

For the Amateur

RADIO NEWS

For the Expert

Huge Orchestra Program by Radio

300-Piece Organization to Give Combined Concert at Auditorium.

Concert by a 300-piece orchestra to be given Monday night, January 21, at the Auditorium, will be broadcast by radio, it was announced yesterday.

The concert will be under the auspices of the Omaha Musicians' association. All professional musicians in the state have been invited to attend.

An immense band will parade the downtown streets the Saturday preceding the concert, to advertise the event.

Members of the reception committee for the affair include Mrs. Hester Bronson Cooper, Blanche Sorenson, Addie Forge, Mrs. Phillip Potter, Mrs. A. V. Kinsler, Honoreta Rees, Mrs. Alma Huntley, Mayor James C. Dahlman, Henry Dunn, Charles Gardner, Dr. H. A. Waggener, Marshall B. Craig, Fred G. Ellis, Herman Mansfield, Harry Watts, Harry Goldberg, Charles Elgutter, Stanley Letovsky, Fritz Carlson, Sam Oakford, Oscar Lieben, E. L. Johnson, Joy Cunningham, William Hartung and A. Cunningham.

Buy Now Drive Started.

Important among other indications that this year will see a vastly increased demand for automobiles is the "Buy Now" campaign which has just been launched by the Ford Motor company. Particular significance may be attached to this, coming as it does at the start of the year, for no company is better situated to sense future conditions in the motor car field nor keep more closely in touch with the temper of the motor buying public.

Nurse Makes Small Radio Sets for Bedridden Hospital Patients

Concerts Brought to the Sick Room by Using Bed Springs as Aerial.

A new way of distributing happiness has been found by Fay Parks, senior nurse at Clarkson hospital. She makes individual radio sets for patients at the hospital. With these sets the bedridden patients are able to hear a concert every evening and church services on Sunday.

Miss Parks became interested in radio herself last September and erected a small radio set at the nurse's home. When patients heard of the concerts enjoyed by the nurses, some expressed a desire to have a radio.

"I have made more than a dozen for the patients," said Miss Parks. "It is very easy to fix them for I have always been interested in electrical things."

Only Small Sets.

"The radio sets for the bedside are only small ones of a single coil. The sets are called crystal sets and for the aerial the bed springs or special attachment on the electric light plug is used," she explained.

"I buy the equipment for the patients with their money, put the sets together and attach them. I make weekly rounds to keep them in order."

"It gives the sick ones pleasure and I am glad to do it for them," said the nurse, modestly.

Miss Parks is from Neligh, Neb. Her mind is of scientific trend, she says, and she hopes to continue her work for the most part in a laboratory of some hospital.

Patients Compare Notes. The patients with radio are busy comparing notes on the concerts heard, according to Miss H. C. Harris, superintendent of the hospital.

"One woman, Mrs. T. C. Wright



Fay Parks

of Long Pine, Neb., told me that hours in the evening do not drag when she can listen to the concert at dinner time," said Miss Harris. "I have a large radio set myself and patients are interested in reports of concerts received on my radio from the outside."

Mrs. Wright has been at Clarkson hospital for three years. She declared that the days with radio seemed shorter than those without radio.

Miss Parks visits Mrs. Wright often to keep her radio in order. All her hours of duty are spent in building and adjusting radio sets.

WOAW Radio Programs

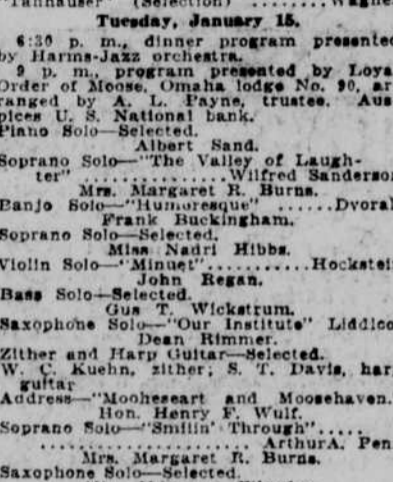
Following are the programs to be broadcast from WOAW, radio station of the Woodmen of the World Life Insurance association, beginning January 13, Sunday, January 13.

