Wiring of Grand Prix Eight Tube Super-Het; Six Tube Fireside Drilling Layouts; Life Story of Bert Davis; Fiddlin' John Carson; WSM and WOJ Pictures

FEROGRAMS

Vol. XV

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SATURDAY, NOVEMBER 7, 1925

RANT NEW TUBE PATENT

GIVE SHUBERT PLAY OVER RADIO AT LAST

'STUDENT PRINCE' IS FIRST OF THEIRS TO GO ON AIR

Other Productions of Same Firm May Be Heard if Box Office Gains Thereby

NEW YORK.—Messrs. J. J. and Lee Shubert will find a more welcome place in the hearts of thousands of Radio fans following the WJZ and WGY broadcast last Sunday evening of "The Student Prince," a Shubert production and New York's favorite operetta.

It is a history-making event that such

It is a history-making event that such prominent theatrical producers as the Shuberts have now made available a Radio interpretation of one of their productions, thus giving a delightful stimulant to microphone programs. After being withheld from Radio for over a year, other Shubert productions may follow

(Continued on page 2)

Beautiful to look upon and beautiful to hear is Thora Martins, former artist at WHT, the Mid Continent Broadcasting chain, Chicago station. Here she is smiling, below, as her voice smiles over the mike.



Center is Beatrice Kay, leading lady of "Rose Marie," who proved popular in a recent WLIT Morning Glory concert. Right, Vera Webster, planist, heard from WEAF.

Three Specialists in Kiddie Entertainment at Pittsburgh Now

PITTSBURG.—Daddy Winkum and his famous rhyming machine, and Uncle Ed with his amusing trips to the zoo, visits to the country, and similar excursions, are back on the air again, along with a newcomer to entertain the children, Postman Dan, who will conduct the KDKA mailbox.

Daddy Winkum, one of the most popular children's Radio entertainers, is broad-casting from Westinghouse Station KDKA twice a week, on Monday and Friday nights, during the children's hour from 7:30 to 8 o'clock, eastern time.

Station WHT Maintains Staff of Expert Receptionists Scattered Over Country

CHICAGO .- A staff of Radio reporters, or expert receptionists, located in every large city, is being organized by Sta-tion WHT through its engineering research department, in charge of Chief Engineer Reeve O. Strock, for compilation technical data to aid in correcting faulty transmission and to insure uniform quality of reception throughout the dominant broadcasting range of the station. Each WHT reporter forwards a weekly

report to the research department.

(Continued from page 1)

United States patent office. This tube was invented by Dr. Irving Langmuir, assistant director of the General Electric research laboratory, in 1912, but because of contests the patent was not granted until now.



Irving Langmuir

The tube is characterized by its hard, constant vacuum, by its freedom from visible discharge and other gaseous effects when B voltages from 30 to 135 are applied, and by its steadiness and reliability in operation. It can be made in large sizes operating with 50,000 volts and upwards, as well as in the smaller sizes such as are used in the ordinary home Radio receiving sets.

Prior to Dr. Langmuir's invention

Radio and X-ray tubes were of what is now known as the soft variety, that is they glowed and acted erratically and unreliably except when used on exceedingly low voltages. Dr. Langmuir's invention, by removing this severe voltage restriction, has made possible practical Radio.

Patent Long in Coming

The patent Long in Coming
The patent application has had an eventful career. Following his invention of the new tube in 1912, Dr. Langmuir spent months in thoroughly testing the invention. He filed his application in the patent office in Washington in 1913 and made the invention known to the world by papers read before scientific societies and by descriptions of the tube in scientific and popular publications. societies and by descriptions of the tube in scientific and popular publications. The new tubes were used for Radio work by the French army early in the war and were soon in regular use in Radio and X-ray work in this country.

The patent application, however, did not enjoy such immediate success. The patent office examiner passed the application for issue in 1916, but this action was revoked before the patent was issued

tion for issue in 1916, but this action was revoked before the patent was issued in order to permit another person who had in the meantime applied for a patent on this invention to contest Dr. Langmuir's right to a patent in what is called

an interference proceeding.

an interference proceeding.

Patent Is Contested

On the declaration of the interference Dr. Langmuir's opponent attempted to show that the invention was not patentable. On account of the unusual importance of the invention the patent office departed from its usual practice and permitted elaborate testimony to be taken on the question of patentability, including even testimony, taken in England, on behalf of Langmuir's opponent of a world-famous British scientist.

After the United States went into the war the secretary of navy requested the commissioner of patents to suspend proceedings because the full time of both parties was required upon war work of great importance to the government.

great importance to the government. After the war testimony was resumed, and the merit of the invention was eventually sustained by the patent office, after an attack for which there are few precedents in vigor or in skill. Thereupon the contest became one to deter-mine whether Dr. Langmuir or the later applicant was the first inventor, and more testimony had to be taken by both parties to establish their dates of invention. The examiner of interferences adjudged Dr. Langmuir the first inventor. On appeal to the Examiners-in-chief the decision was again in favor of Dr. Langmuir.

Goes Through Courts

On further appeal, the assistant commissioner held in favor of the later applicant. But on still further appeal to the cant. But on still further appeal to the court of appeals of the District of Columbia, the assistant commissioner was reversed and the court, agreeing with the examiner of intereferences and the examiners-in-chief, found that Dr. Langmuir was the prior inventor. The appeals, though diligently prosecuted, were not terminated until June, 1925.

Dr. Langmuir is a world-known scient-

ist and inventor. The application of Dr. Langmuir's vacuum tube invention to X-ray tubes was the invention of Dr. William D. Coolidge, another world-known scientist-inventor working in the research laboratory of the General Electric company at Schenectady. The Coolidge X-ray tube, Coolidge Schenectady. embodying the inventions of Dr. Langmuir and Dr. Coolidge, is now in operation in all hospitals and X-ray laboratories.

SHUBERTS GO ON AIR

(Continued from page 1)

the path in the ether into millions of homes. The broadcasting of "The Student Prince" is regarded by the Shuberts as Radio's "trial run" and the results obtained, reflected in public opinion and box office effect, will determine how the wind blows for the morrow.

GIVE NEW TUBE PATENT PATRIOTIC PROGRAM FOR ARMISTICE DAY

MANY STATIONS PLAN BIG CEREMONIES FOR NOV. 11

Ten Bands to Play Over WOR—Bugle Calls from WEAF—Play from WHT

ADIO really began as a world institution immediately after the guns on the Western front were silenced by the armistice of November 11, 1918. From the chaos of barbarism brought on by the greatest war of modern history, sprung one of the most effective instruments for world peace ever known to history—Radio. Hence it is fitting that many programs on Armistice Day should be planned for observance of the occasion.

be planned for observance of the occasion.

Nearly every American station and some in Canada will have Radio services some time during the day. Among the stations sending out advance notices of Armistice Day programs are WOR, WEAF, WHT, CKNC, WEEI, WLW, WBZ, WIP, CNRO, WLS and KGW. WRC, WGY and WJZ will be linked for a special program. Others are preparing features program. Others are preparing features that will be announced over the air.

Big Newark Celebration.

In the East, WOR, Newark, will mike the largest military gathering of the day when it picks up the ceremony in the town of Montclair, N. J., where the townspeople will dedicate a marble shaft to the memory of those who made the surreme memory of those who made the supreme sacrifice.

The ceremony which is attracting nation-wide attention, will be attended by high officials of the Army and Navy, as well as leaders in political, civil and industrial life. One of the impressive features of the program will be band selec-tions by the combined musical units of at least ten army posts of the Second

More than a quarter of a million peo ple are expected to attend the ceremonies, and participate in the singing of the "Battle Hymn of the Republic," said to be a favorite with the men overseas dur-ing the war. They will be accompanied by the combined efforts of the bands, numbering nearly 1,000 musicians.

Taps from WEAF

From New York city, Station WEAF will broadcast a special memorial pro-gram arranged by the League of Remembrance. The program starts at 10:35 eastern time in the morning and ends in two minutes of silence at eleven o'clock two minutes of silence at eleven o'clock, the hour that meant so much to the boys in the trenches seven years ago. Preceding the two minutes of silence, Captain Chester Matheson, solo cornetist of the Salvation Army band, will sound the bugle call "Assembly" and at 11:02 will close the ceremony with "Taps."

close the ceremony with "Taps."

American Legion posts all over the county have been notified to tune in on WHT, Chicago, where Pat Barnes, chief announcer, will reproduce his famous wartime play which was written at the request of General Perishing to depict the true American spirit in France. This play, "A Buck on Leave," was shown all over the U. S. army area overseas and was then replayed in the principal cities in the United States. A special cast, sein the United States. A special cast, selected and directed by the author, will put on the Radio version.

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Radio Digest, Illustrated, Volume XV, Number 5, published Chicago, Illinois, November 7, 1925. Published weekly by Radio Digest Publishing Company, 510 N. Dearborn Street, Chicago, Illinois. Subscription rates, yearly, Five Dollars; Foreign Postage One Dollar additional; single copies Ten Cents. Entered as second class matter at the post office at Chicago, Illinois, under the Act of March 3, 1879.

All the Live News of Radio
Radio Made "Fiddlin' John" Carson Famous.
Bert Davis, the Roaming "Clown of the Air".
WSM, at Nashville, "We Shield Millions"
WQJ, "Surprise Station" of Rainbo Gardens
Operating and Trouble Shooting 1
Advance Programs for the Week
Evening at Home with the Listener In, a chart in eastern time, showing when to listen in for your favorite stations
Editorials, Indi-Gest and Condensed Dielectric
Interesting and Simple Explanation of Radio, Chapter II—The Ether, Wave Motion and Wave Lengths, by H. G. Tanner
Fireside: 6 Tube Set of Perfect Reception, Part II—Panel Drilling and Assembly, by Jacques Fournier
The Grand Prix Eight Tube Super-Heterodyne, Part III—The Wiring in 50 perations by James McDonald
An Economical Three Tube Set; Other Kinks
Questions and Answers
Directory of Radiophone Broadcasting Stations, Part VI

Looking Ahead

What Makes Them Popular-the Lullaby Boys of WLS? Ford and Glenn are great applause drawers. Their audience includes babes in the cradles and elders in easy chairs. See next issue for a full page picture of this famous team.

Opera Stars You Have Heard on Sunday Night will be pictured in a full-page group next week. The six Atwater Kent-WEAF chain concerts, which will have then been given, are milestones in the path of musical progress of broadcasting. You'll want to frame this picture.

L, Mexico City, Is Different. So different is this Mexican exponent of broadcasting that it will pay you to learn Spanish so as to appreciate CYL fully. See and read about CYL next week.

The Eight Tube Grand Prix Super-Het will receive its finishing touches next issue when Mr. McDonald tells how to adjust, tune and operate it.

Tubes of Perfect Reproduction and exceptional selectivity are contained in the "Fireside." Wiring instructions, in detail like those given for the Grand Prix this week, will be outlined next issue.

Operating and Trouble Shooting, of course, will be a study of another standard receiver.

The Advance Programs for the broadcasters are being increased in length and number. Their handiness is being improved thanks to suggestions from subscribers, until this section of each week's Radio Digest is most important to good listening. By the way, did you notice Part VI of the broadcasting station directory on page 31? Every station is listed in order of wave length.

Newsstands Don't Always Have One Left

WHEN YOU WANT

YOU WANT IT!

BE SURE OF YOUR WEEKLY COPY BY SUBSCRIBING NOW

SEND IN THE BLANK TODAY

510 N.	her Radio Digest, Dearborn St., o, Illinois.			
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WJZ COLLEGE GIVES EXTENSIVE COURSES

NEW YORK UNIVERSITY TO MIKE IMPORTANT TALKS

Philosophy, Pyschology, Pure Sciences and the Latin Classics on Schedule for Winter

NEW YORK.—New York university, pioneer in Radio education, opened the third year of its "Air College" October 19, broadcasting directly from classrooms in Washington square here, through Station WJZ, Radio Corporation of America. Outstanding features of the "Air College" for 1925-26, as announced by the bureau of broadcasting, include a course in Greek and Roman classics and their influence on modern life, and a systematic program of lectures following standard university practice. university practice.

university practice.

Pioneer Will Participate

The first semester of the "Air College" will consist of fourteen weeks of lectures by seven members of New York university faculty. They include Dr. Herman H. Horne, the first university professor to broadcast directly from his classroom, and who was featured during the opening year of the "Air College."

New York university will go on the air at Station WJZ from 6:30 until 7 o'clock this year, instead of from 8 until 8:15, the time formerly set for the "Air College."

College

Philosophy Monday Evenings
Professor Charles Gray Shaw will dever lectures on philosophy on the

Not necessary to philosophy of the following Monday evenings:

November 9, "The Problem of Beauty, Not the Beauty Shoppe"; November 16, "The Problem of Religion or Would You Believe It?"; November 23, "The Philosophy of Radio."

osophy of Radio."
Professor Herman H. Horne will continue the series with the following:
November 30, "Who Is the Patriot?";
December 7, "How to Be Happy"; December 14, "Do All Things Change?";
December 21, "What Is Pragmatism?";
December 28, "Is Consciousness Behavior?"; January 4, "Is Man Free?"
January 11, "Is Man Immortal?"; January 18, "Who Is God?"

Pure Sciences on Tuesday Evenings Professor H. Horton Sheldon's Tuesday lectures on the pure sciences will

include:

November 3, "Inside the Atom"; November 10, "The Nature of Sound and of Light"; November 17, "The X-Ray"; November 24, "Ultra-Violet and Polarized Light"; December 1, "Light and Color"; December 8, "Heat and Temperature"; December 15, "Resonance and Radio Reception"; December 22, "The Nature of Energy"; December 29, "Sound, the Voice and Musical Instruments."

Professor James E. Lough will speak conclude the series with physics lectures on January 5, 12 and 19, 1926.

Psychology on Wednesday Evenings

on January 5, 12 and 19, 1926.

Psychology on Wednesday Evenings
Professor James E. Lough will speak
on psychology, his subjects including:
November 4, "Mental Levels and the
Limits of Ability at Each Level"; November 11, "Mental Ability and Skills
Necessary for Success in Various Professions"; November 18, "Psychology of
Advertising"; November 25, "Psychology of
Selling"; December 2, "Psychology of
Management"; December 9, "Psychology
of Study": December 16, "Character and of Selling"; December 2, "Psychology of Management"; December 9, "Psychology of Study"; December 16, "Character and the Unconscious"; December 23, "Character and Physique"; December 30, "Control of Emotions"; January 6, "The Use and Misuse of Memory"; January 13, "Individual Differences and Adjustments"; January 30, "The Mind of the Future."

Greek and Roman Classics

Professor Ralph V. D. Magoffin will take up the Greek and Roman classics on Thursdays under the following headings:

headings:
November 5, "The Value of Greek and November 5, "The Value of Greek and Latin for Culture and Discipline"; November 12, "How Much Greek Can Be Learned Over the Radio?"; November 19, "Greek and Roman History in Their Relation to Modern Times;" November 26, "Roman Architecture, Science and Engineering"; December 3, "The Poetry and Philosophy of Greece"; December 10, "Roman Writers of Comedy"; December 17, "Greek and Roman Life and Manners"; December 24, "Greek and Roman Money and What It Tells"; December 31, "The Roman Epic"; January 7, "The "The Roman Epic"; January 7, "The Greek Theater and Modern Representations of Greek Plays"; January 14, "A Glance at the Caesars"; January 21, "Greek and Roman Literature as an Influence on Subsequent Literatures."

Our Economic Organization

Professor Reid L. McClung on Fridays will deliver the following lectures in the

will deliver the following lectures in the economic course:
November 6, "Market Price Making";
November 13, "Money"; November 20,
"Banking"; November 27, "Business
Cycle"; December 4, "Foreign Trade";
December 11, "Tariff Problems"; December 18, "The Trust Problem"; December 25, "The Labor Problem";
January 1, "The Railroad Problem";
January 8, "Immigration"; January 15,
"Taxation"; January 22, "Social Unrest."

'PHONOGRAPH GIRL' **LAUDS RADIO AS AID**

AILEEN STANLEY PRAISES BROADCASTING ABROAD

Stage and Record Companies First Opposed Her Part in Air Programs; Different Now

LONDON.—Aileen Stanley, "the Phonograph Girl," who has just arrived here

LONDON.—Aileen Stanley, "the Phonograph Girl," who has just arrived here from America, declared emphatically in an interview that Radio was unharmful financially to the stage as a whole or to the drawing power of individual artists. "On this question of whether Radio lessens the pulling power of the stage or hurts the sale of phonograph records," she declared, "I would like to put my little 'no,' or rather a great big 'NO!"

"I have broadcast in almost every large city in the states, and I was really one of the first to make that same experiment about five years ago. At that time the theatrical managers and phonograph recording concerns were very much opposed to Radio; they said it kept people out of the theater and hurt the sale of records. At last they gave me permission to broadcast as an experiment, and it proved the best exploitation I have ever had.

Sale of Records Increases

Sale of Records Increases

"The sale of Records Increases
"The sale of my records increased by leaps and bounds, and as for my drawing power at the theater, that also was increased, and in regard to those new 'friends of the air' who came to the theater (and they did come) it seemed as though I could pick them out from the stage. There is a staunch bond of friendship between the artist of the microphone and his silent audience of the air.

air.
"I am not a bit sorry I got on the band wagon alongside of progress. three hearty cheers for Radio."

CATCHES WGY TEST SIGNALS ON RECORD

SCHENECTADY, N. Y.—Requests of WGY for reports on reception of its superneyer its superpower signals brought many unusual reports. Many listeners submitted curves and detailed reception records that are of special value to the General Electric engineers.

H. N. Elwell, an experimenter of Norfolk, Mass., recorded both the 50- and 2½-kilowatt transmissions on dictaphone records and sent them to WGY where they may be rebroadcast later.

McNAMEE'S LETTERS REQUIRE NO ADDRESS

EW YORK.—Among the thousands of letters received by Graham McNamee, 1925 gold cup winner, following the broadcasting of the World's Series, one of the most in-teresting from the point of view of novelty was the one that a western fan addressed to him by pasting his picture, clipped from Radio Digest, on the outside of the envelope. Although there was neither name or address, the letter reached the King of the Air at WEAF.

NEW YORK-PARIS STAR ON WEAF



TEACH ASTRONOMY BY NOVEL RADIO METHOD

Canadian Station CKY Broadcasts Weekly Star Talks

WINNIPEG.-Love sick swains and maidens who are want to gaze long and tenderly at the summer stars may combine a bit of science with their romanc-ing if they will tune in on Station CKY, here on Friday nights and listen to the

One important constellation is dis-cussed from this station each week and at the conclusion of the talk a group of figures is broadcast, which when plotted on squared paper, will represent the constellation for the next week's talk

Instead of using the Greek alphabet, as true astronomers do, English letters are used to designate the stars on the "graph." A feature of the charts being broadcast by CKY is the fact that each constellation is shown as it will appear to the night following the broadcast and at a time likely to be convenient for observation.

Those who have the inclination and who happen to live near here are permitted to view the heavens through a telescope by arrangement with the station. Parties are being arranged in groups of ten and "graph" system.

New Stations

Florida's land boom is accompanied by the building of new broadcasting sta-tions. Clearwater, Fla., is to have a 500tions. Clearwater, Fla., is to have a 500-watt broadcaster. This station, owned by the George H. Bowles Developments, will be heard under the call WGHB. The wave is 266 meters. Another 500-watt station has been added to Iowa's quota. KSO is the Clarinda, Iowa, station operated by A. A. Berry Seed company. 242 meters is the wave.

Other stations licensed last week are Other stations licensed last week are: KFYD, Muscatine, Iowa, 250 watts, 256 meters; WBT, Charlotte, N. C., 250 watts, 275 meters; WABI, Bangor, Maine, 100 watts, 240 meters; WMAL, Washington, D. C., 15 watts, 212.6 meters; WWAO, Houghton, Mich., 250 watts, 263 meters; KFOJ, 10 watts, 242 meters.

The Toulouse, France, station known as Radio-Toulouse, has altered its wave length from 273 to 432 meters, as it was found that the previous wave led to interference with various other stations.

no charge is made for the privilege Squared paper is furnished to the students by the station and in the future CKY intends to broadcast many other interesting diagrams in addition to the astronomical charts by means of the

Old KPO Still Heard; Is KFPG, Hollywood

Veteran 'Frisco Transmitter Is Moved Down Coast

LOS ANGELES .- A good transmitter, like a good word, seems to go on for-ever. Those fans within the range of the old 500-watt set of KPO and who regretted its passing will be glad to know this old reliable of transmitters has been sold to station KFPG, K. M. Turner Radio corporation of Hellywood Calif

corporation of Hollywood, Calif.

KFPG has been on the air sometimes as a class A station on 100 watts power, 238 meters, but recently switched over to the 500-watt set. KPO's old set was first rebuilt to a standard Western Elec-tric set and it comes on the air again under the new call of KFPG with a bass note range down to 16 cycles. This makes the fifth first-class station

in Hollywood.

Bar Sopranos from Mike of Station WBBM as Unsuited

CHICAGO.-Soprano voices have been parred from the programs of Station WBBM here.

An order that no more sopranos be booked and that those now singing in-termittently before the station's microphone be dropped, was issued to the program staff by Charlie Garland, program Radio.

UNION CALLS STRIKE AGAINST KHJ PLANT

MUSICIANS BOYCOTT RADIO WITHOUT GIVING NOTICE

Daggett Says Action Is Unwarranted, but Will Not Affect Pro-grams in Any Way

LOS ANGELES.—Labor has made another raid on Radio! All members of the Musicians' Protective association, lodge No. 47, Los Angeles, by order of its board of directors, have been notified that giving service over Station KHJ on or after October 15, will subject the offender to fine or suspension.

october 15, will subject the oliender to fine or suspension.

The Los Angeles Times, operating KHJ, was not notified of this decision by the union, the information coming to them when musicians who had received the notices, called to apologize for the action of their governing union. So far it cannot be found out what basis the musicians' union thought it had in calling this boy-cott on KHJ, other than the fact that the Los Angeles Times has always fought for an open shop in Los Angeles, and for years has been labor's bitterest enemy in the southwest.

years has been labor's bitterest enemy in the southwest.

RHJ Only One Hit

Other Los Angeles stations are not effected, KHJ being singled out alone.

"Uncle" John Daggett, director of KHJ, in a statement made just prior to leaving on the Hawaiian trip with the Los Angeles chamber of commmerce, said:

"Most of the musicians effected are not in sympathy with this action, and in fact, have told us they are opposed to it, but are forced to accede or lose the privileges of union membership. For them we sympathize, but KHJ does not intend to submit to any action of this nature, unwarranted and unAmerican as it is, and we will expect relief through the courts, based on the fact that this order is in restraint of trade and in violation of the laws of the United States.

"The order will in no way effect the programs from KHJ as Los Angeles is plentifully supplied with musical talent of all kinds, only a portion of which claims membership in the Musicians' union. We expect to fight this out to a finish to determine whether or not a broadcast station must submit to domination by a small group of men, not musicians themselves, who want to tell us how we must run our station.



The fight between the union and KHJ has long been brewing. Not long ago the union demanded that the men playing in Leighton's cafeteria orchestra be paid an additional 35 per cent because they were broadcasting at the same time they played in the dining room of the cafeteria. The same request was made of Art Hickman's Biltmore hotel concert orchestra but as the latter was playing Art Hickman's Biltmore hotel concert orchestra but as the latter was playing its half hour for Radio only the hotel management took the orchestra off the air. Leighton's paid the increase and stayed on and later received order to increase the players' rate to 50 per cent additional because they were on the air one hour instead of half hour.

Public online seems to be strongly

Public opinion seems to be strongly against such domineering and unfair action against KHJ and thousands of letters have been received stating they are for the station in this fight.

director. Garland said the action was taken "because soprano voices have taken "because soprano voices proved unsuitable and unentertaining for

Radio Made "Fiddlin' John Carson" Famous

R ADIO made me. Until I began to play over WSB, more than two years ago, just a few people in and around Atlanta knew me, but now my wife thinks she's a widow most of the time because I stay away from home so much playing around over this part of the country," says John Carson, Blue Ridge mountaineer fiddler and eight times champion of Dixie.

of Dixie.
Fiddlin' John was born and "jerked up" Fiddlin' John was born and "jerked up" in the moonshine fastnesses of Fannin couny in the heart of the Blue Ridge mountains. He has been fiddling since he was big enough to hold the instrument under his chin, and his mountain cabin was the scene of many a jolly party with young John occupying the spotlight and supplying the music for the festivities.

Those daws seem far past, and today as he nears the 60-year mile post, Fiddlin' John is one of the most famous and one of the most popular Radio entertainers in these United States.

One of the most interesting memories in

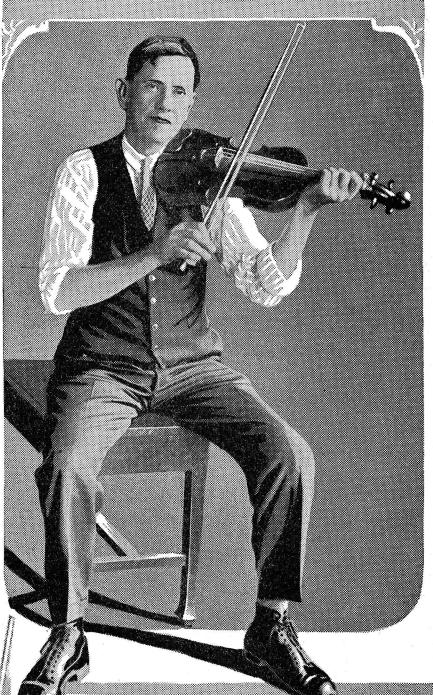
these United States.

One of the most interesting memories in the vari-colored career of the Fannin county virtuoso, is the fiddling contest at which the mountain boy outfiddled Governor Bob Taylor of Tennessee. This contest was the big event of the year. "Fiddlin' Bob," as he was popularly known, was recognized for his skill with the fiddle, and few had ever been found who were near enough his equal to make a competition interesting.

BUT on this momentous occasion, a new adversary was discovered. A hardy mountaineer was entered in the nardy mountaineer was entered in the contest, who was the pride and hope of his friends who had come along with him to lend any moral support they could. The contest went on and it was a thrilling batcontest went on and it was a thrilling battle between the two favorites—Gov. Bob
Taylor, and the unknown mountaineer.
Then the finish and young Carson was declared winner and thereafter became
known as Fiddlin' John, while Governor
Taylor was so edlighted with the young
fellow's playing that right there on the
spot, he bestowed his fiddle on the proud
victor.

After that it was but a step to other things. The Old Fiddlers' convention, at which Dixie's champion is determined, is which Dixie's champion is determined, is a yearly event in Atlanta, and to this came Fiddlin' John, fresh from his first victory. And against hundreds of seasoned exponents of old time fiddling, John was declared champion of Dixie. Not only that but eight times he won, the longest period of time any one man has ever been known to hold the Dixie championship.

Then after awhile came Radio, and Fiddlin' John came up to the Atlanta Journal's broadcasting station to play on a program. He made an instant hit, and before the concert was half finished the



telephones in the Radio department were ringing constantly and furiously bringing in clamorous requests and telegrams came in clamorous requests and telegrams came pouring in from the outside. The homely, old-fashioned backwoods tunes had awakened memories and the love of the "old-timey" that is dormant in all of us, and the unseen listeners were eager for more. That night marked the beginning of the Blue Ridge fiddler's Radio career. Since then he has siven hundreds of concerts at then he has given hundreds of concerts at WSB's studio and always the announcement of his appearance has insured an audience of interested listeners.

THEN after a few months, the Okeh phonograph company, which has drawn upon WSB's supply of talent for a goodly amount of material, recognized in Fiddlin' John Carson a valuable attraction, and without loss of time, contracted with him for a series of his characteristic native airs, and sent him to New York city to record them on the waxen discs. John remembers vividly his trip, which was his first, to Broadway, where he says he walked all day and never saw a soul he knew.

knew.

In between times, the Dixie champion is kept busy filling engagements in various parts of Tennessee, the Carolinas, and Georgia. County fairs, country dances, city entertainments, banquets; in fact, practically every conceivable kind of entertainment seeks his services. On his almost too infrequent return trips to Atlanta, he renews acquaintance with his countless Radio fans, who are always delighted to hear him back on the air.

The Fannin County Kubelik, though nearing the sixty mark, is still hale and hearty, "tough as a knot on a pine log," doesn't look a day over forty, and is good for fifty years more, so he says.

for fifty years more, so he says.

FIDDLIN' John's greatest experience was Γ his debut behind the footlights. The Lyric theater, one of Atlanta's biggest and most popular playhouses, was to give "Mrs. Wiggs of the Cabbage Patch." To "Mrs. Wiggs of the Cabbage Patch." To make the play true to form, a real honest-to-goodness, backwoods fiddler and a dancer were needed, so Manager Monty Salmon, who is a real Radio fan, immediately fastened on Fiddlin' John Carson as the one to fill the required role. He then suited the action to the word, got in touch with WSB, and landed the mountaineer fiddler, and his young daughter, who is an expert buck and wing dancer. Reports and box office receipts testified at the end of the week, to the tremendous drawing power of the popular Radio entertainer and all parties, most of all, Fiddlin' John, declared themselves more than satisfied with the results.



Bert Davis, the Roaming "Clown of the Air"



WSM, at Nashville, "We Shield Millions"

SM, "We Shield Millions," the 1,000-watt broadcasting station of the National Life and Accident Insurance company, Nashville, Tenn., which was dedicated with a magnificent continuous program Monday, October 5, 1925, which lasted from 7 p. m., till after 2 a. m., is the completed dream of the big insurance company executives who, when planning the erection of the National's beautiful home building, included in their plans the erection of one of the finest broadcasting stations in the

Following the completion of the National building first steps were taken toward the building of the powerful station and Vice-President Edwin W. Craig was commissioned with the task of gathering together the best ideas of the Radio stations then successfully broad-casting and incorporating them in the station that Nashville can boast of as one of the very finest in America.

As there were no exclusive class B wave lengths obtainable, through the courtesy and cooperation of Station WOAN, Lawrenceburg, Tenn., which was operating on 282.8 meters, was made by which Station WSM could divide time on the air. WSM subsequently operates for the present every Monday, Wednesday and Saturday from 6:30 to 7:30 p. m., with dinner music from one of the hotels, and from 10 to 11 with a studio concert, and on Sunday alternates with morn-ing services from the First Presbyterian church one week, and the night service the next week.

An interesting point about WSM is the fact that, although the studio is situated on the top floor of the National building in the heart of Nashville, the transmitter and towers are located at an especially selected site some two miles distant from the business district. Here

Thomas L. Parkes, engineer, and his bride of three months live and take care of the main

portion of the equipment.

Jack DeWitt, operator, is stationed in the control room, which adjoins the studio, and operates the speech-input system. Three special lines connect the studio and control room, with the transmitting room. One is for regular programs, one for emergency programs and one a private telephone line between the

two technicians. WSM's studio is beautiful, with walls and ceiling draped in rich wine-colored velvet, a fitting setting for the handsome ebony Steinway grand piano. Floor lamps, a gorgeous crystal chandelier, and a lovely announcer's table, complete what is surely one of the most beautiful studios in the country. WSM's director is Miss Bonnie Barnhardt, nationally

Above, Jack Keefe, cheerful announcer. Large photo, sec-tion of the studio with crystal pendant chandelier. Bonnie Barnhardt, director of the station, is known from coast to coast as "The Lady o' the Radio." iwin W. Craig, vice-esident of the National fe and Accident, at e microphone is pic-tured to the left.

known as the "Lady o' the Radio," who was formerly connected with Station WSB, Atlanta Journal, Atlanta, Ga., in the capacity of program director, bedtime story teller, staff musician and editorial writer. She is now executive head of the big Nashville station and also essays the jobs of program director and Radio editor. Jack Keefe, popular Nashvillian, is WSM's announcer and studio director, and is likewise a splendid entertainer.

likewise a splendid entertainer.

One of the biggest features which marked WSM's debut into the Radio world was the daily broadcast of the play-by-play detail of the World Series. Every Saturday afternoon WSM also gives its vast daylight circle a minute account of the Vanderbilt football games, broadcast direct from the stadium. This feature is tremendously popular with Radio fans and congratulatory messages by the thousand pour into the station. into the station.

Every evening at about 7 o'clock, Miss Bonnie Barnhardt comes on with her famous "Hello Kiddies," and tells WSM little folk and grownups all about Peter Rabbit, and Reddy Fox, and all the other little greater. all the other little creatures of the Green Forest and Green Meadows. Miss Bonnie's bedtime club was first organized at WSB, Atlanta, and has countless members. These and many more new ones are rapidly joining the new circle started at WSM, Nashville. Special songs for the kiddies, and other appropriate the control of the

priate attractions feature the children's period, which comes during the intermission of the dinner hour from 6:30 to 7:30 each evening WSM is on the air. Reports from practically every state in the Union, and Canada and Cuba, were received on WSM's inaugural

broadcast.

One of the biggest features of WSM's opening program Monday, October 5, was the presence of a group of Radio celebrities, including three of the world's most popular announcers, headed by Lambdin Kay, "the Little Colonel" of WSB, the "Voice of the South"; Leo Fitzpatrick, now of WJR, Detroit, Mich., the "Merry Old Chief" formerly of the Kannas City Nighthawke: George D. Hay, the "Solemn Old Judge" of WLS, Sears-Roebuck, Chicago; Major D. B. Carson, commissioner of navigation of Wachington D. gation, of Washington, D. C.,

were in full charge of WSM's inaugural program and alternated at the microphone, giving the Radio audience tuned in for the inaugural broadcast, a bill of superlative entertainment.

15



WQJ, "Surprise Station" of Rainbo Gardens



How Can We Improve Radio Broadcasting?

THE National Association of Broadcasters is doing more work than any other one agency to improve Radio in all its branches. It is working on definite projects which will tend to wards bringing relief to Radio and understanding between those in the broadcast world. Frank W. Elliott, vice president and general manager of the Palmer School of Chiropractic, owners of Station WOC at Davenport, Iowa, was elected president of the national organization at the recent fall meeting. At the same time Powel Crosley, president of the Crosley Radio Corporation, which owns and operates Superstation WLW at Cincinnati, was elected one of the two vice presidents of the same group. Radio Digest has communicated with these two gentlemen and it presents their views on the question, "How Can We Improve Radio Broadcasting?" herewith.

By Frank W. Elliott General Manager Palmer School, WOC President National Association of Broadcasters

RADIO can be improved if we start RADIO can be improved if we start now. There is a place for the small station of limited power. Its functions should be purely local in character and should be of good quality and well managed. It should serve that community with programs local, and at times other than during the general broadcasting hours. Preferably, daytime and early evenings. Superpower stations will not fill the gap of small stations well managed in this respect.

EXPERIENCE has shown that pro-EXPERIENCE has shown that programs of scheduled events, which are designed for an eye and ear entertainment cannot be successfully broadcast as a general rule, but future programs and the better class programs of today are all built especially for Radio, and the future will bring forth a class of entertainment will bring forth a class of entertainment made entirely for the ear. Great progress has thus far been accomplished by many of the better grade stations. Of course, it is folly to contemplate any form of censorship in an industry hardly out of its swadding clothes. out of its swaddling clothes.

THOSE who desire to broadcast, should pay the expense connected with same, whether it be the station owner, or the advertiser who desires to make use of a suitable and convenient station. It can scarcely be argued, or contended, that any station has ever been erected for other than advertising, or goodwill to the THOSE who desire to broadcast, other than advertising, or goodwill to the station owners, so that one form of toll business is no different than the other, business is no different than the other, except that in the so-called toll arrangement a greater variety of approach is made to the public in the way of entertainment, and I believe is being accepted by the listening public to their entire satisfaction. It may be that we will have two classes of stations, those of superpower, and those in net work systems. Such an arrangement would certainly give the greatest possible distribution of entertainment material to our listeners, and would by the very nature of the vastness of the audience compel the highest class of entertainment.

THERE should be a decided stand taken by and supported by the government and endorsed by the people of the United States, to put a stop to the licensing of every station who makes applications of the control of the con plication for same. There is a practical limit to the number of stations that can be assigned to the limited number of wave bands, and that limit should never be in-creased. It is unfair to the public, and unfair to the business interests who spend their good money to provide a free service to the public that can be a service to the public that service to the public, that such a plan be further carried on. Any plan which does not take into consideration the fac-tors of location, priority and ability to serve would be unwise, both from a stand-point of the government and the Radio listening public. listening public.

THE department of commerce is the most important department dealing with the business welfare of this nation. I hope that no political influence will be permitted to enter into the efficiency of that department, and trust that legislation will only be directed to giving the department the necessary latitude to cope with an ever changing situation. I am not in favor of control by other than government agencies, but favor the attitude adopted by the present administration in seeking the advise and counsel of all interested. THE department of commerce is the

AS stated in five, all the legislation that is needed at the present time is a broadening of the powers of the department of commerce, so that their decision when adopted can be enforced.

MY investigation into the Radio section of the department of commerce has led me to believe that a larger appropriation should be granted to the department, owing to unusual demands made upon it. Its small personnel, like many governing departments, are un-



Dr. Frank W. Elliott

derpaid for the demands made upon them. This feature should be recom-mended to congress for consideration.

YOUR eighth question cannot be answered, or put into effect without proper consideration of number seven, for the reason that the department is handicapped by lack of funds and equipment necessary to police the air, and insist upon stations maintaining their assigned frequency.

AFTER proper allocation of wave lengths are made for the existing stations, there will be no need for separate allocation for entertainment. Superpower broadcasting stations and those using increased power (five kilowatts or using increased power (five kilowatts or more) should be given sufficient separation to work efficiently at all times. Greater power than five kilowatts causes little or no disturbance when proper bands are assigned.

THE CLOWN OF THE AIR

(Continued from page 5)

fully making a bow he entered the ball and waved a flag through a hole to signal

and waved a flag through a hole to signal that he was ready.

The assistants gave the ball a shove and it rushed down the incline with its human burden. But instead of looping the loop the ball jumped the incline and rolled down hill into a river half mile away. When assistance arrived the young performer was nearly drowned. former was nearly drowned. So Bert Davis left the circus.

We next find him, still in the callowness of youth, riding horses on the big circuit tracks and frequently doing what the Prince of Wales has been doing ever since the war. Davis took his quota of spills and then left the tracks to become an actor. actor.

From then on until the movies sounded

the tocsin on the blood and thunder of the "ten-twent-thirt" melodramas, Bert played that character parts in "opery" houses all over the country. He left the stage of drama to grace that of vaudeville in the winter and in the summer he followed the dusty trails with carnival caravans.

But Radio was springing into impor-tance in the world of amusement and the ever progressive entertainer heard the call of the microphone. In March 1923, he forsook the old favorite haunts of the big top, the footlights, and the flaming torches, and went on the air. He is there today, nightly delighting thousands of people with his amusing dialogues and

clever comic song variations.

Bert Davis is one of the few that can take a song and put in original variations that make it better than it was originally. It is impossible to tell you were he can be heard regularly, because regularity is the one thing that bothers Davis the least. The old trouping urge is with him yet. This week he may be heard from WQJ, This week he may be heard from wQJ, Chicago and next week one of the eastern stations may be his stage. His Radio equipped automobile is his private car and his route list may be found in the program pages now and then.

SUGGESTED QUESTIONS

SUGGESTED QUESTIONS

What is the future of the small station? Daylight broadcasting? Relay night broadcasting? Or will that be unnecessary on account of the superpower stations? Will the small station be forced off the air by program competition? What type of programs (include various classes) are destined for the future? Of entertainment programs, what kind would you consider the best? What of the "continuity" or "presentation" program? Are you opposed to state and federal censorship of Radio programs? Why? Will toll stations be the answer to "Who's to pay?" We must consider that large business enterprises, who operate their own stations, are really doing toll advertising on an exclusive scale, unless these big firms allow a certain part of their time on the air to be leased by other firms or individuals. Will superpower growth cause the toll station to be the sole survivor of the American system? What about taxing Radio manufacturers, or by a public receiving license fee as in England?

Shall broadcasting stations be limited in number by some licensing plan based on priority and ability to serve, or some similar device? The Kintner plan has been proposed as a means of limitation. What is your opinion of this plan? Do you favor appointment of an unbiased, non-partisan broadcasting control board, in which the public, the broadcasters, the Radio industry and the government shall be represented, which board shall have the power vested to settle all differences pertaining to broadcasting and the interpretation of present or future Radio legislation? What should this include?

The Radio section of the department of commerce last year was given \$125.000 with which to work. The department according to an estimate, employs 70 persons. Trips of supervisors and their assistants all over the country must come out of this appropriation as well as the 70 salaries. No money is left for instruments—the most necessary equipment for the supervisor. Does the department need more money? If the government wishes to reduce taxes,

By Powel Crosley, Jr. President Crosley Radio Corporation Vice-President National Association of Broadcasters

THE small station activities will undoubtedly be confined to a more and more restricted area as time goes on. It will serve its local community in daylight as well as at night. The small station, as a rule, cannot afford to prepare the type of programs that a large station can deliver, so that its audience, in all probability, will be more restricted. I feel that no one has a desire to eliminate the small station, but a fundamental law governs such things—the survival of the fittest. A station depends upon good will as a reason for its existence. With a constantly diminishing audience who prefer to tune to better programs, its value becomes smaller. Its owners are the only ones who can judge when its value ceases to justify its existence. undoubtedly be confined to a more

PROGRAMS must always be designed to please all classes of people. The popular type of programs are best; not necessarily jazz, but popular as differentiated from classical. As public appreciation for better music grows, a larger percentage of people will prefer classical music. Undoubtedly Radio has educated thousands in the appreciation of better music. I do not believe in any form of state or federal censorship of Radio programs. The public should be the judge. Programs must be designed to satisfy the greater portion of the public. Poor programs, undesirable programs, will not create good will, therefore, no Radio station can present them.

I DO not believe in any method of taxing Radio manufacturers or taxing the public. I believe that good will alone is sufficient to maintain a broadcasting station. I am heartily in favor of a broadcasting station dividing its expense with others who will contribute for a certain amount of time. This service provides better programs and reduces the cost to the owner of the station.

BROADCASTING stations should be limited by some licensing plan based on priority and ability to serve. We have always favored such a plan, and recommended it over a year ago. There are, unquestionably, too many broadcasting stations today, and it is now absolutely necessary that something be done to recbe done to rec-e stations who ognize the rights of the stati have been and are now serving.

I FEEL that it is necessary to have 5. some control of the air vested in proper persons who are capable of actually controlling the situation.

IT IS essential that some laws be passed governing Radio now. The department of commerce has done a good department of commerce has done a good work, but they are lacking in authority to properly control the situation; unless something is done the already chaotic condition of Radio will become much



Powel Crosley, Jr.

We need improvement in present conditions very badly, and the prevention of things going from bad to worse.

I FEEL that whoever has charge of the control of broadcasting-whether be the department of commerce or me new especially created depart-int—should have ample money to do ment—should have ample money to do its work, also proper instruments and equipment should be furnished. There is no department of the government which is closer in touch with the real public welfare and service, and that expense should not be stinted. The government can well afford to appropriate the necessary amount of money, not only to the proper control of broadcasting stations, but, if it ever becomes necessary, to the actual expense of broadcasting. This money should come from general taxation rather than from any form of special tax.

I AM thoroughly in favor of using an oscillating crystal to hold a station on its assigned frequency. We have been using one for some months now; few stations have them. The Radio inspectors are not even equipped with any accurate form of frequency measurements. Every station should be excluded. ments. Every station should be equipped so that its wave length will not vary.

THE idea of allocating certain wave bands to international superpower broadcasting stations is excellent, but until superpower is developed further is not essential.

