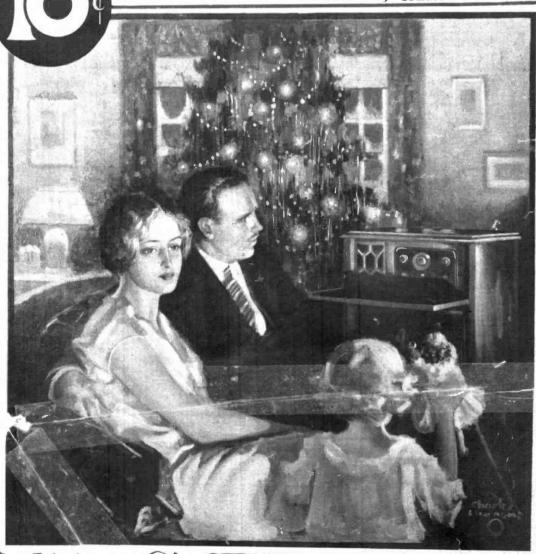
RIIDecember. 1925 KA PHE HOME



In this issue: The SILER MASK IS OFF

DISTANCE THE OBEDIENT SLAVE TO YOUR DESIRES



APEX mastery over the most advanced radio engineering principles make distance the obedient slave of your desires and places at your instant command the whole continent of radio enjoyment.

The infinite care and skill employed in perfecting the mechanical construction of APEX Radio Apparatus is radiantly reflected in the rich beauty of design, harmony of proportion and elegance of finish that stamp all APEX sets with an unmistakable mark of master craftsmanship.

You are cordially invited to inspect this complete showing of Quality Radio Apparatus. Only a dependable merchant is given the APEX dealer franchise. Your APEX dealer will gladly make a personal demonstration of APEX Quality Radio Apparatus.

APEX ELECTRIC MFG. COMPANY
1410 West 59th Street Dept. 1212 CHICAGO

Also makers of the famous APEX Vernier Dials and APEX Rheostat Dials, which are sold by every good dealer in Radio.











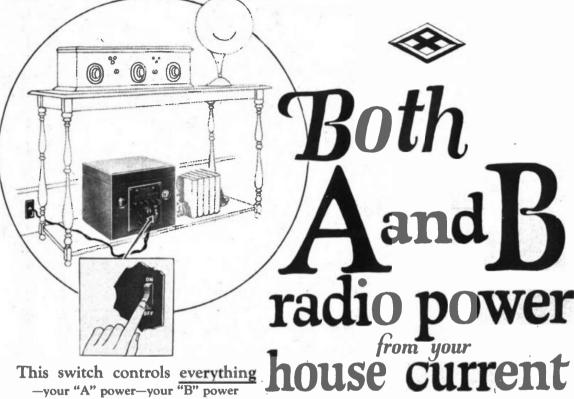




Apex Console Entertainer Price, \$27.50

Apex De Luxe Price \$135

Prices West of Rockies Slightly Higher. Canadian Prices Approximately 40% Higher.



-even the radio set itself

Philco Socket Powers are plugged permanently into a wall or lamp socket. They change your bumpy alternating house current into the smooth, hum-free direct current necessary for your radio.

One switch controls everything-"A" power. "B" power, even the radio set itself. Snap it ON and you get a strong, uniform flow of both "A" and "B" power. Snap it OFF and your power is shut off-your radio is silent-and current begins gently feeding back into Socket Power "A" from your light wires.

No high voltage transformers-no moving parts -no hum-no distortion-no falling off in reception. As dependable as your electric current and turned on exactly like an electric light.

Once you connect Philos Scalest Fower to your you never seminange a single wire. You Les. You forget that radio is mysterious and technical. You just enjoy it.

For Radiola Super-Heterodyne (old and new models) and other sets using 3-volt dry-cell tubes, buy Phileo Socket Power "AB" shown above. Both "A" and "B" power built into one cabinet, satinfinished in brown mahogany. Connect to your radio once for all. Plug into a light rocket. Turn on your radio switch and leave it on. After that there is nothing to think about but the one Socket Power switch.

Snap it ON and enjoy your radio. Snap it OFF and go to bed. For 50-60 cycle 105-125 volt alternating

current..... \$65.00 For 25-40 cycle 105-125 volt alternating current......

Socket Power "B" at only \$47.50 (see narrgraph on the right) may be used on dry-cell tube sets where house current "B" power alone is desired.

For Storage Battery (6 volt) tubes buy Socket Powers "A" and "B" in individ-ual cases. Socket Power "A" permanently connects to a light socket, and without any thought about recharging, automatically supplies "A" battery current. Societ Power "B" eliminates "B" batteries and does away with all recharging and all bother and exwith all recharging and all bother and ex-pense of replacing worn out dry cells. Can be used on any set. Either "A" or "B" may be used alone, but for maximum convenience use both together. Plug the "B" into the built-in socket on the "A." Plug the "A" into your house current. Both "A" and "B" (and the radio set as well) are then controlled by the one "A" switch. Snap it "ON" and eajoy your radio. Snap it "OFF" and go to bed! to hed.

Socket Power "A" for 50-60 cycle 105-125

Sold and demonstrated by leading radio and music stores and by Philco Diamond Grid Battery Dealers.

Philadelphia Storage Battery Company, Philadelphia

DIO A AND B POWERS

Buv a Phileo Diamond Grid Battery for your autombile

514.55 and radio Batteries are built Drynamic DRY but CHARGED. Their life doesn't start u.til the dealer pours in the electrolyte. You can't get a stale Drynamic Philos.



EDITORIALIY SPEAKING

EVERY now and then I find myself wondering if it isn't about time for us to stop marveling at the mystery and the miracle of radio and to consider it from the perfectly cold-

Fewer Stations-Better Programs

blooded and logical viewpoint of a business p r o position,

bidding for our nightly attention on a business basis. Stripped of its mystery, how does it really rank as a contribution to the entertainment and culture of the American home? Is it making for our advancement? Or is it joining forces with other modern influences that are tending to spread our attention over a smattering of everything with serious concentration upon nothing?

We used to listen to an evening of radio and shut off the set with a deep sense of appreciation of the

music and the talks which had come to us free. We felt that it would smack of base ingratitude to find fault. So deeply did the marvel of it all impress us that we were overwhelmed to the point where adverse criticism seemed to be the worst of bad taute.

But today we have become sophisticated. We know now that no broadcasting station is being run as a philanthropy. Several stations have lately been sold, the transfer of the Class B wave length bringing a sum close to six figures and far greater than the cost of actual station and apparatus combined. Recent developments point to the prediction that soon a Class B wave length will be worth as much actual cash as a seat on the New York Stock Exchange.

People don't buy philanthropies at any such figure as that. No: every broadcaster is broadcasting strictly as a business proposition-ranking as business a man's desire for personal publicity or an institution's wish to extend its sphere of influence. At any rate, whatever the object, the broadcaster considers it worth spending a small fortune to achieve.

And what does this money buy? It buys our attention. Millions of dollars are now being spent in an endeavor to get you and me to tune in and give our undivided and friendly attention to the program.

And so we are not getting something for nothing. The moment we sit down to listen to a station we have actually paid for our seat and our entertainment. And we, therefore, have just as much right to applaud or to criticize the performance as has the patron of theatre, opera or concert. We are patrons of the broadcasters. Without us they could not exist. An immense industry has built itself up around this attention



By Henry M. Neely

of ours. A great new phase of advertising in the form of commercial publicity by radio is now being reared, with its foundation rooted in the family group listening about the radio set in the home. This phase is making it possible for us to demand and secure the most famous of artists and the most significant of national events for our evenings with our families and our friends.

Nothing is being sent out by radio for nothing. In a few short years the marvel and the mystery have gone, the deep sense of awe and of gratitude has gone, the fear of being thought thankless has gone. We know now that we are no longer beneficiaries. We know that we are

And so, from time to time. I find myself growing restless and impatient as I turn my dials to find out what the different stations are doing

to deserve the possession of the coveted and valuable privilege of broadcasting.

Unquestionably, programs have immensely improved in the last two years. They should have. The financial value of the stations has improved far faster than some of the programs. But the question that constantly occurs to me is this; are the program standards improving in proportion to the tremendously increased influence of radio on the American public? Does the average station owner really realize the almost sacred trust that he assumes the moment his operator closes the switch to start the station generator?

I am not talking now of idealism. I started out to consider this thing in a perfectly cold-blooded, logical, business way. And that viewpoint still holds.

Two years ago the radio set was a remarkable and fascinating toy. The father of a family let his boy play with it and now and then he himself listened in and even called mother to hear something especially catchy. But in these two years the whole aspect has changed. In many thousands of cases the radio set has achieved the reunion of the whole family in the home, where before the young folks-and the old folks, toowere beginning to seek their evening's diversions elsewhere. The radio set is molding whole family lives.

*bort this changing aspect we are building an industry that already grosses the suspending total of half a billion dollars a year. And we have only just begun. Detter prograbuilding this industry. Still better programs will build it will greater. Its foundations are laid in the family life of the Nat gip and the mortar that holds its stones together is the family's satisfaction with what radio brings into the home. The greater

(Continued on Page 28)

RADIO IN THE HOME

Published Monthly by the Henry M. Neely Publishing Company, Public Ledger Building, Philadelphia o Tolonh Ernerimental Station (SEP), Delance, N 'J. Bell Telephone-Lombard 8431

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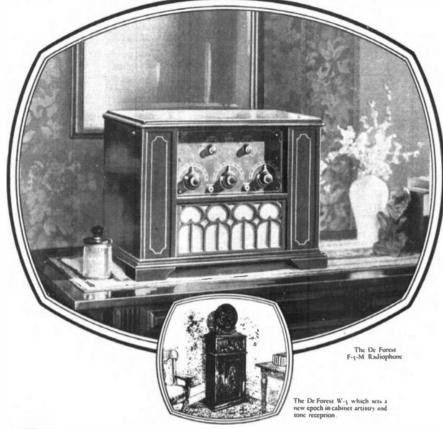
Radio in the Home is sold at 10c per copy at all newsplands, radio shope and backstores. Subscription rates in the United States, 1-10c: Canada, 51.36: Persign, 52.00 per year.

Printed on the redegravure present of the Public Ledger. Philo., Per. Copyright; 1985, by the Henry M, Nesty Publishing Company.

Entered as sreamf-chang matter May 20th, 1925, at the Fuel-disc, Philod-lphia, Pennsylvania, under the act of March 5, 1979. Radio ir the Home Is a Member of the Audit Bureau of Circulation







DE FOREST

The Greatest Name in Radio

A Peerless Value from the Master Scientist of Radio

SELDOM are the finer things of life introduced at popular prices. The cost of originating the new usually prohibits low price.

But here is a notable exception—the De Forest F-5-M Radiophone, a masterpiece in performance, quality and dignified beauty from the master mind of radio science.

Everything about this marvelous set is exceptional. The circuit is new—and ingenious. Known as the De Forest Balanced Circuit, it gives to radio tone the rich realism of life. Low and soft tones that usually die away in a misty blur are reproduced distinctly and musically. Very high tones that seem to climb into the infinite and flutter away like white butterflies against a blue summer sky are borne to your ear with a clearness and sweetness new to radio devotees. Individual parts in quartette and choral harmony are intensified.—something new in reception.

This self-same circuit also contributes economy to operation. It

reduces the drain on batteries, thereby lengthening "B" battery life and the interval of recharging or replacing "A" batteries.

Refreshing, also, is the manner in which this new circuit tunes in stations . . . without scraping and whistling.

