

FIFTEEN MINUTES OF RADIO EACH DAY

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Lesson No. 233.
RADIO DICTIONARY
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AUDIO FREQUENCIES.

All frequencies below 10,000 cycles per second are known as audio-frequencies. The diaphragm of the average human ear is sufficiently sensitive to respond to vibrations of less than 10,000 cycles per second which has therefore been chosen arbitrarily as the dividing line between audio or audible frequencies and radio or inaudible frequencies. Signals radiated from a transmitting station are transmitted through the ether at radio-frequencies, thus necessitating the employment of a detector in the receiving set to convert these high frequencies into frequencies which are rendered audible in the receiving telephone.

CAPACITIVE COUPLING.

The linking of two circuits together or bringing them into mutual electrical relation by utilizing the electrostatic field existing between the plates of a condenser is known as "capacitive" coupling. This type of coupling is used in both transmitting and receiving circuits, for example, in regenerative circuits the "feed back" action may be obtained by "capacitive" or "electrostatic coupling" between the plate and grid circuits. "Capacitive coupling," however, has the disadvantage of not giving as sharp tuning as inductive coupling.

EVACUATION.

With reference to vacuum tubes, the process of "evacuation" consists of removing the air from the inside of the tube. This is accomplished by heating the enclosed metallic elements, namely the grid, plate and filament to a white heat and the glass tube itself to a high temperature for the purpose of driving out the gas contained in the metal and in the glass walls of the tube. Vacuum pumps are then used to remove the air and give the tube a high degree of vacuum.

LOADING COIL.

In order to adjust either transmitting or receiving sets for operation on longer waves, series inductances or "loading coils" are employed in receiving circuits this series inductance may consist of a coil of fine wire having several hundred turns wound on an insulating cylinder of small diameter and provided with a sliding contact so as to obtain a variable value of inductance. The secondary circuit may also have a variable loading coil connected in circuit in order to conform to the desired wave length. In transmitting apparatus it is often desirable to have connections so arranged as to change from wave length to another, for example, from 300 to 600 meters. This is accomplished by a switching arrangement which adds inductance in the form of a separate series "loading coil" connected in the antenna circuit but not coupled to the primary circuit.

SEPARATE HETERODYNE.

When two sources of undamped electrical oscillations of constant amplitude and having slightly different frequencies are combined, the resultant modulated oscillation has a "beat" frequency equal to the difference between these frequencies. If, for example, the oscillation of an incoming radio signal, having a frequency of 1,000,000 cycles per second, is combined with a locally generated oscillation of 998,000 cycles per second, the resultant frequency will be 2,000 cycles per second, this method being known as heterodyne reception. If the local oscillations are produced by a separate tube, having its own regenerative circuit, and these locally generated oscillations are then impressed upon the receiving circuit by suitable coupling, this is known as the "separate heterodyne" method of reception.

MICROAMPERE.

When an electromotive force of one volt is steadily applied to a conductor having a resistance of one ohm, the current produced is one ampere. In connection with the induction of the radio circuits, the "microampere" or one millionth part of an ampere is used as a practical unit for the measurements of the minute electrical currents, for example, the amount of current necessary to produce an audible signal in a telephone receiver of standard design is approximately 0.05 microampere.

Y. W. C. A. PLANS KINDERGARTEN

The board of directors of the Y. W. C. A. yesterday afternoon discussed plans in connection with the opening of a private kindergarten as a means of raising additional funds. Mrs. W. H. Luginbuhl was in the chair. It was reported that the recent Valentine fete had netted nearly \$400. The report of the general secretary, Mrs. Percival Foster, was very comprehensive and encouraging. She dealt with the various aspects of the work, going into detail in each case. The Travelers Aid report was presented by Mrs. James F. Robertson.

For the gymnasium committee, Mrs. A. E. Logie reported an average attendance of 305 at classes in the last week of the month. She told of the basketball schedule, the hikes and parties arranged for gymnasium members, and said five new members had been enrolled.

