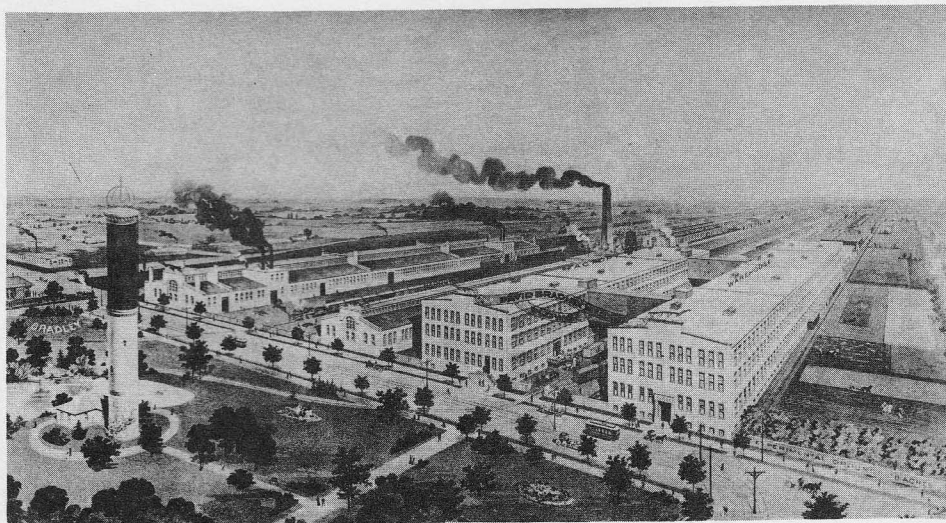


Welcome!

to



ROPER

BRADLEY DIVISION

OPEN HOUSE

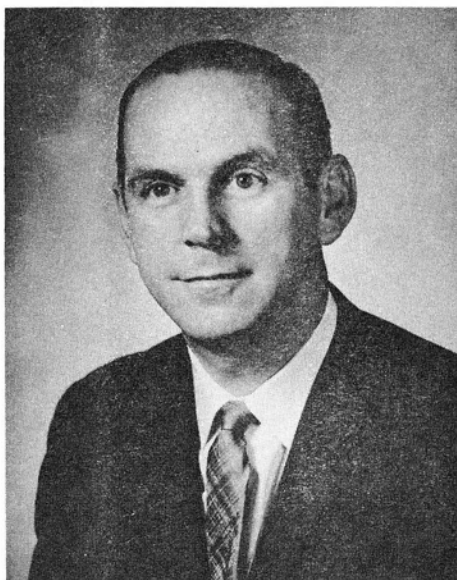
SEPTEMBER 1, 1967



DAVID BRADLEY
AMERICA'S PIONEER PLOW MAKER



THE DAVID BRADLEY TRADE MARK
THE HONOR MARK OF QUALITY



**HARRY L. GRUMISH
VICE PRESIDENT, GEO. D. ROPER CORP.
AND GENERAL MANAGER, BRADLEY DIVISION**

TO ALL OUR VISITORS:

It is my pleasure to welcome all of you on behalf of both the Geo. D. Roper Corporation and all of the people here at Bradley. We trust that you will have both an enjoyable and enlightening time.

Despite the variety of machines and operations you will see, we hope you will take special note of our people, who are the heart and life of this plant. Many occupations and skills are required for our varied products, and our people, each individually important and collectively a team, possess and use these skills.

Should you have any questions, please do not hesitate to ask your guide. He is well qualified to answer. Again, we repeat, Welcome to Bradley.

A handwritten signature in dark ink that reads "Harry Grumish". The signature is written in a cursive, flowing style.

**HARRY L. GRUMISH
General Manager**



HI!

Now that the "Boss" has made you feel at home, we'll even make you feel more at home by "yelling" at you right away. Not really, but PLEASE read this very carefully.



Solely as a precaution for YOUR safety, we ask the following requests be followed without exception.

1. You have been issued a pair of safety glasses. These MUST be worn in the shop and yard areas at all times. It is not a requirement that they be worn in the offices. Please turn the glasses in when your tour is completed.

2. Please keep in close with your group and guide. It makes it much easier for the guide to speak to you, and while we have no "secrets" to hide, if you are not familiar with our plant lay-out, you could easily stray into an area of possible hazzard, or even "get lost".