New power qualities, distance mastery, station separation and volume are added by other newly devised mechanisms. And art intervenes to add the final touch . . . grace and symmetry in cabinet design, the tone reproducer in-built and out of sight, "B" batteries housed in a compartment within the cabinet.

Yet the price is only \$110! (Western prices slightly bigher) See and hear the F-5-M at your nearest Authorized De Forest Dealer's.

Prices range of De Forest Radiophones -\$85 to \$450.

DE FOREST RADIO COMPANY, Jersev City, N. J.



For better reception and longer tube life always bus De Forest Audsons. There's a special one for each soc Forest invented the radio tube



By Henry M. Neely

he SILVER MASK IS OFF

The Silver Masked Tenor pictured at home with his wife and

NOTHING whets the curiosity of the American public more than a mystery, and every theatrical man or press agent knows the value of mystery in exploiting a star or an attraction. But, if there is nothing more than mystery to back it up, the whole campaign soon collapses and the whole thing is forgotten. Given a good mystery and genuine talent to support it—and another career is "made."

Which leads us up to the question—just how much has the mystery element contributed to the popularity of the Silver Masked Tenor, soloist with the Goodrich Silvertown Cord Orchestra and now with the Zippers? If he had been introduced in the first place as John Jones or Bill Smith, would his voice alone have won him the widespread fame that he has achieved in so

short a time? Those who have had most experience in such things answer "no." Without the voice there could have been no such popularity, yet the mystery undoubtedly caused speculation and added interest among the listeners-in. And that is good publicity. Anything that will make people talk about him has a distinct and coveted value to an entertainer.

For some time I have been trying to persuade the Powers That Be to let me tell you who the Silver Masked Tenor really is. I had them just up to the point of consenting when the question of fairness to him entered the discussion and that swung the decision against me. This mystery is still of great potential value to the Silver Masked Tenor. If we took it from him, we would be robbing him of something that is

rightfully his.

But I have secured permission to publish for the first time a photograph of him without his famous silver mask. So here it is on this page—the Silver Masked Tenor, his wife and their baby.

I can vouch for the fact that it is an excellent likeness of Mr. Silver Mask and a fair portrait of Mrs. As for the baby, I am not competent to pass judgment. All babies look exactly alike to me—except that I can usually tell the black ones from the white ones when I can get up my nerve to approach close enough to see. There is a much better picture of Mrs. Silver Mask on the next page. That is her husband's favorite and he carries it in his cardease. I took it from him one day when he was proudly displaying it to me.

And, now that you know exactly what your favorite radio entertainer looks like, you will probably be more than ever impatient to know his identity. I'm sorry I can't tell you.

I have always felt that the best way to describe a man's personality in writing is to tell a few stories about him—providing they are to the point.



Vol. IV

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Some little thing that a man actually does is usually far more revealing than thousands of words of descriptive matter. So—

Has all this nation-wide applause—he's had 85,000 letters—gone to his head and made him forget how to be unaffectedly human? Here's the answer:

One day I invited him to have lunch with me in New York. I felt that a man who was nationally famous would prefer the best of surroundings and the most select of foods. So I took him to the Roosevelt Grill. The waiter gave us menus glittering with the names of the choicest dishes, and, leaning over the Silver Mask's shoulder, suggested one or two of the dainties. Silver Mask listened politely and then laid the card on the table.

and then laid the card on the table.
"Bring me," he said, "a nice order of corned beef and cabbage."

I took the same.

Any man who has dealt much with musicians will tell you that one

almost invariable characteristic they develop is an unreasoning jealously—an inability to say anything good about a rival in their own particular domain. A soprano may admit that some contralto is good, but you'll find it hard to make her say anything nice about another soprano. You must never expect one tenor to praise another, though he may rave over the ability of a basso. But—

The Silver Mask took me one day to the New York offices of the Victor Talking Machine Company. They had sent him word that he could call, if he wished, and hear the new orthophonic records which he and the Silvertown Cord Orchestra had made and which were released last month.

We listened to one after another and, at the end of one of his best solos, I said to him jokingly:

"Well, your favorite tenor certainly records perfectly, doesn't he?"

But Silver Mask took me seriously. A far-away, dreamy look came into his eyes and he shook his head.

"That isn't my favorite tenor by a long shot," he said. "Listen to John McCormack. There's a real tenor—and a supreme artist. You and I will never live to see his like again."

I told him that many people thought that McCormack was really the Silver Masked Tenor. Silver Mask actually lost his temper at that.

"Nobody with any musical ear could possibly make such a mistake," he said, quite as though he were taking his own part against McCormack instead of McCormack's part against him.

Cormack's part against him.

Silver Mask is an ardent follower of athletics. He did 100 yards in 11 seconds in his schoolboy days and then took up boxing with a serious intention of becoming

a professional mitt-slinger. He can still sit down and give you a blow-by-blow account of most of the big fights he has seen. But baseball has almost won him away from his seat at the ringside. He is a genuine fan.

"Suppose," I said to him once, "that the same afternoon offered you your choice of a McCormack concert, a championship fight and a World Series game, which would you choose?"

"That's easy," he said promptly, "I'd go to the McCormack concert."

"All right," I continued, "suppose it were a choice between the fight and the game. What would you do?"

game. What would you do?"

He puzzled for a long time over that.

Finally he smiled.

"That's a hard one," he said, "I guess I'd have to put two radio sets in my house and tune one to the fight and the other to the game."

Silver Mask is blossoming out now as a composer as well as a singer. He has a lready done a good deal of lyric writing, but just a few weeks ago there was published a waltz, "Venetian Night," for which he wrote both the words and music.

Some time ago, in the Witmark "Black and White" series of songs, there was published one called "In Flanders," for which Silver Mask wrote the words and collaborated in the music. It was dedicated to a buddy of his in France—the first man killed in the 102d Engineers. Later in the same song collection appeared "Maureen Mavourneen," dedicated to the brighteyed Irish girl met on the other side during the war and now shown in the accompanying photographs as Mrs. Silver Mask.

That same World War almost lost us the glorious voice that we now enjoy every



This is "Maureen Mavourneen," the wife of the Silver Masked Tenor. It is his favorite photograph of her and is reproduced from a picture which he carries in his cardease

week. Silver Mask couldn't sing a note for a year after he got back. First it was a wound on the inner calf of the right leg. It became infected with mustard gas and the gas also got at the tender membranes of the throat. For a while it looked as though the singing voice was permanently gone.

But Silver Mask hasn't any wound stripe to display to admiring friends. He has a nasty scar—but no stripe. The reason is that when the shrapnel hit him he was too busy to report to the doctors. There had come a hurry call for ammunition in the front-line trenches and Silver Mask had to do the driving. He caught the shrapnel on his first trip up and drove into the mustard gas on his second. But the boys needed more ammunition, so he kept on making trips until the action was over and then, he says, he was just so doggone tired that he merely washed the wound out and hit the hay as soon as he could.

The leg seemed to be all right, and it wasn't until later that the infection began to come to the surface.

The leg still bothers him once in a while, but the throat trouble has now entirely cleared up. After his return to this country and when his voice had got back into shape, he went on a tour with the Neil O'Brien Minstrels, as tenor soloist, for several seasons. Then he sent for "Maureen Mavourneen," and after the wedding they settled in the Bronx.

Oddly enough, we owe to a woman the credit of discovering him for nation-wide radio, and the mystery of his identity came as the result of a joke.

Silver Mask made several "appearances" from various New York stations, engaged by a song publisher to sing new composi-

song publisher to sing no (Continued on Page 23)



Here are the new Goodrich "Zippers" which have succeeded the famous Silvertown Cord Orchestra. From left to right they are: Seated—Marion Ross, Ruby Hoffman, Miriam Mereman and, at the piano, the composer, Lieutenant Gitz Rice. Standing—Albert Campbell, Arthur Friedman, Frank Croxton, John Meyer, George V. Hobart (the librettist), the Silver Masked Tenor and Joseph Knects conductor.

6he WORLD'S MOST

"UNPOPULAR" ANNOUNCER

By Frank E. Mullen

(Who does the market reports and announcing from "National Stockman and Farmer" studio of Station KDKA)

Pedigree of Frank E. Mullen

(as furnished by himself Nativity-Full-blooded Scotchman.

Aye-29 years.

Size-6 feet and 180 pounds.

Religion-Goes to Presbyterian occasionally.

Social status-Married, with year-old boy and all the usual relatives.

Education—All the grandes, high school and low State College, Ames, to say nothing of seventeen years' pitching hay on South Dakota prairies. Also give due credit to United States Army for present proficiency in use of words. (Eighteen months in France.)

Hobbies-Shooting pool and penny ante.

Length of present job-To date (two years six months) have given KDKA market reports since June, 1923.

Accomplishments-Fluent liar, plays cornet and piano. No luck with

GOOD evening, everybody. How are you all

Making the usual conservative radio industry estimate, I suppose that during the last three years 25,000,000 radio listeners have heard the above greeting an average of five nights weekly, and I suppose further that 24,999,999 of said listeners immediately dialed their sets for another station.

It has been no easy task to achieve the reputation of being the world's most unpopular radio announcer, but as market reporter on Westinghouse Station nKDKA, the power of the station and regularity of transmission have combined to thrust upon me this distinction. In proof of my status I submit that in a recent popularity con-

test in which listeners voted for the most popular announcer, my name wasn't even mentioned. Further proof was given when Editor Neely, of Radio in the Home, wrote and asked me how in the world I managed to keep my job.

The truth of the matter is that I am really a boon to the radio industry. In the city of Pittsburgh alone, a hundred thousand radio fans have been compelled to buy high-priced receiving sets in order to get the necessary selectivity to tune me out. You see there is method in the seeming madness.

I had only been broadcasting a few months when I received the following fan



letter: "I wish you would cork up that bottle of yours and float out to sea." Such a compliment pleased me beyond measure and to show that I have ever got worse, last week a gentleman asked my boss: "Who is that fellow that gives the KDKA market reports? He's terrible. I don't like his news column, I don't like the market reports, I don't like his voice and I don't like him."

Needless to say, I got another raise.
When the National Stockman and
Farmer and the Westinghouse Company
began thinking of the desirability of enrolling the farmer in the ranks of the radio
audience, it was decided that market and

Above is a close-up of Frank E. Mullen, the world's most unpopular announcer, while the photograph on the left shows him with Mrs. Aaron A. Coulter, his mother-in-law, wife and baby Russell

weather reports were the proper inducement to offer. When it was further decided that the announcer should be an individual with unlimited nerve, a strong voice and intimate acquaintance with the soil and its products, a survey of the field disclosed my presence on the prairies of the Dakotas. And so I came to Pittsburgh and started down on my accused.

down on my career.

I got into trouble right away. I started out giving the market reports from the East Pittsburgh studio of KDKA. The studio staff objected so strenuously that it was found necessary to build a separate studio for me to give the market reports from, and ever since I have been very much by myself in the studio, and according to many reports 'on the air."

As I have said, my job has been a difficult one. The following story is true. At one of our early conferences on the market reports, Mr. _____, of the Westinghouse Company, sprung this on me: "Mullen," he said, "can't you use another term instead of that word hog. Hog sounds so vulgar over the radio. Why not say pig?" Now, from my extensive experience with

Now, from my extensive experience with the members of the swine family, I assure you that to call a hog a pig is no more accurate than to call a camel a three-toed



It's been lots of fun—this radio market report announcing—and I have received my rewards. I expect that my good friends of the radio audience have sent me about every known variety of fruit and vegetable and, I hasten to add, in good condition. So far

I have received no eggs. Here is another true experience. In reporting the livestock markets it is customary to say that the market is either slow or active, steady or higher or lower. Consequently, quite often I report that the market is slow and steady.

