

# RADIO CONTROLS THIS ACTIVE LITTLE 3-WHEELED CAR

Busy Vehicle Seen Daily Darting  
About at McCook Field at Day-  
ton, Ohio; Looks Like Cigar.

Recent visitors at McCook field, the home of the engineering division of the Air service at Dayton, Ohio, have been astonished at the gyrations of a brightly painted three-wheeled vehicle which has been dashing to and fro between the buildings and among the airplanes on the field under no visible means of control. It is often seen to approach a group of persons blowing its horn wildly, and then when apparently about to strike them, to stop short with screeching brakes, back up with loudly clanging blow, make a sharp turn to the right or left, and to start off in the opposite direction.

### LOOKS LIKE CIGAR

Great mystification has been shown as to the method of operation of this car, some visitors even wondering if perhaps a combination of the heat and newly made home brew may not have had a deleterious effect upon their observation powers. They are oft times considerably relieved to learn that the car is actually performing as they have seen it, though the mystery is lessened but slightly when they learn that the movements of the car are controlled entirely by radio impulses, which are sent out from the radio station at the opposite end of the flying field. The fact that there is no aerial or antenna system visible merely adds to the mystification.

The car is of cigar-shaped construction about 3 feet long, and runs on three pneumatic-tired wheels. It travels at speed ranging from 4 miles per hour to 10 miles per hour and the controls are so finely adjusted that it may be easily steered along a narrow roadway.

**DOTS AND DASHES USED**  
An examination of the interior of the car shows an amazing and confusing collection of batteries, switches, wires, vacuum tubes, potentiometers, relays, magnets, etc., all of which are, of course, necessary to the complete control of the apparatus.

The most interesting part of the apparatus is the "selector" which is in reality the heart of the entire control system. Various combinations of dots and dashes are sent out by means of a specially constructed transmitter, each combination calling for the accomplishment of a certain operation of the control apparatus.

It is the function of this selector to "decode" these various combinations of dots and dashes which are sent out, to close the circuits to the desired controls. So delicately is this selector constructed, and so rapidly will it operate, that it is possible to put into operation any one of 12 distinct controls in a period of less than one second.

**CONTROLLED BY PHONE**  
That is to say, less than one second elapses from the time any push button on the automatic transmitter at the distant radio station is pressed until the control on the car is in operation. Such speed of control has never before been accomplished, and has been completely controlled equally well from an airplane and from a ground transmitting station.

The possibilities of radio control and its application to transmitting are almost without number. Radio control can be applied to any mechanical apparatus that moves, whether it be in the air, on the ground, on the surface of the water, or beneath the water.

Huge land tanks may be constructed and filled with "T. N. T." and driven to any desired point along the enemy's lines where the explosive can be applied by means of radio, or it can be applied in a similar manner to a boat, submarine, torpedo, or even to an airplane, and the explosive can be fired when and where desired.

There is also an application in the commercial field, particularly in plants where long hauls between various parts of the factory are necessary.

**Automobile Gear  
Given Severe Test;  
Comes Out Whole**

"Any motorist who has ever tried to shift his car into reverse while going forward has either paid for a stripped gear (if he was strong) or experienced the feeling that the bottom of his car was dropping out," says E. R. Harrington, local Maxwell-Chalmers branch manager. "To try this without even throwing out the clutch makes matters just that much worse."

"And yet, in San Francisco, Lou H. Rose, Maxwell-Chalmers distributor in that city, recently removed the clutch pedals from three Maxwells and then spent an hour or so running about the streets, shifting from one speed to another and into reverse without the aid of the clutch. The drivers would speed up to about 20 miles an hour or so and then slam the gears into reverse. The cars would go ahead a few feet, then the hind wheels would jump a moment and the car would begin to move backward."

"Several hundred motor fans saw the demonstration, which had been well advertised beforehand, and when it was over, followed the car to the salerooms, where the covers were removed from the gear boxes and the gears washed. They saw for themselves that the gears were in perfect condition, without a tooth even chipped."

