



THE POPE

From behind a leather-and-wire racing mask, the starter with his raised flag was a black-and-white half-illusion through a miasma of oil-sodden exhaust. With flag's drop the petroleum fog gave way to driven dust concealing rocks that struck before they were even seen. Maxim-gun staccato billowed from a frenzy of distorted wheels and shadowy hunched figures in the afternoon's harsh sunlight. Bone-jarring shudders and jerks were telegraphed from rutted dirt surface to the desperate grip of gloved hands on a thick-rimmed wheel. From controlled drift into corrected slide to the sudden grip of the groove through the corner, cars jockeying two, three abreast. Mechanics grasping bodywork and seat, human ballast, defying centrifugal pull, spastic chassis jolt, fighting to

balance themselves and the car. Out onto the back straight, accelerating against the clock, each car charges to attain clear air, or stay in it. Throwing the car in, muscling it through, the far turn. Front straight passage at speed, running deep in a canyon of exuberant cheers, yet taut throats and gaping mouths cupped by hands are eerily silent; no human sound can penetrate the manic thunder of the cars. Back into the dust, the turn, the adrenaline as sweat is jolted from every pore. Five more, ten more, two hundred more laps will bring the record, the win, a piece of the gate, on this barely refurbished horsetrack. Yet few dare think of the finish; if they think of anything beyond the shuddering vista before them, it is their delicate tires, surging fuel, climbing nausea, or that rock just by, too close.

In the first years of the century now past, while the French pelted down their Routes Nationales amid dust, rock and oily fume, their American counterparts were competing in multiple-event heat races and finals at hastily transformed equestrian venues. Rutted by wagons and roughened by floods, primitive American public roads were well understood to be far too brutal for road races; but success on the oval dirt miles brought such names as Winton, Packard and Peerless their renown in the sports pages. One such early manufacturer, competing fiercely to promote itself, attained the laurels of '03 & '04 consistently as if by divine right; Pope Toledo.

"The Pope", as the enthusiast public came to call it, was a superb example of brass era engineering and craftsmanship. Its designers, in creating the four cylinder 24hp Type VI, sought to enhance performance through light weight and precision construction. The engine's cylinders were individually cast, then brought to uniform 4.5" diam-

eter by meticulous use of a boring mill. The outside of the cylinders were machined for lightness and to achieve "uniform expansion under heat, thereby holding the compression much better," as a factory engineer told a contributor to the February 10, 1904 edition of *The Horseless Age* magazine. The cylinders were then grooved externally just below the 5.5" stroke, and individual corrugated copper water jackets were joined with a dovetail, then hard-soldered to make them watertight. The tops of the cylinders were flanged to form a gasket-less seal with the removable cast iron head and integral valve chamber; which also contained water passages. The automatic intake valves were positioned directly above the vertical exhaust side valves, all fabricated of pure nickel-steel.

The combustion chamber and piston showed careful design in many ways. The head, with standard side-valve geometry, contained a combustion chamber pocket; but in the Pope, this pocket led to a unique hemispherically domed combustion chamber with the spark plug at top center. The matching domed piston was described by its designers as "arched or bulged outwardly to give maximum strength for the thickness of wall employed", although the writer for *The Horseless Age* opined that "this ...arrangement may have been dictated by considerations of compression space...the engine works with high compression." To further reduce the dreaded "dead weight", the piston had an extremely thin wall above and below the four rings at the top and again around the fifth ring binding the piston skirt. The con rods are referred to as "the Marine Type" and are forged steel, as is the crank, which is supported by four bronze bearings. The crankcase is of the barrel type, cast in aluminum and split horizontally at the centerline. The chassis brackets and bearing supports are cast integrally with the case's upper half.

In the period when armored wood was the normal

frame material, the 94" wheelbase chassis is constructed of pressed steel rails and cross-members. Steel tube front and back axles are suspended by the expected complement of semi-elliptical springs, but at a time when separate transmissions were customary, the Pope incorporated the three-speed gearbox and differential in-unit, using sliding gears arrayed transversely to the chassis. Final drive is by dual chains. Without question this arrangement delivered power in a manner very advanced for 1902 / '03. Many of the design tenets of this engine lived on into the nineteen-fifties, and its transmission / differential layout presaged designs that found further development well into the second half of the century, facts that speak volumes.

During the American racing season of 1903 and '04 "The Pope" spoke with stentorian voice. Ready for competition in August of '03, it ran in twenty-three races nationally before the end of October. Of these the Pope racers won fifteen competitions including seven in a row; placed second six times, third once, and fourth once. Perhaps most impressive from today's perspective, they never failed to finish, a record that few if any racers of the Brass Era can claim to match.

A 24hp in touring trim took part in the New York-to-Pittsburgh endurance race late in October. This competition suffered inclement weather so intense that birds were battered out of the air, rail traffic stalled and telegraph lines were downed. The participating Pope lost only eight points. The car that placed second had lost ninety-six. The last race of the season was held in the more temperate climate of Los Angeles on November 20th. The attending Pope covered the five mile, oval closed course in five minutes fifty-two seconds, defeating a 45hp Mercedes, a 40hp Tinchner, and a Franklin.

