

NEWS OF INTEREST TO AUTOMOBILE OWNERS

Always Ground Chamois Funnel When Straining Gas in Filling Tank

Generation of Electricity—A Static Charge by Friction of Non-Conductors Frequently Results in Electric Spark—Explosions and Fires So Caused Becoming Common.

"In the last few months many articles have appeared in the automobile papers giving accounts of fires said to have been caused by sparks resulting from charges of electricity generated by the straining of gasoline through chamolins or in other similar manners," writes Herbert Chase, chief engineer of the Automobile Club of America, in the June number of Motor Travel, the club's official publication. "A considerable amount of material has been collected by the writer on this subject, with the hope that some authoritative date might be presented to the benefit of club members. The bureau of standards at Washington has been conducting an investigation along this line, but as yet has made only a preliminary report. From this and other sources the fact has been established that frictional electricity is generated by the passage of gasoline through a chamolin or through other non-conducting material. This so-called static charge may under certain circumstances be sufficient to cause a spark, which, accompanied by certain conditions, may in turn result in igniting gasoline vapor, thereby causing fire.

"It is a fact long recognized by physicists that the rubbing together of two non-conducting materials will cause the production of a static charge. The electric charge thus generated will distribute itself over the surface of the non-conductors or other object in contact therewith. If, then, either body containing the charge is brought close to another body which is not charged, or which has a charge of lower potential than the first body, a spark will jump from one to the other.

"Gasoline itself is a non-conductor, as is chamolin and such material as rubber, canvas and the like, from which hose such as is used, for example, to deliver gasoline from the ordinary type of measuring pump into the tank of a car is made. The passage of gasoline through such a hose or through chamolins in a funnel is apt, especially in a cold, dry atmosphere, to produce a static charge on the surface of the funnel in which the chamolins lie, or at the nozzle at the end of the hose.

Poor Mixture Prevents Explosions. "Suppose, now, in filling a tank the funnel containing the chamolins be held in the end, or is otherwise out of contact with or insulated from the tank

TELL US YOUR TROUBLES

Arrangements have been made with an expert automobile man to answer any questions in reference to automobile repairs, engine or other troubles, through these columns each week. Address all such communications to The Editor Automobile Section, Advertiser, London, Ont.

to be filled. As the gasoline passes through the chamolins the funnel takes on the electric charge. If, then, the funnel be brought close to the tank of the car, or with any other conducting medium, a spark will jump from the funnel to the tank or other conductor. The same phenomenon would occur if the nozzle of a non-conductor hose used for filling purposes were held out of contact with the tank during the filling and afterward allowed to touch it. If this spark occurs at a point where the gasoline vapor is mixed with air in certain proportions an explosion follows, and a fire is almost certain to result, providing the heat of the spark be sufficient to ignite this mixture.

"The fact that accidents have not occurred more frequently is presumably due first to the fact that the heat of the spark is not always sufficient to ignite an explosive mixture, even though this mixture exists in the region where the spark occurs, and, second, more often because the proportion of air to gasoline vapor is not such that ignition can occur. I. e., the mixture is either too rich or too lean.

"Atmospheric conditions have much to do with the production of so-called 'static' charges, or at least with their distribution. Thus, if the air be warm and damp the air itself is a sufficient good conductor to preclude the possibility of a charge of high potential collecting on any body exposed to the air. On the other hand, if the air be cold and dry, a condition which frequently exists during the winter months, especially at points away from the seacoast, a charge of high potential may be collected on the body and dissipated in the form of a spark jumping to another object or to the earth. This same phenomenon may frequently be observed when a comb of hard rubber is passed through the hair in the presence of a cold, dry atmosphere.

