

PARKER SERVICE FOR FORDS REPRESENTS THE MOST MODERN METHODS

Company Less Than Year Old Already Planning on Larger Quarters—Speed and Guaranteed Efficiency at Minimum Cost to Customer Makes New Industry Single and Alone in Field—Remanufacturing of Fords from New Tire Lugs and Body Paint to Complete Overhaul Offers Ford Owners in this District Unparalleled Service—All Jobs Large or Small in the Hands of Experts—System Is Fundamental and Unique in Its Field and Has Attracted Nationwide Attention from Forward Looking Automobile Mechanics and Garage Executives

WITH 42 per cent of the car owners in this district driving Ford cars there will be no doubt considerable interest in knowing that one of Salem's newest industries has already within less than a year grown out of the period of infancy and is now one of the leading industries of the city. That junior industry is the remanufacturing of Ford cars in the Parker plant at 444 South Commercial street.

One of the very remarkable features of the Parker plant is the saving of time and money to the customer. Whether it is the simple tightening of a bolt or

undergoes in the factory. In the Parker plant this operation is successfully accomplished by holding the rivets in place with a specially constructed "buck" and heating each rivet separately with the acetylene torch before it is set with a tool made for the purpose.

How the Motor Is Rebuilt

Importance of Cylinder Work
The cylinder is the heart of the engine. It is the place where the greatest waste occurs and most trouble originates. No matter how carefully other work may

be done, if the cylinders remain in their worn or scored condition the oil will leak by and compression escape. The motor will remain weak and wasteful and will be noisy and unsatisfactory in operation.

Method of Finishing

Producing a "Gun Barrel" Finish
The second operation, that of

testing device. The crank case is rebrazed if necessary and tested to make sure it is not bent or twisted. The motor is then assembled to crank case and transmission cover and run until thoroughly freed up.

Building Up the Rear Axle

While the motor is going through these exacting operations the rear axle is receiving similar treatment in another department. The assembly is placed in a special rear axle stand and then disassembled. All internal parts are washed and cleaned. Each part is subjected to a minute inspection and all worn parts are replaced. All parts to be replaced are removed and new parts installed through the use of special jigs and presses. The axle shafts and drive shaft are tested and if out of true they are straightened in a straightening press.

All internal parts having been assembled, delicate and final adjustments are made. All parts are thoroughly greased and enclosed in housing. New felts are placed on the outer ends before wheels are put on. Brake rods are equalized and adjusted. The axle is then given a thorough and final inspection before it is returned to the chassis.

Overhauling the Front System

After the front axle has been removed from the frame, all parts are disassembled, thoroughly cleaned and inspected, down to the last bolt and nut. All worn parts, where wear cannot be taken up, are replaced by new ones. All broken parts are similarly replaced. Spindle bores and arms are rebushed and reamed with special pilot reamers.

The steering arm connecting rod ball caps are brought up snug when assembled. Front hubs are packed with grease before wheels are placed back on axle, and bearings are then adjusted. Front spring and perches are rebushed. All spring leaves are freed from rust, oiled and reassembled. The front system is now ready for assembly to the chassis when the axle will be tilted at the correct angle and the front wheels properly aligned.

The Radiator

By the ordinary method of repairing a radiator, leaks are usually soldered from the outside or such sections of core are inserted as may be needed. In the Parker system of remanufacturing, tanks are removed entirely, damaged or worn parts are replaced with new, each of the 95 circulating tubes cleaned at both ends and pickled and the radiator again assembled. As the pure copper tubes are not affected by rust or corrosion, the resoldering of the entire radiator makes it in every respect good as new.

Body Work and Painting

Attractive Appearance Important as Mechanical Perfection

Immediately upon removal from the chassis, the body is taken to the wash rack where it is cleaned and all old paint removed by means of chemicals. The upholstery is then repaired or entirely replaced as may be required. Following this, the body goes to the paint department where the bare metal is bumped, smoothed and sanded and receives its first or prime coat which consists of a combination of lead oxide with a mineral pigment.

