

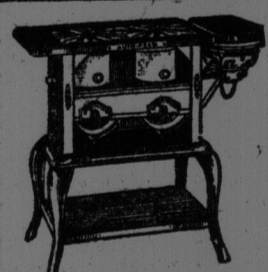
FIFTEEN MINUTES
OF RADIO EACH DAY

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

Remember that:
Lesson No. 188.
POINTS TO REMEMBER.
In operating a receiving set which employs several tubes, always reduce the filament current supplied to each tube a little by turning down the rheostat before removing one or more tubes, from the sockets or before switching off the tubes, one by one. This prevents the last tube burning from receiving an increased voltage due to the removal of the other tubes from the circuit and a consequent reduction in the load on the battery.
It is advisable to increase the resistance in the filament circuit of the detector tube before removing the telephone plug from amplifier jack in order to plug in on the detector alone. Operators of sets having automatic filament control jacks will avoid burning out of detector tubes by leading this. Special precautions of this nature should be taken when the set is being operated at the same time the battery is being charged.
The antenna tuning condenser is preferably connected in the aerial circuit rather than in the ground lead. This reduces the potential difference between the primary winding of the vario-coupler and earth and tends to minimize the effects of body capacity in the vicinity of this coil.
Many receiving sets have the negative terminal of the filament battery connected direct to earth. This brings one side of the filaments and one side of the secondary circuit to earth potential which is zero. This arrangement is believed to give more stable operation of the circuits.
The vacuum tube is an amplifier of alternating current by virtue of its ability to act as a relay to regulate the current flow from a local battery. The action of the crystal detector, on the other hand, is similar to a valve and merely allows the current from the incoming signal to flow through the circuit in one direction.
The stopping condenser as employed in receiving circuits derived its name from the fact that it was originally used to prevent the current supplied by local batteries to crystal detectors from flowing through the secondary rather than through the detector. It is common practice to refer to the telephone shunt condenser even in circuits employing no local battery as the "stopping" condenser.
Before amplifying transformers were obtainable, amateurs employed the windings of spark coils for coupling the successive stages of amplification together. While such devices work very well on telegraphic signals, only a properly designed transformer will function properly over the frequency range necessary for the amplification of music or voice modulated waves.
Some types of audio-frequency amplifying transformers have very low distributed capacity and for this reason the primary should be shunted by a small condenser when the transformer is employed in the first stage of an amplifier. The correct capacity may be determined by employing a variable condenser of known capacity and adjusting the beat signals.
(All Rights Reserved by United Feature Syndicate. Reproduction Prohibited.)

THE HEARTIEST LAUGH IN ST. JOHN
THIS CHRISTMAS SEASON

Records Nos. 9322, 9324 and 9325, Starr Gennett Records, sold by W. H. Bell, Germain street; J. A. Lipsett, Prince Edward street; Wasson's Drug Co., Sydney and Main streets; J. D. Connors, Union, St. John, and Allan Pharmacy, West St. John; also Starr Co. of Canada, Limited, Maritime Branch, 171 Prince William street.
6809-12-26



Give an Oil Cook Stove
A most useful present is a "Kero-gas" Burner Oil Cook Stove. We have 2, 3 or 4 burners, with or without high shelf and ovens.
Beautiful finish and burns 400 gallons of Air to one gallon of Oil.
Special prices for Xmas season.
Mail Orders Promptly Attended To.

P. CAMPBELL & CO., 73 Prince Wm. St.

The Balance of Our
HEATERS
Are Marked
AT COST

Do You Want One?
PHILIP GRANNAN, Limited
568 Main Street. Phone Main 365

Christmas Cheer



The Diamond imparts the real Christmas spirit. Its beauty will never grow less, its value will increase year after year. As a gift it is unexcelled.
Our judgment of many years in buying Diamonds is your assurance of a good selection.

Our Christmas display of DIAMONDS and DIAMOND JEWELRY is of great interest.

The most exacting purchaser will find many quaint and original pieces of Precious Gem Jewelry that will be sure to please.

OPEN EVENINGS
FERGUSON & PAGE
The Jewelers 41 King Street

Make This The Happiest
Christmas In Your Life

Gifts in Furniture make the best Xmas presents. You can make father, mother, brother, sister and sweetheart happy by giving a nice piece of furniture for their Xmas gift. Willow Chairs and Rockers, Leather Chairs and Rockers, Parlor Tables, Dressers, etc., to select from.

A large assortment of Xmas gifts for the children.
Come in and see what we have.
Deliver goods to all parts of the city.

AMLAND BROS., LIMITED
19 WATERLOO ST.

LOCAL NEWS

Wonderful Bargains in hats and dolls.—Quality Millinery, 120 Charlotte, Store open evenings.