**Right Care of Spare  
Tubes Termed Need**

The man who is accustomed to park his shoes on the piano and to file his collars in the coal bin ought to throw his spare tubes in the tool box. That is, he ought to if he wants to be consistent. As a matter of fact neither the piano nor the collars would suffer as much as the tube, in the opinion of local Miller tire men. Inner tubes are usually packed in the factory in wax paper. This paper will preserve the resiliency and elasticity of the rubber, but it won't protect it when thrown carelessly into the tool box of a car. The jolting of the car causes the tube to chafe against the box and thrusts it against the sharp edges of the tools. The tube that is always ready for the roadside emergency is the one that is wrapped in cloth or paper, or better yet, encased in an inexpensive tube bag.

**DRY BEARINGS**  
One cause of inefficient lubrication in the bearings is found in obstructions in the grooves in the bearing holder. Sediment often collects in these grooves so that they cannot perform their appointed function of carrying lubricating oil to the bearing surfaces. An excess of graphite, if that be used with the oil, sometimes produces the condition.

# TELLS ALONG THE ROW



FRED W. VOGLER

AND HIS "LINE COMPLETE"

## TIRES ARE GETTING BETTER TREATMENT

Motorists in general are each year showing decided improvement in their treatment of tires, and are consequently securing greater benefit and longer mileage from them. However, an appalling number of tires are still discarded prematurely because they are victims of negligence and abuse.

According to the service department of the Spreckels "Savage" Tire company, one of the most prevalent tire mis-treatments is bumping into curbs and obstructions and passing over ruts or large stones at high speed. The injury resulting from such maltreatment is often quite serious, since it frequently causes breaks in the fabric foundation of the tire which weakens its integrity. The tread after such an injury may be in perfect shape, but a few cords in the fabric may weaken from the blow and gradually work through other plies of fabric or cords and result in a blowout. An explanation of this condition is the fact that rubber is resilient and will stretch, whereas the fabric is necessarily not flexible enough to absorb the impact of such a similar blow.

Though a tire may seem on the outside to be in perfect condition, a blow-out may occur some time after the tire has been bruised, while running along on a good road, or even when standing idle, due to a bruise pinching the inner tube.

Bruises, of course, can not always be entirely avoided, but careful driving and proper inflation will prevent many injuries of this kind.

The Virginia Islands have 250 automobiles, or one to each 104 inhabitants.

## AUTO TRIP COVERS LENGTH OF RIVER

For the first time in motor car history an automobile has successfully followed the banks of the mighty Mississippi river from its source to the Gulf of Mexico.

The unique trip just completed at Port Arthur, Texas, has particular significance for motorists who appreciate continental touring. It was made by Truman Pearson of Minneapolis, Minn., general manager and founder of the "Port Arthur to Port Arthur route" and "Winnipeg to Tampa line" of the Mississippi river scenic highway system.

Pearson is the originator of the Mississippi river scenic highway system and other routes along the Mississippi and dreams of a great highway through the rich Mississippi valley similar to the Lincoln highway east and west.

The trip was begun in Winnipeg, S. Dak., where blizzards, cyclones and hot spells were encountered by the scout car in the successful mission of blazing what is called by some 300 cities and towns it serves in 14 states and two Canadian provinces "America's greatest north and south automobile road."

Many predicted that the proposed trip could not be consummated by an automobile because there were too many gaps that could not be bridged, that snowstorms and mud and sparsely settled and wild sections with poor roads would defeat the attempt. But Pearson came through, a pioneer in a new and successful venture.

**SOMEWHAT EXPENSIVE**  
In Chicago the cost of hiring a taxicab is 20 cents for the first mile and 10 cents for each succeeding quarter mile.