The next operation, called the glaze coat, fills out any small dents or imperfections in the metal and the body is then ready for the paint and varnish. The successive coats are all flowed on, ending with a coat of high grade wearing varnish.

In the meantime the fenders, hood, lamps, windshield and each of the various parts receive appropriate treatment so that all will be finished at the same time

and ready to be reassembled into the finished car.

Factory Methods Applied to Small Jobs

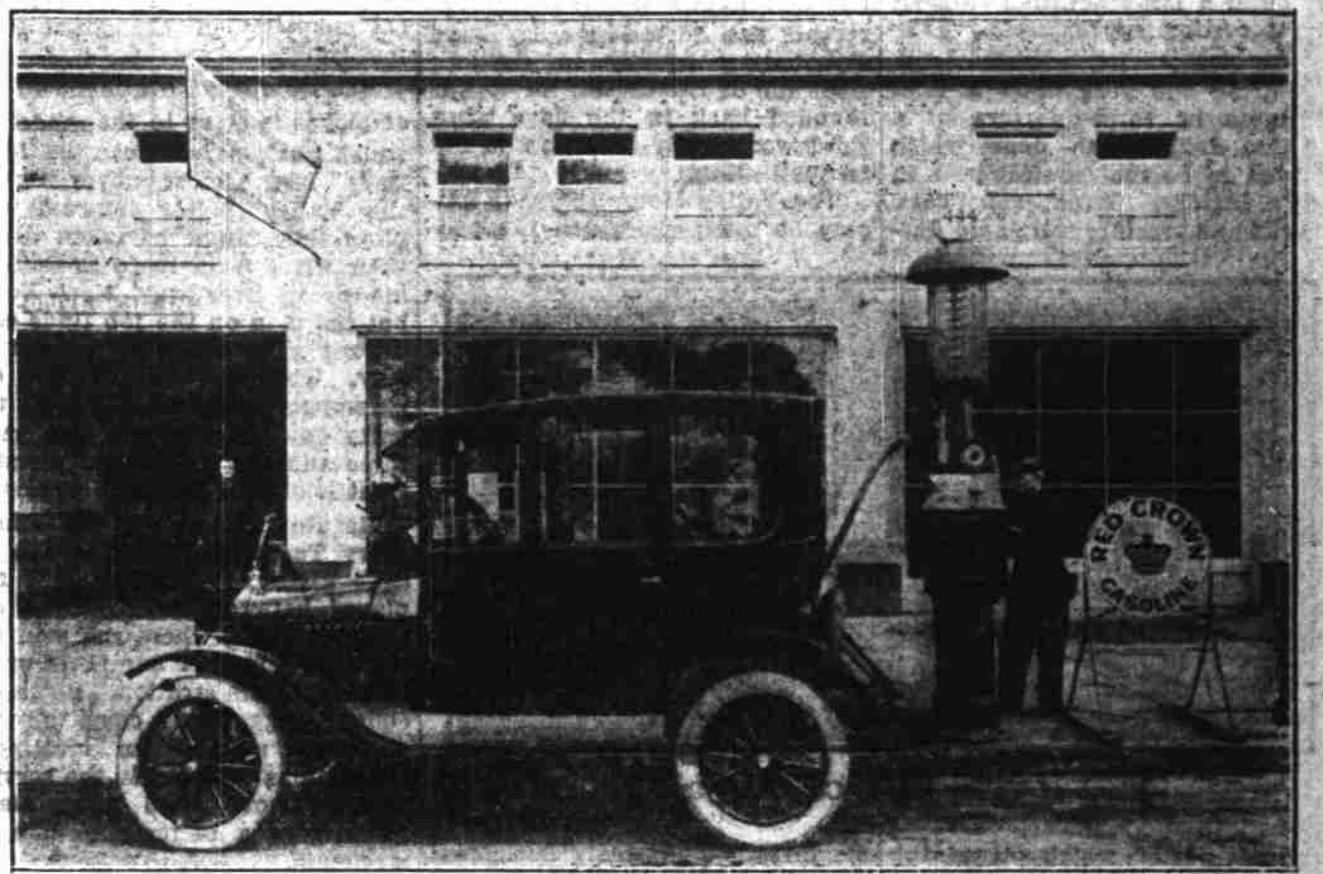
Standardized Operation at Fixed Price Saves Money for Car Owners

Minor repair jobs which come into the shop are handled by exactly the same methods as in remanufacturing, the only difference being that in these cases it is a single unit, such as the motor, an axle or a body that undergoes the rebuilding process instead of the entire car.

