

SUBSTITUTES FOR LEATHER MEET AUTOMOBILE'S NEEDS

The Sixty-first of a Series of Articles by an Expert for the Automobile Owner.

By WALTER SHIELDS.

Most of those who ride in automobiles these days sit upon cushions covered with a compound containing ingredients such as are used in making explosives. This does not mean that the seat cushion is likely to blow up, or that all the ingredients are there, but a cellulose compound is used in the manufacture of leather substitute, which is used on the great majority of cars to-day, and cellulose is used in the manufacture of explosives.

Few of us who ride really appreciate the vast amount of money and thought expended in the development and production of such an apparently insignificant part as the upholstery, yet it represents more experimental work than many units of the chassis. Not all cars, however, are fitted with leather substitute upholstery, for some of the older vehicles and the newer ones that cost about \$2,000 or more use leather. I mention the use of leather substitute upholstery in pre-war times it was not imperative to use a substitute, since the supply of leather was plentiful and the leather market is drawn upon from so many sources not previously existent that the depleted stocks are not sufficient to take care of all the automobiles that are being produced. It is quite true that there are different grades of leather, which shall be explained later, but rather than accept a cheap leather the manufacturer usually uses a good substitute and gets better results. Every owner and rider is interested in the manufacture of upholstery and more than ever in its care and the prolongation of its life.

Every one, whether an automobile owner or not, is familiar with leather substitute, for it has been in use for about forty years and was first manufactured, though not on a commercial scale, over sixty years ago. Most of the handbags, pocketbooks, cheaper grades of trunks and household furniture are finished in leather substitute, and this material has had similar uses long before the automobile came into vogue. Though the basic process in the manufacture of this substitute is very simple, the actual materials used and some of the work connected with its manufacture are not known because of the proprietary secrets held by the makers. Simply stated, though, the upholstery of your Ford or other cheap car, or your medium priced car, consists of ordinary cotton cloth covered with a coating of a cellulose compound.

This latter is nothing more than ordinary cotton treated with nitric and sulphuric acids to give it a gelatinous consistency; oils are added to make it soft, so it will flex after being applied to the cotton, and of course there is a coloring matter to give it the right shade to match the rest of the car. This thick, colored liquid is poured into a tank in a machine through which the cotton cloth is fed, and automatically the liquid is spread evenly over the cloth surface. The better the grade of covering the thicker the cotton base and the greater the thickness of the coating, which is obtained by applying successive coats. So when next you buy a car and have an opportunity of looking at a piece of the upholstery you can tell its relative quality by the thickness of the coating and the cloth. This same material is made thick and heavy enough is used for making tops.

Many salesmen in their anxiety to make a sale will call the leather substitute real leather, when as a matter of fact there is no necessity for trying to deceive the buyer. The upholstery may look like leather, have identically the same finish and feel, still it is nothing more than covered cotton cloth, but rather a good grade of substitute than poor grade of split leather. The housewife can profit by this advice also, for it applies as well to upholstery for chairs as it does for automobiles.

Real leather upholstery is made from the hide of a steer. In the manufacture of leather upholstery, in fact all leather, so many other valuable products are obtained that one might also call the leather a by-product, considering the amount of money obtained for the other things, such as soap, glue, acids, fertilizer, hair for brushes, etc.

The tannery received the hides from the slaughter house in a green salted condition, and upon arrival these are opened and the smaller portions, such as the ears, nose, lips and portions below the kneecaps, are removed. Dirt and salt then are removed by immersion in

NOW WE MAY DRIVE ON A LIBERTY ROAD

R. H. Johnston Describes Splendid Route Between This City and Cleveland.

By R. H. JOHNSTON.
Pres. The White Co. of N. Y.

