

Christmas Set Trouble Finding and Operating Helps; New Het-Duo-Gen Data; A Crystal Set That Operates Loud Speaker; Description of WGR at Buffalo

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# Radio Digest

EVERY  
WEEK

PROGRAMS  
**Illustrated**

TEN  
CENTS

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By Radio Digest Publishing Co.

SATURDAY, JANUARY 3, 1925

No. 13

## RADIO TEACHES ALIENS

### WILL DIRECT PLANES WITH GROUND CABLE

SEND CONTROLLING WAVES  
TO MACHINE IN AIR

Similar Method Used by Ships in N. Y.  
Harbor When Arriving at  
Port in Fog

LONDON. — Tremendous possibilities are opened up by experiments recently conducted in England for the control of the various airways by means of electrified cables laid along the ground. There has been a certain risk of collision between airplanes traveling in opposite directions up to the present time, especially at night, so that it was felt that some system was needed whereby the airplanes could be guided automatically in the right course.

The apparatus tested out by the inventors receives the Radio waves emitted by the power cable on the ground and automatically warns the pilot if he leaves his course by the slightest degree, and a more advanced mechanism automatically steers the airplane along the course of greatest intensity of Radio waves from the ground cable.

#### Gives Pilot More Time

These electric brains, as they are known to the inventors, will permit the pilot to devote all his time to his motors and to his altitude, while he will assume complete control at the landings. In this manner, international or national airlines will be established as direct and permanent as railroad lines now are, so that it can be said that aerial railroads will be established between the important cities of the world.

This method has been used by ships in New York for some time. It is known as a "piloting cable."



### BROADCASTS AMERICANIZE NEWCOMERS

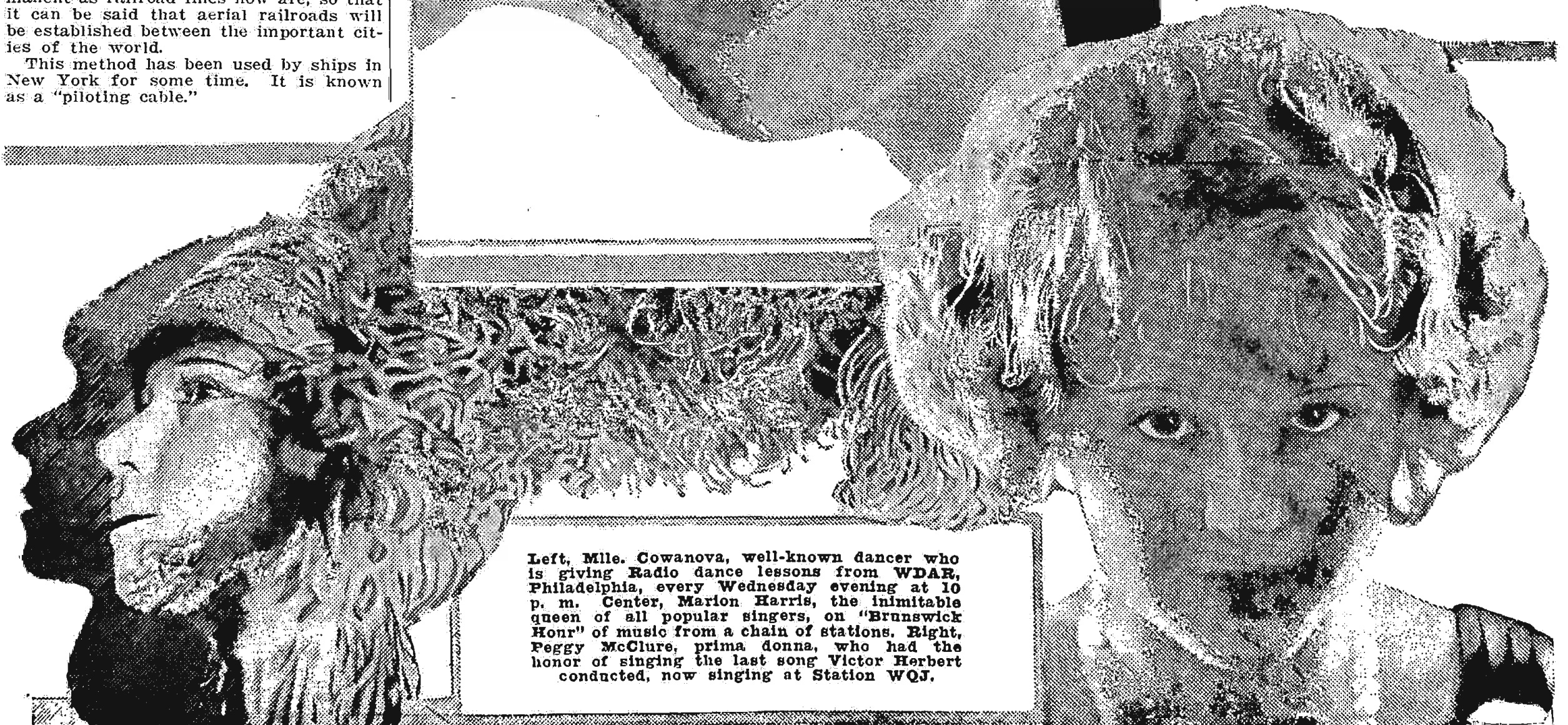
Enlist Aid of Stations

Foreigners Using Sets to Receive  
Music Will Learn Advantages  
of Citizenship

WASHINGTON.—The wonders of Radio combined with the innate love of music and the unknown in persons of foreign birth have been seized upon by two bureaus of the federal government as providing a fertile new field for the Americanization of more than six million adult aliens in the United States.

For plans are under way to enlist the aid of about twenty broadcasting stations throughout the land to carry words of instruction and advice to the great army of non-citizens who either do not know the laws which make citizenship possible or have not felt the inclination to take the step.

It is the overpowering magnetism of music that has fertilized the soil for this new sowing of seeds. Good music, free  
(Continued on page 2)



Left, Mlle. Cowanova, well-known dancer who is giving Radio dance lessons from WDAE, Philadelphia, every Wednesday evening at 10 p. m. Center, Marion Harris, the inimitable queen of all popular singers, on "Brunswick Hour" of music from a chain of stations. Right, Peggy McClure, prima donna, who had the honor of singing the last song Victor Herbert conducted, now singing at Station WQJ.



# \$1000 FOR BEST RECEIVER

## GOLD AWARD DRAWS FANS' ENTHUSIASM

### Many Sets Are Entered

#### Only Two Weeks Left in Which to Submit Entry—Read Rules Carefully

Still they come in! Sets upon sets, of every description and kind are being received by the Radio Digest Gold Award Set Editor, until that gentleman is now almost ready to call the contest to a close—but that, of course, cannot be done until midnight of Saturday, January 17.

One thousand dollars in gold for the best original Radio receiver circuits submitted during the contest! The prizes are attracting many.

Radiophans desiring to have their sets entered in the contest must not forget they have but two weeks more in which to send them in.

Fairness is the first consideration in the management of this award. Many letters have asked how soon their sets will be returned. The answer is simple. Within a few weeks after the close of the contest, all sets, even winners, will be returned. Less fortunate sets may even be returned before the close of the contest—provided there is no possible chance of their winning.

#### Send Sets—Leave Judging to Judges

Many experimenters, no doubt, have entirely new and improved schemes for Radio reception that they do not feel have a chance of winning. This should not be the case. They should be sure to send the sets in. The judges may find in one of these just what they are looking for!

**BUT** before sending in any receivers BE SURE to read the twelve rules carefully. These are listed on this page.

Remember that ability as an author does not count (Rule 4). Just draw a hook-up diagram of what you have and a short explanatory note. Send these to the gold award set editor. Then CAREFULLY pack your set, insure it, and send it prepaid express or parcel post to the gold award set editor. Address him at Radio Digest, 510 N. Dearborn street, Chicago.

Only two more weeks. Hurry!

## RADIO TEACHES ALIENS

(Continued from page 1)

for the taking, and cheap to take, has brought the placing of Radio receiving sets in an estimated 90 per cent of the homes of the foreign born.

A trip through the east side of New York brought the first strong realization of the possibilities. For nine out of every ten tenement houses saw a maze of aerials on the roofs and practically all of the residences occupied by foreigners had their own receiving sets. The same sights were found in other centers. Music in the air and inexpensive receivers in the shop windows have wrought the miracle.

The leaders of the two groups point out that in 3,500 community schools now instructing adult aliens in the principles of citizenship they have a strong nucleus for the new work. The schools have available, and in the proper shape, instruction and instructors that could be utilized over the air in the various communities where foreign populations are large.

Aiming at a firmer foundation for future welfare and unity through education and amalgamation, it is proposed to broadcast talks that would cover the requirements of citizenship, explaining the five-year residence rule and the filing of first papers two years prior to admission.

The citing of such cases as those of two secretaries of labor, both of whom were foreign born, will be used to encourage the naturalization of more aliens by pointing out the extent to which the rights of native born Americans are extended to newly-sworn citizens. The two cabinet officials were Wilson, a Scotchman by birth, and James J. Davis, who was a native Welshman.

#### Broadcast from Field Offices

As tentative plans are lined up, the broadcasting will be from cities where field offices of the Bureau of Naturalization are located. This means locations where aliens are numerous. Included in this list of cities are New York, Brooklyn, Newark, Boston, Springfield, Philadelphia,

### \$1,000 GOLD AWARD SET CONTEST RULES

1. This contest opens at once and will close on Saturday, January 17, 1925, at midnight. All sets received up to that time will be entered.
2. The thousand dollars in gold will be divided into the following prizes: First, \$500.00; Second, \$250.00; Third, \$100.00; Fourth to Ninth inclusive, \$25.00 each. In the event of a tie, the full amount of the prize tied for, will be awarded to each tying contestant.
3. Contest is open to all Radiophans, whether or not subscribers to Radio Digest Illustrated.
4. A neatly drawn hook-up diagram and short description (200 words) of the salient features of the set should be enclosed in separate letter advising set is being shipped. Entrants do not need to be authors or writers.
5. Sets must be sent insured prepaid express or insured parcel post. All sets, including winners, will be returned insured collect to entrants.
6. Radio Digest is not to be held responsible for breakage or loss in transit. Pack sets carefully. Mark boxes and contents plainly with name and address of sender. Tubes and batteries need not be sent unless matched tubes are essential to operation.
7. Freak or novelty sets are not desired. Sets enclosed in or
8. Sets desired are those based on an original circuit or part of circuit that functions better than circuits commonly in use. Originality is one of the prime considerations.
9. Entrants who are not awarded prizes, but whose sets are considered worthy of constructional description in Radio Digest, will be paid at regular manuscript rates.
10. Entrants must guarantee to Radio Digest exclusive publication rights of all descriptions of their sets. The exclusive publication rights will be in force for all sets winning or picked for later description in Radio Digest.
11. Judges not interested in manufacturing will be selected by Radio Digest to make the awards. The award of prizes will be based on: Selectivity, range, volume, quality of reproduction, simplicity of operation, constructional feasibility, economy of construction, minimum re-radiation, universality, practicability.
12. Ship sets and address correspondence to the Gold Award Set Editor, Radio Digest Illustrated, 510 North Dearborn street, Chicago, Ill. All controversies will be decided by the Gold Award Set Editor, whose decision will be final.

Camden, Baltimore, Washington, Buffalo, Rochester, Cleveland, Detroit, Chicago, Cincinnati, St. Louis, Atlanta, New Orleans, Dallas, Fort Worth, Denver, Salt Lake City, Seattle, Portland, San Francisco, Oakland and Los Angeles.

The work in the schools and in industrial institutions with adult aliens last year resulted in 425,540 adult aliens filing first papers for citizenship.

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## Looking Ahead

**Building the Het-Duo-Gen? It's Worth Trying.** C. E. Brush will next tell how to construct the filter, and will give directions and drawings just as complete and detailed as those furnished this issue for the coupler and oscillator coils. This is a real, selective, two control set, and is hard to beat.

**Experimenter Senior Is a New Circuit** that combines the advantages of the ultra audion, absorption control of regeneration and a counterpoise. J. E. Owen, having taken the uninitiated through their A-B-C's in his home Radio demonstration series, now will give full instructions for building a set that is not only simple to put together, but embodies a brand new hook-up.

**Christmas Set Recipients—Experienced or Not—**will find next week's trouble shooting chapter of Harold O. Totten's helpful series invaluable when their outfits refuse to operate properly. Even the oldest of old-timers will find the suggested remedies good to try.

**How to Use Variable High Resistances—**a subject often puzzling to the average set builder and user—will be covered by E. W. Sawyer in an article soon to appear. Mr. Sawyer will show a dozen ways in which variable high resistances can be applied to good advantage.

**Another Illustrated Description of a Popular Broadcasting Station** will be presented in next week's issue. Meet the stations' staffs and read about their likes and dislikes; pasts, presents and futures.

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Have One Left

WHEN YOU WANT

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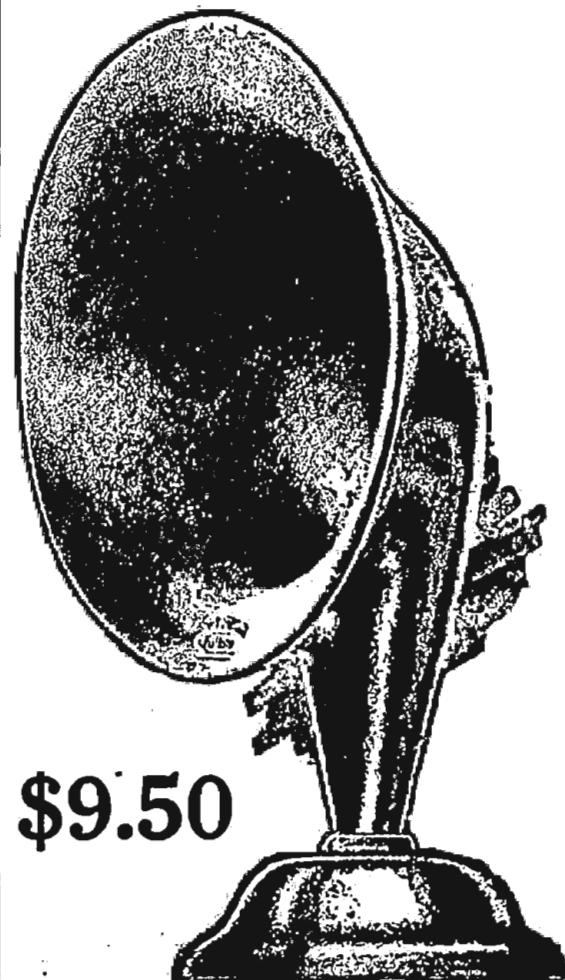
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# GALLI-CURCI HONORS WORK OF BLIND GIRL

## USES HER SONGS ON TOUR OF EUROPEAN CITIES

Claire Dux Also Selects Numbers as Giving Life to Fancies of Shadow World

LOS ANGELES. — It is occasionally heralded as quite a feat worthy of note when some young musician is able to win the praise of the conservative critics of the music world, but how much more so of an accomplishment must be that of Beatrice Fenner, 20-year-old Los Angeles pianist and composer, who, although handicapped by blindness since childhood, has been able to put into musical thought the dim shadows and poetic fancies that flit through her mind in such wonderful form that she has become internationally famous before the time most girls are out of school.

Not only has this young blind girl won the unstinted praise of practically all critics who have reviewed her work, but she has gained public recognition in that her numbers are the only ones used in the American group by Galli-Curci in her recent European tour. In addition, Claire Dux, famous soprano, has selected five compositions and will use them in her January recital in New York.

**Will Give Recital for Galli-Curci**  
To Galli-Curci, Beatrice Fenner owes much, and she is able, through the medium of the genie Radio, to express her appreciation, although the two will be separated by more than a thousand miles. Sunday night, December 28, from 9 until 10 p. m., Pacific time, this famous girl pianist is to give a recital from the studio of KNX especially for Galli-Curci, who will be listening in at Minneapolis, where she is spending the holidays.

Although the program will be dedicated to Galli-Curci, all listeners in will be able to hear as well and get a glimpse into the soul of the little blind girl who refused to be daunted by her handicap. Thought, music and Radio—what a similarity in the way they travel and their universal appeal.

### Almshouse Get Radio

BIRMINGHAM, Ala.—Life to the inmates of the Jefferson county almshouse will be made more pleasant and more endurable this winter with a Radio set, the board of county revenue announces.

# GALLI-CURCI WITH BLIND PIANIST



Blind since early childhood, Beatrice Fenner of Los Angeles has astounded music critics the world over. Scarcely twenty years of age, her compositions are used in recital by Galli-Curci (left) and Claire Dux. She played from KNX December 28.

### Music Critic on WOR Staff

NEWARK, N. J.—One of the features now being presented by Dr. Sigmund Spaeth, musical authority and former musical critic of two leading New York newspapers, who has been secured as musical editor of Station WOR, is a new series of broadcasts on Wednesday evenings.

He gives a short review of the music heard in New York concert halls during the preceding week, after which he broadcasts news of the musical attractions for the coming week.

Whaling ships plying the North Sea are now fitted with direction finders, in order to locate each other and avert collisions in fog or darkness.

# INSTALL RECEIVER TO AMUSE HOBOES

LONDON.—A receiving set complete with loud speaker, has been purchased by Nuneaton Guardians for the benefit of hoboos enjoying the hospitality of the town's tramp ward. "We don't want the tramps to look upon the institution as a palace," commented the mayor of Nuneaton, when the proposal to install the set was carried by the guardians, "but after all Radio is a necessity."

# PHOTO ROOM PART OF STUDIO AT KFI

## Movie and Still Cameras Make Film Record of Visiting Celebrities

LOS ANGELES.—One of the most interesting of the many rooms containing the new KFI station and studio is the camera room. This is a small, oblong, three-sided room that adjoins the supplementary studio of the station.

Probably very few other broadcast stations in the world have, or will have, a room similar to this one, for it has been designed and will be used for the taking of pictures of the celebrities that appear before the KFI microphone.

It is completely wired for the heavy duty Kleig and Cooper-Hewitt lights and the station will own a motion picture camera, as well as the regular variety of "still" camera. This is the first station known to be equipped to take motion pictures of its artists.

# Madame Hyena, Mr. Cockatoo and Leo Africanus Render Operatic Arias

By W. E. Johnson

FOR the first time in the history of Radio reception in this country, as far as it is known, listeners in were treated not long ago to a group of selections rendered by the Carnivora Opera company, and its impresario, C. Emerson Browne, through Station WFI, Strawberry and Clothier, Philadelphia. The members of the company, be it known, hail from Africa, Australia, Asia, India, and points west. The members chose a modern composition in six movements for an initial appearance and it was sung in the company's permanent headquarters at the Zoological Gardens in Philadelphia.

The performance was one of the most successful ever staged by any broadcasting station and many unusual stunts were resorted to in an effort to have all the animals do their stuff in the most approved fashion. Everyone knows that one of the hardest things in the world to do is to have the favorite cat or dog do its stunt for the Sunday company at dinner, and C. Emerson Browne, superintendent of the zoo, had to be prepared with all kinds of stunts so that the animals would do their stunts at the right moment.

**Mme. Hyena Shows Temperament**  
When the time came for Madame Hyena, one of the most popular and temperamental members of the company, to do her singing, she rebelled in the good old fashioned way of standing her ground—and not saying anything. Realizing there were thousands waiting to hear her clear, round laughing song, Mr. Browne had one of the guards jump on the top of her

cage and dance, while another poured a steady stream of water on her. It was too much for Madame Hyena, and she laughed so heartily, last reports have it, that she was heard in Africa, even without the help of the microphone. The first movement of the Carnivora opera was completed.

It was in the fifth movement, however, that the triumphant opera reached the heights. In it was seen the sad plight of lovers grown old and impoverished. Instead of being smooth and sleek, we found them wrinkled and shaggy. Mr. and Mrs. Sun Bear were assigned the roles, and executed them with a tragic realism only too affected. The husband was cool and bloated, seizing upon the family's little store of goods, and gorging it to his heart's content, unmindful of the wails, cries and calls of his helpmate, which were heard over the entire country.

**Leo and Cockatoo Adore "Mikes"**  
Leo Africanus took kindly to the sixth and final movement, and at one part of the opera was even willing to eat the microphone, if it had not been just outside his domain. This was the closest the "mike" came to meeting doom during the entire showing of the opera, although a cockatoo showed more than the average woman's inquisitiveness and endeavored to look inside the "mike." What good it would have done him, nobody knows.

The elephants and monkeys, to say nothing of some other animals, did their stuff quite well over WFI's microphone, and it is understood that the Philadelphia broadcasting station plans to give the operas at frequent intervals.



The white cockatoo was not "mike" shy when the Philadelphia zoo was broadcast through WFI. Indeed, note his very evident curiosity.

C. Emerson Browne, zoo superintendent shown at the right, took great pleasure in introducing the magnificent stars of his Carnivora Opera company.

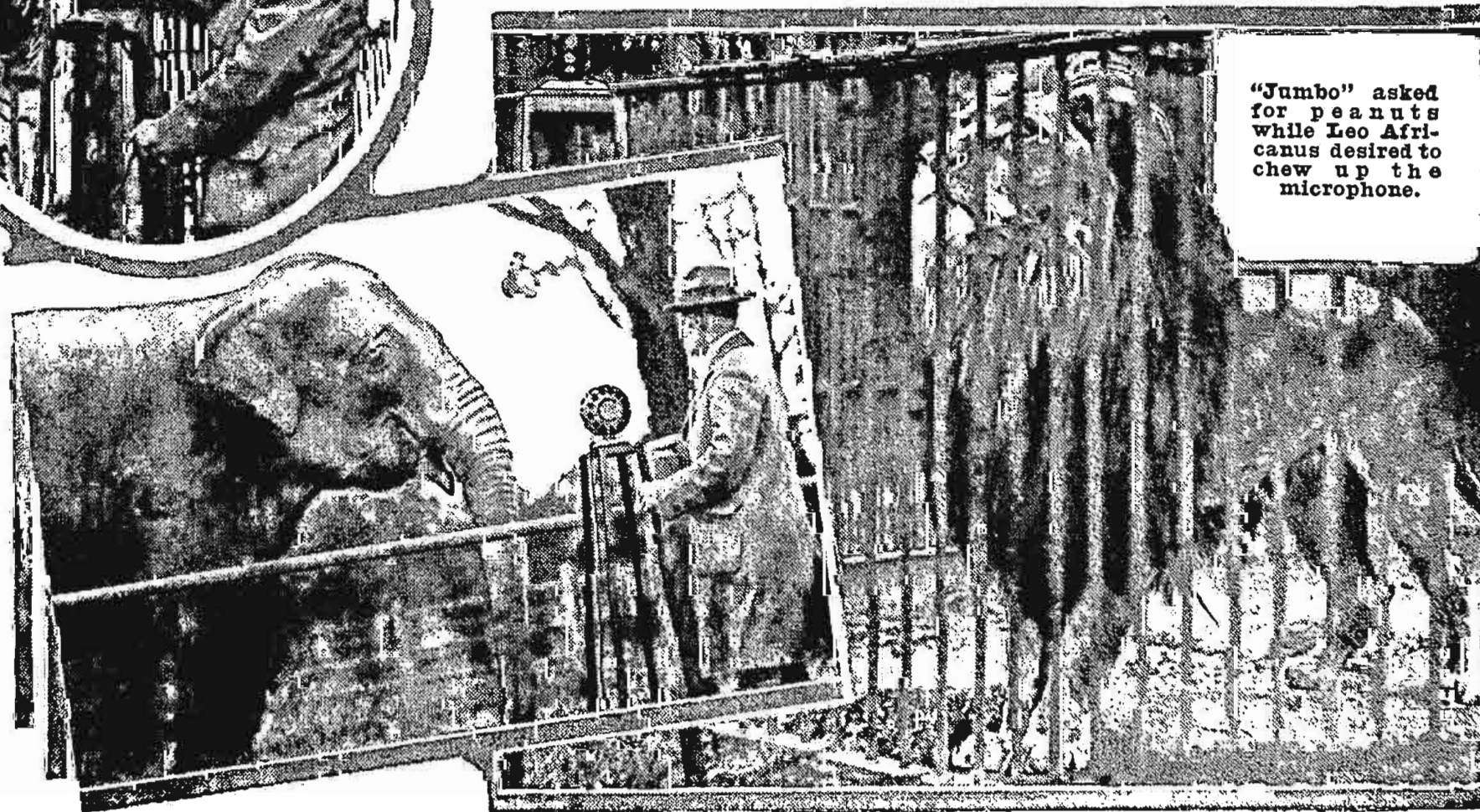
# SPEAKER APPARATUS LOST TO CONGRESS

## House Refuses Appropriation to Retain Amplifier Set

WASHINGTON, D. C.—Because members of the House of Representatives refused to make an appropriation for retaining the broadcasting and loud speaking apparatus installed a couple of years ago in the main hall of the House the apparatus has been dismantled.

One of the electrical companies installed the apparatus for experimental purposes just previous to one of the addresses made to Congress by the late President Harding. Considerable criticism was made by some members of Congress to the working of the apparatus and it was impossible to get any one interested enough in it to purchase the machinery for use in the Capitol.

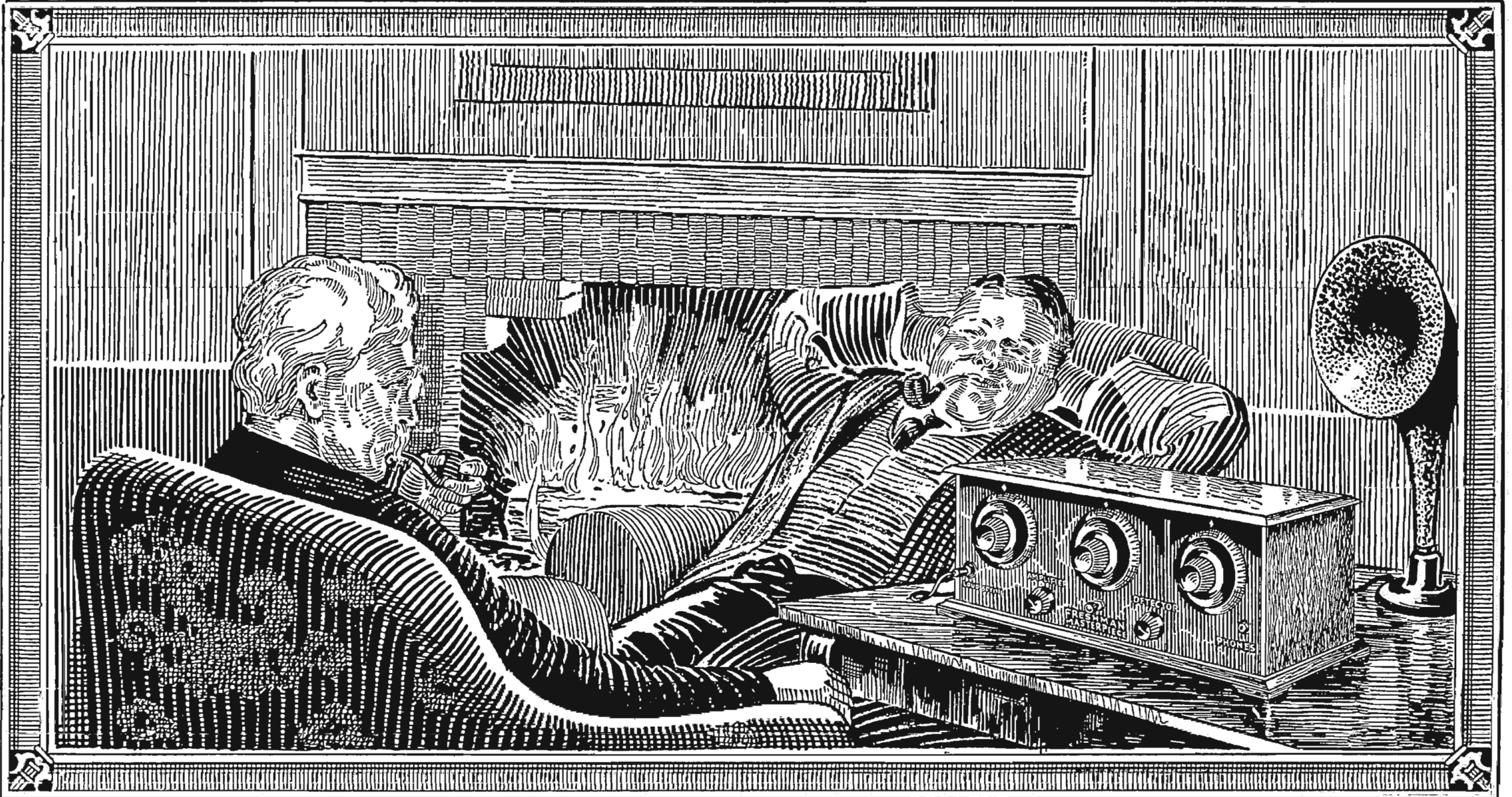
The Berlin Telefunken broadcasting station is now giving daily concerts on a 750-meter wave length.



"Jumbo" asked for peanuts while Leo Africanus desired to chew up the microphone.



# When Winter Winds Blow Cold



## FRESHMAN MASTERPIECE

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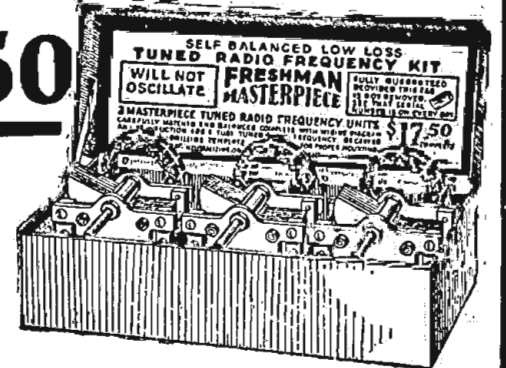
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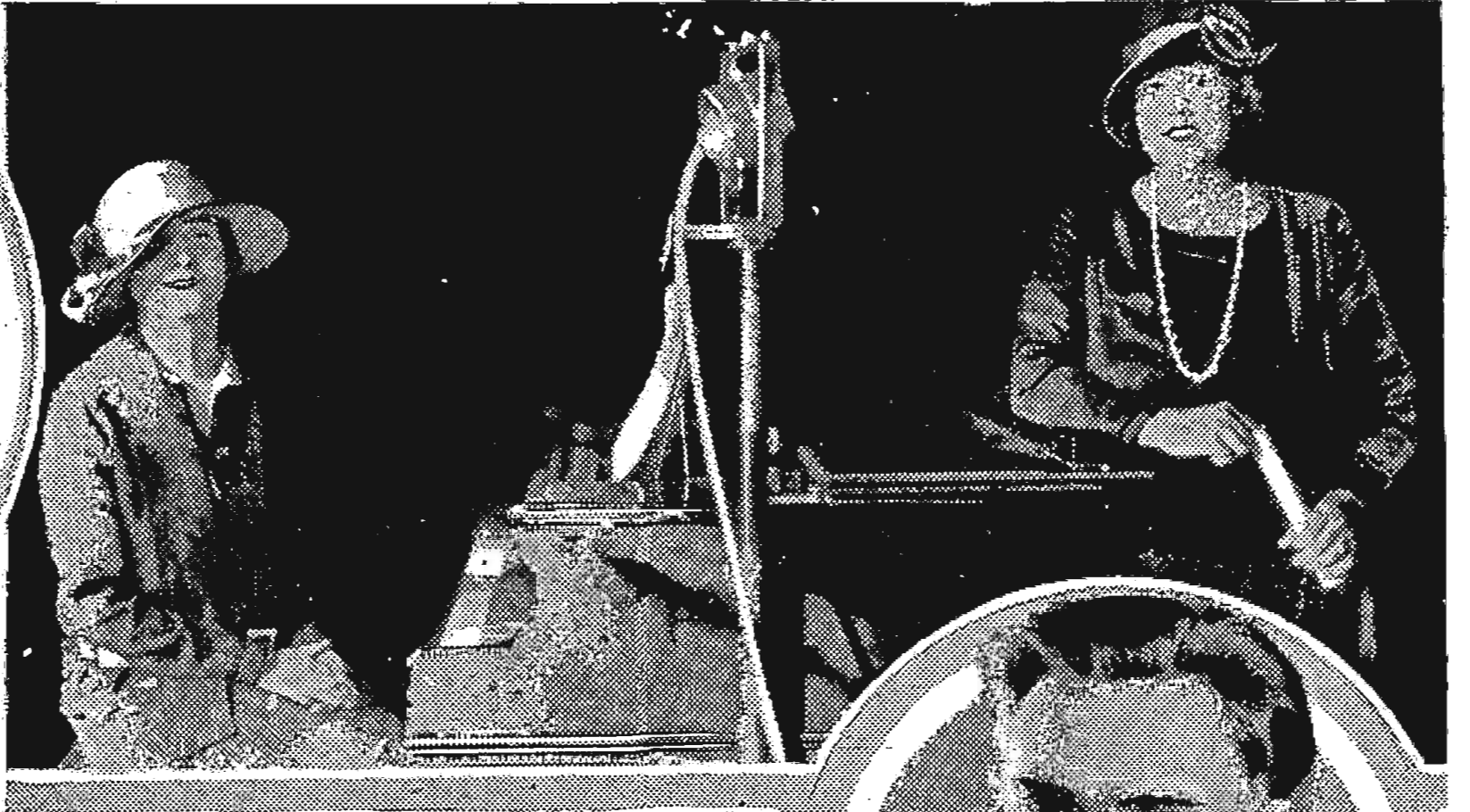
a five tube radio frequency receiver when you use the Freshman Masterpiece Kit. The result will be a receiver that will bring in even the most distant stations with the volume and clarity of locals. The equal of any 5 tube set in selectivity, simplicity of operation and all around efficiency. Write for interesting literature.

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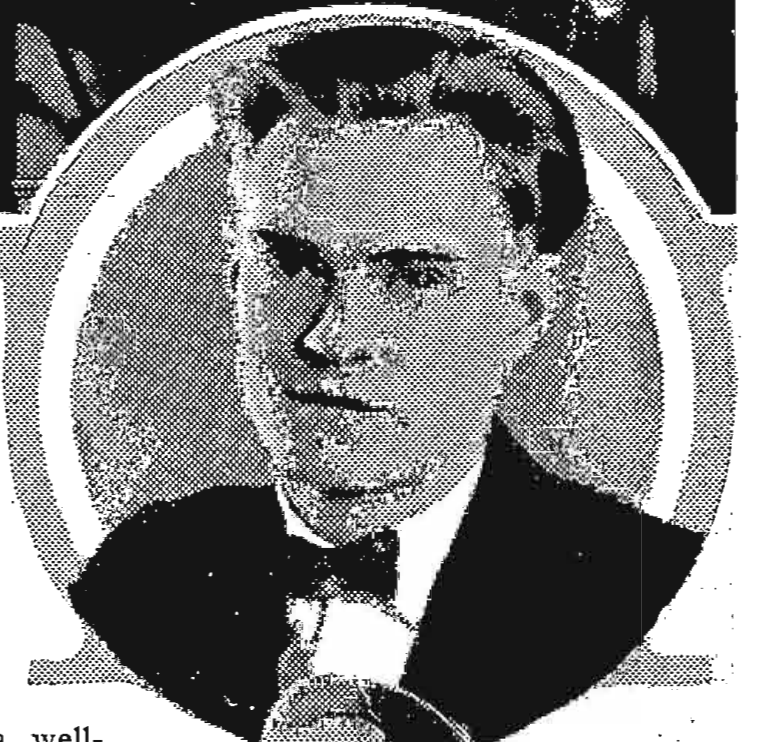
Write for interesting literature.  
Beware of Imitations and  
Counterfeits.



# WGR—"The Key City of Industry"—Buffalo



Left, Mark A. Rigg, Jr., director of Station WGR, Buffalo. Above, Mrs. Katherine Norton Britt, expert on home economics, sitting at the piano and Miss Florence Reed. Miss Reed is a favorite contralto and is well known to WGR fans. Right, Edward Stanko, chief engineer of WGR. Below, A. J. "Al" Erisman, a popular tenor and pioneer Radio impresario often heard over WGR.



## A Station with a Destination

By Lloyd S. Graham

(Photos by Colgrove Studio, Buffalo)

NOW don't get the idea for a moment, just because the title line declares that Station WGR, at Buffalo, has a destination, that actually it is going anywhere. In fact don't take anything in this article too literally.

You know, Radio stations are a lot like people. Often they are on their way but don't know where they are going. Sometimes the results are a little bewildering to the listener in. Sometimes the fact that a broadcasting station is on its way but doesn't know where it is going is the reason for some awfully punk programs. Sometimes it is the reason for some awfully good ones, but the latter rarely; for a station without a destination is like a ship without a hand at the helm. It has no settled policy.

Comparisons are terribly odious, so they say. But any chronic listener in knows what its all about. He knows that there are stations that are highbrow. He knows that some stations feature jazz, the rollicking king of danceland. He knows that stations more and more are beginning to play up certain things. In other words stations are taking on individual characteristics. They vary according to the brains back of them; the amount of devotion, interest, thought and study that the studio manager and those associated with him, are willing to put into the game.

All of which brings us to the point where we may safely and fittingly introduce to you:

Mark A. Rigg, Jr., who has been the nurse of WGR ever since it was born. WGR was born on Sunday afternoon, May 21, 1922, at the plant of the Federal Telephone and Telegraph company which has always owned it and paid for costly transmitting tubes and the other little odds and ends that go to keep a station "on the air."

While M. A. R. was not present at the first gasp and yell of the infant station on that memorable Sunday afternoon, he arrived the following day and has been on the job ever since.

Mr. Rigg sees the station in somewhat the same role as that of a great newspaper with a

gigantic country-wide circulation, carrying a well-balanced and honest service to its readers. Horace Greeley must have had somewhat the same idea in his day. And just as a great newspaper of that type pays a great deal of attention to its printing and general appearance, so Mr. Rigg also pays much attention to the mechanics, perhaps, better say electricians, of putting WGR on the air. He has tried to build up, and has succeeded in a large measure, a reputation for quality transmission.

