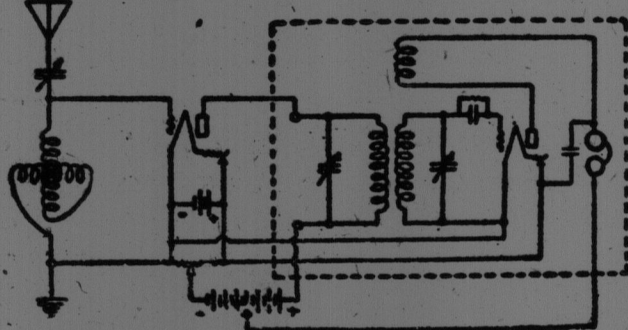


**FIFTEEN MINUTES
OF RADIO EACH DAY**

By Edward N. Davis
Formerly Technical Electrical Expert For U. S. Government

Lesson No. 183.
RADIO FREQUENCY AMPLIFICATION AND REGENERATION.
In order to obtain the advantages of one stage of radio frequency amplification, the experimenter may employ the circuit shown in the diagram.



The portion of the diagram included between the dotted lines represents the standard regenerative receiver with tickler coil for feedback. The condenser usually connected in series with the aerial should in this case be connected in shunt to the primary of the variocoupler. The additional apparatus required consists of a hand receiving tube, socket, rheostat, variometer and condenser for tuning the antenna circuit. While not absolutely essential the variable condenser aids in tuning the antenna circuit.

The plate circuit of the extra vacuum tube which acts as a radio frequency amplifier is connected to the antenna post of the regenerative receiver, while the plate circuit is completed through the primary of the variocoupler, the ground binding post being connected to the plate battery. The same filament and plate batteries may be employed in this circuit without materially affecting the results obtained.

It is desirable to shunt the filament battery with a potentiometer to a variable tap of which the negative terminal of the plate battery is connected. A study of the circuit shows that the variocoupler of the regenerative receiver in this circuit arrangement acts as radio frequency amplifying transformer, the primary and secondary windings being the primary and secondary of the coupler. Tuning to resonance with the incoming wave is accomplished of the variocoupler (by the usual switches) and by varying the values of capacity in shunt to these windings by manipulating the primary and secondary condensers.

The antenna circuit is tuned to resonance with the incoming wave by means of the variometer and variable condenser in series in this circuit. The grid and negative side of the filament of the radio frequency amplifying tube are connected across the windings of the variometer in the antenna circuit. The circuit thus becomes in effect, a single circuit receiver with one step of radio frequency amplification and recommends itself on account of its simplicity and the need for few instruments in addition to the usual regenerative receiver.

While for clearness sake the circuit is shown with only two tubes and no audio frequency amplification, there is no reason why the usual two or more stages of audio frequency amplification should not be employed in connection with this arrangement. Also the circuit shows a regenerative receiver of the tickler feed back type, although it should be just as practicable to employ the common form of two variometer and variocoupler receivers.

If it is desired to employ more than one stage of radio frequency amplification, it will be necessary to add a radio frequency transformer as well as the tube and other apparatus for each additional stage, that is, a two stage amplifier will require one transformer, and a three stage amplifier, two transformers.

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MR. PHILLIPS' STATEMENT

At yesterday afternoon's meeting of the Common Council C. H. Peters said that according to the report he had read of Herbert Phillips' declaration at Tuesday's council meeting the civic distribution plant could not be completed within four, five or even six years.

In connection with this Mr. Phillips said yesterday that any distribution system would have to be extended from time to time as circumstances warranted and would never be completed in the strict sense of the word. He said he hoped this would correct the wrong impression Mr. Peters had received from reading the newspaper report.

**Westinghouse
RADIO SETS**

COMPLETE AND READY TO SHIP

If your dealer cannot supply you write our nearest office.

Made in Canada
Canadian Westinghouse Company, Limited
Hamilton, Ontario

District Office: Toronto, Montreal, Winnipeg, Calgary, Vancouver, Edmonton, Fort William, Ottawa, Halifax.



**Every Woman's
Ambition—Fur**

A Fur Coat of warmth, wear and splendor—the charm of a Choker or the flowing dignity of a Stole—every woman needs, every woman wants at least one, because she knows they go so far and mean so much to her wardrobe. A gift with a guarantee.

In Coats special Christmas prices prevail. Quenly Hudson Seals are \$275 to \$425—here.

Electric Seals, their counterpart, \$125 to \$250. Muskrats, \$145 to \$300. Raccoons, \$175 to \$400. Persian Lambs, \$295 to \$425. Pony, \$75 to \$250. Special Models in Beaver, Nutria, Karakule, Mink Marmot, Taupe Wallaby. Hudson Seal Stoles from \$100—Mink \$250—Opussum \$150—Moleskin \$90—Alaska Sable \$300.

