

# FORD DEALER

*and*

# SERVICE FIELD

NOT CONNECTED WITH THE FORD MOTOR COMPANY

January, 1927

Published Monthly by  
TRADE PRESS PUBLISHING CO.  
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25 Cents

## The MUNCIE

7 Speeds Forward  
5 Speeds Reverse  
(Combination)



**\$84.50**

Passenger Car  
Model, \$74.50

### *More Power To Your Ford*

150% more power—30% more speed—for the Ford Truck or pleasure car. Point for point a superior transmission—at a price 15% to 35% lower than any other transmission of the same type or size . . . Sold—and guaranteed—by the firm that makes it—a firm that has been making transmissions for twenty years . . . These are the facts that are making the Muncie a big profit producer for dealers the country over.

THE MUNCIE GEAR WORKS, Muncie, Indiana

*Manufacturers of Transmission Since 1907*

# NORTHEASTER

A Real Magnetic Horn



When the Doctor  
must get through —

SWIRLING snow—slippery pavements—traffic-choked streets—crowds pressing at cross-walks—**B-E-E-E-P—B-E-E-E-P**—heads up!—the Doctor is answering a hurry call—somebody's life hanging in the balance—every second counts—**B-E-E-E-P—B-E-E-E-P**—the way is cleared—on he goes with pace unslackened.

No one knows better than the Doctor what it means to have to get somewhere quick. His friends and our advertising are making him realize how much he needs a NORTHEASTER. Remind every Doctor that you have a NORTHEASTER for him. *Make it "NORTHEASTERS for Doctors" this month.*



## NORTHEASTER

The Horn with that Smart Vibrant Tone

The Horn with the Quick Response

The Horn That Lasts

The Horn They Want

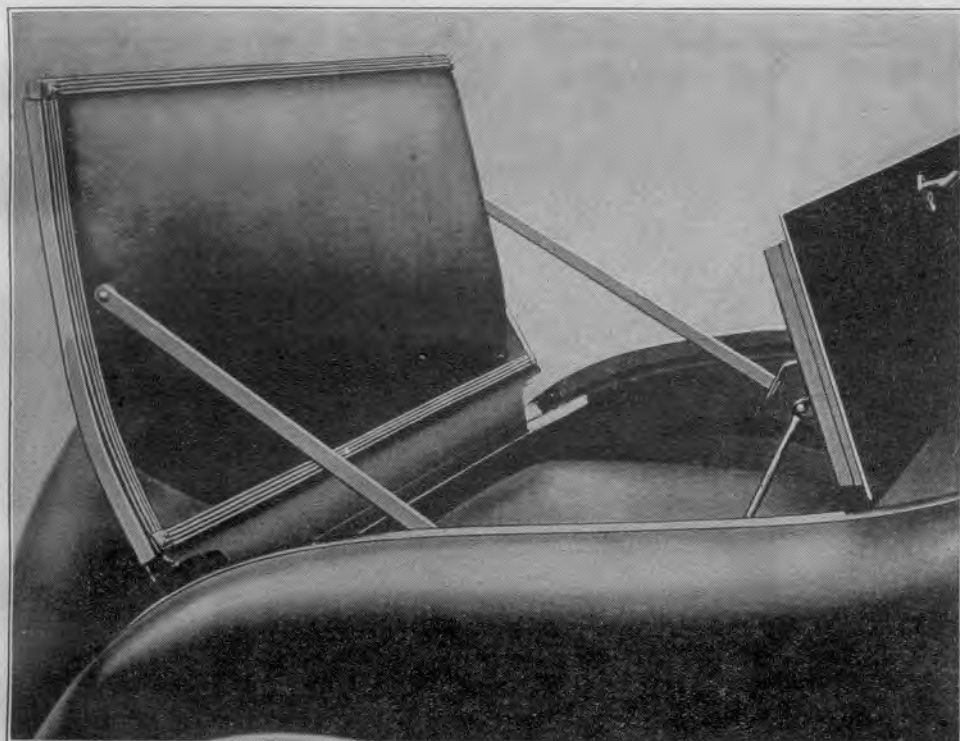
NORTH EAST Products distributed and serviced by  
**NORTH EAST SERVICE INC.**  
Branches: Atlanta-Chicago-Detroit-Kansas City-New York  
San Francisco-London-Paris-Toronto  
Authorized Service Stations throughout the World

NORTHEASTER Horns are made by the  
**NORTH EAST ELECTRIC CO.**  
Manufacturers of Automotive Equipment  
Rochester, N. Y.

# NORTH EAST



STARTING • LIGHTING • IGNITION • HORNS • SPEEDMETERS • FRACTIONAL H.P. MOTORS



## Now ~ A Rumble Seat by Rex ~ For Added Profits



*(Seat Folded Snugly into Place)*  
Note the neat aluminum castings bolted to rear fender for step plates. Top support irons are also furnished.



*(Seat Open and Top in Place)*  
Premier wire, woven in helical coil springs, used throughout in cushion and back. Trimmed with highly durable pebble grain leather cloth.

Big profits will be made on Rex Rumble Seats this spring. Be prepared to get your share. Here at last is a Rumble Seat so comfortable, so easily installed — and yet so compact that it is the marvel of all who see it. A Rumble Seat that bears the stamp of Rex quality throughout. A Rumble Seat complete in every respect, ready to install at a price surprisingly low. Write the nearest Rex distributor today for prices and full particulars.

*Rex Rumble Seats are Now Available for These Models*

|                                |                              |
|--------------------------------|------------------------------|
| Improved Ford Roadsters        | Chevrolet, 1925-26-27, Coupe |
| Improved Ford Coupe            | Star 4-cyl. Roadster         |
| Chevrolet, Series V, Roadsters | Dodge Brothers Coupe         |

### Rex Manufacturing Company

Connersville, Indiana

# Rex RUMBLE SEATS



**"NOW  
I'll get  
service"**

**For all dry battery uses choose Eveready Columbia Dry Batteries**  
*Manufactured and guaranteed by . . . they last longer*  
 National Carbon Co., Inc., New York—San Francisco  
 Canadian National Carbon Co., Limited, Toronto, Ontario

## Just like coupling your private car to the engine

DURING 1927 Eveready Columbia Dry Batteries will be advertised in a long list of national publications, including *The Saturday Evening Post* and other leading magazines. Newspapers will be used to further back up this campaign and to localize it in your territory.

Some exceptionally fine poster-style illustrations full of human interest will be used. Millions of dry battery users will see them. The first one is illustrated above in reduced size. It will appear

in full color, page size, in *The Saturday Evening Post*, March 19th, and in bold black and white in other publications.

The same illustration in full color will be made into attractive window display pieces and will be available to all

**EVEREADY  
COLUMBIA  
Dry Batteries**  
*-they sell faster*

Eveready Columbia dealers. Displayed in your window, the tie-up is immediate and powerful. Your window displays and the national magazine and newspaper advertising will work as a unit, resulting in increased sales. Order Eveready Columbia Dry Batteries from your jobber.