- Radio chapel service conducted by Rev. R. B. Brown of the Omaha Gospel tabernacle, 210 Douglas street, and minister of the Sunday morning radio congregation and his associates.
- Opening hymn, "He is Coming Again."
- Selection, "Sail On."
- Selection, "The Wayside Cross."
- Male quartet (sung by special request) Selection, "Living for Jesus."
- Double quartet.
- Reading of Scriptures.
- Rev. H. A. Keithley, associate pastor of Tabernacle.
- Selection, "Lead Kindly Light."
- Double quartet (by request).
- Prayer.
- Selection, "O Let Not Thy Heart Be Troubled."
- Ladies' quartet.
- Bass solo, "Just for Today."
- Alfred C. Kitchin, Jane Bingham Abbott, Mrs. Ed. Sawyer, Mrs. Clyde Rhoades, Mrs. Ed. Marshall, Mrs. Will Hattha, accompanist.
- "Valse Dancause" by Walter E. Miller.
- Vocal solo, "I Come to Thee" by Caro Roma.
- Miss Janice Hodges.
- U. S. of the Night.
- Ernest R. Hall, Miss Ruth Gonzales, Miss Mildred Bennett.
- Sermon, "The Church as a Business Association," by Rev. F. G. Gonzalez.

Reflex Circuit Boosts Signals

By WILLIAM J. SCHNELL, Radio Engineering Staff, Electrical Research Laboratories, Chicago.

To the average radio enthusiast a certain amount of interest is derived from adventures in building and operating his own receivers. Satisfying as this may be, many evidence a particular desire to understand the why and wherefore of the functioning of their receivers. To the prospective builder also appeals the knowledge of the characteristics of various receivers in order to better equip him in his selection of the circuit for his receiver. It is to these particular



classes of the radio public to which this article is particularly directed. The principle of the reflex circuit depends on the ability of a three electrode vacuum tube to permit currents of different frequencies to pass through it at the same time. The frequency of the currents induced in a radio antenna system are very rapid in their cyclic changes, varying in value from about 500 to 1,000 kilocycles per second, depending on wave lengths. This incident current in the antenna system is generally termed the radio frequency current. It is not possible to cause such high frequency currents in this rapid changing form to actuate directly on a device to convert electrical current variations into sound waves (receivers). In a reflex system these radio frequency currents are usually amplified to increase their intensity before impressing them on the rectifier or detector, which converts these high frequency currents into currents of audible frequency. After rectification these currents are then amplified as were the radio currents by a three electrode vacuum tube. Here lies the difference in and particular advantage of the reflex system over other systems.

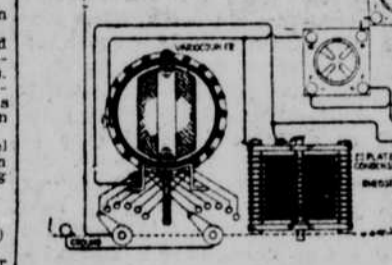
In other systems after rectification the rectified radio or audio currents are amplified by additional tubes for this purpose. In a reflex system before these input radio frequency currents are rectified they are reimposed back on the tubes which amplified them at radio frequency, and when rectified are reamplified at audio frequency before being passed on to the receivers or loud speaker to be converted to sound waves.

If properly designed and built, more than vacuum tube economy can be secured from reflexing.

In the foregoing I have shown the action of the reflex principle and pointed out the various methods of performance and the advantages and disadvantages of each. I will now summarize the findings into the required

Two New Models Shown.

Among the surprises of the New York automobile show were found two new body styles of Cadillac mounted on the regular Type V-63 chassis with the Cadillac 90-degree V-type eight cylinder motor. While production expense has caused a slight increase in the price of open cars these new enclosed cars are priced at a surprisingly low figure. Mr. Hansen, who just returned from the Cadillac factory, says the public may expect great things in the Cadillac V-63.



The necessary door stop can also be decorative if one chooses a gaily painted parrot or an old fashioned basket of flowers.

New Lamp Has No Wick or Chimney

Most Brilliant Home Light Known—Costs One Cent a Night.

A new lamp which has no wick or chimney, yet, according to experts, gives the most powerful home light in the world, is the latest achievement of W. C. Fowler, 277 Factory building, Kansas City, Mo. This remarkable new lamp beats gas or electricity—gives more light than 200 candles, 18 ordinary lamps or 10 brilliant electric lights, and costs only one cent a night. A blessing to every home, especially on farm or in small town, it is absolutely safe, and gives universal satisfaction. No dirt, no smoke, no odor. A child can carry it. It is the ambition of Mr. Fowler to have every home, store, hall or church enjoy the increased comfort of this powerful, pleasing, brilliant white light, and he will send one of his new lamps on free trial to any reader of The Omaha Bee who writes him. He wants one person to whom he can refer new customers. Take advantage of his free offer. Agents wanted. Write him today.—Advertisement.

