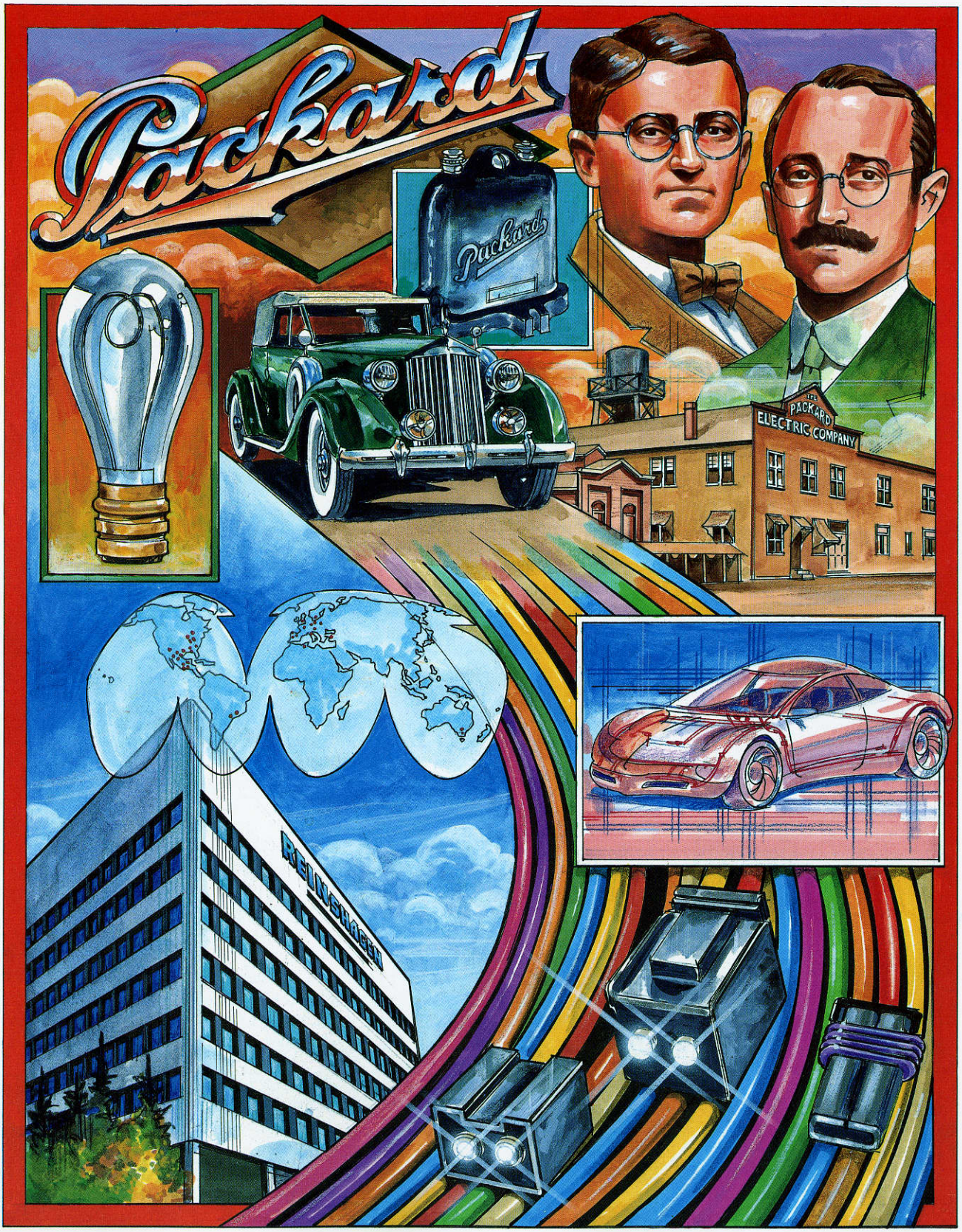
CABLEGRAM

PACKARD ELECTRIC

Celebrating 100 Years



1890 - 1990

Cablegram 100 contents

Vol. 52, No. 3 May/June 1990

This issue of the **CABLEGRAM,** which celebrates Packard Electric's first 100 years, is the final edition of this publication.

The **CABLEGRAM** has served as Packard's divisional publication since 1927. Today, Packard is a global business, and the **CABLEGRAM** has evolved into a divisional magazine which covers Packard's worldwide operations.

To reflect this growth, the name of the **CABLEGRAM** is being changed to the **PACKARD ELECTRIC GLOBE,** beginning with the July/ August issue. Like the **CABLEGRAM,** the **GLOBE** will be published six times a year for employes and retirees throughout the world.

On the cover:

An illustration of Packard Electric's first 100 years by Rick Muccio.

Packard Electric Cablegram
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Division of General Motors
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Warren, Ohio 44486
An equal opportunity employer

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Special thanks to Jeff Brand, Public Relations intern, summer of 1989, who researched, organized, wrote and designed portions of this special edition of the **Cablegram.**

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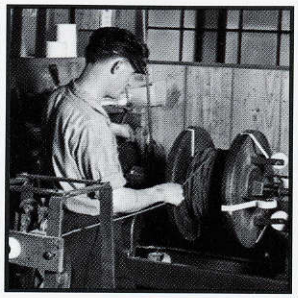

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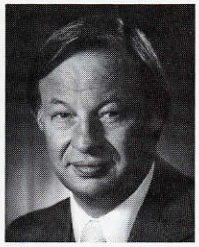
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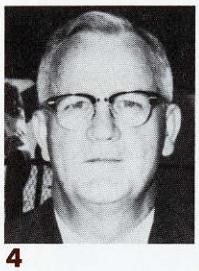
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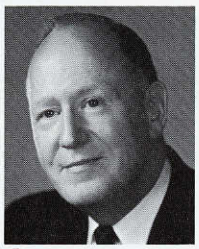
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100 years of Packard leaders

1. W.D. Packard
President 1890-1917
2. Newton A. Wolcott
President 1917-1932
General Manager 1932-1933
3. Basil N. MacGregor
1933-1958
4. Carl C. Rigsby — 1958-1966
5. George W. Chestnut
1966-1969
6. Bert T. Olson — 1969-1975
7. James R. Rinehart
1975-1981
8. W. Blair Thompson
1981-1982
9. Elmer E. Reese — 1982-1989

Celebrating 100 years

General Manager Rudolph A. Schlais, Jr. reflects on Packard's heritage

For a century, Packard Electric people have been doing things right.