WQJ, RAINBO GARDENS

(Continued from page 7)

It is in this room that the popular Saturday afternoon Koffee Klatsches are

held.
Although the writer has been invited to attend a Koffee Klatsch by one of the charming hostesses, insomuch as he is of the other sex, and has been told that he will be the only one of his kind in the dining room, a second hand description will have to suffice here.
This Saturday afternoon feature was instigated by the ever-active Jerry Sullivan shortly after the station's birth. The Koffee Klatsch is a musical program for the ladies. Memberships to the Klatsch are open to listeners, who upon request, are mailed invitations to one of the public affairs, held in Mann's Rainbo Gardens Radio room. Three hundred women are invited weekly and coffee and Gardens Radio room. Three hundred women are invited weekly and coffee and cake is served to these guests of the Calumet Baking Powder company and the Rainbo Gardens Station WQJ.

Jerry Sullivan, composer of many songs, also has an array of exclusive artists.

Jerry Sullivan, composer of many songs, also has an array of exclusive artists around him, including Bert Davis, the Melodians, Clarence Theders, the West Brothers, Clement Laskowski, Maria Dneprova, the Fontella trio and Hal Lansing, ukulele player.

ukulele player.

According to Jerry Sullivan, WQJ can truthfully be called the "surprise station of the air," because you never know what is going to happen. The consensus of opinion of the listeners who have written the station thousands of letters is that they tune in and stay tuned until the station signs off with Jerry singing:

"So, dont go away-this much I have to say Just set your dial-and stay a while-With WQJ --- Chi-C.1 W-go,

NEWS BRIEFS FROM THE BROADCASTERS

U. S. ARMY BAND REGULAR OVER WRZ, WJZ, WGY

Trumbull of KYW to Travel—KHJ's Uncle John Home Again—CKY's Announcer at WQJ

Those who appreciate good band music, Those who appreciate good band music, will hearken to the announcement that the United States Army band is to broadcast concerts every Thursday night at 8:15 p. m., eastern time, through WRC, WIJ and WGY. Captain J. S. Standard is the leader of the army band which, in official circles, is known as Pershing's Own.

Wishing to visit some of the distant points that his voice has reached during his two years of service at the KYW microphone in Chicago, Chief Announcer Logan (Steve) Trumbull, recently signed off and left for an extended journey through the West and possibly the South Seas.

Mr. Trumbull will devote much of his spare time to playwriting, an art in which he has had quite a bit of success.

Uncle John Daggett and the party of KHJ musicians who were selected by the L. A. chamber of commerce to accompany them on their Hawaiian trip, returned last week in time to attend the Halloween party given for the kiddies at KHJ, Los

The Radio Digest Silver Cup Canadian

DIXIE PAPPY LEAVES VAUDEVILLE BEHIND



The vaudeville stage lost another of its popular artists when Eddie Malle, known to thousands of patrons of the two-a-day shows as "Dixie Pappy," forsook the footlights to become announcer at Station WCAU, of the Universal Broadcasting company, Philadelphia.

ARTISTS OF NOTE **NEXT OVER CHAIN**

John Powell, Pianist, Eva Gauthier, Soprano, Give Sixth Atwater Kent Program

NEW YORK .- John Powell, celebrated pianist, and Eva Gauthier, soprano, will be the distinguished artists in the sixth "Atwater Kent Radio Hour" to be presented on Sunday, November 8. at 9:15 p. m., eastern standard time, from the studio of WEAF. Their joint program will be broadcast by WEAF, New York, N. Y., WEEI, Boston, Mass., WCAP. Washing-

WEEI, Boston, Mass., WCAP. Washington, D. C., WJAR, Providence, R. I., WGR, Buffalo, N Y., WCAE, Pittsburgh, Pa., WSAI, Cincinnati, Ohio, WWJ, Detroit, Mich., WOC. Davenport, Iowa, WCCO, St. Paul-Minneapolis, Minn., WTAG, Worcester, Mass., KSD. St. Louis, Mo., and WFI, Philadelphia, Pa. In this series of concerts, Reinald Werrenrath, American baritone, Toscha Seidel, Russian violinist, Mme. Louise Homer, Metropolitan contralto, Salvatore de Stefano, Italian harpist, Olga Samaroff. pianist, and May Peterson, Metropolitan soprano, Mary Lewis, Metropolitan soprano, and Paul Kochanski, violinist, have entertained the Radio audience. ist, have entertained the Radio audience

JACK TELLS MIKE ABOUT WILLS



announcer, D. R. P. Coats of CKY, Winnipeg, visited Chicago last week and was heard from WHT, WLS and WQJ.

WAHG, Richmond Hill, N. Y., plans an unusual series of great artist recitals. Famous organists will be heard at this station Friday nights. The first artist to be heard was Chandler Goldthwaite, who played last week.

"The Merry Old Chief" of the Jewett Jesters immediately found himself in a friendly locality when he started to conduct the Jester program, Monday, October 12. These informal Radio parties are ber 12. These informal Radio parties are conducted every Monday, Wednesday and Saturday by the Merry Old Chief from 11:30 p. m., to I a. m., eastern time. His policy in these entertainments is the same as that which prevailed in the old Nightas that which products hawks at Kansas City.

A musical novelty written for Radio, "Fun in a Schoolroom," will be presented by KGO, Tuesday, November 10, on the latter part of the evening program. Carl Anderson will direct the production. The comedy drama, "Her Temporary Husband," will be breadeast in its original stage. will be broadcast in its original stage form, Thursday evening, November 12.

Hugo Riesenfeld and his orchestra are once again the Sunday afternoon feature at WJZ, New York. These concerts which are given at 12:30 p. m., eastern time, are given from the Rivoli theater, which is particularly adapted to Radio transmis-

Fans listening in to KFAB, Lincoln, Nebr., were given a special treat during the dinner hour music Monday, October 26, at this station. Members of the Duncan sisters, Topsy and Eva show, including Marvel and Thelma White, Kentucky quartet, and the Old Fashioned Girls, appeared before the microphone.

Another new attraction has been added to the daily program of Station KPO. Three talented young vocalists, Art Kahn, Dick Dunn and Harold Couden have been formed into a trio named the "Twilight Boys," and are appearing regularly dur-ing the children's hour. Children's songs are the specialty of the group.

KFNF AIDS STUDY OF **AIR USING BALLOONS**

SHENANDOAH STATION AS-SISTS RUBBER COMPANY

Liberates 300 Gas Bags in Tests to Learn More of Directional Air Currents

SHENANDOAH, Iowa.—Three hundred sounding balloons, ranging in sizes from two to three feet in diameter and inflated two to three feet in diameter and inflated with hydrogen gas, were liberated from Shenandoah, Iowa, on November 3. This marked the beginning of an experiment arranged by the B. F. Goodrich Rubber company in cooperation with the Henry Field Seed company's station here, KFNF. The purpose of the experiment is two-fold. First to study the directional features of different atmospheric levels for

The purpose of the experiment is twofold. First to study the directional features of different atmospheric levels for
aeronautical information and second to
study these currents with respect to
their possible influence upon Radio
broadcast reception.

To Gauge All Levels

The balloons used in the experiment
are of the same type government meteorological experts use in taking altitude
tests of atmospheric conditions. They
were inflated at varying pressures predetermined to gauge the altitude at which
each balloon was to travel.

Tags attached to the balloons give specific instructions. These instructions,
together with the announcements that
have been and will be broadcast daily
from KFNF, are expected to obtain full
cooperation of those persons who find
the balloons. The report of location and
time of finding the balloons is important.
The return of these tags will enable
the completion of records which can be
studied by both Radio and aeronautical
engineers.

studied by both Radio and aeronautical

ater in Philadelphia. Another WLIT quartet, the Adelphi Melody four, competed against the Pennsylvania male quartet for

Western composers who have striven without success for recognition, will be given an opportunity to have their works introduced to the public through Radio, it was announced recently by Marshall W. Giselman, KPO organist. Mr. Giselman, at his Sunday recital over KPO, will play from manuscript one new number during each of his programs, together with a * * each of his programs, together with a short outline of the new composer's life ular WLIT feature, has just been chosen the winner of the "Barber Shop Ballad" should be mailed to Giselman in care of quartet contest conducted by Keith's the-

WHAT DO THE BIG TERMS MEAN? ASK A TECHNICIAN

By James H. Galbraith HAT is all this talk about "phase difference," "high frequency resistance," "straight line frequency," and so forth that we hear Radio engineers discuss and advertising copy-writers using and abusing to tell the public of the merits of their wares? Where do these terms originate and what do they

If you ask William W. Harper, consulting engineer specializing in high frequency measurement, he'll tell you more

than you can digest at once sitting.
"In the first place," says Mr. Harper, "it isn't properly 'straight line frequency.' It should be known as 'straight frequency line.'"

I was trying to learn more of the science of Radio measurements and had decided to interview him at his well-equipped laboratory where the products of many firms are subjected to rigid tests for modifications and improvements in

looking instruments in orderly Queer arrangement were atop every bench.
"The reason the term 'straight line fre-

quency is a misnomer is easily evident. A condenser is a device having electrical capacity. It has no property of frequency. It may have, however, a straight frequency line characteristic when employed to tune a coil having the correct electrical dimensions."

"And, incidentally," Mr. Harper continued, "the frequency line characteristics

have no bearing whatsoever on the selec-

is really proportional to the quotient of the reactance over the resistance in the tuned circuits of the receiver, if that means anything to you."

The writer shook his head apologeti-

cally, but did not request a more simplified explanation. "A difference?" he asked. "And what is phase

The measurer of such things had a ready answer. "Phase difference," he said, it the numerical expression of the merit of various Radio components, such as coils, condensers, and the insulating materials employed. It enables the user to predict the degree of selectivity and responsiveness of a receiving set in which these parts are used. Many of the instruments you see here are employed to ascertain phase difference."

The writer asked if the term "power factor" wasn't somewhat like phase dif-

ference. "Yes," "Yes," replied Mr. Harper. "In fact, power factor is the expression of phase difference in percentage. Phase difference is an angular relation and is expressed in degrees. The power factor is probably more descriptive because it represents the

amount of energy lost.
"One more question," the writer said. "What do you mean by high frequency resistance?"

"High frequency resistance in a receiver is that property which tends to prevent the reception of a signal and impair the selectivity. It should be as low as possible. It is measured in ohms over

tivity a receiver has to offer. Selectivity | the frequency range which the receiver

or component is expected to span."

Thus closing his interview, the writer took his leave, deciding after all that perhaps there was something besides hokum in the large technical terms which many Radio writers, manufacturers and advertising copywriters will probably continue to use and misuse.



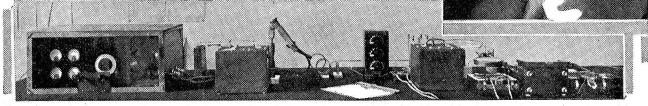


Photo shows high frequency measuring table, with equipment used in measuring the electrical efficiencies of Radio coils, condensers, and insulating materials (as bakelite and hard rubber). "Power Factor," or phase difference, are determined to indicate the merit of these components. Left, screened in, is a 20-watt radio frequency oscillator. Next to the right in order are a precision standard wave meter, a delivery coil, the latter coupled to a coil under test, a decade resistance box, standard variable air condenser, thermogalvanometer (with glass for reading), and several meters at right. The latter are not of the common variety but take peak vacuum tube voltage measurements. Right insert, William W. Harper, consulting engineer.

FOLLOWING SPORTS THROUGH MIKE

SERIES BROADCASTS WASTEFUL?—MAYBE!

ECONOMIC LOSS OF TIME QUESTION IN DOUBT

Many Work on Half Day Schedule So They Can Listen to Description of Ball Games

SCHENECTADY, N. Y .- Do the World Series baseball games result in economic waste? The correspondence of WGY during and following the 1925 baseball championship indicates a suspension of useful, productive effort from two to four o'clock every day of the series.

o'clock every day of the series.

For example, housewives admitted that they limited the fall cleaning to half days and industrious, plodding farmers reported that they abandoned fall plowing at noon to hear Graham McNamee's colorful description of a ball game.

The size of the Radio audience during the series is anybody's guess but no guess can be made on the basis of the number of Radio receiving sets for in city and country groups of from two to three people to two or three hundred listened to the output of single receivers.

Not a Total Loss

Not a Total Loss

It is not just to charge the listening time of all people as a total loss, for Radio does permit some to continue with their work without loss of interest in the subject based coars. subject broadcast. One housekeeper reported that she did all her mending during the baseball series but admitted that there were times when the needle would

Football Broadcasts

Saturday, November 7 Chicago-Illinois, KYW (535. (535.4). WGN

(370.2).

Harvard-Princeton, WBZ (333.1), WCAE (461.3), WCAP (468.5), WEAF (491.5), WGY (379.5), WJAR (305.9), WJZ (464.3), WSAI (325.9), WTAG (268), WTIC (475.9).

VSAI (325.9), WTAG (268), WTIC (475.9).

Iowa State College-Grinnell, WOI (270).

Minnesota-Butler, WCCO (416.4).

Montreal-Argonauts, CFCA (356).

Northwestern-Michigan, WBBM (226).

Ohio State-Indiana, WEAO (293.9).

Pennsylvania-Haverford, WIP (508.2)

Pittsburgh-W. and J., KDKA (309.1).

St. Mary's-Multnomah, KGW (491.5).

Washington-Stanford, KFOA (454.3).

Wisconsin-Iowa, WSUI (483.6).

The work of the World Series announcer is best summed up by a Potsdam, N. Y., woman who wrote: that two women are doing their fall housecleaning on a half-day schedule, two farm women at that, he may be sure he is doing his job well."

"When a man can tell news, especially about the baseball game, so interestingly

Close Sayville Navy Station

WASHINGTON, D. C.—Announcement has been made by the navy department that the naval Radio station at Sayville, L. I., has been ordered decommissioned and its traffic routed through a new 20-kilowatt tube set at Arlington, Va. The Sayville station, taken over from the Germans during the war, handled the Navy traffic with San Juan and Porto Rico on an arc set.

Indians Follow Sports Through Microphone

Yakima Tribesmen Enjoy Broadcast of World's Series Games

PORTLAND, Ore.—Poor Lo has succumbed once more to the white man's inventions—this time the Radio.

During the recent World's Series a

group of members of the Yakima tribe on the reservation across the Columbia river in central Washington listened in to broadcast returns of the game. As Pittsburgh or Washington diamond gladiators played to their satisfaction grunts of approval rose from their backers

of approval rose from among the crowd.

Some of the members are not versed in the language of the white man so one, better trained than his fellow tribes one, better trained than his fellow tribes. one, better trained than his fellow tribes-men, took down the play-by-play descrip-tion in shorthand and then translated it in intervals of silence to those who could understand only the Yakima jargon. Several of the Indians, well versed in America's national game, kept intelligent

box scores of each game, changing the figures accurately with each play.

New Baltimore Station to Have Unique Studio Staff

BALTIMORE, Md.—WBAL, the new Baltimore station recently built by the Gas and Electric company here, has gathered together an unusually talented staff. Frederick R. Huber, director of broadcasting, has chosen Stanley W. Barnett of WOC for studio manager. Gustav Klemm, one of the program supervisors, is a native of Baltimore and conductor of the Park band. George Bolek, the other program director is also a well-known

WOC GIVES FOOTBALL RESULTS OVER RADIO

Davenport Station Will Mike Playby-Play Results

DAVENPORT, Iowa.—Station WOC, the Palmer School of Chiropractic here, has received permission, experimentally, from the Associated Press to broadcast from the Associated Press to broadcast play-by-play reports of football games in cooperation with the Davenport Democrat and Leader. As the plays are received, on the A. P. wire behind the scoreboard at the office of the Democrat, they will be repeated by the WOC announcer into the microphone, and thus carried into the ether to football fans everywhere.

verywhere.
Inasmuch as Station WSUI, the State Inasmuch as Station WSUI, the State University of Iowa, on the same wave length as that used by WOC, will be broadcasting the game that will be played at Iowa City on November 7, WOC must perforce be silent on this date. The following, therefore, are the dates of the games which WOC will broadcast:

November 14—Iowa at Minnesota.

November 21—Iowa at Southern California.

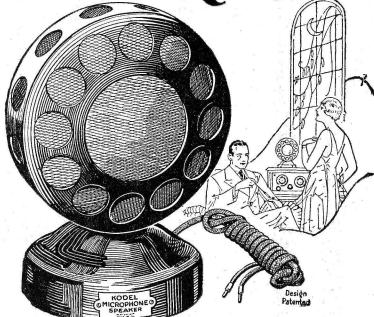
fornia.

The kick-off is scheduled in each case for 2:00 p. m.

Dedicate New WBBM Studio with Big Surprise Program

CHICAGO.-WBBM, Atlass Brothers the Broadmoor hotel and Stewart-Warner studios. The North Side Realty company is sponsoring the studio which is located at 77 West Washington street. The opening program presented many company of the Park band. George Bolek, the other program director, is also a well-known musician. James E. Wilkinson, who has a fine baritone voice, is the announcer.

Loud Speak Sensation



The KODEL MICROPHONE Loud Speaker

HE Loud Speaker that has the whole country talking. An exact replica of the microphone used in broadcasting stations.

The super-sensative tone unit with the unique construction of the new snail-shell horn inside the microphone case, produces a veritable deluge of volume - - loud - every note, every some rich as when it enters the broadcasting microphone in the studio.

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

Write for descriptive literature

THE KODEL RADIO CORPORATION
OWNERS of Station W K R C
CINCINNATI, OHIO

les as fast

T takes only one-third as long to charge your batteries as it did with last year's slow 2-ampere chargers. The new 5-ampere GOLD SEAL HOMCHARGER charges 150% faster --- fully charges the average battery OVERNIGHT!

The new 5-ampere GOLD SEAL HOMCHARGER charges A or B batteries -- is trouble-proof, shock-proof, fire-proof; there are no bulbs to break, no acids to spill, no extras to buy.

Any radio dealer can show you the new 5-ampere GOLD SEAL HOMCHARGER—or can get it for you.

THE KODEL RADIO CORPORATION Owners of Station WKRC 509 EAST PEARL STREET CINCINNATI, OHIO

The New 5 Ampere GOLD SEAL HOMCHARGER



OPERATING AND TROUBLE SHOOTING

OPERATING and Trouble Shooting, is a Radio Digest feature the purpose of which is to give practical information on the operation, care and cure of simple troubles in every kind of receiver. Standard Radio receivers of wide distribution and use are studied from the standpoint of instructions for installing and connecting, tuning and operating, and remedying little difficulties. The suggestions below, if executed faithfully, will make winter broadcast listening yield all there is to yield to the reader and give your set a fair chance to show its worth.

For the Owner of Super-Zenith VII, VIII, IX and X

THE panel and apparatus of Super-Zenith II form the basis around which the other three models in the Zenith line are built so the following data

on this set will be found of equal value to the owner of the larger models. Super-Zenith VII is probably the largest cabinet receiver on the market, as the apparatus has not been crowded together and there are large compartments at each end for the batteries. This set is a tuned radio frequency receiver, incorporating two stages of radio frequency amplification, a detector and three stages of amplification, and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications and the stages of amplifications are stages of amplifications. plification at audio frequencies. Much interest has been aroused in Radio circles in this set as it is the first time that a receiver has appeared for use by the Radio public in which variable coupling in the R.F. transformers has been tried.

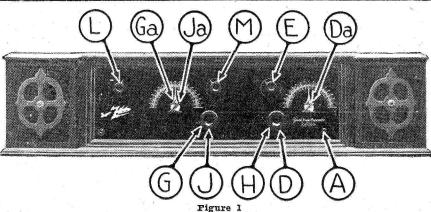
The unique and different factors are no all within the cabinet as inspection of figure 1 will show. At the right end of the panel there is an engraved scale which indicates the settings of the pointer Da, which settings are controlled by the knob identified by the letter D. The usual construction is to have a large dial which can be turned by means of a smaller vernier knob, but in this case all control of Da is done through the knob D. The other tun-ing control is the indicator Ga and Ja, the setting of which is varied by the knob GJ.

The rear view of this panel is shown in figure 2, and study of this illustration will show the reason for the peculiar identification lettering of the controls. The variable condenser D is on the shaft of the pointer Da which is adjusted through knot D. Behind knot D on the front of the panel will be found a knurled disc which is the control H, by which the capacity of

the small condenser H as shown in the rear view, may be varied. The two condensers G and J in figure 2 are controlled through cords by the knob GJ, the settings for which are shown by the pointer Ga-Ja; thus two condensers are controlled simultaneously by means of a single knob.

Figure 3 is presented for those who are familiar with schematic wiring diagrams. and the various parts used and shown in figure 1 and 2 may be readily found in figure 3. For control of efficiency of the first tube, a variable high resistance unit is in serted in the plate circuit of the first tube and identified by the letter E. M is the rheostat by which the brilliancy of the detector tube can be varied, while L is a stage control switch which permits of stages control switch which perhaps to ready change from one to two or three stages of audio frequency amplification. Considering now figure 3 it will be noted that signals come into the primary of the fixed coupler C and the turns in use in the primary can be varied by means of the different connections to binding

A small loading coil is shown at A, which may be cut in or out by the switch identified as A. The secondary of coupler C is tuned by condenser D and from this tuned circuit signals pass to tube U. Tube U is coupled to tube V by means of the tuned R.F. transformer F. The primary of



transformer F is attached to the shaft of condenser G and is rotated with respect to the secondary simultaneously with condenser C. Tighter coupling between primary and secondary is possible at higher wave lengths than can be used at lower wave lengths, and this primary is adjusted so that its position approaches a right angle with respect to the secondary as the rotor plates of condenser G are turned out of the stator plates. Signals then go to tube V and then to transformer I in which the same feature of variable coup-ling is found as is used in transformer F. Transformer I feeds into the detector tube W. The grid leak for this detector tube may be identified in figures 2 and 3 by the letter K.

There are no rheostats in this set for any of the amplifier tubes as fixed ballast resistances are employed to keep the voltresistances are employed to keep the voltage supplied the filaments of the amplifier tubes at the correct value. The three stages of audio frequency amplification appear at the right end of figure 2, the tube sockets X, Y and Z being the first, second and third stages respectively, while transformers N, O and P are used in that order in that order.

A jack, not shown in figure 3, is fur nished, allowing the use of head phones for tuning. The method of changing from phones to loud speaker is entirely automatic, merely removing the phone plug

puts the loud speaker into operation, plugging in the phones puts them into opera-tion and disconnects the loud speaker. Switch L is used to increase and decrease the amplification as desired. This is an improvement over the old plug and jack system employed in the majority of other Radio receivers. Until one has become thoroughly accustomed to the set it is suggested that head phones be used in tuning the receiver. After the operator has had sufficient experience in tuning, the majority of stations may be tuned in di-

rectly on the loud speaker.

Knobs D and GJ are the two tuning controls. By their use the desired station is tuned in. Low wave stations transmitting on 200 to 300 meter waves will be found on the lower left hand side of the scale, stations of higher wave lengths will be stations of higher wave lengths will be found as the pointers are advanced to the right. It will also be noticed that controls D and GJ will have practically the same setting when tuning in a station. For example, if a station is being received with pointer Da at 65 on the scale, Ga-Da will likewise be at approximately 65.

Control E, the resistance, will necessitate a little practice before its use is thoroughly understood. It should be turned to the right until a hissing sound is heard, at which point it should be turned back until the sound just disappears. In other (Continued on page 12)

Why Radio Digest specifies Aero Coils in the new "FIRESIDE" set

Here is the answer to SELECTIVITY with VOLUME in tuned radio frequency receivers

It is easy to obtain selectivity with most any kind of parts, at the expense of power. The problem has been to obtain selectivity and volume; selectivity to tune out powerful locals—and, power to bring in distant stations loud and clear when the locals are tuned out.

HOWIT IS DONE
The answer is, in the control of the coals are tuned out.

The answer is, reduce the high frequency resistance and distributed capacity of the coils used for amplification at radio frequencies—and, tune the coils with condensers of approximately the same resistance!

The amazing selectivity, the way the "Fireside" tunes the most powerful locals in and out on a "knife's edge"; the tremendous volume with which this wonder set brings in the most distant stations, and the bell-like clear tone of the receiver are due primarily to the ideal characteristics of the Aero Coils comprising the radio frequency amplifier!



The Kit you need for the "FIRESIDE" No. TRF-120-Price \$12.00

permits the windings to be entirely "dopeless" and evenly airspaced, the Aero Coils used in the "Fireside" Coils used in the "Fireside" have a lower high frequency resistance and distributed capacity than any other type of inductance ever devised. Laboratory test shows that Aero Coils should be more selective and more powerful than any other coils. Use tests prove that they are!

Obtain a set of Aero Coils from your dealer or direct from the factory. The Kit you need for the "Firesde" is TRF-120. The price is \$12.00.

Other Aero Coil Units

R. F. Regenerative No. RFR-110 List \$11.00 No. CT-80 List \$ 8.00 Wave Trap Unit No. WT-40 List \$ 4.00 Oscillator Because of their 95% air dielectric and their patented construction which No. OS-55 List \$ 5.50

AERO PRODUCTS, INC.

217 No. Desplaines St., Chicago



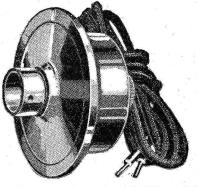
BIG PRICE REDUCTION



THE FORD of LOUD SPEAKERS \$6⁵⁰

Fultone Loud Speaker has conclusively proven to the radio world that a reproducer could be made and sold at \$6.50 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 superherterodyne or reflex. The adjustable diaphragm permits matching Fultone to any receiver and "B" battery voltage.

Either speaker or unit will be shipped on a satisfaction 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.

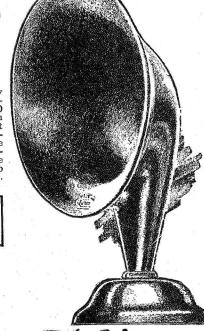


Its large diaphragm and bobbins of fine wire are protected from injury by a heavy nickel-plated case through the back of which adjustment is made by means of a special key. The pole pieces are not made from a solid piece of iron but are assembled from 15 laminations of carefully chosen children in the speaker.

HALL & WELLS, Inc. 128 N. Wells Street, CHICAGO, ILL.

Use on Your Phonograph Edison Adapter 25c Columbia or Pathe 20c Brunswick 30c

HALL & WELLS, Inc. 1



Trade Mark

LOUD SPEAKER UNIT \$300

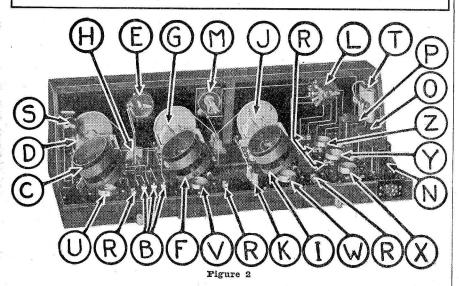
This unit is the secret behind the un-

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										Street,	

NAME.

ADDRESS.. I CITY AND STATE.

OPERATING AND TROUBLE SHOOTING



(Continued from page 11)

words, it should be kept as far to the right as possible without causing distorted signals. The operator can readily recognize this point when a station is tuned in, by turning the control E completely to the right and then bringing it back until a point is reached where the signal is perfectly clear.

To tune, start with D and GJ at zero on their respective scales and the vernier H midway between its left and right hand stopping points. Move GJ slowly to the right and simulaneously swing D pendulumwise to the right, that is, swing it back and forth slowly over a range of three degrees on either side of the position maintained by GJ. The proximity of a station broadcasting at the time, will be indicated by a hissing or rushing sound as D passes a particular point. Adjust GJ and D to the loudest point of the sound, then release D and operate GJ and the vernier knob H simultaneously as follows: Move vernier H slowly back and forth, at the same time moving GJ slowly back and forth over a range about one division on either side of the point where the loudest signals are heard. This should clear up the reception. In the event that it does not, controls GJ and D should be slightly readjusted and the vernier H operated as before. This will bring in the station

clearly, and the readings on the scale may be marked down on a log card for future reference. Should it be desired to retune a station at a future time, it is only necessary to place the pointers at the positions on the scales indicated by the log card and then adjust the vernier H.

then adjust the vernier H.

To get the utmost out of the receiver the following readjustments may be made after the station has been tuned in as outlined above. Turn control E completely to the right and then gradually bring it back to the point where the voice of music clears up. The best suggestion for using this control is to keep it as far as possible to the right without impairing the quality of the program being received.

After a station is tuned in, remove the headphone plug from the jack in the lower left hand corner of the panel, whereupon the signal will be heard in the loud speaker which has been connected to two posts marked "loud speaker" at the rear left-hand corner of the sub base, inside the set. Should more volume be desired, turn switch L to position 2, while turning it to point 3 will further increase the volume.

Considering now, the analysis of the set which formed the first part of this article, and considering also, the tuning procedure just concluded, it should be clear that one is endeavoring to bring three tuned cir-

(Continued on page 24)

Real Progress in Radio

Emphatically Yes!

Radio IS marching forward, this season as before. But it is marching in a new direction.

Quality of Reception.

That is the big, new theme. And the new Jewett Receiver is its inspiration.

At last Radio commands a Receiver that is truly a Musical Instrument, by a manufacturer of experience in the musical instrument field.

Mere words cannot describe this new Jewett Quality of Reception. You must hear and understand.

So just visit an authorized Jewett Dealer and let him prove to you that here is a new kind of Radio—so different from the old as to create new standards and ideals.

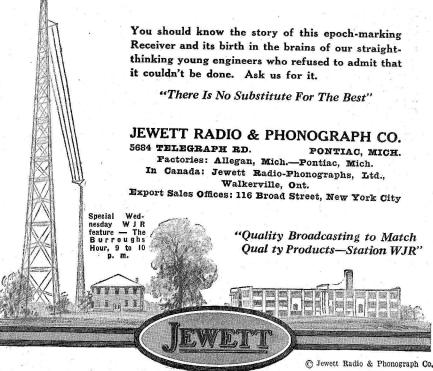
For the first time, B-Battery current and resulting distortion have been completely barred from the speaker circuit.



selective, quiet, long range Radio outfit. Send money

Radio Digest Publications

order, stamps or currency to



ADVANCE PROGRAMS FOR THE WEEK



Edythe Crow-der, coloratura soprano, is one of the most pleasing of the younger art-ists at KWKH, ists at KWKH, Shreveport, La. She has become a per-manent mem-ber of the staff and will be glad to receive requests.

Saturday, November 7

Eastern	Central 7:10 p. m.	Mountain	Pacific
8:10 p. m.	7:10 p. m.	6:10 p. m.	5:10 p. m
WJZ (455) T	he Texans.		
WLS (344.6)	National Bar	rn dance.	
8:30	7:30	6:30	5:30
WIP (508.2)	Surprise prog	gram.	0.00
	8:30		6:30
KYW (536)	Congress class	31C.	
WLW (422.3) Hawaiian S	trains.	6:15
9:10	8:15	7310	0.13
WSA1 (325.8) The Red M		7
WOO 1409 G) Fanny Sch		
11.10	10:10	0.10	8:10
WCO (261) '	The Serenade	" comic one	
12	II Sereman	10	9
	Congress Carr		
20 m	la m	12 m.	11 p. m.

Saturday, silent night for: CFAC, CFCA, CHIC, CNRA, CNRC, CNRE, CNRM, CNRR. CNRT. CNRV, CNRW, KFAU, KFDM, KFMQ, KFMX, KFRU, KLDS, KMA, KOB, KSAC, KTAB, SWSC, WBAP, WBZ, WGAU, WCX, WEBI, WGCP, WHAD, WHAZ, WHB, WHN, WHO, WIP, WIAR, WLWL, WKAQ, WOAI, WOS, WSMB, WSUI, WTAG, WTIC, WWJ.

Eastern Time Stations

Eastern Time Stations

CFCA, Toronto, Can. (356), 2:15 p. m., Rugby game, Montreal vs. Argonauts.

CKNC, Toronto, Can. (357), 8 p. m., Charles E. Bodley and his dance orchestra; Elsie White, soprano; Bob Harvey, tenor; James Brown, tenor.

CNRO, Ottawa, Can. (435), 8 p. m., Charles L. Burler concert orchestra; 9, St. James United church choir; Chateau Laurier dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., dinner concert, Westinghouse band, T. J. Vastine, conductor. 7:30, children's period; 8:30, Westinghouse band concert, T. J. Vastine, conductor.

WAHG, Riehmond Hill, N. Y. (315.6), 12-12:55 p. m., musical program.

WBZ, Springfield, Mass. (333.1), 3 p. m., play-by-play Harvard-Princeton football game.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Harvard-Princeton game; 6:30, dinner concert, William Penn hotel; 7:30, Uncle Kaybee; 8, philharmonic concert.

WCAP, Washington, D. C. (468.5), 1:45 p. m., Harvard vs. Princeton football game.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac hotel.

WEAF, New York, N. Y. (491.5), 1:45-3 p. m., Harvard-Princeton football game; 4-5, Elmer Grosso and his orchestra; 6-7, dinner music, Waldorf-Astoria; 7-11, musical program; 11-12, Vincent Lopez and his University and the Concerts.

his Hotel Pennsylvania orcnestra.

WEAR, Cleveland, Ohio (389.4), 7 p. m., Hotel Statler concert orchestra, Maurice Spitalny, director.

WEEI, Boston, Mass. (34.6), 8 p. m., Dok Eisenbourg and his State theater orchestra; 9, Dok Eisenbourg and his orchestra; 10, American House Marimba band and orchestra

his orchestra; 10, American House Marimba band and orchestra.

W6BU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Theresa Horn, pianist; 10-12, Miami Daily Tab musical melange; 12-1, Blue Steele's orchestra.

WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle Geebee; 6:30-7, Vincent Sorey's orchestra; 7-7:15, dance lessons, Arthur Murray; 8:40-9:10, Magyar ensemble; Gaspar Sante, tenor; 9:30-10:30, program, Warner's theater; 10:30-11:30, Arrowhead inn orchestra.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Henry Rogers, pianist; 3:15-3:30, Henrietta Cross and Maurice Abrahams; 3:30-3:45, Ukulete Lon Hayes; 3:43-4, Rust and Henrichsen, banjoists; 4-4:15, Johanna Cohen, ukulete, songs; 4:15-5:15, Richard Cheatham's Club Basha orchestra.

WGR, Buffalo, N. Y. (319), 1:45 p. m., jointly with WEAF, intercollegiate football game, Harvard vs. Princeton, at Princeton, at Princeton, at Princeton football game; 9:30, Hotel Ten Eyck dance orchestra.

Princeton football game; 9:30, Hotel Ten Eyek dance orchestra.

WHAR, Atlantic City, N. J. (275), 7:30 p. m., lecture period; 8, Seaside hotel trio.

WIP, Philadelphia, Pa. (508.2), 1 p. m., organ recital, Germantown theater; 3, University of Pennsylvania vs. Haverford college; 6:05, Benjamin Franklin concert orchestra, W. Irving Oppenheim, director; 7, Uncle Wib's bedtime story; 8, "Environment a Big Factor in Health and Disease," Prof. Louis Gerschenfeld; 8:15, sports corner, Dr. Francis D'Eliscu; 8:30, surprise program, Metropolitan Opera house; 10:05, dance music, Benjamin Franklin dance orchestra, Howard Lanin, director.

WJAR, Providence, R. I. (305.9), 1:45 p. m., Harvard-Princeton game; 8:20, Philharmonic orchestra, William

Mengelberg.

WJR Detroit, Mich. (517), 2:30 p. m., St. Louis university-University of Detroit, 7, Jean Goldkette's Petite symphony ordestra; 19, Jean Goldkette's serenaders; 10, Jean Goldkette's Victor Recording orchestra; 11:30,

symphony orchestra; y, Jean Goldrecte's Sertoader's 15, Jean Goldrecte's Victor Recording orchestra; 11:30, Jewett Jesters.

MyZ. New York. N. Y. (455), 2:15 p. m., Harvard-Princeton football game; 5, Hotel Lorraine dance orchestra; 7, Bernhard Levitow's Hotel Commonder dinner orchestra; 8:10, The Texans, Sanchez and Milstead, popular songs; 8:30, Sherry's dance orchestra; 9, Gertrude Hopkins; Narpist; 9:13, announced; 2:33, Gertrude Hopkins; 9:45, announced; 11, Jacques Genard and his Club Deauville orchestra. Jean's M. Hotel WMCA, New York, M. M. (464, 7), 6:46, and 16:46, a

High Lights of the Week

ANNY Schnitger Martin, one of the outstanding younger contraltos in the oratorio and concert field is booked to sing at WOC, Davenport, Saturday evening, November 7. Miss Martin has a beautiful voice with an unusual range. For fans who enjoy a bit of light opera now and then the program given by the Bicycle Playing Card sextet at WSAI will sound inviting. The sextet will give selections from the "Red Mill."

Walter Damrosch, a recognized leader in the orchestral world, will be heard from WJZ, New York, Sunday, He will give a notable performance of the Kreutzer sonata. The Atwater Kent artists this week are Eva Gauthier, soprano, and John Powell,

Fathers and sons will have their annual meeting at WHAZ this Monannual meeting at WHAZ this Monday. Other members of the family are invited to tune in. The Mozart male quartet is a popular feature at WCAE, Pittsburgh. WBAP offers a high class vaudeville show from the Majestic theater.

Alumni of the U. of Michigan are enjoying the programs broadcast twice a month by WJR, Detroit, direct from the college campus. Although many of the features are educational, there will be novelty programs approach by the students. educational, there will be hoverty programs sponsored by the students. The next meeting will be held Tuesday, November 10. The "First African Suite," by Barcroft will be the opening number played by the Formica concert orchestra Tuesday at WLW, Cincinnati This suite is an interest. Cincinnati. This suite is an interest-ing musical illustration of African life. WLW hopes to reach African listeners.

Armistice Day begins with taps by WEAF. All the Radio stations on the air Wednesday morning will stand by during the two minutes of silence. Even the ether will participate in this breathless hush which marks the ending of the World War. WOR will broadcast the large military meetings gathered to dedicate the Montclair, N. J., marble shaft in memory of fallen soldiers. In the evening many stations will observe the day with martial music by military bands.

One of the dramatic offerings of the week is "Her Temporary Husband," by the KGO players. One of the attractive players to be heard Thursday, may be found on page 17. Thursday, may be found on page 11. James Francis Cooke, editor of "The Etude" goes on the air this week from WIP with the first "Etude Period." This hour will appeal to young music

It is not recorded in the annuals of broadcasting that anyone has ever seen witches in the air, but WTIC, Hartford, promises that there will be no rest for the superstitious on Friday the 13th. The program will be given entirely by the staff. No one else will be present except a few spirits, evil or otherwise, who crowd into places on such occasions. The program begins at 8:30 p. m., eastern time, and is called "Hoodoo Night." time, and is called "Hoodoo Night."
Deane H. Dickason, official lecturer
of the Canadian Pacific World
Cruises, will talk on "Round the
World in Sixty Minutes" at KOA,
Denver this same evening. Mr.
Dickason has interviewed Mussolini, the late Dr. Sun Yat-sen of China, Ghandi, Sir Rabindranath Tagore and the Maharajah of Rajputana.

8.30, Van's collegians; 10:30-11, Eddie Elkins Ciro Westarantic City, N. J. (298.8), 1:30 p. m., Hotel Morton music, 3. Leonard Lewis, director; 6:45, request organ selections, Arthur Brook; 7, Hotel Traymore music; 8, program announced; 8:30, Chalfonte-Haddon Hall evening concert; dance music, m., New Willard Hall evening concert; dance music, m., New Willard Hall evening concert; dance music, m., New Willard Hall, 8:165, musical program; 10:30, Canadall's Saturday Nighters; 12, Colonial Room orchestra; 8, Ebiberale (285.5), 10-12 midnight, special dance program; 10:30, Canadall's Saturday Nighters; 12, Colonial Room orchestra, Shoreham hotel, WREO, Lansing, Mich. (285.5), 10-12 midnight, special dance program; 12:35-52, 30, a. m., miscellaneous program; 12:35-30, a. m., prince defends of the stations of the s





rogram, KGW, Portland, Ore. (491.5), 2:30 p. m., football game, St. Mary's College of Oakland vs. Multnomah Amateur Athletic club; Rose city trio; 10-12, dance music, Multnomah hotel.

KHJ, Los Angeles, Leighton's Areade cafeteria orchestra, Jack Cron-

Leighton's Areade eafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog, Eugenia Caldwell, dialect readings, Dolly Wright and Henrietta Poland, readings; 8-16, program, Frod H. Schreiner, arranged by J. Howard Johnson, 10-11:30, Art Hickman's Biltmore hotel dance orchestra, Frank Ellis, leader; 11:30-2 a. m., Lost Angels of KHJ.

11:39, Art Hickman's Biltmore hotel dance orchestra, Frank Ellis, leader; 11:30-2 a. m., Lost Angels of KHJ.
KJR, Seattle, Wash. (384.4), 1:15-2 p. m., organ recital; 2-2:15, home helps, Bernice Redington; 8:30-19, L. C. Warner company.
KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Town Tattler; 6:15, travel talk, W. F. Adler; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7, talk on insect life, H. W. McSpadden; 7:15, church announcements; 7:30-8, Wurlitzer pipe organ studio; 8-10, KNX feature program; 10-11, Ray West's Cocomun Grove dance orchestra from Ambassador hotel; 11-2 a. m., Hollywood Night with some famous people of Hollywood.

(Continued on page 14)



WOR, Newark, N. J. (405.2), 3:15-4 p. m.; Zit's Gentral Park Casino orchestra; 6:15-6:17. "Words Often Mispronounced;" 6:17-7. dinner music, Hotel Shelton; 7:15-7:30, sports talk, Bill Wathey; 7:30-

FANNY SCHNITGER MARTIN AT WOC



Catherine Jackson is one of the west coast's premier harpists. She is a popular guest at KHJ, Los Angeles.

Saturday, November 7

(Continued from page 13)

KPO. San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30, studio pro-Seiger's Fairmont hotel orchestra; 2:30, studio pro-gram; 3:30, Falace hotel concert orchestra, Cyrus Trobbe, director; 6:33-7:30, Waldemar Lind and the States Restaurant orchestra; 8-12, Cabirla Cafe or-chestra, Jack Coakley, director.

Sunday, November 8

Eastern	Central	Mountain	Pacifie
	5 p. m. 7) Roemer's		3 p. m.
8	. 7	6	5
KYW(526) (WEAR(389.	4) Fireside	lay Evening cl hour.	ub.
8:30 WCAU (277.	7:30 6) Bonwit T e	6:30	5:30
9	Valter Damro 8 Fontella tric	7	6 .
9:15		7:15	6:15
10	9 Classical 1	8	7
10:30	9:30 9) MacDowell	8:30	7:30

Sunday, silent night for: CHIC, CKNC, CNRA, CNRC, CNRE, CNRM, CNRO, CNRR, CNRT, CNRV, CNRW, KFAB, KFAU, KFMQ, KFOA, KFPG, KFWA, KMA, KOB, KSAC, KWSC, WAHG, WBAP, WCAU, WCX, WDAF, WEBJ, WFI, WGBS, WGCP, WHAD, WHAZ, WJR, WKAQ, WLIT, WMC, WOK, WOR, WORD, WRC, WSAI, WSMB, WTAM, WTIC.

Eastern Time Stations

Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 10.45 a. m., church service; 4 p. m., Dr. Charles Heinroth, organist; 4:45, vesper services; 6:30, Pittsburgh Athletic association; 7:45, church service.

WEZ, Springfield, Mass. (333.1), 10:35 a. m., services, South Congregational church, Rev. James Gordon Gilkey, pastor; Prof. Wilson P. Moog, organist; 24 voice choir; quartet; 8:30, special musical program, Steinway Hall, WZ; Walter Damrosch, planist-conductor; violin recital, Paul Kochanski.

WCAE, Pittsburgh, Pa. (461.3), 8:45 p. m., Dr. S. P. Cadman; 6:30, William Penn hotel; 7:20, Capitol theater gang; 9:15, Atwater Kent.

