EVER OFFERED IN PITTSBURGH

RADIOTORIALS

Last week's papers contained a press dispatch which said that some one in South Africa had heard plainly the radio program from America, given as a part of the International Radio Tests. So plainly was this program heard, said the dispatch, that the listener in South Africa could distinguish the barking of a dog in the United States.

Those who listened to the program of KDKA on the opening night of this International Radio Week will at once recognize the program as one played by the KDKA Little Symphony Orchestra, in which a descriptive hunting scene was given which included the barking of dogs.

Barking dogs may be heard every day, but to hear one at a distance of eight or nine thousand miles is another thing entirely. The dog with such an attenuated bark should be listed in the dog hall of fame along with such other canine immortals as may spring to our minds. Unfortunately the bark which travelled so far by radio was the only portion of the dog that was not nonexistent. This bark should take its place with the grin of the Cheshire cat in "Alice in Wonderland," which you will probably remember was the only visible portion of the cat.

The bark of the dog, however, will have a more abiding reason for eternal fame, for the accomplishment which proclaims it to the world is one of real achievement in the realm of science.

The transmission of a voice, be it of man or of beast, for such a distance, is undoubtedly one of the wonders of the age. In the early days of our country's history, the mere suggestion of such a thing would have raised the cry of witchcraft, and

\$250 Mahogany Phonograph,

As Illustrated,

With Gold Plated Equipment,

A positive sensation! One of the finest phonographs you have

A phonograph actually made to sell at \$250, in this sale for

ever seen or heard-large size-beautiful mahogany case, with

And With 20 Records Free!

LIBERAL CREDIT TELMS

tone-arm, reproducer, etc., all gold plated.

just \$99.75.

dire punishment would have been the result.

Today we read such announcements in our morning papers, and our credulity is not taxed in the least.

Letters are being received regularly by Station KDKA reporting the successful reception of this Pittsburgh station in South

This is all the more wonderful because our friends in South Africa must of necessity wait until the wee small hours of morning before they can listen to far away America. But with rare consistency, they have been losing their sleep while hearing programs from Pittsburgh, and two continents are being bound closer; together by these invisible lines of communication through the air.

Perhaps some of us are slow to realize the good which may come as the result of this pioneer work in international broadcasting, and it is well to repeat as frequently as possible that every tie which binds us closer to the people of other lands is bringing us nearer to the ultimate realization of the world peace which is the dream of all our great thinkers and statesmen.

When the people of one nation understand the peoples who are their neighbors, know their ways of living and their habits of thinking; there will be small danger of bickering and quarreling. This is the same principle which governs many of our acts with those with whom we come in contact. The better we know our friends and acquaintances the more inclined we are to be lenient and forgiving when their actions do not meet our conception of right and wrong. Nearly every misunderstanding can be explained away, if the persons involved know each other well enough; and the same is true of nations.

Radio broadcasting will provide the way for such mutual understanding among the nations, and, once it has been established as an international service, we may expect it to be a veritable dove of peace to the nations of the world

So when the dog's bark from Pittsburgh, which was heard in South Africa, becomes immortal, it may be the symbol of a finer and better civilization in which radio broadcasting will occupy a very prominent position.



The Men who know use Formica

RADIO engineers of 125 leading radio manufacturers use Formica for panels, bess panels, terminal strips, so on. These are the men who make radio what it is. With an experien have the best opportunity to know just what radio insulation will do.

in the world devoted to the production

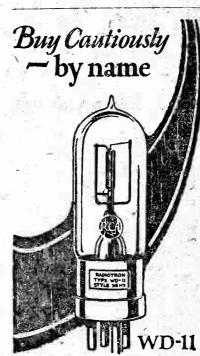
You can get Formica in three beautiful finishes: Gloss black, walnut and mahogany, and in any standard or special

Insist on Formica and get the tried

FORMICA INSULATION CO. 422 First Ave., Pittsburgh, Pa.

Formica Panels and Tubes O-M-C SUPPLY COMPANY, 138 Ninth Street Second Floor, Pittsburgh, Pa.





Radiotron

Steinite Gives On Crystal Sets!

Results truly amazing. Everyone astonished. H. Harryman. Opdyke, Ill., says: Thave heard 26 stations, most distant \$25 miles. Schenectady." H. Lapsley. Council Bluffs. La., says: "Second night I got KDKA. E. Pittsburgh." You can't doubt your own ears. Listen in on STEINITE at my risk. EACH STEINITE at my risk. EACH

Special Offer 2 Steinite Crystals, 1 CotSteinite open and the winder, 3 Hookens, \$1.00.

Steinite open and preventibilities for Crystal
sets Don't delay the Radio treat in store for you.
Send Doller Bill tooks for Special Offer. None genulno unless stamped "S". Two, big Atchisoo Banks
guarantee prompt refund if not delighted. Mfrs,
Famous Stolnite 1500 Mi. Tubo Set \$12; Long
Distance Crystal Set \$65; Deluxe Crystal Set
complete — head phones, aerial, ground \$10;
Stein Wave Trap \$5, and Stein Two Tube Amplifier \$15; Five Tubo Set \$65. FREE descriptive literature on request.

STEINITE LABORATORIES Radio Bldg., Atchison, Kansas

H. E. Terodyne DISTORTIONLESS AMPLIFIERS Says:

For the first time since the beords of the United States Department of Commerce this year show a decrease in the number of licensed amateur transmitting stations. The decrease in the number of stations is not large, and the number itself is not particularly important,-the significant fact is that there are less amateur stations today than there were a year ago. It would be rash, however, to conclude that the pass-ing of the amateur has begun. Instead of viewing this decrease in numbers with alarm, therefore, those who have at heart the welfare and continuing success of the American amateur should rather welcome the reduction in numbers as indicative that the weeding out process has be-

The possession of an amateur station license is a privilege which should be enjoyed only by those persons who are willing to comply with regulations laid down by the department of commerce. Furthermore, in our opinion, the applicant for a transmitting station license should be required to show some other purpose besides that of mere amusement before a license to transmit is granted. We, do not wish to imply that this purpose need be a very serious one. For example, the applicant may desire a station license in order that he may communicate with other staand experience in handling messages, or he may wish to qualify for an appointment as an official relay station of the American Radio Relay League, but whatever his purpose, it should be concerned in one way or another with the furthering of amateur radio communication.

Before the coming of broadcasting it did not matter much what purmitter. Just so he did not cause interferences with government and commercial stations, he could play with his set to his heart's content and there were only other amateurs him nay. Broadcasting, however, brought about greatly changed conditions and the amateur, in order to live, had to adapt himself to the

changed environment. The serious, no, let us call him the earnest amateur, he who repearing and who is responsible for the decrease in the number of licensed radio stations.

justice, was not as black as he was friendly criticism and a helping hand were all that were needed to set him straight on the road to worthwhile listener who continues to annoy his neighbors with his oscillating receiver in spite of campaigns of edugreatest hindrance to radio today. production up to their orders.

Du Pont Develops

After a great amount of experimenting, a radio loud speaker has been developed which, because of own radio receiving sets. Broadcast- ary changes in receiving sets. The uated in the vicinity of 54 degree cember 1 to 6, German engineers is claimed to be perfect in performing has improved, both in programs best engineers in the industry are north latitude, he said, and would are showing the new bearings, ance: The new loud speaker is made and in the mechanical apparatus used of the opinion that there will be no and in the mechanical apparatus used vibrating material and therefore, in the broadcasting stations. vibrating material and therefore,

Cannot impress a false note upon The most satisfactory feature of person buying a good set today and needle, which is believed to be swing- Palace to One Hundred and Twentythat set up by the diaphragm. Its this increase in busines is that it finding it obsolete a few weeks hence. ing westward.

properly built, give quality that is anced amplifier outfit that equals the good enough for anyone, in fact, so resistance coupled amplifier in allgood that it is used in the speech around quality.

DISTORTIONLESS AMPLIFIER)

amplifier circuits of most of the big ers and amplifiers designed to work broadcasting stations, but here again ufacturing tube ballasts, resistances we have a drawback in the cost. and leaks, have developed a kit for Such amplifiers are expensive, unbe- the construction of a three-stage lieveably so, and it takes a lot of resistance coupled amplifier that of sets that have amplifiers that transformer and tube engineering to gives excellent quality with present merely amplify and loud speakers get the correct result. Ordinary as- day tubes, eliminates rheostats by that simply speak loud. I hope you sembled push-pull amplifiers may the substitution of ballast resiswill pardon the puns. They are ad- work all right, but the writer has ances, and overcomes the greatest mittedly in bad form, but they do never seen a particularly good one, drawback heretofore experienced at least good enough to justify the with this type- noise in the resistcost of the transformers and the ad- ances due to changing resistant valusing transformers and tubes of the ditional tube. Some other method of ues. The leaks are sealed in little -amplification must, therefore, be ob- glass tubes to make them moisture-

The Pittsburgh Post

BROADCASTING

NEWS

PITTSBURGH, PA., WEDNESDAY, DECEMBER 10, 1924.

type generally available, it is very diffcult to get through in good shape Resistance coupling in amplifiers, all the notes necessary for good reboth radio and audio, is as old as production. The primary inductance radio. It has a lot of drawbacks, of the transformers is usually too low, not enough iron is employed in but none of them seem as serious to the cores, or the distributed capacity yours only to make them take second place to the average amplifiers. of the secondary windings is usually too high, or a combination of these The one fact sticks out like a life faults is present. On top of this, if preserver to a drowning man—they and is somewhat less expensive than enough "pep" is obtained from the cannot distort, and this is a big step. an amplifier of equal power built

The Daven Radio Company, manproof, insuring that the voltage drop across the tube plate and filament remain's constant at all times.

A three-stage amplifier of this character gives about the same amplification as the ordinary transquality of the best of the push-pulls,

where in it, and hence the familiar howl that sometimes develops in amplifiers is pleasantly absent. (This does not prevent the regenerative howl at cudio frequency, which is a function of the detector circuit and cannot be eliminated in any ampli-

It is not the policy of this department, ordinarily, to recommend any particular type of apparatus, nor do we wish to imply that good results cannot be obtained with other resistance coupled amplifiers. The Daven 100,000 clm resistances (non-inductive types such as the Lavite, Ward-Leonard, etc.,) and as long as good contact is obtained at both ends of the resistors, noiseless operation assured. The amplification possible is determined by the amplification constant of the tube multiplied by er the resistance of the rods, the greater will be the amplification with resistences may be of .001 mfds, calating the grids from the plate bat tery circuit may be of .0005 mfds former coupled two-stage, with the capacity. These must be of the very best quality of mica obtainable.

to criticism for the method in which refuge in the known fact that the

amplifier on strong signals the cores Years ago, resistance coupling was with transformer coupling, even inof the amplifying transformers are considered good enough to be used in cluding the cost of the extra tube Such an amplifier, the circuit of amplifier situation at present is saturated and the result is a flock of the speech amplifier circuits at which is shown here, cannot squeal. acute enough to justify any reason-KDKA, and has been only recently Push-pull amplifying circuits, when replaced by a very expensive balorder of things, and in consequence he exists today and will continue to exist in increasing numbers. It is the trivolous amendant who is also the frivolous amendant who is also the frivolus amendant who is also the friend when the friend th New Arctic Expedition

Phenomenal Pick-Up

INPUT FROM

DETECTOR

By JACK M. BENNETT.

radio public is day by day in every

way becoming more particular about

the kind of stuff they hear over their loud speakers, and it is a lamentable

great majority of the stuff is of qual-

ity that wouldn't pass muster were

anything better easily obtainable or

While a few commercial receivers

together, nevertheless these are by

when compared to the big majority

With apologies to Emil Coue, the

The radio industry right now is cation, and appeals to his sense of than was anticipated and few manu-kept the farmer from buying radio.

> covering that it does not require a few months. covering that it does not require a college course in electrical engineer— waiting before buying sets in the be
> Thousands of people also have been stall the station permanently.
>
> 25 to 60, depending on the nature of the grades. At the Power Expoing to make it possible to build their lief that there would be revolution-

Also, these high power stations will amateur radio. How different, and expectations. The manufacturers receive his market and weather rethough is the case of the broadcast who had been longest in the field ports during the daylight hours. American Radio Relay League headhad prepared for a record-breaking Heretofore such reception has been quarters in this city. season, but the season started earlier extremely difficult, and this condition fair play. The rights of other listen-facturers are now able to keep their At the present time probably not ice floes, this time for the purpose of more than 15 per cent of all the locating a site for a permanent mag-There are many very good reasons American and Canadian farmers netic station in order that observafor this tremendous volume of busi-have receiving sets. The farmers have had a very prosperous year and tions made by Richard Goddard of have had a very prosperous year and tions made by Richard Goddard of ness. Radio apparatus is better than I look for a large percentage of them the Carnegie Institute on the last ex-

> such changes. Development will be ratus for measuring on photographic mogul engine to handle a train of gradual and there is no danger of a paper variations in the magnetic cars that would reach from the

shape is the one which is best calshape is the one which is best calprobably will be permanent. I do
is necessary to many who are remote of having this station located in the however, to signal from the engine
is necessary to many who are remote of having this station located in the culated to eliminate distortion, it is not look for the usual drop next claimed. The peculiar qualities of not look for the usual drop next pyroxylin plastic have been shown summer. By that time the new It is the greatest source of communiby tests, it is claimed, to reproduce higher power stations, authorized at cation discovered since the first lannearer one goes to the pole the more is believed, is the use of radio, and the range of tone, instrumental or vocal, with clarity and fidelity. It Washington by Secretary Hoover, dustry in the United States will run apparatus. Variations of only one or pose without interfering with nearby recreates the message with particular faithfulness, while in volume it will be in operation. With these close to \$400,000,000 this year, quite two degrees at the equator show a public broadcasters. Many other compares favorably with any device high power stations it will be possible a sum for an industry which really swing of from 15 to 20 points in the exhibits bearing on radio to cut through the atmospheric dis- got started after the World war.

