you have a good ground connection, there is little that can be done about it.

Wire for Various Uses

Wire for winding inductances comes in many sizes and different insulations. There are single and double cotton-covered wires, usually listed as s.c.c. and d.c.c. respectively. And single and double silkcovered wires-s.s.c. and d.s.c. There is also a wire with an enamel covering. All of these wires may be used for coils, but with slightly different results. The size of the wire depends upon its use. the wire guage that is used for copper wire, the higher the number the smaller the wire. For coils that are to be inserted in the aerial circuit, the size should be preferably between 18 and 22. In the secondary and other circuits, the size may range from 20 to 26. Smaller wire than this would reduce the efficiency.



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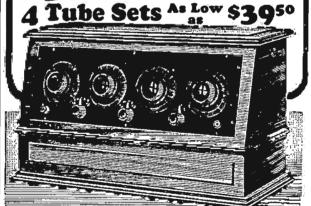
The Instrument makes the sale easy by its performance. We train you to know radio and our methods, make you worthy to wear the Ozarka button as our accredited representative. Previous experience is not necessary. In fact we prefer to do our own educating. If you have a clean record, are industrious, and have eaved up a little cash, here's a real opportunity, if you can qualify for an exclusive territory. We already have 2247 representatives. Territory going fast.



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regenerative (Armstrong) and most of them use speech improvements with which cost prevents the mere novice from experimenting. This hook-up can be made by any one familiar with the common regenerative hook-up and can use a few

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After the feed back that may be encountered by too close placing of transformers, tubes, sockets, etc., in a set, the next most troublesome source is the B battery. When it is considered that the plate circuits meet at the B battery it is indeed not very difficult to understand that inter-action between stages is a frequent occurrence. If it were not for the cost it would be indeed better to use separate B batteries for each stage and tube.

The arrangement of chokes and condensers, as shown in the pinkedyne, will to a great extent solve this problem and is well worth trying by both the novice and DX hound. The chokes may be the ordinary primaries of the bell-ringing transformers. The condensers should be two mfd. capacity.

The main function of the chokes CH is to prevent the audio-frequency currents from flowing into the B batteries, while they allow the direct current from the B battery to flow to the plate.

The condensers C, by-pass the audio



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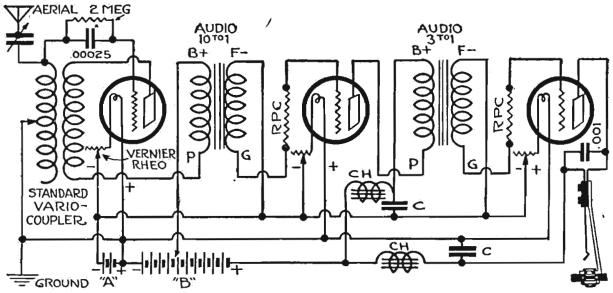
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frequencies that are choked by the chokes CH and allow them to reach the filament but without having to pass through the B battery to do so.

The very small coils RFC are merely very small radio-frequency chokes placed in the grid circuits of the two amplifying tubes to block stray radio frequency currents that may reach the amplifier. These chokes are constructed by winding eighteen turns of number 26 wire on a lead pencil and attaching to a piece of cardboard or bakelite for mounting on baseboard or in center of lead concerned.

A standard variocoupler has been used with wonderful results. Also a standard low loss 23-plate condenser is used in the aerial circuit. A .00025 grid condenser is used with about a 2 meg. leak. It is worth the using of a vernier rheostat for the detector tube, while one rheostat may be used for the two amplifier tubes if desired with about as good results. One 10 to 1 audio transformer is used in the first stage and a 3 to 1 in the second. Any standard wet battery tube may be used which will detect in detector circuit and amplify in the amplifying circuits. From 18 to 22 1/2 volts B battery for detector and 45 to 67½ in amplifying circuit is used, according of course to the kind of tubes used. This can be easily arrived at by trial. Six-volt wet battery is always preferred in this kind of a hook-up.-M. C. Williams, Rantoul, Illinois.

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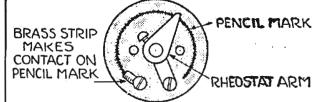
not feel moist to the hands, but the dampness is there just the same. You will be surprised at the improvement that follows a good drying out in the sunlight or by placing the apparatus near the



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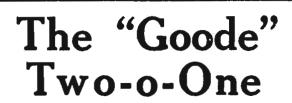
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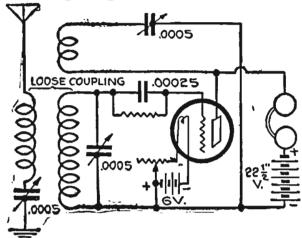
The Goode Tube Corporation Incorporated Owensboro (Dept. A) Kentucky

Questions and Answers

Weagant Circuit

(10200) REM, East Strondsburg, Pa.

A neighbor of mine has a 3-tube, one detector and 2 amplifier circuit. He does not get good results from New York city and New Jersey stations. I am going to build one of these sets and would like to know where I can get a hook-up or blueprint of this circuit, also what is the best tube to use? Will a shorter aerial help any in getting better results? Would



more turns of wire on the primary coil help?

A.—Herewith is shown the Weagant modification of the Armstrong circuit. Audio frequency can be added in the standard method, the output of the detector to the input of the amplifier.

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B. D. SMITH 31 Washington Ave. Danbury, Conn.