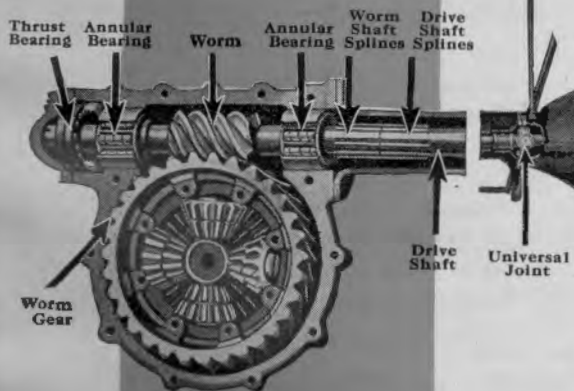
*Manufactured and guaranteed by*  
**NATIONAL CARBON CO., Inc.**  
 New York San Francisco  
 Atlanta Chicago Kansas City  
 Canadian National Carbon Co.,  
 Limited, Toronto, Ontario

# 32 TONS in a Pinch



## "Van Dorn"

CONSTANT SERVICE  
2 SPEED AXLE



The doubled torque power produced is not thrust against the universal joint, drive shaft, drive shaft splines, worm shaft splines, worm, worm gear, the two annular bearings, or the thrust bearing. It is developed and doubled only after the normal torque has been transferred through these parts. Consequently this doubled torque power affects the Ford axle shafts only.

## If You Put a "Van Dorn" in a FORD One Ton Truck

It seems unbelievable, yet this Ford Truck, equipped with a "Van Dorn," pulled the locomotive weighing 18 tons and the trailer weighing 14 tons. That's what it will do in a pinch.

Here's what "Van Dorn" will do under ordinary conditions.

Give a Ford Truck two direct constant service high speeds — a speed high (Ford High) and a power high ("Van Dorn" High), which gives the Ford Truck the fastest practical wheel speed for the least engine speed, both running light and under double the rated load in all-day service.

Double the torque power of all transmission speeds.

Increase your Ford Truck sales by actually increasing your market. Write for more details and our dealer proposition.

The Van Dorn & Dutton Company  
Gear Craftsmen for over a Quarter Century  
Cleveland, Ohio

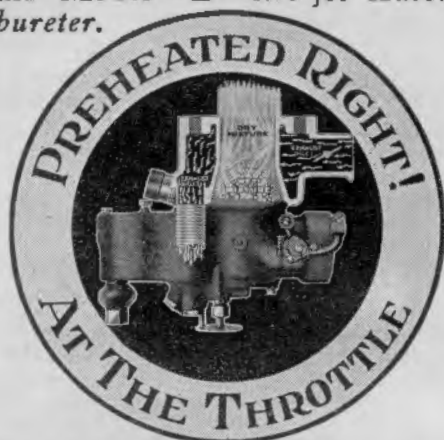
# MARVEL

WITH AUTOMATIC HEAT CONTROL

# MARVEL

## A COMPLETE Carburetion System

The new Model "E" MARVEL installations for Fords embrace every necessary part of the complete carburetion system built around the Model "E" two-jet *Automatic Heat Controlled Marvel Carbureter*.



Exhaust heat around the throttle changes the fuel "Rain Drops" in the mixture to the proper combustible gas as shown. This heat is available from the first explosion.

The Model "E" Carburetion System Includes Intake Manifold, Hot Air Pipe and Throttle Controls. Comparative tests of the Model "E" on Fords are convincing.

### Increased Flexibility

The Model "E" permits quick acceleration from as low as 5 *Miles per Hour* without shifting from high gear. It is the famous Marvel pick-up. *Smooth and certain.*

### Power and Economy

The exclusive principle of *Applied Heat*, found only in *Marvel Carbureters*, means thorough evaporation under all conditions the year around. Think what this means in starting on cold winter mornings and the comfort of smooth idling and low throttling. The two jets are recognized advantages for fuel economy and increased mileage, as the high speed jet is only open when needed, preventing waste at low speeds and when idling.

### Good Territory For Service Stations Still Open

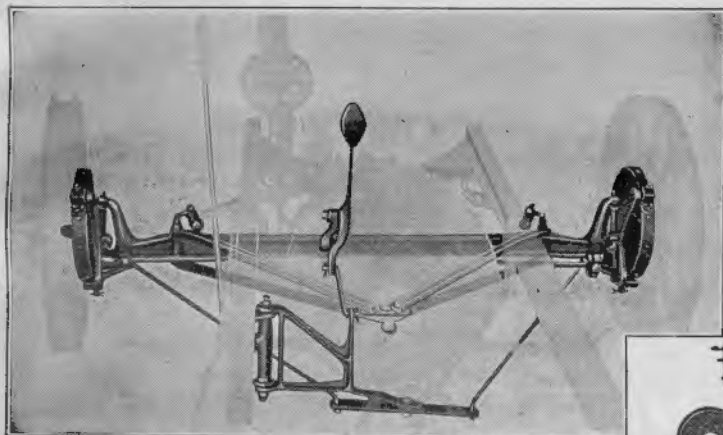
Sell complete carburetion systems that give a guaranteed satisfaction.

|                   |         |
|-------------------|---------|
| Fords .....       | \$18.00 |
| Chevrolets .....  | 18.00   |
| Studebakers ..... | 28.00   |
| Hudson, etc. .... | 25.00   |

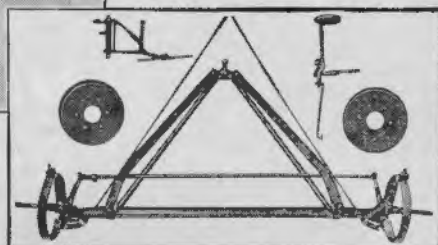
*In complete package form for all the foremost makes of cars.*

Establish yourself in your community as a MARVEL SALES and SERVICE STATION. Write today for complete proposition.

**Marvel Carbureter Co.**  
1900 St. Johns St. Flint, Mich., U. S. A.



*Complete Brakes  
Very Few Parts  
Simple --  
Efficient*



## Heinzelman Front Wheel Brakes for Fords



*The brakes are shipped completely assembled in a specially built crate, bolted together. It is easy to replace the new axle with the old one for shipment back to us.*

—work together with Ford rear wheel transmission brakes, giving equalized braking power on all four wheels. They operate with the same brake pedal.

### Sell 4-Wheel Brakes

Every motorist is familiar with four-wheel brakes, the higher priced cars all have them. It's only because of keen price competition that the lower priced cars are not equipped with four wheel brakes. Every car needs them and most of all the Ford, because of its light weight.

If the Ford owner has never driven a car with four-wheel brakes he can not appreciate their advantages. Get him behind the wheel of a Ford equipped with Heinzelman Front Wheel Brakes and he is sold on them in ten minutes.