Miss Helen M. White is WGR's only feminine announcer; alive and not in captivity. Since the days of the oldest announcer Miss White has always been the same; same interests, same manner, same fraternity pin, same sports; you know, same everything, like the sands of the desert.

For some inexplicable reason Miss White chose to spend her vacation in Cleveland this year. And for want of something better to do she took up golf. So golf will be blamed for the change.

At that, O. E. Becker should know the symptoms. Now Becker takes the announcing game seriously, but not too seriously. Somebody has called him the "velvet-toned announcer." The only "air" way you will know Becker is the way he speaks on the air. None of the announcers use their initials in signing off. It is against Mr. Rigg's policy.

But Becker should be easy to recognize. He is always the same. He rarely hesitates and you can simply see the punctuation marks of (Continued on page 6)



Left to right, Miss Bertha Drescher, soprano teacher and student of voice. O. E. Becker, Helen M. White and Robert Munn, members of the studio staff of WGR. W. H. F. Tenny, popular reader.





## FANS HEAR SELVES TALK FROM WDAF

PHONE CONVERSATION IS  
RELAYED FROM STUDIO

Words of Both Speakers Go on Air;  
Some Enthusiasts Hum  
Original Tunes

KANSAS CITY, Mo.—Anybody can talk over the Radio now! A recent plan, instituted by WDAF, and perfected by the Kansas City Telephone company, enables listeners all over the country to call the station over the telephone and to carry on a conversation with the station announcer, which is sent out on the air.

Preliminary trials have proved that the stunt is a complete success. On the first night, long distance calls were received and broadcast from both coasts, New York and San Francisco. Both sides of the conversation may be heard with perfect clarity in almost all cases.



Leo Fitzpatrick

The general line of talk runs thus: "WDAF, the Kansas City Star Nighthawks."

"Hello, Merry Old Chief!"

"Yes."

"This is \_\_\_\_\_, at \_\_\_\_\_ We are enjoying your program fine and request your piano player to give us 'Red Hot Mamma.'"

### Listeners Hum Strains

The chief then thanks the listener for calling in and the piano player plays the request. Oftentimes when the pianist is unfamiliar with the number requested, the listener is asked to sing or hum a few strains, with more or less humorous results. On one occasion a Chicagoan had a new tune which he had composed, and wishing to try it out on the air, he called the Star at Kansas City and asked to be connected with the Merry Old Chief. His song was broadcast over the telephone

## ERECTION OF NEW EQUIPMENT SOON

Station KYW Will Build Transmitter on Roof of Congress Hotel

CHICAGO.—Westinghouse Station KYW, is not to move—but will build a new station to be located on the roof of the Congress hotel—on the shores of Lake Michigan.

This will be a new KYW. The antenna will embrace science's latest innovations. Likewise, the studio, which will be in the Florentine Annex of the hotel, will also be constructed in the most modern fashion, with acoustics best adapted for Radio uses.

The equipment to be used, is of the latest type devised by the Westinghouse company, employing water-cooled tubes. Rectified alternating current will be used, which will change the 60-cycle power service to high voltage direct current by the kenotron method. With the new mechanical equipment to be used at KYW, a vast improvement will be obtained over its present station which already is one of the best in the country.

Programs from the various studios will be broadcast by special wire to the station on the roof of the Congress Hotel.

From the Hearst studio, Station KYW will broadcast the usual afternoon frolics on Tuesday and Wednesday, the At Home show, the Revue and World Crier service. This last service goes on the ether every hour and half hour throughout the day and night.

line and both his voice and his banjo accompaniment came over great.

Thus the listener is not only able to talk over Radio, but he may also hear his own voice as it comes back through his receiver. The idea is original with WDAF, although other stations have also carried it out successfully. The first plan was to put the calls on a loud speaker and to place the loud speaker in front of the microphone. In the present plan no microphone is used, and the calls are run directly into the amplifier and transmitter.

This is becoming a regular feature of the WDAF Nighthawk frolic, and is proving so popular that almost all of the trunk lines running into Kansas City are completely tied up.

## WGR—"KEY CITY OF INDUSTRY"

(Continued from page 5)

Becker's sentences as they come over the air. He might tell you that he merely stumbled into Radio. Looks more as though he landed in it like a man who slipped on a banana peel. He was on jury duty about a year ago and from the court room, where he sat, he could see the WGR towers on top the Hotel Statler. He had plenty of time, as one sometimes does on jury duty, to think about other things and he made up his mind he would go to the station at the noon recess and see what a Radio station looked like.

When he went up to the station at noon, he ran into M. A. R., himself. Maybe their souls vibrate on the same plane or something. WGR wanted an announcer at that time. Becker was sick of the stocks and bonds game. And there you are.

About the same time that O. E. B. came to WGR, Robert Munn came along also. People affectionately know him as "Bob" Munn. And affection is right. Munn is nice. Everyone likes him. He is the sort that people usually impose upon. That is to say, he has the very devil of a time trying to say "no" to even the most impossible favor that a friend may ask of him.

Munn is tall, slender, dark and possesses a nervous quickness. He is a musician of real talent. He has a baritone voice much beyond the ordinary, can rattle the ivories of a piano something wicked and can get by at the pipe organ like a professional. But he is not interested in those things particularly, except as a vehicle which will help him to success along the road to musical composition.

When Edward Stanko first came to WGR he was in the same class in that respect as "Bob." But he isn't any more. Stanko is the chief operator. He is the chap that makes the wheels go round. He has done wonders with the apparatus at WGR. Ask him anything about Radio, except how he got into the game, and he will hold up his end of a complicated discussion. But when you ask him how he got into the game, he can't tell you. In fact, he admits that he can scarcely remember the time when he was not interested in Radio and the things connected thereto.

There was a time when WGR, like a lot of other stations, had to hustle to get programs, but that passed way back about

the time WGR graduated from class C to class B. Since then there has been an ever increasing demand for program bookings until at the present time Mr. Rigg is constantly booking engagements for two and three months in advance. This has developed a great variety of entertainers, but probably the best known to WGR listeners, outside of Harold Gieser and his Vincent Lopez Hotel Statler dance orchestra, which is a regular station feature, is W. H. F. Tenny. Mr. Tenny is an author and reads his own writings. He has his way of doing it which has proven extremely successful.

Mr. Tenny has fine, small hands and, somehow, they give one the impression that he is a small man but that is not true unless you can call a man who weighs 180 pounds small. He also has white hair, so white, in fact, that he admits himself that the picture accompanying this article is the first picture he ever had taken in recent years that showed whether he had any hair at all or not.

Harriet Shire is another entertainer who has found a great deal of favor with WGR listeners. This lady of the lyric soprano voice of a coloratura quality is tall, dark and energetic. She admits that her chief sport is "housekeeping" which is just another way of saying that she does not have time for the usual run of outdoor sports.

Then there is Bertha Drescher, who made such a stir at WGR, following her appearance before the microphone, when letters began to come in complimenting her on the singing of "June" by Mrs. H. A. Beach and "On the Wild Rose Tree" by Rotoli. Bertha Drescher is a soprano; teacher and student of voice. This summer she spent in the Catskills at High Mount, a pupil of Franz Troschowsky.

Don't get the idea from all this about individual achievement that progress at WGR is made by individual effort alone. It is. And it isn't. One cannot be around the studio long without being struck by the high degree of team work which Mr. Rigg has managed to establish.

### KFNF Heard Off San Pedro

SHENANDOAH, Ia.—KFNF, operated here by the Henry Field Seed company, has been heard during daylight approximately 500 miles of San Pedro, Calif., on a ship enroute to Honolulu. Operator Hudson H. Lyon of KDQZ, the S. S. Frank G. Drum, reported the record.

# Why it is Better

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Federal sockets are but another evidence of the care and engineering skill used in designing and making Federal Standard Radio Parts.

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1/16 inch thick brass nickel plated barrel; screw-anchored to base at two points.

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# CARING FOR YOUR NEW CHRISTMAS SET

## Part I—Ground and Batteries

By Harold O. Totten

Now that Christmas is over and a number of people have sets who never had them before, a word to the new fans on the care of their sets would not go amiss. This article will also help readers who have had sets before, but haven't known how to take the proper care of them.

One of the principal requisites for good reception is to have a good ground. By a good ground is meant a ground that is not a steam, gas or hot water pipe, but a cold water pipe.

To make the ground connection, scrape the pipe with a knife for a length of about 3 inches to remove the dirt and rust which may have accumulated on it. Then take a piece of emery cloth, sand paper or a file and rub it back and forth on the pipe until it is clean and bright (see figure 1).

Run a wire from the ground post of the set to the pipe and wrap it securely

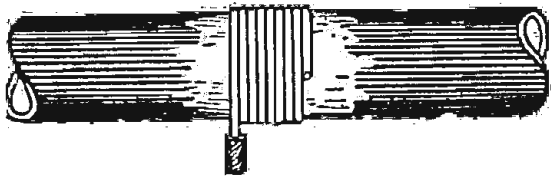


Figure 1

several times around the pipe so there is no possibility of it slipping. Now, either run hot solder around the pipe and wire or cover the wrapped portion of the pipe with tape. Be careful when doing this that the hot solder does not run off onto the arms and wrist or carpet that may be underneath. If soldered, the joint can be taped with friction tape to prevent corrosion at the joint. This will make as near a perfect ground as it is possible to get.

### Batteries Should Be Watched

One of the most important places to watch for trouble in a Radio set is at the batteries. If you are using a storage A battery, buy a syringe hydrometer—this will cost about \$1.50—with which to test the battery. This hydrometer will

This series of articles is for the fan who has been given or has bought a receiver for Christmas. It will also be of interest to the listener who has had a set, but who does not know how to give it proper care.

tell you whether or not your battery is fully charged, and also how far it is discharged at any time.

The hydrometer is a glass tube open at one end with a rubber bulb at the other end. Inside this glass tube is another tube called the float, one end of which is filled with shot. A printed scale is inside the float.

To tell the condition of a storage battery, unscrew the caps on the top of the battery. The electrolyte in the battery should come about one-half inch over the tops of the plates. Take the hydrometer in one hand, insert the open end in the battery solution and squeeze the rubber bulb. Release pressure on the bulb, allowing the electrolyte to enter the hydrometer, which will cause the float to rise. Lift the hydrometer out of the battery—being careful that no drops of electrolyte get on the carpet or floor—and read the scale at the point where it is at the surface of the solution.

When fully charged, the scale will read 1280 to 1300. Completely discharged, the scale will read 1150. Never under any condition allow a battery to run down below 1150.

### Top of Battery is "Live"

Keep all terminals clean. When terminals show signs of becoming coated with "salt" (a green or white flaky substance), take a knife and scrape the contacts clean. While doing this, take a rag and wipe off all excess electrolyte from the top of the battery. Keep top of battery clean and dry at all times.

The "red" terminal on a battery is always the positive terminal. It may also be marked Pos. or with a + sign. When in doubt as to which is positive and which is negative, half fill an ordinary drinking glass with salt; fill with water and stir. Run a wire from each terminal of the battery and hold them about one inch apart in the solution. Bubbles will appear on the negative wire.

Do not light a match to see how much electrolyte is in the battery. The hy-

drogen gas thrown off is liable to explode, causing serious injury to the offender.

Never lay tools on top of a battery as they may short circuit it, causing a complete discharge of the battery. Acid should not be added to a battery unless some has been spilled accidentally. Add nothing but distilled water.

In order to check up on the B battery voltage—whether these batteries be of the wet or dry type—purchase a high grade voltmeter reading 0-50 volts, which will cost about \$5.00 for checking the amount of voltage in the batteries (see figure 2).

When a 22½-volt battery drops to 17 volts, or a 45-volt battery drops to 34 volts, it is time to throw it away. Do not connect a new battery with an old one as the new battery will be drained exceptionally fast, and reception will be "noisy."

B batteries are always connected in series; this means that the positive terminal of one battery is connected to the negative terminal of the next.

In order to increase or lower the voltage applied to the plates of the tubes, terminals are provided on the batteries at various voltages to take care of this condition. These terminals are marked with the voltages which they represent.

Never try to determine the amount of current in a B battery by taking a screwdriver and touching it to the positive and negative posts in order to see "how big the spark is," as this is a certain method of running down the battery. Use a high resistance voltmeter, it gives the voltage available on a scale and does not depreciate the battery.

### Charging Storage "Bs"

The larger Radio sets using from three to eight tubes have become increasingly popular due to their wide range, power and receiving qualities. When a number of tubes are used, the drain on the B batteries becomes proportionately greater. For this reason the storage type of B batteries which can be recharged are now

widely used due to their economy and steady, dependable operation. The home type tungar battery chargers, which are so popular for charging A batteries, can be adapted for charging storage B batteries by means of a simple device, the B battery attachment.

This attachment is hung on the side of the charger and a short lead is clipped to the line tap in the 5-ampere tungar, or the soldered joint on the right of the transformer in the 2-ampere charger. The long lead from the attachment is connected to the positive terminal of the B battery and the negative tungar lead goes to the negative terminal of the battery. The positive tungar lead is not used and should be kept apart from the battery while charging. A 24-volt battery may be charged at 0.2 ampere and a 48-volt battery may be charged at 0.1 ampere.

Higher voltage batteries can be charged by using additional attachments. For instance, a 96-volt battery should be di-

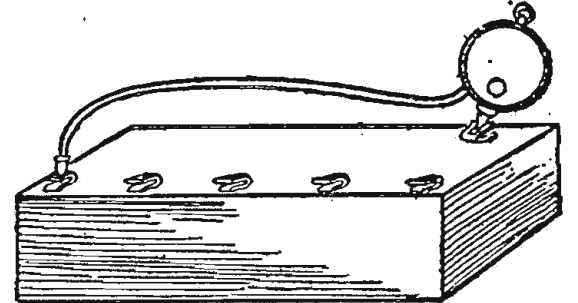


Figure 2

vided in half and the two negative terminals connected to the negative tungar lead. Two attachments are used, the short leads being both connected to the tungar as before and one long lead going to each positive battery terminal. Thus, the two sections of the battery are charged in parallel.

An overnight charge once in two or three weeks, will, in general, be sufficient to keep the B batteries in good condition. The length of the charge and further details may be obtained from the battery manufacturers' instructions.

**Editor's Note—In Part II Mr. Totten will outline for the new Radiophans some of the troubles that even the best sets will have and give methods of determining just where the trouble lies.)**

*and now—*  
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tune in any station you've ever heard—

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Simply pencil-mark any station on this cleverly contrived, beautifully silvered dial. Then forget its wavelength—turn the finder to your mark, and, without awaiting the announcer, **know** you hear this set station.

**Moreover**, the ULTRA-VERNIER is a single vernier tuning control. Replace your old dials with ULTRA-VERNIER Tuning Controls—**today!** At your dealer; otherwise send purchase price and you will be supplied postpaid.

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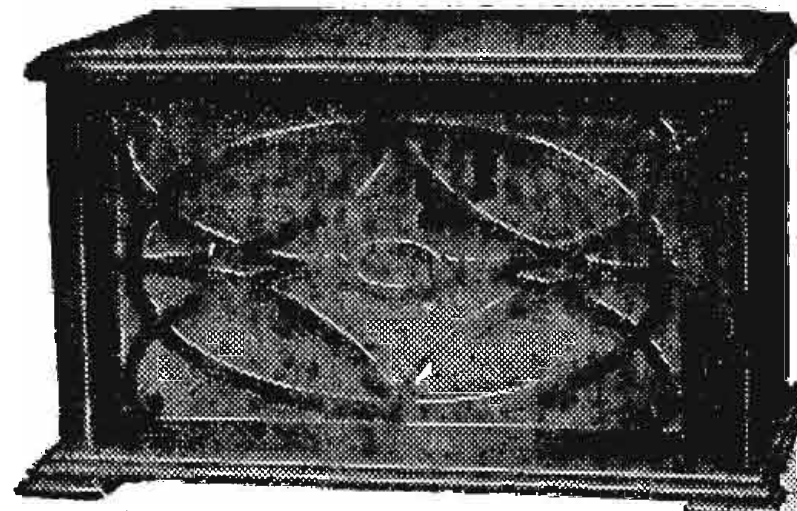
(SEE INSTRUCTIONS FOR USE BELOW)

Table with columns: Station and City, Met., Saturday, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday. Lists radio stations and their broadcast schedules.

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

Table with columns: Meters Call, Meters Call, Meters Call, Meters Call, Meters Call, Meters Call. Lists stations grouped by wave length.



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The New Cabinet Model

For those who admire the full, round, musical voice of the Audiophone, but prefer a cabinet design, we have brought out this splendid model.

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The case is real mahogany. The design is in keeping with the best furnishings. The size, 17x10x10 1/4, is just right for the top of your phonograph or your receiving set. The voice of the Audiophone is

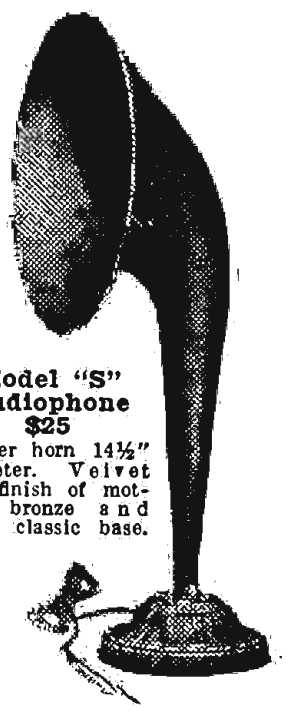
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It is a highly developed, electro-magnetic tone mechanism which reproduces with natural quality in most powerful tones, yet has a sensitiveness equal to any loud speaker developed.

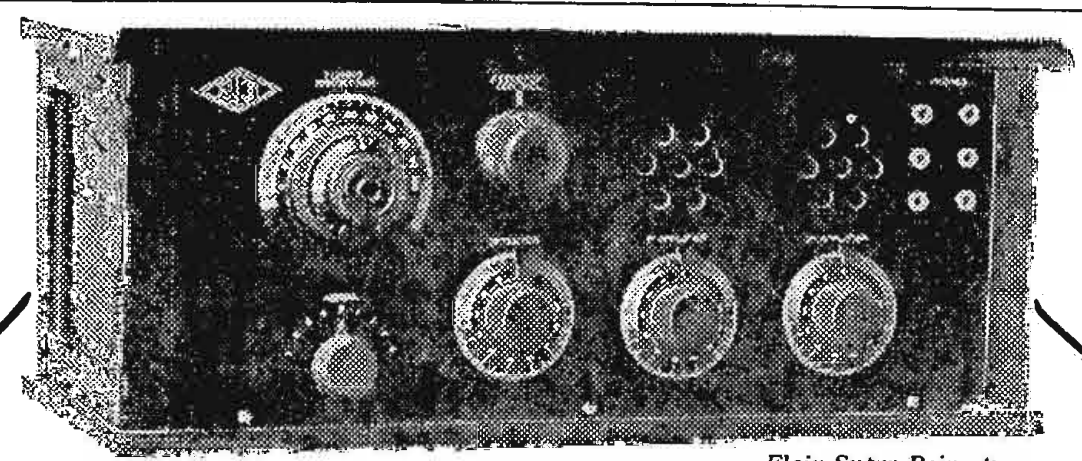
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The Elgin Super-Reinartz, 2LO Model Tuner spans the continent nightly at the hands of thousands of Radiophans. Through this highly efficient circuit amazing reception has been obtained. New York is entertained by KGO and Houston, Texas, listens in on WLAG with surprising regularity.

ELGIN Super-Reinartz "The Ford of Radio"

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# DANISH MUSIC AT WGBS SATURDAY

## Saturday, January 3

Saturday, silent night for: CHNC, KFKX, KOB, WCAP, WCBD, WEAQ, WEBJ, WEEL, WHAZ, WHO, WJY, WKBF, WMAK, WOI, WOO, WOS.

**CKAC, Montreal, Can. (Eastern, 437), 7 p. m.**, kiddies' stories in French and English; 7:30, Windsor hotel concert; 8:30, La Presse studio; 10:30, Windsor hotel dance program.

**KDKA, E. Pittsburgh, Pa. (Eastern, 326), 1:30 p. m.**, concert, Daugherty's orchestra; 6, dinner concert, Westinghouse band, T. J. Vastine, conductor; 7:30, children's period; 8:30, concert.

**KFNF, Shenandoah, Ia. (Central, 266), 6:30 p. m.**, program, Westinghouse band, T. J. Vastine, conductor; 7:30, children's period; 8:30, concert.

**KFOA, Seattle, Wash. (Pacific, 455), 8:30-10 p. m.**, Seattle Times concert; 10:05-11, Eddie Harkness' jazz orchestra.

**KFQX, Seattle, Wash. (Pacific, 238), 7:15-7:45 p. m.**, Aunt Vivien's bedtime story; 8-9, Earl Gray and his orchestra; 9-10, concert hour; 10-12, Earl Gray and his Butler hotel orchestra.

**KGO, Oakland, Calif. (Pacific, 312), 4-5:30 p. m.**, concert orchestra, Hotel St. Francis; 8, "Dulcy," drama in three acts, EGO players; 10-11 a. m., dance music, Henry Halstead's orchestra.

**KGW, Portland, Ore. (Pacific, 492), 10 p. m.**, dance music, Multnomah hotel strollers.

## Headliners of the Week

**I**F YOUR forefathers were Danes and came to this country while roaming the northern seas in those tiny valiant ships of olden days, you will wish to be reminded of these heroes by tuning in for the Danish program at WGBS, Saturday. The two-piano recital by artists pupils of Anna S. Veverka will make this evening's program at WCAE enjoyable to those who like classical music.

Shriners throughout the country will be interested in the memorial services to be broadcast by the LuLu Temple of Philadelphia, through WIP, Sunday, January 4. Many prominent statesmen and church dignitaries will be present.

J. P. Day will talk at WNYC, Monday, on "New York 100 Years from Now." It will be interesting to follow Mr. Day in his prophecy of future days. Do not think you have KFDM if you hear the Magnolia Petroleum company's band tonight. This is the Dallas band and is playing at WFAA.

The talk at KGO, Monday, by Charles W. Duncan, San Francisco advertising expert, will give the

business man some hints on the economic phases of advertising.

Tuesday night CKAC will do everything in its power to reach the "Petit Parisien" in Paris. One of the best known of newspaper men, Sir Campbell Stuart, editor-in-chief of the London Times, and Baron de Vitrolles, French consul general, will speak.

The Old Time String trio which has always been so popular at WOS, Jefferson City, will again please the Radiophans with old-fashioned tunes this Wednesday.

WBBF will give an unusually fine program Thursday night. Mrs. Trowsell, prominent Atlanta violinist, Helen Schaid, pianist, and T. C. Seidell, baritone will do their best to make this station famous.

South Africa seems a long way from Berrien Springs, Michigan, and yet college students from Cape Town, South Africa will give an entire program at WEMC (formerly KFGZ). There will be special talks on the life of the natives, native songs, talks about diamond mines and descriptions of this fascinating country.

dren's hour, Marjorie Tucker; 7:15, dinner music, Irving Boernstein's Washington hotel orchestra; 8:15, Bible talk; 8:30, Cornell Musical club concert; 10:30, Hotel Astor; orchestra; 11:15, Otto F. Beck, organist.

**WSAI, Cincinnati, Ohio (Central, 309), 8:15 p. m.**, Bicycle sextet; 8:45, Margaret Rolfe, violinist; Mercedes Voss, pianist; 9:15, Bicycle mixed quartet; Bicycle male quartet; 12, popular songs; 12:30, Freda Sanker's New Toadstool orchestra.

**WTAS, Elgin, Ill. (Central, 286), 6 p. m.**, Terrace Garden dance program, Fred Hamm and his orchestra; 9:30, Kimball studio hour; Lee Sims, pianist; 10:30, Terrace Garden supper dance orchestra; 11:30, Maximo Brown, Jay Gould.

**WTAY, Oak Park, Ill. (Central, 283), 6:45-7:45 p. m.**, Leon Switzer, baritone; Bella Marta, violinist; Jean Joyaux, soprano; 9-10, Ray Kroc, pianist; Hugh B. Marshall, tenor.

**WWJ, Detroit, Mich. (Eastern, 513), 3 p. m.**, the Detroit News orchestra.

## Sunday, January 4

Sunday, silent night for: CKAC, CHNC, KFKX, KFOA, KFQX, KOB, KSD, WAHG, WBAV, WCAE, WEAQ, WEBJ, WFL, WHAS, WHAZ, WHO, WKBF, WMAK, WMC, WNI, WNYC, WOI, WOO, WOR, WRC, WSAI, WTAY.

**CFAC, Calgary, Alta, Can. (Mountain, 430), 11 a. m.**, Knox Presbyterian church.

**CKAC, Montreal, Can. (Eastern, 437), 4:30 p. m.**, studio concert.

**KFNF, Shenandoah, Ia. (Central, 266), 3 p. m.**, religious services, Rev. Hort; 6:30, regular seedhouse chapel services.

**KGO, Oakland, Calif. (Pacific, 312), 11 a. m.**, service, First Presbyterian church, Rev. William Kirk Guthrie; 3:30 p. m., KGO Little Symphony orchestra, Carl Rhodehamel, conductor; 7:30, services, First Presbyterian church, Rev. William Kirk Guthrie.

**KTHS, Hot Springs, Ark. (Central, 375), 11-12:30 p. m.**, First Presbyterian church services, Chauncey Hickok, pastor; 8:30-10, Deluxe concert, ten-piece Meyer Davis orchestra.

**WBBR, New York, N. Y. (Eastern, 273), 9:10 p. m.**, I. B. S. A. choral singers; 9:20, Fred Franz, tenor; 9:30, Bible lectures; 10, Fred Franz, tenor; 10:10, I. B. S. A. choral singers.

**WBZ, Springfield, Mass. (Eastern, 337), 10:45 a. m.**, church services; 8:30-10 p. m., concert.

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

**WCAL, Northfield, Minn. (Central, 360), 8:30 p. m.**, sacred program, sermon, Rev. William C. Benson.

**WCAU, Philadelphia, Pa. (Eastern, 278), 5 p. m.**, talk; 6, Hotel Pennsylvania orchestra, Louis Baer, director.

**WCBD, Zion, Ill. (Central, 345), brass quartet, mixed quartet; Wiedman Sisters, Erma Reynolds, soprano; Mark Whiteside, baritone; Mr. and Mrs. R. M. Steel, soprano and tenor; Carl Newcomer, saxophonist; Gladys Taylor, pianist; Grace Detienne, reader.**

**WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:20 a. m.**, church service; 4:10 p. m., House of Hope Presbyterian church, Rev. H. C. Swearingen; 7:30, Second Church of Christ Scientist; 9:15, classical concert, Woodwind quintet.

**WCX, Detroit, Mich. (Eastern, 513), 6 p. m.**, dinner concert, Book-Cadillac hotel; 7:15, services, Central Methodist Episcopal church.

**WDAF, Kansas City, Mo. (Central, 411), 4-5 p. m.**, program, Harrisonville, Mo., band; 5-5:45, International Sunday school lesson, Dr. Walter L. Wilson.



Rose Mountain is one of the popular contraltos of WGY, Schenectady. She was heard recently on the Christmas Eve program and will be heard again this week.



Count Henri de Martini and his violin are heard via three stations, WJZ, WBAF and WEEL. He is a composer of note and won first prize at the Conservatory of Paris.



Edna La Verne Friebe has a voice like a bird. She has broken all records for singing high notes and reaches B flat above high C. Tune in Friday for WLS.

**KPD, San Francisco, Calif. (Pacific, 423), 1-2 p. m.**, Rudy Seiger's Fairmont hotel orchestra; 3:30-5:30, tea dansant, E. Max Bradford's Versatile band; 8-12, Art Weldner and his dance orchestra.

**KSD, St. Louis, Mo. (Central, 546), 8 p. m.**, program; 11:30, dance program, Varsity club orchestra.

**KTHS, Hot Springs National Park, Ark. (Central, 375), 8:30-10 p. m.**, concert; 10:30-11:30, dance frolic, Meyer Davis New Arlington hotel orchestra.

**KYW, Chicago, Ill. (Central, 536), 11:35 a. m.**, 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, Dorothy Congor, contralto; Dubuque Girls Novelty orchestra; 9:05, Youth's Companion; 9:35-11:30, Congress classic; 12-2 a. m., Congress hotel, Coon-Sanders Original nightbirds.

**WAHG, Richmond Hill, L. I. (Eastern, 316), 12 p. m.**, 2 a. m., Stuyvesant serenaders.

**WBAV, Columbus, Ohio (Eastern, 423), 9 p. m.**, Dick Fiddler's dance orchestra, Spring Lakes pavilion.

**WBBR, New York, N. Y. (Eastern, 273), 8 p. m.**, Watchtower trio, George Twarosch, Moses Carment, Chester Haughn; 8:15, Irene Klempeter, soprano; 8:20, Bible questions and answers, Judge Rutherford; 8:45, Irene Klempeter; 8:50, Watchtower trio.

**WBZ, Springfield, Mass. (Eastern, 337), 7:05 p. m.**, bedtime story; 7:30, concert, Hotel Kimball trio, 8, Albert D. Edwards, baritone; Ralph T. Entwistle, accompanist; 8:15, Joan Stuart, soprano; 9, Albert D. Edwards, baritone; 9:15, Edward Morgan, soloist; Robert Day, reader; 9:30, Hope Wright, violinist; 9:45, Hotel Brunswick orchestra; 10, music.

**WCAE, Pittsburgh, Pa. (Eastern, 462), 2:30 p. m.**, tea dansant music, 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, special feature; 8:30, two-piano recitals, artist-pupils, studios of Anna S. Veverka.

**WCAL, Northfield, Minn. (Central, 360), 12 midnight.**, musicale.

**WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m.**, home service, Betty Crocker; 8 p. m., "Fireside Philosophies," Rev. Roy L. Smith; 8:15, talk, Dr. Gray McClintock; 9:30, Paul Davin's Hotel Hudson orchestra.

**WCX, Detroit, Mich. (Eastern, 513), 6 p. m.**, dinner concert, Book-Cadillac hotel.

**WDAF, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m.**, the Star's Radio orchestra; 6-7, school of the air, piano tuning-in number on the Duo-Art; address, speaker to be announced; the Tell-Me-A-Story lady; music, Hotel Muehlebach Trianon ensemble; 11:45-1 a. m., Nighthawk frolic, the "Merry Old Chief" and the Plantation players.

**WDAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m.**, daily simanac; 12:02 p. m., Stanley theater organ recital; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra, Marcella North, pianist; 4:30, Cotton Pickers dance orchestra; 7:30, Arcadia cafe concert orchestra.

**WEAF, New York, N. Y. (Eastern, 492), 4-5 p. m.**, Dart's Brookline orchestra; 6-7, dinner music, Waldorf-Astoria orchestra; 7:30-7:50, boys' period, Fred J. Turner; 8-8:30, Eddie Foy Family, slingers; 8:30-9, authors' program, American Merchant Marine library; 9-9:45, Waldorf-Astoria orchestra, Joseph Knecht, director; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra.

**WFAA, Dallas, Tex. (Central, 476), 12:30-1 p. m.**, address, Epps G. Knight; 8:30-9:30, Blue Bonnet serenaders; 11-12, Adolphus hotel orchestra.

**WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m.**, Meyer Davis Bellevue Stratford concert orchestra; 3:05, Leonard Zupp and sons, zithra players; "Developing the Mind and Body in the Classroom," Mary C. Desmond; 4, Columbians dance orchestra; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal; 8, Mrs. Dose Boyie, soprano; Loretta Kern, pianist.

**WGN, Chicago, Ill. (Central, 370), 1:40 p. m.**, luncheon concert; 2:30, Lyon & Healy artist series; 3, rocking chair time; 5:30, Skeezix time; 6, organ recital, Lyon & Healy; 6:30, dinner concert; 8-9, classical period; 10-11, dance numbers, Don Deuter Drake orchestra.

**WGR, Buffalo, N. Y. (Eastern, 319), 2:30-4:30 p. m.**, Buffalo Courier and Enquirer musical program; 6-7:30, dinner music, Halpryd string quartet.

**WGY, Schenectady, N. Y. (Eastern, 380), 9:30 p. m.**, dance music, Phil Romano's orchestra.

**WHAS, Louisville, Ky. (Central, 400), 4-5 p. m.**, selections, Alamo theater orchestra, Harry S. Currie, conductor; "Just Among Home Folks," readings, Courier-Journal, Louisville Times; 7:30-9, concert, auspices Arthur Findling.

**WHN, New York, N. Y. (Eastern, 360), 6:30-7:30 p. m.**, Vincent Catanese and his Hotel Alamac orchestra; 7:30-8, Hotel Carlton Terrace orchestra; 8-8:15, Arthur Stone, blind jazz pianist; 8:30-9, Strand Roof entertainers; 10-10:30, Jimmy Clarke and his entertainers; 11-11:30, Connie's Inn with Leroy Smith's orchestra; 11:30-12, Roseland dance orchestra.

**WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m.**, Karl Bonawitz, organist; 3, Dal Ruch and his Arcadians dance orchestra; "Me and the Boy Friend," "The Only, Only One," "I Picked the Wrong One to Love," "Some Other Day," "No One Knows What Its All About," "Tell Me Dreamy Eyes," "Everybody Loves My Baby," "Follow the Swallow," "Too Tired," "Bye, Bye, Baby," "Show Me the Way," "Somebody Loves Me," 8:05, Hotel St. James dinner orchestra; 7, Uncle Wip's bedtime stories; 8, "Timely talks to Motorists," Gene Hoogie; 8:15, two plays, Emilio Krieger Norris School of Expression and Stage Art, "When the Whirlwind Blows," "He Said and She Said," 9, "In Fairyland," Kurtz Studio concert quartet, Isabella Guthrie, soprano, Edna Loreaux, contralto, Walter Starr, tenor and Paul Grant, baritone; 10:05, Art Coogan and his Club Madrid dance orchestra; 11:05, Karl Bonawitz, organist.

**WJJD, Mooseheart, Ill. (Central, 278) 7:15-8:15 p. m.**, Mooseheart theater orchestra; 9-12, dance music, Log Cabin.

**WJZ, New York, N. Y. (Eastern, 455), 7-8 p. m.**, Waldorf-Astoria dance orchestra; 10:30-11:30, Hotel Astor dance orchestra.

**WLB, Stevens Point, Wis. (Central, 278), 12 midnight.**, frolic.

**WLS, Chicago, Ill. (Central, 348), 7 p. m.**, lullaby time, "Big" Ford and "Little" Glenn; 7:15-12, Saturday midnite revue, Fiddlin' Tom Danduran, Gloomy Gnome Whitlock; Ralph Emerson, organist; Isham Jones and his College Inn orchestra; Carpenter and Ingram, "The Harmony Girls," Ford and Glenn; Walter

Peterson, "The Kentucky Wonderbean."

**WMAQ, Chicago, Ill. (Central, 447.5), 6 p. m.**, Hotel LaSalle orchestra; 6:30, Radio photologue, Hawaii, Paul P. Hoierman; 9, weekly Balaban & Katz Chicago theater revue.

**WMC, Memphis, Tenn. (Central, 501), 12 m.**, musical program, O. K. Houck Piano company; 8 p. m., bedtime story, Uncle Joe; 8:30, musical program.

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

**WNYC, New York, N. Y. (Eastern, 526), 6:30-7:30 p. m.**, Sun Wooding and his Club Alabam orchestra; 7:30-7:35, police alarms; 7:35-8:30, Chateau Four; 8:10-9:30, police quartet; 9:30-10:30, instrumental novelties; 10:30-10:40, police alarms and official weather forecasts.

**WOC, Davenport, Ia. (Central, 484), 7:30 p. m.**, discussion of the International Sunday school lesson, Rev. M. A. Getzendaner; 9, Louis Connor and his LeClaire hotel orchestra; song and novelty numbers, Peter MacArthur.

**WOO, Philadelphia, Pa. (Eastern, 509), 11 a. m.**, organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt.

**WOI, Ames, Ia. (Central, 360), 12:30 p. m.**, chimes.

**WOR, Newark, N. J. (Eastern, 405), 7:30 a. m.**, WOR morning gym class, direction of Arthur E. Gagley; 2:30-2:45 p. m., Lena Angelina Sena, soprano; Massimo Etzl, pianist; 2:45-3:15, Mme. Nina and Marie Artska, Russian Ballet school; 3:15-3:25, Lena Angelina Sena; 3:25-3:45, George Haddon Saxon club orchestra; 7:15-7:30, resume of day's sports, Jolly Bill Steinek; 9-9:15, "How to Live 150 Years," Dr. Frederick W. Collins.

**WQJ, Chicago, Ill. (Central, 448), 11-12 m.**, "Skating," A. T. Conway; 3-4 p. m., coffee klatsch; 7-8, dinner concert, Ralph Williams and his Rainbo Garden orchestra; Otis Pike Jester, soprano; Mary Thrash House, pianist; Sheppard Levine, tenor; Edie Overton, accompanist; 10-2, Ralph Williams and his Rainbo Skylarks; Jerry Sullivan; Harry Geise; the Melodians, Laurie, Eddie and Bennie; Brock Sisters, Julia and Ruth; Peggy McClure, prima donna; Lindsey Coons, baritone; Lew Butler, "The Gonna of Radio;" Bernard and Robinson, "The Dixie Stars."

**WRBC, Valparaiso, Ind. (Central, 278), 7:30 p. m.**, services.

**WRO, Washington, D. C. (Eastern, 469), 7 p. m.**, chil-

(Continued on page 10)



# ADVERTISING EXPERT TO TALK AT KGO

## Sunday, January 4

(Continued from page 9)

9:30, singers, First Christian church; 8:30-11, Lee's fox-trotters.

**WFI, Philadelphia, Pa.** (Eastern, 395), 1:30 p. m., chapel services, auspices Central Y. M. C. A.; talk, Dr. C. A. Barbour.

**WGN, Chicago, Ill.** (Central, 370), 11 a. m., Uncle Walt reads comes to the children; 11:15, twin organ recital, Chicago theater; 2 p. m., Lyon & Healy organ recital; 2:30, Tribuno Master artists concert; 3, Chicago Musical college; 9, "An Evening with the Great Composers," Charles H. Gabriel, Jr.; Drako concert ensemble.