Not many businesses in today's ever-changing, competitive global market will survive long enough to mark such a milestone. The fact that we are now celebrating our 100th anniversary attests to the ingenuity and dedication of Packard people.

Packard's unique people, philosophies, labor agreements and technologies have all contributed to our success. Packard has survived because Packard people have excelled in three critical areas: focusing on the customer, meeting the competitive challenges we've faced and establishing Packard as an innovator in our industry.

We should be proud of what we've accomplished, but we can't stop and rest on our laurels. Doing business in the 21st century is going to be a tough proposition, and the second hundred years will be hard.

The formula for success in the future closely resembles the formula we have followed in the past. To stay in business for another century, we must be committed to our Excellence concept and maintain focus on our customers. We must also improve our competitiveness and maintain our technological leadership.

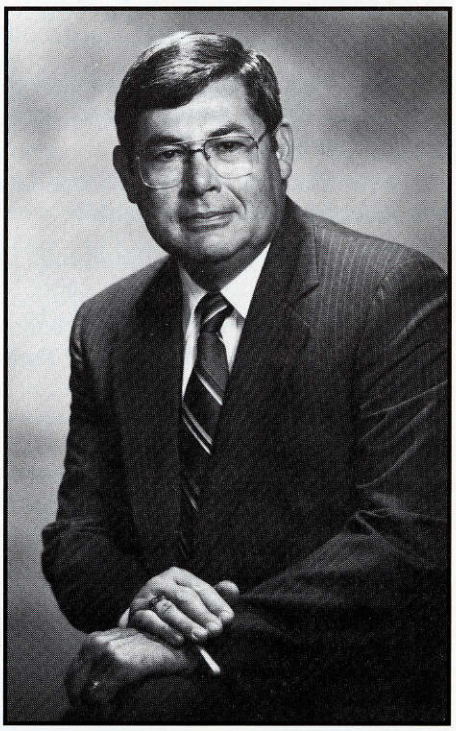
Packard was founded by a pair of technology mavericks: the Packard brothers. Although we have grown from a hometown business consisting of one small plant and 10 employes to a global company with facilities in 18 countries and more than 55,000 people, we still need innovative attitudes.

Good ideas don't respect cultural barriers and national borders. Packard's globalization permits us to share new ideas throughout our worldwide operations and is essential for our survival. Our customers are looking for suppliers with global capabilities, and Packard's future is directly linked to our ability to be a global player in a new economic world. As we continue to expand the globalization process, our thinking must also expand.

Technology is also changing rapidly. We will continue to see Packard's products evolve as we strive to maintain our technological advantage over our competition.

Our future product improvement efforts will focus on cost, technology, design for manufacturing and quality. We'll see more multiplexing used in upscale cars, more fiber optics used for data links and more electronics. The electronic content in vehicles will continue to increase. This will drive our customers to ask Packard to reduce the size of our wiring to accommodate these additional features.

As we celebrate Packard's "First 100 Years of Excellence," we need to recognize that our competition will not permit us to live in the past. Packard's second century begins today, and the opportunities for our business to grow are tremendous. I'm confident that Packard people will meet this challenge, creating a future that will be even better than our past.



Connections: 100 Years

ONE HUNDRED years of company history crowd the pages of this issue. Packard's past is represented below in the "connections" to our history.

1890: On June 4, incorporation papers were signed with James Ward Packard as general superintendent and William Doud Packard as secretary/treasurer of Packard Electric. Incandescent light bulbs were the first Packard product.

1896: Electrical transformers became a second product line.

1899: The first Packard automobile was completed by the New York and Ohio Company under Packard and Weiss Company.

1901: Packard Electric began its cable and wire business.

1902: The Packard automobile business was sold to a Detroit business and renamed the Packard Motor Car Company. Packard's Mazda lamp business was sold to the National Electric Lamp Company, which was later purchased by General Electric.

1917: Packard supplied communication wire, truck wiring harnesses and wire for bombers during World War I.

1927: The first Packard "Cable-Gram" was printed from the Chicago office.

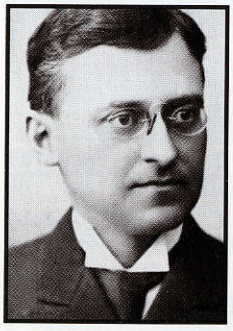
1928: Packard sold the transformer business, leaving only ignition cable and automotive wiring as Packard products.

1932: General Motors acquired Packard Electric.

1937: Plants 2 and 4 were built.

1943: Packard Electric Division and Sunlight Electric merged. Packard was converted to nearly 100 percent defense production, including wiring for ignition manifolds on Allison V-12 aircraft engines.

1948: A plant on Thomas Road was built for fractional horsepower motors.



J.W. Packard

W.D. Packard

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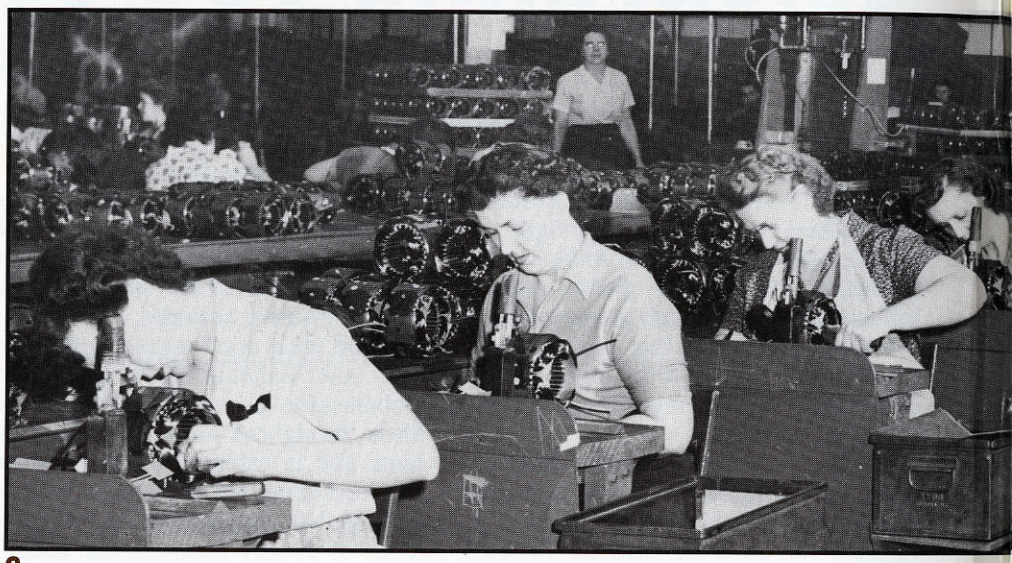

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1949: IUE Local 717 was organized and recognized as the bargaining agent for the hourly employes at Packard's Ohio locations.