Heinzelman Brakes stop the Ford as if some unseen giant reached out his hand and stopped it for you. Besides assuring greater safety they eliminate brake band chatter, make his bands give longer service and reduce wear on the tires and rear end parts.

*Equip a demonstrator with Heinzelman Brakes and see how easy it is to sell them. List price \$32.75, liberal discount to the trade.*



## Heinzelman Brake Co.

Sidney and Iowa Aves.

St. Louis, Mo.

*Send For This Interesting Circular and Complete Dealer Plan.*

# Perfex Radiators Pay Because *they work right*



Perfex Radiators

- 1 *made right*
- 2 *look right*
- 3 *priced right*
- 4 *move right*
- 5 *work right*

If your jobber cannot supply  
Perfex write us direct

**Plenty of water—  
large capacity**

**Offset design keeps  
water stirred up**

**Soft bronze channels  
cool rapidly**

**Brass aerating wings  
hasten cooling**

**Large air ducts keep  
wings cool**

**1-piece channels pre-  
vent leaks**

**Spring cradle pre-  
vents core strain**

**RACINE RADIATOR COMPANY, Racine, Wisconsin**

**JAMES B. CARTER, Ltd.**  
208 Kennedy Bldg., Winnipeg, Man., Can.

**LOUIS J. ZIESEL CO.**  
268 Market St., San Francisco, Calif.

# PERFEX

**THE PERFECT RADIATOR**



# WEARBESTOS

## Transmission Lining

*Great for Ford Trucks and Cars*

Will  
Outlast Five  
or Six  
Ordinary  
Sets in  
the Market,  
Saving the  
User Much  
Labor and  
Expense



Fastest  
Selling  
High Quality  
Lining

A Splendid  
Profit Item  
for  
Dealers

*Guaranteed for One Year*

WEARBESTOS Transmission Lining is by far the most economical and best lining on the market today. The average or ordinary lining crystallizes from the hot oil and ceases to function properly after 30 or 60 days use.

WEARBESTOS is treated with a private formula which makes it last longer than higher priced linings. Stock WEARBESTOS lining now and reap the attractive profits.

Order Direct or Thru Your Jobber

# Asbestos & Allied Products Co.

Executive Offices: 17 W. 60th St., New York City

# AEROFLEX STABILIZERS

## Simplicity of Construction

One swivel ball joint at each end absorbs all torque and strain. The end of the piston is fitted with cup leather, treated with paraffine and beeswax, consequently, requiring no lubrication. Cup leather at bottom of cylinder prevents escape of air pressure at all times. It is firmly supported with a heavy plate on one side and a leather expander which holds the leather firmly against the cylinder on the other side. The gland packing nut on the outside end of the piston keeps out all dirt and grit. The ball valve works instantly under pressure and releases by gravity. It is positive in action and simple of construction.

## Dealers

Handling and stocking Aero-flex Stabilizers means profits. They are easy to sell, no service, no comebacks. They will make friends for your business and will do all we claim for them and more. Remember, Aero-flex Stabilizers are guaranteed to be absolutely satisfactory.

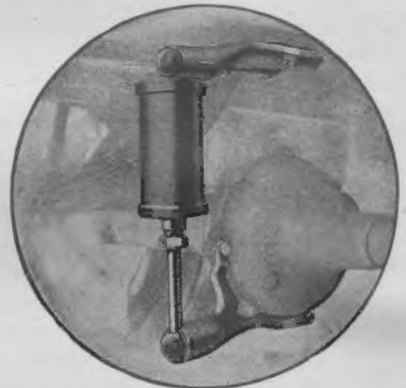


## Cushion the Bumps with Air

Free Air, the most perfect of all cushioning elements has now been perfectly harnessed and affords riding qualities never before known. It responds instantly. Has a 20% downward check and 80% check on the rebound. Works at all times in perfect harmony with the Ford engineering principles.

Perfect riding comfort after once installed; no oiling, greasing, nothing to wear out and nothing to give you worry. A screw driver, hammer, wrench and an hour's time is all that is needed to make the installation. Your satisfaction is our guarantee. We will gladly send complete information upon request.

**Makes Balloon Tires Satisfactory.**



Free Air smooths the roads for Fords as a steam roller. Illustration shows rear installation.

## DETROIT AEROFLEX STABILIZER CO.

439 E. Fort Street

Detroit, Michigan



# One Million and a Quarter!

**T**HAT may not sound like a lot of radiators, but believe us, it's some pile. But the best thing about it, is that it's proof of Peerless quality and Peerless satisfaction.

We've made and sold over a million and a quarter Peerless Radiators—all guaranteed for workmanship and service. Peerless Radiators do their work efficiently and continuously—never shirking on the job, keeping the cooling system okeh and giving the Ford owner complete satisfaction.

For trucks and delivery cars—we recommend the Honeycomb type, as it has more water capacity and greater cooling area, which prevents overheating. For passenger cars—the Tubular type, which is an exact duplicate of the standard radiator.

## Order From Your Jobber

Ask your jobber's salesman about the complete Peerless line—and order some of these radiators for stock.

**PEERLESS PRODUCTS**  
FOR FORD CARS

**NOW READY**  
Peerless Wall Charts Showing Replacements and Other Ford Data. Be Sure to Get Yours.



**PEERLESS HONEYCOMB**

The old reliable—12 years old and still leads in the field. Solid brass core and tanks; core so constructed as to expand when freezing. Stands heavy duty and much punishment. Special side bracket supports. It's good.



**PEERLESS TUBULAR**

Exact duplicate of Ford standard, except that it has pure copper tubes and heavy side supports. These big improvements do not add to price; a bigger value at same price.

**NEW PEERLESS RADIATOR CAP No. 61**



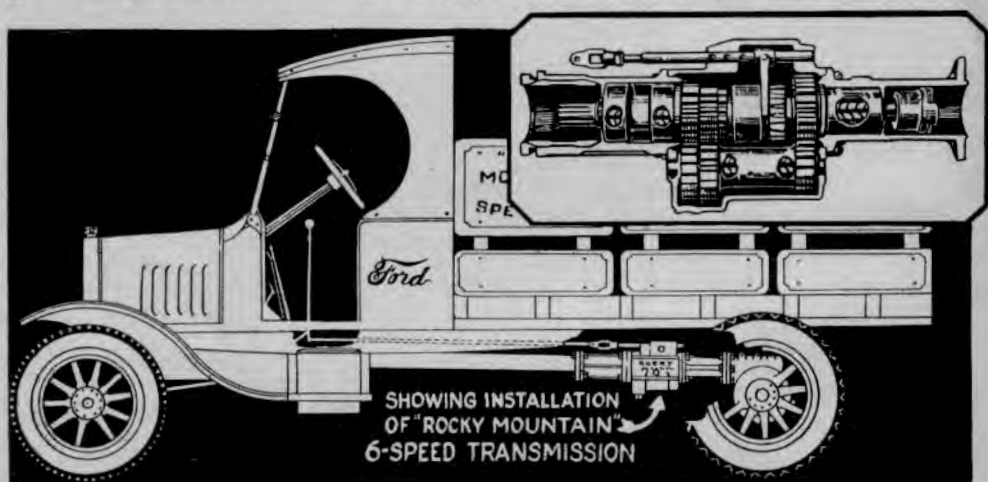
A wing type cap for Fords that is handsome in appearance. Bright nickel finish. Packed in separate boxes; dozen to display carton for counter or window. Don't overlook this special.