**WGR, Buffalo, N. Y.** (Eastern, 319), 3-4 p. m., vesper service, Buffalo Federation of churches; 1-4:30, George Albert Bouchard, organist; 7:15, Central Presbyterian church service, William Wall Whidditt, organist, and Dr. Robert A. MacAlpine, speaker.

**WGY, Schenectady, N. Y.** (Eastern, 380), 11 a. m., service, First Presbyterian church; Rev. Robert W. Anthony, pastor; 3:35 p. m., WGY Symphony orchestra, Leo Klivon, conductor; L. Le Roy Pickett, baritone; 5, Dr. Frank Sill Rogers, organist; 7:30, service, First Presbyterian church, sermon, Rev. Robert W. Anthony; 9, Symphony orchestra; 10, selections, Hampton Institute quartet.

**WHAS, Louisville, Ky.** (Central, 400), 9:57 a. m., organ music; 10, church service, Fourth Avenue Presbyterian church, Rev. Dr. Charles W. Welch, pastor; Esther Metz, soprano; Mrs. Virginia S. Herrick, alto; Williams Layne Vick, tenor; William G. Meyer, baritone; William E. Conen, organist; 4, organ recital, George Latimer, organist; 4:30, choral evensong service, Christ Church cathedral; Ernest Arthur Simon, organist.

**WHN, New York, N. Y.** (Eastern, 360), 3-4 p. m., Queens County Christian Endeavor program, represented by Rev. Lyons of Queens Reformed church; 5-5:30, Roseland dance orchestra; 5:30-6, Olcott Vail

**CKAC, Montreal, Can.** (Eastern, 437), 1:45 p. m., Windsor trio; 4:30, 10 lessons.

**KFAE, Pullman, Wash.** (Pacific, 330), 7:30 p. m., Catherine Hunt, soprano, singing, "Les Papillons," "Little Slippers of the Rain," "Butterflies," "Come Down Laughing Streamlet," Margery Segessenmann, pianist, playing "Humoresque," "Etude in D Flat," "Scherzo," "Important Points in Poultry Raising," Prof. J. S. Carver; "Control of the Serious Hot Bod Disease," George L. Zundel; "Psychology in Industry," Dr. Carl I. Erickson; book chat, Alice L. Webb.

**KFMF, Shenandoah, Ia.** (Central, 266), 6:30 p. m., concert, seeshoo people and their friends.

**KFOA, Seattle, Wash.** (Pacific, 455), 5-6 p. m., Seattle Post-Intelligencer concert; 8-8:15, Sherman, Clay & company; 8:30-10, Seattle Post-Intelligencer concert.

**KFKX, Seattle, Wash.** (Pacific, 238), 7:15-7:45 p. m., Aunt Vivien's bedtime story; 8-9, Earl Gray and his orchestra; 9-10, concert hour; 10-11, Earl Gray and his Butler hotel orchestra.

program; 6, dinner concert, Book-Cadillae hotel; 8:30, musical program.

**WOAF, Kansas City, Mo.** (Central, 411), 3:30-4:30 p. m., the Star's string trio; 5-5:30, weekly Boy Scout program; 6-7, school of the air, piano tuning-in number on the Duo-Art; address, C. H. Cheney, seventh of a series of talks on banking; the Tell-Me-a-Story Lady; music, Hotel Muehlebach Trio; 8:30-9:15, "Around the Town with WDAF," 11:45-1 a. m., night hawk frolic, the "Merry Old Chief" and the Plantation players.

**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; Marcella North, pianist; 4:30, Isabella Sgarra, pianist; 7:30, Dream Daddy; 9:30, Stanley theater symphony orchestra; 10:03, Arcadia cafe dance orchestra; vaudeville features from Fay's theater.

**WEAF, New York, N. Y.** (Eastern, 492), 2:15-4:15 p. m., Government club meeting, Hotel Astor; 4:15-5,

10:50, "Diet and Health," Dr. Lulu Hunt Peters; 1-2 p. m., Henry Vander Zanden's Hotel Ambassador Trio; 4-4:30 Bert Dixon, baritone; Elmer Russ, accompanist; 7-8, Bernhard Levittow's Hotel Commodore dinner concert; 8-8:10, Wall Street Journal Review; 8:10-8:30, "American History," N. Y., U. Air College; 9:15-9:30, "Philosophy of Nutrition," Alfred W. McCann; 10:45-11:45, Jacques Green and his Club Beauville orchestra; Clark's Hawaiians.

**WLS, Chicago, Ill.** (Central, 345), 3:45-4:45 p. m., "Music in the Home," Miss Stroator; "Federal Constitution and Child Labor," Mrs. Florence Bennett.

**WLW, Cincinnati, Ohio** (Central, 423), 6 p. m., dinner hour concert, Cincinnati Post; 8-10, Times Star program; Times Star orchestra; Howard Hafford, tenor; Karl Kirksmith, cellist; Senator Schultz in monologues.

**WMC, Memphis, Tenn.** (Central, 501), 12 p. m., musical program, O. K. Houck Piano company; 8 p. m., bedtime story, Uncle Percy; 8:30, concert, Hotel Gayoso orchestra.

**WNYC, New York, N. Y.** (Eastern, 526), 7:30-7:45 p. m., police alarms; 7:55-7:40, health talk; 8:15-8:30, "New York 100 Years from Now," J. P. Day; 8:30-9:45, Riesenfeld's Rialto program, Rialto theater; 9:45-10, talk, Fred A. Wallis, commissioner, department of correction; 10-10:30, dance program; 10:30-10:45, police alarms and official weather forecasts.

**WOC, Oavenport, Iowa** (Central, 484), 9 p. m., Mrs. Frank W. Elliott, pianist; Mrs. Grace Huber-Lehmann, soprano; Mrs. William A. Kleinhenn, reader; Mrs. Harry Bartlett, violinist; 10, "The Rough Diamond," one-act comedy, dramatic club, W. Roy Van Allen, director.

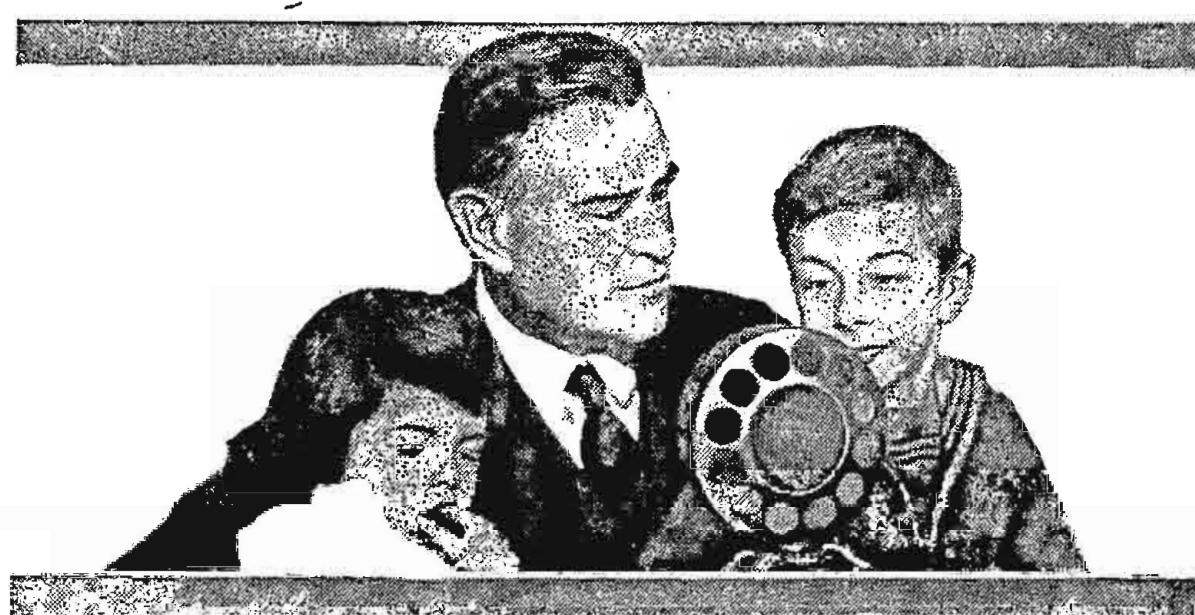
**WOI, Ames, Iowa** (Central, 380), 12:30 p. m., college chimes; "The Need of Planning the Year's Farm Business," 10, program, popular music.

**WOO, Philadelphia, Pa.** (Eastern, 509), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt; 7:30, A. Candelori and his Hotel Adelphia ensemble; 8:30, Harriette G. Ridley, pianist; 9, WOO orchestra, Robert E. Golden, director; 10:03, Mary E. Vogt, organist; 10:30, Vincent Rizzo and his Hotel Sylvania dance orchestra.

**WOR, Newark, N. J.** (Eastern, 405), 7-7:30 a. m., WOR morning gym class; directed by Arthur E. Bagley; 2:30-2:45 p. m., Mildred J. Pfumen, soprano;



Marie Kelly, reader, is heard Wednesday and Saturday nights at WEBB, Chicago. Her readings are enjoyed by many fans.



The Radio bedtime story man at WGBS tries out his tales on two young friends and is highly pleased at the results. As he softly finished his tale the two listeners shown happily dropped their lids and were wafted into slumberland.



Mabelle New Williams, violinist, will be heard from the Dugout studio of Station AT9, Fort Bragg, N. C., this week.

and his string trio; 10-10:45, Gem Razor entertainers; 11-11:30, Vanity club revue; 11:30-12, Alia and his Club Madrid orchestra with Lee Kent; 12-12:30 a. m., Harry Richman and his entertainers; Eddie Elkins and his orchestra.

**WHO, Des Moines, Ia.** (Central, 526), 11 a. m., church service, University of Church of Christ, sermon, Dr. C. S. Medbury.

**WIP, Philadelphia, Pa.** (Eastern, 509), 3 p. m., Shrine memorial services; Lulu temple, direction of Albert H. Ladner; 4:30, "Sunday Talk" meeting; "America's Greatest Sin," Fred E. Smith; 7:15, services, Holy Trinity chapel; 8:30, Symphonic concert, Bed Stad and his WIP Symphony orchestra; Karl Bonawitz, organist.

**WJJD, Mooseheart, Ill.** (Central, 278), 7:45-8:40 p. m., services, Roman Catholic; 8:40-9:40, organ recital, Albert F. Brown; 9:40-11, Protestant services; 3-4, regular Sunday concert.

**WJY, New York, N. Y.** (Eastern, 405), 8:15-10 p. m., Bernhard Levittow's Hotel Commodore concert orchestra; 10-10:15, "Reminiscences of a Reporter," William H. Crawford.

**WJZ, New York, N. Y.** (Eastern, 455), 9-10 a. m., children's hour, original stories by authors, music by composers; 2:30-3:30 p. m., Radio Bible class, auspices of Federation of churches; 3:30-4, "Practical Religion," Rev. Dr. Harry Emerson Fosdick; 4:45, vesper services, St. Georges church; 5:45-7, "The Dream of America," literary vesper, Edgar White Burrill; 7-8, Nathan Abas' Hotel Pennsylvania orchestra; 10-11, Hampton Institute quartet.

**WKBF, Providence, R. I.** (Eastern, 286), 10 a. m., chimes; 5 p. m., organ recital.

**WLS, Chicago, Ill.** (Central, 345), 6:30 p. m., Ralph Emerson, organist; 7-8, musical program, Walther League of the Lutheran church.

**WLW, Cincinnati, Ohio** (Central, 423), 9:30 a. m., school, editorial staff of Sunday School Publications, Methodist Book Concern; 11, services, Church of the Covenant, Dr. Frank Stevenson, minister; 7:30 p. m., services, First Presbyterian church, Dr. Frederick McMillan, minister; 8:30, concert, Western and Southern orchestra, William Kopp, director; Carl Wunderle, zither soloist.

**WMC, Memphis, Tenn.** (Central, 501), 11 a. m., services, First Baptist church, Rev. A. U. Boone, pastor.

**WOC, Oavenport, Ia.** (Central, 484), 3 p. m., Presbyterian church, Rev. H. C. Cooke; 9:30, The Palmer School Radio orchestra, Erwin Swindell, conductor.

**WOO, Philadelphia, Pa.** (Eastern, 509), 10:30 a. m., services, Bethany temple; 2:30, Sunday school services, Bethany temple; 6:05, organ recital, Clarence K. Bawden; 7:30, services, Bethany temple, Rev. Gordon A. MacLennan, minister.

**WOS, Jefferson City, Mo.** (Central, 440.9), 7:30 p. m., First Methodist church, Rev. J. E. McDonald, pastor.

**WQJ, Chicago, Ill.** (Central, 448), 10:30 a. m., sermon, Dr. Preston Bradley; 8-10, Ralph Williams and his Rainbow Garden orchestra; Mrs. E. Spring, accompanist; Jeanette Gledeman, soprano; Dr. Joseph A. Carey, baritone; Maria Dnaprova, Russian soprano; Carl G. Linner, pianist.

**WRBC, Valparaiso, Ind.** (Central, 278), 7:30 p. m., music.

**WSAI, Cincinnati, Ohio** (Central, 309), 3 p. m., chimes concert; 3:10, serenade.

**WTAS, Elgin, Ill.** (Central, 286), 2 p. m., Villa Olivia Star Sunday concert; 6, Fred Ham and his Terrace Garden orchestra; 9:30, Kimball studio hour; Lec Sims; 10:30, Terrace Garden supper-dance program; 11:30, Jay Gould, Maxine Brown, Jimmy Eggert, Jack Little, Paul Small, Lew Butler, Joey Stoolie, Lindsey Coons, Betty Holme, Bahe June.

**WWJ, Detroit, Mich.** (Eastern, 513), 11 a. m., services of the St. Paul's Episcopal cathedral; 2 p. m., the Detroit News orchestra.

**KGO, Oakland, Calif.** (Pacific, 312), 3 p. m., studio musical program; 4-5:30, Henry Halstead's dance orchestra; 5:30-6, Aunt Betty stories and KGO Kiddies' Club; 8, Arlon trio; "Water for the Farm and the Farm Home," Prof. P. L. Hibbard; "A Lesson in English," Wilda Wilson Church; economics course, Charles W. Duncan; "Chats about New Books," Joseph H. Jackson; 10-11 a. m., dance music, Henry Halstead's orchestra.

**KOB, State College, N. M.** (Mountain, 360), 7:30-8:30 p. m., Arlet trio, Mrs. Alice B. Marshall, director.

**KSAC, Manhattan, Kan.** (Central, 341), 12:30 p. m., tuning in piano selection, Osceola Hall Burr; talk, W. R. Martin; "Heat Dairy Cows' Drinking Water," J. W. Linn; 7:20, college bell and opening exercises; 7:30, "History of the Development of the Hog Industry," A. D. Weber; 7:40, Radio College quartet; 7:45, "Business Side of Purebred Dairy Cattle Breeding," J. B. Fitch.

**KSO, St. Louis, Mo.** (Central 546), 7 p. m., music and specialties Missouri theater; 9, music program, Grand Central theater.

**KTHS, Hot Springs, Ark.** (Central, 375), 8:30-10 p. m., down on the farm program, including old-time hoe-down tunes; French harp selections and songs, Luke Hight; banjo, harp, and Mack Hight, fiddler; 10:30-11:30, Chicago serenade dance program.

**KYW, Chicago, Ill.** (Central, 536), 6:30 a. m., morning exercises, Paul Leonhardt; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob.

**WAHG, Richmond Hill, L. I.** (Eastern, 316), 8-8:15 p. m., Emory Deutsch, violinist; 8:15-8:30, Thomas Stevens, Irish tenor; 8:30-8:45, Besse Liebowitz, pianist; 8:45-9, Elsie Edwards, soprano; 8-9:15, Irving Piaternberg, pianist; 9:15-9:30, Harold Pratt, tenor; 9:30-9:45, Emory Deutsch; 9:45-10, Thomas Stevens; 10-10:15, Besse Liebowitz; 10:15-10:30, Elsie Edwards; 10:30-10:45, Ascluto Brothers dance orchestra; 12-2 a. m., dance orchestra.

**WBFB, Atlanta, Ga.** (Central, 270), 9-10 p. m., Hamnett Mungler, pianist; Nellis Mungler, violinist; Mrs. G. C. Mungler, violinist; Mrs. Annie Mueller Mungler, pianist.

**WBGG, Mattapoisett, Mass.** (Eastern, 248), 8 p. m., Biltmore orchestra.

**WBRR, New York, N. Y.** (Eastern, 273), 8 p. m., watchtower string quartet; 8:10, Carl Park, violinist; 8:20, world news digest, Editor Golden age; 8:40, Carl Park, violinist; 8:50, watchtower string quartet.

Prof. Leroy Arnold, Columbia university; 6-7, dinner music, Waldorf-Astoria orchestra; 7:10-8:30, Strand theater program; 8:45-9, Leslie Joy, baritone; 9-10, A. and P. Gypsies; 10:15-10:30, Richard McClanahan, pianist; 10:30-11:30, Midnight Sons orchestra.

**WEEI, Boston, Mass.** (Eastern, 303), 6:30 p. m., Boston Edison Big Brothers club; 7, Dok-Eisenbourg and his Sinfonians; 7:30, talk, Edwin E. Turner, Jr.; 7:40, Dok-Eisenbourg and his Sinfonians; 8, program, courtesy, C. F. Hathaway & Sons, wholesale bakers; 8:30, Courtney Bird and his "Uke"; 8:45, Buddy's Bostonians; 9:30, Gertrude La Puri Drisko, dramatic soprano; Lillian Breslin, soprano; Alice Walsh Hutchinson, accompanist; 10, musicale; 10:30, Dok-Eisenbourg and his Sinfonians.

**WEMC, Berrien Springs, Mich.** (Central, 286), 8:15-8:30 p. m., Jeanette Richardson, soprano; 8:30-8:40, Owen Blake, trombonist; 8:40-8:50, Prof. H. L. Pearson, reader; 8:50-9:05, Betty Kelly, pianist; 9:05-9:15, Cyril Kellman, clarinetist.

**WFAA, Dallas, Tex.** (Central, 476), 12:30-1 p. m., address, Dr. J. B. Cranfill; 8:30-9:30, Magnolia Petroleum company's Dallas band, Paul E. Ashley, director.

**WFI, Philadelphia, Pa.** (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:15, cantata students of Hanna school; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal.

**WGN, Chicago, Ill.** (Central, 370), 1:40-2:30 p. m., luncheon music, Drake concert ensemble, Blackstone string quintet; 2:30-3, recital, Lyon and Healy concert hall; 3-3:30, rocking chair time.

**WGR, Buffalo, N. Y.** (Eastern, 319), 2:30-4:30 p. m., Buffalo Courier and Enquirer musical program; 6:30-7:30, dinner music, Vincent Lopez Hotel Statler dance orchestra; Harold Gieser, director; 9-10, musical program, direction of Dr. David W. Lang; 10-11, musical program, Buffalo Trust company, Cecile Kertz, director; 11:30, supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

**WGY, Schenectady, N. Y.** (Eastern, 380), 7:45 p. m., William A. Fisher, pianist; John Dick, baritone; Eleanor Johnson, flutist; William A. Fisher, pianist.

**WHAS, Louisville, Ky.** (Central, 400), 4-5 p. m., selections, Alamo theater orchestra, Harry S. Currie, conductor; readings, Courier-Journal, Louisville Times.

**WHAZ, Troy, N. Y.** (Eastern, 380), 9 p. m., "The Masque of Troy," presents "So There," "That Brute Simmonds," John M. Francis, director.

3-3:15, Mildred J. Pfumen; 3:15-3:30, talk, Charm magazine; 6:15-7:15, "Music While You Dine," Dave Harmon's Cinderella orchestra; 7:15-7:30, resume of day's sports; Jolly Bill; 8:30-9:30, Albert Vert-champ, violinist; 8:30-9:30, musical program, Bradford theater; 9:30-9:45, Dr. Frank Vitzelitz, lexicographer; 9:45-10:45, Dr. Sigmund Spaeth, musical critic and his party.

**WOS, Jefferson City, Mo.** (Central, 440.9), 8 p. m., Harry Snodgrass, pianist.

**WQJ, Chicago, Ill.** (Central, 448), 11-12 m., "Home Economics Talk," Marcia Meadows; "Balance and Distribution of Ornaments and Furnishings," Sterling Bryan McDonald; "Feast for Health," J. Schinkel; 3-4 p. m., "Lodine in France," Helen Harrington Downing; "The Care of the Hair," Madame Untingford.

**WRC, Washington, D. C.** (Eastern, 469), 4 p. m., book reviews, auspices League of American Pen Women; 4:20, talk, National Geographic society; 4:30, tea music, Meyer Davis' New Willard hotel trio; 6, children's hour, Peggy Aiblon.

**WSAI, Cincinnati, Ohio** (Central, 309), 10 p. m., Doc Howard's Cuvier entertainers.

**WTAS, Elgin, Ill.** (Central, 286), 8-12 midnight, Villa Olivia Monday night program.

**WV, Detroit, Mich.** (Eastern, 513), 3 p. m., The Detroit News orchestra; 7, The Detroit News orchestra; Ina M. Lockart, alto; T. Stanley Pory, tenor.

## Tuesday, January 6

Tuesday, silent night for: CHNC, KFAE, KFKX, KFMF, KOB, WAHG, WBRR, WCAL, WCAP, WCB, WCCO, WEAO, WEMC, WHAZ, WHO, WOC, WOI, WOO, WOS.

**CKAC, Montreal, Can.** (Eastern, 437), 7 p. m., kiddies' stories in French and English; 7:30, Windsor hotel concert ensemble; 8:30, La Presse studio entertainment; 10:30, Windsor hotel dance orchestra; 12 midnight, Capitol theater quartet; greetings, Sir Campbell Stuart, editor in chief of the London Times; Baron de Vitrolles, French consul general.

**KFDM, Beaumont, Texas** (Central, 306), 8 p. m., musical concert.

**KFOA, Seattle, Wash.** (Pacific, 455), 12:30-1:30 p. m., Kiwanis club weekly luncheon; 5-6, Seattle P. I.; 6-6:30, Seattle P. I. concert; 5:45-8:15, Rhodes Department Store studio program; 8:30-10, Seattle P. I. musical program; 10:05-11, Eddie Harkness' Jazz orchestra.

**KFKX, Seattle, Wash.** (Pacific, 238), 7:15-7:45 p. m., bedtime story, Aunt Vivien; 8-9, Earl Gray and his orchestra; 9-10, concert hour; 10-11, Earl Gray and his Butler Hotel orchestra.

**KGO, Oakland, Calif.** (Pacific, 312), 4-5:30 p. m., concert orchestra, Hotel St. Francis; 8, Adelphi club; Mrs. Floyd J. Collar, soprano; Mabel Mellia Shires, alto; Mme. Matrice Couchot, soprano; Mrs. Philip Eberhart, pianist; program, "D" Radio company; mixed quartet selections, Metropolitan Four, Thelma Waril, soprano; Sylvia Haspao Spaulding, alto; Harold Spaulding, tenor; Philip Pedgriff, bass; Vera Parker, accompanist; 10-11, dance music, Henry Halstead's orchestra.

**KSAC, Manhattan, Kan.** (Central, 341), 12:30 p. m., tuning in piano selection, Osceola Hall Burr; "Earvesting and Storing Ice," W. G. Ward; "Green Feeds for Poultry," D. J. Taylor; 7:20, college bell and opening exercises; 7:30, "Place of Alfalfa in Kansas Agriculture," J. C. Mohler; 7:40, Radio College trio; 7:45, "The Production of Hatching Eggs," L. F. Payne.

**KSO, St. Louis, Mo.** (Central, 546), 4 p. m., home economics program; 6, concert, Benjamin Bader's orchestra, Missouri Athletic association; 9 program.

**KTHS, Hot Springs, Ark.** (Central, 376), 8:30-10 p. m., concert, Arthur Platz Vocal studio; Natalie Briggam, violinist.

**KYW, Chicago, Ill.** (Central, 536), 11:35 a. m., table talk, Mrs. A. J. Peterson; 2:35-4 p. m., afternoon frolic; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 7:30-7:45, Around the Town with KYW in Chicago; 8-8:20, musical program; 8:20-8:45, speeches, auspices American Farm Bureau federation; 8:45-9:30, continuation of musical program; 10-11:30, evening at home.



Marcella North, pianist, will be heard again at WDAF, Philadelphia, Tuesday, January 6.



Marion Gaines, pianist, blues singer and society debutante is one of WSB's favorite stars.

## Monday January 5

Monday, silent night for: CKAC, KYW, WBAY, WCAL, WEAO, WEBB, WEBJ, WFI, WHAS, WIP, WJY, WLS, WKBF, WMAK, WMAQ, WNI, WQJ, WRC, WTAY.

**CHNC, Toronto, Can.** (Eastern, 350), 8:30 p. m., instrumental trio, Frank Biechford, Lionel Bilton, Simeon Joyce; Aeolian quartet, Walter Haynes, 1st tenor; Lawrence Defoe, 2nd tenor; Charles Schearer, baritone; A. E. Vandervoort, bass; Vera McLean, alto; Agnes Adie, soprano.

**WBZ, Springfield, Mass.** (Eastern, 337), 7:30-8 p. m., University extension courses; 8-10:30 p. m., concert; 11:30-12, McEnelly's Singing orchestra.

**WCAE, Pittsburgh, Pa.** (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaysee; 7:45, address; 8:15, address, H. F. Buckler; 8:30, concert, quartet, Lillian Feldman, director; 10:30, High of the Mythical Dirigible, Press-Kaysee and orchestra concert.

**WCAU, Philadelphia, Pa.** (Eastern, 278), 6 p. m., Hotel Pennsylvania orchestra, direction, Louis Baer; 7:30, household talks; 8, recital.

**WCBO, Zion, Ill.** (Central, 345), 8 p. m., Junior choir, Fred Faassen organist; trombone quartet; Arthur Rendall, clarinetist; E. B. Payton, baritone; Mrs. Esther Cook Rendall, soprano; L. J. Hira, violist; Eleanor Phil, pianist; Mrs. S. H. DaPew, reader.

**WCCO, Minneapolis-St. Paul, Minn.** (Central, 417), 10:45 a. m., "Recife Exchange," Betty Crocker; 2 p. m., woman's hour, "My Job," Byrd Frost Crowell; 2:30, matinee musical; 4, magazine hour, "Prolude," Edgar Valentine Smith; 5:30, children's hour, Mrs. B. G. Cargill; 8, sport talk; 8, "Current Events," W. P. Lemon; 8:30, Fort Snelling Third Infantry band; travclogue, "Hawaii, Guam, Philippines," Capt. Raymond C. Wolfe; 10, Dick Long's Nankin Cafe orchestra; Mrs. W. H. Grinden, mezzo-soprano.

**WCX, Detroit, Mich.** (Eastern, 513), 4:15 p. m., musical

**WHN, New York, N. Y.** (Eastern, 360), 6:30-7:10 p. m., Vincent Canese and his Hotel Alamae orchestra; 7:10-7:30, fashion chats, Mme. Belle; 7:30-8, Hotel Carlton Terrace orchestra; 8-8:05, "Storage Batteries," H. B. Shontz; 8:05-8:20, Roseland dance orchestra; 8:50-9:20, Littleman's Employees orchestra; 9:20-9:30, Richard B. Gilbert with his taropatch; 9:30-9:35, "How to Get What You Want," Mrs. Genevieve Behrend; 9:35-10, Dan Gregory and His Crystal Palace orchestra; 10-11, Jack Shack orchestra; 12-12:30, Lou Gold and his orchestra, direct from Wigwam club.

**WHO, Des Moines, Iowa** (Central, 526), 7:30-9 p. m., "Care of Teeth," Emma Welsgarber; Herman A. Breithaupt, zither soloist; classical program, Dean Cowper, director; 11:15-12, L. Carlos Meier, organist.

**WIP, Philadelphia, Pa.** (Eastern, 509), 1 p. m., Gimbel tea room orchestra, Ray Steen, director; 3, Bible talk, J. C. Calhoun; 6:05, Hotel St. James dinner orchestra; 7, Uncle Wip's bedtime stories; dancing lessons, Miller Conservatory of Dancing.

**WJJD, Mooseheart, Ill.** (Central, 278), 3:30-4:30 p. m., music, Mooseheart children; 6:30-7:15, Albert F. Brown, organist; 7:15-8:15, Mooseheart Novelty orchestra; talk, Ben Oswald; 11:30-12:30, request program, organ music, Mr. Brown.

**WJZ, New York, N. Y.** (Eastern, 455), 10:20 a. m., housewives' league menu, Mrs. Julian Heath; 10:20-10:30, shoppers' guide, Mrs. Pauline Peck; 10:40-

(Continued on page 11)



# SOUTH AFRICAN PROGRAM AT WEMC

## Tuesday, January 6

(Continued from page 10)

**WBAV**, Columbus, Ohio (Eastern, 423), 8 p. m., program of popular and semi-classical numbers, WBAV orchestra, Frances Handibeau, director.

**WBZ**, Springfield, Mass. (Eastern, 337), 8:30-10:30 p. m., concert; 11:30-12, organ concert.

**WCAE**, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, special feature; 8, vocal quartet, Fred Johnson, director; 9, concert, National Carbon company's Eveready entertainers; 10, concert, Goodrich Silvertown Cord orchestra; 11, concert, artists and orchestra, Nixon restaurant.

**WCAU**, Philadelphia, Pa. (Eastern, 278), 6 p. m.,

man, bass; 11-12, Palace theater grand organ, Dwight Brown.

**WFJ**, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; Loretta Kerk, pianist; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal; 9, Eveready Hour from WBAF; 10, Goodrich Silvertown Cord orchestra from WBAF.

**WGN**, Chicago, Ill. (Central, 370), 1:40-2:30 p. m., luncheon music, Drake Concert ensemble, Blackstone string quintet; 2:30-3, recital, Lyon and Healy concert hall; 3-3:30, rocking chair time; 6-6:30, Lyon and Healy organ recital; 6:30-7, dinner music, Drake Concert ensemble, Blackstone string quintet; 8-9, classic hour; 10-11, Jazz seampar, dance orchestra.

**WGR**, Buffalo, N. Y. (Eastern, 319), 2:30-4:30 p. m., Buffalo Courier and Enquirer musical program; 6-7:30, dinner music, Hallpyrd string quartet; 9-10, "Eveready Hour," jointly with WBAF; 10-11, Goodrich Silvertown Cord orchestra, jointly with WBAF.

**WGY**, Schenectady, N. Y. (Eastern, 380), 2 p. m., "Women in Industry," Mrs. A. Dingman; 6:30, dinner

in Poultry and Egg Marketing," F. A. Gougler; 3:45-4:15, homemakers' hour; "The Budget Every Housewife Should Understand," Mrs. W. E. Fribley; 6:30, Ralph Emerson, organist; 6:50, specialties, Senate Theater studio; 7, lullaby time, Ford and Glenn; 7:15, Miriam Worrell, contralto; Alfred Stoddard, tenor; 7:30, Isham Jones and his College Inn orchestra; 7:45, "Treasure Island," Anthony Wons; 8-9, evening R. F. D. program; Grace Wilson, contralto; Feeding Dairy Cattle," Prof. Frank B. Morrison; "What the Farm Bureau Has Done and is Doing to Solve the Farmers' Transportation Problems," L. J. Quasey; 9, Art Kahn's Senate Symphony orchestra; 9:15, WLS theater, Anthony Wons; 9:45, Florence K. White, soprano; 10, Evans' Brothers Male quartet; 10:30, Isham Jones and his College Inn orchestra; 10:40, Ford and Glenn time; 11, "A Nite Among the Heather," Scotch program, Jessie and Nan Muir; 12, midnight review, Ralph Emerson, organist.

**WLW**, Cincinnati, Ohio (Central, 423), 12:15 p. m., program, Delta Omicron sorority; talk on automobiles, Henry Schlenker; dance numbers, Woody Meyer's orchestra; 4, Mab Jongg lecture, Lucy Blackburn; recital, pupils William Kyle; "What is Evolution," M. V. Whitacre; 6, dinner hour concert, courtesy Cincinnati Post; 10, Keefe-Koeker orchestra; 10:30, concert, courtesy Radio division, Ohio Rubber and Textile company; quartet; special numbers, Pat Berryman, banjoist; Leonard Henkel, saxophonist; Forrest Bradford, pianist; Paul Specht's Post Lodge orchestra.

**WMAK**, Lockport, N. Y. (Eastern, 273), 8:15 p. m., musical program, Mrs. Erlison H. Merritt, director.

**WMC**, Memphis, Tenn. (Central, 501), 12 m., musical program, O. K. Houck Piano company; 8 p. m., bedtime story, Uncle Jerry; 8:30, musical program; 11, midnight frolic.

**WNJ**, Newark, N. J. (Eastern, 233), 10:30-11 p. m., Frank Daily and his famous "Meadowbrook" orchestra; 11:11-30, Jimmy Clark and his Broadway entertainers; 11:30-12, Original Dixieland jazz band; 12-12:30 a. m., dance music, Frank Daily and his Meadowbrook dance orchestra.

**WNYC**, New York, N. Y. (Eastern, 526), 7:30-7:35 p. m., police alarms; 7:35-7:45, sports analysis, Thornton Fisher; 7:45-8:45, dance program; 8:45-9, piano recital; 9-10:30, Brooklyn Mark Strand program, Edward L. Hyman; 10:30-10:40, police alarms and official weather forecasts.

**WOL**, Ames, Iowa (Central, 360), 12:30 p. m., "Planning a Cropping Program," Doctor C. L. Holmes.

**WOO**, Philadelphia, Pa. (Eastern, 509), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt.

**WOR**, Newark, N. J. (Eastern, 405), 7-7:30 a. m., WOR morning gym class; 2:30-3:15 p. m., Josephine Levandoski soprano; 3:15-3:30, Josephine Levandoski; 6:15-6:30, "Music While You Dine," Harry Lafferty's Canary Cottage Inn orchestra; 6:30-7, man in the moon stories for children, Josephine Lawrence and Wm. F. B. McNeary, courtesy Newark Sunday call; 7-7:15,

Evelyn Sparlin, violinist, playing "Meditation from Thais," "Serenade," "Berceuse from Jocelyn," "Concerto in E. Minor," Norma Sparlin, pianist, playing "Minuet in G," Margarete MacLachlan, violinist, playing "Old Refrain," "Indian Lament," "Flower Song," violin duets, Evelyn Sparlin, M. McLaughlin; "Relation of Chemistry to Medicine," Dr. C. C. Todd; "Pointers on Dairy Farming," Prof. E. V. Ellington; kitchen arrangements, Gladys Gallup; book chat, Alice L. Webb.

**KFNH**, Shenandoah, Ia. (Central, 266), 6:30 p. m., concert, Elk's band, Harry Day, director.

**KFOA**, Seattle, Wash. (Pacific, 455), 12:30-1:30 p. m., Seattle Rotary club weekly luncheon program; 5-6, Seattle P. I.; 6:30, Seattle P. I. concert; 6:45-8:15, Hopper-Kelly Music company; 8:30-10, Seattle Times studio concert.

**KFGX**, Seattle, Wash. (Pacific, 238), 7:15-7:45 p. m., bedtime story, Aunt Vivien; 8-9, Earl Gray and his orchestra; 9-10, concert hour; 10-11, Earl Gray and his Butler hotel orchestra.

**KGO**, Oakland, Calif. (Pacific, 312), 3 p. m., musical program and speaker, Cora L. Williams Institute; 4-5:30, concert orchestra, Hotel St. Francis.

**KOB**, State College, N. M. (Mountain, 360), 7:30-8:30 p. m., College male quartet; vesta Frisch, pianist; vocal solos, Wilburn Patrick; "The Relation of Agricultural Research to the Agriculture of the State," Prof. Fabian Garcia; "The Climate of New Mexico," R. E. McBride.

**KSAC**, Manhattan, Kan. (Central, 341), 12:30 p. m., tuning in piano selection, Osceola Hall Burr; "A Story of the Three Good Kafirs," H. R. Sumner; "The Value of Kafr for Poultry Feeding," D. J. Taylor; 7:20, college bell; 7:30, "What Constitutes a Good Public Road," L. E. Conrad; 7:40, Harold Flamm, soloist; 7:45, "Expression in Architecture," Paul Weigel.

**KSD**, St. Louis, Mo. (Central, 548), 6:45 p. m., Aberg's Concert ensemble; Arne Arneson, violinist; 11, dance program, Varsity club orchestra.

**KTHS**, Hot Springs, Ark. (Central, 375), 8:30-10 p. m., concert, Conservatory of Music, Etho. Cline Foner, director; 10:30-11:30, jazz concert, New Arlington hotel orchestra.

**KYW**, Chicago, Ill. (Central, 536), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 8-9, musical program, Sherwood School of Music; 9:05, talk, "Many Problems in One," president of American Meat Packers; 9:45-2:30 a. m., midnight revue.

**WAHG**, Richmond Hill, L. I. (Eastern, 316), 7:30-11 p. m., Brooklyn Daily Eagle special program.

**WBZ**, Springfield, Mass. (Eastern, 337), 8:30-10:30 p. m., concert; 11-12, dance program, Leo F. Reisman and his Hotel Brunswick orchestra.

**WBBR**, New York, N. Y. (Eastern, 273), 8 p. m., Frank Wood, flutist; 8:10, Fred Twarosch, tenor; 8:20, Bible lecture; 8:40, Fred Twarosch, tenor; 8:50, Frank Wood, flutist.

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

**WCAU**, Philadelphia, Pa. (Eastern, 278), 6 p. m., Hotel Pennsylvania orchestra, direction, Louis Baer; 7:30, fashion talk, Mlle. Madeleine; 8, Breyer Ice Cream half hour of songs.