Imagine receiving this letter from a dear old lady of some 65 winters and summers.

"Dear Mr. Mullen:

"I must write you how wonderful radio is and what a great blessing it has been to me. For years I have been a semi-invalid and now, praise God, I am well. Doctors, specialists, friends, all had been unable to help me and then I got a radio set. My trouble was largely nervousness, and to my own surprise I immediately began getting better. In particular have your market reports been of great benefit to me. Every morning as I lay in bed I listened to you giving the market reports, and as you repeated in such a soothing tone, 'slow and steady,' I just seemed to get strength by repeating it after you. For the first time in seven years I am out of bed and walking around. I attribute my recovery entirely



Frank E. Mullen giving the daily market reports from Station KDKA

to radio and I praise God for this great blessing."

Some letter, that, and along with the laugh there is something to think about.

Another very fine experience came to me through the Hudson Bay Fur Company. One of the company men accompanied by his wife started north to a trading post that was reached by boat mail only once a year. Half way in to the post the wife became ill and it was necessary to send her back to a Montreal hospital. Fortunately the trading post was equipped with a radio receiving set and the husband, knowing this, asked the company to send word to him of his wife's condition. He stated further that the post listened to the market-report man of KDKA (mainly because of his strong voice). So it came about that I

A corner of the "National Stockman and Farmer" studio of Station KDKA



sent a message to this man one night along with my market report telling him that his wife was recovering and that everything was all right. About six months later I heard that the message had been received O. K. and that another post some 200 miles distant had also heard and had sent a dog team to the first post to assure the message getting through. Certainly a wonderful human experience.

But I see that I am getting serious. One day the telephone rang and the lady that talked to me stated first that she was a constant listener to the station. She was sure

that every one listened and would I mind telling everybody that Fido, a small, dark brown dog with curly hair, was lost! I don't know whether Fido ever got back home or not.

Listeners in South and North Carolina have caused me no end of trouble. We had instituted weather forecasts nightly from the station and, after repeated requests, had added some six or seven forecasts for as many States. Letters came from the Carolinas asking for the forecast for their States. We hesitated because of the distance, when all at once I received a letter from Washington telling me that the Congressman from North Carolina was pressing the Weather Bureau to have the forecast given from Station KDKA. We compromised and gave it.

The world is small after all. The mint

The world is small after all. The mint growers, of Michigan, want quotations on mint. For mint julep, I presume. The "old Iron" gatherers want quotations on scrap iron. The truck gardeners of the South want quotations on potato plants. Prices on oranges and lemons are wanted by the Florida citrus growers. The boys

(Continued on Page 14)







Radio isn't a bunch of wires and a collection of queer-looking instruments. First of all. it is music and culture; second, it is furniture fitting to the home; third, it is now becoming the center of a remuchening family life. The set shown in the picture is a Bremer Tully Counterphase-Six

The Day of the Factory-Made Set

Editorial Note—Grateful acknowledgment for many data used in this article is made to Radio Retailing, the monthly trade paper published for radio dealers by the McGraw-Hill Company, Incorporated.

WILL our next radio set be home-made or factory-assembled? This is a question of very great national importance and hence one that interests every Government department that is concerned with the welfare of radio.

Of course no one is going to answer the question for every purchaser, because some of us prefer a home-made set, just as we prefer mother's home-made cake; whereas the rest of us are going to the store and buy the best set which our pocketbook can afford, just as the apartment dweller buys bakery goods because the kitchenette is too small to permit manufacture of a full-size cake.

There are good arguments on each side of this question, and Uncle Sam's radio in-

vestigators are, therefore, unwilling to be quoted, pro or con. I think it is safe to say, however, that every one of them believes there is a decided trend toward buying of

complete factory-assembled sets.
Certainly the radio business of the country has come to this conclusion. One editor of a technical radio magazine gives the best evidence that could be offered that you and I are now more likely to be customers in the set department than in the "parts" department of the radio store. This editor shows that ten times as many millions of dollars were spent in 1922 for parts as for sets. But in 1925 nearly three times as many dollars are being spent on sets as on parts. This is certainly a radical change for three years.

Incidentally, you and I have created quite a sizable business in this field, for this same editor finds that there is a market for \$75,000,000 worth of parts, nearly \$200,000,000 worth of sets and over \$200,000,000 worth of accessories per year. Thus you and I might just as well get ready to hand over a half billion dollars annually to this industry.

This does not worry us, however, for there is hardly any other branch of business that is giving us more pleasure and more real satisfaction than we get from these radio expenditures. It is unlikely that the business will again grow to four times its present size in the next three years as it has multiplied in the last three. But our expenditures for radio are certainly going to continue steadily upward as the quality of programs, as the reliability of sets, as the appreciation of radio opportunity increases.

tunity, increases.

With this development of radio business we need not expect that there will be any less attention given by the Government to the amateur. That group of youthful investigators is looked to for some of the most important developments of the next ten years. Amateurs have given us the basic ideas for the vast majority of our presentday achievements. No amount of organized research in the fine laboratories of radio manufacturers could have, in so short a time, produced the wealth of "hook-up" information or the tremendous number of new radio devices which make for the near perfection of today's fine radio sets. Everybody expects and hopes, therefore, that these amateurs will continue their investigations, making all sorts of possible and impossible hook-ups, with the certainity that for every dozen mistakes we can expect some added knowledge and, therefore, better apparatus for every one of us.

The Department of Commerce, in its November conference, placed first of the subjects for consideration the question of broadcasting service. This was the principal problem considered because it is the problem that affects every one of the million or more purchasers of the fine sets that are going to be sold during the present winter season. Unless the broadcasting service can be maintained on a high plane and fine programs be received without interference or distortion, you and I would not buy these sets. Washington proposes to see that we can safely buy them, and that we can use them with thorough satisfaction.

We are likely to do a great deal of this set buying during the next thirty days after this issue of Radio in the Home reaches the reader. December is the big radio month of the year. In fact, November and December combined represent nearly a third of each twelve-month's business. Santa Claus certainly is the best stimulus of this trade, just as static is its worst enemy. It is not surprising, therefore, that you and I buy three or four times as much in December as in August of the average vear.

In grandmother's day little Willie had a suit of clothes made over from father's old Sunday suit. Perhaps the pants did not fit perfectly, but he was just as proud of mother's results as the present-day youth is of his new readymade suit from the local This furnishing store. change from home-made to ready-made clothes has taken about two generations for its full accom-plishment. The corresponding change in radio from home-made sets the only kind we could get five years ago-to the beautiful furniture cabinets with marvelous radio mechanism inside, has occurred within a few years.

We were justly proud of our oatmeal box on which we wound a coil of wire and connected with

a galena crystal detector; it actually let us hear the concert. Even today, I, for one, have not ceased to marvel that a string of wire from the corner of my garage to my study window can bring me any entertainment worth listening to, regardless of the set I use.

But, today we need not use the oatmeal box. For \$15 or \$20 we can buy a set that is better than \$200 would have purchased in 1920. No one then knew how to make as good a set as the poorest which can be successfully marketed today.

As we come to buy our new sets the dealers are expecting us to be as fussy as the rich young bride. We want all the exclusiveness and delicacy of construction

that correspond to the hand-embroidered trousseau.

And yet we are demanding this in quantity. Millions of us want what is virtually "an exclusive model." Perhaps our radio dealers, at that, are not much worse off than the town milliner, who, by reputation at least, sells at least a half dozen each of her "exclusive" styles. In radio there are a few of us skilled enough, patient enough and so disposed that we are building for ourselves an ultra-refinement in radio which could not be successfully made in quantity, and very likely could not be successfully operated by the average listener-in. My hat is off to such an exclusive set builder; but he is one in a million.



Here's a young radio expert tuning in on WEAF. His name is Dick Meyer, and already he is following in the footsteps of his father, V. H. Meyer, president of the WorkRite Manufacturing Company, of Cleveland. The set is a WorkRite five-tube Neutrodyne in console cabinet. It is typical of the kind of sets that Mr. McBride speaks of in his article

The rest of us get ours from the store. Of course, there is still another class of home-made set builders besides the amateur and the radio wizard. This group consists of the men to whom a kit of tools and a mess of radio equipment is the finest

recreation. It is a matter of almost complete indifference whether the finished set is better, or even quite as good as that which could be bought. The important thing is the pleasure obtained in the building. To such radio construction "fans" (they are really not amateurs because the building, not the experimenting, is the game) we all extend our best wishes, for theirs is both a wholesome and instructive avocation. Most of us, are, however, of another type.

We, that is you and I and our wives, most especially our wives, want a fine cabinet suitable for the living room. Dealers and manufacturers know this. Their displays at the radio shows this winter are centered around such fine

cabinet sets.

At the recent radio show in Washington, my first impression was that these sets were too fine. It made me worry about the inroads which would probably be made into my pocketbook when we carry out the common threat, "Some day we are going to get a much better set." But the prices which the dealers gave me on inquiry were a most agreeable surprise. I find that the very best there is in multi-tube equipment in beautiful mahogany or walnut cabinets would cost me less than a flivver touring car. Even the player-piano, or an equalcabinet-model fine phonograph, would cost as much.

Certainly we can have no objection to such prices because the enjoyment and profit from fine radio equipment far exceeds that from any other household device. It is comparable with the automobile in its entertainment of the whole family.

In one of the recent radio trade e magazines which I have examined I have found what appears to me to be the coming point of view of the radio business. In one maker's advertisement we find a splendid cabinet model in the reception hall beside a handsome floor lamp and high-backed hall chair. The element of elegance

was introduced in this advertisement by a marvelous ermine wrap which was thrown over the arm of this chair. The suggestion to each of us is obvious. We want a radio that will make as creditable an appearance to our friends and visitors as would this handsome evening wrap.

Certainly the time is past (we should no longer say it is passing) when we are going to have in the living room or any other place, but the small boy's room the mess of wires and parts which most homemade sets present. Radio is no longer a toy. It is no longer a novelty. Radio equipment, therefore, must step up in appearance from the class of toys and nov-





Emphatically Yes!

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

Quality of Reception.

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

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

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

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

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

You should know the story of this epoch-marking Receiver and its birth in the brains of our straight-thinking young engineers who refused to admit that it couldn't be done. Ask us for it.

"There Is No Substitute For The Best"

JEWETT RADIO & PHONOGRAPH CO. PONTIAC, MICHIGAN

5682 TELEGRAPH ROAD Factories: Allegan, Michigan tiac, Michigan

Export Sales Offices; 116 Broad Street, New York City In Canada Jewett Radio-Phonographs, Ltd., Walkerville, Ont.

Special Wednesday WJR feature - The Burroughs Hour. 9



The Jewett Receiver

Three simple controls provide distortionless reception and eliminate all receiver noises.—The most richly beautiful Receiver you have ever seen.

The Jewett Superspeaker - All that the name implies. Re-commended by experts everywhere.

The Jewett Superspeaker Console

A handsome cabinet with Superspeaker performance.

The Jewett Cone -Faithful In tone and pitch regard less of heat, cold, or dampness. Semi-

The Jewett Vemco Unit -Makes a loud speaker out of your phonograph.

The Jewett Parkay Cabinet -Puts the amateur on a par with the most exclusive cabinet worker.

