Front Panel Assembly of Hetduogen; Super-Heterodyne Trouble Shooting Presenting Experimenter Supreme; Antenna Coupling for Superdyne Set

Radio T TEROGRAMS

Vol. XII

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SATURDAY, JANUARY 24, 1925

RADIO HURTS THEATERS?



STATIONS PREPARING FOR ECLIPSE TRYOUT

HICAGO CFCA, Toronto Star, Toronto, Canada, directly in the path of the sun's eclipse January 24, is among the many stations planning to make a complete log and test of the effect of this phenomenon on transmission. KSD, St. Louis, and a score of other American broadcasters will do likewise. The Western Union Telegraph company also will take observations on all of its land lines during this time. The complete story appeared in last week's issue of Radio Digest.

Wells Hawks at WOR

NEWARK, N. J.-Wells Hawks, internationally known press agent, is presenting a series of talks from WOR here.

Betty Bronson, youthful star of "Peter Pan," who told Radiophans all about herself recently through Station WDAR, Philadelphia.

BROADCASTS TAKE PEOPLE FROM SHOWS

Producers in Argument

Some for, Some Against Radiocasts -McCormack-Bori Concert Starts Heated Discussion

NEW YORK.—Theaters are on the high road to ruin as a result of Radio programs, according to the statements of many aroused theatrical producers and managers, following the first Victor program on the air, with John McCor-mack and Lucrezia Bori star features.

On the other hand there are those producers such as John Golden, responsible for the greatly successful play, "Lightnin'," who rally to the support of Radio and claim it is the best possible advertisement for a really good play.

Other authorities, speaking as the breach

(Continued on page 2)

the Radio headliners.



URGE BROADCAST OF INAUGURAL ADDRESS

Ruth Robinson, who played the leading role "Merely Mary Ann" with the

KGO audio players recently.

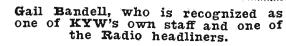
WOULD BE GREATEST LINK **EVER ARRANGED**

More Than 35 Stations Would Permit Public to Listen in Throughout Country

WASHINGTON, D. C.—An expenditure of some \$20,000 is being urged upon the congressional inauguration committee for broadcasting the inaugural address of President Coolidge on March 4.

While this matter has not yet been formally placed before the committee, there has been considerable discussion regarding it here. The idea of those favoring the plan is to hook up thirty-five or more broadcasting stations, thereby having the biggest hook-up yet arranged so that every boy and girl in the country will have a chance to hear an inaugural address.

There is some opposition among members of Congress to the expenditure of this sum of money, but it has been suggested that part of this at least could be saved in other directions.



THEATERS CLAIM RADIO HURTS

(Continued from page 1) opens, insist that theaters are killing

themselves by overtaxing the public for

seats. In the meantime—the battle rages!

Erady Calls Radio Menace

Although theaters invariably suffer a falling off on the evenings following holidays, many theatrical leaders looked at one sense, hearing. their rows of empty seats on New Year's night, heaved a composite sigh and blamed senses will always exist. all their troubles onto the appearance that night of the two important singers at WEAF and linked stations.

William A. Brady, famous producermanager, was emphatic in his avowal that Radio was at the bottom of it all. He seemingly was the first and loudest to

sing the swan song.

"Radio constitutes the greatest menace the theater has ever faced," he declared, cago, who some time back, consented, after "On New Year's night I was seated in a much argument, to a broadcast of "Abie's room with a group of people enjoying, Irish Rose". free of charge, a musical program over the Radio that I can only describe as as a Chicago theater manager has any one gorgeous. Why in the world should we go feature helped patronage like the broadto the theater and pay money? The fault casting from the stage of Abie's Irish is entirely with the men who control the Rose. By actual count at the box office, theater."

Frohman Says Good Play Needn't Worry As a rebuttal to the statement of Mr. Brady, Daniel Frohman, now almost as famous in producing and managing theatricals as was his illustrous father, expressed his views. He said:

"A first rate play will always be sold cut, just as it has been in the past. The hits have nothing to fear. But the average play, which exists only because it furnishes entertainment to people who happen to be in New York for a night, is going to have a hard time to survive.'

First class plays which give value for money received will survive, according to Mr. Frohman. It is merely a case of survival of the fittest.

Hammerstein on Worried List

Arthur Hammerstein, president of the Managers' Protective association, fears anything. the effect of Radio broadcasting of current shows' music, and falls in line with Mr. Brady.

"This practice must be reformed at once," said Mr. Hammerstein, "and our association will take the necessary steps to see that it is done. The music publishers now turn the music over to the big stations who broadcast the scores of our shows at the same time they are being produced throughout the country."

Mr Hammerstein has evidently had a sudden change of mind, or else he does not let his left hand know what his right hand does, for this last year he was quite willing that the music from his own shows, "Wildflower" and "Mary Jane McKane," were broadcast by Radio. So much so, in fact, that he had his own actors and actresses go to the Radio stations to do the singing.

John Golden Sold on Radio

John Golden, eminently successful producer, coming to the front has indicated that he would make an attempt to use the advertising possibilities of Radio for the purpose of stimulating theater attendance.

'My publicity department already has been instructed to devise means of reaching over the air the great theater public," said Mr. Golden. "Instead of taking the attitude that Radio is a menace, theatrical light—a potential means of exploiting their plays before immense audiences."

"Cut Prices and Sell Tickets"

A Radio editor of national repute took a slap at prevailing theater ticket prices. Ile offered the suggestion that prices be slashed to \$2 a seat, "a sane level" for the best shows.

He continued, "The phonograph industry learned this two years ago when they decreased the price of records to a level within the reach of every one. By playing to capacity houses at \$2 a seat the producers can make money. And the producers can be assured that their houses will be filled to capacity by the one instrumentality they are now fighting, namely,

"This is the cheapest form of advertising imaginable. If a first-class station in New York broadcasts a play today, an audience of upwards of one million will listen to it. Far from staying away from an attraction which has been broadcast, the producers will find that the opposite is true."

Equity Joins Brady's Chorus

Frank Gilmore, executive secretary of the Actor's Equity association, chimed in by joining Mr. Brady in his song.

"Plays emerge very badly over the Radio," said Mr. Gilmore, "and I am sure that such performances keep persons away from the theater. We of the Equity have done our best by passing a resolution charging managers with an extra performance when a microphone is placed in the theater for the purpose of broadcasting."

A meeting of the Equity will be held January 26 in New York for the purpose of sounding the actors on their opinions as to Radio, and in the further hope of arousing the theater as a whole to concerted action.

S. L. "Roxy" Rothafel, who has been broadcasting for two years from the Capitol theater, and who claims Radio has increased his box office receipts, took a more rosy view at the "crisis".

"Radio is here-nothing can stop it," he said. "I do not think it will be harmful to the theater. Radio appeals to but The demand for entertainment that satisfies the other

"Good plays draw as well as ever," he continued, "and Radio will not hurt them. Properly used, it will help them. The public is growing wiser, more discriminating, in its tastes, thanks to Radio."

Radio Aid to "Abie's Irish Rose"

Another witness for broadcasting was found in the person of Thomas P. Gozzola, manager of the Studebaker theater, Chi-

"Never in my twenty years' experience 2,876 persons mentioned that they had heard the play over the Radio, and this within the forty-eight hours immediately after the actual broadcasting.'

McCormack Proof of Pudding

Regardless of what fearsome managers have said about Radio and its influence toward keeping people at home, the experience of John McCormack in a concert at Carnegie hall soon after his broadcast appearance, seems encouraging.

His audience overflowed the hall. Every seat was sold and as many persons as the fire laws would permit were crowded into the standing room.

It had been argued that the broadcasting of the tenor's voice on New Year's night would reduce the paid audience at his Proof contrariwise, however, concerts. was that the audience was increased, if

But still the battle rages!

FEEDBACK PATENTS **OWNER IS DE FOREST**

JUDGE BONDY THROWS OUT WESTINGHOUSE SUIT

Application for Injunction Charging Infringement by Robert D. Montgomery Disallowed—Affects Many Cases

NEW YORK .- The Westinghouse Electric and Manufacturing company cannot bring suit for infringement against any company or companies using the regenerative circuit patents. These circuits belong to Dr. Lee DeForest and not to the Westinghouse interests.

Such was the decision handed down by Federal District Judge Wm. Bondy recently in this city, when application for Ambassador Sales company and the Ludwig Baumann company.

Judge Offers Two Courses

In summing up his opinion, Judge Bondy stated that he would force the Westinghouse company to accept one of two alternatives—either dismissal of bill of complaint as to Mongomery, or confine their petition to a charge that the several defendants had conspired together. He warned counsel for the Westinghouse interests that if they elected the latter remedy, they would be required to prove such conspiracy before he would consider the merits of their case.

Failure of the plaintiffs to prove such a conspiracy was tollowed by dismissal of the petition, when Samuel E. Darby, Jr., attorney for Montgomery, said: "It will be remembered that the patent involved in this litigation is for the socalled Armstrong regenerative circuit, priority for the invention of which was awarded to Lee DeForest on September 2, 1924. in the tribunal of last resort on patent office litigation—the court of appeals, District of Columbia.'

In the **EROSLEY** *Trirdyn*

Since the inception of radio, the results obtained with Armstrong Regenerative Receivers have been the goal of comparison for all others. Trick circuits have been injunctions charging infringement were designed to get around the Armfiled against Robert D. Montgomery, "acting jointly as well as severally" with the Ambassador Sales company and the Lud-sults "just as good." This has resulted in the use of more tubes. necessary without, but unnecessary with regeneration.

> The Crosley Trirdyn, because it employs Armstrong Regeneration and tuned radio frequency amplification, needs only three tubes. The results obtained in selectivity, volume, ease of tuning and logging cannot be excelled.

Before You Buy—Compare Your Choice Will Be a Crosley For Sale by Good Dealers Everywhere

Crosley Regenerative Receivers Are Licensed Under Armstrong U. S. Patent 1,113,149.

Write for Complete Catalog

The CROSLEY RADIO CORPORATION

Powel Crosley, Jr., President 1494 Sassafras St. Cincinnati, Ohio Crosley Owns and Operates Broadcasting Station WLW





The Meco stamped on its base means to radio tubes mand genuine **Mec**o Tubes.

Investing in Meco Tubes to replace worn out tubes set is to insure yourself of the ultimate in radio entertainment. So say thousands of radiophans who have "tried them all" and finally standardized on Meco Tubes.



CONTENTS

Radio Digest, Iliustrated, Volume XII, Number 3, published Chicago, Illinois, January 24, 1925. Published weekly by Radio Digest Publishing Company, 510 N. Dearborn Street, Chicago, Illinois. Subscription rates, yearly, Five Dollars; Foreign Postage One Dollar additional; single copies Ten Cents. Entered as second class matter at the postoffice at Chicago, Illinois, under the Act of March 3, 1879.

All the Live News of Radio......1 to 8 Operating and Trouble Shooting for the Owner of the Radiola Super-Heterodyne

Looking Ahead

interests should consider it in its true Lee Shubert, William Brady and John Golden are all famous figures in the theatrical world, and all will give their views on the recent Radio-theater controversy that has arisen. The first two are much opposed to broadcasting any Gilt Edged of their shows or parts thereof, but Mr. Golden is sold on the value of Radio "sampling." Read this feature next week.

> WNAC, The Shepard Stores, Boston, is one of the most interesting stations in America. It was one of the first to get down to the real business of Radio what gilt-edge means to sebroadcasting, while using then but a 100-watt transmitter. See the pictures curities. Look for it. Deand read the story of this station in next issue.

> Combining Resistance Coupled and Push Pull Amplification, J. E. Owen produces some amplifiers that will get a thrill from the most blase old-time or when equipping a new experimenter. This completes what has been one of the most interesting series of articles this publication has had in some time.

Low-Loss Tuned R. F. Inductances Have Been Worked Out by Jacques Fournier, and in the next issue, he goes into great detail in describing their construction. The numerous illustrations will make it easy for the beginner to assemble what look like very difficult units to make.

Tuning and Adjusting Hetduogen will be covered thoroughly next week by C. E. Brush. This is, perhaps, the most important part of its construction, as any set with so many radical departures as this, requires slight variation of its various units for efficiency from the entire assembly.

Newsstands Don't Always Have One Left

WHEN YOU WANT

YOU WANT IT!

BY SUBSCRIBING NOW

Publisher Radio Digest, 510 N. Dearborn St., Chicago, Illnois. Please find enclosed check M. O. fer Five Deliars (Six., Foreign) for One Year's Subscription to Radio Digest, Illustrated.

SEND IN THE BLANK TODAY

GOLD AWARD SET IS STILL TO BE FOUND

ENTRIES SO FAR SHOW NO NEW DEVELOPMENTS

As Issue Goes to Press Judges Investi-gate Carefully Possibilities of Sets Received

What has happened to the much-touted American inventiveness and ingenuityour ability to devise ways and means of doing something, by means of a new method, better than it has ever been done before? Are those who listen to broadcasting night after night satisfied with their present selectivity and range? So it would seem from the response to Radio Digest Gold Award Set offer.

Receivers have come in-beautiful examples of assembly ability, many unusual in layout or finish-but progress and advance are not shown. This is being written as the issue containing it goes to press ten days in advance of publication date and, unless sets containing genuine contributions to the Radio art and Radio knowledge are received, no prizes can be awarded.

Many Possible Developments

The selectivity of a super-heterodyne can certainly be increased. Several theoretical ways of doing this are well known and only await some one working out the data to make them practical. Tuned Radio frequency, first cousin to the neutrodyne, has only been in use a few months and requires much development before its possibilities will be fully realized. Surely, reflexing, delicate and unstable as it usually is, can be put on a more reliable basis, and its selectivity increased.

As an example of what would have had long and serious consideration; why not two reflexed tubes, a pure Radio frequency tube in front, its grid circuit tuned by a low-loss split secondary coupler as in the heduogen, a small condenser controlling regeneration to lower the effective resistance of the circuit, and loose coupling between primary and secondary?

The technical and Gold Set Award editors have been going over the circuit diagrams accompanying sets to make as easy as possible the work of the judges. Variations of single circuit tuners are eliminated, as are the usual forms of Radio frequency amplifiers. The expected improvement may yet come in.

Budget Bureau Will Study Radio's Needs

May Increase Funds for Pressed Radio Section

WASHINGTON.—No decision has yet been reached by the budget bureau on the recommendation of President Coolidge and Secretary Hoover that an increased appropriation for the Radio service be granted.

Hearings have been held on the matter by budget authorities and it is expected that a report will be made to the president and Congress within a very short time. If the bureau approves the recommendation, it will probably be sent to Congress by the president in the form of a supplemental appropriation which, it is believed will receive favorable consider-

The House appropriation committee will soon take up the main appropriation bill for the commerce department, in which the Radio section is included. Secretary Hoover and officials of the Radio section are to appear before the commiftee to tell of the pressing need for an increased appropriation for this receivers.

Sigmund Spaeth's Parties Will Continue from WOR

NEWARK, N. J .- Another of Dr. Sigmund Spaeth's studio parties is scheduled at WOR here next Monday evening and several well-known figures of the music and theatrical world will be presented to the Radio audience in informal fashion following Dr. Spaeth's weekly review and forecast of important musical events. The series of WOR studio parties has attracted considerable favorable attention and will be continued weekly for an indefinite period.

Government May Soon Give Warnings of Heavy Rains

WASHINGTON, D. C .- It is probable that the department of agriculture will broadcast by Radio to the farmers of the United States storm warnings and reports of heavy rains when crops are growing. This suggestion was made to Secretary of Agriculture Gore, by Senator Harris of Georgia and it is said that the secretary is favorable to the suggestion.

ANN PENNINGTON BROADCASTS



OR the first time the actual making of the air, giving the well-known invisible a motion picture has been broadcast. audience an insight into the methods of Through Station WJZ, the filming of procedure during the preparation of enterthe scenes—or rather, the portions of them that are audible—of the "Mad Dancer" in which Vincent Lopez, orchestra leader, some day it will be possible to broadcast and Ann Pennington, Follies dancer, are actual scenes. Vincent Lopez is shown playing the leads, are being sent out on here at the left with the baton.

\$1,200 in Prizes Is Offered for the Best Poems

RICHMOND HILL, N. Y.—The "Radio Saint Valentine" of Station WAHG, A. H. Grebe and company here, offers \$1,200 in prizes for the best valentine verses containing the word "Grebe."

The contest will close February 9 and awards will be made on St. Valentine's eve, Friday, February 13, at 9 p. m., castern time, or 8 p. m. Central time. Verses submitted may be up to fourteen lines in length, either serious or comic. In case of tie, duplicate prizes will be awarded all tying contestants.

The Radio Saint Valentine is on the air every Monday and Friday at 9 p. m., and on Saturday and Monday midnight programs at 1 a. m., eastern time. WAHG broadcasts on 316 meters.

New Train Picks Up WBAP

VALENTINE CONTEST IS Soap Company Pays ON AT GREBE'S STATION Philharmonic's C

Los Angeles Orchestra Treat at Dr. L. W. Austin Says Tests Show KHJ January 24 Marked Improvement

LOS ANGELES.—Probably the most liberal contribution to a paid Radio program in the West, and possibly the United States, will be that of the broadcast of the Los Angeles Philharmonic orchestra on Saturday night, January 24, from KHJ,

size and quality of programs presented last year. has steadily increased, reaching the culmination in this broadcast. The studio at KHJ would not hold the orchestra, consisting of ninety men, satisfactorily and it was necessary to make arrangements to use the auditorium of the First Methodist Episcopal church.

It is understood that the donor of the FORT WORTH, Texas.—Passengers on program, the Los Angeles Soap company, the new Golden State Limited, crack Rock is spending over \$1,200 for this two-Island fast train from Chicago to Cali-hour program, and as KHJ makes no fornia, have heard clearly the daylight charge for the use of its studio or transprograms from WBAP here. The new mitter, the whole amount will go to the train is completely equipped with Radio members of the orchestra in payment for the broadcast.

BRUNSWICK MONEY FOR MUSIC MEMORY

\$5,000 WILL BE AWARDED MONTHLY TO WINNERS

Talking Machine Firm to Broadcast Tests Weekly from Chain of Eight Big Stations

NEW YORK.—To foster a deeper understanding and appreciation of good music, the first national Radio musical memory contest will be broadcast from six of the principal stations of the country, starting the evening of February 2, during the "Brunswick Hour of Music" at 10 p. m., eastern time, or 9 p. m., central time.

Everybody in America is eligible to enter. The broadcasting of operatic stars, famous symphonies and foremost orchestra will be done from the Brinswick laboratories in New York city every Tuesday evening and relayed through Stations WJZ, New York; WGY, Schenectady; WRC, Washington: KDKA, East Pittsburgh; KYW, Chicago, and KFKX, Hastings.

Arrangements are being perfected to include soon Station KOA, Denver, and KGO, Oakland, Calif., so as to reach every Radio musical fan from coast to coast.

\$5,000 Monthly in Prizes Twenty thousand people are expected to take part in this test of music memory. which aside from its educational value will be stimulated by a competition for the winning of cash prizes, totaling \$5,000 monthly. First prize of \$1,000, second \$500, third \$300, fourth \$200, ten of \$100 each and forty of \$50 each. In case of tie duplicate prizes will be awarded all tying contestants.

Lists of musical selections from which the numbers of each Tuesday evening "Brunswick Hour of Music" will be selected will be given in advance. These lists may be obtained in any town or city within the radius of the stations broadcasting the program.

Competitors are not to send in their answers until after the final "Brunswick Hour of Music" program each month.

That people musically inclined who are not fortunate enough to possess Radio outfits may have an opportunity to enter the contest on an equal footing with the owners of sets, arrangements have been made to permit the public to listen in at any Brunswick headquarters Tuesday evenings.

Philharmonic's Cost SUMMER NOISES NOT SO NOISY DURING 1924

Marked Improvement

WASHINGTON.—Summer interference conditions have entirely disappeared and Radio is now going through its best period, according to Dr. L. W. Austin, physicist of the bureau of standards.

"The September and October measure-Los Angeles Times.

Since a few months ago, when the policy of "paid" programs became the the afternoon fading and the disturbances rule instead of the exception at KHJ, the show a market decrease much earlier than

"The atmospheric disturbances in September and October have not only decreased in intensity as compared with July and August, but also have changed their character to some extent. The strong crashes which were common during the summer were infrequent in September and October, the disturbances being nearly always the crackling, rumbling type.'

Crosley's Five-Kilowatt Plant Soon to Be on Air

CINCINNATI.—It will not be long before the new Crosley WLW five-kilowatt broadcasting station at Harrison, Ohio, is ready for testing. Workmen and engineers are doing everything possible to complete their work.

The new transmitter's panels, six in number, bear the serial number 101, which indicates it is the first one of its type. Although the new station will work almost automatically, it will require the attention of a thoroughly experienced operator. For that position J. E. Whitehouse has been obtained. He comes to WLW after ten years in the United States Navy as chief Radio man.

Starts Cross Word Song

CLEVELAND .- A broadcasting studio would be the last place one would pick to work cross word puzzles under ordinary circumstances. But at WTAM was where Mrs. Bernard L. Strang chose to work hers. This was while waiting for her husband, who is "Announcer B. L. S." The result was a popular song written by Carmen Lombardo, one of the brothers around which the Royal Canadian orchestra, a WTAM feature, is built. The song is entitled, "Cross Word Puzzle Crazy.

Many new stations of the B type are preparing to go on the air.

THE CAUSE OF ALL THE TROUBLE



WOC-First Super Power Station on the Air



Above, entrance to the reception and Radio room where the apparatus for broadcasting is kept. The Radio room holds the old 1000-watt set which has established envious records. Left, panel of the new 5000-watt transmitter at Station WOC. Photo shows Stanley Barnett, director-announcer, tuning set with J. S. Ward, engineer who erected the installation "standing by" and giving expert advice.

Where the West Begins, Davenport

By John Galbraith

THE first super-power station to go on the air; WOC, located on the Palmer School of Chiropractic, Davenport, Iowa, has this honor and distinction. New equipment throughout, including the aerial, go towards making WOC one of the finest and best equipped broadcast stations in the country.

The equipment of the new station is the last word in Radio transmitter design. Special water-cooled tubes are used for amplifiers and rectifiers. A stream of water under 24 pounds pressure is continually running around the base of the tubes. The water has an average temperature of 120 degrees Fahrenheit while the tubes are in operation.

A specially designed antenna switch is used so that either the old 1000-watt set or the new 5000-watt set may be switched into operation by merely turning the hand.

A new aerial has taken the place of the one formerly used with the low powered set. This new aerial uses insulators 56 inches long—almost as tall as a man—and about six inches in diameter.

"Ye canna baith be comfortable and gran'." This inscription, over the fireplace in the home of B. J. Palmer, owner of the Palmer School of Chiropractic and Station WOC, is the slogan of the station personnel. When a visitor comes to WOC, he is immediately made to feel at home, thereby fulfilling the slogan.

Foremost among the leaders at WOC stands Frank W. Elliott, business manager of the school and full of "pep." He is a great believer in the possibilities of broadcasting—as the station shows—and his personality would win over the most adverse and chronic hater of Radio to the standard of broadcasting.

Stanley W. Barnett, director-announcer, is a former Naval operator, and feels as much at home before the microphone in the studio as he does in the operating room. It was due to Stan's persistent boosting of Radio broadcasting that WOC is in existence today. When he arrived at the school in Davenport, he began to talk about what Radio was and what it could do. Result—WOC.

Many novel broadcasting ideas have emanated from his mind and Radiophans throughout the country are indebted to "Stan" for the pleasure that they derive from listening to the programs sent from Station WOC.

The chief operator is Franklin W. Pierce. He has been working in Radio since he was able to walk, and it is due to his wonderful electrical ability that troubles at WOC are kept at a minimum. He is better known to fans as announcer ANR.

Would you like to know how to bake a cake, clean woodwork or take care of children? If so, tune in some morning at 10:00 a. m., and listen to GWW tell just how it's done. GWW, or to call him by the name which he uses in signing checks, Gilson V. Willets, has charge of the

far-famed cooking class.

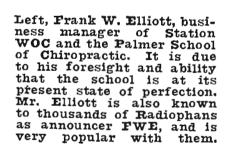
About two years ago, GWW told the ladies one morning about some wonderful cookies which his wife had made—yes, he's married—and invited the listeners to send in their favorite recipes for winning a man's heart. The mail next day to WOC was

so heavy that the letter carrier threatened to quit his job. When the letters were opened, recipes poured out onto the table and threatened to engulf the operators.

The recipes have now been published in book form, which is sold by the Palmer school. Another book is now in the process of being assembled and will be published very soon.



B. J. Palmer, owner of Station WOC, is known to the public as BJ. He acts as announcer between trips around the world, one of which he is making at the present time.



Aurunia) ()

In the State Where the Tall Corn Grows





المائة والمقافلة والمنافرة والمنافرة

Gilson V. Willetts, known as announcer GWW. He is operator and announcer between times. Mr. Willetts gives the "Helpful Hints to Happy Homes" every morning from WOC. These hints are now published in book form so that the housewives may keep them



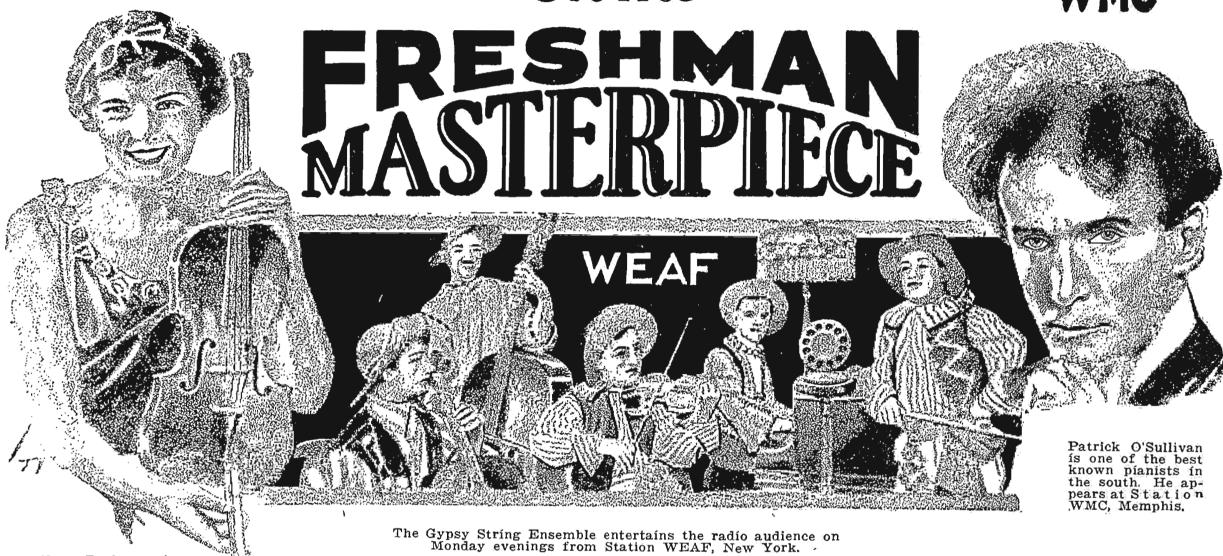
Right, Franklin W. Pierce, chief operator and technician, who is sometimes heard from WOC signing off with the initials ANR. When anything goes wrong at the station with the apparatus, they call on Mr. Pierce to fix it.

Left, Erwin Swindell, musical director and conductor of Palmer School Radio orchestra. Mr. Swindell is the composer of several well-known classical selections. He is personally responsible for the high quality of music sent out from WOC.





You Will Hear These Radio Favorites More Clearly
KPO On The wmc

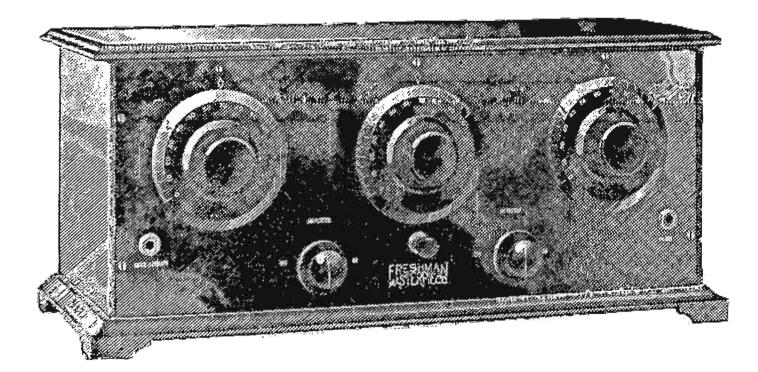


Fern Bachman is a talented violinist appearing frequently at Station KPO, San Fran-

Five Tube Tuned Radio Frequency

\$6000

The Greatest Value Ever Offered in a Radio Receiving Set



Made of the finest low loss materials and in a beautiful, genuine solid mahogany cabinet, that is attractive enough for the most pretentious room, and at sixty dollars, economical enough for the most modest.

The Freshman Masterpiece combines every feature essential to the perfect receiver. Brings in even the most distant stations without a bit of squealing or howling—brings them in night after night at the same points on the dials. And what's more

It's the easiest set in the world to operate.

Have Your Dealer Install One in Your Home!

Every genuine Freshman Masterpiece has the serial number and trade mark riveted on the sub-panel. Sets are not guaranteed if number has been removed or tampered with.

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Radio Receivers & Parts
FRESHMAN BUILDING
240-248W 40th St. - New York

Beware of imitations.

Insist upon the genuine.

Write for interesting literature.

REVISED WAVE BAND GIVEN TO AMATEURS

COMMERCIAL STATIONS TO **GET 105-110 METER RANGE**

Department Urges Abandonment of Spark Transmitters—"Z" Calls Go Into Discard at Once

WASHINGTON. - Under the revised regulations governing amateur Radio station operations, just issued by the department of commerce, amateurs must cease using the wave length band between 105 and 110 meters. This range of waves is being taken up by commercial and government stations.

Radiophone, spark and ICW transmitters may be used only within the band from 170 to 180 meters, but CW transmission may be carried on within the following wave channels: 4.69 to 5.35; 18.7 to 21.4; 37.5 to 42.8; 75 to 85.7 and 150 to 200 meters.

Abandon Spark Transmitters

The department urges the abandonment of the spark transmitter as soon as possible and the adoption of sets causing less interference. No new restrictions will be imposed relative to the character of the power supply, the department regulations state, provided the emanated wave is sharply defined and the power does not exceed 500 watts, set by law.

Amateurs using the band between 150 and 200 meters, which includes all spark, phone and CW transmitters, are required to remain silent every night between 8 and 10:30, local time, and on Sundays during church service broadcasting. Stations using wave lengths below 85 meters and having a pure continuous wave, or where full wave rectification is employed are not required to remain silent, except where interfering with other Radio services. Abolish Special Licenses

Special amateur licenses are abolished, but owners of stations so licensed may continue to use their "Z" calls under new regular amateur licenses. No more special "Z" licenses will be issued, as the department feels that there is no longer need for them.

Amateur stations are not permitted to communicate with commercial stations unless so authorized or in emergencies. These rules go into effect immediately.

WTAR IDENTIFIES **MYSTERIOUS MAN**

"Oxekula," by Broadcast, Found to Be Finnish Naturalist Far Astray

NORFOLK, Va.—Oxekula, mystery man, who acquired nationwide publicity re-cently, has had his mystery solved. Radio broadcasting through WTAR here and a listening near-countryman are respon-

Oxekula, in detention in the city jail and later at the Union mission here, who could not make himself understood, proved to be a middle-aged Finnish naturalist and writer, far astray from his home in Boston, Russia-not New England. He had heard tales of the wonderful plant life in America and the Orient, and, forgetting to bid his aged wife goodby, shipped aboard the S. S. Riga as a sailor.

But the rest of the sailors didn't understand the queer old man's love of flowers and plants-they ridiculed him and mistreated him. The Riga touched Canada, then came to the United States. Oxekula took shore leave in some city here, he knows not where, and became lost. He walked and walked, sometimes being given food by kind persons, all of whom invariably thought him out of his

Then the Norfolk authorities picked him up. He is in good hands now-thanks to Radio-and will soon be deported, according to his wishes, back to Boston, Russia, where an old woman is probably mourning his death at the hands of the Bolshevists.

New Daylight Record

FORT WORTH, Texas.—That WBAP, the Star-Telegram here, has established a daylight record for voice transmission is now believed. H. R. Lovell, Keystone, Canada, at 9 a. m., mountain time, heard the entire market report on November 20, approximately 1,200 miles. Reception of WBAP is also reported by L. L. Donaldson of Papeete, Tahiti, in the middle of the Pacific ocean, about 5,000 miles from Fort Worth. Mr. Donaldson used a five tube

Like WLW Dinner Programs

CINCINNATI.-Many letters have been received at WLW here following the first of a series of dinner hour programs given by the Selinsky quintet and assisting artists through the courtesy of the Cincinnati Post. The programs are broadcast every evening except Sunday and Friday, at 6 p. m., Central time.

"C.B.L." AND "W.R.S." POPULAR WBAP MEN



By Susan Haymes

EATURING Locke and Sullivan: Sounds like participants in a fistic encounter, doesn't it? But these popular announcers, C. B. Locke and W. R. Sullivan of WBAP, Fort Worth, Texas, possess anything but pugulistic procliv-

cer de luxe, is Radio editor of the Star-Telegram. His initials are C. B. L .- easy to remember, and so is he. His Is the voice most often heard from the station's remote control at Crazy Wells hotel, Mineral Wells, Texas, and elsewhere.

C. B. L. is a Texan by choice. His first announcing was done in Kentucky-that land of corn, colonels and fair women. Undoubtedly he kept folks awake with his "announcing" in those days, too! His education was completed at Texas Christian university at Fort Worth. Texas, he decided, had beautiful women, too, so he married one of them.

W. R. Sullivan is announcer and operator. To be an operator of a first-class station requires ability. He must have the patience of Job, the mind of a genius and be as tactful as a diplomat. W.R.S. is all of this.

As announcer for market quotations and weather reports, his services are an invaluable aid to scores of listeners in. Business men in Oklahoma and Texas depend on his reports, clearly enunciated, on cotton, grain, livestock and other com-modities. Buying is regulated by the market information obtained from WBAP.

Mr. Sullivan was born in Galveston, the bustling seaport of Texas; he spent his carefree boyhood days enjoying the Gulf, watching the breakers roll and men go out to the sea in ships. What a delightful and inspiring atmosphere for a dreamer! For dreamers it took to visualize Radio and vision it takes to improve the science.

W. R. S. believes in two things, work and silence. Unusual characteristics for of 200. A portable stage two feet high

TRADE COMMISSION TO TAKE TESTIMONY

ASHINGTON.—It is understood that within the next few days the Federal Trade commission will announce the date for beginning the taking of oral testimony in its case against the Radio Corporation of America. It is expected that the hearings will be held in several of the larger cities. Edward L. Smith, special attorney for the commission, is in charge of the work, which will take time.

but work he is always doing; ever busy in his unending quest for improvement of WBAP, tackling new hook-ups in his leisure or building a new set, only to sit up until 2 a. m. to see if "she works."

The arrows of Cupid haven't struck Sullivan yet. We trust this plain statement will not cause an influx of lettersfor as stated above, W. R. S. loves silence -he doesn't want a loud speaker in the

WLW Adds Portable Stage

CINCINNATI.-It has been announced from the Crosley WLW studio that a portable stage has been added as part of the equipment. It is possible to see the solo and ensemble studios of WLW from the auditorium, which has a seating capacity Locke, aside from being WBAP announ- an announcer, eh? He doesn't talk much, and is now used when occasion demands.



I ain averaging anywhere from \$75 to \$150 a month more than I was making before enrolling with you. I would not consider \$10,000 too much for the course.

(signed) A. N. Long,

Greensburg, Pa.



No somer had I received my discharge (as a buck private) than I opened a radio shop of my own. I carned over \$3,500 in 1 year. I wouldn't have missed the N. R. I. course for a million dollars.

John P. Zinno,
Corona, L. I.



Before I enrolled with you I was making \$15 a week on a farm.

