

AUTO FANS MADE BY THE SPEEDWAY

Local Race Course Increases
Love for Sport by Leaps
and Bounds.

NOTED DRIVERS ARE ARRIVING

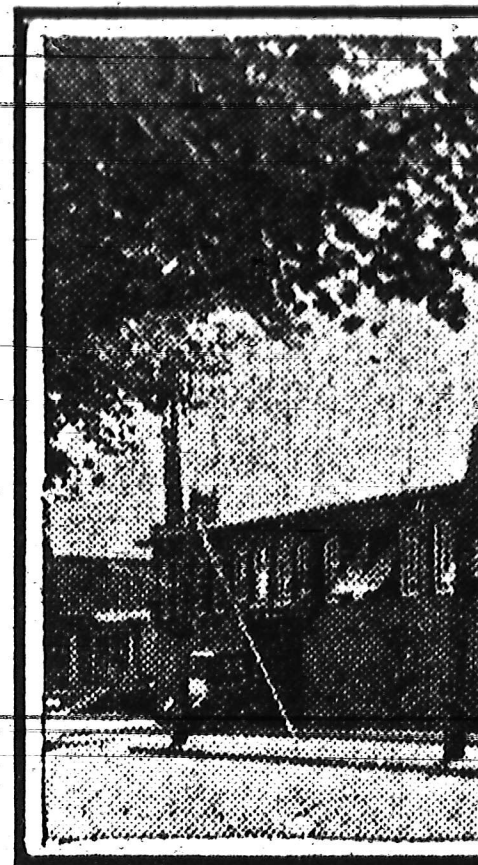
Pent Up Longing to Witness
Motor Contest Will Soon
Be Satisfied.

The stranger who visits Indianapolis may well imagine that the city is in the throes of speed mania. The Speedway is developing a class of fans that do not exist any other place on the American continent.

Now that the racing drivers are gathering and entering the events at the various courses, the people are becoming posted on racing and stock cars and becoming the most critical observers.

Monster automobiles in racing trim chug through the main thoroughfares throttled down to low speed and throbbing with suppressed speed held in reserve. Even the small boys are familiar with the most noted drivers.

Herb Lytle in his red Apperson Jack Rabbit is readily known by the small boy at a glance, while the public is always familiar with his car and achievements. That streak of red, white and blue which moves along with a muffled roar, volleying through the iron throated exhausts, the driver clad in a blue coat and with goggles pushed high, chewing a cigar, is Barney Oldfield. He is a familiar figure, and known everywhere in the city, followed by the small boy and envied by the crowd.



EXPLAINS CAR'S S

EXPERT CITES AUTO

VIBRATION OF FRAME OF CHINES GIVES RISE TO S CONDITIONS BY EX ENCED DRIVERS.

When the vibration of any machine is spoken of the vibration is that of the frame of the machine, that is, the portion of the machine which it is normally attached to its surroundings or supporting structure.

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Boys Know Drivers.

The tall lean unconcerned driver in the great low green machine snorting through its six cylinders is Johnny Aiken, in the National Savannah cup racer. Other drivers there are and well known.

And what of these men, these pilots of monster racing cars that must travel at excessive speed, these men that court death at every turn of track and road. They are the pick of the nerviest men in the world.

Gladiators in the arena possessed no greater nerve than they, and now and then their number is decimated by accident which cripples and maims them. Is their mission one of speed only, or back of all this preparation and hazard what more is to be achieved? The manufacturer realizes that to perfect his product he must learn all its weak parts.

Driving on the public streets does not teach him what they are. Excessive speed for hours will cause an engine that would perform under ordinary conditions to almost burn up, and this is what he desires to know. Hence he looks for these deep-visaged warriors, who have the nerve to let the car out just a little faster than any one else, men who love to combat with each other in this duel or flight against time and each other; men who glory in the speed, speed, and still more speed.

Race Tests Skill.

