

# PLAYER'S

NAVY CUT

## CIGARETTES



"Greatest Value in the World"

10 for 20¢  
also in packages of 20  
and in tins of 50 & 100

## RADIO EXPLAINED

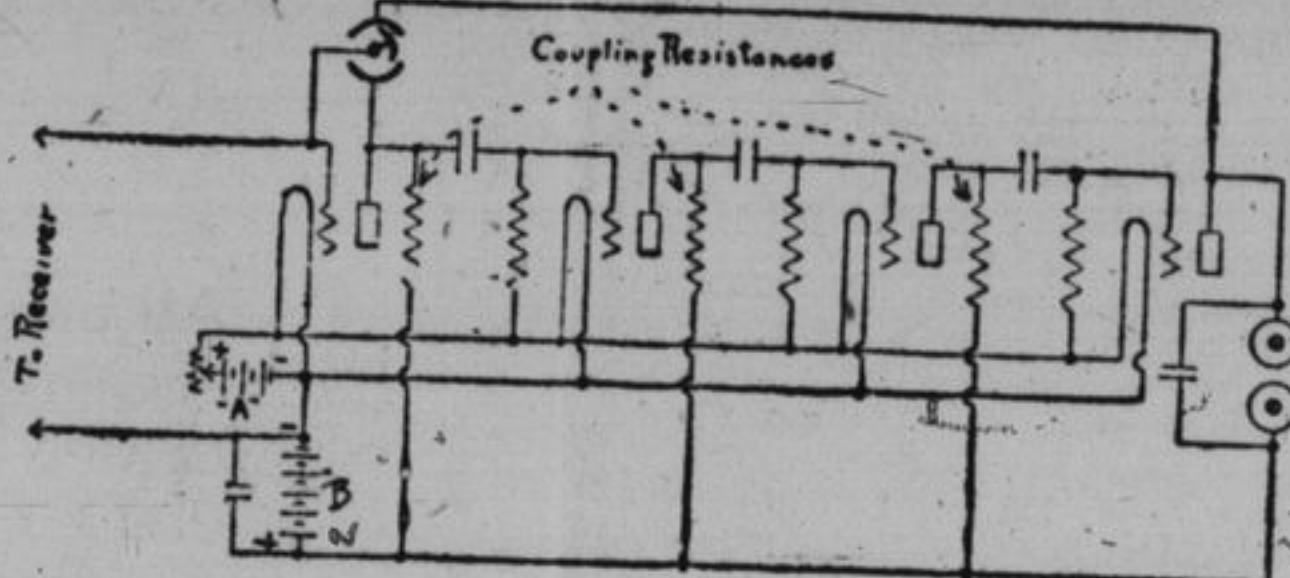
BY E. H. LEWIS  
INSTRUCTOR NEW YORK, Y.M.C.A. RADIO SCHOOL

### CASCADE RADIO FREQUENCY AMPLIFICATION WITH CAPACITIVE FEED RACK.

Reaction of a plate circuit upon a grid circuit to produce regeneration or autodyne effects may be accomplished by capacitive instead of inductive coupling of the two circuits. Care must be taken, however, to have the phase relations correct or there may be a weakening rather than a strengthening effect upon the received signals with increased regeneration. In the diagram the interstage coupling is secured by means of resistances. This is more suitable for long than for short wave reception because of the capacitances of the tubes themselves.

regeneration would be very strong and the process of amplification and regeneration would repeat to produce even stronger effects. In this manner a signal voltage which would be incapable of operating a detector tube might be built up to a very great extent and made available to the detector to good advantage. Best frequencies may be generated if the feed back coupling is sufficiently great and continuous wave telegraph signals are received.