3. Be Alert! Please do not "get in the way" of any of the operators, lift trucks, etc.

4. We request that all children under the age of six years not make the tour, but be "deposited" in our play-ground area at the back of the plant. We have people there to care for them.

5. Please direct any questions you may have to your guide, rather than to any of the machine operators and/or assemblers. Your guide is well qualified to answer.

OK, the sermon is over, and we hope you find the rest of this booklet and your tour of "Bradley Factory" interesting. Thank You.

PS: The real reason we did the yelling at you is that if we hadn't of, Safety Director PETE LAFFEY would have yelled at us.



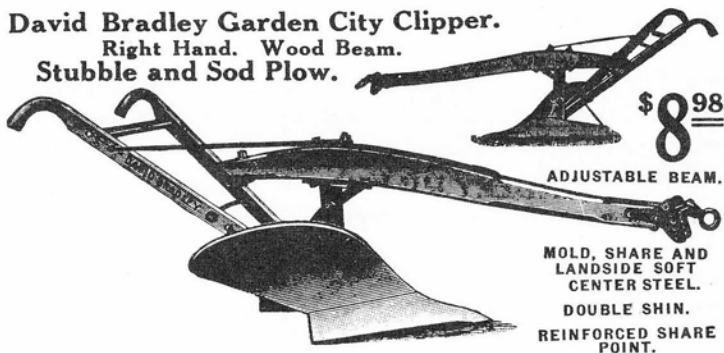
HISTORY OF BRADLEY

In the year of 1895, the David Bradley Manufacturing Company moved to North Kankakee, and shortly thereafter, the Village changed its name to Bradley. David Bradley had developed the famed Garden City Clipper plow, which was the forerunner of today's modern plows, and his business was booming.

This factory and business was actively administered by Mr. Bradley until the time of his death, February 19, 1899. For the next eleven years, the family carried on the business. From the time of the move to Bradley, the firm had erected two major three story buildings and the five story building that are still in use.

To provide a firm source, and to control the quality of its farm implements, Sears, Roebuck and Company acquired the David Bradley Manufacturing Company in 1910. Under Sears management, the name of David Bradley became a symbol of quality, as well as one of the best known trade names throughout the world.

David Bradley Garden City Clipper.
Right Hand. Wood Beam.
Stubble and Sod Plow.



ADJUSTABLE BEAM.
MOLD, SHARE AND
LANDSIDE SOFT
CENTER STEEL.
DOUBLE SHIN.
REINFORCED SHARE
POINT.

The above illustration was clipped from a 1913 Sears catalog, and it is apparent that inflation had not set in as of then.

The Bradley line of plows, discs, cultivators and harrows was augmented by Incubators in 1920, when the big fad was to raise chickens. Brooder Stoves were also manufactured, and business was great. Later, the Bradley Walking Tractor was introduced, along with all its various attachments, and became world famous for its versatility and dependability. Hundreds of thousands of these fine machines were produced, and many are still in use today.

The manufacture of Coal Stokers was undertaken in 1937, and was a major production item for several years.

During World War II, Bradley plunged into war production with the same vigor and skill that marked its civilian production. With more than 300 of their employees serving in the Armed Forces, the Bradley people came up with the supreme effort that won them the coveted Army-Navy "E" Award on December 29, 1944. This enviable production record continued on thru the war, even tho hundreds more of our employees were called into Service.

At the conclusion of the War, the Farm Implement business boomed. Conversion from steel wheels to rubber tire mountings came about, and the famous Walking Tractor was redesigned, and became not only the most powerful one on the market at that time, but also the first to be "streamlined". Plow shares were produced for many firms, as well as for our own use.

In 1946 and 1947, a progressive building program added 218,000 square feet to our facilities, bringing the total under-roof area to more than 700,000 square feet.

Dinette Furniture was added to the product list in 1952, and has now grown to the proportions that this plant is one of the largest manufacturers of Dinette Sets in the country. Hundreds of thousands of dollars have been spent for capital equipment to enable this great growth in the furniture business.

During the Korean War, Bradley again turned to War production, and, as in World War II, made great contributions with their Shell Line.

Starting in 1955, Chain Saws appeared on our production scene, and Bradley has developed the finest saws on the market, and today, they and Sears are justifiably proud of their complete line of super-light weight, high performance saws.

The Walking Tractor met its successor in 1958 when the Riding Garden Tractor was introduced. Thru the vision and foresight of Bradley and Sears, this product has been developed to the present leader in its field. Bradley is the LARGEST manufacturer of Garden Tractors in the world.