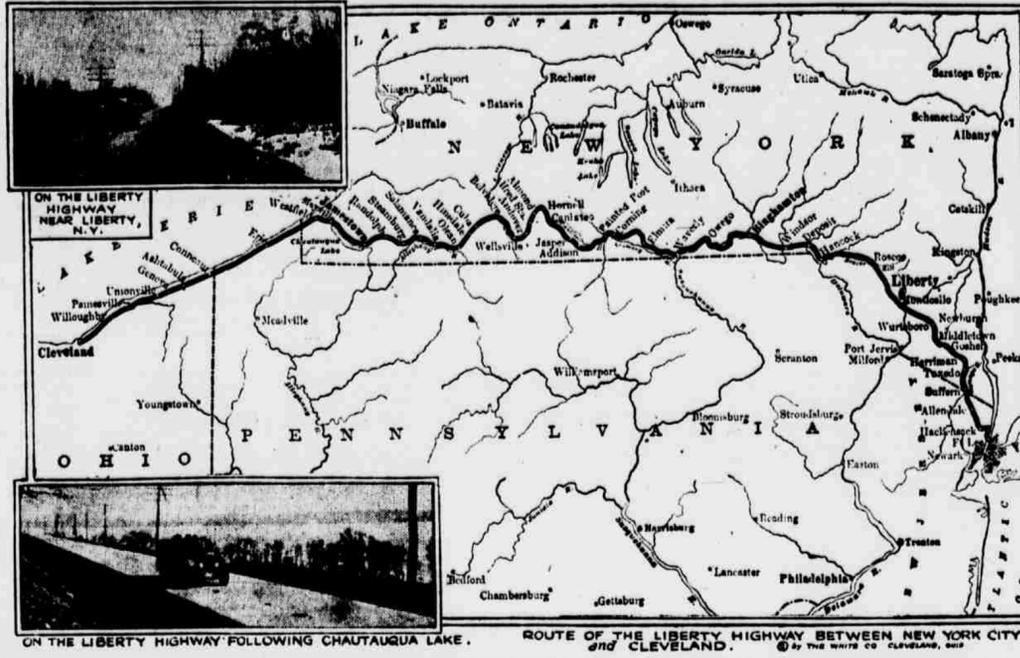
As a result of recent exploring trips I am able to announce that there is available a fine touring and "drive away" route between Cleveland and New York which has been almost unknown and unused up to the present time. It has long been the belief of the great majority of motorists that there are but two practicable routes between Cleveland and New York, namely, the Mohawk Valley route by the greater part of Syracuse and Albany, and the Lincoln Highway route by way of Pittsburgh and Philadelphia. I was among those who shared this belief and accordingly when I started a few weeks ago to explore the roads to determine the advisability of driving new cars and trucks from Cleveland to New York by the greater part of the Mohawk Valley route and then the Lincoln Highway route. As I found that both of these routes in their present condition were ones of very great objections I determined to find an entirely new route to be found.

After piecing together all the bits of information that were available and after studying the maps I decided to drive westward from New York by way of Liberty, Binghamton, Elmira, Hornell, Olean, Jamestown and in good condition all the way and from every point of view, most preferable to either the Mohawk Valley or the Lincoln Highway route between Fort Lee Ferry and Westfield is over the State roads, many of which are so new and have been subjected to an entirely new system of absolutely flawless. There are less than twenty-five miles of road between Fort Lee and Westfield which are not of modern construction and by "modern" I mean dustless, bumpless and rutless. Most of these twenty-five miles of unimproved road lie between Salamanca and Randolph. This stretch might be classed as "good country road." There are also short stretches of bad roads here and there in the outskirts of a few of the towns in the gaps between the State road and the paved streets.

The new route from New York to Cleveland is about 555 miles long. This is about eighty miles less than the Mohawk Valley route and is only about thirty miles longer than the Lincoln Highway route. Owing partly to the split of the times, and partly to the fact that the new route makes his way toward Liberty, N. Y., it seems to me that the new route should be known as the "Liberty Highway," and I will so designate it below.

A distinguishing characteristic of the Liberty Highway, aside from the fine average conditions of the road service, is the splendid scenery which unfolds to the tourist, as may readily be imagined from a study of the topography of the route. Most of the time the route follows the several valleys which distinguish the southern tier counties. The road winds picturesquely through these valleys, following the meanderings of the watercourses. At Buffalo, N. Y., just over the New Jersey line, the Liberty Highway meets the Ramapo River and runs with it past Tuxedo Park to Harbinger. Here the road strikes off sharply to the west and trends over higher and higher, by easy grades, through Goshen, Middletown and Wurtsboro to Liberty, just beyond Liberty the descent begins

The New Liberty Highway Has Been Discovered by an Enthusiastic Motorist.