The Jewett Micro-Dial

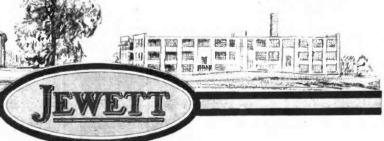
— Makes tuning 50 times as accurate.
Fits any standard receiver.

The Jewett Superspeaker

Highboy

Houses any standard Radio set and all batteries. Superspeaker built in.

"Quality Broadcasting to Match Quality Products —StationWJR"



elties which may be crude or gaudy. It must become a fine piece of furniture, fit for the furnishing of our most attractive room.

The latest campaign idea is well expressed by one of the Department of Agriculture specialists, who recently presented his ideas under the title "Every Farmer Needs a Radio Set." In this paper Mr. Gilbert estimates that there are approximately 550,000 farms which now have radio, but that 5,950,000 more farms are still awaiting this device. And there is no point at which radio should have greater opportunity of giving satisfaction and service. It will bring out to the farm, several times a day, market returns and weather reports to guide the farmer, who must, if he is to succeed, be a real business man. It will bring enjoyment and entertainment for the evening. It will bring recreation to the tired

members of the household in a measure that even the cheap automobile, with its tremendous benefits to the agricultural community, has not exceeded.

It is interesting to know what types of instruments the radio business man thinks the agricultural population is going to buy. Estimates on this subject forecast an average expenditure by farm customers of more than \$150 per set. It is believed that these sets are almost invariably going to be multi-tube devices with attractive cabinets. The average number of tubes anticipated is four or more per set.

To be sure the farm is a little farther from the nearest broadcasting station, but the farmer has no greater interest in getting absolutely certain reception from 100 miles or more away than has any city dweller. In order to get any variety in choice most of us must have a

fine enough set to reach out that distance. Such a set necessarily must have its parts properly proportioned as no helter-skelter assembly will do good work on distant stations. Of course, we expect to have a loud-speaker, and that means that ample power must be available, too.

Our wants as listeners were recently investigated as in comparison with the requirements which most of us imposed upon the dealer a few years ago. Two years ago it seems that our requirements were found to be in the following order: distance, volume, low price, selectivity, and last, quality of reproduction. Now the order is almost exactly reversed. The seven characteristics which we impose as listeners when we buy a set must, therefore, be put down in the following order of importance:

1. Tonal quality; that is,

faithful reproduction and clarity.

2. Selectivity; sharp tuning with a minimum of overlapping of the stations.

3. Appearance; "style" certainly has entered.

 Price; we still would like low price, but convincing demonstrations q u ic k l y convert us to the best sets which our pocketbooks can afford.

Distance: this surely remains, but is far from a dominating requirement as any well-built set will take us hundreds of miles without effort.

 Loop reception; a convenience which we all would like, but far from a necessity.

 Volume; but why worry about this, as any good set gives splendid loud-speaker performance with proper conditions of use.

I think none of us would deny that any set which afforded all these seven characteristics would merit nothing but praise.

The World's Most "Unpopular" Announcer

(Continued From Page 10)

out West want to know what the boys of the East are doing, and so it goes. I get about a thousand letters a month and I read them all. Not all of them ask me to "get off the air." or I might feel more like obliging a portion of our audience.

Most of the criticism of the market-report period comes from listeners whom I excuse by saying that they just don't stop to think. One of the earliest fights I had to make was on the time of giving the market report.

Radio station managers generally believe that the listening audience wants entertainment. I agree with them. We do want to listen to entertainment, especially in the evening. But the other side of the stery is this:

The farmer enjoys entertainment as much as anybody, but he also wants that market information which may mean profit or loss to him. Hence it followed that I must give the market report in the evening when most people want to listen to music instead of quotations on hogs, butter, etc. If you listen to KDKA, you know that we give the market report late in the evening, which is another tribute to my obstinacy. I won that argument with the following figures. (You know that figures don't lie, but liars can figure.)

There are in the United States some six and a half million farmers. At an average of five to a family this means our farming population totals more than 30,000,000 people. In addition

(Continued on Page 21)



(egg)

The Tungar is a G Eproduct, developed in the Research Labora tories of General Electeic.

The new Tungar char ges any make and sire of storage battery ra dio "A" and auto bat teries, and "B" batter jes as high as 96 volto

Prices
East of the Rockies:
Two ampere size \$18.00
Five ampere size \$28.00

Give him a two-ampere Tungar if he has a storage battery of any kind. It will charge all his radio batteries and his auto battery, too.

Or, for bigger jobs, give him a charger wants the afive-ampere Tungar—built to do the same work but to ger—the Tungar.

do it more than twice as fast.

Every man who has a storage battery wants a charger. And every man who wants a charger wants the original General Electric bulb charger—the Tungar.



Tungar-a registered trademark-is found only on the denume. Look for it on the name plate Merchandise Division General Electric Company, Bridgeport, Conn.

GENERAL ELECTRIC





This new principle of radio is exclusive in the Valleytone

Set the dials of a Valleytone for any station you choose. Bring in the signals strong and clear.

Then turn the dials one point beyond or back from the correct tuning. You merely diminish volume. The quality of the signals remains the same. There is no incoherent babble of noises. Turn the dials two or three points either way from the correct tuning. Your program is gone.

Such tuning is possible only in the Valleytone. It is due to the potential belance method of preventing distortion and oscillation. . . a new principle for radio which is exclusive in the Valleytone 5-Tube Radio Receiving Set.

The potential balance gives a balanced tone to the Valleytone. The results are an amasing clearness and naturalness of reproduction. If you have never heard the Valleytone, a new experience in radio reception awaits you.

The Valley Toroidal Coils make possible a selectivity not previously achieved. Stations four or five meters apart can be brought in clearly and distinctly one after the other whether they are distant or local stations.

Before you buy a radio, hear the Valleytone. Judge it by results. Avoid regrets later by listening to the Valleytone now. Any authorized dealer will be glad to demonstrate the Valleytone for you.

VALLEY ELECTRIC COMPANY. Radio Division, ST. LOUIS, U. S. A.

Branches in Principal Cities

Valleytone Receiving Sets Valley Battery Chargers Valley B-Eliminators

Valley table with built-in load speaker

Valleytone

Appearance
The Valleytone is mounted in a solid walnut cabinet, finished in two

tones with inlaid gold stripes.

may also be procured in beautiful console models. Special Valley tables with built-in loud speaker may be obtained for the cabinet model.

Valley Electric

RADIO and the N



Stephen Collins Foster, creator of "My Old Kentucky Home" Drawn for "Radio in the Home" by George Payko

MY OLD KENTUCKY HOME, GOOD NIGHT

The sun abines bright in the old Kentuchy home, "The summer, the darbies are says," in the bloom, The corn top's ripe and measures in the bloom, while the bloom and the same and the day. The research of the same and the same a

CHORUS

Weep no more, my lady, Oh! weep no more today!
We will sing one song for the old Kentucky Home,
For the old Kentucky Home for away.

They hunt no more for the possum and the coon On the meadow, the hill, and the shore. They sing no more by the glimmer of the moon, On the bench by the old cubin door. The day goes by like a shadow o'er the heart, With sorrow where all mas design the heart. The time has come when the darket have to part, Then my old familiachy Home, pool-night!

The head must bow and the back will have to brid, Wherever the darkey may po;
A few more days, and the tresble all will and in the field where the engar-cence grow.
A few more days for to tote the weary load, No mater, 'twill move by light,' A few more days (III or will be to the total the road, I have my old Kentuchy Home, peod-might;

STEPHEN COLLINS FOSTER, creator of simple, but not trivial melodies that go straight to the human heart, occupies a unique position among American composers. There is a vast difference between simplicity and triviality. True simplicity in art is almost invariably beautiful, or at least is an element capable of evoking beauty at the hands of an artist endowed with intuition and equipped with skill. The beautiful simplicity

of Foster's melodies has made scores of



In their program of songs to be broadcast from WEAF and allied stations, on Tuesday evening, December 8. between 8:30 and 9 o'clock, The Gold Dust Twins will include Stephen Collins Foster's

"MY OLD KENTUCKY HOME"
Watch for this and Listen In

his songs known in every American household—has made them genuine folk-songs. Born of the impulse of creation—both the words and the music (for Foster generally wrote the words as well as the music)—these songs of Foster's are as simple and beautiful in their expression as they are sincere in their sentiment. They are true American folk-songs, and they are immortal

The folk-songs of a nation are imbued with at least some of the salient characteristics of its people. But once in a while in the multitudinous folk-song family there is born a simple melody, rich in fundamental and universal appeal, whose strains are destined to set vibrating the heart-strings not only of a single race, but of the world. Such a song is "My Old Kentucky Home." A song of the fireside, it is as true and as gripping today as when it was composed nearly three-quarters of a century ago; and because of the universality of its appeal it is known and loved and sung the world around.

Stephen Collins Foster was born in the little village of Lawrenceville (now a part of the City of Pittsburgh), Pa., on July 4, 1826—just fifty years after the signing of the Declaration of Independence. Although he never lived in the South, by instinct and inheritance he was something of a Southerner, for his father came from Virginia, and his mother from Maryland. The father, William Barclay Foster, of Scottish and Irish ancestry, was a successful Pittsburgh merchant. The mother, Eliza Clayland Foster, was of English ancestry.

The boy Stephen began to show his



musical proclivities almost as soon as he was able to walk, but he was chiefly self-taught and he studied assiduously. When 7 years old he learned to play the flageolet, and later the flute and the piano. He developed a remarkable talent for composition, but did not rely solely on his inspiration for guidance. He was a student of the classical masters, and was particularly fond of the music of Mozart, Beethoven and Weber. The simple melodies that he gave to the world were not the accidental outpourings of an uncultured intellect, but the results of deep and arduous study and a thoroughgoing analysis of the laws of harmony.

When he was 13 years old he composed his first piece of music, "Tioga Waltz," for four flutes, and took the leading part in its performance at the school commencement. In 1842 his first published song, "O pen Thy Lattice, Love," was produced. "Old Uncle Ned," written in 1845, was his first great popular success. From 1846 to '48 he worked as a bookkeeper for his brother, Dunning Foster, in Cincinnati. But finding that he had no taste for business, he returned home in 1848 and. thereafter, devoted his whole time to musical study and composition. study and composition.
Such songs as "Nelly
Was a Lady," "Gentle
Annie," "Laura Lee,"
"Old Dog Tray," "Come
Where My Love Lies
Dreaming" and "Old
Folks at Home," enhanced his reputation hanced his reputation steadily and gave him a nation-wide popularity. He was urged by some New York music publishers to make his home in that city; so when he married, in 1850, Miss Jane Denny McDowell, daughter of a Pittsburgh physician, he took his bride to New York to live. After little more than one year, however, homesickness took them back to Pittsburgh, where

Conducted E

JSIC STUDENT

W. HARRIS

ctory

ill the arts. Today it is Perhaps it is the most t. Certainly our humanlong run, it will and must at life has to offer. And ts for the enrichment of

one universal language; enses than one, for there s there are diversities of In its varied kinds and beauty, significance and to is willing to open his

eatest of all the arts, the e and the most universal t fleeting and evanescent.

Music has no existence of sculpture, an archiace. Music, instead of "moving," endowed with very fact means that it he element of time—and

to cares to know, underthe fullest extent good music-must listen to it phole and undivided atit. And above all, "he ten." With each repetionships and their combimore plainly-and new also be revealed. Full y come with familiarity. n the realm of worthold and discriminating w devotees of the arthancing the appreciation -these almost limitless nore than dreamed of as me of our broadcasting re is a great and steady ets the greatest and best

n a musical masterpiece and it is gone, almost as past your window in a have never heard that wer keen may have been tot at all likely that you was saying to you. You to hear it "on the air" this—and then you will it was.

of music that you like, or impresses you, or that like—why not make the the better acquainted with un, and again, by what-

w department of "Radio to that; and, in a modest deavor to foster the apad music. they continued to live for the next ten years.