Present Plant to Be Enlarged

Plans have been completed for an addition to the present building, at 444 South Commercial St., two hundred feet in length, including a one hundred foot testing platform which will make it possible to road test every car without leaving the building. This will extend through from Commercial street to Liberty street, on property now owned by the company and will give, with the basement, a total floor space of over thirty-five thousand square feet.

Salem is the natural trading center for a territory containing over five thousand Ford cars and the Parker Company is steadily widening this field by bringing in wholesale business from surrounding repair shops and garages. A regular wholesale price schedule is provided for this work. The garage man can lift a motor from the car, ship it to Salem for a complete overhaul and receive it back, ready to put in the car, the next day. In this way he can furnish his customer with a high grade, guaranteed job at a considerable saving in time and money, both parts and material



THE FINISHED JOB
Ready to give its owner another long term of faithful service

with his motor, how long he will have to wait to have it fixed and how much it will cost.

Here is where knowledge and skill together with proper equipment, as against the old fashioned method of guess work and a screw driver, saves time for the repair man and money for the owner of the car. A testing instrument, in appearance much like an ordinary tire pump is screwed into the spark plug hole of the suspected cylinder. This "pump" is fitted with a solid piston which is moved smartly up and down.

To test for a loose connecting rod the piston is placed on top dead center and the knock can be

and accurately as possible. Another thing: we do not attempt to sell our customer accessories of doubtful value nor do we encourage him to make repairs that can be avoided. We feel that the best service we can do the car owner is to sell him the thing he needs, at a price he can afford.

No car owner is getting full service from his car if it skips because the plugs are poor, because it pumps oil, because the clutch slips, because the gears chatter or because of any of the countless things that may be the matter with the car. The original thing which the car owner bought was not a car but car satisfaction, or service. He expects the vehicle