1950: Plant 8 was purchased.

1952: The Administration Building was completed.

1955: Plant 10 was built to house the copper rod mill and additional cable-making facilities.

1961: The fractional horsepower electric motor business was moved to Dayton, Ohio, signaling consolidation with Delco Products. Plant 11 went into service on North River Road.

1963: Packard introduced flexible printed circuits for use in instrument panels.

1964: The Engineering and Research Center opened.

1965: Plant 12 was added to the North River Road complex.

1967: Plant 13 began operation.

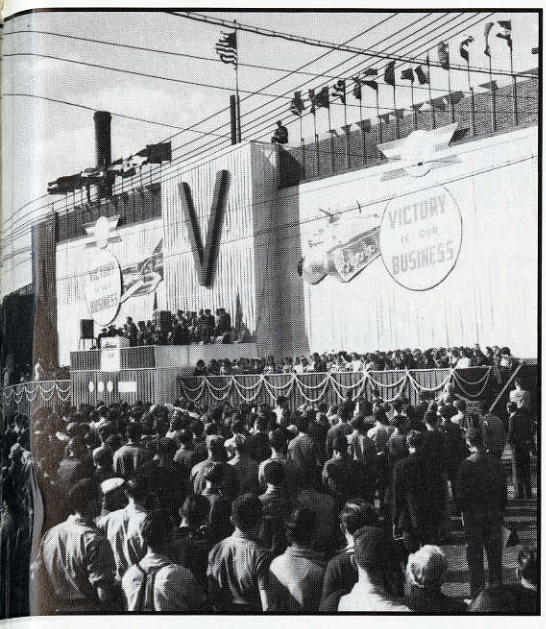
1971: Plant 14 was added to the North River Road complex.

1973: Plants 21 and 22 opened in Clinton, Miss., beginning Packard's continental, then global, expansion.

1975: Packard Electric Ireland, Ltd. opened.

1977: Plant 23 opened in Brookhaven, Miss.

1978: Packard opened Conductores y Componentes Electricos (Plant 31) in Juarez, Chihuahua, Mexico.



1. The original building for Packard Electric Company was located on Dana Street in 1894.

2. Vera Murphy, Anna Caroots, Mary Strah, Grace McKinley and Cecelia Glavan (from front to back) manually insert coils into fractional horsepower motors in March 1954.

3. During World War II, Packard employes produced war goods, such as cable for aircraft. The division won the Army-Navy "E" for production on two occasions.

4. When Delco Products and Packard consolidated their operations for the 1960s, bulk cable spools indicated the partnership.

5. Newton Wolcott leads a Packard Electric Company parade featuring the Mazda Series lamps, circa 1903.

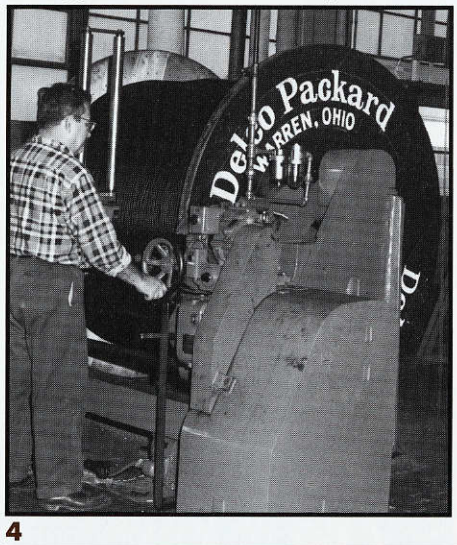
1980: IUE Local 698 was organized and recognized as the bargaining agent for the hourly employes at Packard's Clinton, Miss., locations. Rootstown opened. First known as Plant 43, Rootstown closed in 1982, consolidating operations, but reopened in June 1985 as Plant 7. Thomas Road, Plant 41, began production this year and Plant 42 opened in Hubbard. Austintown was the site of the newest Packard plant, known as Plant 44 on Victoria Road and began production in March. Plant 24 opened in Clinton, Miss., and Rio Bravo, Plant 32, opened in Juarez, Chihuahua, Mexico.

1981: Kabelwerke Reinshagen was acquired by Packard adding manufacturing facilities in West Germany, Portugal and Spain. Plant 45 in Cortland opened.

1982: Joint venture began with Condumex in Mexico. Plants 15 and 16 were added to North River Road. IUE Local 718 was organized and recognized as the bargaining agent for the hourly employes at Packard's Brookhaven, Miss., locations.

1983: Plants 17 and 18 opened at the North River Road complex. Cableados, Plant 33, opened in Mexico.

1984: Conductores II, Packard's fourth operation in Mexico opened as a replacement for Plant 31. IUE Local 717 and Packard ratified a local contract providing job and income security.



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1985: Plant 43 began in an Austintown annex site at Thacher Lane and Plant 46, Fowler Street, opened in Cortland. In Mexico, Rio Bravo III opened as Plant 34 and Rio Bravo V opened as Plant 38. IUE Locals 698 and 718 ratified local contracts providing job and income security.

1986: Continuing its global expansion, Packard Electric Division opened Plant 51 in Casas Grandes, Plants 52 and 57 in Chihuahua, and Plant 55 in Delicias.

1987: The Excellence Training Center opened. Expanding European business, Packard Electric Burgenland GMBH opened in Austria. In Mexico, Packard opened Plant 56, Chihuahua II. Production started at the joint venture with Daewoo in Korea.

1988: Ridge Road, Plant 47, opened in Vienna. North River Road received its latest addition, Plant 49. Plant 58, Meoqui, opened and Nuevo Laredo was the site of Plants 81 and 82 in Mexico. In Nuevo Leon, Guadalupe I, Plant 83, opened. European operations were also expanding. Castello Branco began operations in Portugal.

