

Spodes Italian Blue

Many new pieces of this famous Old Ware are now being shown.

Old Roman Scenery produced from original engravings.

W. H. HAYWARD CO.
LIMITED
85 to 93 PRINCESS STREET

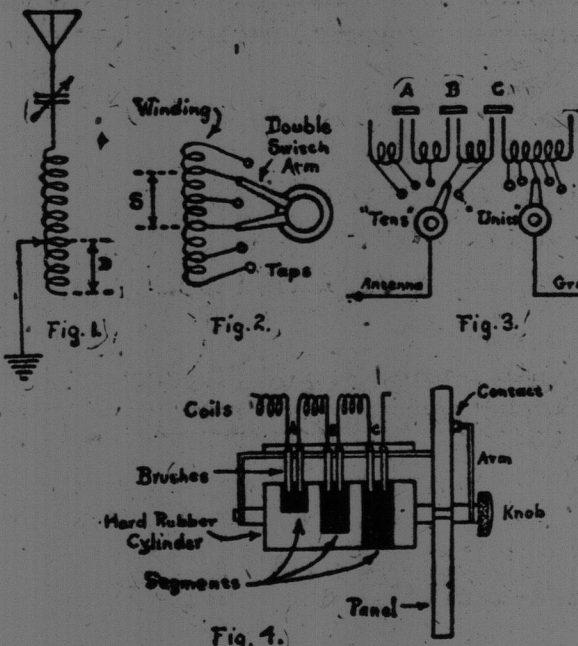
FIFTEEN MINUTES OF RADIO EACH DAY

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

Lesson No. 209.
THE END TURN SWITCH.

If a tuning coil, in the antenna system of a radio receiver, is designed for operation on wave lengths ranging from 200 to 3,000 meters, it is evident that although the full number of turns may be necessary at the higher wave lengths, the shorter wave lengths will require only a portion of the coil, thus leaving a number of unused turns.

Unless some provision is made for removing these unused turns from the circuit there will be a considerable loss in energy due to the distributed capacity or "self-capacity," as it is commonly known, of the coil. Self-capacity results from energy being stored up between the turns in the form of electrostatic lines of force during the flow of oscillations and, although this capacity is small, it is comparable in value to capacities which perform important functions in other parts of the radio circuits.



The unused portion of the coil, therefore, possesses both capacity and inductance and consequently has a definite period of oscillation which may be in resonance with the part of the coil which is in active service. Under these conditions the unused portion of the coil absorbs energy from the unused portion and the resulting transfer of energy reduces the efficiency of the circuit to a considerable degree.

In Fig. 1 the antenna circuit contains a large coil which is tuned to a comparatively low wave length, leaving the unused turns (D) which should be removed from the circuit in order to reduce the amount of energy absorption to a minimum. In Fig. 2 is illustrated a type of "end turn" switch which effectively removes the effect of the unused turns from the circuit by short-circuiting two sections (S) between the used and unused portions of the winding. This switch has two arms placed at such an angle to each other as to rest on the contact points two sections apart, thus short-circuiting the intervening turns and eliminating to a great extent the "dead-end" losses.

In Figs. 3 and 4 is shown the construction and connection of an "end turn" switch which removes the segments to rotate and their position is regulated as to permit a gradual increase or decrease in the number of turns connected in circuit. In Fig. 3 is shown how the various sections of the coils may be added in the "taps" circuit while the circuit is being tuned to the higher wave lengths by regulation of the knob controlling the "taps" switch. Three or more segments may be provided for dividing the winding, de-

Waterbury & Rising's January Sale of WINTER FOOTWEAR

SPECIALS

For the Week-End at our
Union Street and Main
Street Stores

If you have not already visited our stores to take advantage of the bargains offered, we would advise an early visit as these lines are being sold out quickly at the very low price quoted. Here are a few of the many bargains offered:

Children's Laced Gum Rubbers; sizes 6 to 9 89c
Boys' Laced Gum Rubbers; sizes 11 up 89c
From \$1.85 to \$2.70
Men's Felt Boots; all felt or with Leather Trim; former prices, \$4.50 and \$5.50 \$2.80 and \$3.50
Men's Heavy Lumberman's Sox 85c and 95c
Men's Oil Tan Paces; all kinds \$2.70 up to \$6.30

Reliable Footwear at Fair Prices

WATERBURY & RISING, Ltd.
212 Union St. --- 677 Main St.

COSTUMES FOR CARNIVAL WEEK

AMDUR'S, LTD. 'No. 1 King Square

Brand new, all wool Sweaters and Mufflers in wide variety of choice in design and colors.

Men's Woolen Underwear... 85c garment
For Ladies—Golf Sox 49c pr
Boys' Coat Sweaters 69c
Pure Wool Mufflers 69c

All goods brand new in style and color.