White Fox Neck Pieces dyed Isabella, \$50 to \$65; dyed Platinum, \$125. Cross Fox Scarves, \$75 to \$250; Red Fox, \$50 up; Silver Fox, \$250, and Blue Fox \$75 to \$150. Raccoon Scarves for Girls, satin lined or double furred, from \$35. We have also Muffs of Hudson Seal, Alaska Sable, Red Fox, Raccoon, Fitch and Opussum.

Electric Seal Caps for Men, \$15; Hudson Seal, \$25; Black Persian Lamb, \$20. White Tibet Baby Collars, \$9, and in papoose carrying pockets, \$8.50. In Grey Coat, \$6.50. There is more happiness in a gift of Fur.

H. Mont Jones
EXCLUSIVE FUR DESIGNERS
92 King Street.

LOCAL NEWS

PAY PARADE
No. 6 Signal Coy. C. C. S. will parade at the Armories Monday evening Dec. 18th at 8 p.m. for return of clothing and receipt of pay. All technical equipment must be returned at the same time. 8997-12-18.

Special Sale of Men's Mufflers. Sandy Corbet, 185 Union St.

THORNES OPEN EVENINGS ALL NEXT WEEK.
The stores of Messrs. W. H. Thorne & Co., Ltd., will be open evenings until 10 o'clock all next week.

VENETIAN GARDENS TONIGHT
Patrons of the Gardens will have another glorious time tonight. As usual there will be a big crowd and it is advisable to be there early for reservations. Dancing will start promptly at 9 o'clock.

Ladies' 4-buckle overboots, \$3.85. Ladies' 8-buckle overboots, \$2.95—Levine's, 90 King St.

FINEST YET
"Strand Phonograph" Queen Anne design, in as beautiful musical as in design. Plays all makes of records. John J. Frodham, Royal Hotel, 6012-12-20

CARD OF THANKS
James Marley and family of Millford wish to express their heartfelt thanks to the men whose heroic efforts under most trying conditions saved their house and store from the flames on Thursday.

Special Sale of Men's Shirts. Sandy Corbet, 185 Union St.

WHAT ABOUT SOX FOR HIM?
Ever see, (or hear) a man who he could not find a holeless pair of socks? If you have you know how he will enjoy some of these for Christmas. Put some socks in the sock he hangs up this Christmas. Get them at Gilmore's, 68 King St.

Big clean-out sale of Toys, Dolls, Books, Bibles, Fancy Goods, etc., at McArthur's, 84 King St.

1st page—Second Section—

Ladies' cosy corner comfy slippers in lighter shades, pink, blue and rose. Values up to \$2.25 for \$1.00—Levine's, 90 King St.

Ladies' felt fur-trimmed Juliettes, various colors. Regularly \$2.50 for \$1.48—Levine's, 90 King St.

Special Xmas offer Montreal Daily Star and Family Herald. W. 869-41. 8768-12-19

MORE DIFFICULT TO RECOGNIZE

New Irish Detectives Have Advantage Over the Old Force—Congratulated on Efficiency.

Dublin, Nov. 28.—(By Mail)—The Criminal Investigation Department, established by the Irish Government, has largely replaced the old detective department of the Dublin Metropolitan police.

It has its headquarters in Ortel House, and its task is the rounding up of the ordinary criminals, bank robbers and burglars, who have taken advantage of the prevailing troubled times to prey on the citizens. The new force has the advantage, over the old, that its members have none of the traditional and easily recognizable appearance of the ordinary police detective in Dublin. They are mostly young men, very like the average young man in dress and build, and their operations are increasingly effective. They recently made 36 arrests in one week; have recovered much property, and have been congratulated on their efficiency by the Recorder of Dublin.

Scientists say that if insects stopped warring among themselves man would be driven off the face of the earth.

Blue Bird Tea
"BRINGS HAPPINESS"

For Reliable and Professional Optical Service Call at **S. Goldfeather** Optometrist and Optician, 8 Dock Street, Tel. M. 3413

GIRL GUIDE NOTES

The 8th (St. Paul's) St. John Company had a very strenuous meeting on Tuesday and they had a good rehearsal to giving the public a real good time when it comes off. The first aid exam. is getting very close so they had to work on that and the rest of the afternoon was spent helping some of the recruits with their tenderfoot work.

The Brownies met on Wednesday and really got to work. They were introduced to the story of the Wise



Whether you want Kid, Cape, Wool or Fabric Gloves, it's good taste and good sense to insist on DENT'S

3-11-20



BIG XMAS SALE

SELLING OUT THE HOLIDAY STOCK MUST BE TURNED INTO CASH BY DEC. 25th

We purchased a fine new line of Books, Artistic Xmas Cards and Calendars, Toys, Dolls, etc., but everything must go at drastic discounts. A few quotations: 500 Copyright Fiction, reg. \$2, for \$1.37; 3 for \$4.00. 500 Reprint Fiction, reg. 90c, and \$1, for 67c, 3 for \$2. 100 Boys' Books, reg. 40c, for 27c, each; 6 for \$1.50. 500 Boys' and Girls' Books, reg. 75c, for 47c, each; 6 for \$2.50. Toy Books, reg. 15c., for 8c, each, 2 for 15c. 65c. Boxed Notepaper for 39c.; \$3.50 Leather Bibles for \$2.10; \$2.25 Leather Bibles for \$1.35; \$1.00 Dressed Dolls for 69c.