# A 2-TON FORD JOB

## - that fills every need!

**More Profits — More Business for Dealers**  
**More Profits — More Business for Truck Owners**

A Ford Ton Truck equipped with a ROCKY MOUNTAIN 6-SPEED TRANSMISSION will haul 2 Tons. It develops ample power for the hardest pull and more speed when needed.



**Has No Equal In Performance At Any Price**  
 6 Speeds Forward and 3 Reverse  
 85% More Power — 25% Higher Gear Ratio

**List Price \$100** F. O. B.  
 Los Angeles

The Rocky Mountain 20 inch Frame Extension which lengthens the wheel base of the Ford truck from 124 to 144 inches can be had in combination with the Rocky Mountain 6-speed Transmission. This comes complete, ready to install, including side frame members and extension for the radius and emergency brake rods.

**List Price** FRAME EXTENSION  
 AND TRANSMISSION  
 F. O. B. LOS ANGELES **\$115**

**Dealers** — The New Model Rocky Mountain Brakes for all late model Ford Passenger Cars are now available. Write us for attractive Brake or Transmission propositions.

**ROCKY MOUNTAIN STEEL PRODUCTS, Inc.**  
 1345-46-47 Wall Street Los Angeles, Cal.

# There still is time to get your share of CHRISTMAS PROFITS!

Just say - *Presto* to your Jobber

## Presto Heater

No. 2500

**\$450**



There is no more acceptable gift than some accessory or device for use in or about an automobile. That is why these Presto items are particularly popular during the holiday season. They are fast sellers with long profits.

### The PRESTO Heater

Attaches to any light socket and delivers generous warmth under the hood. At trifling cost Presto protects against freezing and ends the morning tussle with a cold sluggish motor. Presto Heater affords the cheapest, safest and most convenient cold-weather insurance.

### The PRESTO Lighter

This Cigar Lighter consumes little current, lights up instantly and the long, flexible cord reels smoothly out of the way when not in use. Nickel plated finish. Clamps quickly to dash or may be mounted through drilled hole if desired. With fuse for your protection. Presto Lighters are guaranteed.

### The PRESTO Ash Receiver

Here is one of the most convenient little accessories that ever went on a dash board. It keeps the car clean and adds to the car's general appearance. Anyone can attach it in a few seconds—no holes to bore—no tools needed. Lasts the life of the car.

## Presto Lighter

**\$300**

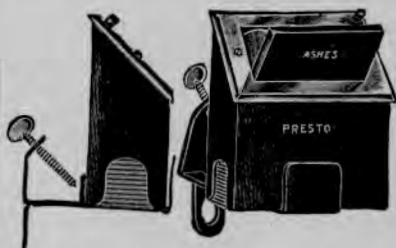
No. 250



Mail Your Order Today Sure

### Christmas Packages

These splendid items are made doubly attractive by the handsome holiday boxes in which they are packed. They'll sell fast. Get your order in early.



Presto Ash Receiver

**\$250**

No. 510

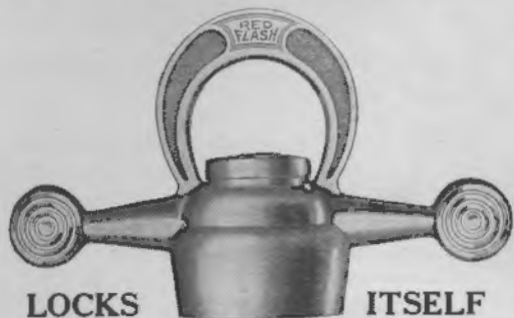
## METAL SPECIALTIES MFG. COMPANY

338-352 North Kedzie Avenue,

Chicago

:: "PRESTO" The Green Box Line — Ask about the green display stand ::

# OUT OF THE BOX ON TO THE CAR RED FLASH



LOCKS ITSELF

## COMBINED RADIATOR CAP & INDICATOR

Mr. Dealer, meet the RED FLASH, the best selling accessory you have ever seen. The RED FLASH will not stay on your shelves. To show it is to sell it. A combined indicator and cap—one unit—out of the box, on to the car, self locking, rigid and steam tight.

The RED FLASH really warns a driver of motor troubles, lack of oil or water by flashing into view a red disc, one and one-half inches in diameter, as visible at night as in the day time.

It is originality plus. To see it is to like it. Beautiful lines, polished nickel finish with red and green enamel inlays. Hinges and catch are weather-proof, no sticking or corrosion. You can open hood at same time radiator is being filled.

### Guaranteed for the Life of the Car

Constructed of brass or bronze throughout, our guarantee proves our confidence in its makeup.

Packed in a beautiful three color box, and sold in quantities of 3, 6, 12 or more to a carton. The list price is \$5.00. A liberal discount will interest you.

Send Order or Write for Details

**RED FLASH MANUFACTURING CO.**  
2451 WEST MADISON STREET  
CHICAGO, ILLINOIS

## WHY STAY BEHIND



List \$6.50

Complete With Laminated Mounting Bracket  
for ALL Fords and Other Cars

Let Hy-Tone No. 35 Super-tone Magnetic vibrator get the road for you and put you, Mr. Dealer, on the Highway to volume sales, and satisfactory profit.

The Greatest Horn Value Ever Offered

Pleasing tone—Positive action and plenty of punch. Produce perfect protection and utmost of pleasure.

Write for booklet on our complete line of Auto Horns (motordriven and vibrators) and Push Buttons, or send in your order. We know you will be pleased.

Fully Guaranteed

**SCHWARZE ELECTRIC CO.**  
ADRIAN, MICHIGAN, U. S. A.

## JOHNSON SIX SPEED INTERNAL GEAR TRANSMISSIONS FOR FORD CARS AND TRUCKS

(4 Forward—2 Reverse)

OVER-DRIVE or UNDER-DRIVE UNITS

Two of the greatest Ford Accessories ever built, giving two quiet rear axle ratios,—standard ratio and higher on the Over-drive,—standard ratio and lower on the Underdrive. Fills every need in both mountainous and level country.