The coupling condenser is of very small capacity and usually consists of but two fixed and one movable plate. The fixed plates



In such a circuit an increase of potential applied to the grid of the first amplifier tube causes an increase of plate current but a decrease of plate potential in that tube because the drop across the resistance in the plate circuit increases with the current in that circuit. The potential applied to the grid of the second tube will therefore decrease in this case, as will also the plate current. The plate potential of the second tube will, however, increase. In a third tube there would be an increase of plate current and a decrease in plate potential, but in a fourth the plate current would decrease and the plate potential would increase when the potential on the grid of the first tube was increased. In the second and fourth tubes the plate potential variations are therefore in phase with the grid potential variations of the first tube, but in the third they are out of phase. Coupling back from either the second or the fourth tube to the grid circuit of the first tube would produce positive regeneration and amplification of signals providing the reaction is proper; controlled by the coupling condenser. The

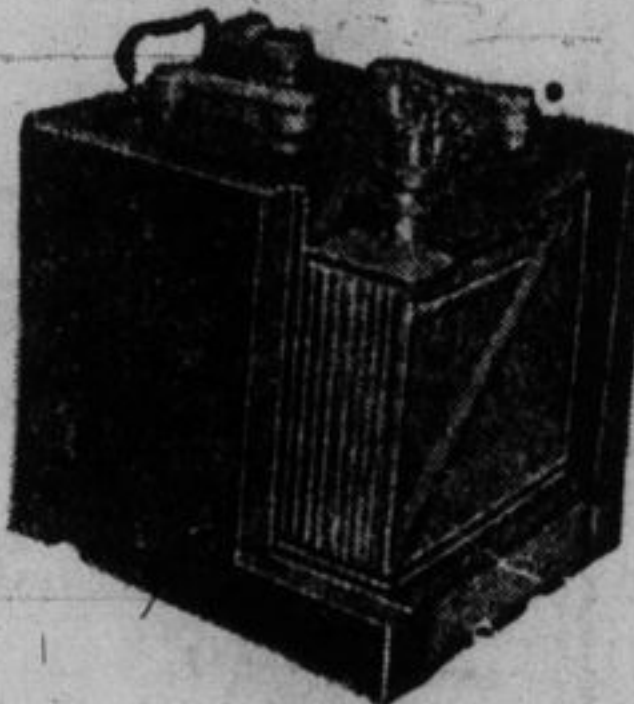
are connected to the plates of the first and the last tubes, while the movable plate is connected to the grid of the first tube. Regeneration is then controlled by adjusting the movable plate with respect to the two fixed plates. The condensers in the grid circuits of the second, third and fourth tubes are to prevent positive potentials being applied to the grid from the "B" battery. Grid leak resistances are therefore required to prevent choking of the tubes and the condensers should have small reactance compared to the grid leak resistances for the frequencies encountered. Since the grid condensers and leak cause rectification when the signals are strong it is seen that there is a limiting effect. Strong signals or atmospheric are therefore suppressed to some extent, while the weak signals are amplified. If loud signals in the head telephones or in a loud-speaker are desired, radio frequency amplification may be used after the radio frequency stages. A power amplifier could also be used in case the loud-speaker required a large amount of power, comparatively, for effective working.

## APPARATUS AND DEVICES

By RALPH BROWN, RADIO ENGINEER

### HEAD PLATES LAST INDEFINITELY IN THIS BATTERY.

The lead plate battery for use as an A battery or filament lighting battery has many advantages which commend it as such. The one described here will interest those with the editor by mail?



seems especially attractive, as it does away with some of the disadvantages of this type of battery. They are made in these capacities: Six volt 40 ampere hours, 6 volt 60 ampere hours, 6 volt 80 ampere hours and 6 volt 100 ampere hours. A new electrolyte is made use of, the semi-solid type, which does away with sulphation and which naturally obviates the spilling of the acid. On tests of abnormal discharge the plates have not buckled and the highest electrical efficiency and voltage maintenance was noted. Another feature is that the battery can stand idle indefinitely without injury to the plates. A hardwood case is furnished as stock but at a small extra charge a hard iron case is furnished. The price compares favorably with the ordinary lead plate type.

