THESE OPTIMISTS LOOK FOR AUTOMOBILE INDUSTRY'S BIGGEST YEAR IN 1917

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President Studebaker Corporation.

HERE ARE THE THINGS TO KNOW ABOUT YOUR CAR

If You Digest These Facts and Follow These Instructions You Will Have Become "a Regular Motorist."

By H. C. BROKAW,
Principal West Side Y. M. C. A. Automobile School.

The instructions given here apply particularly to cars used at our school. As slight variations are found in other cars, before attempting to drive a strange car one should read over the instructions in the manufacturers' instruction book and follow it closely wherever it varies.

Before Leaving the Garage—See that there is sufficient gasolene and oil in the tanks to carry you the distance you wish to go. Examine the radiator or tank to see that it is full of water. Have sufficient air in the tires. All grease cups should be filled and turned down properly. If batteries only are used, two should be carried, one of them fully charged. If you are carrying only one battery, be sure that it is sufficiently charged to make the desired run.

Have on the car at least one extra shoe and three extra tubes, with the ordinary equipment of tire pump, jack, oil gun, tire tools, tire patches and cement, and the regular kit of other tools. A set of nonskid chains will be found very useful on wet days; in fact, it is not safe to run without them on wet asphalt. A couple of extra spark plugs should be carried to save the trouble of cleaning a short circuited one on the road.

Starting Crank—In a gasolene automobile it is found that the motor must draw a supply of gas into the cylinder and compress it before this charge can be ignited to expand and give power. It therefore is necessary to have some means of turning the engine over to accomplish this. The starting crank, placed usually on the front of the machine, just in front of the radiator and between the front spring horns, is for this purpose. It is operated as a rule with the right hand and is rotated clockwise (the direction the hands of a clock travel).

When there is a self starter provided the starting crank is carried in the tool box and is used only when the starter will not operate.

Starting Pedal—The starting pedal, or button, generally may be found somewhere on the floor board. Pressing on it connects an electric motor to the crank shaft of the engine and closes a switch that allows current from the storage battery to flow to the motor and crank the engine. This takes the place of the hand starting crank.

Clutch Pedal—It quite often is desirable to run the engine without moving the car, and it will be found necessary also at times to bring into mesh different gears, so that more power or speed may be obtained. A clutch therefore is placed between the engine and rear wheels. It is controlled by means of a pedal placed just back of the dash. The clutch is released by pressing on this pedal with the left foot, and when released the engine will continue to run, but will not deliver power to the driving wheels.

When the pressure of the left foot is released from the pedal, the clutch will become engaged automatically by means of a stiff spring and the car will move forward or backward, according to which gears are in mesh. If the gears are in the neutral position, however, power will not be applied to the car when the clutch is engaged. The clutch must be released every time the gear shifting lever is moved and whenever the brake is applied.

Remember it is depressing or pushing this pedal that overcomes the tension of the spring and releases the clutch, and when no pressure is applied to the pedal the clutch is engaged.

The Running Brake Pedal—The running brake is used for bringing the car to a standstill. It is operated by means of a pedal placed just back of the dash and to the right of the clutch pedal. To apply the brake, first release the clutch by pushing on the clutch pedal, then push down, or forward, on the brake pedal with the right foot, gently but firmly, until the car is stopped. After removing the foot from the brake pedal the brake will be released automatically by means of a spring.

Use the brake gently, to save discomfort to the passengers, wear on tires and the machine in general. Do not run close to the point where the stop is to be made and then jam the brake on hard, but begin to apply it early and bring the car to a standstill gradually.

The Emergency Brake Lever.—The emergency brakes are used chiefly after the car has been stopped and the operator wishes to leave it. They are applied by means of a lever operated by the right hand. This lever usually is placed just forward and to the right of the driver's seat. It is fitted with a spring latch, and when applied will lock on, and so is very convenient in stopping on a hill or when the car is left standing at the curb. The brake is applied by pulling back the lever. The brake can be used alone or in connection with the running brake for quick stops when necessary, but it should not be used for ordinary stopping, as it usually is not designed for such work.