WGAP, Washington, D. C. (468.5), 11 a. m., New York Avenue Presbyterlan church; 4 p. m., services, Washington Cathedral, Rev. Henry Lubeck; 7:20-9:15, Capitol theater; 9:15-10:13, Atwater Kent Radio hour. WGAU, Philadelphia, Pa. (277.6), 5 p. m., Mrs. Paul Jones, soprano; Kathryn O'Boyle, planist; 5:15, Undenominational Radio church service, John W. Stockwell, 5:25, "The Thirty-fourth Book," Rev. John Stockwell; 5:35, recital; 5:45, "Getting," John Stockwell; 5:30, Hotel Pennsylvania concert orchestra; 8:30-9, Bonwit Teller concert; 10:15-11, Jaffe's Collegians. WCX, Detroit, Mich, 6:17), 10:30 a. m., services, Central Methodist Episcopal church.

WEAF, New York, N. V. (491.5), 3-3:45 p. m., services, Greater New York Federation of charches; 3:45-5:30, men's conference, Bedford branch, Y. M. C. A., 7:25-9:15, "Capitol Gang," Capitol theater; 9:15-5:30, men's conference, Bedford branch, Y. M. C. A., 7:25-9:15, "Capitol Gang," Capitol theater; 9:15-6-11, Jaffe's Collegians. WEAF, New York, N. V. (491.5), 3-3:30 p. m., Goodyear.

Gauthier, soprano.

WEAR, Cleveland, Ohio (389.4), 3:30 p. m., Goodyear orchestra: 7-8, Park theater orchestra; 8-9,

Fireside hour; 9-10, studio program.

WEEI, Boston, Mass. (348.6), 10:50 a. m., morning service, Old South church, Rev. George A. Gordon; 3:45 p. m., Men's conference, Dr. S. Parkes Cadman; 7:20, Major Bowes and his Capitol theater family; 9:15, Atwater Kent hour.
WEBS. New York, N. Y. (315.6), 3:30-4:30 p. m., program, Warner's theater.
WGBU, Fulford-by-the-Sea, Fla. (278), 9-11 p. m., sacred program.

sacred program.

WGR, Buffalo, N. Y. (319), 3 p. m., vesper service, Rev. Dr. Don D. Tullis, secretary Buffalo Council of Churches, speaker; 7:45. Central Presbyterian church courice; 9:15-10-15, jointly with WEAF, Atwater Kent Radio artists, featuring Eva Gauthier, soprano, and John Powell, planist.

WGY, Schenectady, N. Y. (279.5), 9:45 a. m., First Church of Christ, scientist; Elmer Petter, reader: Mabel Gorton, readre; 12:20 p. m., Rivoli theater orchestra, Dr. Huro Riesenfeld, conductor, WJZ, 7 Carillon program, Park Avenue Baptist church, WJZ.

7:30. Hotel Pennsylvania orchestra, WJZ; 8, vocalist, WJZ; 8:30, Steinway series, WJZ, WIP, Philadelphia, Pa. (508.2), 7:15 p. m., evening service, Holy Trinity church, Rev. Floyd W. Tomkins, rector; 9:30, Ben Stadans and his WIP Little symptoms.

rector; 9:39, Ben Statums and his will limite symphony orchestra.

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

WHN, New York, N. Y. (361.2), 1-1:30 p. m., Lexington organ recital; 2:30-3:30, Christian Endeavor program; 5-5:30, Roseland dance orchestra; 7:30-10, services, Calvary Baptist church; 10-45-11, Janssen's Hofbrau orchestra; 12-12:30, Club Richman entertainers.

Hobbrau orchestra; 12-12:30, Club Richman entertainers.

WIAR, Providence, R. I. (305.9), 7:20 p. m., Capitol theater gang; 9:15. WEAF Atwater Kent hour.

WIR, Detroit, Mich. (517), 8:30 p. m., Merry Old Chief, Jewett Jesters.

WLWL, New York, N. Y. (288.3), 8 p. m., talks on literature; special talks.

WMCA, New York, N. Y. (340.7), 6-7 p. m., Roemer's Homers; 7-7:30, Ernie Golden and his Hotel McAlpin orchestra; 7:35-8, Olcott Vail and his Hotel McAlpin orchestra; 7:35-8, Olcott Vail and his Hotel McAlpin orchestra; 7:35-8, Olcott Vail and his Hotel McAlpin string ensemble.

WEO, Lansing, Mich. (285.5), 10 a. m., chimes, Belfry Plymouth Congregational church; 7, Central M. E. church, Rev. Frank Kingdon, pastor.

WTAG, Worcester, Mass. (268), 3:45-5:30 p. m., Men's conference, Dr. S. Parkes Cadman; Gloria trumpeters; George Betts, chime soloist; 7:20-9:15, Major Bowes and the Capitol theater gang, WEAF; 9:15-10:15, WEAF Atwater Kent hour.

Central Time Stations
KFAB, Lincoln, Nebr. (340.7), 4-5 p. m., vesper serv-

KFDM, Beaumont, Texas (315.6), 8-9 p. m., sacred pro-

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

KFMX, Northfield, Minn. (337), 7-8 p. m., college vesper service.
KFNF, Shenandoah, Iowa (256), 10:45 a. m., morning worship, M. E. church; 2:39 p. m., Golden Rule song service; 3, Wheeler Evangelists; 6:39, Gold Rule circle; 7:30, Christian church services; KLDS, Independence, Mo. (440.9), 11 a. m., Stone church services; sermon, Apostle John F. Garver; 6:39 p. m., vesper service; Walnut Park quartet; Minnie Stott Dobson, director; sermon, U. W. Greene; b. ladles' quartet; Mrs. John Wattins, soprano; Mrs. J. Gault, soprano; Mrs. M. Siegfried, contratic, Madge Kueffer, contraito; sermon, Ralph W. Farrell; George Miller, pianist; Lillar Greene, violinist; "Shakespeare and Religion;" Robert Miller, organist.
KMA, Shenandoah, la. (252), 4-6 p. m., vesper services

KPRC, Houston, Tex. (296.9), 10:45 a. m., services, First Methodist church, Rev. A. Frank Smith; 7:30 p. m., evening service, First Methodist church; 10, Ray Mullins' orchestra. (SD, St. Louis, Mo. (545.1), 6:15 p. m., WEAF chain, KTHS, Hot Springs National Park, Ark. (374.8), 11 a. m., services, First Presbyterian church; 9:10 j.m., classical hour, New Arlington hotel 10-piece ensemble; 10-11:30, Phil Baxter and his singing orchestra.

tra.

KYW, Chicago, III. (535.4), 11 a. m., Central church
2:30, chapel; 5, concert hour, Edwin, Harper; 7-9:11
p. m., Chicago Sunday evening club, Imperial male
quartet; "Some Old Letters," Clifford W. Barnes
7:40, Stanley Martin, organist; 8, "The New Age,"
Dr. Lynn Harold Hough,
"WBAP, Fort Worth, Tex. (475.9), 11 a. m., First
Methodist church; 12:30, comic section, Uncle Billy
5-6 Glenwood Church of Christ; 11, Shelly Lee Alley's orchestra.

5-6 Glenwood Church of Christ, 14, Editor Ley's orchestra.

WBBM, Chicago, III. (226), 4-6 p. m., Harold Anderson, Merry Garden orchestra: Charlie Garland, Maurice Sliverman, Burdette Cleveland; Blue Ducces, Zeigler sisters; 8-10, Frances Ingram, contralto; Merry Garden orchestra; Wendell Weigert, violinist; Jean St. Anne, baritone; Christian Grim, accompanist; Ted Coleman, cellist; Joseph Raeiff, concert pianist; 12-2, Nutty old request feature.

cellist; Joseph Raeiff, concert pianist; 12-2, Nutty cellist; Joseph Raeiff, concert pianist; 12-2, Nutty wBBR, New York, N. Y. (272.6), 10 a. m., Watchtower orchestra; 10:20, Fred Twaroschk, tenor; 10:30, "Glad Tidings for All People," W. N. Woodworth; 11, Fred Twaroschk, tenor; Watchtower orchestra; 9 p. m., I. B. S. A. cholar singers; 9:10, violin duet, Prof. C. Robiner, Carl Park; 9:15, "Thy Kingdom Come"; 10, violin duets; 10:15, I. B. S. A. choral singers, Violin duets; 10:15, I. B. S. A. choral singers, will be considered to the control of the cont

Dianist. WCCO, Minneapolis-St. Paul, Minn. (416.4), 11 a. m., WCCO, Minneapolis-St. Paul, Minn. (416.4), 11 a. m., House of Hope Presbyterian church; 8:15, Atwater Kent

program.

WEBH, Chicago, Ill. (370.2), 5-6 p. m., twilight musicale; 7-9, artist program.

WEBW, Beloit, Wis. (268), 4:30 p. m., vesper services.

WFAA, Dallas, Texas (475.9), 3-4 p. m., Sunday hour for farmers; 6:30-7:30, Bible class, Dr. William M. Anderson; gospel song; 7:30-8-30, City Temple service, Dr. B. P. Fullerton; 9:30-11, MacDowell Sisters' string music recital.

WGN, Chicago, Ill. (370.2), 12 m., comics for the children, Unele Walt; 1 p. m., Chicago theater program; 2:30, Lyon & Healy organ recital; 3:30, Chicago musical college concert; 9, Drake concert ensemble.

cago musical college concert; 9, Drake concert cago musical college concert; 9, Drake concert casemble.

WHAD, Milwaukee, Wis. (278), 6-7 p. m., Arthur

WHAD, Milwaukee, Wis. (273), 6-7 p. m., Arthur Richter, organist.
WHAS, Louisville, Ky. (399.8), 9:57 a. m., organ prelude: 10, services. Broadway Baptist church; choir, director H. U. Goodwin, organist; O. W. Edinger, soprano; Angeline McCrocklin, contralto; Charles Barnes, tenor; William Comwall, baritone; 4-5 p. m., vesper song service, Fourth Avenue Seventh Day Adventist church, Rev. Robert J. Bryant, pastor; S. D. Bossing, organist; A. W. Ott, choir leader.
WHB, Kansas City, Mo. (365.6), 9:40 a. m., Linwood Blvd. Christian church; 11-12:15 p. m., All Souls Unitarlan church; 3-9. Lutheran services; 11:15-1, Linwood theater.
WHO. Des Moines, Jown (526), 11 a.m., church serv.

tle symphony, tle symphony, WOK. Chicago, III. (217.3), 6:30-8:30 p. m., WOK mixed quartet, WOK string trio.

WORD, Batavia, III. (275), 10 a. m., hymns and sacred songs; 10:15, Bible lecture, L. M. Smith; 10:45, sacred duets and solos; 9 p. m., I. B. S. A. choral singers; 9:15, Bible lecture; 9:40, sacred musical program, John T. Read, director, 9:30, sacred musical program, John T. Read, director, 9:30, a. m., Christian church; 7:30, Episcopal church; 9:30 a. m., People's church; 7:30, Episcopal church; Medora Walker, violinist; Lenora Altvater, contralto; Medora Walker, violinist; Lenora Altvater, contralto; William Bresters, tenor; Saida A. Ballantine, accompanist; S-10, Madeline Ruff, pianist; Everett G. Mitchell, bartione; Maria Dneprova, Russian soprano; Gertrude Hardeman, contralto; Fontella trio; Muriel Keneally, soprano. WSAI, Cincinnati, Ohio (326), 2:45 p. m., talk, Dr. S. Parkes Cadman, 7:45, chimes, Robert Badgley; 8, sermonette, Rev. William Patterson; S:15, Altwater Kent Radio hour, Eva Gauthier, soprano; John Powell, pianist; 9:15, Union Central Life Insurance concert orchestra.

wsb, Atlanta, Ga. (428.3), 5 p. m., Church of God brogram.

WSM. Nashville, Tenn. (282.8), 3-4:45 p. m., Nashville symphony orchestra; 7:30, services, First Presbyterian church service.

WSUI, lowa City, lowa (483.6), 12-12:30 p. m., famaliar hymans, Mrs. Lottie Volkmer.

Mountain Time Stations
KOA. Denver. Colo. (322.4). 11 a. m., First Baptist
church services; 3 p. m., organ recital. Clarence Reynolds; 7:45, services, First Baptist church.

Pacific Time Stations Hollywood, Calif. (238), 8-9 p. m., KFPG hour, Turner orchestra, Georgia Starke, color-soprano.

atura soprano.

KFWB, Hollywood, Calif. (252), 9-11 p.m., late news and Warner Bros. movie frolic with Joe Martin's Famous Studio Six orchestra; Roy-Al saxophone sextette; Parks Sisters, vocal duets; Charles Beauchann. tenor. tette; Farks Blakers, townschamp, tenor.

K60, Oakland, Calif. (361.2), 11 a. m., service,
Trinity Episcopal church, Charles P. Deems, rector;
3:30 p. m., K60 Little symphony orchestra, Carl
Rhodehamel, conducting; Arthur S. Garbett, Mme.
Elfrieda Wynne, guest artist; 7:45, Trinity Episcopal

church services.

KGW. Portland, Orc. (491.5), 10:55 a. m., First Presbyterian church; 7:30-9, First Church of Christ, Scientist.

byterian church; 7:30-9, First Church of Christ, Scientist.

KHJ. Los Angeles, Calif. (405.2), 6:30-7 p. m., Leighton's Areade cadteria orchestra, Jack Cronshaw, leader; 7-7:30, organ recital, Arthur Blakely, organist; 8-10, program, Martin Music Company, arranged by J. Howard Johnson with John Martin, concert planist; Ruth Pitts, soprano.

KJR. Seattle, Wash. (384.4), 11 a. m., First M. E. church; 7:15-7:30 p. m., Mrs. Montgomery Lynch, organist; 7:30-9, First M. E. church; 9-10:30, Puget Sound Savings & Losn association orchestra.

KNX. Hollywood, Calif. (336.9), 7-8 p. m., First Presbyterian Church of Hollywood, Rev. Stewart P. MacLennan, pastor; 8-9, Ambassador Hotel concert orchestra, Josef Rosenfeld, director; 9-10:30, program, Bewerly Hills Nurseries, Calimon Luboviski Trio; Misha Gegna, 'cello; Raquel Nieto, soprano.

KPO, San Francisco, Calif. (428.3), 9:45 a. m., church services; 6:35-7:30, Palace hotel concert orchestra; 8-8:30, Palace hotel concert orchestra; 8-8:30, Palace hotel concert orchestra; 8-8:30, Palace hotel concert orchestra; 8:30-10, Rudy Seiger's Fairmont hotel orchestra; 8:30-10, Rudy Seiger's Fairmont hotel orchestra; KTAB, Oakland, Calif. (240), 9:45 a. m., Bible lecture, Prof. Linsly; 11, church service; 7:45 p. m., church service; 9:30-11, concert.

Monday, November 9

Headliners Today

| Headliners Today | Eastern | Central | Mountain | 7 p.m. | 8 p. m. | 7 p.m. | 6 p. m. | 7 p.m. 6:30

Monday silent night for: CNRA, CNRC, CNRE, CNRM, CNRO, CNRR, CNRV, CNRW, CNRT, KFDM, KFMQ, KFMX, KFRU, KHJ, KLDS, KTCL, KYW, WBBM, WCBD, WEBH, WEBJ, WENR, WFI, WGBS, WGES, WGN, WHAS, WHT, WIP, WJJD, WKAQ, WLIB, WLS, WLWL, WMAQ, WMBB, WOC, WORD, WQJ, WRC, WREO.

Eastern Time Stations

CKNC, Toronto, Can. (357), 8-10 p. m., Armistice day pragram; CKNC Little symphony orchestra, Charles E. Bodley, director; Madeline Bell, soprano; Lawrence Defoe, tenor; Edgar Smith, bass; Dwight Wilson, baritone; 10-12, Charles Bodley and his dance orchestra; Elsie Addison, contraito; Irene Jenks, Frank Welsman, pianists.

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., dinner concect; 7:45, "International Art," Homer Saint-Gaudens; 9, Spear's happy home hour.

WAHG, Richmond Hill, N. Y. (315.6), 12-12:55 p. m., musical program; 7:30-7:45, Hon, Maurice E. Connolly; 7:45-8:15, Synchrophase trio; 8:15-8:30, Edgar M. Gruen, baritone; 8:30-8:45, Von der Heide and La Ruffa, banjo and piano; 8:45-9, Horace J. Taylor, reader; 9-9:15, Joe Zimmerman, pianist; 9:15-9:30, Synchrophase trio; 9:30-9:45, Edgar M. Gruen; 9:45-9:55, Joe Zimmerman, pisnist; 9:15-9:30, Synchrophase trio; 9:30-9:45, Edgar M. Gruen; 9:45-9:55, Joe Zimmerman; 9:55-10. time signals and weather report; 10-10:15, Von der Heide and La Ruffa; 10:15-11:15, Glenn C. Smith's Paramount orchestra.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., organ

Heide and La Ruffa; 10:15-11:15, Glenn C. Smith's Paramount orchestra.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., organ recital, Margaret Tighe; 7:05, "The Psychology of Understanding People," Abraham Myerson; 7:39, Capitol theater orchestra; 8. concert program, Edward Boyle's Copley Plaza orchestra; 8:30, Elsa Evans, dramatie soprano; Veronica LaMere, pianist; 9, Aleppo Drum Corps or Shriner's band concert; 9:30, Riviera Four, violin, 'cello, piano and saxophone; 10:05, Leo Reisman's Hotel Brunswick orchestra.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, dinner concert, William Penhotel; 7:45, address, American Red Cross; 8, Nixon orchestra; 9, Mozart male quartet; 11, Loew's Aldine theater.

theater.

WCAP, Washington, D. C. (468.5), 7:30-8:30 p. m., program; 8:20-8:45, Apollo chorus; 8:43-9, Tower health talk; 9-10, A. & P. Gypsies; 10-11, WEAF Grand opera company.

WCAU, Philadelphia, Pa. (277.6), 8 p. m., theater chat, Stan Lee; 8:10, Carolyn Thomas, soprano; Ella Jaquette Kratz, planist; 9, Amsterdam girl; 9:10, Danny Dougherty, song hits; 9:39, Delaware County Serenders; 10, songs, Freedman and Travaline, songs; 10:15, James Loughrey, tenor.

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

WEAF, New York, N. Y. (491.5), 4-5 p. m., musical program; 6-7, dinner music, Waldorf-Astoria; 7-10:30, James Kramer, planist; Tower health talk; music, A. and P. Gypsies; "Your Hour"; 10:30-11:30, Ben Bernie and his Hotel Roosevelt orchestra.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Allenter orchestra.

WEAL, Boston, Mass. (348.6), 10:45 a. m., "The Christmas Plum Pudding"; 2 p. m., Happy Hawkins and his orchestra; 3, A. J. Philpott; 7, Rig Brother club; 7:45, Level A. Dennett, violinist; 8, Anonymous

orchestra; 8:45, health talk, WEAF; 9, WEAF
A. and P. Gypsies; 10, American House Marimba
and orchestra.
WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle
Geebee; 6:30-7:30, Premier club orchestra.
WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m.,
Blue Steele's Fulford-by-the-Sea orchestra; 10-1, Blue
Steele's Fulford-by-the-Sea orchestra; 10-1, Blue
Steele's Fulford-by-the-Sea orchestra; 10-1, Blue
Steele's Fulford-by-the-Sea orchestra
WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Eva
Rothenberg, planologue; 3:15-4:15, Andy Pendleton's
band; 4:15-4:30, Joe Ross, harmonica; 4:30-5, Unclue
Robert and his pals; 5-5:15, Shirley Herman, songs;
7-8, Dominion Ginger Ale orchestra; 8-8:15, Slivio
de Rienzo, planist; 8:15-8:30, Ukulele Lon Hayes;
8:30-8:40, Gertrude Guarente, planist; 8:40-9, Bob
Ward and the three little Wards; 9-10, Strickland's
orchestra; 10-11, Radio Shack hour; 11-11:30, Club
Riltz orchestra; 11:30-12, Club Rodeo entertainers,
12-2:30, Comite's orchestra.
WGGP, Detroit, Mich. (270), 8 p. m., WGHP little
symphony.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGRPs aftermoon program; 6:30-7:30, Olympic dance orchestra; 8:30-9, Dutch Master's program; 9-10, Alonist; 10-11, Howard Hartell and associated artists in a popular program; 1-1 a. m., Viocent Lopez Hotel statler dance orchestra, Harold Gleetor and solosis; 10-11, Howard Hartell and associated artists in a popular program; 1-1 a. m., Viocent Lopez Hotel Statler dance orchestra, Harold Gleet, director. WGY, Schenectady, N. Y. (2005), 2 p. m., music; "Cooking Lesson—Fruit Cakes," Jessie Lanc, "Brying Our Food," Irene Nohrling; 2:30, Asia club orchestra; 6:30, dinner program, Hotel Van Curlet orchestra; T. WGY, program, Hotel Van Curlet orchestra; T. WGY, program, Hotel Van Curlet orchestra; Emeline Bates, soprano; George Ackerley, cornetist; Literary Appreciation series, William L. Widdemer.

Widdemer.

WHAR, Atlantic City, N. 1. (275), 2 p. m., Seaside hotel trio; 7:30, fashion review, Hilda Burch; 8, Seaside hotel trio.

Scaside hotel trio.

WHAZ, Troy, N. Y. (379.5), 9 p. m., father and son night program; 10:30, King jazz dance music.

WHN, New York, N. Y. (361.2), 6:30-6:40 p. m., Lesile McLeod, tenor; 6:49-7, Sunshine talk, Billy B. Van; 7-7:30, Marlboro State trio; 7:30-8, Swanee club orchestra; 8:305, talk, H. B. Shontz; 8:05-8:30, Roseland dance orchestra; 8:39-9, Guardian entertainers; 11-11:30 Cotton club revue and orchestra, 11:30-12, Silver Silpper orchestra; 12-12:30, Ted Lewis and his orchestra.

11:30-12, Silver Silpper orchestra; 12-12:50, Ted Lewis and his orchestra;
WIP, Philadelphia, Pa. (508.2), 1 p. m., Gimbel tea room orchestra; 3, Clarence Fuhrman school of nusic, Flora Ripka, pianist; 6:95. Benjamin Franklin concert orchestra; 7, dancing lesson, Miss Miler.
WJAR, Providence, R. 1, (305.9), :05 p. m., studio program; 8, Berry Spring time; 8:30, musical program; 8:50. Red Cross talk; 9, WEAF A. and P. Gypsles; 10, WEAF Grand Opera company.
WIP Datait Mich. (5(1), 7 p. m., Jean Goldkette's

8:50. Red Cross talk; 9, WEAF A. and P. Gypsies; 10, WEAF Grand Opera company.

WJR. Detroit, Mich. (517), 7 p. m., Jean Goldkette's Petite symphony orchestra; 9, Paige Six, Jewett Jesters, WMA, New York, N. Y. (340.7), 6-6:30 p. m. Olcott William of the Medical Medical

gram.

WTIC. Hartford, Conn. (475.9), 6:30 p. m., Emil Heimberger's Hotel Bond tric; 7:45, "Good Factories and Farms," Prof. Hill; 8, dinner music.

WWJ. Detroit, Mich. (352.7), 9:30 a. m., tonight's dinner, woman's editor; 12:35, Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, Detroit News orchestra, A. and P. Gypsies.

Gypsies.

Central Time Stations

KFAB, Lincoln, Neb. (340.7), 3:15-3:45 p. m., matinee musical; 8:30-10:30, Jack Marshall, planist; Mart Grauenhorst, banjoist; Ed Ellingson, tenor; Lenhart's orchestra; Belshaw's orchestra. (FNF, Shenandoah, Iowa (266), 7 p. m., concert, Henry Field Seed company.

KFVE, University City, Mo. (240), 8:30 p. m., popular music, Bunswick-Balke-Collender company; Orchestra Romaine.

KFVE. University City, Mo. (240), 8:30 p. m., popular music, Bunswick-Balke-Collender company; or chestra Romaine.

KMA. Shenandah, Ia. (252), 11:30 a. m.-12:30 p. m., R. F. D. program; garden, flower and orchard talks, Earl May; musical saw solos, J. A. Showers, 6-7. Pollyanna stories, Mrs. D. Nickots; popular nusical numbers; 9-11, How Do You Do, Boys, Grady and Doe; Farnham trio.

KPRC, Houston, Tex. (296-69), 12 noon, Frank Tilton, pianist; 5:30 p. m., Uncle Judd's kiddles' hour; 7:30, Records' Ramblers, Pierre Records; 8:30, J. G. Blaffer, lyric sopranc; Hu T. Huffmaster, pianist; 9. Knights of Columbus band, W. J. Harty, director, KSAC, Manhattan, Kan. (340.7), 12:35 p. m. "Shelter for Cows and Milkers," James W. Linn; "Smite Sorshum Smut," D. R. Porter; 4:30-5, second year English literature; 6:35, book review, current events; (Continued on page-15)

(Continued on page 15)



Deane H. Dickason, official lecturer of the Canadian Pacific World Cruises, will give a talk, "Round the World in Sixty Minutes," at KOA, Denver, Friday evening.

WALTER DAMROSCH AT WJZ SUNDAY

Monday, November 9

(Continued from page 14)

6:50, "General Psychology," P. R. Brainard; 7-7:15, "Marketing Kansas Wheat to Best Advantage," R. M. Green; 7:15, "Control of Corn Insects," J. W. McColloch.

KSD. St. Louis, Mo. (545.1), 6:45 p. m., Abergh's concert ensemble; 9, program; 10, Dutch Masters cigar hour, Max Steindel string quartet.

KTHS, Het Springs National Park, Ark. (374.8), 9-35 p. m., New Arlington hotel orchestra; 9:45-10, Louis Culp, organist; 10-11, Rainbow Garden 555 hour.

KYW, Chicago, 4ll. (535.4), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 1-2, Joska DeBabary's or-

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Majestic theater, N. Y. (272.6), 8 p. m., Irene Kleinpeter, soprano; 8:25, Carl Park, violinist; 8:35, "The Harp of God"; 8:45, Irene Kleinpeter, soprano; 8:35, Carl Park, violinist. WCCO, Minneapolis-St. Paul, Minn. (416.4), 10:45, p. m., "The Gold Medal Christmas Plum Pudding," Betty Crocker; 12 m., Donaldson's orchestra; 2:30, p. m., afternoon concert; 4, Readers' club, Mrs. Walter Stevens; 5:30, children's hour; 6:45, F. & R. Family; 7:45, poultry raising; 8, Gordon Cooke ensemble; Ashwin Birnbach, soprano; 9, classical concert.

semble; Ashwin Birnbach, soprano; 9, classical concert, semble; Ashwin Birnbach, soprano; 9, classical concert, semble; Ashwin Birnbach, soprano; 9, classical concert, semble, semble; Radio orchestra; 6-7, C. M. Ragon, reader; Trianon ensemble; 8-10, Around the Town; 11:43-1 a. m., Plantation players; Around the Town; 11:43-1 a. m., Plantation players; Arbhetic club orchestra; Eadi Coleman's orchestra. WGN, Chicago, Ill. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 2:30, Lyon & Healy; 3, rocking chair time, Drake concert ensemble, Blackstone string quintet; 3:30 tea time music, Marshall Fields tea room orchestra; 5:30, Skeezik time, member National Kindergarten and Elenenatry college; 6:30, Drake concert ensemble, Blackstone string quintet.
WHAD, Milwaukee, Wis. (278), 6-7 p. m., Bill Bennings Milwaukee, Atheltic club orchestra; 8-10, Marquete university studio program.
WHAS, Louisville, Ky. (399.8), 4-5 p. m., concert, Harry S. Currie's Music Box; children's stories, Eleanor Huber; readings; fashion talk.
WHB, Kansas City, Mo. (365.6), 2-3 p. m., Sweeney Radio trio; 7-8, Milo Finley's trio; Sweeney Radio orchestra.
WHO, Des Moines, Iowa (526), 7:30-8 p. m., Drake

orchestra.

WHO, Des Moines, Iowa (526), 7:30-8 p. m., Drake university conservatory of music; 8-9, faculty members, Drake conservatory of music; 11-12, dance

WHO. Des Moines, lowa (526), 7:30-8 p. m., Drake university conservatory of music; 8-9, faculty members. Drake conservatory of music; 11-12, dance university conservatory conservatory of music; 11-12, dance university conservatory conserv

Gonge Luttrell, director.

WOAI, San Antonio, Tex. (394.5), 3 p. m., musical program.

WOAW. Omaha, Neb. (526), 5:40 p. m., Val Me-Laughlin, the Sandman; 6, Phyllis Griswold, organist; 6:25, popular song period; 6:50, Randali's Royal Fontenelle orchestra; 9, Skeen trio, Thelma Skeen, interest Lorenda and Allan Skeen, violinist.

WOC. Davenport, la. (483.6), 12:15-12:25 p. m., "Hog Day," Prof. John M. Evvard.

WOK. Chicago, Ill. (217.3), 12-2 p. m., Sandy Meek, tenor: Harry Sosuik, pianist; Bunks Kennedy, organist; Bob Mokreis, pianist; Gus C. Edwards and his orchestra: 6-1. Jimmy Watson, baritone; Paul Small, tenor; Jimmy Cairns, tenor; Herman Shnaiko, violinist; Harriet Lee, contralto; WOK string trio; WOK, male quartet; Charles Lord, tenor; Henry Syler, tenor; Jack Keves, baritone; Norman Bartlett, bass; Harry Sosuik, pianist; Sandy Meek, tenor; Gus C. Edwards and his orchestra.

WOS, Jefferson City Meek, tenor, "Baking Talk," Cleve Carney; "Preparing and Cooking Corned Beef," J. P. Harding, Jr., 3-4 p. m., "Potatoes a Plenty," Helen Harrington Downling.

WSAI, Cineinati, Ohio (326) 10-12 midnight, WSAI concert studios.

Louis Mecker, a member of the literary staff of the Kansas City Star, gives the book talks every Thursday night at 6 p. m. central time at WDAF.

WSM, Nashville, Tenn. (232.8), 6:30-7 p. m., Beasley Snith's orchestra; 7, bedthme story, Bonnie Earmbardt; 7:30-9, weekly community program, First Presbyterian church; 10-11, studio concert, Nashville Shriners, WSOE, Milwankee, Wis, (246), 2 p. m., cooking chats, Prudence Penny; 5:30, twilight hour, children's stories, Aunt Happy; Laurine Ladwig, soprano; Elmer Ihrke, planist; 6:30, "Hog Raising," F. B. Hansen; 9, Send a Candygram frolie; Alexander and his Briar Cliff orchestra; Erving R. Erving, barttone; Ina Rae, child soprano; Van Buren's Hawalians; Victor Maves, planist; Marguerite Kolka, soprano; Coleriate quartet; artists.

WSUI, lowa City, lowa (483.6), 12-12:30 m., Dorothy Spencer, soprano; address, Dr. Harry A. Greene; 7:30-8:50, College of the Air lectures; 9, concert, University School of Music.

Mountain Time Stations

KFWA, Odden, Utah (261), 5-6 p. m., Ogden Radio Dealers program; 9-10, Clark's Fashion shop.

KfOA, Denver, Colo. (322.4), 12:15 p. m., Rialto theater musicale; 6:30, dinner concert, Herbert White and his Silver State orchestra; 7. Sandman's hour; 8, summary of votes cast by KOA's audience on jazz vs. classical program; Girl Reserves chorus; Agnes Glaister, soprano; Alexander Grant, bartione; "Girl Reserves of America," Martha Castles; "Children's Reading," L. A. Miller; KOA orchestra selections.

KOB, State College, N. M. (348.6), 7:30-8:30 p. m., "The Relation of Plant Pathology to Agriculture in the Southwest," Dr. Crawford; "Color in Home Furnishings," Miss Dewey.

Pacific Time Stations

KFOA, Seattle, Wash. (455.3), 6:45-8:15 p. m., Sherman, Clay and company program; 8:30-10, Times studio program.

KFPG, Hollywood, Calif. (238), 5-6 p. m., children's hour, Big Brother of KFWB; 6:30-7, program, E. P. Janes, builder; 7-8, microphone brevities; 8-9, program, Star Motor Car company, Millon Dollar Four orchestra; 9-11, The Eskimo rewe presented by Globe fee Cream Co. and Weber Baking Co., featuring the Five Little Eskimos.

KGO, Oakland, Calif. (361.2), 11:30 a. m.-1 p. m., luncheon

city trio; 8-9, concert.
KIR. Seattle, Wash. (334.4), 1:15 p. m., organ recital;
2-2:15, home helps; Bernice Redington; 7-8:39, Sears-Roebuck & company; 8:39-10, Post-Intelligencer studio program; 10-11, Gordon Kilbourne and his orchestra.

dio program; 10-11, Gordon Killoutine and his orchestra.

KLX, Oakland, Calif. (508), 8-9 p. m., Mona Motor Oil company; 9-10:30, Lake Merritt Ducks; special guest night.

KNX. Hollywood, Calif. (336.9), 5:30-6:15 p. m., Warllitzer pipe organ studio, Town Tattler; 6:15. travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30, Mutual Motors mirth contest; 7:30-8, program, Columbia Outfitting company; 8-9, program, L. W. Stockwell company; 9-10, program, Ward Gas Floor Heater company; 10-11, Goodrich Silvertown Cord dance orchestra, Lilyan May Challenger, contralto; 11-12, Ray West's Coccanut Grove dance orchestra from Ambassador hotel.

West's Coceanut Grove dance orchestra from Ambassador hotel.

KPO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:39-5:39, Hawaiian and popular music, Velma Truett, gultarist; Leanor Nelson, ukulele soloist; Harry George, banjoist; 6:49-7, Waldemar Lind and the States Restaurant orchestra; 7-7:30, Rudy Seiger's Fairmont hotel orchestra; 8-8:45. Uda Waldrop, organist; 9-10, father and son program; 10-11, Waldemar Lind and the States Restaurant orchestra.

KTAB. Oakland, Calif. (240), 4-5 p. m., women's club motes; 8-10, Western States Life Insurance company.

KWSC, Pullman, Wash. (348,6), 7:30-9 p. m., Mabelle Carstens, reader; Erlene Loffler, pianist; Dorothy Hutchinson, vocalist; Clarice Shattuck, saxophonist; "Early Electric Ploneers," R. D. Sloan.

Tuesday, November 10

Eastern	Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p.m.	5 p. m.
WLW (422.3	3) Formica or	chestra.	
WTIC (475.) Travelers s	ymphonic orel	iestra.
8:15	7:15	6:15	5:15
WIP (508.2)	Armistice Ni	ght program.	
9	8	7	6
	Michigan nigh		
WNYC (526)	Hon. Charle	s Hughes.	12 1000
9:30	8:30	7:30	6:30
WBZ (333.1)	Alandale ho	ar.	
10	9	8	7
KTHS (374.	8) Symphonic	jazz.	
WJZ (455) '	'The Grand '	Tour."	
11	10	9	8
KTHS (374,	8) College nig	ght.	
11:10	10:10	9:10	8:10
KGO (361.2	"Fun in th	e Schoolroom'	novelty.
12:30	11:30	10:30	9:30
KGO (361.2	2) Auction B	ridge feature.	

Tuesday, silent night for: CFCA, CHIC, CKNC, CNRC, CNRE, CNRM, CNRO, CNRW, CNRT, KFAU, KFRU, KFWA, KOB, KUOM, KWSC, WAHG, WHAD, WBRR, WGCP, WHAD, WHAZ, WKAG, WLIT, WOR, WSM, WSMB, WSUI, WTAM.

Eastern Time Stations Eastern 1 ime Stations
KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., KDKA
Little symphony orchestra; 7:45, "Relativity," Dr. L.
P. Sieg; 8, world cruise, Ross H. Skinner; KDKA
Little symphony orchestra; 9, KDKA Little symphony
orchestra; Smithfield Methodist Episcopal church quartet; 11:35, concert, Grand theater.
WAHG, Richmond Hill, N. Y. (315.6), 12-12:55 p. m.,
musical program.

musical program.

WBZ, Springfeld, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:05, announced; 8, Mrs. J. R. Fausey, soprano; 8:15, special theatrical program, Charles R. Hector's orchestra, vaudeville; 9:30, Alandale hour, minstrels, William Mackay, discorrection.

rector.
WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater: 6:30, dinner concert, William Penn

WCAL, Pittsburgh, Fa. (401.3), 5 h. m. Dew Schilland Heater; 6:30, dinner concert, William Pennhotel; 7:15, Uncle Kaybee; 7:30. Davis Saxophone cotet; 8, program from New York; 8:30, Gold Dust Twins; 9, Eveready hour; 10, Grand opera.

WCAU, Philadelphia, Pa. (277.6), 7:30 p. m., recital, N. Snellenburg and company; Pauline Waters, 90-prano; Clyde R. Dengher, tenor; Lilliam Keener, pianist; 8, Bartram quartet; Kathryn O'Boyle, pianist; 9, "Does the American Make a Better Psychologiet than the European?" Rev. John Stockwell; 9:15, Robert Fraser, gospel singer; 9:40, songs and jest, Bartra Link and Wilhle Horowitz; 10:30, Billy Hayes and his Cathay Tea Garden orchestra.

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

WEAF, New York, N. Y. (491.5), 44-30 p. m., musical program; 4:30-5, women's program; 6-7, dhner music, Waldorf-Astoria; 7-7:10, Florence Johnson, contralto; Winifred T. Barr, accompanist; 7:10-7:30, Ross Gorman and his Earl Carroll Vanities orchestra; 8:30-

9. Gold Dust Twins; 9-10, "Eveready Hour;" 10-10:30, auction bridge Instruction, United States Playing Card company; 10:30-11, Vincent Lopez and his orchestra; 11-12, Meyer Davis Lido-Venice orchestra; WEAR, Cleveland, Ohio (389-4), 7-8 p. m., Vincent Percy, organ recital; 8-9, Stewart-Warner artists; 9-10, State vaudeville and music; 10-11, Melody houv, Al Dister's orchestra; 7:45-8, Milton Yokeman, tenor; Norman Hennefeld, accompanist; 8-8:15, falk, G. T. Geer; 8:15-8:30, Kathryn Connolly, soprano; 8:30-8:45, Rudolph Joskowitz, violinist; Norman Hennefeld, accompanist.
WEEI, Boston, Mass. (348.6), 2 p. m., Joe Rines and orchestra; George Joy and Nell Cantor; 3:15, "Books and Plays," Sherwin Cook; 7, Big Brother club; 7:45, Harvard observatory talk; 8, WEAF, Ross Gorman's orchestra; 8:30, Gold Dust Twins; 9, WEAF Eveready hour; 10, auction bridge, WEAF, Gos Gorman's orchestra; 8:30, Gold Dust Twins; 9, WEAF Eveready hour; 10, auction bridge, WEAF, MGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle Geebee; 6:30-7:30, Boys' club program; 8-9, Y. M. H. C. vocational forum.

WGBU, Fulford-by-the-Sea, Fla. (278), 6:30-7:30 p. m., Blue Steele's orchestra; 10-1, Blue Steele's orchestra; Theresa Horn, pianist.
WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Nat Osborne and Eddie Meredith, songs; 3:15-3:30, Silvio de Rienzo, pianist; 3:30-3:45, Isabelle Henderson, soprano; 4-4:15, Leslie McLeod, tenor; 4:15-4:45, studio program; 4:45-5. J. Vincent Moore, tenor. WGRP, Detroit, Mich. (270), 8 p. m., Skylark dance band.
WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Vincent Lopez, Hotel band.

WGR. Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Vincent Lopez Hotel Statler dance orchestra, Harvold Gieser, director; 8-11, jointly with WEAF including Gold Dust Twins, Eveready hour, U. S. Playing Card company and Earl Carroll's theater.

Statler dance orchestra, Harold Gleser, director; 8-11, jointly with WEAF, Including Gold Dust Twins, Eveready hour, U. S. Playing Card company and Earl Carroll's theater.

WGY. Schenectady. N. Y. (279.5), 2 p. m., music; one-act play, "Charming Leander," WGY Matinee players; 2:30, organ recttal, Stephen E. Bofsclair; 6:30, dinner program, Hotel Van Curler orchestra; 7:30, "Water Supply Engineering," Prof. Wirer Taylor; 7:45, program, Hotel Van Curler orchestra; 10, "The Grand Tour-Holland," WJZ; 10:30, W. Spencer Tupman's Hotel Mayflower orchestra, WHAR. Atlantic City, N. J. (275), 2 p. m., Seaside hotel trio; 7:30, book review, Mrs. James Lord; 8, Seaside hotel trio; 11:15, Strand theater organ recital, ton organ recital; 2-3:15, overture and vaudeville Loew's State theater; 3:15-4:30, Lexington orchestra; 4:30-5, Uncle Robert and his pals; 7-7:30, lealand orchestra; 7:30-8, WII Oakland's Chatheau Shanley; 11-11:30, Caravan elub orchestra; 13:0-12, Rodeo club orchestra; 12:12:43, Club Kentucky revue and orchestra; 13:14-13, p. (208.2), 10 a. m., menu, Mrs. Anna B. Scott; 1 p. m., organ recital; 3, Ben Stad violin studic; Myrtle C. Eaver plano studic; Flora Ripka, planist; 6:05, Joe Ray and the California Night Hawks; 8, Elliott Lester, dramatic critic; 8:15, Armistice night program, 315th Infantry association, Stern Price Post, American Legion; Major-General Douglas MacArthur, Admiral Scales, Colonel Clarence Pranklin; Captain Richard V. Lancaster; 10:05, Emo's Weekly Movie broadcast, Eli M. Orowitz; 10:30, Club Pagoda orchestra; 7:30, Lloyds orchestra; 8:30, WEAF Gold Dust twins; 9, Eveready hour.
WJR, Detroit, Mich. (617), 7 p. m., Jean Goldkette's Petite symphony orchestra; 9, "Michigan" night. WLWI, New York, N. Y. (288.3), 8 p. m., services, sermon, benediction; Paulist choristers.
WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail and his Hotel McAlpin string ensemble; 6:30-7, Frank Gebbias Red Lion inn orchestra; 7:30-75, polical alarms; 7:35-8, the Canadians; 8-8:15, New York Zither trio; 8:15-8

Central Time Stations

KFAB, Lincoln, Neb. (340.7), 3:15-3:45 p. m., matinet nusical; 5:30-6:30, Little symphony, Belshaw's orchestra; 8:30-10:30, University of Nebraska musical program.
KFDM, Beaumont, Texas (315.6), 8-10 p. m., musical

program.

KFMX, Northfield, Minn. (337), 10-10:30 p. m., piano lesson, Frederick L. Lawrence.

KFNF, Shenandoah, Iowa (266), 7 p. m., concert, Union, Nebraska, artists, Alda Taylor, director.

KFVE, University City, Mo. (240), 8:30 p. m., studio antaticians.

New Court of the C

ning at home; 1 a. m., Coon-Sanders original night-hawks.

WBAP. Fort Worth. Tex. (475.9), 12:05-12:30 p. m.,
Ward's Trail Blazers; 6-6:30, Fred Cahoon's Texas
hotel orchestra; 7:30-8:30, concert, School of Gospel
music; 9:30-10:45, Enterpean club.
WBBM, Chicago, ill. (226), 8-9 p. m., Merry Garden
orchestra; 9-10, WBBM string quartet; Harold Anderson, accordionist; Merry Garden orchestra; Stewart-Warner
string quartet; Leoua Hayes, harpist; Lew Russell,
tenor; Manhattan quartet.
WCBD, Zion, Ill. (344.6), 8 p. m., Mrs. Thomas, Mrs.
Mayfield, soprano duet; Carl Newcomer, saxophonist;
J. L. Bishop, bartione; Hire trio, musical glasses;
Mrs. Athol Heath, pianist.
WCCO, Minneapolis-St. Paul, Minn. (416.4), 12 m.,
Dick Long's Dayton trio; 2 p. m., the world of books,
H. A. Bellows; 5:30, children's hour; 6:15, Emmet
Long's Golden Pheasant orchestra; 7:30, WEAF.
WDAF, Kansas City, Mo. (365.6), 3:30-4:30 p. m.,
Star's string trio; 6-7, piano tuning in number or the
Duo-Art; piano lesson, Maudellen Littfield; Tell-Me-a-

Esther Healy Dowd, pianist, is a frequent visitor at WTAM, Cleveland. She might almost be called a member of the staff.