Arctic.

HARTFORD, Conn., Dec. 10-Back The study of the compass needle Justice, was not as plack as ne was sometimes painted, and frequently a friendly criticism and a habitant and frequently a friendly criticism. ready planning for another trip measure the height of the aurora running away beyond all estimates make it possible for the farmer to north, according to an announcement with the assistance of radio and mo-

Next summer the little schooner "Bowdoin" will again head into the Loud Speaker Horn it ever was. More persons are disto begin buying radio within the next pedition may be continued over a period of two years. The following

This observatory will be sit- sition in Grand Central Palace, De-

Radio has ceased to be a fad. It He explained that the advantage 400 cars. It would be impossible,

Long Freight Trains Make Radio Signal Necessary Adjunct With the application of ball bear-

be handled on a railroad varies from

This \$161.70 Complete \$00.75 IN THIS OUTFIT: Complete Outfit includes the famous SP-2 Receiver, one of the most remarkable radio sets

on the market. 4-tube tuned radio frequency. giving wonderfully satisfactory results on both local and long-

tive and sensitive. Liberal Credit Terms

distance stations. Highly selec-

(3 Amplifiers and one Detector).

1.50 3 27-volt B Batteries
18.50 16-volt Storage Battery (100 A. H.)

.50 Plug.
.50 Cord.

17.50 Famous Pathe Loud Speaker.
.50 Coll Antenna Wire.
.70 2 Insulators.

GREATEST XMAS PHONOGRAPH VALUE

8161.70 REGULAR VALUE —ALL COMPLETE FOR \$ 99.75.



fered this season in Pittsburgh. Quality of the highest, comparable in every way with Players usually offered at

Xmas PLAYER PIANO SALE The finest instruments for the money ofted this season in Pittshural Of regular \$500 Player Pianos!

Open Saturday Night Till 9.

Open Other Evenings Till 6.

Direct Entrance to Radio Annex at 963 Liberty Ave., Near 10th St.

EVER OFFERED IN PITTSBURGH

Last week's papers contained a press dispatch which said that some one in South Africa had heard plainly the radio program from America, given as a part of the International Radio Tests. So plainly was this program heard, said the dispatch, that the listener in South Africa could distinguish the barking of a dog in the United States.

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\$250 Mahogany Phonograph,

As Illustrated,

With Gold Plated Equipment,

A positive sensation! One of the finest phonographs you have

A phonograph actually made to sell at \$250, in this sale for

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And With 20 Records Free!

LIBERAL CREDIT TERMS

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EREA BARARA BER

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R ADIO angineers of 125 leading radio manufacturers use Formica for panels, base-panels, terminal strips, so on. These are the men who make radio what it is, With an experience based on hundreds of sets a week, they

Formica is made in the largest plant in the world devoted to the production of laminated Bakelite.

You can get Formica in three beautiful finishes: Gloss black, walnut and ma-hogany, and in any standard or special

Insist on Formics and get the tried and proven panel material.

FORMICA INSULATION CO. 422 First Ave., Pittsburgh, Pa.



Formica Panels and Tubes DISTRIBUTED BY O-M-C SUPPLY COMPANY, 138 Ninth Street





Radiotron

Du Pont Develops

menting, a radio loud speaker has been developed which, because of of pyroxylin plastic which is a nonvibrating material and therefore, in the broadcasting stations.

DISTORTIONLESS AMPLIFIER properly built, give quality that is anced amplifier outfit that equals the good enough for anyone, in fact, so resistance coupled amplifier in allaround quality.

-100Y +

While a few commercial receivers good that it is used in the speech are equipped with good, loud speak- amplifier circuits of most of the big ers and amplifiers designed to work broadcasting stations, but here again together, nevertheless these are by we have a drawback in the cost. Such amplifiers are expensive, unbe- the construction of a three-stage when compared to the big majority lieveably so, and it takes a lot of resistance coupled amplifier that of sets that have amplifiers that transformer and tube engineering to gives excellent quality with present merely amplify and loud speakers get the correct result. Ordinary as- day tubes, eliminates rheostats by that simply speak loud. I hope you sembled push-pull amplifiers may the substitution of ballast resiswill pardon the puns. They are ad- work all right, but the writer has ances, and overcomes the greatest mittedly in bad form, but they do never seen a particularly good one, drawback heretofore experienced at least good enough to justify the with this type- noise in the resistcost of the transformers and the ad- ances due to changing resistant valusing transformers and tubes of the ditional tube. Some other method of -amplification must, therefore, be ob-

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The Daven Radio Company, manufacturing tube ballasts, resistances and leaks, have developed a kit for ues. The leaks are sealed in little higher must go the plate voltage. A glass tubes to make them moistureacross the tube plate and filament remain's constant at all times,

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RADIO SECTION.

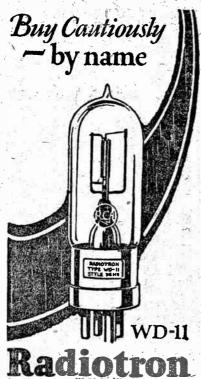
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best quality of mica obtainable to criticism for the method in which this story is presented, but takes refuge in the known fact that the amplifier situation at present is which is shown here, cannot squeal. acute enough to justify any reason.



econd Floor, Pittsburgh, Pa.





Xmas PLAYER PIANO SALE Of regular \$500 Player Pianos!

Open Saturday Night Till 9.

Open Other Evenings Till 6.

The finest instruments for the money of red this season in Bittal fered this season in Pittsburgh. Quality of the highest, comparable in every way with Players usually offered at

Liberal Credit.

Direct Entrance to Radio Annex at 963 Liberty Ave., Near 10th St.

SPERMITE at my risk. FACH CySpecial Offer 2 Steinite Crystals, 1 Cat.
Whisker, 3 Hookups, \$1.00.
STEINITE opens up new possibilities for Crystal
sets. Don't delay the Radio treat in store for you.
Send Dollar Bill today for Special Offer. None genune unless stamped "S". Two, big Atchiaon Bankf
guarantee prompt refund if not delighted. Mirs.
Famous Steinite 1500 Mi. Tube Set \$12; Leng
Distence Crystal Sets \$6; DeLuxe Crystal Set
complete — head phones, aerial, ground \$10;
Stein Wave Trap \$5, and Stein Two Tube Ampillifer \$15; Fiva Tube Set \$65. FREE descriptive literature 20 request. STEINITE LABORATORIES Radio Bldg., Atchison, Kansas

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Radio Industry Shows Capt. MacMillan Announces Phenomenal Pick-Up

The radio industry right now is

covering that it does not require a few months. college course in electrical engineer-waiting before buying sets in the be-stall the station permanently.

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By Major Herbert H. Frost. turbances which have tended to ham-

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ing to make it possible to build their lief that there would be revolution- This observatory will be sit- sition in Grand Central Palace, Dethe material from which it is made own radio receiving sets. Broadcast- ary changes in receiving sets. The uated in the vicinity of 54 degree cember 1 to 6, German engineers is claimed to be perfect in performing has improved, both in programs best engineers in the industry are north latitude, he said, and would are showing the new bearings, is claimed to be perfect in performaing has improved, both in programs ance. The new loud speaker is made and in the mechanical apparatus used and in the mechanical apparatus used and in the mechanical apparatus used such changes. Development will be returned to be perfect in performance in the mechanical apparatus used of the opinion that there will be no such changes. Development will be returned to be perfect in performance in the mechanical apparatus used of the opinion that there will be no such changes. gradual and there is no danger of a paper variations in the magnetic cars that would reach from the cannot impress a false note upon - The most satisfactory feature of person buying a good set today and needle, which is believed to be swing- Palace to One Hundred and Twentythat set up by the diaphragm. Its this increase in busines is that it finding it obsolete a few weeks hence. ing westward. shape is the one which is best calculated to eliminate distortion, it is

Radio has ceased to be a fad. It He explained that the advantage 400 cars. It would be impossible, is necessary to many who are remote of having this station located in the however, to signal from the engine culated to enminate distortion, it is claimed. The peculiar qualities of not look for the usual drop next from the large centers of population. preximity of the magnetic north to the caboose with the methods at pyroxylin plastic have been shown summer. By that time the new It is the greatest source of communi- pole was due to the fact that the present in use. The only remedy, it by tests, it is claimed, to reproduce higher power stations, authorized at cation discovered since the first lan- nearer one goes to the pole the more is believed, is the use of radio, and

HARTFORD, Conn., Dec. 10-Back The study of the compass needle, from the Arctic only two months, he said, would be accompanied by a Captain Donald B. MacMillan is al-Also, these high power stations will ready planning for another trip measure the height of the aurora straight on the road to worthwhile running away beyond all estimates make it possible for the farmer to north, according to an announcement with the assistance of radio and momade during his recent visit to the tion picture cameras.

> Next summer the little schooner "Bowdoin" will again head into the period of two years. The following be handled on a railroad varies from Thousands of people also have been summer Captain MacMillan will in- 25 to 60, depending on the nature

further investigation of the aurora, and might even lead to an attempt to

New Arctic Expedition

Long Freight Trains Make Radio Signal Necessary Adjunct

With the application of ball bearuse for radio has come to the fore, The limit number of cars that can fifth street, or approximately 350 to



DETECTOR

By JACK M. BENNETT.

radio public is day by day in every

way becoming more particular about

the kind of stuff they hear over their

loud speakers, and it is a lamentable

but incontrovertible fact that the

great majority of the stuff is of qual-

ity that wouldn't pass muster were

that simply speak loud. I hope you

With ordinary types of amplifiers,

all the notes necessary for good re-

With apologies to Emil Coue, the



RADIO SECTION.

H. E. Terodyne DISTORTIONLESS AMPLIFIERS Says:

For the first time since the beginning of amateur radio the records of the United States Department of Commerce this year show a decrease in the number of licensed amateur transmitting stations. The decrease in the number of stations is not large, and the number itself is not particularly important,—the significant fact is that there are less amateur stations today than there were a year ago. It would be rash, INPUT FROM ing of the amateur has begun. Instead of viewing this decrease in numbers with alarm, therefore, those who have at heart the welfare and continuing success of the American amateur should rather welcome the reduction in numbers as indicative that the weeding out process has be-

The possession of an amateur station license is a privilege which should be enjoyed only by those persons who are willing to comply with the very reasonable and generous regulations laid down by the department of commerce. Furthermore, in our opinion, the applicant for a transmitting station license should be required to show some other purpose besides that of mere amusement before a license to transmit is granted. We do not wish to imply that this purpose need be a very serious one. For example, the applicant may desire a station license in order that he nunicate with other stations and by so doing acquire skill and experience in handling messages, or he may wish to qualify for an appointment as an official relay station of the American Radio Relay League, but whatever his purpose, it should be concerned in one way or another with the furthering of am-

ateur radio communication. Before the coming of broadcasting it did not matter much what purposes actuated the amateur transmitter. Just so he did not cause interferences with government and commercial stations, he could play with his set to his heart's content and there were only other amateurs (hannily not all like himself), to say him nay. Broadcasting, however, brought about greatly changed conditions and the amateur, in order to live, had to adapt himself to the

The serious, no, let us call him the earnest amateur, he who regarded radio as something more than a means of mere amusement, had no difficulty in conforming to the new order of things, and in consequence he exists today and will continue to exist in increasing numbers. It is the frivolous amateur who is disap pearing and who is responsible for the decrease in the number of licensed radio stations.

The frivolous amateur, to do him justice, was not as black as he was sometimes painted, and frequently a friendly criticism and a helping hand were all that were needed to set him though, is the case of the broadcast listener who continues to annov his neighbors with his oscillating re-

Improving the "Uncle Sam" Tuner

Complete parts for three-tube set, including Litz wire-wound Tuner, Condensers, Sockets, Engraved Panel
Freshman Parts complete for 5-tube Set
Cockaday Parts complete, exactly as specified.
Bremer-Tully low loss parts, complete for one-tube set Uncle Sam Colls
Simplex Low Loss Coils
Electric Soldering Irons
80 Amp. Storage Battery
No. 12 Bus Bar, 2 ft.
No. 12 Enameled Aerial Whre,
100 feet
Scientific Phones
Ceco-Bakelite Base Tubes
Uncle Sam New Low Loss
Coils No. 61, 6-tube-regu-ice \$223.00, our price.. 135.00

BEIGHLEY HARDWARE & TOOL CO.

240 DIAMOND STREET Op n Saturday Evenings Until Christmas.

GUARANTEED RADIO TUBE REPAIRS (TYPES).

Bring or Mail in your burned out or broken Radio Tubes, any tube, pay \$2.25 and take away with you a guaranteed repaired EVERY TUBE MACHINE TESTED AND CERTIFIED

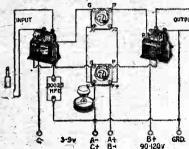
Mail orders we ship C. O. J. and aim to give 24-hour service. We guarantee the Tube and stand back of all our repairing. GLOBE ELECTRIC CO.