Now I earn from \$2,080 to \$4,420 a year. And the work is a hundred times easier than before. Since graduating a little over a year ago, I have earned almost \$4,000 and I believe the course will be worth at least \$100,000 to me.

(signed) Geo. A. Adams,

Tamaqua, Pa.



I can very easily make double the amount of money now than before I enrolled with you. Your course has benefited me approximately \$3,000 over and above what I would have earned had I not taken it.

T. Winder.

Grand Junction, Col.

Prepare Yourself For Radio -the New Profession

Many N.R.I. Graduates Now Earning From \$5000 to \$20000 a Week

THE biggest, best-paying field open to ambitious men today. Thousands needed at once for pleasant, interesting jobs. High Pay—Short Hours. No expejobs. High Pay-Short Hours. No experience required. Learn in your spare time at home.

Here is work that is fascinating, new and easy—an industry which is growing more rapidly than any other in the world time. today—an industry that offers you the chance of a lifetime to "get in on the ground floor" and make big money. Right now, thousands of trained men are needed in all branches of the business. Radio operators, radio engineers, salesmen, mechanics and Radio executives are scarce and receive wonderful dio knowledge to pay. Are you going to shut your eyes become our local to this golden opportunity when there managers." "We reis a quick, easy way to get one of these splendid positions?

You can train for this "big money" field right in your own home—in your spare time. No matter how little you know about electricity or Radio, the National Radio Institute-the largest and best school of its kind in the world-will guarantee to give you a thorough Radio training in a few short months.

Salaries Doubled and Tripled

Since the National Radio Institute was paying jobs in founded in 1914 over 15,000 men and young Radio.

much repairing radio sets and building them as my regular salary.

In a letter from Arthur Ruse of Toronto we read that he has doubled his income since mastering Radio and that he earns from \$50 to \$100 a month in his spare

our graduates. of a competent Ra-

Study in Your Spare Time

at Home

This is the time to go into radio.

Big opportunities are now open in every branch of the work, and salaries were never so high. The thing

dio Engineer."
"We want in en with executive ability in addition to raquire the services of several resident demonstrators"--these are just a few small indications of the great variety of opportunities open to our graduates.

This is an absolutely complete Radio Course which qualifies you for a Government First Class Commercial License and really gets you the bigger

true picture of the opportunities in Radio. Simply mail the coupon and we will send you a big free book "Rich Rewards in Radio," which will show you actual proof of the big money being made by our graduates today. It will describe the course in full detail, it will tell you just how This page contains only a few of the in full detail, it will tell you just how thousands of letters we receive from successful graduates. Hardly a week goes profession. Best of all, you will get the by without our receiving urgent calls for details of our Special Reduced rate which our graduates. "We need the services is being offered for a short time. So,

mail the coupon now! Make this your lucky day!

THE National Radio Institute Dept. 55XB

to do is to begin studying at once, in whatever time you can spare, so that WASHINGTON, D. C.

you will be able to qualify for the position you want when the time comes. Only an hour or so every evening will quickly prepare you for radio—a profession you cannot fail to find fascinating and pleasant. Don't handicap yourself;	may send me, free a interesting book, "Rie information about your plan and about your free the details of your Sp	radio as a profession. You not without obligation, your without obligation, your spare time, home-study comployment service. Also, eclai Offer.
start at once and advance with the others.	L City	State

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

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Statian and City	Met.	Saturday	Sunday	Manday	Tuesday	Wednesday	Thursday	Friday
AT9. Fort Bragg, N. C CFAC, Calgary, Alta	435 430	7:00-8:55 Silent	7:00- 8:00 Silent	Silent 9:00-11:00	7:00-8:55 Silent	Silent 6:00- 7:00	7:00-8:55 10:00-11:00	Silent 7:00-8:00
CFCA, Toronto, Ont CFCN, Calgary, Alta	400	Silent 11:00- 1:00	6:00-7:00 Silent		7:00-8:00 12:30-1:30	7:00- 8:00 Silent	7:00-8:00 Silent	7:00- 8:00 Silent
CHYC, Montreal, Que CKAC, Montreal, Que	341 437	Silent 6:30- 9:30	8:00-9:00 3:30-4:30	Silent Silent	Silent 6:30- 9:30	7:30- 8:30 Silent	Silent 6:30- 9:30	Sllent Silent
CKCO, Vancouver, B. C CKY, Winnipeg, Man	410	10:30-11:30 Silent	Silent 7:00- 8:00	10:30-11:30			10:30-11:30 7:30-9:15	10:30-11:30
CNRO, Ottawa, Ont	435 370	6:30-11:30 8:30 9:00	Silent Silent	Sllent Silent	Silent 8:30- 9:00	6:30-11:30 Silent		Silent Silent
CYL. Mexico City, Mex CYX. Mexico City, Mex	480 330	Slient Slient	Silent	Silent 9:00-12:00	10:00-11:30 Silent	Silent	Silent Silent	10:00·11:30 8:00-10:00
KOKA, E. Pittsburgh, Pa KFAE, Pullman, Wash	309.1 330	5:30 - 8:00 Silent	6:30-7:30 Silent		5:30-10:00 Silent	5:30-8:00 9:30-10:30		5:30 - 8:00 9:30-10:30
KFAU, Boise, Idaho KFOM, Beaumont, Texas.	$\frac{275}{315.6}$	Silent Silent	Silent 9:00-10:00	9:00-10:00 Silent	Silent 8:00-11:00	Silent Silent	Sllent Silent	9:00-10:00 8:00-11:00
KFI, Los Angeles, Calif KFKB, Milford, Kan	469 273	8:45-2:00 6:00-11:00	8:45-1:00 8:00-10:00	8:45-1:00 6:00-11:00	8:45- 1:00 6:00-11:00	8:45-2:00 6:00-11:00	8:45-1:00 6:00-11:00	8:45- 2:00 6:00-11:00
KFKX, Hastings, Nebr KFMQ, Fayettcville, Ark	$\frac{288.3}{275}$	Silent Silent	Silent Silent	9:30-11:00 Silent	Slicnt 9:00-10:00	Sllent Silent	9:30-11:00 7:30-8:30	Silent Silent
KFMX, Northfield, Mlnn. KFNF, Shenandoah, Ia	283 266	Sllent 6:30- 9:00	7:00- 8.00 6:30- 8:00	Silent 6:30- 9:00	Silent Silent	9:00-10:00 6:30- 9:00	Silent 6:30- 9:00	Silent 6:30- 9:00
KFOA. Seattle. Wash KFPT. Salt Lake Cy., Utah	455 268	8:45-12:00 9:00-11:00	Silent 10:00-11:00	8:45-12:00 9:00-10:00	8:45- 1:00 10:00-11:00	9:00-10:00		8:45- 1:00 10:00-11:00
KGO, Oakland, Callf KGW, Portland, Ore	312 492 395	10:00 - 3:00 12:00 - 2:00		10:00-3:00 10:00-11:00		Sllent 10:00- 2:00	10:00 - 3:00 Silent	Silent 10:00-1:30
KHJ, Los Angeles, Calif KJS, Los Angeles, Calif	252	Silent	10:00-12:00 9:15-11:30	Silent	10:00-11:00	10:00-12:00 Silent	10:00-11:00	Silent
KLX, Oakland, Calif KNX, Hollywood, Calif	337 322.4	Silent 8:00- 1:00 Silent	Slient 10:00-12:00	10:00-12:00 8:00-1:00 10:00-11:00	Silent 8:00-1:00 Silent	10:00-12:00 8:00-1:00 10:00-11:00	Silent 8:00- 1:00 Silent	10:00-12:00 8:00-1:00 10:00-11:00
KOA, Denver, Colo KOB, State College, N. M., KPO, San Francisco, Calif.	360 423	Silent 10:00- 2:00	Silent	8:30 - 9:30	Silent 9:00- 1:00	8:30 - 9:30	Silent 9:00- 1:00	8:30- 9:30 Sijent
KQV. Plttsburgh, Pa KSAC, Manhattan, Kan	275.2	Sllent Sllent	Silent Silent	7:00- 9:00 7:30- 8:30	Silent 7:30-8:30	7:00- 9:00 7:30- 8:30	Silont 7:30- 8:30	7:00-9:00 7:30-8:30
KSD, St. Louis, Mo KSND, Seattle, Wash	$\begin{array}{c} 549.1 \\ 238 \end{array}$	8:00- 9:00 7:15- 2:00	Silent Silent	7:00-11:55 9:15- 1:00	7:00-11:00 9:15- 1:00	6:45-11:00 9:15- 1:00	Silent Silent	8:00-9:00 9:15-1:00
KTHS, Hot Springs, Ark. KTW, Seattle, Wash	375 405	8:30-11:30 Silent	8:30-11:30 9:00-11:30	8:30-11:30 Silent	8:30-11:30 Silent	8:30-11:30 Silent		8:30-11:30 Stient
KYW, Chicago, Ill NAA, Radio, Va	535.4 435	7:00- 2:00 Silent	7:00-8:00 Silent	Silent 5:45- 7:20	7:00- 2:30		7:00- 2:30 5:45- 7:40	7:00- 2:30 7:05- 7:40
PWX, Havana, Cuha WAAW, Omaha, Nebr	400 278	7:30-10:00 Silent	Silent	Silent 7:30- 9:00	Silent Silent	7:30-10:00 Silent	Silent 7:30- 9:00	Silent Silent
WABL. Storrs. Conn	$\frac{283}{214}$	Silent Silent	Silent	6:00- 8:00 8:00-10:00	Silent Silent	6:00- 8:00 Silent	Silent 9:00-11:00	6:00- 8:00 Silent
WABN, La Crosse, Wis WAHG, Richmond, N. Y., WBAP, Fort Worth, Tex.	$\frac{316}{472.9}$		Silent 11:00-12:00	6:30-1:00 7:30-10:45			7:30-10:45	6:30-10:15 7:30-10:45
WBAV, Columbus, O WBBG, Mattapoisett, Mass.	$\begin{array}{c} 293.9 \\ 248 \end{array}$	9:00-11:00 Silent	Silent Silent	7:00-9:00 7:00-9:00	Silent Silent	Silent 7:00-8:00	Silent Silent	7:00- 8:00 6:00- 1:00
WBBR, Staten Island, N. Y. WBCN, Chicago, Iil	273 266	7:00- 8:00 6:00- 1:00	8:10-9:05 4:00-10:00	6:00- 7:00	Silent 6:00- 1:00	7:00- 8:00 6:00- 1:00		Silent 6:00-1:00
WBT, Charlotte, N. C WBZ, Springfield, Mass WCAE, Pittsburgh, Pa	360 337	Silent 6:40- 8:55	5:30- 6:30 6:00- 9:00 6:30- 8:30	Silent 6:40-11:00 6:30-10:30	7:30 - 8:30 6:40 - 8:55	Silent 6:40-11:00 6:30- 8:30	7:30-8:30 6:40-8:55 6:30-10:30	Silent 6:40-11:00 6:30- 8:30
WCAL, Pittsburgh, Pa WCAL, Northfield, Minn WCAP, Washington, D. C	462 360 469	6:30-8:30 12:00-1:00 Silent	8:30-10:00 6:20- 9:00	Silent 6:30- 9:00	6:30-10:30 Silent Silent	Silent 6:45- 9:00	9:00-10:00	8:30 - 9:00 6:30 - 11:00
WCAU, Philadeiphla, Pa WCBD, Zion, Iil	278 344.6	Silent Silent	5:00- 6:00 2:30- 6:00	5:00-6:00	Silent	5:00-8:00 Silent	5:00- 8:00 8:00-10:30	5:00-10:00
WCBK, St. Petersburg, Fla WCCO, MinnSt. P., Minn	266	Silent 6:00- 9:00	7:00- 9:00	6:00-7:00	7:00-7:15	Silent 7:00-8:00	6:00-7:00	Silent 6:00- 9:00
WCX. Detroit, Mich WDAF, Kansas City, Mo.	516 414.1	Silent 11:45- 1:00	6:15- 7:15 4:00- 5:00	7:30- 9:00	10:00-11:00 11:45- 1:00	6:00- 9:00	6:00-9:00 11:45-1:00	6:00- 9:00 8:00- 1:00
WDAR, Philadelphia, Pa. WEAF, New York, N. Y	395 492	6:30-7:30 5:00-11:00	Silent 6:20- 9:15	6:30-9:00	6:30-7:30 5:00-10:00	6:30-9:00 5:00-11:00	6:30-7:30 5:00-11:00	6:30-12:00 5:00-11:00
WEAO. Columbus, Ohio WEAR, Clevaland, O	294 390	Silent Silent	Silent Silent	Silent Silent	Silent 6:00-10:00	Silent Silent	7:00-9:00 7:00-10:00	Silent Silent
WEAY, Houston, Texas WEBH, Chlcago, Ill	$\begin{array}{c} 360 \\ 376.7 \end{array}$	Silent 7:30-12:30	8:00- 9:00 7:00- 9:00	Silent Silent	8:30-9:30 7:30-12:30	8:30-9:30 7:30-12:30	Silent 7:30-12:30	8:30-9:30 7:30-12:30
WEBJ, New York, N. Y WEEL, Boston, Mass	303	Silent Silent	Silent 6:20- 9:00	Silent 6:00- 9:45	6:00-8:00 6:00-11:00	6:00 - 8:00 6:00-11:00	Silent 6:00-11:00	Silent 6:00-11:00
WEMC, Berrien Spgs., Mch. WFAA, Dailas, Tex	472.9	Silent 8:30-12:00	7:00- 9:15 6:00-11:00	7:00- 9:15 7:00- 9:15	Silent 8:30-12:00	7:00- 9:15 Sitent	Silent 8:30-12:00	7:00-10:00 8:30- 9:30 6:30-12:15
WFBH, New York, N. Y WFI, Philadelphia, Pa WGAQ, Shreveport, La	273 395 263	6:00-11:30 Silent 9:00-12:00	6:30-12:30 6:30- 7:30	10:30-12:15 Silent 9:00-12:00	10:30-12:30 7:00- 8:00	6:30-12:30 Silent 8:00- 9:00	6:00-12:15 7:00- 8:30	Silent Silent
WGBS, New York, N. Y WGI, Medford, Mass	3164	6:30-11:00 6:30- 9:00	Silent Silent 7:30- 9:00	5:30-6:30 Silent	Silent 5:30-11:00 6:30- 9:00	6:10- 6:30 6:30-9:00	Silent 7:00-12:00 6:30- 9:00	5:30- 6:30 6:30- 9:00
WGN, Chicago, Ill	376.7 319	6:00-11:00 5:30- 6:30	2:30-10:00 3:00-7:30	Silent 5:30-11:00	6:00-11:00 5:30-6:30	6:00-11:00 5:30-11:00	6:00-11:00 5:30-6:30	6:00-11:00 5:30-11:00
WGY, Schenectady, N. X.	380	Silent 8:30- 9:30	Silent 6:30- 9:00	9:00-10:00 6:45- 9:00	Silent 6:45- 9:00	Silent Silent	7:00- 8:00 6:45- 9:00	Silent 6:45-10:30
WHAA, Madison, Wis	535.4 498	Silent 7:30- 9:00	Sllent Silent	7:45- 8:45 Silent	Silent 8:00- 9:00	7:45- 8:45 9:00- 9:30	Silent Silent	7:45- 8:45 Silent
WHAO, Milwaukee, Wis WHAS, Louisville, Ky WHAZ, Troy, N. Y	$\begin{array}{c} 275 \\ 399.2 \end{array}$	Silent 7:30- 9:00	Silent 4:00- 5:00	Silent Silent	Silent 7:30- 9:00	7:30- 8:30 7:30- 9:00	Silent 7:30- 9:00	Silent 7:30- 9:00
WHB, Kansas City, Mo	414.1	Silent Silent	Silent 8:00-10:00	8:00-10:00 7:00- 8:00	Silent 8:00-10:00	Silent 7:00- 8:00	Silent 8:00 10:00	Silent 7:00-8:00
WHK, Cleveland, Ohio WHN, New York, N. Y	360 i	5:00-11:00 6:30-11:00	7:00-10:00 8:30-11:00	5:00- 6:30 6:30-11:00	5:30-6:30 8:30-11:00	5:00- 6:30 6:30-11:00	5:00-11:00 8:30-11:00	5:00-11:00 8:30-11:00 7:30-9:00
WHO, Des Moines, Ja WIP, Philadelphia, Pa	509.9	Silent 7:00-11:00	Silent 9:30-12:00	7:30-12:00 Silent	Silent 7:00-11:00	6:30-9:45 Silent	Silent 7:00-11:00	Silent 6:30-10:00
WJAS, Providence, R. I. WJAS, Pittsburgh, Pa	360 275.3	6:10- 7:10 Silent 7:15-12:00	Silent Silent Silent	7:00- 8:00 7:30-10:00 7:15- 8:15	7:00-8:00 7:30-10:00	7:00-12:00 7:30-10:00 7:15- 8:15	Silent 6:30- 9:00 Silent	6:30-9:00 7:15-8:15
WJJD, Mooseheart, Iil WJY, New York, N. Y WJZ, New York, N. Y	405	Silent 6:00-10:30	7:15- 7:45 6:00-10:30	Silent 6:00-10:30	7:15- 8:15 6:45- 8:00 6:00-10:00	Silent 6:00-10:30	6:30-9:30 6:00-10:30	6:30-10:30 6:00-10:30
WKAU, San Juan, P. R	360	Silent Silent	Silent Silent	Silent Silent	7:00-8:30 8:00-9:30	6:00- 7:30 Silent	6:30-8:00 Silent	Silent Silent
WKBF, Providence, R. I., WLBL, Stevens Point, Wis. WLS, Chicago, Ill	278 314.6	Silent 8:00-12:00	Silent 6:30- 8:00	Silent Silent	8:00- 9:00 6:30- 1:00	Silent 6:30-12:00	Silent 6:30- 8:00	Silent 6:30-11:00
WLW, Clncinnati, O WMAK, Lockport, N. Y	423 265.5	Silent Silent	7:30- 9:15 Silent	8:00-10:00 Silent	10:00- 1:00 7:00- 9:00		10:00-12:00 11:00-12:00	Silent Silent
WMAQ, Chicago, 111 WMC, Memphis, Tenn	444.8 503.9	6:00-10:00 8:30- 9:30	Silent Silent	Silent 8:30- 9:30	6:00-10:00 8:30-12:00	6:00-10:00 Silent	6:00-10:00 8:30- 9:30	6:00-10:00 8:30-12:00
WMH, Cincinnati, O WNAC, Boston, Mass WNYC, New York, N. Y	325.91	9:00-10:00	Silent 7:30- 9:30	8:00-10:00 6:00-10:00	Silent 8:00-10:00	8:00-11:00 6:00-10:00	8:00-10:00 8:00-10:00	Silent 6:00-10:00
WOAL San Antonio, Texas.	394.5	7:30-10:30 Silent	Silent 7:30-10:30	7:30-10:30 Silent	7:30-10:30 8:30-10:30	7:30-10:30 Silent	7:30-10:30 9:30-10:30	7:30-10:30 Silent
WOAN, Omaha, Neb		6:00-12:15 Silent	6:00-11:00 Silent	6:00-11:00 Silent	6:00-11:00 8:15-10:00	Silent Silent	6:00-11:00 Silent	6:00-11:00 8:00-10:00
WOC, Davenport, Ia	498 360 509 9	9:00-10:00 Silent Silent	7:00-11:00 Silent Silent	8:00-11:00 10:00- 1:00 6:30-10:00	Silent Silent	8:00- 9:00 Silent 6:30-10:00	9:00-11:00 8:15- 9:15 Sitent	8:00- 9:00 Silent 6:30-10:00
WOR, Newark, N. J	405	6:15-10:00 Silent	Silent 7:00- 9:00	6:30-10:00 5:15-10:00 8:00- 9:00	Silent 5:15-10:00 8:00- 9:00	5:15-10:00 Silent	5:15- 6:30 8:00- 9:00	5:15- 6:30 Silent
WOS, Jefferson City, Mo WQJ, Chicago, Ill	429.5	Silent 7:00- 2:00	7:30- 8:30 8:00-10:00	8:00-9:00 8:00-10:00 Silent	Silent 7:00- 2:00	8:00-10:00	Silent 7:00- 2:00	8:00-10:00 7:00- 2:00
WRBC, Valparaiso, Ind WRC, Washington, D. C	278	Silent 6:00-10:30	7:30-8:30 Silent	7:30- 8:30 Silent	Silent 6:00-10:30	Silent Silent	Silent 6:00-10:30	Silent Silent
WREO, Lansing, Mich WRW, Tarrytown, N. Y	$\begin{array}{c} 285.5 \\ 273 \end{array}$	$7:15-10.00$ $8:00\cdot10:30$	6:00-7:00	Silent	7:15- 8:15	Silent	7:15- 8:15 8:00-10:30	Silent 8:00-10:30
WSAC, Clemson Coll., S. C. WSAI, Cincinnati, O	$\frac{260}{325.9}$	Silent 8:00-10:00	Silent 3:00- 4:00	Silent 10:00-12:00	Silent 7:00-10:00	7:00- 8:00 Silent	Silent 10:00-12:00	Silent Silent
WSB, Atlanta, Ga WTAM, Cleveland, O	429 390	8:00-12:00 8:00-11:00	7:30- 9:15 Silent	8:00-12:00 7:00- 9:00	8:00-12:00 Silent	10:45-12:00 7:00- 9:00	8:00-12:00 Silent	8:00-12:00 Silent
WTAY, Oak Park, Ill	302.8 250	6:00-12:30 6:45-10:00	6:00-12:30 Silent	6:00-12:30 Silent	6:00-12:30 6:45- 7:45	6:00-12:30 6:45-10:00	6:00- 1:30 6:45- 7:45	6:00-12:30 6:45-10:00
WWJ, Detroit, Mich	516	6:45-10:001	Silent	6:00- 7:00	6:45-10:00	6:45-10:00	6:45- 7:45	6:45-10:00

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

STATIONS IN ORDER OF WAVE LENGTHS USED

Meter	s Call	Meter	s Call	Meter	s Call	Meter	s Call	Meter	rs Call	Mete	rs Call
238	KSND	275.3	WJAS	316	WGBS	360	WOI	414.1	WDAF	469	WRC
240	WOAX		$\mathbf{W}\mathbf{A}\mathbf{A}\mathbf{W}$		WAHG	360	WSAC	414.1	WHB	472.9	$\mathbf{W}\mathbf{B}\mathbf{A}\mathbf{P}$
244	WABN	278	WCAU	319	WGR	370	CYB	419.3	WCCO	472.9	WFAA
248	WBBG	278	WLBL	322.4	KOA	376.7	WEBH	423	KPO	480	CYL
250	WTAY		WORD	325.9	\mathbf{WMH}	376.7	WGN	423	$\mathbf{w}\mathbf{L}\mathbf{w}$	492	KGW
252	KJS		WRBC	325.9	WSAI	375	KTHS	429	WSB	492	WEAF
263	WGAQ	280.2	WNAC	330	CXX	380	WGY	429.5	wos	498	WHAA
265.5	WMAK	283	KFMX	330	KFAE	380	WHAZ	430	CFAC	498	WOC
266 266	WECN	283 283	WABL WHK	337	KNX	390	WEAR	435	AT9	503.9	WMC
266	WCBK	285.5	WREO	337	WBZ	390	WTAM	435	CNRO	509	KLX
268	KFPT		WEMC	340.7	CHYC	394.5	WOAI	435	NAA		WIP
270	WGST		WKBF	$\begin{bmatrix} 341 \\ 344.6 \end{bmatrix}$	WCBD	395	KHJ	437	CKAC	509.9	
273	KFKB	288.3	KFKX	344.6	WLS	395	WDAR	440	CFCN	509.9	\mathbf{woo}
273	WBBR		WBAV	360	KOB	395	\mathbf{wri}	444.8	WMAQ	516	wwj
273	WEBJ	294	WEAO	360	WBT	399.2	WHAS	444.8	WQJ	516	
273	WFBH	302.8	WIJD	360	WCAL	400	CFCA	450	CKY	522.3	WHO
273	WRW	302.8	WTAS	360	WEAY	400	$\mathbf{P}\mathbf{W}\mathbf{X}$	455	KFOA		WOAW
275	KFAU	303	WEEI	360	WGI	405	KTW	455	WJZ	528.8	WNYC
275	KFMQ		KDKA	360	WHN	405	WJY	462	WCAE	535.4	$\mathbf{K}\mathbf{Y}\mathbf{W}$
275	WHAD	312	\mathbf{KGO}	360	WJAR	405	WOR	469	KFI	535.4	$\mathbf{W}\mathbf{H}\mathbf{A}$
275.2	\mathbf{KQV}	315.6	\mathbf{KFDM}	360	WKAQ!	410	CKCD		WCAP	549.1	KSD



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perfectly. I am now using my third can, and have recommended it to

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SPRING STYLES AT WHN, NEW YORK

Saturday, January 24

Saturday, silent night for: CFAC, CKY, KFAE, KFDM, KFKU, KFKX, KIS, KOB, KSAC, WBAP, WBBF, WBBG, WCAP, WCAU, WCBD, WCX, WOBY, WBBG, WCAP, WCAU, WCBD, WCX, WOBY, WEAO, WEBI, WEEI, WGST, WHAZ, WHB, WHO, WIY, WKAQ, WMAK, WOAI, WO, WOS, Stories in French and English; 7:30, Windsor hotel dinner concert; 8:30, La Presse studio concert; 10:30, dance program, Windsor hotel grill; room.

CNRO, Ottawa, Can. (Eastern, 435), 7:30 p. m., biddles story and lullaby, Aunt Agnes; 8. overture, "Son and Stranger," "Slegmund's Love Song," "Celebre Minuet," "Carmen," Chaleau Laurler hotel orchestra; "Star of Eve." Charles Watt, baritone; Dicken's character study, "The Unwelcome Stranger," from Dicken's "Sarnaby Rudge," Bert Summers; "Wilkins Micawber," Bert Summers; "Wilkins Micawber," Bert Summers; "Wilkins Micawber," Bert Summers; "Vilkins Micawber," Bert Summers; "Polonaise, Opus 26," Reta Brennan, planist; "Toccato in D," "Norwegian Dance," "Pavane," "Effentanz," "Offertoire in B Minor," "Minuet," "Gentral, 200, 215 p. m., "Freside Philosophies," Rev. Roy L. Smith, pastor; "Freside Philosophies," Rev. Roy L. Smith, pastor; "Freside Philosophies," Rev. Roy L. Smith, pastor; "Sit, hockey game, Minneapolis-Pittsburgh; 10, dance program, Joe Peyer's St. Paul Athletic club orchestra. Program, Joe Peyer's St. Paul Athletic club orchestra program, Joe Peyer's St. Paul Athletic club orchestra program, Joe Peyer's St. Paul Athletic club orchestra. WCA, Dertoit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner concert, Book-Cadillac hotel.

WOAF, Kansas City, Mo. (Central, 414.1), 3:30-4:30 p. m., the Star's Radio number; 6-7, school of the air, piano tuning-in number on the Duo-Art; personal message from Roger W. Babson, statistical expert; the Tell-Me-A-Story Lady; music, Hotel Mueblebach Trianon ensemble; 11:45-1 a. m., nightbawk frolic, the "Merry Old Chlef" and the Plantation players.
WDAR, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., daily almanae; 12:02 p. m., Arcadia cafe concert orchestra; Stanley theatre organ recital: 2, Arcadia cafe concert orchestra; playlet; Regina C. Marsh, contralto; 4:30, Cotton Pickers dance orchestra; 7:30 Arcadia cafe concert orchestra.

4:30, Cotton Pickers dance orchestra; 7:30 Arcadia cafe concert orchestra.

WEAF, New York, N. Y. (Eastern, 492), 4-5 p. m., dance program, Willie Bruno and his orchestra; 6-12, dinner music, rose room, Hotel Waldorf-Astoria; stories for boys, Fred J. Turner; male chorus of Princeton seminary, Schubert string trio, Felian Garzia, pianist; concert, Waldorf-Astoria orchestra; Alice Sievers, pianist; Loulse Vermona, contralto; Warren Scofield, baritone; Vincent Lopez and his orchestra.

WFAA, Oallas, Texas (Central, 472.9), 12:30-1 p. m., Dallas news for Texas farmers Victor H. Schoffellmayer; 8:30-9:30, Walter J. Fried, vlolinist; 11-12, Adolphus hotel orchestra.

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3. Nellle S. C. Hennessy, planist; Marie Wessler Hermley, contralto; Elsa Dorn, soprano; 4, Women's Novelty orchestra; Henry Williams, baritone; 6:30, Meyer Davis

Bellevue Stratford concert orchestra; 7. Sunny Jim, the kiddies' pal; 8, medical talk: "Influenza and its Complications;" 8:15, banquet, Philadelphia Real Estate

Complications, 8:13, banquet, Prinadelphia Real Estate Board.

WGN, Chicago, III. (Central, 376.7), 1:40 p.m., luncheon concert, Drake Concert ensemble; Blackstone string quintct; 3, rocking chair time! 5:30, skeezix time; 6, organ recital, Lyon & Healy; 6:30, dinner concert; 8, classical concert, Morgan's Welch Men's quartet; 10-11. Don Bestor's Drake dance orchestra; Jerry Conley's Blackstone dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Hotel Statler concert ensemble; 6-7:20, dinner music, Hallpryd trio; 7:30-8:15, mixed program, direction of Cass Conaway, secretary of the Buffalo Real Estate Board, featuring Judge William E. Hough of the Indiana State Tax Commission as speaker, University of Buffalo orchestra.

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

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

WHA, Madison, Wis. (Central, 534.4), 7:30 p. m., basketball game, Minnesota-Wisconsin.

WHAS, Louisville, Ky. (Central, 399.2), 4-5 p. m., sclections, Alamo theater organ; readings, Courier-Journal and the Louisville Times editorials; 7:30-9, concerts, auspices the Liederkranz, Fred O. Neutzel, director.

WHB, Kansas City, Ma (Contral), 4441, 2.2 c. m.

director.
WHB, Kansas City, Mo. (Central), 414.1), 2-3 p. m., ladies' hour program, Sweeney Radio trio.
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: 8:30-9, Strand Roof Entertainers; 11:30-12:30, Roseland dance orchestra

7:30-8, Hotel Carlton Terrace orchestra: 8:30-9, Strand Roof Entertalners; 11:30-12:30, Roseland dance orchestra: WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., organ recital, Karl Bonawitz; 3, "Pep" William's Entertalners; 6:05, St. James hotel orchestra; 7, Uncle Wip's bedtlme stories; 8, great surprise feature.

WJO, Mooseheart, III. (Central, 302.8), 7:15-8:15 p. m., Mooseheart theatre orchestra; 9-12, Log Cabin dance music; popular music from studio.

WJZ, New York, N. Y. (Eastern, 455), 11-1 p. m., American Orchestral society concert, children's concerts; 1-2, Park Lanc orchestra; 4-4:30, "The Texans"—Sanchez and Milstead; 4:30-5:30, Sherry's Tea orchestra; 7-8, Joseph Knecht's Waldorf-Astoria dance orchestra; 8-8:15, "Art for Laymen," Walter M. Grant; 8:15-8:20, "Learn a Word a Day"; 8:20-8:30. Norma Helms, soprano; Keith McCleod, accompanist; 8:30-8:45, "How Motion Pictures are Made," Alfred B. Hitchens; 8:45-9, Nora Helms, soprano; 9-9:30, course on Jewish history and literature, auspices of Rabbinical Assembly of Jewish Theological seminary, Dr. Elias Margolis; 9:30-10:30, Washington Square College players; 10:30-11:30, Hotel Astor dance orchestra.

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

WLS, Chicago, III. (Central, 344.6), 7 p. m., Ford and Glenn's lullaby trip to Mexico; 7:20-12, WLS revue night, Ralph Emerson, organist; Gienn's Corn huskers; Harmony girls, Carpenter and Ingram; Grace Wilson; Isham Jones and his College Inn orchestra; Ford and Glenn.

Glenn.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., settingup exercises, Y. M. C. A.; 3 p. m., dance program,
Hubert Buschle's orchestra; 6, dinner hour concert,
Selinsky instrumental quintet; lafafone, E. D. Leonard.

WMAQ. Chicago, ill. (Central, 444.8), 2 p. m.. Union
League club forum; 6, Ukulele girls; 8, LaSaile hotel



Paladino; "Largo." Charles Watt, barltone; "Jonas Chuzzlewit Come Home Drunk," "A Christmas Carol," Bert Summers; "Country Gardens," Reta Brennan, planist; orchestra; Jack Gracc, soloist.

KOKA, E. Pittsburgh, Pa. (Eastern, 309.1), 1:30 p. m., concert, Daugherty's orchestra; 6, dinner concert, Westinghouse band; 7:30, Richard the Riddler; 8:30, concert, Westinghouse band; operatic quartet; 10, hockey scores, Pittsburgh Hornets-Boston H. C.

KFI. Los Angeles, Calif. (Pacific, 469), 5 p. m., table talk and news, Evening Herald; 5:30-6, Examiner's uuslcal half hour; 6:45-7, "The Subconsclous Short-cut to Power," Dr. Clyde Sheldon Shcpard; 7-8, dance music, C. Howard Paxton, baritone; 8-9, song recital; 9-10, Examiner, program by Alhambra Chamber of Commerce; 10-11, Packard Radlo club.

KFNF, Shenandoah, lowa (Central, 266), 6:30 p. m., concert, Burlington Junction, R. L. Yaple, director.

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

KFOA, Seattle, Wash. (Pacific, 455), 4-5:13 p. fl.;
Olympic hotel concert orchestra; "Today's Rccipe;'
6:45-8:15. Rhodes' Department store program; 8:30-10,
dance umsic; 10:05-11, Olympic hotel music.
KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30
a. nl., sunshine hour program, Mrs. McPherson; 3:304:30 p. ml. impromptu studio program, Roy Reld
Brignali, G. N. Nichols and others; 7:30-9:30, auditorium service of Angelus temple, sermon on Divine
Healing, Almee Semple McPherson, pastor.
KGO, Oakland, Calif. (Pacific, 312), 4-5:30 p. ml., coneert orchestra, Hotel St. Francis; 8, program, Oakland Realtors' Glee club, Zura E. Bells, director;
Elizabeth Johnstone Wastell, accompanist; Edna Fischer
Hail, contralto; Willy Meier Pauselius, guitarist; 101 a. ml., dance music, Henry Halstead's orchestra.
KGW, Portland, Ore. (Pacific, 492), 10 p. ml., dance
music, George Oison's Metropolitan orchestra.
KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30
p. ml., Perry's orchestra; 2:30-3:30, Charlie Wellman's Saturday afternoon frolic; 6-6:30, Art Hickman's
Biltmore hotel concert orchestra; 6:30-7:30, stories
Aunerican history, Prof. Walter Sylvester Hertzog;
Helen Pirle, screen juvenile; Uncle John; 8-10, program, Los Angeles Soap company, arranged by J.
Howard Johnson; Russlan string quartet; Claire Forbes
('rane, pianist; wood-wind quintet; 10-11, Earl Burtnett's Biltmore hotel dance orchestra; 12-1 a. m.,
the Lost Angels of KHJ; Charlie Wellman, tenor;
Hatch Graham, banjoist; Bill Hatch and Helene Smith,
pianists; Dot Street, "The Dumb-Bell Twins."
KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning
prayer; 9, Hired Hand, news; 10, Hired Hand's mornlng message. 12, Wurlitzer pipe orgon recital; 5:30
p. m., Town Crier and Village Urchins; 6-7:30, dinner
hour program. D. B. Carpenter; 8-9, program, Pasadena Realty Board; 9-10, feature program; 10-11, Abe
Lyman's Cocoanut Grove dance orchestra from Ambassador hotel; 11-12, popular songs, June Purcell, the
KNX girl.

KNX girl.

KOA, Oenver, Colo. (Mountain, 322.4), 9 p. m., dance music, Joe Mann and his Ralnbow-Lane orchestra. Signs off at 12.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., setting-up exercises, Bernard Drury; 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30-3:30, musical matinee, California Grays, G. H. Mullatratt, director; 3:30-5:30, tea dansant, E. Max Bradfield's Versatile band; 8-12, Art Weidner's dance orchestra.