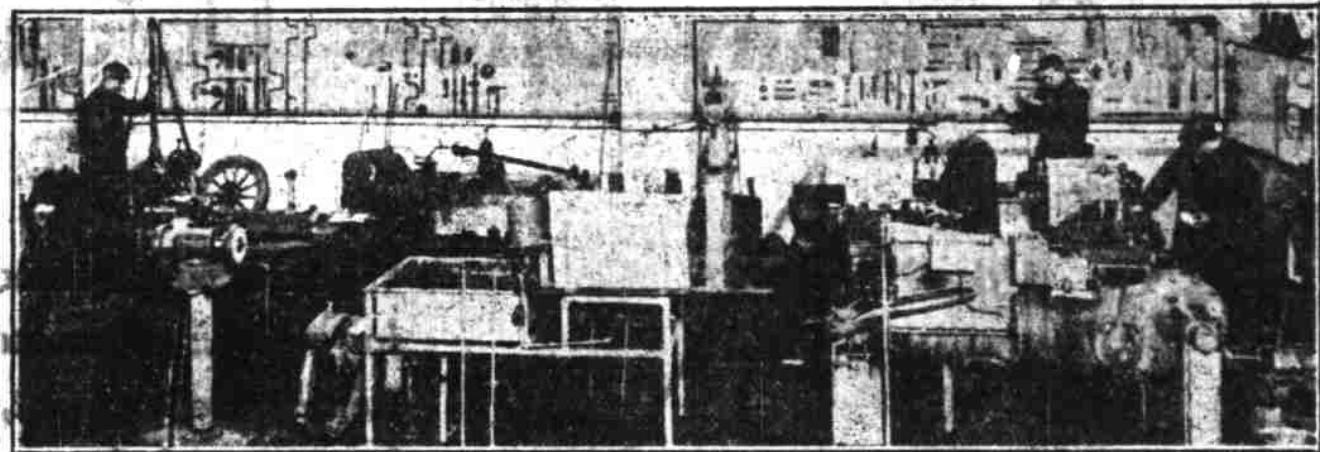
How Charges Are Fixed

The manner in which the amount of the charge is determined will be of particular interest to the car owner who pays to have the work done. A highly trained mechanic is put on each operation and instructed to do that particular job the very best way he knows how. This is compared with the methods of several other good mechanics and when the best and shortest method has been found, this is established as standard and all mechanics follow this one best method until such time as a better may be found.

The charge for each operation is based on the time consumed by a good mechanic using the one best method. Quality of workmanship is maintained by a rigid system of inspection so that even though a certain job might be turned out by a new man or possibly by a man not as fast as the average on that particular operation, the car owner is assured of a standard quality job at a price in direct proportion to the service rendered, because the new workman will be trained at his own expense and not at the expense of the customer.

A standardized, efficient method for doing each job produces much better results and makes faster service. The mechanic knows right where to start, just what to do next, just what tools to have ready and the ordinary run of jobs go through the shop at a rate that is truly astounding. In the front axle department alone seventy-one separate tools are provided, each numbered and in place, ready to the hand of the mechanic.

Short cuts, standardized methods and complete equipment go to cut down costs and render better and faster service. Special socket wrenches, speeders, drifts and punches; specially designed jigs, bucks, mandrels and arbors; quick acting gear pullers, pilot reamers, aligners, valve facers; everything from six foot cold chisels to one one-thousandth inch "feelers," is provided so that the job may be done right and can be done right away and in the Parker Company establishment, Salem has what is believed to be one of the most efficient service stations in the world.



Where the cylinders are machined and the motors and transmissions rebuilt

used in work of this character. The company now numbers among its regular customers, firms all the way from Portland on the north to Eugene on the south and there are at present in the shop five cars from a firm in Vancouver, Washington, undergoing repairs and painting.

Every operation is performed in a certain set routine so that the mechanic turns out the work with a minimum expenditure of time and effort and with machine-like precision. This practically eliminates the chance of overlooking some little thing, such as the placing of a lock washer or cotter key or some small but important adjustment that might cause annoyance and expense after the car has left the shop.

A noteworthy feature of this system is that it results not only in a superior quality of work but is in the majority of cases less expensive than temporary or partial repairing such as has been a frequent practice in the past.

Diagnosing Motor Troubles

Guess work has no place in the Parker institution. For instance, a driver may come in with a knock in his motor. The knock may be caused by a loose cam bearing, which is annoying but not serious in itself. Again it may be a worn connecting rod by which case it should have immediate attention. Or perhaps it is a loose main bearing, which would be much more serious. Whatever the symptoms may be, the owner's desire is to find out what is wrong

plainly heard with the motor at rest. By engaging the crank handle the knock can also be felt through the fingers. A knock that

he bought to carry him where he wants to go, when he wants to go, and do it economically, comfortably and in safety.

Cuts Direct Labor Costs

With the ordinary method of charging by the hour for repair labor, the number of hours turned in on jobs and the actual hours worked in the shop will not balance. There is always a discrepancy, and this dead loss has to be paid for by the customer, either directly, by high rates, or indirectly, by slow or indifferent service. Parker & Company have found the best answer to this problem in the flat rate system of charges. The customer is charged a certain fixed price for a certain operation, no matter whether it takes a man fifteen minutes, or forty minutes or an hour to do that particular job.

