

UPHOLSTERY NEEDS CAREFUL ATTENTION

Seat Covers Are Real Economy to Car Owner.

REAL LEATHER IS SCARCE

But Many of Substitutes Used Look Just the Same and Are Really Better Stuff.

The ignorance of the average motorist owner in regard to the upholstery of his vehicle would be laughable if it were not serious and in the aggregate costing American motorists some millions of dollars every year simply because this necessary part of the car's equipment does not receive the care and attention that will keep it serviceable. Not long ago a new car owner was desecrating on the subject of the handsome Spanish leather upholstery which graced his car. A mere glance told that the Spanish leather was a substitute which would give quite as good service as the car owner thought he had. As a matter of fact, almost all the cars that have been turned out within the past several months have been upholstered in leather substitutes, which is so well done now that it can scarcely be detected from the genuine. Cars selling below \$2000 have not used the real leather in some time, simply because the supply was inadequate and prices enormously advanced. The military demands for leather are tremendous and little has been available for private enterprise. Suppose we examine briefly the methods of manufacture that go into the making of real leather and substitute upholstery.

All Kinds of Leather.
Leather upholstery comes, of course, from the hide of a steer. The tanneries receive the hides in what is known as a "green" condition—that is, with the hair and the skin unremoved. After going through the various preliminary processes of cleaning, hair removal, etc., the hide goes into a vat of weak tanning fluid. From this it goes into a stronger solution and then into a still stronger one and so on until the operation is completed, which requires about eight days. The hide has now become leather, but its interesting career has only begun. The next step in the process is a cutting machine. This ingenious tool is so accurately set and guided that the single hide, only a fraction of an inch in thickness, may be cut into almost any number of sheets of leather, even down to a thickness of tissue paper. Obviously, then, the term leather is merely a relative one. The leather may be a quarter of an inch thick or it may be as thin as a cigarette paper. All also being equal, the thicker the cut the more serviceable and long-lasting will be the leather.

Leather manufacturers have different names for the different cuts of leather. The top cut is known as the "buffing" and is used in the manufacture of bookbinding, pocketbooks and similar light articles. The best grade of leather is the one which comes under the buffing. From this second cut of leather we get the finest type of automobile upholstery that can be made. As a matter of fact, there are several more cuts that vary in value according to thickness and other considerations.

Substitute Often Is Better.
From all this it will appear just why the term "leather upholstery" does not necessarily mean what it is usually taken to mean. In the best grade of leather is unequalled a good substitute is infinitely better than a poor cut from the real leather. After the cutting operation the leather goes through a number of other processes. It receives a further tanning and is then made into a pliable. Finally, it is given various treatments to produce the gloss and finish desired. It is colored with pigments applied mixed with oil.

In the cheaper grades of leather—the thinner and lower quality—the surface is generally covered with a chemical compound which forms a sort of flexible film. Practically the same thing is done in making leather substitutes, so that the two products are almost identical, except that one has a leather base, while the other has a cotton cloth as a foundation. Leather substitutes consist in the final analysis of a base of cotton cloth, on which is laid a deposit of cellulose compound. These ingredients in somewhat different form are also the basis of many modern high explosives, so that the motorist of today may be said to be sitting on the first cousin to a charge of nitroglycerin. Stripped of detail, the process of manufacturing leather substitutes simmers down to treating cotton cloth with nitric and sulphuric acids to give it a gelatinous consistency, after which oils are added to make the product pliable.

Thickness Good Sign.
As with leather, the value of the substitute is governed principally by the thickness, not only of the cotton cloth, but also of the compound which is deposited upon it. This is not an invariable rule, but it is near enough to being so that the car buyer is justified in rejecting substitute leather upholstery that is thin and lacks substance.