KSO, St. Louis, Mo. (Central, 549.1), 8 p. m., concert, St. Louis Symphony orchestra, Rudolph Ganz, conductor.

ductor.

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

Hotel Butler orchestra; 9-10, concert hour; 10-11, Earl Gray and his orchestra.

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

KYW, Chicago, Ill. (Central, 535.4), 6:30 p. m. morning exercises, Y. M. C. A.; 10:30, farm and home service; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7 p. m., children's bedtime story, Uncle Bob; 7-7:30, dinner concert, Congress hotel; 8-8:58, program. Carter H. Harrison Tech. High school band; 9:05, Youth's Companion; 9:35-11:30, Congress classic; 12-2 a. m., Congress carnival.

parton, sisser 130, congress classic, 12-2 a. m., congress carnival.

PWX, Havana, Cuba (Eastern, 400), 8:30 p. m., concert, Academy of Prof. Juan Gonzalez.

WAHG, Richmond Hill, N. Y. (Eastern, 316), 12-2 p. m., William F. Morgan and his Sunlite Serenaders.

the new cornetist with the Detroit News orchestra. He plays with this orchestra every night. Grace Wilson (right), contralto, sings regularly every Tuesday and Saturday evening at WLS, Chicago.

Headliners of the Week

S. R. BRANDT, Lieut. Commander of the U. S. Navy, will give sketches Saturday at WBZ to illustrate the influence of the Navy on American history. If you do not believe now that Oakland is the garden spot of the world, you will after hearing the booster songs of the Oakland Realtors' glee club at KGO. As distance means nothing by Radio, tune in now for WIP and find out what all the mystery is about this Saturday night program.

Sunday nights the Waldorf-Astoria orchestra program as broadcast by WJZ and WGY may always be enjoyed. Dr. Harry Emerson Fosdick, a New York modernist who has been the storm center of the controversy between the fundamentalists and liberalists of the Presbyterian church, will talk Sunday at the Chicago Sunday Evening club and may be heard at KYW.

Many famous artists have crossed the ether but few have given an entire evening of music. Francis MacMillen, a violinist of note, will give a recital program at KSD, Mon-

Queen Titania returns Tuesday night from fairyland to entertain the little folks at KHJ. This little creature is a famous screen beauty and has been appearing with the sandman before the microphone at frequent intervals for over a year.

Spring will soon be here and although a young man's fancy may turn to thoughts of love, a young lady's turns to clothes. WHN knowing this will start the season Wednesday with a talk on spring styles. Tune at 7:30 p. m.

The great Arctic explorer, Donald MacMillan, will talk Thursday night on the "True Value of Arctic Work." Dr. MacMillan as you will remember, relieved the monotony of Arctic life by receiving and transmitting Radio messages.

Rosalie Stewart, co-producer with the late Bert French of "The Show-Off" and "Meet the Wife," is one of the few successful women theatrical producers. What she has to say Friday night at WGBS will be of interest to many young theatrical diorchestra; 8:30, Radio photologue, "Siberla," A. C. Fludo; 9, weekly Balaban & Katz Chicago theater

Fludo; 9, weekly Baladan & Katz Chicago theater revue.

WMC, Memphis, Tenn. (Central, 503.9). 8 p. in., bedtime stories. Uncle Joe; 8:30, program, arranged by Hugh Sandidge.

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

WNYC, New York, N. Y. (Eastern, 528.6), 6:30 p. m., Sam Wooding's Club Alabamy orchestra; 7:35, Chateau four; 8:30, songs; 9. "How the Indians Re-lit the Sun," Marie Collins Rooney; 9:15, Police quartet; 9:45, violinist; 10:10, Board of education lecture.

WOAW, Omaha, Nebr. (Central, 522.3), 6:45 p. m., dinner program; 9, program, auspices of the Omaha Printlng company; 11, Frank Hodek's orchestra of Roseland Gardens; 11:30, organ music, World theater.

WOC, Oavenport, lowa (Central, 498), 7:30 p. m., discussion, International Sunday school lesson, Rev. M. A. Getzendaner, pastor; 9, Lonis Connor and his Le-Claire hotel orchestra; song and novelty numbers, Peter MacArthur.

WOI, Ames, towa (Central, 360), 12:30 p. m., "Preparing for the Summer Meat Supply," Prof. M. D. Helser.

Helser.

WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital; 5, sports results.

WOR, New York, N. Y. (Eastern, 405), 7 a. m., gym class, Arthur E. Bagley; 2:30 p. m., Manhattan male trio; 2:45, Paolo del Pino, tenor; 3, Manhattan male trio; 3:15, Paolo dei Pino, tenor; Papp's orchestra; 6:15, "Music While You Dine," Clifford Lodge orchestra; 8. Schubert string quartet; 8:30. J. E. Harchestra; 8, Schubert string quartet; 8:30, J. E. Hardenberg; 8:45, program, Frank LaForge, composer-coach pianist; 10, joint program, cellist and dramatic

soprano.

WQJ, Chicago, III. (Central, 444.8), 11-12 m., "What Is a Carbonated Beverage," C. J. Hill: "The Proper Radlation for Your Home," J. F. McShayne; 3-4 p. nr., koffee klatsch; 7-8, dinner concert. Ralph Williams and his Ralnbo Gardens orchestra; Otls Pike Jester, soprano; Mary Thrash House, accompanist; Myron Muench, reader; 11-2 a. m., Ralph Williams and his Ralnbo Skylarks; Jerry Sullivan, Harry Gelse, The Melodians, Laurle, Eddle, Bennie; Bock Sisters, Julia and Ruth; Yukona Cameron, soprano: Lew Butler, "Tho Glant of Radlo"; Peggy McClure prima donna; Rick, Whalen and Gardner, "The Three Rounders."

(Continued on page 10)

DR. FOSDICK HEARD AT KYW SUNDAY

Saturday, January 24

(Continued from page 9)

WRC, Washington, O. C. (Eastern, 469), 6:45 p. m., chlidren's hour, Marjorie Tucker; 7, dinner music, Hotel Washington-Irving Boernstein orchestra; 8, Bible talk; 8:15, music; 8:30, talk; 8:45, music; 9, dialect storles, W. Alfred Falconer; 10:30, dance program, Astor Hotel orchestra; 11:15, organ recital, Otto Beck, WREO, Lansing, Mich. (Eastern, 208.5), 9-12 midnight, Frank Logan and his orchestra.

WSAI, Cincinnati, Ohio (Central, 325.9), 8 p. n., chimes; 8:15, program, Bicycle sextet; 8:45, Waldene Johnston, violinist; 9, weekly news review, Allison Frederick Staniey; 9:15, Bicycle male and unixed quartet; Genevieve Goodman, pianist; 12, WSAI midnight entertainers; 12:15, Freda Sanker's Toad Stool orchestra.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs and bedtime story, Bonnic Barnhardt; 8-9, Batticulli string band; 10:45, Journal Hired Heip

WTAY, Oak Park, Ill. (Central, 250), 6:45-7:45 p. m., Anna Largent, violinist; Glenn Bruce, reader; 9-10, Ted Sill, tenor; Benny DuVol, planist.

WWJ, Oetroit, Mich. (Eastern, 516), 3 p. m., tho Detroit News orchestra; 7, the Detroit News orchestra.

Sunday, January 25

Sunday, silent night for: CKAC, KFAE, KFKU, KFKX, KOB, KSAC, PWX, WAHG, WBAV, WBBF, WBBG, WCAE, WCX, WDAF, WOAR, WOBY, WEAO, WEBJ, WGST, WHAS, WHAZ, WHO, WIP, WKAQ, WLBL, WMC, WNJ, WOI, WTAY.

CFAC, Calgary, Can. (Mountain, 430), 7:30 p. m., church scruice.

church service.

CKAC, Montreal, Can. (Eastern, 425), 4:30 p. m., band concert, Philinarmonic de La Salic from Three Rivers city, competing in sliver cup contest, talk by mayor.

CKY, Winnipeg, Can. (Central, 450), 7 p. m., service, Knox Presbyterian church; 9, concert, Aeolian string

quartet.

KOKA, E. Pittsburgh, Pa. (Eastern, 309.1), 11 a. m., services, Point Brecze Presbyterlan church, Rev. Percival H. Barker, pastor; 2:30 p. m., concert; 4, Dr. Charles Helnroth, organist; 4:45, vesper services, Shadyside Presbyterian church, Rev. Hugh Thompson Kerr, minister; 6:15, dinner concert, Scalzo's orchestra; 7:45, services, East End Christian church, Rev. Ray Ewers, pastor.

KFDM, Beaumont, Texas (Central, 315.6), 9 p. m.

sacred concert.

KFI, Los Angeles, Calif. (Pacific, 469), 10-10:45 a. m.,
L. A. Federation of Church Musicians; 4-5 p. m.,
vesper program. Margaret Fern Melrose, soprano; Foothill Four; 6:45-7, musical appreciation talk; 7-8, stage
acts, specialties and orchestra of Metropolitan theater;
8-9, one act play, instrumental trio; 9-10, Examiner,
Cluderella ballroom orchestra; 10-11, Packard Six dance
orchestra.

Ewers, pastor.

WCX, Oetroit, Mich. (Eastern, 516), 10:30 p. in., services of the Central Methodist Episcopal church.
WDAF, Kansas City, Mo. (Central, 414.1), 4-5 p. in., classical program, the Star's Radio orchestra; 5-5:45, international Sunday school iesson, Dr. Walter L.

Wilson.

WDAR, Philadelphia, Pa. (Eastern, 395), 2:30 p. m., Arcadia cafe concert orchestra, Ferl Sarkozi, director.

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

WBZ, Springfield, Mass. (Eastern, 337), 10:45 a.m., scrvlees; 8:30-10 p.m., concert.
WCAE, Pittsburgh, Pa. (Eastern, 462), 10:45 a.m., services, Rodef Shalom temple; 3 p.m., Peoples Radio church; 4. Prof. Otto Kalteis, pianlst; 6:30, dinnor concert, WIlliam Penn hotel.
WCAL, Northfield, Minn. (Central, 360), 8:30 p.m., sacred program, sermon, Rev. Niis Kieven, pastor.
WCAU, Philadelphia, Pa. (Eastern, 278), 5, contralto solos; 5:30, talk. Rev. Dr. John W. Stockwell; 6, Hotel Pennsylvania orchestra, Ray Steen, director.
WCBO, Zion, Ill. (Central, 344.6), 8 p.m., malo chorus and Hiro trio; clarinet quartet, Randall, Petrenan, Dreyer, Hendricks; Goorge Beem, marimba soloist; vocal duct, Carcy sisters; Mrs. Marion Mouiton Priddy, pianist; Mrs. John A. Marshall, reader.
WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 11 a. m., Westminster Presbyterian church, Rev. J. E. Bushnell, pastor; 4:10 p.m., House of Hope Presbyterian church, Rev. H. C. Swearingen, pastor; 7:20, Second Church of Christ Scientist; 9:15, classical concert.
WCY, Octrait Mich. (Eastern, 255), 10:20 p.m.

Brooklyn Mark Strand program, Edward L. Hyman, director.

WOAI, San Antonio, Texas (Central, 394.5), 11 a. m., services, First Presbyterlan church; 7;30 p. m., services, Central Christlan church; 9:30, selections from "Rigoletto," WOAI entertainers.

WOAW, Omaha, Nebr. (Central, 522.3), 8 p. m., dramatic hour, Davis Studio of expression.

WOC, Oavenport, 1a. (Central, 498), 8 p. m., church service, Calvary Baptist church, Rev. H. B. Cox, pastor; 9:30, The Palmer School Radio orchestra, Erwin Swindell, conductor.

WOI, Ames, lowa (Central, 360), 10:45 a. m., college chimes; 11, chapel services, Dr. J. M. Artman.

WOO, Philadelphia, Pa. (Eastern, 509.9), 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. Gorden A. MacLennan, pastor; organ recital, Caroline Quigg.

WOS, Jefferson City, Mo. (Central, 429.5), 7:30 p. m., religious service, Central Evangelical church, Rex. E. W. Berlekamp, pastor.

WQJ, Chicago, III. (Central, 444.8), 10:30 a. m., sermon Dr. Preston Bradley; Clarence Eddy, organist; 8-10, Ralph Williams and his Rainbo Garden orchestra; Lancaster Smith, accompanist; Maxine Mordy, violinist; Mace Gordon, soloist; Miriam Burns, soprano; Lois Mackey, accompanist; Miriam Burns, soprano; Lois Mackey, accompanist; Otto A. Moore, baritone.

KOB, State College, N. M. (Mountain, 360), 7:30-8:30 p. m., Radio talk; "Public Health," Dr. G. S.

KOB, State College, N. M. (Mountain, 360), 7:30-8:30 p. m., Radio talk; "Public Health," Dr. G. S. Luckett; College band.
KPO, San Francisco, Calif. (Pacific, 423), 11 a. m., chat to the housewives on "Home Making," Prudence Penny; 1-2 p. m., Rudy Seiger's Falrmont hotel orchestra; 4:30-5:30, Rudy Seiger's Falrmont hotel orchestra; 5:30-6:30, chlidren's hour storles, Big Brither of KPO; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Theodore J. Irwin, organist; 9-10, "Better Lighting," H. C. Barnard; Constance Reese, soprano; 10-11, E. Max Bradfield's Versatile band.
KSAC, Manhattan, Kans. (Central, 340.7), 12:30 p. m., reading; farm and home weck, L. C. Williams; "Hatch Disease Free Chicks," J. W. Lamb; 7:20, college bell and opening exercises; 7:30, "Duroc, Poland China and Chester White Breeds," A. D. Weber; 7:49, Radio college quartet; 7:45, "Feeding for Milk Production," J. B. Fitch.

KSO, St. Louis, Mo. (Central, 549.1), 7 p. m., music and specialtles, Missouri theater; 9, studio recital, Francis MacMillen, American violinist, KSNO, Seattle, Wash. (Pacific, 238), 7:15-8 p. m., Aunt Vivien's bedtime story; 8-9, special program; 9-10, concert hour; 10-11, Early Gray and his Hotel Butler orchestra.

Aunt Vivien's bedtime story; 8-9, special program; 9-10, concert hour; 10-11, Early Gray and his Hotei Butier orchestra.

KYW, Chicago, Ill. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7, children's bedtime story, Uncle Bob, WAHG, Richmond Hill, N. Y. (Eastern, 316), 8 p. m., Miss Sherer, soprano; 8:15, Norman Curtis, pianist; 8:30, Adelaide Deloco, contralto; 8:45, Elizabeth Carlton, popular songs; 9, special musical number; 9:15, musical; 9:30, Miss Sherer, soprano; 9:45, Norman Curtis, pianist; 10, Adelaide Deloco, contralto; 10:15, Elizabeth Carlton and William Morgan, popular singers. WBAP, Fort Worth, Texas (Central, 472.9), 7:30-9:30 p. m., dance music, Frensley Moore's Biack and Gold serenaders; 9:30-10:45, string band of Ennis, George W. Collard, director.

WBAV, Columbus, Ohio (Eastern 293.9), 8 p. m., WBAV orchestra, Frances Handibeau, directing, in popular and semi-classical numbers.

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

WBBR, New York, N. Y. (Eastern, 273), 8 p. m., Frank Wood, flutist; 8:10, Irene Kleinpeter; soprano; 8:20, world news digest; 8:40, Irene Kleinpeter; soprano; 8:20, world news digest; 8:40, Irene Kleinpeter; 3:50, Irank Wood, flutist.

WBZ, Springfield, Mass. (Eastern, 337), 7:10 p. m., kiddies' bedtime story; 7:15, lecture address; 7:30, University Extension course; 8-10:30, concert; 11:30-12, McEnelly's Singing orchestra playing dance music.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, address; 8:30, concert, studios of Mme. Lella Wilson-Smith; 9, concert, A. & P. Gypsy string ensemble; 10, music; 11, artists and orchestra from Nixon restaurant.

ensemble; 10, music; 11, artists and orchestra from Nixon restaurant.

WCBO, Zion, III. (Central, 344.6), 8 p. m., McEiroy saxophone quintet; celestial bells; vocal trio, Estlicr Wiedman, Pearl Ludlow, Mrs. Evelyn Del'cw; E. B. Paxton, baritone; Hermann Becker, cellist; Richard F, Hire, pianist; Mrs. Edna Huston Paxton, reader.

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 2 p. m., woman's hour, Dr. Murgaret Whalen; 2:30, matinee musical; 4, magazine hour, excerpts from "In the Beauty of the Purple," William Sterns Dayls; 5:30, children's hour, Ellen Nye; 8, talk, auspices Parents' and Teachers' association; 8:15, "What Taxpayers' Associations Can Do," H, W. White; 8:30. Third Infantry band, travelogue on Japan, Korea and Manchuria, Capt. Raymond C. Wolfe; 10, dance program, Dick Long's Nankin cafe orchestra; Lou Emmei, baritone, WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner concert, Book Cadillac hotel; 7, musical program.

6, dinner concert, Book Cadiliac hotel; 7, musical program.

WOAF, Kansas City, Mo, (Central, 414.1), 3:36-4:30 p. m., program broadcast from Newman and Royal theatres; 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, eleventh of a series of talks on banking; the Tell-Me-A-Story Lady, music, Hotel Muellebach Trianon ensemble; 8-9:15, Ivanhoe band, Walter A. French, director; Ivanhoe Glee club, Edward H. Gili, Jr., director; 11:45-1 a. m., nighthawk frolic, the 'Merry Old Chief' and the Plantation players.

players.

WDAR, Philadelphia, Pa. (Eastern, 395). 11:45 a. m., daily almanac; 12:02 p. m., Arcadla cafe concert orchestra, Stanley theater organ recital; 2, Arcadia cafe concert orchestra; 4:30, Marcella North, pianist; 7:30, Dream Daddy's bedtime stories; 7:55, "Short Agro-Waves," Chas. D. Shoffner; 8:30, Luserow quartet; 9:25, Stanley theatre features; 10:02, Arcadia cafe dance orchestra; 10:15, vaudeville features, Fay's Knickerbocker theatre.

WEEI, Boston, Mass. (Eastern, 303), 2 p. m., Crystal Lake orchestra; 6:30, Big Brother club; 7, Dok-Eisenbourgh and his Sinforians; 8, Macedonian male quartet; 8:45, "Buddy's" Bostonians; 10, musicale.

WEMC, Berrien Springs, Mich. (Central, 286), 8:15-9:30 p. m., Radio Lighthouse music makers; travelogue on England, Paul Nelson Pearce.



Here are the humorists who tell those funny stories each week via Radio and Station WGBS, New York. Norman Anthony (left) is the editor of Judge and George Mitchell (right), editor of Film Fun.

Cinderella ballroom orchestra; 10-11, Packard Six dance orchestra.

KFNF, Shenandoah, Iowa (Central, 266), 3 p. m., religious services. Afton. Iowa, C. E. Hand, director; 6:30, regular Seedhouse chapei service.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-12:30 p. m., compicte morning service of Angelus temple with sermon broadcast from pulpit, Aimee Semple McPherson, pastor; Esther Fricke Green, organist; 2:30-4:30 p. m., afternoon musical program and service, Temple choir; 7-9:45, complete evening service with special musical hour, Temple choir and Silver band, with scrumon, Almec Semple McPherson; 10-11, organ recital, Esther Fricke Green.

KGD, Oakiand, Calif. (Pacific, 312), 11 a. m., service, First Congregational church, Rev. James L. Gordon, pastor; 3:30 p. m., KGO Little Symphony orchestra concert. Carl Rhodehamel, conductor; 7:30, service, First Congregational church.

KGW, Portland, Ore. (Pacific, 492), 10:30 a. m., service, First Presbyterian church, Dr. Harold Leonard Bowman, pastor; 3 p. m., municipal concert; 6, church services. Portland Council of Churches; 7, dinner concert. Colburn concert orchestra.

KHJ, Los Angeles, Calif. (Pacific, 395), 10 a. m., sermon, Dr. H. C. Cuibertson, pastor Plymouth Congregational church; 10:30-12:30 p. m., organ recital and complete scrvice of First Methodist Episcopal church, Dr. E. E. Heims, pastor; Arthur Blakely, organist; 6:30-7, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 7-7:30,

sonies requested; 8:49-9:00, Dr. Birt Summers, organist; 9:05-9:25, address. Pastor John Knox.

WFAA, Oallas, Texas (Central, 472.9), 3-4 p. m., Grand Symphony orchestra; 5-6, vesper servicc, Westminster Presbyterian church, Dr. T. O. Perrin, pastor; 6-7, Radio Bible class, Dr. William M. Anderson; 7:30-8:45, First Methodist church, south, Dr. Carl C. Gregory, pastor; 9:30-11, McDowell sisters.

WFI, Philadelphia, Pa. (Eastern, 395), 4:30 p. un., taik, Dr. Daniel A. Poling, of New York; 7:30, Arch Street Presbyterian church.

WGN. Chicago, III. (Central, 376.7), 11 a.m., Uncle Walt reads the "funnies;" 11:45, Chicago theater program; 2 p. m., organ recital, Lyon & Healy; 2:30, special program, Russian concertos, students of Moosaiye Boguslawski; 3:30, artists, Chicago Musical college; 9, "Evening with the Great Composers," Charles H. Gabriel, Jr.; solos, Ethel Wakefield, soprano, Drake concert ensemble.

WGR, Buffalo, N. Y. (Eastern, 319), 3-4 p. m., vesper service, the Rev. C. E. Odel, speaker; 4-5, George Albert Bouchard, organist; 7:15, service of the Central Park Presbyterian church, William Wall Whiddit, organist and Dr. Rohert J. MacAlpine, speaker.

ganist and Dr. Rohert J. MacAlpine, speaker, WGY, Schenectady, N. Y. (Eastern, 380), 10:30 a. m., Belleview Reformed church. Dr. J. A. Thurston, pastor; 3:35 p. m., program, WGY Symphony orchestra, Leo Kliwen; Grace Klugmann wartz, soprano; 5, Dr. Frank Sill Rogers, organist; F. Roy Keefer, violinist; 7:30, service, First Church of Christ Scientist; 9, Symphony orghestra from Waldo.f-Astoria, New York, broudcast with WJZ; 10, selections, Hampton Institute quartet. tute quartet.

tute quartet.

WHAS, Louisville, Ky. (Central, 399.2). 9:57 a. m. organ music; 10, church service, auspices Methodist temple, Rev. Dr. Charles A. Humphrey, pastor; 4 p. m., organ recitai, George Latimer; 4:30-5, choral crensong service, Christ church cathedral, Rev. Richard L. McCready, dean; Ernest Arthur Simon, organist.

WHB, Kansas City, Mo. (Central, 414.1), 9:45-11 a. m., services, Linwood Boulevard Christian church, Dr. Burrls Jenkins, pastor; 8-9:15 p. m., services, representative church of Kansas City; 12 m., special midnight program.

WHN, New York, N. Y. (Eastern, 360), 3-4 p. m. Queens County Christian Endeavor program; 5-5:30, Roseland dance orchestra; Olcott Vail and his string trio; 10-10:45, Gcm Razor entertainers; 11-11:30, Vanity Club revue; 11:30-12, Connie's Inn revue, featuring Leroy Smith's orchestra; 12-12:30 a. m., Harry Richman and his entertainers with Eddic Elkins and his

WHO, Des Moincs, Iowa (Central, 522.3), 11 a. m. sernon, Dr. C. S. Mcdbury. WIP, Philadelphia, Pa. (Eastern, 509.9), 10:45 a. m., services, Holy Trinity church, Rev. Floyd D. Tompkins, D. D., rector; 4, "Sunday Talk" meeting from Germantown Y. M. C. A.; "The World Challenge to America," Frank Dixon.

WIJD, Mooseheart, III. Central, 302.8), 7:45-8:45 a. m., Roman Catholic scrvices; 8:40-9:40, organ recital, Albert F. Brown; 9:40-11, Protestant services; 3-4 p.

m, regular Sunday concert.

WJY, New York, N. Y. (Eastern, 405), 8:15-10 p. m.,
Bernhard Levitow's Hotel Commodore orchestra; 1010:15, "Reminiscences of a Reporter," William H. Crawford.

Crawford.

VIZ, New York, N. Y. (Eastern, 455), 9-10, a. m., children's hour; 2:30-3:30 p. m., Radio Bible class; 3:30-4, "Practical Religion," Rev. Dr. Harry Emerson Fosdick; 4-5:45, vesper services from St. Georges church; Dr. Karl Relland, rector; Mozelle Bennett, violinist; Harry T. Burleigh, bass; 5:45-7, "The Metropolls of Mankind," Edgar White Burrill; Tom Morgan, haritone; 7-8, Nathan Abas; Hotel Pennsylvania orchestra; 8-8:30, Harry H. Schyde, bass; 10-11, Hampton Institute quartet. Hampton Institute quartet.

Hampton Institute quartet.

WLS, Chicago, ill. (Central, 344.6), 6:30 p. m., Raiph Emerson, organist; 7-8, choir, Julia Gay Memorlai church, Cari G. Theeman, director.

WLW, Cincinnati, Ohio (Central, 423), 9:30 a. m., Sunday school, editorial staff of Sunday school publications of the 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, Western and Southern orchestra; William Kopp, director; Joseph Vito, solo harplst with the Cincinnati Symphony orchestra.

WEMC, Berrien Springs, Mich. (Central, 286), 11-11:15
a. m., Radio Lighthouse choir; 11:15-11:25, songs, specially requested by our patrons; 11:25-11:30, Scripture reading and prayer; 11:30-11:40, Cecil Woods, bass; 11:40-12:05 p. m., sermon, Pastor W. R. French; 8:15-8:30, Radio Lighthouse choir; 8:30, songs requested; 8:45-9:05, Dr. Birt Summers, organist; 9:05-9:25, address. Pastor John Knox.

WFAA, Oallas, Texas (Central, 472.9), 3-4 p. m., Grand Symphony orchestra; 5-6, vesper service. Westminster westminster with the service of the se WSB, Atlanta, Ga. (Central, 429), 11 a. m., service, First Presbyterlan church; 5-6 p. m., Sabbath service, Neighborhood chapei, Church of God; 7:30, Wesley

Memorial service.

WWJ, Oetroit, Mich. (Eastern, 516), 2 p. m., the
Detroit News orchestra; 7:30 p. m., services, St. Paul's
Episcopal cathedral.

Monday, January 26

Monday, silent night for: CKAC, CKY, KFDM, KFSG, KJS, KYW. PWX, WCAL, WCAU, WDBY, WEAO, WEBH, WEBJ, WGN, WHAS, WJY, WKAQ, WLBL, WLS, WMAK, WMAQ, WNJ, WOAI, WQJ, WRC, WREO, WTAY.

WREO, WIAY.

CKAC, Montreal, Can. (Eastern, 425), 145 p. m., Windsor hotel juncheon concert; 4:30, 110 lessons.

KOKA, E. Pittsburgh, Pa. (Eastern, 309.1), 7 a. m., morning exercises, O. Shannon; 8, morning exercises; 12:15 p. m., concert, Scalzo's orchestra; 6:15, KDKA Little Symphony orchestra; 7:30, children's period; 8:15, address, University of Pittsburgh studio; 8:30, concert.

8:15, address, University of Pittsburgh studio; 8:30, concert.

KFAE, Pullman, Wash. (Pacific, 330), 7:30-9 p. m., Alpha Gamma program; vocal solos, Frances Lookwood; Rosalia C. Koch, pianist; vocal solos, Agnes Dilts; Reba Robertson, reader; Marguerite Miller, vocalist; ensemble numbers; Edna McKee, vocalist; group songs; talk, Dean A. A. Cleveland; "Opportunities in Civii Engineering," O. L. Wailer; "First Egg Laying Contest," R. N. Miller.

KFAU, Boise, idaho (Mountain, 275), 8 p. m., program, Evening Capitai News.

KFI, Los Angeles, Caiif, (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, dance music; 9-10, program, Walter M. Murphy Motors company; 10-11, Examiner, Ray West and his orchestra.

KFKU, Lawrence, Kas. (Central, 275), 6:50 p. m., piano tuning-in number; 7, muslc, University string quartet, Prof. Waldemar Geltch, Prof. Kari Andrist. Cobrad McGrew, Dean D. M. Swarthout; 7:15, basketball coaching, "Individual Defense," Dr. F. C. Allen; 7:30, debating, "Refutation," Prof. A. B. Gilkinson; 7:45, elementary Spanlsh, Lesson IV.

KFKX, Hastings, Nebr. (Central, 288.3), 9:30 p. m., special Scotch program, male quartet; French horn, mouth harp, ukuleie, guitar trio.

KFNF, Shenandoah, Iowa (Central, 266), 6:30 p. m., concert, Stanton, lowa. A. W. Anderson, director.

mouth harp, ukulele, guitar trio.

KFNF, Shenandoah, Iowa (Central, 266), 6:30 p. m., concert, Stanton, Iowa, A. W. Anderson, director.

KFDA, Seattie, Wash. (Pacific, 455), 4-5:15 p. un., studio music: 6:45-8:15, Sherman Clay & company program; 8:30-10, Seattle Times.

KGO, Oakland, Calif. (Pacific, 312), 11:30-1 p. m., luncheon concert, l'acific States Electrie company; 3, studio musical program; 4-5:30, Henry Haistead's dance orchestra; 5:30-6, Aunly Betty stories, KGO Kiddies' klub; 8, "How Our Food Affects Our Teeth," Miss Secrest; "A Lesson in English," Wilda Wilson Church; "The First Years in School," Dr. Aurella Henry Reinhardt; "Chats About New Books," Joseph Henry Jackson; 10-1 a. m., dance music program, Henry Haistead's orchestra.

KGW, Portland, Ore. (Pacific, 492), 5 p. m., children's

KGW, Portland, Ore. (Pacific, 492), 5 p. m., children's program; 8, Oregonian concert orchestra; 10, George Olsen's Metropolitan orchestra; Shefler's string or-

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30 p. m., Plggly Wiggly glrls trlo; 8-10, Charllo Wellman's frolic transplanted to an evening program for benefit

of eastern ilsteners.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10 Hired Hand's morning message; 12, Wurlitzer pipe organ recital: 8-10 p. m., program, Los Angeles Ice and Cold Storage company; 10-11, June Purcell, the KNX glrl; 11-12, Abe Lyman's Cocoanut Grove dance orchestra from Amhassador hotel.

KOA, Denver, Colo. (Mountain, 322.4), 8 p. m., Scottish program, in honor of Robert Burns.

Dr. Harry Emerson Fosdick, leader of the modernist movement in the religious world, will talk again this year Sunday, January 25, at the Chicago Sunday Evening club, Orchestra hall. You may get his views by dialing KYW.



WFAA, Dallas, Tex. (Central, 472.9), 12:30-1 p. m., address, Dr. J. D. Boon; 6:30-7:30, vesper musicale, address, Dr. J. D. Boon; :30-7:30, vesper musicale, Paul Wellbaum and his orchestra; 8:30-9:30, Edmonds

address, Dr. J. D. Boon; 30-7:30, vesper inusicate, Paul Wellbaum and his orchestra; 8:30-9:30, Edmonds quartet entertainers.

WFI, Philadelphia, Pa. (Eastern, 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:05, Lester L; Druckenmiller, tenor; Marguerite Moyer, accompanist; Anna March Jenkins, contralto; Mrs. Charles Ross, soprano; 4, Piccadilly Sirens dance orchestra; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jlm, the kiddles' pai.

WGN, Chicago, III. (Central, 376.7), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artists' series, Lyon & Healy; 3, rocking chair time; 5:30, Skeezix time; 6, organ recital, Lyon & Healy; 6:30-7, dInner concert.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Hotel Statier concert ensemble; 6:30-7:30, dinner music, Vincent Lopez Hotel Statier dance orchestra; Harold Gieser, director; 9-10, concert, Argo Musical club, direction of Frances Cady; 10-11, Melodette orchestra and assisting artists; 11:30, supper dance music, Vincent Lopez Hotel Statier dance orchestra, Harold Gieser, director.

sic, Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGST, Atlanta, Ga. (Central, 270), 9-10 p. m., program, Signal Corps unit of the R. O. T. C.

WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m., "Working with Mother, Every Child's Privilege," Florence E. Winchell; 7:15, farm bureau speakers; 7:45, Mildred Hali, planist; Mardi Kenny, soprano; "Characteristics of Moxart", May Gilmore, planist, WHAS, Louisville, Ky, (Central, 399.2), 4-5 p. m., selections, Alamo theater organ; readings, Courler-Journal and Louisville Times.



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bus, who entertains every day at 1:15 p. m., and sometimes 4, at WEAO. She is always willing to play your favorite selections.

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nick is another attractive

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the Marguerite Manley Siedel

School of

Music, Colum-

organ recital, Arthur Blakely, organist; 8-10, program, Newberry Electric corporation, arranged by J.

Howard Johnson.

KIS, Los Angeles, Calif. (Pacific, 252), 10:45-12:30 p. m., regular morning scrvice, Church of the Open Door, sermon, Dr. William Evans; Alfred M. Butler, organist; 6-6:45, vesper scrvices, vocal and instrumental numbers with short scriptural talk; 7:15-9:30, evening service of the Church of the Open Door, muslcal program arranged by C. M. Books; Alfred M. Butler, organist.

organist.

KNX, Hollywood, Calif. (Pacific, 337), 4 p. m., Salvation Army band; address, Mrs. Evangeline Booth, president of Salvation Army; 7-7:45, program, International Elbic Students' association; 8-9, Amhassador

national Bibic Students' association; 8-9, Amhassador hotel concert orchestra, Josef Rosenfeid, director; 9-11, program, El Encanto Apartments.

KOA, Oenver, Colo. (Mountain, 322.4), 11 a. m., services, First Congregallonal church, Rev. Robert Hopkin, pastor; 7:50 p. m., First Church of Christ Scientist.

KPO, San Francisco, Calif. (Pacific, 423), 11-2 p. m., church services, Rev. Samuel Blacknery; soloist, Georgo Carson, baritone; Theodore J. Irwin, organist; 8:30-10, concert, Rudy Selger's Fairmont hotel orchestra.

KYW, Chicago, III. (Central, 535.4), 11 a. m., Central church service, Dr. F. F. Shannon, pastor; 4-5 p. m., studio concert; 7, Chicago Sunday Evening club, Dr. Harry E. Fosdick, speaker.

WBAP, Fort Worth, Texas (Central, 472.9), 11 a. m., scrvices, First Methodist church, Rev. J. W. Bergin; Will Foster, organist; 4 p. m., concert, Rlaito theater; 11-12, midnight frolles, Ted Miller's Crazy hotel orchestra.

WBBR, New York, N. Y. (Eastern, 273), 9:10 p. m., I. B. S. A. choral singers; 9:20, vocal duets, Thyra Lundberg, Fred Franz; 9:30, 'The Joy of the Pcople,' Judge Rutherford; 10:10, vocal soios, Fred Franz; 10:20, 1. B. S. A. choral singers.

QUEEN TITANIA AND SANDMAN AT KHJ

Monday, January 26

(Continued from page 10)

WHAZ, Troy, N. Y. (Eastern, 380), 9 p. m., Rensseiaer Polytechnic institute students' program; address, member of faculty; 10:30, Palladino orchestra.
WHB, Kansas City, Mo. (Central, 414.1), 2-3 p. m., ladles' hour program, Sweeney Radio trio; 7-8, address, member of factulty of Sweeney school; music, Sweeney Radio trio.

Radio trio.

WHN. New York, N. Y. (Eastern, 369), 5-6 p. m., Charles Taylor and his Southeeneers orchestra; 6:30-7:10, Vincent Catanese and His Hotel Alamac orchestra; 7:10-7:20 fashion; chats, Mme. Belle; 7:20-7:30, Hotel Carlton Terrace orchestra; 7:30-7:35, "Spring Styles," Haas Brothers Fabric corporation; 7:35-8, Hotel Carlton Terrace orchestra; 8-8:05, "Storage Batteries," H. B. Shontz; 8:05-8:30, Roseland dance orchestra; 8:50-9:20, Littmann's employees' orchestra; 9:35-10, Dan Gregory and his Crystal Palace orchestra; 10-11, Jack Shack direct from Radio Shack. WHO. Des Moines, lowa (Central, 522.3), 7:30-9 p. m., Stewart Watson; classical program, Dean Hoimes Cowper, director.