radio articles kindly communicate

### BACK TO OLD HOME.

**A Former Resident Came Back After Many Years.**  
Charleston, July 24.—T. D. Spence lost a valuable hound. The animal was poisoned. Miss Sarah Hudson was called to Jones' Falls, on Tuesday, by the illness of her sister, Mrs. Fordie Moulton. She returned on Thursday. Miss Julia Hudson, Summit, N.J., is now with Mrs. R. Wagner, who is spending a couple of days on business near Ottawa, Mr. and Mrs. E. M. York were in town last week. Mr. and Mrs. E. I. Martin are spending the week-end with her parents, Mr. and Mrs. E. M. York.  
Mrs. C. Howard is home from the hospital a little improved. William Carroll has returned home after an absence of five weeks at Yarker and Kingston. Dr. and Mrs. Lawson spent Saturday in Kingston. Rev. Dr. Lawson gave a second sermon of a series on "God's Last Invitation."  
Miss Ethel McMillen, Ottawa, is home on a vacation. Miss Elsie Craig is spending the holidays at home, after a busy season of teaching at Courtright. Rev. Mr. and Mrs. H. J. Crowder spent a couple of days visiting friends at Deo's Corners. H. Campbell has purchased a new Oldsmobile car.  
T. Ball sold a car last week to J. Coulter. George Tuttle and children, Courtyard, N.Y., are spending a few weeks here with her parents, Mr. and Mrs. S. Storms, and with friends in the vicinity.

**Mudget From Verona.**  
Verona, July 25.—Miss Ina Quinn, Kingston, spent a week with her grandparents, Mr. and Mrs. Thomas Ryder. Miss Fern Grant, Murvella, spent a week with her grandmother, Mrs. A. Ryder. Miss Pansy Percy, Calgary, is home to spend the summer with her parents, Mr. and Mrs. Eugene Percy. Mrs. Joseph Percy spent a couple of days last week with her son, Eugene Percy. Misses Fran-

ces and Wilma Connely, Kingston, are spending the holidays with their grandparents, Mr. and Mrs. E. A. Tallen. Miss Bessie Amey spent a couple of weeks at Bellrock. Misses Louise and Eliza Davy have returned home after spending a couple of weeks with their sister, Mrs. H. Lee. John Wilks, of the Eureka Flint and Spar Company, is spending a few days in the village. Mr. Wilks and Summ, N.J., is now with Mrs. R. Wagner, who is spending a couple of days on business near Ottawa, Mr. and Mrs. E. M. York were in town last week. Mr. and Mrs. E. I. Martin are spending the week-end with her parents, Mr. and Mrs. E. M. York.  
Mrs. C. Howard is home from the hospital a little improved. William Carroll has returned home after an absence of five weeks at Yarker and Kingston. Dr. and Mrs. Lawson spent Saturday in Kingston. Rev. Dr. Lawson gave a second sermon of a series on "God's Last Invitation."  
Miss Ethel McMillen, Ottawa, is home on a vacation. Miss Elsie Craig is spending the holidays at home, after a busy season of teaching at Courtright. Rev. Mr. and Mrs. H. J. Crowder spent a couple of days visiting friends at Deo's Corners. H. Campbell has purchased a new Oldsmobile car.  
T. Ball sold a car last week to J. Coulter. George Tuttle and children, Courtyard, N.Y., are spending a few weeks here with her parents, Mr. and Mrs. S. Storms, and with friends in the vicinity.

## VULCANITE SLATE SURFACED ROOFING

Four-in-One Slab Shingle ..... \$7.50 per sq.  
Hexagonal Slab Shingle ..... \$8.00 per sq.  
Rolls, 32" wide ..... \$3.90 per sq.  
The highest type of "Beaver Quality Roofing and surfaced with natural colored Crushed Slate, Red or Green.

SERVICE AT THE RIGHT PRICE  
OUR MOTTO  
**Allan Lumber Co.**  
TEL. 1092  
VICTORIA ST. KINGSTON, ONT.

**THE A. B. C. WASHER**  
Let us loan you one free for next washday.  
"THE ELECTRIC SHOP"  
F. GRACE Phone 1545 115 Brock Street

**Cannell Coal**  
We have received a car of Ebony Cube Cannell Coal of the finest grade and quality. Let us have your order for your season's requirements, which shall have our prompt attention. Cut Soft Kindling for summer burning always in stock.  
**SOWARDS COAL CO**  
PHONE 153.  
UPTOWN OFFICE: MCGALL'S CIGAR STORE. PHONE 811.