AMDUR'S WOOLEN CENTRE, King Square

pending upon the various bands of wave lengths to which it is desired to tune, these wave lengths ranging from the amateur wave length in the vicinity of 200 meters to the 2,500 meter wave on which time signals are transmitted, with provision for receiving the broadcasted signals at 300 and 400 meters respectively.

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RECENT DEATHS

Mrs. A. D. Toogood.

A recent cable message from England, to Henry Willmot announced the death at Camberley, Surrey, of his mother-in-law, Mrs. A. D. Toogood.

**Put the
DUCON
in a Lamp
Socket and
Your Aerial
is Ready**

A DUCON Plug
allows a Radio Receiving Set to be connected to any electric light socket. It is simply screwed into the socket like an electric bulb. Nothing further is necessary. The tuning is done in the usual manner. All outside wires are eliminated.

For Sale by all Electrical Dealers
PRICE
"Made in Canada"
Cassidy General Electric Co. Limited

\$1.75

widow of Captain Toogood, Second Bengal Fusiliers and of her late Majesty's Body Guard. Besides Mrs. Willmot, now of this city, two other daughters survive, Mrs. Heberden, of Exford, Somersetshire, and Miss Dora, at home; also one son, Lieut.-Colonel Cecil Toogood, D.S.O., Lincolnshire Regiment, of Guildford, Surrey. Mrs. Toogood, who was in her eighty-ninth year, was much esteemed by a large circle of relatives and friends.

John Mullaney.
John Mullaney, an old and highly respected citizen of Milford, died early this morning at the residence of his son-in-law, Henry Berry, of Church avenue, Fairville. He leaves one brother, James Mullaney of Milford and two sisters, Mrs. Henry Berry, Fairville, and Mrs. William McJunkin of St. John.

Mrs. Caroline Kilpatrick.
The death of Mrs. Caroline Kilpatrick occurred yesterday at her home in Upham, Kings County. She is survived by two sons and eight daughters, one of whom is Mrs. Alexander Crawford of St. John. The funeral will be held tomorrow.

Announcement January Clearance Sale at London House Begins Saturday 20th to 31st

Our store wide disposal of all remaining Winter Merchandise, as well as many clearing lots from the manufacturer.

The time has come when every remaining article of Winter Goods must go, regardless of price. Progressive merchandising methods demand it. Our policy insists upon it. It's a clearance sale that combines a true business principle and a well defined purpose, namely, that every six months a thorough store-wide cleaning must take effect to insure the starting of the new season with new stocks. Every department has contributed its share to this sale. You will make worth while savings.

Many special clearing lots of first quality merchandise have been brought in from the manufacturer. This is a feature that will make our January clearance sale more popular than ever before.

Women of St. John and vicinity would do well to come early and often and get their share of all the good things we will have to offer them. It's an annual bargain time.

London House

F. W. DANIEL & CO.

HEAD KING ST.

NO APPROBATION
NO EXCHANGE

January Sale Of Men's Furnishings

A Great Bargain Occasion

APPRECIATING that a man's furnishings plays a big part in making variety to his dress, we have secured an unusually large selection—enough variety in style, fabric and color to meet individual needs and preferences.

You'll find some great bargains in this sale. It's a BUY NOW opportunity worthy your immediate attention.

Sale Commences Friday Morning

Men's Colored Shirts

TWO BARGAIN PRICE LOTS



No. 1—Reliable cord cloth Shirts with full sized bodies and double sewn seams. Made with soft double cuffs and full yokes. Five different patterns in three colors.

\$1.29 each

No. 2—Odd Shirts in several reliable makes. All good serviceable cloths in a selection of nice colors and patterns. Clearing the assortment at

\$1.89 each

Clearance Prices on Half Hose Offer an

Opportunity to Save Money

Heavy ribbed wool Half Hose in black only. Sale 25c pr
English ribbed Worsted in black or grey. A particularly big value. Sale 40c pr
All Wool Heavy Rib in black, grey and heathers. A favorite quality. Sale 50c pr
English Heathers in fine rib; medium weight. Very desirable. Sale 60c pr
Colored Cashmere, plain or clocked. A very popular weight and kind. Sale 60c pr
Colored Cashmere with clocks. Extra quality; new colors. Sale 89c pr
Silk and Wool ribbed in new mixtures. Sale 89c pr
Extra quality fine, all wool Cashmere, "Two Steeple brand." Fashionable colors. Sale \$1.39 pr
Union Cashmere in medium weight; black only. Sale 35c pr

All Wool Black Cashmere; plain or with grey spliced heels and toes. English make. A very exceptional value. 50c pr



Winter Weight Underwear

Priced to Clear

Men's Fleece Lined Shirts and Drawers, reliable make, wonderful value, 69c pair.

Men's Heavy Ribbed Wool Shirts (traveller's samples). Every garment a genuine bargain, 75c, \$1.15, \$1.25.
Men's Union Suits (traveller's samples). Fleece lined, merino and fine or heavy ribbed wool. Sale prices \$1.35, \$1.50, \$1.75, \$2.50, \$3.50.