USE OF DETECTOR TUBES IN REFLEX CIRCUITS

tube in place of the crystal. This is stroy the inherent stability which charnot done to sell crystals, but because acterizes these circuits. of the fact that the circuits are design-

flex circuit is much more important where the crystal is now located. than that of the ordinary rectifier, inasmuch as it acts also as a stabilizer of manufacturer of reflex sets and apparthe reflex stage. The constant or value atus for reflex circuits.—Editor's Note.

Regarding the use of a tube detector necessary for the achievement of this in the reflex circuit a little information stabilization is fairly critical, and the will clear up the difficulty. Builders substitution of a tube with entirely of reflex sets discourage the use of the different constants will obviously de-

It is not claimed to be impossible to ed for proper functioning when a crys- substitute a tube for a crystal, for this tal detector is used and cannot be ex- can be done, but the change necessary pected to function properly unless used. is much greater than that of simply The function of a crystal in the re- wiring a vacuum tube into the circuit

(This is a communication from a

A short antenna has the advantage of increasing selectivity, although at the (11315) AJD, Breaux Bridge, La. sacrifice of range. Generally, it is advisable to use a single wire antenna accomplishing one hundred and fifty feet in length, including lead-in.

The UV-201A tubes are recommended both as detector and amplifiers.

The limitations encountered in reception from certain points may be due to intervening obstructions or possibly to the fact that the present seasonal manitestations, peculiar to a short period of the summer, are not favorable.

Send me your burned-out or broken Power tubes—50 watts or over. Will pay liberally. W. Baker, 36 West 20th Street, New ally. W. E York City.

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BOOKLET

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Antenna for Neutrodyne

Will a neutrodyne receiver tune sharper on a short antenna composed of several

Men to build radio sets in spare time. Leon Lambert, 501-H Kaufman Bldg. Wichita, Kansas.

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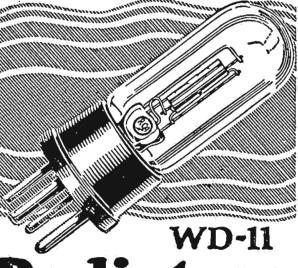
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Radiotron

wires than a long single wire, say 125 feet? Will reception be as good?

A.—We wish to advise that a neutrodyne receiver will tune sharper on a short antenna of several wires than on an antenna composed of one single wire 125 feet long.

There would probably be slightly more volume on the longer wire, but there might be more difficulty in separating stations.

It's your money and you can spend it for tubes or batteries if you want to; but I can show you how to bring distant stations in on a simple crystal set. Same plans increase range of tube sets also. Copyrighted plans \$1.00. Complete parts for long distant crystal sets \$5.00. Leon Lambert, 501 Kaufman Bldg., Wichita,

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Radiophone Broadcasting Stations

Corrected Every Week—Part I

United States

A3, Denyer, Colo. 440 meters. Fitzsimmons Gen. Hospital. (Educational Dept. U. S. Army). Announcer, John B. Crandall. Daily ex Sun, 12:30-1 pm, AA 3's Shelled Schocked Serenaders. Mountain. AQ6, Canton. O. 425 meters. Hdqts. 135th Field Artillery O. N. G.

Artiflery O. N. G.

AT9, Fort Bragg, N. C. 435 meters. 500 watts. U. S. Government. Announcer, Lieut. James Y. LeGette. Slogan, "The Pioneer Broadcasting Station of the Field Artillery." Tues, Thurs, Sat, 8-9.55 pm, dance music, talks, bands, fights. Sun, 8-9 pm, service. Eastern.

AV7, St. Paul, Minn. 400 meters. 6th Inf. Minn. Nat'l Guard, St. Paul Armory. Irregular schedule. Central.

Central.

AW5, Dayton, O. McCook Field, U. S. Army. Experimental work only.

KDBG, San Pedro, Calif. 146 meters. 100 watts. Thomas H. Ince private yacht "Edris."

KDKA, E. Pittsburgh, Pa. 309.1 meters. 1,000 watts. Westinghouse Elec. & Mfg. Co. Announcer, H. W. Arlin. Slogan, "The Pioneer Broadcasting Station of the World." Daily ex Sun, 9:45-10 am, 12-1 pm, market reports, music; 6:15, music; 7:15-10, markets, news, features, concert; 9:55-10, time. Sun, 10:45 am, church services; 2:30 pm, concert; 4, orgsn; 4:45-6:15, dinner concert; 7:30, church service. Eastern.

KDPM, Cleveland, O. 58-270-1817 meters. 500 watts. Westinghouse Eleo. & Mfg. Co. Announcer, J. J. Francis.

Westinghouse Eieo. & Mfg. Co. Announcer, J. J. Francis.

KDPT, San Diego, Calif. 244 meters. 50 watts. Southern Eiec. Co. Announcer, William O. Heathcote. Slogan: "At the End of the Trail." Daily ex Sun, 1:30-2:30 pm. Tues, 8-9 pm. Thurs, Fri, Sat, 6:00-6:45 pm. Wed, 8:00-10:00 pm. Pacific.

KDYL, Salt Lake City, Utah. 250 meters. 50 watts. Newhouse Hotel. Announcer, H. C. Mailander. Siogan, "Better Radio." Daily ex Sun, 3-4 pm, 6:30-8, news, music, entertainment. Mountain.

KDYM, San Diego, Calif. 280 meters. 100 watts. Savoy Theater.

KDYQ, Portland Ore. 213 meters. 50 watts. Oregon Institute of Technology. Announcer. George Sturley. Slogan: "The Radio School." Educational programs. KDZB, Bakersfield, Calif. 360 meters. 100 watts, Frank Siefert. Daily ex. Sun. 8-9 p.m. reports, music. Pacific.