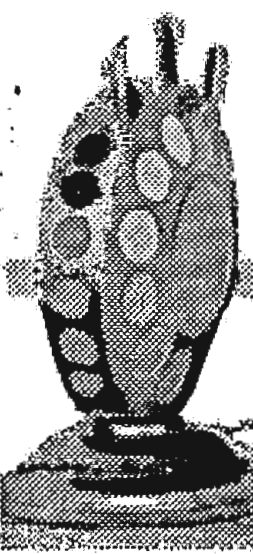
**WCCO**, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., "Oven Temperatures," Valentine Thorson; 2 p. m., woman's hour; 2:30, matinee musical; 4, Transfiguration of Miss Philury; 5:30, children's hour, Alpha Stalson; 7, St. Olaf's Lutheran church, Rev. O. H. Sletten, pastor; 9, classical concert; 10, Arnold Frank's Casino orchestra.

**WCX**, Detroit, Mich. (Eastern, 513), 4:15 p. m., musical program; 6, dinner concert, Book-Cadillac hotel; 8:30, musical program.

**WDAF**, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., the Star's string trio; 6-7, school of the air, piano tuning in number on the Duo-Art; address, speaker, auspices Health Conservation association; address, speaker, auspices Meat Council of Greater Kansas City, the Tell-Me-a-Story Lady; musto, Hotel Muehlebach Trianon ensemble; 8-9:15, classical pro-



Rose Brown is called "The Girl with the Charming Voice," and plays the lead in many of the radio plays at KGO. She is Dulcinea of "Dulcy" to be given Saturday, January 3. Prudence Penny (right), has started her radio career with KPO, San Francisco. Tune in some Monday or Friday morning and take advantage of her helpful hints on home making. Eli Rasmussen is the Danish violin instructor in Omaha and will be heard January 3 at WOAW.



Hotel Pennsylvania orchestra, direction Louis Baer; 7:30, talks; 8, concert.

**WCCO**, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., "Meat Dishes," Betty Crocker; 2 p. m., woman's hour, Minnesota League of Women Voters; 4, magazine hour, "Shadowed"; 5:30, children's hour, Gold Medal Lady; 6:15, feed talk; 6:30, dinner concert, Riley's Grand Cafe orchestra; Kenneth Johnson, tenor; Eleanor Freemantel, accompanist.

**WCX**, Detroit, Mich. (Eastern, 513), 4:15 p. m., musical program; 6, dinner concert, Book-Cadillac hotel; 10, The Red Apple club.

**WDAF**, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., the Star's string trio; 5-5:30, weekly child-talent program; Anna June Gearhart; 6-7, school of the air, piano tuning in number on the Duo-Art; thirteenth of a series of Radio piano lessons, Maudelien Littlefield; the Tell-Me-a-Story Lady; music, Hotel Muehlebach Trianon ensemble; 11:45-1 a. m., nighthawk frolic, the "Merry Old Chief" and the Plantation players.

**WDAR**, 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; 2:30, Mary P. Elcheberger, contralto; Mildred Tindall, soprano, Marcella North, accompanist; 7:30, Dream Daddy's bedtime stories.

**WEAF**, New York, N. Y. (Eastern, 492), 11-11:30 a. m., Board of Education; 11:45-12, motion picture forecast, Adele Woodard; 4-4:15 p. m., Lehman Eych, tenor; 4:15-4:30, Kathryn J. Neuschwander, pianist; 4:30-5, Women's program; 6-7, dinner music, Waldorf-Astoria hotel; 7-7:30, Empire State Novelty orchestra; 7:45-8, Arline Thomas, soprano; 8-8:15, talk, Bank of America; 8:15-8:30, Charles Mertens, baritone; 8:30-9, Gold Dust twins; 9-10, Eveready hour; 10-11, Goodrich Silvertown Cord orchestra, under Joseph Knecht.

**WEBJ**, New York (Eastern, 273), 7-7:15 p. m., Bly-brun's reviews of new photo-plays; 7-7:15, Nat Perrin's orchestra from the College of City of New York; 8-9, songs, Edythe Traub; May Singhl Breen and her cyncopators.

**WEI**, Boston, Mass. (Eastern, 303), 2 p. m., program, Charles L. H. Wagner; 6:30, Boston Edison Big Brother club; 7, Dok-Eisenbourg and his Sinfonians; 7:30, talk; 7:40, program, Dok-Eisenbourg and his Sinfonians; 8, program, courtesy, C. F. Hathaway & Sons Wholesale Bakers; 8:30, music; 9, program, Eveready hour; 10, program, Goodrich Silvertown Cord orchestra.

**WFAC**, Dallas, Tex. (Central, 476), 12:30-1 p. m., music, player and singer from Dallas Young Men's Christian association, C. E. Osborne, director; 8:30-9:30, musical recital, artists from Vernon; Edwin Lis-

music, Hotel Ten Eyck trio; 7:45, drama talk; WGY orchestra; 8:15, "Rosemary," WGY players; 11:20, Stephen E. Boisclair, organist.

**WHAS**, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater orchestra, Harry S. Currie, conductor; readings, Courier-Journal, Louisville Times; 7:30-9, concert, Carl Zoeller's Melodists; chapters IX and X of the "Billy and Jane" stories, James Speed.

**WHN**, New York, N. Y. (Eastern, 360), 2:15-3:15 p. m., overture and vaudeville, Loew's State theater; 6:30-7, Strand roof entertainers; 7-7:10, E. S. Colling, movie critic in "Personal Chats of the Stage and Screen"; 7:10-7:30, WHN employment broadcasting; 9:30-9:35, "What Becomes of Old Watches?" 9:35-10, Bertram J. Goodman's orchestra; 10:30-11, the New Rockwell Terrace revue; 11-12, Club Rose revue; 11:30-12, Sam Wooding and his Club Alabama orchestra; 12-12:30 a. m., Ted Lewis and his symphonic clown.

**WIP**, Philadelphia, Pa. (Eastern, 509), 1 p. m., Karl Bonaviv, organist; 3, Catharine B. Heuser, trumpeter, playing "The Maid of the Mist," "Only a Dream," "Columbia Polka," "Romance"; 6:15, Harvov Marburger and his vaudeville orchestra; 7, Uncle Wip's bedtime stories; 8, "The Theater," Elliott Lester; 8:15, Philadelphia police band, direction Lieut. Joseph Kiefer; 9, recital, Laserow Instrumental quartet; 10:05, "Eino's" weekly movie talk; 10:30, Harvey Marburger and his vaudeville orchestra.

**WJJD**, Mooseheart, Ill. (Central, 278), 3:30-4:30 p. m., music, Mooseheart children; 6:30-7:15, Albert F. Brown, organist; 7:15-8:15, Mooseheart concert band; talk, "Child Care," M. P. Adams.

**WJY**, New York, N. Y. (Eastern, 405), 9-10 p. m., "Political Situation in Washington Tonight," Frederick William Wile, from WRC.

**WJZ**, New York, N. Y. (Eastern, 455), 10-10:20 a. m., housewives' league menu, Mrs. Julian Heath; 10:20-10:30, "Etiquette," Vogue magazine; 10:30-10:40, "Art for a Dime," Grace P. Noxon; 10:40-10:50, Tribune Institute, Bertha Baldwin; 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; 7-7:15, Manchester Terrier, Frank Dole; 7:15-8, Joseph Strisoff's Hotel Vanderbilt orchestra; 8-8:10, Wall Street Journal review; 8:10-8:25, "Drama," N. Y. U. Air college; 8:25-9, Estey organ recital.

**WKAQ**, San Juan, P. R. (Intercolonial, 360), 9-10:30 p. m., Euterpe Jazz band.

**WKBF**, Providence, R. I. (Eastern, 288), 8:30 p. m., Vincent Lopez Arcadia orchestra.

**WLBL**, Stevens Point, Wis. (Central, 278), 8 p. m., musical program.

**WLS**, Chicago, Ill. (Central, 345), 12-1 p. m., "Feeding Dairy Cattle," Frank B. Morrison; "Pioneering

Harry Lafferty's Canary Cottage Inn orchestra; 7:15-7:30, resume of day's sports, Jolly Bill Stelnke.

**WQJ**, Chicago, Ill. (Central, 448), 11-12 m., "One-Dish Dinners," Agnes M. Olson; talk, Mrs. E. Tolman East; "American Citizenship," Mrs. Jasper T. Darling; 3-4 p. m., "Eating for Correct Weights," Josephine Naylor; "Little Foxes," Dr. Lena K. Sadler; 7-8, dinner concert, Ralph Williams and his Rainbow Garden orchestra; Leroy Trauger, baritone; Edith Phillips Heller, pianist; Excelestior quartet; 10-2, Ralph Williams and his Rainbow Skyarks; Nubs Allen, contralto; Will Rosister; Bernard and Robinson; Rick, Whalen and Gardner.

**WRC**, Washington, D. C. (Eastern, 469), 7 p. m., children's hour, Peggy Albion; 7:15, dinner music, New Willard Meyer Davis orchestra; 8, "Show Shopping," Leonard Hall, 9, The Political Situation in Washington Tonight," Frederick William Wile; 10, "Brunswick Hour of Music," 11-2, dance program, Meyer Davis' Le Paradis orchestra.

**WSAI**, Cincinnati, Ohio (Central, 309), 7 p. m., Hotel Gibson orchestra; 7:30, chime concert; 7:45, children's story; 8, Hotel Gibson orchestra; 9, University of Cincinnati speaker; 9:15, Lucy de Young, contralto; Irish songs, Tom Brady; E. Metz, tenor.

**WTAS**, Elgin, Ill. (Central, 286), 6 p. m., Fred Hamm and his famous Terraco Garden orchestra; 9:30, Kimball studio hour, Jack Little, Paul Small, Leo Sims, Lindsey Coons, Betty Holmes, Babe June, Joe Mertz, Jimmy Eggert, Lew Butler, Joey Stoolie, Tubby Edlin, Sammy Epstein, Ziegler Sisters; 10:30, Fred Hamm and his orchestra; 11:30, Maxine Brown, Jay Gould; Fred Hamm and his orchestra.

**WTAY**, Oak Park, Ill. (Central, 283), 6:45-7:45 p. m., Ray Kroc and Harry Sosnik, Melody Boys; Raynor Dalheim and company orchestra.

**WWJ**, Detroit, Mich. (Eastern, 513), 7 p. m., Art Black's Pier Ballroom orchestra; W. D. Leitch, tenor.

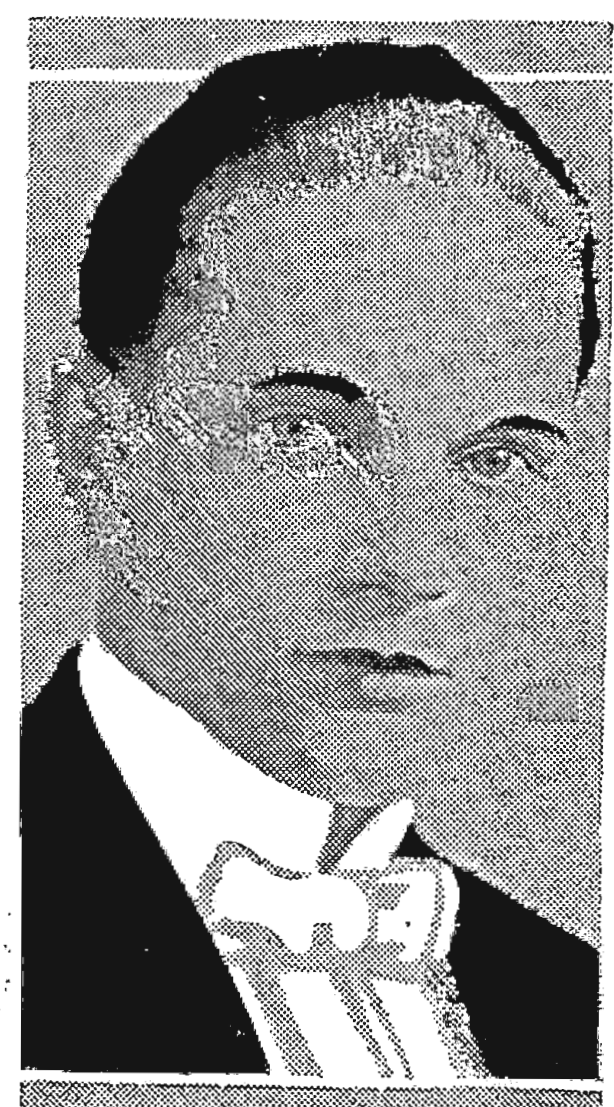
gram, the Trianon ensemble and soloists; 11:45-1 a. m., nighthawk frolic, the "Merry Old Chief" and the Plantation players.

**WDAR**, 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; 8:30, Norristown night, talks, songs and orchestral renditions by various clubs of Norristown, direction Rotary club; 10:05, Arcadia cafe dance orchestra.

**WEAF**, New York, N. Y. (Eastern, 492), 11:10-11:20 a. m., "Your Child Laundry Problem," Janet Read; 11:40-12, Dr. Wm. H. Kilpatrick of Columbia university; 12-12:30 p. m., chapel services, Columbia university; 6-7, dinner music, Waldorf-Astoria hotel orchestra; 7:30-8:20, U. S. Army band, WRC; 8:20-8:30, talk, American Bond and Mortgage company; 9-9:45, Brooklyn Sodyly orchestra; 11-12, Club Lido Venice orchestra.

**WEAO**, Columbus, Ohio (Eastern, 294), 8 p. m., ohimes concert, Prof. A. P. McManis; miscellaneous program, Ohio State University Alumni association.

**WEEI**, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston



(Continued on page 12)

## Wednesday, January 7

Wednesday, silent night for: CKAC, CHNC, KFKX, KGO, WBAV, WCAL, WCBD, WEBJ, WFAA, WFI, WGY, WHAZ, WIP, WJY, WKBF, WMAK, WMC, WOI.

**CKAO**, Montreal, Can. (Eastern, 437), 1:45 p. m., Windsor hotel trio; 4:45, Windsor hotel dance program.

**KFAE**, Pullman, Wash. (Pacific, 330), 7:30 p. m.,



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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 3:** 6, KGO, WCX, WGN; 6:15, WRC; 6:30, CKAC, KFNF, WBZ, WDAE, WGN; 6:35, WNYC; 6:45, WCAE, WTAY; 7, KYW, WBBR, WBZ, WFAE, WFI, WHN, WLS, WQJ; 7:15, WIP, WLS; 7:30, CKAC, KDKA, WBZ, WCAE, WHAS, WRC; 7:45, WBBR; 8, KHJ, KSD, KYW, WBZ, WGN, WIP; 8:15, WSAI; KTHS, WBZ, WCCO, WMC, WNYC; 8:45, WSAI; 9, WBZ, WTAY; 9:30, WMAQ; 9:35, KYW; 10, KGO, KHJ, KTHS, WQJ; 10:05, WIP; 10:15, WRC; 10:30, KFOA; 11, KFQX; 12, WCAL, WLBL, WSAI.

**Sunday, January 4:** 6:20, WFAE; 6:30, WDAE, WLS; 7, KYW, WLS; 7:30, WBZ, WDAE, WIP, WRBC; 8, WCB, WGY, WQJ; 8:10, WBBR; 8:15, WEMC; 8:30, KTHS, WCAL, WLW; 8:50, WEMC; 9, WBBR, WFAA, WGN, WGY, WJZ; 9:15, WCCO, WFAE; 9:30, WOC.

**Monday, January 5:** 6, WCX, WJZ, WLW; 6:10, WFAE; 6:30, KFNF, WJJD, WOO; 6:45, WGY; 7, KSD, WAHG, WBBR, WCAU, WBEI, WOR; 7:30, CHNC, WAHG, WCAE, WBEI, WNYC, WOO, WOR; 7:40, KSAC, WBBR; 7:45, WFAE; 8, KFOA, KTHS, WAHG, WBZ, WCB, WGR, WHAZ, WHO, WOS, WTAS; 8:15, WEMC; 8:30, KOB, WAHG, WCCO, WDAE, WBEI, WEMC, WFAA, WMC, WOS; 8:45, KFOA; 8:50, WEMC; 9, KSD, WBEI, WGR, WOC; 9:03, WOO; 9:15, WFAE; 9:30, KFAE, WCAE, WTAS; 10, KGO, WOC; 10:30, KFOA; 11, KFQX; 11:15, WHO; 11:30, WJJD.

**Tuesday, January 6:** 6, KGO KSD, WCX, WGN, WLW; 6:15, WRC; 6:30, CKAC, WCCO, WGN, WJJD; 6:45, WCAE, WFAE, WTAY; 7, WBAV, WCAE, WCAU, WEBJ, WBEI, WQJ; 7:15, WFAE, WGY, WIP, WJJD, WMAK; 7:25, WJZ; 7:30, CKAC, WBZ, WFAE, WBEI, WHAS, WHO, WSAI; 7:40, KSAC; 7:45, WNYC; 8, KFDM, KFOA, WCAE, WBEI, WFI, WGN, WIP, WLBL; 8:20, WRC; 8:30,

KTHS, WFAA, WMC; 8:45, CFAC, KFOA; 9, KSD, WCAE, WRC; 9:15, WSAI; 10, KGO, WCAE, WQJ; 10:20, WGY; 10:30, KFOA, WLW, WBZ; 11, KFQX, WFAA.

**Wednesday, January 7:** 6, KGO, WCX, WBEI, WGN, WLW, WTAS; 6:30, KFNF, WAHG, WFAE, WGN, WOO; 6:35, WNYC; 6:45, KSD, WCAE, WNYC, WTAY; 7, WBBR, WCAU, WEAO, WBEI, WQJ; 7:25, WJZ; 7:30, WBZ, WCAE, WDAE, WBEI, WHAS, WNYC, WOO; 7:40, KSAC, WBBR; 8, KFOA, WBEI, WLW, WOC, WOR; 8:15, WEMC; 8:30, KTHS, WGR; 8:45, CFAC, KFOA, WNYC; 9, KFAE, WCCO, WLW, WTAY; 9:03, WOO; 9:30, WTAS; 10, WBEI, WNJ, WQJ; 10:15, WRC; 10:30, KFOA; 11, KFQX.

**Thursday, January 8:** 6, KGO, WCX, WGN, WLW, WRC; 6:30, WCCO, WGN; 6:35, WNYC; 6:45, WCAE, WTAY; 7, WEAO, WBEI, WGY, WNYC, WQJ; 7:15, WGY; 7:30, CKAC, WBZ, WCAE, WFAE, WGY, WHAS, WWJ; 7:40, KSAC; 8, CNRW, KFOA, WCB, WCCO, WFAE, WBEI, WSAI; 8:10, WBBR; 8:15, WOI; 8:30, KTHS, WFAE, WMC; 8:45, KFOA; 9, WCAL, WEMC; 9:05, WBBR; 9:15, WSAI; 9:30, WSAI, WTAS; 10, CNRC, KGO, WQJ; 10:03, WLW; 10:30, KFOA, WGY; 11, WLW; 12, WSAI.

**Friday, January 9:** 6, KGO, WCX, WBEI, WGN; 6:15, WEBJ; 6:30, KFNF, WCCO, WBEI, WGN, WJJD, WOO; 6:45, WTAY; 6:55, WNYC; 7, WAHG, WBAV, WCAU, WDAE, WFAE, WBEI, WQJ; 7:15, WEBJ; 7:30, CNRT, WCAE, WFAE, WEBJ, WBEI, WHAS; 7:40, KSAC; 7:45, WEBJ; 9, CFAC, KFDM, KFOA, KSD, WAHG, WBEI, WGR; 8:30, KOB, KTHS, WCAL, WCCO, WFAA, WCCO, WFAA, WMC; 8:45, KFOA, WNYC; 9, KYW, WAHG, WBZ, WCCO, WGR, WTAY; 9:30, CNRE, KFAE, WTAS; 10, WQJ; 10:30, KFOA, WGR; 11, KFQX, KYW; 11:30, WJJD; 12, CFAC.



Did you ever admire the cellist on the Lyon & Healy programs from WGN, Chicago? This is she—Anne Slack. Like Her?

Davis' New Willard hotel trio; 6, children's hour, Peggy Albion; 11:15, watch service, Trinity church. WTAS, E. H. (Central, 286), 6 p. m., dinner and dance concert, Fred Hamm and his dance orchestra; 9:30, Klmball studio hour, Lee Sims, Jimmy Eggert, Lew Butler, Joey Stoolie, Jack Little, Paul Small; 10:30, Terrace Garden dance program; WTAS artists; 11:30, Maxine Brown and Jay Gould. WTAY, Oak Park, Ill. (Central, 283), 6:45-7:45 p. m., George H. Clark, organist; 9-10, Axel Christensen, pianist; Grace Wilson, singer; ten-minute technical talk, member of the staff of Radio Age. WDET, Detroit, Mich. (Eastern, 513), 3 p. m., The Detroit News orchestra; 7, The Detroit News orchestra.

## Wednesday, January 7

(Continued from page 11)

Edison Big Brother club; 7-8, musicale; 8, program, courtesy, C. F. Hathaway & Sons; 8:30, concert, Madrigal quartet; 9, program, Jack O'Brien; 11, Lloyd G. Del Castillo, organist. WEMC, Berrien Springs, Mich. (Central, 286), 8:15-9:15 p. m., miscellaneous program, Spanish Department, Emmanuel Missionary college. WFAA, Dallas, Tex. (Central, 476), 12:30-1 p. m., musical program, Dallas theater. WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:10, Loretta Kerk, pianist; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal. WGN, Chicago, Ill. (Central, 370), 1:40-2:30 p. m., luncheon music, Drake concert ensemble, Blackstone string quintet; 2:30-3, recital, Lyon & Healy concert hall; 3-3:30, rocking, Lyon & Healy concert; 3:30-4, Harry Richmond and his entertainers; 4-4:30, Harry Richmond and his entertainers; 4:30-5, Harry Richmond and his entertainers; 5-5:30, Harry Richmond and his entertainers; 5:30-6, Harry Richmond and his entertainers; 6-6:30, Harry Richmond and his entertainers; 6:30-7, Harry Richmond and his entertainers; 7-7:30, Harry Richmond and his entertainers; 7:30-8, Harry Richmond and his entertainers; 8-8:30, Harry Richmond and his entertainers; 8:30-9, Harry Richmond and his entertainers; 9-9:30, Harry Richmond and his entertainers; 9:30-10, Harry Richmond and his entertainers; 10-10:30, Harry Richmond and his entertainers; 10:30-11, Harry Richmond and his entertainers; 11-11:30, Harry Richmond and his entertainers; 11:30-12, Harry Richmond and his entertainers. WGR, Buffalo, N. Y. (Eastern, 319), 2:30-4:30 p. m., Buffalo Courier and Enquirer musical program; 6:30-7:30, dinner music, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director; 8-8:15, lecture, Dr. C. E. Cummings, Buffalo Society of Natural Sciences, "Some Common Superstitions in Nature"; 9-9:30, recital, Prof. H. Collier Grounds; 9:30-11, concert, direction of J. P. Quinn; 11:30, supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director. WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater orchestra, Harry S. Currie; readings, Courier-Journal and Louisville Times; 7:30-9, Tropical Hawaiian quartet; chapters XI and XII of the "Billy and Jane" stories, James Speed. WHN, New York, N. Y. (Eastern, 360), 5-5:30 p. m., Johnny DeDroit and his Balconades orchestra; 6:30-7, Vincent Cananese and his Hotel Alamae orchestra; 7-7:30, Harry Richmond and his entertainers; Eddie Elkins and his orchestra; 8-8:10, "College Clothes," Mme. Belle; 9:30-10, Rose-Danceland orchestra; 10-11, Clover Gardens dance orchestra; 12-12:30 a. m., Strand Roof entertainers. WHO, Des Moines, Ia. (Central, 526), 7:30-9 p. m., dance program, Bankers' Life Radio orchestra, Wm. L. Marsh, director; J. W. Ocker, veteran musical singer. WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m., Gimbel tea room orchestra, Ray Steen, director; 3, Frank Lewis Fleischman, baritone, singing, "Serenade," "My Curly Headed Baby," "Ah, Love But a Day"; 6:05, Art Coogan and his Club Madrid orchestra; 7, Uncle Wip's bedtime stories. WIJD, Mooseheart, Ill. (Central, 278), 3:30-4:30 p. m., music, Mooseheart children; 8:30-7:15, Albert F. Brown, organist; 7:15-8:15, Philharmonic orchestra; Junior band. WJZ, New York, N. Y. (Eastern, 455), 10:30-10:45 a. m., "Finding the Right Job for Your Daughter," Helen Hoerle; 10:40-10:50, "Bo Your Own Decorator," Amy Mally Hicks; 10:50-11, fashion talk, Eleanor Gunn; 4:30-5:30 p. m., Hotel Belmont tea music; 8-8:10, Wall Street Journal review; 8:10-8:25, N. Y. U. air college; 8:25-8:45, Doris Le Vene, pianist; 8:45-9:15, "50 Questions," Times Weekly News magazine; 9:15-10:15, "Bridge the Hudson," meeting, direct from Town Hall; 10:30-11:30, Billy Wynne's Greenwob Village Inn orchestra. WKAR, San Juan, P. R. (Intercolonial, 360), 8-9:30 p. m., Municipal band. WLS, Chicago, Ill. (Central, 345), 12-12:30 p. m., Frankie Sulfrano, tenor; "The More-Dollars-on-the-Tree," A. B. Leepers; 3:45-4:45, "The Old Woman Made New," Rocelle Desai; "Safety in the Home,

School and Street," Isalah Gordon; "The Exploitation of Our Children," Mrs. M. P. Man; P. L. program; Edith Shearer; 6:30, Ralph Emerson, organist; 6:50, specialties, Senate Theater studio; 7, lobby time, Ford and Glenn; 7:15, program, WLS Tribe of Lone Scouts; 7:30, Isham Jones and his College Inn orchestra; 7:45, program, WLS Tribe of Lone Scouts; 8-9, evening R. F. D. program; "Farm Filchings," E. B. Heaton; "Live Stock Marketing Costs," Charles A. Stewart; Ralph Emerson, organist; 9, Art Kahn's Senate Theater Symphony orchestra; 9:15, WLS theater, Wallace Bruce Amstary; 9:30, Isham Jones and his College Inn orchestra; 9:45, Robinson and Bernard, "The Dixie Stars"; 10, Phyllis Campbell; 10:30, Isham Jones and his College Inn orchestra; 10:40, Ford and Glenn time. WLW, Cincinnati, Ohio (Central, 423), 12:15 p. m., Mu Phi Epsilon sorority; dance program; Ahaus Brung-wick shop orchestra; 4, program for the "Shut-Ins," Dunning Benevolent and musical service; Lillian Aldrich Thayer Settlement School of music; 6, dinner hour concert, courtesy Cincinnati Post; 8-9, Herschede-Phillie Anderson, company; Billie Waterworth, pianist; Billie Anderson, baritone; trio; vocal duets, Mary Steele, contralto; Ferd Kalne, tenor; Grace Raine, accompanist; 9, Paul Bachelor's Ballet, Schuster-Martin school; Formica band, Walter Esberger, director. WMC, Memphis, Tenn. (Central, 501), 12 m., musical program, O. K. Houck Piano company. WNJ, Newark, N. J. (Eastern, 233), 10:30-11 p. m., dance music, Frank Dally and his Meadowbrook orchestra; 11-11:15, Victor Wilbur, baritone; 11:15-12, Original Dixieland Jazz band; 12-12:30 a. m., Frank Dally and his Meadowbrook orchestra. WNYC, New York, N. Y. (Eastern, 526), 7:30-7:35 p. m., police alarms; 7:37-7:45, studio program; 7:45-8:30, Gedyne, Vand, Magee, banjoists; 8:30-9:45, "Appreciation of Music," Dr. Henry T. Fieck; 9:45-10:30, studio program; 10:30-10:40, police alarms and official weather forecasts. WOC, Davenport, Ia. (Central, 484), 7:20 p. m., "The Spinal Column," A. G. Hinrichs; 8, Erwin Swindell, organist; Robert McGregor, baritone. WOJ, Ames, Ia. (Central, 360), 12:30 p. m., college address; "Planning a Livestock Program," Dr. C. L. Holmes. WOO, Philadelphia, Pa. (Eastern, 509), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt; 7:30, A. Candelori's Hotel Adelphia ensemble; violin solos, A. Candelori; 8:30, J. W. C. I. band; 9, WOO orchestra, Robert E. Golden, director; 10:03, organ recital, Harriette G. Ridley; 10:30, Vincent Rizzo and his Hotel Sylvania dance orchestra. WOR, Newark, N. J. (Eastern, 405), 7-7:30 a. m., WOR morning gym class; 6:15-6:55 p. m., "Music While You Dine," Harry Corb; Robert Treat orchestra; 6:55-7, resume of day's sports, Jolly Bill Steinke; 8-8:30, Eugene Ingraham's Great Notch Inn orchestra; 8:30-8:45, "Behind the Scenes of a Newspaper Office," Wells Hawkes; 8:45-9, "Topics of the Day," Literary Digest; 8-8:15, "Persian Garden, Wallace Hermann and Joseph M. Barnett. WOS, Jefferson City, Mo. (Central, 440.9), 8 p. m., address, faculty member, Missouri College of Agriculture; 8:15, address, member of State Department of Education; 8:30, barn dance tunes, Old Time string trio. WQJ, Chicago, Ill. (Central, 448), 11-12 m., "American Made Household Lottery," Mrs. Wilbur E. Fribley; "Salad Secrets," Mary Hale Martin; "The Responsibility of the Purchaser," Mrs. Mary Day Harris; 3-4 p. m., "First Lesson, Domestic Science Course," Helen Harrington Downing; "Are You Fed or Merely Filled?," Martha Logan; 7-8, dinner concert, Ralph Williams and his Rainbo Garden orchestra; Lancaster Smith, bass, Mrs. Lancaster Smith, accompanist; Maxine Mordy, violinist; Dorothy Davie Dillow, soprano; James Mitchell, baritone; the Melodians, Laurie, Eddie, Bennie; Fred Jacobsen, Swedish monologues; Lew Butler, "The Giant of Radio," (East Caldwell, pianist. WRC, Washington, D. C. (Eastern, 469), 4 p. m., fashion developments, Eleanor Gunn; 4:10, George F. Ross, pianist; 4:20, talk, Outlook; 4:30, two music, Meyer

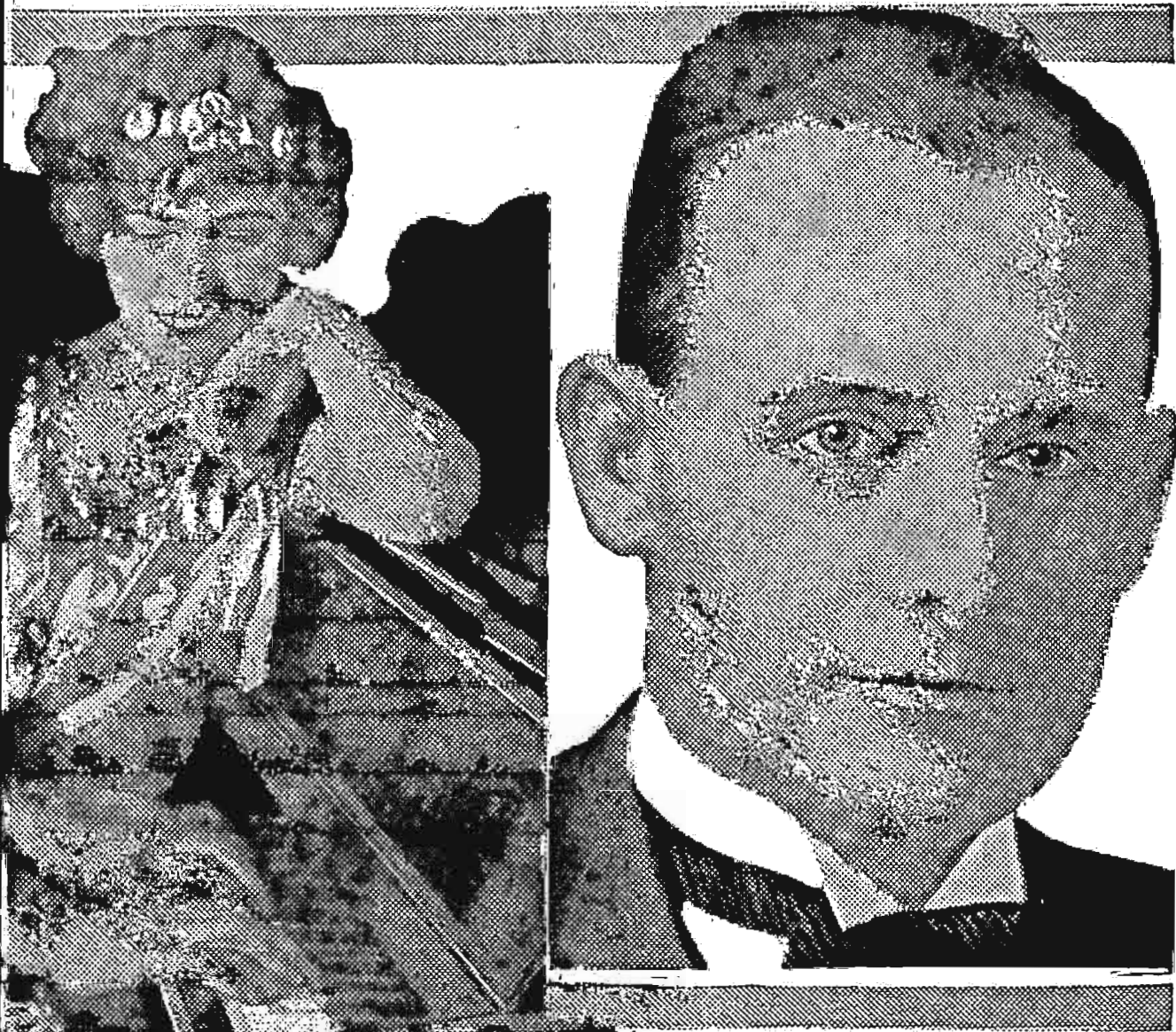
## Thursday, January 8

Thursday, silent night for: CHNC, KFAE, KFQX, KGW, WTAS, KSD, WAHG, WBAV, WCAP, WCAU, WEBJ, WEMC, WHAZ, WHO, WJJD, WJY, WOO, WOS. CKAC, Montreal, Can. (Eastern, 437), 8:30 p. m., Canadian National Railways concert. CNRC, Calgary, Can. (Mountain, 430), 9-11 p. m., bedtime travel tale; Mme. Mamie Gardiner, contralto; instrumental party. CNRW, Winnipeg, Can. (Central, 450), 8-11 p. m., bedtime travel talk; program, Winnipeg Chapter Order of Demolay for Boys; Vernon Taylor, pianist; Ed Kehr, vocalist; K. Spencer, vocalist; I. Cowan; C. Wright, reader; F. McLeavy, violinist; L. H. Clegg, xylophonist; F. S. Holmes, G. F. Holmes, xylophonists; Frank Wright's Country club dance orchestra. KFKA, Hastings, Nebr. (Central, 291), 9:30-11 p. m., Hastings dance orchestra. KFNF, Shenandoah, Ia. (Central, 266), 6:30 p. m., orchestra music, P. R. Simpson, director. KFOA, Seattle, Wash. (Pacific, 455), 6-6:30 p. m., Seattle P. I. concert; 6:45-8:15, Rhodes Dept. store studio program; 8:30-10, Seattle P. I. musical program; 10:05-11, Eddie Barkness' Jazz orchestra. KGO, Oakland, Calif. (Pacific, 312), 11:30-1 p. m., luncheon concert; 4-5:30, concert orchestra, Hotel St. Francis; 8, "Lady Windermere's Fan," KGO players; 10-1 a. m., dance music program, Henry Halstead's orchestra. KSAC, Manhattan, Kans. (Central, 341), 12:30 p. m., Osceola Hall Burr, reader; "Ordering Trees for Spring Planting," W. R. Martin; "Value of Good Arsenicals," E. G. Kelly; 7:20, college bell and opening exercises; 7:30, "Bugs and Bug Making," Harriet W. Allard; 7:40, Radio college trio; 7:45, "Do You Always Make Good Bread?" Martha S. Pittman. KSD, St. Louis, Mo. (Central, 546), 4 p. m., home hour. KTHS, Hot Springs, Ark. (Central, 375), 8:30-10 p. m., concert, thirty-piece violin ensemble, Oscar Rust studio. KYW, Chicago, Ill. (Central, 536), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 8-8:20, "Twenty Minutes of Good Reading," Rev. C. J. Pernin; 8:20-9:05, program, Auburn orchestra; 9:15, safety first talk, Z. C. Elkin; 10-11:30, evening at home. WBBF, Atlanta, Ga. (Central, 270), 7-8 p. m., Mrs. Mary Townsell, violinist; Helen Schald, pianist; T. C. Seldell, baritone. WBBR, New York, N. Y. (Eastern, 273), 9-10 p. m., Moses Carment, clarinetist; 9:20, Kay Macrae, coloratura soprano; 9:30, International Sunday school lesson, S. M. Van Stupa; 9:50, Kay Macrae, soprano; 10:05, Carl Park, violinist; 10:20, Moses Carment, clarinetist. WBZ, Springfield, Mass. (Eastern, 337), 8:30-10:30 p. m., concert. WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, special feature; 8:30, concert, articles from Moore's cafeteria, E. T. Moore, manager. WCAL, Northfield, Minn. (Central, 360), 9 p. m., Ruby Jacobson, pianist; Lyla Pederson, contralto; Evelyn Jerdee, mezzo-soprano; Lillian Bentley, pianist. WCB, Zion, Ill. (Central, 345), 8 p. m., mixed quartet; celestial bells; Edith Carey, contralto; Mrs. J. D. Thomas, soprano; J. D. Thomas, baritone; Emella Nelson, pianist; Lillian Detyenne, reader. WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., home service, "Hot Lunches," Betty Crocker; 2 p. m., woman's hour, "The Popular Concert," Agnes Fryberger; 4 magazine hour, "Home Brew"; 5:30, children's hour, Gold Medal lady; 6:30, dinner concert, Minneapolis Athletic club orchestra; Lou Emmel balton; 7:45, health talk, auspices Ramsey County Medical society; 8, program, auspices Soo railroad; 10, Orchestral Art association, William MacPhail, conductor; Annetto Yde Lake, soprano; Was Hamilton, pianist.