Gear Shifting Lever.—This lever usually is placed forward and to the right of the operator's seat, and to the left of the emergency brake lever. It is operated with the right hand. By shifting this lever, which engages different sets of gears, the machine may be made to go forward at different speeds, while the engine turns at a practically uniform speed. It also controls the reverse gear.

When the car is standing the lever should be left in neutral position. When in this position, even if the clutch is engaged, the machine will not move. To start the car release the emergency brake, release the clutch with the left foot, grasp the gear shifting lever with the right hand and shift from the neutral position to the first speed notch, accelerate slightly, then allow the clutch to engage slowly and the car will start.

After the car has started release the clutch again and shift the gear lever to the second speed notch and engage the clutch quickly but gently. Repeat this operation for third and fourth speeds. Always release clutch when shifting this lever. Whenever the car is brought to a standstill put the lever in neutral position before applying emergency brake.

Accelerator Pedal—This pedal operates the throttle on the carbureter and regulates the amount of gas going to the engine and thus controls the power which the motor develops. It is sometimes placed between the clutch and brake pedals, but usually to the right of the brake pedal, and is operated by the right foot. More gas is permitted to enter the cylinders and therefore more power is obtained by pressing it, and when released the throttle will be returned to its minimum position by means of a spring.

Push on the pedal very slowly, for a slight movement greatly increases the power developed by the motor, and a too sudden application of power will strain the whole machine. It should be pushed slightly when the clutch is engaged to increase the power of the motor, and should be released when the clutch is disengaged, so that the engine will not race.

The Throttle Lever—This lever controls the throttle on the carbureter the same as the accelerator pedal, but it has a spring latch, and when it is desirable to run the machine for some distance at a nearly constant speed this lever may be used, as it will stay where placed, thus relieving the right foot, which would become tired by holding the accelerator pedal in one position for a long time. It is usually placed on the steering post above the steering wheel and is operated with the right hand. Do not advance the throttle lever too quickly.

The Spark Control Lever—It takes some time after the spark occurs for the gas to get thoroughly ignited and give power. Therefore it is desirable to have the spark occur earlier when the engine is running fast, so that the gas may be thoroughly ignited at the beginning and deliver power for the full length of the working stroke. This means that the spark, when advanced, actually occurs while the piston is still travelling up on the compression stroke and so gets the gas in the cylinder at its maximum pressure when the crank passes top dead centre.

When the motor is cranked in starting it is turned so slowly that, to avoid a kick back, the spark must be retarded so that it occurs after the crank has passed top dead centre. The spark control lever is connected with the spark timing device, and so controls the time at which the spark occurs in the cylinder. It usually is placed on the steering column above the steering wheel, and is operated with the right hand. On some cars it is moved forward and on others backward to advance the spark.

When the engine is cranked in starting the spark should be fully retarded. After the motor has started it usually can be advanced about two-thirds, but there is no set rule for this. In general advance as the motor (not the car) gains speed and retard as it slackens speed. Keep the spark advanced as far as possible at all times, but retard it if the engine labors or knocks.

Ignition Switch—Usually placed on the dash. It is for the purpose of closing and opening the electric circuit and thus stopping the motor or allowing it to be started. It is generally provided with a removable plug or key, so that the car may be left safely at the curb. Be sure that the switch is in "off" position when the motor is stopped.

Steering Wheel—The steering wheel usually is placed on the left hand side of the car directly in front of the operator's seat. By its means the direction of the car is controlled. When moving forward, turning the wheel counter clockwise will cause the car to go to the left, and turning it clockwise will cause the car to go to the right. It should be operated with the left hand only, unless steering is very hard, when both hands may be used.

Grasp the wheel firmly with one or both hands, but not with a strong, nervous grip, as this becomes very tiresome. If the hand is kept always in one position on the wheel, when only slight turns are desired there will be no difficulty in knowing by its position when the front wheels are pointing straight ahead. When turning corners the position of the hand on the wheel may be changed, and both hands should be used. Do not attempt to turn the steering wheel when the car is not moving, as this throws a very great and entirely needless strain on the whole steering mechanism.