Cowper, director.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Gimbel tea room orchestra; 3, Combs Conservatory of Music; 6:05, Hotel St. James dinner orchestra; 7, Uncle Wip's bedtime stories.

WJID, Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., music, Mooseheart children, assembly, taiks, members of taculty; 6:45-7:15, Albert F. Brown, organist; 7:15-8:15, Novelty orchestra, talk, Ben Oswait, athletic coach: I1:30-12:30, organ, A. F. Brown.

WJZ, New York, N. Y. (Eastern, 455), 10:20-10:30 a. m., "The Use and Abuse of Clothes" Mrs. Julian Heath; 10:40-10:50, "A Five Letter Word Meaning Beef," John C. Cutting; 10:50-11, Eleanor Gunn's fasbion talk; 1-2 p. m., Henry Vander Zanden's Hotel Ambassador trio; 4-4:30, Elizabeth Gibbs, contraito; Marie Nicbolson, soprano; Keith McLeod, pian-

ist; 4:30-5:30, Fred Hali's Royal Terrace orchestra; 7-8, Bernhard Levitow Hotel Commodore dinner concert; 8-8:10, Wall Street Journal review; 8:10-8:20, "Amerlean History," Dean M. S. Brown; 10:45-11:45, Jacques Green and his Club Deauville orchestra with Clark's Hawaiians.

WLS, Chicago, Ill. (Central, 344.6), 12 m., music numbers, Nubs Allen; 3:45-4:45 p. m., "The Care of the Woman Offender," Jessie Binford; "Fun for the Family," Mrs. Samuel MacClintock.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, William Stradtman; 12:15 p. m., Williamson entertainment and review; 6, dinner hour program, Cincinnati Post; 8, Times Star program, Times Star orchestra playing overture: "The Merry Wives of Windsor," "Whispering Flowers," "The Chimes of Normandy," "Golly Woggles Cake Walk." "Entre Act" Valse, Finale; "Scenes from Rigoletto"; Howard Hafford, tenor; Karl Kirksmith, first cellist; Kathryn Reece Haun, soprano; Ewald Haun, flutist; Marjoric Garrigus Smith, Thomie Prewitt Williams, accompanists.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs and bedtlme story, Bonnle Barnhardt; 8-9, concert, Alumni Association of Emory university;

10:45, Warner Seven Aces.

WWJ, Detroit, Mich. (Eastern, 516), 8:30 p. m., the
Detroit News orchestra; Eugene Wilson, baritone;
Margaret Foy, soprano.

Tuesday, January 27

Tuesday, silent night for: KFAE, KFKU, KFKX, KFNF, KOA, KOB, PWX, WAHG, WBAV, WBBF, WBBG, WBBR, WCAL, WCAP, WCBD, WDBY, WEAO, WEMC, WGST, WHAZ, WHO, WOC, WOI, WOO, WOS.

CKAC, Montreal, Can. (Eastern, 425), 7 p. m., kiddies' stories in French and English; 7:30, Windsor hotel dinner concert; 8:30, studio entertainment; 10:30, Windsor hotel dance program.

CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., unlversity lecture; 8:15, studio concert.

CNRA, Moncton, N. B. (Eastern, 313), 8:30 p. m., program, St. John artists, Dr. P. L. Bonnell, director; popular dance nusic, Joe Mazzleo and his Rainbow Melody boys.

orchestra; 9-10, concert hour; 10-11, Earl Gray and his Hotel Butler orchestra.

KYW, Chicago, III. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 4 p. m., studio frolic; 6:02-6:18, news; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner eoncert, Congress hotel; 8-8:20, Stella Wrenn, soprano; Irving P. Schuster, tenor; Ned Santry, tenor; W. E. Hunter, bag puncher; 8:20-8:45, speeches, auspices, American Farm bureau federation; "Monthly Analysls of Farm Markets," H. W., Moorhouse; 8:45-9:30, musical program; 10-11:30, evening at home program, Coon-Sanders Original Nighthawks; 11:05, "Appleauxing program; 10-11:30, evening at home program; 10:30-11, Guy Hunter, blind entertainer. orchestra; 9-10, concert hour; 10-11, Earl Gray and his Hotel Butler orchestra.

KYW, Chicago, Ill. (Central, 535.4), 6:30 a. m., morning exercises; I1:35, table talk, Mrs. Anna J. Peterson; 4 p. m., studio frolic; 6:02-6:18, news; 6:35-7, children's bedtime story, Uncle Bob; 7-7:30, dinner eoncert, Congress hotel; 8-8:20, Stella Wrenn, soprano; Irving P. Schuster, tenor; Ned Santry, tenor; W. E. Hunter, bag puncher; 8:20-8:45, speeches, auspices, American Farm bureau federation; 'Monthly Analysis of Farm Markets,' H. W. Moorhouse; 8:45-9:30, musical program; 10-11:30, evening at home program, Coon-Sanders Original Nighthawks; I1:05, "Applesauce club."

WBAP, Fort Worth, Texas (Central, 472.9), 7:30-8:30 p. m., musical program, artists of Bowie; 9:30-10:45, male and mixed quartet of Mexia.

male and mixed quartet of Mexia.

WBZ, Springfield, Mass. (Eastern, 337), 7:10 p. m., kiddies' bedtime story; 7:15, lecture, address; 8:30-10:30, concert; II:30-12, organ concert.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 8:30, Mildred Oglesby, pianist; 9, Eveready hour; I0, concert, Goodrich Silvertown Cord orchestra.

WCAL, Northfield, Minn. (Central, 360), 7:30 p. m., Luther college-St. Olaf basketball game.

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Hotei Pennsylvania dance orchestra, Ray Steen, director; 7:30, series of household talks; 8, recltai.

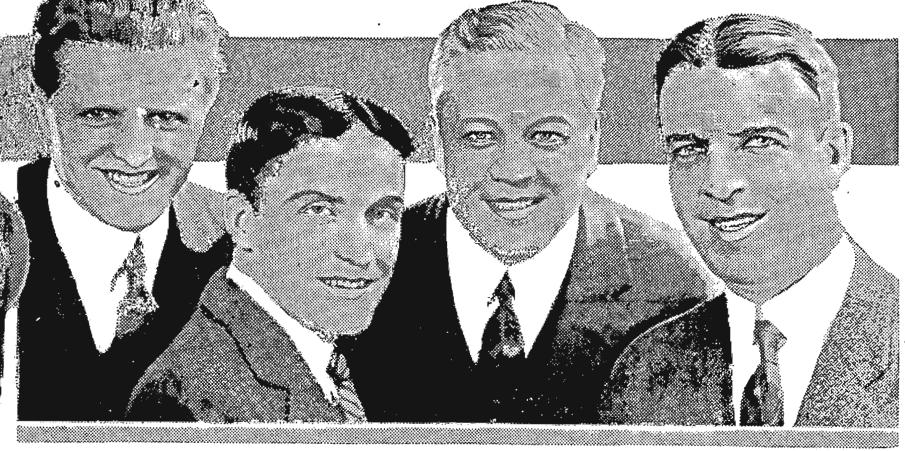
entertainer.

entertainer.

WJZ, New York, N. Y. (Eastern, 455), 10:30-10:40 a. m., "Care of the Hair," Nestle and company; 10:40-10:50, Tribune institute, Bertha Baldwin; 10:50-11, fashlon talk, Eleanor Gunn; 1-2 p. m., Nathan Agais' Hotel Pennsylvania orchestra; 4-4:30, Josephine Vcllanti, soprano; 4:30-5:30, Bernhard Levitow's Hotel Commodore tea orchestra; 7-7:15, "Bull Terrier," Frank Dole; 7:15-8, Joseph Strissof's Hotel Vanderbilt orchestra; 8-8:10, Wall Street Journal review; 8:10-8:20, N. Y. U. Air college, "Minerai Wealth of the United States," E. R. Lilley; 9:10-9:30, Gotham National Bank quartet.

WKAQ, San Juan, P. R. (Intercolonial, 360), 9-10:30 p. m., WKAQ orchestra and artists.

WLBL, Stevens Point, Wis, (Contral, 278), 8 p. m., muslcal program.



Marguerite McGuiness (left) favorite with the audience of WEAR when that station was operated as WJAK. Although WEAR is operated

CNRR, Regina, Can. (Mountain, 420), 9 p. m., weekly bedtime travel tales; Mrs. Colin Faunt's concert party.

KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:30 p. m., Institute from Trinlty church; 6:15, dinner concert; 7:30, children's period; 8, program, Tree of Life congregation; 11, concert, Pittsburgh Post studio.

KFDM, Beaumont, Texas (Central, 315.6). 8 p. m., musical program. 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, vocal recital; 9-10, Examiner, literary program by Women's Press club of Southern California; 10-II, Packard ballad hour, Bess Rudisill and Rhue Gill, melody sincers.

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

singers.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-II:30 a. u., sunshine hour; 3:30-4:30 p. m., organ recital, Esther Fricke Green and assisting artists; 6:30-7:30, children's hour, presenting Harry James Beardsley (Thoda Tim) (Uncle Jim)

(Uncle Jim).

KGO, Oakland, Calif. (Pacific, 312) I1:30-1 p. m., luncheon concert, Pacific States Electric company; 4-5:30, concert orchestra, Hotel St. Francis; 8, Pacific Junior concert orchestra, Lawrence B. Bellis, director; Albert E. Gross, tenor; Mrs. John E. Bowersmith, contralto; Hawalian Harmony kings; Theodore Fauer, baritone; John Hoeburn, pianist; Consuelo de Laveaga, soprano; Harry A. James, monologist; 10-1 a. m., dance music, Henry Halstead's orchestra.

KGW, Portland, Orc. (Pacific, 492), I2:30 p. m., concert; 5, children's program story, Uncle Dave; 8, lecture, "Glass—a Vegetable Garden Asset," A. G. Boquet; 8:30, concert; 10, Multnomah Hotel strollers.

Boquet; 8:30, concert; 10, Multininah Hotel strollers.

KHJ. Los Angeles, Calif. (Pacific, 395), 12:30-1:30
p. m., news and music; 2.30-3:30, program, Pacific
States Electric company, Grace Currey, harpist; Mary
Newkirk Bower, soparno; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edw. Fitzpatrick, dircctor; 6:30-7:30, little stories American history, Prof.
Walter Sylvester Hertzog; weekly visit of Queen Titania
and the Sandman from Fairyland; Uncle John; 8-10,
program, Gistenwalter and Gough, presenting the
Zenith trio; 10-11, Earl Burtnett's Biltmore notel dance
orchestra.

Recce Haun, soprano; Ewald Haun, flutist; Marjorle Garrigus Smith, Thomie Prewitt Williams, accompanists.

WMAQ, Chicago, III. (Central, 444.8), 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.

WMC, Memphis, Tenn. (Central, 503.9), 8 p. m., bedtime stories, Uncle Percy; 8:30, special organ recital.

WNYC, New York, N. Y. (Eastern, 528.8), 7 p. m., Harry Ash and his Royal orchestra; 7:35, health talk; 7:45, Harry Ash and his Royal orchestra; 8:15, recitals; 8:45, Riesenfeld Rialto program; 10:10, "The Trend of the Times," Dr. Sydney Neville Usher.

WOC, Davenport, Ia. (Central, 498), 7:20 p. m., "Care of Infants," J. H. Craven; 8, program, artists from Clinton, Harry Yeazelle Mercer, director; 10, "Ten Nights in a Bar Room," drama in five acts.

WOI, Ames, lowa (Central, 360), 12:30 p. m., college chimes; "Planning the Poultry Unit on the Farm for 1925." Prof. W. H. Lapp; 10, program, popular muslc, WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m.. Wanamaker crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt; 5, sports results; 7:30, A. Candelori and his concert orchestra; 8:30, concert from Fox theatre; 9, WOO orchestra; 10:03, Royal Palm dance orchestra, WIlliam Bogye, director; 10:30, Vincent Rizzo's Havana Casino dance orchestra.

WOR, New York, N. Y. (Eastern, 405), 7 a. m., gym class, Arthur E. Bagley; 2:45 p. m., Lillian B. Haamiller, planist; 3:45, Charm magazinc presents Winifred Moses talking on "Yarious Uses of Dried Fruits;" 6:15, "Musie While You Dine," Davo Harman's Cinderella orchestra; 8:30, musical program, Branford theatre; 9:30, Dr. Sigmund Spaeth, music critic; 10:30, Carolinians, Charles M. Koch, director; 11:15, two-man singing orchestra, Perry and Russeli

WOS, Jefferson City, Mo. (Central, 444.8), 11-12 m., "Cakes and Reclpcs," Cleve Carney; "Club Institutes," Mrs. Edward T. Balley; "A Liveable H KJS, Los Angeles, Calif. (Pacific, 252), 8-9:30 p. m., musical program, direction of C. M. Books, vocal teacher of the Bible institute.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, program. State Board of Education; 10, Hlred Hand's morning message; 10:30. Mrs. Kate Brew Vaughn, home economics; 12, Wurlitzer plpe organ recital; 5:30 p. m., Town Crier and Village Urchins; 6-7:30, dinner hour program, R. C. "Cliff" Durant: 8-9, program, Elite Catering company; 9-10, feature program; 10-12, "movlc night," Ambassador hotel, Town Crier introducing celebrities over the air.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., setting-up exercises, Bernard Drury; 1-2 p. m., Rudy Selger's Fairmont hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories; 7-7:30, Rudy Seiger'a Fairmont hotel orchestra; 8, program, Harold Pracht, director; 10-11, E. Max Bradfield's Versatile band.

KSAC, Manhattan, Kans. (Central, 340.7), 12:30 p. m., reading; "Sheep Clubs," M. H. Coe; Radio question box; "Plans for Early Brollers," J. H. McAdams; 7:20, college bell and opening exercises; 7:30, "Time to Seed Alfaifa," L. E. Call; 7:40, Radio college trio; 7:45, "Natural Method of Incubating Eggs," L. F. Payne.

(SD. St. Louis, Mo. (Central, 549.1), 6 p. m., Benjamin Rader's orchestra, Missourl Athletic association; 8, studio recital, Mrs. J. E. Stoker, soprano; Mrs. M. H. Bronaugh, planist.

KSND, Seattle, Wash: (Pacific, 298), 7:15-8 p.m., Aunt Vivlen'e bedtime story; 8-9, Earl Gray and his

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now by the Goodyear Tire and Rubber company, Mrs. McGuiness will still appear on the programs arranged by the Cleveland News-Leader on Tuesday eve-

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 10:45 a. m., home service, "Recipe Exchange," Betty Crocker; 2 p. m., woman's hour, 'How Minnesota Administers Agricultural Problems," Dean W. C. Coftey; 2:15, woman's hour, 'How Minnesota Administers Problems Relating to Public Domain such as Drainage and Waters, Timber and Forestry," Lt. Governor W. I. Nolan; 4, magazine hour, "Grass: A Persian Epic of Migration," Merian C. Cooper; 5:30, children's hour, Gold Medal Lady; 6:30, dinner concert, Biley's concert orchestra; 7:30, "How to File Income Tax Returns," Charles H. Preston; 7:45, "Invitation to the Business Men of the Northwest to Attend the Market Week Show," Governor Theodore Christianson.

WCX, Detroit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner correct, Book-Cadillac hotel; 7, musicale; 10, the Red Apple club.

WDAF, Kansas City, Mo. (Central, 414.1), 3:30-4:30 p. m., the Star's Radio trio; 5-5:30, weekly child talent program; 6-7, school of the air, piano tuning in number on the Duo-Art; sixteenth of a series of Radio plano lessons, Maudellen Littlefield; the Tell-Me-a-Story Lady; music, Hotel Muchlebach Trianon ensemble: II: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 recitai; Arcadia cafe concert orchestra; 2, Arcadia cafe concert orchestra; 2:30, Mrs. George B. Huttenlock, contralto; 4:30, Edna Wyatt Webster, soprano; Marcella North, pianist; 7:30, Dream Daddy's bedtime stories.

WEBJ, New York, N. Y. (Eastern, 273), 7-9 p. m., entire program arranged by Citizens of New Rochelle. WEE1, Boston, Mass. (Eastern, 303), 6:30 p. m., Big Brother club; 7, Dok-Eisenbourg and his Sinfonians; 8-11, programs from New York studio, Eveready

Hour. WFAA, Dallas Texas (Central, 472.9), 12:30-I p. m., Charles E. Osborne, physical director of the Dallas Y. M. C. A.; 6:30-7:30, vesper musicale, Lone Star Five's orchestra; 8:30-9:30, recital, Dallas Woman's forum; 11-12, organ recital, Dwight Brown.

WFI, Philadelphia, Pa. (Eastern, 395), I p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:05, Philadelphia Music club; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pal; 8, play by Walter Gray players; 9, Everready hour; 10, Goodrich Silvertown Cord orchestra.

WGN, Chicago, Ill. (Central, 376.7), I:40 p. m., iuncheon concert, Drake concert ensemble; Blackstone string quintet; 2:30, artists series; 3, rocking chair time; 5:30, Skeczix time; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert; 8-9, Hermanus T. Baer, baritone; 10-11, Don Bestor's Drake dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), I2:30-I p. m., Hotel Statler concert ensemble; 6-7:30, dinner music, Hallpryd trio; 9-10, "Everready Hour;" 10-II, Goodrich Silvertown Cord orchestra.

WGY, Schenectady, N. Y. (Eastern, 280), 2 p. m., "Women as Representatives," Mrs. Edward P. Pressey; 8, WGY orchestra; John Leather, baritone; 11:40, Stephen E. Boisclair, organist.

WHAS, Louisville, Ky. (Central, 399.2), 4-5 p. m., selections, Alamo theator organ; 7:30-9, concert, Rosson entertainers; a chapter of the "Billy and Jane" stories; fifteen minute specialty, Wendell Hall.

WHB, Kansas City, Mo. (Central, 414.1), 2-3 p. m., ladies' hour program, Sweeney Radio trlo; 8-9:30, varied musical program.

WHN, New York, N. Y. (Eastern, 360), 5-6 p. m., Henry Tobias and his Versatile orchestra; 6:30-7, Strand Roof orchestra; 7-7:10, "Personal Chats of the Stage and Screen," E. S. Colling; 7:10-7:30, WHN employment broadcasting; 10-10:30, Loew's vaudeville headliners; 10:30-11, Now Rockwell Terrace revue; I1-11:30, Club Rose revue; I1:30-12, Sam Wooding and his Club Alabam orchestra; 12-12:30 a. m., Ted Lewis and his orchestra from Parody club,

WHO, Des Moines, Iowa (Central, 522.3), 2:15 p. m. Pathe news.

nings. These merry gentlemen are members of the Mark Strand male quartet, heard Monday evenings at Station WEAF, New York.

WLS, Chicago, III. (Central, 344.6), 12-1 p. m., Jimmy Whelan, Irish tenor; "Selection and Breeding of Dairy Cattle," Prof. W. W. Yapp; 3:45-4:45, First District of Illinois Federation of Women's clubs; 6:25, Ralph Emerson, organist; 6:50, Senate theater studio; 7, lullaby time, Ford and Glenn; 7:15, Metropolitan ladles' quartet; Grace Wilson, contralto; 7:45, juvenile adventures, Anthony Wons; 8-9, Isham Jones and list College Inm orchestra; Ford and Glenn; Kenneth Clark, Hawaiian guitarist; "Selection and Breeding of Dairy Cattle," Prof. W. W. Yapp; "Conditioning Hens for the Breeding Season," D. E. Hale; 9, Florence K. White, soprano; 9:10, "Much Ado About Nothing," Anthony Wons; 9:30, Kenneth Clark, Hawaiian guitarist; 9:40, Art Kahn and his Senate theater syncopators; 10:30, Isham Jones and his College Inn orchestra; 10:40, Ford and Glenn time; 11, vaudeville talent, Carreil agency; 12, Ralph Emerson, organist; Isham Jones and his College Inn orchestra; Ford and Glenn.

WI W. Cincinnati, Ohio (Central, 420), R. a. M. Picchel.

Glenn.

WLW. Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, William Stradhuan; 12:15, program, Deita Omicron sorority from College of Music; 4, pupils of Wm. Kyle in recital; program, Cincinnati Federation of Mother clubs; lecture on Mah Jongg, Lucy Blackburn; 6, dinner hour concert, Cincinnati Post; 10, Ohio Rubber and Textile company; Ohio Rubber quartet, Howard Hafford, first tenor; Erwin Meyer, second tenor; Edwin Weidinger, baritone; John Dodd, bass; Howard Evans, accompanist; Ohlo Rubber Instrumental trio; dance program, Keefer-Kocker orchestra; special features and attractions to be announced.

WMAK, Lockport, N. Y. (Eastern, 265.5), 8:15 p. m., First Presbyterian Sunday school orchestra, Martin Brophy, director.

Brophy, director.

WMAQ, Chicago, III. (Central, 444.8), 12 m., weekly program, auspices Illinois Manufacturers' association; 4 p. m., American Red Cross talk, Estelle Weltman; 4:30, Gunn School of Music; 5, lullaby lady, Mrs. Gene Davenport; 6, Chicago theater organ; 6:30, Hotel LaSalle orchestra; 8, book review, Harry Hansen; 8:20, travel talk, Clara E. Laughlin; 8:40, Association of Commerce weekly talk; 8:50, University of Chicago lecture; 9:15, musical program.

WMC, Memphis, Tenn. (Central, 503.9), 8 p. m., bedtime stories, Uncle Jerry; 8:30, lecture, Edward Howard Griggs; 11, midnight frollc, Rhinehardt's orchestra.

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; II:30-12, Original Dixieland Jazz band; 12-12:30 a. m., Frank Daily and his Meadowbrook orchestra. WNYC, New York, N. Y. (Eastern, 528.8), 7:30 p. m., police alarms; 7:35, sports analysis, Thornton Fisher; 8:30, "Thrlft," Albert Firmin; 8:50, vocal and instrumental recitals; 9:30, Colonel Jamos Churchward, geologist and world traveller; 10:10, Board of Education lecture.

WOAI, San Antonio, Texas (Central, 394.5), 8:30 p. m., selections from light operas, WOAI entertainers; WOAI trio; Jimmy's Joys orchestra.

WOI, Ames, lowa (Central, 360), 12:30 p. m., college chimes; "Selection of Poultry Breeding Stock," Prof. W. H. Lapp.

W. H. Lapp.
WOO, Philadelphia, Pa. (Eastern, 509.9), II a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra, Robert E. Golden, director: 4:45, organ recital, Mary E. Vogt.
WOR, New York, N. Y. (Eastern, 405), 7 a. m., gym class, Arthur E. Bagley; 3:30 p. m., book reviews. Mae Jacobus Flemming; 6:15 p. m., "Music While You Dine," Halsey Miller's orchostra; 6:30. "Man in the Moon" stories, Josephine Lawrence, William F. B. McNeary; 7, "Music While You Dino," Halsey Miller's orchestra.

McNeary; 7, "Music While You Dino," Haisey Miller's orchestra.

WQJ, Chicago, III. (Central, 444.8), 11-12 in., A. G. Morse, authority on the manufacture of candy; "Mah Jongg," Mrs. Louise Nichols; 3-4 p. m., "The Mah Jongg Party," Josephlno Naylor; "Health Inheritanco," Dr. Anna E. Blout; "Suggestions for Washington and Lincoln Partlos," Agnos May Allen; 7-8, dinner concert, Ralph Williams and bis Rahnbo Garden orchestra;

(Continued on page 12)

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ROSALIE STEWART TO TALK AT W

WBZ, Springfield, Mass. (Eastern, 337), 7:10 p. m., kiddies' bedtime story; 7:15, lecture, address; 8:30-10:30, concert; 11-12, Leo F. Reisman and his Hotel

tion players.

G. Del Castillo.

Where to Hear Concerts

Central Standard Time

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

Saturday, January 24: 6, KGO, WGN, WLW, WMAQ; 6:30, CKAC, KFNF, WBZ, WDAR. WGN, WGR; 6:35, WNYC; 6:45, WOAW, WTAY; 7, KYW, WIP, WLS, WOR, WQJ; 7:30, VJZ, WLS; 7:30, CKAC, KDKA, KFI, PWX, WBZ. WCAE, WHAS, WNYC, WOR; 7:45, WJZ, WOR; 8, KHJ, KNX, KSD, KYW, WGN, WLS, WMC, WREO, WSAI, WSB; 8:15, WNYC; 8:30, KTHS, WFAA; 8:45, KFOA, WSAI; 9, WLS, WMAQ, WOR; 9:15, WSAI; 9:30, CKAC; 9:35, KYW; 10, KFI, KGO, KHJ, KNX, WQJ; 10:15, WRC; 10:45, WSB; 11, KFI, KNX, KSND, WHB, WLS; 11:30, WOAW; 12, WCAL; 1, KNX; 2, KHJ.

Sunday, January 25: 6:20, WEEI; 6:30, WLS; 7, KYW, WJZ, WLS; 7:30, WBZ; 8, WCBD, WJZ, WNYC, WQJ; 8:10, WBBR; 8:15, WEMC; 8:30, KHJ, WLW; 9, CKY, KFDM, KFI, KFSG, KGW, KHJ, WGN. WJZ, WOAW; 9:10, WBBR; 9:15, WCCO; 9:30, WFAA, WOAI, WOC; 10, KFI, KHJ, KNX; 10:30, KPO; 11, KNX; 12, KFSG.

Monday, January 26: 6, WCX, WGN, WJZ, WLW, WOAW; 6:30, KFNF, KPO, WFAA, WGN, WOAW, WOO; 6:45, WGY, WJID; 7, KSD, KYW, WAHG, WBAV, WBBR, WBZ, WEEI; 7:15, WJJD, WNYC; 7:30, KDKA, KFI, WAHG, WCAE, WDAR, WHO, WOO, WOR, WWJ; 7:45, WNYC; 8, KYW, WAHG, WCBD, WCAE, WDAF, WGR, WGST, WHAZ, WHO, WLW, WOC, WSB; 8:15, WEMC; 8:25, WDAR; 8:30, WAHG, WFAA, WMIC; 8:45, KFOA; 9, KOA, KSD, WAHG, WBBF, WEEI, WGR, WOAW; 9:15, WAHG, WDAR; 9:30, KFAE, KFKX; 10, KFAU, KGW, KHJ, KNX, KSND, WCAE, WOC, WOI; 10:15, WOR; 10:30, KFOA; 11, KSND; 11:15, WHC; 11:30, WJJD; 12, KNX, KPO.

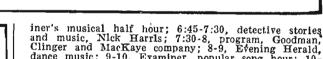
Tuesday, January 27: 6, KGO, KSD. WCX, WEBJ, WGN, WLW, WMAQ; 6:25, WOAW; 6:30, CKAC, KPO, WCCO, WFAA, WGN; 6:45, WJJD, WTAY; 7, KDKA, WCAU, WEEI, WFI, WGY, WLS, WQJ; 7:15, WIP, WIJD, WLW; 7:30, CKAC, KFI, WBAP, WBZ, WCAE, WHAS, WWJ; 7:50, WNYC; 8, KFDM, KHJ, KNX, KSD, WCAE, WFI, WGN, WGR, WHB, WIP, WIZ, WLBL, WSB; 8:15, CKY, KFI, WREO; 8:30, WFAA, WOAI; 8:45, CFAC, KFOA, KYW; 9, WCAE, WHN, WIY, WLS, WOAW; 9:05, WIP; 9:15, WMAQ; 9:30, CKAC, WBAP, WJY: 10, KDKA, KGO, KHJ, KJS, KNX, KPO, WLS, WLW, WQJ;

10:30, KGW, WBZ; 10:40, WGY; 11, KNX, KSÑD, WFAA, WLS; 12, KFI, KNX, KPO, WLS.

Wednesday, January 28: 6, KGO, WCX, WEEI, WGN, WLW; 6:30, KFNF, KPO, WAHG, WGN, WOO; 6:45, KSD, WCAE, WJJD, WTAY; 7, KYW, WCAU, WEAO, WEEI, WLS, WLW, WNYC, WQJ; 7:10, WBBR; 7:15, WEAO, WGR, WJJD; 7:25, WJZ; 7:30, KDKA, PWX, WAHG, WBAP, WBZ, WCAE, WHAS, WHB, WHO, WWJ; 7:40, WBBR; 8, KHJ, KNX, KYW, WCAU, WDAF, WGN, WOC; 8:15, WEMC, WOR; 8:30, WMAQ, WOS; 8:45, CFAC, KFOA, KYW, WNYC; 9, KNX, KOA, WCCO, WEEI, WHO, WOR, WTAY; 9:15, WGR; 9:30, KDKA, KFI; 9:45, KYW, WMAQ; 10, KGW, KHJ, KNX, KPO, WEEI, WNJ, WQJ; 10:15, WNJ; 10:45, KYW, WSB; 11, KFI, KSND; 11:30, KYW; 12:30, KYW.

Thursday, January 29: 6, KGO, WCX, WGN, WLW, WMAQ; 6:30, KFNF, KPO, WCCO, WFAA, WGN; 6:45, WCAE, WOAW, WTAY; 7, KDKA, KFKU, KYW, WBBF, WDBY, WEEI, WFI, WGST, WGY, WIP, WLS, WNYC, WOS, WQJ; 7:30, CKAC, KDKA, KFI, WCAE, WEEI, WGY, WHAS, WWJ; 8, CKY, KHJ, KNX, WCCO, WCBD, WEEI, WGN, WHB, WSB; 8:02, KYW; 8:10, WBBR; 8:15, WOI, WOS, WREO; 8:30, WFAA; 8:50, WBBR; 9, WCAE, WCAL, WEEI, WLS, WOAW; 9:30, KFI, KFSG, WBAP; 9:35, WNYC; 10, CFAC, KDKA, KFI, KGO, KHJ, KJS, KNX, KPO, KYW, WQJ; 10:03, WLW; 10:30, WGY; 10:55, WSB; 11, CFAC, KFI, KPO; 11:15, KFSG; 12, KFI, KFSG, KPO.

Friday, January 30: 6, KGO, WEBJ, WEEI, WGN, WJZ, WMAQ; 6:30, KFNF, KPO, WCCO, WEBJ, WFAA, WGN, WMAQ; 6:45, WJJD, WTAY; 6:50, WGY; 7, KYW, WAHG, WBAV, WCAU, WEBJ, WEEI, WHB, WLS, WQJ; 7:15, WJJD; 7:25, WOO; 7:30, KDKA, WBAP, WCAE, WCCO, WDAR, WEBJ, WGY, WHAS, WHO, WJY, WNYC, WWJ; 8, CFAC, KFDM, KHJ, KSD, WEEI, WGN, WGR, WOC, WSB; 8:15, CKY; 8:30, KNX, WFAA, WHO; 8:45, KFI, KFOA, WJZ; 9, KOA, KYW, WEMC, WBZ, WCCO, WEEI, WLS, WNYC, WOAW; 9:10, WHN; 9:30, KFAE, WEMC, WGY; 9:35, WNYC; 10, KFAU, KHJ, KNX, WNJ, WLS, WOAW, WQJ; 10:05, WEMC; 10:30, KFOA; 10:55, WSB; 11, KFI, KSND, KYW, WLS; 11:15, KFSG; 10:30, WJJD; 12, KFI, KFSG, KNX, WLS; 12:30, KYW.



program.

WOAF, Kansas City, Mo. (Central, 414.1), 3:30-4:30
p. m., the Star's Radio 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; music, Hotel Muhlebach Trianon ensemble; 8-9:15, program by employees
of Montgomery Ward & company; 11:45-1 a. m., nighthawk frolic, the "Merry Old Chief" and the Plantation players.

tion 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; 2, Arcadia cafe concert orchestra; 3, Arcadia cafe concert orchestra; 4:30, Emilie Buckley, contralto; 7:30, Dream Daddy's bedtime stories; 8:30, Herman Kentner's Green Hills Farm orchestra; reading travel talk; 10:03, Arcadia cafe dance orchestra.

WEAO. Columbus, Ohio (Eastern, 294), 8 p. m., university chimes, Prof. A. P. McManigal; 8:15 p. m., concert, community chorus of Washington Court House, Obio; Ruth Reid Fenner, piano; Raymond K. Hollinger, baritone.

WEEI, Boston, Mass. (Eastern, 303), 6:30 p. nn., Big Brother club; 7, Shawmut Juvenile syncopators, Lou Lissack, director; 7:45, "The Bad Boy from the Good Home," Harry Einstein; 8, musicale; 9, Gillette Safety Razor dance orchestra; 10, program, Ernest A. L. Hill; 11, Fenway theater midnight organ recitai, Lloyd G. Del Castillo.

G. Del Castillo.

WEMC, Berrien Springs, Mich. (Central, 286), 8:15-9:15 p. m., program, men of Maple hall.

WFAA, Oallas, Texas (Central, 472.9), 12:30-1 p. m., music, Dallas theater entertainers.

WFI, Philadelphia, Pa. (Eastern. 395), 1 p. m., Meyer Davis Bellevue Stratford concert orchestra; 3:05, Radlo talk, Warren Foote; "Narratlve Poetry," Walter Gray; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddles' pal.

WGN, Chicago, III. (Central, 376.7), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet: 2:30, artists scries; 3, rocking chair time; 5:30, Skeezix time; 6, organ recital, Lyon & Healy; 6:30-7, dlnner concert; 8-9, classical concert, Lyon & Healy artists; 10-11, Don Bestor Drake dance orchestra; Ned and Ches, jazz artists.

'Does Your Banker Know You?" Clarke Mitchell.

KOB, State College, N. M. (Mountain, 360), 7:30-8:30 p. m., international code course, lesson 4. Dean R. W. Goddard.

KPO, San Francisco, Calif. (Pacific, 423), 7 a. m., setting-up exerciscs, Bernard Drury; 1-2 p. m., Rudy Sciger's Fairmont hotel orchestra; 2:30-3:30, matince program, Johnnie Bulck's amphians; 4:30-5:30, Rudy Sciger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-11, E. Max Bradfield's Versatile band; "Uncle Josh" of KPO.

6:30-7, dlnner coucert; 8-9, classical concert, Lyon & Healy artists; 10-11, Don Bestor Drake dance orchestra; Ned and Ches, jazz artists.

WGR, Buffalo, N Y. (Eastern, 319), 12:30-1 p. m., Hotel Statler concert ensemble; 6:30-7:30, dinner music, the Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, dlrector; 8-8:15, lecture, "Some Common Superstitlons in Nature," Dr. C. E. Cubbings of the Buffalo Society of Natural sciences; 8:15-9:15, Philharmonic concert, jointly with WEAF; 10:15-11:15, musical program, quartet of the First Presbyterian church of Niagara Falls, N. Y., 11:30, supper-dance music, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director.

WHAS, Louisville, Ky. (Central, 399:2), 4-5 p. m., selections, Alamo theater organ; readings, Courier-Journal and Louisville Times editorials; 7:30-9, concert, K. & I. Terminal Railroad orchestra, J. Clark Martin, director; selections. String Division, K. & I. Terminal Railroad orchestra; chapter of the "Billy and Jane" stories; fifteen-minute specialty, Wendell Hall.

WHB, Kansas City, Mo. (Central, 414.1), 2-3 p. m., Jadles' hour program, Sweeney Radio trio; 7-8, address; music, Sweeney Radio trio. KSAC, Manhattan, Kans. (Central, 340.7), 12:30 p. m., tuning in piano selection; reading: "The Way Out," F. Pattison; Radlo question box; "Join a Farm Organization," A. L. Clapp; 7:20, college beli and opening exercises; 7:30, "Annual Cost of a State System," L. E. Conrad; 7:40, solo, Harold Flamm; 7:45, "Tho Sultable Farm Dwelling," W. G. Ward.

KSD, St. Louis, Mo. (Central, 549.1), 6:45 p. m., Abergh's concert ensemble; 11, dance program, Varsity club orchestra.