**We Have a Lunch That You Will Like**  
A special club dish, changed daily, a cup of our delicious Tea or Coffee and a tasty dessert, is sufficient lunch for anyone.  
**THE VICTORIA CAFE**  
JEWEL LEE, Manager. TELEPHONE 762. 364 KING STREET

**Big Variety of Geraniums**  
See our choice variety of Potted Geraniums and other Plants. Beautify your lawn and home with our plants. Window Boxes and Hanging Baskets made up to your order. Cut Flowers always on hand.  
**P. C. LAWSON**  
THE LEADING FLORIST  
STORE: Corner Wellington and Brock Streets. Phone 770.  
CONSERVATORIES: 65 Centre Street. Phone 11743.

**Aluminum Ware Specials**  
20 QUART PRESERVING KETTLE at ..... \$2.50  
14 QUART PRESERVING KETTLE at ..... \$1.98  
POTATO POTS—regular \$2.25, at ..... \$1.50  
COVERED ROAST PANS—regular \$3.50, at ..... \$1.98  
PERCOLATORS—regular \$2.00, at ..... \$1.40  
HEAVY 14 GAUGE TEA KETTLES—regular \$4.00, at ..... \$2.98  
Also many other lines at very low prices. These goods are one of the best makes of ALUMINUM WARE on the market, and are all first quality.  
**Lemmon & Sons**  
187 PRING ESS STREET

**The Tonic Value**

of O'Keefe's Imperial Brews makes them ideal for restoring depleted strength of mind and body. Nothing else is so wholesome or bracing after a tiring day, as a glass of O'Keefe's Ale, Lager or Stout.

**O'KEEFE'S - TORONTO**

Order a case from  
**E. BEAUPRE**  
Distributor for Kingston

# Goodyear Tires

of 3 different types and prices now available for  
**Fords, Chevrolets & Overlands**

More people can own Fords, Chevrolets & Overlands  
Those who own them can afford to drive them more  
**BECAUSE - these Goodyear Tires at today's prices provide a cost-per-mile lower than heretofore possible**



**"All-Weather" Tread-Fabric 30 x 3 1/2**  
All-Weather Tires are All-Wheel Tires—rough and tough to resist skidding through thousands of miles. Made in Canada in increasing numbers for over ten years. The most used 30 x 3 1/2 tire in the world.  
\$15 00

**"Non-Skid" Tread-Fabric 30 x 3 1/2**  
This Goodyear Tire has been tested on hundreds of thousands of cars in the United States and Canada. Introduced here a year ago, it quickly assumed leadership among the lower-priced tires. Non-skid tread of horizontal bars with sturdy ribs in the centre—Cross-Rib. Full Goodyear quality—husky construction—the most durable tire in its price class.  
\$12 00

**"All-Weather" Tread-Cord 30 x 3 1/2**  
Gives Ford, Chevrolet and Overland owners Goodyear Cord economy and Goodyear Cord comfort previously enjoyed only on larger cars. Reduces depreciation and fuel consumption. Has the famous, rugged, All-Weather Tread.  
\$18 50

**4000 selected dealers sell Goodyear Tires**

The Goodyear Tire & Rubber Company of Canada, Limited

**Notes From Florida.**  
Florida, July 27.—Haying and berry-picking are the order of the day. Mr. and Mrs. Walter Clark and family, and Miss Longmore, of Havelock, have returned home, after spending a week at Edward Martins. Mr. and Mrs. R. Snider spent Sunday with their daughter, Mrs. Byard Snider. Milton Jeffrey, Hartington, has returned home after visiting his brother, C. W. Jeffrey. Mrs. Enoch Snider and sister, spent Wednesday at Walter Com-

tons. Rev. Mr. and Mrs. W. Wilson, of Belleville, were recent guests at John Peter's.  
Thrice is he armed that has his quarrel just. Better not quote than misquote.

Mrs. Donald D. McDonald, Ottawa, a sister of the late Most Reverend Charles Hugh Gasheier, Archbishop of Ottawa died on Monday, aged 65 years.  
The Belleville Council will hand over \$20,000 to the G.W.V.A. to purchase the Hub block for a memorial home. The people voted the amount some time ago.