(SIXTH FLOOR) CENTURY BUILDING, PITTSBURGH. PA.

peared originally as the "Uncle Sam," little tuner need not be junked if the has been giving a high degree of sat- operator is sufficiently confident that isfaction in broadcast receivers. It he (or she, we must include) can was originally sponsored by the handle another control on the set. writer some years ago, and, since Were the primary of the tuner built by thousands of enthusiasts into not exist, but while we can make it good tuners. The qualifications of aperiodic and get the necessary selecfered were selectivity, simplicity of tivity, we would still have the weak fair efficiency, the latter condition be- it aperiodic we must introduce detriing brought about by loose coupling mental resistance into the antenna

diffication is necessary to get loud the resistance would have to be pretty perating in the vicinity of KDKA. The only solution is to loosen the

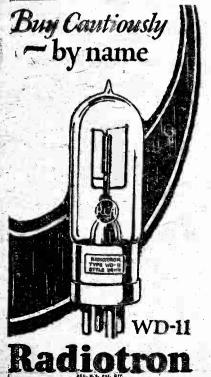
MORE VOLUME LESS NOISE



MAKE IT A RADIO XMAS Frost Musette Loud Speakers. \$12.50 Musselman Selective Aerials . 6.25 Remler Variocoupler . 4.50

Radio "A" and "B" Batteries-Al Radiola Receiving Sets From \$35.00 to \$425.00.

The Robbins Electric Co. 880 LIBERTY AVE.,



All of this we admit. Still, no mat about a year a little tuner of ter how hopeless the situation seems, untuned primary type, which ap- there is always a remedy, and the

IMPROVING THE "UNCLE SAM")

made its appearance, it has been truly aperiodic, this condition would construction and operation, and very signal to contend with, for to make general absence of superfluous circuit. To be non-oscillatory or aperiodic, the total resistance of the Still, there have been complaints circuit must exceed the value of trickling into the editorial sanctum twice the square root of the inductthat some signals are so ance multiplied by the capacity, and weak that a third stage of audio am- unless the antenna were very short,

VBZ, WGY and other stations of the coupling still further and then tune igh powered class, are not suf- the antenna to resonance, which explains the reason for the additional

The procedure is as follows: Referring to the diagram, a coll of about 35 turns of No. 22 D. C. C. magnet wire is wound loosely on a pickle bottle or other suitable support and then is slipped off, bunching the turns and tying with a few bits of thread to make it self-supporting. This is placed at "X" in the diagram.

A LOW LOSS variable condenser of .0005 mfds, capacity is now placed in the position shown by the dotted lines in the diagram. If any other style of condenser is used, the results will

Now we must loosen the coupling The variable condenser in the antenna circuit is set at zero, and the coil we have just wound is short circuited with a short piece of wire. Tune in the signal that interfered most with your reception and find the point of maxium volume. Now move the secondary condenser two degrees in the direction of maximum reading. The signal will still be heard, but not quite so strongly. One at a time, begin taking turns off the primary of the "Uncle Sam" coll (starting with the end nearest the secondary) until the interiering nal just disappears. When you have determined this point, anchor the primary turns securely in place and solder up the new end of the primary. You have obtained a "zero coupling" point for your interference factory, and will be able to tune him out at

Now take off the short-circuiting strap on your extra antenna coil, set the secondary condenser on the wavelength of some station, and increase the tickler coupling until the set just breaks into ocsillation, Swing the antenna condenser slowly over its entire scale until a point is found where oscillation ceases with a click. Your desired signal will now be audible, and may be built up by a slight readjustment of all three controls, starting with the secondary condenser and ending with the tickler.

The theory of operation is the same as that of the old familiar two variometer and vario-coupler regenerative circuit. The grid circuit is adjusted to resonance with the desired signal and the tickler coupling is increased to the point of oscillation. When the antenna circuit is tuned up to resonance, it absorbs enough power from the secondary to stop oscillation. When exact resonance between the antenna and secondary has been obtained, it is possible to regenerate the signal to unbelievable volume. The tickler operation is very smooth at resonance, little trouble being experienced with the tube slopping over into oscillation with an annoying snap, a fault sometimes difficult to eliminate

with the untuned primary. The writer hopes that this little suggestion will clear up some of the mystery apparently surrounding the untuned antenna circuit in the minds

Brandes Brandes O-M-C-Supply Co. Brandes Constituted Tone Headsen

138 Ninth St., Pittsburgh., Pa.





WHOLESALE DISTRIBUTORS Pittsburgh Radio & Appliance Co., Inc. PITTSBURGH. PENNA. 112 Diamond St.

\$10.

The name Navy Type \$8

to know in Radio

RADIO PROGRAMS FOR THE WEEK

7 p. m.—Boston Edison Big Brother Club.
7:30-9 p. m:—Gillette Safety Razor band.

ittle ones as "Uncle Beb."
7 to 7:30 p. u.—Dinner concert broadcast
from the Congress Hotel: Joska DeBabary's
ortiginal Nighthawis, Pompelian room; Joska
DeBabary's orchestra, Louis XVI room.

6 p. m.—Sommany divestock, grain, dairy, fruit and vegetable, positry and egg, hay and feed markets; farm news bulletins.
6:30 p. m. to 7:20 p. m.—Pipe organ recital; dullaby time; WLS theater operatta.

b-WMAQ (447) CHICAGO, ILL.

b-WHAS (406) LOUISVILLE, KY,

b—WHAS (408) LOLISVILLE, KY.

4-5 p. m.—Selection by the Alamo Theater orchestra, Harry S. Currie, conductor. Police bulletins. Weather forecast for Kentucky, Indiana and Tennessee. "Just Among Home Folks," a daily hus rous column appearing in the "Courier-Journal." Readings: Selected "Courier-Journal" and Louisville "Times" editorials. Late important news bulletins: 4:55 p. m.—Local livestock, produce and grain market reports.

5 p. m.—Official Central Standard time announced.

b—KSD (546) ST. LOUIS, MQ. p. m.—The home hour.

10 a. m.—Opening market quotations.
10:05 a. m.—Household hints.
10:55 a. m.—Tibre signals.
11:05 a. m.—Weather and river forcast.
11:05 a. m.—Market quotations.

1:10 a. m. - Agricultural bulletins

6:45 p. m.—Sport news and weather forecast.

7 p. m.—Sandman's visit—(Bedtime stories by Val McLaughlin).

9 p. m.—Orchestra program (one shour).

The Schuster Sisters' orchestra, of the Blackhawk Hotel, Davenport, Iowa, presenting popular selections.

11 p. m.—Orchestra program (one hour).

Lonis Connor and his LeClaire Hotel Orchestra, broadcasting direct from the LeClaire Hotel Winter Garden, Moifne, Ill.

Song and novelty numbers by Peter Mac-Arthur.

12:30-1:30 p. m.—Program of news tens vander Zanden director, and music.

2:30 to 4 p. m.—Program through the courtesy of the Pacific States Electric Co.

5:30 p. m.—State and Federal agricultural reports; farm and home reports; closing guest tations of the New York stock exchange; for closing director, and the Pacific States Electric Co.

1:30-1:30 p. m.—Program of news tens vander Zanden director, 4 p. m.—Specialty numbers.

5:30 p. m.—State and Federal agricultural reports; farm and home reports; closing guest tations of the New York stock exchange; for eign exchange quotations; Evening "Post" of the New York and Pacific Reports of the New York stock exchange; for eign exchange quotations; Evening "Post" of the New York and Pacific Reports of the New York stock exchange; for eign exchange quotations; Evening "Post" of the Pacific States Electric Co. orchestra from the Bitmore Hotel; Edward Fitzpatrick, director.

0:30 to 7:30 p. m.—Chfldren's program presenting Prof. Walter Sylvester Hertzog telling stories of American History. Jane Hughes, screen juvenile. Dickie Brandon, agreen juvenile. Two pupils of Carter Weaver, Henrietta Poland and Elsa B. Cohn.

7:30 p. m.—'Art' takk by Harold Swartz of the faculty of the 6tis Art Institute.

7:45 p. m.—'Care of the Body' talk by Dr. Philip M. Lovell.

18 to 10 p. m.—Program presented through the courtesy of the Heliman Trust and Savings Bank, arranged by A. K. Berkland.

10 to 11 p. m.—Earl Burtnett's Biltmore Orchestra breadcasting from the Biltmore Hotel.

FRIDAY

Friday, December 19.

Friday, December 19.

a. KDKA (326) PITTSBURGH, PA

7 a. m.—Morning exercises conducted by 0.

8 a. m.—Dlckens; "Christmas Carol." tead by Edward H. Smith, assisted by WGY orchestra. Selection, "Christmas Song," orchestra. Reading, Part I, "The Christmas Carol." Marley's Ghost, Edward H. Smith. Selection, "Old Carols," orchestra. Reading, Part II, "The Christmas Carol." The Ghost of Christmas Pact. Edward H. Smith. Selection, "Old Carols," orchestra. Reading, Part II, "The Christmas Carol." The Ghost of Christmas Pact. Edward H. Smith. Selection, "Old Carols," orchestra. Reading, Part II, "The Christmas Carol." The Ghost of Christmas Carol." The Ghost of Christmas Pact. Edward H. Smith. Selection, "Old Carols," orchestra. Reading, Part II, "The Christmas Carol." The Ghost of Christmas Pact. Edward H. Smith. Selection, "Old Carols," orchestra. Reading, Part II, "The Christmas Carol." The Ghost of Christmas Pact. Edward H. Smith. Selections from "Messlah," WGY orchestra. The Christmas Pact. The Christmas Pact. The Christmas Pact. Edward H. Smith. Selections from "Messlah," WGY orchestra. The Christmas Pact. The Christmas Pact. The Christmas Pact. The Christmas Pact. Edward H. Smith. Selection, "Christmas Pact. The Christmas Pact. The Christmas Pact. The Christmas Pact. Edward H. Smith. Selections from "Messlah "Warren O. Taylor, associated production of the McKeesport (State Pact. The Christmas Pact. The Christmas Pact. The Christmas Pact. Edward H. Smith. Selections from "Messlah "Warren O. Taylor, associate production of the McKeesport (State Pact. The Christmas Pact. The Christmas Pact. The Christmas Pact. The Christmas Pact. The Y. M. C. A. 9.45 a. m.—"Stockman" reports of the prishurgh livestock markets; general market review and agricultural items. 11:55 a. m.—Ariligton time signals,

b—MYW (536) CHMIAGO, M.L.
6:30 a. m.—Morning exercises. Instructions given by the physical director of the X. M.
C. A. This feature is also given by the 1:50 p. m.—Report of the closing prices of the Chicago grain market.
3 p. m.—Report of the closing prices of the Chicago grain market.
10:30 a. m.—Late news and comment of the financial and commercial markets.
10:35 a. m.—Table talk by Mrs. Anna J.
Peterson of Peoples Gas Company.
2:35 to 4 p. m.—News, financial and final market familished by the United in Hearst Square.
6:22 to 6:18 p. m.—News, financial and final market familished by the United Trust Company's period, 2:35 to 7 p. m.—Children's bedtime steep told by Water Wilson, who is known to the little ones as "Struck Bebo."

7 to 7:20 p. m.—Dinner concert breadcast from the Company Serviced by Carteria and the Morris at the plano.

1 p. m.—Meyer Davis Bellevue Stratford Mrs. Mrs.
3 p. m.—Agricultural reports.
3 p. m.—Agricultural Analysis of the Chicago grain market.
3 p. m.—William harket.
2 2:30 p. m.—Vincent Lopez, Hotel Statler, dinner music.
3 p. m.—William harket.
3 p. m.—Vincent Lopez, Hotel Statler, dinner music.
4 p. m.—William harket music.
4 p. m.—William harket.
4 p. m.—William harket.
4 p. m.—William harket.
4 p. m.—Agricultura.
4 p. m.—William harket.
4 p. m.—Anthony Baideme and kis unchested.
4 p. m.—Anthony Baideme and kis unchested.
4 p. m.—Anthony Baideme and kis unchested.
4 p. m.—Market venor will have been dead of the chicago grain market.
4 p. m.—William harket.
4 p. m.—William harket.
4 p. m.—Alliam harket.
4 p. m.—Agricultura.
4 p. m.—Agricultural reports.
4 p. m.—Vincent Lopez, Hotel Statler, dinner music.
4 p. m.—Agricultural reports.
4 p. m.—Agricultural reports.
5 p. m.—Beport of the closing prices of the Chicago grain market.
5 p. m.—Burdet

n—WCAP (469) WASHINGTON, D. C.

Silent.

a—WGBS (316) NEW YORK CITY.
10 a. m.—Timely talks with Teresec.
10:10 a. in.—Lack and David Teitelbaum, planist and violinist.
10:20 a. m.—Gentrude Tucker in book teview.
10:30 a. m.—Jack and David Teitelbaum, planist and wiolinist.
10:40 a. m.—Great women of Bible, Catherine H. B. Mullaly.
10:50 a. m.—Jack and David Teitel baum, planist and violinist.
10:40 a. m.—Great women of Bible, Catherine H. B. Mullaly.
10:50 a. m.—Jack and David Teitel baum, planist and violinist.
10:40 a. m.—Great women of Bible, Catherine H. B. Mullaly.
10:50 a. m.—Jack and David Teitel baum, planist and violinist.
10:40 a. m.—Bernurd Mitchell tenor.