KFAB, Lincoln, Nebr. 240 meters. 200 watts. Nebraska Buick Auto Co. Announcer, Gayle Grubb. Mon, Wed, Fri., 7:30-9:30 pm. Sun, 4 pm, church services.

KFAD, Phoenix, Ariz. 360 meters, 100 watts, McArthur Brothers Mercantile Co. Announcer, Arthur C. An-derson. Slogan, "Where Summer Winters." Daily ex Sun, 7:30-8:30 pm, news, weather, stock reports, music. Mountain.

music. Mountain.

KFAE, Pullman, Wash. 330 meters. 500 watts. State College of Washington. Announcer, George Bayles. Slogan: "Your Service Station." Wed, Fri, Mon, 7:30 pm, talks, music. Pacific.

KFAF, Denver, Colo. 278 meters. 500 watts. Western Radio Corp. Announcer, George D. Walker. Slogan: "Voice from the Rockies—Out Where the West Is."

Voice from the Rockies—Out where the west 18.

KFAI, Boulder, Colo. 261 meters. 100 watts. Univ. of Colo. Announcer, F. M. Orsborn. Tues, Thurs, Sat. 5 pm, time, music, addresses by faculty. Sat, 2:30-5 pm, sports. Mountain.

KFAR, Hollywood, Calif. 227 meters. 100 watts. Studio Lighting Service Co.

Concert. Pacific.

KFAU, Boise, 1da. 275 meters. 500 watts. Boise H. S. Announcer, David Taylor. Slogan: "Intermountain Station." Daily ex Sat, Sun, 3:30-4:15 pm, markets, weather, news. Mon, Fri, 8-9 pm, concert. Mountain. KFAW, Santa Anna, Calif. 280 meters. 10 watts. Radio Den. Slogan: "Where There Is Always a Friend from Your Old Home Town." Daily ex Sun, 4:30-5 pm, news, reports, music. Mon, Thurs, 6:30-7:30 pm, concert. Pacific.

KFBB, Havre, Mont. 275 meters. 50 watts. F. A. Buttrey Co. Announcer, C. O. Boettger. Daily ex Sun, 12:45 pm, markets, weather, reports. Mountain.

12:45 pm, markets, weather, reports. Mountain.

KFBC, San Diego, Calif, 278 meters. 15 watts. W. K.
Azbiil. Thurs, Sun, 8-9 pm, Bibie lesson, aermon.

Pacific.

KFBG, Tacoma, Wash. 250 meters. 50 watts. First
Presbyterian Church. Announcer, Frank Tovey. Sun,
11-1 pm, 7:30-9. Pacific.

KFBK, Sacramento, Calif. 283 meters. 100 watts. Kimball-Upson Co.

ball-Upson Co.

KFBL, Everett, Wash. 224 meters. 20 watts. Lesse
Bros. Announcer, R. H. Leese. Daily, 7:15-8:15
pm. Sun, 2-3 pm. Pacific.

270.1 meters 50 watts. The

pm. Sun, 2-3 pm. Pacific.

KFBU, Laramie, Wyo. 270.1 meters. 50 watts. The Cathedral. Wed, 5:45 pm, chimes. Sun, 5 pm, 7:30, church service. Mountain.

KFCB, Phoenix, Ariz. 238 meters. 10 watts. Nielson Radio Supply Co. Announcer, E. A. Nielsen. Slogan: "When It's Wintertime in Michigan, It's Summer time Down Here." Daily. 7-7:30 pm, bedtime stories.

Mountain.

KFCC, Helena, Mont. 248 meters. 10 watts. The First Congregational church. Announcer, George C. Stocking. Sun. 11-12:15 pm. church service; 6:30, bedtime story; 7:30-9, service. Mountain.

KFCF, Walla Walla, Wash. 256 meters. 100 watts. Frank A., Moore. Slogan: "The Vailey They Liked So Well They Named It Twice."

KFCL, Los Angeles, Calif. 236 meters. 500 watts. Leslie E. Rice.

KFCP, Odgen, Utah. 360 meters. 25 watts. Ralph W.

KFCP, Odgen, Utah. 360 meters. 25 watts. Kaiph W. Flygars.
KFCV, Houston, Texas. 360 meters. 10 watts. Fred Mahaffey, Jr. Daily ex Sun, 7:30-8 pm, entertainment. Sun, 2-3 pm, entertainment. Central.
KFCZ, Omaha, Neb. 258 meters. 50 watts. Central.
H. S. Announcer, Arnold Cisier. Daily ex Sat. 3-5 pm, orchestra, organ. Mon, Tues, Thurs, 7:30-9 pm. Sat, midnight program. Central.
KFDD, Boise, Idaho, 275-1 meters. 10 watts. St. Michael'a Episcopal Cathedrai. Announcer, Paul Roberts. Sun, 11:15-12:30 pm, 7:30-9:15. Mountain.
KFDH, Tucson, Ariz. 268 meters. 50 watts. Univ. of Ariz. Announcer, Max Voss Kuehler. Irregular schedule.

schedule.

KFDJ, Corvalits, Ore. 254 meters. 50 watts. Oregon Agri. Coilege. Announcer, Jacob Jordan. Mon, Frl, 7 pm, college news. Pacific.