1989: Plant 26 began production in Brookhaven, Miss. and Plant 27 opened in Clinton, Miss. Plant 37, Conductores III, and Plant 85, Sabinas Hidalgo, opened in Mexico. In Spain, Tarazona began production. Guadalupe II (Plant 84) opened in Guadalupe, Nuevo Leon, Mexico. Sabinas Hidalgo (Plant 85) opened in Sabinas Hidalgo, Nuevo Leon, Mexico. Packard CTA, a joint venture with Carthew and Travaglini (Pty.) Ltd. in Ararat, Australia, was formed. Packard do Brasil announced a joint venture with Ericsson do Brasil to produce components in Sao Jose Dos Campos, Brasil. Packard's Asian Technical Center was established in Tokyo, Japan.

1990: Plant 86 opened in Linares, Nuevo Leon, Mexico. Anahuac (Plant 87) opened in Anahuac, Tamaulipas, Mexico. Plant 88 opened in Sabinas, Coahuila, Mexico.

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Packard Firsts

PACKARD ELECTRIC Division's contribution to the automotive industry compares with the automotive industry's contribution to society — it has changed the way we do things.

When the Packard Electric Company began building cars, it had no one to supply "high tension" cable. This cable had to be capable of carrying a powerful ignition spark to the spark plug. Italian and French cable was expensive, difficult to obtain, and often inadequate in quality. By necessity, some carmakers used unshielded cable and household wire in their early cars.

It was then that Packard Electric became the first manufacturer of high tension automotive cable in the United States. Within a few years, Packard was recognized as a world leader in wiring for automotive, aircraft and marine applications.

Packard has held its leadership in the field of power and signal distribution by leading the way in the development of new technologies. Packard's firsts include:

1901: The Packard Electric Company developed and produced high tension ignition cable. The cable was called "Packard Lac-Kard Cable."

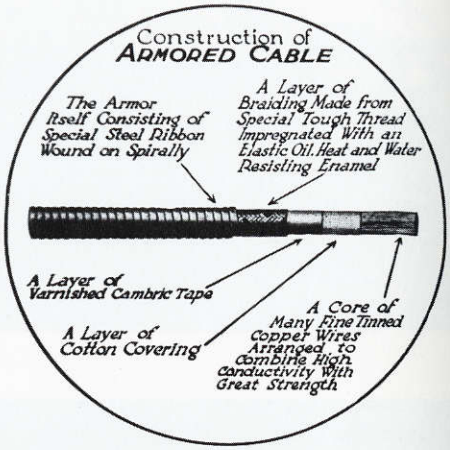
1909: Acid-proof cable was introduced using a heavy layer of rubber to insulate tinned copper wires.

1913: "Packard Jr." cable was developed, having lower grade core, rubber, and enamel coating than on the standard cable.

1917: Packard "armored" cable was produced. It featured a spiral of steel ribbon.

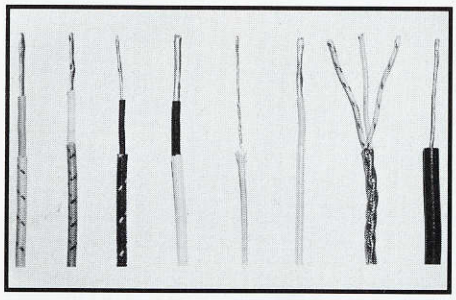
1927: Packard responded to market needs for universal spark plug cable terminals. A terminal was designed to fit either of two common spark plug fittings.

1934: Packard Electric Division received a patent for its "shielded cable." The grounded metallic braid prevented radio interference on aircraft applications.



1917: armored cable

1920s: cable is coiled for shipping



1953: some of Packard's cable

1937: The wiring harnesses were divided for ease of assembly and installation.

1942: Packard Electric was the first supplier of PVC (vinylite) insulated cable. This was the first application of plastic to cover and insulate wire. It was used on Air Force equipment.

1949: Injection molding for plastic products on vehicle electrical systems was first used by Packard.

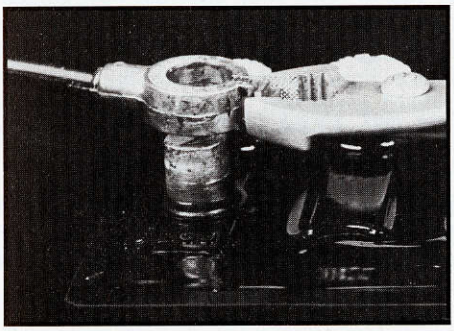
1953: Vinyl tape coverings replaced braiding as a method of protecting wire harness routing and branches.

1956: The "56 Series" multiple quick connections allowed multiple wires to be connected by one connector.

1959: Spring ring battery terminals were introduced to replace bolt clamp terminals.

1962: Bulkhead connectors allowed automotive wiring harnesses to be more easily connected at the automotive assembly plant.

1963: Packard Electric and General Motors first used flexible printed circuits in instrument panels.

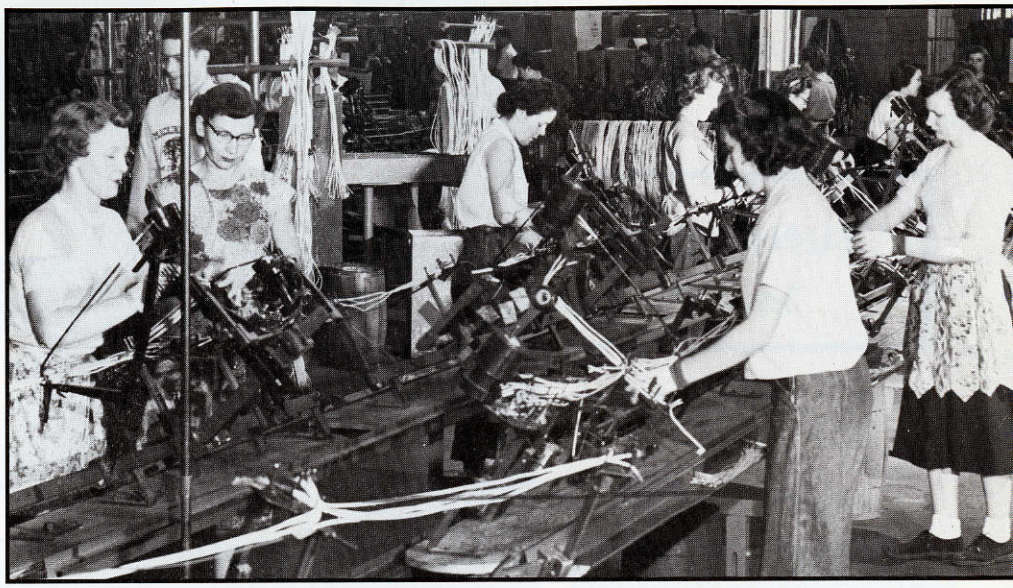


1959: a spring ring battery terminal

1965: "Pack-Con" connection system was developed to connect larger numbers of circuits by one connector.