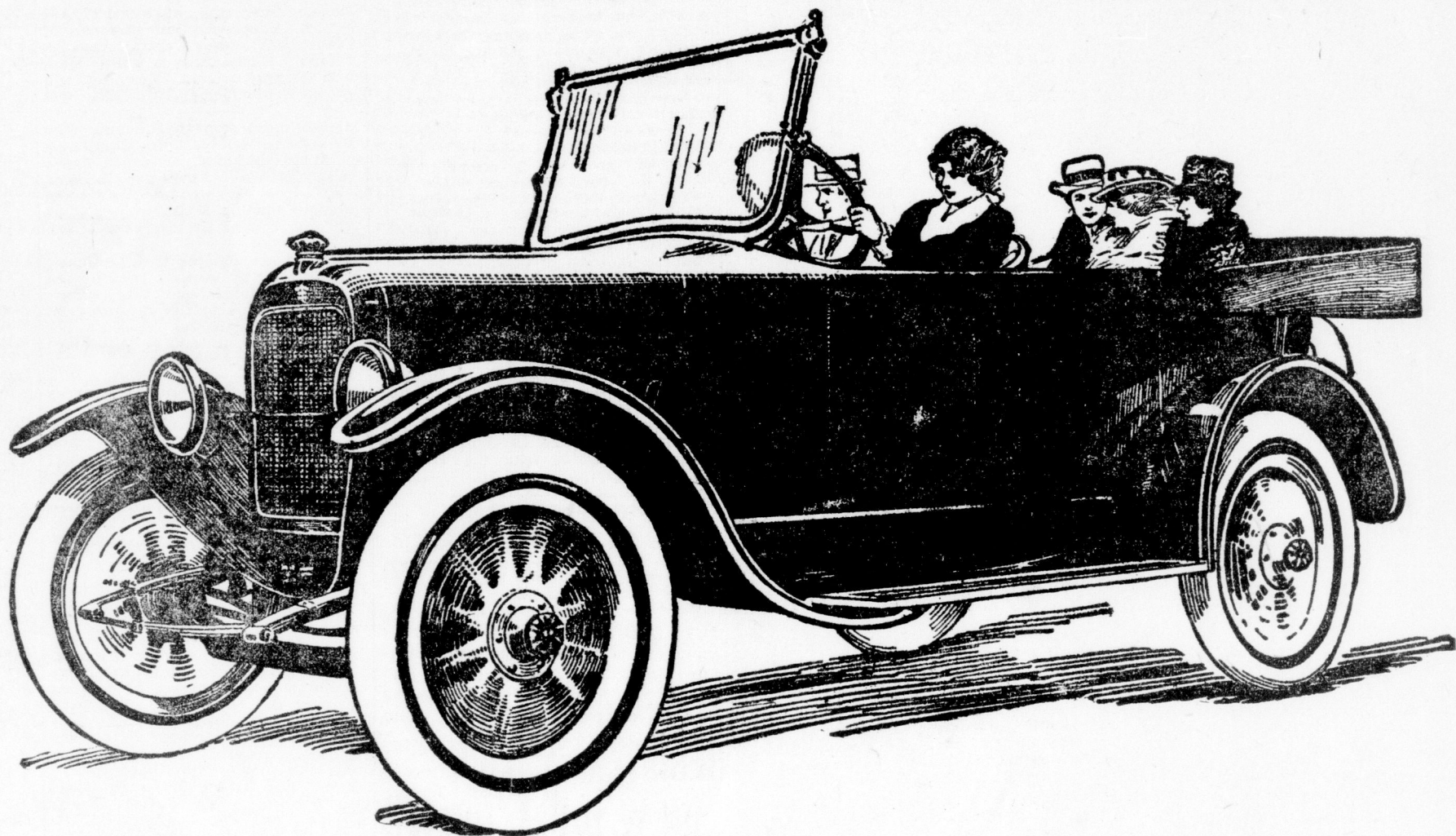
Keep Metal Parts in Contact. "To prevent the possibility of fire contact with or insulated from the tank

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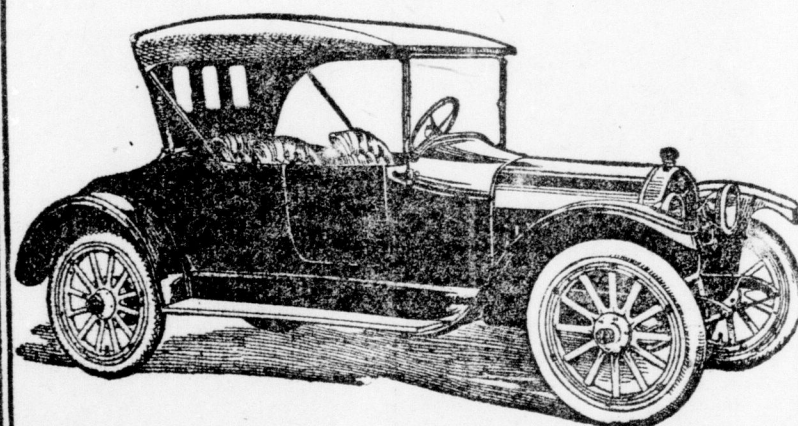
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8—38
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—the de Luxe Eight of super-power—the aristocrat of motordom. For sheer beauty of outline, luxury of appointment and even flow of power, the Briscoe Eight-38 leaves nothing to be desired.

114-inch wheel base—French stream line body—full cantilever rear spring suspension—and every refinement that comfort suggests.

The price includes every accessory.



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Just as Benjamin Briscoe created a new era in motordom when he brought out the Briscoe Four-38 and Eight-38, so too, motor history begins all over again with the coming of the Briscoe Four-24 at \$825, the car with the half million dollar motor.

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It is a car to give you everything you could ask for in the way of style, attractiveness, comfort and equipment, with the minimum cost of upkeep for tires and gasoline.