# SEASONABLE Auto Accessories

Are you ready for the cooler weather, the wet pavements and the longer nights? Why not take an inventory of your car and determine your accessory needs? Following are a few suggestions of seasonable auto accessories obtainable at this popular accessory store with which all motorists are acquainted:

**Auto Robes \$4 Up**  
To keep you and your guests warm while driving. Wide variety of styles for your selection. All wanted sizes in several good grades. \$4.00 upward.

**Spotlights \$3.95**  
Special  
The Kauffman Jr. Silverbeam—A spotlight that will guide you on the darkest night and make driving safe on the highway and in the city. Sold usually at \$6. Special, \$3.95.

**Mirrors \$1 Up**  
for trucks and pleasure cars. A great help for safe driving. In fact, the law requires trucks to wear mirrors. Our prices start at \$1.

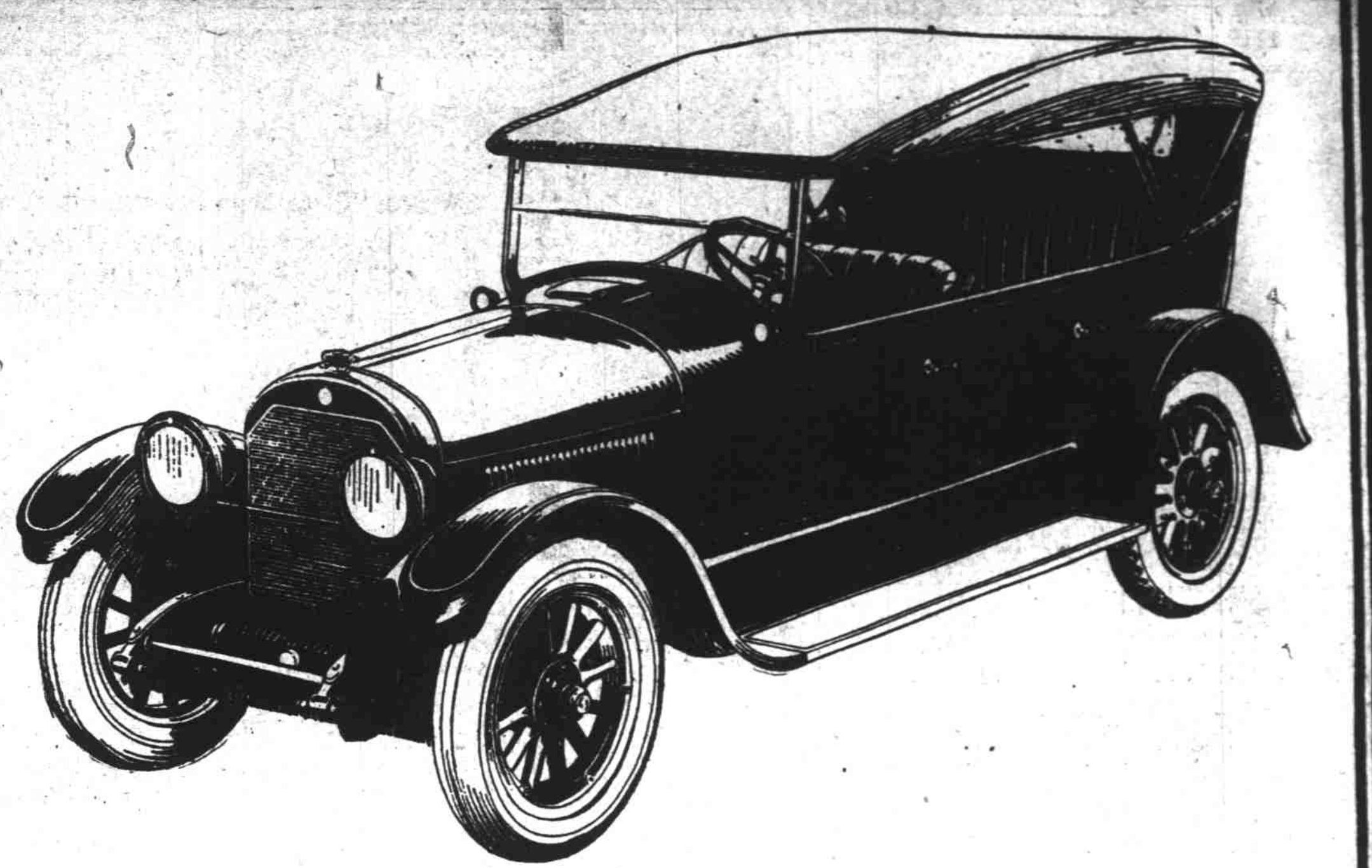
**HOME OF AUTO SUPPLIES**  
**DAVID HODES CO.**  
BROADWAY AT COUCH STREET  
Portland, Oregon