WCX, Detroit, Mich. (Eastern, 513), 4:15 p. m., musical program, 6, dinner concert, Book-Cadillac hotel; 8:30, musical program. WDAF, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., the Star's string trio; 6-7, school of the air, readings; the Tell-Me-a-Story Lady; music, Hotel Muehlebach Trianon ensemble; 11:45-1 a. m., night-hawk frolic, the "Merry Old Chief" and the Plantation players. WDAE, 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; 4:30, Marcella North, pianist; 10:30, Dream Daddy's bedtime stories. WFAE, New York, N. Y. (Eastern, 392), 4:15-5 p. m., Columbia university, lecture on Bernard Shaw and religion; 6-7, dinner music, Waldorf-Astoria hotel; 7-7:30, services, Federation of churches; 8-8:20, lecture, Columbia university; 8:30-9, Packard Motor company; 9-9:30, Hohner Harmony four; 9:30-10, choir of Cathedral incarnation of Garden city; 11-12, Vincent Lopez and his Hotel Pennsylvania orchestra. WFAO, Columbus, Ohio (Eastern, 294), 8 p. m., chimes concert, Prof. A. P. McManigal; educational music program. WEAF, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston Edison Big Brother club; 7, Dok-Elsenburg and his Sinfonians; 7:30, talk; 7:40, dance selections, Dok-Elsenburg and his Sinfonians; 8, concert, Maurlich quintet; 9, Gillette Safety Razor concert orchestra. WFAA, Dallas, Tex. (Central, 476), 12:30-1 p. m., music, Edmund Boettcher, tenor; William H. McRayen, pianist; address, DeWitt McMurray; 8:30-9:30, Frank Davenport and his eight-piece orchestra; 11-12, Adolphus Hotel orchestra. WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:05, Housewives Radio exchange, direction Mavel Swint Ewer; talk, auspices Philadelphia Mothers' club; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 8, Sunny Jim, the kiddies' pal; 8, Boy Scouts' meeting. WGN, Chicago, Ill. (Central, 370), 1:40-2:30 p. m., luncheon music, Drake concert ensemble, Blackstone string quintet; 2:30-3, recital, Lyon & Healy concert; 3-3:30, rocking chair time; 6-6:30, Lyon & Healy organ recital; 6:30-7, dinner music, Drake concert ensemble, Blackstone string quintet; 8-9, classic hour; 10-11, Jazz scamp, dance orchestra. WGR, Buffalo, N. Y. (Eastern, 319), 2:30-4:30 p. m., Buffalo Courier and Enquirer musical program; 6:30-7:30, dinner music, Hallpryd string quartet; 8:30-9, Dr. Robert J. MacAlpine, speaking at the dinner of the Central Railroad club, at the Hotel Statler on "Playing the Game from the Railroad Man's Point of View." WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m., "Is a Home Well Furnished?" Anna Randolph Kalm; 6:30, dinner music, Hotel Ten Eyck orchestra; 7:45, "A Few Moments with New Books," William F. Jacob; 8, studio program, J. T. Quinlan, baritone; Earle Rice, pianist; 8:30, Marcel Dupre, organist; 9:30, banquet of the Automobile Engineering society; 11:30, Stephen E. Bolsclair, organist. WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater orchestra; readings, Courier-Journal and Louisville Times; 7:30-9, concert, auspices Mrs. Jobn E. Harmon, Jr. WHN, New York, N. Y. (Eastern, 360), 6:30-7:10 p. m., Vincent Cananese and his Hotel Alamae orchestra; 7:10-7:30, WEIN employment broadcasting; 10:25-10:30, "What Becomes of Old Watches?"; 10:30-10:45, Alja and his Club Madrid orchestra, Lee Kent; 11-11:30, Connie's Inn with Leroy Smith and his orchestra; 12-12:30 a. m., Ted Lewis and his Symphonic Clowns from Parody club; 12:30-1 a. m., Lou Gold and his orchestra, Wigwag club. WIP, Philadelphia, Pa. (Eastern, 509), 9 a. m., commencement exercises, West Philadelphia high school; 1 p. m., Gimbel tea room orchestra, Ray Steen, director; 3, 6:15, Harvey Marburger and his Vaudeville orchestra; 7, Uncle Wip's bedtime stories; 8, "Magazine of the Air," consisting of talks on science, economics, public affairs, the theater and current events; 10:05, Harvey Marburger and his Vaudeville orchestra.



# RADIO MIDNIGHT PROGRAM TUESDAY



O. D. Temple is the popular tenor at WOAW, Omaha, singing under the name "Just an Ordinary Singer Singing Ordinary Songs."

Ruth (left) and Lilah Carlson, who will give a popular piano song act, Wednesday, January 7, from KFI, Anthony's, Los Angeles. The two sisters have a very ardent radiophon following, if mail is any indication. Witzel Photo

WIZ, New York, N. Y. (Eastern, 455), 10-10:20 a. m., housewives league menu, Mrs. Julian Heath; 10:20-10:30, review of reviews; 10:30-10:40, "Household Lines," editor of Needle Art; 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4:30-5:30, Bernhard Levitov's Hotel Commodore tea orchestra; 7-8, Bernhard Levitov's Hotel Commodore orchestra; 8:25-9, Hennessy dance orchestra; 9-9:15, Society of Automobile Engineer's banquet, Hotel Astor; 9:15-9:30, "Alms and Objects of Museum of American Indian," A. B. Skinner; 10-10:15, "American Negro in Art and Literature," James Weldon Johnson; 10:30-11:30, Waldorf-Astoria dance orchestra.

WKAQ, San Juan, P. R. (Intercolonial, 360), 8-9:30 p. m., musical program, La Cafetera.

WKBF, Providence, R. I. (Eastern, 286), 8 p. m., educational talk, member of faculty of Brown university.

WLS, Chicago, Ill. (Central, 345), 12-1 p. m., music numbers, Robinson and Bernard; "Clean Hearts and Herds," M. H. Peterson; 3:15-4:45, homemakers' hour; "Successful Chicken," Mrs. Louise Secor; "A Stork Shower," Julia M. Deal; 6:30, Ralph Emerson, organist; 6:50, specialties, Senate theater studio; 7, Big Fords and Little Glenn's Woodshed theater play; 7:15, WLS theater, operetta.

WLW, Cincinnati, Ohio (Central, 423), 12:15 p. m., dance program, Woody Meyer's orchestra; 4, French lesson, Madame Tcmplids; Adelaide Apfel, pianist; 6, dinner hour concert, Cincinnati Post; 10, three minute message, U. S. Civil service; 10:03, concert program, auspices Cooper Tire and Battery corporation, orchestra, quartet; 11, Camp Washington M. E. church choir, Robert Suddendorf, director; special program, Milnor instrumental trio; dance program, Doherty Melody boys.

WMAK, Lockport, N. Y. (Eastern, 273), 12 midnight, Murray Whiteman's midnight serenaders.

WMC, Memphis, Tenn. (Central, 501), 12 m., musical program, O. K. Houck Piano company; 8 p. m., bedtime story, Uncle Joe; 8:30, musical program.

WNYC, New York, N. Y. (Eastern, 526), 7:30-7:35 p. m., police alarms; 7:35-7:45, sports analysis, Thornton Fisher; 7:45-8, "Timely Topics," F. P. Brent; 8-10:30, entire program, Borough of Queens; 10:30-10:35, police alarms and weather forecasts; 10:35-12, Borough of Queens program.

WOC, Oavenport, Iowa (Central, 484), 7:20 p. m., educational lecture, 9, program, Schuster sisters; 11, Louis Connor and his LeClaire hotel orchestra; song and novelty numbers, Peter MacArthur.

WOI, Ames, Ia. (Central, 360), 12:30 p. m., college chimes; "How Farm Practice Affects Profits," Dr. C. L. Holmes; 8:15, men's glee club.

WOO, Philadelphia, Pa. (Eastern, 509), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt.

WOR, Newark, N. J. (Eastern, 405), 7-7:30 a. m., WOR morning gym class; 6:15-6:30 p. m., "Radio for the Layman," Albert E. Sonn; 6:30-7:15, Jimmy Lent's Famous Society orchestra; 7:15-7:30, resume of the day's sports, Jolly Bill Stelnek.

WQL, Chicago, Ill. (Central, 448), 11-12 m., "Hot Suppers for Zero Nights," Erna Bertrams; "A Froek for the Holidays," Eleanor Oalmer; "Authority on Horticulture," C. P. Blinner; 3-4 p. m., "Gauging Meals by the Weather," Josephine Naylor; "Household Refrigeration and Frozen Desserts," Mrs. George M. Shirk; 7-8, dinner concert, Ralph Williams and his Rainbo Garden orchestra; Manuel Rodriguez, Spanish tenor; Lydia Lochner, contralto; Marion Henry, pianist; 10-2 a. m., Ralph Williams and his Rainbo skyraks; Jerry Sullivan; Peggy McGuire; Rick, Whalen, Gardner; Rosemary Hughes, soprano; Will Rossiter, daddy of them all.

WRC, Washington, D. C. (Eastern, 469), 6:45 p. m., children's hour, Peggy Albion; 7, dinner concert, Bernhard Levitov's Hotel Commodore orchestra; 8, talk, auspices American Automobile association; 8:30, talk, auspices Smithsonian Institute; 9:20, concert, Lee House trio; 10:30, dance program, Waldorf-Astoria orchestra.

## Friday, January 9

Friday, silent night for: CKAC, CHNC, KFKX, KGO, WCOB, WEAQ, WFI, WHAZ, WIP, WKBF, WLW, WMAK, WOI, WOS, WRC.

CKAC, Montreal, Can. (Eastern, 437), 1:45 p. m., Windsor hotel luncheon concert; 4:30, 10 lessons.

CNRE, Edmonton, Can. (Mountain, 450), 7:30-8 p. m., children's half hour; 8:30-10:30, Jesuit College trio.

CNRT, Toronto, Can. (Eastern, 400), 6:30-8 p. m., Luigi Romanelli and his King Hotel concert orchestra; 8:30-10, studio program, Hambourg Conservatory of Music; Rachelle string quartet, Rachelle Copeland Stephenson, first violinist; Nellie McGhie, second violinist; Ruby Dennison, violist; Gertrude McKeown, violoncellist; Carmoletta Sheridan, soprano; Ada Lingham Wagner, accompanist; 9, address; 10:30-12, Luigi Romanelli and his King Edward Hotel dance orchestra.

KFAE, Pullman, Wash. (Pacific, 330), 7:30 p. m., Marguerite Miller, soprano, singing, "Sierra Sue," "Break O'Day," "Pastorale," Doris McReynolds, violinist, playing "Ave Maria," "Romance Andalusia," "Sarassate," "Concerto in G Minor," "Essentials of Successful Farm Management," Prof. George Severance; "Getting Ready for the New Crop," Leonard Hegnauer; "Relation between Banker and Farmer," F. C. Forrest.

KJOM, Beaumont, Texas (Central, 306), 8 p. m., Magnolia Refinery band.

KNFN, Shenandoah, Ia. (Central, 266), 6:30 p. m., community program, Colin J. Dr. Luke, director.

KFOA, Seattle, Wash. (Pacific, 455), 6-6:30 p. m., Seattle P. I. concert; 6:15-8:15, Sherman, Clay & company studio program; 8:30-10, Seattle Times concert.

KFKX, Seattle, Wash. (Pacific, 238), 7:15-7:45 p. m., bedtime story, Aunt Vivien; 8-9, Earl Gray and his orchestra; 9-10, concert; 10-11, Earl Gray and his Butler hotel orchestra.

KGO, Oakland, Calif. (Pacific, 312), 3 p. m., studio musical program; 4-5:30, concert orchestra, Hotel St. Francis; 5:30-6, "The Girls' Half Hour," Esther Wood Schneider.

KSAC, Manhattan, Kan. (Central, 341), 12:30 p. m., Osceola Hall Burr, reader; farm and home week; L. C. Williams; "Why Tax Counties with Scalp Bounties," A. E. Oman; 7:20, college bell; 7:30, lectures on music, Ira Pratt; 7:40, musical numbers, department of music; 7:45, lecture on music, Ira Pratt.

KSO, St. Louis, Mo. (Central, 546), 8 p. m., program, R. Elmer Guenther, baritone; Paul Mehl, pianist.

KTHS, Hot Springs, Ark. (Central, 375), 8:30-10 p. m., program recital, Princess theater; Meyer Davis orchestra.

KYW, Chicago, Ill. (Central, 536), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 8, speeches, American Farm bureau; 9-10, midnight revue; 11-2:30 a. m., midnight revue; Coon-Sanders Original Nighthawks; W. Remington Welch, organist.

WAHG, Richmond Hill, L. I. (Eastern, 316), 8-8:15 p. m., Arthur Nelson, tenor; 8:15-8:30, Chas. Van Cleeves, violinist; 8:30-8:45, Helen Kuck, soprano; 8:45-9, Norman Grayson, pianist; 9-9:15, Harry Walsb, baritone; 9:15-9:30, Bennett and Marsh, songs; 9:30-9:45, Arthur Nelson; 9:45-10, Chas. VanCleeves; 10-10:15, Helen Kuck; 10:15-10:30, Norman Grayson; 10:30-10:45, Harry Walsh; 11-12, George Walter and his orchestra.

WBAV, Columbus, Ohio (Eastern, 423), 8 p. m., concert, Dispatch Little Symphony orchestra; John Clark, director; Mrs. T. C. Tussey, reader.

WBZ, Springfield, Mass. (Eastern, 337), 7:30-8 p. m., University extension courses; 10-11:30, concert, 11:30-12, dance program, McEnelly's singing orchestra.

## 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 3:** 6:15, WBZ; 6:30, WEAQ; WMAQ; 7, WIP; 7:15, WRC; 7:30, WOC; 8, WCCO, WOR; 8:15, WCCO; 8:45, KHJ; 9:05, KYW.

**Sunday, January 4:** 6, WFAA; 7:15, WJY; 8:30, WBRR; 9, WEMC.

**Monday, January 5:** 6, WCCO; 6:10, WHN; 6:30, WBZ, WCAU, WEEI; 6:35, WNYC; 6:45, WCAE; 7, WHN, WJZ; 7:10, WJZ; 7:15, WCAE, WNYC; 7:20, WBRR; 7:30, KSAC, WHO; 7:45, KSAC; 8:15, WJZ; 8:30, WBZ, WHN, WOR; 8:40, WEMC; 8:45, WNYC, WOR.

**Tuesday, January 6:** 6, WEBJ, WHN, WJZ; 6:10, WHN; 6:15, WCCO, WBZ; 6:30, WCAU, WEEI; 6:35, WNYC; 6:45, WGY; 7, WEAQ, WGY, WIP, WJZ, WRC; 7:10, WJZ; 7:20, KSAC; 7:45, KSAC; 8, KYW, WJY, WRC; 8:30, WHN; 9, WSAI; 9:05, WIP.

**Wednesday, January 7:** 6, WCCO; 6:15, WBZ; 6:30, WCAU; 7, WGR, WHN, WJZ; 7:10, WJZ; 7:20, KSAC, WBRR, WEAQ, WOC; 7:30, WOR; 7:45, KSAC, WJZ, WOR; 8, WOS; 8:30, KOB; 9:05, KYW; 9:15, WJZ.

**Thursday, January 8:** 6, WEAQ; 6:10, WHN; 6:15, WBZ; 6:30, WEEI; 6:45, WNYC, WGY; 7, WEAQ, WFI, WIP, WKBF, WRC; 7:20, KSAC, WOC; 7:30, WCCO, WGR, WRC; 7:45, KSAC, WCCO; 8, KYW; 8:15, WJZ; 8:30, WBRR, WGY; 9, WJZ; 9:25, WHN; 10, CNRC.

**Friday, January 9:** 6, WEBJ, WGY; 6:15, WBZ; 6:30, WBZ, WCAU; 6:35, WNYC; 6:45, WGY; 7, WGY; 7:15, WJY, WJZ; 7:20, KSAC; 7:30, KGO, WCCO, WNYC; 7:45, KSAC; 8, CNRT, KYW; 8:45, KOB; 8, WHN; 9:20, WEMC; 9:25, WHN; 10, WLW.

dinner concert, William Penn hotel; 7:30, Uncle Kay-see; 8:30, musical program; Oswald Johns Welsh, baritone.

WCAI, Northfield, Minn. (Central, 360), 9 p. m., "Points of View," "Dear Cornelia," reviewed by Dr. George Weida Spohn.

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Hotel Pennsylvania orchestra, direction Louis Baer; 7:30, electrical talk; 8, recital.

WCCO, Minneapolis-St. Paul, Minn. (Central, 417), 10:45 a. m., "Have You Had Your Iron Today?" Betty Crocker; 2 p. m., woman's hour, community welfare talk; 2:30, matinee musical; Ronald Jonson and his rollicking four; 4, magazine hour, "Not Wanted," Jessie Lynch Williams; 5:30, children's hour, Court of Gold Medal; 6:30, dinner concert, Minneapolis Athletic Club orchestra, George A. Greene, ace stringed violin soloist; Mrs. George A. Greene, accompanist; Eleanor Poehler, soprano; Eleanor Freeman, accompanist; 7:30, "Importance of a Strong Business Personnel," J. Henry Todd; 8:30, program; 9, "Pa's F. & R. Family."

WCX, Detroit, Mich. (Eastern, 513), 4:15 p. m., musical program; 6, dinner concert, Book-Caddillae hotel; 8:30, musical program; 10, dance program.

WOAF, Kansas City, Mo. (Central, 411), 3:30-4:30 p. m., the Star's string trio; 6:7, school of the air, piano tuning-in number on the Duo-Art; address, speaker, auspices Kansas City Children's Bureau; the Tell-Me-a-Story Lady; music, Hotel Muehlebach Trioan ensemble; 8-9:15, popular program; 11:45-1 a. m., nighthawk frolic, the "Merry Old Chiof" and the Plantation players.

WOAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., daily almanac; 12:02 p. m., Stanley theater organ recital; Arcadia cafe concert orchestra; play, students National School of Elocution and Oratory; 7:30, Dramm Daddy's bedtime stories; 8, play by WPA; 8:30, weekly treasure hunt; 10:03, Arcadia cafe dance orchestra; Morning Glory club concert; songs by Hershey and Zoehms.

WEAF, New York, N. Y. (Eastern, 492), 4:10-4:30 p. m., French lesson, Columbia university; 6-7, dinner music, Waldorf-Astoria hotel; 7:30-8, story telling, G. R. Kinney Shoe company; 8-8:30, Happiness Candy Boys; 8:30-10, U. S. Navy band, WRC; 11-12, Club Lido Venice.

WEBJ, New York, N. Y. (Eastern, 273), 7-7:15 p. m., Blybrun's reviews of new plays on Broadway; 7:15-8, Nat Martin's "I'll Say She's"; 8:15-8:30, Hains and Scott, songs; 8:30-8:45, Pauline Spivak; 8:45-9, novelty.

WEI, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston Edison Big Brother club; 7, musicale; 7:30, Mrs. Alice Monroe Evans, soprano; 8, Sarah Alice King, contralto; 8:30, Gilchrist quartet; 9, program, New York studio; 10, Dok-Eisenberg and his Sinfonians.

WEMC, Berdrien Springs, Mich. (Central, 286), 9-9:20 p. m., oldtime hymns and gospel songs; 9:20-10, South African night, college students from Cape Town, Africa, native songs, talk on life of natives, diamond mining, descriptions of the country.

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer David Bellevue-Stratford concert orchestra; 3:05, Caroline Hoffman, pianist; 6:30, Meyer David Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal.

WFAA, Dallas, Tex. (Central, 476), 12:30-1 p. m., address, Dr. Robert Stewart Hyer; 4:30-5, woman's hour, Mrs. Bessie M. Tribble; 8:30-9:30, vocal recital, G. Haydn Jones and singers, choir of First Presbyterian church.

WGR, Buffalo, N. Y. (Eastern, 319), 2:30-4:30 p. m., Buffalo Courier and Enquirer musical program; 6:30-7:30, dinner music, Vincent Lopez Hotel Stalter dance orchestra; Harold Giesler, director; 8:20-8:55, Hutchins High School orchestra; 9-10, musical program, Lucas-Lux Motor Corporation; 10-11, musical program, direction of Mrs. E. A. Southall; 11:30, supper-dance music; Vincent Lopez Hotel Stalter dance orchestra, Harold Giesler, director.

WGY, Schenectady, N. Y. (Eastern, 380), 7:45 p. m., WGY orchestra; 8, "What Every Voter Should Know About His City Government," Prof. Frank T. McKittrick; 8:15, Edward A. Rice, violinist; G. M. Tromblini, cellist; Rice string quartet; Peter Schmidt; clarinetist; 10:30, program, Bluebird dance orchestra; "A New Method of Measuring the Flow of Water"; "How to Behave in Society," Frederick B. Allen; WGY orchestra.

WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selections, Alamo theater orchestra; readings, Courier-Journal and Louisville Times; 7:30-9, concert, auspices, Mrs. Robert K. Van Pelt.

WHN, New York, N. Y. (Eastern, 360), 6:30-7 p. m., Vincent Carone and his Hotel Alamo orchestra; 7-7:30, Harry Richmond and his entertainers, with Eddie Elkins and his orchestra; 9:30-10, Dan Gregory and his Crystal Palace orchestra; 10-10:10, fashion chats, Mmo. Belle; 10:25-10:30, "Storage Batteries," H. B. Shonts; 10:30-11, Roseland dance orchestra; 11-11:30, Vanity club revue; 11:30-12, Sam Wooding and his orchestra from Alabam club; 12-12:30, Ted Lewis and his Symphonie Clown.

WHO, Oes Moines, Iowa (Central, 526), 7:30-9 p. m., Williamson brothers; Y. M. C. A. male quartet, W. A. D. Parke, first tenor, Frank Shipoy, first tenor; George Parks, baritone, Hubbard Cleveland, bass; Dr. Charles Sitzer, pianist; Richard Hyde, 11-year-old soprano; Mrs. R. C. Hyde, accompanist.

WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m., Glimbel tea room orchestra, Ray Steen, director; 3, "Food for Anomics," Mrs. Anna B. Scott; 3:15, M. Dorothy Descon, soprano; Milton J. Demon, tenor; 4:15, "Abnormal Children," Dr. F. H. Leavitt; talk, Laura Belle Staley; 6:05, Art Coogan and his Club Madrid orchestra; 7, Uncle Wip's bedtime stories.

WJJO, Mooseheart, Ill. (Central, 278), 3:30-4:30 p. m., music, Mooseheart children; 6:30-7:15, Albert F. Brown, organist; 7:15-8:15, solos, Mooseheart children; Mooseheart Novelty orchestra; talk, M. F. ...

WJY, New York, N. Y. (Eastern, 405), 8:15-8:45 p. m., "State Legislative Review," Julius S. Berg; 10-11, Ace Brigade and his fourteen Virginians, direct from Monte Carlo club.

WJZ, New York, N. Y. (Eastern, 455), 1-2 p. m., Henry Vander Zanden's Hotel Ambassador trio; 7-8, Savarin ensemble; 8:15-9, "State Legislative Review, Julius S. Berg; 10-11, Ace Brigade and his fourteen Virginians, direct from Monte Carlo club.

WLS, Chicago, Ill. (Central, 345), 12-1 p. m., R. F. D. program; George Simons, tenor; "Handing the Farmers' Legal Problems," Donald Kirkpatrick; 3:45-4:45 homemakers' hour; "Is Your Sweet Tooth Healthy?" Louise Fitzgerald; "The Busy Woman of Today," Helen Bennett; 6:30, Ralph Emerson, organist; 6:50, specialties, Senate theater studio; 7, lullaby time, Ford and Glenn; 7:15, Ida Miller, 7, lullaby time, Madsen, tenor; 7:30, Isham Jones and his College Inn orchestra; 8-9, evening R. F. D. program; Irving Epstein, violinist; "The Twentieth Century Co-operative," George R. Wicker; 9, Art Kahn's Senate theater Theater symphony orchestra; 9:15, WLS theater; 9:30, Isham Jones and his Collego Inn orchestra; 9:45, Robinson and Bernard, 10, Marshall High School Glee club; 10:30, Isham Jones and his Collego Inn orchestra; 10:40, Ford and Glenn time.

WLW, Cincinnati, Ohio (Central, 423), 1:15 p. m., popular program, Ahaus Brunswick Shop orchestra; 4, recital, pupils of Leo Stofregen.

WMC, Memphis, Tenn. (Central, 501), 12 m., musical program, O. K. Houck Piano company; 8, p. m., bedtime story, Uncle Percy; 8:30, concert, Britlings Novelty orchestra, Frank Braceante, director; 11, midnight frolic.

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

WNYC, New York, N. Y. (Eastern, 526), 7:30-7:35 p. m., police alarms; 7:35-7:55, resume of meeting of board of estimate; 7:55-8:30, musical program; 8:30-8:45, talk on sports, Fred G. Lieb; 8:45-9:45, dance program by Irving Bloom and his Club Tokio orchestra; 9:45-10, song recital; 10:30-10:35, police alarms and weather forecasts; 10:35-12, Ben Bernie's Hotel Roosevelt orchestra.

WOC, Oavenport, Iowa (Central, 484), 9 p. m., Wrixen's Capitol Harmony Kings orchestra.

WOI, Ames, Iowa (Central, 360), 12:30 p. m., college chimes; "How Keeping Farm Records Affects Profits," Dr. C. L. Holmes.

WOO, Philadelphia, Pa. (Eastern, 509), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 5:15, organ recital, Mary E. Vogt; 7:30, A. Candelori and his Hotel Adelpia concert orchestra; 8:30, Erno Rapee and his Radio gang from Fox theater; 9:30, WOO orchestra, Robert E. Golden, director; 10:03, A. Candelori and his dance orchestra; 10:30, Vincent Rizko and his Hotel Sylvania dance orchestra.

WOR, Newark, N. J. (Eastern, 405), 7-7:30 a. m., WOR morning gym class; 3-3:15 p. m., talk, Allan E. Guilmore, Newark Technical school; 6:15-6:30, "Music While You Dine," Bluebird orchestra; 6:30-7, man in the moon stories for children, Josephine Lawrence and Wm. F. B. McNeary; 7-7:15, Bluebird orchestra; 7:15-7:30, resume of the day's sports, Jolly Bill Stelnek.

WQJ, Chicago, Ill. (Central, 448), 11-12 m., Fred Mann's Sunday dinner menu; Ted Vilnius; 3-4 p. m., "A Club Luncheon," Dorothy McLain Dickens; "Touring Europe," Mrs. Harry T. Sanger; 7-8, dinner concert, Ralph Williams and his Rainbo Garden orchestra; Sheppard Levine, tenor; Edjo Overson, accompanist; Deonthe Schuber, Jugoslav soprano; 10-2, Ralph Williams and his Rainbo Skyraks; the Rogers boys, Larry and Billy; Nubs Allen, contralto; James J. Whalen, tenor; West brothers, Monogram trio.

WRC, Washington, D. C. (Eastern, 469), 4 p. m., fashion developments of the moment, Eleanor Gunn; 4:10, Eleanor Glynn, pianist; 4:20, "Beauty and Personality," Elsie Pierce; 4:30, tea music, Meyer Davis' New Willard hotel trio; 6, children's hour, Peggy Albion.

WTAS, Elgin, Ill. (Central, 286), 12:30-1:30 p. m., Kimball hall classical concert; 6, Terrace Garden dance program; 9:30, Kimball studio hour; 10:30, supper dance program, Jimmy Eggert, Jack Little, Paul Small, Lindsey Coons, Leo Sims; 11:30, Jay Gould, Maxine Brown.

WTAY, Oak Park, Ill. (Central, 283), 6:45-7:45 p. m., Ray Kroc and Harry Sosnik, the Melody boys; Black Cat orchestra; 9-10, George H. Clark, organist.

WWJ, Detroit, Mich. (Eastern, 513), 3 p. m., The Detroit News orchestra; 7, The Detroit News orchestra; Anne Campbell, The Detroit News poet.

## Additional Programs

(Received Too Late for Classification)

### Saturday, January 3

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-7:30, dance orchestra; 7:30-8, song recital; 8-9, vocal and instrumental; 9-10, Examiner, varied program; 10-11, Packard Radio club.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 3:30-4:30 p. m., impromptu studio program, Gladwyn Nichols, cornetist; 7:30-9:30, auditorium service, sermon on Divine Healing, Allice Semple McPherson, pastor.

(Continued on page 14)







WFI,  
KSAC,  
7:45,  
WJZ:  
9:25,

WGY;  
6:35,  
7:15,  
KGO,  
NRT,  
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8:45 p. m.,  
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; 10:03, A.  
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30 a. m.,  
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Fred Mann's  
2., "A Club  
Touring  
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orchestra;  
accompanist;  
0-2, Ralph  
logers boys,  
; James J.  
trio.

9), 4 p. m.,  
ment, Eleanor Gunn;  
4:20, "Beauty and  
4:30, tea music, Meyer

Davis' New Willard hotel trio; 6, children's hour,  
Peggy Albion.

WTAS, Elgin, Ill. (Central, 286), 12:30-1:30 p. m.,  
Kimball hall classical concert; 6, Terrace Garden  
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Paul Small, Lindsey Coons, Lee Sims; 11:30, Jay  
Gould, Maxine Brown.

WTAY, Oak Park, Ill. (Central, 283), 6:45-7:45 p. m.,  
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Anne Campbell, The Detroit News poet.

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Examiner, varied program; 10-11, Packard Radio club.  
KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30  
a. m., sunshine hour; 3:30-4:30 p. m., impromptu  
studio program, Gladwyn Nichols, cornetist; 7:30-8:30,  
auditorium service, sermon on Divine Healing, Almo  
Sompio McPherson, pastor.

(Continued on page 14)

Borough of Queens program.  
WOC, Davenport, Iowa (Central, 484), 7:20 p. m., edu-  
cational lecture, 9, program, Schuster sisters; 11, Louis  
Connor and his LeClaire hotel orchestra; song and  
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morning gym class; 6:15-6:30 p. m., "Radio for the  
Layman," Albert E. Sonn; 6:30-7:15, Jimmy Lent's  
Famous Society orchestra; 7:15-7:30, resume of the  
day's sports, Jolly Bill Stelke.  
WQJ, Chicago, Ill. (Central, 448), 11-12 m., "Hot  
Suppers for Zero Nights," Erna Bertrams; "A Frock  
for the Holidays," Eleanor Chalmers; "Authority on  
Horticulture," C. P. Binner; 3-4 p. m., "Gauging  
Meals by the Weather," Josephine Naylor; "Household  
Refrigeration and Frozen Desserts," Mrs. George M.  
Sbirik; 7-8, dinner concert, Ralph Williams and his  
Rainbow Garden orchestra; Manuel Rodriguez, Spanish  
tenor; Lydia Lochner, contralto; Marlon Henry, pianist;  
10-2 a. m., Ralph Williams and his Rainbow skybirds;  
Jerry Sullivan, Peggy McGuire; Rick Whalen, Gard-  
ner; Rosemary Hughes, soprano; Will Rossiter, daddy  
of them all.  
WRC, Washington, D. C. (Eastern, 469), 8:45 p. m.,  
children's hour, Peggy Albion; 7, dinner concert,  
Bernhard Levitow's Hotel Commodore orchestra; 8,  
talk, auspices American Automobile association; 8:30,  
talk, auspices Smithsonian Institute; 9:20, concert,  
Lee House trio; 10:30, dance program, Waldorf-Astoria  
orchestra.

WRO, Des Moines, Iowa (Central, 312), 3 p. m., studio  
musical program; 4-5:30, concert orchestra, Hotel St.  
Francis; 5:30-6, The Girls' Half Hour, Esther Wood  
Schneider.  
KSAC, Manhattan, Kan. (Central, 341), 12:30 p. m.,  
Osceola Hall Burr, reader; farm and home week;  
L. C. Williams; "Why Tax Counties with Scalp Boun-  
ties," A. E. Oman; 7:20, collegio bell; 7:30, lectures  
on music, Ira Pratt; 7:40, musical numbers, depart-  
ment of music; 7:45, lecture on music, Ira Pratt.  
KSD, St. Louis, Mo. (Central, 546), 8 p. m., program,  
R. Elmer Guenther, baritone; Paul Mehl, pianist.  
KTHS, Hot Springs, Ark. (Central, 375), 8:30-10 p. m.,  
program recital, Princess theater; Meyer Davis or-  
chestra.  
KYW, Chicago, Ill. (Central, 536), 11:35 a. m., table  
talk, Mrs. Anna J. Peterson; 6:35-7, children's bed-  
time story, Uncle Bob; 7-7:30, dinner concert, Con-  
gress hotel; 8, speeches, American Farm bureau; 9-10,  
midnight revue; 11-2:30 a. m., midnight revue; Con-  
sanders Original Nighthawks; W. Remington Welch,  
organist.  
WAHG, Richmond Hill, L. I. (Eastern, 316), 8-8:15  
p. m., Arthur Nelson, tenor; 8:15-8:30, Chas. Van  
Cleeves, violinist; 8:30-8:45, Helen Kuck, soprano;  
8:45-9, Norman Grayson, pianist; 9-9:15, Harry  
Walsb, baritone; 9:15-8:30, Bennett and Marsh, songs;  
9:30-9:45, Arthur Nelson; 9:45-10, Chas. VanCleeves;  
10-10:15, Helen Kuck; 10:15-10:30, Norman Grayson;  
10:30-10:45, Harry Walsb; 11-12, George Walter and  
his orchestra.  
WBAV, Columbus, Ohio (Eastern, 423), 8 p. m., con-  
cert, Dispatch Little Symphony orchestra; John Clark,  
director; Mrs. T. C. Tussey, reader.  
WBZ, Springfield, Mass. (Eastern, 337), 7:30-8 p. m.,  
University extension course; 10-11:30, concert, 11:30-  
12, dance program, McEnelly's singing orchestra.

Kibben; 8:15, Edward A. Rice, violinist; Giovanni  
Trombini, cellist; Rice string quartet; Peter Schmidt,  
clarinetist; 10:30, program, Bluebird dance orchestra;  
"A New Method of Measuring the Flow of Water,"  
"How to Behave in Society," Frederick B. Allen;  
WGY orchestra.  
WHAS, Louisville, Ky. (Central, 400), 4-5 p. m., selec-  
tions, Alamo theater orchestra; readings, Courier-  
Journal and Louisville Times; 7:30-9, concert, auspices,  
Mrs. Robert K. Van Pelt.  
WHN, New York, N. Y. (Eastern, 360), 6:30-7 p. m.,  
Vincent Catanese and his Hotel Alamae orchestra;  
7-7:30, Harry Richman and his entertainers, with  
Eddie Elkins and his orchestra; 9:30-10, Dan Gregory  
and his Crystal Palace orchestra; 10-10:10, fashion  
chats, Mme. Belle; 10:25-10:30, "Storage Batteries,"  
H. B. Shonts; 10:30-11, Roseland dance orchestra;  
11-11:30, Vanity club revue; 11:30-12, Sam Wooding  
and his orchestra from Alamo club; 12-12:30, Ted  
Lewis and his Symphonic Crown.  
WHO, Des Moines, Iowa (Central, 526), 7:30-9 p. m.,  
Williamson brothers; Y. M. C. A. male quartet, W. A.  
D. Parke, first tenor, Frank Shiploy, first tenor;  
George Parks, baritone, Hibbard Cleveland, bass; Dr.  
Charles Sitzer, pianist; Richard Hyde, 11-year-old  
soprano; Mrs. R. C. Hyde, accompanist.  
WIP, Philadelphia, Pa. (Eastern, 509), 1 p. m., Gimbel  
tea room orchestra, Ray Steen, director; 3, "Food for  
Anasomica," Mrs. Anna B. Scott; 3:15, M. Dorothy  
Deacon, soprano; Milton J. Demon, tenor; 4:15, "Ab-  
normal Children," Dr. F. H. Leavitt; talk, Laura  
Belle Staley; 6:05, Art Coons and his Club Madrid  
orchestra; 7, Uncle Wip's bedtime stories.  
WJJD, Mooseheart, Ill. (Central, 278), 3:30-4:30 p. m.,  
music, Mooseheart children; 6:30-7:15, Albert F.  
Brown, organist; 7:15-8:15, solos, Mooseheart chil-  
dren; Mooseheart Novelty orchestra; talk, M. P.  
Allen; 11:30-12:30, 4:30-5:30, 8:30-9:30, 10:30-11:30



Additional Programs

(Received too late for Classification)

(Continued from page 13)

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., 111 Moulton and his orchestra; 2:30-5, Charlie Wellman's Saturday afternoon frolic; 6-6:30, Art Hickman's concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, stories, American history, Prof. Walter Sylvester Hertzog; David Durand and Uncle John; 7:45, "Care of Body," Dr. Lovell; 8-10, program, Dr. A. Zimmerman; 10-11, Earl Burnett's Biltmore hotel dance orchestra.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Town Crier, news; 9:30, technical talk on Radio, Forbes Van Why; 5 p. m., closing markets; 5:30-6, Town Crier and the Village Urchins; 6-7:30, dinner hour music; 8-9, "A Trip to the South Sea Islands with Capt. Edw. Sallsbury," sponsored by Sallsbury and Alexander; 9-10, Manual Arts Alumni program; 10-11, Abe Lyman's Ambassador Hotel dance orchestra.

WBAP, Fort Worth, Tex. (Central, 476), 7 p. m., review, interdenominational Sunday school lesson, Mrs. W. F. Barum.

Sunday, January 4

KFI, Los Angeles, Calif. (Pacific, 469), 10 a. m., J. A. Church Federation service; 4-5 p. m., vesper service, Annie Mottram Clark, director; 6:45-7, musical appreciation talk; 7-8, stage acts, specialties and concert orchestra from Metropolitan theater; 8-9, song recital; 9-10, Examiner, dance music; 10-11, Theron Bennett and one of his dance orchestras.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-12:30 p. m., morning service of Angelus temple, broadcast from pulpit, Almeo Sempio McPherson, pastor; 2:30-4:30, afternoon service of Angelus temple, Silver band, choir and musical numbers by visiting artists; 7-9:45, musical hour program and evening service of Angelus temple; 10-11, organ recital, Estler Frick Green, organist.