Story Lady; Trianon ensemble; 11:45-1, Plantation players; Earl Coleman's orchestra; Eddie Kuhn's Kansas City Athletic club orchestra; Johnmie Campbell's Kansas City club orchestra.
WEBH, Chicago, Ill. (370.2), 7-8 p. m., Oriole orchestra; Lydis Lochner, contraito; Uptown theater; 9-10. Oriole orchestra; songs, Paul Small; 11-1 a. m., Oriole orchestra; Sandy Meet, tenor; Harry Sosnick, accompanist; Jack Penewell, twin guitarist; songs, Paul Small.

panist; Jack Penewell, twin guitarist; songs, Paul Small.

WGES, Oak Park, III. (250), 5-7 p. m., Lydla Werner, soprano; Miles Sullivan players, one-act playlet; Stenstrom sisters, vocal duo; Tiffin theater organ and orchestra; 8-9, Helen Frahm, soprano; Tiffin orchestra; 11-1 a. m., Serenaders orchestra; quartet; Remington Welsh, organist, Sandy McTadish, Scotch comedian; Erwin Schmidt and his own songs; Jack Goodwin, tenor. WGN, Chicage, III. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 2:30, artist series, Lyon & Healy; 3:30, tea time music, Marshall Fields tea room orchestra 6:30-7, Drake concert ensemble, Blackstone string quintet; 8-9, WGN string frio; 10-11, Jack Chapman's and the Blackstone hotel dance orchestras.

WHAD, Milwaukee, Wis. (278), 6-7 p. m., Bill Benning's Milwaukee Athletic club orchestra.

WHAS, Louisville, Ky, (399.8), 4-5 p. m., Harry S. Currie's Music Box; children's stories, Eleanor Huber; readings; 7:30-9, Eddie Rosson and his orchestra.

Huber, readings; 7:30-9, Eddie Rosson and his orchestra.

WHB. Kansas City, Mo. (365.5), 7-7:30 p. m., organ concert, Morrell Moore; 8-9:30, Maurice Beamon, bass; Eddith Willis, accompanist; Gene Buell, plano accordionist; Geary School of dancing; MHO. Des Moines, lowa (320), 7:30-8 p. m., Raleigh quintet; 8-9, Bankers Life trio; 11-12, Bankers Life Little symphonic orchestra.

WHT, Chicago, III. (399.3), 6-7:30 p. m., classical program; Grayling's string trio; Eleanor Gilmour, soprano; Helen Raum, planist; John Clark, baritone; Oscar Heather, tenor; Al Carney, organist, Loftis period; (238), 7:45-9:15, musical features; (399.8), 9:30, Jelke entertainers; Kitchen Klenzer Klassics; Larry Shay, tenor; U. S. L. program; Al Carney, organist; Husk O'Hare's orchestra; 12, Pat Barnes and Al Carney.

and Al Carney.

W1BO, Chicago, III. (226), 6-8 p. m., classical dinner concert; string trio, artists; 12-2 a. m., midnight

organist; Aidsk U Hare's orchestra; 12, Pat Barnes and Al Carney.

W180. Chicago, III. (226), 6-8 p. m., classical dinner concert: string trio, artists; 12-2 a. m., midnight jamborec.

W186. Elgin, III. (302.8), 7-8 p. m., dinner concert. Drake concert ensemble; Blackstone string quintet; 9-10, Fred Hamm's orchestra; organ recitat; 10-11, Jack Chapman's and the Blackstone hotel dance orchestra; jazz artists; 1-2 a. m., Chapman's orchestra and Blackstone hotel dance orchestra; jazz.

W18. Chicago, III. (344.6), 12 noon, Ferd and Glenn; 6:30 p. m., Ralph Emerson, organist; 7, Iullaby time. Ford and Glenn; 7:15-7:55. W18- trio.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., healthfut exercises, William Stradtman, Y. M. C. A., 7:45. morning devotions, auspices Parkway Y. M. C. A., 7:45. morning devotions, auspices Parkway Y. M. C. A., 7:45. morning devotions, auspices Parkway Y. M. C. A., 7:45. morning devotions, auspices Parkway Y. M. C. A., 7:45. morning devotions, auspices Ordical Polymornia (19), 10-10, 1

orchestra; Billie Allen Hoff, Ed Hines, Harond Stokes.

WOAI, San Antonio, Texas (394.5), 8:30-9:30 p. m., musical program, Beghart Mexican players.

WOAW, Omaha, Neb. (526), 5:40 p. m., Val McLaughlin, the Sandman; 6, classical; 6:30, Ed Myers and Peony Park orchestra; 9, deluxe program; 12, Rialto Alarm.

WOC. Davenport, 1a. (483.6), 12:15-12:25 p. m., "Poultry Day—Feeding Hens Grains and Mashes." Prof. A. G. Phillips; 7:30-8, Eveready hour; 8-9, bridge games; 9:30-10:30, Crescent orchestra.

WOK, Gheago, III. (217.3), 12-2 p. m., Banks Kennedy, organist; Marlanne Powell Baboock, soprano; Thomas B. Stephenson, tenor; Marle Dneprova, soprano; Bob Mokreis, planist; WOK male quartet; Gus C. Edwards and his orchestra; 3:30-7, Genevieve Barry Burnham, soprano; Clement, Laskowski, tenor; Bob Mokreis, planist; Banks Kennedy, organist; WOK string trio; Gus C. Edwards and his orchestra; 10-1, Bill Hay, bass; Harriet Lee, contralto; (Continued on page 16)

(Continued on page 16)

STATIONS OBSERVE ARMISTICE DA

Index to Popular Concerts

T ABULATED below is a time table of the stations giving popular concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

Eastern Time Stations

Eastern 1 ime Stations

Saturday, November 7: 8:30, WGBS;
8:45, WEAF; 9, WEAF, WGBS,
WNYC; 9:30, WGBS; 10, WREO;
10:30, WEAF, WRC; 10:45, WEAF.

Monday, November 9: 7:30, WHN;
7:45, WAHG; 8, WGBS; 8:30, WOR;
8:45, WAHG; 9, WCAU, WEAF,
WGR, WOO; 9:15, WAHG; 9:30,
WGR, WHAZ; 10, WGR, WMCA; 11,
WLIT; 11:30, WHN; 12, WAHG; 1,
WAHG.

Tuesday, November 10: 7, WMCA; 8, WEAR; 8:30, WMCA; 9, WBZ, WEAR; 11, WHN; 11:30, WHN.

Wednesday, November 11: 7:30, WAHG, WEBI, WHN; 7:45, WAHG, §, WAHG, WEBJ, WEBI, WGCP, WMCA; 8:15, WAHG, WGCP; 8:30, WEBJ, WGCP; 9; WEBJ, WGCP; WNYC; 9:30, WAHG; 9:45, WAHG, WCAU; 10, WGCP; 11, WHN.

Thursday, November 12: 7:30

Thursday, November 12: 7:30, WEAF; 8, WCAE, WCTS, WEAF, WFI, WMCA; 8:15, WBZ; 9:30, WCAU; 10, WHN, WNYC; 10:20, WBZ.

Friday, November 13: 7:30, WEEI, 7:45, WAHG, WGY; 8, WGCP, WJR; 8:30, WEEI, WGCP, WHN; 9, WGR; 9:15, WBZ, WGCP; 9:30, WAHG, WHN; 9:46, WGCP; 10, WLIT; 10:30, WHN, WLIT; 11:30, WHN, WTIC.

Central Time Station.
Saturday, November 7: 6:30, WFAA;
:20, WLS; 7:30, WMBB; 8, WBBM,
VENR, WLS, WMAQ; 8:30, WGN,
WBM, WENR, Saturday, November 7: 6:30, WFAA; 7:20, WLS; 7:30, WMBB; 8, WBBM, WENR, WLS; 9, KPRC, WBBM, WENR, WGN, WMBB; 9:30, WEBH; 10, KFVE, WBBM, WBBB, WOK, WQJ; 10:30, WEBH; 11, KOIL, WBBM, WLS; WOAW, WOK, WQJ; 11:30, WEBH; 11, KOIL, WBBM, WLS, WOAW, WOK, WQJ; 11:30, WEBH; 11:45, WDAF; 12, WBBM, WEBH, WENR, WOK, WQJ, WSAI; 12:30, WBBM, WEBH, WENR, WOK, WQJ, WSAI; 12:30, WDAF, WOK, WQJ, WSAI; 12:30, WDAF, WOK, WQJ, WBBM, WENR, WQJ, Sunday, November 8: 7:30, KOIL; 8, WBBM; 9, WBBM; 10:15, KTHS; 11, KTHS; 12, WBBM.

Monday, November 9: 6, WBBM; 6:30, WFAA, WOAW; 6:45, WCCO; 8:30, KFAB, WOK; 9, WMBB, WOK; 9:25, KTHS; 9:30, KFAB; 10, KFAB, KFVE, WMBB, WOK; 10:30, WHT; 11, KOIL, WHO, WOK; 11:45, WDAF; 12, WHT, WOK.

Tuesday, November 10: 6, WOAW; 7:30, KPRC, WBAP; 8, WBBM, WSB; 9, WBBM, WMBB, WOAW; 10,

KFVE, WBBM, WHT, WMBB, WOK, WQJ; 10:15, WSB; 10:30, WGN: 11, KOIL, WBBM, WFAA, WMC, WOK, WQJ; 11:45, WDAF; 12, WFAA, WHT, WOAW, WOK, WQJ; 1, WQJ.

Wednesday, November 11: 7, KFNF, WLS; 7:30, KOIL, WBAP, WHO; 8, WBBM; 8:30, KFAB, WHO; 9, KPRC, WBBM, WHO WMBB; 9:30, KFAB, WBAP; 10, KFAB, KFVE, KYW, WMBB, WOK, WQJ; 10:30, KYW, WGN, WHT; 10:45, WSB; 11, KYW, WOK, WQJ, WSAI; 11:45, WDAF; 12, KYW, WBBM, WHT; WOK, WQJ; 1, WBBM, WOK, WQJ.

Thursday. November 12: 6:20

N' W. WBBM, WHT, WOK, WQJ; 1, WBBM, WOK, WQJ.

Thursday, November 12: 6:30, WFAA; 7, WOC, WSAI; 7:30, WBAP; 8, WBBM, WHAD; 9, KMA, WBBM, WHAD; 9, KMA, WBBM, WHAD, WMBB; 9:30, KTHS; 10, KMA, KYW, WBBM, WMBB, WOK, WQJ; 10:03, WLW; 10:30, WGN, WHT; 10:45, WSAI; 11, KOIL, WBBM, WFAA, WOG, WOK, WQJ; 11:20, WLW; 11:45, WDAF; 12, WHT, WOK; 12:15, WLW, WQJ; 1, WQJ.

Friday, November 13: 6:30, WFAA; 8, WBBM, WLS, WOC; 9, WBBM, WDAF, WHAD, WOAW; 9:45, WLS; 10, KFVE, KYW, WOK, WQJ; 10:30, KYW, WGN, WHT; 10:45, WSAI; 11, KOIL, WMC, WOK, WQJ; 11:30, KYW; 11:45, WDAF; 12, WHT, WOK, WQJ; 1, WQJ.

Mountain Time Stations

Wednesday, November 11: 10, KFWA.

Friday, November 13: 10, KFWA.

Pacific Time Stations

Saturday, November 7: 8, KFWB, KNX; 9, KNX, KPO; 10, KFWB; 11, KNX; 11:30; KHJ, KTCL; 12, KNX; 12:30, KHJ; 1, KNX; 1:30, KHJ.

Sunday, November 8: 8, KHJ; 9, KFWB; 10, KFWB.

Monday, November 9: 9, KNX; 10, KFWB; 11, KFWB; 12, KFWB.

Tuesday, November 10: 8, KFWB, KNX; 9, KNX, KPO; 10, KFWB, KNX; 11, KFWB.

Wednesday, November 11: 8, KGW, KPO; 9, KFWB, KNX; 10, KNX; 11, KFWB; 11, KNX.

Thursday, November 12: 8, KHJ; 9, KHJ, KTAB; 10, KFWB, KHJ; 11, KNX.

Friday, November 13: 8, KFWB; 9, KFWB, KHJ, KNX; 10, KFWB, KNX; 12, KFWB, KNX; 1, KNX.

Eva Gauthier, soprano, and John Powell, pianist, below, are the two famous artists who may be heard Sunday night during the Atwater Kent hour at WEAF, New York. These programs reach many fans through the nationwide link and are being received enthusiastically. nesday, silent night for: CHIC, CKNC, CNRA, CNRE, CNRM, CNRR, CNRV, KFAU, KFDM, KOB, KTAB, KTCL, KUOM, WBBR, WCBD, WFI, WGBS, WHAR, WHAZ, WIP, WLWL, WOAI, WOAW, WORD, WPG, WRC, WREO. Eastern Time Stations
CNRO, Ottawa, Can. (435), 8 p. m., Chateau Laurier
concert orchestra; 8:30, Armistice Day program; Mrs.
J. D. Robertson, soprano; Eligar quartet; Harry Hands,
tenor; J. Herbert Summers, reader; Mrs. J. R. Pontifex, contralto; Frank Browne, bass; Chateau Laurier
dance orchestra. tenor; J. Herbert Summers, reader; Mrs. J. R. Pontifex, contralto; Frank Browne, bass; Chateau Laurier dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., dinner concert; 7:45, "The Essentials of Prison Reform," Dr. W. T. Root; 9, Dry Slitz hour of music.

WAHG, Richmond Hill, N. Y. (315.6), 12-12:55 p. m., musical program; 7:30-8:30, Billy Elsenhuth's "Lynbrocklyns;" 8:30-8:45, John Myles Flynn, angling lore; 8:45-9, Louis Caton, tenor; 9-9:15, Frank Lauria, violinist; 9:15-9:30, Crescent quartet; 9:30-9:45, Louis Caton; 9:45-9:55. Crescent quartet; 9:55-10, time signals and weather report; 10-10:15, Frank Lauria, 10:15-11:15, Joe Zimmerman and his orchestra.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:30, nature story, Thornton W. Burgess; 8, special Armistice Day program, Waltham Lodge of Elks.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, William Penn hotel; 8, father and son talks; 8:30, Pooley period; 9, Waterman hour.

WCAP, Washington, D. C. (468.5), 7:30-8 p. m., U. S. Army band; 8-8:30, Huyler's Bon Bon Buddies; 8:30-9, U. S. Army band; 9-10, "The Treaty of Versailles," WEAF; 10-11, Ipnan troubadours.

WCAU, Philadelphia, Pa. (277.6), 7:30 p. m., Lew Chapman and his Hotel Pennsylvania orchestra; 8, stage dancing lesson, Al White: 8:15, William H. Moore, tenor; Kathryn O'Boyle; planist; 9, Hill's instrumental trio; 9:30, health talk; 9:40, nopular ditties, Moe and Joe; 9:50, Morris Wager, songs; 10, Penndashery Collegians.

WCX. Detrait, Mich. (517), 6 p. m., dinner concert, Book-Cadillae hotel; 9, musical program.

Tuesday, November 10 (Continued from page 15)

strumental trio; 9:30. health talk; 9:30, popular ditties, Moe and Joe; 9:50, Mortis Wager, songs; 10, Penndashery Collegians.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillae hotel: 9, musical program.

WEAF, New York, N. Y. (491.5), 4-4:45 p. m., Ray Nichols orchestra; 4:45-5; "The Nightingale and the Rose," Mrs. Annie Barnouw; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, United Synagogue of America; 7:39-8, concert, United States Army band; 8-8:30, "Huyler's Bon Bon Buddies;" 8:30-9, Peoley concert; 9-10, "Waterman's Points of Progress—the Treaty of Versailles," 10-11, Ipana Troubadours; 11-12, Ben Bernie and his Hotel Roosevelt orchestra.

WEAR, Cleveland, Ohio (389.4), 7-8 p. m., Hotel Cleveland orchestra, Ivan Francisci, director.

WEBJ, New York, N. Y. (272.6), 8-8:30 p. m., Red and Gray Melody Boys; 8:45-9, Phillip Krumholtz, tenor; Norman Hennefeld, accompanist; 9-9:15, Lilian Bucknam, soprano; 9:30-10, Roth trio.

WEEI, Boston, Mass. (348.6), 10:45 a. m., "Your Working Methods"; 3 p. m., Johnnie Bowles and his orchestra; 7, Big Brother club; 7:45, musicale; 8, Huyler's Bon Bon Buddies, WEAF; 8:30, Radio Progress—Treaty of Versailles, WEAF; 10, WEAF; 10, WEAF, Ipana Troubadours; 11, Chamber of Commerce organ, Armistice program of war songs.

WGBS, New York, N. Y. (315.6), 6-6:30 p. m., Uncle Geebee; 6:30-7:30, Yerkes Flotilla orchestra; talk on Florida, M. C. Tebbetts.

WGCP, New York, N. Y. (315.6), 6-6:30 p. m., Henry Rosers, planist; 3:30-3:455, Bert Dagmar, songs; 3:45-4, Clarence Williams trio; 4-4:15, Ona Welsh, planist; talk on Florida, M. C. Tebbetts.

WGCP, New York, N. Y. (315.6), 6-6:8:30, p. m., Henry Rosers, planist; 3:30-3:455, Bert Dagmar, songs; 3:45-4, Clarence Williams trio; 4-4:15, Ona Welsh, planist; and plano; 8:45-9, Nat Osborne and Eddle Meredith; 9-9:05, health talk; 9:05-9:30, studio program; 9:45-10, Win Chemerican; 11:41-51, Strickland's orchestra; 12-12:30, Connie's orchestra; 12-12:30, Connie's orchestra; 12-12:30, Connie's orchestra; 12-12:30, Co

cert, Sherman, Clay and company; S. "Radio Breezes," K. C. B.; 8:10, California quartet; Margaret Vogel, cellist; Coleman Cox, the business philosopher; Catherthe Brown, pianist; Millie M. Anderson, contralto; piano duet, Kaspara Hagan and Richard A. Nichols; musical novelty. "Fun in the Schoolroom"; 9:30, auction bridge feature. (KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 7:45-8, talk, Oregon Banker's association; 8-9. "Sound Investments;" auction bridge lessons; "Style" talk, concert trio; 9-10, General Cord orchestra; 10-12, Indian Grill.

KHJ, Los Angeles, Calif. (405.2), 6:6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; weekly visit Queen Titania and Sandman from Fairyland, Chas. Leslie Hill, readings, Louis F. Klein, auto-harp and harmonica; 7:30, talk on dogs, H. M. Robertson; 8-10, program, Broadway Department store; arranged by J. Howard Johnson; 10-11, Art Hickman's Biltmore hotel dance orchestra, Frank Ellis, leader.

KJR. Seattle, Wash (384.4), 10 a. m., musical prohome helps, Bernice Redinston; 7:30-8, Bon Marche program, Mrs. Clara Hartle; 1:15, organ recital; 2-2:15, story lady, Anne Heetderks; 8:30-10, Puget Sound Savings & Loan association orchestra.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:45, Don Clark and his La Monica dance orchestra; 7:45, talk on health, Dr. Robt. T. Williams; 8-9, program, Zinke's Rebottoming company, 9-10, KNX feature program; 10-12, movic night at the Ambassador, Ray West's Cocoanut Grove dance orchestra; 8:45, Waldenur Lind and the States Restaurant orchestra; 7-10, Rudy Seiger's Fairmont hotel orchestra; 9-10, Mona Motor Oil company, Mona Motor Oil trio; 10-11, Jack Coakley's Cabirians.

K7AB, Oakland, Calif. (240), 8-10 p. m., program, Mutual Stores.

Wednesday, November 11

Fasterin		rs Today	
Eastern	_Central	Mountain	Pacific
8 p. m.	7 p. m.	6 p.m.	5 p. m.
WBZ (333.1)	Armistice I		
8:30	7:30	6:30	5:30
WEAF (491.	5) Pooley per	iod.	
WHAS (399.)	8) Kentucky	Night Owls.	
9	8	7	6
WLW (422.3)	Armistice I	Day program.	
WGY (279.5)	Armistice I	av program.	
9:30	8:30	7:30	6:30
WEBJ (272.6) Roth trio.		0.00
10	9	8	7
KOA (322.4)	Armistice D	av program	
10:40	9:40	8:40	7:40
		Legion progra	m
11	10	Q progra	8
WEET (348 6		Day program.	U
ECOTE (4010.0	Armistice I	Day program.	

gram; 7:30, U. S. Army band, WCAP; 9, Waterman's Points of Progress; 10, musical program.

WR. Detroit, Mich. (517), 7 p. m., Jean Goldkette's Petite symphony orchestra; 9, Burroughs hour; 11:30, Jewett Josters.

WKAQ, San Juan, P. R. (340.7), 7-9 p. m., mynicipal band, Prof. Manuel Tizol, director.

WMCA, New York, N. Y. (340.7), 6;6:30 p. m., Olcott Vail and his string ensemble; 6:30-7:30, Fruite Goiden and his Hotel McAlpin orchestra; 8-9, services, Northminister church; 9-9:15, Joseph Wetzel, tener; 9:30-9:45, talk, Frank G. Wadsworth; 10-11, Andy Asciutto's Paragon orchestra; 11-11:30, Hofbrau Haus; 11:30-12, Jack Smith.

WNYC, New York, N. Y. (326), 6:10-6:20 p. m., market high spots; 6:20-6:30, plano recital; 6:30-7, elementary Spanish lessons; 7:30-7:35, advanced Spanish lessons; 7:30-7:35, advanced Spanish lessons; 7:30-7:35, advanced or orcigin, wars; 10-10:10, health talk, George A. Keane; 10:10-10:30, lecture service, board of education.

WOR, Newark, N. J. (495.2), 6:15-6:17 p. m., "Words Often Mispronounced;" 6:17-7, dinner music, Hotel Shelton; 7:15-7:30, sports talk, Bill Wathey; 7:30-8, Vincent Lopez orchestra; 8:30-8:45, Sam Stegel, mandolin virtuoso; 11-12, Zit's Central Park Casino orchestra.

WTAG, Worcester, Mass. (268), 10:30 a. m., chat; 10:40.

dolin virtuoso; 11-12, Zit's Central Park Casino orchestra.

WTAG, Worcester, Mass. (268), 10:30 a. m., chat;
10:45, housewives' talk, Lydia Flanders; 12:05-2 p. m.,
lumcheon music, WTAG trio, Harry Smith; 7:15,
Twinkle Twinkle story teller; 8, Spanish lesson, Mrs.
De LaParra; 8:15, concert program.
WTIC, Hartford, Conn. (475-9), 6:30 p. m., Hotel
Bond trio; 10, Bill Tasillo's orchestra.

WWJ, Detroit, Mich. (352.7), 9:30 a. m., tonight's dinner; 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra; 9, program from WEAF.

Central Time Stations

Central Time Stations
CNRW, Winnipeg, Can. (384.4), 8 p. m., Fort Garry hotel musical program; 8:30, farmers' agricultural service talk; 8:40, Fort Garry trio; Mrs. J. H. Waugh, contraito; Miss 'Verrinder, pianist; 10, Al Kilgour; supper-dance program, Fort Garry hotel.
KFAB, Lincoln, Neb. (340.7), 8:15-3:45 p. m., matinee musical; 5:30-6:30, Bielshaw's orchestra, Buick Little symphony; 8:30-10:30, Lincoln Syncoputors, Mrs. Brokema, pianist and vocalist; Anna Brokema, violinist; Gladys Soller, vocal solos; patriotic features.

tures. KFMX, Northfield, Minn. (337), 9-10 p. m., musical

KIMS. Northfield, Minn. (337), 9-10 p. m., musical program.
KFNK, Shenandoah, Iowa (266), 7 p. m., concert, Omaha Concord club, Walter Roesig, director.
KFNE, University City, Mo. (240), 8:30 p. m., Paul and Jack Snyder.
KMA, Shenandoah, Iowa (252), 11:30 a. m.-12 p. m., R. F. D. program; garden, flower and orchard talks, Earl E. May; music; 6-7, dinner program; domestic science topics, Le Ona Teget, June Case; 9-11, familiar songs and music; chimes, William Howie; Bobbie Riddle, child singer and clog dancer; Gertrude May, director.
KPRC, Houston, Texas (296.9), 12 noon, Lion's club luncheon program; 5:30 p. m., Uncle Judd's kiddles' hour; 7:30, Rice Institute student band, Lee Chatlam, director; 8:30, Eddle's Syncopators; 11, Seger Ellis, blues composer-pianist.
KSAC, Manhattan, Kan. (340.7), 12:40 p. m., readings; "Wherf System Helps," I. N. Chupman; 12:47, question box; 12:58, "Burn the Chinch Bug," J. W. McCollock; 4:30-5, football, basketball, base-ball course; 6:50-7, "Educational Sociology," V. S. Strickland; 7, "Electrical Refrigeration," R. G. Kloeffler; 7:15, "Present Day Economics in Power Production," J. P. Calderwood.
KSD, St. Louis, Mo. (545.1), 7 p. m., Banjamin Bader's orchestra. orchestra; 11-11:30, Club Richman entertainers; 11:30-12; Strickland's orchestra; 12-12:30, Connie's orchestra.

WGHP, Detroit, Mich. (270), 8 p. m., WGHP little symphony.

WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 7:7:30, Murray Whiteman's serenaders; 9-11, Jointly with WEAP, including Waterman's "Points of Progress" and the Ipana Troubadours; 11-1, Vincent Lopez Hotel Statler dance orchestra, Harold Gioser, Christopez Hotel Statler dance orchestra, Harold Gioser, Christopez Hotel Statler dance orchestra, Harold Gioser, Christopez Hotel Statler dance orchestra, Harold Gioser, Ployd Walters, organist; 7:30, book of knowledge program; 9, Armistice program; Army School band, WRC; General Summerall, speaker; Father Francic P. (21.2), 2:15-2:45 p. m., Jimmy Clarke's entertainers; 7:30, Cotton dub orchestra; 10-10:30, Roseland dance orchestra; 11-11:30, Silver Slipper orchestra; 11:30-12, Swanee club orchestra; 12:12:30, Club Richman entertainers; 12:30-1, Ted Lewis and his orchestra. 508.2), 10:30 p. m., special reducing exercises, Dr. Francis D'Elixcu; 1 p. m., Gimbel a room orchestra; 3, Kurtz vocal studios, Flora Ripka, planist; 6:05, Benjamin Franklin concert orchestra.

der's orchestra.

KTHS, Hot Springs National Park, Ark. (374.8), 99:40, Meyer-Davis ensemble; 9:40-10:10, American

DANCING

DAY WITH MILITARY PROGRAMS



DANCING

DANCING

Central Time

Saturday, November 7:
, Wir, Wnye, Wng;
380, Wfaa; 8:35, Wg;
, Webh, Weel, Wmbb,
Nup, Wree; 9:10, Kth,
Wor, Wre; 10, Kte,
Vor, Wre; 10, Kte,
Vor, Wre; Weel,
Weel, Word, Wree,
Viva, Koa, Kpo, Weel,
Vgn, Wir, Wkre,
Wree,
Wis, H. Klog, Krea,
Wis, H. Klog, Krea,
Wist, H. Klog, Krea,
Wist, H. Klog, Krea,
Vgbu, Who, Webh, Wfaa,
Vgbu, Who, Webh, Wfaa,
Vgbu, Who, Webh, Wfaa,
Vgbu, Who, Web, Kya,
Vgbu, Who, Kgo, Kgw, Kn,
Vgbu, Kgo, Kgw, Kn,
Vgbu, Who, Kgo, Kgw, Kn,



Hawalian trio; 9:30-10:45, Fred Canoon's Texas notel orchestra;

WBBM, Chicago, Ill. (226), S-10 p. m., Sunset mad quartet; Fert Davis; William Moln..re, tenor; Ted Coleman, cellist; Frances Ingram, contralto; Merry Garden orchestra; Burdette Cleveland, planist; 12-2, Harold Anderson, accordionist; Montmartre orchestra; Burdette Cleveland, planist; Charlie Garland, Nate Caldwell, Eddie Loftus, Uler and Farwell.

WCCO. Minneapolis-St. Paul, Minn. (416.4), 10:45 a. m., "Kitchen Test Your Working Methods," Betty Crocker; 2 p. m., woman's hour; 7, midweek church service, Temple Baptist church; 8, WEAF; 10:05, Wallie Erickson's Coliseum orchestra; 11:30, Eddie Dunstedter, organist.

WDAF. Kansas City, Mo. (365.6), 10:45 a. m., Betty

Dunstetter, organist.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., Betty
Crocker Gold Medal Flour home service talk; 3:30-4:30,
Star's string trlo; 6-7, address, pseaker, Health Conservation association; address, Ralph E. Herrick; TellMe-a-Story Lady; Trianon ensemble; 8-10, Star's Radio
string orchestra; 11:45-1, Plantation players; Eddie
Kuln's Kansas City Ahtletic club orchestra; Earl Coleman's orchestra.

Kuhn's Kansas Čity Ahletic club orchestra; Earl Coleman's orchestra.

WEBH, Chicago, III. (370.2), 7-8 p. m., Oriole orchestra; Florence Behrend, soprano; 9-10, Oriole orchestra; Correll and Gosden; Robert York, tenor; 11-1, Oriole orchestra: Correll and Gosden; Robert York, tenor; Oriole orchestra.

WGES, Oak Fark, III. (250), 5-7 p. m., Betty Bebb and Helen Cameron, vocal duo; McDevitt sisters; planists; Tiffin theater organ and orchestra; 8-9, Ethel Glese, soprano; Ruth Kalthoff, contralic; Peter Mathews; basso; John Stamford, tenor; Tiffin theater organ and orchestra; 11-1 a. m., Philips twins, vocal duo and ukulele solelsts; Tiffin theater organ and orchestra; Serenaders; Morris Hoffman, tenor.

WGN, Chicago, III. (370.2), 12:40 p. m., Drake con-

Morris Hoffman, tenor.

WGN, Chicago, III. (370.2), 12:40 p. m., Drake concert ensemble, Blackstone string quintet; 2:30, artist series Lyon & Healy; 3:30, tea time music, Marshall Fields tea room orchestra; 6:30, Drake concert ensemble, Blackstone string quintet; 8-9, WGN string trio; 10-11, Jack Chapman's and the Blackstone string their decembers.

WHAD, Milwaukee, Wis. (278), 6-7 p. m., Arthur Richter, organist; 8-10, Wisconsin Roof Garden orchestra.

WHAD, Milwalkee, Wis. (278), 6-7 p. m., Affinit Richter, organist; 8-10, Wisconsin Roof Garden orchestra.
WHAS, Louisville, Ky. (399.8), 4-5 p. m., Harry S. Currie's Music Box; readings; 7:30-9, Jake Seligman and his Kentucky Night Owls.
WHB Kansas City, Mo. (365.6), 2-3 p. m., Morrell Moore, organist; 7-8, Milo Finley's trio; talk, John Burns,
WHO. Des Moines, Iowa (526), 6:30-7:30 p. m., Reese-Hughes orchestra; 7:30-9, "La Boheme" trio; Dr. and Mrs. H. A. Hurd, Hawatian guitarists; Kate Miller, whistler; 9-12, dance program.
WHT Chieago, III. (399.8), 6-7:30 p. m., classical program; Pauline Sachs, soprano; Oscar Heather, tenor; Helen Rauh, pianist; Al Carney, organist; Grayling's string trio; (238), 7:35-9:15, musical features; (399.8), 9:30, request organ recital; Hickey and Johnson, harmony boys; Carl Strodel, baritone; Marie Wright, soprano; Leuta Laabs, soprano; Al Carney, organist; 12, Pat Barnes, "Your Hour League;" Al Carney, WIBO, Chicago, III. (226), 6-8 p. m., vocalists; 10-12, popular program; Ted Fiorito and Dan Russo orchestra.
WLIB, Elgin, III. (302.8), 7-8 p. m., dinner concert, Drake concert ensemble; Blackstone string quintet; 9-10, Fred Hamm's orchestra; organ recital; 10-11, Jack Chapman's and the Blackstone hotel dance orchestra; lazz artists; 1-2 a. m., Chapman's orchestra; Blackstone totel dance orchestra; iazz
WLS, Chicago, III. (344.6), 12 noon, Ford and Glenn; Ford and Glenn; 7:15, Mu Phi Epsilon concert; Olive Lacey, soprano; Fredericka Downing, contralito; Dorothy Bell, harpist; 7:45-8:15, WLS theater; trio, special patriotic program; 8:30, Armistice Day feature, Wallace Bruce Amsbury; 9:10, Charles and Katherine



Koraes; special Armistice program; 10:40, Ford and Glenn; 11:10-12, organ recital.

WLW, Cincinnati, Ohio (422.3), 7:30 a. m., morning exercises, William Stradtman, Y. M. C. A.; 7:45, exercises, William Stradtman, Y. M. C. A.; 7:45, exercises, devotions, auspices Parkway Y. M. C. A.; 12:15, musical program, Irene Downing and Marjory Hebestreit; 4, "Shut In" program, directed by Mr. and Mrs. Wm. Duning, co-operating with Settlement Schools and all other institutions, auspices Cincinnati Exchange club; 7, Hotel Gloson concert, Robert Visconti, director; 7:30, National Radio Farm council; 8, special Armistice Day program, 10th Infanry band from Ft. Thomas, warrant officer E. G. Fisher, director; 8:30, Mrs. Harley Morrison, Gold Star mother; 9, "The World Court," Dr. Guy Tawney, Cincinnati Peace league; 9:10, musical program, Cincinnati Chapter of the American Red Cross; 9:30, Salvation Army band concert, Fred Mattison, director; 10, Representative of American Legion; 10:15, Cinomale quariet, songs of the World War; 10:45, planologues, "Newport" Carl Bamberger; 11, organ concert, Johanna Grosse.

WMAQ, Chicago, III. (447.5), 12:45 p. m., Radio farm school; 1, Chicago Association of Commerce luncheon; 2, Shut-in program; 4, Cosmopolitan school of music; 4:30, Red Cross talk; 6, Chicago theater organ recital; 6:30, Georgene Faulkner, the story lady; 8, lecture, Northwestern university; 3:30, Indian musical program; 9, WMAQ players.

WMBB, Chicago, III. (250), 7-8 p. m., Trianon duo; Lillian Marsellles, Marie Caruso; 9-11, Trianon orchestra; Woodlawn theater orchestra; West Brothers & Lyerla trio; Billie Allen Hoff, Marquette banjo four. & Antonio, Texas (394.5), 3 p. m., musical program, Radio Trades association; 8:30-9:30, Army

four. WOAI, San Antonio, Texas (394.5), 3 p. m., musical program, Radio Trades association; 8:30-9:30, Army

& Lyerla trio; Billie Allen Hoff, Marquette banjo four.

WOAI, San Antonio, Texas (394.5), 3 p. m., musical program, Radio Trades association; 8:30-9:30, Army night musical program.

WOK, Chicago, III. (217.3), 12-2 p. m., Harold Morava, tenor; Jean Carlson, soprano; Banks Kennedy, organist; Bob Mokrejs, pianist; WOK male quartet; 5:30-7, Ed Kemp, tenor; Bryce Talbot, organist; Bob Mokrejs, pianist; WOK string trio; Gus C. Edwards and his orchestra; 10-1, Ned Miller, tenor; Rita McFawn, soprano; Herman Sinaiko, violinist; Harriet Lee, contralto; Harold Morava, tenor; WOK male quartet; Charles Lord, tenor; Henry Byler, tenor; Jack Keyes, baritone; Norman Bartlett, bass; Banks Kennedy, organist; WOK string trio; Gus C. Edwards and his orchestra.

WORD, Batavia, III. (275), 8 p. m., Webster hotel concert trio; 8:15, I. B. S. A. choral singers; 8:30, Bible lecture, Calvin H. Swingle.

WOSD, Jefferson City, Mo. (440.9), 8 p. m., "Mathematics of Farming," E. A. Logan; original poems, LeRoy H. Kelsey; Schell's orchestra; address, George A. Pickens.

WQ1, Chicago, III. (447.5), 11 a. m., "The Runabout Child," Dr. Lena K. Sadler; "Have Your Pencils Ready," Frank Wendt, famous chef at Rainbo Sea Food Grotto; "Your Daughter-in-Law's Home Making," Adah H. Hess; 3-4 p. m., questions and answers, Helen Harrington Downing; "An Old-Fashioned Dinner in a New-Fashioned Way," Martha Logan; 7-8. dinner concert, Rainbo Gardens orchestra; Helen Holman, soprano; Clement Laskowski, tenor; Edith Day, whisther; 10-1, Rainbo Skylarks; program, Daughters of the Veterans; Melodians; Esther Trostrud; Clarence Theders, tenor; Alma Adair, prima donna; Sandy Meek, Scotch tenor; Harry Sosnick, pianist; J. Edwin Peterson, bass; 1-2; Ginger hour. WSAI, Cincinnati, Ohio (326), 7:45 p. m., art talk, Cincinnati, Art club; 10, Congress Card string quartet. WSOE, Milwaukee, Wis. (246), 3:30 p. m., special matinee program, Third Annual Wisconsin Radio Exposition; High School band; soloists; Hiram C. Taylor, director; 5:30, Twilight hour, Aunt Julie, ch

College of the Air lectures.

Mountain Time Stations

Mountain Time Stations
KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio
Dealers program; 9-10, Lion Coal company, Ellis
Fuel company; 10-12, Olie Reeves and his orchestra.
KOA, Denver, Colo. (322.4), 6:30 p. m., dinner conner, Herbert White and his Silver State
orchestra; 7:30, Book of Knowledge; 8, summary
of votes cast by KOA's audience on recent jazz
vs. classical program; Armistice day program, Denver
Council for World Peace; Unity church quartet;
memorial address, Morrison Shafroth; Walter Brinker,
bass; readings, Alvin B. Collins; Mrs. G. B. Kent,
soprano; "International Relations," Mary C. Bradford; KOA orchestra.

Pacific Time Stations
Pacific Time Stations
(A54.3), 6:45-8:15 p.

Pacific Time Stations

(KFOA, Seattle, Wash. (454.3), 6'.45-8:15 p. m., Hopper
Kelly company, 8:30-10, Times studio program.

KFPG, Hollywood, Calif. (238), 5-6 p. m., home hour
with Mammy Simmons and neighborhood children; 6-1,
dinner music; 7-7:30, history and astronomy lesson;
8-10, KFPG concert hour, Turner orchestra, Rondeau
male quartet; 10-11, dance music.

KFWB, Hollywood, Calif. (252), 5-6 p. m., children's
hour, Big Brother; 7-7:30, Mutual motors mirth contest; 8-9, program. Cheek-Neal Coffee comoany with
Maxwell House Ceffee string quartet; Ashley Sisters.

KGO, Oakland, Calif. (361.2), 11:30-1 p. m., luncheon
concert; 3-4, Armistice Day program, Oakland Technical

Index to Farmers' Programs

Farmer Dinner Concerts Daily Except Sunday KFNF, 12:15-1:35 (central time).

WLS, 12 (central time). Radio Farm School

WMAQ, 12:45 (central time); 12:10 on Friday. WOC, 12:15-12:25 (central time).

Daily Except Saturday and Sunday Refer to detailed programs for titles.

Eastern Time Stations

WEAR, 11:30. WGY, 7 p. m. (Monday only).

Central Time Stations

KFKX, 12:30.
KMA, 11:30-12:30.
KOIL, 8:50 (Monday only).
KSAC, 12:40-1:05; 7-7:30.
WCCO, 7:45 Monday and Friday.
WLS, 12-12:45; 9.
WOC, 12:15-12:25.
WSOE, 6:30 p. m. (Monday only).

Mountain Time Stations

KFAU, 4. KOA, 7:30, question box.

Markets and Weather Daily Except Sunday

		pt Sunda	-
	Central		10.000000000000000000000000000000000000
		7:30 a.m.	6:30 a. m.
WFAA (475. WOAW (526) markets.		
9:45	8:45	7;45	6:45
KDKA (309.	1) livestock,	grain.	
10	9	. 8	7
WLS (345) 1 WOS (440.9)	ivestock, mar hogs.	kets, fruit.	
10:25	9:25	8:25	7:25
WWJ (352.7)	weather.		
10:30	9:30	8:30	7:30
KPRC (296.9) weather.) weather, she	fruit, vegetab eep, quotations	
10:45 .	9:45	8:45	7:45
WCCO (475.9) markets.		
11	10	9	8
WEAR (389.	weather, ho	gs.	
11:15	10:15	9:15	8:15
WTAG (268)	markets, wea	ther.	
11:30	10:30 ,	9:30	8:30
WCCO (416.4	3) weather, fr 4) markets. 4) markets, w	uit, vegetable eather.	s.

Central Eastern Mountain

11 10 9

KDKA (309.1) weather, livestock, grain.
KPRC (286.9) weather,
WBAP (475.9) weather, cattle, grain.
WEAR (388.4) markets, weather.
WGBU (278) weather.
WHAD (275) weather, markets.
WHAD (275) weather, markets.
WLS (345) poultry, dairy, hogs, sheep.
WOS (440.9) livestock, poultry, eggs, grain.
12:30 p. m. 11:30 a. m. 10:30 a. m. 9:30 a. m.

KFKX (288.3) livestock, fruit, vegetables, dairy. WEAR (384.4) markets, weather. WFAA (475.9) markets. f p. m. 12 noon

WBAP (475.9) markets. WHT (400) fruit, weather. WOS (440.9) livestock, weather. 1:30 p. m. 12:30 p. m. 11:30 a. m. 10:30 a. m. KTHS (374.8) markets, weather. WFAA (475.9) markets. WOAW (526) markets.

1:35 p. m. 12:35 p. m. 11:35 a. m. 10:35 a. m. KPO (428.3) butter, eggs, cheese, poultry. 1:45 p. m. 12:45 p. m. 11:45 a. m. 10:45 a. m. KOA (322.4) weather, roads, livestock, poultry. 2 p. m. 1 p. m. 12 noon 11 a. m.

2 p. m. 1 p. m. 12 noon 11 a WOC (484) weather, grain, livestock, dairy. WOS (440.9) grain. WOS (440.9) grain.
2:30 p. m. 1:30 p. m. 12:30 p. m. 11:30 a. m.
WCCO (416.4) markets, weather.
WFAA (475.9) markets.
3 p. m. 2 p. m. 1 p. m. 12 noon
WLS (345) livestock, grain, dairy, fruit, vegetables.
WOS (440.9) livestock, markets, grain.

1:30 3:30 2:30 KPO (428.3) weather. WFAA (475.9 markets. 12:50 WWJ (352.7) weather, markets. KFKX (288.3) livestock, wool. WCCO (416.4) markets. 4:30 3:30 2:3 1:30 WEAR (389.4) markets, WFAA (475.9) markets. 5:50

4:50 2:50 5:50 4:50 5:50 2.50
WDAF (365.6) markets, weather, road reports.
WHAS (399.8) markets. KFAU (278) markets, weather. WIP (508.2) weather. 6:30 5:30 3:30 KSAC (340.7) markets. 6:45 5:45 WIP (508.2) livestock, markets. 5:50 3:50 WHAD (275) markets.

