

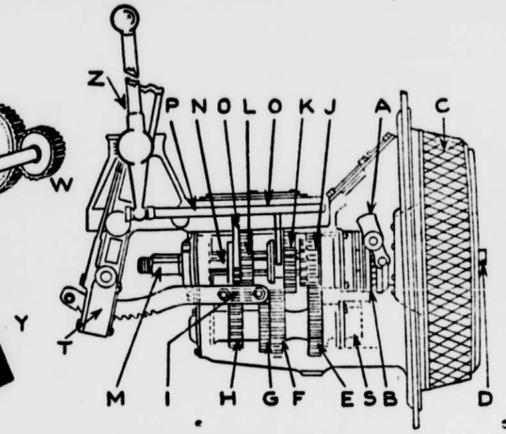
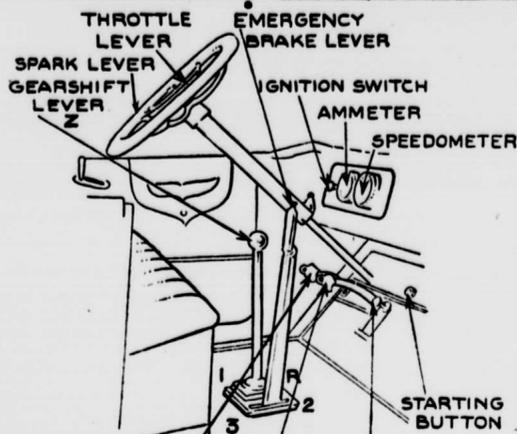
TEACHING THE OWNER TO KNOW HIS AUTOMOBILE

Being the Twelfth of a Series of Practical Articles by an Expert on the Subject of the Car and Its Operation.

By WILLIAM H. STEWART, JR., Pres. Stewart Automobile School.

Perhaps the most difficult problem for the beginner to master when learning to drive is proper shifting of the gears.

Gear Shifting



- A—Clutch throw out yoke. B—Clutch yoke thrust bearing. C—Leather faced clutch. D—Clutch centre pilot shaft. E—Countershaft constant mesh gear. F—Countershaft second speed gear. G—Countershaft first speed gear. H—Countershaft reverse gear. I—Reverse idler gear. J—Main shaft drive gear. K—Main shaft second speed sliding gear. L—Main shaft first speed sliding gear. M—Main shaft universal joint end. N—Main spline shaft for sliding gear. O—Gear shifting forks. P—Parallel shafts carrying gear shift for countershaft. Q—Emergency brake lever assembly. R—Gear shift lever. S—First speed position. T—Second speed position. U—Third or direct speed position. V—Reverse speed position.

confidence. If a person has driven a horse through the congested districts of the city he is familiar with control



Is your Battery being Starved to death?

Your car calling on your battery for a big day and night's work— Without feeding it enough current—without sufficient distilled water?

FREE Prest-O-Lite SERVICE

Let us inspect your battery. Don't put this off. We'll test your battery and add water, as often as you wish.

The Presto-O-Lite Co., Inc. NEW YORK 2104 BROADWAY

HOW THE GERMANS USE MOTOR TRUCKS

It's a Splendid Object Lesson to This Country, Says Olds Co. Executive.

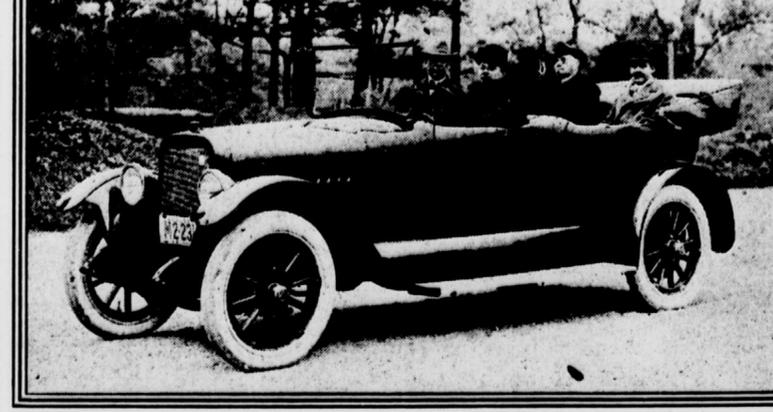
Individuals at variance with him on the subject of automobile preparedness are invited by Jay V. Hall, active executive of the Olds Motor Works and advocate of the establishment of a mobile reserve corps in every important city of the United States, to acquaint themselves with the phenomenal use made of motor cars in the present European war by the Germans.

"Again, when the Germans started their drive on Warsaw it was the motor car which enabled them to make such rapid progress. The railroads having been demolished, but the roads still remaining, the latter were turned into automobile highways, and guns, troops and ammunition transported over them in incredible quantities and at an extremely rapid rate.