KHJ, Los Angeles, Calif. (Pacific, 395), 10 a. m., Rev. Benj. Urquid, pastor, El Salvador Mexican Baptist church; 10:30-12:30 p. m., complete church services of First Methodist Episcopal church, Arthur Blakely, organist; 6:30-7, Art Hickman's concert orchestra, Edward Fitzpatrick, director; 7-7:30, organ recital from First Methodist Episcopal church, Arthur Blakely, organist; 8-10, program, Julio Kellar, harpist and assisting artists.

KJS, Los Angeles, Calif. (Pacific, 360), 10:30-12:30 p. m., complete religious service of Church of Open Door broadcast from pulpit, music and organ numbers; 6-7, vesper service, vocal numbers, Scripture talk; 8-9:30, evening service and sermon.

KNX, Hollywood, Calif. (Pacific, 337), 7-7:45 p. m., vesper service, International Bible Students' association; 8-9, Ambassador hotel concert orchestra, Jos. Rosenfeld, director; 9-11, program, El Encanto Apartments.

WBAP, Fort Worth, Tex. (Central, 476), 11 a. m., services, First Methodist church, Rev. J. W. Bergin; Will Foster, organist; 11-12, midnight frolics, Ted Miller's Crazy Hotel orchestra.

Monday, January 5

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald table talk and news; 5:30-6, Examiner's musical half hour; 8-9, Evening Herald, Patrick and Marsh's "Nightingales" dance orchestra, Margaret Edwards, vocalist; 9-10, program, Walter M. Murphy Motors company; 10-11, Examiner, dance music.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:15 p. m., Piggly Wiggly Girls trio.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Town Crier, news; 10:30, Mrs. Kate Brew Vaughn, home economics; 11, Dr. Richard M. Scott, talk on pets; 5 p. m., closing markets; 5:30-6, Town Crier and Village Urchins; 8-10, program, Western Auto Supply company; 10-11, Juno Purcell, the

KNX girl; 11-12, Abe Lyman's Coconut Grove dance orchestra.

WBAP, Fort Worth, Tex. (Central, 476), 7:30-8:30 p. m., popular music, Frensel Moore Bluck and Gold Serenaders; 9:30-10:45, musical program, Montgomery Ward's entertainers.

WMAQ, Chicago, Ill. (Central, 447.5), 4 p. m., mothers in council, Mrs. Frances M. Ford; 4:30, talk on English, Mrs. J. Elliott Jenkins; 6, Chicago theater organ recital; 6:30, Milan Lusk, violinist.

Tuesday, January 6

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-8, Aeolian residence pipe organ recital, Dan McFarland, organist; 8-9, Cecellian quartet; 9-10, Examiner, program presented by Jane of the Examiner; 10-11, Packard ballad hour.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 3:30-4:30, organ recital, Estler Frick Green and assisting artists; 6:30-7:30, children's hour with "Cousin Jim" and associates.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., news and music; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edw. Fitzpatrick, director; 6:30-7:30, Prof. Walter Sylvester Hertzog, stories, American history, "Fraternal visit of Queen Tlanta and the Sandman of Fairyland, Uncle John; 8-10, program, Associated General Contractors' association; 10-11, Earl Burnett's Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 360), 8-9:30 p. m., musical program of classical nature, vocal and instrumental with organ numbers.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, educational program for schools by State Board of Education; 10:30, Mrs. Kate Brew Vaughn, home economics; 5 p. m., closing markets; 5:30-6, Town Crier and Village Urchins; 6-7:30, dinner hour music; 8-10, feature program; 10-12, "movie" night at the Ambassador hotel with the Town Crier introducing filmland celebrities.

WBAP, Fort Worth, Tex. (Central, 476), 7:30-8:30 p. m., concert, Old Time Fiddlers; 9:30-10:45, program, Rotary club.

WMAQ, Chicago, Ill. (Central, 447.5), 12 m., weekly program, auspices Illinois Manufacturers' association; 4 p. m., American Red Cross home nursing talk, Estelle Weltman; 4:30, musical program; 5, lullaby lady, Mrs. Gene Davenport; 6, Chicago theater organ; 6:30, Hotel LaSalle orchestra; 7-9, Twelfth Night party for the children.

Wednesday, January 7

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-7:30, Nick Harris, detective stories; 7:30-8, Carson trio; 8-9, Evening Herald, Ken Smith's Kentucky Colonels, Sophie Cooper, mezzo-soprano; 9-10, Examiner, "Mampus" night presenting movieband; 10-11, vocal recital.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 2:30-4:30 p. m., auditorium service, sermon and testimonials on Divine Healing; 6:30-7:30, children's hour with little Mary Elizabeth and Helen Edwina Hughes.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., Abe Perliuss and his Rose Room orchestra; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edw. Fitzpatrick, director; 6:30-7:30, stories, American history, Prof. Walter Sylvester Hertzog; Dick Winslow, juvenile reporter; Uncle John; 7:30-8, program, University of Southern California; 8-10, program, So. Calif. Music company; Sully Balano, violinist; Gladys Blackwell Plekerling, soprano; Bill Graves, xylophonist; Mort Stuart, baritone; 10-11, Earl Burnett's Biltmore hotel dance orchestra.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Town Crier, news; 10:30, Mrs. Kate Brew Vaughn, talk for women; 5 p. m., closing markets; 5:30-6, Town Crier and Village Urchins; 6-7:30, dinner hour music; 8-10, feature program; 10-12, Hollywoodland dance orchestra.

WBAP, Fort Worth, Tex. (Central, 476), 7:30-8:30 p. m., Alvarado string orchestra, Ila Griggs, director; 9:30-10:45, dance program, Jim Riley's Texas hotel orchestra.

WMAQ, Chicago, Ill. (Central, 447.5), 1 p. m., speeches, weekly luncheon of the Association of Commerce; 4,

stories from Child Life; 4:30, program, McLean school; 6, Chicago theater organ recital; 6:30, stories for children, Georgene Faulkner; 8, weekly lecture, Northwestern university; 8:30, music; 9, musicale.

Thursday, January 8

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-7:20, Bon Ton Ballroom orchestra; 7:20, Y. M. C. A. speaker; 7:30-8, one act play; 8-9, instrumental quartet; 9-10, Examiner, varied program; 10-11, program by John Smallman.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 3:30-4:30, organ recital, Roy Reid Brignall; 7:30-9:15, water baptismal and sermon by Almeo Sempio McPherson, pastor, Esther Frick Green, organist; 9:15-10, studio program, Silver Band and Temple choir; 10-11, organ recital, Esther Frick Green.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., news and music; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edw. Fitzpatrick, director; 6:30-7:30, children's hour, stories, American history, Prof. Walter Sylvester Hertzog; Dickie Brandon, screen juvenile; Uncle John; 7:45, "Care of Body," Dr. Lovell; 8-10, Atwater-Kent program arranged by Inelo Remus; 10-11, Earl Burnett's Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 360), 8-9:30 p. m., vocal and instrumental concert.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Town Crier, news; 10:30, Mrs. Kate Brew Vaughn, home economics; 11, Dr. Richard M. Scott, talk on pets; 5 p. m., closing markets; 5:30-6, Town Crier and Village Urchins; 6-7:30, dinner hour music; 8-10, feature program; 10-11, Abe Lyman's Coconut Grove dance orchestra; 11-12, June Purcell.

WBAP, Fort Worth, Tex. (Central, 476), 7:30-8:30 p. m., program, Texas Christian university, Prof. H. D. Guellic, director; 9:30-10:45, musical program, artists, Howard Payne college.

WMAQ, Chicago, Ill. (Central, 447.5), 4 p. m., household hour, Mrs. Elizabeth O. Hiller; 4:30, Illinois Federation of Women's clubs; 6, Chicago theater organ; 6:30, Hotel LaSalle orchestra; 8, musicale; 8:15, Boy Scout talk; 8:30, musicale; 9, lecture, University of Chicago; 9:15, musical program.

Friday, January 9

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-8, Aeolian residence pipe organ recital, Dan McFarland, organist; 8-9, Evening Herald, Owen Fallon's Californians, Mile. Alexandria, vocalist; 9-10, Examiner, dance music; 10-11, Foothill Four quartet.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 3:30-4:30 p. m., organ recital, Roy Reid Brignall and assisting artists; 7:30-9:15, "Crusaders Rally," sermon and testimony of young people; 9:15-10, band concert by Silver band, technical Radio talk; 10-11, organ recital, Roy Reid Brignall.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:15 p. m., program of news and music; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edw. Fitzpatrick, director; 6:30-7:30, stories, American his-

tory, Prof. Walter Sylvester Hertzog; "Sir" Richard Headrick, screen starlet; Uncle John; 8-10, University of California, Southern Branch, Women's Glee club; 10-11, Earl Burnett's Biltmore hotel dance orchestra. KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Town Crier, news; 9:30, Estelle Lawton Lindsay, personal problems; 2 p. m., literary talk, R. D. McLean; 5, closing markets; 5:30-6, Town Crier and Village Urchins; 6-7:30, dinner hour music; 8-10, program, Eastern Outfitting company and Columbia Outfitting company; 10-11, amateur hour; 11-12, Abe Lyman's Coconut Grove dance orchestra from Ambassador hotel. WBAP, Fort Worth, Tex. (Central, 476), 7:30-8:30 p. m., music, K. P. Mandolin orchestra, Julia Struve, director; 9:30-10:45, program, Municipal band, Charles Tunstall, director.

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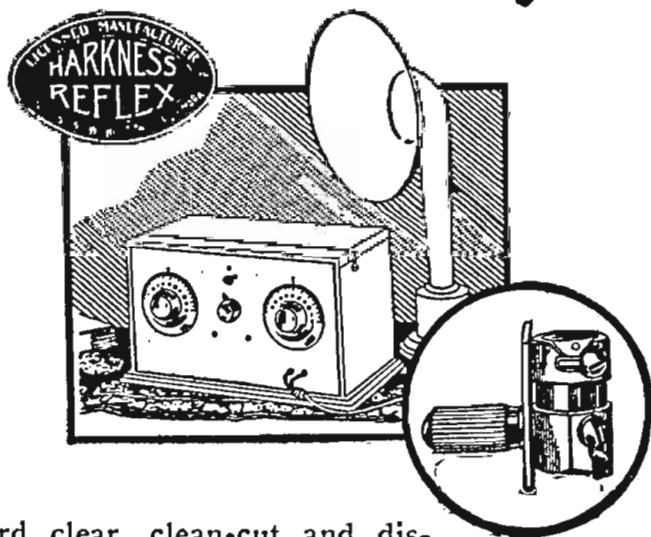


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# Construction of the Six Tube Het-Duo-Gen

## Part II—How to Wind the Inductances

By C. E. Brush

**I**N CONSTRUCTING a Radio set, it is always best to have all of the parts to be used actually on hand when the assembly is begun. In this way the parts may be tentatively arranged in their positions and the builder will have a clear idea of just how it will look when finished, and know just how to proceed in the actual construction.

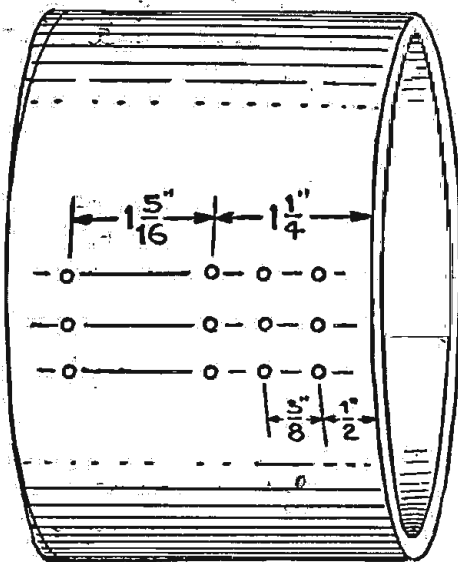


Figure 3

This holds true with Het-duo-gen, and as three of the units used in this set must be made by the builder, we will first go into the construction of these parts.

The units to be made are L-1, L-2 the tuning coil, or fixed coupler; L-3, L-4, L-5, the oscillator coil; and L-6, L-7 the filter coil, on which is the condenser regeneration control. The rest of the apparatus to be used are stock items, which can be purchased at any Radio store.

### The Antenna Coupler

The materials necessary for the tuning coil are one bakelite or hard rubber tube 3 inches inside diameter by 3 inches long, and 1/2 pound of number 22 dsc. wire. This coil comprises an untuned primary winding of 12 turns of wire, which is to be connected in series with the aerial and ground, and a secondary winding of 43 turns of wire, with a tap taken from the middle (or 22nd) turn; this to be tuned by a .0005 mfd. condenser.

With a small drill, slightly larger than the number 22 wire, the following holes should be drilled in the tube to provide beginning and ending anchorages for the two windings (see figure 3).

At a point 1/2 inch from one end of the tube drill three small holes in a row, parallel with the edge of the tube, and spaced 1/4 inch apart. These holes will be anchoring for the beginning of the primary winding. Mark off a space 3/8 inch from the holes just made and drill three others on a line with those already made.

These will be the anchoring for the ending of the primary winding.

Now turn the tube, and still on a line with the holes drilled for the primary winding, and at a point 1 1/4 inches from the same end as before, three more holes should be drilled in a line for the beginning of the secondary winding. Mark off a space 1 1/2 inch from the holes just made, and drill three holes at this point for the ending of the secondary winding.

The windings are to be wound clockwise, that is when holding the tube with one end toward you, the windings traverse the tube in the same direction that the hands of a clock revolve, and build along the tube away from you. Between the first two sets of holes drilled, wind 12 turns of the number 22 dsc. wire. Anchor the beginning of the winding by passing the end of the wire down through the first hole, up through the second, and down again through the third, allowing about a foot of the wire for connection to other parts of the circuit. The end of the winding is to be anchored in the same fashion, also allowing about a foot of wire for further connections. Tuck the ends of the winding inside the tube and begin the secondary winding.

### The Secondary

The secondary winding is wound in the same direction and manner as the primary, and consists of 43 turns of the number 22 dsc. wire. If the winding is done care-

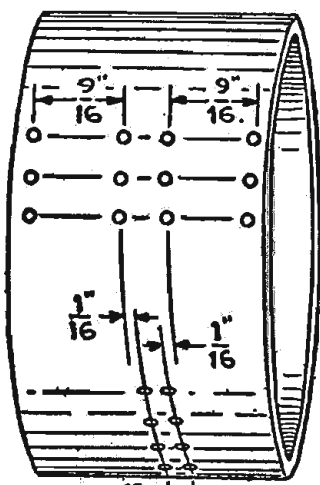


Figure 4

fully and smoothly you will find that the distances between the two sets of holes will just accommodate the number of turns specified, and the space between the two windings will be 3/8 inch. The manner of fastening this coil in the set will be taken up later, and we will now begin the oscillator coil.

### Oscillator Windings

Materials necessary for the oscillator coil are one bakelite or hard rubber tube

2 3/4 inches in diameter by 1 1/2 inches long, two discs of fiber or other material 2 3/4 inches in diameter, one strip of 1/2 inch by 1/2 inch flat brass 3 inches long (for the standard), one 8-32 brass machine screw 2 inches long (or 2 inches of 8-32 threaded rod), two 8-32 brass hexagon nuts. The material other than the dielectric tube is for the mounting of the coil in the set.

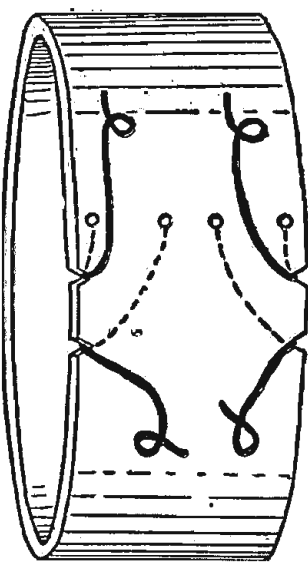


Figure 5

For the present we are concerned with the winding of the coils.

As before, we drill holes for anchoring the ends of the winding (see figure 4). This coil consists of three windings, two of which comprise the oscillator inductances and the third is the pick-up coil which couples the oscillator to the first tube circuit.

At a point as near the edge of the tube as possible, say about 1/8 inch, drill a row of three small holes, as before, spaced 1/4 inch apart. Turn the tube, and directly opposite these, and on the other edge of the tube, drill another row of these holes. Now mark off a point exactly 1/8 inch from each of the two rows already made, and drill a row of three holes at each of these points. You will now have four rows of holes, all directly opposite and in line with each other, with a space of 1/4 inch between the two inside rows. We will now wind the wire in the two spaces we have just provided for. The winding here, as on the other, must be in clockwise manner. Each space is to be wound with 28 turns of number 26 dsc. wire, the ends to be anchored in the same manner and leaving about a foot of wire for connections.

### The Pick-Up Coil

In the space between the two windings just made, and at a point about one-

quarter of the circumference of the tube from the other rows of holes, we now drill two more rows, this time of four holes each, as nearly in the center of the two windings as possible, and just far enough apart to accommodate two turns of the number 22 dsc. wire used on the tuning coil. These two turns of wire are to be wound in the same direction as the others, and with ends left long enough for connections. You will find that using the four holes for anchoring these ends, the ends of the wire will be on the outside of the tube, whereas the other four ends are on the inside of the tube. This is as it should be.

We are now ready to assemble the oscillator coil for mounting. The 3-inch piece of flat brass should be bent to a right angle about 1/2 inch from one end, forming a foot and standard. A hole large enough to accommodate the 8-32 screw, or bolt, should be drilled at the center of the foot, and also at a point about 1/2 inch from the end of the long arm. At the center of each of the 2 3/4-inch discs, the same sized hole should be drilled.

The parts are ready now to be bolted together, but before clamping the end pieces (discs) to the end of the tube, we must arrange to bring the ends of the wires to the outside. This is to be

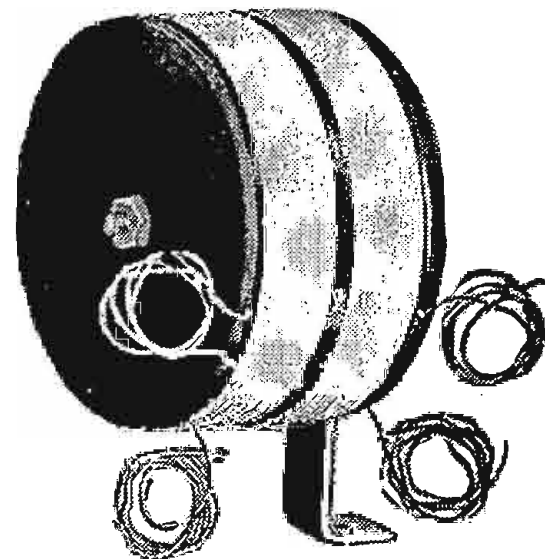


Figure 6—The Oscillator Unit.

done by filing a small notch for each of the four ends, two on either end of the tube, and about 1/2 inch to 3/4 inch apart. Now arrange the ends of the wires in the filed notches as follows (see figure 5). Holding the tube in one hand, the inside end of wire on the left hand winding should be placed in the forward (the

(Continued on page 20)

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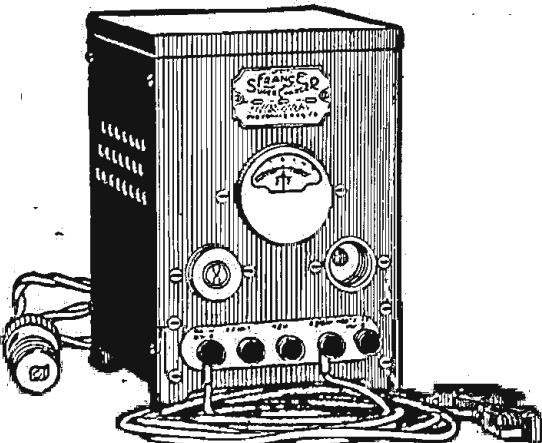
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241  
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Vol. XI. Chicago, Saturday, January 3, 1925. No. 13

## Demand Hoover Live Long

### Or Else Pass Suitable Radio Legislation

CAN Herbert Hoover live to be 100 years old? Perhaps, but more than likely he wouldn't remain in office as secretary of commerce during all that time. We, and many other well wishers, hope he lives to be 100 and acts as secretary of commerce till he dies.

All because—  
He has written Representative White a lengthy letter asking that no remedial Radio legislation be passed for the time being.

We cannot always be sure we have a Hoover in the chair of secretary of commerce. We cannot predict who may be our next secretary and head of Radio administration. We may need a law with less leeway if we are so unfortunate as to have Hoover succeeded by men less altruistic in their motives.

Preston Nolan, philosopher, has said, "In business, put it in writing; in love, never."

How applicable! Why not put our Radio laws in writing instead of in generalities. If revisions are needed—there are future Congresses to convene.

Our request that Secretary Hoover live to be 100 is not original. It is taken from a paper written on this subject by E. F. McDonald, Jr., president of the National Association of Broadcasters. He speaks vested with authority. Let us excerpt from his paper:

"As president of the National Association of Broadcasters, I want to make it known that I stand four square on the proposition that the proposed legislation would be perfectly safe so far as Mr. Hoover is concerned. But we do not know who Mr. Hoover's successors will be. Mr. Hoover would exercise any power given him with discretion, but someone else might abuse such power. And under the proposed legislation it is obviously possible to divert such a power into channels grossly adverse to the common good.

"One of these days we shall be confronted with the need of special communication laws, and if that need exists now let me urge for the good of the community, that if it is to stay in the hands of the department of commerce that provision be made for appealing from any decision of the secretary of commerce. There should be a power of review, an appellate court, so to speak.

"Communications today, including telephone, telegraph, cable and Radio, have reached such tremendous proportions and are such a vital factor in our daily civilized life that they merit a separate commission to function only in control of these mediums. A communications commission, if you please. The interstate commerce commission, as is common knowledge, is woefully overloaded with work. In fact, it has been in that condition for a long time. It is safe to state that the commission is years behind with some of the problems with which it is beset. And yet, it is called upon from time to time to add to the present burden. It is even confronted with highly technical matters, such as telephone and telegraph communications. Now with Radio, the world's greatest mechanical educator, as an additional element of enormous proportions in the field of communication, a vast subject in itself, the interstate commerce commission will unquestionably be called upon for advice and assistance.

"Modern progress is wholly dependent upon the speed of communication. Paralysis of the railroads would affect it no more than paralysis of our communication system. Certainly so large, and important, and vital a factor as communication, is in need of special attention that only a highly specialized group of men can give. The natural and logical solution, therefore, should be a communications commission to function on the order of the interstate commerce commission, to be self-controlling, and to be vested with powers similar to those granted the interstate commerce commission, and it should have under its jurisdiction the allied means of communication—telegraph, telephone, cable and Radio.

"Then, and not until then, give us legislation for this body of men to administer."

So ends Mr. McDonald. So would end our problem. Mr. Hoover, let's reconsider. Let's stop and think who our successor will be, before we make rash recommendations to Congress. You cannot be very sure of being secretary of commerce forever, and good legislation such as has been advised herewith will see that your work is carried out to everyone's satisfaction—even though you were to die tomorrow.

## RADIO INDI-GEST

### The Song of the Radio Singer

Somewhere in my invisible audience  
Methinks that I can see  
An old time friend who has been kind  
In many ways to me.  
Tonight, on the waves of the ether  
It seems to me I hear  
Love singing throughout the ages  
And many souls are near.

Somewhere in the infinite ether  
The so-called dead are there;  
And in the dusk of the twilight—  
Hear my evening prayer.  
God's symphonies in the ether  
In harmony divine  
Seem to come from another world and  
Enter this soul of mine.

Somewhere in my world wide audience  
I sing to one I love;  
And God will guide all those in tune  
To His great laws above;  
Some time through the veil of the ether  
Will burst the dawn of light;  
Then we shall see Eternal day—  
And never more know night.

RHEA SHELDON.

### Probably Smelled the Smoke

#### News Item

HAMBURG.—Some Radio fans of this city, boasting of powerful sets and giant antennas, claim to have heard programs of a Pittsburgh station during the last three night of the month of September. They also claim to have heard the piano player cough.  
SPIDER WEBB.

### The Radio-Ations

When you say to yourself, at your Radio set,  
"I'll stick 'till I get that station."  
And you tune 'till your nerves are all upset,  
That's determination.

When that boastful bird, with the super-hot  
Says he got some other nation,  
And you admitted that local was all you could get,  
That's mortification.

But when you're tuning and the things you say  
Are not fit for publication,  
The announcer calmly says, "KHJ."  
That's gratification.

DICK N. LACY.

### Practicing What They Preach

Dear Indi:—Recently while listening to a sermon from WOAW, someone began tuning in a nearby regenerative set, which caused a howl in my set, completely killing reception. Suddenly the howl stopped. The first words I heard were, "and now its all spoiled."  
RAY D. ATTON.

### The Lost Announcement

(Apologies to Adelaide Proctor)  
Seated one day at the Radio,  
Forgetting my former trials,  
And my fingers feverishly wandered  
Over the polished dials.  
I know not what I was seeking  
('Twas the slip of hand or thumb),  
But I heard a crash of static  
Like the beat of a big bass drum.

It flooded my aching ear drums  
Like the buzz of a whining saw,  
And it ruffled my fevered spirit,  
Already wounded and raw.  
It howled like a soul in torture  
Or feeding time at the zoo—  
Ran the scale of human discord  
And — Satanic crew.

It linked all kinds of noises  
Into one perfect fit,  
And it rumbled away into silence  
As if it were loath to quit.  
I have sought, but I seek it vainly,  
That announcer's blatant yell  
Which came from out of the ether,  
But static busted to —.

It may be death's bright angel  
('Twould make life worth the game)  
Will clear away the static—  
Let me hear that station's name.  
It may be that death's bright angel  
Will repeat that word again—  
It may be that only in heaven  
I shall learn that station's name.

B. K. VAN PETT.

### Famous Calls Heard



Introducing GEE. Often heard where rough bow wows or pooches abound. Station reported hard on trousers, etc. Beware!

### That's All There Is, There Isn't Any More

Heave a deep sigh,  
For all of the boobs,  
Who cross up their batteries,  
And burn out five tubes.

E. L.

## But They're at It Now



## Condensed

Some time ago I ventured to question the necessity of waiting for WEBH to leave the mike in the Riviera theater to return to that in their studio. There are no pauses any more. Personally, I should have enjoyed staying at the theater the other night to hear more of the truly wonderful coloratura singing of Miss Helen Yach. Immediately her numbers ended, the studio was prepared to continue the program.

Once again WIP, in Philadelphia, is to be handed a bouquet for featuring that fine lyric tenor, Frank Oglesby. I warned you listeners before to be on the watch for programs presenting Mr. Oglesby, so if you missed it don't blame me. Especially pleasing was his singing of the aria from the opera of "Elisir d'Amore," with orchestra accompaniment.

A very fitting memorial was the rendition by the orchestra of numbers from "La Boheme," one of the best known of the late Puccini's operas, sent out from WIP. The organ was also used during this concert.

Perhaps as good a concert as one could wish for was heard from that powerful Canadian station, CNRO, when the Salvation Army band of Ottawa was brought before their "mike." They play as a unit.

I have no doubt that the feature on WGN's program devoted to musical compositions of Spanish composers afforded pleasurable instruction to a great many listeners. The speaker ably characterized the work of each and presented a biographical background. Both those words of Albanez of Granados which were played showed the familiarity of the pianist with the interpretative intent of the composers.

There is more genuine music in chamber music than any other form. In spite of that statement being generally accepted as true, attendance at chamber music concerts is usually woefully small. Yet, see how popular stringed quartets have become with Radio audiences. A very good one was listened to through WDAR, the Philadelphia stringed quartet.

When a man leaves prison he needs all the aid possible to get, to help him back into society. Radio casting has proved a valuable asset in such cases, as witness the case of Mr. Snodgrass, known to thousands through Station WOS. We heard from their announcer of the many gifts sent to him and his family on the eve of his departure from confinement.

Just why there should be so much criticism of stations whose schedules include sopranos is beyond me. If variety is demanded, then why not pick some of the other overworked features for condemnation. At any rate, I am recording here high praise for the work of Dorothy Bloom, whose singing of "At the Well" from the studio of WEBH is a very pleasant memory.

We were cautioned to listen for Lombardo and his Royal Canadians, if a treat was desired. They are good. But a more lovely oriental selection than "A Japanese Sunset" is hard to find, and equally so, a better rendition than that of the Tall Cedars band. I believe if the call letters were omitted you would know reference was made to WTAM.

Speaking of tenors, the softly modulated tones of the coed announcer at the studio of the University of Ohio caught my attention and held it until a tenor's voice was heard. Both singing and songs were quite acceptable. So also is the voice of the announcers.



# Demonstrating Radio Principles at Home

## Chapter IV—Devising New Circuits

By J. E. Owen

**RADIOPHANS** inclined to experiment will find in this series of articles, directions for illustrating to their own satisfaction the underlying principles of Radio. They will be told how to set up the experimental apparatus, which will be simple and not so complicated as to require the equipment of a large laboratory, using odds and ends probably already at hand. Few new parts will be needed. The chapters to follow will be:

- Chapter V—Presenting the Experimenter Senior.
- Chapter VI—Presenting the Experimenter Junior.
- Chapter VII—Presenting the Experimenter Supreme.
- Chapter VIII—Experimenting with Push Pull Amplifiers.

**RADIO** is a science, but its application is an art. The successful designer of Radio apparatus and receiving sets is truly an artist, his abilities for penetrating into the art of designing, depending on his scientific knowledge of

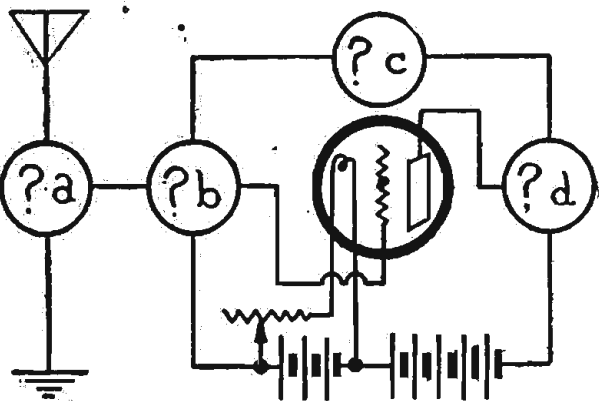


Figure 1

the fundamentals of Radio and the interrelations of electric, magnetic, and dielectric circuits within a complicated arrangement of apparatus.

The science of Radio deals with the functions and characteristics of various types of apparatus. The art of Radio

designing deals with what combinations to select and what to expect of a receiver if certain portions of apparatus are used with certain connections. Theory is often not complete enough to permit the development of certain types of sets that have been and are now being developed. For example, in reflex circuits where more than one tube is being reflexed, there are no formulas by which the constants of capacity and inductance may be accurately determined. To make certain inverse reflexes function properly, it is often necessary to construct an experimental set; the units for capacity, resistance, and the like, being variable, these later being adjusted so that maximum results are obtained.

### Circuit Arrangements

The vacuum tube as a receiver or transmitter has, for most purposes, the possibilities of circuit arrangements shown in figure 1. There are the aerial, the grid, and the plate circuits, these being so arranged that a piece of apparatus may be used in one that will, either through electric, magnetic or dielectric circuits, influence either or both of the others. Influences due to dielectric circuits are often detrimental, and, in fact, low loss coils and condensers have recently been placed at the public's disposal, these units having been so designed that losses due to uncontrolled actions of the electrostatic lines of force may be minimized.

In the aerial, grid and plate circuits shown in figure 1, different pieces of apparatus may be used, the different pieces giving different results. In figure 2 is listed a number of the most important types of apparatus which may be used in the different circuits. To illustrate how a circuit may be developed from figure 1, if a coupling device such as figure 2e (a vario, loose, or fixed coupler) is placed at 'a' and 'b', and a variometer, figure 2b, and a pair of headphones, figure 2l, are placed at 'd', 'c' being omitted (or it may represent the electrostatic field within the tube that causes the feedback of energy from the plate circuit), the result is the standard three circuit re-

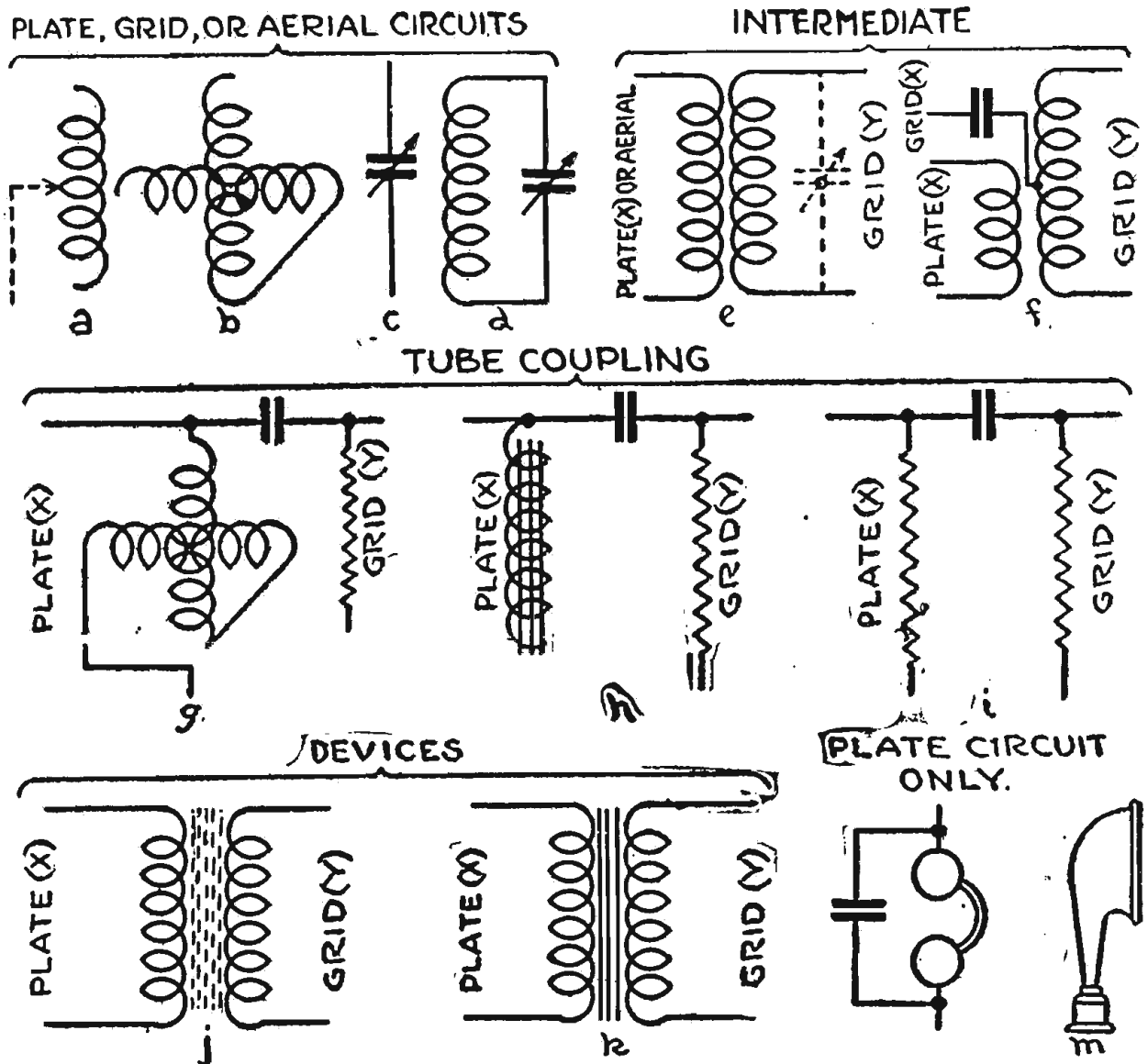


Figure 2

ceiver of figure 3. Of course, in any detector tube circuit, with the present type of tubes, a grid leak and grid condenser must be used for purposes of regulating

the voltage on the grid. To get a single circuit receiver, 'a' and 'b' may be re- (Continued on page 18)

## MECO RADIO TUBES

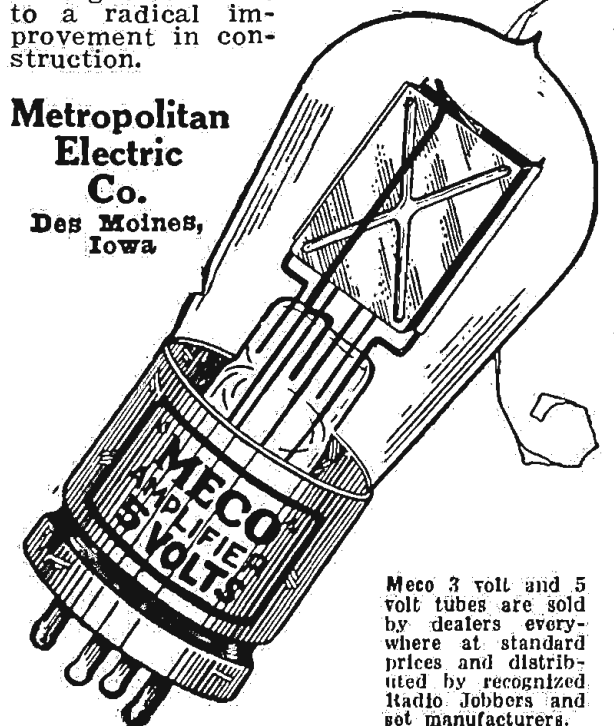


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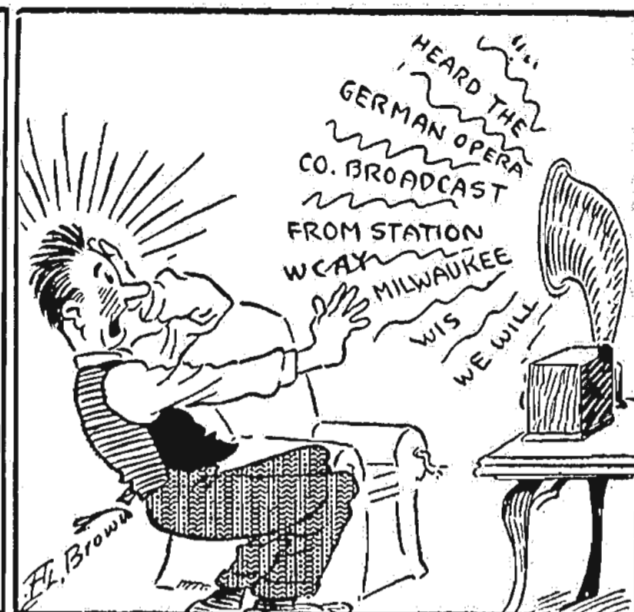
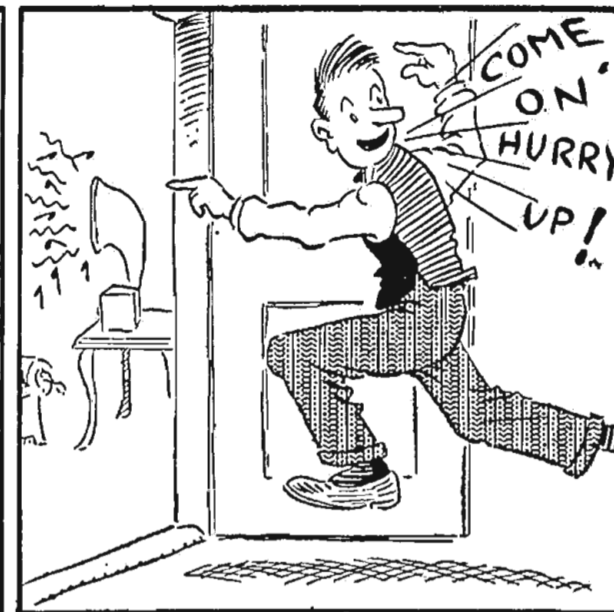
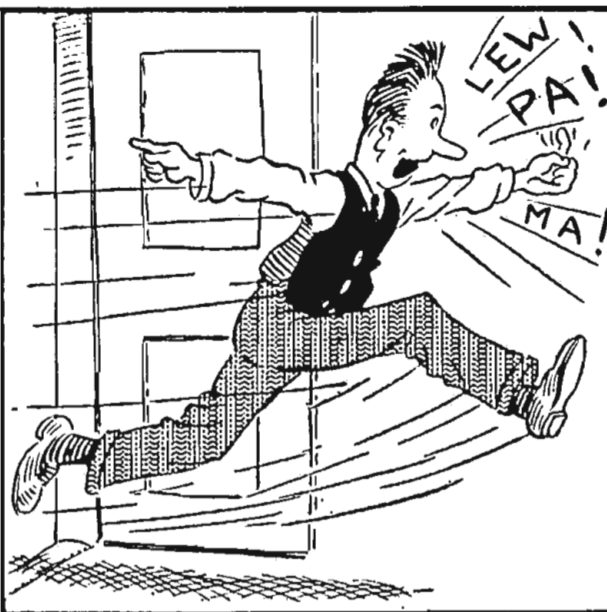
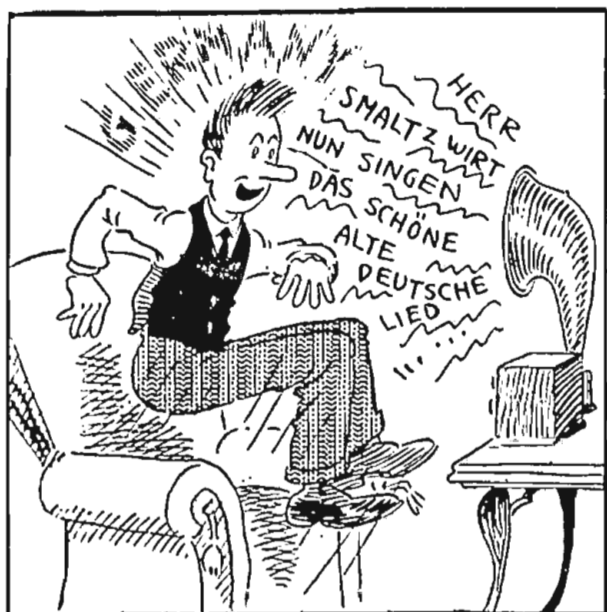
**THORDARSON ELECTRIC MFG. CO. CHICAGO.**



THE ANTENNA BROTHERS

Spir L. and Lew P.