7:15 0.10 KTCL (305.9) weather. 8 7 4:15 8 7 0 KFKX (288.3) markets. KOA (322.4) sheep, markets, livestock, poultry. KJR (384.4) weather. WOC (384) weather.

WCCO (416.4) weather, grain.

Thursday, silent night for: CHIC. CKNC, CNRA, CNRE, CNRO, CNRR, CNRT, CNRV, CNRW, KFAB, KFAU, KFDM, KFMQ, KFMX, KFOA, KFRU, KFVE, KFWA, KGW, KOA, KOB, KTCL, KWSC, PVE, WAFD, WAHAG, WOEE, WEBJ, WGCP, WHAD, WHAZ, WJJD, WLIT, WLWL, WOAI, WOR, WOS, WSM, WSUI, WTAM.

WAFD, WAHG, WCEE, WEBI, WGCP, WHAD, WHAZ, WJID, WLIT, WLWL, WOAI, WOR, WOS, WSM, WSUI, WTAM.

Eastern Time Stations

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., KDKA
Little symphony orchestra; 7:45, "The Conference of Locarno," Paul F. Shupp; 8, farm program; 8:30, "Johann Sebastian Bach," Richard Kountz, KDKA
Little symphony orchestra; Edith McDowell Palmer contralto; 9, KDKA Little symphony orchestra; Edith McDowell Palmer, contralto; 11, midnight concert, Pittsburgh Post Studio.

WAHG, Richmond Hill, N. Y. (315.6), 12-12:55 p. m., musical program.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., announced; 7:05, "The Literary Significance of the Roman Occupation of Britain," Prof. E. Charlton Black; 7:30, Anna Richter, pianist; Hazel King, soprano; 8, musical program, Noves Bulck company; 9, evening of opera, Madame Vinello-Johnson; 10:05, McEnelly's shrking orchestra.

CAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Aldine theater; 6:30, dinner concert, William Penn hotel; 8, Larkin period; 10, Goodrich Silvertown Cord orchestra. WCAU, Philadelphia, Pa. (277.6), 6:30 p. m., Billy Hayes and his Cathay Tea Garden orchestra; 7:30, recital, N. Shellenburg and company; 8, Ethel Brooks, soprano; Dorothy Butterworth, soprano; Frances Butterworth, pianist; 9, Barry O'Moore, Irish tenor; 9:15, Central Radio Snycopators; 9:30, songs of vesterday, Frank Cook; 10, Sesqui Centennial hour, WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillac Johel; 8, studio program.

WEAF, New York, N. Y. (491.5), 4-5:15 p. m., Charles Phillips, planist; 4:15-4:30, Alma Wesstrom, soprano; 4:30-4:45, Charles Phillips; 4:35-5, talk; 6-7, dinner music, Waldorf-Astoria; 7-7:30, services, Greater New York Federation of churches; 7:30-8. Cushman's servanders; 8-8:30, the Larkinities; 8:30-9, talk George Elliott Cooley; 9-10, WEAF concert ensemble; 10-11, Vincent Lopez and his orchestra.

WEAF, New York, N. Y. (491.5), 4-5:15 p. m., Hotel Statler concert; orchestra; Maurice Spitalny; 8-9, 17:45, Harvard observatory talk; 8, Larkinites,

anist. WGHP, Detroit, Mich. (270), 10 p. m., midnight mari-WGR, Buffalo, N. Y. (319), 2:30-4:30 p. m., WGR's afternoon program; 6:30-7:30, Vincent Lopez Hotel (Continued on page 18)

high school band, Herman Trutner, Jr., director; 5:30, Mr. Fix-it; 6-7, dinner concert, Sherman, Clay and company studio.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City, tric; 8-9, Armistice Day program, 7th infantry band; 10-11, Sherman, Clay and company studio.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Arcade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Dick Winslow, juvenile reporter, Mickey McBam, screen juvenile, Piggly Wiggly Girls string tric; 7:30-8, Univ of Calif. Southern Branch glee club; 8, Dr. Mars Baumgardt, scientific lecturer; 8:30-10:30, program, F. B. Miller Hudson-Essex Co., arranged by J. Howard Johnson; 10:30-11:30, Art Hickman's Biltmore hotel dance orchestra, Frank Ellis, leader.

KIR, Seattle, Wash (384.4) 1:15 p. m., organ recital; 7-8:30, Sears-Roebuck and company studio program; 8:30-10, Post Intelligencer studio program.

KLX, Oakjand, Calif. (308), 8-9 b. m., Roy Harrison Danfortif Ad Schuster, Harry Noyes Pratt, Gerard Taillandier, Prof. E. R. DeOng; 9-10, special Armistice day program, American Leglon; 10-11, Harry Davis and his bailroom entertainers.

KNX, Hollywood, Calif. (336-39), 5:30-6:15 p. m., Wurlitzer pipe organ studio, Town Taitler; 6:15, travel talk, W. F. Alder; 6:30-7. Alwater Kent Radio orchestra, Paul Finsteln, leader; 7-8, Ambassador hotel concert orchestra, Josef Rosenfeld, leader; 8-9, "The Tragedy and Triumph of Gallipoli," by Dr. Arthur E. Hoare; 9-10, program with a kick, Hercules Gasoline company; 10-11, Elite dance orchestra; 2:30-3:30, Hawaiian music, Duke Kamoku and his Royal Hawaiians, 3:30, talk on fashions, Ninon; 6:45-7, Waldermar Lind and the States Restaurant orchestra; 7-8, Amistice Day; 8-9, Atwater Kent artists; 9-10, goodrich Silvertown Cord orchestra; 10-11, Waldemar Lind and the States Restaurant orchestra; 7-8, P. m., program, KWSC, Pullman, Wash. (348.6), 7:30-9 p. m., Droothy Brady, reader; Glow William Hanson, cornetist; "The Farmer as an Enghneer," C. C. Johnson; "Remode Thursday, November 12

Headliners Today | Teadliners Today | Factors | Today | T

10 8 7 WEZ (333.1) Evening of opera. WGR (319) American Hawalian quartet. 8 KGO (361.2) "Her Temporary Husband," comedy:

WLW TO TRY FOR AFRICA TUESDAY

Thursday, November 12

(Continued from page 17)

(Continued from page 17)

Statler dance orchestra, Harold Gieser, director; 8-11, jointly with WEAF, including the Larkinites and the Goodrich Silvertown Cord orchestra.

WGY, Schenettady, N. Y (279.5), 2 p. m., music; Survey of Sociology," "The Recreation Center," "How to Cook Vegetables," Faith Fenton; 6:30, dinner program, Ten Eyck concert trio; 7:50, book chat, L. L. Hopkins; 7:45, William J. Dunn, baritone; 8, "Earthquakes," Dr. Reginald Aldworth Day; 9:30, Royal hour, WJZ; 10:30, WGY orchestra; 11:30, organ recital, Stephen E. Boisclair.

WHAR, Atlantic City, N. J. (275), 2 p. m., Scaside hotel trio; 7:30, "What Does It Mean?" Dr. Henry Reik; 8, Seaside hotel trio; 9, studio concert.

WHN, New York, N. Y. (361-2), 12:30-1 p. m., Lexington organ recital; 3:15-4:30, Lexington orchestra; 4:30-4:35, Miller, Piotti, Val, songs and piano; 6:30-6:40, Leslie McLeod, tenor; 6:40-7, Sunshine talk, Billy B. Van; 7-7:30 Iceland orchestra; 7:30-8, Cecil B. Kennedy's quintet; 8-8:30, Will Oakland's Chattheau Shanley: 8:30-9, Guardian entertainers; 9-9:20, Jimmy Clarke and his entertainers; 10:30-11, Club Kentucky orchestra; 11-11:30, Caravan club orchestra; 11:30-12, Rodeo clab orchestra; 12-12:30, Ted Lewis and his orchestra, Pa. (508.2), 10 a. m., menu, Mrs.

chestra; 11:30-12, Rodeo club orchestra; 12-12:30, Ted Lewis and his orchestra.

WIP, Philadelphia, Pa. (508.2), 10 a. m., menu, Mrs. Anna B. Scott; 1 p. m., Gimbel tea room orchestra; 3. Charlotte Rosenthal King, reader; James M. Clauson, barttone; Flora Kipka, pianist; 6:05. Pagoda cafe orchestra; 8. Sesqui centemnial; talk, Hon. Harry A. Mackey; 8:15. Etude period, James Francis Cooke; 9. Lyric trio, Ernesthe. Baker, soprano; Florence Haenle, violinist; Dorothy Power, artist; Flora Ripka, planist; 10:05. Joe Ray and the California Night Hawdwist WJAR, Providence, R. 1. (305.9), 1:05 p. m., Joe McNamara and his Twim Elm orchestra; 8. musical program; 9. Hudson-Essex orchestra; 10. Goodrich Slävertown Cord orchestra.

town Cord orchestra.

WJR, Detroit; Mich. (517), 7 p. m., Jean Goldkette's Petite Symphony orchestra; 9, Jean Goldkette's Serenaders; 10, Jean Goldkette's Victor Recording orchestra. orchestra. WKAQ, San Juan, P. R. (340.7), 7:30-9 p. m., music,

La Cafeteria.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail and his Hotel McAlpin string ensemble; 6:30-6:45, Robert Soffer, pianist; 7-7:30, Joe Chappelo's Sunnyside orchestra; 7:30-8, Lanson's orchestra; 8-8:30, "Hale and Hearty; 8:30-8:46, Alexander Dellerson, bartione; 9-9:15, Alexander Dellerson; 10-10:15, "How to Drive Automobiles," Harry T. Rainess; 11-12, Ernie Golden and his Hotel McAlpin orchestra. WNYC, New York, N. Y. (526), 7-7:10 p. m., market high spots; 7:10-7:30, dance program; 8-9, studio program; 8-9, 30, Allan trio; 9:45-10, song recelat; 10:10-10:30, talk, Sydney N. Ussher; 10:35-11, Hotel St. George orchestra.

talk, Sydney N. Ussher; 10:35-11, Hotel St. George orchestra.

WOR, Newark. N. J. (405.2), 2:45-3 p. m., talk, Dr. George Watson; 6:15-6:17, "Words Often Mispronounced;" 6:17-7, dinner music, Hotel Shelton; 7:15-7:30, sports talk, Bill Wathey.

WTAG, Worcester, Mass. (268), 10:30 a. m., chat; 10:45, talk, Marjorte Woodman, nurse; 12:05-2 p. m., luncheon music, WTAG trio; 4:30, Indoor Sports ckub; 5:15, Twinkle Twinkle story teller; 8-8:30. Larkinities, WEAF; 8:30-9, Pop concert, WEAF; 0-10, WEAF concert ensemble; 10-11, Silvertown Cord orchestra, Joseph Knecht, director.

WTIC, Hartford, Conn. (475-9), 6:30 p. m., Hub restaurant trio; 7, dinner music; 7:30, "Diptheria," Dr. Willard Knowlton.

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

Central Time Stations
KFNF, Shenandoah, Iowa (266), 7 p. m., Blue Grove

chertainers.

KLDS, Independence, Mo. (440.9), 8 p. m., lecture course series, M. A. Etzenhauser; 8:15, concert, Dorothy Clair, dramatic reader; Rozanne Clinton, violinist; Florence Campbell, planist.

KMA, Shenandoah, Ia. (252), 11:30 a. m.-12:30 p. m., R. F. D. program; garden, flower and orchard talks, Earl May; music; 6-7, music; 9-11, Delmonica Dreamers; Walter Nixon, planist and director; E. J. Gottsch, soloist.

solbist.

KPRG, Houston, Tex. (296.9), 12 noon, program, 5:30
p. m., Unele Judd's kiddies' hour; 7:30, Blanchard's
dance orchestra, Claude Blanchard, leader; 8:30, mysteale; J. Moody Dawson, violinist; Sanuel Francis,
tenor; Gertrude Worthington, violinist; Mildred Beard,

tenor; Gertrude Fortung St., planist.

KSAC, Manhattan, Kan. (340.7), 12:35 p. m., readings; 12:40, Bovine tuberculosis, J. W. Lamb; 12:47, question box; 12:58, "Burn the Chineh Bug," J. W. McColloch; 4:30-5, community civics; 6:35, music and art talks; 6:39, business English, J. O. Faulkner; 7, "Dyeing and Setting of Colors," L. McElmurry; 7:15, "The Influence of School Days," Jean S. Dobbs.

7:15. "The Influence of School Days," Jean S. Dobbs.

KSD, St. Louis, Mo. (545.1), 6:55 p. m., WEAF chain.

KTHS. Hot Springs National Park, Ark. (374.8), 9-9:40 p. m., Louis Culp. organist; 9:40-10:30, Charles Elliott, saxophonist; 10:30-11, symphonic jazz.

KYW. Chicago, Ill. (535.4), 11:35 a. m., table talk, Mrs. Anna J. Peterson; 12:05-1 p. m., noon-day concert, Commonwealth Edison company; 1-2. Congress hotel; 6-6:30. Edison company; 6:35-7, children's bed-time story, Walter Wilson; 7-7:30, Congress hotel; 7:33-7:53, American Farm Bureau federation; address, G. L. Noble; "1925 Seed Crop;" 8-8:20, "Iwenty Minutes of Good Reading," Rev. C. J. Pernin; 8:20, 9:15, musical program; 9:20, "Armistice Means Meet Half Way," John C. Cutting; 10-11:30, evening at home; 1, Insonnia club

WBAP, Fort Worth, Tex. (475.9), 12:05-12:30 p. m., Trail Blazers; 6-8:30, dinner music, Fred Cahoon's Texas hotel orchestra; 7:30-8:30, Mrs. Charles Utermoehlem, violinist; Mrs. G. B. Dickey, pianist; 9:30-10; 35, Sanuel L. Ball School of Artistic piano playing.

10:45, Samuel L. Ball School of Artistic piano playing.

WBBM, Chicago, Ill. (226), 8-9 p. m., know the world program: 9-10, Stewart-Warner string quartet; Ziegler sisters; Montmatre; Four Crows quartet; Leona Hayos, harpist; 10-12, Merry Garden orchestra.

WBBR, New York, N. Y. (272.6), 8 p. m., Watchtower instrumental trio; 8:10, Barbara Jonasch, soprano; 8:20, Sunday school lesson, S. M. Van Sipma; 8:40, Barbara Jonasch, soprano; 8:50, Watchtower instrumental trio.

WGBD, Zion, Ill. (344.6), 8 p. m., saxophone quintet vocal trio; Mr. and Mrs. G. R. Sparrow, Mrs. Beatrice Beem, Mrs. Pauline Brown.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 12 m., Donaldson's orchestra; 2 p. m., among the musicians, H. A. Bellows; 7, WEAP; 10:05, travel talk, WDAF, Kansas City, Me. (365.6), 3:30-4:30 p. m. Star's Radio orchestra; 6-7, piano tuning in number; book talk, Louis Mecker; Tell-Me-a-Story Lady; Trianon ensemble; 11:45-1, Carl Nordberg's Plantation players; Earl Coleman's Ambassador hotel orchestra; Eddie Kuhn's Kansas City Athletic club orchestra; Ted Meyn. organist.

Eddie Kuhn's Kansas City Athletic club orchestra; Ted Meyn, organist.

WEBH, Chicago, III. (370.2), 7-8 p. m., Oriole orchestra; recital; 9-10, Oriole orchestra; Katherine Forbes, sorpano; Beulah Ladon, violinist; 11-1 a. m., Oriole orchestra; stories. Wayne Myers: Paul Smail.

WGES, Oak Park, III. (230), 5-7 p. m., Frederick Irving, basse; Rose Olech, soprano; Stenstrom sisters, vocalists; Miles Sullivan players; John Brown, planist; Wysenbeek trio; Tiffin theater organ and orchestra; 8-9, Remington Welsh, organist; Richard Dale, baritone; Ruth Kalthoff, mezzo soprano; Wyzenbeek trio.

WGN, Chicago, III. (370.2), 12:40 p. m., Drake concert ensemble. Blackstone string quintet; 2:30, Lyon & Healy; 6:30, Drake concert ensemble, Blackstone string quintet; 8-9, WGN string trio; 10, Jack Chapman's Blackstone hotel dance orchestras.

WHAD, Milwaukee, Wis, (278), 6-7 p. m., Bill Benning's Milwaukee Athletic club orchestra.

Index to Classical Concerts

T ABULATED below is a time table of the stations giving classical concerts this week. Stations are divided into the four different standard times in use. The hours are given in the kind of time in use at each listed station. By using this table as an index and referring to the complete programs below, full information will be obtained.

Classical

Eastern Time Stations

Saturday, November 7: 6, WCX, WEAF, WMCA, WREO; 6:17, WOR; 6:30, WCAE; 7, WEAR, WNYC, WRC; 7:15, WEAF; 7:35, WEAF; 8, WBBR, WNYC; 8:15, WRC; 8:30, WCAE; 8:40, WBBR; 9:30, WEAF; 10, WEAF

Sunday, November 8: 6, WCAU; 6:30, WCAE, WOR; 7, WEAR; 7:20, WCAE, WCTS, WEAF, WEEI, WWJ; 8, WBZ, WEAR, WGBS, WGCP, WKAQ; 8:30, KDKA, WBZ, WGCP; 9, WBZ, WEAR, WGY, WHAR, WNYC; 9:15, WCAE, WEAF, WEEI; 9:20, WNYC; 9:45, WGCP; 10, WNYC; 11, WHN; 11:15, WHAR.

Monday, November 9: 6, WCX, WEAF, WMCA, WREO, WWJ; 6:05, WIP; 6:30, CFCA, WBZ, WCAE, WGY, WTIC; 7, WEAF, WEAR, WJR, WOO; 7:15, WEAF, 7:30, WEEJ, WGY, WMCA; 8. WBBR, WBZ, WCAU, WCX, WHAR, WTIC; 8:15, WBZ, WHAZ, WNYC; 8:30, CHNC, KDKA, WBBR, WBZ, WGCP; 8:45, WEAF; 8:55, WBBR; 9, WBZ, WCAE, WEEI; 9:10, WLIT; 9:15, WGCP; 9:30, WBZ; 10, WEAF; 10:10, WEEI; 10:30, KDKA; 10:40, WEEI; 11, WHN. 11. WHN.

11, WHN.

Tuesday, November 10: 6, WBZ, WCX, WEAF, WMCA, WREO, WWJ: 6:05, WIP: 6:17, WOR: 6:30, WCAE, WGY, WTIC: 7, WEAR, WEBJ, WGBS, WJR, WOR, WTIC, WWJ: 7:20, WTIC: 7:30, WCAU, WEAF, WOO: 7:45, WEBJ: 8, WBZ, WCAE, WCAU, WCX, WEAR, WEEI, WGR, WHAR, WREJ: 8:30, KDKA, WBZ, WCAE, WCAE, WCAE, WCAE, WCAE, WEAF, WEBJ: 8:30, KDKA, WBZ, WCAE, WCTS, WEAF, WEEI, WFI, WGR: 9, WCAE, WEAF, WEEI, WFI, WGR: 9:15, WREO: 9:30, WBZ, WHN, WRC, WTIC: 10, WCAE, WEAF, WEEI, WFI, WGAF, WEAR, WEEI, WFI, WGAE, WEAF, WEEI, WFI, WGAE, WEAF, WEEI, WFI, WGAE, WEAF, WEEI, WFI, WHAR.

Wednesday, November 11: 6, WCX,

10:30, WGR; 11:15, WHAR.

Wednesday, November 11: 6, WCX,
WEAF, WMCA, WREO, WWJ; 6:05,
WIP; 6:30, WBZ, WCAE, WTIC; 6:45,
WGY; 7, WEAR, WJR; 7:20, WTIC;
7:30, WEAF, WEEI; 8, WBZ, WCX,
WEAF, WEEI, WKAQ, WMCA,
WWJ; 8:05, WNYC; 8:15, WCAU,
WOR; 8:30, KDKA, WBZ, WCAE,
WEAF, WOR; 8:45, WBZ, WCAU,
WEBJ; 9, WBZ, WEEI, WGR, WOR;
9:15, WBZ, WCAU; 9:30, WNYC; 9:45,
WOR; 10, WEAF, WEEI, WGR,
WNYC, WOO; 11, WCAE.

WNYC, WOO; 11, WCAE.

Thursday, November 12: 6, WBZ, WCX, WEAF, WMCA, WREO, WWJ; 6:05, WIP; 6:17, WOR; 6:30, WCAE, WGBS, WGY, WOR, WTIC; 7, WEAF, WEAR, WGBS, WJR, WWJ; 7:30, WCAU, WEEI, WHN, WRC; 7:45, WGY, WTIC; 8, WBBR, WBZ, WCAU, WCX, WEAR, WEEI, WGR, WGY, WHAR, WIP, WTIC; 8:15, WNYC; 8:30, KDKA, WBZ, WCTS, WEEI, WHN, WMCA, WREO; 8:40, WBBR; 8:45, WBZ; 9, WCAE, WCAU, WEAF, WEEI, WHN, WMCA, WREO; 10, WCAE, WCAU, WEAF, WEEI, WGR, WHAR, WNYC, WRC; 9:30, WREO; 10, WCAE, WCAU, WEAF, WCAU, WEAF, WCAU, WEAF, WCAU, WEAF, WCAU, WEAF, WCAU, WGR, WGR, WGY; 10:15, KDKA; 11:30, WGY.

Friday, November 13: 6, WCX, WMCA, WREO: WWJ; 6:05, WIP; 6:30, WBZ, WCAE; 7, WEBJ, WGY, WJR, WOR, WTIC; 7:30, WEEI, WTIC; 7:45, WEBJ; WAHG, WBZ, WCAU, WCX, WEBJ; WEEI, WTIC, WWJ; 8:05, WNYC; 8:10, WHAR; 8:30, KDKA, WCAE, WEBJ; 8:45, WAHG, WBZ; 9, WBZ, WCAU, WEEI, WMCA, 9:30, WEEI; 10, WEEI, WNYC; 10:30, WGR, WGY; 11:15, WHAR.

Central Time Stations

Saturday, November 7: 6, KFAB, WENR, WMAQ, WOAW, WOK; 6:15, WCCO; 6:30, WGN; 7, KOIL, KSD, KYW, WGN, WMBB, WQJ; 7:30, WEBH, WHAS; 8, KFNF, KPRC, KYW; 8:15, WCCO; 8:30, KYW, KPRC, WFAA, WHAS, WMC; 9, WKRC, WMAQ, WOAW, WOC; 9:15, KPRC; 9:30, WOC.

Sunday, November 8: 6:30, KLDS, WHT: 6:45, WORD; 7, KYW, WLS, WORD; 7:30, WHO; 8, KFDM, KPRC, WCBD, WFAA, WGN, WQJ; 8:30, WLW; 9, WQJ; 9:10, KTHS; 9:15, KLDS, WCCO, WHT; 9:25, KTHS; 9:30, WFAA, WOC; 10, KFVE, KTHS, WCC; 10:30, WHT; 11, WOC.

Monday, November 9: 6, KFAB, KMA, WHAD, WOAW, WOK; 6:30, WGN; 6:45, WOAW; 7, KFNF, WHT, WLW, WMBB; 7:30, KOIL, KPRC, WBAP, WHO; 8, KPRC, WHAD, WHO, WLW, WORD, WOS; 8:30, KPRC, WBAP, WFAA, WMC, WOAI; 9, KFKX, KMA, KPRC, KSD, KTHS, WHAD, WOAW; 9:30, KTHS; 9:45, KTHS; 10, KFKX, KMA, KTHS, WSAI; 11, WBAP, WSAI.

Tuesday, November 10: 6, KFAB, KMA, WHAD, WMAQ, WOK; 6:05, WCCO; 6:30, WFAA, WGN, WLW; 6:45, KSD; 7, KFNF, KYW, WHT, WLS, WMBB, WQJ; 7:30, KOIL; WCCO, WHAS, WHO, WOC; 7:45, WSAI; 8, KFDM, KLDS, KYW, WCBD, WCCO, WLW, WMAQ, WOC, WORD; 8:30, KPPC, WGN, WLW, WMC, WOAI, WORD; 8:45, KYW; 8:50, WMAQ; 9, KFDM, KFMQ, KMA, KPRC, KTHS, WCCO, WHAS, WLW, WOC, WSAI; 9:25, KTHS; 9:30, WBAP; 10, KMC, KYW, WSAI; 11, WHO.

Wednesday, November 11: 6, KMA, WHAD, WMAQ, WOK; 6:15, WLS; 6:30, KOIL, WGN, WHO; 7, KFNF, KPRC, KYW, WHAD; 8, KPRC, KYW, WCCO, WDAF, WHAD, WMAQ, WOS, WORD; 8, KSD; 8:15, KOIL, WORD; 8:30, PWX, KPRC, WGN, WOAI; 9, KMA, WCCO, WHAD, WLS, WMAQ, WOC; 9, KTHS; 9:25, KTHS; 9:30, PWX; 9:45, KTHS; 10, KMA, KTHS, WLS, WLW, WOC, WSAI; 10:10, WSAI; 10:30, WLW; 11, WHAD, WLW; 11:30, WCCO, WLW; 11:45, WLW.

Thursday, November 12: 6, KMA, WHAD, WMAQ, WOAW, WOK; 6:30, WGN; 7, KYW, WHT, WLS, WLW, WMBB, WOAW, WQJ; 7:30, KFNF, KOIL, WHAD, WHO, WSAI; 8, KLDS, WBAP, WCBD, WCCO, WOCD, WSAI, WSB; 8:20, KYW, WMAQ; 8:30, KPRC, WFAA, WGN, WHAD, WMC, WOAI; 8:35, WMAQ; 9, KPRC, KTHS, KYW, WCCO, WHAD, WOAW, WOC, WSAI; 9:10, KTHS; 9:30, WBAP; 9:45, KTHS; 10, WBAP; 10:40, WLW; 11, WHO.

Friday, November 13: 6. WHAD, WMAQ, WOAW, WOK; 6:15, WCCO; 6:30. WGN; 6:50, WMAQ; 7, KYW, WHT, WLS, WQJ; 7:30, KFNF, KOIL, KSD, KYW, WBAP, WHAD, WHO; 8, KFDM, WCCO, WDAF, WHAD, WMAQ, WSAI; 8:30, KFAB, WFAA, WGN, WHAD, WHO, WMAQ, WMC, WORD; 9, KFDM, KFXX, WHAD, WMAQ; 9:05, WCCO; 9:10, KTHS; 9:30, KFAB, KTHS, WBAP; 9:45, KTHS; 10, KFKX.

Mountain Time Stations Monday, November 9: 6:30, KOA; 8:10, KOA.

Tuesday, November 10: 6:30, KOA; 7:30, KOA.

Wednesday, November 11: 6:30, KOA; 8:10, KOA.

Thursday, November 12: 6:30, KOA;

Friday, November 13: 6:30, KOA; 8:10, KOA; 8:30-10:30, CNRE.

Pacific Time Stations

Saturday, November 7: 6, KFOA, KHJ; 6:30, KNX; 6:45, KFOA; 7, KNX; 7:30, KNX; 8:10, KGO; 8:15, KHJ.

Sunday, November 8: 6:30, KHJ; 6:35, KPO; 7, KHJ, KNX; 8, KHJ, KNX, KPO; 9, KHJ, KNX; 10, KNX.

Monday, November 9: 6, KFOA, KGO; 6:30, KNX; 6:45, KFOA; 7, KPO; 7:30, KNX; 8, KGW, KHJ; 9, KGW; 10, KHJ.

Tuesday, November 10: 6, KFOA, KGO, KHJ; 6:30, KNX; 6:45, KFOA; 7, KNX; 8, KGO, KHJ; 8:30, KFOA; 9, KGW, KPO.

Wednesday, November 11: 6, KFOA, 8:30, KNX; 7, KNX; 8, KGO, KGW, KPO; 9, KGW, KPO.

Thursday, November 12; 6, KHJ; 6:30, KNX; 7, KNX; 8, KGO, KPO; 9, KGW, KPO.

Friday, November 13: 6, KFOA, KGO, KHJ; 6:15, KPO; 6:45, KFOA; 7:30, KNX; 8, KHJ, KNX, KPO; 9,

WHAS, Louisville, Ky. (399.8), 4-5 p. m., Harry S. Currie's Music Box; readings; 7:30-9, concert, Nellie Young and her Melody Men; International Sunday school lesson; welfare talk.

WHB, Kansas City, Mo. (365.6), 2-3 p. m., ladles' hour program, Sweeney Radio trio; 7-7:30, Morrell Moore, organist; 8-10, Shrine serenaders; Mrs. Fred L. Kammer, Margaret Kammer.

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

WHT, Chicago, Ill. (399.8), 6-7:30 p. m., classical program; Grayling's string trio; Wilkens and Martens, Melody Maids; John Clark, baritone; Bernice Taylor, soprano; Helen Rauh, pianist; Al Carney, organist; (238), 7:45-9:15, musical features; (399.8), 9:30, Jelke entertainers; U. S. L. half hour of dance music; Kenneth Clark's Hawaiian trio; Howard Shershon, tenor; Al Carney, organist; Husk O'Hare's orchestra; 12, Pat Barnes, "Your Hour League"; Al Carney, WIBO, Chicago, Ill. (226), 6-8 p. m., vocalists; 12-2 a. m., midnight jamboree.

WJAZ, Chicago, Ill. (322.4), 10-12 midnight, Ramon string trio; Dr. Fery Lulek, baritone; Ruth Ford, contaito; chimes; Chicago lyric trio; Martha D. Beck, planist.

WLIB, Elgin, Ill. (302.8), 7-8 p. m., dinner concert.

WIBO. Chicago. III. (2224). 18-12 midnight, Ramon string trio; Dr. Fery Lulek, bartione; Ruth Ford, contralto; chimes; Chicago lyric trio; Martha D. Beck, pilanist.

WIIB, Eigin, III. (302.8), 7-8 p. m. .dinner concert. Drake concert ensemble; Blackstone string quintet; 9-10, Fred Hamm's orchestra; organ recital; 10-11, Jack Chapman's and the Blackstone hotel dance orchestras; jazz artists; 1-2 a. m., Chapman's crehestra; Blackstone hotel dance orchestras; jazz artists; 1-2 a. m., Chapman's crehestra; Blackstone hotel dance orchestras; jazz.

WIS. Chicago, III. (344.6), 12 moon, WLS trio; 6:30, Ralph Emerson, organist; 7, Woodshed theater, Ford and Glenn; 7:20, Western Electric quartet; 7:40-7:55, Daugremond string trio.

WLW. Cincinnati, Ohio (422.3), 7:30 a. m., morning exercises, William Stradtman, Y. M. C. A., 7:45, morning devotions, auspices Parkway Y. M. C. A., 7:45, morning devotions, auspices Parkway Y. M. C. A., 7:45, morning devotions, auspices Parkway Y. M. C. A.; 2:15, organ concert, Mildred Prigges, pupil of johanna Grosse, health talk, Dr. Carl A. Wiltzback; 4, Glbson en C. Chapper, M. C. A., 7:45, morning devotions, auspices Parkway Y. M. C. A.; 30, the "Eyes" have et. Boper Visconit, director 7:30, the "Eyes" have et. Boper of the Union Gas and Electric Co., in Hotel Shiton ballroom. program will include addresses by prominent speakers, music by members of Cincinnati Symphony orchestra; 10, 3-minute message from Civil Service Dept. of the U. S. Government, 10:30, Doherty Melody boys, tenor solos, Homer Seott; 10:55, a half hour of music by the composer Rudolp Friml.

WMAQ, Chicago, III. (447.5), 12:45 p. m., Radio farm school; 2, Shut-in program; 4, Illinois Federation of Women's clubs program; 4,45, musical program, R. R. Hawkins, director; 5:

Ginger hour.

WSAI, Cincinnati, Ohio (326), 7 p. m., Larkinites; 7:30, pop concert; 8, WEAF concert cusemble; 9, Silvertown

Cord orchestra.

WSOE Milwaukee, Wis. (246), 3:30 p. m., matinee program. Milwaukee Radio show; 5:30, twilight hour; Victor Maves, planist; Jinmy the Boolblack, mouth-accordionist; 7:30, Milwaukee Radio show program; Croation Tamburica orchestra; Anton Kezman, director; Eleanor Day, soprano; E. W. Day, baritone; Ann Bauman, contralto; 8:45, "Automobile Trouble Shooting," Doc Otto. man, contratto; 8:20, Doc Otto, Doc Otto, WSUI, Iowa City, Iowa (483.6), 12 m., organ numbers, Mrs. Preston C. Coast.

Mountain Time Stations

CNRC. Calgary, Can. (435.8), 9 p. m., Orpheus quartef.

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

KOA. Denver, Colo. (322.4), 5:15 p. m., Rialto theater musicale; 3:15, relaxing and corrective exercises;
3:30; matinee for housewives; 4, culinary hints; 4:15,
fashion review; 6:30, dinner concert, Herbert White
and his Silver State orchestra; 7:30, farm question
box.

Pacific Time Stations

Facilic I lime Stations

KFPG. Hellywood, Calif. (238), 5-6 p. m., bome hour,
Mammy Simmons and pupils of Carter Weaver; 5-7,
dinner music; 7-7:30, history lesson; 8-10, KFPG
concert hour with Turner orchestra, N. M. Russell,
Scotch baritone; 10-11, dance music by remote con-

KFWB, Hollywood, Calif. (252), 6:30-7 p. m., program, E. P. Janes. builder; 7-7:15, talk Dr. T. Floyd Brown, plastic surgeon; 7:15-7:30, microphone brevi-fles; 8-9, program, Starr Plano company featuring Hollywood Rythmn Kings and Ina Mitchell Butler, soprano, in arrangements Gennett records; 9-10, program, Don P. Smith, Inc., Diana-Moon orchestra; Sol Hoopil's Hawalian trio; 10-11, Warner Bros. frolic, featuring Charley Ilch's Sunset Canyon Country Club orchestra.

orchestra. (60, Oakland, Calif. (361.2), 10:40 a. m., classroom instruction, ninth grade; 11:30-1 p. m., luncheon concert; 5:30-6:30, "Friend to Boys," George Ludlow; book chat; 8, "Her Temporary Husband," 3-act comedy. Edward Paulton; KGO players, Wilda Wilson Church, director; Arion trio; 10-12, dance music, Ben Black's

orchestra.

KGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose city trie; 7:45-8. Catholte Truth.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Areade cafeteria orchestra, Jack Cronshaw, leader: 6:39-7:39, history story. Prof. Hertzog; Dickie Brandon, screen juvenile, bedtime story by Uncle John: 8-10, program. Los Angeles Ehamelers association, arranged by Walter Biddick: 10-11, Art Hickman's Biltmore hotel dance orchestra, Frank Ellis, leader.

man's Billioner hoter takes to be leader.

KJR, Seattle, Wash. (384.4), 1.15 p. m., organ recital;
2, home helps, Bernice Redington; 7:30, Anne Heetdirks; 8:30-10, Puget Sound Savings and Loan association orchestra; 10:30-12, Keep Joy Radiating Order

of Bats. KNX, Hellywood, Calif. (336.9), 5:30-6:15 p. m., Wur-(Continued on page 19)

MICHIGAN NIGHT FOR ALUMNI AT WJR

Thursday, November 12

(Continued from page, 18)

litzer pipe organ studio; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7, Atwater Kent Radio orchestra, Paul Finstein, leader; 7-8, program, H. L. Crockett, baritone; Way Wats and ukulele and others; 8-10, KNX feature studio program; 10-11, Ambassador hotel dance orchestra, Ray West, leader.

PO, San Francisco, Calif. (428.3), 1-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 2:30, special after-noon studio program; 3:30, Palace hotel concert or-chestra; 6:30-8, banquet in honor of Robert Dollar; 8-9, Don Lee Cadillac company; 10-11, Jack Coakley's Cabirians.

KTAB, Oakland, Calif. (240), 8-10 p. m., program,

Osborne and Eddie Meredith, songs; 3:15-3:30, Leslie McLeod, tenor; 3:30-3:45. Ona Welsh, pianist; 3:45-4, William J. Rietz, songs; 4-4:15. Sam Weber, pianist; 4:15-4:30, Profit and Sampson, entertainers; 4:30-4:45, Hugo Angelo, tenor; 4:45-5, Charol de Thomee, pianist; 5-5:15, Sunshine, songs; 7-8, Dominion Ginger Ale ornelseta; 8:15-8:45, Clarence Williams trio; 8:45-9, Shirley Herman, songs; 9-9:15, Ukulele Bob McDonald; 9:15-9:30, Jimmy Flynn, songs; 9:30-9:45, Eva Rothenberg, pianplogue; 10-11, Strickland's orchestra; 11-1:30, Club Ritz orchestra; 11:30-11:45, Club Rodeo entertainers; 12-12:30, Conne's orchestra. WGHP, Detroit, Mich. (270), 10 p. m., Skylark orchestra and solost. WGHP, Ostroit, Mich. (270), 10 p. m., WGR's afternoon orogram; 6:30, Clef trio; 9, Winger's Cres-

Central Time Stations
KFAB, Lincoln, Neb. (340.7), 3:15-3:45 p. m., matinee musical; 5:30-6:30, Buick Little symphony, Belshaw's orchestra; 8:30-10:30, Silver Creek band and entertainers.

shaw's orchestra; 8:30-10:30, Silver Creek band and entertainers.

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

KFMX, Northfield, Minn. (337), 10-11, organ recital.

KFNF, Shenandoah, 1a. (266), 7 p. m., Sunday School lesson; 7:30, concert, Tom Keenan.

KFVE, University City, Mo. (240), 8:30 p. m., studio entertainers, Orchestra Romaine.

KMA, Shenandoah, 1a. (252), 11:30 a. m.-12:30 p. m., R. F. D. program; garden, flower and orchards talks, Earl E. May, music; 6-7, dinner program; domestic science talks Le Ona Teget, June Case; How Do You

Currie's Music Box; readings; 7:30-9, concert, Louisville Music and Radio company; Gene Klingman, uke soloist, planist and director.

WHB, Kansas City, Mo. (365.6), 2-3 p. m., Sweeney Radio trio; 7-8, Milo Finley's trio; Sweeney Radio

orchestra.

WHO, Des Moines, Ia. (526), 7:30-9 p. m., program,
Hapac Groto quartet; 11-12, dance program.

WHT, Chicago, III. (399.8), 6 p. m., classical program; Genevieve Burnham, soprano; Bob York, tenor; Grayling's string tric; Al Carney, organist; (238), 7:45-9:15, musical featires; (399.8), 9:30, Lottis half hour of music; Freddle Whitner, pianist; Samuel Rowe, tenor; Oscar Heather, tenor; Pat Barnes, tenor; Helen Rauhn, pianist; Husk O'Hare's orchestra; 12, Pat Barnes "Your Hour League," Al Carney.

Friday, November 13 Headliners Today Eastern Central Mountain 7 p. m. 6 p. m. 5 p.m. WOS (440.9) Homecoming. 6 8 7 6 5 WGY (279.5) Festival choir. 8.30 7:30 6:30 5:30 WHO (526) Hapac Grotto quartet. WTIC (475.9) Hoodoo Night. 10 9 KOA (322.4) Football rally, yell fest. WGY (279.5) "The Dover Road," comedy. 10:30 8:30 8:30 7:30 KOA (322.4) 'Round the World. WBAP (475.9) Special graduation exercises. 5:30 iest. comedy. 7:30 Friday, silent night for: CHIC, CKNC, CNRC, CNRM, CNRO, CNRR, CNRW, KFMQ, KFRU, KGO, KLDS, KOB, KPRC, KUOM, WAFD, WBBR, WCBD, WFI,

Florence Sully Todd, left, has an exquisite contralto voice. She will be featured in WGR's afternoon programs during the week of November 16. Elizabeth Santagano, above, is one of the new staff entertainers at WIP. She is a European singer of note.

Santagano Photo, Jubey-Rembrandt

WGBS, WHAZ, WIP, WKRC, WLW, WREO, WSAI, WSMB, WSUI, WTAM. Eastern Time Stations

NRT. Toronto, Can. (356.9), 6:30 p. m., King Edward hotel concert orchestra; 9, Mrs. Russell Marshall, soprano; Alfred Heather, tenor; Reginald Stewart, pianist; 11, Luigi Romanelli and his King Edward hotel dance orchestra.

dance orchestra.

KDKA, Pittsburgh, Pa. (309.1), 6:15 p. m., dinner concert; 7:45, "The Rhodes Scholarships," Dr. Alfred P. James; 8:30, Dutch Master half hour.

WAHG, Richmond Hill, N. Y. (315.6), 12-12:55 p. m., musical program; 7:30-7:45, Hon. Maurice E. Connolly; 7:45-8, Emma Keller May, soprano; 8-9, Skinner organ recital; 9-9:15, Emma Keller May; 9:15-9:30, Rainbow saxophone quartet; 9:30-9:45, William Bellham, reader; 9:45-9:55, Rainbow saxophone quartet; 9:55-10, time signals and weather report; 10-10:15, Radio talk; 10:15-11:15, Benton Harbor erchestra.

10:15, Radio talk; 10:15-11:15, Benton Harbor crchestra.

WBZ, Springfield, Mass. (333.1), 6:30 p. m., Leo Reisman's Hotel Lenox ensemble; 7:05, violin recital, Alessandro Nicoli; Dorothy Curtis, planist; S. Myrile
Ashe, planist; Loris Patten, reader; 8:39, Rita Koul,
soprano; Bertha St. Claire, contralto; Bossie Brewn,
planist; 9, Whatdoyoucallit club.

WCAE, Pittsburgh, Pa. (461.3), 3 p. m., Loew's Al2ine
theater; 6:30, concert; 10, Alabama Blue Blowers.

WCAP, Washington, D. C. (468.5), 7:45-8 p. m., "The
Age of Synthetic Production," Dr. H. E. Howe; 8-9,
announced; 9-9:29, Hood College glee club, Prof. Henry
T. Wade, director; 9:20-9:45, Irving Boernstein's
Wardmen Park hotel tric; 10-12, Irving Boernstein's
Wardman Park hotel dance orchestra.

WCAU, Philadelphia, Pa. (277.6), 7:45 p. m., Lew
Chapman and his Hotel Pennsylvania orchestra; 8:15,
cbiropractic talk; 8:30, Houston Club Smoker entertalment; 9, Hill; Instrumental tric; 9:30, Billy and
his saxophone; 9:45, Ed Kiefer, humovist; 10, Rennie
Cormack, popular song writer; 10:30, Loosser's dancing
academy orchestra.

WCX. Detroit, Mich. (517), 6 p. m. dimer concert.

Gormack, popular sous masses, p. m., dinner concert, academy orchestra.

WCX, Detroit, Mich. (517), 6 p. m., dinner concert, Book-Cadillae hotel; 9, musical program; 10, dance music, from the Graystone ballroom.

WEAF, New York, N. Y. (491.5), 4-5 p. m., Aaron Hirsch, violinist; talk; 6-7, dinner music, Waldorf-Astoria; 7-11, Allan Harris, banjoist; Sir Hobgoblin; Astoria; 7-11, Allan Harris, banjoist; Sir Hobgobin; Happiness Candy Boys; Eagle Neutrodyne trio; Mears and company; Flordna trio; 11-12, Meyer Davis Lido-

Happiness Candy Boys; Dague Actionary, Happiness Candy Boys; Dague Actionary, Florida tric; 11-12, Meyer Davis Lido-Venice orchestra.

WEAR, Cleveland, O. (389.4), 7-8 p. m., Roberts Kindergarten hour; 8, talks; 8:39-11, dance program.