Fanny Sharfsin is the violinist who pleases the Radio audience of WFI, Philadelphia. She is one of the promising young artists of this city. KYW, Chicago, III. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7, dinner concert, Congress hotel; 8-8:30, Ann Kelley, soprano; James Murray, tenor; Eleanor Teprell, planist; 8:30-8:45, around 'he town with KYW; 8:45-9, music; 9:05, "Hygeia," Dr. John M. Dodson; 9:15, "Entertaining Plans," Vivette Gorman; 9:45-2:30, midnight revue.

PWX, Havana, Cuba (Eastern, 400), 8:30 p. m., concert, General Staff band of the Cuban army, Captain Jose Molina Torres. General Staff band of the Cuban army, Captain Jose Molina Torres.

WAHG, Richmond Hill, N. Y. (Eastern, 316), 12 m., hour of talks on cooking; 12:15, etiquette, travels, eto.; 12:30, Brooklyn Eagle studio; 7:30 p. m., musical selections; '8, Current events, H. V. Kaltenborn; 8:30, special program, Brooklyn Daily Eagle studio.

WBAP, Fort Worth, Texas (Central, 472.9), 7:30-8:30 p. m., musical program, Y. W. C. A.; 9:30-10:45, dance music, Jim Riley's Texas hotel orchestra.

WBBR, New York, N. Y. (Eastern, 273), 8 p. m., violin duets, George Twaroschk, Carl Park; 8:10, George Twaroschk, violinist; 8:20, "How We May Know We Have the Truth," E. J. Coward; 8:40, Carl Park, violinist; 8:50, violin duets, George Twaroschk, Carl Park.

WBZ, Springfield, Mass. (Eastern, 337), 7:10 p. m. The Gold Medal Radio to by these four singers, we programs from the Gold last St. Paul, WCCO. They a tenor (center above); Chieb below); "Choppie" Klin Ist Nels Sw. 11, ba

WHN, New York, N. Y. (Eastern, 360), 5-6 p. m., Johnny DeDroit and his orchestra; 6:30-7, Vincent Catanese and his Hotel Alamac orchestra; 7-7:30, Harry Richman and his entertainers with Eddie Elkins and his orchestra; 7:30-7:35, "Spring Styles," Haas Brothers Fabric corporation; 10-11, Clover Gardens dance orchestra; 12-12:30 a. m., Strand roof orchestra.

WHO, Des Moines, Iowa (Central, 522.3), 6:30-9:45 p. m., Reese-Hughes orchestra; Bankers Life Radio orchestra; Evelyn Fowler, pianist; P. J. Louberge, French soloist; Des Moines theater symphonic orchestra, Prof. Leon A. Dashoff, director.

Wip's bedtime stories.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. in., Gimbel tea room orchestra; 4, recital of Negro music, Theodor Liedemedt, violinist; Walter Kruger, pianist; 6:05, Art Coogan and his Club Madrid orchestra; 7, Uncle

Wip's bedtime stories.

WJJD, Mooseheart, III. (Central, 302.8), 3:30-4:30 p. m., music, Mooseheart children; 6:45-7:15, Albert F. Brown, organist; 7:15-8:15, Philharmonic orchestra: Junior band.

WJZ, New York, N. Y. (Eastern, 455), 10-10:20 a. m., housewives league menu, Mrs. Julian Heath; 10:20-10:40, 'Fall Planting, Flowers and Fruits,' Edith Loring Fullerton; 10:50-11, fashion talk, Eleanor Gunn; 4:30-5:30 p. m., Hotel Belmont tea music; 7-8, Cafe Boulevard orchestra; 8-8:10, Wall Street Journal review; 8:10-8:20, N. Y. U. Air college; 8:25-8:40, Frank Anderson, baritone; 8:40-8:50, '50 Questions,' Times Weekly News magazine; 10:30-11:30, Billy Wynne's Greenwich Village Inn orchestra. WKAQ, San Juan, P. R. (Intercolonial, 360), 8-9:30 p. m., Municipal band, WLS, Chicago, III. (Central, 344.6), 12-12:30 p. m., Grace Wilson, contralto; 3:45-4:45, 'The Educational Advantages of the Field Museum,' Mrs. Dorothy Cockrell; 'Some Knowledge of Banking and Property Laws That Every Woman Should Have,' Mrs. W. E. Fribley; 6:25, Ralph Emerson, organist; 6:50, Senate thester studies 7 Juliaby time Ford and Clemp. 7:15

Grace Wilson, contraito; 3:45-4:45, "The Educational Advantages of the Field Museum," Mrs. Dorothy Cockrell; "Some Knowledge of Banking and Property Laws That Every Woman Should Have," Mrs. W. E. Bribley; 6:25, Ralph Emerson, organist; 6:50, Senate theater studio; 7, lullaby time, Ford and Glenn; 7:15, program, WLS Tribe of Lone Scouts; 7:40, Sandy Meeks, Scotch tenor; 7:50, Nubs Allen; 8-9, Ralph Emerson, organist; "Farm Flickerings." E. B. Heaton; "Some New Wrinkles in Poultry Production," D. E. Hale; "Illinois Ten Litter Contest," W. H. Smith; 9, Jimmy Whalen, Irish tenor; 9:10, interpretation of Rudyard Kipling, Wallace Bruce Amsbary; 9:30, WLS Four Aces of harmony; 10:10, Philharmonic quartet; 10:30, Isham Jones and his College Inn orchestra; 10:40, Ford and Glenn.
WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, William Stradtman; 12:15 p. m., program, Mu Phi Epsilon sorority; Ahaus Brunswick Shop orchestra; 4, "Shut-ins' program, Duning Benevolent and Musical service co-operating with the Lillian Aldrich Thayer Settlement School of music; 6, dinner hour concert, Cincinnati Post; 7, special concert program, Iota Chapter S. A. I. sorority from Cincinnati Conservatory of music; 8, lecture on Mall Jongg, Lucy Blackburn; trio of young ladies: Jessica Stelnle, mezzo soprano; Edythe Tolken, violinist; Beulah Perryman, accompanist; Milnor Electric Instrumental trio; 9, Formica orchestra, Walter Esberger, director; Elizabeth Carlisle, soprano; Louise Rasch, accompanist.
WMAQ, Chicago, Ill. (Central, 444.8), 1 p. m., luncheon, Assoclation of Commerce; 4, beauty talk, Mme, Grace Earl; 4:30, music, Cosmopolitan School of Music; 5:30, Armour musical clubs; 6:30, stories for the children, Georgene Faulkner; 8, weekly lecture, Northwestern university; 8:30, piano concerto; 9, WMAQ players.
WN, Newark, N. J. (Eastern, 233), 10:30-11 p. m., Frank Daily and his Meadowbrook orchestra; 11-11:15, Victor Wilbur, bartone; 11:15-12, Original Dixicland jazz hand; 12-12:20 a. m., dance music, Frank Daily and his

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

Tuesday, January 27

(Continued on page 11)

Dorothy Davie Dillow, soprano; the Excelsior quartet; 10-2 a. m., Ralph Williams and his Rainbo skylarks; Ned and Ches; Nubs Allen, contraito; Will Rossiter; Rick, Whalen and Gardner; Nate Caldwell.

WREO, Lansing, Mich. (Eastern, 288.5), 8:15-9:45 p. m., Reo Motor Car company band; Reo Glce club; faculty Lansing Conservatory of music.

WSE, Atlanta, Ga. (Central, 429), 12 m.. cntertainment; 5-6 p. m.. Bonnie Barnhardt; 8-9, Wesley Memorial church cholr; 10:45, Vick Myers Melody orchestra.

WTAY, Oak Park, III. (Central, 250), 6:45-7:45 p. m., Sandy Mcek, baritone; Raynor Dalheim & company orchestra.

Octroit, Mich. (Eastern. 516), 3 p. m., the Detroit News orchestra; 8:30, the Adanac male quartet; Mrs. John McDermott, soprano.

Wednesday, January 28

Wednesday, silent night for: CKY, KFKU, KFOM, KFKX, KGO, KJS, WBAV, WBBF, WCAL, WCBO, WEBJ. WFAA, WGST, WGY, WHAZ, WJY, WLBL, WMAK, WMC, WOAI, WOAW, WOI, WRC, WREO.

WEBI. WFAA, WGST, WGY, WHAZ, WJY, WLBL, WMAK, WMC, WOAI, WOAW, WOI, WRC, WREO.

CNRM, Montreal, Can. (Eastern, 341), 8:30 p. m., "Aria from 'Heradlade'," "Two Grenadiers," "Evening Star," Max Panteleef, baritone; "Elizabeth's Prayer, "Tannhauser"," 'I Know a Hill," Mrs. Harold Mills. soprano; "Etnde, Op. 25, No. 11," Olga Gullaroff; address; "Serenade," "Song of the Flea." "Volga Boat Song," Max Panteleef, baritone; 'Oh. Hall of Song," 'Oh, for a Breath of the Moorlands," Mrs. Harold Mills, soprano.

CNRO, Ottawa, Can. (Eastern, 435), 7:30 p. m., half-hour talk for hoys and girls, Uncle Dick: 8, "Mademoiselle Modiste," "As a Dream," "Tales of Hoffman." Chateau Laurier hotel orchestra; 8:30. "The Spirit Flower," Madame Puget Corbell; "The Married Man." Tom Hamilton, Scotch comedian: Ted Gray, jazz pianlst: "The Road to Love," Cliff McAdam; "De Stove Pipe Hole." H. Winges; "Berceuse in D Flat." "Regaudom in D," J. llughes-Johnson; "Habenera," Madame Pouget Corbell: "Donald McFarlane," Tom Hamilton; Ted Gray, planist; Cliff McAdam, tenor; "How Bateese Come Home," H. Winges; "Duetta," "Bee's Wedding," H. Hughes-Johnson, planist; Chateau Laurier hotel orchestra; Jack Grace. KOKA. E. Pittsburgh. Pa. (Eastern, 309.1), 12:20 p. m., Institute from Trinity church: 6:15, concert, Gregorio Scalzo, conductor; 7:30, children's period; 8:15, address, University of Pittshurgh studio; 7:30, concert. KFAE, Pullman, Wash. (Pacific, 330), 7:30-9 p. m., Lusinn Barakian, soprano; Frederick C. Butterfield, planist; talk on commercial art, Worth D. Griffin; talk, Dr. Carl I. Erickson; U. S. health bureau talk; Radio talk No. 5, selectivity, Dean H. V. Carpenter; "Demonstration Meetings on Clothlog," E. Belie Alger; "Polniers on Dairy Farming," E. V. Ellington.

KFI. Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Herald, table talk and news; 5:30-6, Exam-

Number Seather Story, 7:13, lecture, address; 8:30-10:30, concert; 11-12, Leo F. Reisman and hls Hotel Brunswick orchestra.

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

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Hotel Pennsylvania dance orchestra, Ray Steem, director; 7:30, fashion talk, Mile. Madclaine; 8, Bryer Ice Cream company's half hour of songs; 9, recital.

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 10:45 a. m., "Home Management," Bernice Bell; 2 p. m., woman's hour, Buchanan Bible study club; 2:30, matinee musical; 4, Garns players; 5:30, children's hour, Alpha Stalson; 7, midweek church service, Salvation Army, Col. W. S. Barker; 9, musical program; 10, dance program, Arnold Frank's Casino orchestra. WCX, Oetroit, Mich. (Eastern, 516), 4:15 p. m., musical program.

iner's musical half hour; 6:45-7:30, detective stories and music, Nlck Harrls; 7:30-8, program, Goodman, Clinger and MacKaye company; 8-9, Evening Herald, dance music; 9-10, Examiner, popular song hour; 10-11. Patrick and Marsh's dance orchestra.

KFNF, Shenandoah, lowa (Central, 266), 6:30 p. m., Spelbring's concert orchestra.

KFOA, Seattle, Wash. (Pacific, 455), 4-5:15 p. m., Olympic hotel concert orchestra; "Today's Recipe;" 6:45-8:15, Hopper-Kelly company studio program; 8:30-10. Seattle Times studio program; 8:30-10. Seattle Times studio program; concert orchestra; "Today's Recipe;" 6:45-8:15, Hopper-Kelly company studio program; 8:30-10. Seattle Times studio program; program; concert music and sermon, Aimee Semple McPherson; 6:30-7:30, children's hour program, present Helen Edwina and Mary Elizabeth Hughes.

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

KGW, Portland, Ore. (Pacific, 492), 12:30 p. m., concert; 5, children's program; 8, concert; 10, Multnomah hotel strollers.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. m., Abe Perluss and his Rose room orchestra; 2:30-3:30, program, Pacific States Electric company, Grace Currey, harpist, and assisting artists; 6-6:30, Art Hickman's Biltmore hotel concert orchestra; 6:30*7:30, stories American history, Prof. Walter Sylvester Hertzog; hedtime story, Uncle John; 8-10, program, Pacific Mutual Life Insurance company, Dr. Mars Bumgardt, scientific lecturer; 10-11, Earl Burtnett's Biltmore hotel dance orchestra.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hlred Hand's morning message; 10:30, Mrs. Kate Brew Vauglin, home conomics; 12, Wurlitzer pipe organ recital; 5:30 p. m., Town Crier and Villago Urchins; 6-7, dinner hour music; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, director; 8-10, program, Security Trust and Savings bank; 10

KSNO, Seattle, Wash. (Pacific, 238), 71:15-8 p. m., Aunt Vivlen's bedtline story: 8-9, Earl Gray and his orchestra; 9-10, concert hour; 10-11, Earl Gray and his Hotel Butler orchestra,

DANG

Monday, 15:8 Wbap, Woo; 835; Whn; 9. Kpd; 836; Wdar; 9:03, 831; Wbap, What b, Wor 10, Kfii, 1000 Wbz, Wgrs, Rish 11, Cfac; 12, Kfi, Ksnd; 1, K

Tuesday, 19, Kpo, Wcs, Wgr; 9:30, Wip, Wnj; Webn, Wgu, 10:30, Kfoay, Wnj, Webn, Webn, 11:45, Kgo, Kgw, Webn; 12:03

Wednesdaylary
8, Webh, Wwo,
Kpo, Webh, Woo,
William, Woo,
William, William,
Ksnd, Wbz. W
Wgn; 10:30, W
H, Ksd, W
Wn; 11:45, W
Kfi, Kgw, E
Ksnd, Webh

GBS; ARCTIC EXPLORER AT WCCO



4:45, organ recital, Mary E. Vogt; 7:30, A. Candelori's cnsemble from Hotel Adelphia; 8:30, Harrictte G. Ridley, planist; 9. WOO orchestra; 10:03, Royal Palm dance orchestra, William Bove, director; 10:30, Vincent Rizzo's Havana Casino dance orchestra.
WOR, New York, N. Y. (Eastern, 405), 6:15 p. m., "Musle While You Dine," Harry Cox's Robert Treat orchestra; 8:45, topics of the day, Literary Digest; 9:15, Helen Steel, coloratura soprano; 10, Helen Steel, coloratura soprano.
WOS, Jefferson City, Mo. (Central, 429.5), 8 p. m., "Physical Education for Girls," Dr. Henry S. Curtis; 8:15, "The Winter Pruning and Spraying of Tree Fruits." T. J. Taibort; 8:30, musical program, Frank G. Robertson.

Robertson.

G. Robertson, WQJ, Chicago, III. (Central, 444.8), 11-12 m., "The Influence of Corsets on Women's Health," Mrs. Bertha WQJ, Chicago, III. (Central, 444.8), 11-12 m., "The Influence of Corsets on Women's Health," Mrs. Bertha Bridge; "Some Mid-Winter Cleaning Hints," Mrs. Wilbur E. Fribley; health talk on the value of yeast, H. J. Schlnkel; 3-4 p. m., "Fourth Lesson, Domestic Science Course," Mrs. Helen Harrington Downing; "Meat in the Diet," Martha Logan; "Horseback Through the Trail of the Lonesome Pine," Roy J. Snell; 7-8, Ralph Williams and his Rainbo Garden orchestra; Merrie Boyd Mitchell, soprano; James Mitchell, baritone; Rev. Karl Scheroffski, planist; 10-2 a. m., Ralph Williams and his Rainbo skylarks; Fred Jacobsen, Swedish monologuist; the Melodians; the Rogers boys; Nate Caldwoll.

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

10:30, Wsb; Wdaf;

Wnj; Whn, Wsb; Wmc,

ary 27: /oo; 9, : 9:03.

Wbap,

Wgr:

Knx.

ry 28: 8:30.

Khi. 12:05, Kyw,

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs and bedtime story, Bonnie Barnhardt; 10:45, Pilgrim quartet.

WTAY, Oak Park, III. (Central, 250), 6:45-7:45 p. m., Howard Hanks, pianist; Nina Joslyn, soprano; Richard Joslyn, baritone; 9-10, ten minute technical talk, member of the staff of "Radlo Agc;" Spencer Laverne and Shayne, the Xylophone Harmony kings; Grace Wilson, blues slnger.

WWJ, Oetroit, Mich. (Eastern 516), 8:30 p. m., the Detroit News orchestra; Templeton Moore, tenor.

Thursday, January 29

Thursday, silent night for: KFAE, KFKU, KFOM, KFOA, KGW, KOA, KSD, KSND, PWX, WAHG, WBAV, WBBG, WBZ, WCAP, WCAU, WEAO, WEBJ, WEMC, WGR, WHAZ, WHO, WJJO, WLBL, WNJ, WOO, WOS.

WNJ, WOO, WOS.

CKAC, Montreal, Can. (Eastern, 425), 8:30 p. iu., special entertainment, Frontenac Breweries studio, CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., lesson in French diction and conversation, A. C. De-Lalande; 8, Canadian National Railway's program from Fort Garry hotel.

CNRC, Calgary, Can. (Mountain, 430), 9-11 p. m., weekly travei tales, "Johnny and Jenny Jingles" and youthful C. N. R. travelers; Canadian National Railways Symphony orchestra; George Boothman, baritone. CNRW, Winnnipeg, Man. (Cential, 450), 8:15 p. m., bedtime travel tales; 8:30, The Melody Three, Elisa Brault, soorano: Lucia Hart, contralto; Margaret Brault, soprano; Lucia Hart, contralto; Margaret Fletcher, accompanist; "The Functions of an Express Foreign Department in Overseas Trade;" dance pro-

Foreign Department in Overseas Trade;" dance program, Frank Wright's Country club dance orchestra. KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:20 p. m., Institute from Trinity church; 6:15, concert, KDKA Little Symphony orchestra, Victor Saudek, conductor; 7:30. children'a period; 8, program; 8:30, concert; 11, concert, l'Ittsburgh Post studio.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. mi., Evening Herald, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-7, Y. M. C. A. speaker; 7-7:30, dance orchestra; 7:30-8, Retta King Nelson, mezzo-soprano; Philip Musgrave, cello; female quartet; 8-9, program, Standard Oil company of California; 9-10, Examiner, program, Zoellner Conservatory of music; 10-11, vocal and instrumental.

KFKU, Lawrence, Kans. (Central, 275), 6:50 p. m., plano tuning-in number; 7, music, Prof. Waller Whitlock, tenor; university string quartet; 7:15, "Americanization," Prof. F. W. Blackroar; 7:30, chemistry

lecture, Dr. H. C. Ailen; 7:45, educational psychology, lesson IV, Dean R. A. Schwegler.
KFKX, Hastings, Nebr., (Central, 288.3), 9:30 p. m., program, Juniata School orchestra.
KFNF, Shenandoah, Ia. (Central, 266), 6:30 p. m., concert, Burlington Jct., John Greely, director.
KFOA, Seattle, Wash., (Pacific, 455), 4-5:15 p. m.,

KFOA, Seattle, Wash., (Pacific, 455), 4-5:15 p. m., Olympic hotel concert orchestra.

KFSG, Los Angeles, Cal. (Pacific, 278), 10:30-11:30 a. m., sunshine hour; 3:30-4-30 p.m., organ recital, Roy Reid Brignall; 7:30-9:15, Temple scrvice, Temple choir and Silver band with sermon, Almee Semple McPherson, pastor; 9:15-10, program, Butts Muslc company; 10-11, organ recital, Esther Fricke Green.

KGO, Oakland, Calif., (Pacific, 312), 11:30-1 p. m., luncheon concert, Pacific States Electric company; 4-5:30, concert orchestra, Hotel St. Francis; 8, "Arms and the Man," George Bernard Shaw's three-act play, KGO players; Arion trio; 10-1, dance music, Henry and the Man," George Bernard Shaw's three-act play, KGO players; Arion trio; 10-1, dance music, Henry Halstead's orchestra.

KGW, Portland, Ore. (Pacific, 492), 12:30 p. m., concert, Civic Music club; 5, children's program.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p.m. news and nusic; 2:30-3:30, program, Pacific States Eiectric company, Grace Currey, harpist; 6-6:30, Art Hickman's Biltmore hotel concert orchestra, Edward Fitzpatrick, director; 6:30-7:30, stories American history, Prof. Walter Sylvester Hertzog; Dick Winslow, juvenile reporter; 8-10, program arranged by Beth Woodruff Nordwall; 10-11, Earl Burtnett's

Biltmore hotel dance orchestra.

KJS, Los Angeles, Calif. (Pacific, 252), 8-9:30 p. m., program consisting of instrumental and vocal num-

bers.

KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hand's morning message; 10:30, Mrs. Kate Brew Vaughn, home economics; 12, Wurlitzer pipe organ recital; 5:30 p. m., Town Crier and Village Urchins; 6-7:30, dinner hour music; 8-10, program the Lions club; 10-11, Abe Lyman's Cocoanut Grove dance orchestra from Ambassador

KPO, San Francisco, Calif. (Pacific, 423), 7 a.m. setting-up exercises; 1-2 p. m., Rudy Seiger's Fairmon hotel orchestra; 4:30-5:30, Rudy Seiger's Fairmont hotel orchestra; 5:30-6:30, children's hour stories; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-9, Theodore J. Irwin, organist; 9-10, program, Anna K. Bioteky, contraito; 10-11, E. Max Bradfield's Versatile

KSAC, Manhattan, Kan. (Central, 340.7) 12:30 p. m., tuning in plano selections; reading; "Some Seven Day Dairy Rations," A. W. Knott: Radio question box; "Mating for Breeding," J. H. McAdams; 7:20, college bell and opening exercises; 7:30, "Labor and Saving Devices;" Harriet W. Allard; 7:40, Radio college trio; 7:45, "Meat: The Muscie Maker," Katherine Hudson. KSO, St. Louis, Mo. (Central, 549.1), 4 p. m., home hour.

hour.

KYW, Chicago, III. (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 2:35-4 p. m., afternoon frolic; 6:35-7, children's bedtime story, Unclc 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, Chicago Association of Credit Men; 9:15, safety first talk. Chicago Motor cith; 10:11:20 exercing at home

Chicago Association of Credit Men; 9:15, safety first talk, Chicago Motor ciub; 10-11:30, evening at home, Coon-Sanders Original Nighthawks.

WAAW, Omaha, Nebr. (Central, 278), 7:30 p. m., bridge talk, Mrs. Purdy.

WBAP, Fort Worth, Tex. (Central, 472.9), 7:30-8:30 p. m., dance music, "The Troubadours;" 9:30-10:45, musical program, artists of Texas Woman's college.

WBBR, New York, N. Y. (Eastern, 273), 9:10 p. m., Malcolm Carment, clarinetist; 9:20, Fred Twaroschk, tenor; 9:30, international Sunday school lesson, S. M. Van Sipma; 9:50, Fred Twaroschk, tenor; 10:10, Malcolm Carment, clarinetist.

van Sinma; 9:30, Fred Twaroschk, tenor; 10:10, Marcolm Carment, clarinetist.

WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dinner concert, William Penn hotel; 7:30, Uncie Kaybee; 7:45, special feature; 8:30, concert; 10, concert, Goodrich Silvertown orchestra.

WCAL, Northfield, Minn. (Central, 360), 9 p. m., musical program.

WCAL, Northfield, Minn. (Central, 360), 9 p. m., musical program.

WCBO, Zion, Ill. (Central, 344.6), 8 p. m., mixed quartet; trio, Miss Hollingshead, Mrs. Hire, Mrs. Huth; Mrs. Carl Huth, harpist; Miss Hollingshead, flutist; Mrs. L. J. Hire, violaist; Daniel Mason, trombonist; Mr. and Mrs. R. M. Steel, tenor and soprano; Joseph Bishop, baritone; Mrs. S. D. Inman, soprano; Dorothy Schad, painist; Mrs. Hulda Klammer, reader.

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 10:45 a. m., home service, Betty Crocker; 2 p. m., "The Popular Concert," Mrs. Agnes Fryberger; 4, magazine hour, "William the Conqueror: Part One;" 5:30, children'e hour, Gold Medai lady; 6:30, dinner concert, Dick Long's Nankin cafe orchestra; Kater Brothers quartet; 7:45, "True Value of Arctic Work," Donald McMillan; 8-9, musical program; 10, dance program. Dick Long's Nankin cafe orchestra.

WCX, Detroit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner concert, Book-Cadillac hotel; 7, musical program.

program.

WOAF, Kansas City, Mo. (Central, 414.1). 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; Cecile Burton, reader; address, one of a series of book talks. Louis Mecker; the Tell-Me-a-Story lady; music, Hotel Muchlebach Trianou ensemble; 11:45-1 a. m., night-

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 24: 6, WDAF. WOAW; 6:15, WBZ; 6:45, WCAE; 7, KFI, WFI, WJZ; 7:15, WBBR, WJZ; 7:30, WJZ, WOC; 8, WCCO, WJZ, WLS, WNYC; 8:30, KHJ, KOB, WMAQ; 8:45, KFI, WNYC; 9:05, KYW, WEMC; 9:10, WNYC.

Sunday, January 25: 8:45, KFI, WBBR; 9, WJY.

Monday, January 26: 6, WDAF; 6:10, WHN; 6:15, WBZ, WGY; 6:30, WBZ, WHN; 6:35, WNYC; 6:45, WCAE; 6:55, WDAR; 7, KFI, WHB, WHN, WJZ; 7:10, WJZ; 7:15, KDKA; 7:20, KSAC, WOC; 7:30, KFKU; 7:45, KFKU; 8, WCCO; 8:15, WCCO; 8:30, KOB, WOR; 9:10, WNYC; 10, KGO; 11, KPO.

Tuesday, January 27: 6, WDAF, WHN, WJZ, WOAW; 6:10, WHN; 6:15, WBZ; 6:30, WCAU; 6:35, WNYC; 6:45, WCAE, WGY; 7, KFI, WAHG, WJZ; 7:10, WJZ; 7:30, CKY, KSAC, WCCO, WJY, WNYC; 7:45, WCCO; 8, WLS, WMAQ; 8:20, KYW; 8:30, WMC, WNYC; 8:50, WMAQ; 9:10,

WNYC; 9:15, WIP; 10, KGW; 11, KFI; 11:05, KYW.

Wednesday, January 28: 6, WDAF; 6:15, WBZ; 6:30, WCAU, WHN; 7, KFI, WGR, WHB, WJZ; 7:15, KDKA; 7:20, WBBR; 7:30, KSAC, WNYC; 7:40, WJZ; 7:45, WOR; 8, WLS, WLW, WMAQ, WOS; 8:15, WOR; 8:30, KHJ, KOB, KYW; 8:45, KFI; 9:05, KYW; 10, KFAE.

Thursday, January 29: 6, WDAF; 6:10, WHN; 6:15, WBZ; 6:35, WNYC; 6:45, WGY; 7, KFI, WJZ; 7:15, KFKU, WJY; 7:30, CKY, KFKU, KSAC, WAAW, WCCO; 7:45, KFKU, WCCO, WJY; 8, KYW, WLS, WOS; 8:30, KHJ, WAAW, WBBR; 9, WMAQ; 9:15, KYW.

Friday, January 30: 6, WDAF; 6:15, WBZ; 6:30, WBZ, WCAU; 6:45, WGY; 6:50, WDAR; 7, KFI, WGY; WJZ; 7:10, WDAR; 7:15, WGR; 7:20, WOC; 7:30, CKY, KGO, KSAC, WOC; 7:40, KOA; 8, KYW, WJZ, WLS, WMAQ; 8:15, KDKA; 8:30, KHJ, KOB, WCAL, WNYC; 9, WHN; 9:25, WHN; 10, KGW.

hawk frolic, the "Merry Old Chief" and the Planta-

wdar, Philadelphia, Pa. (Eastern, 395), 11:45 a. m., dally almanac; 12:02 p. m., Arcadia cafe concert or-chestra; 12:30, Stanley theater organ recital; 2, French program of music and songs, Lillian Foster, soprano; Marcella North, pianist; Mildred Tindeil, soprano; Kathleen Daiton, planist; 7:30, Dream Daddy's bed-

Marcella North, pianist; Mildred Tindeil, soprano; Kathleen Daiton, pianist; 7:30, Dream Daddy's bedtime stories.

WEEI, Boston, Mass. (Eastern, 303), 6:30 p. m., Boston Edison Big Brother club; 7, Dok-Eisenbourg and his Sinfonians; 8-11, program, New York studio.

WFAA, Oailas, Texas (Centra!, 472.9), 12:30-1 p. m., DeWitt McMurray, philosopher; Edmund F. Boettcher, tenor; William H. McRaven, pianist; 6:30-7:30, vesper musicale, Jack A. Davis and his Ritz orchestra; 8:30-9:30, singers, Midlothian, L. D. Huffstatter; 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 Mabel Swint Ewer; 6:30, Meyer Davis Bellevue Stratford concert orchestra; 7, Sunny Jim, the kiddies' pai; 8, Victor concert.

WGN, Chicago, Iil. (Central, 376.7), 1:40 p. m., luncheon concert, Drake concert ensemble, Blackstone string quintet; 2:30, artists series; 3, rocking chair time; 5:30, Skeezix time; 6, organ recital, Lyon & Healy; 6:30-7, dinner concert; 8-9, elassicai concert, WGN artists: 10-11, Don Bestor Drake dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Hotel Statler concert ensemble; 6-7:30, dinner music, Halipryd trio.

WGST. Atlanta. Ga. (Central, 270), 7-8 p. m., Jessie

Hotel Statler concert ensemble; 6-7:30, dinner music, Halipryd trio.

WGST, Atlanta, Ga. (Central, 270), 7-8 p. m., Jessie McMichael, mezzo soprano; maie quartet; "Edgar Ailen Poe," Frank R. Reade.

WGY, Schenoctady, N. Y. (Eastern, 380), 2 p. m., "Picknicking with Our Children." Cora A. Steele; 6:30, dinner music, Hotel Ten Eyck orchestra; 7:45, "A Few Moments with New Books," L. L. Hopkins; 8, studio program; 8:30, concert, United States Navy band; 11:30, Stephen E. Boisclair, organist.

WHAS, Louisville, Ky. (Central, 399.2), 4-5 p. m., selections, Alamo theater organ; 7:30-9 one-hour concert, auspices, Mrs. Jane. Webster Murreli; saw solos, Prof. William W. Francisco; plano solos, Prof. William W. Francisco; plano solos, Prof. William W. Francisco; vocal solos, Paul Roach; fifteen minute specialty, Wendell Hail.

WHB, Kansas City, Mo. (Central, 414.1), 2-3 p. m., ladies' liour program, Sweeney Radlo trio; 8-9:30, varied musical program.

which was a strictly and the strict of the strictly and strictly as the strictly and strictly and the strictly and strictly as the strictly as th orchestra; 7:10-7:30, WHN Employment orgadeasting; 9:30-10, O'Meara Gardens ballroom; 10-10:30, Loew's vaudeville headliners; 11-11:30, Connie's Inn revue, featuring Leroy Smith's orchestra; 12-12:30 a. m., Ted Lewis and his orchestra from Parody club. WHO, Oes Moines, Ia. (Central, 522.3) 2:15 p. m., Pathe News.

Pathe News.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Gimbel tea room orchestra; 3, Ralph C. Carlin, tenor; talk, Capt. L. G. Pritchard; 6:05, Art Coogan and his Club Madrid orchestra; 7, Uncle Wip's bedtime stories; 8, Delapiaine minstrel troupe; 9, Jacob Rader; 10:05, Harvey Marburger and his vaudeville orchestra.

WJY, New York, N. Y. (Eastern, 405), 8:15-8:45 p. m., "Indlans of the Southwest," Donaid A. Cadzow; 8:45-9, "Income Taxes," Frank Shevit.

WJZ, 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 equipment, Ethel R. Peyser; 10:40-10:50, "Bride's Household Linen," edltor of Needle Art; 10:50-11, fashion talk, Eleanor Gunn; 1-2 p. m., Nathan Abas' Hotel Pennsylvania orchestra; 4:30-5:30, Bernhard Levitow's Hotel Commodore tea orchestra; 7:55-8, "Hints for Husbands," John Kennedy of Colifer's; 8-8:10, Wall Street Journal review; 8:10-8:30, N. Y. U. Air college; 10:30-11:30, Waidorf-Astoria dance orchestra.

WKAQ, San Juan, P. R. (Intercolonial, 360), 8:30-10

WKAQ, San Juan, P. R. (Intercolonial, 360), 8:30-10

VKAQ, San Juan, P. R. (Intercolonial, 360), 8:30-10 p. m., musical concert, La Cafetera.

VLS, Chicago, III. (Central, 344.6), 12-1 p. m., music, Bert White; 3:45-4:45, "What Beautiful Pictures Do for Your Home," Margery Currey; "Recreation in the Home," Margaret Bridge; "Preparing for the Baby," Eilen Rose Dickey; 6:25, Ralph Emerson, organist; 6:50, Senate theater studio; 7. "Tom Thumb," Ford and Glenn Woodshed theater; 7:20, WLS theater presents operetta, "The 1sle of Asswere."

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

and Glenn Woodshed theater; 7:20, WLS theater presents operetta, "The Isle of Asuwere."

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, William Stradtman; 12:15, noon-day concert; 4, French lesson, Madame Ida Tcimpidis; piano recital, Adeiaide Apfel; 6, dinner hour concert, Cincinnati Post, featuring Selinsky quintet; 10, throe-minute message, Civil Service Department of United States; 10:03, Cooper corporation concert, featuring Cooper orchestra, directed by Wm. Stoess; maie quartet: Richard Pavey, first tenor; Ferd Raine, second tenor; Herbert Schatz, baritone; Howard Fuldner, bass; Grace Raine, accompanist.

Herbert Schatz, baritone; Howard Fuldner, bass; Grace Raine, accompanist.

WMAK, Lockport, N. Y. (Eastern, 265.5), 12 midnight, Murray Whiteman's Midnight serenaders.

WMAQ, Chicago, III. (Central, 444.8), 4 p. m., household hour, Mrs. Elizaboth O. Hiller, director: 4:30, Illinois Federation of Women's clubs; 6, Chicago theater organ recitai; 6:30, Hotel LaSaile orchestra; 8, banquet of the Chicago and Cook County Bankers' association; 9, lecture, University of Chicago; 9:15, Walthers league program.

WMC, Memphis, Tenn. (Central, 503.9), 8 p. m., bedtine story, Uncle Joe; 8:30, Hotel Gayoso orchestra: WNYC, New York, N. Y. (Eastern, 528.8), 7:35 p. m., sports, Thornton Fisher; 8, program, citizens and officials of Borough of Queons; 8:30, Queen's night; 10:35, Queen's night.

WOAI, San Antonio, Tex. (Central, 394.5), 9:30 p. m., Jimmy Joy's dance orchestra.

WOC, Davenport, Ia. (Central, 498), 9 p. m., Bernie Schuiz and his orchestra; 11, Louis Connor and his LeClaire hotel orchestra; song and novelty numbers, Peter MacArthur.

WO1, Ames, la. (Central, 360), 12:30 p. m., college chimes; "Incubation," Prof. W. H. Lapp; 8:15, musical

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

crystal tea room orchestra, Robert E. Golden, director; 4:45, organ recital, Mary E. Vogt.

WOR, New York, N. Y. (Eastern, 405), 7 a. m., gym class; 2:30 p. m., Gertrude Briedenbeck, pianist; 3:30, Gertrude Briedenbeck, pianist; 6:15, "Radio for the Layman," Aibert E. Sonn; 6:30, "Music While You Dine," Tom Cooper's Country club orchestra.

