Charles A. Dana

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It's not as if Charles Dana was knowledgeable about mechanics, or even cared greatly about the technical minutiae of automobiles. The products of the company that would eventually bear his name were already on the market when he stepped in, almost by chance, and rescued the little firm. What Dana brought to the table was financial acumen, discipline and a far-reaching intellect.

Dana came from a very different background from the man who founded the manufacturing company, Clarence W. Spicer, who had learned machining skills while working on his family's farm implements. Dana, on the other hand, was accustomed to power and privilege. When he was born in 1881, his father had already retired as one of New York City's most influential bankers. The scion of a prominent family from New England, he was named for his uncle, Charles Anderson Dana, who went from living in a utopian commune with Nathaniel Hawthorne and Horace Greeley to become an assistant secretary of war under Abraham Lincoln, and later, the legendary owner and editor of the *New York Sun*, which

under his tutelage ran the endlessly republished holiday editorial "Yes, Virginia, there is a Santa Claus," in 1897.

The younger Dana received a law degree from Columbia University and was elected three times to the New York State Legislature. Before he was 30, the attorney was already president of two utility companies.

Spicer had conceptualized and crafted a device he knew could revolutionize the auto industry. While studying engineering at Cornell University in Ithaca, New York, he came up with a workable universal joint, borrowing an idea from a wagon hitch that could pivot on multiple axes. In 1903, he built a prototype car that employed a universal joint and tubular shaft drive. He quickly realized that it was far less complicated, more reliable, and quieter than the chain-and-sprocket drivelines that were the standard at the time.

Spicer relocated his family to Plainfield, New Jersey, where a cousin, George Babcock, provided startup capital. His first universal joints were shipped to the Corbin Motor Vehicle Company in New Britain, Connecticut, in 1904. Spicer had gambled that if the auto business took off, so would his, and he was right. By 1913, more than half a million vehicles had been built in the United States, and Spicer Manufacturing was a supplier to more than 100 vehicle manufacturers ranging from General Motors to Hudson. Although sales topped $10 million, Spicer was desperately in need of cash, both for new equipment to keep pace with exploding orders and to pursue patent-infringement lawsuits against competitors.

Spicer was rejected by one New York investment-banking firm, Trask and Company, which is where Dana learned of the struggling business in New Jersey. He agreed to advance Spicer a $15,000 loan, on his own very specific terms. From the outset, Dana intended to grow his investment, and while recognizing Spicer's obvious skills as an engineer and machinist, also took note of his shortcomings as a manager and planner. Dana directly immersed himself in Spicer Manufacturing's legal, financial and management operations, and was named to its board of directors in 1914. By that time, Spicer was awash in overtime expenses, and was at risk of losing GM's business over costs and erratic delivery schedules. Two months later, Dana was named Spicer's vice president. Within a year, he held half the company's stock and pledged to make Spicer his sole business endeavor. At 34, he ascended to its presidency.

Immediately, Dana asked Spicer to stay on as vice president and chief engineer, and determined to see the quality of his products maintained, Spicer agreed. Dana became close with GM president Charles Nash, who liberally dispensed advice on further increasing production. To that end, Spicer moved to a new, much larger facility in nearby South Plainfield, New Jersey, in 1915. The timing was fortuitous, as the United States was poised to enter World War I, and virtually all of Spicer's production was pre-sold and destined for installation on military trucks. Moreover, Clarence Spicer was approached by the War Department and asked to design a standardized military truck. What he created became the Class B Liberty truck, with easily replaced, interchangeable parts.

By 1920, Spicer was one of the world auto industry's most important suppliers, with annual sales topping $30 million. Flush with cash, Dana took Spicer on a series of acquisitions

including Chadwick Engine Works, Parish Pressed Steel, Sheldon Axle & Spring and Salisbury Axle. Subsequent purchases, including the Brown-Lipe Gear Company of Syracuse, New York, achieved a synergy with Spicer's core products of universal joints, clutches and axles.

In 1929, Dana moved Spicer from New Jersey to a centralized production plant in Toledo, Ohio-close enough to its major customers in Detroit, and within an overnight train ride for Dana, who still lived in Manhattan, to easily visit.

Spicer died in 1939, and after the firm's business swelled again during World War II, the board renamed it the Dana Corporation in 1946. Dana remained as chairman until 1966; a signature product was the fabled Dana 60 rear, one of the toughest driveline com ponents ever built. When he died in 1975, the foundation he established was active in charities including the University of Toledo's engineering building and a learning-disabilities center at the University of Texas-Austin. Dana's annual sales now total more than $10 billion, including the all-aluminum space frame for the 2006 Chevrolet Corvette Z06.

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