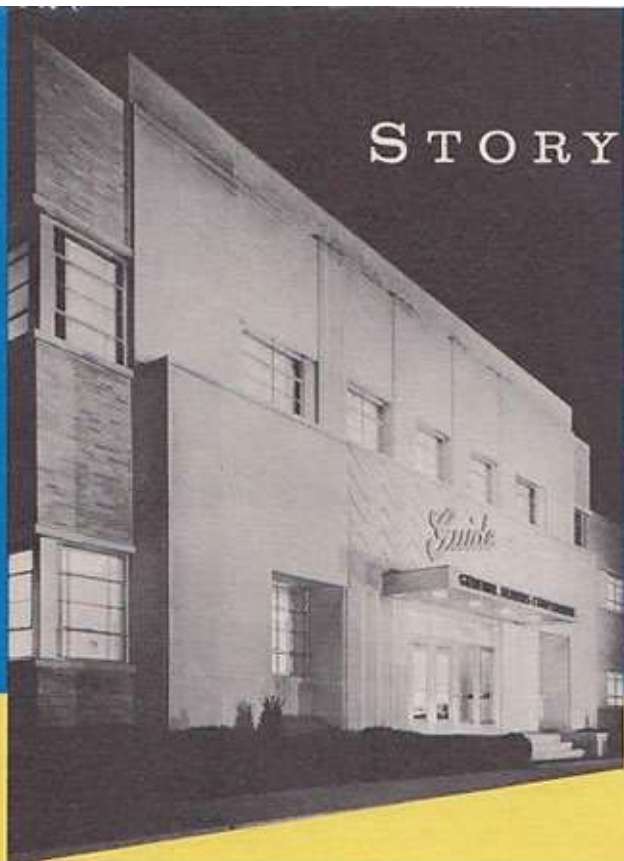


# STORY OF GUIDE LAMP

## Brightest Name

IN

# LIGHTS



**G**UIDE LAMP, "Brightest Name in Lights"—from the progress of the past . . . the promise of the future.

With this theme, Guide Lamp joins the other divisions of General Motors in the year-long observance of General Motors "Golden Milestone" with its 1958 line of Golden Milestone automobiles and trucks representing fifty years of engineering and styling achievement.

Since its founding in 1908, General Motors has compiled a record unmatched anywhere in industrial history. It is an unparalleled record of technological success reflecting the tremendous growth of the automobile industry and its resulting social, cultural and economic benefits.

Guide Lamp Division has been a member of the General Motors family for thirty of these fifty years and has contributed to GM's growth with many advanced developments, the latest of which is the T-3 Safety-Aim four-lamp headlighting system. We at Guide Lamp are proud of our part in this era of spectacular human achievement through science and technology.

The story of Guide Lamp began in 1906—two years before the founding of General Motors.

1906 . . . Theodore Roosevelt is President . . . Most disastrous earthquake in American history strikes San Francisco . . . Gary, Indiana, is founded . . . Guide Lamp is founded as a carriage lamp repair business in Cleveland.

In this year—1906—the fire of youthful enthusiasm and the spark of genius kindled a flame that not only survived, but grew in a dog-eat-dog environment until today—after five decades of steady progress—it provides more vehicular light on America's highways than all of its competitors combined.

It began with Hugh Monson. While working at the

Badger Brass Company in Kenosha, Wisconsin, he developed a friendship with two other equally ambitious young men, William F. Persons and William Bunce. Out of their friendship an idea was born. Why not go into business for themselves?

Hugh, who had left his Ozark Mountain home early in life, had drifted through a variety of jobs, most of them dealing with carriage lamp manufacturing.

