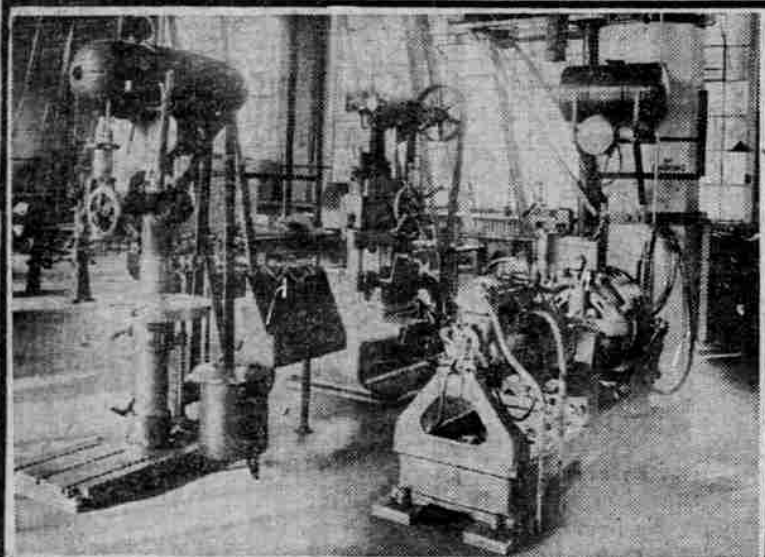
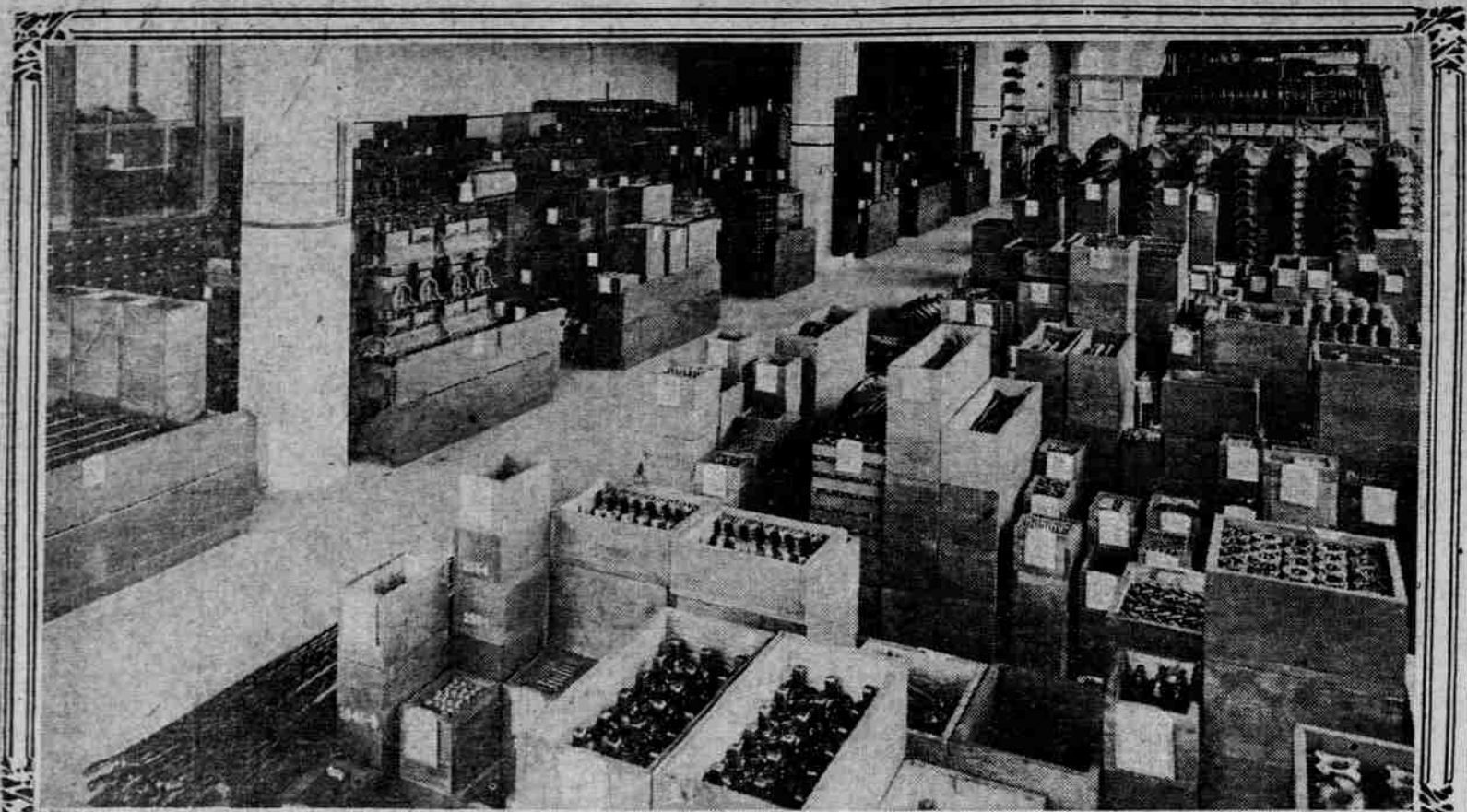
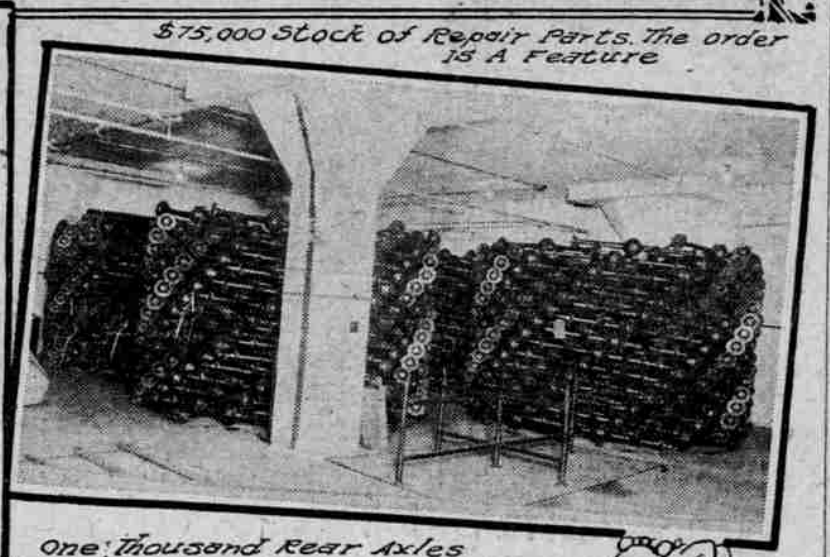