"Throughout the entire history of the war the Germans have made unprecedented use of automobiles for troop movements, concentrating whole army corps first at this point and then that, as attack threatened or an offensive was contemplated. Using the motor car much as a fencer would his foil, the German General Staff has been enabled to avoid danger from a dozen different points at once. This is the lesson the United States must learn.

"With our tremendous number of motor cars there is no limit to the strategical manoeuvres we could execute, dazzling and bewildering our foes by the rapidity of our movements. Given the proper complement of arms, men and ammunition, the United States, with her motor cars, would be invincible. To this end, of course, organization is necessary. The sooner the various social and commercial automobile organizations of the United States realize this fact and get some action the better prepared we shall be against our possible day of trouble."

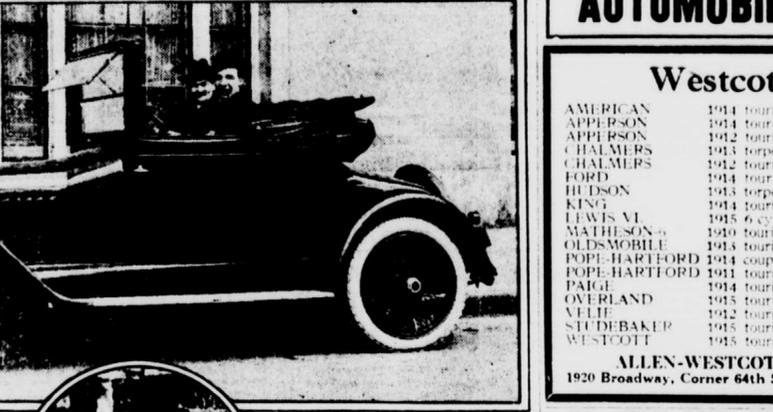
The First H. A. L. Twelve to Reach New York



New Yorkers have taken very kindly to the new H. A. L. Twelve which reached the Hollander-Randall Company, metropolitan distributors, a few days ago. Harry Goss, head demonstrator for the Hollander-Randall firm, drove the vehicle over the roads from Cleveland, stopping at several cities en route to show the paces of Harry A. Lozier's latest creation.

James J. Heaslet, vice-president in charge of engineering and production of the Studebaker corporation, belongs to the limited few who have been in the automobile industry practically since its inception. Due to Mr. Heaslet's modesty it is not generally known outside of the automobile industry that he first designed an automobile some nineteen years ago, when the automobile industry was "in its swaddling clothes."

Harry Lauder and Luther Burbank Are Enthusiastic Motorists



Seated at the wheel of the Chalmers Six is Chalmers, one of the newest year-round creations of the Chalmers Motor Company, is Harry Lauder, the world's most famous comedian. Harry, so it is said, drives down \$1,000 each week, "but in gold, mine, yes" and seldom takes a week's vacation. William Morris, his manager, is the other passenger in the car. In the circle is shown Luther Burbank, the wizard culturist, at the wheel of his new Willys-Knight. This quiet, unassuming great man portrays in his simplicity, his strong characteristic simplicity. It was the extreme quietness of the Knight motor, with its lack of vibration, that first attracted his attention. Then its simplicity of construction and operation was like an open book to his limited knowledge of motor construction.

SERVICE STATIONS HELP MOTORISTS

Goodyear Company Has Established Them All Over the Country With Good Effect.

"Motoring has now entered the era of the owner driver. Never before have so many men and women handled the steering wheels of their own cars," says R. S. Wilson, manager of the service department of the Goodyear Tire and Rubber Company. "The expert chauffeur will always have a place for these in employment for him in the service of the rich with their many cars of varied uses. He will be needed in the truck work for taxicabs and for the illies engaged in merchandise or passenger transportation, but the vast majority of motorists prefer to drive their own cars.

"Probably one of the greatest factors in popularizing the motor car has been the vast improvement in automobile tires. In the olden days the tire question was about the biggest bugaboo that troubled the motorist's peace of mind. If he started on a journey, he was indeed fortunate if he ever finished it. He troubles were a very fertile field for the comics, and many jokes were cracked at his expense.

"All this is changed today. With the automobile now starts on a journey the least of his troubles are that he fear their dependability. "The two big aims of the Goodyear factories are to build mileage into tires and to make it easy to get Goodyear service. So Goodyear service stations are located everywhere. In the big cities, medium sized towns and the rural districts these service stations are always within easy reach. They will see that you use tires of proper size; they will provide proper inflation; they will tell you whether the wheels of your car are in alignment; they guard against the various forms of tire abuse which motorists usually inflict."

AUTOMOBILE EXCHANGE

Table listing used cars for sale from Westcott Used Car Dept. and Allen-Westcott Motor Car Co., Inc. including models like American, Apperson, Chalmers, Ford, Hudson, King, Lewis, Matheson, Oldsmobile, Pope-Hartford, Paige, Overland, Vellie, Studebaker, and Westcott.