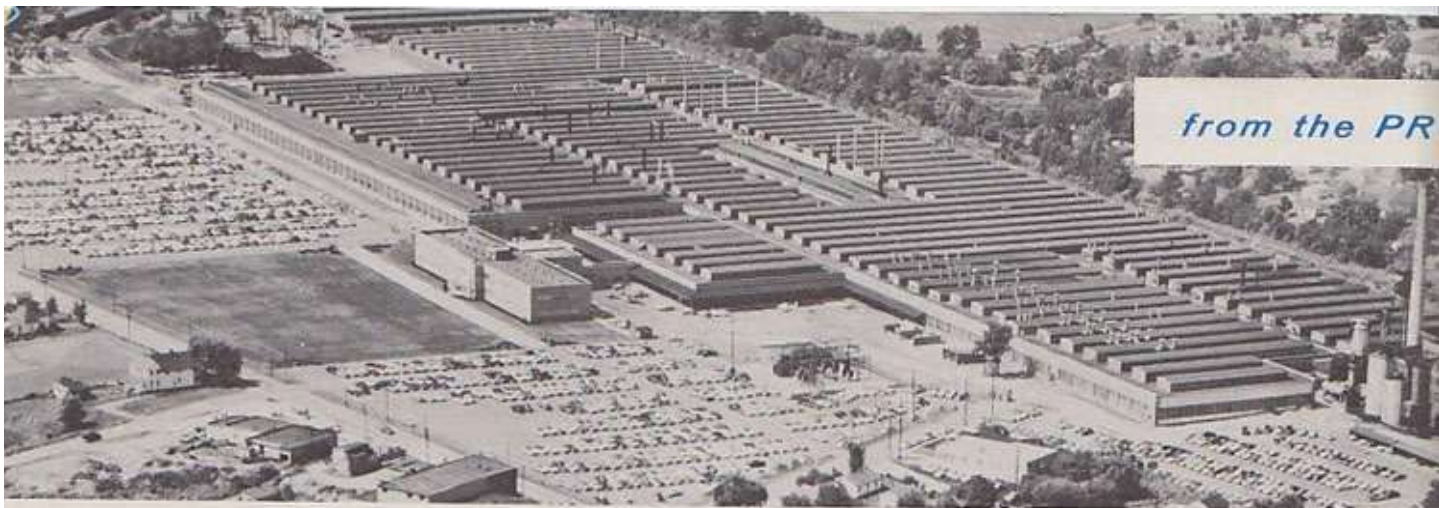
In view of his experience, it was only natural that the three considered the lamp field. Carriage lamps and motor vehicle lamps needed a lot of repairing, and they might get the business for many automobiles as well as carriages.

As the site for their new business, they selected Cleveland, Ohio. It was the center of the automobile accessory trade, but was without a lamp-making concern. In addition, it was the home of the Royal, Winton and Stearns cars.

Each of the partners contributed one-third of the new company's total capital, which, at that time, amounted to exactly \$300. They named their business "The Guide Motor Lamp Company" and located it in a small shop on the fifth floor of the Graves Building in Cleveland.

At first the three men were the entire organization—salesmen, office workers and shop workers. They handled all of the business themselves, including the actual repair work on carriage and automobile lamps.

Displaying a keen public relations sense that would do credit to modern experts in this field, the three men had large placards printed and posted in various parts of Cleveland and vicinity, proclaiming to the public that, no matter how badly a lamp was damaged, they would rebuild it as good as new. They guaranteed "satisfaction or money back," and many times they accepted repair



*from the PR*

jobs at a loss rather than contradict their advertising. But they acquired satisfied customers.

It was not long before lamps from every part of the country, of all sizes and shapes, were heading for their shop to be repaired.

The second year of its existence was a hectic one for the little company. Like the rest of the nation, it was caught in the maelstrom of a great financial panic and its business ground to a near halt. Times were so hard that Bunce worked at odd jobs outside the company in order to furnish the firm with working capital. Each Saturday night, the partners would meet and take just enough from Bunce's salary and the company's pitifully small profits to live on, and the rest was put into the business.

The partners clung on tenaciously and refused to give up when few little companies such as theirs lasted very long or went very far. Business began to pick up.

It was about this time that Hugh first began experimenting with electric headlamps. He believed that since electricity was being used for house lighting it could also be used for automotive lighting. At any rate, he felt it could be more satisfactory than the lamps then in use.

**1908 . . . Taft becomes the 27th President . . . The General Motors Company is organized by W. C. Durant . . . Ford introduces the Model T . . . Albert von Tilzer, of Indianapolis, composes the hit song, "Take Me Out to the Ball Game" . . . Hugh Monson and T. A. Willard produce the first electric headlamp for automobiles.**

Hugh's experiments bore fruit, and he produced an electric headlamp—a crude affair compared with the lamps of today, but more effective than the headlamps then in use. Therefore, it was natural for the three to think about manufacturing lamps.