Men's and Boys' Sweaters

All Year Around Quality.
Men's Coat Sweaters in medium weight, with shawl collars. Genuine bargain priced, \$3 each.
Men's Navy Worsted Pullovers with roll collars, very special, \$2.50 each.
Men's Black Cardigan Jackets, \$3 ea.
Boys' Pullover Sweaters in popular colors, only 75c, \$1 and \$1.25 each.
Boys' Coat Sweaters with shawl collars. Sale \$1.25 each.

Sample Undershirts

Boys' sizes only. Fleece lined, 50c garment; heavy ribbed wool, 65c, and 75c garment.
Boys' Fleece Lined Union Suits, \$1 suit.

Neckwear and Braces

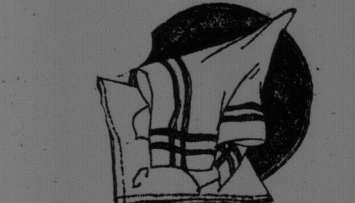
Greatly Reduced

All Silk Neckwear in favorite shapes and an assortment of new patterns and popular colorings. Sale prices 59c, 79c, 95c, each.
Men's Brushed Wool Mufflers in dark colors, \$1.00 each.
Men's Plain Knitted Wool Mufflers with bordered ends. Showing in the popular heather mixtures. Sale \$1.50 each.
Men's Fibre Silk Mufflers in stylish two and three tone mixtures. Dark colors. Sale \$1.50 each.
Men's Braces in genuine French style. Sale 35c.
Boys' Braces (sample lots), 10c, 15c, 25c.
Men's and Boys' Starched Collars—Several styles, 2 for 25c.
Men's and Boys' Soft Collars—Some are slightly soiled; 29c, each, 4 for \$1.

Gloves and Mittens!

A Few Odd Lines Priced Very Low

Men's Scotch Knit Gloves. Sale 65c a pair.
Tan Cape and Brown Mocha Gloves with warm wool linings. Sale \$1.39 and \$1.65 pair.
Heavy Fleece Lined Driving Mittens. Sale 75c.
Men's Heavy Driving Mittens made from oil dressed deerskin, lined with fleece. A big bargain, \$1.75 pair. (Men's Furnishings, ground floor.)



Handkerchief Bargains

Colored Bordered, or in plain white cambric or mercerized cotton. Sale, 2 for 25c.
Extra quality highly mercerized Handkerchiefs in larger sizes. Hem-stitched and colored bordered. Sale 25c each.

(Men's Furnishings, Ground Floor.)



Remarkable Bargains In Baggage of the Reliable Kind.

Some pieces are very slightly defaced

SUIT CASES

Black Enamel—Sale... \$6.50, \$7.50, \$8.25
Brown Keratol—Specially good wearing, \$4.00
Real Leather, in brown only—Two big values. \$10 and \$15

HAND BAGS

Black Walrus, grained, leather lined—Sale \$8.50
Smooth Leather in brown or black, leather lined—Sale \$17.50
Heavy Black Cowhide—Sale \$18.50
Fine Grain Heavy Leather in black only; large shape—Sale \$22.50
Heavy Brown Cowhide in one of the most popular shapes—Sale \$25.00
Best Brown Cowhide—Sale \$31.00

TRAVELLER'S PORTFOLIOS

In tan cowhide, size 14 in., \$11 each
In tan or black cowhide, size 16 in. \$12.50
Pocket style in brown cowhide, 16 in. \$8.50

HAT BOXES

Ladies' size in new shape, fancy lined \$12.50

FITTED PAD

For man's hand bag. Sale \$15

SCHOOL BAGS

In heavy split cowhide or black seal grain. Sale \$2

TRUNKS

Steamer Trunks with heavy, hard fibre covering. Two big values \$18.50, \$20.00
General Purpose Trunks, with steel covering \$12.50
General Purpose Trunks, with hard fibre covering. Large size \$13.50
34 in. Trunks in the old reliable style. Very strong. Sale prices... \$15.50 and \$16.50
Wardrobe Steamer Trunks with the new heavy steel bound edges. Sale price... \$27.75

Sale of English Made

Wool Rugs

Reversible Plaids with fringed ends. Used for travelling, boating, driving, camping, etc. Every piece genuinely bargain priced.
Sale \$2.75, \$4, \$5.75, \$7, \$7.50, \$8, \$11.50.

Mackinaws and Sheep Lined Coats

Reduced to Clear

Men who work out of doors will find these short warm coats ideal for winter wearing. Great for skating and other outdoor sports, too.

Men's sizes, \$8.95 and \$11.50
Double lined \$11.95
With sheep collars \$12.95
Sheep Lined Coats with whipcord or corduroy coverings and warm sheep collars—Only \$11.50
Boys' Mackinaws in dark brown checks \$5.95 and \$6.95 each
Men's Clothing, 2nd floor.)

Manchester Robertson Allison Limited
KING STREET - GERMAN STREET - MARKET SQUARE