

DR. H. A. STEWART Dental Surgeon

Wishes to announce that he has resumed his practice, cor. Wellington and Princess Streets. Phone 2092. Dr. H. A. Stewart Corner Princess and Wellington

GRAND TRUNK SASTEM Harvest Help Excursions Aug. 11th and 21st

WINNIPEG-\$15.00 Plus & cent per mile beyond. Re-turning & cent per mile to Winnipeg,

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Montreal to Glasgow Aug. 31|Sept. 29|Oct. 27 Cassandra Sept. 8|Oct. 6|Nov. 3Saturnia Montreal to Liverpool Sept. 16 Oct. 14 Nov. 11 Ausonia Sept. 23 Oct. 21Albania Montreal to Plymouth, Cherbourg and London

Aug. 26 Sept. 30 Nov. 4 Andania harvesting their grain and thresh- pleted. Fred Bodely is visiting J. N. Y. to Queenstown and Liverpoot

Sept. 7 Oct. 5 Laconia where she has been taking a sum-Sept. 14 Oct. 12 Carmania mer course in physical culture. B. N. Y., Cherbourg & Southampton Aug. 22|Sept. 12|Oct. 3Aquitania Aug. 29|Sept. 19|Oct. 10 Berengaria

N. Y., Ply., Cherbourg and Hamburg Boston - Liverpool - Queenstown Sept. 20 Tyrrhenia Redmond and family, at C. G. Mc-Oct. 19 Samarla Knight's, Godfrey; Mr. and Mrs. Sept. 2 City of London Marion Walker, Sydenham, and

Sept. 16 Oct. 14 Nov. 11 Columbia at J. W. Redmond's. N. Y. to MEDITERRANEAN (Cruise)Scythia Dec. 6 (Cruise) Tuscanie Feb. 10-(Cruise) Mauretania

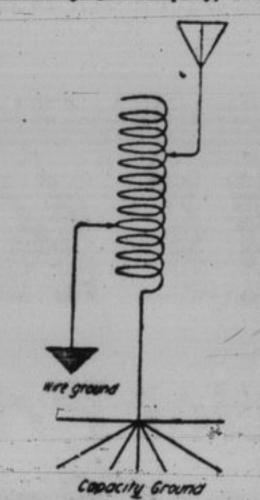
particulars apply to local agents or HE ROBERT REFORD CO., LIMITED 60 KING STREET EAST TORONTO, ONT.



RADIO EXPLAINED BY LIEUT. JOHN R. IRWIN INSTRUCTOR U. S. AIR SERVICE

ELIMINATION OF ANTENNA RESISTANCE.

Mr. H. H. Beverage, research engineer, Radio Corporation of America, writing in a publication issued by his company, reveals



some interesting data in connection with the above subject. He had difficulty in providing a good ground at his own amateur station owing to the dry, pond near the antenna, but not under it. A ground connection obtained in this pond by running

several hundred feet of wire into it showed an antenna resistance of 60 to 70 ohms at wave lengths of 200 to 300 meters. This high resistance was undoubtedly caused by the antenna flux being forced to travel a considerable distance through very high resistance soil before reaching the low resistance ground wires in' the pond.

Mr. Beverage decided to install a counterpoise of four No. 14 B and S. copper wires running parallel with the antenna flat top and directly beneath it, the parallel counterpoise wires being four feet apart and carefully insulated. The counterpoise also extended several feet beyond the ends of the antenna. When this counterpoise was substituted for the ground, the antenna resistance was reduced from approximately sixty ohms to ten ohms. Continuing the experiment and combining the counterpoise and the ground, asshown in the accompanying diagram, the antenna resistance was further reduced to four ohms. The resistance of the helix used to tune this antenna was three ohms, thus making a total of seven ohms. The above values were taken with a wave length tuning this combination will be shown in the next installment of

purchased a Ford car. The Holiness has stopped the dust nuisance so

Aug. 14.-Mrs. (Rev.) Hartwell and daughter, West China, were guests at W. A. Coon's the past week. Gus Coon, who has been spending a month with his parents, has return ed to Edmonton. J. Pinkerton has sailed for England enroute to South Africa to return about Christmas | Aug. 14 .- Mr. and Mrs. W. Brown-