In 1908 they produced and marketed the first electric headlamp for motor vehicles. In the development of this lamp, Hugh was assisted by T. A. Willard, who later became president of the Willard Storage Battery Company.

The manufacturing cost of the new lamp was so great as to make the selling price almost prohibitive. However, the new lamp was sensational.

Quantity orders soon came for it from the Rauch and Lang Electric Carriage Company and the Baker Electric Company. The future began to look very bright to the three men, and in 1910 each of the partners withdrew \$5,000 from the business.

**1911 . . . Halley's comet had come and gone, causing widespread excitement—but the world had not ended . . . Center of U.S. population is in Bloomington, Indiana . . . Fire destroys Guide Lamp.**

A severe blow was dealt the three partners in 1911. Their shop burned out during a fire in the Graves Building. Equipment and stock were completely destroyed. All that remained were a few company records and \$900 in insurance.

Unable to operate without equipment, the company canceled all its orders. To make matters worse, it was necessary to buy new lamps to replace the ones which had been sent in for repairs.

However, the partners refused to admit defeat. Tightening their belts, they plunged in and rebuilt. In less than two months, they were again doing business in their old shop.

The business grew steadily and in May, 1913, it was incorporated as The Guide Motor Lamp Manufacturing Company, with Hugh as president. The old, small quarters in the Graves Building became crowded and forced them to build a two-story building on West Madison Avenue.

Fortune continued to shine on the road Guide had chosen. During World War I contracts were received from the U.S. Government for a large number of lamps, together with contracts for mess kits, gun sight assemblies, and various other articles then being used by the United States Army.

**1919 . . . Jack Dempsey knocks out Jess Willard and becomes heavyweight champ . . . Death of Theodore Roosevelt stuns nation . . . Guide introduces first universally adjustable headlamp mounting bracket.**

In 1919 a ball-and-socket headlamp mounting bracket was developed by C. A. Michel, then production manager of Guide Lamp. (Mr. Michel has been general manager since 1941.) This was a major advance in headlamp aiming. By loosening a nut, it was possible to adjust the lamp to any position, and hold it in place by tightening the nut.

Prior to the introduction of this mounting bracket, most headlamps were mounted on rigid fork supports which had to be bent, at the risk of breaking, if the aim of the headlamps was to be changed. Other headlamps were bolted to the sheet metal of the car and their aim could not be changed.

Guide continued to experience growing pains. By 1920 still more room was needed. To get it, a modern factory building was erected on Cleveland's West 110th Street.

It is interesting to note that up until about 1920 there were no drawings or blueprints of the lamps manufactured by Guide Lamp. When a new lamp was about to be built, instead of having it drawn up first, the model shop was told to build a sample lamp incorporating the

GRESS of the PAST

the PROMISE of the FUTURE



This is Guide Lamp today. Here, approximately 6,000 men and women of Anderson and near-by communities work together in producing the world's finest automotive lighting equipment. Since becoming a division of General Motors, Guide Lamp's floor space has increased fourteen times—from 91,000 square feet in 1929 to 1,300,000 in 1958.

desired new features, and then production tools were made directly from the model lamps. Production lamps were built from memory instead of prints. The drafting room got its start about 1920, when Howard Mead (now Guide's chief engineer) took lamps that were then being manufactured and made drawings from them.

Hard luck again overtook Guide Lamp. The severe financial panic of 1920 came on, and the company was suddenly confronted with a half-million dollar indebtedness, two plants, an inventory that was rapidly becoming obsolete, and no orders.

The situation became desperate. Salaries were cut, and company officers were doing factory labor and clerical work.

1922 . . . Top literary work of the year is Emily Post's "Etiquette" . . . Station WEAJ, New York City, introduces radio's first "commercial" . . . Guide Lamp introduces the Guide Ray headlamp.

In 1922, a bright ray of light appeared on the Guide horizon. It was the Guide Ray headlamp, the world's first completely engineered headlamp, developed by C. A. Michel. The "hot spot" or high intensity area was placed at the top of the beam for the first time. This gave good light well down the road. The new lamp was the best road-lighting device of its day.

The lens of the Guide Ray headlamp was designed for use with its own reflector, which was something new, since up to this time lenses were used with any reflector of the same outside diameter. This development was a big step forward in headlighting.