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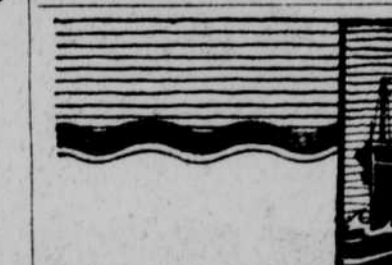
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New Car Price Trend Seen.

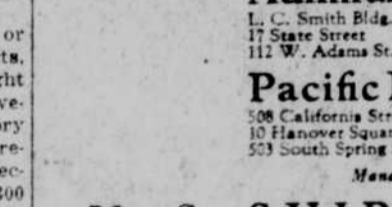
Cleveland, O., Jan. 12.—T. L. Hausmann, president of the reorganized Templar Motor Car company of Cleveland, in a statement issued here, predicted for 1924 a popular trend toward a car of a price range of around \$2,000. Owners are rapidly coming to realize that the use of a



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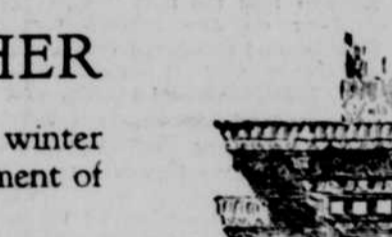


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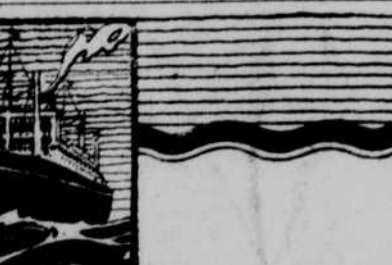
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Ford Runs 57 Miles On Gallon of Gasoline

A new automatic and self-regulating device has been invented by John A. Strasky, 2212 Fourth St., Pukwana, Pa., with which automobiles have made from 40 to 57 miles on a gallon of gasoline. It removes all carbon and prevents spark plug trouble and overheating. It can be installed by anyone in five minutes. Mr. Strasky visits agents and is willing to send a sample at his own risk. Write him today.—Advertisement.



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Enjoy Winter Evenings With a Cutting & Washington Radio Set

When cold weather keeps you by the fireside—it is then that you will really enjoy a Cutting & Washington radio set. The news and entertainment of the world at your finger tips! A source of entertainment and instruction for every member of the family.

Schmoller & Mueller Piano Co
154-16-18-Dodge St. - - - Omaha

THE BRANDEIS STORE Monday New Radio Features

THE efficient principle of reflex amplification, regarded by many of the foremost scientists and investigators as the ultimate in radio development, is carried to amazing perfection in the advanced Erla reflex circuits illustrated and described on this page.

Tube for tube, these circuits demonstrate a decisive superiority over other types, whether measured in terms of range, selectivity, ease of control, or volume and purity of reproduction.

- All 6.50 Radio Vacuum Tubes Reduced to 5.00
- | | | | |
|--|------|---|------|
| 5.00 Erla Reflex Audio and Radio | 4.45 | Switch Stops, 4 for | 5c |
| 11pl. Variable Condensers with bakelite end pieces | 1.45 | Switches at | 25c |
| 23pl. Variable Condensers with bakelite end pieces | 1.65 | Formica Panel, per square inch 1 1/2 | 35c |
| 3-in. bakelite or rubber Dials | 25c | Single Jacks at | 50c |
| .001 M. F. mica Condensers at | 35c | Double Jacks at | 50c |
| .0025 M. F. mica Condensers at | 30c | Plugs, Federal, Patent or U. S. | 45c |
| .002 M. F. mica Condensers at | 35c | Radio | 45c |
| \$1.50 Howard Micrometer Rheostat | 1.35 | 6.50 W. D. 12 Tubes at | 5.95 |
| Howard plain Rheostat at | 1.00 | Bus Bar, per two-foot length | 5c |
| Sockets at | 35c | Lightning Arrestor at | 95c |
| Rubber top Binding Posts at | 5c | Automatic Phones at | 3.65 |
| Switch points, per dozen | 20c | Freshman Variable Grid Leak and Condenser | 65c |
| | | 2.00 Grewol fixed glass enclosed Detector | 1.65 |
| | | Soldering Lugs, per dozen | 5c |
- Main Floor—Arcade

Few Motors in China.

Distributing automobiles over a territory larger than the continental United States and with a population much larger, yet containing fewer cars than can be found in many American cities, is the job of H. L. Ricks of the H. E. Hornsby company, Pekin, China, who has arrived in this country to attend the national automobile show. Mr. Ricks' company is distributor of Buick automobiles over all of North China, a district which, he explains, is long on people, but short on roads.

Unique Moon Feature.