**Windshield Cleaners**  
Accidents often result from vision through a wet windshield. Every car should be equipped with a suitable windshield cleaner. It will make driving safe. The cost is slight.

**Ford Wheels \$5.00**  
Special  
Are your wheels in good shape? Will they stand the strains of skidding after the long, dry summer? We have wheels for Fords and other cars. Ford wheels, 20 in. by 3 1/2 in., special, \$5.00.

**Exhaust Horns**  
The best warning of danger is a loud, shrill whistle. Attach one of our Exhaust Horns to your exhaust and you will be able to give an unmistakable danger signal at any time. It's worth \$5.50 at this low price, complete.

**Ford Radiator Caps**  
Special \$1.95  
Dress up your Ford with a handsome nickel radiator cap for only \$1.95. Bar and ball design. Radiator caps for all other cars at \$2.50.



# A New Cadillac and a New and Glorious Zest in Motoring

The new Cadillac Type 61 carries with it, of course, all of the positive assurance of sound, enduring value which has always been associated with the very name Cadillac.

Needless to say, there is all of the old reliability, responsibility, and regularity of performance—more pronounced than ever because in the Cadillac plant the passage of time is a continuous process of improvement.

But in addition to these hidden 'traits of character' which have made it the world's standard of motoring efficiency—the Type 61 Eight Cylinder Cadillac brings you other positive and quickly recognizable qualities which immensely enhance ease and enjoyment.

Within a few minutes from the time you have taken the wheel you will discern a more pronounced quality of resilient roadability than the Cadillac has ever developed before.

In other words, it is our judgment, that this Type 61 accomplishes the greatest advance yet recorded in overcoming road discomfort and insuring riding ease.

Largely by way of simple but fundamentally sound changes, such as lowering the center of gravity without decreasing road clearance, smoothness of travel has been surprisingly improved.

Again, a recently adopted and equally simple improvement in carburetor practice has bettered Cadillac acceleration so that its proverbial, swift surge of power is even more

immediately brought into action and mileage per gallon of gasoline increased.

The new Cadillac gets away grandly, and communicates both to the one at the wheel and those in the tonneau, a sense of pent-up reserve power that is delightful.

The same simple changes that have given it a greater degree of road resilience have brought with them much greater beauty than before.

The Type 61 is a delight to the eye not merely at the first admiring glance, but in the wealth of attractive details which a closer inspection reveals.

Experienced motorists will delight in the artistic and convenient arrangement of the instrument board, the windshield and ventilator improvements, the restful simplicity and grace of the new steering wheel and controls, the convenient inspection lamp, and other refinements of a most pleasing character.

Incidentally, Cadillac coach work has improved upon itself so that the new car comes to you not only with greater charm of general design but a far more impressive and beautiful finish.

These latter are the lesser satisfactions—the real delight will come in the revelation of greater riding ease and roadability, and swifter acceleration.

A delightful experience is in store for Cadillac owners and non-owners alike.

## CADILLAC MOTOR CAR COMPANY, DETROIT, MICH.

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COVEY MOTOR CAR CO.  
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# CADILLAC



The Standard of the World