Barbecue Grills were produced in the early 1960s, but the line was discontinued to better utilize men and equipment for other items.

The famous DAVID BRADLEY MANUFACTURING COMPANY name became a "thing of the past" in 1962, when Sears merged the Newark, Ohio Company and Bradley into a single unit, still maintaining ownership. The Bradley Plant then became known as the Newark Ohio Co., Kankakee Division.

In 1964, the Newark Ohio Company was merged with the Geo. D. Roper Corporation, which is the only nationally known firm to headquarter in Kankakee. Although the Roper Corporation is not owned by Sears, that merchandizing giant is still the major customer of the firm.

With the merger, Bradley became more active than ever. In 1966, Gas-fired Rotisseries were added to the line, and, later in the year, the production of Pocket Billiard Tables was undertaken. In the fall of '66 a new Warehouse was built, adding some 72,000 more square feet of area to the plant. The new warehouse alone represented an expenditure of nearly half a million dollars.

As in previous times of conflict, the people of the Bradley plant have again risen to the occasion, and currently nearly 100 of our people are in the Armed Forces, many of whom are seeing action in Viet Nam.

Our shop employees are represented by Local Lodge No. 1184 of the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFL-CIO; Lodge No. 1212 of the International Association of Machinists and Aerospace Workers, AFL-CIO; and Local No. 296 of the International Brotherhood of Firemen and Oilers, AFL-CIO.



ITEMS OF INTEREST ALONG TOUR ROUTE

The numbers appearing before the various items in this write up correspond to the numbers on the map on the preceding page. This will enable you to locate on the map where these various installations are in relation to each other.

① The first major Department we pass thru is the Maintenance Shops. These men, Millwrights, Plumbers, and Electricians, are the unsung heroes of the place, as almost all of their work is on an "emergency" basis. When something breaks down, these men swing into action to get it going again.

② Entering the next room, you will immediately see the overhead conveyor, carrying both painted chair frames, and wheel/tire assemblies. This conveyor is 1472 feet long, and you will see the chair frames being taken off in another building on the third floor, and then in still another building, the tires are removed.

③ Heat Treatment is the name given to heating and cooling operations performed upon solid metals and alloys in order to obtain the desired condition and/or properties. These Heat Treating facilities are the finest obtainable, and the cost of this installation was approximately \$150,000.00. Upwards of three million parts are processed here each year.

The various types of heat treatment done at this installation are: annealing, process annealing, normalizing, spheroidizing, carburizing, carbo-nitriding, oil hardening, air hardening, stress relieving, tempering, induction hardening, induction tempering and carbon restoration.

④ MIG (wire) welding is much faster and makes a neater weld than the conventional arc welding. We are converting many of our welded assemblies to this method.

⑤ The Ames Projection Welder welds a chair frame in less than two seconds. The test stand nearby has a chair frame heavily weighted down, and being rocked, twisted, and generally abused to test the welds.

⑥ The Clearing Press is the most powerful press, 1200 tons, in the plant. We have other presses with larger frames, but not as great capacity.

⑦ On the Guide Bar Line, three parts are assembled and welded into a "sandwich" of steel. Very close tolerances are held in these operations, to avoid too close or too sloppy a fit of the chain when the saw is in operation.

⑧ "Hot working" is the term usually applied to the plastic deformation which takes place above the recrystallization temperature of a particular metal or alloy. Hot work processes are generally preferred on high strength steels in order to avoid fracturing or cracking of the metal during forming. Furnace temperatures are: Hot working, 1500 to 1700°, and Forging, 2000 to 2200°. This particular product is a tractor seat spring, with an annual production of 60,000 parts.

⑨ The Yoder Tube Mill is capable of producing tubing from ½" diameter up to 3½" diameter. The Mill is made up of several pieces of semi-automatic equipment as follows: Coil unloader or uncoiler, coil splitter, coil recoiler, 7 stand forming mill, 180 cycle electric welder, 5 stand sizing mill, and a 4 post cut off machine.

This equipment, installed in 1953, converts coils of steel that weigh approximately 10,000 pounds into electric welded Tubing at a rate of more than 100 feet per minute, and cuts it off at a predetermined length. On an average day (8 hours), this machine will produce about five miles of tubing, enough to lay a pipeline from Kankakee to Aroma Park. In 1966, we produced more than thirteen million feet of tubing. Installed and tooled up, this Mill cost approximately \$175,000.00. As to accuracy, the Mill produces the tubing within five thousandths of an inch of the desired diameter.