Priming Device or "Choke"—When the engine is cranked in starting it is turned so slowly that the air going in through the carbureter has not sufficient velocity to draw the required amount of gasolene from the spray nozzle. The mixture that goes into the cylinder, therefore, is weak and cannot be exploded easily. To enrich the mixture a valve is placed in the carbureter air passage to choke off the air and feed more gasolene to the motor. This valve is operated by a lever or button found usually on the dash or attached to the steering column under the steering wheel. It is often combined with a device for making the mixture richer or leaner, to take care of different weather conditions.

Some engines will start nearly every time without priming the carbureter; others must be primed every time the engine is started. Do not prime to excess, and as soon as the engine starts return the lever or button to the running position.

The Gasolene Tank.—The gasolene tank carries the fuel that is to be fed to the engine. It will be found sometimes under the front seats and may be filled by removing the cushions. In this system the gasolene flows by gravity to the carbureter and a small hole about the size of a pin will be found in the filler cap to allow air to enter as the gasolene leaves. This hole should be kept clean, because if the air cannot enter the gasolene will stop flowing to the carbureter and the engine will stop running.

Some cars carry the gasolene tank on the rear of the chassis, under the body, and air pressure is kept on the gasolene to force it to the carbureter. This pressure is obtained by a hand pump placed on the dash and is kept constant automatically. This system differs from all others in that there should be no hole in the filler cap of the tank and the gasket on the cap should be kept in good condition to prevent air leakage. A gauge will be found also on the dash and by this means the pressure on the tank may be determined.

Other cars with the tank under the rear end of the chassis have a system of drawing the gasolene by means of a vacuum to a small tank located by the carbureter under the hood, from which it flows into the carbureter by gravity. Still other cars have a gasolene tank in the cowl of the dash, from which the gasolene flows to the carbureter by gravity.

The Lubricator.—The lubricating system generally is built into the crankcase of the engine. The oil is supplied through a pipe or other opening found on the engine and a gauge or pet cock is provided to indicate the amount of oil in the motor. The system should be kept filled with a light to medium high grade gas engine oil. The lubricating system generally oils all the internal parts of the engine only, the transmission, steering and differential gears being lubricated by heavy oil or grease placed in their respective housings, and all other parts of the car are taken care of by oil or grease cups. Any oil put into the engine should be carefully strained to remove dirt or grit.

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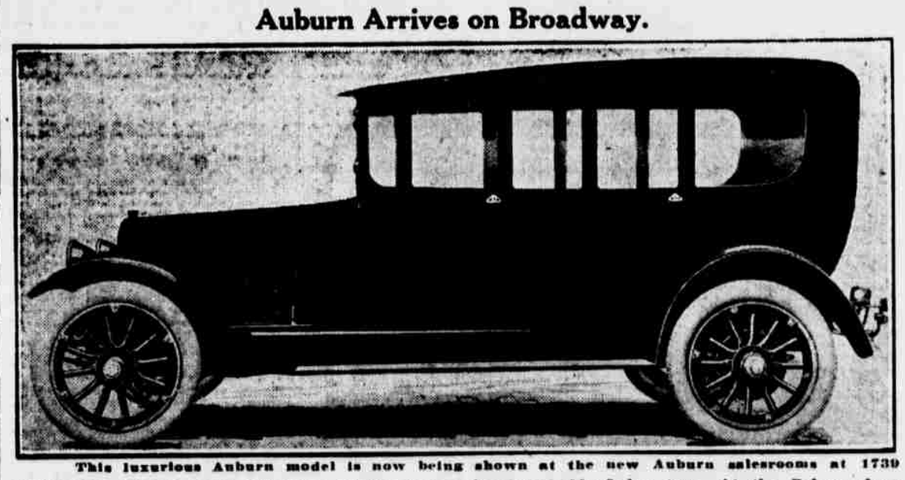
Auburn Arrives on Broadway.