Silent.

house Philharmonic trio, from the Hotel Kimball studio, Springsield.
7 p. m.—Market report as furnished by the United States Gepartment of Took States Gepartment of Took States Gepartment of Took p. m.—Bedtime story for the kiddies.

Took p. m.—Lesson of a course in "Musical Appreciation," given under the auspices of the country of the supplies of

10 at m.—Tinely talks with Terese,
10:10 a. m.—Agnes MacPeake, soprano,
10:20 a. m.—Ffeterial Review program,
10:30 a. m.—Agnes MacPeake, soprano,
10:40 a. m.—Pictorial Review program.

6:45 p. m. Sport news and weather fore a-WJY (405) NEW YORK CITY.

10:50 a. m.—Eleanor Gunn's fashion talk. c-KHJ (395) LOS ANGELES, CAL, 12:30-1:30 p. m.—Program of news items Vander Zanden, director,

a-WGY (380) SCHENECTADY, N. Y.

11:55 p. m.—Time signals.

12:30 p. m.—Stock market report.

12:40 p. m.—Produce market report.

12:45 p. m.—Weather forecast.

2 p. m.—Music and health hints, by Dr.

C. W. Woodall.

6 p. m.—Produce and stock market quotations; news bulletins.

6:30 p. m.—Stories for children.

7 p. m.—International Sunday School lessean.

12 m—Weather forecast. "Stockman" reports of the Pittsburgh livestock and whole sale produce markets.
12:20 p. m.—Sunday school lesson for December 21, by James C. Mace, from Y. M.
13:30 p. m.—Closing quotations on hax, grain and feed.
13:30 p. m.—Concert by the Hotel Schenley Meyer Davis Orchestra, Lon Chassy, director.
15:30 p. m.—Stockman" reports of the primary livestock and wholesale produce markets.
15:30 p. m.—Monthly book review, "Two Recent Collections of Short Stories," given by S. P. Mayer of the department of English, University of Pittsburgh, from the University of Pittsburgh studio.
15:50 p. m.—Arbington time signals; weather forecast.
16 n.—WFI (395) PHILADELPHIA.
10:15 a. m.—Produce market and live stock reports.
17:00 p. m.—Agricultural reports.
18 1:50 p. m.—Agricultural reports.
19 p. m.—Agricultural reports.
20 tion, "March Pontificale," orchestra. Reading, Part III, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "Christmas Echoes," orchestra. Reading, Part III, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H. Smith. Selection, "The Christmas Carol." The Ghost of Christmas Past, Edward H

Hotel Kimball studio, Springfield.

n—WEEH (303) BOSTON, MASS.
6:30 p. m.—Dok-Eisenbourg and his Simbours, direct from the amber room, Y. D. Cook's, Boston.

T. D. m.—Beston Edison Big Brother Club. T. 30 p. m.—WEE from the amber room, Y. D. Cook's, Boston.

T. D. m.—Beston Edison Big Brother Club. T. 30 p. m.—WE Fromenberg, president of the Neapolitan Ice Cream Company, interviewed by Hap Myers.

S. p. m.—Fromenberg, president of the Neapolitan Ice Cream Company, interviewed by Hap Myers.

S. p. m.—Program of instrumental and vocal selections arranged by Charles W. Pearson. Stop p. m.—John T. Comor Company presented to leart chat on "Sportsmanship."

p. m.—Bortsmanship."

p. m.—Bortsmanship."

p. m.—Bortsmanship."

p. m.—Burns and Foran, clog steps.

c. b—KYW (536) CHICAGO, H.L.

6:30 a. m.—Morning exercises. Instructions given by the physical director of the X. M. and 8 a. m.

6:30 a. m.—Late news and comment of the financial and commercial markets.

This service is also broadcast at 7 and 8 a. m.

9:39 a. m.—Late news and comment of the financial and commercial markets.

This service is also broadcast at 7 and 8 a. m.

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9:39 a. m.—Late news and comment of th

6.36 g. m.—C. Baldwin Allen, baritone.
6.36 g. m.—Morning exercises. Instructions
6.36 g. m.—Accretta Dileu Brady, children of the N. M.
6.30 g. m.—Lorenta Dileu Brady, children of the N. M.
6.30 g. m.—Lorenta Dileu Brady, children of the Santone of the Santone

4 p. m.—One of a series of talks on English diction by Mrs. J. Elliott Jenkins.
4:30 p. m.—Puplis of Bush Conservatory.
5 p. m.—"The Lullaby Lady," Mrs. Gene
Davenport.
6:30 p. m.—Organ recital from Chicago Thaeter.
6:30 p. m.—Hotel LaSalle orchestra.
8 p. m.—Weekly Wide-Awake Club program directed by Mrs. Frances M. Ford.
8:30 p. m.—Musical geography. Mr. and Mrs. Marx E. Obendorfer.
9 p. m.—Musical program by the Regal Quartet.
9 p. m.—Musical program by the Regal Quartet.
9 p. m.—Beddime stories for the kiddles by Uncle Percy.
8:30 p. m.—Brittlings' Cafeteria Novelty orchestra.

4:10 p. m.—A Carristinas play given by fine Starlight Players under the direction of Walter Gray.
8:14 p. m.—Address: "The New Spirit of Christmas," given by James Francis Cooke. Orpheus Piectral Dance Crehestra under direction of C, H. Davis.

5 p. m.—Chime concert.
8:15 p. m.—Bicycle Male Quartet; contraito solos, Miss Helen Nugent; Stept and Collins.
9 p. m.—Weekly News Review, Allison F. Stanley.
9:20 p. m.—Bicycle Mixed Quartet; soprano solos, Miss Helene Kessing.
12 p. m.—Midnight Eentertainers.
12 p. m.—Freda Sanker's Tondstool Orchestra.

orchestra. 11 p. m.—Midnight Frolic.

b-WHAS (400) LOUISVILLE, KY.

4-5 p. m.—Selections by the Alamo Theater orchestra, Harry S. Currie, conductor. Police bulletins. Weather forecast for Kentucky, Indiana and Tennessee. "Just Among Home Folks," a dafly humorous column appearing in the "Courler-Journal." Readings: Selected "Courier-Journal." Readings: Selected totals. Late important news bulletins.

4:55 p. m.—Local livestock, produce and grain market reports.

5 p. m.—Local Standard time announced.

Silent.

Constra.

b-WMH (309) CINCINNATI, 6.

10 p. m.—Songs by Frank Wright and Frank Bessinger, the Radio Franks. Piano solos by Edward Schoelwer. Organ selections, popular busics, and the Hotel Alms Frank Wright and Frank Bessinger, the Radio Franks. Piano solos, Lelid Lemar. Tenor solos, Howing and Hafford. Murray Horton's Hotel Alms or chestra.

11 p. m.—Songs by Frank Wright and Frank Bessinger, the Radio Franks. Piano solos by Edward Schoelwer. Organ selections, popular busics, and the Hotel Alms Frank Bessinger, the Radio Franks. Piano solos Lelid Lemar. Tenor solos, Howing Totals, Late Important news bulletins.

4:55 p. m.—Local livestock, produce and grain market reports.

5 p. m.—Official Central Standard time announced.

b-KSD (546) ST. LOUIS, MO. 8 p. m. Recital by Edyth Myrl Carver, so-



DISTRIBUTORS FOR DAVEN PRODUCTS

O-M-C Supply Company 138 Ninth St., 2nd Floor, Pittsburgh, Pa.

b-WOC (484) DAVENPORT, IA.

auspices of the Scott County Farm Bureau). 'Producing Beer for Profit," by Prof. R. W.

n-WGY (380) SCHENECTADY, N. Y. 11:55 a. m.-U. S. Naval Observatory th

signals.
12:30 p. m.—Stock market report.
12:40 p. m.—Produce market report.
9:30 p. m.—Dance music by Phn Romorchestra, from New Kenmore Hotel, A. N. Y., and popular songs-

b—WLS (345) CRICAGO, ILL.

10. 18. m.—Market report; weather forecast.

11. a. m.—Hog, cattle and sheep flashes; furit and vegetable shipments.

Noon to I p. m.—Music; weather forecast; farm program.

1.30 p. m.—Complete livestock, fruit and evegetable markets; final grain market quotations; farm news bulletins.

6 vegetable markets; final grain market quotations; farm news bulletins.

6 p. m.—Summary livestock, grain, dairy, fruit and vegetable; poultry and egg, hay and feed anarkets; farm news bulletins.

6 cattle; lullaby time; farm news bulletins.

6 cattle; lullaby time; farm news bulletins.

6 p. m.—Pipe organ reaction farm; form news farm program; WLS the ater radio drama; Ford and Glenn time.

5 b—WMAQ (447) CHICAGO, ILL.

10:15 ja, m:—Produce market and live stock reports.

10:15 ja, m:—Produce market and live stock reports.

10:16 ja, m:—Produce market and live stock reports.

10:17 ja, m:—Produce market and live stock reports.

11. a. m.—Hog, cattle and sheep flashes; farm news bulletins.

2 p. m.—A Christmas story read by the Brandt, contralite; Lewis Meehan, tenor. Other Hotel Concert Orchestra.

3 p. m.—A Christmas story read by the Brandt, contralite; Lewis Meehan, tenor. Other Hotel Concert Orchestra.

3 p. m.—A Christmas story read by the Brandt, contralite; Lewis Meehan, tenor. Other Hotel Concert Orchestra.

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3 p. m.—A Christmas story read by the Brandt, contralite; Lewis Meehan, tenor. Other Hotel Concert Orchestra.

4 p. m.—Eroduce market and live stock, put and steed and humorous sketches.

9:35 to 11:30 p. m.—Late show broadcast from the Congress Hotel studio.

12 p. m. to 2 a. m.—"Congress Carnival."

12 p. m. to 2 a. m.—"Congress Hotel studio.

13 p. m.—Program of dance music by Choir dance music by Choir dance music by Drandta Hotel Concert Orchestra.

12 p. m. to 2 a.

b-WMAQ (447) CHICAGO, III.

12:25 p. m.—Y. M. C. A. Forum.

4 p. m.—One of a series of talks on English diction by Mrs. J. Elliott Jenkins.

15:25 p. m.—A Christmas play given by the Starlight Players under the direction of Walter Gray.

gram.
1:30-2:30 p. m.—Mignon Ladies' Vocal Trio.

9 a. m. Market report; weather forecast.
11 a. m. — Hog. cattle and sheep flashes; fruit and vegetable shipments; farm news bulletins.
1:30 p. m.—Summary livestock, grain, dairy, fruit and vegetable, poultry and egg, hay and feed markets; farm news bulletins.
7 p. m. to midnight—Ford and Glenn's trip to Toyland; National barn dance; request and review night.

b-WMAQ (447) CHICAGO, ILL. 6 p. m.—Armour Tech band. 8 p. m.—Hotel LaSalle orchestra

8 p. m.—Hotel Lasane ordinestra.
8:40 p. m.—Radio prologue, "The Holy
Land," by Paul Hinkhouse.
9 p. m.—Weekly Balaban & Katz Chicago

b-WMO (500) MEMPHIS, TENN. 8 p. m.—Stories for the kiddles by Uncle

b-WHAS (400) LOUISVILLE, KY.
4-5 p. m.—Selection by the Alamo Theater orchestra, Harry S. Currie, conductor. Police bulletins. Wenther forecast for Kentucky, In torials. Late important news bulletins:
1:55 p. m.—Local livestock, produce and grain market reports.
5 p. m.—Official Central Standard time au-

grain market reports.

5 p. m.—Official Central Standard time announced.

7:30-9 p. m.—Concert under the auspices of the Louisville and Jefferson County Children's Home Glee Club; Miss Grace Deppe, director. Late important news bulletins. Official Central Standard time announced at 9 o'clock.

8—WCAP (469) WASHINGTON, D. C.
Silent.

8—WGBS (316) NEW YORK CITY.
10 a. m.—Timely talks with Terese.
10:10-10:40 a. m.—Eleanor Schrorer and core Von Beust. Late important news bulletins. Official Central Standard time announced time announced time announced.

10:40-11 a. m.—Frances Porter Ross pro- at 9 o'clock.

3 p. m.—Interview with Karl Kitchen, by Terese Rose Nagel.

RADIO PROGRAMS FOR THE WEEK

(Continued From Page Five.)

Ittle ones as "Uncle Bob."

7 to 7:30 p. m.—Dianer concert breadess brom the Cangress Rotel: Joska DeBabary's rehastra, Louis XVI room; Coan-Sander's briginal Nighthawks, Pompelian room; Joska DeBabary's orchestra, Louis XVI room.

7:30 to 8 p. m.—Program will be broadcast from KYW's studio in the offices of the Duncan Sisters' Music Publishing Company.

8 to 8:30 p. m.—Kusical program will be furnished by the Walther Lesgue. Artists and program in detail will be announced by radio.

3:30 to 8:45 p. m.—"Areund the Town with KYW in Chicago" (stage review).

8:45 to 9 p. m.—Musical programs continued, 9:05 p. m.—'Good Roads" report furnished by the Chicago Motor Ciub.

9:10 p. m.—Talk on "Income Tax;" by H. krchibald Harris.

9:20 p. m.—Talk by Mr. E. C. Brown, treasurer of the National Live Stock and Mest loard.

Subject, "Protecting Our National Ealth."

d vegetable shipments.

to 1 p. m.—Music; weather forecast; ogram.
p. in.—Complete livestock, fruit and en markets; final grain market quota-arm news bulletins.

s. 4:45 p. m.—Howsenskers' hour.
m.—Summary livestock, grain, dairy, to vegetable; poultry and egg, hay and rests; farm news bulletins.
b. m. to 10:45 p. m.—Pipe organ restillaby time; farm program; WES feature; Wallace Bruce in a romance northland; on the book trail; Ford me time.