WEBJ, New York, N. Y. (272.6), 7-7:30 p. m., Blenheim theater ensemble; 7:45-8, Michele Bontenno, bartione; Norman Heinbetch accompanist; 8:15-8:39, Carrie Cohen, planist; 8:30-9:30, Recreation club orchestra; direction, Andrew Bonne, WEE1, Boston Mass. (348.6), 10:45-2, m., "Quick Nut Loaf; 3:15 p. m., Art Rubin and his orchestra; 7, Big Brother club; 7:35, musicale; 8, Nearolitan fee Cream company; 8:30, Sager's half hour of hospitality; 9, musicale; 10, American House Marlimba and orchestra; 9, musicale; 10, American House Marlimba (Gebec: 6:30-7:30, Anzell's orchestra.

WGBS, New York, N. Y. (345.6), 6-6:30 p. m., Uncle Geebee: 6:30-7:30, Anzell's orchestra.

WGCP, New York, N. Y. (315.6), 3-3:15 p. m., Nat

cent Park entertainers, "The Old Blacksmith Shop;" 9:39-10, Margaret Garrison, pianist; 10-10:39, American-Hawalian quartette; 10:39-11, Hewitt Rubber company program, "Thirty Minutes of Something Different;" 11-1 a. m., Vincent Lopez Hotel Statler dance orchestra, Harold Gieser, director.

WGY, Schnectady, N. Y. (279.5), 2 p. m., music; health talk, "Chronic Appendicitis," Dr. C. W. Woodall; "Color in Lamps," Bernice Bowser; 9:30, Incernational Sunday School lesson; 7, Albany Strand theater orchestra, Julius Boxhorn, conductor; Floyd Walfers, organist; 7:30, health talk; 7:35, piano recital, Ollie G. Yettru; 8, Festival choir; WGY Augmented orchestra; Cecil Wright, conductor; 9:20, Radio Four, A. Coggeschall, Kolin Hager, William Fay, Ellsworth Page; 10, comedy, "The Dover Road," Ten Eyck Clay, director.

WHAR, Atlantic City, N. J. (275), 2 p. m., Seaside hotel tric; 7:30, talk; 8, Seaside hotel orchestra; 11:15, Strand theater organ recital.

WHAN Mew York N. Y. (361.2), 6:40-7 p. m., Sun-

WHAR, Atlantic City, N. J. (275), 2 p. m., Sensitue hotel tric; 7:30, talk; 8, Seaside hotel orchestra; 11:15, Strand theater organ recital.
WHN, New York, N. Y. (361.2), 6:40-7 p. m., Sunshine talk, Billy B. Van; 7-7:30, Club Richman entertainers; 7:30-8, "Cheerful Philosopher," Burr Mc-Intosh; 10:30-14, Roseland dance orchestra; 11:130, Bandbox revue and orchestra; 11:30-12, Club Alabam orchestra; 12-12:30, Silver Silpper revue and orchestra; 12-12:30, Silver Silpper revue and orchestra; 12-12:30, silver Silpper revue and orchestra.
WIP, Philadelphia, Pa. (508.2), 1 p. m., Gimbel tearom orchestra; 3, artist recital; 6:05, Benjamin Franklin concert orchestra.
WJAR, Providence, R. J. (305.9), 1:05 p. m., Woodsteck entertainers; 8, musical program; 9, Maine Creamery hour; 11, Providence Billmore dance orchestra.
WJR, Detroit, Mich. (517), 7 p. m., Jean Goldkette's Petite symphony orchestra; 8, Summerfield and Hecht presentation.

WIR. Detroit, Mieh. (517), 7 p. m., Jean Goldkette's Petite symptony orchestra; 8, Summerfield and Hecht presentation.

WKAQ, San Juan, P. R. (340.7), 8-9 p. m., entertainment, Porto Rican Atheneum.

WLWL, New York, N. Y. (288.3), 8 p. m., question box, Rev. James Gillis; 2, Catholle Study club; vocal and instrumental numbers.

WMCA, New York, N. Y. (340.7), 6-6:30 p. m., Olcott Vail and his Hotel McAlpin string ensemble; 6:30-7:30, Enrie Golden and his Hotel McAlpin orchestra; 8:50-9, falk, Arthur Williams; 9-10, Hardman hour of music; 10:15-11:15, Donald Flamm, dramatic critic.

WNYC, New York, N. Y. (526), 6:10-6:20 p. m., market high spots; 6:20-6:30, piano recital; 6:30-7, elementary French lossons; 7-7:30, advanced French lessons; 7:30-7; 6:40-6:20, piano recital; 6:30-7, elementary French lossons; 7-7:30, advanced French lessons; 7:30-7; 6:40-6:40, piano recital; 6:30-7, market for ducation; 8-9, studio program; 10:10-10:30, talk, Prof. J. G. Carter Troop.

WOR, Newark, N. J. (495.2), 3:45-4 p. m., talk, E. P. Adams; 6:15-6:17, "Words Often Mispronunced; 6:17-6:30, sports talk, Bill Wathey; 6:30-7, Man in Moon; 7-7:30, dinner music, Hotel Shelton.

WTAG, Worcester, Mass. (268), 10:30 a. m., chat; 10:45, food binls, Mildred Thomas; 12:05-2 p. a., lumcheon music, WTAG trio, Harry Smith, director; 7:15, Twinkle Twinkle story teller; 8, concert, program announced.

WTIC, Hartford, Conn. (475.9), 6:30 p. m., young peo-

7:13. Twinkle Twinkle story teller; 8, concert, progrom announced.
WIIG, Hartford, Conn. (475.9), 6:30 p. m., young people's half hour; 7, Emil Heimberger's Hotel Bond trio; 8:30, "Hoodoo Night," staff of WIIC; 10:05, Hotel Bond orchestra; 11:30, popular half hour.
WWJ, Detroit. Mich. (352.7), 12:05 p. m., Jules Klein's Hotel Statler orchestra; 3, Detroit News orchestra; 6, dinner concert; 8, News orchestra; 9, dance program.

Santagano Photo, Jubey-Rembrandt

Santagano Photo, Jubey-Rembrandt

Do Boys, Grady and Doc, Connie Forte and the Stumber Boat; 9-11, entertainers, Amity Township, KSAC, Manhattan, Kan. (340, 7), 12:35 p. m., readings; 12:40, "Prevent Colds, Croup and Frozen Combs," J. H. McAdams; 12:38, word picture of the horticulture exposition, W. R. Martin, Jr.; 4:30-5, lessons in color and design; 6:35, travelog and speaking; 6:50, English literature; 7, flour, E. L. Tague; 7:15, components of a farm, A. F. Peine.

KSD, St. Louis, Mo. (545,1), 7:39 p. m., commerce hour, Marietta Schumacher, soprano, KTHS, Hot Springs National Park Ark. (374,8), 9:10-hour, Marietta Schumacher, soprano, KTHS, Hot Springs National Park Ark. (374,8), 9:10-19:45-10, Louis Culp, organist; 10-11, Pooley hour, Rainbow Garden.

KYW, Chicago, Ill. (555,4), 11:35 a. m., table talk Mrs. Anna. J. Peterson; 12:05, noenday concert, Commonwealth Edison company; 12, luncheon concert, Sanders Original Nighthawks; 7,7:30, Congress hotel; 9-10, Commonwealth Edison company; 10-12:30, Consadiers Original Nighthawks; 12, Henri A. Kontes, organist; 1-2, Insomnia club, WBAP, Fort Worth, Tex. (475,9), 12:05 p. m., Shelly Lee Alley and his entertainers; 6-6:30, Fred Cahoon's Texas hotel orchestra; 7:30-8:30, artists, John Tarileton Agricultural college; 9:30-10:45, mid-term graduation exercises, University of Eskota.

WBBM, Chicago, Ill. (226), 5:30-6 p. m., Kiddles Joy-Digger club; 8-10, instrumental quartet; Leona Hayes, Montmattre orchestra.

WCCO, Minneapolis-St. Paul, Minn. (416.4), 10:45 a. m., "Quick Nut Loaf;" 12 m., Dick Long's Dayton trio; 3:95 p. m., "Canned Foods Week Value to Hospitals, Nurses, Physicians, Invalids," Carey Emerson; 4, readers' club, Mrs. Walter Stevens; 6:15, Chadbourne's Nicollet hotel orchestra; 7:45, farm leeture, dairy farming, lesson IV; 8, health talk; 8:15, musical program; 10:05, Dick Long's Nankin cafe orchestra.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., Betty Crocker series; 3:30-4:30 p. m., Star's string trio;

orchestra.

WDAF, Kansas City, Mo. (365.6), 10:45 a. m., Betty Crocker series; 3:30-4:30 b. m., Star's string trio; 6-7, piano tuning in number; address, speaker Kansas City Children's bureau; Tell-Me-a-Story Lady; Trianon ensemble; 8-9:30, Star's Rudio orchestra; 11:45-1, Plantation players; Eddie Kuhn's Kansas City Athletic dub neclestra.

non ensemble; 8-9:30, Star's Radio orchestra; 11:45-1, Plantation players; Eddie Kuhn's Kansas City Athletic club orchestra.

WEBH, Chicago, III. (370.2) 7-8 p. m., Oriole orchestra; Uptown theater; 9-10, Oriole orchestra; Katherine Forbes, soprano, Beulah Ladon, violinist; 10-1 a. m., Oriole orchestra; stories, Wayne Myers; Paul Small.

WGES, Oak Park, III. (250), 5-7 p. m., Lydia Werner, soprano; John Brown, pianist; Katherine Gray, contralto; Edwin Kemp, tenor; Tiffin theater organ and orchestra; 3-9, Thomas Pappas, accordion; Tiffin theater organ and orchestra; John Stamford, tenor; McDevitt sisters, vocal duo; 11-1 a. m., Remington Welsh, organist; Parish and Ward, Sandy McTavisi, Seoteh comedian; Bebb and Cameron, duettists; Thomas Pappas, accordionist.

WGN, Chicago, III. (370.2), 12:40 p. m., Drake concert ensemble; Blackstone string quintet; 2:30, Lyon and Healy; 6:30, Drake concert ensemble; Blackstone hotel dance orchestra.

WHAD, Milwaukee, Wis. (278), 6-7 p. m., Arthur Richter, organist; 7:05, Bill Juhre's Radio Cartoon game; 8:30-10, Wisconsin theater revue.

Cecil and Esther Ward, above, are the entertainers at WMBB, Chicago, who take the listener away to islands of the South Seas. The soft strum of their Hawajian guitars gives many a fan romantic dreams.

guitars gives many a fan romantic dreams.

Wibo, Chicago, III. (266), 6-8 p. m., studio program; 10-12, popular program; O'Henry quartet.

WLIB, Elgin, III. (302.8), 7-8 p. m., dinner concert, Drake concert ensemble: Blackstone string quintet; 9-10, Fred Hamm's orchestra; organ recital; 10-11, Jack Chapman's and the Blackstone hotel dance orchestras; jazz artists; 1-2 a. m., Chapman's orchestra; Blackstone hotel dance orchestras; jazz artists; 1-2 a. m., Chapman's orchestra; Blackstone hotel dance orchestras; jazz artists; 1-2 a. m., Chapman's orchestra; Blackstone hotel dance orchestra; jazz.

WLS, Chicago, III. (344.6), 12 noon. Ford and Glenn, Inllaby time; 7:15, WLS trio; 8, farm program; 9, quartet; 9:30, Rodeheaver program, Vivian Tripp, director; 10:40, Ford and Glenn.

WLW. Cincinnati, Ohio (422.3), 7:30 a. m., morning exercises, William Stradman, Y. M. C. A.; 7:45, morning devoltons, auspices Parkway Y. M. C. A.; 9, Crosley elementary school program, mustcal appreciation, Sarah Y. Cline; 9:10, "The Corn Beli," Dr. McConnell, Mani university; 9:20, Agricultural primer, "Feeding a Fig and Feeding a Boy," J. W. Schwab, Purdue university; 9:25, calisthenies, Y. M. C. A.; 21:15, moonday concert.

WAGC, Chicago, III. (447.5), 12:10 p. m., Radio farm school; 12:25, Y. M. C. A. formin; 2, Shut-in program; 4, Bush Conservatory of music; 4:50, fads end fancies, Dorothy Aldis; 5, Child life stories; 6, Chicago theater organ; 6:20, Family Altar leagus; 6:30, Wide-Awake club program; 8, musical lecture, Mr., and Mrs. Marx E. Obendorfer; 8:30, Whitney trio; 9, University of Chicago, 111, (250), 7-8 p. m., Trianon duo; Law tharseilles; 9-11, Trianon orchestra, Woodlaw, Marx E. Obendorfer; 8:30 p. m., program, Menger hotel trio.

WAGL, San Antonio, T. R., (394.5), 3 p. m., program, Menger hotel trio.

WOAL, San Antonio, T. R., (394.5), 3 p. m., program, Menger hotel trio.

WOAL, San Antonio, T. R., (394.5), 3 p. m., program, Menger hotel trio.

WOAL, San Antonio, T. R., (394.5), 3 p. m., program, Menger hotel trio.

W

WORD, Batavia, III. (275), S. p. m., Webster notei concert trio; S:15, WORD Badio Study club; IIBSA orchestra.
WOS, Jefferson City, Mo. (440.9), 6 p. m., home conning, Missouri university.
WQ1, Chicago, III. (447.5), 11 a. m., "Have Your Pencils Ready," Ted Wilmes; 3-4 p. m., "The Sixth Domestic Science Lesson," Heien Harrington Downing; 7-8, Rainbo Gardens orchestra; Lavina Price, planist; Maude Shapton Couse, lyric soprano; Henrictta Nolan, violinist; 10-1, Rainbo Skylarks; West Brothlers; Dr. H. Lucille Long, woman harmonica player; Rainbo fantasy; Blues Destroyers trio; Medidians; Electa Kind, soprano; Lean Terrill, baritione; Lot McGhmis, accordionist; 1-2, Ginger hour.
WSM, Mashville, Tenn. (282.8), 6:30-7 p. m., Beasley Smith's orchestra; 7, bedtime story, Bonnie Barnhardt; 7:13-8, Smith's orchestra.
WSU1, Jowa City, Jowa (483.6), 12 m., Dr. Jacob Kwal-Wesser, Planist.

wasser, planist. WJAD, Waco, Tex. (352.7), 8:30-10 p. m., Mrs. Kenneth E. Runkel.

WJAD, Waco, Tex. (352.7), 8:30-10 p. m., Mrs. Kenneth E. Runkel.
WSOE. Milwaukee, Wis. (246), 3:39 p. m., matinee program, Milwaukee Radio show; 5:30, twllight hour. Aunt Julie's stories: Caroline Ramminger, soprano; Claudine Clark, planist; 8:45, book chat, M. S. Dudgeon; 9, old favorite songs, dance tunes, Milwaukee Radio show; Underwood's Quadrille orchestra; L. Melster, violinist; L. Frankenstein, soprano.
Mountain Standard Time Stations

Mountain Standard Time Stations
KFWA, Ogden, Utah (261), 5-6 p. m., Ogden Radio
dealers' program; 9-10, studio program;
KOA, Denver, Colo. (322,4), 12:15 p. m., Rialto theater
mustcale; 3:15, relaxing and corrective exercises; 3:30,
matinee for housewives; 4, culinary hints; 4:15, fashion
review; 6:30, dinner concert, Herbert White and his
Silver State orchestra; 7:30 International Sinday
School lesson; 8, summary, of votes cast by KOA's (Continued on page 21)

WGY IN HORIZONTAL **RADIATION TRY-OUTS**

SCHENECTADY STATION EX-PERIMENTS IN SENDING

es Horizontal Antenna Alternately with Vertical One; Asks Listeners for Cooperation in Tests

for Cooperation in Tests

SCHENECTADY, N. Y.—Tests to establish the value of horizontal radiation on broadcast wave lengths were made from the Radio development laboratory of the General Electric company, near here, Monday and Tuesday nights, November 2 and 3, according to an announcement by C. J. Young, of the Radio engineering department of that company.

Both tests were conducted on superpower, 50 kilowatts, through WGY, using the normal wave length of that station, which is 379.5 meters. The listener had an opportunity to compare reception on both horizontal and vertical radiation on the same night. The schedule provided for a half hour period of broadcast entertainment on the horizontal antenna from 12 to 12:30 midnight, Monday and Tuesday, and from 12:45 to 1:15 on the vertical antenna, regularly used for superpower transmission. A period of fifteen minutes was required to change connections from one antenna system to the other.

Not Often on Broadcast Wave

Not Often on Broadcast Wave
Much has been written during the past
few months on horizontal radiation and
there has been considerable speculation
as to the advantages which this form of transmission holds. Practically all, if not all, experimental work with horizontal waves has been carried on with the very high frequencies of the shorter wave lengths, and much valuable data has been called a party of the shorter wave lengths. collected. Reports on short wave length demonstrations were necessarily few because of the comparatively small number of short wave sets in use. It is also pointed out that results on higher wave lengths may be directly opposed to the observations made on wave lengths from 50 to 150 meters.

Instituting these tests, Mr. Young is requested that all Radio listeners report requested that all Radio listeners report on the quality, volume, comparative signal strength and the fading characteristics of both forms of transmission. Work in transmission development necessarily depends upon the cooperation of all those who are interested in improved broadcast transmission. Receiver development can be carried on in the laboratory but transmitter work makes the entire but transmitter work makes the entire country a laboratory and every listener an experimenter. The reports received will be digested and expertly analyzed and it is hoped by this procedure to collect a vast fund of information which must ulti-mately advance the art of broadcasting. Sending out Radio power which vi-

mately advance the art of broadcasting. Sending out Radio power which vibrates parallel to the earth's surface is a comparatively new development. In earlier days it was asumed that an antenna which lay parallel to the earth's surfee would neither transmit nor receive signals, and that is largely true of the long wave lengths which were used before broadcasting.

long wave lengths which were used before broadcasting.

However, recent experiments made by E. F. W. Alexanderson, consulting engineer of the General Electric company, and by others, such as Dr. G. W. Pickard, have shown that short wave horizontal radiation may be more effective than the vertical radiation obtained from the usual upright type of antenna.

Alexanderson's Theory

Alexanderson's Theory

Alexanderson's Theory

Mr. Alexanderson's work showed that the short, horizontally polarized waves do not follow the surface of the earth like the low waves but are launched into space as though fired by a high angle gun and that they travel in a curved trajectory through the upper atmosphere. It is Mr. Alexanderson's theory that the wave on returning to earth is vertically polarized. It is impossible to state, thus far, what relation the discovery of horizontally polarized waves will have to the problem of the reduction of static, but it is probable that it will open up new possibilities for progress. There is the possibility that the fading phenomena are directly due to the change in the plans of polarization. Because of the high angle radiation of horizontal waves it is possible that with the use of high power, good long distance recognizers. radiation of horizontal waves it is possible that with the use of high power, good, long distance reception may be secured without the production of overstrong signals in the immediate vicinity of the transmitters. In other words, it may shoot most of the energy into the air so that it will come down at a distance.

U. S. Has Twice as Many Stations as Rest of World

WASHINGTON, D. C.—According to figures which have been compiled by the department of commerce there are 277 department of commerce there are 277 broadcasting stations now operating outside the United States as compared with 563 stations operating in this country as Wiered by the Radio division of the defining at 8:20 p. m. and ending about 10:30 p. m. eastern time.

HAS FUNERAL FOR SILENCED SENDER

Portugal 'Ham' Burlesques Solemn Rites When Censor Bars Him from Air

LIBSON, Portugal.—A day or two after the last of the periodical attempts a revolution in Portugal, the police visite each of the five Portuguese private seners and informed them that amater transmission would be forbidden in the future, "as in times of revolution, falson, and the seneral production, falson, and the seneral production of the

news by this means might be sent abroad
The amateur whose call number
PIAC, solemnly loaded his entire apparatus on a mock funeral carriage and followed by his colleagues and friend as "mourners," conveyed it to a shop sel ing Radio apparatus on one of the mai streets of Lisbon.

In the shop window a mock funera-

chapel was erected. There on a black draped bier lay all that remained of PIAC, with wreaths and burning candle Following the continental custom of sending the custom ing out heavily black-bordered death notices to friends, letters were printed an sent out, earning a whole crop of replie expressing condolences and heartfelt sympathy in this severe bereavement.

Check Up Wave Length with Bureau Test Cal

Government Station on Air Twice a Month

WASHINGTON.—The bureau of stand ards transmits, twice a month, Radi signals of definitely announced frequen-cies, for use by the public in standardiz ing frequency meters (wavemeters) and transmitting and receiving apparatus. The signals are transmitted from the bureau Station WWV, Washington, D. C. and from Station 6XBM, Stanford university, California.

versity, California.

The transmissions are by unmodulated continuous-wave Radiotelegraphy and the signals can be heard and utilized by stations equipped for continuous-wave reception at distances within about 500 tr. 1,000 miles from the transmitting stations. Information on how to receive and utilize the signals is given in bureau of standards letter circular No. 171, which may be obtained on application from the bureau of standards, Washington, D. C. The schedule of standard frequency signals from both the bureau of standards and Stanford university is as fol-

ards and Stanford university is as fol

Schedule of Frequencies in Kilocycles (Approximate wave lengths in meters in parentheses.)

Time*	Nov.5	Nov. 20	Dec.5	Dec. 19	Jan.5	Jan. 20
10:00 to	3000	125	300	550	1500	3000
10:08 p. m.	(100)	(2400)	(1000)	(545)	(200)	(100)
10:12 to	3300	133	315	630	1650	3300
10:20 p. m.	(91)	(2254)	(952)	(476)	(182)	(91)
10:24 to	3600	143	345	730	1800	3600
10:32 p.m.	(83)	(2097)	(869)	(411)	(167)	(83)
10:36 to	4000	155	375	850	2000	4000
10:44 p. m.	(75)	(1934)	(800)	(353)	(150)	(75)
10:48 to	44(9)	166.5	425	980	2200	4400
10:56 p. m.	(68)	(1800)	(705)	(306)	(136)	(68)
11:00 to	4900	205	500	1100	OIMO	1000
11:08 p. m.	(61)	(1463)	(600)	(265)	(199)	(61)
11:08 p. m. 11:12 to	5400	260	600	1300	2700	5400
11.20 p. m.	(55)	(1153)	(500)	(231)	(1111)	(55)
11:24 to	6000					
11:32 D. m	(50)	(059)	(450)	(000)	14001	
*Eastern star	dard tim	e for W	WW	Woodsta	(100)	D 30)

"WIRED WIRELESS" IS PROPERTY OF PUBLIC

Supreme Court Rules Squier's Invention Open to All

WASHINGTON, D. C.—The supreme court of the United States has refused to review the decision of a lower court in which it held that the American Telephone and Telegraph company has the right to use "wired wireless" through the patent of General George O. Squier, who at the time of his invention was chief of the signal corps of the United States Army.

lower court contended that a patent taken out by an official of the government can be used by the public as public property, and not only by the government itself. In refusing to review this case the United States supreme court has unbeld this onlying. has upheld this opinion.

WWJ, Detroit Station Will Broadcast N.Y.Philharmonic

DETROIT.—Commencing November 7 WWJ, the Detroit News, will broadcast the New York Philharmonic orchestra once a month.

once a month.

The first two concerts, which are November 7 and December 19, will be conducted by Willem Mengelberg. The last four, their dates being January 30, 1926, February 13, March 20 and April 3, will be led by Arturo Toscanini and Wilhelm Suntwelder.

AN EVENING AT HOME WITH THE LISTENER IN IN EASTERN TIME

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College		Call	Location		-			Tuesday	Wednesday	/ Thursday	Friday
Column		CFCA	Toronto, Ont	356.9	Silent	8:00- 9:00					
Column		CICA	Edmonton, Can	516.9	11:00- 1:00				Silent	10:00-11:00	0 Silent
150 150		LICKA			7:30-11:00	Silent	Silent	7:30-11:0	Silent	7:30-11:00	Silent
The column		CKY	Winnipeg, Man	384.4	7:30- 9:15	8:00-10:4	Silent	9:30-11:4	Silent	9:00-10:00	
10. 10.	the	CYB	Mexico City, Mex.	. 370	11:30-12:45	Silent	Silent	10:15-11:18	Silent		
19		CYX	Mexico City, Mex.	-	-			-		-	9:00-10:30
The column	is	KEAR					6:15- 9:55	6:15-12:30	6:15- 9:5	5 6:15-12:30	6:15- 9:55
March Marc		I KI DI	M Beaumont, Texas	315.6	Silent	9:00-10:00	Silent	9:00-11:30	Silent	Silent	9:00-11:30
Second Column	ıds	KFK	Hastings, Nebr	288.3	Silent	Silent	10:00-12:00	Silent	Silent		
	100	KFM:	Northfield, Minn.	. 337	Silent	8:00- 9:00	Silent				Silent
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100 100		KFW	B Hollywood, Calif	252	11:00- 2:00	12:00- 2:00	9:00- 2:00		9:00- 2:00	10:30- 2:00	11:00- 1:00
College	ıd-	KGW		491.5	1:00-3:00	10:45-12:00	11:00- 1:00		9:00-10:00	11:00- 3:00	9:00-10:00
Second Column 1964 1.30				421	Silent	3:00- 4:00	9:00- 1:00	8:30- 2:00	8:30- 2:30	8:30- 2:00	8:30- 2:30
College Coll	ies	KLDS					10:00- 2:00	11:30- 1:00	10:00- 1:00	11:30- 3:00	11:30- 2:00
1	111-	KEX	Oakland, Calif	508.2			9:00- 2:00	Silent	9:00- 2:30	Silent	9:00- 1:30
		KOA	Denver, Colo	322.4	11:00- 1:00	6:00-11:00	8:30-11:00	8:30-10:30	8:30- 1:00	1 0.00 2.00	
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CC CTA CAMPAGE CAMPA				299.8		11:00- 1:00	10.00- 1.00	8:00- 9:00	8:00- 9:00	Silent	8:00-10:00
CT 19	ce		Oakland, Calif	215		10:45- 2:00 10:15-12:30	11:00- 1:00	11:00- 1:00	Silent	11:00- 1:00	11:00- 1:00
The color		KTCL	Seattle, Wash	305.9	9:50- 3:00	10:50- 1:10	Silent	10:00-11:00	Silent	Silent	10:00- 3:00
College Coll		KTW	Seattle, Wash	455						20100 22100	
Temporary		KWSC		348.6					Silent	9:00-10:00	Silent
18. 18.	10.00		Radio, Va	434.5			Silent	8:00-1:30	8:00- 2:30	8:00- 1:30	8:00- 2:30
1.	ıs.		Havana, Cuba	400	Silent	Silent	Silent	Silent	8:30-11:00	Silent	Silent
West		WAMI	Minneapolis, Minn.	243.8	11:00-12:00	3:00-11:00	Silent	11:00-12:00	11:00-12:30	11:00-12:30	11:00-12:00
Col. MSDN Chickey II.		WBAR	Sisiht, Wis	406	Silent	11:00-12:00					
Column C		WBBR	Staten Island, N.Y.	272.6							
Corporation			Springfield, Mass					10:00- 2:00		10:00- 3:00	10:00- 2:00
A				461.3 468.5		6:30-8:20	6:30-12:00	8:00-11:00		9:00-11:00	6:30- 9:30
Act WCD Winnest P, Minn Minn Minn Minnest P, Min	a-		Philadelphia, Pa	278		5:00- 7:00	7:30-11:00	7:30-11:30	7:30-10:00	6:30-11:30	8:00-11:30
10	- 14	wcco	Minn-St. P., Minn.	416.4		5:20-11:15	7:00-12:00		8:00- 1:30		
Week Free New Park New York, N.		WDAF	Kansas City, Mo	365.6	7:00- 2:00	Silent	7:00- 2:00				6:00-11:00
WEAR Columbus, Ohis		WEAF	New York, N. Y	491.5	6:00-12:00	7:00-10:15	6:00-11:30				Silent
WEBI Roleage, III.		WEA0 WEAR	Clumbus, Ohio Cleveland, Ohio	293.9	7:00- 8:00			Silent	8:00- 9:00	8:00- 9:00	Silent
WENR Chicago III 486,6 700,900 400-1230 530-1-00 530-1-100 530-1-100 700-1-100	1-			370.2 272.6				8:30-1:30			8:30-1:30
11 WFAA Dallas, Tox.			Booton, maddinim					8:00-11:00			8:30-11:00
20	ln		Dallas, Tex			7:30-12:00	7:30-10:30	7:30- 1:00	Silent	7:30- 1:00	7:30-10:30
Web Web Fulford, Fla			Philadelphia, Pa	394.5	8:00- 9:30	7:30-8:30	Silent	8:00-12:00	Silent	8:00-11:00	Silent
	0		Fulford, Fla		6:30- 1:00	9:00-11:00	6:30- 1:00	6:30- 1:00	6:30- 1:00	6:30- 1:00	6:30-1:00
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WHA Madison, Wis \$35.4 \$31.00 \$31.00 \$30	00		Buffalo, N. Y	319	7:45- 9:15	Silent	8:00-12:00	7:00-10:00	8:00-12:00	7:00-10:00	
10	8)	WHA	Madison, Wis	535.4	Silent	Silent					
Second Color Seco	1)	WHAR	Atlantic City, N. J.	275	7:30-10:30	7:50- 1:15					
		WHAZ	Trey, N. Y				Silent	8:30-10:30	8:30-10:00	8:30-10:00	8:30-10:00
WHO Ober field, III. 399.8 \$0.9 200 7:00 1:00 \$1.00 7:00 1:00 \$1.00 \$1	0) C.	WHN				F.00 F.00	8:00- 9:00	Silent	8:00- 9:00	9:00-11:30	8:00- 9:00
WIRD Chicago, III. 250 350-12:00 Silent 7:00-1:00 7:			Des Moines, la	526	Silent	8:30- 9:30	8:30- 1:00	8:30-1:00	7:30- 1:00	8:30- 1:00	8:30- 1:00
WAR Providence, R. I.	.		Chicago, III	226	7:00- 9:00	7:00- 1:00	Silent	7:00- 4:00	7:00- 4:00	7:00-4:00	7:00- 3:00
WJID Mescheart, III 30.2, 7:00-2:00 9:45-11:00 Silent Sile		-	Providence, R. I	305.9	Silent	7:20-10:15	8:00-10:00				
		MIID	Messeheart, III	302.8	7:00- 2:00	9:45-11:00	Silent				
WKAQ San Juan, P. R. 34.7 7:00-11:30 Silent S	-	AIA	New York, N. Y	405.2	Silent	8:15- 9:15				7:00-11:00	7:00-10:00
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The color of the		WKRC		285.5 1 422.3 1		F 14 40 00	7:00- 8:00			Silent	7:00-8:00
WLW Harrison, O	t	WLS				Silent	7:30-11:00	Silent	7:30-11:00	Silent	7:30-11:00
WMAQ Chicago, III		WLW	Harrison, O	122.3	8:00-10:00	8:30-10:30	8:00- 9:00	7:30-11:00	8:00-12:00	8:00-1:00	Silent
## WMBB Chicago, III						- Daniel A					
WMCA	f	WMBB	Chicago, III	250	8:00-11:30	8:00-11:30	Silent	8:00-11:30	8:00-11:30	8:00-11:30	8:00-11:30
WAKE Boston, Mass. 280.2 \$3.00-10:00 \$3.00-12:00	$^{\rm s}$	WMC	Memphis, Tenn	199.7	3:30-10:30	Silent	8:30-10:30	8:30- 1:00	Silent		
WOAN Company	a.	WNAC	Boston, Mass	280.2 8	3:00-10:00	3:00- 9:30	8:00-10:00			9:00-12:00	
WOAN Lawrencer'g, 1efn. 282.8 Silent 10:00-11:00	. 1	NOAL	San Antonio, Texas 3	394.5	9:30-10:30	9:00-11:30				7:35-10:30	7:30-10:30
t WOAX WOC Trenten, N. J		WAOW	Omaha, Nebr				0:00-11:00 1	0:00-11:00 1	1100000 10 10 10	0:00-11:00 1	0:00-11:00
WO K Homewood III	t	WOC	Trenton, N. J Davenport, Ia 4				Silent	Silent	Silent	Silent	Silent
WOO Philadelphia, Pa 508.2 Silent 7:30 - 8:30 6:00 - 7:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 12:00 7:30 - 8:30 7:30 - 8:30 7:30 - 12:00 7:30 8:00 - 1:30 9:30 - 1:	1	WOK	Homewood, III 2	217.3	:00- 2:00 8	3:00- 2:00			1.00 0.00		
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Vector V	3	WOR	Newark, N. J 4	05.2	3:15- 8:30	Silent	6:15- 9:30	6:15-7:30	6:15-10:00	6:15- 7:30	
WQI	7	W08 -	Jefferson City, Mo. 4	40.9	Silent 9	0:00-10:00	9:00-11:00	Silent	9:00-11:00	Silent	
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t WSAI Mason, O	-	WREO I	ansing, Mich 2	85.5 1	0:00-12:00	Silent	Silent	7:00-11:00 8:15-10:00	Silent Silent	7:00-11:00	Silent
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		es	in Minima 3	- 0./	Prient 6	.20-10:00 (9:00	9:00- 9:00	5:00-10:00	5:00-12:30 6	3:00-10:00

FRIDAY THE 13TH WTIC HOODOO NIGHT

Friday, November 13

(Continued from page 19)

audience on jass vs. classical program; football rally and yell fest, Colorado Agricultural college; 2,500 students participating; R. O. T. C. band; 8:30, "Round the World in Sixty Minutes," Dean H. Dick-ason; Melodies typical of various countries.

Pacific Time Stations
FOA, Seattle, Wash. (454.3), 6:45-8:15 p. m., Sherman, Clay and company, studio program; 8:30-10. Times studio program; 10-11:30, Eddie Harkness and bits probests.

Times studio program; 10-11:30, Eddie Harkness and his orchestra.

KPPG, Hollywood, Calif. (238), 5-6 p. m., home hour with Mammy Slimons and naborhood children; 6-7. dinner music; 7-7:30, history lesson; 8-10, KFPG concert hour with Turner orchestra; Amanda Fernandez, tenor; 10-11, dance music by remote control.

KFWB, Hollywood, Calif. (252), 6:30-7 p. m., program, E. P. Janes, builder; 7:30, microphone brevities; 8-10, studio program; 10-11, Warner Brothers frolic.

KGO, Oakland, Calif. (361.2), 11:30-1 p. m., luncheon concert; 3-4, concert, Norman Woodside's Metropolitan orchestra; Frank Gibney, tenor; 4-5:30, concert orchestra, Hotel St. Francis, Vinton LaFerrera, conductor; 5:30-6, girls' half hour; 6-7, Sherman, Clay and company dinner concert.

tra, Hotel St. Francis, Vinton LaFerrera, conductor; 5:30-6, first half hour; 6-7, Sherman, Clay and company dinner concert.

RGW, Portland, Ore. (491.5), 12:30-1:30 p. m., Rose City trio; 9-10:30, Sherman, Clay and company; 10:30-12, Hoot Owls.

KHJ, Los Angeles, Calif. (405.2), 6-6:30 p. m., Leighton's Areade cafeteria orchestra, Jack Cronshaw, leader; 6:30-7:30, history story, Prof. Hertzog; Richard Headrick and Vyola Von, screen starlets; 7:30, "Romance of Santa Fe Trail," Gladys De Witt: 8-10, program, Western Auto Supply company, arranged by J. Howard Johnson; 10-11, Art Hickman's Billmore hotel dance orchestra, Frank Ellis, leader.

KIR, Seattle, Wash. (334.4), 1:15 p. m., organ recital; 2, home helps; Bernice Redington; 8:30-10, Post Intelligencer studio program; 10-11, Gordon Kilbourne and his orchestra.

KLX, Oakland, Calif. (508), 5-5:30 p. m., Aunt Elsie's Irate Pirate; 8-9:45, program, Western Auto Supply company; 9:45-10:30, Harry Davis and his ballroom entertainers.

KNX, Hollywood, Calif. (336.9), 5:30-6:15 p. m., Wurlitzer studio, talk on golf by D. Scott Chisholm; Town Tattler; 6:15, travel talk, W. F. Alder; 6:30-7. Atwater Kent Radio orchestra, Paul Finstein, leader; 7-7:30. Carlyle Stevenson and his El Patio ballroom orchestra; 7:30-8, program, Eastern Outfitting company; 8-9, West Coast theaters; 9-10, Order of Optomistic Donuts; 10-11, Ray West's Coccanut Grove dance orchestra.

chestra.

KPO, San Francisco, Calif. (428.3), 1:30-2 p. m., Rudy Seiger's Fairmont hotel orchestra; 7-7:30, S. B. Dickson; 8-11, Palace hotel dance orchestra.

KWSC, Pullman, Wash. (348.6), Helen Frink, vocal and banjo soloist; Helen Dunlap, planist; Frieda Peterson, vocalist; "Ten Years of Highway Progress in Washington," H. E. Phelps.

New Station Features New Community Shows

WSM to Broadcast Weekly Programs from Nashville Church

NASHVILLE, Tenn.—A weekly community program, the first of its kind in the south, will be given every Monday evening between the hours of 7:30 and 3 o'clock from the First Presbyterian church here and broadcast by WSM, on the ways length of 282 2 meters.

the wave length of 282.8 meters.

The public is cordially invited to these concerts which will present the finest talent available in the city and even big attractions which visit Nashville from other cities.

WSM's weekly community program should prove one of the biggest assets to Nashville's civic life ever fostered and officials of the National company, the church and the city are working hand in hand to give Nashvillians a regular meeting place where the best musical talent obtainable will entertain them.

WSM's community broadcast is scheduled for every Monday night from 7:30 to 9 o'clock. The first one presented P. L. McFerrin, organist, and the mixed quartet choir of the church and associate ortists.

Monotony of Bus Travel Is Eliminated by Radio Shows

BIRMINGHAM, Ala.—The Birmingham-ontgomery Transportation company, Montgomery operators of motor busses between Birm-ingham and Montgomery, has equipped a number of busses with Radio.

R. B. Dwyer, manager of the company, says that his company now has receivers on all night busses between Birmingham and Montgomery.

Some excellent programs are being received on these busses en route. The trip by motor bus from Birmingham to Montgomery requires about three hours and Manager Dwyer says Radio entertains passengers so well that the monot-ony of the trip is eliminated.

Becker Suggests Cosmos as Appropriate Radio Flower

BUFFALO, N –O. E. Becker, senior announcer at WGR, has sprouted some poetic flights of fancy. Out of them has been born the idea of having a Radio flower.

Mr. Becker's own flower garden has had much to do with the bright idea. He wants to know what Radio fans think about it and will be glad to hear suggestions on the subject.

Mr. Becker suggests the cosmos. He declares that the very name is apropriate inasmuch as it is indicative of the universal good of Radio.



Violet Deutsch is a talented, young pianist of Omaha, Nebraska. Her effective tone production on the concert grand piano has won her many admirers among the listeners in of WOAW.

RESEARCH DEVELOPS VOCAL POSSIBILITIES

Downing Says Voices Need Special Radio Training

CLEVELAND.—Since the earliest days

of broadcasting, Albert Downing has been a familiar figure and voice to the audiences of Cleveland Radio stations but in spite of this few listeners know the extent of Mr. Downing's Radio activities. Early in his experiences, he discovered that one voice of undeniable quality for concert work will compare very unfavorably with another which is decidedly inferior when the two are applied to Radio and that any voice of a natural quality can be trained for Radio work when it might be hopeless for concert work, but that a voice of operatic quality needs for Radio artists. Mr. Downing is an exclusive artist of WEAR, the Goodyear Tire and Rubber company's station here.

special training for Radio in most

instances.

The result of his research will be offered soon to the public in the form of a book on broadcasting for students in voice culture. Many of Mr. Downing's pupils are training for Radio alone. In this connection he has started what is perhaps the first actual school exclusively for Radio artists. Mr. Downing is an exclusive artist of WEAR, the Goodyear Tire and Rubber company's station here. He is perhaps best known for his "Evening Hour's" programs, the Sunday evening feature of WEAR.

STATIONS IN ORDER OF WAVE LENGTHS USED Meters Call | Meters Call

1	215 KTAB	278 KOIL	315.6 WGBS	365.6 WDAF	410.7 CKAC	475.9 WBAP
Н	217.3 WOK	278 WCAU	315.6 WGCP	365.6 WHB	416.4 WCCO	475.9 WTIC
П	226 WBBM	278 WGBU	319 WGR	370 CYB	421 KIAF	475.9 WFAA
П	226 WIBO	278 WOQ			422.3 WLW	480 CYL
П	240 KFVE	280.2 WNAC			422.3 WKRC	483.6 WOC
П	240 WOAX	282.8 WOAN	325.9 WSAI		428.3 WSB	483.6 WSUI
ı	243.8 WAMD	282.8 WSM	330 CYX		428.3 KPO	491.5 KGW
П	250 WGES	285.5 WKAR			434.5 CNRO	491.5 WEAF
11	250 WMBB	285.5 WREO			434.5 NAA	499.7 WMC
l	252 KFWB	288.3 KFKX			434.5 CFCN	508.2 KLX
П	266 KFNF	288.3 WLWL	340.7 KFAB		435 AT9	508.2 WIP
	266 WBCN	293.9 KTBI	340.7 WKAQ		440.9 KLDS	$508.2 \cdot WOO$
П	268 WTAG	293.9 WEAO		389.4 WTAM	440.9 WDWF	516.9 CJCA
ı	272.6 WBBR	296.9 KPRC			440.9 WOS	516.9 WCX
1	273 KWKH	299.8 KFMQ			447.5 WMAQ	516.9 WJR
	272.6 WEBJ	299.8 KSL			447.5 WQJ	526 WHO
	272.6 WFBH	299.8 WPG			454.3 KFOA	526 WNYC
ı	273 WRW	302.8 WJJD		399.8 WHT	454.3 WJZ	526 WOAW
ı		305.9 KTCL		400 PWX	455 KTW	535.4 KYW
		305.9 WJAR			461.3 WCAE	
	275 WHAR	309.1 KDKA			467 KFI	
1	275 WORD	315.6 KFDM			468.5 WCAP	545.1 KFUO
1	275.3 WJAS	1315.6 WAHG	361.2 WHN	1406 WBAR	468.5 WRC	545.1 KSD
1						

MANY WILL ATTEND ANNUAL RADIO MEET

HOOVER SAYS CONFERENCE WILL ONLY LAST 3 DAYS

Department Outlines Principle Problems for Discussion; Public Invited to Attend Meetings

WASHINGTON, D. C.—The Canadian government at the invitation of Secretary of Commerce Hoover has appointed C. P. Edwards, director of Radio of the department of marine fisheries, to represent it at the fourth Radio conference to be held here beginning November 9. Mr. Edwards will be accompanied by one of his assistants, Mr. W. A. Rush. Many other acceptances have reached the department and indications are that the forthcoming conference will be the biggest which has ever been held.

Seek New Secretary

gest which has ever been held.

Seek New Secretary

Considerable attention is being given by officials to the appointment of a secretary for the conference. Last year L. E. Whittemore, who was at that time secretary of the interdepartmental Radio advisory committee, acted as secretary of the conference but Mr. Whittemore is now associated with the American Telephone and Telegraph company and will not be available for this work.

The position as secretary of the conference requires a man thoroughly familiar with Radio activities and also a man of ability. W. E. Downey, assistant chief of the Radio section of the department, has been mentioned for the position but there is some objection to this, owing to the fact that the department wants him to be available for discussion at the conference. It is expected that Secretary Hoover will take action in the next few days.

Three days should be enough to com-

Three days should be enough to complete the work of the conference is the opinion of Secretary Hoover, although there is no question but what committees will be appointed by the conference which will sit for a longer time.

Now Preparing Data

Now Preparing Data
Statistical data is being compiled by the Radio section of the department of commerce in preparation for the conference so that everything possible will be available for reference. William D. Terrell, chief of the section, and Representative Wallace White of Maine have returned from Paris where they attended the telegraph conference as representing the degraph conference as representing the department.

Arrangements are being made by the department for an even larger representa-tion at the conference than last year when more than 200 delegates were registered representing daily papers, Radio magazines, broadcasters, amateurs and others.