This luxurious Auburn model is now being shown at the new Auburn salesrooms at 1739 Broadway. It is a seven passenger touring type, with detachable Sedan top. At the Palace show the Auburn cars were very much in the limelight and many sales were made. In the new company now looking after Auburn sales hereabouts are W. S. Maltby, J. W. Gathard and F. W. Wright, three pioneer motor car men.

GREAT DAY IS HERE FOR THE AEROPLANE

Coming Show Will Prove Great Utility of the Machine and Reveal Bright Prospects.

"With the recent appropriation of $35,000,000 by the Government for the purchase of aeroplanes to be used in connection with the Army, Navy and Post Office departments, the making of aeroplanes is past the 'game' stage and can now be ranked as one of America's foremost industries," says L. M. Bradley, general manager of the Motor and Accessory Manufacturers.

"Realizing the important advances made by the aeroplane industry and its close relation to members of the Motor and Accessory Manufacturers, the directors of the M. & A. M. recently sanctioned the forthcoming First Pan-American Aeronautic Exposition to be held in Grand Central Palace, February 8 to 15 inclusive, and many members of the big accessory and parts association have already been allotted space.

"To those closely allied with aeronautics the rapid strides made by the aeroplane industry are not surprising, but the general layman will probably be astounded by the fact that there were built last year in this country aeroplanes amounting in value to $30,000,000. Aircraft is, as a matter of fact, the most promising factor in the solution of the two gravest questions of the day—upbuilding of our defence and the reconstruction that will follow this war. The advent of practical aircraft which already are capable of lifting fifteen tons and flying at a speed of 125 miles an hour and the increasing demand for military aircraft are bringing to the American aeronautic industry $50,000,000 worth of orders for the coming twelve months and creating wonderful opportunities for engineers and men in all contributing industries, especially those organizations affiliated with the M. & A. M.

"In addition to the above appropriation made by the Government there are pending before Congress additional large appropriations to be used in the purchase of aeroplanes. American manufacturers of aeroplanes are not dependent upon the United States alone for orders, as during the past year our aeroplane manufacturers have shipped abroad millions of dollars worth of aircraft. The United States Government has recently ordered 326 aeroplanes and is developing its aeronautic corps very rapidly.

"There are two aeroplane companies in America that are capitalized at over $10,000,000, and there are fourteen aeroplane factories in this country employing over 10,000 men. No industry in America has a better financial backing than the making of aeroplanes and it is evident that there are many more millions available for aeronautic expansion.

"Many automobile manufacturers are either producing aeroplane motors today or else designing aeroplane motors for future delivery. There are about 1,000 aviators in America, while France has over 5,000, England over 40,000, and England has 70,000 men in the Royal Flying Corps. All of this means that a new outlet is fast approaching for products made by motor, motor parts and accessory manufacturers in America.

"Members of the M. & A. M. will make quantity production possible for the aeroplane industry just as they have for the builders of motor cars. Were it not for the motor, motor parts and accessory manufacturers allied with the M. & A. M. the huge quantity production which made the motor car industry famous never could have been attained.

"It is not to be expected that the aeroplane maker can build carbureters, batteries, axles, spark plugs, magnetos, electrical apparatus and other parts better than can the manufacturer whose business it is to specialize in these individual parts.

BEN-HUR WELL RECEIVED.

President Anderberg Enthusiastic Over Returns From Show.

"The New York Automobile Show is like an actor's 'first night' to manufacturers like ourselves, who bring out new cars at this show," says F. R. Anderberg, president of the Ben-Hur Motor Company of Cleveland.

"It is, therefore, a matter of great gratification to me that Ben-Hur cars received such unqualified approval at this big national event. We were, of course, much pleased with the reception given our cars in Cleveland the first week in January, when they were first introduced to the public. The ovation in New York comes as a crowning achievement.

"Sales were closed during this show for close to $1,000,000 worth of Ben-Hur cars. A number of dealers were signed up for points in various parts of the United States and export conections were made covering most of the neutral foreign countries.

New Monroe 5-Pass. Touring Car.