Send for Bulletins and Sales Proposition

**J. P. JOHNSON ENGINEERING CO.**  
East 61st and Waterman CLEVELAND, O.



Gives More  
Speed or  
More Power  
and Does It  
Quietly

Prices \$55.00  
to \$69.50,  
Cars or Trucks

# 4

## Forward Planetary Speeds for Fords



*Here Are the Gear Ratios at Driver's Command*

| Using Standard Ford Gears | PASSENGER CAR              | Using "Planator" 3 to 1 Gears |
|---------------------------|----------------------------|-------------------------------|
| 3.63 to 1                 | Ford High                  | 3 to 1                        |
| 7.26 to 1                 | Planator Intermediate High | 6 to 1                        |
| 10 to 1                   | Ford Low                   | 8.25 to 1                     |
| 20 to 1                   | Planator Extra Low         | 16.5 to 1                     |
| 14.2 to 1                 | Ford Reverse               | 12.76 to 1                    |
| 28.4 to 1                 | Planator Reverse           | 25.5 to 1                     |

| High Speed Worm | TRUCK                      | Low Speed Worm |
|-----------------|----------------------------|----------------|
| 5.16 to 1       | Ford High                  | 7.25 to 1      |
| 10.32 to 1      | Planator Intermediate High | 14.50 to 1     |
| 14.20 to 1      | Ford Low                   | 19.95 to 1     |
| 28.40 to 1      | Planator Extra Low         | 39.90 to 1     |
| 20.60 to 1      | Ford Reverse               | 29 to 1        |
| 41.20 to 1      | Planator Reverse           | 58 to 1        |

These tables demonstrate how the Jumbo Planator gear shift improves the Ford 100% in flexibility and pulling power. Planator-equipped you can show Ford performance hundreds of dollars ahead of its class—yet the extra cost is as little as one-twelfth part of the additional cost of some cars and trucks that lure your customer.

Thousands never sold on auxiliary transmission before, are being won over by Planator's featuring of Ford's own planetary principle. Cash in now while bad weather driving furnishes ideal conditions for a real Planator show-down, meeting and beating cars and trucks selling for double. Write for the details today.

### JUMBO PLANATOR for FORDS GEAR SHIFT

80% of gears are standard Ford. Bolts right ahead of differential housing. Just 3 units ready to install in 1½ hours. A single forward and back, positive, muff-proof shift, flexible for any road or load. Special Planator 3 to 1 gears at slight added cost.

**The Price-Hollister Co.**  
 Dept. C. ROCKFORD, ILL.  
 Export Office:  
 130 West 42nd St.  
 New York City



MAIL THIS COUPON  
 The Price-Hollister Co.  
 Rockford, Ill.  
 Dept. C.

Send me details of Jumbo Planator transmissions for Ford Cars and Trucks.

Name.....  
 Address.....

\$ **49<sup>50</sup>**  
 FOR PASSENGER CARS

and

\$ **69<sup>50</sup>**  
 FOR TRUCKS

## NOW—You Can Adjust All Ford Bands WITHOUT REMOVING TRANSMISSION COVER

Save Time! Make a Clean Job of a Messy One!  
Avoid Dropping Wrenches Into Transmission Case!

Install

### Tuttle External Adjuster for Ford Bands

PATENT PENDING

Interchangeable With Ford Brake and Reverse Pedal Shafts

SELLS AT \$2.50 A SET



## THE BARKER FACTORY, INC.

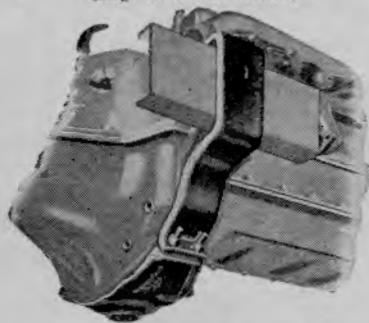
Box 63,

Norwalk, Conn., U. S. A.

Manufacturers of Barker Marine Conversion Equipment for Ford Model T Engines

## WINDSOR MOTOR STABILIZER

(Reg. U. S. Pat. Office)



### For All FORD Cars and Trucks

Fast-selling item because it does as advertised. Reduces motor vibration; makes motor and frame ONE unit.

NOW ONLY \$3.50 LIST.

Write for Free Literature  
and Display Cards.

Windsor Motor Products Corp.  
1531-F. Pine St. St. Louis, Mo.



## This STARK COMBINATION PUMP stops alcohol! evaporation!

Put this pump on any Ford and the efficiency jumps 50%. The centrifugal water pump insures circulation of water under all conditions, even with water low in radiator—prevents failing and evaporation of alcohol. Radiator will not freeze. The lately improved Weisenborn rotor in the oil pump follows the wear; always functions; insures perfect oiling at 75 lbs. pressure. Simple design, substantially built—trouble proof!

Stark Pump fits any Ford car or truck. Furnished complete with belt and attachments—easily installed in 30 minutes. Send \$7.50 for your pump, specify if for 1926 Ford. DEALERS: Special prices insure big profit. Write for exclusive agency. Get facts also on reversible rotary pumps for all purposes.

ONLY  
\$7.50

STARK METAL WORKS, INC.

322 N. Grand Blvd.,

St. Louis, Mo.

STARK Combination PUMP for  
Oil & Water Fords



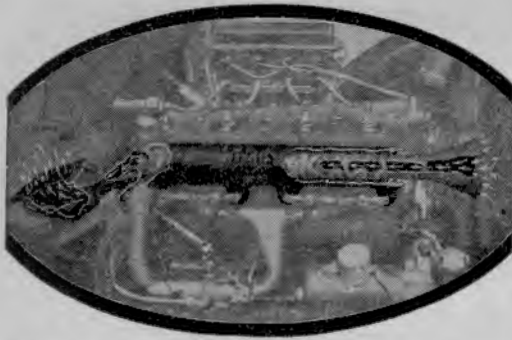
# 3 Big Things for 1927

- 1- One Bull Dog "Model C" Foot Accelerator Fits All Fords
- 2- A New Bull Dog Counter Merchandiser to increase your sales
- 3- The Biggest Bull Dog Advertising Campaign



Bull Dog comes to you this year—with the biggest sales winning and profit making line-up in their history. With one accelerator to fit all Ford Models—including latest series with vaporizer or those Fords on which a regenerator has been installed. With the most striking and attractive counter merchandiser ever created for an accelerator—with the biggest Bull Dog advertising effort—Bull Dog dealers are off to a flying start in 1927. And every time you ring up a Bull Dog sale at \$1.50—remember you are making a legitimate and worthwhile profit.

**The W. H. Thomas Mfg. Co. Spencer, Iowa**  
World's Largest Manufacturers of Foot Accelerators



## Make Your Next Order for ATLAS HEATERS

**F**IGURE it out for yourself. Lay an ATLAS HEATER down on your counter, alongside of any other heater regardless of price. Look 'em over carefully—compare them point by point—and which one would YOU buy? You would pick an ATLAS every time—for compactness, strength, appearance, efficiency and because there is nothing to rattle or get loose! Your customers figure it out the same way. Wherever ATLAS is sold it gets preference—and the money—every time.