So Far and Yet So Near



DEMONSTRATING RADIO (Continued from page 17)

placed with either a, b, or d, 2c representing the electrostatic or magnetic feedback circuits between the grid and the plate portions of the receiver. If any of the inter-tube coupling devices of figure 2 are used in the plate and grid circuits, an amplifier may be obtained, the form of amplification depending on the type of coupling used.

Values of Inductances

The experimenter who builds sets of his own design should have some idea of what values of inductance and capacity must be used in the various circuits. Fortunately, most of this is already solved by the manufacturers of Radio apparatus. The distributing agent will usually know approximately the wave lengths, for example, that may be covered with his particular piece of apparatus. For the experimenter who builds his own units, the problem is not so simple. He has one advantage, however, over those who buy their coils, condensers, and the like, already adjusted for certain values. He can use a variable unit, determine exactly the value he wants, and adjust his permanent units to this particular value. For example, in winding a coil, he can put on taps and experiment to see just what position of the

coil connection will give the best results. He then has two possible methods of procedure. He can either cut off the excess winding on this coil, or he can wind another the same shape and size except that it will be necessary, of course,

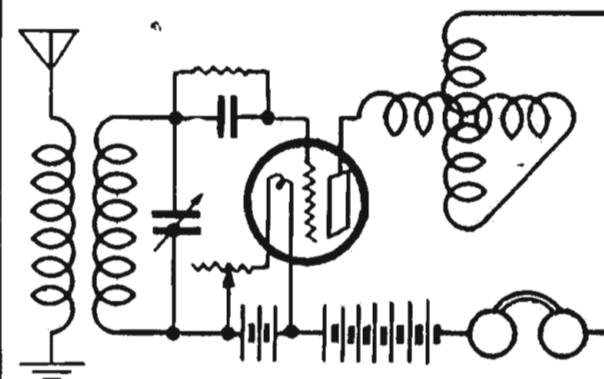


Figure 3

to stop the winding at the position found to give the best results when the first coil was used.

In selecting a relation of coils and condensers for use in a particular portion of a set, there are two ideals towards which one should work. First, the coil should be so arranged that the entire wave length band may be covered without taking off taps. Second, the relations of inductance and capacity should be such that a mini-

mum condenser capacity is used. The full scale of the condenser dial should be used in all cases. It is often necessary to remove plates from a condenser in order to reduce its capacity to the value that will allow the use of the full 180 degrees. Reducing this capacity, however, has a twofold effect. First, it aids tuning by separating the stations farther on the dial, and second, it increases the efficiency of the condenser.

Standards of Reception

After a set is designed, it is often possible to judge its possibilities merely from the circuit diagram. This is a study that will pay the potential Radio builder to investigate. Its mastery, however, comes only after long experience. To the beginner, especially, there appears to be a great maze and mass of Radio circuits, the relative values of which it is impossible to determine. There are certain standards of reception, however, that will enable one to judge these circuits at first sight. Some of the requisites for good reception are: Clearness, distance, DX volume, stability, ease of control, freedom from distortion, and selectivity.

In examining any kind of set, examine the form of amplification used and the types of apparatus used in order to get this amplification. The problem of Radio is amplification, it being desirable to get maximum amplification with a minimum

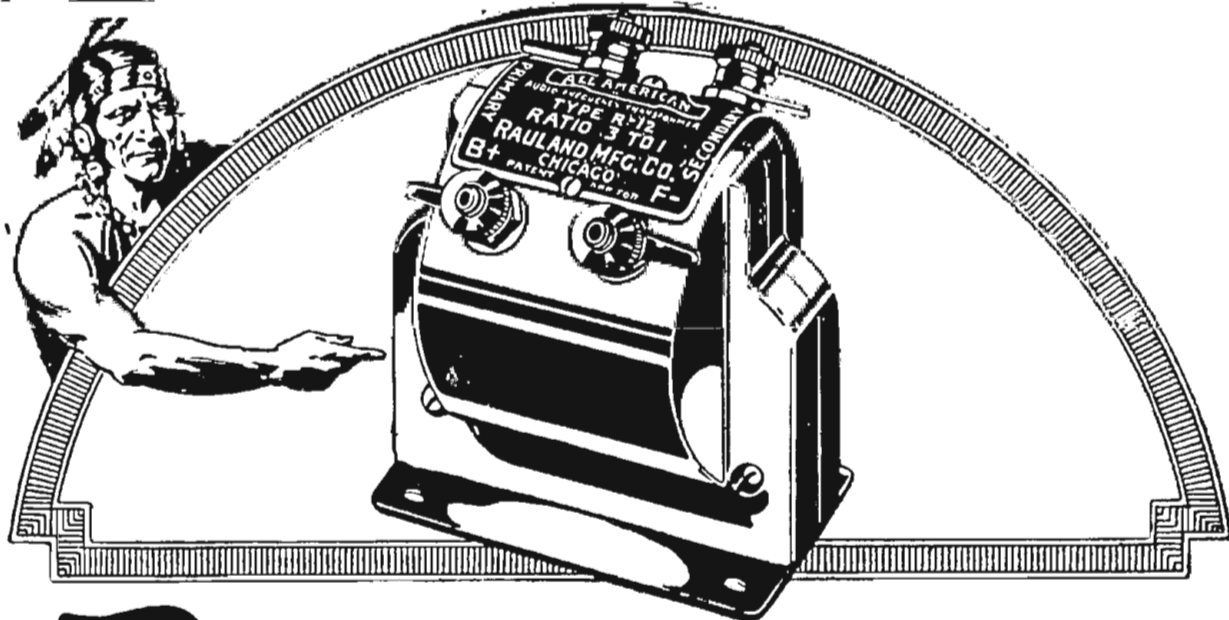
distortion and a minimum introduction of undesirable noises. Different forms of amplification give different efficiencies and different output qualities. The amplification per tube is not at all constant with different sets, the most efficient being, probably, a one tube regenerative—or possibly, a one tube super-regenerative.

Regenerative Circuit

If a regenerative circuit is used, the type regenerative and the type control over the incoming signal is important since the selectivity of the set often depends on these factors. A high degree of selectivity, when obtained, is usually obtained at a sacrifice of volume, and conversely, the balance of these factors depending on the amount of interference under the existing conditions of reception. In determining the efficiency of a regenerative set, it should, if possible, be tested under widely different conditions of reception. Some of the most important tests to put to the receiver involve the following: Is the control over regeneration satisfac-

(Continued on page 20)

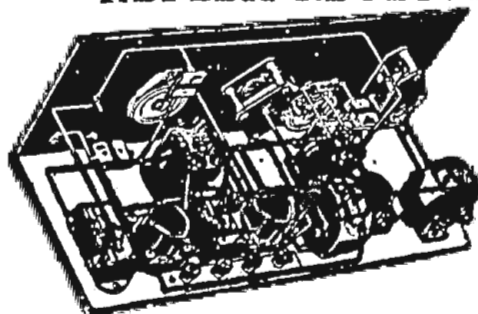
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3 Tubes DO THE WORK OF 6



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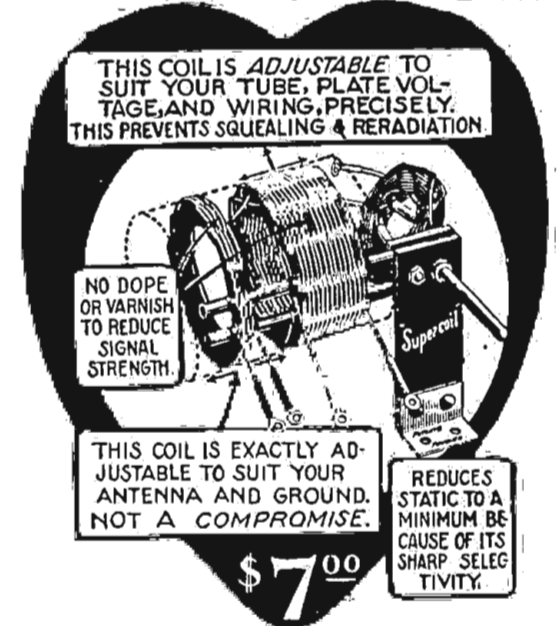
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Three Circuit Tuner Fully Adjustable Coils



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THIS COIL IS EXACTLY ADJUSTABLE TO SUIT YOUR ANTENNA AND GROUND. NOT A COMPROMISE.

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# Tubeless Crystal Set Operates Loud Speaker

## French Use Mechanical Amplifier

By Frederick M. Delano

THE superior clearness of the reception on a crystal detector has never been questioned—no tube detector has yet been able to approach it, but, unless one adds tubes and their necessary current supplies, a loud speaker could not be used. A loud speaker crystal set, known as the Crystavox, has just been perfected and placed on the Parisian market that will allow broadcast listeners to receive clear sharp programs without the need of storage batteries and tubes.

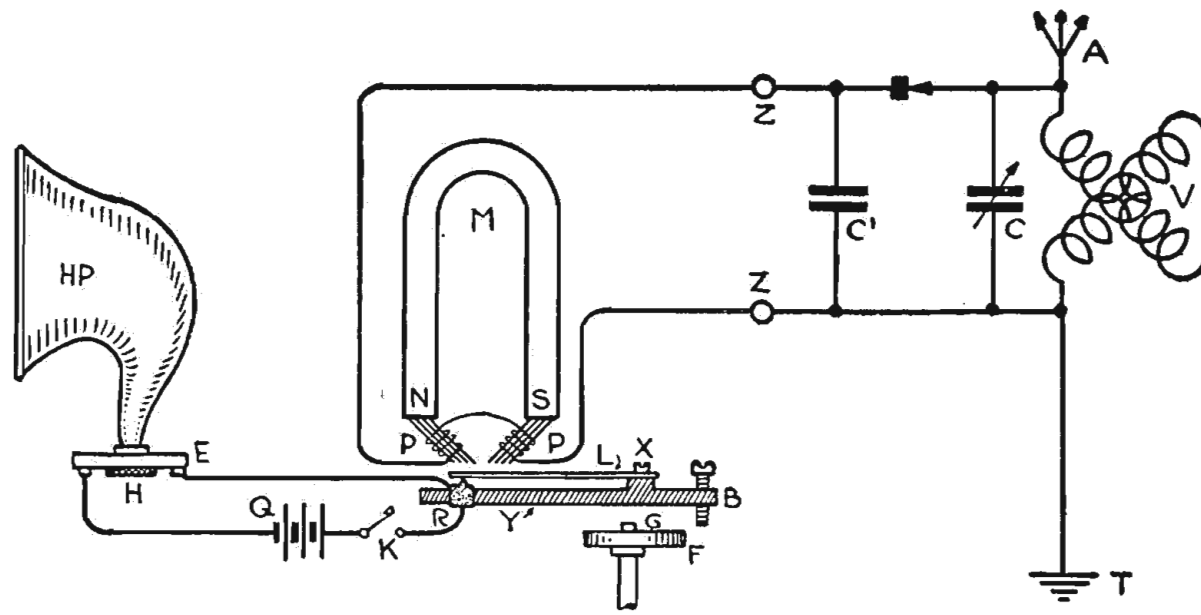
Crystavox is unique and is making a well-deserved hit with French listeners as now they can listen in on the concerts of the great French stations on a loud speaker. The range is very good and with a small indoor antenna with a good, tested crystal many enjoy the concerts 20 miles out; frequently, connections with the water and gas pipes have given splendid results. Listeners located 12 and 15 miles away using but a 4-foot vertical wire antenna pick up time and weather reports regularly.

### The Circuit Used

The circuit and the essential details of the mechano-electrical amplifier are shown in the illustrations. While the inductance and condensers used are such as to cover 200 to 2,700 meters, any good American crystal set will function with equal satisfaction. The antenna is A, ground is T and the variometer is V, while the variable air-spaced condenser is C. This variometer is of the syntonic variety and, with a variable condenser of .001 mfd. capacity, shunted by the fixed capacity of .002 mfd., it covers the range mentioned. This much of the apparatus is in one cabinet with the output at posts ZZ.

Instead of the usual head receivers or loud speaker being connected at this point, a special magnetic receiver is used, composed of a powerful magnet M terminating in PP, with windings similar to those in headphones. These windings are connected to the receiving set at ZZ and cause a semi-rigid metal strip L to vibrate. While L is firmly secured at one end to the base Y by the screw X, the free end vibrates rapidly and sets up variable electric currents in a small microphone R.

This section of the apparatus is called the primary amplifier system, or the primary relay. The varying frequencies set up in the microphone R correspond with surprising faithfulness to the blade L, and with far greater intensity than is found in the circuit ZPZP, due to the



local source of power Q, four dry cells. Current consumption by the microphone and unit E is very slight and a set of good dry cells can be used for a period of several months without need of replacement. The switch K turns off the current when the user is through as the unit and microphone form a closed circuit which otherwise would waste current uselessly. There is a loud speaker unit of the usual type in HP which is adjusted by the special knurled screw H. This receiver is composed of a vibrating cone of the Brown type. Many of the better grade American speakers would work excellently in this set.

### Few Adjustments Needed

The adjustments of this apparatus are first that of the blade L by means of the screw B which raises or lowers the assembly on Y, and second, that of the speaker unit by the screw H. The sensitivity of the receiver is ascertained by means of the usual test buzzer before the speaker is thrown in.

The real secret of the success of this apparatus is, however, found in the parts marked G and F. The part G is an iron

disk secured, at an eccentric axis, to shaft F, and fine adjustments are made by the rotation of an external dial secured to F. The rotation of F causes a displacement of G and determines infinitesimal variations in the polar field, allowing extremely sharp adjustments for clarity to be made.

### Suggestions for Fans

American Radiophans wishing to try this device may find the following sug-

gestions of some value. For the magnet use one of the large U-shaped magnets found in magnetos and small generators or construct one from laminations of silicon steel with small extensions to take the coils PP. If the solid magnet is used, the laminated extension pieces can be fastened to it with a machine screw.

It makes no difference whether M and PP are adjusted to be at varying distances from Y and L, or whether Y and L are varied and M made fixed. The latter arrangement may prove slightly better as then there is no change in distance between G and M. It is the effect of the polar field existing between the extensions of M that the metal piece G deflects.

Piece L should be of very fine spring steel, since it must vibrate at audio frequencies ranging from 16 to 5,000 per second. Microphone buttons may be difficult to obtain in certain localities, but the writer understands they can be had in many larger cities and from mail order houses. It is essential that the loud speaker be adjustable by a screw such as H.

(This article is not intended as a how-to-make and is presented only as a basis on which American experimenters can work. No details are available other than those presented.—Editor's Note.)



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# A

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The "Goode" Two-o-One A Tube amplifies or detects. It is a quarter ampere, five volts, standard base silvered tube.  
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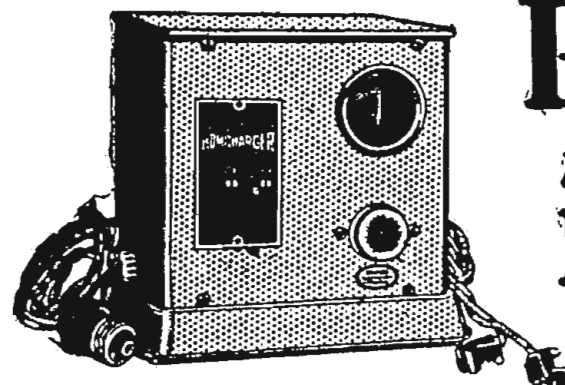
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**SUB PANEL DRILLING LAYOUT FOR HET-DUO-GEN**

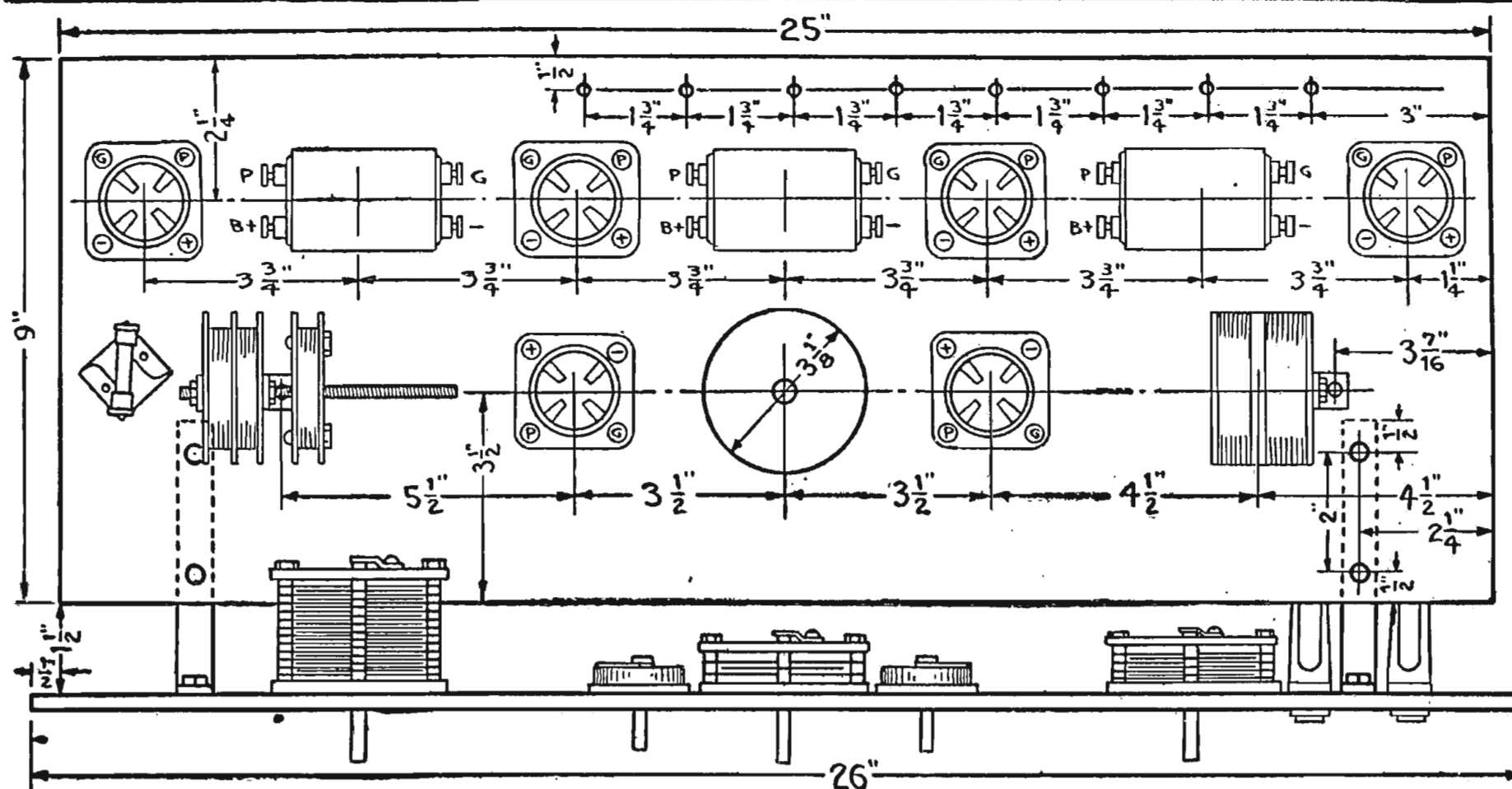


Figure 7

**SIX TUBE HET-DUO-GEN**

(Continued from page 15)

nearest to you) notch on the left hand end of the tube, while the outside end of wire of the same winding is placed in the notch directly behind the other, on the same end of the tube. Similarly, the inside end of the right hand winding goes in the nearest notch of the right hand of tube, while the outside end goes in the notch directly behind this, on the same end of the tube.

Now, holding these ends in their proper notches, place one of the discs at the left hand end of the tube. This will hold the two ends of wire on that side of the tube in place. Now put the 8-32 bolt

through the disc and tube, and then place the second disc at the right hand side of the tube, keeping all four ends of wire in their proper places. Then take the standard and slip it on the bolt at the right hand side, and turn on the nut to hold everything in place. You will now have a good looking piece of apparatus, ready to mount (see figure 6).

(The next article gives complete details on the filter coupler.—Editor's Note.)

**Don't Make a Jolt Test**

Never strike the cabinet to test for poor connections. A sharp blow is liable to destroy the filament of one of the tubes in the set, or it may even knock a

wire carrying high potential current loose and touch a filament lead, thereby burning out the tubes and running down the batteries.

**DEMONSTRATING RADIO**

(Continued from page 18)

tory? Does oscillation occur over the efficiency of the filament? Are there few wave length controls? Is the amplification tire wave length range at the normal fairly constant over the whole scale of wave lengths? Is the set selective?

Here is an excellent test for selectivity that may be applied to anything from a one tube set to a super-heterodyne. It is often noticed that when two stations are on approximately the same wave lengths, there is a hum in the receiving unit, this hum depending on the difference in the frequencies of these stations. For example, if one of these stations shifts its wave length so the difference in their frequencies is increased, the pitch of the hum will be increased, but also the volume of the hum will be decreased. Consequently, if two stations are found that are the proper distance apart in their frequencies, one receiver being troubled by the resulting hum and another not being troubled by this same hum, it being understood that approximately the same conditions of receptions exist when the two receivers are compared, the second receiver is more selective than the first.

(A modified ultra audion set using aerial, counterpoise and ground will be presented under the head of Presenting the Experimenter Sr. in the next chapter by Mr. J. E. Owen in his demonstrating series.—Editor's Note.)

An antique gray finish can be put on an open-grained Radio cabinet by rubbing the wood with linseed oil, cleaning it off and rubbing a "filler," made of white lead and lampblack.

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THE STAR-ITE CRYSTAL

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We have secured oscillation with crystals in a laboratory fashion, but would not attempt to sell the STAR-ITE to take the place of amplifying tubes.

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As this crystal is a new one put out by an old firm in the crystal business your dealer may not have it, but try to get him to order one for you, on our money back guarantee. If he does not wish to do so send us his name with a \$1.00 bill at our risk, and we will send you one with the understanding that you may return it, and we will refund you the \$1.00 at any time within 30 days. Gold Cat Whisker in Each Package.

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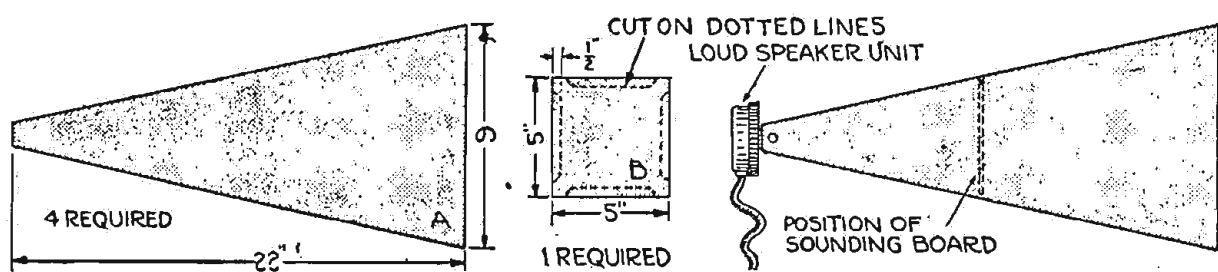


# How to Build a Loud Speaker Horn

## Sound Board in Throat Secret of Tone Quality

With the use of the loud speaker illustrated I have had good results and the tone is exceptionally fine. It is rectangular in shape and tapering from end to

### PARTS MADE OF WALL BOARD



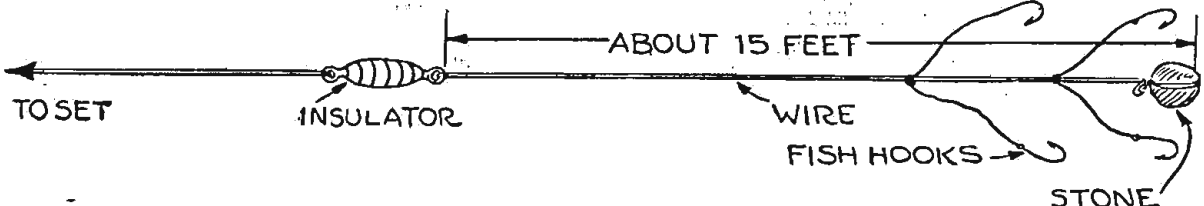
### Putting up an Aerial

For a long time I got along with a small aerial, but I had a great desire for a better and longer one up in a tree across the road from my residence. The trouble lay in the fact that the tree was one of the original limbless kind until one got about 30 feet from the ground and not having a ladder long enough to reach

where it has stayed for some months. The free end, of course, goes to the set.—M. Daugard, Syracuse, N. Y.

### Shield Carefully

When shielding a panel, remember that the tinfoil glued to the inside of it must not touch any piece of apparatus. Cut the holes in it considerably larger than



the first limb it was certainly a sticker until I hit on the following idea.

I took my aerial wire, placed an insulator about 15 feet from the end so that it would be far enough from the tree not to touch it and then tied a stone and some fish-hooks to the end of the wire and threw it into the top of the tree,

those where the shafts and screws pass through, so that there is no danger of having them touch. Make sure this tinfoil shield is connected to the ground binding post only.

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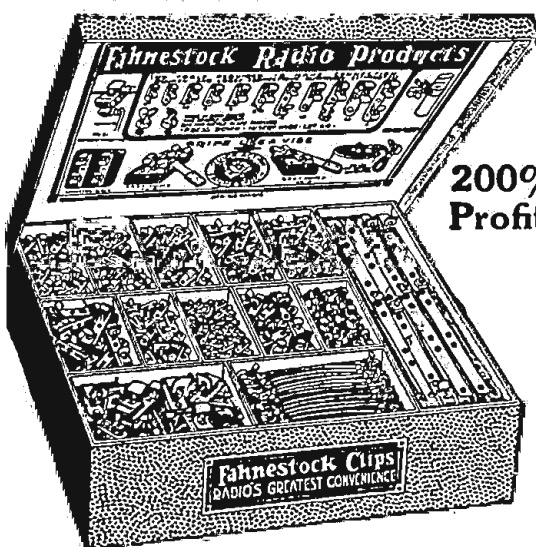
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## Placing Loud Speaker to Relieve Distortion

Distortion in a loud speaker, if not traceable to the wiring of the audio frequency unit or its transformers, may be reduced to a minimum by facing the loud speaker to the wall of the room at a distance of about 6 inches. This distance varies with the type of loud speaker to be used and can be determined only by experiment. Of course, adjusting the diaphragm of the loud speaker unit may help, but there are loud speakers in which the diaphragm cannot be adjusted. If the transformers are at fault, distortion may be eliminated almost entirely by shunting .001 or .002 mfd. fixed condensers across the primaries, the secondaries, or across both primaries and secondaries. A .005 fixed condenser in series with the G post of the transformer and the ground terminal may also help. One of these combinations is right for your particular unit, and this combination, of course, must also be determined by experiment. Reduction of the B battery voltage will help reduce distortion.

A vernier attachment or condenser is often necessary for sharp tuning.

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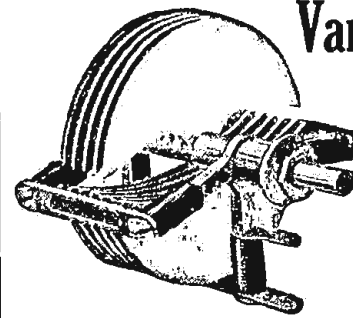
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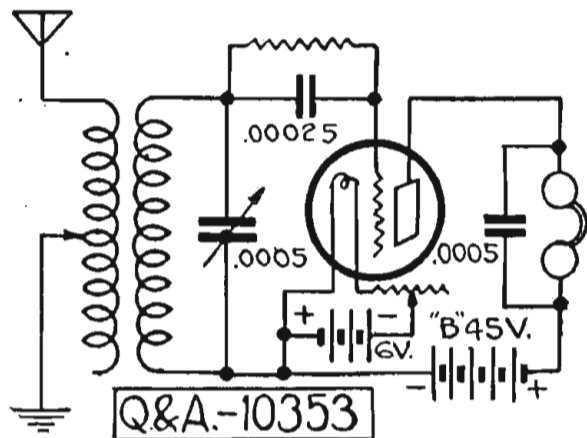
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# Questions and Answers

## Best One Tube Hook-Up

(10353) IDW, Buffalo, N. Y.  
 In reference to a certain one tube reflex hook-up, I notice you mention a 201A tube. I am using dry cell tubes WD-12. Kindly let me know what results



if any could be expected from a WD-12 instead of the 201A, and what plate voltage to use with it? Can you get as distant stations with this as with a regenerative one tube set? Also, can you add two or more stages of amplification?

I would also like to know what you

**Log Books, Maps, best out.** Space for 300 stations, 25c each. Roy Stacy, Rockford, Ill.

**Men to build radio sets in spare time.** Leon Lambert, 501-11 Kaufman Bldg., Wichita, Kansas.

**Zellers Radio Guide makes listening-in enjoyable.** Gives wave length, power, location, when on, logging space for each station, \$1. Zellers Company, Hooper, Nebraska.

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## PATENTS

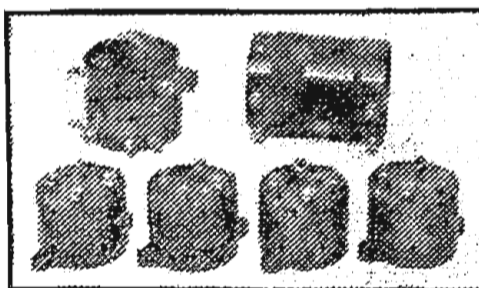
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 WM. ROSENBLUM CO., 11 Derring Road, Mattapan, Mass.

consider to be the best one tube hook-up, using one 23-plate condenser one variocoupler and WD-12 tube? The coupler has taps every ten turns. Am using a .00025 grid condenser and variable grid leak. Have no room to add anything to these instruments except a few fixed condensers if they would improve it. What does winding coils clockwise mean?

A.—The circuit submitted was sent in by a correspondent and published upon his authority for its effectiveness in the usual spirit of our Kinks department. A closer analysis shows that it has limitations and we therefore offered a diagram

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# Radiophone Broadcasting Stations

## Corrected Every Week—Part II

### FIND MISTAKES AND YOU'LL GET DOLLAR

ONE DOLLAR will be paid to the Radiophan reader of Radio Digest submitting the most errors in any one station's listing in the Directory of Radiophone Stations, which appears in five parts, serially continuously on the next to last page. Letters must reach Radio Digest's office not later than one week from date of issue corrected. Readers are not limited to correcting one station, but such corrections must be verified by the stations themselves, and NOT by comparison to other so-called accurate Radio directories or lists. Turn in corrections for as many stations as you can find—if you can find errors! Use separate sheet of paper for each station submitted and place name and address on each sheet. In case of tie, duplicate awards will be made.

### United States (Cont'd)

**KFRZ**, Hartington, Nebr. 222 meters. 15 watts. The Electric Shop.

**KFSG**, Los Angeles, Calif. 278 meters. 500 watts. Angelus Temple. Tues, Thurs, Fri, Sat, 3:30-4:30 pm. Tues, 6:30-7:30 pm. Wed, 2:30-4:30 pm; 6:30-7:30 pm. Thurs, Fri, Sat, 7:30-11 pm. Sun, 10:30-12:30 pm, 2:30-4:30, 7-9:30. Mon silent. Pacific.

**KFSY**, Helena, Mont. 248 meters. 10 watts. The Van Blearcom company. Announcer, George C. Stocking. Wed, 7:30 pm, music, talks. Sun, 10 am, 8 pm, church services. Mountain.

**KFUL**, Galveston, Tex. 258 meters. 10 watts. Thomas Goggan & Bros.

**KFUM**, Colorado Springs, Colo. 242 meters. 100 watts. W. D. Corley.

**KFUO**, St. Louis, Mo. 545 meters. 500 watts. Concordia Theological Seminary.

**KGB**, Tacoma, Wash. 252 meters. 50 watts. Tacoma Daily Ledger. Announcer, Alvin Stenro. Slogan, "This is KGB in Tacoma, Washington, the Lumber Capital of America and the Gateway to Mount Tacoma." Mon, Wed, Fri, 7-9 pm. Pacific.

**KGO**, Oakland, Calif. 312 meters. 1,000 watts. Gen. Elec. Co. Announcer, Howard I. Millholland. Daily ex Sat, Sun, 1:30 pm; Sat, 12:30, markets, weather; Mon, Wed, Fri, 3 pm, music. Mon, 4-5:30 pm, dance orchestra. Daily ex Sun, Mon, 4-5:30 pm, concert orchestra. Daily ex Sat, Sun, 6:45 pm, reports, news. Mon, Tues, Thurs, Sat, 8 pm, lectures, music. Mon, Tues, Thurs, Sat, 10-11 am, dance music. Mon, 5:30-6 pm, children's half hour. Fri, 5-5:30 pm, girls' half hour. Sun, 11-12 m, 7:45-9 pm, church services; 3:30-5 pm, concert. Pacific.

**KGU**, Honolulu, Hawaii. 360 meters. 100 watts. Marlon A. Mulrony, The Honolulu Advertiser. Announcer, M. A. Mulrony. Daily, 7:30-9 pm. Tues, Thurs, Sat, special program. 150 meridian. 2 1/2 hours later than Pacific.

**KGW**, Portland, Ore. 492 meters. 500 watts. Portland Morning Oregonian. Announcer, Dick Haller. Slogan, "KGW, Keep Growing Wiser." Daily, 12:30 pm, concert. Daily ex Sat, Sun, 5 pm, children's stories; 7:15, police, markets, weather, news. Mon, Wed, 8 pm, concert. Tues, 8 pm, lecture; 8:30, concert. Fri, 8 pm, lecture; 10:30, Foot Owls. Mon, Tues, Wed, Sat, 10-12, midnight dance. Sun, 3 pm, concert; 6, church service; 7, concert. Pacific.