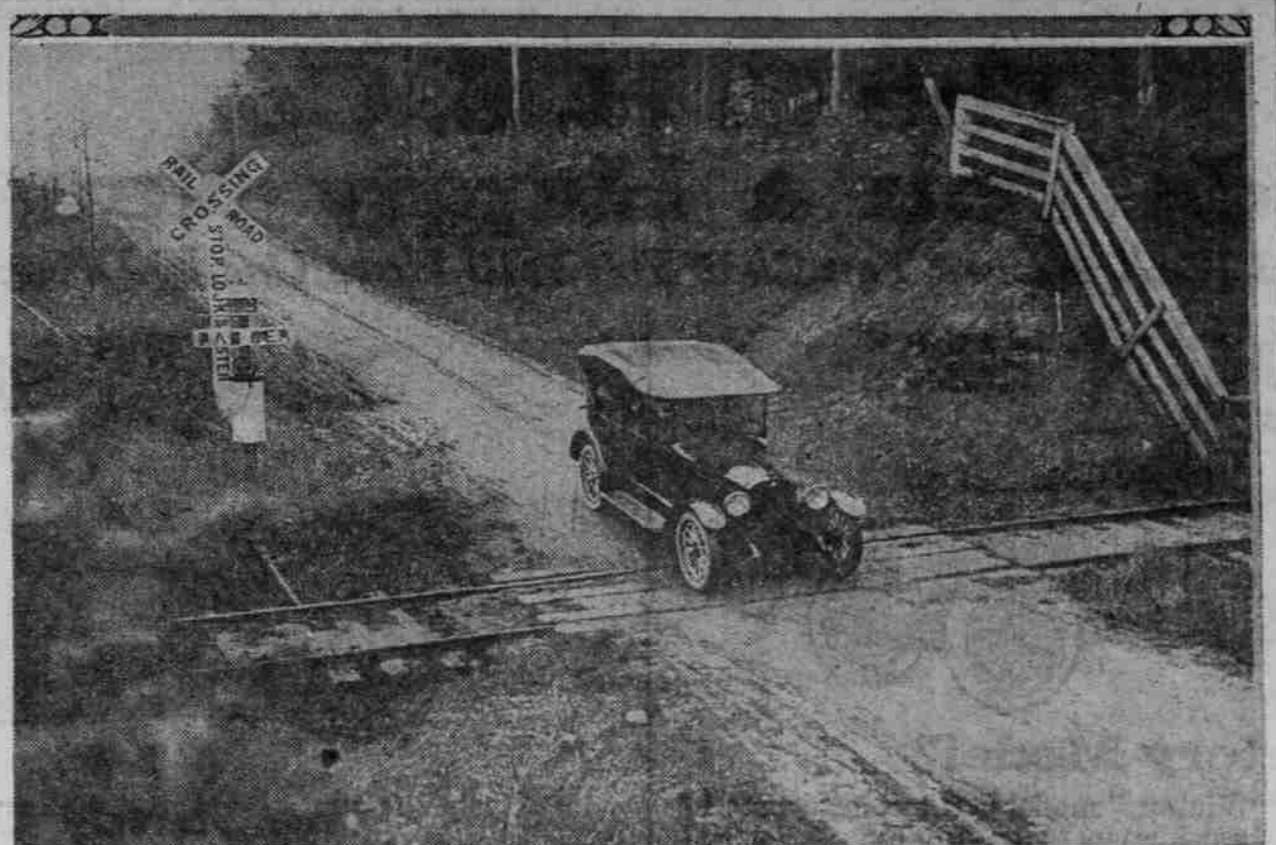
So perfect is the likeness to real leather that has now been produced in the substitute that "sharp" salesmen frequently pass the latter as the former on unsuspecting customers. But, as a matter of fact, the manufacturer with a good grade of substitute has nothing to apologize for. It will give excellent wear and will look exactly like real leather during its period of service, if a few simple attentions are given it at stated intervals.

To begin with, the sooner the American motor car public learns the value of the substitute the sooner it will begin to have needless expense for reupholstering vehicles. These covers protect the upholstery, whether it is real leather or substitute, and they will repay their cost in any car.

Secondly, gasoline should never be used to clean the upholstery, no matter which kind it is. The first step in cleaning is to clean off any dust or dirt that may be present by a brisk brushing with a stiff whisk broom. Next wash the upholstery with castile soap and water and then dry the surface carefully. Finally go over the surface with a cloth dampened in sweet oil or some standard upholstery dressing.

A successful method of preventing a cylinder head gasket from sticking to the cylinder or the cylinder head is to smear it on both sides with flake graphite mixed in oil. With this precaution the head may be removed several times without replacing the gasket.

AMONG THE THINGS THAT CAUSE AUTOMOBILE ACCIDENTS.