### ATLAS Means Bigger Heater Sales for You

Note carefully the picture above—the compactness and simplicity of this finest of all car heaters. There is nothing to rattle—no clumsy sheet metal enclosures—and no possibility of fumes or gases. Atlas Heaters are made in three models—101 for Fords without Holley Hot Spot, \$6.00—102 for Fords with Holley Hot Spot, \$7.00—201 for Chevrolets \$7.00. (Western prices \$1.00 higher.)

### ATLAS WATER PUMPS

Here is more good Winter business for you. ATLAS PUMPS reduce the danger of frozen radiators and prevent the rapid boiling away of alcohol and anti-freeze solutions. Packed in handy cartons. No special belts or extras required. Installed with only screw driver and wrench. Made for FORDS at \$4.50—FORDSONS \$15.00—Overland Fours \$5.50—Gardner Fours \$6.50—Essex Six \$10.00. (Western Prices 50c higher, except Fordson Model which is \$1.00 extra.)



If your jobber cannot supply you write us at once for literature and terms!

### THE ATLAS BRASS FOUNDRY CO.

982 S. Park Street

Columbus, Ohio

Export Office: 594 W. Washington St., Chicago

**NATHAN**

## "All-Weather" ENCLOSURES For FORDS & CHEVROLETS



Models  
1923 to 1927

**\$13<sup>85</sup>** LIST -- for Ford Roadster  
Touring Models \$22.50 Complete

### New and Improved "All-Weather" Models

Metal Frames — Non-Breakable Glass  
— Snug Fit — Rattle Proof

Write Today for details of Territorial Rights  
Now Open. Address all inquiries to

**NATHAN NOVELTY MFG. CO., Dept. A**  
Prospect Ave. & 182nd St., NEW YORK, CITY

## A Three Minute-One Man - Ford Truck Top



The WALDEN ADJUSTABLE TOP is the most practical one man truck top ever made. It slides freely on side rails and can be opened or closed in three minutes.

### Easy to Sell, with Every Stake Truck

Every Ford stake truck in your territory should be equipped with the WALDEN ADJUSTABLE TOP.

**DEALERS:** Write today for our attractive proposition.

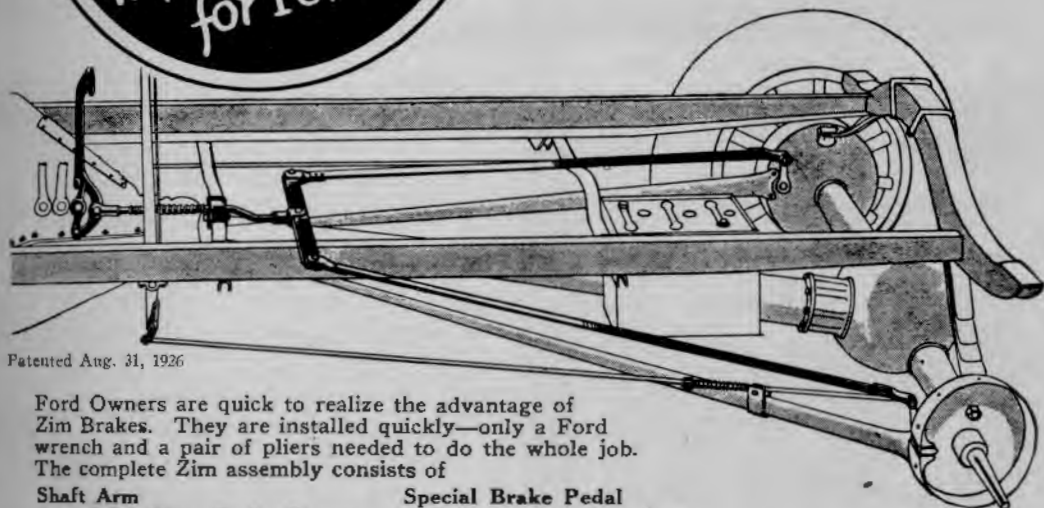
**Hugh Lyons & Company**  
Lansing, Michigan

# Fast, Smooth, Quiet!

## A Complete Equalized Brake Action



Less complicated than 4 wheel brakes. A combination of rear wheel and transmission brakes—applied at the same time by simply pressing the brake pedal. Chatter is eliminated—and side skidding done away with by the Zim Triple Brake Action.



Patented Aug. 31, 1926

Ford Owners are quick to realize the advantage of Zim Brakes. They are installed quickly—only a Ford wrench and a pair of pliers needed to do the whole job. The complete Zim assembly consists of

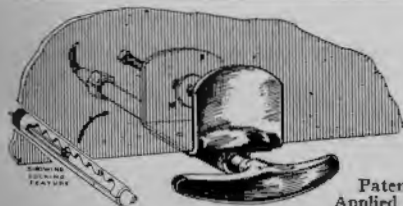
- Shaft Arm
- Set of Auxiliary Brake Straps
- Special Brake Pedal
- Pull Rods—Equalizer Arm

List price for all Models of Fords—\$12.00. Order a set and try them. If your jobber cannot supply you, write us. A trial will convince you of the profit possibilities in selling and installing this advanced braking system.

## ZIM MFG. CO.

3037-3047 CARROLL AVENUE,

CHICAGO, ILL.

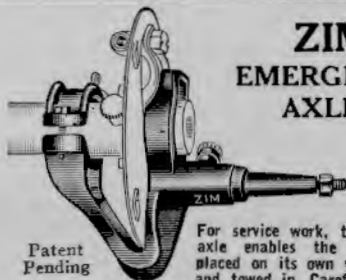


Patent Applied For

### THE ZIM No. 2 DASH CONTROL

Attached quickly without drilling instrument board. A positive control for cut-outs, exhaust horns, air chokes, radiator shutters. Handsomely finished.

List Price \$1.25



### ZIM EMERGENCY AXLES

FOR NEW MODEL FORDS

Patent Pending

For service work, this emergency axle enables the Ford to be placed on its own wheels quickly and towed in. Carefully made and used by leading Ford dealers and garages.

List Price \$6.00

# The Only Magazine That Reaches and Is Read by *All* the Important Contacts in the Great Ford Trade Field Every Month!



January, 1927

PUBLISHED BY  
WEEKLY PUBLISHING CO.  
129-135 Michigan Street Milwaukee, Wis.

25 Cents



*The Original International Monthly  
Magazine of the Ford Trade Field*

OVER 13 years of intimate contact with Ford Dealers, Accessory Jobbers and other branches of the Ford Market.

OVER 13 years of experience with hundreds of manufacturers who have expended thousands of dollars, cultivating this tremendous Field.

We can be of great assistance to both Manufacturers and their Advertising Agencies in connection with their advertising and merchandising problems.

Direct your printed salesmanship through the same channels that you insist upon with your own personal salesmen. You can do this by advertising regularly in the publication that reaches the very individuals you *must* reach in order to successfully market your products to the Ford Trade.

**Ford Dealer & Service Field**  
129-135 Michigan St. Milwaukee, Wis.

**E**VERY time a Warford Transmission is sold, some Ford dealer sells a truck.

And Warford will begin 1927 with sales well into the *second hundred thousand!*

That means somebody's been selling some trucks.