## FORD FACTORY PRESENTS UNIQUE FEATURES IN TURNING OUT THOUSANDS OF MACHINES

Cleanliness Put to Front First and Foremost, Despite Constant Accumulation of Car Axles, Which, at All Times, Are Piled High in Factory—Expense of Operation Another Revelation to Auto Men.



Corner in the Testing Room,  
Showing Motor on the Block



\$75,000 Stock of Repair Parts. The order  
is a feature



One Thousand Rear Axles

PORTLAND'S branch of the Ford Motor Car Company, over in East Portland, has been in operation more than a year, and in the last period of 12 months has turned out the roads of Oregon nearly 4000 automobiles.

It would seem that the building, painting and assembling of that many cars would have changed the new appearance of the factory, but it has not.

It was the appearance which first appealed to the Portland people to whom a peep inside was given. Were it not for the stacks of wheels, axles, chassis and such things, the visitor could easily imagine himself inside a big hospital or a biscuit factory or some other plant which demands absolute cleanliness.

**Order Typical of System.**  
The cleanliness and order are typical of the Ford system, and F. B. Norman, who is in charge of the Portland plant, has kept pace with the factory system in every detail, and probably none it one better in some of them.

The cleanliness is everywhere apparent, from the clothing which the workers wear to the floors and ceilings of the big plant. Today, a year after the plant has been in steady operation, it is even much cleaner than it was when the building was turned over by the builders.

Have you ever been in the painting-room of a carriage factory or a furniture factory? Probably, if it was an average factory, the paint was inches thick on the floor and splattered almost to the top of the ceiling.

Well, then, imagine one in which black paint is the leading color detail. Also imagine it as clean as the pastry-room of a modern tiled-lined bakery.

Such is the case at the Ford branch. The walls are white enameled and the floors are a light gray.

**Dirt Easy to Find.**  
That is because the dirt will show better and will be easier to find," said Manager Norman, by way of explanation.

When the writer was taken through the room had just been cleaned up after several hundred sets of parts had been black enameled. The paint troughs had been drained. The draining pans were emptied and washed and all metal shone with the luster of a new dollar.