The results of '03 electrified the growing fraternity of racing drivers, who queued up at the Toledo factory to

pay the \$3500 catalogue price. Popularity thus added to power and reliability resulted in a stunning '04 season for Pope-Toledo. Between April and June the marque entered seven hill climbs and won all of them. From June through October, with forty races contested in nine states, the cars from Toledo took the laurels thirty-three times. Between July 2 and August 26th of '04 they won 23 consecutive races, placing second twice.

Of the many talented drivers who competed with a Pope, one of the most successful - and enthusiastic - was Herbert Lyttle. After a rewarding season on the short tracks, Lyttle looked forward eagerly to the first Vanderbilt Cup competition, to be held on 8 October 1904.

William Kissam Vanderbilt was the very prototype of the wealthy daredevil. He dreamed of a thoroughly American road race which would honestly compare to the European races he had participated in and contributed to - the 1895 Paris-Bordeaux, the '02 Paris-Vienna and Circuit de Ardennes, and the Paris-Madrid of '03. In practical matters, though, he was no dreamer, and he understood that American roads would not yet sustain a full-tilt city-to-city race after that pattern.

He therefore set about to organize America's first road race in the European manner on a set course, using the relatively well-groomed roads of Long Island, and taking as his model the 1903 International Challenge Cup race in Ireland, sponsored by his close friend Gordon Bennett. As Bennett had, Vanderbilt insisted that the parts of the competing cars should have been manufactured in the car's country of origin; but he stopped short of mandating, like Bennett, that the drivers share the auto's nationality. Each lap was to cover thirty miles through the countryside of Long Island, the whole race comprising ten laps - so that, while the competition would not have the exhausting



character of a Paris-Madrid, it would certainly pose a more formidable challenge than the oval-track races the American cars had been bred for.

Nor were these roads, while adequate, destined to be a cakewalk for the assembled cars and drivers. Though the circuit was predominantly made up of state turnpikes, and Vanderbilt had the influence and money to declare these roads suitable for racing, they were still more than rustic. The course contained six level crossings, the bane of these early competitions.

The entrants' list for this deeply anticipated Saturday inaugural held six French marques, five each of American and German origin, and two from Italy. One expatriate American would be driving a Panhard, and three Americans were at the wheels of Mercedes. AAA sanctioning had been secured, a three-foot-tall solid silver cup commissioned from Tiffany, bountiful prize money was provided, international factory participation was assured, the local constabulary would undertake crowd control - on the face of it, all looked very organized indeed.

The reality was quite different. Though Vanderbilt got right-of-way for the day of the competition, the locals were dead set against the event - at least until they realized they could charge the expected 50,000 spectators a substantial sum for parking close by the circuit. The police allocated 100 officers, barely appreciating the logistic ordeal before them. The most effective crowd control turned out to be the roar of the oncoming cars, which in passing kicked up oil-soaked clods from the track surface.

The cars were sent off at two-minute intervals, with Al Campbell in a 60hp Mercedes leading the way. For the drivers and their riding mechanics, the crowd was a mere distraction as this brutal thirty-mile course stretched unendingly before them. The level crossings, rightly feared, by mid-race had taken out three Mercedes and both FIATs as well. At the front, the race was between the

American from Paris, George Heath, on his 90hp Panhard, and Albert Clément on his similarly muscular Clément-Bayard. The Pope and Herbert Lyttle, and his riding mechanic Charles Soules - a formidable driver in his own right - started in sixth. They lost ground on the second lap, drifting back to eighth. They then started to move upfield; seventh on the third lap, fourth on the fourth, fifth and sixth, then finally attaining third which they kept until the finish. Lyttle's fastest lap was timed at 37 minutes and 26 seconds, for an average speed of 48.53 MPH. The Pope, while far from the most powerful car competing, exhibited its legendary reliability and consistency; the press in attendance observed that Lyttle ran "the most uniform race of the day. The greatest variation in his lap times was 1 minute, 3 seconds on any one of the 30 mile laps". Of course, this was the Brass Era, and the press duly noted that one of Lyttle and Soules' laps was impaired by "30 minutes spent at the J & G Tire Depot" - a pit stop not exactly of NASCAR caliber.

II

On the night of July 11th, 1905, the 35 contestants of the first "official" Glidden Tour - or, formally, AAA Reliability Tour - gathered for a banquet in the high summer heat of a Hartford hotel ballroom. The Connecticut hotel was the first overnight stop of many on the 870 mile Tour before them. Sitting between the city's Mayor and the Tour's organizer, Charles Jasper Glidden, was the evening's toastmaster, Colonel Albert Pope. As Colonel Pope stood addressing 150 guest automobilists and the Tour drivers, many of whom were his pioneering peers in automotive manufacturing, he was a man at the top of his game. This retired Union Colonel had combined his munitions company with the Weed Sewing Machine company and created a manufacturing operation capable of machining to

1/2000th of an inch tolerance - in the 1870s. His devotion to precision manufacturing was inspired when he watched the public's reaction to the American introduction of the bicycle at the Philadelphia Centennial Celebration. Convinced of destiny, he traveled to the Continent, observed the latest trends in manufacturing, and came home understanding that these new personal vehicles would succeed only if they could be built from interchangeable parts - the same conclusion that had made possible the armaments empire of Samuel Colt. Well-versed in contemporary distribution and customer support problems, Colonel Pope took pains to establish individual factories in different cities. His efforts resulted in America's first large scale bicycle manufacturing operation.