Talk.

2:30-4 p. m.—Program through the coursesy of the Pacific States Electric Company, presenting the Immanuel Male Quartet and Saxopone Club.

6-6:30 p. m.—Art Hickman's Concert Orchestra from the Britmoze Hotel; Edward Fitzpatrick, director.

6:30-7:30 p. m.—Children's program, presenting Prof. Walker Sylvester Hertzog telling stories of American history. Dick Winslow, screen juvenitie and reporter. Baby Muriel MacCormac, sereen juvenitie.

7:80 p. m.—University of Southern Canfornia program, 6:30 p. m. to 10:45 p. m.—Pipe organ re-ital; lillaby time; farm program; WKS heater feature; Wallace Bruce in a romance

Iniversity. 8:30 p. m.—Musical program to be an-

8:30 p. m.—Musical program to be anounced.

9-p. m.—WMAQ-"play-night."

9:45 p. m.—Talk from one of the Chiesgo charities.

b—WMC (500) MEMPHIS, TENN,

Slient night.

b—WMAS (400) LOUISVILLE, KY.

5-p. m.—Selections by the Alamo Theater spehesits, Harry S. Currle, conductor. Police balletins. Wenther forceast for Kentucky. Indicate and Tennessee. "Just Among Home Folks," a daily humorous column appearing in the "Courser-Journal." Readings: Selected "Courser-Journal." Readings: Selected "Courser-Journal." and Louisville. "Times" editorials. Late important news bulletins. "Confler-Journal" and Louisville "Times" editorials. Late important news bulletins.

4:55 p. m.—Local livestock, produce and mary livestock and wholesale produce mary

Work

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Rećeivers

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\$65.00

b-KSD (546) ST. LOUIS, MO. nom KYW's studio in the offices of the Dunin Sisters' Music Publishing Company,
8 to 8:30 p. m.—Musical program will be
2 program by the Waither League. Artists
3 p. m.—Program by Schubert Trio of Alton,
11 program in detail will be amounced by
12 pt. Fredrick Tuemmler, violin; Frances Davis,
13 to 8:45 p. m.—'Arende the Town with
15 pt. KSD (546) ST. LQUIS, MO.
6:45 p. m.—Abergh's concert ensemble, Arne
4 program by Schubert Trio of Alton,
16 pt. Fredrick Tuemmler, violin; Frances Davis,
17 pt. Fredrick Tuemmler, violin; Frances Davis,
18 pt. College of the College o

b-WOC (484) DAVENPORT, IA.
10 a. m.—Opening market quotations.
10:55 s. ux.—Household hints.
10:55 s. ux.—Home signals.
11 a. m.—Weather and river forecast. 11:05 a.m.—Merket quotations.

12 mean—Chimes concept.

12:15 p. m.—Weather forecast (repeated.)

2 p. m.—Closing stocks and markets.

6:45 p. m.—Sport news and weather fore-

Thursday, December 18.

b-WSAI (309) CINCINNATI, O.

b. WMH (309) CINCINNATI, O.
S p. m. Ongan recital by Kurt Henkel.
Songa by Frank Weight and Frank Bessinger,
the Radito Franks. Tenor solos by Carl R.
Counuelle; Miss Margaret Bronson, accompan-

the northland; on the book trail; Ford

F Glein, time.

b—WMAQ (447) CRICAGO, H.L.

F p m.—Speeches from the weekly lunchem

the Association of Commerce.

4 p. m.—Benuty talk by Mme. Grace Earl.

430 p. m.—Program by the Cosmopolitan

chool of Massic.

5 p. m.—Frogram by the Cosmopolitan

chool of Massic.

5 p. m.—Frogram by Jean Mowat.

6 p. m.—Frogram by Jean Mowat.

6 p. m.—Frogram by Jean Mowat.

6 p. m.—Stories for the children by Miss

6 corgene Faulkner, the Story hady.

8 p. m.—Weekly lecture from Northwestern

THURSDAY

December 18.

Maccounter, of Southern Canfor

18 p. m.—WCAP (469) WASHINGTON, D. C.

8 p. m.—WCAP (469) WASHINGTON, D. C.

19 p. m.—William and Selection of the Week, The Story and Selection of Commerce.

10 p. m.—Dr. Mars Baumgardt, lecture.

8 p. m.—Benuty talk by Mme. Carace Earl.

4 p. m.—Benuty talk by Mme. Grace Earl.

4 p. m.—Frashloms by Jean Mowat.

8 p. m.—Stories for the children by Miss

6 p. m.—Stories for the children by Miss

6 p. m.—Program recital.

a-WEAF (492) NEW YORK CFFS. 11-12 s. m.—Musical program and talks

R-WGY (380) SCHENECTADY N. Y.

a. WGY (3807 SCHEMAN)

11:55 a. m.—Time signals.

12:30 p. m.—Stock market report.

12:45 p. m.—Weather report.

2 p. m.—Music and talk, "Good Times for Young People," Daniel Chase, physical training bureau, state department of education.

6 p. m.—Produce and stock market quesa
10:20 p. m.—Produce and stock market quesa
10:20 p. m.—Concert by wattman p.

11:55 p. m.—Concert by wattman p.

12:40 p. m.—Concert by wattman p.

14:40 p. m.—Concert by wattman p.

15:40 p. m.—Concert by wattman p.

16:40 p. m.—Weather p. tions; news bulletins.

177%. 6:15 p. m.—Teport on condition of New asks to York state highways, furnished by Captain

8:30 p. m.—Concert by the KDKA Little
Symphony Orchestra and Mabel Shoup King,
sopreno, and Pattl Baildage, contraito.

8:35 p. m.—Arlimyton time signals; weather
forces.

8:36 p. m.—Arlimyton time signals; weather
forces.

8:36 p. m.—Concert from The Pittsburgh Post
stude.

8:37 p. m.—Concert from The Pittsburgh Post
stude.

8:38 p. m.—Concert from The Pittsburgh Post
stude.

8:48 p. m.—Mayer Davis Bellevue Siratford
Hotel Concert Orchestra.

10:15 a. m.—Produce market and layer
the auspices of the Graves, mezzo
soprano, sayet take by Mat Lawis; But Lawi

kets. 8 p. m.—Program arranged by the "National

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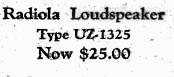
Forbes & Murray Electric Co., 5853 Forbes St.

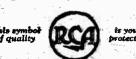
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RADIO PROGRAMS FOR THE WEEK

SUNDAY

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Methodist Episcopal Church, South, of Washington.

Rev. W. A. Lambeth, pastor, will deliver the servan.

4 p. m.—Service at Bethiehem chapel of the National Episcopal Cathedral at Mt. St. Alban, Washington.

7:29-315 p. m.—Musical program by "Roxy and His Gang." direct from the Capitol Theorem and the Gang. "Give the Servand His Gang." direct from the Capitol Theorem and the Gang." direct from the Capitol Theorem and the Gang." direct from St. Theorem and His Gang." direct from St. Gang. Theorem and His Gang. The Gang. Theorem and His Gang. The Gang. The Gang. The Gang. Theorem and His Gang." direct from St. Gang. The Gang. The Gang.

a. H. His A. Services of the Bast End Curies, Philadruph, Rev. John Ray 23.00 m. measured concert, "Hear Management and S. I. Rother 23.00 m. Rev. Chork, assisted by Elizabeth Library 23.00 m. measured concert, "Hear Management and S. I. Rother 23.00 m. measured concert, "Hear Management and S. I. Rother 23.00 m. measured concert, "Hear Management and S. I. Rother 23.00 m. measured and S. I. Rother 23.00 m. measured concert, "Hear Management and S. I. Rother 23.00 m. measured and S. I. Rother 23.00 m.

OVER 250,000 Radio fans have of found the big capacity 5 ampere GOLD SEAL HOMCHARGER ideal for keeping their Radio bat-teries fully charged and operating a-WGR (319) BUFFALO, N. Y.

3 p. m. Vesper services, Rev. Fletcher
Homan, Central Park Methodist Episcopal
Church.

at top efficiency. Connects to any lamp socket and charges all Radio Batteries over night for a nickel. Gunderman, Jr., organist.
7:15 p. m.—Pre-service organ recital, William Walf Whiddit, organist.
7:30 p. m.—Evening service, direct from Central-Presbyterian Church, sermon "Wiosesone Optimism," R. J. McAlpine, D. D., minister.

operated by any one. Contains no bulbs, acids or fast wearing carbon ceipt of purchase price. THE AUTOMATIC ELECTRICAL DEVICES CO. 143 W. Third St., Cincinnati, Ohio

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2:30 p., m.—Studio chapel service broadcast from our studio in the Commonwealth Edison building. This program will be arranged by Arthur H. Kaub, rector at Windsor Park Evangelical Lutheran Church.

7 p. m.—Chicago Sunday Evening Club service will be broadcast from Orchestra Hall, Chicago. The musical program will be arranged by Edgar Nelson. The speaker of the evening will be announced by radiophone.

KYW, "The World Crier," will broadcast the latest news of the world every half hour—on the hour and half hour—during the day and night. This service is furnished from 5 a. m. to 5 p. m. by the Chicago "Evening American," International News Service, and Cosmopolitan News Service. KYW bulleting are provided from 5 p. m. to 5 a. m. by the Universal News Service in co-operation with the Chicago "Herald and Examiner."

a—WBZ (337) SPRINGFIELD, MASS.

10:55 a. m.—Church services from the South Congregational Church, Rev. James Gordon Gilkey, pastor; music by Prof. Wilson B, Moog, organist; and choir of 24 voices; the quartet is as follows: Mcs. Grace R. Donovan, soprano; Mrs. A. E. Waite, contraito; William L. Spittal, tenor; Albert Edwards, bass, 2:30 p. m.—People's Symphony orchestra from St. James theater.

1:30 p. m.—Concert direct from the Estey organ studio, presenting Gertrude Wood, contraito; Eric Anderson, tenor.

9:30 p. m.—Concert under the direction of Charles L. W. Wagner, radio poet, assisted by Lindal Rogers, violinist; P. Harold Morrison, bartone; Harold Hoyle, pianist; Helen Morrison Dunlap, accompanist, from the Hotel Brunswick studio, Boston.

b-KYW (536) CHICAGO, ILL. 11 a. m.—Central Church service broadcast from Orchestra Hall, Chicago. Dr. F. F. Shannon, pastor. Musical program will be arranged under the direction of Daniel Protheroe.

2:30 p. m.—Studio chapel service broadcast

b-WLS (345) CHICAGO, ILL. 6:30 to 8 p, m .- Pipe organ recital; musi-

b-WHAS (400) LOUISVILLE, KY.

9:57 a. in.—Organ music.

10 a. m.—Church service under the auspices of the Broadway Baptist Church, the Rev. Dr. Russell Johnson Pirkey, pastor; H. U. Goodwin, organist and choir director; Mrs. O. W. Edinger, soprano; Miss Angeline McCrocklin, contralto; Charles H. Barnes, Jr., tenor; William Cornwall, bartione.

45 p. m.—Vesper song service under the auspices of Mrs. Jane Webster Murrell.

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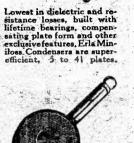


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b-WOC (484) DAVENPORT, IA.

9 a. m.—Sacred Chinese concert.

1 p. m.—Orchestral concert (one hour).

Sacred and classical numbers by the Palmer School Radio orchestra; Erwin Swindell,

mer schoof Radio orchestra; Erwin Swindell, conductor.

8 p. m.—Church service—Rev. Otis L. Bowman, pastor Methodist Episcopal church of Hillsdale, Ill. Subject of sermon, "The Wavelength from the Soul of God."

9:30 p. m.—Musical program (two hours).
The Palmer School Radio orchestra; Erwin Swindell, conductor.

c-KHJ (395) LOS ANGELES, CAL. 10 a.m.—Sermon from KHJ studio by Rev. Charles F. Hutslar, pastor of the Washington Christian Church

Charles F. Hutslar, pastor of the Washington Christian Church.

10:30-12:30 p. m.—Organ recital and entire religious service from the First Methodist Episcopal Church, Arthur Blakeley, organist, and Rev. Elimer E. Helms, pastor.

6:30-7 p. m.—Art Hickman's Concert Orchestra, from the Blitmore Hotel; Edward Fitspatrick, director.

7-7:30 a. m.—Organ recital from the First Methodist Episcopal Church, Arthur Blakeley, organist.

8:10 a. m.—Program presented through the courtesy of the Martin Music Company, arranged by J. Howard Johnson.

MONDAY

Monday, December 15. a—KDKA (326) PITTSBURGH, PA.
7 p. m.—Morning exercises conducted by O.
annon, physical director, McKeesport Y. M.

Shannon, physical director, McKeesport Y. M. C. A.

8 a. m.—Morning exercises conducted by O. Shannon, physical director McKeesport Y. M. C. A.

9:45 a. m.—"Stockman" reports of the

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or fire. Approved by Insurance Underwriters everywhere. Beautifully finished in mahogany and gold. May be used right in the finest living room. Price, \$18.50 complete for all currents. Simple, reliable, fool-proof. Can be Sold by all good Radio dealers, or

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mas gift.