On the left is our Steel Stores. Note the huge overhead cranes that transport this material.

⑩ Presses, presses, and presses. Too numerous to identify individually, these machines do a great variety of stamping, punching, cutting, trimming, etc.

⑪ Die storage area – and all of the dies in this room are for currently active parts, needed for production. Dies of various sizes and functions can cost as little as a few hundred dollars up to and in excess of fifty thousand dollars each.

⑫ Our Tool Room is equipped well enough to make just about anything we would require in the line of dies, jigs and fixtures. However, our production is so great that these men and machines are used almost exclusively on the repair and maintenance of existing tools, consequently, we are obliged to purchase most of our new dies from other firms. These Toolmakers are all expert craftsmen.

⑬ Our Pocket Billiard Table Line is completely contained in this room at present, but the rosy outlook of future business for this line indicates that this Department will probably expand to three times its present size.

⑭ Dinette Table Assembly – and as a matter of saving steps, we will follow this line “in reverse”, that is, starting at the finished end, and going from there. Our present schedule includes 14 various models, and an annual production of 75,000 tables. We have been the primary source of dinettes for Sears since 1953. On March 8th, 1966, our Furniture Division won the Sears E Award for outstanding excellence of quality and service. (Just in case we don't mention it later, we also won the same award for our tractors and attachments.)

⑮ Our Dinette Chair Department, and we are sure all the ladies in our group will be amazed at the speed with which our young ladies sew the vinyl seats and backs. On the upholstering lines, the west line is upholstering seats, and the east line is upholstering backs. As they complete their job, the finished product is put on the conveyor, and at the end of the line, each piece is individually inspected.

Chair Assembly, and here comes those chair frames on that conveyor we saw earlier in the tour. The chairs are partially assembled, and packed in cartons. Some models are two per carton, others four, and some six. The store and/or customer completes the assembly when the chairs are unpacked. Annual production – 375,000 chairs.

Down the stairs, and, weather permitting, we will take a brief stroll outside. (If it happens to be inclement, we will retrace our steps thru the Tool Room and Die Storage.)

⑯ This is a Pre-Assembly area, where some of our larger components for tractors and accessories are “put together”. The two large presses here are a 250 ton Clearing, closest to the wall,

and a 500 ton H.P.M. The Clearing is used for blanking and punching parts, while the HPM, which is a hydraulic press, is used for forming and deep drawing of metal parts.

①7 The Machine Shop, and a myriad of different pieces of equipment to turn, bore, drill, knurl, groove, and do about anything possible to a piece of metal by machining. On the left are lathes and automatic bar machines.

①8 This line of machines is our Gear Case Line, and most of the equipment is specially designed and made to do the job. *When the gear case halves leave this line, they are ready for assembly.

* Cost of the special machines on this line was nearly \$200,000.00.

①9 Of special interest on the right are our three Gear Hobbing Machines. We have one single spindle machine, a six spindle machine, and the huge 8 spindle one. The gear teeth are cut on these machines, and we make gears with from 7 to as many as 141 teeth, and these three machines can cut teeth on 8700 gears in one three shift day. We make all the gears for our tractors, chain saws and tillers.

②0 On the Paint Line, we are using the latest airless spray equipment. This is an electrostatic system, and paint overspray is all but eliminated. Approximately 150 gallons of paint are used daily, and the paint is heated to 160° before entering the spray guns. Each spray gun is supplied with ninety thousand volts by the power pack. This line normally runs at 21 feet a minute, and in the ovens, the paint is baked at 350° to assure the finest quality.

②1 The Chain Saw "Merry-go-round" is also capable of varied daily production, as the number of men working on it can be changed.