Many lines at less than cost. Mr. McArthur, after a long business career, is now desirous of retiring and offers stock, fixtures, etc., for sale en bloc. Advertisement appears in this issue. Shop early. We are going to clean out this Xmas stock, and prices are cut accordingly.

D. McARTHUR, 84 King Street

Do Not Overlook

"His Majesty, the Baby"

Dolls' Carriages, Toy Sets, Blackboards, High Chairs, Low Chairs and Rockers, Kiddie Cars, etc.

Xmas Gifts for every member of the family. Come in and see our beautiful Xmas gifts for father, mother, sister, brother and sweetheart.

Handsome Willow Chairs and Rockers at \$10 upwards. Smoking Stands at \$3.00 upwards.

Leather Chairs and Rockers at \$18 and upwards. Music Cabinets, Dining Room Suites at greatly reduced prices. See our windows.

AMLAND BROS., LIMITED
19 WATERLOO ST.

Sleds and Framers

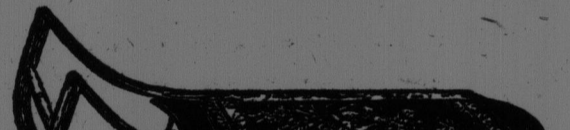
A Full Range of Sizes to Suit Boys and Girls of All Ages

SELF-STEERING SLEDS



\$2.30, \$2.60, \$3.25, \$3.80, \$4.80 and \$5.50

FRAMERS



\$2.10, \$2.50, \$3.50, \$3.60, \$3.85, \$4.00 and \$4.45

BOARD SLEDS
New Brunswick Pattern



\$1.75, \$2.25, \$2.75 and \$3.10

"PIG STICKER" PATTERN



\$1.40, \$1.55, \$1.90 and \$2.20

'PHONE Main 2540

McAVITY'S

11-17 King Street

QUOTES LORD NORTHCLIFFE ON DOCTRINE OF HATE

Industrial Editor Says Late Publisher Saw Reason as Europe's Hope.

New York, Dec. 16.—When he was in the world of Europe being on a real basis in one year from now," Lord Northcliffe told Mr. Rogers. "There is just one gleam of hope and that is down in Italy. There is a little fellow down there, no more than 35 years old, who has been listening to all the agitating Bolsheviki for the last five years and who has decided that it is just as easy to sell faith as it is to sell hate. That man's name is Mussolini. He is appealing to the best there is in Italy and selling faith. If Italy is going to be saved Mussolini is going to do it."

Mr. Rogers pictured the immigrant coming to this country as "getting a jolt" as soon as he reached Ellis Island and was welcomed only by the I. W. W. "This was true in the best also, he said. The radicals, said Mr. Rogers, still so much hatred in the minds of Europe, are full of hate that they are licensed against the employers. He also blamed the "business agents" in the unions for sowing much of the discord, and said it was they and not the actual gunman who were responsible for the Herrin murders.

OUTSIDE CONTRIBUTION

"Lord Dorchester" Chapter I. O. D. E. Dorchester, has sent \$5 to the secretary of the Navy League, to assist in the Christmas celebration for seamen in this port.

A CHRISTMAS GIFT

should be something that will both give pleasure and be useful. What, then, could be nicer than a dress or skirt, blouse or coat? And for the BABY also we have a complete range of coats, dresses, sweaters, hose, etc. Why not make your folks happy by presenting them with any of these most serviceable articles?

- LADIES' Blouses, all shades and styles, in silk, georgette crepe, crepe de chene, tricollette and pongee. \$2.75 to \$7.48
- Camisoles (in boxes) \$1.25 up
- Ladies' Skirts, all styles and cloths \$2.50 up
- Dresses, in serge, tricotine and homespun \$5.98 up
- Dresses, canton crepe \$17.50 up
- Ladies' Coats, all styles \$12.50 up
- BABY Coats, in sand, rose and pink \$2.98 to \$3.25
- BABY Coats in white only \$3.75
- BABY Dresses in voile, silk and gingham \$1.49 to \$2.25
- BABY Wool Sets \$2.25

The Ideal Ladies Ready-To-Wear

193 Union Street, near the Opera House
Remember the "House of Bargains."

STRIKES CAUSE FOOD LOSSES

Large Supply of Potatoes Allowed to Freeze in German Railroad Yards.

Duesseldorf, Germany, Nov. 27.—(A. P. By Mail)—With pleas for winter food supplies coming in from all over tons and English tanks 4,626.

Germany, 400 carloads of potatoes were permitted to freeze in the railroad yards here because of a strike of transport workers. The station warehouses also became congested with goods, and for a time all of the Rhein & Westphalian industry was threatened with great losses on account of the tie-up. The issue centered primarily in the question of wages.



After musing around your car THE GREAT HAND CLEANER