In 1852, Foster and his wife made a trip down the Ohio and Mississippi Rivers to New Orleans with his brother, Dunning Foster, who was the owner of a large river packet; and that trip gave him the inspiration and the materials for some of his plantation melodies. In 1860 he again went to New York to live. He died in that city on January 13, 1864. His published songs number about 160.

"My Old Kentucky Home" was written in the summer of 1852, while Foster was visiting the old Rowan homestead, situated close to the horseshoe bend of Beech Fork River, about a mile southwest of Bards-town, Nelson County, Kentucky, thirty-nine miles from Louisville. The old manor house, long known as "Federal Hill," dates from 1795, when John Rowan, an able young attorney, built it for his home on a plantation of 1500 acres carved from the surrounding wilder-ness. John Rowan became a local judge, a member of Congress, a United States Senator, and finally Chief Justice of Kentucky. made Federal Hill a center of the political, legal and social activities of the new commonwealth. It typified all that once was best in the country life of Kentucky. Its quiet and quaint simplicity, its picturesque environ-ment and its old-time customs made possible the atmosphere that inspired Foster's song.

And the song gave a new fame to the old manor house. In 1921 the Legislature of Kentucky authorized and Governor Edwin P. Morrow appointed a special commission to raise funds for the purchase of the house with its remaining 236 acres, in order to preserve it as a shrine in a State park.

(Continued on Page 19)

Scheduled for Thursday Evening, Dec. 10

Broadcasting from WEAF and allied stations, on Thursday evening, December 10, at about 10 o'clock, Miss Kathleen Stewart, pianiste, will play Frederic Francois Chopin's

FANTASIE IMPROMPTU, Op. 66

Watch for this and Listen In

CHOPIN'S "FANTASIE IMPROMPTU"

CHOPIN'S Fantasie Impromptu in C Sharp Minor, Opus 66, is intrinsically so beautiful, so thoroughly delightful, and so characteristic of its composer's genius, that one cannot help wondering why he wrote across the back of the completed manuscript (left unpublished at his death) the words "To be destroyed when I am gone."

Fortunately for untold thousands of music-lovers, that injunction was disregarded. Chopin's pupil and lifelong friend, Julius Fontana, published the piece in 1855, and it has become one of the best-beloved, as it is one of the most faultlessly beautiful of Chopin's works. It is a true Impromptu, and the descriptive epithet "Fantasie" bestowed upon it by Fontana is really superfluous, except as it provides a convenient title for differentiating this one from the three other Impromptus written by Chopin.

Although possessing almost the freedom of an improvisation, the Chopin Impromptu yet has a well-defined form; there is structural impulse, albeit the patterns are free and original. Perhaps Chopin feared that



Miss Kathleen Stewart, pianiste, who will play the Chopin "Fantasie Impromptu" on the evening of December 10 over the WEAF link of stations



Frederic Francois Chopin
Reproduced through the courtesy of the
Historical: Society of Pennsylvania

both the form and the content of the "Fantasie Impromptu" were too original, too subtle and complex and too wholly unfamiliar to the musical world of his day to be understood or appreciated and, therefore, doubted the advisability of publishing it.

The piece presents peculiar rhythmical difficulties. The whole first section consists of a continuous rapid figure of four notes in the right hand against three in the left -a problem to be mastered only by long and special practice. But when this is smoothly played it produces just that sinuous, interwoven, flowing effect which the composer desired, and which could not have been obtained, in such perfection, in any other way. This first section, allegro agitato, breathes spontaneity in every bar, while the middle section, a large in D flat, contains some of the master's choicest thoughts. The closing phrase of eight bars where the melody-previously given at the largo part—rhythmically and melodically modified is taken up in the left hand, while the right hand accompanies with the rapid figure of the opening section, played pianissimo, constitutes one of the most beautiful and telling effects to be found in Chopin's works.

"The content of this composition," says Edward Baxter Perry,
"is purely emotional, like a strictly
lyric poem; it is a wholly subjective expression of a mental state,
an emotional condition, not of any
scene or any action. It touches
the minor key and sounds the
plaintive harmonies to which his
heartstrings were tuned and vibrating at the time when it was
written. It voices a soft summer
twilight mood, half sad, half
tender, full of vague regrets, of
indefinite longings and aspirations,
of fluttering hope, never destined

to be realized, and bright fleeting memories that rise and pass, dimmed by intervening clouds of sorrow and disappointment, like the shifting forms and hues of a kaleidoscope seen through a misty glass, or the

(Centinued on Page 20)





THE STANDARD SET CONNECTOR

Represents a radical departure in condenser design. The tuning efficiency is in the patented cam control.

10 Points of Superiority

This condenser utilizes the complete 360° of the dial.

Electrostatic field is concentrated the center

condenser.

Unique construction eliminates all possibility of back lash, Balanced condition of plate assemblies insures velvety

Die cast throughout insuring uniform characteristics in all

Compact

being no larger than the old style semi-circular job.

Dial shaft is dead-not connected to either set

Provided with pig-tail connecons of tried-and-true efficiency. All condensers have provisions for single or three-hole mounting.

Design permits direct mounting of air core transformers on condensers.

Three Capacities .00025, .00035, .0005

At Your Dealers One Price-\$4.00

Jobbers and Dealers

If you are not fully acquainted with this popular con-denser, ask us to send you complete information. Signal Radio Products are quality built; a good line to stock.

SIGNAL ELECTRIC MANUFACTURING CO.

Dept. 11-L

Menominee, Mich. Branches in All Principal Cities

Lighted Continuously 72 Days and Still in Good Receiving Condition

One astonishing report of the many hundreds received proves unmistakably Sea Gulls' exceptionally long life. A user kept six Sea Gull Tubes lighted for over 1700 hours and found them all operating efficiently at the end of the period.

The original letter containing the above statement is on file in our office and will be shown to any one interested.

AMPLIFIER AND DETECTOR



Have four points of superiority. 50% longer life, higher mutual conductance, uniformity, [interchangeable at any stage] and they are positively non-microphonic.

At your \$2.50 or by mal

We also make

** diso make
Tube R—Rectifying Tube \$3
Tube P—Semipower Tube \$5
Tube X—Double Duty Rec. Tube \$5

Sea Gull Tubes give greater Satisfaction

ABERDEEN SPECIALTY CO., Inc.

Main Sales Office
Suite 408, 1001 Chestnut St., Philadelphia

Dealers and jobbers write us for full information and discounts



Ward's New Radio Catalogue is Now Ready

Are you interested in seeing what is new in Radio-what is best and what has been approved?

And do you wish to know the lowest prices on tested sets, prices made without the usual "Radio profits?"

This Catalogue is a Complete Guide to Radio

Ward's is headquarters for Radio, with probably the largest retail radio depart-

ment in the whole world.

This new 52 page Radio Catalogue shows everything in parts,
batteries, cabinets, contains a list

of stations, a radio log for recording stations. It shows the best of the new sets. One tube eat shat give amazing results. Five tube acts with a single dial to turn. Think of tuning in one station after another the station of tuning in one station after another the station of tuning in one station after another the station of tuning in the station of tuning to you. Everything offered it tested by our own Radio Experts. In fact, the best experts compiled this Catalogue for you, Write for this 52 Page Book. It is yours free.

Our 53 year old Policy

For 53 years we have sold only quality merchandise under a Colden Rule Policy. You can rely absolutely upon the quality of everything shown in this Radio Catalogue.

Write to the house nearest you for your free copy of Ward's new Hadio Catalogue. Address Dept. 3.R

Montgomery Ward & Co

The Oldest Mail Order House is Today the Most Progressive

more Chicago Kansas City St. Paul Portland, Ore. Oakland, Calif. Ft. Worth

"My Old Kentucky Home, Good Night"

(Continued From Page 17) Helpful Hints

A biography of Stephen Collins Foster, by Harold Vincent Milligan, is published by G. Schirmer, New York.

A complete edition of Foster's songs, words and music, entitled "The Melodies of Stephen C Foster," was published in 1909 was published in 1909 by T. M. Walker, Pittsburgh.

"My Old Kentucky Home" is to be found in many and various collections of old, favorite and popular songs; and there are many editions of the sheet music of the song—a good one being that published by Oliver Ditson Company, Boston, at forty cents.

"My Old Kentucky Home" is to he had in the following phonograph records:

Victor Records-

By Alma Gluck (with male 6143 \$2.00 chorus) By Geraldine Farrar (soprano) 20200 By Elsie Baker (contralto) 18045 .75 (soprano) 88238 1.50

By Harry Macdonough (tenor) 16389

By Samuel Gardner (violin) 17756

By Neapolitan Trio 75 By Chimes 16160 .75 By Victor Band

.75 By Ford Hanford (Wood 18767 Saw)

Edison Records-By Frieda Hempel (soprano and Criterion Quartet 82551 \$2.00

By Thomas Chalmers (baritone) and chorus 1.50 80321

Brunswick Records-By Marie Tiffany (soprano)

and male trio 13091 \$1.25

Vocalion Records-

By May Peterson and quartet 30109 \$1.00 By Criterion Quartet

14783 For reproducing pianos "My Old Kentucky Home" is available in recorded interpretations as follows:

Duo-Art-

By Herbert Jones

101135 \$1.25 By George H. Gartlan 101906 1.50

Welte-Mignon (licensee)-By Adam Carroll

C-6166 \$2.00

Ampico-By Andrei Kmita

51914F \$1.50

Ask for BIRNBACH



Price OO

For Distance, Volume and Selectivity

Birnbach Radio Frequency Coil \$

For sale by

America's Greatest Chain Stores: S. S. KRESGE CO.

W. T. GRANT CO.

There's a Store in Your City

BIRNBACH RADIO CO. 370 Seventh Ave. New York City

New and Improved



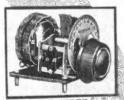
Encased in as fine a heavy 5 ply solid, genuine mahogany cabinet as ever graced any radio set.

Every part embodied is newly constructed resulting in greater efficiency and finer tone quality. The illustration shows our new straight line wave length, low loss condenser and vernier device, permitting the reception of stations over a wave length from 190 to \$50 meters.

For Sale By Authorized Freshman Dealers Only

Chas. Freshman Co.Inc. FRESHMAN BUILDING
240-245 WEST 40TH ST.-NEW YORK NY
CHICAGO OFFICE - 327 & LA SALLE ST







A STRAIGHT-LINE FREQUENCY ACHIEVEMENT

DUGGED, compact, sublimely efficient, with all the refinements of 15 years experience comes the latest. Hammarlund dishbraments to condenser that distributions equally over your data and solves the problem of critical tuning. You will recognize many distinctive that the condense of the problem of critical tuning. You will recognize many distinctive "HAMMARLUND" features that have won world renown. Others are new—the perfections of advanced engineering and the natural progress of the radio art.

Soldered, non-corroelwellers

Soldered, non-corroelwellers

plates, with sturdy tie-bars that insure permanent alignment; one small
piece of Isolantite insulation placed
outside of the electro-static field;
warpless aluminum frame, grounded
to the rotor; adjustable ball bearings at both ends of rotor shaft;
bronne clock-spring pigtail; singlehole mounting; a separate "handmade in all standard capacities; a
quality product at a moderate price.