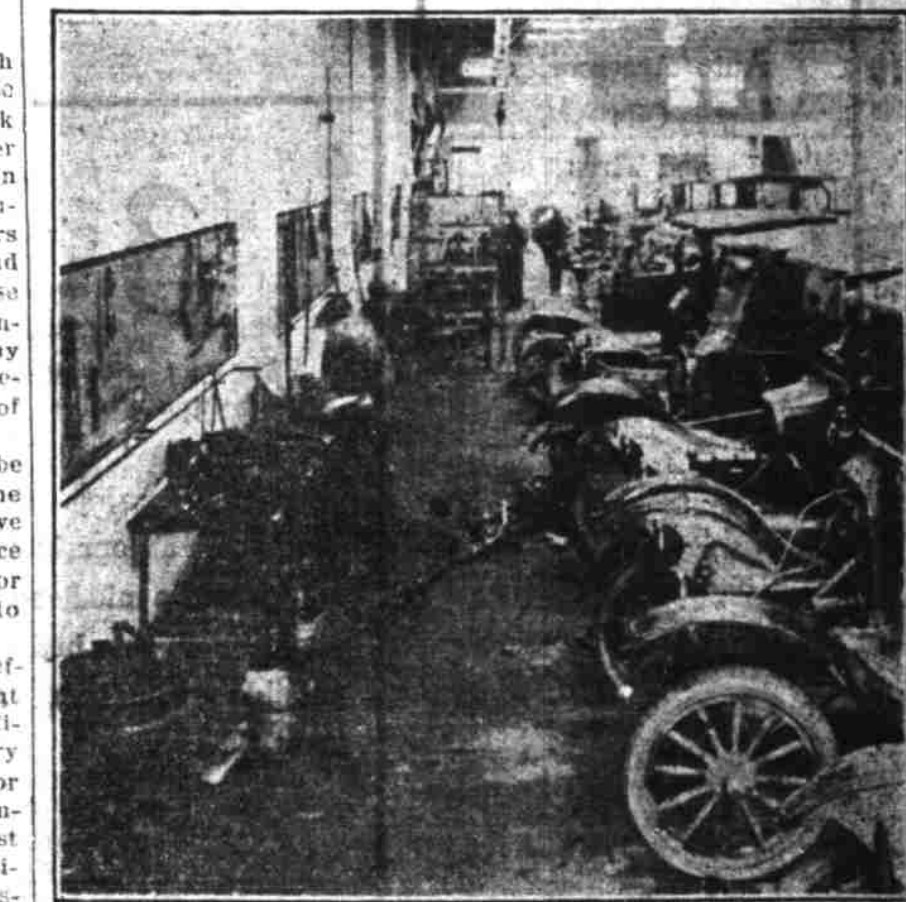


One of the Presses Used to Remove and Replace Worn Bushings

can be heard but not felt through the hand will prove to be a loose wrist pin. By turning the crank shaft thirty degrees past center the cylinder is tested for piston slap and by attaching the instrument to the successive cylinders and testing with the pistons and valves in various positions, loose bearings, broken rings, leaky intake or exhaust valves or any other faults can be accurately determined without the necessity of taking down the motor.

A complete diagnosis can be made in a few minutes and the owner is often saved an expensive repair bill by knowing in advance the exact condition of the motor and the most economical way to go about making repairs.

Mr. Parker says: "Every effort is being made to carry out the idea that success lies in efficiently serving the ordinary, every day folks who must have motor transportation in the most convenient manner and at the lowest possible cost. We are not infallible and occasionally make mistakes which are rectified to the best of our ability. Our men are not superhuman and cannot do superhuman work, but what they accomplish is done as honestly



GENERAL REPAIR LINE
A place for everything and everything in its place makes it possible to repair and remanufacture cars quickly and economically.



FIRST REMANUFACTURING OPERATION
The frame is riveted and fitted with new front cross member. Note special tools on wall, each numbered and in place ready to the hand of the mechanic.

screw, or the entire remanufacturing of a Ford, Parker's shop is equipped to do it in the least possible time at the least possible cost. National attention is being attracted to the methods used by Parker and Company; many garage and repairmen from various parts of the country have visited the institution for the express purpose of getting information on the newest and most up to date methods used by the firm.

The remanufacturing operations should not be confused with the ordinary repairing work such as done by garages and repair shops.