**KGY**, Lacey, Wash. 246 meters. 10 watts. St. Martins College. Announcer, Sebastian Ruth. Slogan, "Out Where the Cedars Meet the Sea." Tues, Fri, Sun, 8:30-9:30 pm, news, concert, lecture. Pacific.

**KHI**, Los Angeles, Calif. 395 meters. 500 watts. Los Angeles Times. Announcer, John S. Dazgett. Slogan, "Kindness, Happiness, Joy." Daily ex Sun, Mon, 12:30-1:30 pm, 2:30-3:30, 6-7:30, 8-10. Sun, 10-12:30 pm, 6:30-7:30, 8-10. Mon, 12:30-1:30 pm. Pacific.

**KHJ**, Seattle, Wash. 360 meters. 100 watts. Louis Warner.

**KIAP**, Siltcoot, Minn. 421 meters. 500 watts. Steele Co. Program irregular.

**KJQ**, Stockton, Calif. 273 meters. 5 watts. Gould. The Light Man. Daily ex Sun, 5-6 pm, concert. Wed, Sat, 9-11 pm, dance music. Mon, 9-10 pm. Sun, 10-11 am, church. Pacific.

**KJR**, Seattle, Wash. 283 meters. 100 watts. Northwest Radio Service Co. Announcer, Vincent J. Kraft. Slogan, "Radio Headquarters." Daily ex Sun, 5:30-6:30 pm, dinner hour program. Daily Sat and Sun, 8-10:30 pm, etatuo programs; 10-11, orchestra. Sat, 9-10 pm, orchestra. Pacific.

**KIS**, Los Angeles, Calif. 252 meters. 750 watts. Bible Inst. of Los Angeles. Announcer, M. E. Carrier. Slogan, "King Jesus Saves." Tues, Thurs, 8-9 pm, sacred music, lectures, etc. Sun, 10:45-12:30 pm, 6-8:45, 7:15-9:30, church services. Pacific.

**KLS**, Oakland, Calif. 360 meters. 250 watts. Warner Bros. Radio Supplies. Announcer, S. Warner. Slogan, "The City of Golden Opportunity." Daily 11:30-1 pm. Sun, 10-11 am. Pacific.

**KLX**, Oakland, Calif. 509 meters. 500 watts. Oakland Tribune. Announcer, Seth T. Bailey. Slogan, "Where Real and Well meet." Daily ex Sun, 7, news; 7:30, weather. Mon, Wed, Fri, 8-10 pm, talks; entertainment. Pacific.

**KLZ**, Denver Colo. 283 meters. 250 watts. Reynolds Radio Co. Announcer, Mrs. William D. Reynolds. Slogan, "Its a Privilege to Live in Colorado." Daily ex Sun, 8:30 am, 10:15, 12:15. Daily ex Sun, Wed, 7:30-8 pm, news, markets. Thursday, 8:15-9:30 pm. Mon, Sun, 9-10:30 pm. Mountain.

**KMI**, Fresno, Calif. 248 meters. 50 watts. San Joaquin L.L. Fr. Corp. Announcer, S. W. Green. Slogan, "Home of the Raisin." Irregular schedule.

**KMO**, Tacoma, Wash. 360 meters. 10 watts. Association Station. (Love Electric Co.) Mon, Wed, Fri, 6-7 pm, popular program; 9-10, artist's program. Pacific.

**KNT**, Kukak Bay, Alaska. 263 meters. 100 watts. Walter Herrlich.

**KNX**, Hollywood, Calif. 337 meters. 500 watts. Los Angeles Evening Express. Announcer, Wm. Van Why. Daily ex Sun, 10 am and every hour, Town Crier; 12 m, time, 6-7:30, dinner concert; 8-10, feature program; 10-11, dance music. Sun, 8-10 pm, feature program. Pacific.

**KOA**, Denver, Colo. 323 meters. 1500 watts. General Elec. Co.

**KOB**, State College, N. M. 360 meters. 500 watts. N. M. College of Agri. & Mech. Arts. Announcer, Frank Morrison. Slogan, "The Sunshine State of America." Daily 11:15-12 m, 9:55-10 pm, time, reports. Mon, Wed, Fri, 7:30-8:30 pm, concert. Mountain.

**KOP**, Detroit, Mich. 277.8 meters. 500 watts. Detroit Police Dept. Announcer, Elmer C. Releh. Slogan, "Safety First." Daily ex Sun, 1 pm, 8:30; reports, police information, emergency. Safety talks. Eastern.

**KPO**, San Francisco, Calif. 423 meters. 500 watts. Hale Bros., Inc. Announcer, Clair E. Morrison. Slogan, "The City by the Golden Gate." Daily ex Sun, 12 m, reading. Daily ex Sat, Sun, 1-2 pm, 4:30-5:30 pm, music, Fri, 12:45-1:30 pm, talks. Sat, 1-2 pm, 3:30-5:30 pm, music. Mon, Tues, Wed,

Thurs, 5:30 pm, children's hour; 7-7:30, dinner music; 8-11, concert, lectures. Sat, 8-12 midnight, music. Sun, 11-12:15 pm, church services, 8:30-10, music. Pacific.

**KQP**, Hood River, Ore. 260 meters. 10 watts. Apple City Radio Club. Announcer, H. B. Reas. Slogan, "The Home of the Hood River Apple." Fri, 6:30 pm, music. Wed, 9 pm, special. Pacific.

**KQV**, Pittsburgh, Pa. 275.2 meters. 500 watts. Double-day-Hill Elec. Co. Daily ex Sun, 10:30-11:30 am, music; 3 pm, Mon, Wed, Fri, 8-10 pm. Eastern.

**KQW**, San Jose, Calif. 240 meters. 50 watts. Chas. D. Herold. Daily ex Sun, 1-1:30 pm. Wed, 8-9 pm, concert. Pacific.

**KRE**, Berkeley, Calif. 275 meters. 50 watts. Daily Gazette. Announcer, J. E. Wiggins. Sat, 8-12 midnight, dance music.

**KSAC**, Manhattan, Kan. 341 meters. 500 watts. Kansas State Agricultural College. Announcer San Pickard.

**KSD**, St. Louis, Mo. 546 meters. 500 watts. St. Louis Post Dispatch. Daily ex Sun, 9:40 am, 10:40, 11:40, 12:40 pm, 1:40, 2:40, 3:40. Mon, 7 pm, 9, 11. Wed, 6:45 pm, 11. Fri, 8 pm. Sat, 8 pm; 11:30. Tues, 4 pm, 6, 9. Thurs, 4 pm. Sun, silent night. Central.

**KTHS**, Hot Springs, Ark. 375 meters. 500 watts. The New Arlington Hotel. Announcer, G. C. Arnoux. Daily ex Sun, 12:30-1:30 pm, weather, markets, orchestra; 8:30-10 pm, concert. Mon, Wed, Sat, 10:30-11:30 pm, dance concert. Sun, 11 am, church services; 8:30-10 pm, concert. Central.

**KTW**, Seattle, Wash. 405 meters. 1000 watts. First Presbyterian church. Announcer, J. G. Priestly. Slogan, "Hear Ye, hear ye, the Gospel." Sun, 11-12:30 pm, 3-4:30, 7-9:30, church service. Pacific.

**KUO**, San Francisco, Calif. 360 meters. 150 watts. San Francisco Examiner. Slogan, "The Voice of the West." Temporarily off the air.

**KWG**, Stockton, Calif. 360 meters. 50 watts. Portable Wireless Telephone Co. Announcer, E. R. Garrow. Slogan, "Voice of the San Joaquin Valley." Daily ex Sun, 4-5 pm, news, concert, markets. Tues and Fri, 8-9 pm, concert. Sun, 2-3 pm, concert. Pacific.

**KYQ**, Honolulu, H. T. 270 meters. 100 watts. Elec. Shop, Teves & Joaquin Co., Ltd.

**KYW**, Chicago, Ill. 536 meters. 1500 watts. Westinghouse Elec. & Mfg. Co. Announcer, Edward Borroff. Daily ex Sun, Sat, aft, 9:30 am, 10, 10:30, 11, markets; 10:55, time; 11:05, weather; 11:30, news; 11:35, table talk; 12, 12:30 pm, 1, 1:20, 2:15, 2:30, markets; 3, 3:30, 4, news; 4:15, markets; 4:30, 5, news; 6:30, markets. Daily ex Sun, Mon, 6:35-7 pm, bedtime story; 7-7:30 pm, dinner concert; 8, concert; 9, special. Tues, Thurs, 2:30-4 pm, musical frolic. Wed, Fri, 10-12, midnight revue. Tues, Thurs, 10-11:30 pm, "at home" program. Sat, 10-11:30 pm, classical program; 12-2, carnival. Sun, 11 am, Central church; 2:30 pm, chapel; 7, Chicago Sunday Evening club. World Crier every half hour. Central.

**KZZK**, Manila, P. I. 270 meters. 100 watts. Electrical Supply Co.

**KZM**, Oakland, Calif. 360 meters. 100 watts. Western Radio Institute (Hotel Oakland). Announcer, Roswell S. Smith. Daily ex Sun, 6:30-7 pm, entertainment. Pacific.

**NAA**, Radio, Va. 435 meters. United States Navy Dept. Daily ex Sun, 9:45-10:40 am, 12:25-12:40 pm, 1:45-2:20, markets, weather; 2:45-3 (Tues only), Dept. Interior; 3:25-4:40, 5:05-5:20, markets, weather 10:05-10:20, weather. Wed, 7:25-7:40 pm, Civ. Ser. Daily ex Sat, Sun, 7:45-8 pm, dept. programs. Mon, 8:25-8:40 pm, Dept. of Interior. Eastern.

**PWX**, Havana, Cuba. 400 meters. 500 watts. International Tel. & Teleg. Corp. Announcer, R. O. Farrill. Slogan, "If you hear the tick of a clock you are in time with PWX, at Havana, Cuba." Wed, Sat, 8:30-11 pm, music. Eastern.

**WAAB**, New Orleans, La. 268 meters. 100 watts. Valdemar Jensen.

**WAAC**, New Orleans, La. 360 meters. 400 watts. Tulane Univ. Announcer, D. Elliott. Fri, 7:15-7:30 pm, reports; 8-9:30, educational and entertainment program. Central.

**WAAD**, Cincinnati, O. 258.6 meters. 25 watts. Ohio Mechanics Inst. No regular schedule.

**WAFF**, Chicago, Ill. 278 meters. 200 watts. Chicago Daily Drivers Journal. Announcer, Carl Ulrich. Daily ex Sun, 8:40 am, 10:30, 10:45, 12:30 pm. Daily ex Sun, Sat, 12:45, 3, 4:30, live stock and weather reports. Central.

**WAAM**, Newark, N. J. 263 meters. 250 watts. I. R. Nelson Co. Announcer, J. B. Bayley. Slogan, "Electrical Repairing and Manufacturing." Daily ex Sun, 11-12 m, music, talks, markets. Mon, Tues, Wed, Fri, 8-11 pm. Eastern.

**WAAN**, Columbia, Mo. 254 meters. 80 watts. Univ. of Mo. Announcer, Otto S. McDaniel.

**WAAP**, Omaha, Neb. 278 meters. 500 watts. Omaha Grain Exchange. Slogan, "Where Agriculture Accumulates Wealth." Daily ex Sun, 9:45, 10:45, 11:45, 12:45-1:15 pm, 8, market reports. Mon, 7:30-9 pm, music. Thurs, 7:30 pm, bridge talk; 8, program. Central.

**WABA**, Lake Forest, Ill. 266 meters. 100 watts. Lake Forest university. Wed, 8-9 pm, music, talks. Central.

**WABB**, Harleburg, Pa. 266 meters. 10 watts. Harleburg Sporting Goods Co. Announcer, Frank B. Gaucher. Tues, Fri, 8 pm, sports, music. Sun, 9 pm, church services. Eastern.

**WABD**, Dayton, O. 283 meters. 5 watts. Parker High School. Announcer, A. H. Schroy.

**WABH**, Sandusky, O. 240 meters. 20 watts. Lake Shore Tire Co.

**WABI**, Bangor, Me. 240 meters. 100 watts. Bangor Ry. & Elec. Co. Announcer, P. L. Sprague. Slogan, "The Pine Tree Wave." Wed evening, music.

**WABL**, Storrs, Conn. 283 meters. 500 watts. Connecticut Agri. College. Announcer, Daniel E. Noble. Slogan, "From the Nutmeg State." Mon, Wed, Fri, 7-9 pm. Eastern.

**WABM**, Saginaw, Mich. 261 meters. 350 watts. J. E. Doherty Automotive & Radio Equip. Co. Announcer, G. C. Hiatt. Daily ex Sun, 10:15 am, news, markets, 2:15 pm, weather, stocks; 6, news, stocks, sports, music. Daily ex Sun, Sat, 10 pm, dance. Sun, 10:30 am, 7:30 pm, church service. Eastern.

**WABN**, La Crosse, Wis. 244 meters. 500 watts. Ott Radio Inc. Announcer, W. C. Grover. Slogan, "The City Beautiful on the Old Mississippi." Club, Thirty Knights. Mon, 8-10 pm, Thurs, 9-11 pm. Central.

**WABO**, Rochester, N. Y. 283 meters. 10 watts. Lake Avenue Baptist church. Announcer, Laurence Hukson. Sun, 10:15-12 m, 7:15-9 pm. Eastern.

**WABQ**, Haverford Pa. 261 meters. 50 watts. Haverford College Radio Club. Announcer, Dr. James McF. Carpenter. Tues, 8-9 pm, educational program. Thurs, 9-11 pm, music. Eastern.

**WABR**, Toledo, O. 270 meters. 50 watts. Scott High School. Fri, 8:15-9 pm, program by high school students. Eastern.

**WABU**, Camden, N. J. 226 meters. 50 watts. Victor Talking Machine Co.

**WABW**, Wooster, O. 234 meters. 100 watts. The College of Wooster, Dept. of Physics. Announcer, Victor Andrew.

**WABX**, Mt. Clemens, Mich. 254 meters. 250 watts. Henry B. Joy, Jr.

**WABY**, Philadelphia, Pa. 242 meters. 50 watts. John Magaldi, Jr. Slogan, "Quaker City Sleep Dodgers" Club. "The American Broadcasting Club." Sun, 9 pm, music; 10:30, "Sleep Dodgers" Session." Eastern.

**WABZ**, New Orleans, La. 263 meters. 100 watts. The Coliseum Place Baptist church. Announcer, V. W. Bradbury. Slogan, "The Station with a Message." Wed, 9-10 pm, talks, music; Sun, 11-12:15 pm, 7:30-8:45. Central.

**WANG**, Richmond Hill, N. Y. 316 meters. 500 watts. A. H. Grebe & Co. Mon, 7:30-2 am. Wed, Fri, 7:30-11:15 pm. Sat, 12-2 am. Eastern.

**WAR**, Slish, Wis. 406 meters. 500 watts. Kopp Radio Co. Indefinite schedule.

**WBAW**, W. Lafayette, Ind. 283 meters. 250 watts. Purdue University. Announcer, J. W. Stafford. Daily ex Sun, 9:50 am, stocks, markets. Mon, Fri, 7:15 pm, special programs. Central.

**WBAK**, Harrisburg, Pa. 400 meters. 500 watts. Penn-

sylvania State Police. Announcer, Frank P. Gaucher. Daily ex Sun, 10 am, 1:30 pm, 5:45, police reports, fire protection, markets; 12:30 am, police reports. Mon, Tues, Wed, 7:30 pm, special. Eastern.

**WBAN**, Paterson, N. J. 244 meters. 100 watts. Wireless Phone Corp. Announcer, H. W. Ryerson. Slogan, "The Silk City of America." Daily ex Sun, 9-11:30 am, 12:30-5:30 pm. Sat morning only. Sun, 10-12 am, 2-5 pm, 7:30-10:30. Eastern.

**WBAO**, Decatur, Ill. 275 meters. 50 watts. James Millikin Univ. University activities. No definite schedule.

**WBAP**, Fort Worth, Tex. 476 meters. 1000 watts. Fort Worth Star-Telegram. Announcer, "The Hired Hand" Club, "Radio Truth League." Daily ex Sun, 10, 11, 12 m, 1 pm, 2, market reports, weather; 4, "Port of Missing Men." 6:30, sports. Mon., Tues, Wed, Thurs, Fri, 12:05-12:30 pm, 7:30-8:30, 9:30-10:45, concert. Sat, 7 pm, Bible lesson. Sun, 11 am, church; 4 pm, concert; 11, midnight frolic. Central.

**WBAV**, Columbus, O. 423 meters. 500 watts. The Erner and Hopkins Co. Announcer, H. E. Day. Slogan, "We Broadcast a Variety." Daily ex Sun, 12-1 pm. Tues, Fri, 8-10 pm. Sat, 9-11 pm. Eastern.

**WBAX**, Wilkes-Barre, Pa. 254 meters. 100 watts. John H. Stenger, Jr. Slogan, "In Wyoming Valley, Home of the Anthracite." Daily ex Sun, 6-12 midnight, orchestra. Eastern.

**WBAY**, New York, N. Y. 492 meters. 500 watts. A. T. Co. Experimental purposes only.

**WBBC**, Newark, Ohio. 240 meters. 20 watts. Plymouth Congregational church. Daily ex Sun, 6:30 pm, news. Fri, 7 pm, special Radio service. Sun, 11 am; 7:30 pm. Eastern.

**WBBD**, Reading, Pa. 234 meters. 50 watts. Barbey Battery Service. Wed, 10-11:30 pm. Sat, 10-11:30 pm. Eastern.

**WBFF**, Atlanta, Ga. 270 meters. 500 watts. Georgia School of Technology. Announcer, J. H. Persons. Slogan, "The Southern Technical Institution with a National Reputation." Mon, 9 pm. Thurs, 7 pm. Central.

**WBGG**, Mattapoisett, Mass. 248 meters. 500 watts. Irving Vermilya. Announcer, Albert N. Labouef. Mon, Wed, Fri, 8-10 pm, music. Sun, 10:45-12 m, church service. Eastern.

**WBHH**, Port Huron, Mich. 246 meters. 50 watts. J. Irving Bell.

**WBBI**, West Palm Beach, Fla. 258 meters. 50 watts. Neel Elec. Co. Announcer, R. C. Bender. Slogan, "Where Summer Spends the Winter." Tues, Thurs, Fri, 8-10 pm, band. Sun, 11-12 m, 7:30-9 pm, church services. Eastern.

**WBBL**, Richmond, Va. 229 meters. 100 watts. Grace Covenant Presbyterian church. Announcer, Herbert C. Taylor. Tues, 8 pm. Sun, 11 am, 8 pm. Eastern.

**WBBM**, Chicago, Ill. 226 meters. 200 watts. H. Leslie Adams.

**WBPF**, Petoskey, Mich. 214 meters. 100 watts. Petoskey High School. Announcer, Carl Bowman. Wed, 8-9 pm. Central.

**WBRR**, Staten Island, N. Y. City, N. Y. 273 meters. 500 watts. International Bible Students' Association. Mon, Wed, Sat, 8-9 pm, lectures, music. Sun, Thurs, 9:10-10:30 pm. Eastern.

**WBSS**, New Orleans, La. 252 meters. 50 watts. First Baptist Church.

**WBST**, Philadelphia, Pa. 234 meters. 5 watts. Gethsemane Baptist church.

**WBUU**, Monmouth, Ill. 224 meters. 10 watts. Jenks Motor Sales Co.

**WBV**, Johnstown, Pa. 248 meters. 5 watts. Johnstown Radio Co.

**WBW**, Norfolk, Va. 222 meters. 50 watts. Ruffner Junior High School. Announcer, Lee M. Kilnefelter. Slogan, "We're Backed by Workers." Wed, 8:30 pm, music. Fri, 3:30 pm. Eastern.

**WBXY**, Charleston, S. C. 268 meters. 20 watts. Washington Light Infantry. Announcer, Hugh Easterly. Wed, 7:30-11 pm, talk, music. Sun, 6:30-9:30 pm, orchestra. Eastern.

**WBBZ**, Indianapolis, Ind. 227 meters. 50 watts. Noble B. Watson. Robert Robbins. Mon, 8-9:30 pm. Central.

**WBCN**, Chicago, Ill. 266 meters. 500 watts. Southwestern Economist.

**WBRL**, Butler, Pa. 1599 meters. 250 watts. Pa. State Police. Announcer, H. Nilfong. Daily ex Sun, 9:30 am, 10, 10:30, 1 pm, 1:30, 2, 5:30, 5:45, 6:15, 12, 12:30 am, 1. Eastern.

**WBS**, Newark, N. J. 360 meters. 100 watts. D. W. May, Inc. Announcer, C. A. Reberger. Daily, 11-12 m, music; 1-2:15 pm, reports, music. Tues, Thurs, Fri, 7:30-9:30 pm, program. Sun, 12:30-3 pm. Eastern.

**WBT**, Charlotte, N. C. 360 meters. 250 watts. Southern Radio Corp. Announcer, J. C. Fogarty. Slogan, "Queen City of the South." Daily ex Sun, 11 am, weather; 12:30-1:30, 7, music; 7:15, markets. Tues, Thurs, 9 pm, music. Mon, Wed, Sat, 10:45 pm, music. Sun, 11 am, 7:30 pm, church services. Eastern.

**WBZ**, Springfield, Mass. 337 meters. 1500 watts. Westinghouse Elec. & Mfg. Co. Announcer, A. E. Bach. Daily ex Sun, 6-7 pm, dinner concert; 7, market reports, talks; 7:10, bedtime stories; 9:15-7:30, lectures; 9:55-10:05, time weather. Daily ex Mon, Fri, 8:30-10:30 pm, concert. Mon, Fri, 7:30-8 pm, extension course. Mon, 8-10:30 pm, concert; 11:30-12, orchestra. Tues, 11:30-12 pm, organ. Wed, 11-12 midnight, dance program. Fri, 10-11:30 pm, concert; 11:30-12, dance. Sat, 11:30-12 pm, dance program. Sun, 10:45 am, church services; 8:30-10 pm, concert. Eastern.

**WCAD**, Canton, N. Y. 263 meters. 250 watts. St. Lawrence Univ. Announcer, Ward C. Priest. Slogan, "The Voice of the North Country." Daily, 11 am, weather, reports, time. Wed, 8:30 pm, program. Eastern.

**WCAE**, Pittsburgh, Pa. 462 meters. 500 watts. Kaufman & Baer Co. Pittsburgh Press. Announcer, Joseph Sartory. Daily ex Sun, 12:30 pm, news; 3:30, news, music; 4:30, reports; 6:30, music; 7:30, Uncle Kaybee, 8:30, music. Mon, Tues, 10:30 pm. Sun, 10 am, am, services; 3 pm, sermon; 4, 6:30, music. Eastern.

**WCAG**, New Orleans, La. 268 meters. 100 watts. Clyde R. Randall. Temporarily off the air.

**WCAH**, Columbus, O. 286 meters. 200 watts. Entreklin Elec. Co. Announcer, C. A. Entreklin. Slogan, "The Heart of Ohio." Daily ex Sun, 11:30-12:30 am, music, news. Tues, 8-10:30 pm. Sun, 10-12:30 pm, 7:30-9, church services; 4, vespers. Eastern.

**WCAJ**, Univ. Place, Neb. 280 meters. 300 watts. Neb. Wesleyan Univ. Announcer, J. C. Jensen. Daily 10:30 am, weather. Tues, 7 pm, children's hour. Fri, 9 pm, music, lectures. Central.

**WCAL**, Northfield, Minn. 360 meters. 500 watts. Dept. of Physics, St. Olaf College. Announcer, Kenneth Onsgaard. Slogan, "The College on the Hill." Daily ex Sun, Mon, 9:45 am, chapel. Thurs, 9 pm, music. Fri, 8:30 pm, talk. Sat, 12 midnight, music. Sun, 8:30 pm. Central.

**WCAO**, Baltimore, Md. 275 meters. 50 watts. Sanders & Stayman Piano Co. Announcer, R. E. Brunner. Daily ex Sun, 11:55 am, time; 12 m, weather. 12:05-2:30 pm, dance music. Mon, Wed, 8-10 pm. Eastern.

**WCAP**, Washington, D. C. 469 meters. 500 watts. Chesapeake & Potomac Tel. Co. Announcer, William T. Pierson. Mon, 7:30-10 pm, Wed, 7:45-10 pm, Fri, 7:30-12 midnight. Sun, 11 am, 4 pm, 7:20-10 pm, jointly with WCAF. Eastern.

**WCAR**, San Antonio, Tex. 263 meters. 200 watts. Southern Radio Corp. of Texas. Announcer, L. Tatam. Club, "Royal Order of Prevaricators." Mon, Thurs, Sat, 8:30-9:30 pm, concert. Wed, Sat, 11 pm. Central.

**WCAT**, Rapid City, S. D. 240 meters. 100 watts. S. D. State School of Mines. Announcer, J. O. Kammerman. Daily ex Sun, 9:30 am, 12:30 pm, weather, reports. Thurs, 7:30 pm, concert. Mountain.

**WCAU**, Philadelphia, Pa. 278 meters. 500 watts. Durham & Co. Daily ex Mon, Sat, 7-10 pm. Eastern.

**WCAY**, Little Rock, Ark. 263 meters. 20 watts. J. C. Dice Elec. Co. Wed, Fri, 8:30 pm, lecture, music. Sun, 9-10:30 pm, special musical concert. Central.

**WCAY**, Milwaukee, Wis. 266 meters. 250 watts. MIL-

waukee Civic Broadcasting Station. Announcer, Billy Williams. Mon, Wed, Fri, 10:15 am, 12 m, weather, market reports; 3-4. Mon, Fri, 8-9 pm. Tues, 9:15-10:30 pm. Wed, 6:30-7:30 pm. Thurs, 10:30 pm. Central.

**WCAZ**, Carthage, Ill. 246 meters. 50 watts. Carthage College. Wed, 9-10 pm. Central.

**WCBA**, Allentown, Pa. 254 meters. 10 watts. Chas. W. Heimbach. Wed, 8:15-11 pm. Fri, 6:45-7:45 pm. bedtime stories, Bible lesson. Sun, 5-7 pm, church service. Eastern.

**WCBC**, Ann Arbor, Mich. 229 meters. 200 watts. U. of Mich.

**WCBD**, Zion Ill. 345 meters. 500 watts. Wilbur Glenn Voliva. Announcer, J. H. DePew. Slogan, "Where God Rules, Man Prospers." Mon, Thurs, 8-10:30 pm, concert. Tues, 2:30-3:45 pm, service. Sun, 9-10:45 am, Bible School; 2:30-6, church services. Every 2nd and 4th Sun, 8-10:30 pm. Central.

**WCBE**, New Orleans, La. 263 meters. 5 watts. Uhalt Brothers Radio Co. Announcer, Johnny Wilson. Slogan, "Second Port U. S. A." Sat, 9 pm, dance. Sun, 12:30-2 pm, dinner concert; 9, dance music. Central.

**WCBG**, Mayfield, Ky. 268 meters. 10 watts. Howard S. Williams. Slogan, "Will Christ Be Glorified?"

**WCBH**, Oxford, Miss. 242 meters. 20 watts. U. of Mississippi. Announcer, W. L. Kennon. Mon, Wed, 8 pm. Central.

**WCBJ**, Jennings, La. 244 meters. 10 watts. J. C. Mans.

**WCBK**, St. Petersburg, Fla. 266 meters. 500 watts. E. Richard Hall. Mon, Thurs, 7-8 pm. Tues, 8-8:15 pm. Sun, 8-10 pm. Eastern.

**WCBL**, Houlton, Me. 280 meters. 100 watts. Northern Radio Mfg. Co. Announcer, Lee J. Bell. Slogan, "Call of the North." Wed, 7:30-10 pm. Sun, 10:30 am, 7 pm. Eastern.

**WCBM**, Baltimore, Md. 229 meters. 250 watts. Hotel Chateau. Announcer, Harry J. Dobe. Tues, Thurs, 10 pm-1 am. Sat, 9:30-12 mid. Sun, 9-11 pm. Eastern.

**WCBP**, Memphis, Tenn. 250 meters. 20 watts. The Radio Shop, Inc. Wed, Sun, 8:30 pm. Central.

**WCBQ**, Nashville, Tenn. 236 meters. 100 watts. First Baptist church. Announcer, R. G. Monahan.

**WCBR**, Boston, Mass. 246 meters. 5 watts. Charles H. Messier. (Portable.)

**WCBT**, Worcester, Mass. 238 meters. 250 watts. Clark University, Collegiate Dept.

**WCBU**, Arnold, Pa. 254 meters. 50 watts. Arnold Wireless Supply Co. Announcer, F. J. Ambrose. Slogan, "The Little 50 Watt Station in a 50 Kilo-watt town." Wed, Sun, 9-10 pm. Sat, 10-11 pm. Eastern.

**WCBV**, Tullahoma, Tenn. 252 meters. 10 watts. Tullahoma Radio Club.

**WCBW**, Macon, Ga. 226 meters. 20 watts. Matland Solomon and G. P. Rankin, Jr. Irregular schedule.

**WCBX**, Newark, N. J. 233 meters. 100 watts. The Radio Shop. Tues, Wed, Fri, 6-6:30 pm; 7:30-10:30. Eastern.

**WCBY**, Buck Hill Falls, Pa. 268 meters. 10 watts. Forks Electric Shop. Announcer, Hugh Kemper.

**WCBZ**, Chicago Heights, Ill. 248 meters. 50 watts. Coopotelli Brothers Music House. Announcer, John King. Slogan, "Where the Lincoln and Dixie Highways Meet." Mon, Fri, 8:30-10:30 pm, program. Central.

**WCCO**, Minneapolis-St. Paul, Minn. 417 meters. 500 watts. Washburn-rosb Co. Announcer, Paul Johnson. Daily ex Sun, 9:40 am, reports, weather; 10, 10:30, markets; 10:45, home service; 11:30, markets; 1:30 pm, markets, weather; 2, woman's hour; 2:30, music; 4, magazine; 5:30, children's hour; 6, sport hour; 6:30, dinner concert. Mon, 8 pm, lecture; 8:30, music; 11, dance. Wed, 6:30 pm, markets; 7, vespers; 9, music; 11, dance. Thurs, 6:30 pm, dinner concert; 7:30, lecture; 10, music. Fri, 6:30 pm, dinner concert; 7:30, lecture; 8:30, music. Sat, 8 pm, lecture; 8:30, music; 11, dance. Sun, 10:20 am, 4:15 pm, 7:30, church services; 9:15, music. Central.

**WCEE**, Elgin, Ill. 536 meters. 1,000 watts. Charles E. Enstet.

**WCK**, St. Louis, Mo. 273 meters. 100 watts. Stiv. Baer & Fuller Dry Goods Co. Announcer, Helen G. Hatfield. Daily, 12-12:30 pm, 3-3:30. Mon, Tues, Wed, Fri, Sat, 8-8 pm. Mon, Fri, 11-1 am. Wed, 11:30-1 am. Sun, 7-9. Central.

**WCM**, Austin, Tex. 268 meters. 250 watts. Texas Markets & Warehouse Depts. Announcer, J. Austin Hunter. Daily ex Sun, 9:45 am, 11:45, 3:45 pm. Central.

**WCK**, Detroit, Mich. 517 meters. 500 watts. The Detroit Free Press. Announcer, C. D. Tomp. Club, "Red Apple Club." Daily ex Sun, 2 pm, news; 2:15, stock reports; 2:50, weather, markets; 4:15, 6, music. Daily ex Sat, Sun, 8:30-10 pm, alternate weeks, concert. Tues, 10-12 pm, club. Sun, 10:30 am, 7:15 pm, church services. Eastern.

**WDAE**, Tampa, Fla. 273 meters. 250 watts. Tampa Daily Times. Announcer, McDonald Thompson. Daily, 5, 7:30. Thurs, 8-10 pm. Eastern.

**WDAF**, Kansas City, Mo. 411 meters. 500 watts. Kansas City Star. Announcer, Leo Fitzpatrick. Club, "Nighthawks." Daily ex Sun, 3:30-4:30 pm, music; 5:50, markets, weather; 6-7, educational, bedtime story, music; 11:45, Nighthawks. Mon, Wed, Fri, 8-9:30 pm, concert. Sun, 4-5 pm, music. Central.

**WDAG**, Amarillo, Tex. 263 meters. 100 watts. J. Lawrence Martin. Slogan, "Where Dollars Always Grow." Tues, Thurs, 8-9:30 pm, music. Central.

**WDAM**, El Paso, Tex. 268 meters. 50 watts. Trinity Methodist Church South. Mon, Wed, Thurs, Fri, 7:30 pm, concert. Sun, 11 am. Mountain.

**WDAR**, Philadelphia, Pa. 395 meters. 500 watts. Lit Bros. Announcer, Harry E. Ehrhart. Club, "Morning Glory." Daily ex Sun, 11:45-12:55 pm, music; 2-3 pm, 4:30-6, music, talks; 7:30-8 pm, Dream Daddy. Mon, Wed, 8-10 pm, entertainment. Fri, 8-10:50, entertainment; 1 am, Club. Eastern.

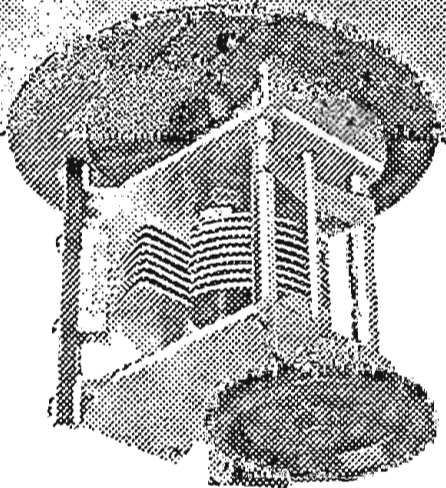
**WDAY**, Fargo, N. D. 244 meters. 50 watts. Radio Equip. Corp. Announcer, K. M. Hance. Slogan, "The Biggest Little City in the World." Daily ex Sun, 10 am, 11-12:30 pm, markets, news; 2, markets; 5, music, news. Tues, Thurs, Sat, 7:30 pm, entertainment. Sun, 10:30 am, church service; 4





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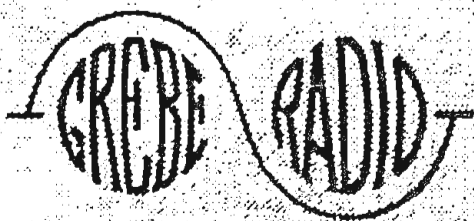
*Doctor Mu*



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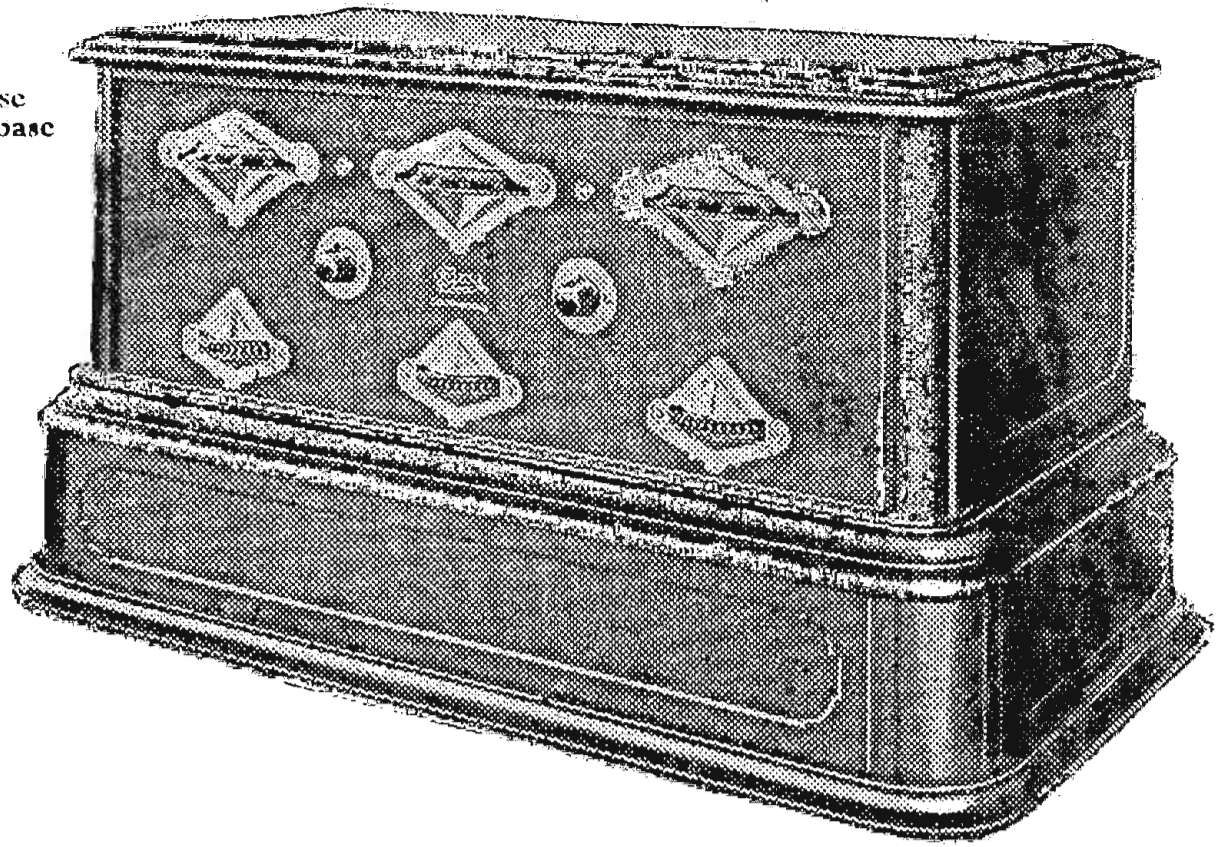
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