With muscles drawn and tense; clutching the wheel that the smallest variation means hurling them into eternity, guiding these snorting monsters through the long hours of a race, careening, lurching and swaying from side to side of the course, watching contestants, score boards that whirl by in mad jumbled confusion, signals and signs that advise them of their position in the contest. Risking all and willing to risk more if necessary, to carry glory to the name of the car that they represent. Watch these stern-faced drivers, covered with dust from the course, as even a dustless course will sear their faces, causing the great deep lines to show, with a determined/deathlike stare. Hour after hour whirls by and they stick to their post, smiling in grim determination or in despair as they lose an advantage through accident or delay, as the slightest mishap means that they are losing time which must be made up and this means additional hazard which they are all too willing to risk.

As they stop at the pits to replenish fuel and tires, they look the picture of weary exhaustion, though the skill with

which it is normally attached to its surroundings or supporting

Although a machine or engine attached to any foundation, or anchored, may show excessive motion at all, says Motor Printer, the center of gravity of the portions taken collectively, is not a fundamental fact which is explained by saying that motion as a whole in a self-contained system are invariably due to forces from without."

It follows in consequence of this principle, that if a running engine is suspended, its frame will, by compensating for the movement of the piston, so that the center of gravity of the whole engine has no change of position. Under these circumstances the whole frame of the engine is in every moment in the opposite position to that of the moving parts with a velocity inversely proportional to the respective masses.

Points to Single Cylinder

A single cylinder engine may be taken as an elementary study in vibration. The moving parts in a single cylinder engine consist of the piston, connecting rod, and crank shaft. Now the motion of the crank shaft is rotary, and a rotary motion must be balanced by rotary balance weights which are arranged of such magnitude as to bring the center of gravity of the whole engine exactly on to the crank axis. The balance weights are arranged symmetrically about the crank shaft. A crank shaft will, when running, be perfectly balanced, that is to say, its center of gravity is stationary, and its motion will not cause vibration in the engine frame. The piston has a straight line motion and must not be compensated for, or balanced, by a rotating part. The piston causes a straight line vibration of the engine, whose magnitude bears the same proportion to the stroke as the weight of the piston bears to the weight of the remainder of the engine. The connecting rod is regarded as partly rotational, and must be balanced by a suitable increase in the balance weights on the crank, thus adding to the weight of the piston and the vibration it causes.

Shows Definite Cause

It is thus seen that the definite cause of vibration in a single cylinder engine is its piston motion. The piston produces counterpart linear vibration of the frame.

Besides this main cause of vibration there is in a single cylinder engine a second cause, which is under circumstances quite as marked as the first. It is the "lateral recoil" of the impulses. In a piston engine were quite

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As they stop at the pits to replenish fuel and tires, they look the picture of weary exhaustion, though the skill with which they perform their tasks belies this theory, and then again back in the race, flying, lurching and careening, on they go in their mad flight.

Well may it seem that the inhabitants of the city which is becoming famous for speed are looked upon by the stranger as speed mad.

REGAL USES REMY MAGNETO.

New York to San Francisco Scout Is Well Equipped.

The Regal "Thirty" now forging its way across the prairies of the Western part of

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It is thus seen that the definite cause of vibration in a single cylinder engine is its piston motion which produces counterpart linear vibration of the frame.

Besides this main cause of vibration there is in a single cylinder engine a second cause, which is under circumstances quite as marked as the first, what may be most aptly termed "the recoil" of the impulses. In a piston engine were the piston connected so that its frame could move about the shaft—as, for example, in mounting the motor by its crank on lathe centers—every impulse received by the flywheel, increasing its velocity in the one direction, would be transmitted to the frame of the motor in the opposite direction. When the rotation is prevented by the frame of the motor frame by elastic supports such as when mounted on carriage wheels, each impulse is marked by the velocity imparted to the motor, as we have said, may be termed "the recoil."

This is a fundamental form of vibration which can only be got rid of by increasing the mass of the frame.