In the remanufacture, the body is first removed from the chassis

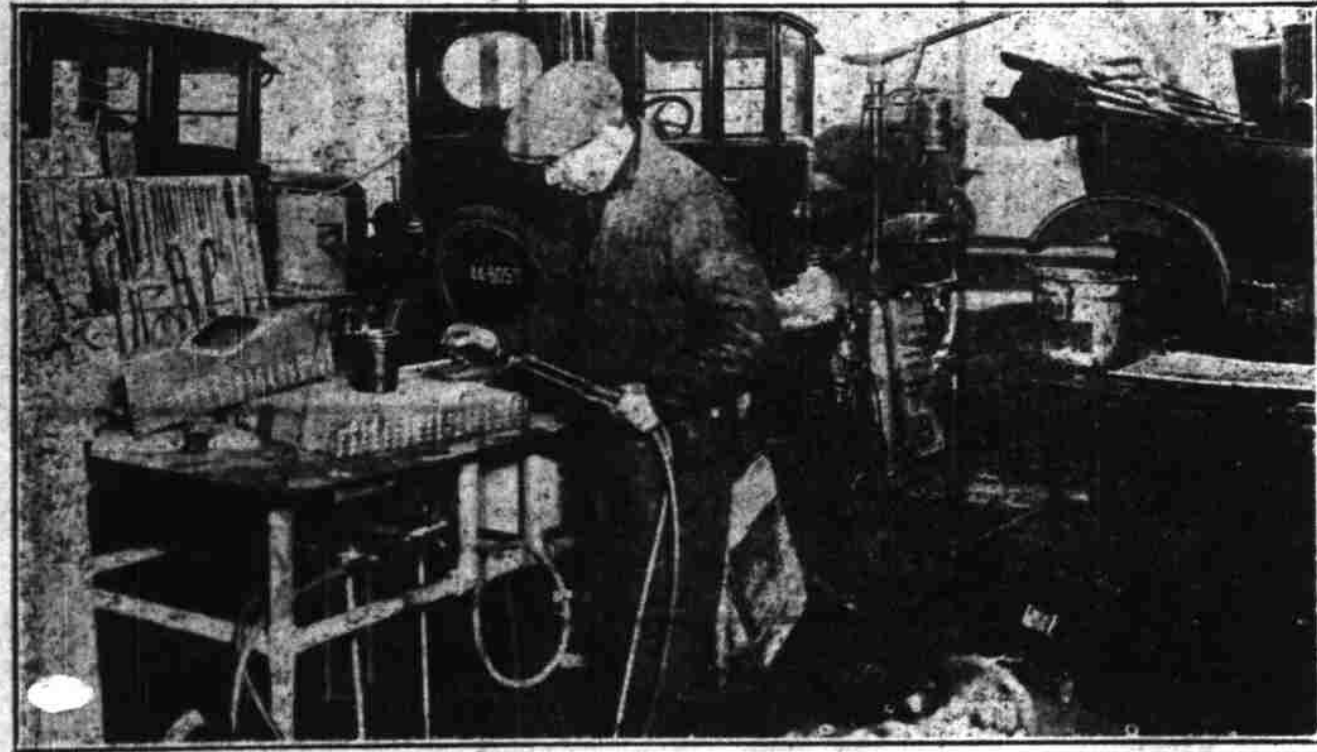
have been done, if the cylinders remain in their worn or scored condition the oil will leak by and compression escape. The motor will remain weak and wasteful and will be noisy and unsatisfactory in operation.

"Lapping in" new oversize pistons without first machining or truing up the cylinder is a very slow and impractical process. Even where the wear is very slight the results obtained seldom justify the time and effort expended. It is absolutely impossible to lap out a scored or tapered cylinder with the necessary degree of accuracy for perfect results. A new true cylinder wall must be produced and the prob-

producing the mirror-like working polish, is accomplished by a self centering finishing head electrically driven. The head, rotated at the proper speed by the spindle, is fed slowly and evenly forth and back through the cylinder. The correct speed and feed give a perfect uniformity of finish throughout the entire bore.

