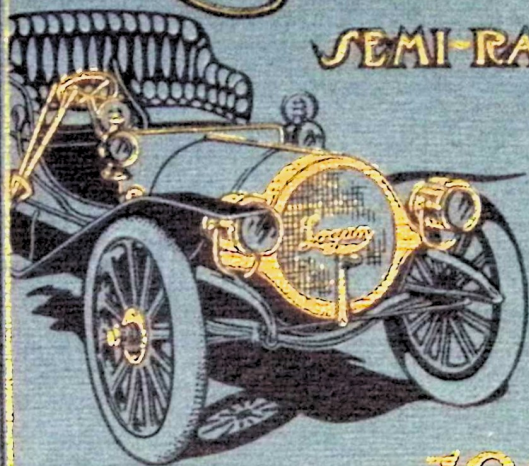


# Logan

RUNABOUT

SEMI-RACER



1907

Logan Motor Co.

1253-5 Michigan Ave.

Tel. Cal. 1036.

CHICAGO, ILL.

JOS. L. SCHILDER,  
President.

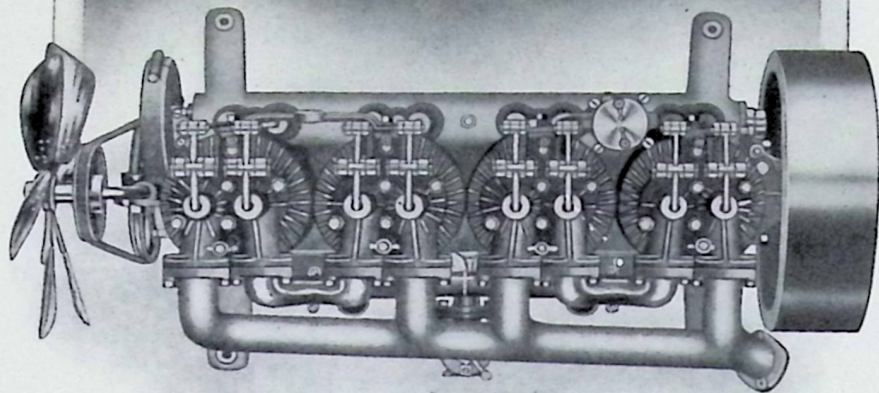
B. A. GRAMM,  
Vice Pres. & Gen'l Mgr.

CHAS. F. SMITH,  
Sec'y & Treas.

THE LOGAN  
CONSTRUCTION  
COMPANY  
CHILlicothe, OHIO

DIRECTORS

J. L. SCHILDER	GEO. H. SMITH
B. A. GRAMM	IRA MOSHER
W. A. HALL	GEO. F. HUNTER
JOHN KELLHOFER	B. W. TWYMAN
CHAS. F. SMITH	



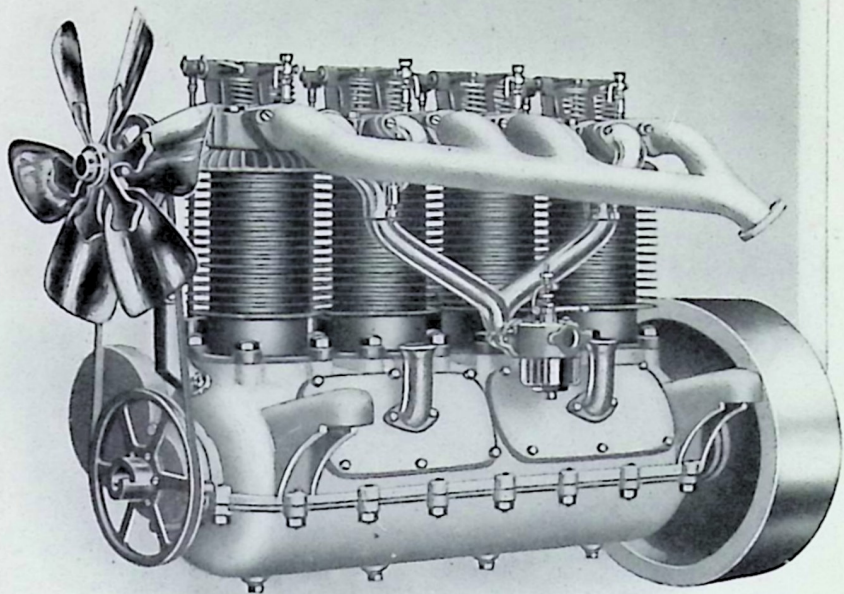
"Four cylinder motor, based on French rating, and every motor is tested on an Electric brake test and must show from 26 to 24 h. p."

