

is not quite so thermally double or single cylinder of horse power. This, however, small item to be set against advantages resulting from sub-cylinders, says a writer in don.

as to actual figures is rather to give an idea of how two, one being a four-cylinder and a two, both rated at twelve and having similar loads and others, other factors also being our would average twenty-two million as against the two-cylinder-six miles.

Drivers Obtain Results.

It is obtained with a good buretor without any special I would not go so far as to represents the best possible, good average example obtained owners who can handle their y, and who know all the tips waste of fuel.

ter of lubricating oil used in t is quite impossible to ven- figures, but one would be on e in assuming that a four- would require double the ed by a two-cylinder car. ore bearings and more cylin- to be maintained in perfectly ondition. But even with the least economical system of he two-to-one proportion is owance. On the other hand, ally good lubricating system, d mechanical supply to all ces and the surplus oil which into the crank case being nd over again, the oil con- ould not be twice as much for the two-cylinder.

majority of cars on the road, pe they may be, are over- excepting those which have matic devices. Very few car to risk experiments on oil but it is, nevertheless, a would pay in the long run to careful observation the min- ity upon which the engine ly run. It is not always rec- as an engine is more and it requires considerably less han when in its new condi- 1,000 miles the running and ces, especially piston rings walls, have worked up to a sh, and the merest film of tween them is necessary to ction. Granted, then, that nders an engine has for a the more fuel and oil will be ere no compensating advant- et against these items? Un- ere are, and especially in the ear and tear of tires.

Drivers Require Attention.

making, the upkeep of a car

MOTOR RACES INCREASE

CHALMERS - CITES GROWTH

AUTO BUILDER THINKS SPEED CONTESTS WILL NEVER DISAPPEAR AND COMPARES AMERICAN AND EUROPEAN SMALL CARS.

Some men prominent in the automobile world have said recently that motor car contests are an evil rather than a help to the industry as a whole, and that the time is not far distant when they will no longer be held. I can not agree with this opinion. I believe the next few years will see more automobile racing and other contests than any other similar period has witnessed. And I believe these great contests will be of benefit to the industry, because they will be governed by sensible rules and in all probability managed by those who naturally have the most vital interest in seeing that contests are conducted under the most favorable conditions—namely, the manufacturers.

The result of most of the racing heretofore has been such as to lead the public to think that the Europeans "have it all over" us Americans when it comes to building motor cars. The real facts, however, are not by any means so discouraging.

Reverting to the small car matters as being of considerable immediate interest to American constructors, upon the face of it, taking into account the extremely high speeds made in recent foreign small car races, it would appear that there exists abroad some magical touch of design, materials or construction far in advance of anything American. But this is not really the case.

In the first place we must remember that the character of European small car contests has been very different from anything over here. Here, except in the case of the last Savannah event, every effort has been put forward to limit the contesting cars to a construction at least approximately in accordance with the regular stock product of the manufacturer entering.

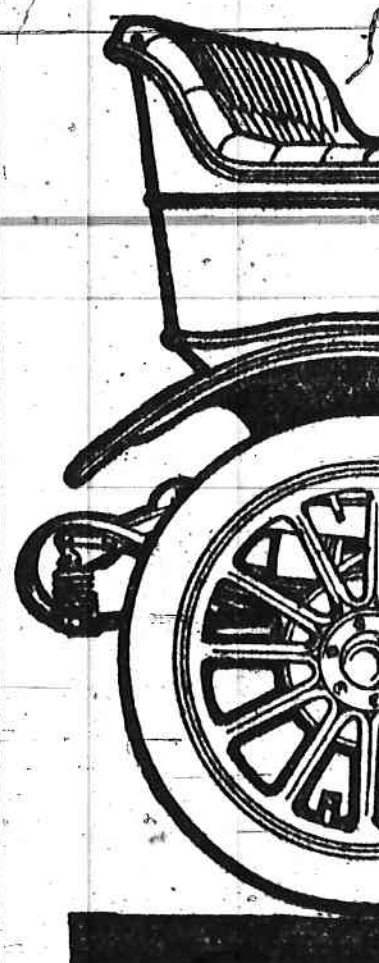
Even at Savannah, where leeway was given the maker along lines of special construction, insufficient time was allowed between the dates of the announcement and the running of the event to per-

TROUBLE WITH ALL THE

President Anderson of Gives Motorists

Adv

Every once in a while manufacturer hears of me state that their only re car is on account of th This mistaken idea-ground principally on who are negligent in care of their tires, is mobile trade at large manufacturers in the v cent interview with J dent of the Hartford pany, on this point, h very much to be regret



a it

...when in its new condition... 1,000 miles the running and... especially piston rings... walls, have worked up to a... ash, and the merest film of... between them is necessary to... ction. Granted, then, that... linders an engine has for a... the more fuel and oil will be... ere no compensating advant... et against these items? Un... ere are, and especially in the... ear and tear of tires.