ROUTE OF THE LIBERTY HIGHWAY BETWEEN NEW YORK CITY AND CLEVELAND.

into the basin drained by the Delaware River. First the road runs side by side with Little Beaver Kill, then with Beaver Kill as far as Hancock, whence the road parallels the Delaware River to Deposit. Along Beaver Kill and the Delaware River we found numerous places where the adjacent hillside were sinking a tendency to slide down over the road. Strong concrete retaining walls have been built along this road for miles at a stretch, but when a hillside starts to move the retaining walls can do but little to hold it back. Fortunately there are road gangs constantly patrolling the roads and as soon as one of these landslides occurs the road is quickly cleared.

From Deposit the road mounts over the hills, and after crossing the Susquehanna River at Windsor meets this busy stream again at Binghamton and follows it almost to Waverly. Beyond Waverly the road crosses along the banks of the Chemung River past Elmira and Corning through Randolph. Here the road again strikes over the mountains and descends to the valley of the Canisteo River a few miles from Hornell. From that city the road goes "cross country" to Wellsville, where it meets the gentle Genesee. This river is left sharply behind at Belvidere, from which the road leads through a wondrously beautiful valley through Cuba and Hinsdale to Olean. Then comes that perfect almost unused road following the course of the Allegheny River through Candalla to Salamanca. This river is followed still further to Red House, whence the road again carries the tourist over the hills so that the next body of water that he sees is beautiful Lake Chautauqua at Jamestown. Striding this lake for twenty miles the road leaves it at Mayville and drops several hundreds of feet in the next six miles to Westfield, on the shores of Lake Erie.

At Westfield the scenic part of the Liberty Highway is at an end. Here too is almost the end of the modern improved roads. New York State thought it wise to build a highway from its southeast corner to Westfield; but in the pre-war era of self-satisfied State complacency it did not think it worth while to connect up the New York State line with the Ohio State line. Ohio in turn did not go further east than Ashtabula with its good road system. This it happens that between Westfield and Ashtabula the road has not been systematically improved. The war time emergency has resulted in some isolated attempts to put this road in condition, but this part of the road is still the poorest link of the great Liberty Highway. From Ashtabula to Cleveland the roads are splendid. An idea of the generally fine condition of the Liberty Highway may be obtained from the schedule which I followed in my recent exploring trip in my sixteen valve White touring car. We made Elmira from New York the first day, Erie on the second day and drove from Erie to Cleveland on the morning of the third day. In other words, a touring party may safely figure on a schedule of 250 miles a day. In fact, a touring party which "keeps going" could easily cover the route in two days, in which case Hornell would be the logical night stopping place. Those driving trucks over the road should be able to maintain a schedule of approximately 100 miles a day.

My own confidence in the superiority of the Liberty Highway is shown by the fact that I have immediately commenced the driving of new cars and trucks over this route from Cleveland to New York. I strongly recommend to the trade that they send at least part of their "drive away" parties over the new Liberty Highway. Even if there were no other reasons, the overcrowded condition of the hotels, garages and even the roads of the Mohawk Valley and Lincoln Highway routes makes it advisable that a third highway should save the ever increasing "drive away" traffic.

Fortunately the Liberty Highway is well provided with both hotels and garages, and as for the roads they are practically bare of traffic. In fact the roads seem to be calling, "We want to do our bit." Come, ye army trucks and feed trucks and fuel trucks—come and use us.

HELPING TO SOLVE THE ROAD PROBLEM

C. H. Larson Has Some Good Ideas for Permanent Surface.

The dawning of the day of the motor truck means the death of the dirt road and means that the extensive road building programme for 1918 throughout the country must be carried out with the utmost thoroughness. In the opinion of C. H. Larson, president of the Motor Club.