Movement services are discontinued. people can have their doors open Miss Irene Hull, Westport, spent last again. Rev. Mr. Keough and dauweek with Miss Grace Church. Alice ghter are spending a few days at Dowsett spent a few days in Port- Cornwall with relatives. Miss Hazel land visiting relatives. A large Coon has returned from visiting at crowd from this vicinity were on Smith's Falls. Mr. and Mrs. C. F. hand to fight the fire which burnt the Meyers and twin bables spent Sunoutbuildings of Father O'Hanlon, day at G. Howard's. Dr. Berliner and party, New York city, are guests at William Charland's.

time. The Soper Bros. are out with ing and family spent Sunday at M. their threshing outfit. Miss M. Knapp Reid's, Watson's Corners. Miss Marhas accepted a position as clerk in guerite Lee spent last week with her Newboro. Miss Doris Waddington uncle and aunt, Mr. and Mrs. N. S has been engaged as clerk at J. C. Lee, Lanark. Mrs. W. J. Boyd and Pennock's. Mr. and Mrs. Sharp, Miss Helen McFarlane visited with Perth, were guests at J. C. Pen- the former's sister, Mrs. A. Crawford, nock's. Mr. Sharp was one time Calabogie, a few days last week. R. connected with the bank here. Mrs. Boudreau visited relatives in Mont-Ripley and daughter, Smith's Falls, real during the past week. Miss were guests of relatives. Miss Nel- Dorothea Heal has returned to her son, Cornwall, was a guest of C. F. home in Toronto after spending the Keer's. Rev. Mr. McFarland and past two weeks at William Brownfamily were guests of A. L. Camp- ing's. Robert Stewart and family. bell at their summer cottage, Chaf- Mr. and Mrs. N. S. Lee, Lanark, and parents, Mr. and Mrs. George Lashfey's Locks. William Flemming is the Misses Kennedy. Ottawa, spent spending a few weeks at home before Sunday at T. Lee's cottage, "The leaving to teach school. The coat of Cedars." Miss Jessie Moreau has Tis strange but true that you must and Athens, has moved from Athens tar applied to the village driveway gone to Renfrew for an indefinite take trouble to avoid trouble.

LAVANT STATION.

me. Mrs. George Sproule and daughter, Reta, spent the past week with her husband at Bowmanville. Summers, Winchester, was forced to George Moore and granddaughter, submit to the amputation of one of Miss Freda Weir, Montreal, visited her legs because of gangrene and a Barrie spent Sunday at his home in moved by Drs. Alguire and Mc-Watson's Corners. Mr. and Mrs. J. Laughlin. E. Lee and family visited the latter's ley, Watson't Corners, on Sunday.

Slate, Red or Green.

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Rolls, 32" wide \$3.90 per sq.

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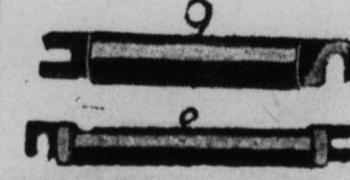
Second Leg Amputated. A short time ago Mrs. Andrew relatives here recently. Thomas few days ago the other leg was re-

> Moved To Lyn. Rev. Mr. Burgess, pastor of the Holiness Movement church at Lyn

By RALPH BROWN, RADIO ENGINEER

TRANSMITTING GRID LEAKS.

The purpose of these grid leaks is to limit the potential accumulating on the grid of an oscillating tube, and thus govern the output to the antenna, and



also the character of the antenna oscillations.

These resisters consist of a conductor wound upon a heat resisting silicate compound body developed to resist sudden and

extreme temperature changes without becoming cracked, weakened or in any way injured. After being wound upon this compound it is embedded in a blue vitrous enamel which is fused to a dense, glassy structure at a temperature of about 1,000 degrees Centigrade.

A metal foot is provided at each end of the grid leak to which the resister windings.

the resister windings are connected and through which external connections are made. In addition, a mid tap is provided for securing half of the resist-

They are made in two sizes, the smaller for tubes of 5 watts and the larger for power tubes

Will readers interested in these radio articles kindly communicate with the editor by mail?

From the Countryside

Frontenac

BATH ROAD.