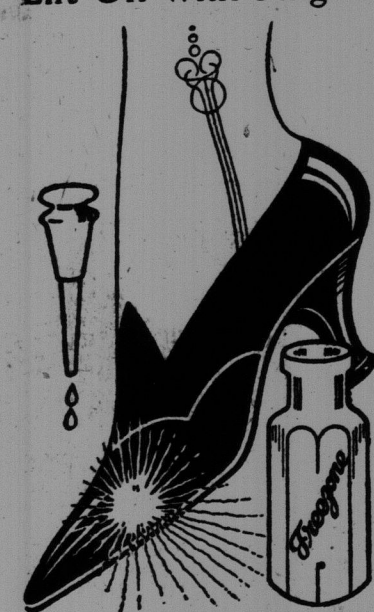
For the house and cafeteria committee, Mrs. W. C. Cross told of the remodeling of the dormitory having been begun. She referred with pleasure to the fact that Miss Baird had consented to remain as matron, and spoke also of the credit balance in both cafeteria and house accounts.

General appreciation of Miss Canada was expressed at the meeting, and there was some pride in recalling that Miss Canada had been a "Y" girl for two years. The members of the board were glad to know that she had carried herself in a manner to reflect highest credit on the association. The secretary was asked to write to Miss Canada, congratulating her and asking her to attend a meeting of the Y. W. C. A. members this week.

The resignation of Mrs. H. W. Morrissey was respectfully accepted and Mrs. F. T. Barbour was appointed as a new director.

CORNS

Lift Off with Fingers



Doesn't hurt a bit! Drop a little "Freezone" on an aching corn, instantly that corn stops hurting, then shortly you lift it right off with your finger. Truly! Your druggist sells a tiny bottle of "Freezone" for a few cents, sufficient to remove every hard corn, soft corn, or corn between the toes, and the calluses, without soreness or irritation.

"WHITE FLAG" MAKING HEAVY GAINS IN GERMAN

Imports on Population Cause Repeated Calls for Financial Assistance.

Berlin, Jan. 17.—(By mail)—Tuberculosis has made such heavy inroads on Germany's population recently that cries for additional financial aid are going up repeatedly from the official and unofficial relief agencies. A short time ago more funds were demanded for the state insurance department which ministers to the tubercular. Its aid extends this winter to 80,000 families. One of the department's regulations requires that, before a family can claim its benefits, at least one member must hold a state insurance policy.

Now a plea for further public subscriptions has been raised by the agency which confines its activities to members of the middle classes and operates largely through public funds to aid persons not covered by insurance. Among the agency's beneficiaries at present are: 1,284 federal, state and municipal officials; 119 professors, ministers, attorneys, doctors and students; 133 teachers, 88 journalists and actors, 188 widows and orphans, 982 independent hand workers and tradesmen; 1,894 employed salesmen and clerks, and 789 merchants.

A HAPPY BOY SCOUT

A Halifax lad of fourteen, a boy scout, named Stanley Baldwin, sent a picture of himself in scout uniform to his famous namesake, Hon. Stanley Baldwin, British Chancellor of the Exchequer, when the latter was in Wash-

ington. He has received the following reply:—
Dear Namesake—It was a great thought of you to send me a greeting for the New Year and we were all very pleased to get it.
You look the right sort of boy from your photograph and I hope you will grow into the right sort of man. The world needs them. You wouldn't be a Scout if you didn't pull all your weight in the boat; we'll both try and it will help each of us to know that the other is pulling away in all weather, just as hard as he can.
Yours sincerely,
Good luck to you always.
(Sgd.) STANLEY BALDWIN
From Worcestershire, England.

RECENT DEATHS

Henry T. Burns.

The death of Henry T. Burns, second son of the late William R. and Mary Burns, occurred yesterday at the St. John Infirmary. Mr. Burns was employed by W. H. Thorne & Co., being on the office staff of that firm. He is survived by three sisters, Molly and Dorothy of this city and Sister Emily, of the Sisters of Mercy, Portland, Me.; one brother, John of Montreal; also two aunts, the Misses Agnes and Annie Burns, of this city, and two uncles, W. G. Walsh and Thomas Burns both of this city.

Patrick McElrath.