Assembling the Motor

When the cylinder has been prepared, the crank shaft is tested and trued in a straightening press; main bearings and caps are trued, and crank shaft fitted to cylinder block. Piston pins and rings are then fitted, connecting



RADIATOR OPERATING TABLE
Top and bottom tanks are completely removed and every one of the ninety-five circulating tubes cleaned and pickled before reassembling

and the entire car disassembled, even to the bearings in the wheels and the bolts and rivets in the frame.

It is then completely rebuilt, everything being gauged and aligned to factory standard and all parts either worn or showing the effects of crystallization are replaced with new. So thoroughly is this work done that, upon leaving the plant, it cannot be distinguished from a new car right from the factory, either in appearance or performance.

The First Operation

The remanufacture begins with the frame. This part of the car receives special attention as it is the real back bone or frame work on which all the other units are attached. A new front cross member is always fitted because this is the part which almost invariably is first to give way from the effects of crystallization after a long period of hard service.

To make the frame stiff and solid as when first turned out of the factory, it is necessary that it be riveted. To produce a first class job the rivets must be red hot and at the same time the metal of the frame must not be unduly heated as this would destroy the effects of the special heat treatment which the metal

heretofore has been to find the most economical and practical method of accomplishing this.

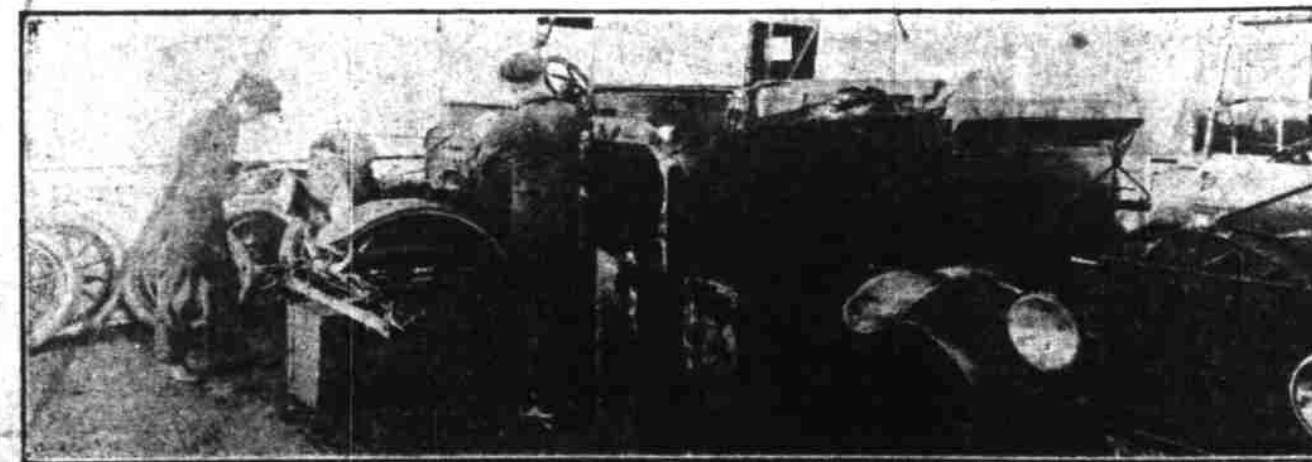
Method of Cutting

Securing "Cannon Bore" Accuracy
The system used in the Parker shop is a distinctive machining process—a factory production method that combine the accuracy and efficiency of the steel multiple cutter head—for making the new accurate hole—with the advantages of a correctly designed grinding or finishing head—for producing the final working polish, a finish that has heretofore never been obtained in motor cylinders by mechanical means.

The First Operation

The producing of the new bore, with "cannon-bore" accuracy, is accomplished by a patented multiple cutter head. The forward tapered edges of the six cutters do the actual cutting as they are fed forward to the work. They cut on exactly the same principle as do the cutters used for boring cannon and for other work where extreme accuracy is required.

Each of the six cutting edges assumes its proportionate share of the cut, dividing and equalizing the cutting strain. This is a very important feature. A single cut-



In the paint department the body receives four flowed coats of paint and varnish