1966: Packard Electric was first in the development of low cost fiber optics for use in automotive applications. General Motors introduced fiber optics in some 1967 model cars.

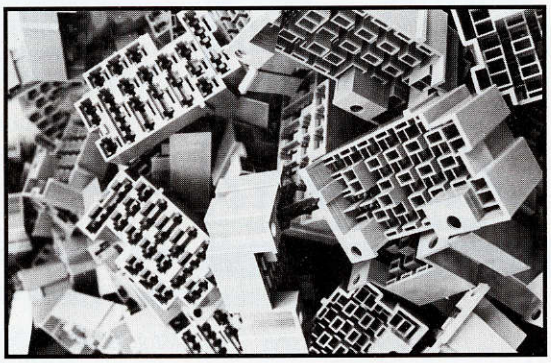
1968: Convoluted conduit, a resistant covering for wiring assemblies, was introduced and quickly implemented through high volume production.



1953: a progressive assembly line using vinyl tape

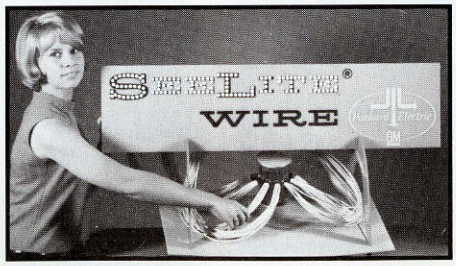
1969: Fiber optic ribbon for instrument panel lighting was first produced by the division.

1975: High energy ignition (HEI) system was developed in cooperation with Delco Remy to improve engine ignition performance. Packard designed and introduced secondary terminal locks which increased connection reliability. This innovation gained acceptance throughout the auto industry.



1976: the auto fuse block

1976: Packard's auto fuseblock design replaced the tubular fuse with a flat, chip-like fuse plug. This system is now a standard part of most modern cars.



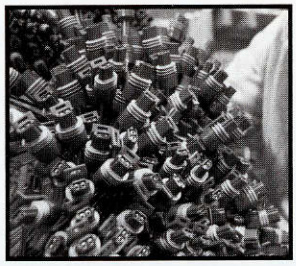
1966: fiber optics

1979: The Weather-Pack connection system was designed by Packard Electric to provide total, long term environmental isolation of the connection.

1980: Wire connection reliability was improved by the Metri-Pack system.

1983: Packard Electric's Micro-Pack provided a more compact connection system. It accommodated smaller gauges and increased numbers of connections.

1984: Tee locks were developed by Packard. The secondary precaution against disconnection works like a bolt-in-loop lock.



1975-present: Weather-Pack

1985: Pull-to-seat terminals solved problems with poor seating. Sealed connectors required a new pull-to-seat assembly process.

1989: Packard's patented bussing plate provides a 118-contact connection system, creating a common circuit.

The Easy Sell

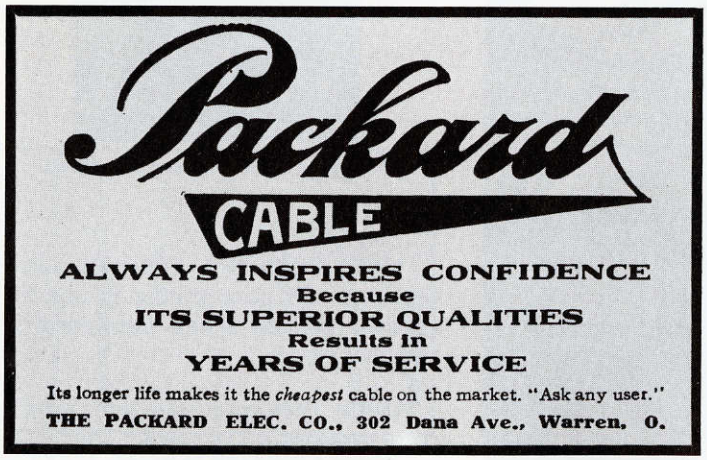
PERSUASION IS ONE of our society's greatest communication tools. It can influence people to do things: buy Packard cable, for instance.

Before Packard Electric was a giant part of the automotive industry, the company had to sell the public on its goods, convincing it that being "tied to Packard" meant getting quality products. And it worked. Between word and deed, Packard products soon gained the reputation of being "the public's choice" and motorists only had to "ask any user" to learn how good Packard products really were.

J.W. Packard was the company's first sloganeer. He coined the famous phrase touting the quality of his automobiles, "Ask the man who owns one." Once Packard began mass producing spark plug cable, J.W. proclaimed of the Packard name, "It is never seen except on goods of honest value."

Ads and slogans from the early years at Packard are not only fun to read, they illustrate how similar Packard's early business values were to its international operation today. The bottom line has always been Excellence. From catchy phrases like "Another proof of Packard perfection" to "We deliver Excellence," buyers have been convinced of getting the very best electrical component on the market.

Packard Electric Division has continued this advertising trend. Sophisticated marketing is convincing the industry today that we are its "global connection."



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1. A trade magazine ad from June 1940.
2. An ad that appeared in *Motor Age* and *The Automobile* in about 1910.
3. Present day ad in *Automotive News*.
4. An ad from the postcard and calendar series in the early 1900s.
5. An early 1900s advertisement.
6. An ad from the early 1920s.

O, YOU CAN'T JOLLY ME

BY saying you have for sale Ignition Cable "Just as good as 'Packard Cable.'" Rather a pretty compliment that *Packard Cable* is the *acknowledged standard* (which we modestly concede) but *are* they "as good?" "Perchance to dream---aye, there is the rub."

THE PACKARD ELECTRIC COMPANY
WARREN, OHIO

(Worth while to read reverse side.)