KFDM, Beaumont, Tex. 315.6 meters. 500 watts. Magnolia Petroleum Co. Announcer, Magnolene Mike. Slogan, "Kali for Dependable Magnolene." Tues, Signan, Paris of the Standard of the Control of the Standard of the Control of the Standard of the Standard of the Control of the Standard of the First Baptist Church. Announcer, Dr. M. E. Dodd. Wed, 9-10 pm, muslo, talks. Sun, 11 am, 7:45 pm.

KFDY, Brookings, S. D. 273 meters. 50 watts. S. D. State College. Announcer, G. A. Rletz. Daily ex Sun, 12:15 pm, livestock markets. Tues, 11 am, music, lecture. Thurs, 8-9 pm, music, lectures.

music, lecture. Thurs, 8-9 pm, music, lectures. Central. KFDZ, Minneapolia, Minn. 231 meters. 10 watts.

Central.

KFDZ, Minneapolia, Minn. 231 meters. 10 watts.

Harry O. Iverson.

KFEC, Portland, Ore. 248 meters. 50 watta. Meier & Frank Co., Inc. Daliy ex Sun, 12 m, weather, reports; 4-5 pm, music; 6:30 pm, weather, crop, marketa, reporta. Thurs, 9-10 pm, concert. Sat, 11 am-12 m, children's hour. Pacific.

KFEL, Denver, Colo. 254 meters. 50 watts. The W. L. Winner Radio Shop. Announcer, Capt. W. L. Winner. Daily ex Sun, 9 am, 10, 11, 2 pm, 3-4. Tucs, 8-9 pm. Thurs, 10-12 m. Fri, 8-9 pm. Sun, 9-10 am. Mountain.

KFEQ, Oak, Nebr. 268 meters. 100 watts. J. L. Scroggin. Announcer, Clarenco Koch. Fri, 9-10 pm. Central.

KFER, Fort Dodge, Ia. 231 metera. 10 watts. Auto Electric Service Co. Announcer, H. E. Giltner.

KFEV, Caaper, Wyo. 263 meters. 250 watta. Caspor Radio Club.

KFEX, Minneapolis, Minn. 261-meters.—100 watts.

KFEY, Kellogg, Ida. 360 meters. 10 watts. Bunker
Hill & Sullivan Mining & Con. Co. Announcer,
Walter C. Clark. Slogan: "Voice of the Coeur
D'Alene." Mon, Wed, Sat, Sun, 7:30-8:30 pm.
Pacific.
KFEZ, St. Louis, Mo. 248 meters. 250 watts. Assoclated Engineering Societies. Announcer, Frank H.
Schubert. Slogan: "Lend Your Ears to the Engineers."
Wed, 8:30-9:30 pm, Engineering program. Central.
KFPP, Moberly, Mo. 266 meters. 50 watts. First
Baptist Church. Announcer, Granville Ray Boote.
Slogan: "The Gospel Messenger of the Air." Sun,
Radio Lab. KFFP, Moberly, Mo. 266 meters. 50 watts. First Baptist Church. Announcer, Granville Ray Boote. Slogan: "The Gospel Messenger of the Air." Sun, 11 am; 7:30 pm. Central.

KFFR, Sparks, Nev. 226 meters. 10 watts. Jim Kirk. Thurs, 7-8 pm, "Sagebrush Canaries." Pacific. KFFV, Lamoni, Ia. 250 meters. 100 watts. Graceland College. Announcer, R. A. Cherille. Mon, 7:30 pm, musicale. Thursday, 7:30-8:30 pm, educational program. Sun, 11 am 2nd 3rd, 4th Sundays; 7:45 pm, 1st Sun, each week.

pm, 1st Sun, each week.

KFFY, Alexandria, La. 275 meters. 50 watts. Pincus & Murphey, Inc. Mon, Thurs, 7-8:30 pm. Central KFGC, Baton Rouge, La. 254 meters. 100 watts. Louisiana State University.

KFGD, Chickasha, Okla. 252 meters. 200 watts. Okla. College for Women. Announcer, J. A. Teeters. Tues, Thurs, Sat, 8 pm, music, lectures. Wed, 10 am, chapel service; 11 pm, special jazz program. Central. Central.

KFGH, Stanford Univ., Calif. 273 meters. 500 watts. Leland Stanford Junior University. No regular sched-

KFGQ, Boone, Ia. 226 meters. 10 watts. Crary Hardware Co. Announcer, Harold E. Wilcox. Slogan: "Daniel Boone Station." Wed, 8-9 pm. Sun, 3-4 Centrai.

pm. Centrai.

KFGX, Orange, Tex. 250 meters. 500 watts. First Presbyterian Church. Announcer, C. A. Doane. Sun, 11 am. 7:30 pm, church services. Central.

KFHA, Gunnison, Colo. 252 meters. 50 watts. Western State College of Colorado. Announcer, E. Russel Wightman. "Where the Sun Shines Every Day." Tues, Fri, 6:30 pm, bedtime story; 7:30 pm, musicale; 10:30, orchestra. Mountain.

KFHL, Oskaloosa, Iowa. 240 meters. 10 watts. Penn College.

College.

KFHR, Seattle, Wash. 263 meters. 100 watts. Star Elec. & Radio Co. Announcer, R. Mattmueller. Slogan: "The Voice of the Charmed Land." Daily ex Sun, 4:30-5:30 pm. Mon, Wed, Fri, 6:30-7:30 pm. Tnes, Thurs, Sat, 7:30-10:30 pm. Sun, 1-3 pm; 4:30-7:15. Pacific.