WOS, Jeserson City, Mo. (Central, 429.5), 7 p. m., program, Hannibai Chamber of Commerce, from Hannibai, WOJ, Chicago, Ill. (Central, 444.8), 11-12 m. "Some Meat Dishes That Are Different," Erna Bertrams; "Choosing Clothes with an Eye to Spring," Eleanor Chalmers; "The Story of the Bath," Edward L. Barker; "Suggestions for Candy Making," H. E. Morse; 3-4 p. m., "Some Suggestions for Home Builders," L. M. Francisco; "Suggestion for Home Lighting," C. E. Johnson; 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., Raiph Williams and his Rainbo skylarks; Ned and Ches; Axel Christensen, pianist; Grace Wilson, contraito; Hill, Hirsch, Gorny; Rosemary Hughes, soprano; Peggy McClure, WREO, Lansing, Mich. (Eastern, 288.5), 8:15-9:45 p. n., Reo Motor Car company orchestra; Reo quartet; S. Ray Hamilton, tenor; James Lyon, baritone; Mrs. Carl Dewey, accompanist.

Dewey, accompanist.

Dewey, accompanist.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment: 5-6, bedtime story, Bonnie Barnhardt; 8-9, Dr. Charles A. Sheldon, organist; 10:55, classic cuncert, Mrs. Bess Merrill Smith, soprano, director.

WTAY, Oak Park, III. (Central, 250), 6:45-7:45 p. m., Mildred Broman, reader: Herbert Schaeffer, pianist; Jerry Fulium, soprano.

WWJ, Detroit, Mich. (Eastern, 516), 3 p. m., The Detroit News orchestra; 8:30, The Detroit News or-

Friday, January 30

Friday, silent night for: KFKX, KGO, KJS, KPO, PWX, WBBF, WBBR, WCBD, WDBY, WEAO, WGST, WHAZ, WKAQ, WMAK, WOAI, WOI, WRC, WREO.

CKAC, Montreal, Can. (Eastern, 425), 1:45 p. m., Winsor hotel luncheon concert; 4:30, 1 to lessons. CKY, Winnipeg, Can. (Central, 450), 7:30 p. m., "The Human Body as a Machine," Prof. J. C. B. Grant; 8:15, studio concert.
CNRA, Moncton, N. B. (Eastern, 313), 7:30 p. m., Uncle Aif, bedtime stories; 8:30, musical program; popular dance music, Joe Mazzico and his Rainbow Melody Boys.
CNRE, Edmonton, Can. (Mountain, 450), 7:30 p. m.

NRE, Edmonton, Can. (Mountain, 450), 7:30 p. m., children's bedtime stories; 8:30, Newsboys' band of Edmonton.

CNRE, Edmonton, Can. (Mountain, 450), 7:30 p. m., children's bedtime stories; 8:30, Newsboys' band of Edmonton.

CNRT, Toronto, Can. (Eastern, 400), 6:30 p. m., Luigi Romanelli and hls King Edward lotel concert orchestra; 8:30, studio program, ensemble, 'O Canada;'' 'Men of Harlech,' Mabel F. Downlng, harpist; 'Dear Little Boy of Mine,' 'Last Rose of Summer,' Eva Warrington, soprano; 'Les Farfadets,' Erland Misener, violinist; 'In a Time of Roses,' 'Now Sleeps the Crimson Petai,' Marion Copp, contralto; 'Song of Praise,' Mabel F. Downing, harpist; duet, 'Misercre Scene from 'Ii Trovatore',' Eva Warrington and Branson Hall: 'Oh Mistress Mine,' 'Fill the Glass,' George Aldcroft, baritone; 'Canzonetta,' 'Serenade,' Erland Misener, violinist; 'Ah, Moon of My Delight,' Branson Hall, tenor; 'Serenade,' Mabel F. Downing, harpist; 'Ii Bacio,' Eva Warrington, soprano; 'Mother My Dear,' 'My Life Has Crept,' George Aidcroft, baritone; vlola solo, Erland Misener; 'Linden Lea,' 'Noah's Ark,' Marion Copp, contralto; quartet, 'Good Night Belored;' 9, address; 10:30, Luigi Romanelli and his King Edward hotel dance orchestra, KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 7 a. m., morning exercises, O. Shannon; 8, morning exercises; 12:20 p. m., Sunday school lesson, J. C. Marce, W. M. C. A.; 6:15, concert, Charlie Gayiord's orchestra; 7:30, children's period; 8:15, address, University of Pittsburgh studio: 8:30, concert.

KFAE, Pullman, Wash. (Pacific, 330), 7:30-9 p. m., Harvey Wixson, tenor; Danae Licsay, planist; Erna Neison, reader; 'Reading in Preparation for Travel in Europe,' Cari M. Brewster; 'Essentials of Successful Farm Management.' George Severance; 'Survey of New Books,' Alice L. Webb; 'First Care of Buby Chicks.' W. D. Buchanan.

KFAU, Boise, Idaho (Mountain, 275), 8 p. 10, Fd. Hoffman, baritone; Mrs. Frod Rankin, soprano.

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

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m.,

KFOM, Beaumont, 1ex. (Contral, 515.5), band.

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 recitai, Dan McFarland, organist; 8-9. Evening Herald, dance music; 9-10. Examiner, vocal and instrumental; 10-11, Harmony trio. Amadea Reno, violinist, and Carolina Reno, pianist.

(Continued on page 14)

ROSALIE STEWART TO TALK AT WGBS; ARCTIC EXPLORER AT WCCO

Where to Hear Concerts

Central Standard Time

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

KYW, Chleage, Ill., (Central, 535.4), 6:30 a. m., murning execlese; Ill. 53. Table talk, blire, Anny 3. Peterson, 6:33-7; dinner concert, Coursest hotel; S-8:33. Aon; Kelley, soptano; James, Murray, Jenor; Elandy, Teptel, pelnsig; 3:30-8:18, around: the torm with KYW; 3:45-9; model; 9:93. "Hygels." Dr. John, M. Dodson; 5:16; 'Enderdaining Flans," 'Yrette German, Policy of the Course of the C

DANCING (Central Time)

Pligtin quariet, bak Park, 116 (Central, 250); 6:45-1:45 p. ma-Hanks; plantst; Nina Joshy, soletine; Tuckerd barlione; 9-10, ter; mutute technical tak-of line staff of "Railo Are;" Spencer Latence, spie. His. Nytophono; Harmony king; Grace

The Gold Medal Radio quartet is the name taken by these four singers, who appear each week on the programs from the Gold Medal station, Minneapolis-8t. Paul, WCCO. They ate Kenneth Johnson, second tenor (center above); Cal Schiebe, baritone (center below); "Chopple" Mine first tenor (right), and Nels Swesson, bass.

Where to Hear Talks Central Standard Time

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

**WAYC. 9:15, WIP. 10, KI; W. 11, WAYC. 9:15, WIP. 10, KI; W. 11, WAYC. 9:15, WAZ. WOCO. 9, WCO. 9, WC

Charlene Clanoy, a pupil of the Marguerite Manley Sledel School of Music at Columbus, plays avery Thursday, at 11 a.m. for WEAU listeners in

hanks frolle, the "blacey Ohl Chief" and the Planta WOAL, San Antonia; Tes. (Obites, 184,5), 8130 p. million Dispres.

incher, Dr. H. C. Allers, This color-district promoting of the part of the color plants of the part of the color plants (1985) and the color p

WCCO,)S; 8:30, WMAQ;

WDAF; AU; 6:45, I, WGY, GR; 7:20, C, WOC; Z, WLS, HJ, KOB, 5, WHN;

1.5), 9:30 p. m.,

p. m., Bernie Connor and his noveity numbers,

p. m., college pp; 8:15, musical

9.9), 11 a. m., m., Wanamaker Golden, director;

k, pianist; 3:30, 'Radio for the fusic White You

usic While You chestra.

), 7 p. m., profrom Hannibai, 1-12 m., "Some Erna Bertrams; pring," Eleanor 1," Edward L. aking," H. E. for Home Buildor Home Lightconcert. Ralph concert, Ralph chestra; Manuel liner, contralto; Ralph Williams es: Axel Chrises; Axel Chris-o; Hill, Hirsch, gy McClure, 8:15-9:45 p. m., quartet; S. Ray ne; Mrs. Carl

entertainment: concert, Mrs.

:45-7:45 p. m, aeffer, pianist;

3 p. m. The troit News or-

30

), KJS, KPO, DBY, WEAO, .1, WOI, WRC,

lo lessons.
lo p. m., The
C. B. Grant;

7:30 p. m., isical program; 1 his Rainbow

), 7:30 p. m., sboys' band of

Op. m., Luigi
ncert orchestra;
anada;" "Men
t; "Dear Little
r." Eva Warrland Misener,
ow Sleeps the
lto; "Song of
inet," "Miscrere
/ gton and Branill the Glass."

"Mother My Dear," "My Life Has Crept," George
Aldcroft, barltone; vloia solo, Erland Misener; "Linden
Lca," "Noah's Ark," Marion Copp, contralto; quartet,
"Good Night Beloved;" 9, address; 10:30, Luigi
Romanelli and his King Edward hotel dance orchestra.
KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 7 a. m.,
morning exercises, O. Shannon; 8, morning exercises;
12:20 p. m., Sunday school lesson, J. C. Mace, W.
M. C. A.; 6:15, concert, Charlie Gaylord's orchestra;
7:30, children's period; 8:15, address, University of
Pittsburgh studio; 8:30, concert.
KFAE, Pullman, Wash. (Pacific, 330), 7:30-9 p. m.,
Harvey Wixson, tenor: Danac Llosay, planist; Erma
Nelson, reader; "Reading in Preparation for Travel
in Europe," Carl M. Brewster; "Essentials of Successful Farm Managoment," George Severance; "Survey of
New Books," Alice L. Webb; "First Care of liaby
Chicks," W. D. Buchanan.
KFAU, Boise, Idaho (Mountain, 275), 8 p. m., Ed.
Hoffman, baritone; Mrs. Fred Rankin, soprano.
KFDM, Beaumont, Tex. (Central, 315.6), 8 p. m., refinery
band.
KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m.,

band.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m.,
Evening Heraid, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-8, Aeollan rosidence
pipe organ recital, Dan McFarland, organist; 8-9.
Evening Heraid, dance music; 9-10, Examiner, vocal
and instrumental; 10-11, Harmony trio, Amadeo Reno,
violinist, and Carolina Reno, pianist.

(Continued on page 14)

trom Fort Garry hotel.

CNRC, Calgary, Can. (Mountain, 430), 9-11 p. m., weekly travel tales, "Johnny and Jenny Jingles" and youthful C. N. R. travelers; Canadian National Raliways Symphony orchestra; George Boothman, baritone. CNRW, Winnnipeg, Man. (Cential, 450), 8:15 p. m., bedtime travel tales; 8:30, The Melody Three, Elisa Brault, soprano; Lucia Hart, contralto; Margaret Fletcher, accompanist; "The Functions of an Express Foreign Department in Overseas Trade;" dance program, Frank Wright's Country club dance orchestra. KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:20 p. m.,

gram, Frank Wright's Country club dance orchestra. KDKA, E. Pittsburgh, Pa. (Eastern, 309.1), 12:20 p. m., Institute from Trinity church; 6:15, concert, KDKA Little Symphony orchestra, Victor Saudek, conductor; 7:30, children's period; 8, program; 8:30, concert; 11, concert, Pittshurgh Post studio.

KFI, Los Angeles, Calif. (Pacific, 469), 5-5:30 p. m., Evening Heraid, table talk and news; 5:30-6, Examiner's musical half hour; 6:45-7, Y. M. C. A. speaker; 7-7:30, dance orchestra; 7:30-8, Retta King Nelson, nezzo-soprano; Pnilip Musgrave, cello; female quartet; 8-9, program, Standard Oli company of California; 9-10, Examiner, program, Zoeliner Conservatory of music; 10-11, vocal and Instrumental.

KFKU, Lawrenco, Kans. (Central, 275), 6:50 p. m., plano tuning-in number; 7, music, Prof. Waller Whitlock, tenor; university string quartet; 7:15, "Americanization," Frof. F. W. Bluckmar; 7:30, chemistry

dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 7:45, special feature; 8:30, concert; 10, concert, Goodrich Silvertown orchestra.

WCAL, Northfield, Minn. (Central, 360), 9 p. m., musical program

WCAL, Northfield, Minn. (Central, 360), 9 p. m., musical program.

WCBD, Zion, III. (Central, 344.6), 8 p. m., mlxed quartet; trlo, Miss Hollingshead, Mrs. Hire, Mrs. Huth; Mrs. Carl Huth, harpist; Miss Hollingshead, flutist; Mrs. L. J. Hire, violaist; Daniel Mason, trombonist; Mr. and Mrs. R. M. Steel, tenor and soprano; Joseph Bishop, baritone; Mrs. S. D. Inman, soprano; Dorothy Schad, painist; Mrs. Hulda Klammer, reader.

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 10:45 a. m., home service, Betty Crocker; 2 p. m., "The Popular Concert," Mrs. Agnes Fryberger; 4, marazine hour, "William the Conqueror: Part One;" 5:30, children's hour, Gold Medal lady; 6:30, dinner concert, Dick Long's Nankin cafe orchestra; Kater Brothers quartet; 7:45, "True Value of Arctic Work," Donald McMillan; 8-9, musical program; 10, dance program, Dick Long's Nankin cafe orchestra.

WCX, Detroit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner concert, Book-Cadillac hotel; 7, musical program.

6, dinner concert, BOOK-Cadiliac notel; 7, musical program.

WDAF, Kansas City, Mo. (Central, 414.1), 3:30-4:30 p. m., the Star's Radlo orchestra; 6-7, school of the alt, piano tuning-in number on the Duo-Art; Ccclle Burton, reader; address, one of a series of book talks. Louis Mccker; the Tell-Me-a-Story lady; music, Hotel Muchichach Trianon ensemble; 11:45-1 a. m., night-

Ellen Rose Dickey; 6:25, Raiph Emerson, organist; 6:50, Scnate theater studio; 7, "Tom Thumb," Ford and Glenn Woodshed theater; 7:20, WLS theater presents operetta, "The Isle of Asuwere."

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercises, William Stradtman; 12:15, noon-day concert; 4, French lesson, Madame Ida Tcimpidis; plano recital, Adelaida Apfel; 6, dinner hour concert, Cincinnati Post, featuring Seiinsky quintet; 10, throeminute message, Civil Service Department of United States; 10:03, Cooper corporation concert, featuring Cooper orchestra, directed by Wm. Stoess; male quartet: Richard Pavey, first tenor; Ferd Raine, second tenor; Herbert Schatz, baritone; Howard Fuldner, bass; Grace Raine, accompanist.

Herbert Schatz, baritone; Howard Fuldner, bass; Grace Raine, accompanist.

WMAK, Lockport, N. Y. (Eastern, 265.5), 12 midnight, Murray Whiteman's Midnight serenaders.

WMAQ, Chicago, III. (Central, 444.8), 4 p. m., household hour. Mrs. Elizabeth O. Hiller, director; 4:30, Illinois Federation of Women's clubs; 6, Chicago theater organ recital; 6:30, Hotel LaSalle orchestra; 8, banquet of the Chicago and Cook County Bankers' association; 9, lecture, University of Chicago; 9:15, Waithers league program.

WMC, Memphis, Tenn. (Central, 503.9), 8 p. m., bedtime story, Uncle Joc; 8:30, Hotel Gayoso orchestra; WNYC, New York, N. Y. (Eastern, 528.8), 7:35 p. m., sports, Thornton Fisher; 8, program, citizens and officials of Borough of Queons; 8:30, Queen's night; 10:35, Queen's night.

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Kpo, 9:05, Webh, 10:15, e b h, Whn, Kyw, Kgo, 29: 8, 89 Whn a. Wex, 12: Wdar, Ve' 9:30, W Wnj, \$15 (Ksnd, W 10:30, W) Wnj,

Webh, VI: 11:45, Kh.; h 12:05, Kyw, 12:05. Kyw,

Friday, January 30

(Continued from page 11)

(Continued from page 11)

KFNF, Shenandoah, Ia. (Contrai, 266). 6:30 p. m., eoncert, Omaha, Nebr., Rev. J. W. Sapp. director.

KFOA, Seattle, Wash. (Pacific, 455). 4-5:15 p. m., Olympic hotel concert orchestra; 6:45-8:15, Shorman, Cloy & company program; 8:30-10, Seattlo Times studio program; 10:05-11, Olympic hotel dance music.

KFSG, Los Angeles, Calif. (Pacific, 278), 10:30-11:30 a. m., sunshluo hour; 3:30-4:30, organ recital, Roy Reld Brignall; 7:30-9:15, auditorium servico, Angelus Temple, illustrated sermon; 9:15-10, studio program presenting Temple Choir and Silver band; 10-11, organ recital, Roy Reid Brignall.

KGO, Oakland, Calif. (Pacific, 312), 11:30-1 p. m., iuncheon concert, Pacific States Electric company; 3, studio musical program and speaker; 4-5:30, concert orchestra. Hotei St. Froneis; 5:30-6, girls' half hour, Esther Wood Schnelder.

KGW, Portland, Ore. (Pacific, 492), 12:30 p. m., concert; 5, children's program, story. Aunt Nell; 8, lecturo, University of Oregon Extension division; 10:30, Hoot Owls.

KHJ, Los Angeles, Calif. (Pacific, 395), 12:30-1:30 p. ml., Perry's orchestra; 2:30-3:30, program, Pacific States Electric company; 6-6:30, Art Hlekman's Biltmore hotel concert orchestra. Edward Fitzpatrick, director; 6:30-7:30, Prof. Walter Sylvester Hertzog, little stories, Aunerican history, "Slr" Richard Headrick, screen starlet, Unelo John; 8-10, program, Mullen & Bluett; G. Alilson Phelps, Radlo philosopher; 10-11, Earl Burtnett's Biltmore hotel dance orchostra. KNX, Hollywood, Calif. (Pacific, 337), 8 a. m., morning prayer; 9, Hired Hand, news; 10, Hired Hond's morning message; 11:30, Estello Lawton Lindsey, skipper of the Evening Express' Log; 12, Wurlitzer pipe organ recital; 5:30 p. m., Town Crior and Village Urchins; 6, Richfield weekly traveloguo; 6:30-7:30, dinner hour nusle; 8-10, program arranged by Mrs. A. F. Borden; I0-11 popular songs, June Purcell, the KNX girl; 11-12, Abe Lymun's Cocoonut Grove dance orchestra from Ambassador hotel.

III-11 popular songs, June Purcell, the KNX girl; 1112, Abe Lymun's Cocoonut Grove dance orchestra from
Ambassador hotel.

KOA, Oenver, Colo. (Mountain, 322.4), 6:40 p. m.,
hook of knowledge; 8, "The Romantle Age," KOA
players, Irls Ruth Pavey, director; KOA orchestra.

KOB, State College, N. M. (Mountain, 360), 7:30-8:30
p. m., popular science course, lesson 2, member of the
carlingering faculty.

KPO. San Francisco, Calif. (Pacific, 423), 7 a. m.,
settling up exercises, Bernard Drury; 11, chat to
housewives, Prudence Penny; 12:45 p. ni., talk, Commonwealth club luncheon; 1-2, Rudy Selger's Fairmont hotel orchestra; 4:30-5:30, Rudy Selger's Fairmont hotel orchestra.

KSAC, Manhattan, Kan. (Central, 340.7), 12:30 p. ni.,
tuning in plane selection; reading; "Studying Last
Year's Bushness from Farm Accounts," I. N. Chapman;
Radio question box; "The Hessian Fly," E. G. Kelly;
7:20, college bell and opening exercises; 7:30, "Making the Address," Henry A. Shinn; 7:40, Radio College quartet; 7:15, reading, Henry A. Shinn.

KSD, St. Louis, Mo. (Central, 549.1), 8 p. m., program,
('entral Wesleyan College band and glee club.

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

KYW, Chicago, III, (Central, 535.4), 6:30 a. m., morning exercises; 11:35, table talk, Mrs. Anna J. Peterson; 6:35-7, children's hedtime story, Uncle Bob;
7-7:30, dinner concert, Congress hotel; 8, speeches,
auspices of the American Farm Bureau federation;
"What Illinols Produced and Sold in 1924," A. C.
Page; "Painting Signs on Illinois Farms," H. C.
Butcher; 9-10, midnight revue; 11-2:30, midnight
revue continued.

WAHG, Richmond Hill, N. Y. (Eastern, 316), 12 in.,
Brooklyn Federation of churches; 8 p. m., plane duets,
Betty and Helen Lasner; 10, Mat Steger's dance orchestra.

Brooklyn Melen Lasner; 10, Mat Steger's danco orchestra.

WBAP, Fort Worth, Tex. (Central, 472.9), 7:30-8:30 p. m.. dinner music. Jinuny Rlley's Texas hotel orchestra; 1:30-10:45, Saxophone band of Sweetwater.

WBAV, Columbus, Ohio (Eastern, 294), 8 p. m., Dispatch Little Symphony orchestra, John Clark, director.

WBZ, Springfield, Mass. (Eastern, 337), 7:10 p. m., klddies' bedtlme story; 7:15, lecture, address; 7:30-8, University Extension course; 10-11:30, concert: 11:30, McEnelly's singing orchestra playing dance music, WCAE, Pittsburgh, Pa. (Eastern, 462), 6:30 p. m., dlmer concert, William Penn hotel; 7:30, Uncle Kaybee; 8:30, musical program, Rochester artists.

WCAL, Northfield, Minn. (Central, 360), 8:30 p. m., hook talk, "The Necessity of Art," reviewed by Dr. George Weida Spohn.

WCAU, Philadelphia, Pa. (Eastern, 278), 6 p. m., Hotel Pennsylvania dance orchestra, Ray Steem, director; 7:30, series of health, fashion and household talks; 8, reeltal; 9, dance music, Southland seven.

WCCO, Minneapolis-St. Paul, Minn. (Central, 419.3), 10:45 a. m., home service. "A Redueing Diet," Betty Croeker; 2 p. m., "The Visiting Nurse and a Happy Community," Eleanor Zuppaun; 2:30, matinee musical; 4, magazine hour, "William the Conqueror: Part Two;" 5:20, children's hour; 6:30, dinner concert, Diek Long's Nankin cafe orchestra; 7:30, program, ausplees Brainer Chamber of commerce; 9, "Pa's F. and R. Family."

WCX, Detroit, Mich. (Eastern, 516), 4:15 p. m., music; 6, dinner concert, Book-Cadillae hotel; 10, dance music, the Arcadia. 8, dinner concert, Book-Cadillac hotel; 10, dance music,

the Arcadia.

WOAF, Kansas City, Mo. (Central, 414.1), 3:30-4:30 p. m., the Star's Radlo trio; 6-7, school of the air, plane tuning-in number on the Duo-Art; address, speaker, auspices Kansas City Children's bureau; the Tell-Me-a-Story lady; music, Hotel Muchlebach Trianon cnsemble; 8-10, popular program; 11:45-1 a. m., night-hawk frolic, the "Merry Old Chief" and the Plantation ulayers.

resemble: 8-10, popular program; 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., Arcadia eafe concert orchestra; Stanley theater organ recital; 2, playlet, Natlonal School of Oratory and elocution; 7:30, Dream
Daddy's bedtime stories; 7:50, humor talk, Sam Wingfield: 8:10, hook review, Arnold Abbott; 8:30, WDARWalter Greenough players; 10:03, Arcadia eafe dance
orchestra; 10:15, Morning Glory cluh concert.

WEBJ, New York, N. Y. (Eastern, 273), 7-7:30 p. m.,
Jean Moresco, operatie arias; Norman Hennefeld, accompanist; 7:30-8, Edlth Law, soprano; accompanied
hy Vlola Miner; 8-8:15, June Manning, songs; 8:158:30, Italiroad talk, Garrow T. Geer; 8:30-9, Felrsteln ensemble.

WEE1, Boston, Mass. (Eastern, 303), 2 p. m., Happy
Hawkins and his Grand Gardens orchestra; 6:30, Big
Brother club; 7, musicale; 8, program, Neopolitan Ice
('ream company; 9-11, musicale.

WEMC, Berrien Springs, Mich. (Central, 286), 9-9:15
p. m., Radio Lighthouse choir; 9:15-9:30, life of Isaae
Watts, singing of his well known hymns; 9:30-9:45,
Ruth Lee, soprano; 9:45-10:05, Mary Lamson, reader;
10:05-10:20, Italph Wade, E. DeLong, saxophonists.

WFAA, Oallas, Texas (Central, 472-9), 12:30-1 p. m.,
address, Dr. Robert Stewart Hyer; 4:30-5, woman's
hour, Mrs. Bessie M. Trihle; 6:30-7:30, vesper musicale. Jack Gardener's Hone Boys orchestra; 8:30-9:30,
program. Texas penwomen.

WFI, Philadelphia, Pa. (Eastern, 395), I p. m., Meyer
Davis Bellevue Stratford concert orchestra; 6:30, Meyer
Davis Bellevue Stratford concert orchestra; 7, Sunny
Jim, the kiddles' pal.

WGN, Chicago, III. (Central, 376.7), 1:40 p. m., lunchcon concert ensemble, Blackstone string quintet; 2:30,
artists serles; 3, rocking chair time; 5:30-7, dinner
concert; 8-9, classical concert; 10-11, Don Bestor Drake
dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m.,

dance orchestra.

CN

dance orchestra.

WGR, Buffalo, N. Y. (Eastern, 319), 12:30-1 p. m., Ilotel Statler eoncert ensemble; 6:30-7:30, dinner musie, Vineent Lopez Hotel Statler dance orchestra, Haroid Gleser, director; 8:15-8:30, lecture, "Earned Income and Other New Features of the 1924 Federal Income Tax Law." E. C. Gruen; 8:45-8:55, rectal, Blanche K. Langhans, soprano, and assisting artists; 9:10, concert, Niagara Battery corporation, direction of C. S. Bettinger, president; 10-11, the Larkin string orchestra, John Lund, director; 11:30, supper-dance musie, Vincent Lopez Hotel Statler dance orchestra, Harold Gleser, director.

WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m.,

Harold Gleser, director.

WGY, Schenectady, N. Y. (Eastern, 380), 2 p. m., health hints, Dr. C. H. Woodall; 6:30, stories for chlidren; 7:45, health talk; 7:30, WGY orchestra; 8, address, "The Pan-American Scientific Congress," Henry Wallace Gardner; Glovanni Trombini, eeliist; 8:30, drama, "Inside the Lines," WGY players; 10:30, Tschalkowsky program; WGY orchestra; Glovanni Trombini, cellist; A. O. "orgeshall, tenor; Edward A. Riee, vlollnist; "An Appreciation of Tschalkowsky; Ethel E. Obterhont, planist; Rice string quartet; American trio. WHAS, Louisville, Ky. (Centrai, 399.2), 4-5 p. m., solections, Alamo theater organ; 7:30-9, concert, Al

Wiesman's Novelty orchestra; fifteen minute specialty, Wendell Hall.

WHB, Kansas City, Mo. (Central, 414.1), 2-3 p. m., ladles' hour program, Sweeney Radio trio; 7-8, address; music, Sweeney Radio trio.

WHN, New York, N. Y. (Eastern, 360), 6:30-7 p. m., Vincent Catanese and his Hotel Alumac orchestra 7-7:30, Harry Itlehman and his entertainers; Eddio Elkins and his orchestra; 9:30-10, Dan Gregory and his Crystai Polace orchestra; 10-10:10, fashion chats Mmo. Belle; 10:10-10:25. Boh Miller, songs; 10:25-10:30, "Storage Batterlos," H. B. Shontz; 10:30-11, Roseiand danco orchestra; 11-11:30, Vanity elub revue; 11:30-12, Sam Wooding and his Club Alabam orchestra; 12-12:30 a. m., Ted Lewis and his Parody club orchestra.

WHO, Dos Moines, ia. (Central, 522.3), 7:30-8:30 p.

WHO, Dos Moines, ia. (Central, 522.3), 7:30-8:30 p. m., classical program, Dean Raymond N. Carr, director; 8:30-9, Williamson brothers.

WIP, Philadelphia, Pa. (Eastern, 509.9), 1 p. m., Gimbel tea room orchestra; 3:15, Norman 1. Greig, baritone; Elizabeth Gear, pianlst; 6:05, songs, Mark Fisher and Joc Burke; 6:15, Harvey Marburger and his vaudevillo orchestra; 7, Unclo Wip's bedtiue stories.

Joe Burke; 6:15, Harvey Marburger and hls vaudevillo orchestra; 7, Unclo Wip's bedthue stories.

WJJO, Mooseheart, ill. (Central, 302.8), 3:30-4:30 p. m., musie, Mooseheart children; 6:45-7:15, Albert F. Brown, organist; 7:15-8:15, solos, Mooseheart children; Novelty orchestra; talk, M. P. Adams; 11:30-12:30 a. m., request organ music.

WJY, New York, N. Y. (Eastern, 405), 8:30-10 p. in., "Inside the Lines," WGY players from WGY, WJZ, New York, N. Y. (Eastern, 455) 10-10:20 a. m., housowivos' league inenu, Mrs. Julian Heath; 10:20-10:40, "Books," Grace Isabel Colbron; 10:40-10:50, "Arts and Decorations," Mrs. Mary Roberts; 11-11:30, "Scottish Recipes from Chief Steward of a Scottish Ship," Chief Steward Walter McKay; 1-2 p. m., Henry Vander Zanden's Hotel Ambassodor trlo; 7-8, Savarin ensemble; 8-8:10, Wali Street Journal review; 8:10-8:20, "Public Speaking," N. Y. U. Air college, Alvin C. Busse; 8:40-8:50, Scotch songs, John Cassidy, haritone; 9-9:45, International Book review, Clifford Smyth; 9:45-10, Ernesto Berumen, pianist; 10:30-11:30, Duke Yellman and his Irene Castle orchestra.

WLS, Chicago, Ill. (Central, 344.6), 12-1 p. m., WLS 4 Aces of harmony; talk, Rev. George Neil; 3:45-4:45, "Religious Education of the Children in the Home," Rev. Norris L. Tibbets; "Child's Literature," Mrs. Florence Crocker; Worth Jackson, pianist and whistler; Mrs. May Jackson, reader; 6:25, Ralph Emerson, organist; 6:50, Senate theater studio; 7, Iullaby time, Pord and Glenn; 7:15, Garrett Male Glee club; 8-9, Kenneth Clark with his Hawalian guitar; talk, Rev. George Neil; "Cashing in on Early Chicks," D. E. Hule; 9, C. A. Bali, baritone; 9:10, WLS theater; 9:30, Martha Bjorn, contralto; 9:42, Senate theater

orchestro; 10, Senate theater symphony orchestra; 10:10, Nubs Allen; Kenneth Clark and his Hawailan guitar; 10:30, Isham Jones and his Collego Inn orchestra; 10:40, Ford and Glenn time.

WLW, Cincinnati, Ohio (Central, 423), 8 a. m., physical exercisos. William Stradtman; 12:15 p. m., program from the College of music, dance program; 4, French lesson, Madame 1da Teimpldis, recital, pupils of Leo-Stoffregen.

lesson, Madame 1da Tcimpldis, recital, pupils of Leo Stoffregen.

WMAQ, Chicago, III. (Central, 444.8), 12:25 p. m.,
Y. M. C. A. forum; 4, talk on English, Mrs. J. Elliott Jenkins; 4:30, pupils, Bush conservatory; 5, Iullaby lady, Mrs. Gene Davenport; 6, organ recital, Chleago theater; 8, weekly Wlde-Awake elub program, Mrs. Frances M. Ford; 8:30, musical geography, Mr. and Mrs. Marx E. Oberndorfer; 9:15, musicol program.

WMC, Memphis, Tenn. (Central, 503.9), 8 p. m., bedtime stories, Uncle Percy; 8:30, Prof. Chin Chin and his Britling's Cafeteria Novelty orchestra; 11, midnight frolic.

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

Meadowbrook orchestra.

WNYC, New York, N. Y. (Eastern, 528.8), 7:35 p. m., resume of meeting, board of estimate, Peter J. Mc-Gowan; 8:30, studio program; 9:30, timely topics, Francis P. Bent: 10, studio program; 10:35, Ben Bernie and his Hotel Roosevelt orchestra.

WOC, Davenport, ia. (Central, 498), 7:20 p. in., "What Farm Bureau Work Means to Women," Mrs. Bertlia Cutler; 7:30, discussion of the international Sunday school lesson, Rev. M. A. Getzendaner; 8, Leo T. Boylon, planist; Alice Ostrander, soprano; Olga Edeen, soprano.

WOI, Ames, iowa (Central, 360), 12:30 p. m., collego chimes; "Brooding of Chicks," Prof. W. H. Lapp. ehlmes; "Brooding of Chicks," Prof. W. H. Lapp.

WOO, Philadelphia, Pa. (Eastern, 509.9), 11 a. m., organ recital, Mary E. Vogt; 12:02 p. m., Wanamaker crystal tea room orchestra; 4:45, organ recital, Mary E. Vogt; 5; sports results; 7:30, A. Candelori's ensemble from Hotel Adelphi; violin solos, A. Candelori; 8:25, Erno Rapee's intimate concert, Fox theater; selections, Fox theater petite orchestra; 10:30, Viliam Bove's Royal Palm dance orchestra; 10:30, Vincent Rizzo's Havana Casino dance orchestra.

WOR, New York, N. Y. (Eastern, 405), 7 a. n., gym class, Arthur E. Bagley; 2:30 p. nn., Mildred J. Truman, soprano; 3, Allan R. Cullimore; 3:15, Mildred J. Truman, soprano; 6:15, "Music While You Dino," Papp's orchestra; 6:30, "Man in the Moon" stories, Josephine Lawrence, William F. B. McNeary; 7, "Music While You Dine," Papp's orchestra.

WOS, Jefferson City, Mo. (Central, 429.5), 8 p. m., "Missouri," George A. Pickens; 8:15, square dance

fiddlin's tunes, Bill Caton and Ola Gathright.

WQJ, Chicago, ill. (Central, 444.8), 11-12 p. m., Fred Mann and his Sunday dinner menu, Ted Wilmus, Rainbo Garden chef; 3-4, "A Formal Reception," Dorothy McLain Dicken; "Apache Trail of Arizona," travelogue, Mrs. H. T. Sanger; 7-8, concert, Ralph Williams and his Rainbo Garden orchestra; Maridean Borreson, baritone; Fern Denicke, accompanist; Harry Golso, pianist; 10-2 a. m., Ralph Williams and his Rainbo skylarks; Rogers boys, Lairy and Billy; Nubs Allen, contralto; West brothers, steel guitarists; Monograin trio; James J. Whalen, tenor; other artists to be announced.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment.

WSB, Atlanta, Ga. (Central, 429), 12 m., entertainment; 5-6 p. m., songs and bedtime story, Bonnio Barnhardt; 8-9, John McCrindle, Scotel bass; 10:55, Radiowl

entertainment.

WTAY, Oak Park, Ill. (Central, 250), 6:45-7:45 p. m.,
Sandy Meek, barltone; Black Cat orchestra.