FINEST YET
"Strand Phonograph" Queen Ann design, is as beautiful musically as it is in design. Plays all makes of records. John J. Frodsham, Royal Hotel, 6013-12-23

GIFTS FOR SMOKERS.
Case pipes, \$1.85. Louis Green's Cigar Store, 89 Charlotte St. Free coupons. 6091-12-26

BARGAIN FEAST
of ladies and gents Xmas footwear at K. and H. Boot Shop, 208 Union St. 12-23.

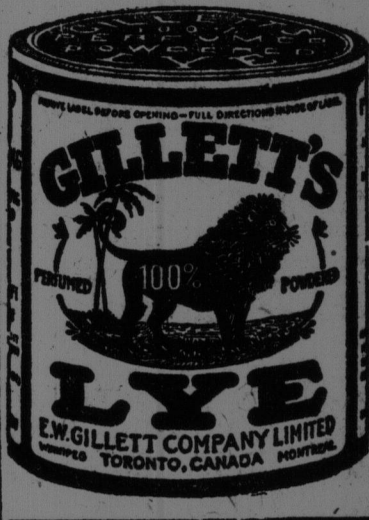
CUT IN TWO
Prices of Xmas footwear, K. and H. Boot Shop, 208 Union St. 12-23.

NOT EXHAUSTED
We still have plenty of ladies and gents Xmas footwear at extremely low prices. K. and H. Boot Shop, 208 Union St. 12-23.

A NEW ARRIVAL
We have just received another large shipment of ladies and gents Xmas slippers to be sold at extremely low prices. K. and H. Boot Shop, 208 Union St. 12-23.

AT THE ARENA.
Good ice for skaters. Rink open afternoons and evenings. Public assured of safety, health and pleasure. Season ticket best Xmas gift for your children. 6238-12-29

NOTICE
The office of the Standard Business College will be open from 10 to 12 every morning after Christmas for the benefit of those wishing to make inquiries about business courses. New term opens January 4. 12-26



PIGEON IS ENLISTED
BY DRUG SMUGGLERS

Vancouver, Dec. 22.—In an effort to deliver a small quantity of drugs to a Chinese boarding-house without running risk of arrest, a carrier pigeon was used on Sunday to deliver two packages to the house. Detectives Sinclair and Ricci, who were making a surprise visit to the premises, had drawn a blank so far as drugs were concerned, when they heard a tapping near an upper window. Looking out, a pigeon was endeavoring to enter a trap-net. The detectives opened the trap, let in the bird, and proceeded to examine it, with the result that two small packages of drugs were found held by rubber bands around its legs.

DELAY AUSTRIAN CREMATION
Authorities Base Refusal to Act on Emperor's Decree in 1784.

Vienna, Dec. 22.—Austria's first crematorium has been declared open by the Socialist Governor of Vienna despite the Supreme Court's injunction issued to the Christian Social Government. Nevertheless, in obedience to a decree dated 1784 and signed by Emperor Joseph I, enacting that "the dead shall be buried," the authorities have refrained from ordering bodies awaiting cremation burned, they were buried, pending removal of the injunction.

LOCAL NEWS

FIRE SALE OF MILLINERY.
Great reductions in Hats and Trimmings. Miss Suddard, Carleton Millinery, 201 King Street, West. 6237-12-26

Give Eveready Flashlights on Christmas.
There's one for every member of your family. Get them from Emerson & Fisher's, Ltd. s.n.r. l.f.

GARDENS TONIGHT
Pleasure seekers will have another good time tonight. Good music and a splendid place to spend the evening. Dancing will start promptly at 9 o'clock.

Sweeping discounts on toys, dolls, books, etc., at McArthur's, 84 King street for Saturday's big sale. 6232-12-23

"RITZ," TURKEY TONIGHT.
A large Christmas turkey awarded to the lucky patron tonight. 6232-12-23

Waterman's fountain pens at Hawker's Drug Store, 528 Main street. 12-26

GOLF COST 2,000,000 PLAYERS
\$1,319,000,000 THIS YEAR

New York, Dec. 22.—Some statisticians with a liking for figures has estimated that there are now 2,000,000 golfers in the United States, and that by the end of the present year their golfing budgets will have amounted to \$1,319,000,000, apportioned as follows: \$23,000,000 for golf property, \$18,000,000 for club-houses, \$6,000,000 for club furnishings, \$25,000,000 for construction of courses, \$6,000,000 for course equipment, \$60,000,000 for golf balls, \$15,000,000 for golf sticks, \$50,000,000 for golf apparel, \$25,000,000 for salaries, \$4,000,000 for caddies, \$5,000,000 for lockers, \$80,000,000 for dues, \$8,000,000 for golf architects' fees, \$2,000,000 for golf bags, \$2,000,000 for golf shoes, \$2,000,000 for tees, \$1,000,000 for fertilizers, \$2,000,000 for trucks, \$1,000,000 for musical instruments and \$1,000,000 expended by golfers on and because of golf alone.