KFKQ. Conway, Ark. 250 meters. 100 watts. Conway Radio Lab.
KFKU, Lawrence, Ksn. 275 meters. 500 watts. University of Kansas. Mon, Thurs, 6:50 pm. Central.
KFKV, Butte, Mont. 283 meters. 50 watts. F. F. Gray. Sun, Wcd, Fri, 8:30-9:30 pm. Mountain.
KFKX, Hastings, Neb. 291 meters. 1000 watts. Westinghouse Elec. & Mfg. Co. Announcer, Win. G. Hay. Slogans: "The Empress of the Alr," "The Pioneer Re-Brosdcasting Statlon of the World." Mon, Thurs, 9:30-11 pm, broadcasts own program. Re-broadcasts KDKA's programs. Central.
KFLA, Butte, Mont. 254.1 meters. 5 watts. Abner R. Willson.

KFLE, Denver, Colo. 268 meters, 100 watta. National Educational Service. Daily ex Wed, 6-6:30 pm, Broadcasts for schools on request. Mountain.

KFLQ, Little Rock, Ark. 261 meters. 10 watts. Bizzeli Radio Shop. Irregular schedule.

KFLR, Albuquerque, N. M. 254 meters. 100 watts. U. & N. M. Announcer, Philip S. Donnell. Slogan, "The Sunshine Center of America." Fr. 8 pm, educational program. Mountain.

KFLU, San Benito, Texas. 236 meters. 100 watts.

Rio Grande Radio Supply House. Announcer, R. W.
Thacker. Slogan, "Heart of the Magic Valley."
Mon, Thurs, Sat, 8:30-10 pm, concert. Sat, 8:30 pm, Sunday school lesson. Central.

KFLV, Rockford, Ill. 229 meters. 100 watts. Swed-ish Evangelical Mission Church. Announcer. A. T. Frykman. Fri, 8:30 pm. Sun, 12:30 pm, service for shut-ins (Swedish); 9:30, service (English). Central. KFLX, Galveston, Texas. 240 meters. 10 watts. George R. Clough.

KFLZ, Atlantic, Iowa 273 meters. 100 watta. Atlantic Automobile Co. Slogan: "The Garden Spot of Iowa." Wed, 6-7:15 rm, dinner program: 9-11, music. Sat, 9-11:30 pm, dance music. Sun, 4 pm, clurch service. Central.

KFMB, Little Rock, Ark. 254 metera. Christian churches of Little Rock.

KFON, Long Beach, Calif. 240 meters. 100 watts. Echophone Radio Shop. Slogan, "Where Your Ship Comes In." Tues, Wed, Thurs, Fri, 2:30-4 pm; 7:30-10. Mon, 8-10 pm. Sat. 2:30-5 pm; 7:30-10. Sun, 11-12 m., 8-9 pm. Pacific.

KFOO, Salt Lake City, Utah. 261 meters. 10 watts. Latter Day Saints University. Announcer, Don C. McRae.

KFOR. David City, Neh. 226 meters. 20 watts. David City Tire & Elec. Co. Slogan, "The Voice of David City." Announcer, Howard A. Shuman.

KFOT, Wichita, Kansas. 231 meters. 50 watts. College Hill Radio Club. Announcer. Leon Garnett.

KFOT, Wichita, Kansas. 231 meters. 50 watts. College Hill Radio Club. Announcer, Leon Garnett. Slogan, "Radiocasting Church." Sun, 11-12:30 pm; 7:30-9, church services. Mon, 9-10:30 pm, music. Central.

KFOU, Richmond, Calif. 254 meters. 100 watts.
Hommel Mfg. Co.
KFOX, Omaha, Neb. 248 meters. 100 watts. Board of Education, Technical High. Announcer, H. E. Bennett.

KFOY, St. Paul, Minn. 252 metera. 50 watts. Beacon Radio Service. -Central. KFOZ. Fort Smith, Ark. 233 meters. 20 watts. Leon Hudson Real Estate Co. Mon, Fri, Sun, evening program. Central.

KFPB, Seattle, Wash. 224 meters. 15 watts. Edwin

J. Brown.

J. Brown.

KFPG, Los Angeles, Calif. 238 meters. 100 watts.

Garretson and Dennis.

KFPH, Salt Lake City, Utah. 242 meters. 50 wstts.

Haroid Charles Mailander.

KFPL, Dublin, Tex. 252 meters. 15 watts. C. C.

Baxter, announcer. Mon, Thurs, 8 pm; Sat, 10-11 pm;

Sun, 7-8 am. Central.

Sun, 7-8 am. Central.

KFPM, Greenville, Tex. 242 metera. 10 watts. The New Furniture Co. Announcer, Dave Ablowich, Jr. Slogan, "The New Furniture Co., the Home of Good Furniture," located at Greenville, Texas, where you find "The Blackest Land, the Whitest People." Daily ex Sun, 2 pm, music. Tues, Wed, Thurs, Fri, 7:45 pm. Sun, 11 am, services; 7:15 pm, irregularly. Central.

KFPP, Olympia, Wash. 236 meters. 20 watts. G. & G. Radio and Elec. Shop.

Radio and Elec. Shop.

KFPR, Los Angeles, Calif. 231 meters. 500 watts. Los Angeles Co. Forestry Dept. Irregular schedule.

KFPT, Salt Lake City, Utah. 268 meters. 500 watts.

Radio Service Corp. of Utah. Announcer Charles H.

Hays. Mon, Wed, Thurs, Sat, 8 pm. Tues, Fri, Sun, 9 pm. Mountain. KFPV, San Francisco, Calif. 236 meters. 50 watts. Heintz & Kohlmoos, Inc. Announcer, Ralph H. Heintz. Slogan, "Ain't We Got Fun." Sun, 7-8:30 pm. Pacific.