At the Better Dealers. Write for Descriptive Folder HAMMARLUND MANUFACTURING COMPANY 424-438 West 33d Street New York City

For Better Radio PRODUCTS

Chopin's "Fantasie Impromptu"

(Continued From Page 17)

luminous phantoms of dead joys and shadowy suggestions of the might have been, against the gray background of a sad present and an uncertain, promiseless future. It is a strange, delicately complex mood, a mood of life's sunset hour, colored by the pathetic glories of the dying day, and the depressing, yet tranquillising shadows of the coming night—a mood well-nigh impossible to express, but perfectly embodied in the music."

To say that this is among the most delightful of Chopin's works means that it is one of the most delightful pieces in the whole range of piano music. For Chopin is the incomparable poet of the piano.

Frederic Francois Chopin was

born at Zelazowa-Wola, a village near Warsaw, Poland, on March 1, 1809. His father, Nicholas Chopin, teacher in the Warsaw high school, was a native of Nancy, France. His mother, Justine Kryzanowska Chopin, was a Pole. The boy was brought up in his father's private school among the sons of the Polish nobility. He took his first piano lessons from Adalbert Zywny. a Bohemian, who was a violinist, pianist and composer, and from whom he learned with such success that he played a concerto in public before he was 9 years old.

When he was 14 his father sent him to Joseph Elsner, head of the Warsaw Conservatory, for instruction in harmony and counterpoint. His first attempts at composition were Polonaises, Mazurkas and Waltzes; but in 1825 he published as his first

work a Rondo, and as his second a Fantasie with orchestra.

In his youth he appeared at irregular intervals as a pianist in several German towns-Berlin, Danzig, Dresden, Leipzig and Prague. In 1829, already a composer with several works of eminent individuality to his credit, and a remarkably fine pianist, he set out for London, by way of Vienna, Munich and Paris. His reception in Paris was so cordial that he gave up his further plan of going to London and made the rench capital his home for life. He died, of pulmonary consumption, in Paris on October 17, 1849.

Chopin enriched the world with some 200 original musical compositions, and in them gave the piano a place of its own as a solo instrument. Anton Rubinstein declared:

"The piano bard, the piano



APPROVED BY UNDERWRITERS

this is important when we designed the Jewell Lightning Arrester we made sure that it would pass the Underwiters' tests. It is mounted in a brown porcelain case and is approved for indoor and outdoor installation.

JEWELL ELECTRICAL INSTRUMENT CO. 1650 Walnut St. Chicago



It's What's Behind the Panel That Tells the Tale

IT'S what's behind the panel that tells the tale. The B-T "Counterphase" is more than a beautiful cabinet—more than a neat arrangement of parts—it is a combination of the highest-grade apparatus found in any manufactured receiver with an exclusive, patented B-T circuit that secures maximum efficiency on both high and low wave lengths. Any expert will tell you the value of this feature.

Three stages of radio frequency amplification give distant loud speaker reception with an indoor aerial. Two tuning dials make operation easy—more are unnecessary—less would be unsafe.

A B-T "Counterphase-Six" insures distance, selectivity and quality consistently, because, behind the panel it's right.

Five and six-tube "Counterphase" kits are also available. The B-T system of color charts in nine-wire-colors, furnished with each kit, makes wiring most easy.

Color-diagrams and instructions sold separately, 75 cents.

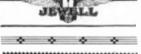
Ask any expert. He'll tell you where B-T products stand. The "Counterphase-Six," in beautiful walnut cabinet, fully copper-lined and shielded, with B battery compartment and multiple plug connectors, is \$165.00.

The latest, best circuits and the newest apparatus are discussed in "Better-Tuning." The 8th edition, 80 pages, sent for 10 cents. Circulars free on either sets or parts.

Bremer-Tully Mfg. co

552 S. Canal St.

Chicago, Illinois





MODEL

8-700
The super-detector, amplifor a n d power tube. 5 volt. 36 a m p. Standard Rees.

\$5 THE SUPER-TUBE

The Giant Tube With the Small Appetite

The sweer detector—the super amplifier—the feels oscillator is this ginat power and Transmitting Tube. A ginat in power—yet consumes only 16 amperes. To get the utmost out of your set and complete antifaction, use this super this nay one or all stages of your set. The difference in price is well worth it. On mile by authorized dealers everywhere. B-1690 — 8-001 — 19/199-emp, decloremp, 8.169. Bianderd type tubes—61.60. SCHICKERLING PRODUCTS CORPORATION 1214 Jefferson Bidg. : 1015 Chestent St.

Factory and General Offices 401-407 Mulburry Street, Newarts, N. J.

Philadelphia Distributors
LOCKWOOD RADIO CORP.
637 Market Street
Wholesale Distributors for
Philadelphia Tarritory

SCHICKERLING RADIO TUBES



For EVERY Radio Set

A stunning piece of furniture that restores order in the room where you have your Radio! No more cluttered table-tops, nor litter of

equipment under-foot.

No unsightly horn in evidence, either! This console has its own loud speaker. in-built. It's out of sight, but with very apparent tonal s u periorities. defeats vibration, For it has the



highest-developed type of unit. With horn built of special nonvibrating, extra-hard, ceramic material. Produces clear nonvibrant tone.

There's ample room for everything; space for largest A and B wet batteries-or battery eliminator-required for any home set; and for a big charging outfit, too.

Finished in mahogany, or walnut color. Dainty design of parqueterie on two front panels. Top, 38 in. x 18 in. Substantially built; the product of a 40year old furniture maker.

The price, forty dollars, is for the complete console and includes the loudspeaker horn and unit. Thousands of dealers are showing this artistic addition to home radio equipment.

Rear View-Set Hooked Up



rhapsodist, the piano mind, the piano soul is Chopin. Tragic. romantic, lyric, heroic, dramatic, fantastic, soulful, sweet, dreamy, brilliant, grand, simple -all possible expressions are found in his compositions, and all are sung by him upon his instrument."

Helpful Hints

Many books have been written about Chopin. One of the best is "Chopin: the Man and His by James Huneker, Music." published by Charles Scribner's Sons, New York, at \$2.

The sheet music of the Fantasia-Impromptu is published by Oliver Ditson Company, Boston, at 75 cents; by G. Schirmer, New York, at 60 cents, and in many other editions.

The Fantasie Impromptu may obtained in music-roll recorded interpretations for reproducing pianos as follows: Duo-Art-

By Harold Bauer

6058-4 \$3.00 Welte-Mignon (Licensee) By Raoul Pugno

C-547 \$2.00

Ampico-

By Adriano Ariani 52486H \$2.00

By Germaine Schnitzer 60743 \$2.00

And in the following phonograph records:

Brunswick-

By Leopold Godowsky \$2.00 50008

Edison-

By Andre Benoist 80408 \$1.50

Victor-

By Alberto Salvi (harp) 55141 \$1.50

The World's Most "Unpopular" Announcer

(Continued from Page 14)

there are about 20,000,000 people engaged in the various industries allied to agriculture, such as those engaged in the transporting, processing and merchandising of food products. We may truthfully say then that approximately one-half of the population of the United States is interested in a business way in the price of food products. We may also say that the other half are consumers of these food products and ought to be interested in the prices whether they are or not. All of which argues that 100 per cent of the listening. audience ought to be interested in the market report.

You must admit that this argument is a good one. I even convinced the Westinghouse Company officials that they



ought to listen to the market report. Naturally I am a great believer in the value of radio market reports. I am convinced of their business value to farmers and others. But I will make an admission. Hundreds of the letters which my listeners have so kindly written me state that they enjoy listening to the market report, not so much for the information, as for the contact with the station. It is easy to visualize the lonely farm home, perhaps isolated by distance and natural barriers, or maybe isolated by storms, bad roads or severe weather. Radio means much to such a home; and then we must remember that we all like to hear and talk about the subjects in which we are most interested. Markets to a farmer are much like baseball to a baseball fan. A perennial subject to talk about.

It seems to me that radio is a human thing; at any rate it

should be. It's a little hard to sit down in front of the microphone and seemingly talk to yourself. It was hard for me at first, but soon my audience established contact with me, and now we sit down together every night and just have a chat, with me doing all the talking. As one listener wrote me just this week: Dear Mr. Mullen:

"I have been thinking of writing to you for some time. I hear you talk almost every day, and sometimes I answer you, but you won't talk to me. I take great interest in the market report and I do love music, but I don't like to hear them ladies sing or some of them. I think it hurts them to sing. Come to the country and see us. We have, I was going to say, lots of fruit and chickens. I am sending you a few plums. Try them * * ."

I quote that letter verbatim.

Soprano singing comes in for a good deal of criticism and we must admit often deserves it.

To make this long story longer (I'm getting paid for it) I will conclude with the best story I've heard on my market report. A friend of mine occasionally calls on an elderly Jewish lady who is quite a radio fan. It de-veloped in their conversation one day that my friend knew me. The Jewish lady at once said, "Oh, I listen to him giving the market report quite often. But tell me, there is one thing that puzzles me greatly. Mullen always states that there are so many thousand hogs at Chicago, so many thousand at Buffalo and so many thousand at Pittsburgh. What do they do with all those hogs!"

As I say every night from our studio, the program of Radio in the Home will be com-The above reference to the tinued on another page and I ladies' singing is not unusual. am bidding you all good-night.

The Wilson B Radiopower-Unit

December, 1925

This new unit makes it possible to use a light socket for "B" voltage, without only irrealizement hum from alternating current.

Supplies the constant voltage necessary for perfect reception. No acid to split. No moving parta. Requires no attention. Semi-automatic in operation. The least or possible type of unit because type of unit because under the consumption and long life. In head-some welmut case. Price \$35.

The Andrews



Paddlewine al Coil
Pata. Ped.
Por best results
In home-bulk sets
It is asfer to use
to safer to use
ployed in the best
com mercial recolvers. Here is
a superfor coil
used in such highgrade receivers.

13.00 drue and Buchingham. It can be used in any
hook-up requiring a high type infuctance.

inaham.

hook-up requiring a man deductance.

ductance to resistance with minimum distributed capacity. Improves tone. Increases range, volume and selectivity. Blue private of cested hook-ups employing this coll are available.

Our Technical Dept. will

Folding Loop

sity portable. Has insulate dile and graduated dial. Re-es static and other interferent poolal model for every circuit. these standard unite at your deal-write for complete information.

die Unite Inc.





Lasts Indefinitely-Pays for Itself

Ouality Is Season's Watchword

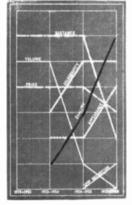
"Fidelity of Tone Production Will Be Greatest Public Demand this Fall"-Radio Retailing, issue of August, 1925.

Radio Retailing asked one hundred dealers in ten states what was the most important thing in Radio today.

They all said "Tonal quality is the first requisite."

For years Daven has pioneered quality. It is gratifying to see our vision come true and our judgment substantiated.

Daven engineers have long recognized that the present day receiving set needed to be greatly improved from a quality standpoint. They worked



graph from August issue of Radio Retailis showing the most important selling point of Radio from 1922 to date.

and perfected Resistance Coupled Amplification, the only existing method known whereby you can procure amplification without distortion and no distortion means simply quality.

The Daven Resistance Coupled Amplifier shown below can be conveniently added to any existing set owned by the public. Manufacturers and amateur set builders should also investigate Daven Resistance Coupled Amplification. Your set will not be 1926 Model unless it is Daven Resistance Coupled.