R-WCAP (469) WASHINGTON, D. C. R—WCAP (469) WASHINGTON, D. C. 7:30-8 p. m.—To be announced.
8-8:15 p. m.—The United States Postal Service," the first of a series of short, interesting radio talks about Government activities, to be delivered by H. E. Morgan of the United States civil service commission.
8:15-8:30 p. m.—To be announced.
8:30-10 p. m.—Musical concert by the advanced students of the Peabody Conservatory of Music of Baltimore. Presented by Harold Randolph, director of the faculty. This concert will be broaddast from the auditorium of the conservatory.

-WGBS (316) NEW YORK CITY. a—WGIN (318) NEW, YORK CITY.
10 a. m.—Timely talks with Terese.
10:10 a. m.—Hermine West, soprano.
10:20 a. m.—Prudenca Penny, household talk.
10:30 a. m.—Mrs. T. Mortimore Lloyd on

ertal story.

(3:30 p. m.—John Cassidy, baritone.

3:40 p. m.—Charles M. Smith on "The Future of Your Child."

Bob Schaffer, Larry Vincent and Bobby 8-WEAF (492) NEW YORK CITY.

B-WJZ (455) NEW YORK CITY.

10:30 a. m.—Home Beautiful, Dorothy Ethel Walsh.

10:40 a. m.—"Can't Talk With a Mouthful of Tongue," John C. Cutting of the Meat Council of New York.

10:50 a. m.—Eleanor Gunn's fashion talk.

1 p. m.—Hotel Ambassador Trio, Henry Vander Zanden, director.

4 p. m.—Regalbute Sisters, planists.

4:30 p. -m.—Joseph Knecht's Waldorf Astoria tea music.

walian gultars. 10:30 p. m.-Hock and Jerome, popular

songs. 10:45 p. m.—Jacques Green and his Club Deauville Orchestra, with Clark's Hawaiians. a-WGY (380) SCHENECTADY, N. Y. 11:55 a. m.-U. S. Naval Observatory time

12:30 p. m.—Stock market report.

12:45 p. m.—Produce market report.

12:45 p. m.—Weather report.

2 p. m.—Music and talk, "Keeping the Children Well in Winter," Dr. Caroline Croasdale, New York State College for Teachers.

6 p. m.—Produce and stock market quotations; news bulletins.

6:30 p. m.—Weekly sports review, by Harold Anson Bruce, director of physical training and athletics at Union College, Schenectady, N. Y.

Standard Vacuum Socket, for all circuits; special.........25c Ermco Stat, and adjustable Rheostat for all tubes; special...\$1.39 Peanut Tubes, just the tube for Reflex Circuits; special 98c

> a—WBZ (337) SPRINGFIELD, MASS.
>
> 11:55 a.m.—Arlington time signals; weather reports; Springfield market report.
>
> 6 p. m.—Dinner concert by the Westinghouse Philharmonic trio, from the Hotel Kimball studio, Springfield.
>
> 7 p. m.—Market report as furnished by the United States department of agriculture at Boston.
>
> 7:05 p. m.—Bedtime story for the kiddies.
>
> 7:15 p. m.—"Bringing the World to America," prepared by "Our World." Late news a-WRZ (337) SPRINGFIELD

7:05 p. m.—Bedtime story for the kiddles.
7:15 p. m.—"Bringing the World to America," prepared by "Our World." Late news from the National Industrial Conference board from the Hotel Kimball studio, Springfield.
7:30 p. m.—Lesson in a course in modern literature being given under the auspices of the commonwealth of Massachusetts department of education. Lecturer in this course, Robert Emmons Rogers, professor of English literature, from the Hotel Brunswick studio, Boston.

tween Boston Bruins and Ottawa direct from the Boston arena.

9:45 p. m.—Concert by the Westinghouse Philharmonic trio and Fred W. Gardner, tenor; Katherine Gravelin, accompanist, from the Hotel Kimball studio, Springfield.

9:55 p. m.—Arlington time signals; official United States weather reports.

10:01 p. m.—Continuation of musical program from the Hotel Kimball studio.

orchestra.

7 p. m.—Boston Edison Big Brother Club.

7:30 p. m.—"A Few Minutes With Santa Claus," courtesy of Houghton & Dutton Company, Boston.

8 p. m.—Laselle Seminary Christmas con-8:45 p. m.—"Buddy's Bostonians," from the

b--KYW (536) CHICAGO, ILL.

C. A. This service is also broadcast at 7 and 8 a. m.—Ithilan Hartigan "Grace, Poise and 8 a. m.—Late news and comment of the financial and commercial markets.

11:85 a. m.—Table talk by Mrs. Anna J. Peterson of the Peoples Gas Company.

6:02 to 6:18 p. m.—News, financial and final markets furnished by the Union Trust Company, Chicago "Journal of Commerce," and U. S. department of agriculture.

2:30 a. m.—Millian Hartigan "Grace, Poise and Charm" talk.

10:30 a. m.—Millian Hartigan "Grace, Poise and Charm" talk.

10:50 a. m.—Millian Hartigan "Grace, Poise and Charm" talk.

10:50 a. m.—Millian Hartigan "Grace, Poise and Charm" talk.

10:50 a. m.—Minnie Stern, planist.

10:50 a. m.—Ailligton time signals; official United States weather report.

2:55 p. m.—Arlington time signals; official United States weather report.

2:50 p. m.—Jack Brown and his orchestra.

2:50 p. m.—Jack Brown and his orchestra.

3:00 p. m.—Danic selection by George Leo Patterson, from the Hotel Brunswick,

9:30 p. m.—Arlington time signals; official United States weather report.

2:55 p. m.—Arlington time signals; official United States weather report.

2:50 p. m.—Jack Brown and his orchestra.

3:00 p. m.—Jack Brown and his orchestra.

3:00 p. m.—Jack Brown and Jazz numbers.

3:00 p. m.—Jack Brown

ports.
45 p. m.—Grayee Amriehm, planist; wom-en's program under the auspices of the Women's League of the United Synagogue of Women's League of the United Synasome Mamerica.
6-11 p. m.—Dinner music by the WEAF Instrumental Quartet; Blanch Anthony, coloratura soprano; Mount Royal Orchestra; Mozart String Quartet; talk by the Bank of America; the Gold Dust Twins; "Eveready Hour;" "The B. F. Goodrich-Rubber Company's Silvertown Cord Orchestra'" under the direction of Joseph Knecht.

a-WJY (405) NEW YORK CITY.
7:30 p. m.—Lew Gold's Cameo orchestra
8 p. m.—Albany Community Chorns, direct
from Chancellor's Hall, Albany, N. Y., from
WGY, Schenectady.
9:30 p. m.—United States Army night; address by Major-General Merritt W. Ireland,
surgeon general of the United States Army;
music by the United States Army band,

a-WJZ (455) NEW YORK CITY. fullan Heath.

10:20 a. m.—"Vogue's" talk on etiquette.

10:50 a. m.—Eleanor Gunn's fashion talks.

1 p. m.—Nathan Abas' Hotel Pennsylvania

11 p. m.—Meyer Davis' Society Orchestra, direct from Le Paradis Cafe, from WRO

a—WGY (380) SCHENECTADY, N. Y.

11:55 a. m.—U. S. Naval Observatory time signals.

12:30 p. m.—Stock market report.

2 p. m.—Music and talk, "A Christmas Breakinst Party with Three," Helen A. Ballard (Virginia Dare Extract Co.).

6 p. m.—Produce and stock market quotations; news bulletins,

6:30 p. m.—Dinner music by trio from Hotel Ten Eyck, Albany, N. Y.

7:48 p. m.—Program by Albany Community chorus of 1,000 voices from Chancellor's Hell, Albany, N. Y. Elmer A. Tidmarsh, conductor. Selections, a. March, "Thunderer," b. "Faust," Y. M. C. A. orchestra, Claude J. Holding, conductor. Selections, a. "Star Spangled Banner," b. "America," Albany Community Chorus. Baritone solos, a. "Bonnie Prince Charlie," b. "Bonnie Dundee," Joseph Calhoun. Selections, a. "Albany, Dear Albany," b. "It's a. Fine Thing to Sing," chorus. Contraito solos, a. "The Moon Behind the Cotton Wood," b. "Love's Old Sweet Song," Mrs. John C. Cary (chorus humming). Selections, a. "Arb Bannie of Your Smile," b. "The Great Red Dawn," chorus. Soprano solos, a. "Ave Maria," (violin obligato by Thomas R. O'Neil) b. "At Dawning," Mrs. Edward H. Belcher. Selections, a. "Wonderful One," b. "On the Road to Mandalay," chorus. Plano solos, a. "Banjo Picker," b. "The Cat and the Monse," Elmer A. Tidmarsh. Address, Mayor William S. Hackett. Selections, a. "Academy March," b. "Sweet Little You." Albany Academy Orchestra, William Paige, leader. (Under the direction of Helen McElwee Miller). Selections, a. "Shadow March," b. "She's the Lass for Me," chorus. Quartet selections, a. "Oh, Come to Rest, E Call Ye Lambkins All" (Norwegian Folksong), b. "In Direamy Shadows Lying," Mrs. D. H. Belcher, Miss L. Coughiry, Mrs. N. C. Doyle, Mrs. B. Rickards; Mrs. Raiph G. Winslow, accompanist. Selections, a. "Souvenir," b. Waltz, "La Traviata," Jacob Nelson, Frances B. Poskanzer, accompanist. Selections, Economics. dena," chorus. Flute solos, a. "Souventr."
b. Walts, "La Traviata," Jacob Nelson,
Frances B. Poskanzer, accompanist. Selections, a. "O Little Town of Bethlehem," b.
"Silent Night," chorus. Selections, a. "Song
of Songs," b. "What'll I Do," chorus. Violin
solos, a. "Ave Maria," b. "Midnight Bells,"
Thomas Francis O'Nell; Joseph F. Dwyer, accompanist. Selections, a. "A Perfect Day,"
b. "Au Revoir," chorus.
11:20 p. m.—Organ recital by Stephen E.
Bolsclair, Proctor's Harmanus Bleecker Hall,
Albany, N. Y.

a-WGR (319) BUFFALO, N. X. 11:30 a. m.—Address by Mrs. K. N. Britt, home demonstration agent, for the United States department of agriculture.
2:30 p. m.—Concert, courtesy Buffalo "Courter," end "Frontier". er" and "Enquirer." 6-7:30 p. m.—Hallpryd String Quartet, din-

a-WBZ (337) SPRINGFIELD, MASS.
11:55 a. m.—Arlhaton time signals; weather reports; Springfield market report,
6 p. m.—Leo Reisman Hotel Lenox ensem-

7:30-8:30 p. m.—Musicale. 8:30 p. m.—Y. M. C. A. Glee Club concert. 9 p. m.—Program from New York Studio— 10 p. in.—Program from New York studio— loodrich Silvertown Cord orchestra.

b-KYW (536) CHICAGO, ILL. 6:30 a. m.—Morning exercises. Instructions iven by the physical director of the Y. M. C. A. This service is also broadcast at 7 and 9:30 a. m.—Late news and comment of the

8.a. m. —Late news and comment of the finaucial and commercial markets. 10:30 a. m.—Varm and home service. 2:35 to 4 p. m.—"Afternoon Frolic," broadcast from KYW's studio in Hearst Square. 4 p. m.—"Bringing the World to America," furnished by the editors of "Our World." 6:02 to 6:18 p. m.—News, financial and final markets furnished by the Union Trust Company, Chicago "Journal of Commerce," and U. S. department of agriculture. 6:35 to 7 p. m.—Children's bedtime story told by Walter Wilson, who is known to the little ones as "I nole Bob."

7 to 7:30 p. m.—Dinner concert broadcast from the Congress Hotel: Joska DeBabary's orchestra, Louis XVI room. Coon-Sander's Original Nighthawks, Pompelian room. Joska DeBabary's orchestra, Louis KVI room.

7:30 to 7:45 p. m.—"Yaround the Town with KYW in Chicago" (stage review). T:30 to 7:45 p. m.—"Around the Town with KYW in Chicago" (stage review).

8 to 8:20 p. m.—Musical program: This program will be furnished through the courtesy of the Chicago Musical College. Artists and program in detail will be announced by radio.

8:20 to 8:45 p. m.—Speeches under the auspices of the American Farm Bureau Rederation.—"Speakers will be announced by radionone.

radiophone. 8:30 p. m.—Musical program: Helen Bickerton Cole, soprano; Lucille Long, contraito; R. V. Thomas, bass; Irene Pierce, accompanist; Thomas B. Stephenson, tenor. Mr. Stephenson will sing any of the old time songs on request.

10 to 11:30 p. in.—"Evening at Home" program broadcast from KYW's studio in Hearst Square. b—WLS (345) CHICAGO, ILL.

8 a. in.—Market report; weather forecast.

11 a. in.—Hog, cattle—and sheep flashes; fruit and vegetable shipments.

Noon to 1 p. in.—Music; weather forecast;

tarm program.
1:30 p. m. Complete livestock, fruit and ons; farm news bulletins. 3:45 to 4:45 p. m.—Housemakers' hour. 6 p. m.—Summary, livestock, grain, dairy, fruit and vegetable, poultry and egg, hay and feed markets; farm news bulletins.

6:30 p. m. to midnight—Pipe organ recital; lullaby time; farm program; Shakespeare drama; Ford and Glenn time; midnight mardi

b-WMAQ (447) CHICAGO, ILL. 12 m.—One of the weekly programs under auspices of the Illinois Manufacturers' Asso-ciation.