Slogan, "Ain't We Got Fun." Sun, 7-8:30 pm. Pacific.

KFPW, Carterville, Mo. 268 meters. 20 watts. St.

John M. E. Church, S.
Christ Means Progress." Wed, Fri, 8-10 pm, popular program. Sun, 1-3 pm, chapel service. Central.

KFPX, Pine Bluff, Ark. 242 meters. 50 watts. First Presbyterian Church. Announcer, Howell L. Westbook. Sun, 11 am, 12 m, 7:30-8:30 pm, church services. Central.

KFPY, Spokane, West, 265-2 meters, 100 mt. 100.

KFPY, Spokanc, Wash. 265.3 meters. 100 watts. Symons Investment Co. Announcer, E. B. Craney. Daily ex Sun, 3-4 pm. music, markets. Tues, Wed, Thurs. Fri, 6:15-7 pm. Tues, 8:30-9:30 pm. Fri, 9:30-11:30

pm. Pacific. KFQA, St. Louis, Mo. 261 meters. 50 watts. The Principla.

KFQB, Fort Worth, Tex. 254 meters. 150 watts. The Searchlight Pub. Co. Announcer, Y. M. Cornelius. Sun, 11 am, 7:15 pm, church services. Tues, Wed, Thurs, Fri. 8 pm, music. Sat, 8 pm. concert, Bible lecture. Central.

KFQC, Taft, Calif. 231 meters. 100 watts. Kidd Bros. Radio Shop.

KFQD, Anchorage, Alaska. 280 meters. 100 watts. Chovin Supply Co.

KFQE, Colorado Springs, Colo. 224 meters. 5 watts. Dickinson-Henry Radio Laboratories.

KFQG, Los Angeles, Calif. 229 meters. 100 watts. Southern Calif. Radio Assn.

KFQH, Burlingame, Calif. 231 meters. 50 watts. Albert KFQL, Muskogee, Okia. 252 meters. 20 watts.

KFQL, Muskogee, Okla. 252 meters. 20 watts. Oklahoma Free State Fair Assn. Announcer, Burle R. Jones. Slogan, "Our Gates Stand Open." Mon, Wed, Fri, 8-9 pm, music. Central.

KFQM, Austin, Tex. 268 meters. 50 watts. Texas Highway Bulletin. Announcer, George M. Baker. Daily ex Sun, 7 pm, 9. Central.

KFQN, Portland, Ore. 283 meters. 5 watts. Third Rantist church. Wed. Frl. 8-9 nm. Sun. 9:45-10:30

Baptist church. Wed, Fri, 8-9 pm. Sun, 9:45-10:30 am; 9-10 pm. Pacific.

KFQP, Iowa City, Iowa. 224 meters. 10 watts. George S. Carson, Jr., Wed, 8-9 pm. Sat, special programs. S. Carse Central.

S. Carson, Jr., Wed, 8-9 pm. Sat, special programs. Central.

KFQR, Oklahoma City, Okla. 250 meters. 10 watts. Walter La Fayette Ellis.

KFQT, Denison, Tex. 252 meters. 10 watts. Texas National Guard. Announcer, Robert Cox.

KFQU, Holy City, Calif. 234 meters. 100 watts. W. Riker. Announcer, Arthur J. Landstrom. Daily ex Mon. 9-10 pm. Sun, 11-12 m., 9-10 pm. Pacific.

KFQW, North Bend, Wash. 215.7 meters. 50 watts. The Photo Radio and Elec. Slop. Announcer, Carl F. Knierim. Slogan, "At the Western Entrance of Snoquaimie Pass." Mon, Wed, Fri, 9-11 pm. Pacific.

KFQX, Seattle, Wash. 238 meters. 1500 watts. American Radio Telephone Co. Announcer, Vivien Potter. Slogan, "Daddy of 'Em All." Daily ex Sun, 6-7 pm, weather, stocks. 7-7:45, children's hour; 8-9, orchestra; 10-11. Sat, 11-12. Pacific.

KFQY, Belden, Neb. 273 meters. 10 watts. Fariners State Bank. Announcer, A. H. Abts. Slogan, "Where Corn Is King."

KFQZ, Hollywood, Calif. 240 meters. 250 watts. Taft Radio company.

Radio company. KFRA, Carver, Minn. 240 meters. 100 watts. Marvin S. Oison.

KFRB, Beeville, Tex. 248 meters. 250 watts. Hall Brothers. Fri, 10 pm. Central. KFRC, San Francisco, Calif. 278 meters. 50 watts. Radiocast studio. KFRF, Alexandria, La. 242 meters. 10 watts. W. R.

KFRH, Grafton, N. D. 268 meters. 10 watts. The Radio Shop. KFRJ, Conway, Ark. 250 meters. 10 watts. Guy Sim-KFRM, Fort Sill, Okla. 263 meters. 50 watts. James

F. Boland. KFRO, Fort Worth, Tex. 246 meters. 50 watts. Curtis Printing Co. Announcer, James R. Curtis. Siogan: "Who Does Your Printing?" Sat, 8-10 pm. Central.

KFRP, Redlands, Calif. 211 meters. 10 watts. Trinity Episcopal church. Sat, 7:30-8 pm, organ. Sun, 11-Episcopal church. Sat, 7:30-8 pm, organ. Sun, 11-12:30 pm; 7:30-8:30, church service. Pacific.

