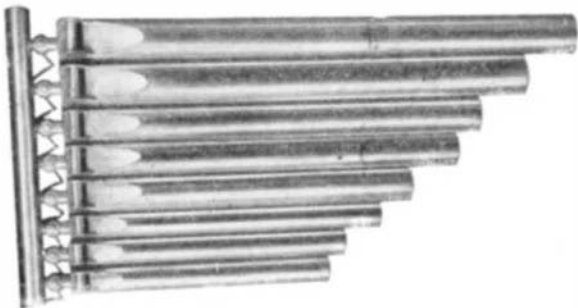
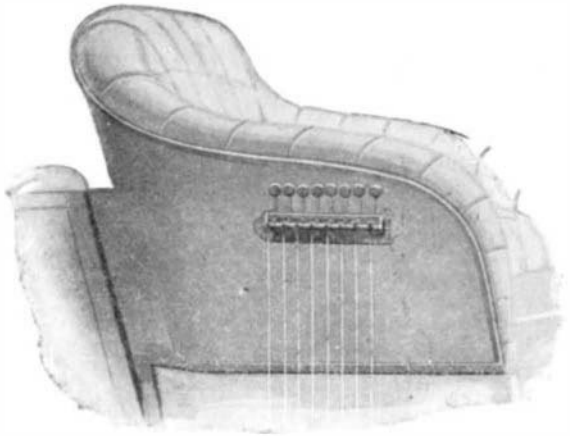


Automobile Novelties and Improvements.

THE GABRIEL HORN.

During the past year many large cars have been fitted with a compound horn, or whistle, giving a musical



EXHAUST-BLOWN HORN SOUNDING AN OCTAVE.

note of varying pitch and intensity. This horn is worked directly from the exhaust pipe of the motor, and it can be applied to any multiple-cylinder car. An improved horn of this type, having eight separate pipes, has recently been put on the market. The new horn is a sort of miniature pipe organ, being operated by a keyboard and being capable of sounding a full octave. The improved horn can be made to play a tune when a musically-inclined person fingers the keyboard.

DANGER SIGNS FOR AUTOMOBILISTS.

More than three hundred accidents to motor-car tourists have been reported in the United States and Canada during 1905, many of them resulting fatally. It cannot be said that these accidents were wholly due to rapid speed or reckless driving, for some of the most serious ones happened to automobilists who are known to be prudent and careful in the management of their vehicles. Most of them could have been avoided by a better knowledge of the danger points, or by some warning by which the tourist could have been advised of the proximate peril. The truth is that in many parts of the country, and especially in those sections which are most picturesque and attractive to the tourist, the highways are too narrow and winding and are often skirted by deep unguarded ditches and dangerous gullies, and crossed by railroad tracks at points where the tourist would have little reason to anticipate them.

To lessen these perils as much as possible, the American Motor League has called upon its consuls, members, and proprietors of official stations, in all the important States where touring is most popular, to take up the work of erecting danger signs and

guide boards, by which the tourist may be forewarned and his course directed to the avoidance of these pitfalls. Many of these danger signs have already been put up, and the Pittsburg Board of Consuls of the American Motor League has been particularly active in western Pennsylvania in putting this work in evidence. The league sends out stencils, from which these signs can be easily made by a man of ordinary skill, and in some cases the completed signs are sent out ready to be put up.

Blanks are being sent to automobilists in several States, with letters requesting information as to points where these signs should be erected, and a contract has been made with a firm in central New York for a large number of signs, which will be put up in place within the next few months. It is believed that before the end of 1906 more than three thousand of these signs will be placed in different parts of the United States.

ELECTRIC LIGHT FOR CLOSED CARRIAGES.