DAVEN RESISTANCE COUPLED AMPLIFICATION

To the public—Duven Resistance Coupled Super Amplifier in a genuine Bakelite base with all resistors, grid leaks and condensers inserted — or in kit form, for those who like to build their own.

To radio dealers-Send for our complete catalog and the name of our nearest established distributor

To set manufacturers.—The facilities of our Engineering Department are yours to command. Call upon



us at any time. We can offer you constructive advice on how to improve the audio end of your set.

THE RESISTOR MANUAL is the handbook of Resistance Coupled Amplification. At your dealer's 25c. By mail postpaid 30c.

The Sine of Mock

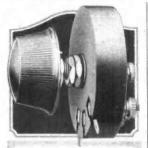
DAVEN RADIO CORPORATION

Ansistor Specialists

New Jersey

CLIP THIS COUPON 200-00 DAVEN RADIO CORPORATION
Life-160 Summit Street, Newark, New Jersey
Please evad use the following on Revisioner Compled Amplification:
Clorch One | Revision Manual, 30c, is each ord.
| Complete Cotalogue (free).

BIG THINGS RADIO



Centralab Modulator Volume Control

THIS improved type of potentiometer takes the rough spots out of volume - smooths out powerful "locals", as well as difficult "DX". It provides noiseless control of tone volume without in any way affect. ing the tuning of your set. Has a total resistance of 500,000 ohms, specially tapered to give smooth, even control from a whisper to full volume - or vice versa -without detuning.

You will never know how much better results your set is capable of, until you have equipped it with this audio amplification control. It is easily installed and can be used in audio circuits with any transformers or with the new Thordarson "Autoformers"

Endorsed by the Thordarson Electric Mfg. Co., and used as a standard unit in many leading commercial sets.

CENTRAL RADIO LABORATORIES



CENTRAL RADIO LABORATORIER, 18 Keefe AVENUE

| Send Internative developing Centralial construits.
| Enchand find \$3.00 for which and me one of your Centralia Modulature.

(Place & in squares opposite from wanted).

The Silver Mask Is Off!

Continued From Page 8)

tions and make them popular. He appeared under his right name. At that time the Goodrich Silvertown Cord Orchestra was playing on the WEAF network, and the officials decided that they ought to have a good tenor soloist to give variety to the programs. But they had a lot of trouble hunting for the right man.

One night in his home one of the executives at WEAF happened to mention the problem to his wife. She told him about a tenor she had heard that afternoon from another station and said that she had been unusually impressed by the radio possibilities of the voice. A few evenings later they saw in the newspaper programs this man was scheduled to sing again. The The reexecutive listened-in. sult was a meeting and a contract.

At first he was announced simply as "the tenor of the Goodrich Silvertown Cord Orchestra," without any name. Then one evening Phillips Carlin, who does the announcing for this occasion, told his audience jokingly that everything about the orchestra was silver.

"They play on silver instru-ments." he said. "The drummer has silver drumsticks and the trombone player has silver fillings in his teeth."

Then he added, quite as an afterthought:

"And the tenor wears a silver mask.

Nothing more was thought of it until the letters began to arrive. They showed that, somethis afterthought had struck the public fancy.

The Silver Masked Tenor became a national institution. The title suddenly leaped into a commerical value that cannot now be even estimated. It is so valuable that I am not allowed, in this article, to call him anything but the Silver Mask.

Correction

Through a typographical error in the heading of the advertisement of the Schickerling Products Corporation, which appeared in the November issue of this magazine, a false impression of the ampere consumption of the Model S-700 superdetector, amplifier and power tube being placed on the market by consumption was printed as 11/4. which, those familiar with tubes would know, was obviously in-correct in this day of low current tubes. The part of the heading referred to should have read: 5 volt, 1/4 amp. Standard Base, as explained in the body of the advertisement.



The World's Largest Exexclusive Radio Mail Order House Will Send You This Wonderful Book FREE

64 illustrated pages con taining thousands of bar-gains in radio sets, semi-finished sets and radio kits of all styles, sizes and approved circuits. Beautiful models of the very latest designs and types. Elabor-ate console models with loud speakers built right into cabinets of genuine mahogany and walnut. ALL SETS GUAR-ANTEED. Coast to coast receiving range, Catalog also receiving range. Catalog also contains everything in radio supplies, including batteries, chargers, loud speakers, transformers, condensers, rheostats and any other parts you may want for Improving your set or building a new one. Guaran-teed saving to you of 1/2 to 1/2.

> OUR GUARANTEE Every article ex-actly as repre-sented. Every article is tested before shipping. Complete satismoney cheer-fully refunded,



DON'T BUY ANYTHING IN RADIO UNTIL YOU GET OUR BIG MONEY SAVING CATALOG.

RANDOLPH RADIO CORPORATION

The Largest Exclusive Radio Mail Order House in the World, 159 N. Union Ave. Dept 189Chicago, III.

You must have our catalog no matter what set or kit you want. Our line is complete and includes all popular sets such as Superheterodyse, Neu-trodyne, Ultradyne, Reinartz, Regenerative, Radio Frequency, Browning-Drake, Reflex and all other urake, kellex and all other latest circuits. Kits, sets and parts manufactured by all well known manu-facturers such as: Frost, Howard, Baldwin, Bran-des, Western Electric, Columbia and others. Columbia and others.

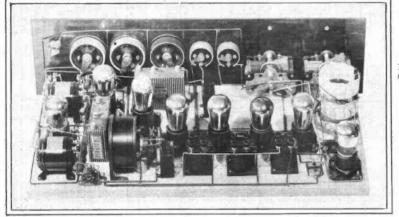
Our seni-finished sets come with all partia mounted on panel and baseboard i eady forwiring. Do not fail to rend for our catalog, Remember, we are the largest exclusive radio mail order dealers in the world and curry the best of everything in radio.

Our Catalog

includes complete list of broadcasting stellons and general information and facts about our free service division. Our ra-dio engineers will help you solve all your radio problems. Sand your name and address on a wrill send cotalog FREE.



By E. M. Clarke



This rear view shows the assembly of the parts

SUPER with "SUPER-TONE"

THREE years ago, few radio fans cared much about the quality of the reproduction which radio brought them. All they demanded was distance. In those days the superheterodyne was the unrivaled distance-petter. But, almost without exception, the supers brought in distortion so bad as to be almost intolerable to a musical ear.

Then I happened to find the M. & H. superheterodyne with intermediate transformers that did not distort and, in the issue of this magazine for March, 1924, I printed a complete construction article written by Joseph Morgan, designer of the transformers and the original circuit. In the same issue I printed an article by E. M. Clarke, telling of his experiences in building the set. He was the first man to whom we showed the original hook-up before publication.

Mr. Clarke has stuck to these same transformers ever since, though he has considerably altered and improved the assembly of the original set in the light of wider knowledge and advanced superheterodyne practice.

I can personally highly recommend the set as now described by Mr. Clarke. He left it in my home for a month while he was away on his vacation last summer, and I liked it so much that I had him build one for me, and I have since found it most satisfactory, not only for distance, but particularly for its quality of

HENRY M. NEELY

IN MARCH, 1924, Radio in the Home published the description of a real superheterodyne. Just at that time I was tining of the quality that most sets produced and was searching for one that I could listen to all evening with pleasure. Radio then was in such a state of development that if anything at all came through a receiver, it was pronounced a success, no regard being paid to the listener's ears.

You old readers will remember H. M. N.'s reply when I called him one day and informed him that I was about to build a super. "God help you," was what he said, for at that time a man had to be a master of every trade from sheet metal worker to electrical engineer. Then he told me of a new super that he was about to describe, and advised me to try it. I built one and found it not at all hard to do, as most of the complications had been removed. It was not necessary to shield any part of it, as had been the case up to then, and the set was a remarkable success. It did more than anything I had ever had before, and its tone quality was wonderful.

But like everything else it had its day. Other ideas came along and we all built other circuits, but no matter what I tried, nothing gave me the complete satisfaction that my super did. It was somewhat crude and had its shortcomings, but after

The schematic diagram of the "Super-Tone" Super

trying this and that I became convinced that the super was the right idea and that mine had more possibilities than all the rest put together.

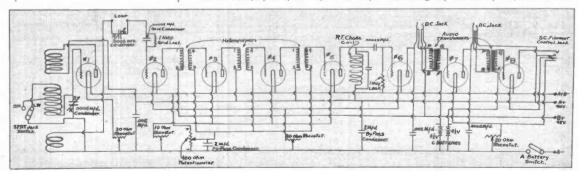
With this in mind I started to experiment with it. I studied other supers and during the past year have had as many as twelve and as few as six tubes in it. Every new idea was given a fair tryout, and I reached the definite conclusion that you cannot obtain the results with fewer than eight tubes, and it is useless to have more. That is the way this will be described. Suppose we christen it the SUPER-TONE OCTETTE, for we are using the SUPER-TONE essential parts.

It will cost you about \$200.

The parts are especially important. Don't use anything but the best you can buy. Since building a set described in this magazine using a Jones cable connector, I would not think of building a receiver without having one of them in it.

Now, let's assume that you have all the necessary parts before you. Before attempting any construction work, examine every screw and nut on the parts, and see that it is tight.

Now that you are certain that all instruments are perfect, lay out and drill your panel. The diagram shown herewith is for use with the parts which I chose. If you are using any different parts, the holes for







the mounting screws. Once drilled, mount it on the baseboard, for you can mount everything better with it in this position. Beginning at the left, the first condenser tunes the loop, and the second tunes the oscillator. The small knob between them is the double throw jackswitch, about which more will be said later. Then come five knobs, the first of which is the 30-ohm rheostat controlling the filament of the oscillator tube. The second, the 10-ohm rheostat, controls the bank of three intermediate frequency tubes. The next is the potentiometer controlling the pothem longer than necessary. Too much wire will materially detract from the results in the loud-speaker. Never run two wires that carry the same circuit in the same direction, when by tapping into one you can make it do the work of two. The position of the parts shown in the baseboard layout make the shortest leads possible.

Bear in mind that the grid leads are the critical ones. They must be short, and travel in the most direct line between points. Keep them clear of all other wires. I lay great stress on this, for it means the success or failure of the set. If you bury

The baseboard layout of the "Super-Tone" Super-Heterodyne

tential placed on the grids of the three intermediate frequency tubes, acting mainly as a volume control. The next knob is the 20-ohm rheostat controlling both detectors, and the last also a 20-ohm rheostat controls the two audio frequency tubes. The filament switch completes the line. Below at the right are the three jacks for the detector and two audio stages.

Now, study the baseboard layout and remember this arrangement is the result of many months' experiment, and the set will work better in this form than any other. Adhere to this general scheme and you will not go wrong. Secure everything in its proper position and you are then ready for wiring.

The wiring of this set is really very simple-simpler than the wiring of a four-tube reflex. Follow the wiring diagram to the letter and check each wire as you place it in position. Eighteen pieces of Celatsite wire are sufficient, and if you find that you are using more than this, it shows that you are duplicating some leads or making

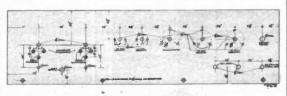
your grid wires under a lot of other wires. I'll say right now. you won't have success.

It is a good plan to use yellow covered wire for plate and grid leads; green for negative A battery wires; red for positive A; and brown for positive B. This makes it easy to trace out the different circuits.

Tube No. 1 is the oscillator; No. 2 and No. 6 are the detectors; Nos. 3, 4 and 5 are the intermediate frequency amplifiers, and Nos. 7 and 8 are the audio stages.