No greater compliment could be paid to the Logan Runabout (semi-racer) than to place its 20-24 horse power, four-cylinder, air-cooled motor upon the introductory pages of this booklet. It is well worth the purchasers' first notice in studying the merits of the "Logan Semi-Racer."

The crank case made of special aluminum alloy with internal ribs, give maximum strength with minimum weight. Notice that the engine is hung from arms attached to the upper half of crank case which supports the bearings and that the lower half can be readily removed. The upper half is also provided with hand holes for making connecting rod adjustments. All crank shafts are drop forged from special crank shaft steel, hardened and ground to size and carefully balanced before assembling. This gives uniform action and uniform strength throughout. Bearings are carefully handscraped to perfect fits and all bushings made from Parson's White Brass. Six thin brass liners are on each side of crank shaft and connecting rod bearings for easily adjusting the wear. We use large crank and crank pin bearings,  $1\frac{3}{4}$  inch diameter.

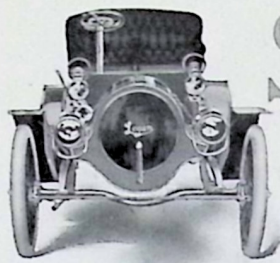
The pistons, of very light construction, are made of a special tough and close-grain cast-iron, are fitted with four eccentric rings  $\frac{1}{8}$  inch wide, with joint cut diagonally at 45 degrees. The rings are ground on three sides. The pistons are rough turned and annealed, and then finished by grinding.

The Cylinders are made from a special grade of iron especially adapted for air-cooled work. This is an improved method of molding, which we have found, after experimenting with different methods, to be the most successful, and we can safely say that we are securing the finest results in air-cooled cylinder castings made today. The cylinders are bored within .002 inch of size, then ground, and have sixty radiating flanges.



The valves are all mechanically operated from one cam shaft by means of the drop forged and hardened tapped levers on top of valve cages, which is connected with push rods by means of a forked steel drop forging. This construction eliminates all noise, one of the bad features of air-cooled engines. The valves are 35 per cent nickel steel, and of a peculiar construction, which we have found to be the best design to withstand the heat of the exhaust. We have run our demonstrating car 3,500 miles over all kinds of roads and have not had any valve trouble and this is the same engine photographed. The spark timer is mounted on a vertical shaft, driven by means of a pair of mitre gears on the cam shaft. The fan is adjustable up and down for the stretch of belt.

We have tested this engine installed in a *five-passenger touring car*, weighing 2,750 pounds, without passengers, with a gear ratio on high of 3 $\frac{1}{2}$ . We never used low gear and climbed all grades on second and high speeds. We can throttle the engine so as to make as low as three miles per hour, and have made forty miles, all on high gear with five passengers. Now the "Logan Semi-Racer" on the scales weighs, with all on, only 1,490 pounds, and its engine power is *over abundant*. It is capable of making 60 miles per hour.



Front View "Semi-Racer"