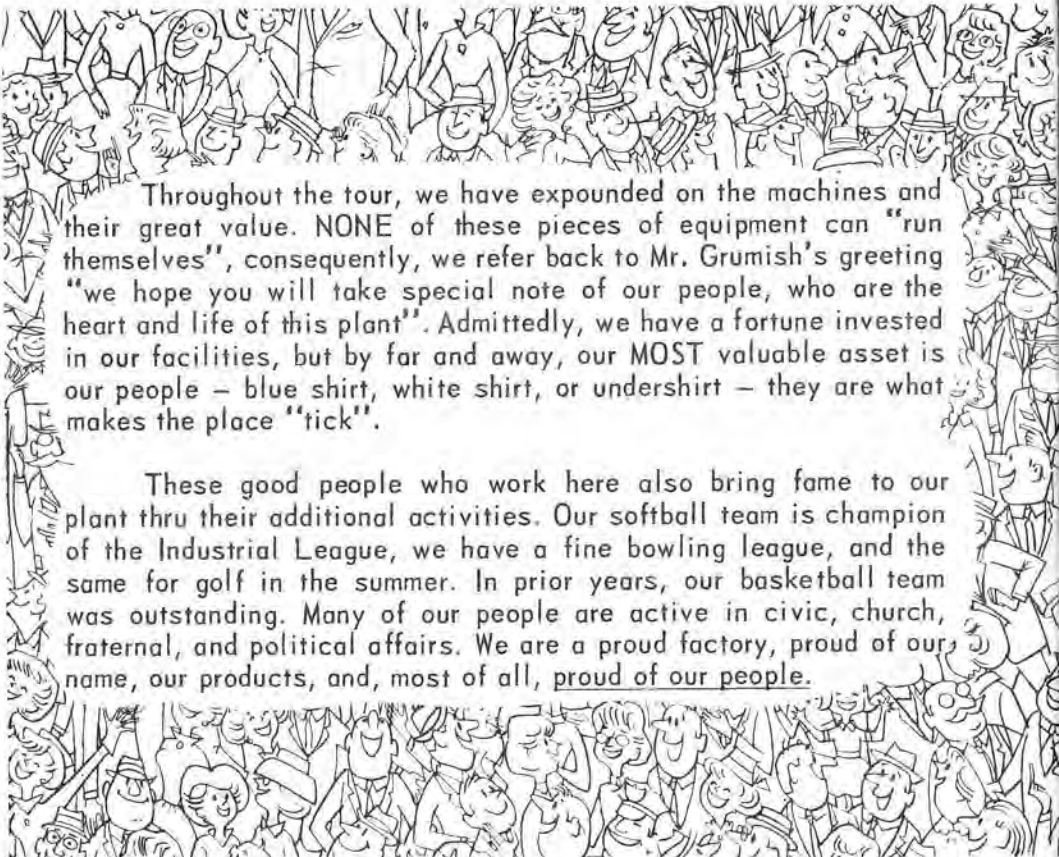
②2 Assembly Line for Suburban Tractors – a flexible group. Presently operating with 30 men, and producing 114 tractors a day, it can be run by more or less men, and production can be from 50 to 200 plus tractors in eight hours, depending upon the number of assemblers.

Along the South End here is our QUALITY AUDIT, which carefully checks our finished products for performance as well as appearance. Despite inspections of all parts in all operations, this final check is our assurance that only top quality merchandise goes into our Warehouse.

23 This new warehouse was completed last Fall, and has 72,000 square feet of floor space. Apart from a small area set aside for receiving cartons, engines, etc., this building is used exclusively for storage of tractors and attachments.

24 On the right as we enter the office area is the Tabulating Department, and beside it is our Print Shop. The First Floor Office has Timekeeping, Cost Accounting, Warehouse and Shipping, Sales, and Billing Departments.

25 The Second Floor Office is home to Tool Design, Industrial Engineering, Standards, Product Engineering, Materials Control, Purchasing, and Dispatching Depts.



Throughout the tour, we have expounded on the machines and their great value. NONE of these pieces of equipment can "run themselves", consequently, we refer back to Mr. Grumish's greeting "we hope you will take special note of our people, who are the heart and life of this plant". Admittedly, we have a fortune invested in our facilities, but by far and away, our MOST valuable asset is our people - blue shirt, white shirt, or undershirt - they are what makes the place "tick".

These good people who work here also bring fame to our plant thru their additional activities. Our softball team is champion of the Industrial League, we have a fine bowling league, and the same for golf in the summer. In prior years, our basketball team was outstanding. Many of our people are active in civic, church, fraternal, and political affairs. We are a proud factory, proud of our name, our products, and, most of all, proud of our people.



THIS CONCLUDES OUR TOUR, LADIES AND GENTLEMEN;
AND WE THANK YOU SO VERY MUCH FOR COMING.

This brochure was published in the Roper/Bradley Print Shop, and was written and edited by the Staff of the Roper/Bradley News – J. A. Grimes, Editor; D. E. Jenkins, Publisher; and Karen Hayes, Coordinator.

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