Leap to the 1890s, when person-powered transport was being supplanted by powered personal transport. Both an electric car company, Waverley Electrics of Indianapolis, and a factory in Hartford for gas-powered vehicle manufacture were established. By selling five hundred electrics and fifty gas powered cars by the end of the 'nineties, Pope became America's first large-scale automobile company.

In 1899 the perceived suitability of Waverley electrics for the taxi trade sparked the formation of a Wall Street trust which, it was thought, could transform the streets of America's cities. 1,600 lead-acid electrics were delivered, but sadly, their inefficiency of operation prevented them from having the envisioned impact on the manure removal budget of the major Eastern cities; and the financiers' effort was derided as "The Lead Cab Trust".

Electric automobiles were trusted and popular, but Colonel Pope saw more exciting possibilities in gasoline-driven vehicles. Thinking strategically as he usually did, and not wanting to fall afoul of litigation arising from the Selden patent - a situation that would bedevil Henry Ford,

as first among equals, for years - Pope began by buying Selden out, then moved forward with his nascent gas-powered-car operation. Overshadowed by the reception of the Waverley electrics, gas-powered development had proceeded quietly but steadily under the innovative direction of Hiram Percy Maxim, son of the gun's inventor. By 1904 the Pope company, organized into divisions, manufactured several gas-powered models and sold them into numerous markets. As Colonel Pope stood at the rostrum that warm night, speaking to R. E. Olds, Walter C. White, J. D. Maxwell, Percy P. Pierce and the attendant automobilists over cigars and port, he could have been canonized as the patron saint of automotive promotion. To quote one of the company's executives in 1906; "Much of the success of this enterprise is directly traceable to the policy of the founder in the liberal and persistent use of newspaper and regular periodical advertising. During the last decade this house has probably used more newspaper space than any other concern throughout the civilized world." Yet that proud moment at the Glidden dinner, during which the officer-turned-tycoon seemed forward-looking and unasailable, was probably the apogee of his career.

Certainly no weakness was evident in the company's operations, then or for some time after. The recognition earned in the racing seasons of '03 and '04 facilitated the company's expansion of its line of road cars for 1905. The 24hp Toledo became the more luxurious 30hp, then the stunningly powerful 45hp. The factory in Hartford expanded its line of "economy cars". The Maryland plant increased production of its motorized surreys with the fringe on top.

Herbert Lytle, ever the Pope man, bankrolled the construction of a 60hp prototype for the second running of the Vanderbilt. The redoubtable Maxim joined two of the four-cylinder 30hp motors at the crank, to create a V8. But the competition on Long Island that autumn proved

more formidable than the year before, the spectators equally unruly, and the race itself harder fought. After the lead cars crossed the finish line the 50,000 spectators surged onto the track, and Lyttle, sidelined by cylinder problems on the fourth lap, never came close to officially finishing. The day was saved for Pope-Toledo by Bert Dingley, winner of the American elimination trials, whose machine was running after completing five laps, and who was awarded twelfth place. The strong showings of European teams like Darracq, Panhard, Mercedes and FIAT were a rude shock to American competitors.

For the '06 Vanderbilt Lyttle, lesson bitterly learned, again turned to Maxim for a high-powered American competitor. His response was a more highly developed eight with 120hp, to face off squarely against the 130hp FIAT and the 120hp machines of Darracq, Mercedes and Itala. But in the more strictly organized Eliminating Trials of '06, Lyttle was disqualified for requiring motorized assistance to tow the big V-8 to life. Still, Pope felt justified in raising the price of the 1907 customer's model to \$4,250, which he duly announced in his advertising and catalogues.

The looming Banker's Panic of 1907 meant that his timing could barely have been worse. On August 15th both his Toledo operation and the parent company in Hartford were pushed into receivership at the instigation of MacManus-Kelley, the company that placed all of Pope's advertising.

Newspapers of the era relished the Colonel's attempt to fight the good fight. Perhaps the youthful Union Army officer had led his men to victory at Petersburg; the mature captain of industry, skirmishing against vaguely defined monetary policy during the nascent days of industrial credit, went slowly to defeat. In 1908 a painful consolidation began when Waverley Electric was sold. The following year the Toledo factory passed into the

hands of the Apperson-Toledo Motor Company. Only the Hartford operation survived the country's currency short-fall, and its progenitor did not; Colonel Albert Pope, one of America's greatest apostles of the bicycle and the gasoline automobile, passed on in 1909 at the - then venerable - age of 66. Finally, burdened by the overextension of 17 models offered, embattled by Ford's dominance of the entry-level market, Pope's original manufacturing facility disappeared in 1914. So passed the company and the man who, as few others, defined the process of American automobile manufacture and the industry that resulted.

By S. Scott Callan & Kip Crosby
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