The death of Patrick McElrath, son of the late William and Bridget McElrath, of Springfield, Kings county, occurred in this city yesterday. He leaves six brothers and four sisters. The brothers are: Francis and Michael, of this city; John and William of Massachusetts; James, of Lubec, Me., and Charles of Hovebrook, Me. The sisters are Miss Jennie McElrath, of this city; Mrs. H. E. Edmonds, of Dorchester, Mass.; Mrs. William J. Bradley, of Lynn, Mass., and Mrs. Charles Leonard, of Hampton, Kings county, N. B. The funeral will take place on Friday morning at 8:15 o'clock from the residence of the deceased, the residence of Mrs. Thomas Cogger, 200 Rockland Road, to Holy Trinity church for high mass of requiem.

8-YEAR-OLD LAD KILLED BY TRAIN WHILE COASTING

Samuel Miller, aged eight years, son of Mr. and Mrs. S. S. Miller, 89 Acadia street, was run over and killed by a train while coasting in Acadia street yesterday afternoon. In company with Ronald Livingstone, aged nine, young Miller was going down the hill on a sled. Livingstone was sitting on his back. Just before they reached the railway crossing the latter fell off and the sled bearing young Miller went under the wheels of a transfer truck and was run over by an engine driven by Engineer Smullen of Fairville. The engine ran over the boy's left leg between the ankle and the knee, practically severing it. Dr. C. M. Pratt was summoned and the ambulance sent for but the child died a moment after being placed in it. The body was taken to Brennan's undertaking rooms in Main street. The little Livingstone boy ran to the mother of the Miller child and told her of her son's plight. She rushed to the scene but arrived just as her

MONDAY WILL BE A HOLIDAY

for you from now on if you order us to call the first of the week for your laundry. You need not hesitate on account of cost because our wet wash system, which washes all your clothes and linens and returns them to you for ironing, is inexpensive.

DRYCLEANING & DYEING — WET WASH & ROUGH DRY

PHONE 1707

New System Laundry Limited

WET WASH, FRENCH DRY CLEANING AND DYEING
30-40 LANSDOWNE AVE.

Have YOU Tried

Gunn's TIP-TOP

SAUSAGE?

A REAL BREAKFAST TREAT

Daily deliveries to all stores.

Made fresh every day in St. John.

GUNN, LIMITED

674 Main Street, St. John, N. B.

1923—AMOUR'S BARGAIN BULLETIN No. 2—1923

Special For Thursday Only

Imported Colored

Turkish Towelling

22c. yd.

Read the Bargain Bulletin daily. Each bulletin will tell of a money-saving offer in a line of goods proper to the time of the announcement. The Bargain Bulletin is intended to meet your needs of the hour.

Amdur's, Ltd., No. King Square

Everything About

Cuticura Soap

Suggests Efficacy

of Cuticura Soap

in the treatment of

skin diseases

and itching

and burning

and soreness

and irritation

and all other

skin troubles

and conditions

of the skin

and its appendages

and the hair

and the nails

and the face

and the body

Special Bargains!

In Our Clearance Sale of
Good Quality Footwear

MEN'S RUBBERS, in light
weight or with heavy cor-
rugated soles.
Sale price \$1.00

GIRLS' TWO-BUCKLE
OVERSHOES—Sizes 12-1-2,
13-1-2, 1, 1 1/2, 2.
Sale price \$1.48

WOMEN'S BROAD TOE and
LOW HEEL RUBBERS—
Sizes 5-1-2, 6, 6 1/2, 7, 8.
Sale price 55c

MEN'S LOW OVERSHOES
for pointed toe boots. Sizes
6-1-2, 7, 7 1/2, 8,
8 1/2. Sale price \$1.25

McROBBIE
Foot St. John 50 King
Fitters Street

boy died. She was prostrated last night from grief and shock. An inquest will be held.

The victim of the accident is sur-
vived by his parents, one brother,
Abraham, of Halifax, and five sisters,
Mrs. Jacob Gordon, of Halifax; Miss
Katie, of Halifax; Mrs. Margola, of
Yarmouth; and the Misses Esther and
Yetta, of this city. He had been at-
tending Dufferin school where he was
a favorite with the other children.

Ammono, New Mexico, an Indian
Pueblo is the oldest inhabited settle-
ment in the United States. It was
settled in 1589.

I am
not poisonous
—That's for
the children—

MAPLE
LEAF
MATCHES

Well worth 15¢ a box

Stores open 9 a.m., close 6 p.m.
during winter months.