Sept. 9|Oct. 14|Nov. 18 Antonia ing has begun. A little daughter has Ohlman's. come to brighten the home of Mr. and Mrs. E. Vanorder. Miss Thelma *Aug. 31|Sept. 28|Oct. 26 --- Scythia Cliff has returned from Toronto, * Also sails from Boston Sept 1. Mouldey is painting his house. Con gratulations to Miss Gertrude Orser who passed the Lower school inations. Farmers of this vicinity are preparing a large exhibit for Kingston Industrial Exhibition month, Mr. and Mrs. John Moulder have returned from visiting friends in Toronto. Mr. and Mrs. J. Brown, Toronto at J. Mouldey's Miss

> Aug. 14 .- Sunday school is starting on Sunday, with a good attendance. The dance at William Hare's was well attended and everybe had a good time. Earl Storms furn Eveline Asseltine played the organ D. Hecht is at his farm, Mr. and Mrs. Henry Smith were at George Goodberry's on Sunday. Mr. and Mrs. Willis Asseltine and Lloyd visited at John Raycroft's. Mr. and Mrs. Alexander Embury spent Sunday afternoon at W. Hare's. John day. Mr. and Mrs. W. Cousins at William Smith spent Sunday at Earl

Aug. 16 .- The hot dry weather is drs. (Dr.) Clarke went to Kingston esterday. Rev. E. Rowland, Mrs. Plevna and vicinity lately. Rev. Mr. Lyons held services in Holy Trinity a number of the boys went west on her sister, Mrs. G. R. Church. Mr. the excursion on the 11th. Congratutions to Miss Eileen Ohlman on passing her normal entrance. Mrs. C. Ohlman and the Misses Eileen and Italiand on Tuesday. Eileen Marshall, Lansdowne, is visiting at the home ston last week. Miss Etta Lemke is of W. E. Coopper. N. E. Brown has

visiting her cousin, Mrs. John Tooley. The boys and girls spent a jolly evening Wednesday last, when Mr. and Mrs. T. King gave them a dance before the boys went west. R. Dawson returned to Ottawa after spending a few days in Plevna. John Aug. 16.—Farmers have finished Hanes has his new barn almost com-

Aug. 15 .- The harvesting is nearly finished and all report a good from here attended the big picnic at Lake Ontario Park and reported a fine time. Mrs. William Michea and son, Harry, Toronto, are visiting at McFadden, Mr. and Mrs. Gordon McFadden motored to Brockville on Sunday. Kenneth Wilson, Watertown, N.Y., is spending his holidays with friends and relatives here. The stork has visited the home of Mr. and Mrs. J. A. McMaster and left a wee baby girl. Miss Doris McAdoo, Wolfe Island, spent the past week with Miss Helen McMaster. A number from here left on Friday on the harvest excursion for the west. Recent visitors at B. Orr's were James Mitchell, Watertown, N.Y.; Joseph Eves, Carthage, N.Y. Miss Annie Orr is home after spending her holidays at Wolfe Island. A successful open air dance was held under the auspices of Dufferin Lodge on Tuesday

Leeds

Aug. 14.—The weather is favoris able for harvesting. Rev. spending a week visiting her sister, Lyon, Lyn, is spending a week at Mrs. W. Asseltine. Mr. and Mrs. the cottage at Brule Lake, and held Harvy Keller and Mr. and Mrs. Philip service in Holy Trinity church Lemke, Harold Ohlman and Stanley Kring. Misses Etta and

Aug. 16 .- The farmers are very mer has already threshed. Mrs. N parents on the Mountain. Quite C. Shook is very ill at the home of



The Man Who Brings the Message of Life Insurance is the True Friend of Us All

You know something of the work of the Life Insurance Man,but do you appreciate that if it were not for his efforts, the homes of Canada would be without the protection of three-and-a-half billion dollars of life insurance?

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> Life Insurance Representatives are the great ambassadors to your home. They will be pleased to show you how simply and easily you can throw the "mantle of protection" around it.

In Toronto this week the Life Insurance Representatives on this Continent are meeting for the purpose of further increasing their power to serve the public. Life Insurance Service extends greetings from all who are engaged in this great cause, and also on behalf of the policyholders throughout the Dominion of

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