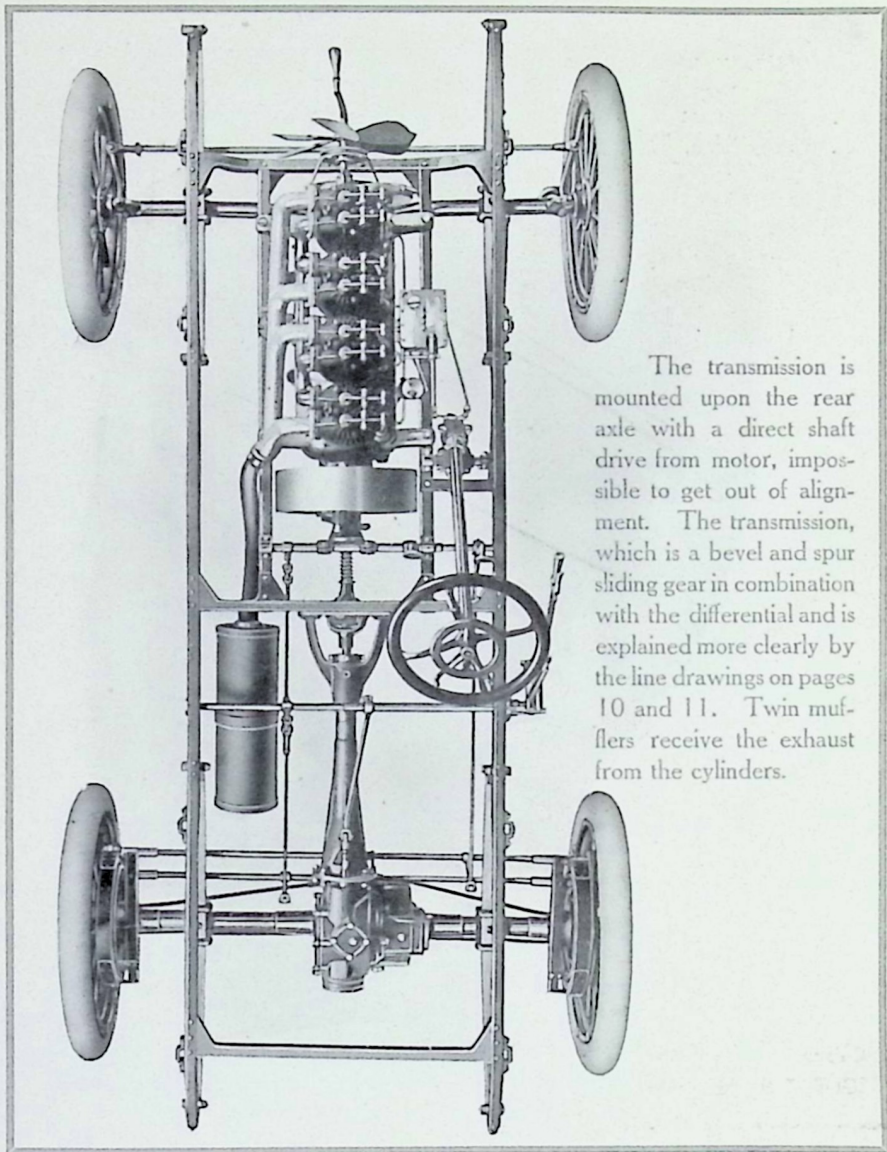
SWIFTER than an eagle is the "Logan" Runabout for 1907. Equipped with a four cylinder 20-24 H. P. air-cooled motor, it is capable of maintaining a speed of 50 miles, or even 60 miles, per hour without injuring or crowding the engine in the slightest degree. The Logan Construction Company will manufacture but a limited number of this high class type of runabouts, which has the lines, style and rakishness of the \$5,000 models.

We have styled this handsome runabout a "semi-racer", which is in keeping with its long wheel base, large wheels and its tremendous power. These features, combined with its comfortable riding qualities, has given the "Logan" first place over all other runabouts for 1907.

Many a physician has proved the use of an automobile indispensable in his business, but few, if any, have a car that will climb all grades on high speed. This car has a greater engine power for its weight than any other runabout built—its entire weight being only 1,490 pounds with its equipment.

This combined type of a business car and semi-racer has long been demanded by automobile enthusiasts and it is a great pleasure for us to present this car to the buying public. It will be sold at a reasonable price and equipped with or without top so that it may be utilized not only for fast driving but also for touring and by physicians and business men. As a physician's runabout, it is unsurpassed and we do not doubt that the demand will be largely in excess of our output, therefore, we advise early orders.