In 1927 it might as well be you.

# Warford PRODUCTS

Phone, Write or Wire the nearest Distributor and Start the  
New Year Right!

|                    |                            |                     |                               |                                    |                                 |
|--------------------|----------------------------|---------------------|-------------------------------|------------------------------------|---------------------------------|
| Albany, N. Y.      | - Foster-Warford Co.       | Los Angeles, Cal.   | - Hammel-Gerke Co.            | Windsor, Ont.                      | Warford Corp. of Can. Ltd.      |
| Atlanta, Ga.       | - Atlanta-Houdaille Co.    | Mansfield, La.      | - W. C. Nabors                | (Home Office)                      |                                 |
| Auburn, N. Y.      | - Foster-Warford Co.       | Memphis, Tenn.      | - Wayne Splinks Co.           | Toronto, Ont.                      | - A. C. Lewis Co.               |
| Buffalo, N. Y.     | - Foster-Warford Co.       | Morrisville, Vt.    | - McMahon Bros.               | Montreal, Quebec                   | - A. C. Lewis Co.               |
| Canton, Ohio       | - Dine-DeWees Co.          | Philadelphia, Pa.   | - Warford-Eastern Co.         | Calgary, Alta.                     | - J. R. Good                    |
| Charlotte, N. C.   | - Hall-Warford Co.         | Pittsburgh, Pa.     | - Warford-Pittsburgh Co.      | Edmonton, Alta.                    | - Dominion Motors Ltd.          |
| Chicago, Ill.      | - Sleg-Warford Co.         | Portland, Ore.      | - Woodward Sales Co.          | Vancouver, B. C.                   | - E. W. Jay                     |
| Columbus, S. C.    | Warford-Sales Co. of S. C. | Richmond, Va.       | - Baker Equipment Eng. Co.    | Coventry, England                  | - Bramco, Ltd.                  |
| Dallas, Texas      | - Houdaille-Polk Co.       | Rockford, Ill.      | - Schacht Truck Co.           | Manchester, England                |                                 |
| Davenport, Iowa    | - The Sleg Company         | San Francisco, Cal. | - Warford-Pacific Co.         | Truck & Tractor Appliance Co. Ltd. |                                 |
| Denver, Colo.      | - Motor Specialties Co.    | Seattle, Wash.      | - Warford-Equipment Co.       | Antwerp, Belgium                   |                                 |
| Detroit, Mich.     | - Transmission Sales Co.   | Spokane, Wash.      | - George H. Dietrich Co.      | Truck & Tractor Appliance Co.      |                                 |
| Haverhill, Mass.   | Massachusetts Warford Co.  | St. Paul, Minn.     | - McGee-White Corp.           | Trieste, Italy                     | - Truck & Tractor Appliance Co. |
| Idaho Falls, Idaho | - Auto Parts Company       | Stockbridge, Mich.  | - Transmission Sales Co.      | India & the Orient                 | - Dodge & Seymour               |
| Indianapolis, Ind. | - Kenny Equipment Co.      | Tampa, Fla.         | - Wholesale Auto Supply House | Africa & South Seas                | - The Wile Corporation          |
| Kansas City, Mo.   | - Warford-Western Co.      | Washington, D. C.   | - S. J. Meeks' Sons           |                                    |                                 |
| Lewiston, Me.      | - Main-Warford Co.         | Wichita, Kan.       | - Warford Distributing Co.    |                                    |                                 |

The Warford Corporation, 44 Whitehall Street, New York City



## There's a big winter market for Fordsons now!

The farmer uses the Fordson as much in the winter nowadays as in the summer! He saws wood, and makes a fine profit from his timber crop, by using a Corley Portable Tractor Sawmill.

Let us tell you how we work with Fordson dealers and enable them to make a profit on our Mill as well as on the Fordson sales we produce for them. One dealer sold 65 of our mills, with a Fordson for each, in 10 months! Simply ask for details of our Dealer Plan.

Write Today!

# CORLEY MANUFACTURING CO.

1906 Williams Street

Chattanooga, Tenn.

**FORD runs 35 miles per gallon.**  
**Reaches speed of 60 miles per hour.**

Real Slow Idle Speed on Same Adjustment  
 with the 1927

## NEW AIR FRICTION CARBURETOR

It gives you—Greater Speed, Power to Spare, More Mileage with any make of car. The Most Powerful—Easiest Starting Carburetor Made (Easy to start in cold weather—no shifting, stalling or jerking in traffic—a boon to motorist).

Now is the time to equip your car with this carburetor—easy to attach—no boring of holes. All you need is a wrench.

Sent on 30 days free trial. Write

### Garagemen and Auto Mechanics!

This is a genuine money maker for you. You can double your money on each sale. It sells on performance—send today for our attractive offer—you'll profit tomorrow.

### The New Air Friction Co.

(In no way connected with the old Air Friction Company. A new company with a new improved product.)  
 15 Israel Building . . . Dayton, Ohio



**STOPS ANY LEAK IN 5 MINUTES**

Every car owner—every garage and repair shop should have BLACK SWAN handy. A metallic POWDER that permanently repairs leaky radiators, split water jackets and cracked cylinder heads. No clogging. Prevents rust.

### One Size Can—All Cars

Retails for 75 cents. Easy to sell—with a big margin of profit for dealer. Attractive counter displays FREE. Write for sample and prices.

**MAJESTIC SALES AGENCY**  
 2859 W. Van Buren St., Chicago, Ill.

# BLACK SWAN Radiator Seal

Exclusive Turbine Head.  
Double bronze bearings  
and double lubrication.  
Husky construction will  
last a lifetime. Com-  
plete with belt and horn  
bracket. \$7.50.

Blackhawk Pumps fit the  
latest and all previous  
model Fords.



## Keeps Ford Owners Boasting and Boosting

Blackhawk Water Pumps for Fords will repay you for some extra push right now.

You know that a pump is the best "motor insurance" a Ford owner can have in cold weather. Sell this idea—and your pump volume will keep up all through the winter. With our "Chief" and "Scout" you meet the quality demand and low price demand with the ideal pumps in both classes.

*Display stand free with order for six pumps. Holds either "Chief" or "Scout". Stock these big sellers now.*



"The Scout"

An efficient and reliable pump designed to sell at a low price. Complete with belt and horn bracket. \$5.00.

**BLACKHAWK MFG. CO.**

Dept. K

Milwaukee, Wis.