KFRQ, Portland, Ore. 213 meters. 5 watts. Radio Market Service Co. KFRU, Bristow, Okla, 355 meters. 500 watts. Electrical

KFRW, Olympia, Wash. 220 meters. 100 watts. United Churches of Olympia. Daily ex Sun, 7-7:30 pm, reports. Sun, 11-12 m., 7:30-8:30 pm. Pacific, KFRX, Pullman, Wash. 217.3 meters. 10 watts. J.

KFRX, Pullman, Wash. 217.3 meters. 10 watts. J. Gordon Klemgard. Announcer, Gordon Klemgard. Slogan, "The Only Farmers Radio Statlon in the World." Daily ex Sun, 9-10 pm, news, nusic. Pacific. KFRY, State College, N. M. 266 meters. 50 watts. New Mexico College of Agriculture and Mechanic Arts. KFRZ, Hartington, Nobr. 222 moters. 15 watts. The Electric Shop. Announcer, P. M. Thies. Daily ex Sun, 11:55 am, news, markets; 4:15-5:15 pm, entertainment. Sun, 12-1:30 pm, entertainment. Central. (Note—The second part of the station data list will appear next week.)

CHALLENGE!

NE DOLLAR will be paid to the Radiophan submitting the most errors in any one station's listing. Letters must reach Radio Digest office not later than one week from date of issue corrected. Readers are not limited to correcting one station, but such corrections must be certified by the stations themselves, and NOT by comparison to other so-called accurate Radiocast directories and lists.

That's just how sure Radio Digest is that this Radiophone station directory is correct! To make the challenge fair for everyone, Radiocast stations and their employes are barred from this offer. Why? Because the Radiocasters are the source of all the data given herein. They are (or should be) interested enough to answer the inquiry sent them every time data on their station appears. This inquiry contains a proof of their last listing and must either be corrected or O K'd as correct and returned to the Digest. Nevertheless, sometimes the stations are careless and mistakes are made. But Radio Digest is so sure of the exactness of this directory that this challenge is made unconditionally.

With reference to the directory: It appears in five parts, serially continuously; the first four parts are station data listings, arranged alphabetically; the fifth part is a state, city index of stations. The information contained in each station data listing is given in the following order: Call letters, city, state, wave length used, watts antenna input, owner's name, announcer's name, slogan used if any, name of listener in "club," schedule of operating hours, and kind of time used, as "Central," "Mountain," etc.

Five successive issues of Radio Digest will give one the most complete and accurate list of Radiocast stations obtainable. This service is original with this publication, and has been maintained from the start. Right of reproduction without permission of any or all of the data contained herein is denied.

(Owing to the temporary adjustments in reallocating wave lengths of many stations, errors in wave lengths will not be considered eligible for the dollar offer until further notice. Once the changes are made permanent this ban will be removed.)

KFI, Los Angeles, Calif. 469 meters. 1,500 watts. Earle C. Anthony, Inc. Announcer, Paul W. Reese. Slogan: "The Radio Central Station." Daily ex Sun, 5-6 pm, 6:45-8 pm, 8-11 pm. Wed, Fri, Sat, 8-12 midnight. Sunday, 10-10:45 am, 4-5 pm, 6:45-8, 8-11 Paulia.

midnight. Sunday, 10-10:45 am, 4-5 pm, 6:45-8, 8-11. Pacific.

KFIF, Portland, Ore. 248 meters, 100 watts. Benson Tech. Student Body.

KFIO, Spokane, Wash. 252 meters. 50 watts. North Centrai High School.

KFIQ, Yakima, Wash. 256.3 meters. 100 watts. First Methodist Church. Announcer, Dr. I. M. Miller. Wed, 7:30 pm, organ. Sun, 11 am, 7:30 pm. Pacific.

KFIU, Juneau, Alaska. 226 meters. 10 watts. Alaska Elec. Light & Power Co. Announcer, O. E. Shoembell. Mon, Wed, Fri, 7-8 pm. Alaskan.
KFIX, Independence, Mo. 268 meters. 250 watts. Reorganized Church of Jesus Christ of Latter Day Saints. Announcer, Arthur B. Church. 9 pm. Sun 11 am, 7:30 pm. Central. Tues, Thurs

KFIZ, Fond du Lac, Wis. 273 metera. 100 watts.
Daily Commonwealth and Seyfert Radio Corp. Announcer, Albert Mayer. Daily ex Sun, 5 pm, music, news, markets, weather. Central.

news, markets, weather. Central.

KFJB, Marshalitown, Iowa. 248 meters, 10 watts.

Marshali Elec. Co. Announcer, E. N. Peak. Siogan:

"Marshalitown, the Heart of Iowa." Daily ex Sun,
10 am, markets. Tues, Fri, 8:30 pm. Central.

KFJF, Oklahoma City, Okla, 261 mcters, 225 watts.

National Radio Mfg. Co. Announcer, Tired Hand.

Slogan: "Radio Headquarters." Daily ex Sun, 9:30
am, 12:15 pm, markets; 7 pm. Daily ex Sun, 9:30
am, 3:15 pm, markets. Sat, 1:15 pm, markets. Tues, Fri,
8:30 pm, special concerts. Sun, First Baptist church.

Central.

Central.

KFJI, Astoria, Ore. 245.8 meters. 10 watts. E. E. Marsh and Liberty Theater. Announcer, E. E. Marsh. Wed, Fri, 10-11 pm, organ. Sun, 10:30-11 pm. Pacific.