An engineering department that could study lighting requirements under driving conditions as well as design lamps that were pleasing in appearance had been established at Guide Lamp. The Guide Ray headlamp was the first product of this setup. C. A. Michel and Howard Mead were the key men in the new department.

1924 . . . United States Army airplanes fly around the world in 175 days . . . Ku Klux Klan casts sinister shadow over nation . . . Guide introduces Tilt Ray headlamp.

Two important lighting developments occurred in 1924. R. N. Falge, a young General Electric engineer, invented a two-filament bulb. The bulb made possible Guide's Tilt Ray headlamp, developed by Michel and Mead. This was the first real two-beam headlamp, and resulted in resistance dimmers being dropped.

(Mr. Falge joined General Motors in 1927, became chief engineer of Guide Lamp in 1936, and retired in 1957 after nearly 22 years of staff level responsibility.)

So outstanding were the characteristics of the Tilt Ray headlamp that a single road demonstration invariably sold the lamp, not only to Guide's own customers, but to the customers of its competitors as well.

Taxed beyond its capacity to produce the quantity of lamps demanded and unable to increase its facilities on such short notice to meet the backlog of orders, Guide Lamp—determined that the public should have Tilt Ray headlamps—licensed all of its competitors under Guide patents. However, Guide established manufacturing and inspection standards in the plants of its licensees in order to insure top quality.

In the license to its competitors, Guide Lamp stipulated that all Tilt Ray reflectors would be produced by Guide and that the accuracy of all Tilt Ray lenses would be controlled by Guide engineers. As nearly as we can determine, this is the only time in the history of industry that such an arrangement existed.

The Tilt Ray headlamp continued as standard equipment on many makes of automobiles for several years.

1928 . . . Hoover defeats Smith . . . Skirts reach knee-length and moralists become alarmed at "Flaming Youth" . . . General Motors acquires Guide Lamp.

In August, 1928, as a result of negotiations between Guide Lamp and General Motors Corporation, Guide Lamp became a part of GM and was merged with Delco-Remy in Anderson.

On January 1, 1929, Guide's ties with Delco-Remy were broken and Guide became a separate GM division, with plants in Cleveland and Anderson. F. S. Kimmerling, formerly of Delco-Remy, was named president and Hugh Monson became vice-president in charge of sales.

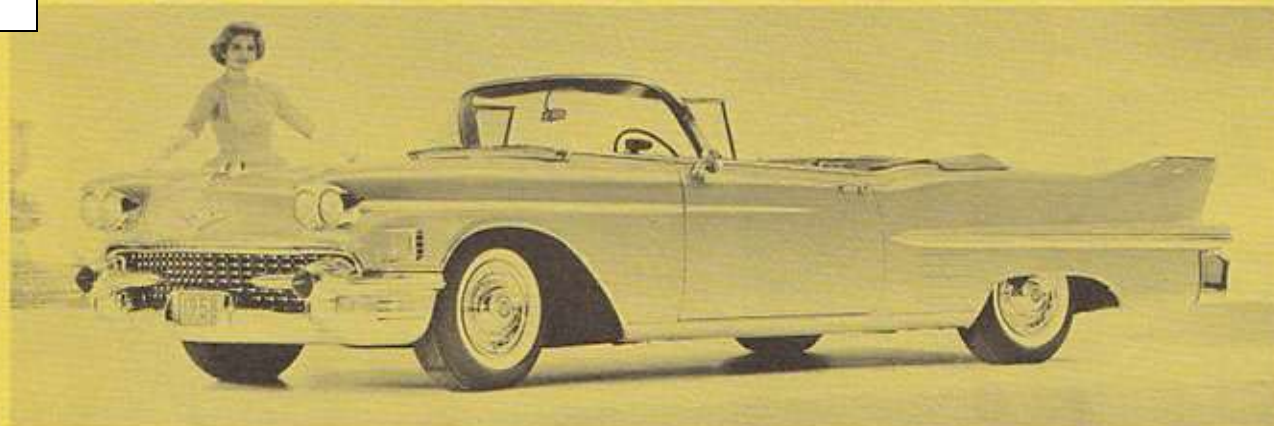
In 1930 the Cleveland plant was closed and all Guide activities were concentrated in Anderson.

In the fall of 1931, Guide Lamp again introduced a "first" in automotive headlighting. It was the Multi-beam headlamp, developed by Michel and Mead. The nonsymmetrical meeting beam principal incorporated in the Multibeam unit has been retained on all lighting systems up to the present day.