Mr. Larson points out that the truck is certain to attain an even greater measure of popularity than it now enjoys, with continued congestion on the highways of the country having to bear a heavier burden than ever.

"With a constant stream of men pouring into the nation's encampments," Mr. Larson says, "the arteries of transportation should be of the best. Road conditions in the South, taken at large, have always been notoriously bad, yet some of the biggest camps—perhaps the greatest number of them—are below the Mason-Dixon line.

"It is good to note that the individual States in Dixie realize their immediate responsibility, because they contemplate spending vast amounts, although too much can hardly be expended, in improving their roads. Texas, for instance, has, I believe, the largest camp for soldiers in the United States, and is going to put \$25,000,000 into highways where she has only \$5,000,000 last year. Louisiana is spending six times what she did in 1917, and Alabama fifteen times. The gains noted are the greatest, but the progress indicated is general throughout the South.

"Motorists and laymen would do the nation a service if they would talk roads and talk them long and persistently. The public knows of course that they are extremely valuable, but it is not yet awakened entirely to the full benefit to be derived from them. And in talking roads talk hard roads, with a solid foundation.

"Roads of the type wanted facilitate transportation by motor truck (to say nothing of the valiant work they do in relieving the rail of a burden) by reducing the running time. This in turn saves gasoline and tires and cuts down to an appreciable degree the wear and tear on the car. Macadam roads, therefore, are vital to conservation.

"Here is a shining example of the harm that a dirt road can do. According to one who has just returned over the route, there is an eighteen mile stretch between Beaver Falls, Pa., and New Springfield, Ohio, that is effectively blocking shipments to the East via Pittsburgh and Philadelphia.

"The reason why the road is so much worse than the ordinary bog road," says this man, "is that the passage of heavy Government trucks, some with 40 h. p., has created ruts and the weight of the trucks has pushed down into the mud all the broken stone and other solid material which has ever been dumped on the road."

Helps Keep Roads Open.

The New York State Automobile Association is cooperating in every possible manner with various committees and organizations for the successful prosecution of the war, and keeping main roads through the State in how it will work may be seen in a comparison of sunset hours, as follows:

Month	Old Time	New Time
May 1	4:30	5:55
June 1	4:20	6:25
July 1	4:10	6:55
August 1	4:00	7:25
September 1	3:50	7:55
October 1	3:40	8:25

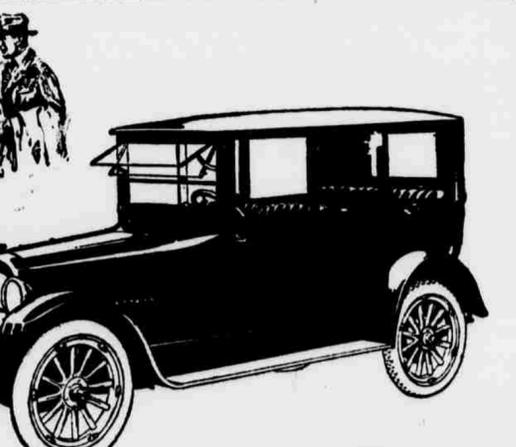
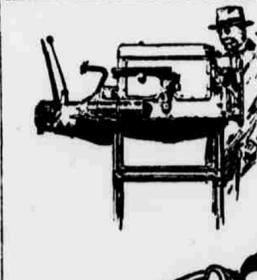
"Most motorists prefer daylight to night driving in the country, and most of us usually figure on driving as far as the light will permit. This being the case, will some bright mathematician kindly figure out how much extra gasoline will be sold this summer?"

More Daylight for Driving.

Changing the Time is Seen for Motorists.

"Judging from remarks made by our customers," says Harry S. Hout, president of the Hudson Motor Car Company of New York, "this will be a great season for automobile touring, as the majority of owners of our cars are making plans for extensive trips this spring, summer and fall. One reason for leading me to believe that motorists will tour more and further this year than ever before is the new daylight saving. It sounds reasonable. We can't, of course, add to the hours of daylight vouchsafed us, but with the clock changed and our habits still working, things will be vastly different.

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