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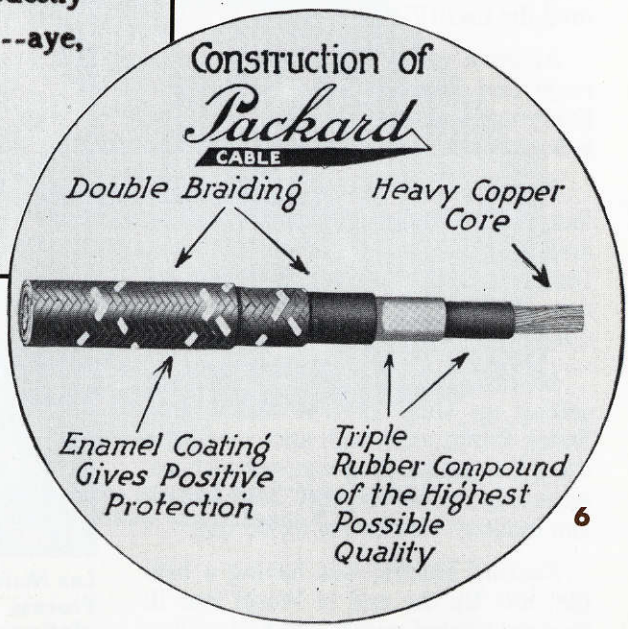

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J. W. PACKARD, Prest. W. D. PACKARD, Sec'y and Treas.

THE PACKARD ELECTRIC CO.,

CONTRACTORS FOR

Arc and Incandescent Electric Light Plants,
Electric Bells, Gas Lighting,
Annunciators, Burglar Alarms,
Speaking Tubes, Etc.

REPAIRING PROMPTLY ATTENDED TO.
Office and Works: 410 to 416 North Ave., Warren, O.

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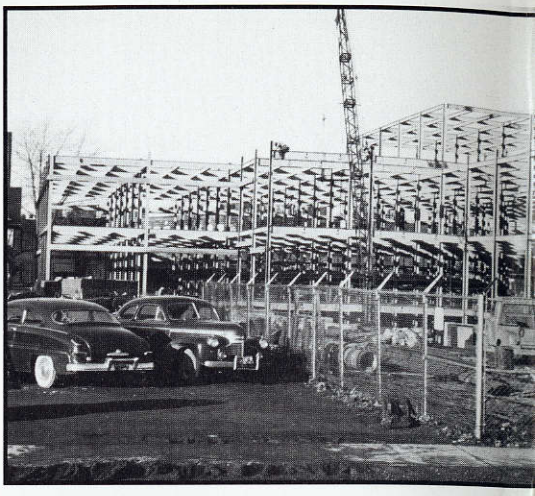
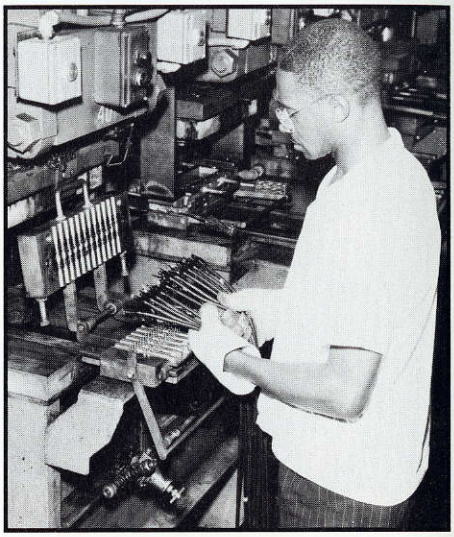
Milt Fellows, methods engineer, tests cable insertion in 1954.





Joseph Bryant molds grommets in the 1950s.

BOOM YEARS

Packard grows and expands

Boom.

Oil boom. Boom box. Loud boom. Boom town. Boom Boom (as in Mancini).

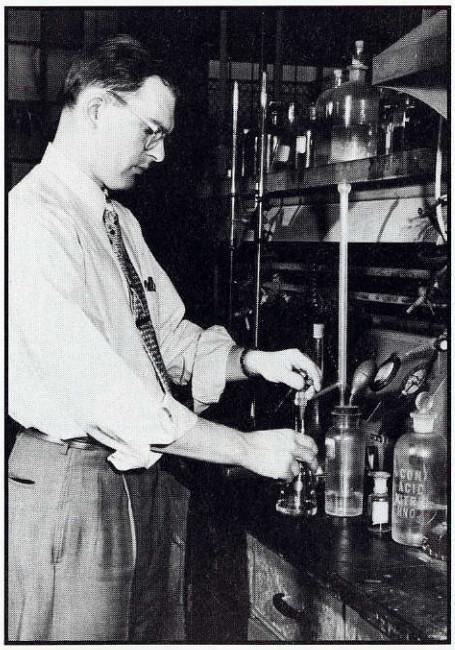
For Packard Electric Division, boom describes the "wonder years" beginning just after World War II and lasting until the mid-1970s.

America was living it up then. Marriage and children were fashionable. Everyone was buying a home in the suburbs with a backyard barbeque.

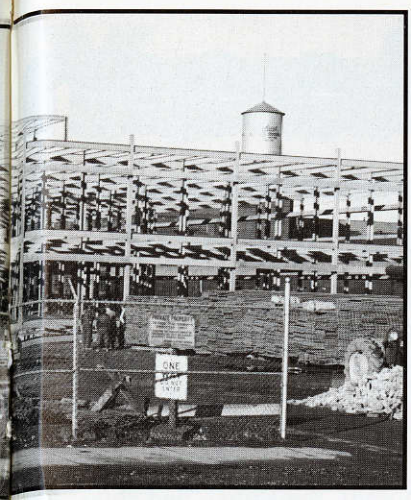
Most families were purchasing their first cars, and living rooms were rearranged around the television set. People bought modern appliances and new furniture, just like Ward and June Cleaver's.

Meanwhile, companies expanded, setting up shop all over the United States. Profits were high and costs were low. New construction was everywhere, especially in the Midwest. And American industry was having its heyday.

Packard Electric was having a heyday, too. By the end of World War II, Packard totaled nearly one-half million square feet of floor space and 2,500 employes. By 1973, Packard Electric had 3.3 million square feet of floorspace and employed about 15,000.



Les Molnar, an engineer in the Tool & Process Engineering Dept., checks a plating solution in June 1953.



This 1952 photo shows the structural steel framework for the Administration Building.

Marge Wielbruda and Chris Outrakis tape harnesses in the mid-1950s.

Carlton Hyde, third from right, shows Sears Roebuck & Co. representatives a Plant 6 display containing 53 basic models of Packard motors used in Sears appliances and for over-the-counter sales in 1955.

There is plenty of room in the trunk of this 1960 Corvair, as demonstrated by Mary Acri of Dept. 417.