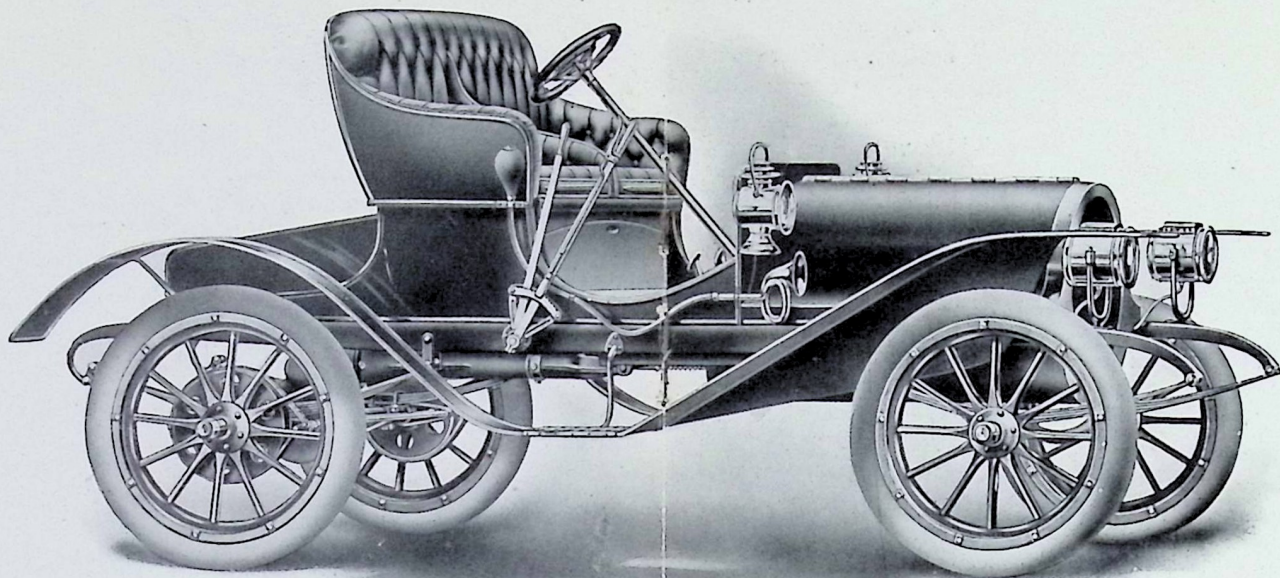
You will note here the perfect symmetrical lines in the top view of the Model O Chassis. It may be described as follows: The chassis is a pressed steel frame, hanging low to the ground and mounted on semi-elliptic springs. It has an internal band clutch that is automatic, self adjusting, does not need oil and is not exposed to dust or dirt. Four sets of brakes are provided, operating simultaneously upon the rear wheels.



The transmission is mounted upon the rear axle with a direct shaft drive from motor, impossible to get out of alignment. The transmission, which is a bevel and spur sliding gear in combination with the differential and is explained more clearly by the line drawings on pages 10 and 11. Twin mufflers receive the exhaust from the cylinders.

The Logan "common head hood," completely encasing the four cylinder air-cooled motor, can be easily removed, exposing entire motor, and the large Acetylene headlights, 32-inch wheels and long sweeping fenders, lend a finish to the entire design. These fenders are so arranged as to produce air currents that force

the dust downward and away from the car. The seat, upholstered elegantly and tufted with heavy roll edge, is divided in the center and is built to fit the contour of the body, which makes the "Logan" Runabout a most comfortable car to ride in and at the same time, retains in a measure, the lines of a French racing model.



Logan "Semi-Racer," 20-24 H. P. Motor, "Air Cooled," Price, \$1,500

#### SPECIFICATIONS

CAPACITY—Two passengers.

SPEED—1 to 50 miles per hour.

WEIGHT—1,587 pounds actual.

MOTOR—20-24 H. P. Air-cooled.

CYLINDERS—4-inch bore, 4-inch stroke.

IGNITION—Jump spark, storage battery.

TRANSMISSION—Sliding bevel spur and pinion gear type, complete on rear axle, two speeds forward and one reverse.

DRIVE—Direct shaft and spur gear.

LUBRICATION—Mechanical positive force feed.

BRAKES—4 brakes, all on rear hubs. Expanding and contracting.

STEERING—Irreversible type.

DIFFERENTIAL—Spur gear.

GASOLINE CAPACITY—12 gallons.

WHEELS—32-inch wood artillery.

TIRES—32 x 3½-inch detachable.

FRAME—Pressed steel.