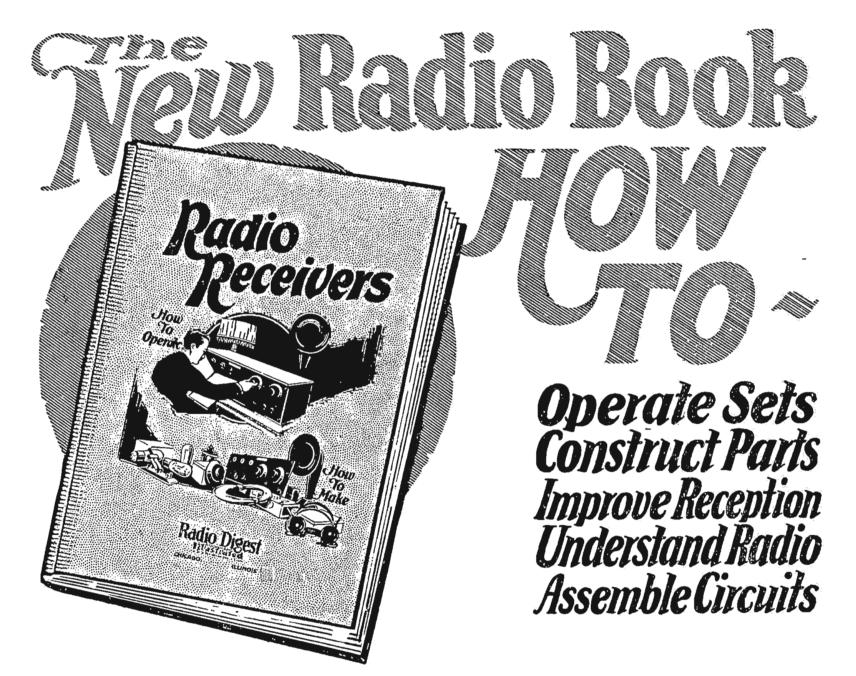
WWJ, Oetroit, Mich. (Eastern, 516), 3 p. m., The
Detroit News orchestra; 8:30, The Detroit News orehestra; The Detroit News poet,

Complete Denial of Rumor Using Secret Broadcasting

NEW YORK .- Emphatic denial of the rumor that the American Telephone and Telegraph company had perfected a device which would permit the broadcasting of special programs only to those who had subscribed for the service was made by J. A. Holman, manager of broadcasting for the telephone company.

This rumor was published in several papers and created quite a furore among Radio engineers. When questioned, Mr. Holman stated that there was no foundation for the story being printed in these papers.

New Radio regulations are being promulgated by the Polish ministry of industry and commerce which will provide for a certain amount of private broad-



FREE With One Year's Subscription to Radio Digest

THE greatest assemblage of facts and hints, from actual everyday practice, ever gotten together. Edited by the technical staff of Radio Digest it supplies the demand for a book covering every phase of Radio from a simple explanation of Radio reception to a technical explanation of the different parts of a set which leads to the best reception possible. The sections on selecting and making sets develops the different types of sets and circuits with blue-prints and diagrams to explain same. "How to Operate" gives detailed information on the operation of all the well-known sets. The section of general

information contains a complete Radio map and schedule and a section of workshop kinks which save time and money. Now is the time to take advantage of the exceptional offer as listed in the coupon for your convenience.

This Handy Radio Reference Book Is Yours Today Use the Coupon-Mail Today

RADIO DIGEST, 510 N. Dearborn St., Chicago, Ill.	-	1-24-25
Enclosed find five dollars fo Radio Digest including FREE Book called "Radio Receivers- to Make."	I the New 124	Page Radio
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OPERATING AND TROUBLE SHOOTING

For the Owner of a Radiola Super-Heterodyne

ADIOLA Super-heterodyne is a Radio broadcast receiving instrument, utilizing the super-heterodyne principle, which provides unusual simplicity of operation, selectivity and sensitivity. The cabinet contains the operating mechanism and the battery equipment, as well as a loop antenna, making the set self-contained. It is designed for reception over the broadcast wave length band 220 to 550 meters.

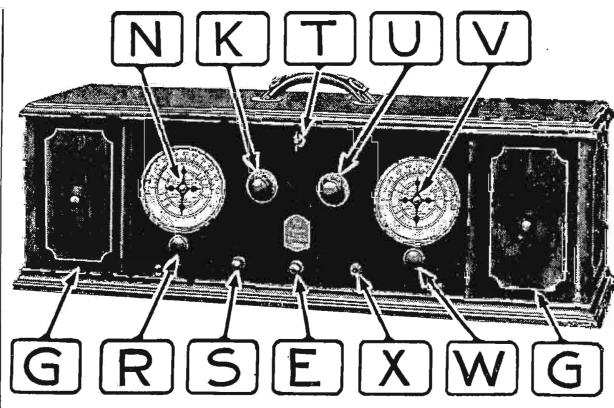
Additional Equipment Required

In addition to the Radiola Super-heterodyne, there will be required the following apparatus: 6 vacuum tubes, model UV-199, 1 loud speaker, 1 telephone plug, 1 set of A, B and C batteries. The A battery may be composed of six ordinary dry cells, 11/2 volts each, for lighting the filaments. They should be connected in two parallel groups, each of three cells in series. For the B battery, four 22½-volt plate batteries connected in series, or two 45-volt plate batteries may be used, if desired. The C battery is to be one of the customary 4½-volt units measuring 4 by 3 by 1% inches.

Access to the space provided for the A and B batteries is secured by pulling on the knobs on the two small end doors and removing these doors. An envelope containing four short and two long jumper connectors will be found inside.

Connecting Batteries

Connect two B batteries in series, using one of the long jumper connectors, fastoning one end onto the "+22½ V." terminal of one battery and the connected of set. minal of one battery, and the other end onto the "-" terminal of the other battery. (Should the large size 45-volt blocks be used, the two jumper connectors will marked "+C" to the "+" terminal on back in place and lock it, using the latch T. be used, the two jumper connectors will not be needed.) Connect these batteries to the set, fastening the lead marked "—C" to the "—4½ V." terminal "+B", coming through the hole in the of the battery. side of the battery compartment onto the battery terminal marked "+22½ V.", as nected, replace the battery doors. Radiola yet unconnected; (or onto the "+45 V." super-heterodyne may now be located in



used). Connect the other lead marked desirable to its owner. It need not be "—B" onto the "—" terminal of the other located in any particular place or turned battery. Stand the batteries (or battery) in any particular direction with respect on end and place them in the compartment, pushing them into the corner as near toward the center of the set as possible.

Connect three of the A dry cells in series, using two of the four short jumper connectors. Connect the lead marked

With the batteries installed and conterminal of the 45-volt battery if one is any part of the home, convenient and

located in any particular place or turned to the room or to the received signal.

This super-heterodyne utilizes six tubes. model UV-199, which should be handled with due care. Pull the Radio panel forward to the half open position, allowing it to rest against the stay joint.

Before inserting the tubes, turn the battery setting knob K to "off" or push "+A" to the center binding post (not yet connected); and connect the lead marked in the filament switch E in the lower '—A" onto the outside binding post (not center of the panel. Remove the six center of the panel. Remove the six vacuum tubes from their individual cartons. Insert one in each of the six tube sockets by placing it in the socket, turning the tube until the pin in the base drops into the slot, and then turning

Pull out the filament switch E. Turn the "battery setting" knob K clockwise from "off" toward "100." With new bat-

teries, the pointer should be set approximately 40 to 50 on the dial. As the batteries grow older, this setting must be gradually advanced toward "100." Turn the "volume control" knob U clockwise from "soft" to "100." Push in the jack switch S, which puts the output of the second stage amplifier into the loud

The tuning of Radiola super-heterodyne involves only the manipulaion of the two "station selector" knobs R and W—a simple operation if the principle described below becomes thoroughly understood.

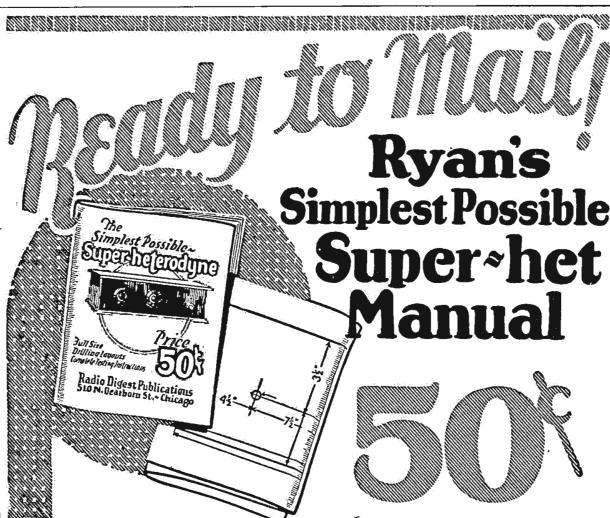
The two gold-tipped pointers have approximately the same settings, i.e. if one is set at 10 or 30, etc., the other is at or near 10 or 30, etc.

When searching for stations, the settings of which are not known, proceed as follows: Set "station selector I" goldtipped pointer N at, say, 10 (referring to the metal dial scale under the paper scale). Move "station selector II" goldtipped pointer V slowly over the scale near 10, say from 5 to 15. If no signals are heard, there is no station working on that wave length. Then set "station selector I" pointer at say 12, and slowly move "station selector II" from about 7 to 17. If again no signals are heard, set "station selector I" gold-tipped pointer at, say, 14, and move "station selector II" slowly from about 9 to 19. If still no signals, repeat this process increasing the setting of "station selector II" in small steps until the whole scale has been covered. It will be noted after the first few trials that when "station selectors I and II" are in resonance, a slight breathing sound is heard, indicating that the set is working properly and in resonance.

After hearing a signal, carefully adjust both "station selectors I and II" to best result. If no stations are heard, the set should be turned on the table 90 degrees from where it was during the preceding adjustments, and the tuning process just described should be repeated.

As Radiola super-heterodyne is a very sensitive receiver, it is often found advisable to reduce the loud speaker volume. This may be accomplished by employing one or all of the following methods:

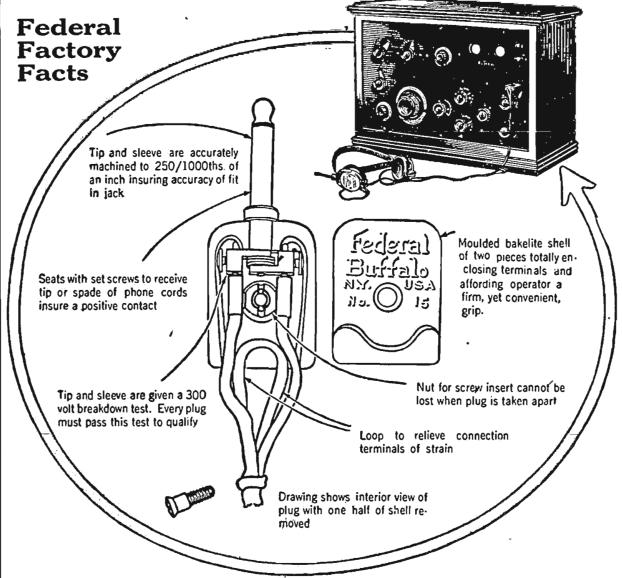
(Continued on page 20)



Full Size Drilling Templates-Loop Aerial Construction

ANYONE who has built a crystal set or single-tuber can follow Mr Ryon's can follow Mr. Ryan's concise, simply worded instructions and enjoy the range available only from a super-heterodyne. Every wire, every lug, is placed by his directions and you cannot go wrong.

The construction of loop aerials, storage "B" batteries, a charger and even the cabinet are gone into thoroughly. This manual covers the complete installation of a selective, quiet, long range Radio outfit. Send money order, stamps or currency to



The plug is the KEY that unlocks the full possibilities of your receiver. No matter what you are getting off the air, you HEAR only what the plug lets through.

Buy a No. 15 Federal Plug for your radio phones or loud speaker if you want to know what your radio set can give you.

Buy a Federal Plug today—also take advantage of the other 130 standard radio parts sold under the same Federal iron-clad performance guarantee.

FEDERAL TELEPHONE MANUFACTURING CORP. Buffalo, N. Y.

BOSTON PITTSBURGH

CHICAGO SAN FRANCISCO BRIDGEBURG, CANADA

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Publicity Broadcasting

Field for Reaching Buyers Great Advertisers Think FRENCH advertisers are beginning to wonder what is the best means to reach the wide field of sales prospects among Radio listeners. This has been a problem wherever broadcasting exists. A station has a multitude of purposes. The manager is supposed to be a conductor of opera, an educator, an editor, a private entertainer, a director of an orchestra and a music hall manager, and last of all advertisers would make him sales campaign manager.

The Frenchmen think that in using a station for advertising, or other publicity, that this would be a cure for their ills in financing the broadcasting of

Spain has a law which controls the amount of advertising or other publicity which may be broadcast by Radio. Only five minutes of this advertising is per-

initted for every hour of operation.

As it happens America has no law or regulation on things to broadcast, neither does it have a tax on sets. Very little advertising passes through the air. Americans do not stand for anything out of order. The public would not stand for advertising slides in motion picture houses, neither will they stand for the same thing coming through the air. To tax a set is the wrong way and some other means must be sought.

Radio Classes

To Which of Three Classes Do You Belong?

THERE are three distinct classes in Radio. These may be applied to fields other than Radio and can be classed generally under the headings, mildly interested, technically inclined and hobby riders. Translated into Radio terms, these distinctions mean the owners of manufactured sets, experimental listeners and the amateurs who do not only receive but transmit as well.

If you belong to any one of these groups you are a member of the Radio fraternity, but your ability to hold your own conversation with a group of Radiophans depends entirely on whether you have taken the first, second or third degree. To be merely the owner of a receiving set, without knowing the first thing about its construction, admits you into the circle However, you cannot get farther without the ability to converse in terms of hook-ups.

In order to get the most out of Radio, if one seeks more than the ordinary entertainment and educational advantages, it is necessary to go through all of these stages. The amateur game represents the limit that can be reached while maintaining an interest in Radio as an avocation. Amateur Radio, when one has mastered the code and a certain amount of technical knowledge, admits one to the greatest thrills in Radio, the exchange of personal messages over distances limited only by the world itself.

All Kinds of Receivers

Anything from a Flivver to a Rolls Royce

THERE are many types and classes of Radio sets as there are motor cars. There are broad principles of design that must be followed in all sets. In addition to the necessary parts there are many refinements and improvements which are found in the better class

Fifteen years ago automobiles were sold without top. windshield or side curtains. The "unnecessaries" were available, but at a higher price. Today a good automobile is really not complete unless it has a closed body, balloon tires, speedometer, bumpers and countless other refinements that we now look upon as things which should go with any good car.

Likewise, in the early days of Radio, an amplifier and loud speaker was looked upon as an admirable equipment for the scientific laboratory, but beyond the hopes of the amateur enthusiast. Today almost any Radiophan contemplates a ten tube superheterodyne with considerably less emotion than we used to display toward the first quick detachable tire. So when you buy a Radio set remember that you attention that he picks up China every day. have the opportunity to purchase anything from a depending on your needs—and also your purse.

RADIO INDI-GEST

At Raquette

Still, so still that the creaking boot Shrieks loud on the frosty night; Cold, so cold that the shivers shoot, And your skin is shrivelled tight.

Dull, so dull that your way grows slouch, A face from the morgue you wear. Sour, so sour, you enjoy a grouch-You're a brother to the bear.

Home, a joke in a twisted shack, That shakes like a shimmie flirt. Jail, yes jail, where the big woods crack, Twelve months in a flannel shirt.

Song! What th' 'ell! (you have just tuned in) A song, and you see some bird. Sweet, so sweet that it smoothes your skin, And you eat it word by word.

Jazz! Oh, jazz! how it spreads your chest, Some pep, how it warms your veins. Lights, white lights with the mirth and jest, And the music, songs and Janes.

Laugh, you laugh, and you tilt your chair. You're back with the mob you know. Jokes, new jokes, and you rough your hair At the old time minstrel show.

Swift, so swift they have dumped the load, The waves that have thawed the heart. Far, so far on the measured road, But a breath of time apart.

Home, back home, you are chummy now, An ear to the outside world; Sing, you sing, and you hold no row, And your flag, old grouch, is furled. CHARLES HOWARD SCANLAN.

Dusting a Few Good Ones

ONE THAT ABE MARTIN OVERLOOKED

The other day Simon Pratt heard a right good Radio from the neighbor's house, but on investigating found it to be only a phonograph. LISTERINE TO THIS

One good thing about the Radio is that you don't have to worry whether the guy speaking to you has Halitosis or not.

LISTERINE TO THAT

"Does Mr. Smith suffer much from his Halitosis?" "No, but we do."
WE SUGGEST

That WTAS adopt a slogan. How about "Vice of a Nation?"

SAID MR. LUDWIG

Radio man of the ZR3, "The Statue of Liberty looked a great deal smaller to us than we had expected it to be."

Well, it was larger until prohibition came to the land of the free. HEINRICH HASENFUSS

Has bought enough Radios to reach from here to Kansas City, but he hasn't reached the coast yet. SAID THE ANNOUNCER AT WSOE

"The next number is 'Kiss Me Again.' We will do the best we can with the many requests coming in." Now wasn't that nice of him?

THE THIRD TROMBONE PLAYER.

Pa's Radio

Pa is mesmerized and hypnotized. While Ma looks on amazed; He sits and works his superdyne Until we're nearly crazed. "Listen, we're getting out tonight," Says fan Pa with a grin, "But shucks, it's only local-So loud that's coming in."

Pa keeps us up at night so late, Sometimes it's way past two; "Sh!" says he, "I think I hear a song Clear from Honolulu." He keeps the whole durn house astir With static from his set; Ma has to set her foot down, too— Or sleep we'd never get.

It's fine to have this wireless thing A fillin' all the air; But Pa he cares for nothin' else But his 'ol tube set there. We travel fast o'er all the land, Amidst the squeaks and squawks; . There's one thing about that Radio, We can't speak back when it talks. RHEA SHELDON.

What Were You Drinking?

Dear Indi: While listening to KGO recently I heard

the following announcement:

"KGO-the voice of the prairies, broadcast from the Aeolian hall by the Calumet Baking Powder company at Winnipeg, down in Dixie, the city surrounded by the United States, in the state where the tall corn grows, in the land of ten thousand lakes. Announcer G. R. the Hired Hand. KFI signing off at exactly 6:00 o'clock Eastern Daylight time. REH O. STAT AND SON, STATIC.

Absotively, Mr. Miloplex? Posilutely, Mr. King

Dear Indi: Hi! I know a guy who is waiter in the Statler hotel at Buffalo, and it has been called to my

Do you suppose you could get this in on the last

You're Always Welcome



Condensed

By DIELECTRIC

Out in Denver, where KOA sends forth three programs weekly, available dramas for Radiocasting evidently are none too plentiful. At least that would be the natural inference after hearing them put on "Mrs. Temple's Telegram," an interesting skit-some fifteen years ago. It may be that Radarios have not been supplied the studio. It "went over" anyway,

WTAM had a feature artist whose work almost made you doubt the assertion that Ruth Park is only twelve years old. Her playing of piano selections requiring maturity to interpret properly had moments of such treatment. In fact, I have heard pianists more than twice her age give less intelligent readings to a few of the compositions. Bravo Ruth and WTAM.

The Quaker City may not display the speed some of our eastern and western metropolises do, but the directors of studios in Philly's Radiocast stations are not behind the times nor are the local musicians lacking snap. WIP presented the city police band with soloists in a program full of pep and enjoyment.

A violin is one instrument capable of giving utmost pleasure or severe agony, according to the skill of the performer. Fortunately WHB had the good luck to know a musician falling within the first class. His choice of classical numbers was discriminating and rendition of them very delightful.

If you "Wait and hear Grebe" perhaps you will be pleased, perhaps not. The programs from this station are fairly diversified so that at some time during the evening's performance you may find what suits. The Lincoln's Specialty Boys succeeded in playing popular numbers in rather an agreeable manner. WAHG has a good corps of operators.

It was before KGO came on the air officially, and while they were testing under their experimental call, that we first heard the Arian Trio play. Since that time we have heard them often and never tire of the sheer beauty of their playing. Between acts of a KGO play, at the beginning or end of a program of any kind, this instrumental group always fits in gracefully. It is our hope that someday KGO will present an entire program of numbers by these musicians.

Of course they cry "We are ruined," those dramatists, fight promoters, dance hall managers, dog fanciers, et al., who think they saw millions upon millions of Americans listening to McCormack and Bori in their initial Radio appearance in preference to patronizing them. The day of substitution is over. If you want to see drama you won't accept music in place of it. Thank goodness the Victor company is allied with Radiocasting instead of futilly deriding it. Radio audiences are to have the best in music with a wonderful opening night in retrospect.

From the recording laboratory of the Brunswick company come voices of renowned artists. Mario Chamlee is one of America's foremost tenors; Florence Easton holds as high a place among sopranos, both of whom-with Elly Ney, English planist-entertained through several Radiocast stations. Listening to WGY the concert came through splendidly, but the same cannot be said for WJZ in respect to the piano numbers.

There is not much fault to find with the playing of the Boston American orchestra as it comes to us flivver to the Rolls Royce of Radio; your choice line, seeing as how I have never made the line as yet? through Station WNAC. The selections are good and KING MILOPLEX. | their rendition shows capable leadership.

Demonstrating Radio Principles at Home

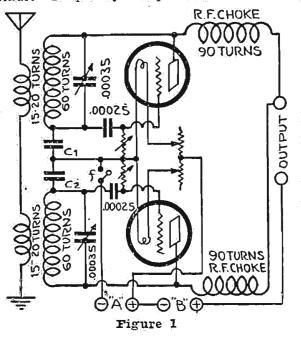
Chapter VII-The Experimenter Supreme

By J. E. Owen

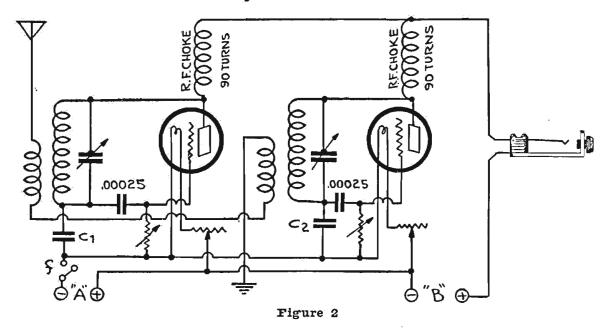
RADIOPHANS inclined to experiment will find in this series of articles, directions for illustrating to their own satisfaction the underlying principles of Radio. They are told how to set up the experimental apparatus, which is simple and not so complicated as to require the equipment of a large laboratory,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

appear next week, will be: Chapter VIII—Experimenting with Push Pull Amplifiers.

JUSH-PULL amplification has been used in both audio and Radio frequency amplifiers with excellent success. However, since two stages of Radio frequency amplification are re-



in front of the audio frequency amplifiers. form of air core Radio frequency trans-



ceiver practicable.

to retain most of the advantages of pushthe same time to reduce very materially 2 is shown in figure 3. the tube and battery costs heretofore involved. Regeneration is the form of Radio frequency amplification used and is approximately equivalent to two stages as ordinarily employed.

Push-Pull Radio Frequency

The circuit diagram of the Experipienter Supreme is given in figure 1. It will be noticed that while the input or Radio frequency circuits are arranged push-pull, the audio frequency or output circuits are in parallel. No audio frequency amplification is included in the diagram but if desired, it may be added in the usual way.

The circuit of figure 1 is general in that any types of apparatus (coils, conquired before any appreciable advantage densers, etc.) may be used. However, in is obtained over regeneration, this type order that the experimenter may not go of amplification has not been extensively far astray, figure 2 is given in which the adopted on account of tube and battery circuit is adapted to apparatus similar to costs Five tubes, obviously, are required | that used in neutrodyne sets. The same

Only for the experimenter who has hours formers are mounted on condensers of and dollars to spend is this form of re- .00035 mfd. capacity. If the experimenter makes his own coils, it is recommended The Experimenter Supreme is designed that the condensers be .0005 infd. The panel and baseboard layout for this type pull Radio frequency amplification and at of apparatus used in the circuit of figure

> The construction of the Radio frequency choke coils is simple. On any tube about 2½ inches in diameter wind 90 turns of number 24 dcc. wire. Unless appearance is important, it is not necessary to take any pains in winding this coil. Tie the turns with thread in three or four places and slip them off the tube. Two such coils are to be wound. The coils should not be mounted close to each other or close to other coils in the set. The leads from the plates of the detector tubes to the Radio frequency chokes should be short. After the set is in operation these choke coils may be moved slightly in order to determine the position that gives the least reaction between them and the tuning coils.

Mounting Coils

The angle for mounting the tuning coils is, as in the neutrodyne circuit, 57.4 de-

LIST OF PARTS 2 Air core Radio frequency transformers mounted on .00035 mfd. condensers\$12.00 2 Smoothly variable rheostats..... 3.70 2 Variable grid leaks...... 3.70 1 Filament switch..... 2 Fixed mica condensers, .00025 mfd. 1 Jack, open circuit..... 2 Dials, 3" with verniers..... 2.00 2 Sockets 2 Fixed mica condensers, .0001 mfd. 2 Fixed mica condensers, .00025 mfd. .70 2 Fixed mica condensers, .0005 1 Panel 7"x16"x3/16"..... 1 Cabinet to match..... 4.00 1 Baseboard 7"x15"x1/2 or 3/4"...... 1 Binding post panel 3"x7"..... 6 Binding posts Bus bar, spaghetti, etc..... 1.00 Total cost.....\$37.85 LIST OF ACCESSORIES 2 Tubes, preferably "soft".....\$ 8.00 1 Storage battery 20.00 B battery, 22½ volts..... 2.00 1 Pair head receivers with plug.. 100 Feet aerial wire..... 4 Insulators 40 Feet No 12 insulated wire...... \$38.00

grees. This angle may have to be changed a degree or two for best results.

The correct values for the condensers C₁ and C₂ will depend on the types of tuning apparatus used and may be determined by experiment. On the average, this value will be either .0001, .00025, or .0005 mfd.

A list of do's and don'ts will not be amiss at this time.

The lead from the plate to the tuning (Continued on page 18)



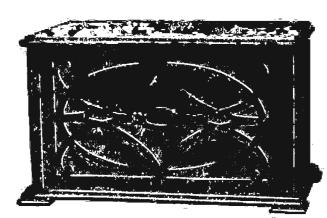
Perfect Tune

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

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

There are five Bristol Audiophones, priced from \$12.50 to \$2\00. If not at your dealer's, write for Bulletins AY-3011, 3017 and 3022.

The Bristol Company, Waterbury, Conn.



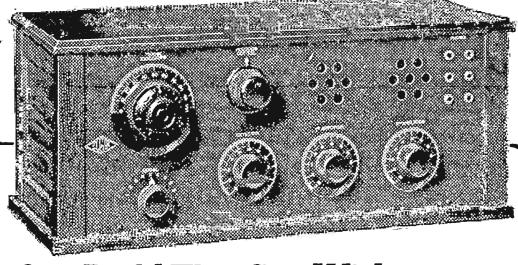
Cabinet Model \$30.00

\$25.00

Rabber horn, 14½" in dlameter. Cast metal throat. Velvet mat fluished, mottled bronze and gold.

Beautifully finished mahogany. Full floating wooden horn. Cast in otal throat. Size 17x10x10 4".

AUDIOPHONE Loud Speaker



You Can Build This Set Without Soldering. Save Fifty-Dollars!

FREE!

We want you to learn more about this amaz-

ing set-mail the couwith your name

and address and we will send you the com-

plete working draw-lngs of the Elgin Super-Reinartz—ab-

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

down set.

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

If you can use a screw solutely FREE! driver you can build this highly efficient receiving set in an hour or so. Then call in your friends and show them the set you built yourself! Show them how easy it is to tune in the stations they have

been unable to get with ordinary sets.

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

The parts supplied you are exact duplicates of the parts we used in the original model, the hook-up is the same and an exact simplified working drawing is

working drawing is supplied. You can't go wrong!
We guarantee every part in the Elgin Super-Reinartz to be the utmost in efficiency.
We guarantee the drawings furnished you to be duplicates of the same set that cates of the same set that heard London. We guaran-tee reception that is only

possible on other sets twice the size and price, providing our drawings are followed and the set is properly constructed as we direct! Read our FREE offer to you.

Super-Reinartz The Ford of Radio



Elgin Radio Supply Company, Suite A, 207 E. Chicago St., ELGIN, ILL.

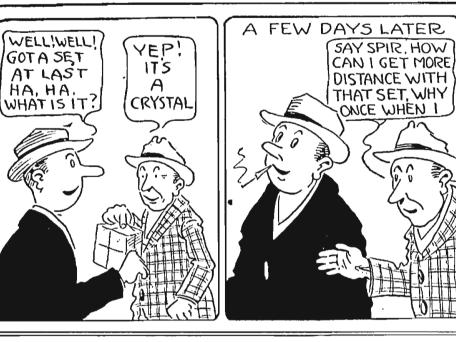
I want to know all about the set that heard London. Send the working drawings of the Elgin Super-Reinartz set by return mail—Free! I am enclosing a stamp to cover postage.

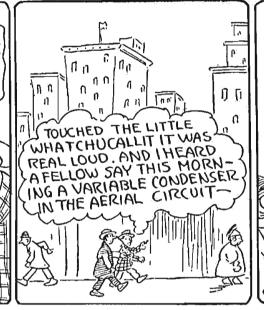
----Tear This Off---

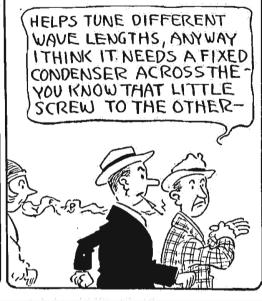
THE ANTENNA BROTHERS

Spir L. and Lew P.

Distance Without Howling



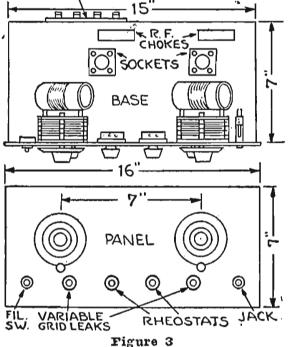






(Continued from page 17) coil must be connected between the plate and the plate choke coil-not outside or beyond this choke.

BINDING POST PANEL



circuits must be connected in a reverse noiseless job.

DEMONSTRATING RADIO order, that is, so that a surge of elec- WOC AT DAVENPORT tricity in the primary circuits will cause a surge in the secondaries in opposite directions with respect to the plate and grid of the tube in each circuit. Proper connections are shown in the illustrations.

Don't try to make this set using one rheostat to control both tubes. If the rheostats recommended in the list of parts are not used, the type selected should be good vernier rheostats.

Don't let either tube oscillate during reception. Don't mount the variable condensers

closer than six inches shaft to shaft. Don't be discouraged if good results

are not obtained at first. (The theory of push-pull amplification with several examples using resistance coupling between the stages, with special

reference to using dry cell tubes in series (filaments) being fed from a six-volt battery, will be the next and last article in the series.—Editor's Note.)

Non-Corrosive Flux

Celluloid dissolved in acetone makes a very good binder for Radio work. It should be used in place of shellac, collodion, etc. Rosin dissolved in rubbing alcohol, with a couple of drops of glycerin, makes an absolutely non-corrosive flux. A drop on a piece of wire suffices The primary coils in the two tuning for most joints and makes a neat and

(Continued from page 5)

installed to allow the pupils to listen in to any affair of national importance which is being broadcast. It is also used when B. J. talks to the students and they are unable to get into the auditorium.

Police reports are broadcast from this station whenever a man is wanted by the police. Recently two men escaped from the county jail by knocking one of the keepers unconscious. The warden called WOC on the phone and gave a description of the flying "birds" to the operator on watch. In a few minutes, the public were told to be on the lookout for the two men. This is one of the many services that WOC has rendered since their appearance on the air.

Even the elevator boy who runs the car up to the studio door is an ardent Radiophan. He has a small crystal set around the top of the car. When WOC is broadcasting, he can listen in to the ideal way to keep elevator operators from sleeping while on duty, excepting, of the amplifier. course, the bedtime stories have a bad

and province in the North American continent on one single program. On Decem-ings.

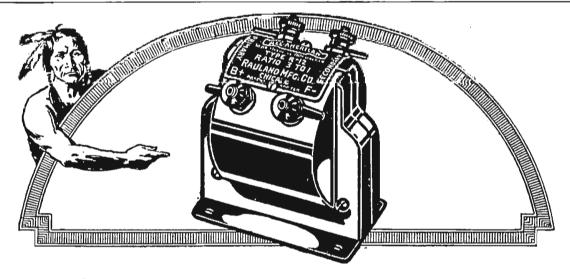
ber 16, 1922, a lecture by Major Dent Akinson was picked up thirty kilometers cast of Paris, France, an airline distance estimated at 6,000 miles.

Since that time, reception of WOC signals have been officially reported at Stockholm, Rome, Great Britain, Buenos Aires, Samoa, the Philippines and by the MacMillan North Polar expedition in North Greenland. An enviable record was established in the early part of 1923 with the steamship Ardmore, in South American waters. While operating off the coast of Chili, in the vicinity of Antofagasia, which is more than twenty-two degrees south of the equator, the crew of the Ardmore were entertained regularly for three months with programs from WOC.

How to Stop Squeal

Distortion from an audio frequency amplifier caused by feedbacks between installed in the car with an aerial running the transformers, can be cleared up by reversing the leads to the primary of one of the instruments. If a high pitched program without interrupting the elevator service. "Stan" claims that this is the by connecting a .005 mfd. capacity fixed condenser across the output terminals of

· If the audio frequency amplification Station WOC, using its old 1000-watt units do not work well, try reversing the transmitter, has been heard in every state transformer leads. This applies, of course, to both the primary and secondary wind-



Reliable!

There is now an ALL-AMERICAN for every radioneed. Audio and R. F.— Power Amplifying (Push-Pull)—Intermediate Frequency.

All-Amax Receivcrs-the famous ALL-AMERICAN Reflex-completely mounted with full wiring directions. Junior (1 tube) \$22. Senior (3 tubes) \$42.

ALL-AMERICAN Standard Audio Transformers in any radio receiver are recognized by experimenters and listeners everywhere as proof of assured efficiency in amplification.

> Three Ratios: -3 to 1, \$4.50 5 to 1,\$4.75 10 to 1,\$4.75

Two pleasant hours spent with the RADIO KEY BOOK will acquaint you with the essential facts of modern reception, and how to enjoy it at its best. Ten cents—coin or stamps—brings the KEY BOOK.

RAULAND MANUFACTURING CO. PIONEERS IN THE INDUSTRY

2640 Coyne Street Chicago

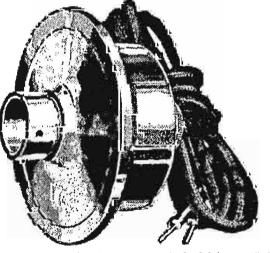
Largest Selling Transformers in the World

Trade Mark

THE FORD of LOUD SPEAKERS \$950

Fultone Loud Speaker has conclusively proven to the radio world that a reproducer could be made and sold at \$9.50 which would handle music or speech in volume as perfectly as any speaker at any price. The horn is solid, non-ringing and wide-throated enough to handle the powerful reproduction from superheterodyne or reflex. The adjustable diaphragm permits matching Fultone to any receiver and "B" battery voltage.

Either speaker or unit will be shipped on a satis-faction or money back basis on receipt of price in money order or currency. The coupon is provided for your convenience in ordering if your dealer cannot supply you.



Use on Your Phonograph Edison Adapter.....25c Columbia or Pathe.....20c Brunswick30c

means of a special key.

\$9.50

LOUD SPEAKER UNIT

This unit is the secret behind the un-paralleled success of Fultone Speaker. Its large diaphragm and bobbins of fine wire are protected from injury by a heavy nickel-plated case through the back of which adjustment is made by The pole

pieces are not made from a solid	Tear_Off,	Fill in, Mail Nov
piece of iron but arc assembled from 15 laminations of carefully chosen	I mare a merca a	nc., 128 N. Wells Stree
steel.	Proloced to 2	for subtable able me

Enclosed is	\$fo	which	ship	me ()
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CITY AND STATE....

HALL & WELLS, Inc. i ADDRESS..... 128 N. Wells St. Chicago, Ill.

Construction of the Six Tube Hetduogen

Part V—Assembly of the Front Panel

By C. E. Brush

ITH the sub base apparatus in place and wired, we can now take up the drilling and assembly of the front panel. The layout of the apparatus on the sub base was such that we can place the front panel parts symmetrically without resorting to long leases. On the panel we must secure three condensers, two rheostats, a battery switch and two jacks. The 20-ohm rheostat is the left, the 6-ohm rheostat to the right.

The Full Size Layout

Figure 12 is the layout for this panel. Due to the fact that there has been no standardization of mounting holes for Radio apparatus, an enlargement of figure 12 cannot be used as a drilling template for all the holes. Lay out figure 12 on a large sheet of paper; now, in each box containing rheostats and condensers will be found a template for the drilling of mounting holes. Paste these small templates on the large sheet so that shaft holes coincide. On the boxes containing jacks and the switch will be found directions for the size hole to be drilled for those items.