To prove that the Lockheed four-wheel hydraulic brakes, used on Moon cars, assure positive equalization of the brakes on all wheels, Moon is exhibiting a chassis equipped with four-wheel hydraulic brakes with a series of four pressure gauges, one mounted at each wheel, to register the pressure on the brake bands, when the brake pedal is depressed.

LINCOLN

IN COLD WEATHER

Every possible assurance of faultless winter performance is provided in the equipment of the Lincoln power plant.

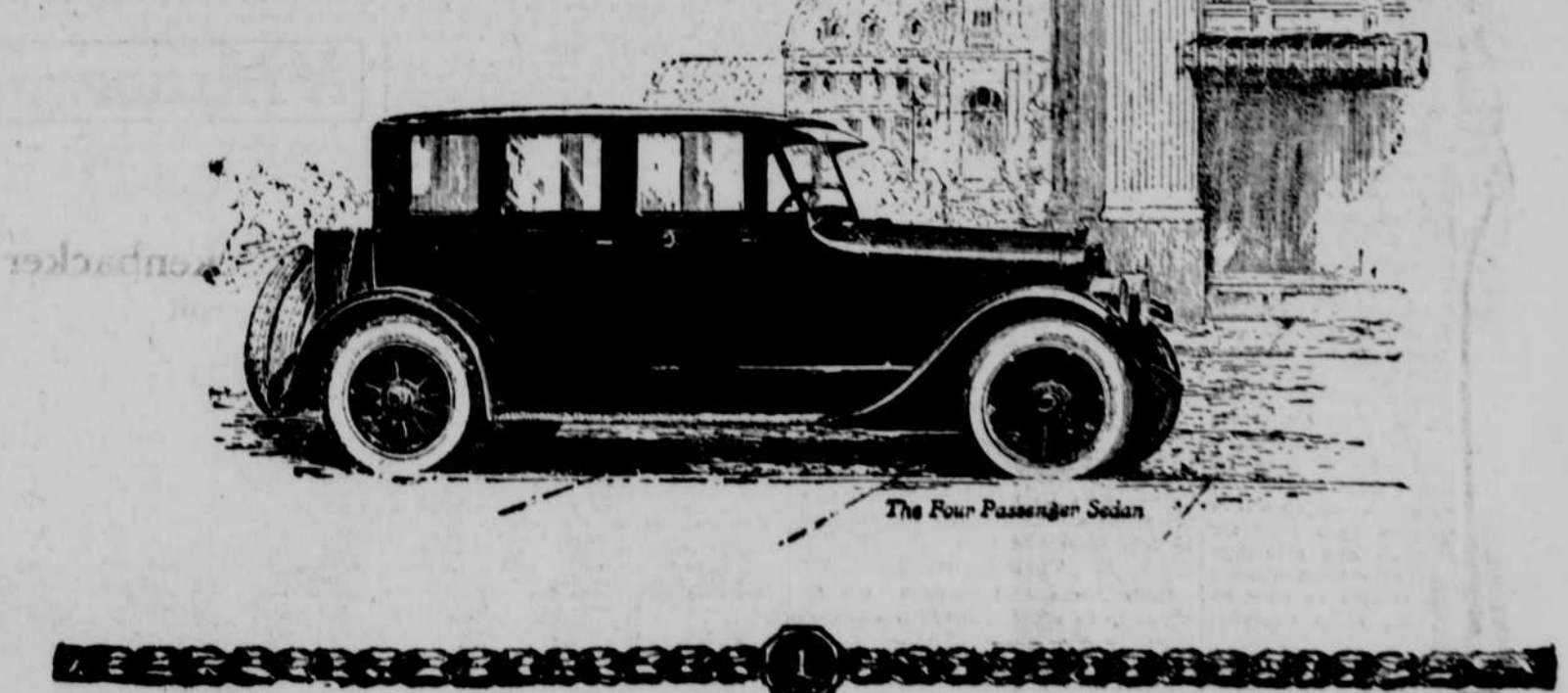
The Electro-Fog Generator produces a rich, highly combustible fuel mixture that makes starting quick and sure in the coldest weather.

Radiator shutters, controlled automatically by thermostat, assure just the right temperature for highest engine efficiency.

A special tank conserves the anti-freeze solution. It condenses all vapors generated in the radiator and returns the liquid to the cooling system.

These features free you from troubles incident to winter driving. They make Lincoln cold-weather performance care-free, positive, and vigorous.

Ask any Lincoln Dealer
LINCOLN MOTOR COMPANY
DIVISION OF FORD MOTOR COMPANY, DETROIT, MICH.



The Four Passenger Sedan