In 1936, a small group of Guide men under Norman M. Ross moved to Syracuse, New York, to open the Brown-Lipe-Chapin plant as a part of Guide Lamp.

In 1939, another outstanding development, the "sealed beam" headlamp, was introduced on the 1940 models. Guide did much of the development work.

1941 . . . Congress passes Lend-Lease Act . . . Japan attacks Pearl Harbor, 2,300 Americans killed . . . Guide General Manager Frank Burke is promoted to GM Central Office.



Guide Lamp products on this Golden Milestone Cadillac include the new four-lamp headlighting system and other lamps, Autronic-Eye Automatic Headlamp Control, inside Glare-Proof rear view mirror and remotely controlled outside rear view mirror.

When Mr. Burke was promoted to the GM Central Office, Detroit, in September, 1941, Mr. Michel succeeded him as general manager of Guide Lamp.

Business at Guide was at its all-time peak just as World War II began. Our division was the world's outstanding producer of automotive lamps and was also the manufacturer of many metal stampings and die castings for GM cars and others.

In 1942, Brown-Lipe-Chapin, Guide's plant at Syracuse, New York, was made a separate General Motors division to manufacture machine guns.

Wartime requirements and improved types of military vehicles presented many lighting problems, which were turned over to Guide Lamp. As a result, Guide developed and produced most of the lighting equipment used on military vehicles.

Guide's wartime achievements as a part of the "Arsenal of Democracy" were recognized by the awarding of the Army-Navy "E" and four stars.

As of V-J Day, Guide Lamp had shipped:

Approximately 8,500,000 articles of lighting equipment for military vehicles—headlamps, tail lamps, dome lamps, black-out lamps and signal lamps.

Approximately 3,400,000 Stimsonite reflector units.

Enough spinner noses and adapters to outfit 22,000 P-39 fighting planes.

About 1,000,000 water-jacket sleeves for Allison aircraft engines.

Well over 36,750,000 cartridge cases.

Around 1,600,000 barrels for Browning machine guns.

A total of 650,000 complete M-3 submachine guns.

**1945 . . . World War II ends . . . President Roosevelt and General Patton die . . . Labor difficulties beset nation . . . Guide Lamp begins reconversion.**

After the war, the hubcap and bumper guard activity formerly handled at Guide Lamp was transferred to the Brown-Lipe-Chapin Division, and all GM lamp manufacturing operations were concentrated at Guide Lamp.

Guide quickly reconverted to peacetime production, and was soon establishing new production records.

In 1952 Guide introduced the Autronic-Eye, the world's first successful automatic headlamp control. This was followed in the fall of 1954 with an improved sealed beam unit. In 1955, the T-3 headlamp with its built-in aiming feature was introduced. In 1956 Guide Lamp introduced the four-lamp headlighting system, which appeared on the 1957 Cadillac Eldorado Brougham.

**1957 . . . Milwaukee wins its first World Series . . . Russia sends aloft world's first earth satellite, and "Sputnik" becomes household word . . . Guide Lamp's four-lamp headlighting system appears on all 1958 GM cars.**

The new four-lamp headlighting system is being used on all 1958 General Motors passenger car, truck and coach lines. This, together with other important mechanical and styling changes in all GM products affecting Guide Lamp, resulted in a substantial expansion of plant facilities at Guide and the addition of several hundred employees during the latter part of 1957.

Guide Lamp's growth in Anderson has been rapid. Building after building has been added since it became a GM division. Its floor space has increased fourteen times—from 91,000 square feet to 1,300,000 square feet. Our employment has grown to approximately 6,000 men and women.

Guide Lamp's products include all types of automotive lighting equipment for civilian and military vehicles, outside and inside rear view mirrors, traffic light viewers, turn signals switches, Guidex reflex reflectors, stampings, header parts, die castings, molded plastic parts, Autronic-Eye Automatic Headlamp Controls, T-3 Safety-Aim sealed beam headlamps and T-3 Safety Aimers.

General Motors goes "forward from fifty" into its second half-century and Guide Lamp, "Brightest Name in Lights," goes with it. Guide Lamp research men today are working in the future to provide the lamps to light the way of tomorrow's automobiles—"from the progress of the past . . . the promise of the future."