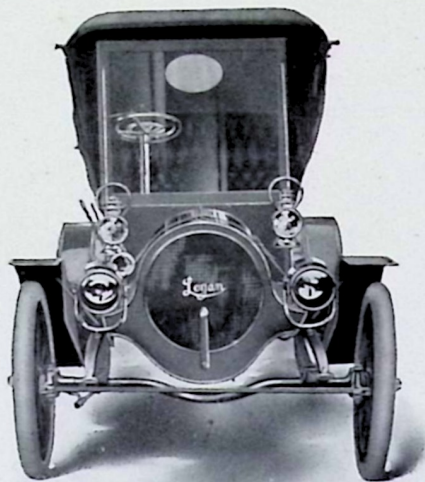
WHEEL BASE—86 inches.

TREAD—56½ inches.

FINISH—Logan tan or optional.

EQUIPMENT—One set oil lamps (front) with tail lamps, horn and tools complete.

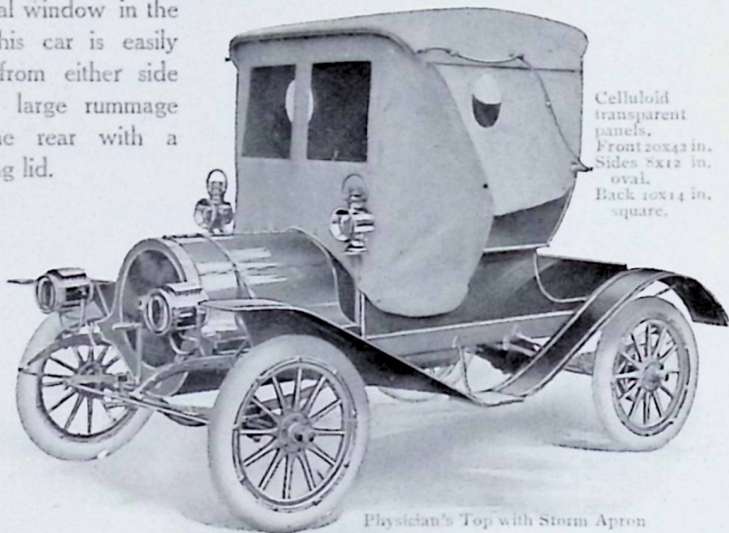
EXTRAS—Acetylene gas lamp with generator, \$50.00; with storage tank, \$75.00; wind shield, \$25.00; top and storm front, \$50.00.



Front View (top up)

Experts in the automobile business and skilled artisans have bent every effort to build this runabout as a perfect type of motor-car, and master mechanics have universally pronounced it perfect in every feature. It has been a pleasure to us to equip a stylish racing model with abundant power for the physician and business man and this unsurpassed air-cooled motor is the heart of its entire mechanism. Upon this page is shown the physician's top and wind shield. We also add to the doctor's equipment storm apron with a 20 x 42 transparent

celluloid front that can be removed and curtains with oval celluloid windows, 8 x 12, on either side and a 10 x 14 oval window in the back. This car is easily accessible from either side and has a large rummage box in the rear with a hinged lifting lid.



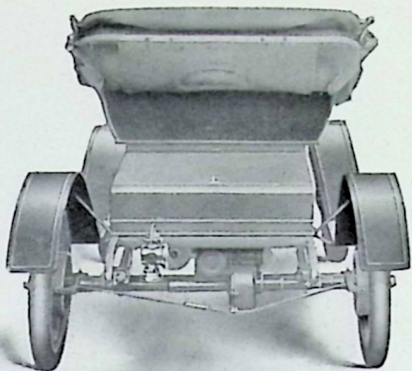
Celluloid transparent panels,  
Front 20x42 in.  
Sides 8x12 in.  
oval,  
Back 10x14 in.  
square.

Physician's Top with Storm Apron

This illustration gives a clear conception of the rear view of the runabout with physician's top down and clearly shows the trim and neat appearance of the transmission mounted on the rear axle.

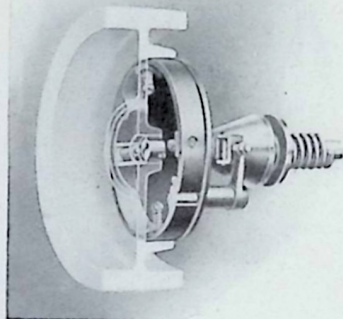
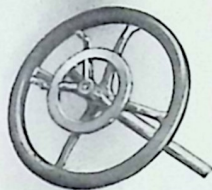
The large rummage box with lid provided is well shown in this view—especially necessary for touring.