After seventeen years experience selling both foreign and American cars Norris Mason, well and favorably known in automobile circles, cannot help enthusing over this striking little car that sells for only $985. It would appear too that Mason has something genuine to enthuse over.

This car has a new type differential, a counterbalanced crankshaft and a motor which develops 44 h. p at 2,600 revolutions. It is of the 4-cylinder type, 3 1-4x4 1-2, and Mason guarantees twenty miles to a gallon of gasolene.

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Beautiful Cars are Rare

A work of art requires an artist to create it. Artistic motor cars are few and rare because motor car artists are few.

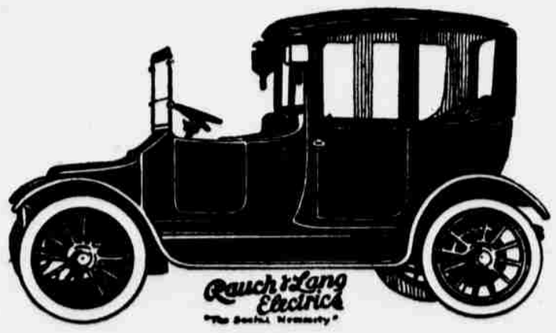
MORE and more grows the demand for beautiful cars. The successful family is no longer content with a car that looks monotonously like hundreds of other cars. This is the day of individuality.

But the demand is greater than the supply, because most motor car makers have either ignored or denied the public desire for artistic effects. Consequently, thru their inexperience, the ability to create effects that conform to the canons of taste is extremely limited. Those manufacturers whose work passes critical inspection are not numerous.

One of these is the Winton Company. Specialists for years in producing cars expressly created to meet the personal tastes of individual buyers, the Winton Company has developed an art so sure and superior that every Winton Six purchaser is certain to possess a car that will everywhere win approval and commendation. Consider us at your service. Simply telephone Columbus 3580.

Open Cars $2685 to $3500
Closed Cars $3000 to $4750

The Winton Company
Broadway at 70th Street



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Late 1916 model 56
LIMOUSINE

This car has been in service for a very short time. Speedometer shows 3,397 miles. An exceptional opportunity to purchase a high grade vehicle at a remarkable saving in cost. This car originally cost $6,356.00. Our resale price is less than half its original cost. For further information inquire of

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SEDAN—Special Aluminum Body. Self-starter. Best of condition. Car built for C. T. Silver's personal use. Will sell for $700. Phone 245 Franklin.

1917 STEARNS TOURING; seven passenger; practically new. ROSKAM-SCOTT CO., 1896 B'way.

LATE 1916 OVERLAND TOURING CAR, LIKE NEW, FULLY EQUIPPED, ROBES, MANY EXTRAS; $450. 148 EAST 29TH ST.

SIMPLEX TOWN CAR—1914, 50 horse; Martha Washington limousine; elegant bargain. ROSKAM-SCOTT CO., 1896 B'way.

FOR SALE: Rauche & Lang five passenger double drive electric coach, 1917 model brand new. Cost $3,000. Owner has never taken car from show room. Will make reasonable discount for quick sale. Car now on exhibition in Philadelphia automobile show. Address, S. ALOE, 1001 S. Broad St., Philadelphia.

1916 NEW KISSELL SEDAN; never used; bargain. ROSKAM-SCOTT, 1896 B'way.

HANDSOME PAIR BEAR ROBES; also two beautiful PLUSH ROBES, GENTLEMAN'S fur lined overcoat; also chauffeur's fur coat; perfect condition; no cash offer refused. PRIVATE STABLE, 148 East 29th St., near Lexington Ave.

PACKARD TWIN SIX—1-35 limousine; landaulet; like new; elegant bargain. ROSKAM-SCOTT CO., 1896 B'way.

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1916 CADILLAC SEDAN—7 passenger; bargain. ROSKAM-SCOTT CO., 1896 B'way.

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1916 PACKARD LANDAULET—1-25, 1-35, run 800 miles; like new; exceptional proposition. ROSKAM-SCOTT CO., 1896 B'way.