The little lamp shown herewith is intended to be used in the roof of a Limousine or other closed body, and to be run from the ignition accumulators with which all large cars are supplied. The lamp is fitted with a silver-plated reflector mounted in a supporting ring. In front of the reflector an incandescent lamp of special design is hung on silver springs mounted in ivory bushings. An oval, beveled, plate-glass cover locks on the rim, and effectually protects both lamp and reflector. The initials of the owner of the car can be cut in this cover, if desired. The lamp is intended to be placed horizontally in the roof of the vehicle, and not in the position shown in the cut. The hanging of its bulb on springs makes the latter specially durable for automobile service. Although the light is shown here with a switch upon the base, it is usually wired with a switch in some convenient place where it can be readily reached when one wishes to turn on the light. If it is necessary to run the wires on the surface of the woodwork, a polished wood back of mahogany or oak with grooves for the wires can be used. The lamp is about six inches in diameter, and projects about two inches from the roof of the carriage. It is adapted for a four, six, or eight-volt set of accumulators, and will furnish from four to eight candle-power, according to the bulb that is used. Another convenience about a car is a small electric light on a flexible cord, for use in case of a breakdown.



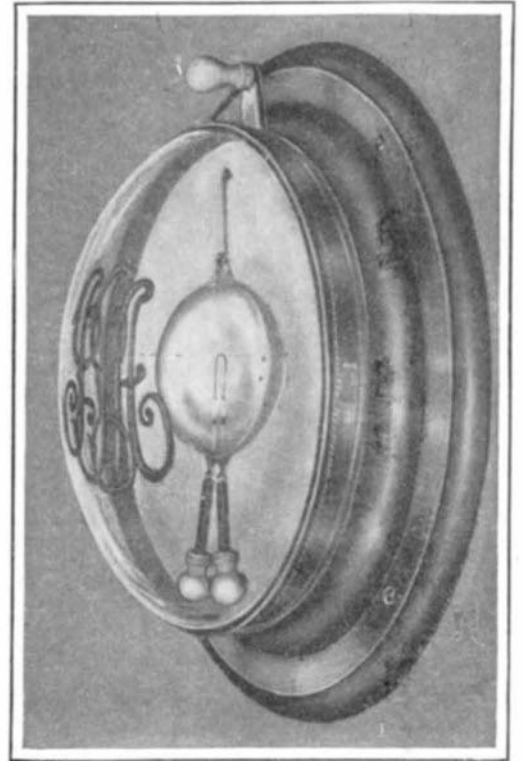
ONE OF THE AUTOMOBILISTS' ROAD SIGNS THAT ARE BEING LOCATED IN DANGEROUS PLACES.

ulators, and will furnish from four to eight candle-power, according to the bulb that is used. Another convenience about a car is a small electric light on a flexible cord, for use in case of a breakdown.

NEW SPRING WHEELS.

Among the new spring wheels which are coming out

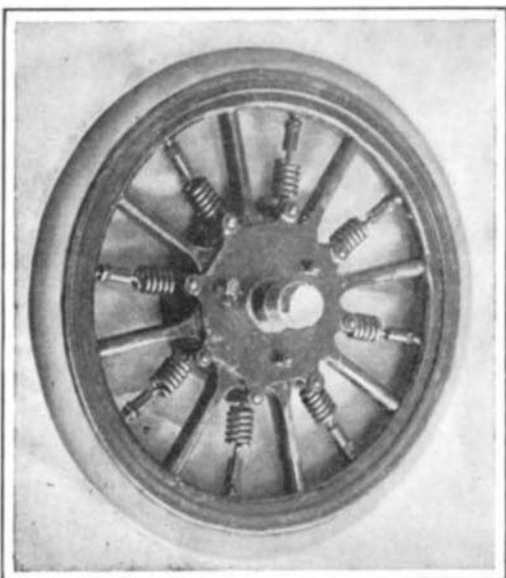
in France we note the S. Guigner wheel. It is manufactured by Bourguin & Lebon, of Parthenay. It has a central wood disk which carries the spokes, also of wood, and upon the wood disk are placed two metal plates carrying the axle, but being independent of it and able to allow for the play required by the springs.