Commencing Thursday
Morning

We will have on sale in our dress goods department, a limited
quantity of

Pure Wool High-Grade
Tweeds

In suitable weight for suits, skirts and dresses.

Showing in the new lot mixtures in grey, blue, fawn, green
and brown effects. All 57 in. wide.

These Tweeds were formerly sold as high as \$3.50 yd.
In order to insure immediate disposal, we have marked them
for this sale

At \$1.69 Yard

(Dress Goods Dept., ground floor.)

Manchester Robertson Allison Limited

KING STREET — GERRARD STREET — MARKET SQUARE

PLAN EXTENSION
OF SCOUT WORK

The monthly meeting of the execu-
tive of the Local Boy Scout's Council
was held last evening with A. C. Shel-
ton in the chair. The president of the
district council, Mr. Shelton, presented
to Mrs. G. Wilford Campbell a gold
swastika or "thanks" badge in recog-
nition of her splendid work in connec-
tion with the boy scout tag day, which
was held last December. Mrs. Camp-
bell thanked the members for their
kindness. The treasurer's report was
received and adopted. It showed that
the total receipts were \$2,815.88 while
the total expenditures for the year of
1922 were \$1,984.94, leaving a balance
on hand of \$830.94. A budget of \$2-
000 was decided on for the coming
year. It was decided also to call a
meeting of the troop and pack com-
mittees and the troop and pack chap-
lains for early next month when the
matter of troop extension will be dis-
cussed.

It was decided that there be a strong
unit effort to spur on the Scout
movement and the meeting next month
will take the first action along this line.

The treasurer's report in detail for
the period from Dec. 1, 1921, to Dec.
1, 1922, follows:

Contributions \$ 441.85

Subscriptions 1,940.63

Tag Day 1,018.54

Registration fees 12.75

Expenditures

Salary \$1,800.00

Rental 20.00

Educational Publicity 20.00

Printing and Stationery 80.82

Office Furniture—Can. Gen. C. 98.28

Office Furniture—U.S. Gen. C. 266.70

Light 68.84

Postage 10.50

Telephone 41.82

Cartage and Express 1.48

War Tax and Interest 6.45

Insurance 5.42

Grants and Provincial Act. 11.50

Sundries 82.96

Travelling Expenses 6.75

Field Day Expenses 81.18

Tag Day Expenses 26.59

Books and Badges 37.06

..... \$1,984.94

Balance in bank \$ 830.94

Certified Correct
P. F. BLANCHET, C.A.,
Auditor.

MORNING NEWS
OVER THE WIRES

The Provincial Government in session
last evening expressed itself as being
against entering the proposed maritime
university federation. The Government
approved of the action of the senate
which means that officially the Univer-

sity of New Brunswick is announced
as being opposed to federation. Pre-
mier Veniot announced that the Gov-
ernment would meet again on February

28, the date set for swearing in the new
lieutenant-governor.

Fire doing damage to the extent of
\$30,000 destroyed the general store and
ings were saved with difficulty.

warehouse with all their contents of
Lords, Limited, at Charlottetown, P. E.
I. Monday evening. Adjournings build-

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Our February Furniture Sale

Offers Many Very Substantial
Bargains

Pieces included in this sale are the
high-grade qualities you'll be proud to
own.

Prices have been very greatly lowered
—You'll find it decidedly worth your
while to make intended purchases NOW.

For instance:

Real Brass Beds—Width 8 ft., 9 in.
Originally \$62.00. Sale \$36.50

Real Brass Beds—Width 4 ft., 6 in.
Originally \$38.00. Sale \$35.00

(Furniture Store—Market Square)

The New

"Deauville" Ties

One of these smart new ties will lend
just the wanted touch of color to an
otherwise dull garment. They are
showing in the bright Bath colors and
combinations now so much in demand.

May be used with equal effect for
hat bands, neckerchiefs or scarves. The
side tie as shown in illustration is par-
ticularly becoming to many.

Just now we are showing a very at-
tractive line of these new ties. We
would like you to come in and see them.

(Neckwear—Ground Floor)

Commencing Thursday
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We will have on sale in our dress goods department, a limited
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Pure Wool High-Grade
Tweeds

In suitable weight for suits, skirts and dresses.

Showing in the new lot mixtures in grey, blue, fawn, green
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