Following is a system I have found to work out admirably in wiring the set:

Start at the loop binding posts, and with yellow wire make all connections from them to the variable condensers, the oscillator soils, the tube and the first detector tube No. 2. Continue through the intermediate stages, straight back through the second detector and audio stages wiring the plate and transformer connections to the Now, take up the 45 jacks. and 90 volt B battery leads, putting them all in with brown wire.



The panel layout of the "Super-Tone"



RADIO sets located anywhere near the sea are particularly subject to condenser trouble. Salt air creeps in and causes corrosion. Then comes distortion-if your set will work at all. Don't assume that your condensers are right! Put in Sangamo Mica Condenserssolidly molded in bakelite-and no service can ever change their accuracy.

Sangamo Mica Condensers

Every Sangamo Mica Condenser is separately tested at the factory. If it does not come within very fine limits, it is rejected. You can solder it, boil it, freeze it, or subject it to heavy electrical surges - but the capacity stays exactly the same. The bakelite jacket is impervious, and nothing gets through to the delicate parts inside.

All wide-awake dealers carry Sangamo Mica Condensers or know where to get them for you quickly. Put them in when you build your set and you will never have fixed condenser trouble.

> ALSO AVAILABLE SANGAMO By-pass Condensers 1 Mfd.-\$1.25 1/2 Mfd.- .90



Sangamo Electric Company Springfield, Illing

RADIO DIVISION, 50 Church Street, New York

SALES OFFICES—PRINCIPAL CITIEN
For Canada — Sangamo Electric Co. of Canada, Ltd., Toronto.
For Europe—Bettah Sangamo Co., Ponders End, Middlerer, Eng.
For Fe East—Ashida Engineering Co., Otaka, Japan



A 100% TOROIDAL COIL SMALL SIZE LOW LOSS

Use HELIOTORS and obtain transcontinental range, knife-like selectivity, true tone quality, freedom from static or local interference.
Is an armasing technical all coll design. HELIOTOR

24 EAGE local interference.

The HELIOTOR is an amazing technical advance in toroidal coil design.

AUDIO FREQUENCY TRANSFORMER.

The smooth uniformly air-spaced, circular turns are firmly held in position by the unique HELIOTOR central interface. Both the inside primary and the outside secondary coffs are in the shape of consecondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs are in the shape of contenting the secondary coffs.

Replace your old radie frequency transferred field.

Replace your old radie frequency transferred the secondary conditions and the secondary conditions are to tune with any 300035 or 3005 condensers.

We have prepared an interesting folder where the secondary using Heliotors. May we send you one?

GEO. A. FREEBIRG CO. \$4 Each The HELJOTOR

GEO. A. FREEBURG CO. 169 Lovell St., Elgin, Ill.

ILL BUY FOR YOU! FREE SHOPPING SERVICE FOR



l will buy any apparatus mentioned in this magazine and send it to you at its regular price, plus only Parcel Post and insurance. Buy your parts in the great radio markets of Philadelphia and New York.

Are You Acquainted With This Service?

It is conducted in co-operation with RADIO 'N THE HOME and was instituted so that its readers can readily obtain parts identical with those used in the sets described. I sell only those parts I have TESTED and KNOW to be good. I have done the EXPERIMENTING. YOU BUY A CERTAINTY

Every instrument bears my unconditional guarantee

Super-Tone

SUPER-HETERODYNE

PARTS*

50 K. C. HETEROFORMERS

A most efficient intermediate frequency transformer, scientifically designed for amplification at 50 K. C., the frequency at which radio amplification can be accomplished with greatest efficiency.

7.00

Super-Tone R. F. FILTER and CHOKE UNIT

This well-made instrument is responsible for nus west-made instrument to responsible for the exceptional electivity and tone which this super possesses. Designed to function also at 50 K. C. this unit puts the whole circuit in "tune," and delivers a strong, clear, undis-torted signal to the detector for amplification.



\$8.00



Super-Tone SUPER-COUPLER

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Above parts are identical with those used in set described in this issue. *Complete set of Blue Prints showing levent and wiring diagram, \$1.00.

E. M. CLARKE 1523 Chestnut St., Phila., Pa.

and make the connections to the Jones cable and jacks. Then with red wire make all A positive connections. Then with green make all your A negative connections from the cable to the rheostats and on to the tubes.

You are now almost finished. as all that remains is the placing of the C batteries, the bypass condensers and the small fixed condensers between the plates of tubes Nos. 6 and 7 and the A negative. Run all your wires down to the baseboard and along it to their destination. This improves the appearance of the set as well as making it easier to get at all the wires than is the case when they are strung through the air above the baseboard. Do not be afraid of "bunching" the wires (except grid leads), especially in the audio stages where it is a decided benefit to the set. The parallel wires, close together become in effect a by-pass condenser which prevents the audio tubes from oscillating and results in exceptionally quiet amplification.

Now, connect your batteries. The cable ends are plainly marked and you cannot go wrong. Connect A positive and B negative together at the batteries, and use the red marked wire to lead to the set. Use the green for A negative, the blue for 45 volts B positive, and the pink for 90 volts B positive.

Connect your loop, plug in the cable and try one tube in one socket after the other, seeing that the tube lights and does not blow out. This done place all tubes in their sockets and plug in the loud-speaker. If you use a twelve-turn Duo spiral loop with one turn removed you will find that the two dials will track along at about the same readings. Turn all rheostats about two-thirds full "on," and the potentiometer about one-quarter. Start with both dials at 100 and slowly turn them downward. At 70 on the dial, 500 meters will be heard: 390 meters at 40, and 300 meters at 23. This will give you an idea where to look for the others.

When you first hear a station, tune it with the condenser verniers to its maximum volume and clarity, then bring it to the desired volume with the potentiometer. Turning this to the right makes it louder, and to the left softer. This is all there is to tuning it. With practice you will find the precise point at which to leave the oscillator rheostat, and when that is found, leave it in this position, for you will find that a change in this setting will make a slight change in the setting of the oscillator condenser dial. You will also find that there is a certain relationship between the setting of the 10-ohm rheostat knob and the potentiometer.

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Official Service Station "Radio in the Home"

1212 Jefferson Bldg. 1015 Chestnut St. Philadelphia, Paare obtained when the filaments are burning at the lowest possible voltage. Bear this in mind when the quality is not just right, for, by the proper adjust-ment of these controls, absolutely perfect reproduction can be obtained.

What results can you expect? Well, here is my story: I live several miles from the center of Philadelphia in a fair radio locality. In good weather my reliable range takes in Dallas, Denver, Eastern Canadian stations and down to Havana. I call this my "reliable range" because almost any evening I can get stations within these limits with sufficient volume on the loud-speaker that I can cut down below the "noise level," and reproduce the broadcasts with fidelity and clearness that makes listening a pleasure.

I get no thrill whatever from hearing the same jazz that I can hear in Philadelphia just be-cause it comes from a station 3000 miles away. I have tuned thirty-six stations clear and distinct in one trip from 100 to 0 on my dials, and several times I have had California stations on the speaker. It seemingly is no hardship for this set to get them when they are on the air, but the thing I have striven for above all else is an ability to choose my program from among twenty or thirty stations, and

in such a way that I am sorry when they sign off. I put quality foremost, with selectivity next and volume and distance

This quality is due in no small degree to the construction of the intermediate transformers, and the whole set has been built around these instruments. These are the only parts of the set as it stands today that have not been changed from the original as described in March, 1924. I tried to better them, but found that they were practically perfect in their existing form. In all my experiments, I have invariably returned to these transformers.

The use of the two-way switch is for separating the low-wavelength stations. With the switch thrown to the right you are using the full inductance of the grid coil, and you will find that when you get down to about twenty-five for KDKA, there will sometimes be several stations in each degree of the dial.

By throwing the switch to the left you split the inductance of this grid coil and leaving the loop dial in the same position you will find that KDKA will now be found at about 75, giving you seventy-five degrees to tune all stations below 309 meters instead of only twentyfive degrees, resulting in a very much greater separation of



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ARAS Harmonik Transformers deliver ARAS Harmonik Transformers with loads of volume from stations one to two thousand miles away. Distant reception worth listen ing to!

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The November issue of RADIO IN THE HOME contained complete instruc-tions, photographs and diagrams for building the Victoreum Superheterodyne, as it was constructed at Station 3XP, the experimental station of this magnitine. Here is a Super-Het that "Supes." Every "fan" should try it.

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RADIO IN THE HOME CIRCULATION DEPARTMENT

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than any straight-line frequency

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can make it work my way.

volume depends a lot on the

tubes you use, so select them carefully. This set can be built

for use with 199 tubes, without

changing anything but the sockets, but don't expect the

same volume from them that is

If you have been operating a

set with three or more controls

you will appreciate this one with

but two. You no longer have use for that "third arm" that you

Editorially Speaking

(Continued From Page 4) that satisfaction the more firmly

will it hold this edifice together and make for its permanence. It is a most fortunate thing that, scattered all over the coun-

try, within easy reaching distance of every average set, there

are stations which are most admirably realizing all this and

which are sparing no expense

and no effort to make their programs measure up to the high standards which this condition imposes. But the tragedy is

that there are so many of the opposite kind whose existence

either compels the better station. to divide time on the wave length or whose operation is so

inefficient that a constant hetero-

dyne whistle ruins the highgrade program which we want

to hear. One night, not long

obtained with 201A type.

have so often wished for.

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Note the quadruple core surrounding the coil, forming an almost per-fect path for the flux within the coil. The core within the coil. The core is a special prode of leant-net silicon steel that roowled hyphest permeability and lowest hysteris loss, with consequent maximum conductivity in the magnetic circuit of the transformer. Price, \$10.00. West of Racky Mts., \$20.50.



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The "SELF-ADJUSTING" Rheastat

ago, I remember turning my dials to one after another of my favorite stations and in not one single instance could I get reception without a heterodyne that spoiled everything. Some of the best of our broadcasting stations are separated only by the minimum of ten kilocycles, and while this is theoretically sufficient to prevent an audible beat-note, it is actually impossible in practice to keep all stations on their exact fre-quency under the present-day operating conditions—and this ruinous heterodyne is the result. Radiall Company h.H.-14.50 Franklin St., N. Y. City

The answer is obvious. It is easily stated in words, but probably impossible of application. It is this-cut the number of

(Continued on Page 20)

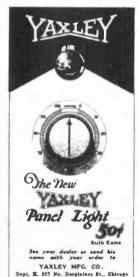
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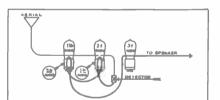


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Because of the high amplification and the resulting volume of the Inverse-Duplex System, the tendency to operate the rheostat low actually prolongs the life of the tubes. This means a

minimum tube strain, despite the fact that we get results equal to double the number of tubes.

Type 3X-P Receiver, my official laboratory model, was built and is sponsored by David Grimes, Inc. I recommend it highly.

Inquiries are welcome in regard to my system, and I shall endeavor to

answer as many as possible in the columns of Radio in the Home.





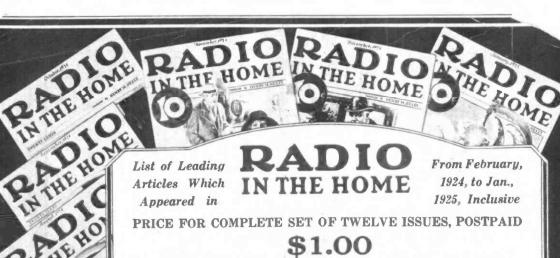
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Insures Natural Tone Quality







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