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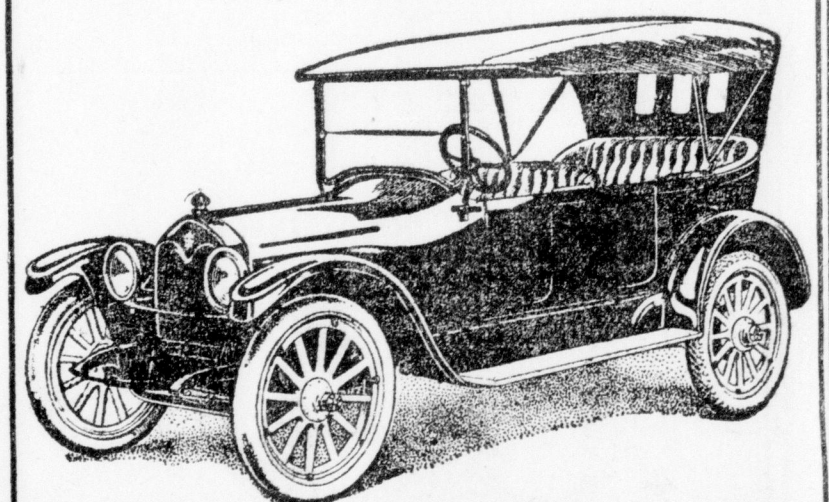
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ANALYZED WATER GASOLINE SUBSTITUTE

"If, as we have been credibly informed, the car of the future is to be propelled with 'broken-up' water, there is little need to worry over the gasoline problem, says Motor West. Louis Enright, an inventor, has solved a chemical which, when mixed with water, produces a compound which acts perfectly in an internal explosion motor. It is asserted that Henry Ford is willing to buy the Enright formula in order, presumably to pass it along free of charge to a gasoline-hungry world. Speed the day!

If the chemical be what the inventor claims for it, and if Mr. Ford buys

the secret and hands it to the world, we opine that he will confer a greater benefit than followed upon his attempt to get the European combatants out of the trenches.

Maxim is also investigating the commercial value of the discovery. He is reported to have admitted securing an option on the Enright patents.

Little Fairy Tale.

The story of a recent test of the Enright gasoline substitute reads like a tale from the Arabian Nights. A pitcher of drinking water was drawn from a faucet in the inventor's barn, and enriched with the greenish contents of a small vial, which he took from his pockets. The mixture was poured into the fuel tank of a small car—the tank having been previously drained of every drop of liquid.

A couple of turns of the starting

crank and the engine roared fiercely with an open throttle, running evenly and true without missing an explosion. The testers climbed into the car, and drove it all around the Long Island village, which claims the inventor as one of its most estimable citizens, and which is due to become world-famous if Enright "makes good."

Said To Be Simple.

The inventor claims that his compound is susceptible of simple analysis, and fears that he will be compelled to dispose of his discovery for a comparatively small price. The ingredients are so cheap and common, he says, that no one could possibly hope to "corner" them.

Mr. Ford says the Enright process is the breaking up of water so that the hydrogen may be released, the idea not being a new one, and that the chemists

have been working along the same line for some time; but Enright has evidently "beaten them to it." He says the principle is right, and if the fuel proves to be what the inventor claims, he will buy.

Meantime, the gasoline makers do not seem to have been stampeded by the news.

WHAT'S VOGUE IN FADS AND FANCIES FOR FAIR MOTORISTS

Bolivia cloth is used for two smart extra coats. One is in kingfisher blue and is lined with yellow crepe. It is made in the very full-skirted fashion of the winter coat, is shorter in front than in the back, and is gathered into

an oddly-shaped yoke. The collar and cuffs are corded with white satin, and amber and ivory buttons are used down the front. The other coat is of deep tan bolivia cloth, with a blue lining and blue satin band trimming. It is in a full model, pleated to the form of a yoke in the back, and gathered in front, where the gathers are held in place by a half-belt girdle made of four strands of the cloth, satin lined. The girdle and convertible collar are held in place by large flat bone buttons, that are laced onto the coat with blue silk cords.

Reversible silk sweaters are prettier than ever this year. They are striped on one side and plain on the other. One with pink and white stripes with a pink border on one side has a solid pink reverse of a deeper shade. The sash has to be

changed when the sweater is turned, for there is a full complement of buttons on each side. The fringe sweater is Scotch plaid, has a high belt and deep collar. Around the bottom there is a knotted fringe and a narrower fringe edges the collar.

Hat boxes for the running-board are among the late offerings. They are so arranged as to carry two ordinary-sized toques and a rolled soft hat. At the bottom there is the usual cushion for hatpins and a pocket for veils is at the top.

Nestled paper drinking glasses the size of the usual soda water glass are pleated with a rim, and make excellent lemonade glasses. They are very strong, and, of course, may be cast aside after being used.