The secretary has announced that all of the meetings of the conference will be open to the public and that opportunities will be afforded for the expression of views on any of the subjects to come before the meetings.

Outlines Some Problems

While consideration is to be given to Radio activities generally, the principal problems will be those affecting broadcasting. The department in announcing the subjects to be taken up insofar as they have been outlined up to this time

"Recognition of the principle that service to the listening public must be the basis for every broadcasting privilege and for all Radio regulations.

"The present saturation in broadcasting due to the exhaustion of channels, and the necessity for limiting the number of stations on the basis of public service.

"The requiring of permits in advance

"The requiring of permits in advance of construction of broadcasting stations. "The necessity of operators' licenses, particularly for broadcasting stations. "Frequency band assignments for the various classes of Radio communication.

Use of High Power
"The use of high power for broadcast-

ing.
"The location of broadcasting stations so as to prevent intereference in congested centers.

'Time division, duplication of frequency assignments, and a geographical basis for allocations. "The use of broadcasting for advertis-

ing.
"Matters affecting amateurs.

"Matters affecting the marine and mobile services "Rebroadcasting."

WOR is broadcasting on the last Monday of each month a magazine review by Henry Seidel Canby, who formerly edited the Literary Review of the New York Post and now edits the Saturday Review of Literature and Lectures at Yale,

Radio Diges

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Vol. XV

Saturday, November 7, 1925

No. 5

The Shuberts Reconsider

THE SHUBERTS, Lee and J. J., are going in for Radio! Let's see— wasn't it just about one year ago that the Messrs. Shubert and William Brady were up in arms decrying with alarm the inroads which the popular thing of the day, broadcasting, was making on the theatrical profession?

Readers of this publication will remember how Equity and the two producers named were reading the riot act and asking divine guidance as to how to control this giant new amusement. The Shuberts and Brady insisted that Radio was hastening the day when the sheriff's notice would be posted on their doors and the auctioneer's hammer would be disposing of their useless seats.

Radio has never and will never do the harm to the legitimate stage that the managers have done themfrom the brightly lighted theater lobbies after having heard, "Nothing better than fourteenth row" and have gone direct to their homes to tune in on a fair playing Radio program rather than patronize the ticket scalpers. This class of insects is the only known group of paragites that are encouraged by these contributed. pers. This class of insects is the only known group of parasites that are encouraged by those on which they live. When the producers cleanse themselves of the scalpers they will have less to fear from Radio.

We always have contended that the presentation

motion picture house, with seats selling (four or five times a day) for from thirty-five to seventy-five cents, was doing a great deal of damage to the weak and weaker drama and musical shows whose seats sell for from \$1.50 (worst seats) to \$3.50 and often more The good motion picture, presented with first quality music and incidental, high quality, entertaining acts, is the most dangerous competitor Mr. Brady, Equity or the Messrs. Shubert can possibly have.

We still contend this to be true. Radio is a poor,

struggling infant of an opponent when compared to the 1925 brand of silent drama. We wonder if the spoken drama and musical show profession members

spoken drama and musical show profession members have looked the "movies" squarely in the face?
Radio has helped, can help, and will help the legitimate stage again to a firm footing. Radio can do very little for the motion picture, however, until Radio motion pictures—or Radio instantaneous vision, sometimes called Radio television—is perfected, or rather becomes popular with the public.

The Messrs. Shubert have recently recognized this truth. They permitted broadcasting of "The Student Prince." They are still being surprised with the public acclaim and box office support which the broadcasting produced.

The Shuberts also have come to Radio for their stars. The Misses Martens and Wilkens, "Melody Maids" team at WHT, Chicago, were given an audition and signed for a forty-week tour in a "Student Prince" road show.

We haven't heard the Equity or Mr. Brady calling out the militia of late, so we are inclined to believe that they too are converted to the large scope of broad-casting as an aid to their business. If not converted, perhaps this editorial will help them to see the problem in the same light the Shuberts have recently seen.

The Modern Miracle

IF THERE is such a thing as "the modern miracle" it surely must be represented by the scene in which we have an old lady. She lives far from any relative who might be of any comfort to her. She is an invalid sitting in a wheel chair. A stroke of paralysis is her surety that she will never walk again. She likes to read but in the evening she tires of that. Her eyes are not as good as they used to be so that sewing is out of the question.

She is blessed, however, in a sense, with a Radio receiver that she has in her home. She loves beautiful music and when she would like a little entertainment all she has to do is turn a small knob and forget that she is unable to visit the theater, or the

opera.

Our little old lady is happy indeed, pleased with something that is accomplished by modern genius, that we think nothing of. We take Radio for grander than the control of the first that the control of the con but not so her. She is ever thankful for this "modern miracle" which benefits her so much.

RADIO INDI-GEST

The Radio in Camp

A construction camp, when far from a town, Is a lonesome place when the sun goes down: For the day's work is done, the men all fed, And all but myself have retired to bed.

Tis then that the Radio proves its worth, And livens me up with music and mirth: The loneliness goes as I listen and hear Both music and voices from far and near.

The folks in the cities who use it for fun, Have other amusements,—we have just this one; For out here it is newspaper, church and play And helps pass the long empty hours away.

The foregoing comes to us from those great open spaces where two tubes bring in real DX and a crystal set is out of luck. Our friend George lives in a railroad car hence no mater how large a set he uses, some manufacturer can claim wonders on it as a portable.

LA GRAND TRIX How to Get DX on a Crystal Set By PROF. SPOFFENHAUER

Expert on Sanitary Engineering and Belgian Lace Installation

1. Purchase a good crystal set, equipped with a cat's whisker made of gold-plated green cheese.

2. Take the purchased good crystal set, equipped with a cat's whisker made of gold-plated green cheese, home.

3. Set the good crystal set, equipped with a cat's whisker made of gold-plated green cheese, which you have bought and taken home, on a special Radio table made of mahogany veneered pine.

made of mahogany veneered pine.

4. Cover the purchased good crystal set equipped with a cat's whisker made of gold-plated green cheese, which you have bought and taken home and set on a Radio table made of mahogany veneered pine, with a pine box heavy enough to hold the Grand Prix Superheterodyne described in Radio Digest.

5. Turn to the articles by James McDonald and build the Grand Prix superheterodyne, which you will then set upon the pine box covering the purchased good crystal set equipped with a cat's whisker made of gold-plated green cheese which you have taken home and set on the mahogany veneered pine Radio table and tune it for DX. tune it for DX.

6. Tell your friends that you get DX every nigh on a crystal set. This is known as La Grand Trix.

Tangled

Pa puts on his head set 'An Ma puts on a pair
'An the baby is delighted,
In his big high chair;
While Pa helps with the dishes, While Pa neips with Midst wires everywhere.

RHEA SHELDON

NO, JUST OUR VOICE

Dear Indi: Picked up your broadcast of Dixie Dee's poems over WBCN the other night and would have sent the following telegram: "LOUDER AND FUNNIER," but the office here would not accept it for transmission collect. What's the matter, is your credit had?

By the way, Cap, why be so original in your praise

Not Even a Marine

London correspondence tells us that the microphone used by King George when his speeches are broadcast is made of solid silver. When it was displayed at the recent Radio show there it was displayed at the recent Radio show there it was guarded by a squad of detectives. During the New York show, the Gold Cup shaped like a mike, which was presented to Graham McNamee by Radio Digest, was on exhibition. There

Remember when the cry used to be heard daily at the post office when the senior class of the correspondence school call for their daily lessons:

Pooh, Pooh, Harvard, Bah, Bah, Yale, We gets our learnin' Through the mail.

Now with the Radio colleges we should expect stir-ring cheers such as the following to ring out from

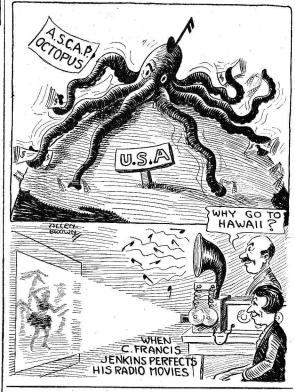
under the antennas:

Tune 'em high, tune 'em low,
Turn the dials! To school we go!
It is found most everywhere The University of the Air.

EXPERIENCES IN A RADIO LUNCHROOM—NO. 1

The morning was one of those real indigo ones, so we lay abed until the sun was well up in the sky. The clock told us that, Chicago skies being sunproof The clock told us that, Chicago skies being sunproof on weekdays. Then with that morning after taste in our mouth still lingering because we did not heed the wisdom of the ant and put away plenty of sarsarparilla for a blue morning, we hied out to the "Grecian Tea Room" around the corner for a "scupscoughee." While we were trying to balance ourselves on the stool in front of the porcelain slab used by the proprietor as a race course for his trained roaches and the customers as a place to park the "java and," we noticed the pitiful wail of an ill-tuned Radio. "Ah, ha," says we, "here's where we scoop Condensed and get material for a review of one of those programs for busy housewives." We did! The subject of the talk was: "Adenoids and Tonsils, the Cause of Morning Vomitting by Children."

News of the Week



Condensed BY DIELECTRIC

There is at least one aged person (probably thousands more) who, after hearing the first of the Atwater Kent concerts, declared her youth restored and joy unbound. But the great boon bestowed upon the Radio public in the form of concerts by famous artists is not confined to the infirm; it's universal. Toscha Seidl performed difficult violin selections with apparent ease and gave to less spectacular works the richness of his artistry—not for hundreds of paid auditors in concert hall, but for all who could listen. It is evident no pains is spared in putting these concerts on the air to approach as nearly as possible perfection in transmission. Let's see what proportion of listeners in avail themselves of these opportunities to hear without charge the very best of artists and music. For several years my urgent plea has been for such Radio entertainment. Do we like it? Write

WTAM, Cleveland, holds to the virtue of diversified programs and with apparent success. One of their programs included flute solos of more than passing merit. This instrument is infrequently heard on Radio programs, although there would seem to be no reason for excluding it. Many beautiful effects are produced in its playing and there could be fair substitution for some of the hackneyed piano and song numbers presented night after night. Mr. Mc-Mahan's haritone voice added to a concert of general Mahan's baritone voice added to a concert of general appeal and few would care to tune it out.

WMBF, Miami Beach, runs strongly to dance music presumably fitting the needs of their audiences, if a little tiresome to DX hounds. However that may be, they are guilty of one thing which the majority of broadcasters have overcome: the tendency of long waits between numbers. On this occasion of my listening to this southern station there were periods varying from a few minutes to more than five following the finish of a selection to the announcement. Fans like to know to whom they are tuned and only those who practice the regime of WHAS, Louisville, will continue in favor.

And now for a word of commendation for WOC, Davenport. Recently this station offered an orchestra program which was excellent in several particulars. The selections themselves were carefully chosen from the more lasting type of music and rendered in a manner to meet the favor of discerning listeners. Then for the station itself mention might be made of the fine modulation which insured reception of a bigh order. high order.

There are tenors and tenors appearing before the mike of this fair land, for some of whom there might better be no expression made. WEBH, Chicago, entertained in their studio a tenor of very pleasing whose singing of songs of the popular type was rather agreeable. Later in the program we were entertained with dance numbers, that is those who wanted to dance listened while others moved on the

There is no need for extensive comment on that portion of the programs from WLW, Cincinnati, which feature Isham Jones' dance orchestra. Suffice to say that this world-famous aggregation of terpsichoreau followers give pleasure to thousands of listeners whenever they play to the Radio public. Rhythm has. no more efficient exponents than they.

Interesting and Simple Explanation of Radio

Chapter II—The Ether, Wave Motion and Wave Lengths

By H. G. Tanner, Associate Professor University of Oregon

HAT has been called space is frequently called ether. Ether is a quently called ether. Ether is a better word to cover up our ignor-It is what is left after things definitely proved to exist have been taken away. It may be considered as the ocean

in which all matter (electricity) swims.
To assume its reality is the only way transmission of light can be explained in harmony with other experiences. (Some very expert mathematicians are not hampered with the necessity of a physical explanation and to them the phenomenon of light is explained without the ether, but most of us have not climbed to their

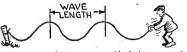
We know from experience that the beam of light from a flashlight is just as straight on a windy night as when all is calm. The air therefore has nothing to do with it. Furthermore we receive light from the stars whose distances are awe inspiring. Aviators and astronomers tell us the air extends but a short distance above the earth. If light were a stream of tiny particles, smaller than even the of tiny particles, smaller than even the electrons, shot out from the flashlight or other source we would not need an ether to explain it. But everyone today who has studied it arrives at the conclusion that light is not materialistic in its nature but is a wave motion, and that is why we have to have an ether.

Imagine Ether Made of Tiny Particles
We simply cannot conceive of this wave motion coming from the stars or other sources in nothingness, hence it is customary to assign what might be called a semi-material existence to the ether. For convenience let us imagine ether to be made up of particles extremely small compared to electrons. This would make the ether particle about the size of the mathematician's "point."

If light is a wave motion in this ether then Radio waves are also, because light waves and Radio waves are identical in every respect except size.

It will be easier to understand how ether waves are produced if one first freshens his memory about other waves.

Waved Rope Explains Wave Motion Suppose one end of a rope be fastened to a post and a person quickly moves the



A man waving a rope tied to a post pro-duces a series of waves.

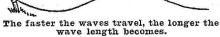
other end up and down. A wave is produced which travels along the rope. Every time this is repeated a wave is produced, and if at regular intervals a series of waves occur. In this series the distance between the humps is termed the wave

length.
Obviously, the faster one shakes the rope, the closer the waves will be to each other. Worded in technical terms, the higher the frequency (of production) the shorter the wave length.
This distance apart of the waves may

be measured in inches, yards, miles, etc., but because of the very great convenience of the decimal (metric) system of measures, Radio wave lengths are expressed in meters. A meter happens to be equal to 39.37 inches.

Speed of Wave Travel

If one maintained the same frequency of production but changed ropes the wave length might not be the same. This is length might not be the same. This is because waves travel faster in some ropes



than others. If they traveled faster in the second rope they would be stretched out, so to speak, and necessarily farther apart (longer wave length).

To sum it all up, the higher the frequency of production, the shorter the

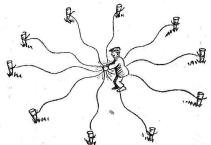


wave produced in the rope.

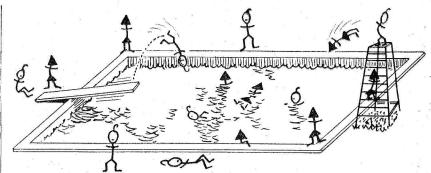
wave length; and the faster the waves travel, the longer their wave length. A given frequency may produce short waves in one medium and very long ones in another. In Radio, however, the speed is always the same, 186,000 miles per second. How Radio Waves Resemble Ropes

Extend the picture of generating waves in one rope to that of a person holding a great many ropes radiating in as many directions. Perhaps an even better illustration would be a person at the center of a large piece of canvas. Upon shaking it up and down waves would radiate from him in all directions.

Very much the same thing happens when a Radio wave is produced in the ether. Electrons are pumped by appro-priate apparatus—a dynamo for example from the ground up to the tip of the antenna. The next moment they and others of the wire are pumped back into the ground. These electrons in darting upward kick the ether behind them, and when they are suddenly called by the dyname to return they kick the ether upward.



shaking series of ropes stretched radially, gives idea of Radio.



The ether may be considered as the ocean in which all matter (electricity) swims.

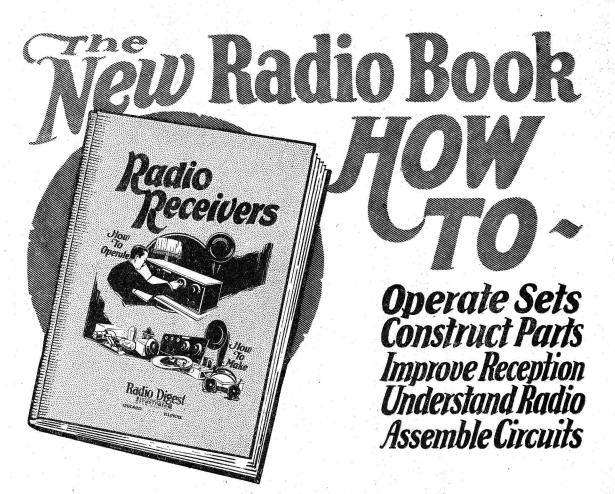
mensions as is the canvas but extends to infinity in all three directions. The wave is therefore of a more complex character. For our purpose we may consider only one section of this wave and think of a plane or disc of ether extend-

This action produces a wave in the other just like a wave was produced in the canvas.

The ether, however, is not of two dimensional distributions and the canvas.

Dynamo Is an Electron Fump

As just mentioned a dynamo is an electron pump. If it be constructed so as to pump the electrons first in one direction and then in the reverse direction it is called an alternator.
(Continued on page 24)



FREE With One Year's Subscription to Radio Digest

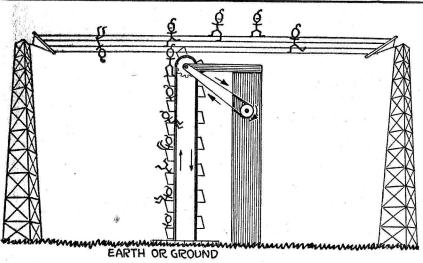
THE greatest assemblage of facts and hints, from actual everyday practice, ever gotten together. Edited by the technical staff of Radio Digest it supplies the demand for a book covering every phase of Radio from a simple explanation of Radio reception to a technical explanation of the different parts 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.

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A DYNAMO IS AN ELECTRON PUMP



The dynamo is an electron pump. When hitched to aerial and ground it pumps electrons from ground to aerial. Let us consider the bucket lift above as a pump.

EXPLANATION OF RADIO

(Continued from page 23)

Just as the rate at which the end of rope is shaken determines the length of the waves in the rope, so also does the frequency at which the alternator reverses the electron current determine the (distance apart) of the ether

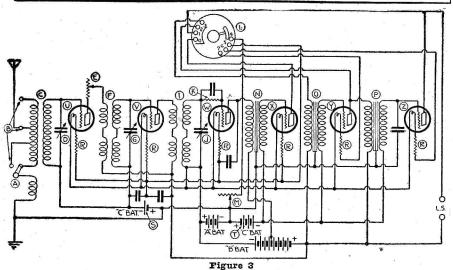
waves travel in the ether at a speed of 186,000 miles per second. If the alternator produced a complete up and down stroke in one second the wave produced would be 186,000 miles long. (Two wave humps would be this far apart.) This is because the first edge of the wave would have traveled this distance before the last of it would have been formed.

A wave length of such huge dimenis too unwieldy and impractical. A higher frequency must be used so as waves together. have found that a frequency of at least 10,000 waves per second must be used, and even this produces waves, 18.6 miles in length.

Frequencies used by the broadcasting stations lie between 600,000 and 1,500,000. The wave lengths corresponding to these two frequencies are 500 and 200 meters

respectively.
(In the third chapter of his series of articles, Mr. Tanner will tell how music is changed into ether waves. His simple analogies, based on commonplace things, will be employed again to bring the mysteries of Radio home to the non-technical reader .- Editor's Note.)

OPERATING AND TROUBLE SHOOTING



(Continued from page 12)

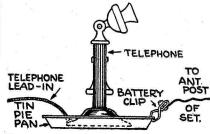
cuits to resonance on a single wave length so that the program being broadcast on that wave length will be heard with maximum volume and clearness, to the complete exclusion of all other signals. The tuned circuit consisting of condenser D and the secondary of transformer C is adjusted to maximum response to the desired wave length by knob D. The two sired wave length by knob D. The two tuned circuits, one of which consists of condenser G and the secondary of trans-former F, the other consisting of con-denser J and the secondary of transformer I, are brought to resonance simultaneously by the use of knob GJ.

Due to slight differences which are bound to occur in the values of the four instruments included in these two tuned circuits, the vernier condenser H is provided and connected across the larger variable condenser G. The tuning procedure outlined first brings the circuit including D into resonance with the circuit including J and, of course, into resonance with the program it is desired to receive. Adjustment of the small condenser H then of the Radio set. If wave length is too brings the circuit which includes condenser G into exact resonance with the there is two just mentioned. The control E between phone base and pie pan.—Wm. D. Cope, Los Angeles, Calif. may seem to be a great many controls and that a person has only two hands with which to manipulate them all, one quickly finds that two are used for preliminary coarse adjustment, two are then used for fine adjustment and only one is used for the final setting to maximum efficiency. (The next receiver to be considered for

Analysis, Trouble Shooting and Operating, is the Freshman Masterpiece. Comment on these articles will be appreciated by the Technical Dept.—Editor's Note.)

Pie Pan Antenna

The only parts necessary to construct this serviceable indoor antenna are a pie pan, nearby telephone, battery clip and from 10 to 20 feet of copper insulated wire. The battery clip should be clamped to the rim of the pan after spot on pan has been sandpapered or scraped for good contact.



Wire is attached to clip and the other end

Connect Plugs Correctly

When building a set, be sure to note to which side of the jacks you connect the plus terminal of the B battery. Then be just as sure to connect your phone cords to the plug so that the phone terminal marked with a colored thread will connect in the B battery plus in the jack. phones and loud speakers work much bet-ter connected correctly and the magnets do not lose their strength.





Where is the difference in radio transformers?

THE audio frequency transformers in your radio perform a most important duty. They aid in increasing the volume of sound ...in building it up to the desired strength. BUT-

When sound is increased, the tendency is toward distortion. That's where the difference comes in transformers. Inefficient transformers will give distorted reception, just as a defective mirror will show a distorted image.

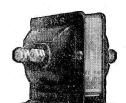
Whether you are building a set, or buying one, be sure about the transformers. No radio, remember, can be better than its transformers. A safe guide to follow is the Jefferson trade mark. You can depend on quality in performance when the name "Jefferson" is on the product.

Jefferson Transformers are made by transformer specialists the world's largest manufacturers of small transformers. There is a very definite reason why leading radio engineers specify "Jefferson." You'll find it in the clear, sweet, life-like amplification which Jefferson Transformers give. Sold by the better dealers, used by manufacturers of high grade radio sets.

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Keep your radio tubes like new! Rejuvenate them regularly, AT HOME, just as you recharge your storage battery. Jefferson Home Rejuvenator doubles and trebles tube life, quickly pays for itself. Raises your set's efficiency to 100%, and keeps it there! Completely restores paralyzed or exhausted tubes. Takes large or small tubes—types 201-A, 301-A, UV199, C-299, 5-VA. Don't be without this long-awaited radio necessity. \$7.50 at leading dealers.



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The great popularity of Jefferson Radio **DEALERS:** Transformers and the Jefferson Home Tube Rejuvenator makes it well worth your while to display these products prominently where your customers will see them. Order from your Jobber.

Fireside: 6 Tube Set of Perfect Reception

Part II—Panel Drilling and Assembly

By Jacques Fournier

ATTENTION has been called to the fact that in the first article, which appeared last week, there is an inconsistency between the list of parts and that part of the article which appeared on page 46. In the list of parts there is a Daven Leakandenser unit and there is a Daven Leakandenser unit and a Dubilier .001 mfd. fixed condenser while the article speaks of Electrad fixed condensers which do not appear on that list. There are two Firesides, identical in every way, except that the first one has Electrad condensers and a Daven grid leak, and it was from this one that I wrote these articles. The second one, in which I put the new Daven Leakandenser was in the hands of the technical editor for

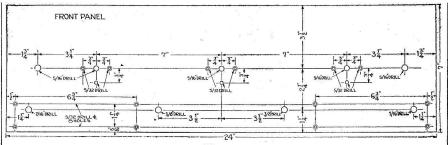


Figure 3

blueprint templates on receipt of 25c sent to Dept. 5, Radio Digest Publishing Co., 510 North Dearborn St., Chicago, Ill. We come now to the assembly of the parts that go on the front panel. The rheostats go on first, in the two holes 3½ inches each side of the center line and 1¼ inch up from the bottom. One is rated at 6 ohms resistance and goes in the left side hole; the other is a 30-ohm unit and goes in the right side hole. ohm unit and goes in the right side hole. If you have taken these out of the boxes and then cannot tell which is which, you will find the rating punched in one end of the fibre strip on which the wire is wound. Each is to be mounted with the terminals toward the center of the set.

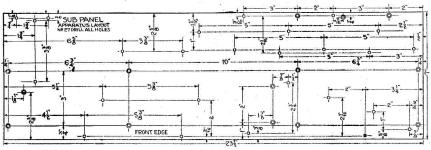


Figure 4

we will build the second one in these articles, since presumably you purchased parts by the list.

With this article there are included the drilling layout of the front panel as figure 3, the drilling layout for instrument mounting holes in the sub base as figure 4 and the drilling layout for wiring holes in the sub base as figure 5. For those who have been readers of Radio pieces for some time these should not For those who have been readers of Radio Digest for some time, these should not present much difficulty, but for those to whom this work may be new, the following explanation of the use of these drawings is included. Each layout is to be enlarged to full size on a heavy piece of paper, taking care to get all dimen-

test and it was from this that he made sions exact as, once holes are drilled, it up the list of parts. That being the case, we will build the second one in these machine screws may be put through installing since where the case of th strument and panel.

strument and panel.

When these have been enlarged, the three resulting drawings are known as templates. The drawing from figure 3 is to be secured on the face of the piece of bakelite to be used as front panel, either with metal or wood "C" clamps or a touch of paste in the corners. At each cross indicating a hole, a center punch and hammer are used to make a dent in the panel by nunching through

Figure 5

drills can be applied as shown. In cases where you haven't the exact drill specified, use the next size smaller which you have, and ream to the necessary size. It will be noted on the drawings for

the apparatus mounting holes that some of the holes have two concentric circles around them. This indicates that such around them. This indicates that such holes are to be countersunk. The same procedure specified for the template of figure 3 and the front panel is to be followed for figure 4 and the panel used as a sub base. Figure 5 shows the small holes to be drilled in the sub base through which wires pass from above to below it. Since there are, doubtless, many readers who like to build their sets but hesitate over their ability as draftsmen, Radio Digest will furnish full size

The C-R-L variable resistances come next, that marked for 200,000 ohms to be placed in the hole at the left end on the horizontal center line. The 500,000-ohm unit goes in the hole at the opposite end of the line, 3½ inches from the top edge and 1% inches in from the right end of panel. The Yaxley switch then is placed in the 7/16-inch hole in the lower left corner and the Yaxley jack in the same size hole made in the lower right corner. The condensers, being the more delicate apparatus, have been left for the last. I found, when laying out this set. last. I found, when laying out this set, that the dial pin came right at the point on the panel and below each condenser shaft, where the lower mounting screw of (Continued on page 26)

MEETING POPULAR DEMAND



all kinds of storage batteries.

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Qualitone Super Kit

USING the Qualitone Kit in the Simplest Possible Super-heterodyne described in Radio Digest, makes unnecessary any changes in the diagram and insures perfect operation on completion of the wiring. Each part fits into place as shown in Mr. Ryan's layouts.

Kit includes three long wave transformers, one filter coupler and one oscillator coupler, with complete set of blueprint instructions, all packed in sturdy SEALED carton. Genuine Bakelite and silk covered wire employed throughout.

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Can be used in 7 or 8 tube supers and the Hetero-flex described in Radio Digest of August 1st.

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LOOKING DOWN ON ASSEMBLED FIRESIDE 6-TUBE SET

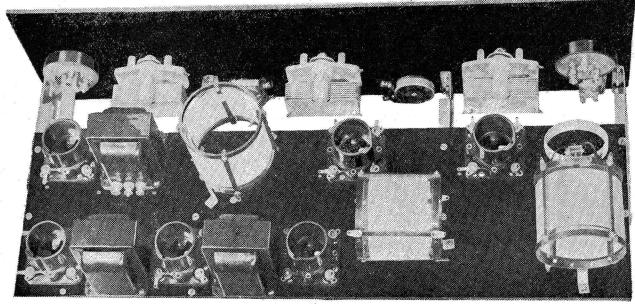


Figure 6

'FIRESIDE" RECEIVER

(Continued from page 25) the condenser had to go. In mounting each condenser, then, put in the two screws which are on a line with the shaft just enough to catch the threads in the mounting pillars and then slip in the dial pin through the lower mounting hole and catch its threads in the lower pillar of the condenser. Then screw in the machine screws and the pin a little at a time, going from one to the other so they will all be tight at about the same time. time, going from one to the other so they will all be tight at about the same time. With the rotor plates then turned so they are entirely enmeshed in the stator plates, slip the dials on the condenser shafts with 100 at the top. The slot on the smaller plate will then slip over the pin and the set screw can be tightened in each dial hub.

The two inner brackets are then mounted on the panel with their mounting flanges inward. The one to the left of the 6-ohm rheostat will have its flange at the top and pointing toward the right; that to the right of the 30-ohm rheostat has its flange toward the left. The outer brackets are then put on in the same inner brackets two

The sub base assembly now follows. Before mounting the coils, some alterations are to be made in the brackets sup-plied for them. Each of the nickeled brass brackets is made with a curved lug

first radio frequency transformer about denser unit on the under side of the sul first radio frequency transformer about 6 inches to the right and also at the rear edge. Considering the end of each bracket at which there is only a right angle bend, measure up 5/16-inch and bend again. The small square with the single hole, formerly intended for mounting to sub base, is then cut off. Our new 5/16-inch section is to be the foot of the bracket and a hole is drilled in its of the bracket and a hole is drilled in its center with a number 27 or 5/32-inch drill. This operation will be made clearer by observation of the photograph reproduced here.

by observation of the photograph reproduced here.

For mounting the third coil at a point behind the 30-ohm rheostat, a slightly different procedure is necessary. The foot of each bracket is bent and cut off as described above, but also the curved wing at the other end is bent to be in line with the long straight portion of the bracket. At one end of this third coil, it will be noted that the terminals are marked G and B. In the bakelite ring at this end there are two small bracket holes already drilled. On this same ring and diametrically opposite, drill two more very small holes the same distance apart. The two brackets just altered are apart. The two brackets just altered are then secured to this bakelite ring and the coil is mounted vertically with the small inner primary winding at the top. The antenna coupling coil with variable

The antenna coupling coil with variable primary is mounted on the two holes in the rear left corner 1% inches in from at one end with two small holes for attaching the coil. At the other end is a right angle bend with a single hole for securing to the sub base. Four of these are used for mounting the antenna coupling coil with variable primary is mounted on the two holes in the rear left corner and 3% inches apart. The first radio frequency coil is mounted on the two holes which are also 3% inches apart who holes which are also 3% inches apart two are used for mounting the antenna coupling coil with variable primary is mounted on the two holes in the rear left corner 1% inches in from edge and 3% inches apart. The first value is the rear left corner and the left corner and the left corner and the left corner and the rear left corner and the left corner is mounted on the two holes in the rear left corner 1% inches in from edge and 3% inches apart. The first value is mounted on the two holes in the rear left corner 1% inches in from edge and 3% inches apart. The first value is mounted on the rear left corner and the rear left corner is mounted on the rear left corner and the rear left corner is mounted on the rear left corner and the rear left corner is mounted on the two holes in the rear left corner is mounted on the two holes in the rear left corner is mounted on the rear

denser unit on the under side of the sub base. Two countersunk holes are shown a little to the right of center near the front edge and 2 inches apart. Flat head machine screws are dropped through these and one of the clips provided with the Leakandenser is placed on each. Put a soldering lug on each and then a small hex nut. The third Aero coil, to be mounted vertically, is then put on.

The Benjamin sockets are placed next, as follows: That which will hold the first radio frequency amplifier tube goes

as follows: That which will hold the first radio frequency amplifier tube goes squarely behind the variable condenser to the left, with its G and P terminals to the rear. The socket for the second radio frequency tube goes on the sub base just behind the left edge of the center variable condenser; G and P are to the rear. The third socket is placed at the rear edge of sub base just to the the rear. The third socket is placed at the rear edge of sub base just to the right of the second Aero coil with G and P terminals to the right. Two holes are provided by figure 4 for each socket.

Socket 4 goes 21/2 inches to the right Socket 4 goes 2½ inches to the right of socket 3 at the rear edge of sub base and socket 5 is to be 2½ inches from that to the right, at the rear right corner. In both cases G and P are to the right. The last socket goes in the front right corner with G and P to the right. Use a long screw in the hole on the left edge toward the rear and, on the under side, slip on one of the Dayen resister mount. slip on one of the Daven resistor mountings with its terminals front and back.

Close to the rear edge and 4% inches from the right edge is a countersunk hole, through which drop a flat head 6-32 hole, through which drop a flat head book machine screw and, beneath the sub base, secure the 1.0 mfd. fixed bypass condenser with its terminals forward. In this position, the left hand mounting lug is used under the screw and nut just mentioned.

We now come to the Autoformers. One is placed between sockets 3 and 4 with terminals forward. Mounting holes are provided in figure 4 at the front right and rear left corners. Another Auto-former is now set between sockets 4 and 5, with terminals forward, and secured in place. The machine screws which hold our third Autoformer in place also hold our third Autoformer in place also hold two units on the under side. This Auto-former goes just to the left of socket 6 close to the front edge with terminals to the rear. Beneath it place a .5 mfd. fixed bypass condenser with terminals to the rear and so that its right mounting lug is around the screw close to the front edge that is holding Autoformer.

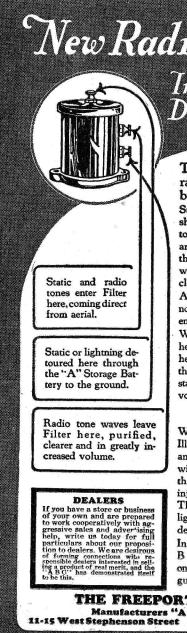
edge that is holding Autoformer.
At the rear left corner of this Autoformer, a longer screw is used and, on the under side, the second Daven resistor mounting is secured by a hex nut, with terminals front and rear. Behind socket terminals front and rear. Behind socket 4 and close to the rear edge of the sub base is a countersunk hole. Beneath socket 4 place a .5 mfd. fixed condenser with its terminals forward and its left mounting lug around a machine screw put through the hole just mentioned. Condenser can then be secured by a hexput. The same procedure is then followed. nut. The same procedure is then followed, using another .5 fixed bypass condenser and the countersunk hole behind socket 5. One short screw, with plenty of tightening on the hex nut, is sufficient

to hold each condenser in place.

The last .5 mfd. fixed bypass condenser The last 3 mid. Inxed bypass condenser is put in place using the countersunk hole just to the front and left of the front mounting screw of the antenna coupling Aero coil. Terminals go forward and the left mounting lug is secured around the screw. Now go back to socket

(Continued on page 30)





New Radio Static Filter Increases Volume Decreases Interference

Easily Attached

This new radio invention actually separates radio tones from static, clearing reception by detouring static.

Study the diagram shown at the side of this ad. It shows where the static and radio tones enter the Filter together. Inside the Filter, the static and radio tones are separated, the static being detoured to the ground through the "A" Storage battery. But the radio tone waves are filtered through entering the set purified, clearer and increased in volume.

Attach the Filter to any set-no matter what kindnote the reception-cut out the Filter-note the differ-

With the "A B C" Filter attached to your set, you hear music as it is really played by the artists - you hear the dramatic climaxes of speeches-you understand the market reports and other announcements. Distant stations are brought in easier, due to the increased

Lightning Proves Claims

We have on file a sworn statement by a Stockton, Illinois, business man Lightning struck his building and was carried by a radio aerial to a set equipped with the "A B C" Filter. The lightning was carried through the Filter to the ground with absolutely no injury to the tubes, batteries, tuning unit or cabinet. The building was unharmed. The Filter is a perfect lightning arrester. If it will detour lightning—it will detour static. Write for a copy of the sworn statement. In event your dealer cannot supply you with the "A B C" Filter, simply mail us \$5 00, and we will send one direct with full instructions for attaching. Full guarantee with each Filter

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Part III—The Wiring in 50 Operations

By James McDonald

F THE instructions in last week's issue were followed completely, the entire panel assembly is complete, as is the assembly of the sub base. Our Grand Prix is now ready for wiring and this part of the work divides into an even 50 operations. Before starting, however, the coldering lugs should be put on all tersoldering lugs should be put on all terminals, including those of the potentiometer and rheostat. Two are provided with the switch. Five dozen lugs are neces-

Considering, first, the sub base assembly, the sockets will be referred to by numbers, 1, 2, 3 and 4 across the rear edge from left to right and 5, 6, 7 and 8 back across the front edge from right

1. A wire is bent into a U-shape so that it can be laid on the lugs on the left front terminals of sockets 1, 2, 3 and 4, then forward and across the right rear lugs on 5, 6 and 7, then forward to the front right lug on socket 8. Solder to all lugs.

2. Another U-shape wire is bent to rest on top of wire 1 and connect to the right front lugs on 1, 2, 3 and 4, then forward and connect to the left rear lugs on sockets 5, 6 and 7 and the rear right lug on socket 8.

3. A wire is soldowed.

3. A wire is soldered to wire 1 mid-way between sockets 6 and 7 which goes straight forward to binding post 6 on the oscillator coupler, then down and slightly to the left to left terminal on rheostat. Solder to post 6 on coupler

and to rheostat terminal.

4. Drop a wire through the hole by the left rear terminal on socket 5 and, about 1¼ inch below sub base bend it forward so it will connect to the right terminal on the potentiometer.

5. Put a wire straight across from the left terminal of the rheostat to left ter-

minal on the potentiometer.
6. Put in a short wire from post 4 on the coupler, down and to left, to the right

hand terminal on the rheostat.
7. A short wire about 1 inch long is next to connect right hand terminal on the rheostat to the left hand terminal

Put in a wire from the right hand terminal of the rheostat, across to right behind potentiometer to rotor terminal of the right hand variable condenser C-2.

9. A wire is to be bent and inserted,

from post 1 on coupler, back to edge of sub base and then to the left to the rotor terminal on the left variable condenser, C-2, then back to the rear Imp jack. Should be soldered at each end and to the rotor terminal.

10. Now place a wire from post 5 on the coupler, going ½ inch back, then to the right to the stator terminal on the left side of right hand condenser C-2.

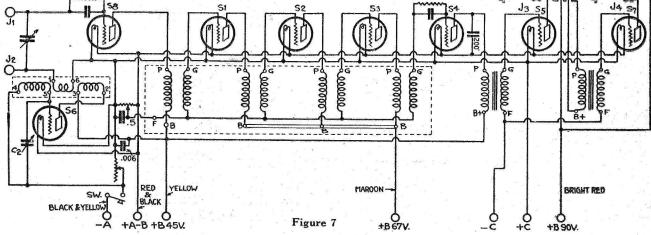
Determine the point on wire 10 opposite the front right post on socket 6.

11. Determine the point on wire 10 opposite the front right post on socket 6.

12. Run a wire from post 2 on the coupler, back and up through the hole for the left front post on socket 6, and solder to that post.

13. The next wire goes from post 3 on the coupler, back almost to the Multiformer then to the left between Multi-former and AT-2, to the B terminal at

left end of Multiformer. 14. Loosen the nut on



15. Connect a wire from the center terminal of the potentiometer to F terminal at the right end of Multiformer.

16. A short wire is now inserted connecting the right hand terminal of the 5 mfd. condenser to the nearest point of

wire 15 just inserted.
17. The other terminal of the .5 mfd. condenser is to be connected to the left hand terminal of the potentiometer.

At the point where wire 13 passes under the front edge of the sub base, connect a wire which should drop 1 inch, then go to the right around front end of AT-1 to the B plus post on AT-1. This passes above wire 4.

Attach a 34-inch length to each end of the Dubilier type 601 fixed con-denser of .006 mfd. capacity. One of these goes to the joint where wires 13 and 18 meet while the other goes to the left hand terminal of the rheostat.

20. Drop a wire from the left front terminal of socket 5, through the hole, then downward and to the right to the top spring on jack J-3.

21. A short wire is to run up from terminal G on AT-1 through the hole to G terminal, the right front one, on socket 5.

22. A wire from the second spring on jack J-3 goes back 2 inches, then to the

left to the P terminal on AT-2.

23. From the third spring a wire goes back 1 inch, then to left to the B plus post on AT-2.

24. From the upper terminal of jack J-4 (at left of set) run a wire up through the hole by the left front post (P) on socket 7 to that post.

25. A wire is now put in straight across from the bottom spring on jack J-3 to the frame terminal on jack J-4.

26. Run a wire from the F terminal

on AT-1, back and downward 1¼ inch, then to left and then forward and down to F terminal on AT-2. (See photograph

of wiring).

27. We complete the loop circuit by putting in a wire from the stator terminal on the left side of the left condenser C-1 back to the front Imp jack.

28. Insert a wire to go from P terminal

chine screw holding socket 6 and put in the 5 mfd. fixed condenser by slipping a mounting lug under the nut. Terminals are forward.

15. Connect a wire from the center on AT-1, back and to the left, up through the left 1 inch and up through the hole by the rear right terminal on socket 4, to that terminal. This wire should be kept about ½ inch below sub base.

26. Calling the left 1 inch and up through the hole by the right front terminal (G) on socket 7.

31. Drop a wire from the rear left post on socket 8 through the sub base,

29. Solder one terminal of the Dubilier .002 mfd. fixed condenser to wire 28 about midway of its below sub base length; then run a wire from the other terminal about 2 inches to wire 4 where it bender unward. it bends upward.

30. Next wire goes from G on AT-2 to

post on socket 8 through the sub base, back and to the right between sub base and Multiformer to the P terminal at the left end of the rear edge of the Multiformer.

The second post from left on rear edge of Multiformer is G; run a wire up (Continued on page 28)

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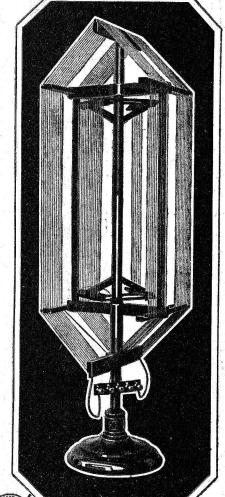
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WIRING PHOTO DIAGRAM FOR GRAND PRIX SUPER-HET

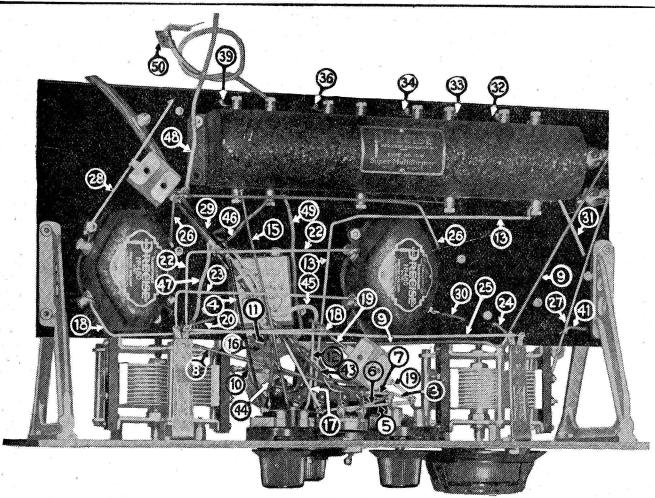


Figure 8

rear left post on socket 2.

35. Fifth post is P; run wire up to

35. Fifth post is P; run wire up to rear right post on socket 2.
36. Sixth post is G; run wire up to rear left post on socket 3.
37. Seventh post is P; run wire up to

rear right post on socket 3.

38. Take one of the Dubilier grid condensers and clips and set it vertically between sockets 3 and 4 with clips to left and solder the lower terminal to the lug

on the rear left post of socket 4.

39. A wire connecting to the upper terminal of this grid condenser is bent ½ inch to the right and rear, then down through hole to G, the eighth post on Multiformer.

