

GAS PUMPS

BY MICHAEL KARL WITZEL

THE FIRST HURDLE IN DEVELOPING THE MODERN GASOLINE PUMP WAS RECOGNIZING that such a thing was needed. Early in the century, when cars were still rare, gasoline was essentially a nuisance for petroleum refiners, a byproduct of kerosene distillation that had to be disposed of somehow. It had a variety of minor uses: as a solvent and as a fuel for lamps, stoves, and engines. Automobiles were somewhere near the bottom of the list. Customers who wanted to buy gasoline would go to the back of their local hardware, general, or grocery store, wait for the proprietor to pour the required amount from a barrel or tank, and then carry it away in a leaky metal canister.

As automobiles grew more common, the danger and inconvenience of this method became evident. Sylvanus F. Bowser of Fort Wayne, Indiana, took the first step toward safe gasoline sales in 1905 by adapting a kerosene pump he had designed twenty years earlier. Bowser's "Self-measuring Gasoline Storage Pump" consisted of a fifty-gallon metal tank enclosed in a wooden cabinet with fume vents. A hand-operated suction mechanism pumped gasoline directly into the vehicle through a flexible hose, with each pull of the lever dispensing a preset amount. For easy access the unit could be set up in front of a store or at the curb. Jake Gumpper, a stove-gas supplier who became Bowser's first salesman, dubbed the arrangement a "filling station." Other companies quickly brought out similar apparatus.

Using a pump instead of a simple gravity-operated spigot made it possible to put the tank underground, which was safer, took up less space, and reduced contamination and evaporation. Pump makers soon added gauges to measure the amount dispensed. These changes were not always in the consumer's interest, since unscrupulous dealers could adulterate the unseen gasoline or overcharge by rigging the dial. The answer was to let the customer see what and how much he was buying. As early as 1901 John J. Tokheim of Thor, Iowa, patented a pumping unit with a domed glass cylinder on top. The product being dispensed—kerosene, machine oil, or gasoline—would first be pumped into the cylinder, which was marked with a volume scale. After the quantity had been verified and any water had separated out, the liquid would be released to flow by gravity into the customer's container. In 1906 Tokheim introduced a model specially designed for gasoline. It was six feet tall, weighed 135 pounds, and came in red or black enamel with gold trim.

TOKHEIM'S INVENTION SOLD POORLY AT first, but the idea behind it caught on. In 1912 the Gilbert & Barker Manufacturing Company of Boston brought out its T-8 model, with an etched-glass advertising globe on top, a dial indicator for precise measurement of the amount dispensed, a hand-operated quick-discharge piston that could deliver fifteen gallons per minute, and an access door with lettering that read FILTERED GASOLINE. Over the century's second decade American automobile ownership exploded, and similar pumps from scores of manufacturers could be found wherever there were cars. Pump companies developed a new design, with a ten-gallon glass holding cylinder mounted on a six-foot steel pedestal. The cylinder was marked for volume, making the questionable dial gauge unnecessary. Both types retained the illuminated advertising globe on top.

Hand-pumped dispensers with visible tanks persisted into the 1920s, growing steadily more decorative. Since most gasoline was sold by independent dealers stocking little-known brands, a reliable, well-designed pump could be a selling point for wary customers. Recognizing this, pump makers advertised directly to motorists. During the 1920s, though, gasoline sales started to become more centralized, with vertically integrated corporations replacing the previous hodgepodge of jobbers and retailers. Instead of buying anonymous gasoline from a repair shop or curbside pump of questionable reliability, a driver could pull into an attractively designed filling station (in the modern sense of the term), often run by a national oil company. Trustworthiness began to reside more in the brand of gasoline than in the pump. Big refiners dyed their gasoline with distinctive colors to

establish an identity. By the end of the decade, more than 90 percent of gasoline would be sold at stations built for the purpose.

IN 1923 THE FIRST ELECTRICALLY OPERATED PUMP came out, greatly reducing the elbow-grease requirement. Two years later Erie Meter Systems abandoned visual measurement and inspection entirely in favor of an electric dial that registered gallons and fractions with small and large hands, as on a clock. The next big advance came in 1933, when the Wayne Oil Tank & Pump Company of Fort Wayne introduced its ingenious “variator,” a mechanical computer. The variator displayed the amount dispensed with revolving number wheels and simultaneously calculated the price, eliminating the need for any familiarity with arithmetic by either party to the transaction. Drivers could finally buy a dollar’s worth of gasoline without resorting to long division. Other companies tried to replicate the device, but Wayne defended its patent fiercely, and eventually all the major American gas-pump makers licensed its technology. By the end of the 1930s, revolving wheels were tabulating gasoline sales at almost every service station in America.

The venerable Tokheim Corporation introduced electronic measurement in 1975, and today microprocessors allow such innovations as debit-card pay terminals with video display screens. Nowadays one gas pump looks much like another, and consumers place much more emphasis on price than on the brand of gasoline, let alone the manufacturer of the pump. Gone are the days when pump makers prepared elaborate advertisements that could in perfect seriousness direct motorists to “Stop here—it’s a Bowser.”

Michael Karl Witzel has published several books on automotive topics, including The American Gas Station (Motorbooks International, 1992) and Route 66 Remembered (Motorbooks International, 1996).