APPERSON

BIG VALUE IN USED CARS READY FOR IMMEDIATE DELIVERY

DIMOND-APPERSON MOTOR CO. BROADWAY at 68th Street. TELEPHONE 10202 Columbus

CARL H. PAGE MOTORS CO. USED CAR DEPARTMENT

- 1916 Mitchell Demonstrator. 1915 Mitchell, 4 cyl. 5-p. Rdstr. 1916 Chandler, 7 pass. 1915 Ford Coupelet. 1916 Pullman. 1914 Cadillac 7-pass Touring. 1916 Overland, model 83. 1915 Paige, 6 cyl. 1912 National Speedster Cadillac Limousine. All above cars guaranteed. And Many Others 1826 Broadway (Circle Building) NEXT DOOR TO THE PLACE IN THE SUN Phone 8601 Columbus.

FRANKLIN Motor Car Company

- Offers the Following Used Cars: 14 Franklin, 5 Pass. Runabout. 12 D Franklin, 6 cy., 5 Pass. Touring. 11 D Franklin, 6 cy., 5 Pass. Touring. 14 Cadillac, 5 Pass. Touring. 12 Cadillac, 5 Pass. Touring. 11 Cadillac, 4 Pass. Touring. 10 Chalmers, 4 cy., 5 Pass. Touring. 14 Chalmers, 4 cy., 5 Pass. Touring. 14 Jefferson Cross Country 5 Pass. Touring. 14 Ohio, 6 cy., 7 Pass. Touring. 12 Oakland, 5 Pass. Touring. 10 Marion, 5 Pass. Touring. 11 Peerless Landulet. 11 Packard, 18 Limousine. FRANKLIN MOTOR CAR COMPANY 1848 BROADWAY Columbus 7556. At 61st Street.

Advertisement for Franklin Motor Car Co. featuring the slogan 'WITH gasoline costing real money will the motorist be content with 12 miles per gallon—when so many are averaging 20 and up?' and listing agents at 1848 Broadway, at 61st Street, Columbus 7556.

AUTON: GREAT BARGAINS NOW.

- 1915 STUTZ TOURER—Four passenger; elegant condition. Fully equipped. Roskam-Scott Co., 1826 Broadway. 1915 STUTZ "BEARCAT"—Like new; used little. Fully equipped. Roskam-Scott Co., 1826 Broadway. 1913 S. G. V. BROUHAAM—Landulet; four door; four door; elegant bargain. Roskam-Scott Co., 1826 Broadway. 1915 STUTZ TOURER—Four passenger; elegant condition. Fully equipped. Roskam-Scott Co., 1826 Broadway. 1915 STUTZ TOURER—Four passenger; elegant condition. Fully equipped. Roskam-Scott Co., 1826 Broadway.

FRANKLIN MOTOR CAR COMPANY

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to the forward movement of the car. If motor is turned "fast" clutch "C" will be revolving at the same speed and likewise the countershaft gears E, F, G and H, the driving gears J and K being constantly in mesh. As soon as the clutch is disengaged it will start to come to a standstill.

The proper time to shift to gears to avoid flashing is at that instant when the second speed gears "H" and "K" approximate each other in mesh. Ordinarily there is a clutch brake which quickly stops the clutch rotating as soon as disengaged and affords rapid change from one speed to another. The same rule applies in shifting from a higher gear to a lower gear. To do this without flashing the gears it is often necessary to shift to neutral, engage clutch and then accelerate motor to speed up the clutch before disengaging and shifting to the lower gear.

In shifting to the reverse gear care must be taken to bring the car to a standstill before attempting to shift. If this is not done serious damage is very apt to result. The reverse is obtained by driving through a reverse idler gear located at "I" between upper main shaft and countershaft. This reverse idler is constantly in mesh with "H" and engaged when gear "L" is brought back into mesh with it by moving the gear shift lever to reverse position. When first learning to drive the operator is very apt to become confused because there seems to be so many things to do at one time. The feet must be trained to act in unison with the hands. Once the driver understands what is actually taking place he will instinctively act without hesitation. The most efficient operator performs automatically. He does not have to think or reason out what he should do.

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1917 MARION HANDLEY HERE.

Attracts Considerable Attention at Kent Motors Place. There was much interest last week in the arrival of the 1917 Marion Handley cars at the showroom of the Kent Motors Corporation at 1704 Broadway. This new car has attractive lines and all the up-to-date features. It carries seven passengers, has a 6-40 motor, weighs 2,700 pounds and sells for \$1,185. P. H. Clarke, the president, announces that he has fifteen for immediate delivery.

GASOLINE bills reduced one-third by using our new KINGSTON MOTOR TRUCK CARBURETOR. Has adjustment. Is built especially for motor trucks. WILLIAM E. KEMP 1233 Broadway, New York, N. Y. Phone 4762 2994.