The other Dubilier grid condenser and clips is set vertically in front of socket 8 with clips to the front and a short ½-inch length of wire connects from

machine screw and on the under side piece of heavy strip brass about 5/16-inch wide and % inch long, in which a hole for the screw has been drilled in one end. The Belden cable is secured under this at a point about 4 inches back from where the braid ends. The end of the Belden cable is used, at which the separate leads are but 5½ inches long. With a piece of heavy cord, cable the Red and Black, the Yellow and Black and the pure Yellow leads from the end of the outer braid, a distance of 2½ inches.

43. Solder the Yellow and Black wire to the right terminal of the switch.

Solder the Red and Black wire to the right terminal of the potentiometer.
45. Solder the Yellow lead to the junction of wires 13 and 18 described under

operation 18.
46. Cut off the Maroon wire so that,

GRAND PRIX SUPER-HET

(Continued from page 27)

through sub base to rear left post on socket 8.

41. Put in a wire from the upper terminal, bent to the left and slightly back, down through the hole provided, then to the right terminal of socket 1.

33. Next post is P; run wire up to rear right terminal of socket 1.

34. Fourth post is G; run wire up to rear left post on socket 2.

35. Fifth post is P; run wire up to of heavy strip brass about 5/16-inch wide.

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47. Cut off the bright Red wire so that it just reaches the frame terminal, the lower one, on jack J-4.

48. Solder a 1-foot length of flexible wire to wire 26 where it bends to the left after extending 1¼ inch back from the F terminal on AT-1.

49. Solder a 16-inch length of flexible wire to the left terminal of the .5 mfd. condenser and run it out to the rear between the Multiformer and the sub base.

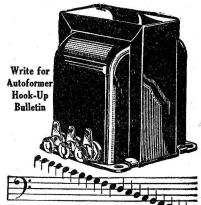
50. Recently, the Crowe Name Plate and Manufacturing company, of Chicago, have brought out some long needed little identification tags for leads. These are known as "Crowe Cable Markers." These find a perfect use here, as once the set is in the cabinet it might be hard to identify the various colored leads. Put the — A on the Yellow and Black; the + A on the Red and Black; the B45 on the Yellow; the B + on the Bright Red. Take the B — and scratch out the — sign; scratch in 67. This tag is then secured on the Maroon lead. Flexible wire 48 gets C — and wire 49 gets tag C +.

(The wiring of the Grand Prix receiver is now completed and the experienced fan can connect up the set and put it into operation. Those who have not set up and operated sets heretofore had best wait, however, for the connecting and operating article in next week's issue.— Editor's Note).

Follow the Directions

When constructing a new set from an article, whether published in Radio Digest or some other periodical, follow the data given to the letter. If you do not, and try to ring in some bright ideas of your own, neither the writer of the article nor the technical editor of the paper, can possibly answer questions on it. No home constructor can expect the technical staff of any paper to build up a special set with the variations made just to answer his individual problems. The writer of the original article did all the work once to present the data on a group of parts and a hook-up that it was known would work well.

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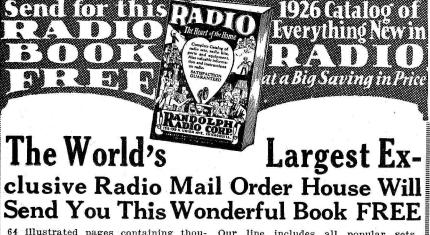
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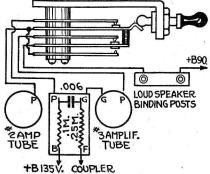
nights; the hot spells that visit us in summer seem to take little effect on the set. Here are the particulars:

My aerial is 85 feet long and 38 feet

The coupler is wound with 60 turns of No. 22 dsc. wire on a 3-inch coil with 6 taps taken off as shown. The rotor has 50 turns of the same wire on a $2\frac{1}{2}$ -inch

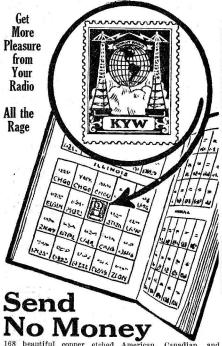
Resistance-Coupled Stage Switch

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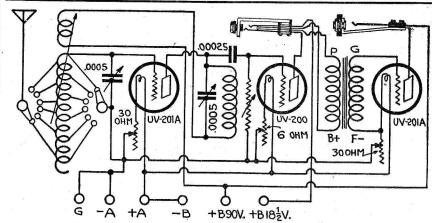
amplification are used, the volume is often

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HOOK-UP AND DETAIL OF COIL TAPS



The two variable condensers used are 23 plate with .0005 mfd. capacity. radio frequency tuned impedance coil is 40 turns of No. 20 dsc. wire on 3-inch tube.

The taps in the hook-up number 12, only 6 coming from the coupler. This is explained by the smaller diagram. The audio frequency transformer is 6 to 1 ratio. If frequency transformer is 6 to 1 ratio. If any difficulty is encountered by your readers they can write me direct.—John Mulliken, 128 Bates St., N. W., Washing-ton, D. C.

too great from nearby high-powered sta-tions, and as no way is provided for cut-

ting in between stages as in transformer coupled amplification, the arrangement shown in the diagram was devised, for cutting down to the second amplifying tube. When greater volume is desired,

tube. When greater volume is desired, the little wooden plug is left loosely in the jack. By merely pushing the plug in, the

loud speaker is automatically connected to the plate of the second amplifying tube,

the third resistor-coupler and tube being disconnected in the same operation.

powerful station, finds the volume far greater than he needs, pushes in the little plug, and behold, the music is greatly softened.-J. F. Gardepe, Columbia, S. C.

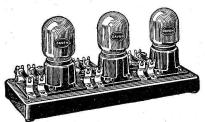
Tool for Wire Skinning

If you are at loss for a good tool to use in peeling the insulation off of wires file a couple of notches in the blade of a common kitchen paring knife near the handle

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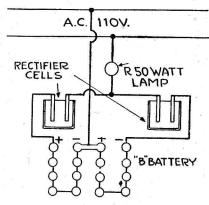
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(O) (O)

B Charger Hook-up

To charge B batteries I use two rectifier cells consisting of lead and alu-minum plates immersed in a saturated solution of borax. The plates are about one inch apart and have one square inch of their surface immersed in the solution. You can get these plates from Curtis-Griffith Sales, 1109 Eighth Ave., Ft Worth Tevas Ft. Worth, Texas.
Run the alternating current through the

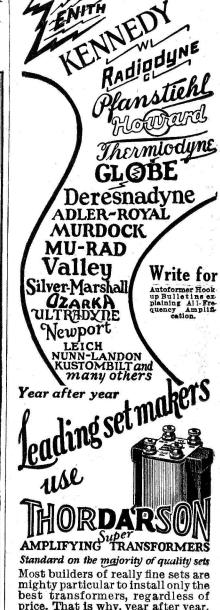
cells for 20 minutes to frost (form) the



aluminum plates, then connect as shown in diagram. One side of the alternating current line goes to 50-watt lamp as resistance, then to the cells where the aluminum plate of one connects to the lead plate of the other. From the remaining plate of the other. From the remaining lead plate connect to the negative end of B battery, from the remaining aluminum plate run a wire to the positive end of B battery. The last wire is to be run from center of B battery to the remaining alternating current wire.

This hook-up will charge four dozen cells at one time if necessary as the current is forced to alternate in the balves.

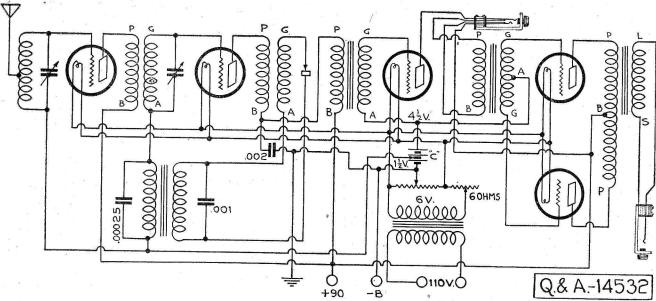
rent is forced to alternate in the halves; that is, it goes one way one-half cycle and the other way in the other half cycle. -V. O. Humphrey, Gooding, Idaho.



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Questions and Answers



110 Volts A. C. on Erla Filaments

(14532) LG, Detroit, Mich.

I am enclosing the diagram of my Erla five tube receiver. Will you please complete this daigram so that the filaments of the tubes are lighted from the 110 A. C. lines in the way described by a Mr. Cope in one of your recent numbers?

The diagram requested is shown here. You will note that there are two C battery voltages used; the R.F. grid returns are tapped in at 1½ volts. In the original circuit these returns were brought back to the negative filament line between the rheostat and the battery which put a grid bias of about 1½ volts on these grids. The ground connection now comes from the key wire to which grid returns, potentiometer arm and negative B must attach. With the exception of the filament circuits, no changes in wiring are necessary form the original hook-up.

Best Audio Amplifier

(14700) MAC, Youngstown, Ohio.

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and one push pull; (4) one transformer and two resistance-coupled stages; (5) three stages resistance coupled.

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Set your Radio Dials at 210 meters for the new 1000 wait World Storage Eathery

STORAGE BATTERIES

Solyour Radio Dials at 210 meters for the new 1000 wait World Storage Eathery

Watch for announcements.

WEAF - WGN - WJS - KHJ - KGO - KFAF - WJY - KOP

dressing the circulation department and enclosing 10 cents for each one desired. In the March 28, May 16, and September 26 issues are articles relating to underground antenna systems, their installa-

When working about the set, always throw off the battery switch, or better, disconnect the A and B battery connecting wires.

Where you see these 3 signs in circuits — use

At your dealer's

Potter Manufacturing Co., North Chicago, III



Hear What YOU Like

Thank-You'

YOUR OWN Name and Address Printed Free on Applause Cards Stations gladly put on num-bers you request. We print special cards that get ATTION-TION. Applaud your favorites. FREE LOG with 1st Order

Quality cards. High grade printing. All the rage. 100—\$1.45, 200—\$1.95; 300—\$2.45. Money refunded if not delighted. Send No Money just pay postman when you get cards and FREE Log, Order NOW Radio Printers, Dept. 8418, Marengo, III.

QUALITY TUBES



67-A Fifth Ave. NEW YORK

"FIRESIDE" RECEIVER

(Continued from page 26)

3 and loosen the nut on the mounting screw in the right edge close to P terminal. Slip the bakelite terminal block of the Jones Cabelug on this screw with terminals to the front and using the left mounting hole. This unit was not put on sooner as the cable would have been in the way. It is, of course, on the under side of sub base.

side of sub base.

Two holes are left, parallel to the rear edge, and close to the rear left corner. These are for the antenna and ground binding posts. With these put in, the assembly is completed. In the photograph, figure 6, these binding posts are not shown, but the holes for their insertion appear in figure 4.

(The wiring of the parts just mounted will be the subject of Mr. Fournier's third article to be in next week's issue.— Editor's Note.)

Radio Map FREE

With New Perpetual Loose Leaf LOG

New 64 page log. Corrected sheets may
be secured as changes in calls, wave
lengths, owners, addresses, etc. occur.
Holds 504 stations. Shows 4 dial settings, remarks, etc. Tuning suggestions.
Station list by wave lengths—by statics,
etc. Trouble preventions, trouble finders,
Full of other valuable information. So convenient. Worth many times small cost. Just what you need,
enjoy your radio more. Only \$1. Pay postuman after log and
PREE map arrive. Postpaid if you prefer to pay with
order. Money refunded if not deligated, Order to lay—now.

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Takes Place of Tube

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



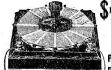
Tested to Stand TUBE VOLTAGE and lasts in-definitely.

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

LOW Steinite Loss **Interference Eliminator**

No Radio Set Complete Without It

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



\$4 Amazing Results, Better Reception Guaranteed or **We Refund Your** Post- Dollar, Send paid. Order Today

Select Stations At Will

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

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From dealers or sent direct postpaid upon receipt of price and your dealer's name. Write for free technical circular by W. W. Harper, the designer.

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Radiophone Broadcasting Stations

Corrected Every Week-Part VI

Wave length	Frequency (kilocycles)	Power (watts)	Call signal	Location	Wave length	Frequency (kilocycles)	Power (watts)	Call Location signal	Wave length	Frequency (kilocycles)	Power (watts)	Call signal	Location	Wave length	Frequency (kilocycles)	Power (watts)	Call signal	Location	Wave length	Frequency (kilocycles)	Power (watts)	
	nited	1	es S	tations by	234	1,280		KFOL Marenge, Iewa KFUP Denver, Colo.	254	1,180	50 50		Corvallis, Ore.	275	1,090		KFBB KFDD	Havre, Mont. Boise, Idaho.	461.3	650		AE Pittsburgh, Pa.
202.6			Len	gths Big Bear Lk., Cal.			50 50 10	KFUS Oakland, Calif. KMJ Fresno, Calif. WDBQ Salem, N. J.			50 100 100	KFJZ KFLR KFW	Ft. Worth, Tex. Albuq'que, N. M. H Chico, Calif.			500 500 500	KFKU KFSG KQV:	Lawrence, Kans. Los Angeles, Cal. Pittsburgh, Pa. New Orleans, La.	468.5 475.9	630 1	500 WC 500 WR	Los Angeles, Cal. AP Washington, D. C. C Washington, D. C. AP Ft. Worth, Tex.
97.5		50 20	WIBD	Joliet, III. Elizabeth, N. J.	£757		10 5 100	WEBE Cambridge, 0. WFBD Philad'phia, Pa. WFDF Flint, Mich. WGBM Providence, R. I.			500 10 100	WCAJ	C Ashville, N. C. Uni. Place, Nebr. A Allentown, Pa. B Baltimore, Md.			50 500 500	WABZ	New Orleans, La. Port Huron, Mich. (Harrisburgh, Pa.	483.6	620 8	500 WE 500 WF	El Boston, Mass. AA Dallas, Tex. C Davenport, Iowa
205.4	.1,460	50 10 50 30	KFXD	San Pedro, Cal. Logan, Utah Flagstaff, Ariz. Pydce., R. I., ptb.	2.		20 10 100	WGBQ Menomonie, Wis. WHBJ Ft. Wayne, Ind. WJBC LaSalle, III.			10 50 10	WFB2 WGB2 WHB	Z Galesburg, III. A Baltimore, Md. C Canton, Ohio			100 250 50	WBAC WBT WCAC	Decatur, III. Charlotte, N. C. Baltimore, Md.	491.5	610	500 WS 500 KG	UI Iowa City, Ia. W Portland, Ore. AF New York, N. Y.
	u"	20 100 100	WFRL	Evanston, N. Y. Breeklyn, N. Y. Tolede, Ohio	226		32	WKAP Cranston, R. I. WQAC Amarillo, Texas WGMUR'hm'd, H., N.Y.			100 50 250	WIAI	Burlington, Ia. C Greentown, Ind. D Norman, Okla. C Coldwater, Miss.			5,000 100 250 500	WEAL	Elgin, III. J Sioux City, Ia. / Lincoln, Nebr.) Milwaukee, Wis.	499.7 508.2	600 590	500 KF 500 WM	RU Columbia, Me. IC Memphis, Tenn. X Oakland, Cal.
206.8	1,450	10 500	WOCG	Utica, N. Y. Sycamore, III. W Oakland, Calf.	236	1,220	100	Andrew M. Carrier and Carrier Sanction	256	1,170	100 100	WSAI	R Fall River, Mass. Q Osseo, Wis. Wia Wia, Wash.			500 500 100	WHA	R Atlan. City, N. J. Pittsburgh, Pa. Oklahoma, Okla.	516.9	580	500 WI 500 WO	P Philadelphia, Pa. O Philadelphia, Pa. X Detroit, Mich.
		20 50 10	WIBA	W Wooster, Ohio Joliet, III. St. Petersh'g, Fla.			10 10 10	KFVG In'pendence, Kan. KFVY Albu'que, N. M. KFXE Waterloo, lowa.	/	1,170	100 20 250	KFIQ KFLF KFYI	Yakima, Wash. Gedar R'p's., la. Muscatine. la.	Į.		20 100 15 1,000	WMA	C Cazenovia, N.Y. D Cazenovia, N.Y. Jamestown, N.Y. D Batavia, III.	526	570	5,000 WJ 500 WH	R Detroit, Mich. O Des Moines, Ia. IYC New York, N. Y.
	1,441	250 100 5	KDZB	H'yweed, Calif. Bakersf'd, Cal. J Eureka, Cal.	25		100 50 100	WBOQ R'dm'd H. N. Y. WFBI Camden, N. J. WFBJ Cellegev'e, Minn. WGBF Evansville, Ind.			150 20 50 500	WBA	Berkeley, Calif. X Wilkes-Ba'e, Pa. C Gr'd Rpds, Mich. H Portland, Me.	_		50 250 500	WPA WSB1 WSM	K Agrig. Col., N. D. South Bend, Ind. K Dayton, Ohio.	535.4		1,000 WO 2,000 KY	AW Omaha, Nebr. W Chicago, III. IA Madison, Wis.
		100 500 5	WBNY WIBH	Santa Maria, Cal. New York, N.Y. New B'df'd, Mass.			15 100 100	WGBT Greenv'e, S .C. WIBA The Capital Times WRMU R'hm'd H., N. Y.		A	100 500 5	WDC WD0 WEB	H Hanover, N. H. D Chat'nooga, Tenn. T Dayton, Ohio	278	1,080	750 100	KFAL	New Orleans, La. Boise, Idaho Gd. Forks, N. D.	545.1	550	500 KF	UO St. Louis, Mo. D St. Louis, Mo.
		50 500 200	WKA	Meridian, Miss. V Laconia, N. H. K New York, N. Y. Chicago, III.	238	1,260	50 100	WTAD Carthage, III. KFCB Phoenix, Ariz. KFPG Los Angeles, Cal.			20 100 10 100	WHB	W Sp. Valley, III. P Johnstown, Pa. N Sycamore, III. K Escanaba, Mich.			500 200 500 200	KUSE	Detroit, Mich. Vermilion, S. D. G Brownsyle., Tex. F Chicago, 111.			Leng	
211.1	1,420	10 250	KFW	C Upland, Calif. D Avalon, Calif.	**		100 100 250	KFWU Pineville, La. KWKCW'ls'n D'ne'n Stu WCUW Worcester, Mass. WHBN St.Pet'sb'g, Fla.	258	1,160	50 50 50	WRH KFD	F W'hingt'n, D. C. H Tucson, Ariz. C Cedar F'ls, Iowa			100 500 100	WAB	D Rochester, N. Y. U Philadelphia, Pa. E Atlanta, Ga.	247.8 267.7		29 CF 500 CF	KC Thorold, Ont. MC Kingston, Ont. RC Kingston, Ont.
212.6	1,410	100 5 15	KFW'	New York, N. Y. V Portland, Ore. L Leese Opt. Co.	240	1,250	10	WRAW Reading, Pa.	ı.	x	20 10 50	KFP' KFU KOCI	W Carterville, Mo. L Galveston, Tex. H Omaha, Nebr.			0-100 100 500 100	WFB	Tuscola, III. G Altoona, Pa. U Fifd. By-Sea, Fi. M Rochester, N. Y.	291.1	1,030	20 CF 500 CJ	YC New Wstmtr., B.C. XC New Wstmtr., B.C. YC Scarboro Stn., Ont. RA Moncton, Can.
214.2	1,400	500 10 250	KFAV	L R'hm'd HI., N.Y. V Santa Ana, Cal. F St. Louis, Mo.	w , z,		10 10 500	KFRL Gr'd Forks, N. D. KFVE Un'sity City, Mo.			100 50 500	WAD	D Cincinnati, Ohio C Akron, Ohio C Lancaster, Pa. Y Chicago, III.			100 50 5	WHD WKA WLB	l Minneap., Minn. A Cedar Rap., la. Minneap., Minn.	312.3		500 CN 50 CF	RV Vancouver, B. C. CY Charlotn., P. E. I. CK Regina, Sask.
215.7	1,390	10 150 50	WCLS	P Brownsv'e, Tex. 5 Joliet, III. 7 N. Bend, Wash.			500 100 50	KFVI Houston, Texas KTAB Oakland, Calif. WABI Ist Uni. Church WCAT Rapid City, S. D.			100 100 50	WHE	C Rochester, N. Y. S Chicago, III. L. Omaha, Nebr.			500 50 500 250	W L B W M A W O Q	L Stevens Pt., Wis. N Columbus, O. Kansas City, Kans. C Valparaiso, Ind.	329.5	910	500 CF 500 CF 50 CH	CT Victoria, B. C. QC Saskateon, Sask. UC Saskateon, Sask.
	* *	50 50 20	WBB2 WHB WHB	Z Ind'apolis, Ind. L Logansp't., Ind. R Cincinnati. O.			50 10 100 50	WDBO Winter Pk., Fla. WGBI Scranton, Pa. WHAP Brooklyn, N. Y. WHBB Stevens Pt., Wis.	261	1,150	500 100 225	KFA	Y New York, N. Y. J Boulder, Colo. F Oklahoma, Okla.	the second of	1,070	500 500	WNA	C Boston, Mass. N Lawreebg., Tenn.			50 CJ 250 CJ 5,000 CK	GC London, Ont. WC Saskatoon, Sask. CW Brktn, Jct., Ont.
		100 100 100 250	WKB	1 Chicage, III. G Ch'ge, III. (Ptb.) C Harrisb'g, Pa. G Bay Shore, N. Y.	242	1,240	500 10 50	WOAX Trenton, N. J. WSMH Owesso, Mich. KEEP Moberly, Mo.			10 50 100 500	KFU	R Sioux City, Ia. A St. Louis, Mo. T Salt Lk. City, U. A Ogden, Utah		1,050	1,000 500 500	WSM	Nashville, Tenn. I Ithaca, N. Y. C Ber. Spgs., Mich.	340.7	880	10 CH 50 CK	RO Ottawa, Ont. CS Hamilton, Ont. OC Hamilton, Ont.
217.3	1,380	10 10 5,000	KFR) WJD	C Pullman, Wash. Granville, Ohio Homewood, III.		1,210	10 10 50	KFOJ Moberly, Mo. KFPM Greenville, Tex. KFRM Ft. Sill, Okla.			50 500 50	WAB KWK WDA	Q Haverford, Pa. (H Kennonwood, La. (Y Fargo, N. D.	288.3	1,040	500 500	WKA	R E. Lansing, Mich. O Lansing, Mich. C Hastings, Nebr.	356.9	840	500 CH	CA Toronto, Ont. IC Toronto, Ont. NC Toronto, Ont. SC Unity, Sask.
218.8	1,370	10 100	KFJC	Junct'n Cty., Kan. V Olympia, Wash. I Manhattan, Kan.			50 100 50 500	KFUJ Bree'nr'ge, Minn. KFUM Colo. Sp'gs, Colo. KFXH El Paso, Texas KSO Clarinda, Iowa	p d	- 191 s	100 250 250 100	WEA	R Boston, Mass. M N. Pl'nf'd, N. J. F Milwaukee, Wis. AZ Macon, Ga.	1	1,020	5-100 1,000 500	WBB	P Petoskey, Mich. L New York, N.Y. Los Angeles, Cal.			50 CJ 500 CJ	BC Terente, Ont. CD Terente, Ont. SC Terente, Ont.
		10 5 250	WHU	B Anderson, Ind. Flushing, N. Y. Red Bank, N. J.			100 50 250	KZM Oakland, Calif. WABY Philadephia, Pa. WBZA Boston, Mass.			500 200	WOA WPS WRR	C Lima, Ohio C State College, Pa. Dallas, Texas		1,010	500 500 500	WBA WEA	V Columbus, O. O Columbus, O. Houston, Tex.	201.1	700	500 CK	CL Toronto, Ont. NC Toronto, Ont. RT Toronto, Ont.
220	1,360	250 50 500	KFQI	S Flint, Mich. 4 B'lingame, Cal. 18.8'n Frn'co, Cal.			10 50 10 20	WCBH Oxford, Mich. WCBQ Nashville, Tenn. WEBC Superior, Wis. WEBK Gr'd R'ds, Mich.			100 100 15	WTA	C Bay City, Mich. R Norfolk, Va. Z Lamberty'e, N. J.	299.8	1,000	500 1,000 500	KSL	Q Fayettv'le., Ark. Salt Lk. City, Utah Atlan. City, N. J.		780 730	500 CN 1,650 CF	Y Winnipeg, Man. RW Winnipeg, Man. CF Montreal, Que.
		50 100 500	WCB	U Arnold, Pa. W Logansp't, Ind. A Parkesb'g, Pa.			100 50 500	WHBW Phila'phia, Pa. WTAP Cambridge, III.	263	1,140	50 50 100 50	KFM KFQ	Reportland, Ore. We Hought'n, Mich. Be Ft. Worth, Texas Reportland, Ore.	diffee	990	1,000	KTCL	Mooseheart, III. B Elgin, III. Seattle, Wash.			850 CH	CQ Vancouver, B. C. IYC Montreal, Que. KC Burnaby, B. C. AC Montreal, Que.
222	1,350	100 15 50	KFR	J Holy City, Cal. Z Hartington, Nebr. W Norfolk, Va.	244	1,230	50 500 100	KUOM Missoula, Mont. WAMD Mi'apolis, Minn.			250 50 250	WAA	M, Newark, N. J. BR Toledo, Ohio D Canton, N. Y.	309.1 315.0		500 1,000 10	KDK	R Providence, R. I. A Pittsburgh, Pa. Colo. (Portable).		DA DE SERVER SE	1,000 CK 50 CK 1,000 CN	CD Vancouver, B. C. CFC Vancouver, B. C. IRM Montreal, Que.
		100 20 100	WHB	S Takoma Pk., Md. D Bellef'taine, O. F Rock Island, III. H Culver, Ind.			100 100 100	WNAX Yankton, S. D.			250 5 100	WCB	AR SanAntonio, Tex. E New Orleans, La. AG Amarillo, Tex. BZ Savannah, Ga.			500 1,000 500	WAH	M Beaumont, Tex. V Pasadena, Cal. G Rhmd. Hill, N. Y		690	750 CF	AC Calgary, Alta. CN Calgary, Alta. ICM Calgary, Alta.
il 		100 50 20	WIBO	St. Pet'b'g, Fla. Elkins Park, Pa. J Poynette, Wis.	246	1 220	50 100 500	WSAZ Pomeroy, Ohio WTAT B'st'n, Mas. (ptb.)			500 20 100	WHA	AT Min'polis, Minn. V Henderson, N. C. AV Yellow Spgs. O.	317.3	946 940	500 750	WFK WGR	S New York, N. Y. B Chicago, III. Buffalo, N. Y.			100 CH	IXC Ottawa, Ont. CO Ottawa, Ont. IRC Calgary, Alta. IRO Ottawa, Ont.
224	1,340	5 15	KFBI	C San Diego, Cal. L Everette, Wash. P Iowa City, Ia.	246	1,220	10 50 500	KFJI Astoria, Ore. KFJY Ft. Dodge, Ia. KFVW San Diego. Cal.	266	1,130	250 250 50	WW.	DA New York, N. Y. AO Houghton, Mich. P Moberly, Mo. O Spokane, Wash.	322.		500 1,000 1,000	KOA WJA	IB New Orleans, La Denver, Colo. Z Chicago, III.	483.6 499.7		500 CF	IRR Regina, Sask. CU Hamilton, Ont. CH Iroquois, Ont.
		50 100 50	KFU KFU KFV	R Ogden, Utah U San Le'dro, Cal. S C'pe Gir'd'u, Mo. R Monmouth, III.	2 3		5 150 250 50	WABX Mt. Cle'ns, Mich.			500 500 100 50	KFN	F Shenandoah, la.	325.		500 500 1,500	KDY WBZ	l Cincinnati, O. L Salt Lk. Cy., Utal Springfield, Mass	516.9		100 CF 500 CJ	CK Edmonton, Alta. AC Edmonton, Alta. VRE Edmonton, Alta.
		250 15	WDO	D Patterson, N.J. F Laporte, Ind.			10 50 50	WEBD Anderson, Ind. WIBR Weirton, W. Va. WQAE Springfield, Vt.			500 250	KFW KLZ WAE	VD Arka'phia, Ark. Denver, Colo. 3B Harrisb'g, Pa.	336.	9 890	750 500 500	K N X	X Northfd., Minn Los Angeles, Cal L Northfd., Minn		Cuban	Statio Lens	ns by Wave
226	1,330	10	KFIU KFK	Q Boone, lowa I Juneau, Alaska Z F. M. Henry R David City, Neb.	248	1,210	100 10 50	KFCC Helena, Mont. KFEC Portland, Ore.			500 200 1,000	WCA WEN	CN Chicago, III. AH Columbus, Ohio NR Chicago, III. BC Memphis, Tenn.	340.	7 880	500 200 500 500	KFA KSA	C Clemson Col. S. C B Lincoln, Nebr. C Manhattan, Kan Q San Juan, P. R	200	1,299	20 5A	Z Mantanzas IS Santa Clara 'R Camaguey
	A 800	250	KJBS WBB	Z Hollyw'd, Calif. San Fran'co, Cal. A Newark, Ohio M Chicago, Ill.			100 100 100	KFJB Marshallt'n, la. KFKQ Conway, Ark.			500 100 500	WGI WHA	HB Clearwater, Fla. AV Wilm'gton, Del. AK Lockport, N. Y.	344.	6 870	500 500 500	WCB	A New York, N. Y D Zion, III. Chicago, III.	210	1,430 1,333	10 2R 10 6D	M Havana W Santa Clara
		1,500 150 100	WDA WEN	D Nashville, Tenn. IB U. S. (portable) L U. S. (p'table)			250 10	KFRB Beeville, Tex. KFSY Helena, Mont. KFUZ Virginia, Minn.	268	1,120	10 50	WW KFE	AB Fall River, Mass. I Dearborn, Mich. Q Oak, Nebr.	348.	6 860	500 500 500	KOB	State Col., N. M C Pullman, Wash C Hartford, Conn		1,308	15 8F 20 8J	AZ Camaguey TU Santiage Q Santiage 'W Havana
		10 20 100	WEB WFB WGB	Q Harrisburg, III. E Seymour, Ind. G Thrifton, Va. O Chicago, III.			500 500 500 500	WAPI Auburn, Ala. WBBG M'tap'sett, Mass.	92 (A)		100 50 500) KFF) KGU 0 WB	C Baton Rouge, La. C SanFran'co, Cal. J Honolulu, Hawaii BY Charleston, S. C.	352. 360	7 850 833	500 500 250	WJA WW	D Wace, Tex. I Detroit, Mich. Oakland, Cal.	235	1,276	10 2A	B Havana B Havana R Havana BY Camaguey
227	1,320	1,000 5 10	KFN KEV	V Santa Rosa, Cal. N Welcome, Minn. / San Jose, Calif.			100) WCSO Sp'gfield, Mo.) WEW St. Louis, Mo.) WGAL Lancaster, Pa.	2** 1		10 50 50	WCI WD WE	BG Herrin, III. (ptb) RC New Haven, Conn. AH Wichita, Kans. BW Beloit, Wis.	361.		500 100 2,000	WQ/ KGO	Y Baguio, P. I. 10 New York, N. Y Oakland, Cal.	250	1,250 1,200	20 8A 50 Q2	AZ Santiago PLC Havana GR Santa Clara
		100	0 WAE 0 WDE 0 WGE	BA Lk. Forest, III. BK Cleveland, Ohio BL Elyria, Ohio	250	1,200	100 500	KDPM Cleveland, O.			50 250 2 50	0 WFE	3M Ind'napolis, Ind. AM Cedar Rp'ds, Ia. OX Knoxville, Tenn.	365.		500 500 500	W H I	N New York, N. Y NF Kan. City, Mo B Kansas City, Mo		1,176	10 6J	Q Santa Clara BY Santiago BB Havana
229	1,310	500 50 100 50	KFA	VO Ft. Wayne, Ind. N Moscow, Idaho V Rockford, III. C Pasadena, Calif.			50 100 100 500) KFDX Shrevep't, La.) KFFV Lamoni, <u>lo</u> wa			10 10 2	0 WQ 0 WR 0 WS/	AM Miami, Fla. AX Gloucester, N.J. AX Chicago, III. AC Johnstown, Pa.	370. 374.		1,000 500	WEE WGI KTH	H Chicago, III. V Chicago, III. S Hot Spgs., Ark	260	1,153 1,132 1,110	200 6E 10 2L	BY Santa Clara JF Havana
s		10 10 5	0 WAI 0 WBE 0 WCE	T Taunton, Mass. 3L Richmond, Va. 3M Baltimore, Md.	1 N		500 500 50) KFVY Ibuq'que, N. M.) KFXF Colo. Sp'gs, Colo.) KGB Tacoma, Wash.	270	1,110		O KOF	P Hood River, Ore. AN Providence, R. I. AY Houston, Texas	379.	5 790	500 3,500 500	WGY	Q Manila, P. I. 'Schenectady, N. Y AZ Troy, N. Y.		1,110	5 1A 5 2J	P Havana AZ Havana L Havana K Twinucu
		5(1) 2:	0 WDE 0 WGE 0 WHE	3] Roanoke, Va. 3R Marshf'd, Wis. 3G Harrisburg, Pa. 2Z Montgomery, Ala.	1		50 20 25	WFBC Knoxville, Tenn. WHBA Oil City, Pa.	100		1,50 50 25	0 WG: 0 WG: 0 WG	HP Detroit, Mich. ST Atlanta, Ga. AG Norfolk, Nebr.	384. 389.		1,000	WEA	Seattle, Wash. BF Miami Beh., Fla R Cleveland, O.	295	1,070	20 21 100 21	MG Havana HP Havana
		10 10 25	0 WKI 0 WSA 0 WSA	BE Webster, Mass. N Allentown, Pa. J Grove City, Pa.	.]		100 150 500	0 WIAD Philadelphia, Pa. 0 WLAL Tulsa, Okla. 0 WMBB Chicago, Ill.			50 50 10 20	0 WO 0 WO' 0 WR	3L Decatur, III. I Ames, Iowa WL New Orleans, La. K Hamilton, Ohio	394.	5 760	1,500 500 1,500	WFI WO	AM Cleveland, O. Philadelphia, Pa Al San Antonio, Tes	. 315	1,000 970 952	100 2F	OL Havana RK Havana BY Havana
231	1,300		0 WSA 5 KDL 5 KFD	NU Chesham, N. H. R Devils Lk., N. D. Z Min'polis, Minn			100 100 100	WNAT Philadelphia, Pa. WQAN Scranton, Pa.	273	1,100	25 50 10	O WT	AW College Sta., Tex. AB Phoenix, La. DY Brookings, S. D.	394. 399.		500 500 1,500	WHA	T Philadelphia, Pa AS Louisville, Ky T Chicago, III.	320	937 903 857	10 20 100 61	CX Havana CW Twinucu CG Havana
		50 10 5	O KFP O KFG	T Wichita, Kans. R Los Angeles, Cal. C Taft, Calif. G Los Angeles, Cal.	202	1,190	50 50 50	0 KFCY Lemars, lowa 0 KFGD Chickasha, Okla.			50 10 5	0 KFI 0 KFI 0 KFI	GH Stan. Uni., Cal. Z Fond du Lac, Wis. KA Greeley, Colo. LZ Atlantic, Iowa	405.		500 1,000 500	KHJ WJY	Los Angeles, Ca New York, N. Y R Newark, N. J.	355	845	500 73 400 21	SR Camaguey EP Havana
		5	0 WBI 0 WCL 0 WHI	RE W'kes-Ba'e, Pa O Camp Lake, Wis BK Ellsworth, Me.	.		50 11 20	0 KFOY St. Paul, Minn. 5 KFPL Dublin, Texas 0 KFQT Denison, Texas			10 10 10	0 KH 0 KZI 0 WA	Q, Seattle, Wash. KZ Manilla, P. I. AB New Orleans La.	416 422		5,000 1,000 5,000	WK	O Minneap., Mini RC Cincinnati, O. W Cincinnati, O.	1. 360 400	833 750	. 10 5	OK Havana EV Colon WX Havana
0.55		2 5	0 WN	AX G'ncastle, Ind. AR Butler, Mo. AX Streator, III. Y Kellogg, Idaho			50 50 50	0 KFUV Sp'gfield, Mo. 0 KFWB Hollyw'd, Calif. 0 KMA Shenandoah, Ia.			50 50 50 25	0 WA 0 WB 0 WB	FD Port Huron, Mich. AA W. Laf'ette, Ind. BR Rossville, N. Y. AE Tampa, Fla.	428 435		1,000 5,000	KPO WSI	San Fran., Cal. 3 Atlanta, Ga. 1 Radio, Va.	N	1exica	n Stati Len	ions by Wave
233	1,29	10	0 KF0 0 KGT 5 WD	N Long Beach, Cal 'T San Fran'cc; Cal BZ Kingston, N. Y			30 10 10	0 WGAJ Uni. Pl., Nebr. 0 WGAX Burlington, Vt. 0 WFBL Syracuse, N. Y.			50 50	0 WE 0 WF	BJ New York, N. Y. AM St. Cloud, Minn. BH New York, N. Y.	440		1,000 500 1,000	KLE WD WM	S Independ., Mo WF Cranston, R. AF Drtmth., Mas	s. 310	1,153	C	YF Oaxaca, Mex. YS Mexico City, Mex.
			5 WEI 10 WH 20 WH	BA H'hl'd Pk., N. J AG Cincinnati, O. BM Ch'go, III. (ptb. BQ Memphis, Tenn			50 50 10	0 WGBX Orono, Maine 0 WGCP New York, N. Y. 0 WNJ Newark, N. J.			10 25 50 1,00	0 WI 0 WR 0 WR	K Cleveland, Ohio L St. Louis, Mo. M Urbana, III. R Dallas, Texas	447	la de la sa	500	WO:	S Jefferson Cy., M AQ Chicago, III. I Chicago, III.	0. 325 333 380	923 900 790	C	YH Mexico City, Mex. YX Mexico City, Mex. YB Mexico City, Mex.
	There	10	0 WJE	BD Ashland, Wis. BK Ypsilanti, Mich KO New York, N. Y			10	0 WRHM Min'polis, Minn. 5 WSRO Hamilton, Ohio			50 25 5	0 WR	W Tarrytown, N. Y. BF St. Louis, Mo. G Manhattan, Kans.	454	.3 660	500	KT	A Seattle, Wash. V Seattle Wash. Z New York, N.	400	750 625	C	YZ Mexico City, Mex. YL Mexico City, Mex.

The wonderful performance of these CROSLEY Radios will be duplicated this year—and with these New Prices they should be Radio's best value!

Lives in Lawrenceburg, Ind.—Listens to U. S. with a Crosley 2-Tube 51.

"I received program under normal conditions from New England States including Canada, the Western Coast and as far South as Florida and Texas."

EDGAR F. FEIST, Lawrenceburg, Ind.

Vermont Man Appreciates Selectivity of Crosley 2-Tube 51.

"KOA, Denver, Colorado, as you know is very close to WGB of New York City. Come in on my dial only one point from each other, yet I get no interference."

ALTON D. FARRINGTON, Putney, Vermont.

Lives in the Heart of Chicago-Gets the Country's Best in Radio with a Crosley 2-Tube 51.

"E. W. Plauk of 5130 Sheridan Road, Chicago, sends a list of 46 stations he hears regularly outside of Chicago from New York City to Los Angeles, California, to which he adds, "all praise and credit to Crosley Radio."

Vancouver to Torrington, Connecticut is a Short Distance for the Crosley

"Following are only a few of the stations I have received: WBAP, Fort Worth, Texas; 6KV, Cuba; KOA, Denver, Colorado; WTG, Manhattan, Kansas; KPO, San Francisco; Manchester, England and Vancouver, for which I can furnish sworn statement if desired."

l." HARRIS C. RODSEFELLOW, Torrington, Conn.

Crosley Trirdyn Has Brought Him 178 EKKO Stamps and KZKZ Ma-nila, Philippine Islands.

"In all I have logged 208 stations and received 178 EKKO stamps. The farthest I have received is 7,000 miles, which is Manila, Philippine Islands (KZKZ). I have received one Alaska station and four California stations."

LEO CASSELL, Indianapolis, Ind.

Hot Weather Did Not Keep This Crosley Trirdyn Owner Home.

"During hot weather I bring in New York, Schenectady, Detroit, Omaha, Cincinnati, Cleveland, New Orleans, Denver, St. Louis, and Atlanta on any night. No matter how many stations are broadcasting in Chicago I can always pick up 10 to 20 outside stations on my set."

ORVILLE G. DALLY

ORVILLE G. DAILY, Chicago, Illinois.

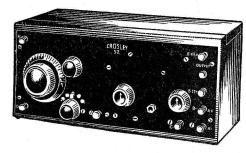
CROSLEY 2-TUBE 51 REGULAR

This efficient little set uses any make of tubes. Nearby stations on loud speaker, long range on headphones.

Now 1475, Was



CROSLEY 3-TUBE 52 REGULAR

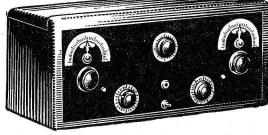


For a less expensive 3tube set the Crosley 52 regular cannot be surpassed at the new low

Now 25 30

CROSLEY SUPER-TRIRDYN REGULAR

In the Super-Trirdyn, 3 tubes do the work of 5. Matchless performance. Beautifully finished solid mahogany cabinet.



THESE PRICES DO NOT INCLUDE ACCESSORIES. ADD 10% TO ALL PRICES WEST OF THE ROCKIES.

Easy Tuning is a Feaure of the Crosley Trirdyn.

"My little daughter, two and a half years old, is a real radio fan. For an honest fact, she can tune in the most powerful stations and get some music." L. F. INFANGER,

Rome, New York.

35 States in the Union Report to this Crosley Trirdyn Owner.

"Here is a list of States from which I have received verification stamps—from one or more stations in each state. I have also heard Scotland during international test."

JOHN H. PUTHOFF, Akron, Ohio.

Low Power Stations Heard Across the Country with the Crosley 3-Tube

"One big asset of Crosley '52' is its ability to pick up low powered broadcast. I have picked up KFON, Long Beach, California, and KFUM, Colorado Springs, Colo., both stations using only 100 watts and KFEL, a 50 watt station in Denver."

PHILLIP S. WILLIAMS, Bristol, Pa.

Lives in California—Lists 35 Stations East of Rockies, Heard on Loud Speaker.

J. F. McGinley, living in Hallster, Calif., sends us a list of stations in the East including Ohio, Pennsylvania and New York, whose broadcasting he enjoys constantly on his loud speaker. He emphasizes the fact that he owns no ear phones.

"Coast to Coast" Reception with a Crosley 3-Tube 52.

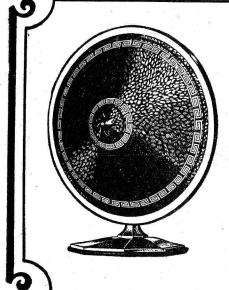
"I have a record of reception of practically all the large radio stations in this country and Canada from WBZ, New England, to WMBF, Miami, from Fort Worth, Texas, to CNRT, Toronto, and from CYL, Mexico City, to KGW, Portland, Oregon, and KFI, Los Angeles."

WALTER HAGERTY, Burlington, Iowa.

Spruce, Michigan, is within Earshot of Europe with a Crosley 3-Tube 52.

"During the International test last year I heard the following stations clearly and distinctly: Paris, Berlin, London, Honolulu, and Porto Rico. 6 and 8 tube sets in my neighborhood don't begin to compare with my 'Little Wonder'."

ELLIS C. MARTIN, Spruce, Michigan.



The Famous MUSICONE

This marvelous loudspeaker—well on its way to REPLACE HALF A MILLION HORN TYPE SPEAKERS by January 1st -substantially reduced because of assembly improvements developed by Crosley engineers. Reproduces all tones-without distortion. Crosley patented unit, not cone, secret of its amazing perfection.

was \$1750

Agency and the second s

BETTER · COSTS LESS THE CROSLEY RADIO CORPORATION—Department 49—CINCINNATI