The light-colored floor was in the process of being cleaned and the specks of black paint were rapidly disappearing from the white work. That is done after each day's work and when the workmen start in the morning, the room is again as neat and orderly as the operating room of a big hospital.

**Tools All Put Away.**  
No tools are seen anywhere. The only tools are those in the hands of the workmen or in the immediate vicinity of some job. When used they are cleaned and returned to the check room, where a special operative takes care of them, inspects them and sees that they are in proper condition for the next job.

There is no dirty waste to be seen. Polished metal cans line the hall. If any waste is needed, it is taken from one can, used and thrown in the waste can without being allowed to smear up any floors or benches.

The workmen themselves might all be internes in some big hospital. It is a certainty that many bakers and foodstuffs makers have a lot to learn from the Ford system.

The novice asks: "How can a workman, for example, take down an old engine, work on it all day, and still be wearing clean clothes?"

**Explanation Is Simple.**  
The explanation is simple. The engine, immediately upon arrival, is given a bath. It is lifted from the chassis by a chain block and dipped into a big vat of boiling acid. A few minutes' immersion and it comes out with all greases, dirt and old paint removed.

It is then, no dirtier job than repairing a watch or a typewriter.

Of special interest are the many novel machines which save time and labor. One of the most interesting is the wheel painting machine.

That was invented by a 16-year-old boy who was blamed for being too slow," explained Mr. Norman.

He worked in the Ford factories at Detroit, day in and day out, laboriously painting the wheels, which, because of the absence of straight lines and planes, was a slow job. One day the foreman thought he was slower than usual.

**Boy Studies Problem.**  
"The boy ate his lunch and then began to figure of some better way to paint those thousands and thousands of wheels which were piled up on all sides. The drill press seemed the solution.

"The boy took the pan of paint and put it on the drill table. Then he fastened the wheel to the drill and filled the hub so that the paint would not fill the bearings. Then he pressed the drill down and the wheel sank into the paint.

"He raised it and let it spin and centrifugal force wiped off the excess paint. The machine saved thousands of gallons of paint and one man did the work of 20. With a few alterations, the drill press was made into a painting machine and one man now does all the work for this plant with the machine standing idle more than half the time."

Another machine enables one man to line 100 brake bands in an hour. Special machines put together the parts of the chassis.

**Assembling Time Cut.**  
The Portland factory is getting better every day and in one year has cut the time of assembling a Ford from 47 minutes to 27.

The first step in the time-saving was accomplished by putting the assemblies all on one floor and within 150 feet. The parts stand on each side, always put there the day before. In that way, a Ford runs out on its own power, just 27 minutes after the first workman touches its parts.

Down on the ground floor an extensive testing plant has been installed. The branch does all repairing and completely overhauls an owner's car in six hours.

After the re-assembling, the motor is put on the block against an immense electric motor and a thorough test is given it before it is put back in the customer's car. No matter how small the job on the motor, it is tested by the branch.

On the other side is a cylinder re-borer. Bearings are tested and aligned by another expensive machine. The stock-room looks like a vault in a mint. Every style of parts is put away in cases of 50. As soon as one

box is used it is removed. The cases are all of the same style, and the order is perfect.

In another corner is the branch hospital now being installed. A male nurse will soon be placed in charge.

Manager Norman was asked why all this care and perfection in detail.

"We find that it is the one way to attain the highest efficiency," he said. "Take the stock-room. There is one place for every particular kind of thing. There is no danger of losing any vital part."

"Also there is no danger of ever running out of just the part which may be needed to place some car back into service. We notice a shortage long before actual need."

**No Employee Gets Sick.**  
"The light and cleanliness throughout the factory make conditions better for the employees. No man, no matter what the weather, ever gets sick because of conditions at the plant. Sanitary fountains are at every corner."

"These conditions, coupled with the minimum of \$5 a day, gives us a force of which we expect and get the highest efficiency."

The general Ford factory conditions prevail throughout the offices. All employees, with the exception of messengers and girls, get \$5 a day. The messenger boys get from \$2 up. The telephone operators get nearly \$10 a month, and the women clerks get more than that.

**BRITISH GAS TAX ACCUMULATES**  
Six Cents Gallon Which British Have Paid May Help Distressed.

For more than three years there has been a duty on gasoline in the British Isles equivalent to 6 cents a gallon, the full brunt of which has fallen on the consumer, and, as for the past two years the price of the spirit has been steadily rising, there is no doubt that the expensive nature of gasoline has in some measure retarded the development of the motor market, particularly as this comes in addition to the horsepower tax.