The writer has, for some time, followed the practice of mounting condensers with the stationary plates up and the rotor plates swinging below, as in figure 10 of last week's description. This prevents damage to the rotor plates from above after the set is in the cabinet and one is making adjustments. In placing the condenser templates in position rotate them so that, when the condensers are mounted, the plates will be as stated.

Panel Mounting Holes

Note the width of the rabbeting around the front of the cabinet; it will probably be 5/16 inch, % inch or ½ inch. Whichever it is, measure from the panel edge lines one-half that distance and mark to drill small countersunk holes for flat head wood screws to hold the panel to the cabinet. If the rabbeting extends across the bottom, mark to drill four equally spaced holes across the bottom edge of the panel for screws. On each end two holes are to be drilled, one about 11/2 inches from the top and one 11/2 inches from the bottom. If

Hansen "BIRD-CAGE" Radios

4-Tube Receiver NIGHTINGALE\$32.50 A wonderful little set.

4-Tube Cabinet Receiver. BLUEBIRD\$57.50

Easy to tune-long distance-selective.

4-Tube Receiver.

WARBLER\$90.00

A very high grade receiver - very

selective.

AMERICAN CREST. \$150.00

This we believe to be the best 6-Tube loop set on the market.

We Announce the

5 TUBE RECEIVER

GOLDFINCH\$75.00

CONDENSER TEMPLATE HERE CENTER SHAFT-HOLE OF .0005 CONDENSER TEMPLATE HERE BASE PANEL FILAMENT SWITCH Figure 12

beting across the top, mark to put in four holes across the top edge of the panel for screws, corresponding in position to those across the bottom.

Check over the large sheet for all drill marks: condensers, rheostats, jacks, switch, mounting screws and angle brackets. In connection with the angle bracket holes, they should be so placed that, when the sub base is mounted, there will be 134 inches below it to the bottom edge of the front panel. The jack centers are 11/4 inches from the bottom edge and, if these dimensions are followed exactly throughout, no difficulty will be experienced from parts not fitting together exactly.

Now clamp, or paste, this large layout drilling sheet to the front panel and cen-ter punch all holes before drilling. It will be found a wise precaution to drill any 5/16-inch and 7/16-inch holes with a number 27 or number 18 drill before using the full size. This for the reason that large drills do not have sharp points and are only too apt to start considerably off the mark.

When the front panel apparatus has all been mounted in place the wired sub base can be attached to it by the brackets. While figure 7 shows but two right angle

your cabinet is of the type that has rab-| brackets and figure 10 shows two 45 de-| flow correctly through the speaker in one gree brackets also, this should not prove jack, would cause it to oppose the magconfusing. If your right angle brackets netism when the other jack was in use. are sufficiently heavy, the others are unnecessary, but there is plenty of room for the 45 degree brackets if the others are rather light.

Connecing Sub Base to Panel

The rotor of the .0005 mfd. (500 mmfd.) condenser can now be connected to inductance L-3, as shown in figure 10, the stator connected to the stator of the 3plate condenser and to inductance L2, the rotor of the 3-plate to the P post of the mixer tube, the rotor of the 7-plate condenser to inductance L5 and P of the oscillator tube socket, and finally the stator plates to G of the oscillator socket. Rheostat and jack connections are clearly shown in figure 11 of last week.

It will be noted in that diagram that the short spring in the double circuit jack is connected to the plus B supply, and the frame of the single circuit jack is connected to this same lead. Such a connection, while it would cause the current to

GAVE ARCTIC EXPLORERS THEIR NEWS

New York City—Donald H. Mix, wireless operator of the McMillan Expedition, reports

Thordarson Transformers used in their

radio stood the extreme temperature of the Arctic without the slightest mishap. They were in as good condition on their return as when installed in May, 1923. Thordarsons are standard on the majority of leading sets. Partial list below:

The double circuit jack should be turned so that the long spring is closer to the second jack and is connected to the plus B lead. The set is now complete and, as wired, will probably work fairly well. There are, however, numerous little adjustments and

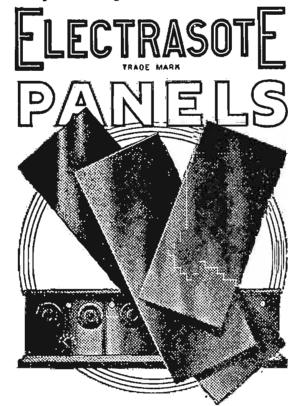
of extreme sensitivity and volume such as this can be expected to work at 100 per

cent efficiency. (In next week's issue, Mr. Brush goes into the changes that may prove desirable in the 7-plate condenser and the use of the second variable resistance.—Editor's

changes to be made before any receiver

More Than Just the "Front" of Your Set

A Radio panel should be more than just the "front" of your receiving set. It is an important feature that should be selected just as carefully as any other part.



meet the most exact specifications. They reduce surface leakage to a minimum. Unaffected by climatic conditions, they will neither warp nor change color, retaining for all time their fine finish. When you buy an Electrasote Panel you are getting something with a reputation back of it, for Electrasote is one of the celebrated "sote" products introduced by The Pantasote Company, Inc. Yet these panels are

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Bronze panel and Gold dials—Beautiful Mahogany Cabinet with space for B Batteries. This set looks and per-forms like a Million Dollars. We cannot offer anything better.

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Audio frequency 2-1, \$5; 3½-1, \$4; 6-1, \$4.50. Power Amplifying, pair, \$13, Interstage Power Amplifying Transformer, \$8. Write for latest bulleting.

THORDARSON ELECTRIC MFG. CO.

HOW TO OPERATE SET

(Continued from page 15)

1, turn the "volume control" knob U away from "100" toward "soft"; 2, pull out the jack switch S; 3, shift the set on the table, until best position is found.

Eliminating Interference

Signals from an interfering Radio station may be eliminated or at least mini-

1. Turn "station selector II" pointer V, either to the right or left, by approximately % to 1 inch, to find another position of this control, where the desired "lower wave length peak," and the other the "upper wave length peak." Two settings of this nature will be found for all broadcast stations, and the separation between them becomes greater and greater for the higher end of the scale, i.e., nearer ence is encountered, shift to the "upper peak," and use whichever one at which minimum interference occurs.

every transmitting station, there are two positions at which the signal strength destroying the quality of reception. The will rise to a maximum, and two others at right angles at which it is at a minimum. Place Radiola super where best results are secured, trying to locate the Rather reduce volume by dimming all filaposition where the interference does not come in, but the desired signals do.

Four paper dials for each of the "station selectors" will be found with the set, three each in the envelope for the instruction book, and one each in place on the ranel. To put another "station selector I" dial in place, grasp pointer N with the oiling operation is important, and should left hand, turn and remove the knurled be done about once every six months. To put which holds it in place. Grasp the two knobs on the end of the clamp wire, selector" pointers as far right as possible, pinch the knobs together, and pull the and open the panel of the set half way. clamp wire free from its retaining ring. Remove the old dial and place a "station such as typewriter oil, on each of the selector I' dial on the panel, taking care following parts of both "station selectors" properly to line up the central hole and the notch on the left hand side. Replace clamp wire, pointer N, and knurled nut in black moulded sub-panels; 2, on the bushthe order mentioned. Follow the same process for "station selector II."

The paper dials provide a means of recording the settings of the "selectors" for the various stations. Once recorded, the pointers may be reset at any later time to these positions, and if the station is broadcasting, it will be heard. After a station is tuned in as above, mark the

'station selectors" as well as the call letters of the station. It is suggested that only the "lower peak" of "station selector II" be recorded.

General Information

Each of the "station selectors" is provided with four pointers, in order that stations of nearly the same setting may be recorded on the dials without crowding mized by either of the following methods: the markings. It is suggested that the gold-tipped pointers be reserved for wave length or frequency markings, and that the station settings be recorded on the three remaining pointers in the following station will be again heard. The setting order: Long black pointer, right short of "station selector II" nearer the left end | pointer, and left short pointer. Mark as of the scale is technically called the many stations as possible on the long black pointer. When a new station is tuned in, quite close to one already recorded, then use the short pointers for the markings.

The only precaution to be observed when making these markings is to see the right hand end. It is recommended that the set is not located near any large that "station selector II" be consistently metal objects, such as a steam radiator, set on the "lower peak" in the usual or that it is not near any aerials or electric wiring. Such positions may cause changes in the settings of "station selector I.'

The "battery setting" knob K should be 2. Rotate the receiver on the table. For kept as near the "off" position as possible, without decreasing the signal strength or six tubes should be used at all times. It is inadvisable to remove the sixth tube when only five are used, to reduce volume. ments or by turning the set than to employ this method. Both these precautions make for economical use of the batteries and tubes.

Very little maintenance is required on this super-heterodyne, outside of an occasional oiling of a few of the parts. The oil the moving parts, turn both "station Then place one drop of good grade oil

1, on the front and rear bearings of the shafts, where the shafts pass through the ings in the panel which hold the "selector" knobs; 3, on the universal or ball joint just back of the "selector" knob shaft; 4, on the spring bearing of the slanting

positions of one of the tips of each of the knob shaft (which spring bearing presses against the black insulation collar).

Possible Difficulties

Should any trouble develop in the use of Radiola super-heterodyne, it will in all probability be due to loss of life of the tubes or to the exhaustion of the batteries. As the batteries grow old, they decrease in voltage, and increase in resistance. After the tubes have been used for a long time, their filaments tend to lose emission. If the difficulty appears to be elsewhere, it is recommended that the scrvices of the dealer from whom the set was purchased, be enlisted.

If the set becomes inoperative, try infrom the right is the important one and it is well to replace it before looking elsewhere for tube trouble. Try substituting this tube for either the third, fourth or fifth one. It is of advantage to keep a spare UV-199 on hand, to meet emergencies.

There are several indications by which the user may determine that the filament or A batteries are becoming exhausted. These are low filament brilliancy, weak signals, and distortion, the signals becoming less and less recognizable. When it is found necessary to turn the "battery setting" knob up to "100," and the operation of the set is still unsatisfactory, it is a definite indication that the filament batteries are exhaused.

When fresh batteries are installed for the first time, listen to the loud speaker, while pushing the jack switch in and out. Sharp "clicks" will be heard in the loud speaker. Do this sufficiently to learn just how loud the click should be. If the B batteries have become fairly well exhausted, these clicks will become practically imperceptible—an indication that they need replenishing.

An indication of exhausted C batteries may be had by listening to the loud speaker with no station tuned in. If the loud speaker gives forth a continuous noise, the battery needs renewal. The noise may be either a high pitched whistle, a high cackling sound or a low gurgling murmur. Frequently the whistle is so high as to be above the range of audibility for some, but in any case the noise becomes more audible as the batteries age.

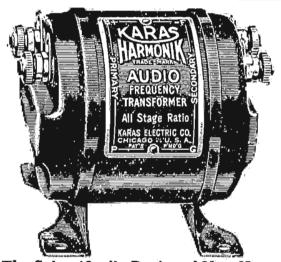
When a storage battery fails to take a charge, it is an indication that it needs to be overhauled at a battery service station.

C Battery Effects Saving

The C battery as a grid bias effects a saving in B battery current consumption. The C battery is used in the audio frequency stages. Although the C battery reduces the amount of current in the plate circuits of the tubes, it does not cause a reduction in the strength of signals when properly used, but rather a slight increase with added signal clarity.

Static Cut with Short Aerial

A short antenna cuts down the static. The signal may also be somewhat weaker, but it does not fall off as much as the terchanging the tubes. The second tube static and the result over-all will be more pleasing reception.



The Scientifically Designed New Karas Harmonik Audio Frequency Amplifying Transformer.

"The Best Transformer Money Can Buy"

THE only transformer that amplifies all frequencies equally—only transformer that can handle 2 audio stages of an efficient super-het without howling. Delivers full, round, rich, mellow tones—every tone separate and distinct—all the vital harmonicks and rich overtones amplified equally with

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

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

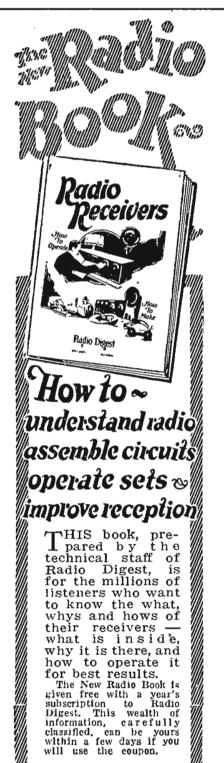


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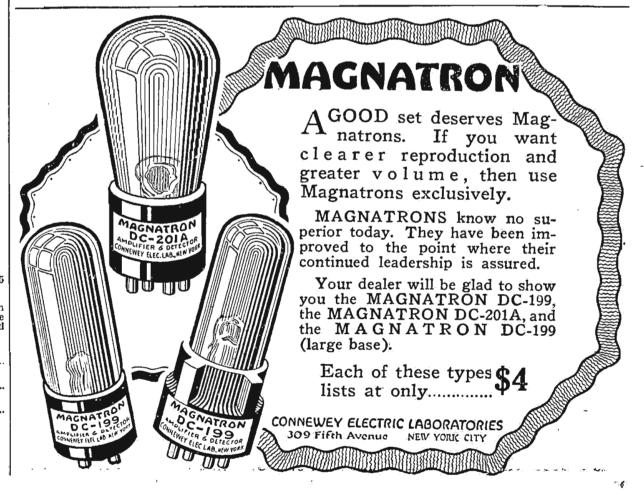
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Volume Obtained with Selectivity on Distance

While experimenting with various kinds of antenna coupling for my superdyne set, I hit upon an arrangement whereby the volume on both local and distant sta-

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HERE are many little kinks worked out at home that would aid your fellow Radio worker if only he knew about them. There are new hook-ups, new ways of making parts and various unique ways of operating sets that are discovered every day. Radio Digest is very much interested in obtaining such material. Send them in with full details, including stamped envelope, so rejected copy may be returned. The work must be entirely original, not copied. RADIO KINKS DEPARTMENT

Radio Digest, 510 North Dearborn St., Chicago

tions is increased quite a bit. This discovery was purely accidental.

Leaving one side of the four primary turns connected to the aerial, I was connecting the ground lead to various points. I touched it to the grid lead of the Radio frequency stage and noted that the stations came in with surprising volume. I also noted that the selectivity of the set was increased and that the wave length was increased by about 25 meters.

As is shown in the diagram, one side of the primary coil is left open. To change from the old circuit to the new at will, I installed a single pole double throw switch. A convenient arrangement is to use a switch arm and two contact points.

Another arrangement worth trying is shown in the second illustration. The single pole double throw switch can also be used on this hook-up.

Using these arrangements, I have been able to hear WGR, WGY and KDKA very well.—Henry G. Jones, Jr., San Diego, Calif.

Single Circuit Receiver

While the accompanying diagram is very much self-explanatory, a few suggestions may aid any who desire to build such a set to get the most out of the circuit. Success depends very much on the use of the best materials. Not necessarily the most expensive, but the most efficient. The winding of the variocoupler need not be exactly as given, but the turns mentioned have produced the best results with selectivity.

The capacity of the grid condenser and leak is very important and the adjust-

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For three years—long before the days of Super-Heterodynes

and many other splendid radio successes-Morrison has been

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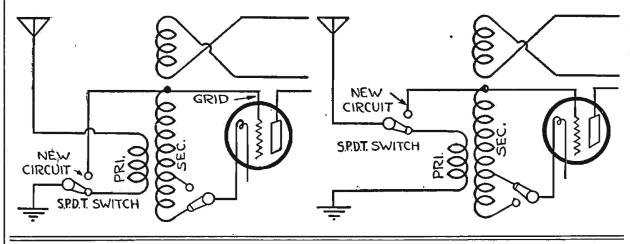
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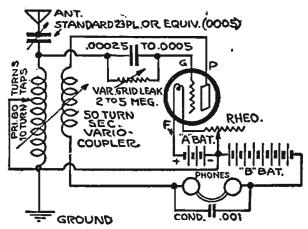




once found it may remain the same for

If the tone of the set is too metallic, increase the capacity of the phone condensers. The capacity of .001, as shown, should be about correct, but larger capacity may give a more mellow tone to music.

When the correct filament and plate voltage are found they do not vary. When the rheostat is adjusted properly all



tuning is done with an aerial condenser and the variocoupler. The aerial condenser controls the wave length and the rotor of the variocoupler coontrols regeneration. A good ground is very essential.

One of the secrets of selectivity is in the use of an aerial about 50 feet high and from 70 to 80 feet long, well insulated. Long distance reception will come quickly with this set, as its simplicity permits the operator to become familiar with the tuning controls. Learn to tune with both hands. Mount the condenser and variocoupler so the right hand adjusts the wave length with the condenser, and the left hand adjusts the regeneration with the coupler. In this way it will be found that presently the left hand will work automatically without thought. keeping the tube just at the point of oscillation while tuning. This gives quick and satisfactory operation with a minimum of interference to other nearby receiving stations. Good phones are es-

ment of the grid leak is very critical, but sential for long distance reception.—Cliff H. Dafoe, Guelph, Ontario, Canada.

Locating Condenser Shorts

A short circuit in a condenser is usually quite easily located by the scraping of the rotary plates against the stationary ones. This is not always so, though, because sometimes the contact is so light that it makes no noise at all. This is the worst kind of "short" and the hardest to locate. Placing a white piece of paper under the condenser with a strong light on it will sometimes allow the fan to locate the touching plates, if he looks through the condenser sidewise. It is usually cheaper to buy a new condenser than to attempt to fix one which has become damaged in this way.

When building a receiving set, it is best to first obtain the necessary parts and from the dimensions of these units lay out the panel and baseboard.

The Crystalstat



The Ideal Reflex Detector but equally suitable for crystal sets The Ideal Reflex Detector but equally suitable for crystal sets

The Crystalstat embodies the following features:

A super-sensitive crystal in an air tight enclosure.

A brush cat whisker of gold tinsel strands. A micrometer adjustment by means of which the most delicate adjustment may be had. The multiple contacts of fine gold filaments prevent howling and gives light but sure contact. The crystal is our wonderful Star-ite, the pick of the Earth's best crystal.

The Crystalstat attaches through one 5/16" hole in the panel so that only the control knob shows on the fare of the panel.

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Now ready—the D. X. L. 5-tube tuned
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Line and Low Loss. Will separate two
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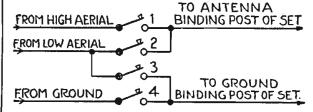
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Switch Combination for Antenna and Ground

When I built an underground antenna according to the instructions given in Radio Digest I found it convenient to have a system of switches to connect the upper aerial, underground aerial and ground in whatever combinations I desired for best reception. In this combination I used four small 15-ampere single pole single throw knife switches.



As the illustration shows this system gives five combinations. Closing all switches grounds the whole system.

If 'the underground aerial is placed directly below the regular aerial it can be used for a counterpoise.—N. V. Parsons, Pasadena, Cal.

Number 12 enameled solid copper wire is excellent for aerials. Aluminum wire is not recommended.

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1. Soldered brass plates, chemi-cally treated against corro-

2. Special shaped stator plates for easy tuning of low waves.

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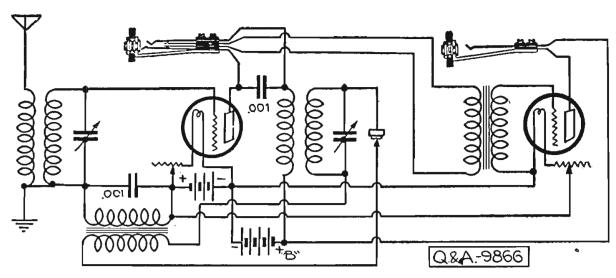
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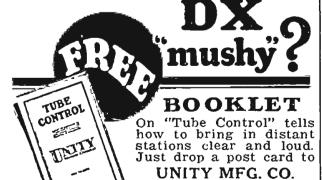
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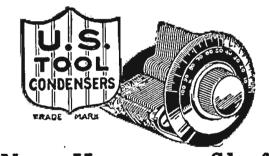
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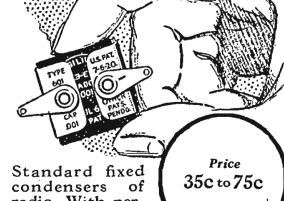
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Canada (Continued)
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Berlin, L. P., Vox Haus,
Telefunken Co.
Breslau, Schlesische, Rundfunk
Frankfort-on-Main, Sudwestdeutsche Rundfunkfienst
Hamburg, Norag.
Konigsberg, Outwarken, Rundfunk

Hamburg, Norag.

Konigsberg, Ostmarken Rundfunk
Leipzig, Mitteldeutsche Rundfunk
Munich, Deutsche Stunde
Munster Station
Nuremberg, relayed from Munich
Stuttgart, Station

Great Britain: Aberdeen, 2BD
Belfast, 2BE
Belfast, 2BE
Birmingham, 51T
Bournemouth, 6BM
Bradford, 2f.S
Cardiff, 5WA
Chelmsford, 5XX
Dundee, 2DE
Edinburgh, 2EH
Glasgow, 5SC
Hull, 6KH
Lecds, 2LS Lecds, 2LS Liverpool, 6LV London, 2LO Manchester, 2ZY Newcastle, 5NO Nottingham, 5NG
Plymouth, 5PY
Sheffield, 6FL
Stoke-on-Trent, 6ST

Italy: Rome, IRO Mexico:

Chihuahua, XICE
Mazatlan, CYR
Mexico City, CYB, CYL, CYX
CYZ, CZA
Monterey, 24A
Oaxaca, CYF
Netherlands:

Amsterdam, PA5, PCFF Hague, PCGG, PCUU Hilversum, NSF Ymuiden, PCMM New Zealand:

Auckland, 1YA, 1YL Dunedin, 4XO, 4YO Gisborne, 2YM Wellington, 2YB, 2YK Spain:

Barcelona, EAJL Madrid, PTT Switzerland: Geneva, HB1 Lausanne, HB2, Hongg

STATION SCHEDULES

(Continued from last week)

Chile

ABC, Vina del Mar, Chile, 400 meters. Radio Corp. of Chile. CRC, Santiago, Chile. 460 meters. Radio Corp. of Chile. Valparaiso, Chile, Senor Placi do Munzo Rojas.

Cuba

PWX, Havana, Cuba. 400 meters. 500 watts. International Tel. & Teleg. Corp. Wed, Sat, 8:30-11 pm, music. Eastern. music. Eastern.

2AB, Havana, Cuba. 240 meters. 20 watts, Alberto S.

Bustamante. Bustamante.
2BY, Havana, Cuba.
Company of Cuba.
2CX, Havana, Cuba.
W. Borton.
2EV, Havana, Cuba.
220 meters. 10 watts. Frederich
Westinghouse Elec. Co.
2HP, Havana, Cuba. 295 meters. 100 watts. Credito
y Construcciones Co. 2HS, Havana, Cuba. 180 meters. 20 watts. Julio Power.
2JQ, Havana, Cuba. 150 meters. 10 watts. Raul
Perez Falcon.
2KP, Havana, Cuba. 195 meters. 10 watts. George A. Lindeaux.

2LC, Havana, Cuba. 250 meters. 30 watts. Luis Casas.

2MG, Havana, Cuba. 280 meters. 20 watts. Manuol
Y. Gulllerno Salas Music Store. Announcer, Roger
Morales. Daily, 3-4 pm, music. One day each week,
8-11 pm. Eastern.

20K, Havana, Cuba. 260 meters. 100 watts. Mario
Gareta Velez.

20L, Havana, Cuba. 290 meters. 15 watts. Oscar
Collado. Lindcaux. 20L. Havana, Cuba. 290 meters. 15 watts. Uscar Collado. 2TW, Havana, Cuba. 230 meters. 20 watts. Roberto E. Ramirez.

2WW, Havana, Cuba. 210 meters 20 watts. Amadeo Saenz de Calahorra.

5EV, Colon, Cuba. 360 meters. 10 watts. Leopold V. Flgueroa. Sun, 9-11 pm. Eastern.

6BY, Clenfuegos, Cuba. 300 meters. 100 watts. Jose Gandure. 6CX, Clenfucgos, Cuba. 170 meters. 20 watts. Antonio T. Figueroa.

6KJ, Tuinucu, Cuba. 275 meters. 100 watts. Frank H. 7SR, Elia, Cuba. 350 meters. 50 watts. Salvador C, Riondo. Slogan, "Cuba, the Land of Sunshine, Sugar and Tobacco." Mon, Tues, Thurs, 9 pm. Eastern. 8AZ, Santiago, Cuba. 240 meters. 20 watts. Alfredo 8BY, Santiago, Cuba. 250 meters. 100 watts. Alberto SDW, Santiago, Cuba. 275 meters. 50 watts. Pedro C. Andux. Daily, 4:30-8:30 pm, 10:30-12. SEV, Santiago, Cuba. 180 meters. 75 watts. Eduardo Mateos. 8FU, Santiago, Cuba. 225 meters, 15 watts. Andres Vinent, 8GT, Santlago, Cuba. 260 meters. 50 watts. Juan F.

France

FL, Paris, France, Eiffel Tower. 2,600 meters. Announcer, "Chief Poste Milltaire de la Tour Eiffel.

FPTT, Paris, France. 450 meters. 480 watts. Superior School P. T. T. Announcer, M. Chanton.

MRD, Toulouse, France. 1,525 meters. Aerodrome.

SFR, Paris, France. 1,780 meters. 2,000 watts, Radio-Paris YN, Lyons-la-Doua, France. 480 meters, French Government.
Agen. France, 335 meters. French Government.
Issy-Lez-Moulineaux, France. 1,600 meters. French
Government.
The France Le Petit Parlslen, 340 meters. 500 Paris, France, Le Petit Parlslen, 340 meters, 500 watts.

Germany

LP, Berlin, Germany. 680 meters. 4,000 watts. Konigswusterhansen.
Berlin, Germany. 430 meters. 700 watts. Vox Haus.
Berlin, Germany. 750 meters. 1,000 watts. Telefunken Breslau, Germany. 415 meters. 1,500 watts. Schieslsche Rundfunk, A. G. Frankfort-on-Main, Germany. 467 meters. 1,500 watts. Sudwestdeutsche Rundfunklenst. Norag, Hamburg, Germany, 395 meters. 1,200 watts. Nord-iseler Rundfunk, A., G. Announcer, Hermann T. Figueroa.

6DW, Cienfuegos, Cuba. 225 meters. 10 watts. Eduardo Terry.

6EV, Caharien, Cuba. 250 meters. 50 watts. Maria Josefa Alvares. Dally, 10;30 pm.

6KW, Tulnueu, Cuba. 340 meters. 100 watts. Frank H. Jones. Slogan, "If You Hear the Koo of the Cuckoo You Are in Tuno With Tuinucu." Mon, Tues, Fri, Sun, 10 pm, music. Wed, Thurs, Sat, 8 pm, music. Sat, 12 mldnlgbt, dance music. Eastern.

Great Britain

7AZ, Camaguey, Cuba. 225 meters. 10 watts. Pédro
Nogueras.

7BY, Camaguey, Cuba. 235 meters. 20 watts. Salvador
Rionda.

7SR, Elia, Cuba. 350 meters. 50 watts. Salvador C.

Plonda, Sugar (Cuba. 495 meters. 1,500 watts. British Broadcasting Co., Announcer, A. M. Shinnie.

2BE, Belfast, Ireland. 435 meters. British Broadcasting Co., Ltd. Announcer, W. T. Guthrie.

2DE, Dundee, Scot. 331 meters. British Broadcasting Co. 2EH, Edinburgh, Scot. 328 meters. British Broadcasting Co.
2LO. London, Eng. 385 meters. 1,500 watts. British Broadcasting Co.

2LS, Bradford, Eng. 310 meters. British Broadcasting Co.

2LS, Leeds, Eng. 346 meters. British Broadcasting Co.

2LS, Manchester, Eng. 375 meters. Brltish Broadcasting Co. ing Co. 51T, Blrmingham, Eng. 475 meters, Brltish Broad-casting Co. Announcer, Percy Edgar. 5NG, Nottingham, Eng. 322 meters, British Broad-casting Co. 5NO, Newcastle, Eng. 400 meters. British Broadcast-5PY, Plymouth, Eng. 235 meters. 200 watts. British Broadcasting Co. Announcer, Clarence Goode. 5SC, Glasgow, Scot. 420 meters. British Broadcasting 5WA, Cardiff, Wales. 351 meters. British Broadcasting Co.
5XX, Chelmsford, Eng. 1,600 meters. 14,000 watts.
British Broadcasting Company, Marconi Wireless Telegraph Co., Ltd.
6BM, Bournemouth, Eng. 385 meters. British Broadcasting Co. Announcer, John H. Raymond.
6FL, Sheffield, Eng. 301 meters. British Broadcasting 6KH, Hull, Eng. 335 meters. British Broadcasting Co. 6LV, Liverpool, Eng. 315 meters. British Broadcasting Co. 6ST, Stoke-on-Trent, Eng. 306 meters. British Broadeasting Co.

Italy

IRO, Rome, Italy. 422 meters. 1,500 watts.

Mexico CYA, Mexico City, Mex. 185 meters. Partido Liberal Avanzado.

CYB, Mexico City, Mex. 380 meters. 500 watts. El Buen, Tono. Tues, Sat, 7:30-9 pm. Thurs, 8-10 pm, concert. Mexican. concert, Mexican.

CYF, Oaxaca, Oax., Mex. Federico Zorrilla.

CYG, Mexico City, Mex. Sceretara de Guerra y Marina,

CYL, Mexico City, Mex. 480 meters. 500 watts. La

Casa del Radio. Announcer, Raul Azcarraga. Slogan:

"The Land of Eternal Simmer. Dally ex Sun, 1:30-2

pm, weather, financial reports, music. Tucs, Fri, 9
10:30 pm. Mexican.

CYR, Mazatlan, Sln., Mex. Rosseter Y Cla.

CYX, Mexico City, Mex. 333 meters. 500 watts. Excelsior & Cia. Parker. Announcer, Rafael Lerdo de Teiada. Slogan, "Land of the Aztecs." Mon, 8-9:30 pm. Fri, 8:30-9:30 pm. Mountain.

CYZ, Mexico City, Mex. 400 meters. Liga Central Mexicana de Radio.

CZA, Mexico City, Mex. 70-500-1,070 meters, Aviation Dept., War Ministry. Announcer, Ricardo S. Bravo. Daily, 12:30-1 pm, time, weather, news; 6:30-7:30, time, markets, music. Mexican.

XICE, Chihuahua City, Mex. 400 meters. 250 watts. Chihuahua State Radio Broadcasting Station. Announcer, C. A. Nieto. Wed, Fri, 8-9:30. Mountain. 24A, Monterey, Mex. 285 meters. 200 watts. Tarnava & Cia. Daily ex. Sun, 12-6 pm, news, markets, baseball. Wed, 8:30-10 pm. Mexican.

Netherlands

NSF, Hilversum, Netherlands. 1,050 meters. 500 watts. Dutch Radio Apparatus Factory.

PA5, Amsterdam, Netherlands. 1,050 meters. 200 watts. Smith and Hooghout.

PCFF, Amsterdam, Netherlands. 2,125 meters. Vas Diaz Press Office. Daily, hourly, 7:55-4:10 pm.

PCGG, The Haguc, Netherlands, 1,050 meters. Nederlandsche Radio Industri.

PCMM, Ymuiden, Netherlands. 1,050 meters, Middelraad. raad. PCUU The Hague, Netherlands. 1,050 meters. Laboratorium Heussen.

New Zealand

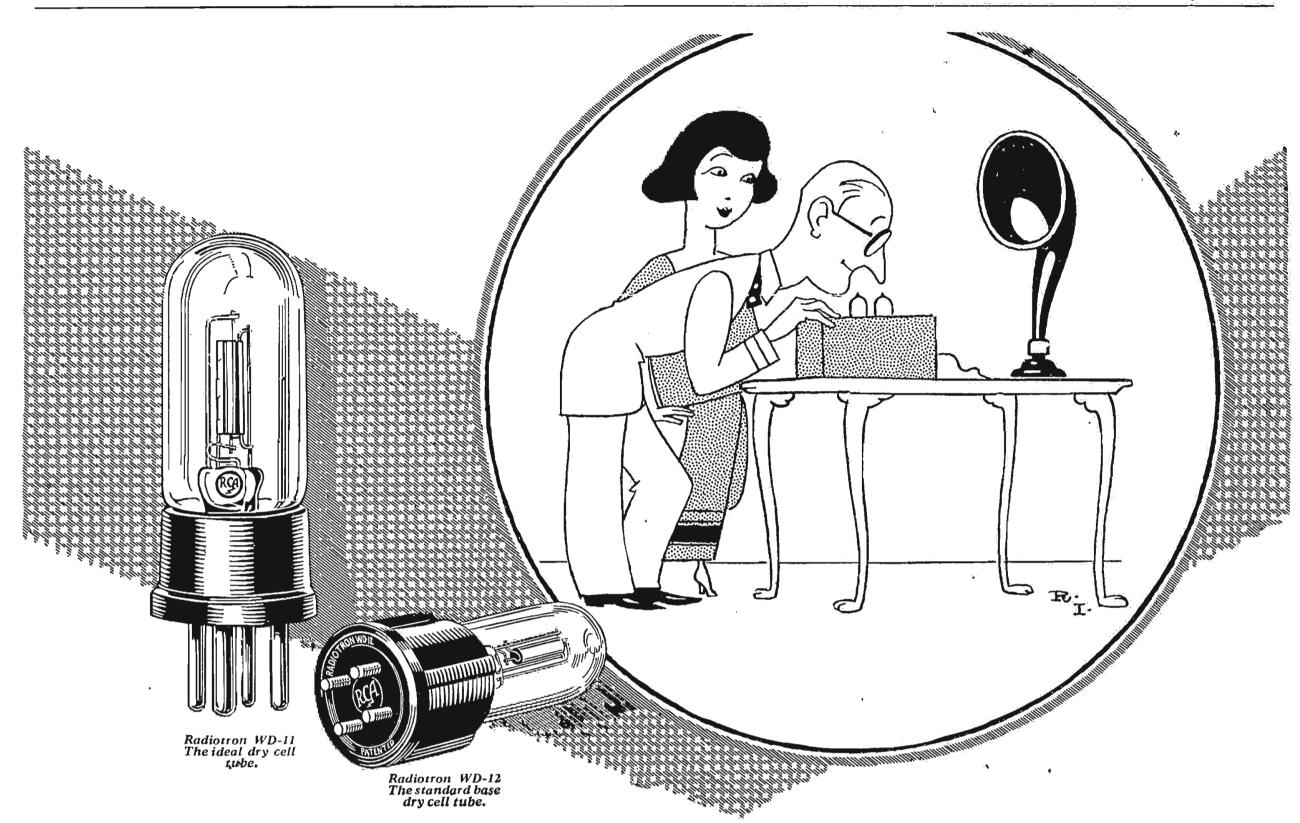
IYA, Auckland, New Zealand. 260 meters. 200 watts.
Auckland Radio Service.
IYL, Auckland, New Zealand. 260 meters. 500 watts.
C. H. Pearson for Newcombe (Ltd.)
2YB, Wellington, New Zealand. 275 meters. 15 watts.
Wellington Broadcasters (Ltd.)
2YK, Wellington, New Zoaland. 275 meters. 15 watts,
Dominlon Radio Co.
2YM, Gisborne, New Zealand. 335 meters. 500 watts.
Gisborne Radio Co.
4X0 Dunedin, New Zealand. 140 meters. Otago Uni-4X0, Dunedin, New Zealand. 140 meters. Otago University.
4YA, Dunedin, New Zealand. 310 meters, 500 watts,
British Electrical & Engineering Co.

Spain

EAJL, Barceiona, Spain. 325 meters. 100 watts. Daily, 6-7 pm, 9-11. Madrid, Spain. 392 meters. 1,500 watts.

Switzerland

HBI, Geneva, Switzerland. 1,100 meters. 600 watts. Marconi's Wireless Telegraph Co., Ltd. HB2, Lausanne, Switzerland. 850 meters. 500 watts. Champ de l'Alr. Lausanne, Switzerland. 650 meters. 500 watts. Hongg.



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