2 Dozen
Kiddies

Make them happy for \$1 Christmas Day. Give them each a package of Little Sun-Maid Raisins, luscious little Christmas fruit-cakes—tickle them to pieces.
\$1.25 worth for \$1—special Christmas price!
Stick little packages in stockings. Also, let the children give them to their little friends.
Little raisins "just made" for Christmas time.
Get the cartoon now at Lay store.

Little
Sun-Maids
"Christmas Raisins"

At Everywhere
Had Your Iron Today?



An Easy
Chair
—AT—
An Easy
Price

A thought for father, mother, aunt or sister—any home bird. Give an easy chair if you can find one nice enough. There are a few under our eye as we write, fine examples of the Jacobean period of furniture art. Ebony or antique oak finish with the high light markings (the natural wood tint showing through).

The backs are carved all over excepting those with caning. The legs are back struts, have a long corkscrew twist that completes the ornamental effect. Seats are in various tapestries or mohair. One price,
\$29.50

Besides these easy chairs and rockers there is wide variety in Chesterfield chairs, gifts in enduring furniture for all.
Open tonight and tomorrow night.

J. Marcus
Furniture, Rugs
30-36 DOCK ST.

Give Your Eyes the Consideration Due Them.

Seeing is by far the most important sense in the human body. And still it is the one most frequently neglected.

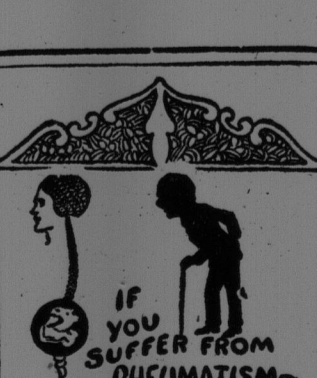
If your power of speech were impaired, or your hearing below normal, you would not hesitate about consulting a specialist—and yet good eyesight is the easiest to restore if taken in time.

If you do not know what it is that is troubling your eyes, or if you are in doubt as to your seeing power, we invite you to allow us to make a thorough test to convince yourself of the truth.
Our service is unexcelled.

D. BOYANER
111 Charlotte St.

Freshly Roasted
Coffee
for
Christmas
at
Humphrey's
Coffee Store
14 King Street

FOR THE BABY'S CHRISTMAS.
Baby's fine wool overalls in navy, brown or tan. Prices \$1.85 to \$2.45.
Baby's wool caps, brown, navy or gray. Prices 75c. to \$1.35.
Children's wool tuxedo sweaters in navy with gray trimmings. Price \$2.25 in Xmas box.
Baby's silk puffs in sky. Price \$3.65 in box.



SPINAL ADJUSTMENTS
For all diseases of any part of the body, lumbago, sciatica, neuritis, stiff joints of muscular pains or soreness, see Dr. TALBOT, the expert drugless physician, whose scientific treatment of such troubles has met with phenomenal success. DR. TALBOT is at his office, 50 King square, St. John, every Monday, Friday and Saturday. Phone Main 3821

Hundreds of cured patients in New Brunswick are living testimonials to his successful treatment.

"The London House"
All Prepared For Late Shoppers

And meeting the demands for popular gifts for every member of the family. Many gift things bear special prices for tonight and Saturday.
(Store open until 10 p.m.)

CHRISTMAS BLOUSES—SPECIALLY PRICED FOR TONIGHT AND SATURDAY
WOMEN'S HANDSOME FUR-TRIMMED COATS
CHRISTMAS BLOUSES—SPECIALLY PRICED FOR TONIGHT AND SATURDAY
BRASSIERS—A POPULAR GIFT THIS CHRISTMAS.
XMAS NECKWEAR—MAKES DAINTY GIFTS
SILK UNDIES AN INTIMATE GIFT.
GIFT HANDBAGS—ALL POPULAR STYLES.
INEXPENSIVE GIFTS IN ANNEX
SWEATERS—A THOUGHTFUL GIFT.
A PLEASING GIFT FOR BOY OR GIRL—COATS AT REDUCED PRICES.
WHITWEAR A PLEASING GIFT.
BIG DOLL BARGAINS
Jointed Dressed Dolls, natural hair—Special prices, 69c., 98c., \$1.29 and \$1.98 each
Come and get one while they last.

London House
F. W. DANIEL & CO. HEAD OF KING ST.