Requirements Require Attention.

...speaking, the upkeep of a car... year or two is mainly a mat... Fuel and oil can always be... if a prospective car owner... covering a mileage per annum... 0, he can write off within a... what his oil and fuel ac... ce. He can be guided by the... of others who drive cars, about... ight and power and strike an... res, however, are the un... ity. No one, however, ex... be, could honestly say to a... car owner that his tires will... t so many miles without re... hing spent on them. But the... btaining in the running of a... r engine are appreciably more... the life of the driving tire... gle or two-cylinder, for the... on that the driving stresses... to the tire are so much... is the rapidly alternating... stresses transmitted from the... h tell so much against the life... But there is a further saying... rarely receives due recogni... ly because it does not show... or two, and that is in sav... ing tear of gears. This is ob... use there is bound to be less... gears required with a four... l with a two-cylinder.

...we come to consider cost of... parts adjustments and over... the four-cylinder shows up... against the two or three... line and this, I think, must... obvious. Take the simpler... plug replacements. On a... y with dual ignition there may... h of plugs—good plugs still... price and one must always... to replace a few of them... are unless, as is apt to... bearing witness when they... several have generally to be...

...cylinder engine requires... from which it is... matter for the... a slight... that... of... the...

...of anything American. But this is not really the case.

In the first place we must remember that the character of European small car contests has been very different from anything over here. Here, except in the case of the last Savannah event, every effort has been put forward to limit the contesting cars to a construction at least approximately in accordance with the regular stock product of the manufacturer entering.

Even at Savannah, where leeway was given the maker along lines of special construction, insufficient time was allowed between the dates of the announcement and the running of the event to permit of the design, construction and test of any special racing car.

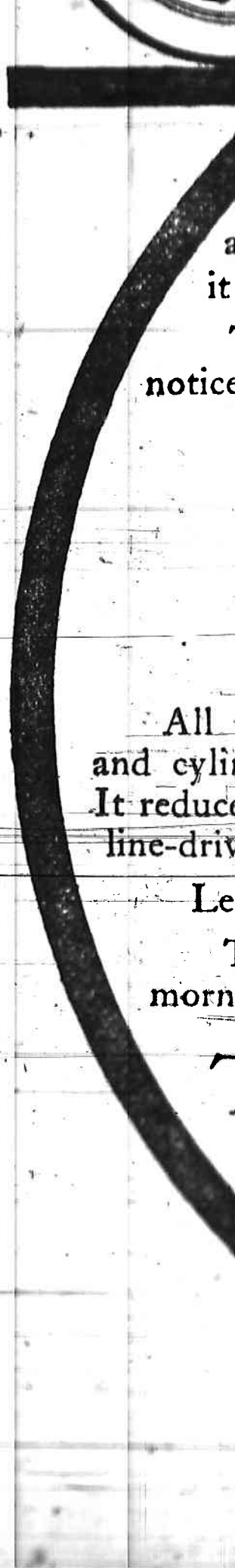
It must be remembered, further, in connection with this event, that for six or eight weeks the organization controlling 90 per cent of the contests throughout the country was holding over the head of each individual manufacturer the threat of disqualification should he permit a car to be entered.

Savannah Small Car Race.

Glance for a moment at the Savannah result—a foreign car of a make perhaps acknowledged abroad to be the equal of any car there built—this particular car, a special one built for racing, lightened even to the extreme extent of frame drilled full of holes, fresh from tests and trials in England, and sent here in perfect condition in ample time to work out over the course—this car in a distance of 196 miles and a total elapsed time of 3 hours, 43 minutes and 33 seconds gained a total of six minutes and twelve seconds over its nearest competitor, an American stock chassis, and ten minutes and twenty-two seconds over its next competitor, also an American stock chassis. It is a matter of record how much delay from tire and other trouble was experienced during the race by the three cars. The behavior of the other foreign cars is also a matter of record.

It is conceded that the winning car ran a beautiful race. It must also be conceded that the American cars finishing second and third were both faster than the winner, and that their delays were occasioned by insufficient or improper preparation in one case at least (the third). It must also be considered that to make the third car eligible in the event it was necessary to remove the bore of the... way lightening the stock chassis to keep... with the... all of... would have very materially affected... result.

The race was a fair one and was... conducted... to the... of... the...



...a
it
notice

All
and cylinder
It reduces
line-drive

Le
T
morn