The petrol tax was introduced into England by Lloyd George's famous budget of 1919. The funds raised by it, together with the money brought in by the motor license duties were given into the charge of a body known as the Road Board. The funds were to be used for the improvement of roads, but not for their maintenance, as the ex-

pense of all road repair work has to be borne by the local authorities.

The Road Board has had to be very sparing with its grants, because it was intended that the money should be saved as much as possible until a period of trade depression comes along, and then the unemployed would be set to work on the roads.

Last year the Road Board was attacked inside Parliament and out by those who thought it unfair that motorists should continue to be taxed so heavily while more than \$10,000,000 of the money raised, so far from having been used for improvements, had been invested. The Road Board adopted the attitude of "wait and see," and now perhaps its large reserve fund will come in very useful for relieving the distress which is bound to follow the war.

**POPPIES TO LINE LINCOLN WAY**  
California Children Have Planted State Flower Along National Road.

When the stream of Eastern tourists begins to pour into California next Spring over the Lincoln Highway they will pass for mile after mile between rows of California poppies, while the foothill boulevard leading into Oakland will be further beautified with a fringe of blue pines, which will set off the brilliant yellow of the poppies.

The work of gathering the poppy seeds and of planting them along the Lincoln Highway has been undertaken by the school children of Alameda County under the direction of Professor G. C. Smith, of San Leandro, vice-president of the California Botanical Society. The children of the other counties in California crossed by the Coast-to-Coast road are expected to follow the example.

Most of the seed has already been gathered, the children having worked hard all Summer.

**Her Creed.**  
(London Telegraph.)  
Gertie—I wish to show you that I don't stand on trifles.  
Helen (glancing at her feet)—No, dear; I see you don't.

**Warmth and Expense of It.**  
Boston Transcript.  
She—"The mere thought of the fur you have promised me makes me feel warm." He—"And the mere thought of their cost makes cold shivers run down my back."

# TIRES

All non-skid—guaranteed 3000 miles

28x3 .....	\$ 8.00	31x4 .....	\$15.50	35x4 1/2 .....	\$22.00
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30x3 1/2 .....	\$12.00	33x4 .....	\$18.00	37x4 1/2 .....	\$22.50
		34x4 .....	\$18.00		
31x3 1/2 .....	\$12.50	35x4 .....	\$18.50	35x5 .....	\$24.00
32x3 1/2 .....	\$13.25	36x4 .....	\$18.50	36x5 .....	\$24.00
34x3 1/2 .....	\$13.75	34x4 1/2 .....	\$21.00	37x5 .....	\$27.00

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We have a large stock of parts for 15 different makes of cars at about one-half price. See us for anything pertaining to Automobiles. We have a reputation of being the lowest-price Auto Supply House on the Pacific Coast.

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For several weeks we have been installing new machinery and equipment in our tire factory, so that we may turn out first-class work for less money. Now that our plant is complete we have cut the price of Vulcanizing 35 per cent.

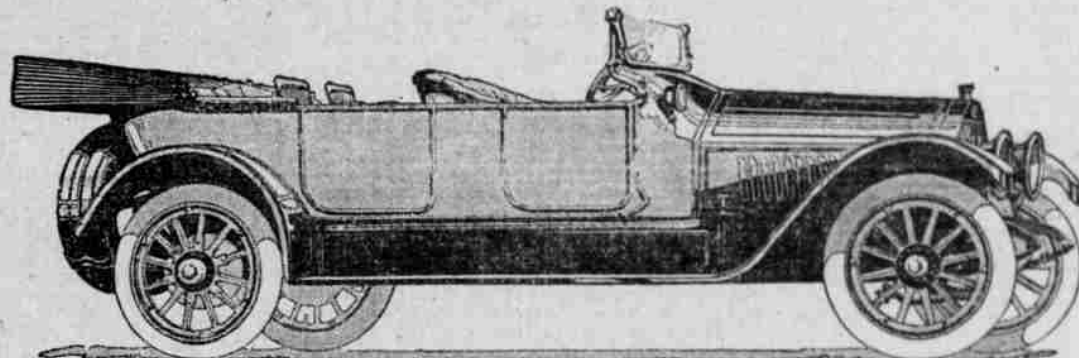
With our new, up-to-date equipment to work with, this still leaves us a good margin of profit. All our work is absolutely guaranteed.

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