DANGEROUS GRADE CROSSINGS OVER RAILROAD TRACKS, LIKE THIS ONE, SOONER OR LATER RESULT IN A FATAL WRECK.

This grade crossing over the Hillsboro-Forest Grove branch of the Oregon Electric, near Garden Home, is a perfect trap. As the photo shows, the road descends to the railroad track, which is in a deep cut. The high bank, which is so well done now that it can scarcely be detected from the genuine. There is an electric signal, but even electric signals don't always signal. In Washington county permits this crossing to remain as it is, sooner or later there will be some funerals that should have been averted.

MAINE FALLS INTO LINE

\$4,000,000 FOR HIGHWAY APPROPRIATIONS NEXT YEAR.

This Is in Contrast to Fact That Only 20.5 Miles of Road Work Was Done This Year.

Four million dollars for the construction of roads will be available next year in Maine. Half of this money will come from the state and the other half from the federal government, and it is expected that 150 miles of new state highway will be constructed. These new pieces of road will be so located that they will largely make connection between sections of state highways already completed.

Labor will be the factor which will govern the amount of road work that will be done next year, and Paul D. Sargent, the chief engineer of the state highway commission, does not expect that wages of workmen will be any lower than during the present season, where men received from \$3 to \$4 a day, according to the locality. The experience of the highway department in hiring labor is that men who live near the cities, or rather where the work is nearer the cities, demand more pay than they do in the country.

All of the work to be done next year will be federal aid jobs because of the fact that the federal government participates in the cost of construction. Projects are being put into shape and presented to the federal government for approval as fast as possible, and the highway commission plans to let contracts as early as possible. With this thought in mind, the highway commission early in September let a contract for 2.5 miles of bituminous macadam road in the town of Vassalboro, Kennebec county. The contractor has been able to lay practically all of his culverts this fall and do part of the heavy grading.

Letting work early or in anticipation of next season's construction allows the contractors plenty of time to make all the arrangements for getting equipment on the job, for securing all necessary material and other details before the actual building begins. It is thought that this may tend to lower prices, as in many cases contractors can deliver and stack alongside the roads gravel, stone and sand during the winter months when their teams otherwise would not be busy and when large loads can be hauled on wheels.

WINTER DRIVING EQUIPMENT

Even in Coldest Climate, Car Can Be Kept in Use.

"Careful use of an automobile, and careful driving will make it serviceable in the coldest winter weather," says Stewart McDonald, president and general manager of the Moon Motor Car company, of St. Louis. "Even open touring cars can be made comfortable. We equip our Victory Six model with curtains that are airproof and our touring car is almost as comfortable as a closed car. This comfort can be greatly added to by use of one of the several heaters that are to be bought, with some kind of a hood cover to retain the heat of the motor. With a good antifreeze solution in the radiator, which

NEW SERIES STUDEBAKER

SPORT MODEL REFLECTED IN LATEST BIG SIX.

No Great Changes in '20 Series, but Special Six Is More Peppy Than Its Predecessor.

In these days of increasing automobile prices, advances naturally are expected along with the announcement of new models. But for once this rule is being broken, the Studebaker having set the precedent in the '20 series. The cars show no radical changes in appearance or design, but there are many improvements which increase efficiency, ease of handling and travel comfort. The influence of the recent sport model is reflected in the big six, in that the lines have been made straighter and snappier.

BIG AXLE CONCERN FORMED

\$5,000,000 COMPANY LOCATES IN CLEVELAND.

That City Declared to Be Crowding Detroit for Leadership of Auto Industry.

Cleveland literally becomes the axle of the automobile industry by the establishment there of an enormous manufacturing plant for the production of axles for both trucks and passenger cars.

The new company, organized by a group of strong financial interests and incorporated under Ohio laws, with approximately a capital of \$5,000,000 as the Eaton Axle company, will have its first factory unit completed soon and will be marketing its product by June, 1920. All the stock has been sold.

V. V. Torbensen, inventor of the Torbensen axle and one of the founders of the Torbensen Axle company, is chief engineer of the Eaton Axle company and J. C. Eaton, formerly president of the Torbensen Axle company, is president and general manager. Following inventions of Mr. Torbensen of a decade ago, the two founded the Torbensen Axle company, which started production in a small shop in New Jersey.