4 p. m.—American Red Cross home nursing talk by Miss Estelle Weltman, one of a weekly series.
4:30 p. m.—Program from the Gunn School of Music. 5 p. m.—"The Lullaby Lady," Miss Grace Davenport.
6 p. m.—Chicago Theater organ.
6:30 p. m.—Hotel LaSalle orchestra.
8 p. m.—Harry Hansen, literary editor of the "Daily News" book review,
8:20 p. m.—Clara E. Laughlin,
8:40 p. m.—Association of Commerce weekly

8:50 p. m.—University of Chicago. 9:15 p. m.—Program of Philharmonic

b-WMC (500) MEMPHIS, TENN. 8 p. m.-Kiddies bedtime stories by Uncle S:30 p. m.—Program sponsored by Mazda Grotto Lodge. 11 p. m.—Midnight Frolic.

b-WHAS (400) LOUISVILLE, KY.
4.5 p. m.—Selections by the Alamo Theater orchestra, Harry S. Currie, conductor. Police bulletins. Weather forecast for Kentucky, Infolians and Tennessee. "Just Among Home Folks," a daily humorous column appearing in the "Courier-Journal." Readings: Selected "Courier-Journal" and Louisville "Times" editorials. Late important news bulletins.

4:55 p. m.—Local livestock, produce and realn market reports. grain market reports.

5 p. m.—Official Central Standard time apronneed.
7:30-9 m.—Concert by Carl Zoeller's Melodists, Carl Zoeller, director and drums; Elmore Welsarock, trumpet; Aulyn Kanston, piano; Ed Reithmuth, saxophone and violin; Jerome Welsarock, trombone; Cliff Eblen, banjo and saxophone; Cecil Davis, tuba. Late important news bulletins. Official Central Standard time announced at 9 o'clock.

b-KSD (546) ST. LOUIS, MO. 4 p. m.—Home economics program.
6 p. m.—Concert by Benjamin Rader's Or-chestra, direct from Missouri Athletic Asso-ciation.

9 p. m .-- Program to be announced. b-WOC (484) DAVENPORT, IA.

10 a, m.—Opening market quotations.

10:05 a. m.—Household hints.

11:25 a. m.—Weather and river forecast.

11:05 a. m.—Market quotations.

12 noon—Chimes concert.

12:15 p. m.—Weather forecast.

2 p. m.—Closing stocks and markets.

5:45 p. m.—Chimes concert.

6 p. m.—Sport news and weather forecast. b—WOC (484) DAVENPORT, IA.

c—KHJ (395) LOS ANGELES, CAL.

12:30-1:30 p. m.—Program presenting
Tommy Tibbets and his Rendexyous Ballroom
Orchestra from the Crystal Beach.

2:30-4 p. m.—Program through the courtesy
of the Pacific States Electric Company, presenting Jose Arias and his Mexican Orchestra.
Antoinette Friend, singer and violinist.

4 p. in.—Program through the courtesy of
the Southern California Music Company,
6-6:30 p. m.—Art Hickman's Concert Orchestra from the Biltmore Hotel; Edward
Fitzpatrick, director.
6:30-7:30 p. m.—Children's program presenting Prof. Walter Sylvester Hertzog telling
stories of American history. The weekly visit
of Radio Fairies, the Sandman and Queen
Titania. Louis F. Klein, harmonica and autoharp.

7:30 p. m.—Bertram Sanham will talk on
"Samoa." -KHJ (395) LOS ANGELES, CAL.

7:30 p. m.—Bertram Sannam will talk on "Samoa;" 8-10 p. m.—Program presented through the courtesy of the Peerless Laundry, arranged by J. Howard Johnson.

10 p. m.—Program through the courtesy of C. C. Maganhelmer, president of the Sentinel Oil Company, presenting the Los Angeles Trio. If p. m.—Earl Burthett's Biltmore Orchestra from the Biltmore Hotel.

WEDNESDAY Wednesday, December 17. a-KDKA (326) PITTSBURGH, PA.

a—KDKA (326) PITTSBURGH, PA.
T. a. m.—Morning exercises conducted by O.
Shannon, physical director of the McKeesport
Y. M. C. A.
S. a. m.—Morning exercises conducted by O.
Shannon, physical director of the McKeesport
Y. M. C. A.
Signature of the

the primary livestock and wholesake product markets.

8:15 p. m.—Evolution and Heredity talk No. V. "Experimental Evolution," by Prof. H. D. Fish, head of department of zoology, University of Pittsburgh, from the University of Pittsburgh studio.

8:30 p. m.—Program by the courtesy of the Rosenbaum Company, under the direction of Chauncey Parsons.

9:55 p. m.—Arlington time signals; weather forecast.

a-WFI (395) PHILADELPHIA. 19:15 a. m.—Produce market and

3:05 p. m.—"Short Cos." by Ethel Kooker. 3:00 p. In.—Short Charles of State of S

B-WCAP (469) WASHINGTON, D. C. a—WCAP (469) WASHINGTON, D. C. 7:30-8:30 p. m.—Concert by the United States Navy Band, Charles Benter, leader, broadcast jointly with stations WEAF, New York, and WJAR, Providence. 8:30-10 p. m.—Studio concert by "Bob" Lawrence and his musical friends. 10-11 p. m.—Special musical program under the auspices of the Potomac division of the Salvation Army, presenting several New York artists.

INTERNATIONAL CORRESPONDENCE SCHOOLS

nn Orchestra.
3 p. m.—Interview with Fred Fletcher, fishg and hunting editor, by Terese Rose Nagel. 3:10 p. m.—Ethel Cryder, soprano. 3:20 p. m.—Ethel Rosemon, editor of Moving

ports.
4-5 p. m.—Musical program.
6-12 p. m.—Dinner music by the WEAF Instrumental Quartet; Synagogue services; U. S. Navy Band direct from Washington, D. C. Concert by Joseph Knecht's Orchestra direct from the Lobby of the Hotel Waldorf-Astoria; concert by Alfred Y. Cornell and Artist pupila. Meyer Davis' "Palm Beach" Oschestra direct from the Lido-Venice Restaurant,

10 a. m.—Housewives' League menu, Mrs. Julian Heath. 10:20 a. m.—'Periodic Examination,' by Visiting Nurse Service of New York, founded by Henry Street Settlement.

10:40 a. m.—"Foods, Facts and Fancies,"
Tribune Institute talk by Bertha Baldwin.

10:50 a. m.—Eleanor Gunn's fashion talk.

1 p. m.—Hotel Belmont luncheon music. 4 p. m.—Specialty number.
4:30 p. m.—Hotel Belmont tea room.
5:30 p. m.—State and Federal agricultural

news.
7 p. m.—Bernhard Levitow's Hotel Commodore dinner concert.

8 p. m.—"Wall Street Journal" review.

8:10 p. m.—NYU Air College: "Sociolege" dr College; "Sociology. Prof. E. George Payne. 8:30 p. m.—Keith McLeod, planist (request

a—WGR (319) BUFFALO, N. Y.

2:80 p. m.—Concert, courtesy Buffalo "Courter and Enquirer."

6:30 p. m.—Vincent Lopez, Hotel Statler, dinner music.

8-8:15 p. m.—"Prehistoric Monsters of Western New York," by William L. Bryant of the Buffalo Society of Natural Sciences.

9-11 p. m.—Musical program, courtesy Hoover Suction Sweeper Company, Buffalo division.

a—WBZ (337) SPRINGFIELD, MASS.

11:55 a. m.—Arlington time signals; weather reports; Springfield market report.

6 p. m.—Dinner concert by the Westinghouse Philharmonic trio, from the Hotel Kimball studio, Springfield.

7 p. m.—Market report as furnished by the United States department of agriculture at Boston.

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Brunswick orchestra, 11:30 p. m.—Popular song recital. 11:45 p. m.—Leo Reisman and his Hotel Brunswick orchestra.

a—WEEI (303) BOSTON, MASS. 2 p. m.—Happy Hawkins and his orchestra. 6:80 p. m.—Dok-Eisenbourg and his or-

chestra.
7 p. m.—Cooking school by recognized au-

thorities.
7:10 p. m.—Boston Edison Big Brother

7;10 p. m.—Bosson action
Club.
7;40 p. m.—"A Few Minutes With Santa Claus," courtesy of Houghton & Dutton Company, Boston,
8 p. m.—Army night.
10 p. m.—Musicale,

i p. m.—Fenway Theater midnight organ ital with Lloyd G. Del Castillo at the

b—KYW (536) CHICAGO, ILL. 6:30 a. m.—Morning exercises. Instructions given by the physical director of the Y. M. O. A. This service is also broadcast at 7 and

8 a. m.
9:30 a. m.—Late news and comment of the financial and commercial markets.
11:35 a. m.—Table talk by Mrs. Anna J.
Peterson of Peoples Gas Company.
6:02 to 6:18 p. m.—News, financial and final markets furnished by the Union Trust Company, Chicago "Journal of Commerce," and U. S. department of agriculture.
6:35 to 7 p. m.—Children's bedtime story



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(Continued from Page Three.)

b-WMH (309) CINCINNATI, O. 8 p. m.—The Original Blue Grass Enter-alners, William Schoultels, director. 8.30 p. m.—Organ recital. Songs, by Frank

m.-The Original Blue Grass Enter-William Schoulteis, director.

Hri Scouts.

10:50 s. m.—Hermine West, soprano.

10:50 s. m.—Bruno Mailer Concert Trio.

3 p. m.—Interview with Amelia Bingham, ctress, by Terese Rose Nagel.

3:10 p. m.—John Cassidy, baritone.

3:20 p. m.—William J. Stuart in reading of

3:50 p. m.—John Cassldy, baritone. 6-6:30 p. m.—Uncle Geebee. 6:30-7:30 p. m.—Bob Schafer's entertainers:

a—WEAF (492) NEW YORK CITY.
45 p. m.—Tessie Bloom, planist; "Wall
Street" by Henry Collins Brown.
6-11 p. m.—Dinner music by WEAF Instrumental Quartet; musical program direct from
the Strand Theater; Madge Kennedy, stage
and screen star; Harry I. Marble, basso; Jane
Miller Flynn, soprano; music by the A. and
P. Gypsies; Midnight Sons Orchestra.

10 a. m.—Housewives League menu, Mrs. Iulian Heath. 10:20 a. m.—Shoppers' Guide, Mrs. Pauline

toria tea music.
5:30 p. m.—State and Federal agricultural reports; farm and home reports; closing quo-tations of the New York stock exchange; foreign exchange quotations; Evening "Post" news.
7 p. m.—Barnhard Levitow's Hotel Commo-

dore Concert Orchestra.

8 p. m.—'Wall Street Journal' review.

8:10 p. m.—NYU Air College; "Sociology,"

Prof. E. George Payne.

8:30 p. m.—Piano and violin musical.

9:30 p. m.—'Philosophy of Nutrition," Alfred W. McCann.

9:45 p. m.—Marguerite Manierre, soprano.

10:15 p. m.—Dettborn and Howard, Hawalian guiltars.

signals.
12:80 p. m.—Stock market report.

N. Y.

7:45 p. m.—Program by WGY orchestra, assisted by Walter Reagles, tenor. Selection, "Reverie," WGY orchestra. Tenor solo, "The Page," Walter Reagles, accompanied by Earl Rice. 'Cello solo, 'Romanza,' Giovanni Trombini. Selection, Valse, "Palais de Danse," orchestra. Tenor solos: a. 'Mountain Volces,' b. 'Il Sent a Song,' Walter Reagles. Selections, Suite for Violin and Plano, Op. 84.

a. 'Moderato,' b. 'Allegreto,' 'Tempo di Menuetto,' Edward A. Rice, violin; Earl Rice, plano. Selection, 'Melody of-Love,' orchestra. Tenor solo, 'Good-night,' Walter Reagles. Selection, 'Vision,' orchestra.

a-WGR (319) BUFFALO, N. Y. 30 p. m.—Concert, courtesy Buffalo "Cour-6:30 p. m.—Vincent Lopez, Hotel Statler. 9 p. m.—Regular monthly period by the Wheat Ice Cream Company, Buffalo.

Boston. 8:05 p. m.—Broadcast of hockey game be-tween Boston Bruins and Ottawa direct from

a-WEEI (303) BOSTON, MASS. 6 p. m. Jack Renard and his Mansion Inn

Fenway Theater, Boston.

9:30 p. m.—Musicale,
10:30 p. m.—Dance selections by Dok-Eisenburg and his Sinfonians, direct from the amber room, T. D. Cook's, Boston.

6:30 a. m.—Morning exercises. Instructions given by the physical director of the Y. M. C. A. This service is also broadcast at 7

3:20 p. m.—Boys Club of Hudson Guild.
3:30 p. m.—Martha P. Miller, sogramo.
3:40 p. m.—Aifred G. Robyn, plano lessons.
3:50 p. m.—Martha P. Miller, sopramo. 6-6:20 p. m.—Uncle Geebee. 6:20-6:30 p. m.—Loretta Ellen Brady, chil-

dren's stories.
6:30-7:30 p. m.—Larry Funk's Orchestra.
8-8:30 p. m.—MacFadden period.
9:30-10:30 p. m.—New York 'Herald-Tribune'' period.
10:30-11 p. m.—Helena Bloom, Russian 11-12 p. m.—Vincent Rose and His Ritz-Carlton Orchestra

a-WEAF (492) NEW YORK CITY. 11-12 a. in.—Musical program; lecture under the auspices of the board of education; motion

10 a. m.—Housewives League menu, Mrs. Julian Heath.