Boom

Employes recall the 'old' days

Packard's automotive wiring harnesses were assembled on progressive harness assembly lines like this in April 1958.

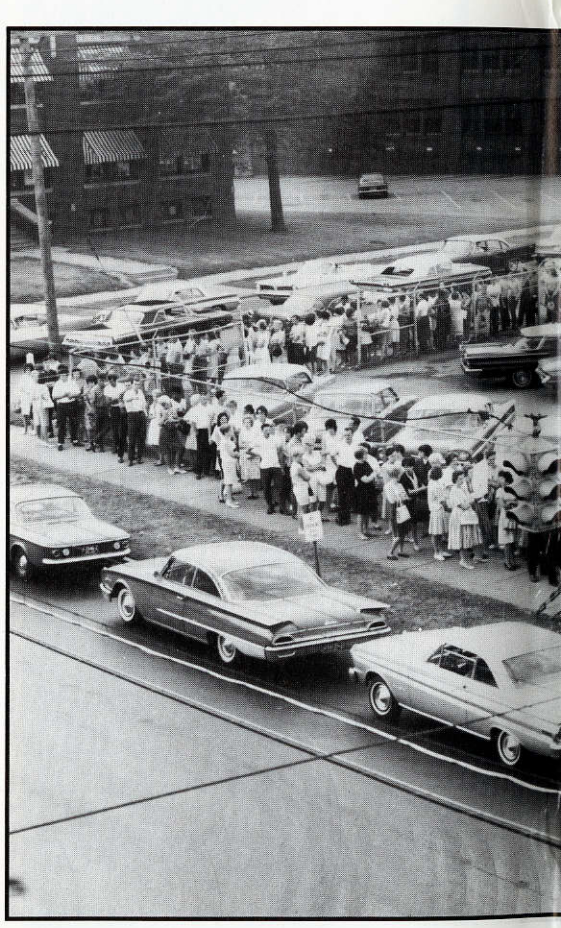
A company's ledger records the bottom line realities that allow it to function in its industry; but it's the people who create a company's history.

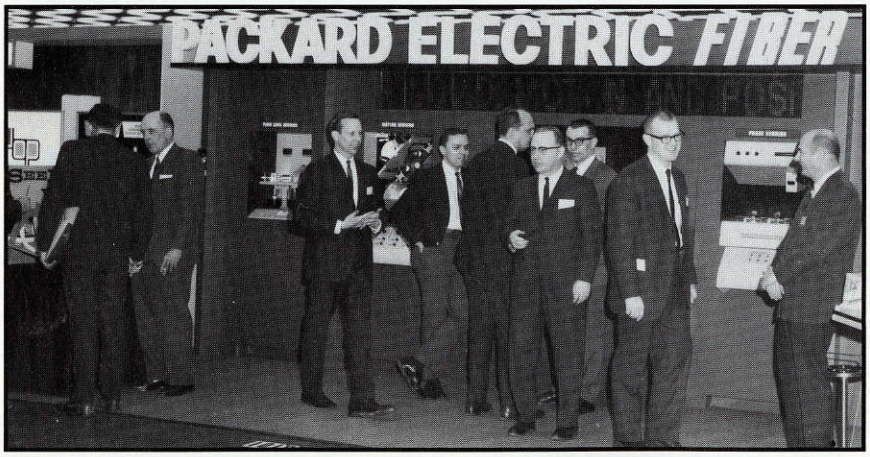
Bob Sims, who retired in 1980 as director, Reliability and Quality Control, remembers the years following World War II, when Packard's product was meant for vehicles far different than those of today.

"After the war, Packard built assemblies for tanks; there were still a lot of tanks being built that went to Korea and other places," he said. "We also developed waterproof connectors so that vehicles could ford streams."

Other changes Sims remembers are

A modern low-silhouette lobby and reception area welcomed visitors to the Engineering and Research Building in 1964.





The Packard display at the Society of Automotive Engineering exposition is shown at Cobo Hall in Detroit in the 1960s.

Years

building harnesses on conveyors and sectioning the harnesses.

Around 1950, Packard's methods lab developed the first conveyor assembly boards. As technology advanced, operators performed electrical checks while the harnesses were on the conveyors, not having to remove them before testing.

According to Sims, at least one thing has remained consistent throughout Packard's recent history: commitment to our customers.

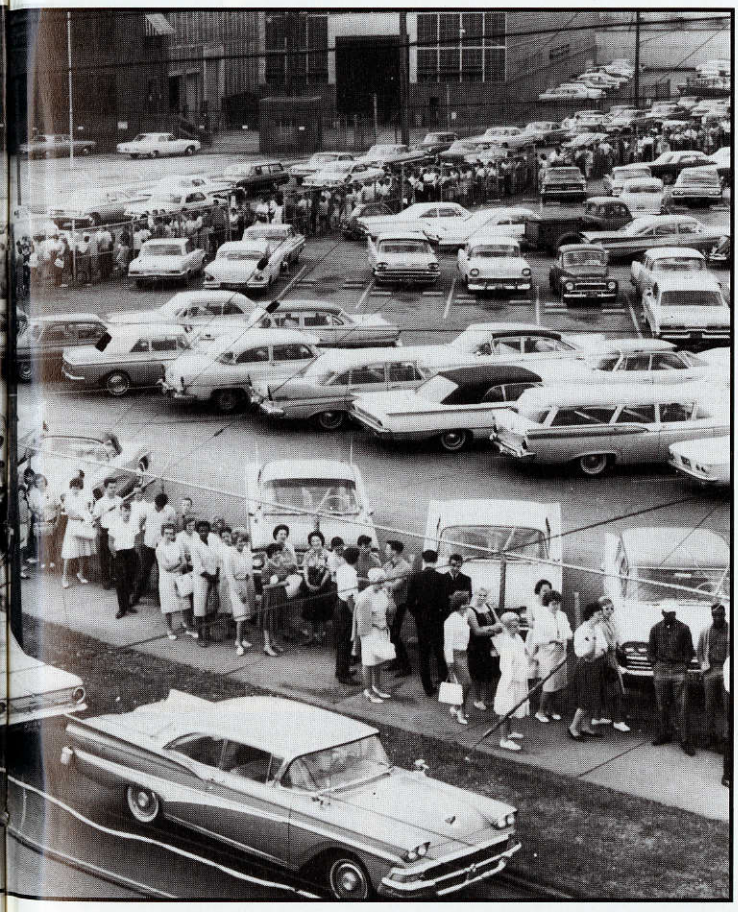
"Packard was — and has always been — customer conscious. I credit that to B. N. MacGregor, who was our sales manager when Packard became part of General Motors. He was a sales-oriented guy who made sure we did what the customer wanted, and Packard has survived very well because of the customer relations we've had over the years."