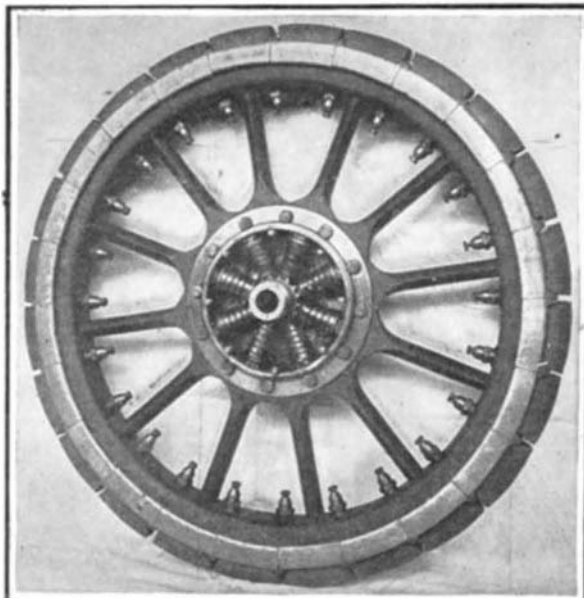
CEILING LIGHT FOR CLOSED CAR.

The two metal plates completely cover the wood disk on both of its sides and are joined by three bolts. The wood disk has large openings which allow the bolts to pass through. The metal plates are also connected at the rim by eight cross-pieces carrying the springs. The elasticity of the system is obtained by coiled springs which connect the two metal plates with the inner rim of the wheel. The springs are attached to the rim by a special device which seems to hold them in place and also to regulate the tension. The springs can be taken off in a few seconds. Owing to this construction, the car is suspended to a certain extent at the center of the wheels by means of the coiled springs, which work by traction and by compression and give a good effect in deadening the shocks. The center of the wood disk has an opening which allows the axle to take the necessary play. The three bolts connecting the two plates carry washers or separating pieces for the plates, and at each side of the bolts is a rectangular cavity in the wood piece which carries a coiled spring working against the bolt by compression, or else a rubber block serving the same purpose, so that we obtain a deadening of the shock at the time of sudden starting or a quick stop. To complete the elasticity of the system the central part of the wheel carries a heavy rubber washer or cylindrical piece which is used to complete the action of the springs at exceptional times, under a very heavy shock. By the above combination the inventor claims a very great ease of movement combined with all the desired rigidity of the wheel. The expense of keeping it in order is reduced to the changing of the rubber tires, which are solid, and it is recognized that a good solid

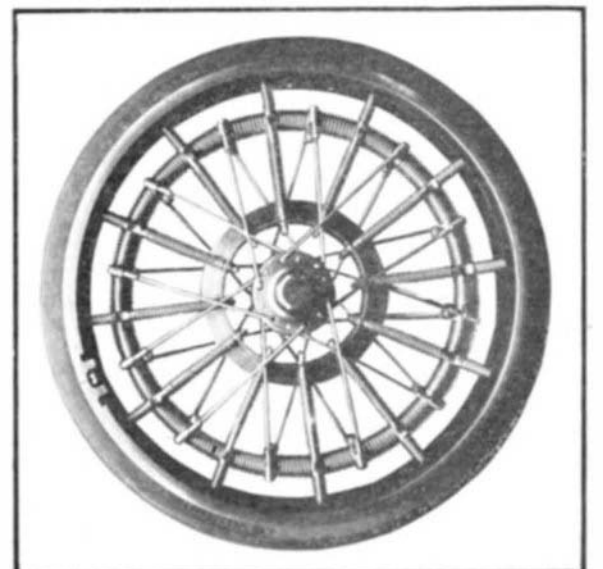
(Continued on page 38.)



WHEEL WITH FLOATING HUB SUSPENDED BY COILED SPRINGS FROM THE RIM.



WHEEL FITTED WITH SECTIONAL TIRE AND SPECIAL SPRING-SUPPORTED HUB.



WHEEL WITH AN INTERNAL SPRING DRIVING WHEEL.