The "Logan" will be found simple in its entire construction, perfect and durable, of abundant power and good in all climates, under all conditions and in all kinds of weather.



## Spark and Throttle

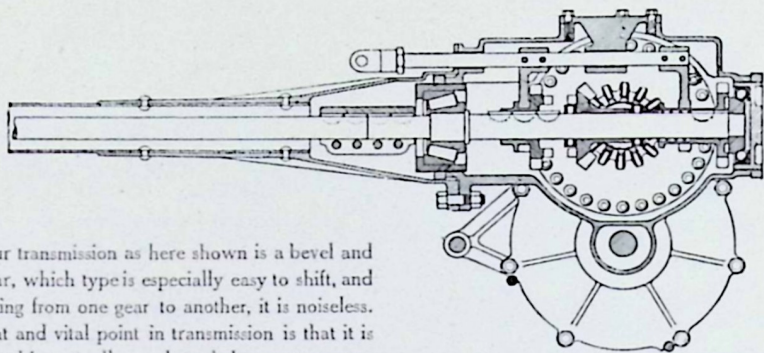
Lever is mounted upon the face of the steering wheel, as shown in the accompanying illustration. A carburetor of modern type is used in conjunction with the throttle and these give the driver perfect control of the motor.



## Clutch

This internal clutch of our own design is ideal in itself, the best we have ever known after careful study and long experimenting. It is an internal expanding steel band so constructed that its outer rim is at all times concentric with the flange on fly wheel of motor. It is operated by a foot pedal and is especially good in that it is self-contained, requires no oiling, is self-adjusting and does not have to be relined.

# Transmission and Control

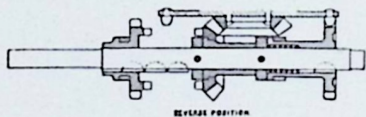
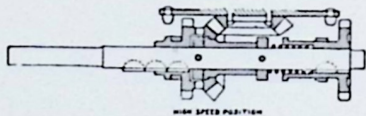
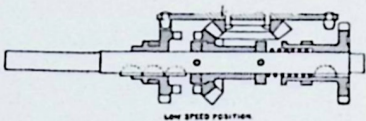
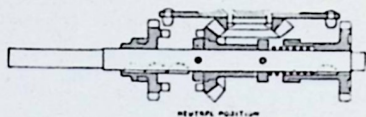


Our transmission as here shown is a bevel and pin gear, which type is especially easy to shift, and in shifting from one gear to another, it is noiseless. Its great and vital point in transmission is that it is a direct drive on all speeds and does not use any auxiliary shafts or gears in changing speeds.

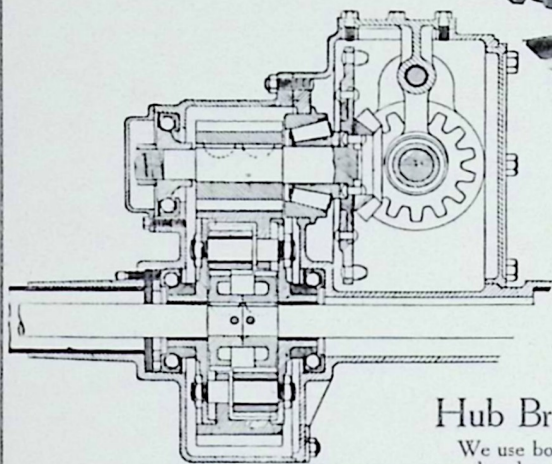
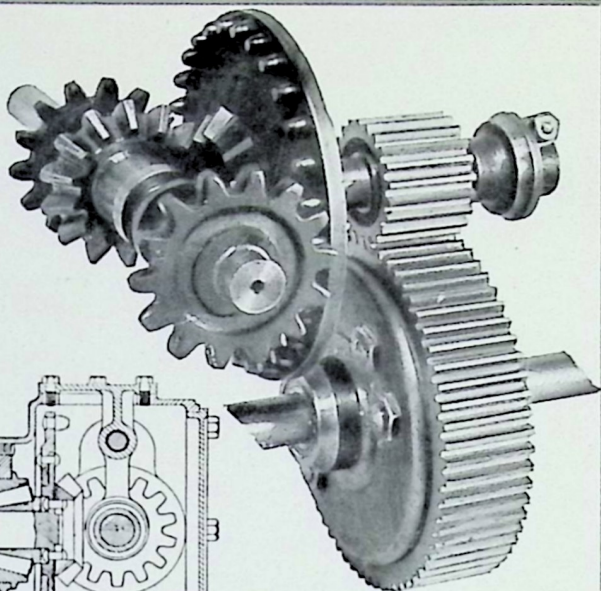
A disc on the countershaft in the transmission carries a circle of pins on its outer periphery and a bevel gear in the center of this circle of pins. These pins are used only in the "Low" gear and "Reverse" positions.