KFJK, Bristow, Okla. 233 meters. 110 watts. Delano Radio & Elec. Co. Daily ex Sun, 8-4 pm, music. Thurs, 8-9:30 pm, music. Sun, 7:30 pm, church services. Central

KFJM, Grand Forks, N. D. 278 meters. 100 watts.
University of North Dakota. Slogan: "Grand Forks,
the Educational Center of the State."
KFJR, Portland, Ore. 263 meters. Ashley C. Dixon &

Son.
KFJX, Codar Falis, Iowa. 258 meters. 50 watts. 1owa
State Teachera' Colloge. Educational programs.
KFJY, Fort Dodge, Iowa. 246 meters. 50 watts. Tunwall Radio Co. Announcer, Carl Tunwall. Dally.
12 m, 5:45 pm, markets, news, weather. Wed. 9
pm, orchestra. Thurs, 6 pm, agriograms, weather
bulletins, news. Sun, 11 am, 7:30 pm, church services. Central.

KFMQ, Fayetteville, Ark. 275 meters. 500 watts. U. of Arkansas. Announcer, C. V. Bullen. Tues, 9 pm. Thurs, 7:30 pm. Central.

KFMR, Sioux City, Ia. 261 meters. 50 watts. Morningside College. Announcer, Jesse C. Ducommun. Tues, Thurs, Fri, Sat, 8:55 am. Tues, Thurs, Sat, 12 m. Central.

12 m, Central.

KFMT, Minneapolis, Minn. 261 meters. 100 watts. Dr. George W. Young. Announcer, Dr. George W. Young. Slogan: "Always Young." Mon, 7 pm; Thurs, 8 pm. Sun, 1:30-3:30 pm. Central.

KFMW, Houghton, Mich. 266 meters. 50 watts. M. G. Sateren (announcer). Sun. 3-4:30 pm.

KFMX, Northfield, Minn. 283 meters. 500 watts. Carleton College. Announcer. Dr. Bruno Melnecke. Wed, 9 pm. Sun, 7 pm. Central.
KFNF, Shenandoah, Ia. 266 meters. 500 watts. Henry

Field Seed Co. Announcer, Henry Field. Slogan: "Friendly Station in a Friendly Town." Daily ex Sun, 12:25-1:25 pm. Daily ex Sun, Tues, 6:30-9:30 pm, concert. Sun, 3 pm, services; 6:30-8, sacred song service. Central.

song service. Central.

KFNG, Coldwater, Miss. 254 meters. 10 watts. Wooten's Radio Shop. Announcer, S. D. Wooten. Slogan, "The Most Powerful 10 Watt Station in the World." Sat, 9:30-10:30 pm. Sun, 4-5 pm. Central. KFNJ. Warrensburgh, Mo. 234 meters. 50 watts. Central Missourl State Teachers College. Announcer, John McNay.

KFNL, Paso Robies, Calif. 240 meters. 10 watts. Radio Broadcast Assn. Announcer, Early W. Moore. Slogan, "The Home of the Nut." Mon, 8-10 pm, music. Pacific.

music. Pacific.

KFNV, Santa Rosa, Calif. 234 meters. 5 watts. L. A. Drake. Daily 2-3 pm; 6-6:30, news, music. Pacific.

KFNY, Helena, Mont. 248 meters. 50 watts. V. Kemp Roberts. Experimental station.

KFNZ, Burlingame, Calif. 231 meters. 20 watts. Radio Sales Co. Announcer, A. R. McGregor. Daily ex Sun, 4-5:30 pm, concert; 7-7:30, news, weather. Wed, 8-10 pm, classical music. Sat, 8-12 pm, dance music. Pacific.

KFOA, Seattle, Wash. 455 meters. 500 watts. Rhodes Dept. Store. Announcer, Carl E. Haymond. Mon, 8:30 pm; Fri, 12:30 pm; Sat, 2 pm. Wed, Fri, Sat, 8:30 pm, Seattle Times programs. Daily ox Sat, 3:45-4:45 pm. Seattle Times programs. Daily ox Sat, 3:45-4:45 pm. Seattle Times program.

KFOC, Whittier, Calif. 236 meters. 100 watts. First Christian Church.

KFOD, Wallace, Idaho. 224 meters. 10 watts. The Radio Shop.

KFOJ. Moberly, Mo. 246 meters. 5 watts. Moberly High School. Announcey, Ray Boots.

KFOL, Marengo, Ia. 234 metors. 5 watts, Leslie M, Schalbuch.

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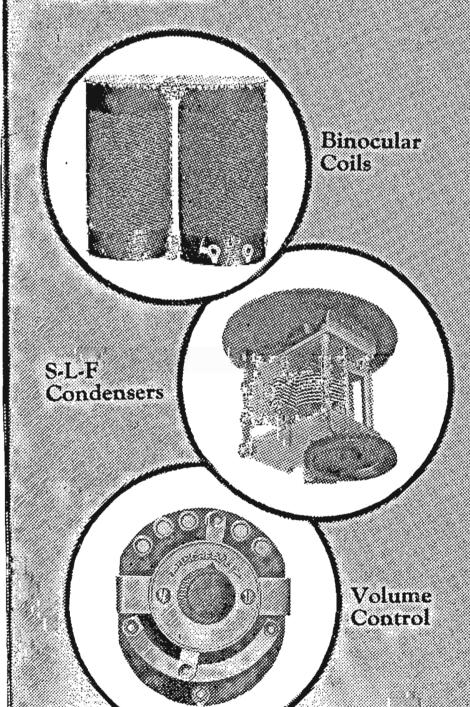
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