

PLATFORM OF G. STEVENSON

Advocating the Restoration in the Automobile Industry of Steam, the True Automotive Power

The basic and final superiority of the steam automobile over the internal combustion car has always been recognized by those acquainted with it. There are, still running, a few steamers built before 1920 that will outperform any gas wagon made today. The old fashioned steamers, however, were hard, and took a long time, to start, often burned out or froze up, were difficult and expensive of upkeep, and altogether so complicated and troublesome that public favor turned to the more immediate and superficial advantages of the gasoline plant; which were, self-contained compactness, ready starting, ease of upkeep, and comparative simplicity. And, as gas wagons are easier and cheaper to make than steamers, car makers found it decidedly more profitable to follow this trend than to try to overcome the many and great difficulties then in the way of a practical steam car. Many gas wagon manufacturers once made steamers; of them, the Whites have always conceded the basic superiority of the steam plant.

Because of the above-listed features, the gas engine, of course, had and still has, many sincere adherents, whose misled belief it has been that its disadvantages can be eliminated through divers superficial improvements hung onto a principle that is fundamentally impractical and always will be. The disadvantages of the old steam cars, however, can be eliminated; they are superficial and not basic. The old timers had to be fired by a match, in the way that a blow-torch is lit; a modern steamer gets up steam in 20 seconds at the turn of a switch. Electric starting and electric controls, only recently made possible, make simple, positive, reliable operation a feature of the modern steamer. Burning out of the boiler is eliminated by the use of modern alloy steel. Freezing can easily be taken care of. In ease of upkeep and simplicity a modern steamer can compete with any gas wagon. Self-contained compactness is not a requisite of the automobile plant.

One out of every four strokes in a gas engine is a power stroke. During the other three the engine has to ride around on its momentum. If that momentum be killed by slowing the engine down so it cannot reach the next power stroke, the machine stalls. Gas wagon ads sometimes contend that the power impulse consists of a rapid, steady expansion of the burning gases against the piston, and is not an explosion at all; a notion easily dispelled by a few minutes' listening to a gas engine without a muffler. Besides, if this were so, an eight cylinder gas engine would have the absolute flexibility of steam, which it obviously does not. The operation cycle of a gas engine consists of a series of terrific explosions better suited to hammering the machine to pieces than to the accomplishment of useful work. They are effective for so short a part of the stroke that complication, weight, and sluggishness are about all that can be gained by multiplicity of cylinders and "overlapping" of strokes; a 16-cylinder car has to have a gear shift, as well as a four.

This is the way a gas engine works. It is the fundamental system of it, and no amount of inspired tinkering with it can make it work any other way than just that. Except for synchro-mesh and "free wheeling" (the latter being great sport, but of little practical use; both are said to have "revolutionized" the automobile industry), the gas wagon transmission is the same as it was 30 years ago--which can hardly be called progress. Such things as electric drives and other flexibilizing substitutes for it have been too heavy, complicated, costly, and inefficient, and generally accredited a failure; such around-the-corner procedure is hardly logical as compared with having a flexible power plant in the first place.

For any one purpose, and where a smooth, quiet machine is not required, such as climbing Pike's Peak, breaking a world's speed record, or driving a sawmill, the gas engine is about as good as the steam engine, and often handier; one given power plant and transmission ratio can meet all requirements. Speed record drivers use the gas engine, as more development has been given it, and with it they have a better knowledge of where they are at. In the ordinary automobile, however, the load is constantly varying, and each major fluctuation in the load on the gas engine has to be met with a corresponding change in the transmission ratio, that the machine may not stall or race unnecessarily; constant gear-shifting and pampering of the power plant make even the most luxurious modern gas wagon a far from pleasant thing to drive. The steam engine is universally adaptable and flexible, and operates with full efficiency and effectiveness at any speed; the identical same steam-powered chassis, without a single change, is equally good at delicately maneuvering a ton of bricks through the traffic of New York, and at speeding a luxurious limousine 100 miles an hour over the Lincoln Highway.

In a double-acting steam engine, every stroke is a power stroke. Steam admitted to the cylinder gives a steady, smooth push, not a terrific shock, to the piston for its entire travel, and back again. The entire valve mechanism is a single sliding piece moved by an eccentric over two ports. The steam engine can turn over either way, and reverse is effected simply by adjusting the valve travel so that steam admitted will tend to drive the engine in the opposite direction to that in which it has been going. Save for dead centers, a single steam cylinder is unstallable. Two such cylinders, with their cranks at right angles so that one is at the full of its stroke when the other is on dead center, compose an absolutely flexible machine. It can start from any position of rest simply by admitting steam to it. Its speed and power are unlimited by the structural difficulties of the gas engine. The equipment for supplying steam to the automobile engine can, as described before, now be made perfectly reliable and practical.

Summary of the Advantages That
Can be Built into a Modern
Steam Automobile:

NO GEARS TO SHIFT: No clutch to trouble with, no noise, no "free wheeling" to run away from you; from 0 to as fast as you care to let it out, and back again, your only controls are the throttle and the

brake. Reverse at the touch of a pedal; can be used to brake the car on hills.

PICKUP TWICE AS FAST AS A GAS WAGON: Independent of momentum, every stroke a power stroke, the steam engine responds instantly to control.

SMOOTHNESS UNKNOWN WITH A GAS WAGON: Because of its absolute flexibility, smoothness is inherent in the operation of steam power, and not the result of smothering a noisy, shaky machine with artificial counterweights, mufflers, "vibration dampeners", "rubber mounting", "silencers", "it floats" devices, and the like.

BURNS ANYTHING from bootleg hooch to fuel oil, without even special adjustment. As far on a gallon as a gas wagon of comparable weight and power.

NO STINK: Does not have to be pampered with special gas; combustion clean and complete, and does not take place where the cylinders are lubricated.

MORE POWER for its weight than any automobile ever made.

SIMPLE as a gas wagon, with a rugged straightforwardness in its construction as opposed to the delicate adjustments and fickle behavior of a gas engine. Modern electrical ignition and controls do away with the complication and troublesomeness that caused the failure of the old fashioned steamer, and make practical the modern steam car.

SAFE: Easy, positive control and pickup, combined with the non-stallable reliability of steam power, get and keep you out of jams as no gas wagon can do. Automatic controls, safety valve, and ample reserve strength insure against the boiler's blowing up (something which hardly ever happened even to the earliest and most primitive steam cars).

WATER does not have to be renewed any more often than in a gas wagon, because all exhaust steam is condensed. Ample provision made against freezing up in winter.

STARTING: 1) Turn on a switch.
2) Drive it.

No spark, no start pedal, no choke, no "carburetor heat control", no fumbling with the hand throttle, no stalling and second tries. Gets up steam from cold to operating pressure in 20 seconds.

A GOOD-LOOKING CAR, yet built so you can see where you're going in it. There is no reason why this should be exclusive to steam, but no present-day gas wagon has this feature.