When the gears are in "Low" or "Reverse" position, there are but two transformations of power. These are from the sliding gear to the pins and from the countershaft pinion to the axle driving gear on outside of differential case. With only two transformations, the losses due to friction are greatly reduced, especially at that particular instant when all the available power of the motor is needed for torque at the wheels of the car. With all other types of transmission, the minimum number of transformations is five, involving great loss of power in the "Low" and "Reverse" positions.

High road clearance is a great feature in our transmission, and it shows a clearance of 10 to 12 inches. This is 3 to 4 inches greater clearance than any other shafts drive system.

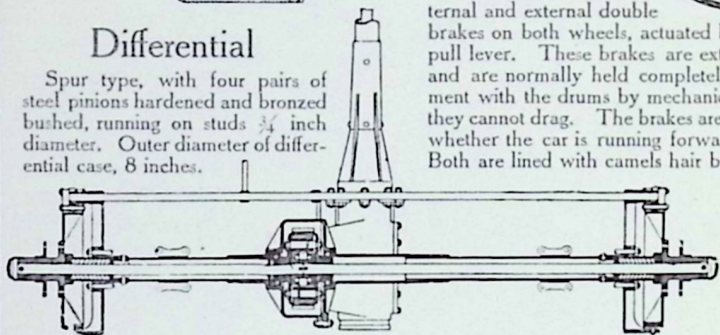


The transmission provides two speeds forward and one reverse which are operated by means of a single shaft through the transmission on which the gears slide. The differential and transmission is carried on ball bearings and the thrust of the bevel gears is taken by tapered roller bearings, as shown.



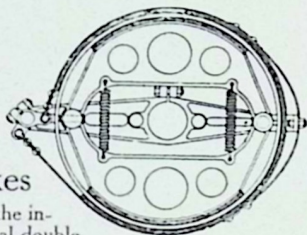
## Differential

Spur type, with four pairs of steel pinions hardened and bronzed bushed, running on studs  $\frac{3}{4}$  inch diameter. Outer diameter of differential case, 8 inches.



## Hub Brakes

We use both the internal and external double brakes on both wheels, actuated by one shaft and pull lever. These brakes are extremely powerful and are normally held completely out of engagement with the drums by mechanical means so that they cannot drag. The brakes are equally effective whether the car is running forward or backward. Both are lined with camels hair belting.



# Warranty

We have adopted the standard guarantee passed by the National Association of Automobile Manufacturers, August 12th, 1902, which is now in force and which is given below.

We warrant all goods furnished by us for sixty days following the date of their shipment, based upon the date of invoice covering the goods, this Warranty being limited to the replacement in our factory of all parts giving out under normal service in consequence of defect or material or of workmanship.

If the circumstances do not permit that the work shall be executed in our factory this Warranty is limited to the shipment, without charge, of the parts intended to replace those acknowledged to be defective.

It is, however, understood that we make no warranty whatever regarding tires or the batteries and coil.

We cannot accept any responsibility in connection with any of our motor cars when they have been altered or repaired outside of our factory.

We are not responsible to the purchaser of our goods for any undertakings and warranties made by our agents beyond those expressed above.

We wish it distinctly understood that we make no warranty of our goods except as stated above, but desire and expect that customers shall make a thorough examination of our goods before purchasing.

# Terms

All machines sold F. O. B. Chillicothe.

All orders must be accompanied by cash deposit. Balance sight draft against bill of lading, or by express C. O. D.

Cars delivered to Transportation Company are thereafter at the risk of the purchaser.

All remittances to be made in New York Exchange or funds bankable at par in Chillicothe.

All orders executed in rotation and accepted subject to strikes, fire and other causes beyond our control.