"Unbelievable" is the way Ed Cleckner described the hiring lines of the 1960s. Cleckner retired as vice president of I.U.E. Local 717 in 1982, after 28 years with Packard.

"People came from down South in hearses because more could travel in one vehicle," he recalled. "The lines snaked around the Administration Building.

"People parked all the way to Park Avenue," Cleckner said. "If it was put in the paper that there were 50 or 100 jobs at Packard, I can guarantee that 4,000 to 5,000 people would converge to apply for the openings."

Two "Delco-nauts" pose with a display of Packard battery and ignition cables in the United Delco exhibit in the Futurama Product Plaza in the 1960s.



People wanting jobs at Packard formed long lines in 1964.

Ruby Dickey, Dept. 1174, and Ken Everett, Dept. 1174 foreman, prepared the wiring system for GM's 100 millionth vehicle produced in the U.S. in the mid-1960s.

From Warren, Ohio, to spanning the globe

In 1890, Packard Electric consisted of one building on Dana Street in Warren, Ohio, and 10 employes — counting the Packard brothers.

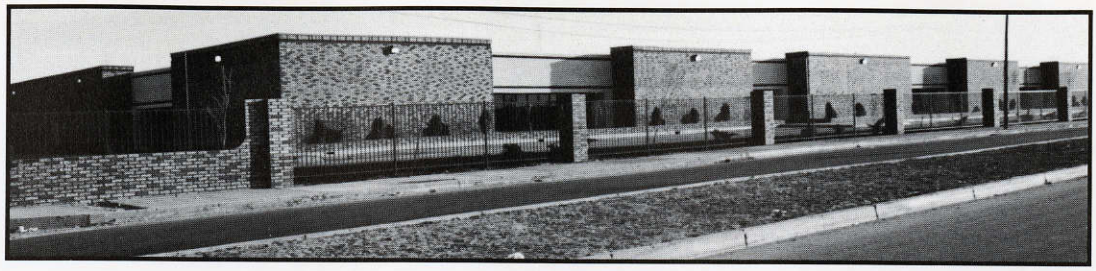
One hundred years, six continents and 18 countries later, Packard Electric spans the globe. Divisional headquarters are still in Warren, Ohio, but production facilities are located around the world.

Packard stretches from Seoul to Spain, from Ireland to Istanbul and from Mississippi to Mexico. This expansion will keep us competitive in the global automotive market.

General Manager Rudy Schlais said, "Packard Electric no longer means just Warren, Ohio. We are a global division — serving customers all over the world."

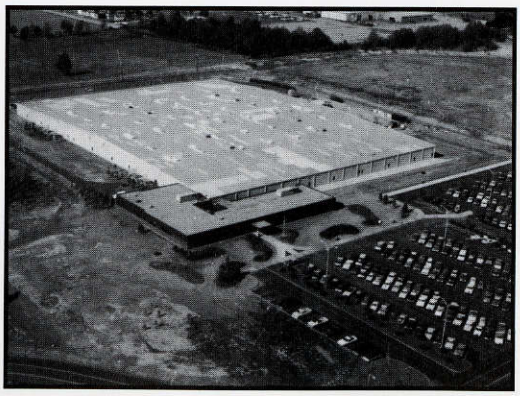
Plant 10 in the North River Road complex in Warren, Ohio, is responsible for wire and cable production.

The new Central Administration Building in Juarez, Mexico, replaced the Gateway and Peninsula offices early in 1990.



Left:
Packard Electric Ireland, Limited, in Tallaght is part of Packard Europe.

Right:
Plant 23 in Brookhaven, Miss., was built in 1977.



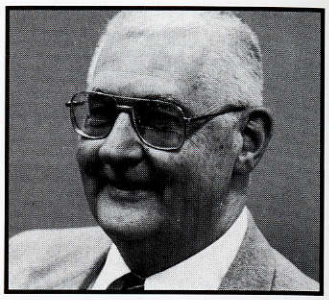
Remembering yesterday . . .

If history is a collection of memories, then Packard's history is best told by its employes.

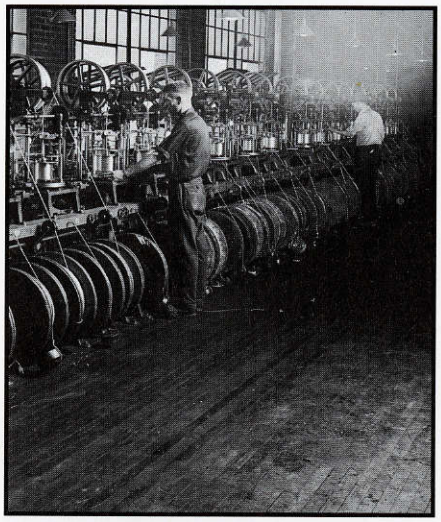
Bill Penman, who is now an allocator in the Ohio Operations' Dept. 62, recalled making fractional horsepower motors for one of America's retailers. "The biggest share of our volume was with Sears and Roebuck: we made all Sears' motors."

Penman, who joined Packard's Motor Engineering Department in October 1947, said the only facility Packard owned at that time was the plant across from the Administration Building in Warren, Ohio.

Kenny Spencer, die setter/operator in Plant 11, said he used to go hunting in the fields that occupied what is now the Ohio Operations' North River Road complex.



Bill Penman has been with Packard more than 40 years.



Braiders cover rubber-insulated cable with fabric prior to lacquering in the late 1920s.

This picture was snapped at a Packard party for visiting jobbers in November 1930.

Hired in July 1948, Spencer worked for 90 cents an hour. "It was a lot of money then; gas was 18 cents a gallon," he said.

Spencer remembered that, except for white ceilings, everything in the plant — from the floors and walls to all the machinery — was painted "operating room green."

He also recalled a lot of rules from earlier days. For instance, employes weren't allowed to smoke during the first hour or last half hour of the day. People were sent around the plant with air testers to make certain no one did. Also, employes couldn't wear shorts to work; anyone who did was sent home.

Just as rules change, so has Packard. The division evolved from a single building in Warren, Ohio, to a global operation with facilities around the world.

Kenny Spencer joined the division in the summer of 1948.

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