Orchestra.

4 p. m.—George Forrest, tenor.

4:30 p. m.—Bernhard Levitow's Hotel Commodore tea music.

5:30 p. m.—State and Federal agricultural reports; farm and home reports; closing quotations of the New York stock exchange; foreign exchange quotations; Evening "Post" news.

ews. 7 p. m.—Frank Dole, "Dogs, Japanese 7:15 p. m.—Hotel Vanderbilt Orchestra. 7:15 p. m.—Hotel Vanderbilt Orchestra.

8 p. m.—'Wall Street Journal', review,

8:10 p. m.—NYU Air College; "Sociology,"

Prof. E. George Payne

8:30 p. m.—Address by Frederick William

Wile, direct from WRC, Washington.

8:45 p. m.—Concert by the New York Mozart Society; John Charles Thomas, barltone; Lester Hodges, accompanist; WRC will
also broadcast. also broadcast.

10 p. m.—The Brunswick hour of music, direct from Brunswick Recording Labora-tory; WRC, WGY and KDKA will also

a-WGY (380) SCHENECTADY, N. Y. 11:55 a. m.-U. S. Naval Observatory time

ner music.
9-10 p. m.—National Carbon Company's everready hour, broadcast jointly with Station WEAF, New York City.
10-11 p. m.—Goodrich Silver Town Cord Orchestra, jointly with Station WEAF, New York City.

b-WSAI (309) CINCINNATI, O. 7 p. m.-Hotel Gibson Orchestra, Robert 7:30 p. m.-Chime concert; children's stories, Mrs. Behrman.

8 p. m.-Hotel Gibson Orchestra. p. m.—Florence Braun, soprano; Stept d Collins; Oliver Plunket, tenor. a—WGBS (316) NEW YORK CITY.

10 a. m.—Timely talks with Terese.
10:10 a. m.—Minnie Stern, planist.
10:20 a. m.—"The Modern Kitchen,"
scientific housekeeping period.
10:30 a. m.—Minnie Stern, planist.
10:40 a. m.—Lillian Hartigan "Grace, Poise
and Charm" talk.
10:50 a. m.—Minnie Stern, planist.
1:30-2:30 p. m.—Ted Brown's Colored Entertainers and Spirituals, Jubilees and Jazz
numbers.

e-PACIFIC STANDARD TIME. ports of the Pittsburgh livestock and whole-sale produce markets.

12:15 p. m:—Concert by Daugherty's Or-chestra, playing at McCreery's dining room.

3:30 p. m.—Closing quotations on hay, grain and feed, from "Stockman" studio.

6:30 p. m.—Dinner concert from the Pitts-burgh Athletic Association, Gregorio Scalzo, conductor. 7:30 p. m. "Stockman" market reports of

stock reports.

1 p. m.—Meyer Davis Bellevue Stratford
Hotel Concert Orchestra otel Concert Orchestra.

1:50 p. m.—Agricultural reports.

3 p. m.—Report of the closing prices of the Chicago grain market.

3:05 p. m.—"Short Chats on Recent Nov-

by Ethel Lewis, Center, Loretta Acta, accompanist.
6:30 p. m.—Meyer Davis Bellevue Stratford Hotel Concert Orchestra.
7 p. m.—"Sunny Jim—the Kiddles' Pal," assisted by Martie Faye with Margaret Morris at the plano.

b—WMH (309) CINCINNATI, O.

8 p. m.—Songs, Frank Wright and Frank
Bessinger, the Radio Franks. Cello solos by
Oscar Krische; Margaret Bronson, accompanist.
Bass solos by Chester Markward. Vocal duets,
Miss Margaret Bronson and Mrs. Ora Welf,
Mrs. George Dunning, accompanist. Reading,
Miss Sadie Stewart.

9:30 p. m.—Dance orchestra. 9:30 p. m.—Dance orchestra.

-WGBS (316) NEW YORK CITY. a—wt.BS (316) NEW TOTAL CITY.

10 a. m.—Timely talks with Terese,

10:10 a. m.—Blmo Russ, pianist.

10:20 a. m.—House furnishing review.

10:30 a. m.—Bert Dixon, baritone.

10:40 a. m.—Gertrude E. Tucker, "Real tomance of America."

10:50 a. m.—Elmio Russ and Bert Dixon.

1:30-2:30 p. m.—Mischa Bor and His Russian nn Orchestra.

3:20 p. m.—Ethel Rosemon, editor of Moving Picture Stories.
3:30 p. m.—Ethel Cryder, soprano.
3:40 p. m.—Charles Le Maire "Costumes or Fancy Dress Balls."
3:50 p. m.—Ethel Cryder, soprano.
6:6:30 p. m.—Uncle Geebee.
6:30-7:10 p. m.—Van and His Collegians.
7:10-7:30 p. m.—Judge and Film Fun in Wittind Humor.

a—WEAF (492) NEW YORK CITY, 11-12:30 p. m.—Musical program and Young Mother's Program. Chapel services direct from Columbia University; market and weather re-

a-WJZ (455) NEW YORK CITY, a. m.-Housewives' League menu, Mrs.

reports; farm and home reports; closing quo tations of the New York stock exchange; for eign exchange quotations; Evening "Post"

program).

9 p. m.—"Field and Stream" talk by Harold McCracken.

9:15-p. m.—Specialty number.

10 p. m.—Hotel St. George Trio.

10:30 p. m.—Billy Wynne's Greenwick Village Inn Orchestra. a—WGY (380) SCHENECTADY, N. Y.

11:55 a. m.—Time signals.

12:80 p. m.—Stock market report.

12:40 p. m.—Produce market report.

12:45 p. m.—Weather report.

6 p. m.—Produce and stock market quotations; news bulletins.

6:30 p. m.—'Adventure Story,'' (courtesy of "Youth's Companion).

Silent night.

United States department of agriculture at Boston.

7:05 p. m.—Radio nature story by Thornton B. Burgess, from the Hotel Kimball studio, Springfield.

7:15 p. m.—Information concerning civil service examinations from the Hotel Kimball studio, Springfield.

7:30 p. m.—Concert by the Marchesi quartet, assisted by the Westinghouse Philharmonic trio, from the Hotel Kimball studio, Springfield.

8:30 p. m.—Concert arranged by Mme. Emilla Ippofito, from the Hotel Brunswick studio, Boston.

9:30 p. m.—Marimba solos by Clarence H. Jones, accompanied by Mrs. A. Symington,

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a-EASTERN STANDARD TIME. by Walter Wilson, who is known to the little ones as "Uncle Bob."

All Chicago stations are silent on Monday from 7 p. m. to 12 p. m.

> b-WLS (345) CHICAGO, ILL. B a. m.—Market report; weather forecast.
>
> 11 a. m.—Livestock, fruit and vegetable markets; farm news bulletins.
>
> Noon to 1 p. m.—Music; weather forecast; farm program.
>
> 1:30 p. m.—Complete livestock, fruit and vegetable markets; fanal grain markets; farm news buffetins. news builetins.
> 3:45 to 4:45 p. m.—Housemakers' hour.
> 6 p. m.—Summary livestock, grain, dairy, fruit and vegetable, poultry and egg, hay and feed markets; farm news bulletins.

b-WMAQ (447) CHICAGO, ILL. b. m.-Mothers in Council, by 4 p. m.—Mothers in Council. by h Frances M. Ford; one of a weekly series. 4:30 p. m.—One of the series of talks English, Mrs. J. Elliott Jenkins. 6 p. m.—Chicago Theater organ recital. 6:30 p. m.—Hotel LaSalle orchestra. Monday night-Silent night.

b-WMC (500) MEMPHIS, TENN.

8 p. m.—Bedtime stories for the kiddles by Uncle Percy. 8:30 p. m.—Regular Monday evening request program by Biggers Georgia Serenaders. b—WHAS (400) LOUISVILLE, KY.
4-5 p. m.—Selections by the Alamo Theater orchestra, Harry S. Currie, conductor. Police bulletins. Weather forecast for Kentucky, Indiana and Tennessee. "Just Among Home Folks," a daily humorous column appearing in the "Courier-Journal." Readings: Selected "Courier-Journal" and Lousville "Times" editorials. Late important news bulletins.
4:55 p. m.—Local livestock, produce and grain market reports.

ain market reports.
5 p. m.—Official Central Standard time 7:30-9 p. m.-WHAS is silent on Monday b—KSD (546) ST. LOUIS, MO.
7 p. m.—Music and specialties direct from Missouri Theater.
9 p. m.—Music program direct from Grand Central Theater.

b-WOC (484) DAVENPORT, IA. 10 a. m.—Opening market quotations.
10:05 a. m.—Household hints.
10:55 a. m.—Time signals.
11 a. m.—Weather and river forecast. 11:10 a. m.—Weekly hay and grain review. 12 noon—Chimes concert. 12:15 p. m.—Weather forecast (repeated).

2 p. m.—Closing stocks and markets. . 6:45 p. m.—Sport news and weather foreo. m.—Sandman's visit.—(Bedtime stories 7 p. m.—Sandman's visit.—(Bedtime stories by Val McLaughlin).
7:20 p. m.—Educational lecture—"Advertising," by H. E. Vedder, department of psychology, the Palmer School of Chiropractic.
8 p. m.—Musical program—(1½ hours).
Schmidt Music Company Concert orchestra.
9:30 p. m.—Educational lecture—"What a Million Miles of Travel Have Taught Me," by Major Dent Atkinson, Ph.D.
10 p. m.—Special—A three-act comedy entitled, "Not Such a Fool as He Looks," presented by the Dramatac Club of the Palmet School of Chiropractic, directed by W. Roy Van Allen.

c—KHJ (395) LOS ANGELES, CAL.

12:80-1:30 p. m.—Program presented through the courtesy of the Martin Music Company, arranged by J. Howard Johnson.

2:30-4 p. m.—Program through the courtesy of the Pacific States Electric Company, presenting the Pacific States Check Seal Trio, and Gladys Blackwell Pickering, soprano.

s-WCAP (469) WASHINGTON, D. C.

-WGBS (316) NEW YORK CITY.

TUESDAY Tuesday, December 16. -KDKA (2061 PITTSBURGH, PA. a—RDRA ("Stockman" reports of the Pitts-burgh livestock markets; general market re-view and agricultural items. 11:55 a.m.—Arlington time signals. 12 m.—Weather forecast. "Stockman" re-ports of the Pittsburgh livestock markets. 12:15 p.m.—Concert by Scalzo's Orchestra, playing at Kaufmann's dining room, Pitts-burgh. 8:30 p. m.—Closing quotations on hay, grain and food from the "Stockman's" studio.
6:30 p. m.—Organ recital by Alexander F.
Taylor, from the Million Dollar Grand Theater, Pittsburgh.
7:30 p. m.—"Stockman" reports of the primary livestock and wholesale produce markets.
7:45 p. m.—Story time for the little folks.
8:30 p. m.—Choir Ensemble Society, Lyman
Almy Perkins director, assisted by KDKA
String Ensemble. Soloists: Miss Caroline
Bracey, soprano; Miss Lillian Vetter, soprano; Miss Mary Berlies, soprano; Mrs. Levigna McCrady, contralto; Mrs. L. Wallace

Ohl, contralto; Arthur C. Scott, tenor; Arthur Ray Davis, tenor; E. Claire Anderson, bass. 9:55 p. m.—Arlington time signals; weather 11 p. m.—Concert from The Pittsburgh Post a-WFI (395) PHILADELPHIA.

10:15 a. m.—Produce market and live tock reports.

1 p. m.—Meyer Davis Bellevue Stratford

1:50 p. m.—Agricultural reports.
3 p. m.—Report of the closing prices of 1:50 p. m.—Agricultural reports.
3 p. m.—Report of the closing prices of the Chicago grain market.
3:05 p. m.—Program under the suspices of the Matines Musicale Club, held in the ballroom of the Bellevue Stratford Hotel.
6:30 p. m.—Meyer Davis Bellevue Stratford Hotel Concert Orchestra.
7 p. m.—"Sunny Jim—the Kiddies' Pal."
8 p. m.—Review of local theatrical plays by T. Lawton Slaugh.
8:10 p. m.—Illustrated recital by Madame Inga Julievna, soprano, with Mary Miller Mount at the plano.
9 p. m.—"Eveready Hour" program, broadcast direct from Station WEAF, New York city.
10 p. m.—Goodrich Silvertown Cord Orchestra, under direction of Joseph Knecht, broadcast direct from Station WEAF, New York city.

le.

6:30 p. m.—Copley Plaza orchestra under he direction of W. Edward Boyle.

7 p. m.—Market report as furnished by he United States department of agriculture. the United States department of agriculture at Boston.

7:05 p. m.—Bedtime story for the kiddles from the Hotel Kimball studio, Springfield.

7:15 p. m.—World market aurevy from the department of commerce at Boston from the Hotel Kimball studio, Springfield.

7:80 p. m.—Leo Beisman and his Hotel Brunawick orchestra.

8 p. m.—Amelia Marcus, soprano, and Marjorie Lieberman, planist, from the Hotel Brunawick studio, Boston.

8:30 p. m.—Program arranged by Pauline Hammond Clark, from the Hotel Brunswick studio, Boston. studio, Boston.
9:30 p. m. Talk on "Starlore," by George
Leo Patterson, from the Hotel Brunswick,