Subsequently the industry was moved to Cleveland, where it grew rapidly and is today conducted on a gigantic scale. With the Eaton Axle company Cleveland will be supplying the bulk of axles to the automobile industry. The products of the new company will be based on new inventions by Mr. Torbensen.

MAKING MORE CLOSED CARS

One Firm to Build 60 Per Cent of Output in Closed Models.

Manufacturers are at last beginning to sense the public demand for closed cars sufficiently to alter their ideas on the percentages of closed cars that should be produced. One prominent concern plans to make its output for 1920 60 per cent closed cars. Others have jumped from 15 to 20 per cent to 50 and 40 per cent. The closed car is gaining popularity, and the manufacturers who wish to make their production line up with the demands of the public should revise their ideas on the closed-car production schedule. Present business conditions in the automobile industry are abnormal, and the manufacturer can sell anything that he produces.

FIVE TONS OF SHINGLES IN THIS WHOPPING LOAD.



Another instance of the dependability of the motor truck. Some three years ago the Brown-Petzel Lumber company of Stayton, Or., purchased this 3 1/2-ton Republic truck to haul lumber and shingles. They replaced it the other day after three years of constant work with another Republic of the same size. There are 2 1/2 bunches and 60,000 separate shingles in this load, which at 180 pounds per thousand weigh 10,800 pounds, just a little over five full tons. This truck and its successor were both purchased from the Roberts Motor Car company.

AS WE approach the close of the most successful year of our business career and near another year we extend to our patrons and friends our best wishes for a **Happy New Year** fruitful with the results of well doing and conscientious endeavor. May the New Year bring you naught but joy and prosperity.

GEORGE K. CASSIDY

American Tire & Rubber Company
Broadway at Oak Street
on the "General Corner"

TRUCK MAN IS VISITOR

J. A. KNUDSON, OF SERVICE COMPANY, IN PORTLAND.

Representative of Big Factory Has Message That Demand for Trucks Will Be Enormous.

J. A. Knudson, western factory representative for the Service Motor Truck company of Wabash, Ind., arrived in Portland a week ago to make this his temporary headquarters in the northwest. He has under his charge the whole northwestern territory, comprising the states of Oregon, Washington, Montana, Idaho, Wyoming and British Columbia.

While in Portland he is working with the Service Sales agency, distributors for the Service Truck in the Oregon territory. Mr. Knudson brings word that the factory is getting back to a normal production of motor trucks, after having been engaged in war work. Normal production is 40 trucks a day, and this has been nearly attained.

The Service Motor Truck company builds seven truck models, ranging from one to five-ton jobs, but its main production is in the 3 1/2-ton model. It also builds a 3 1/2-ton special for road building work, which is very popular at present in the Oregon territory.

"This ought to be by long odds the biggest year the motor truck industry has ever enjoyed," said Mr. Knudson.

Another FEDERAL 1 to 5 Tons

The prosperity and happiness that our friends wish for us during the new year cannot come to us through their wishes. We must want them, must be desirous, must be progressive. To those whose business involves transportation, the Federal Motor Truck will not be the least of the agencies to make prosperity and happiness a realization.

William L. Hughson Co.
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A NEW SEDAN

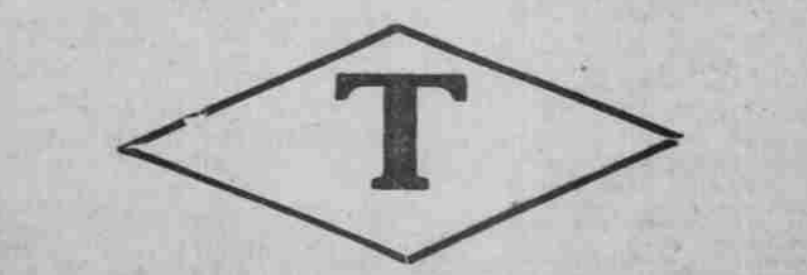
Exceptionally easy to enter and leave, the new Oakland four door Sedan is sensibly designed and most attractively furnished. The windows in all four doors are regulated by a convenient automatic controller; the side rear and back panel windows are fitted with roller curtains of grey silk; every essential convenience is included in its standard appointment. Like all Oakland models it is a thrifty and able car, suited alike to country and city driving.

Immediate Delivery, \$2050 Portland.
Wire Wheel Equipment \$75 Extra

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