# BLACKHAWK

There's Business all  
around you on  
the New  
**AKRON**  
-HED  
For Fords

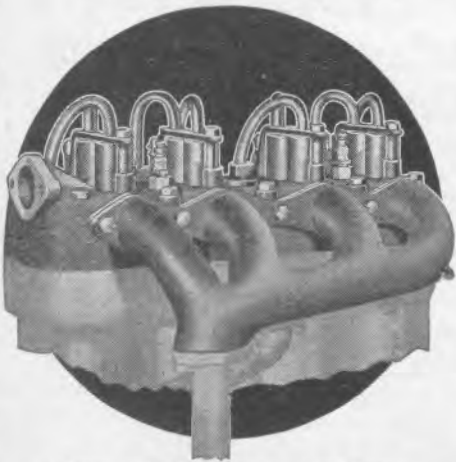
In every locality there are numbers of prospects for the AKRON-HED. Corporations who own Fords want the increased power and saving in gas. Young men want the power and speed to pass the big boys on the hills.

They cannot get this increased power and speed and saving in gas with any other device at so little cost as with the AKRON-HED.

It fits old and new Fords without alterations. It takes the hills on high and you don't have to keep shifting in traffic. It reduces the heat so you can't make a Ford radiator boil, in high.

One sample head installed will sell many of them for you.

Priced  
at **\$67<sup>50</sup>** Retail



Exhaust Side of Improved AKRON-HED

The AKRON-HED is an entirely new type of overhead block for Fords. It combines greatly improved operation with simplest possible construction and installation.

**DEALERS**—Write today for complete specifications and Introductory Proposition

**THE WILLIAMS FOUNDRY  
& MACHINE COMPANY**

"In Business Since 1888"

AKRON, OHIO, U. S. A.

MAYDWELL & HARTZELL, INC.

San Francisco — Los Angeles

Pacific Coast Distributors



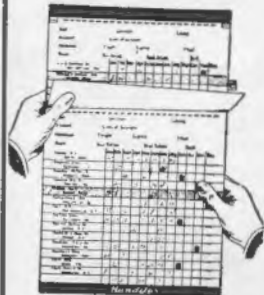
Not spooks, it's sparks he wants most right now! Hor, fat sparks that will make his engine "git"—the kind that a set of Splitdorf **HALF-DOLLAR** Spark Plugs which sells for \$1.75, will deliver.

Ask your Jobber about this proposition for Fords



**Handifax**

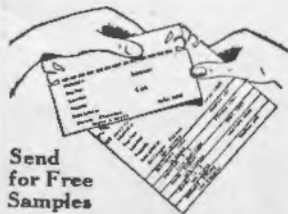
**Sheets of Cards for Visible Records**



Handifax—A wonderful invention—Helps business. Visualizes facts to executives. 50 Cardsheets show 1000 cards. Visible space on each card 1/2 or 1 in. Easy to analyze.

Color signals "flag" your attention. Cuts record-keeping costs 40%. Quick for use in reference or posting.

Good for all kinds of records. Any size—100—1,000—10,000—1,000,000. Your present system can be used. Very low cost—very compact.



Send  
for Free  
Samples

**Sales Agents  
Wanted**

**ROSS-GOULD COMPANY**

457 N. 10th St., St. Louis, Mo.



# A potential market of millions!

THERE is a vast potential market of motor car users—actually millions—who need the protection afforded by a motor heat indicator, whether it be dashboard, steering column or radiator cap mountings.

A Boyce Moto Meter may be had in all three types of installations but the Moto Meter Company, Inc., particularly recommends the radiator cap mounting. Constantly in the direct line of driving vision it affords proper protection with relaxation from dashboard attention.

Ten million motor car drivers are today enjoying this protection and driving comfort; such public acceptance is not easily or wisely diverted. The progressive dealer needs no further indication of its potential sales possibilities.

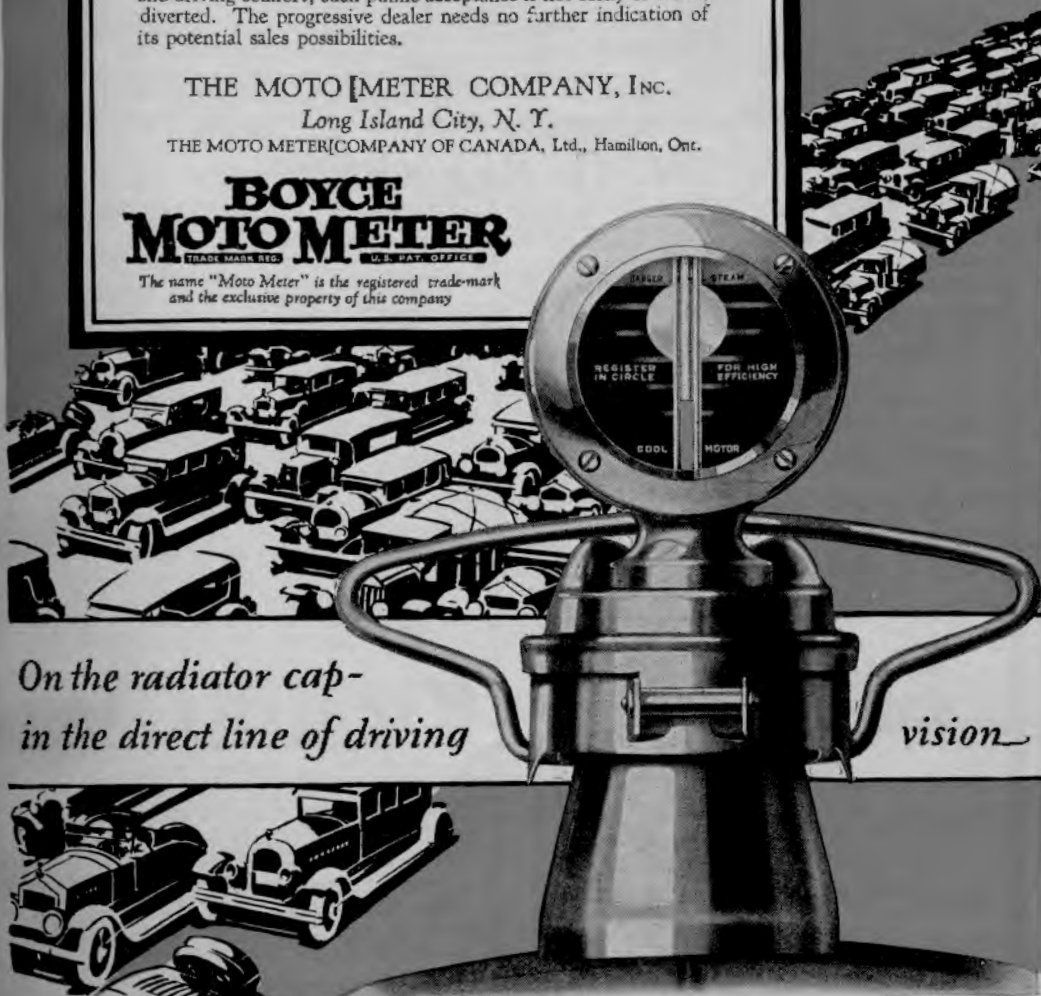
THE MOTO METER COMPANY, INC.

Long Island City, N. Y.

THE MOTO METER COMPANY OF CANADA, Ltd., Hamilton, Ont.

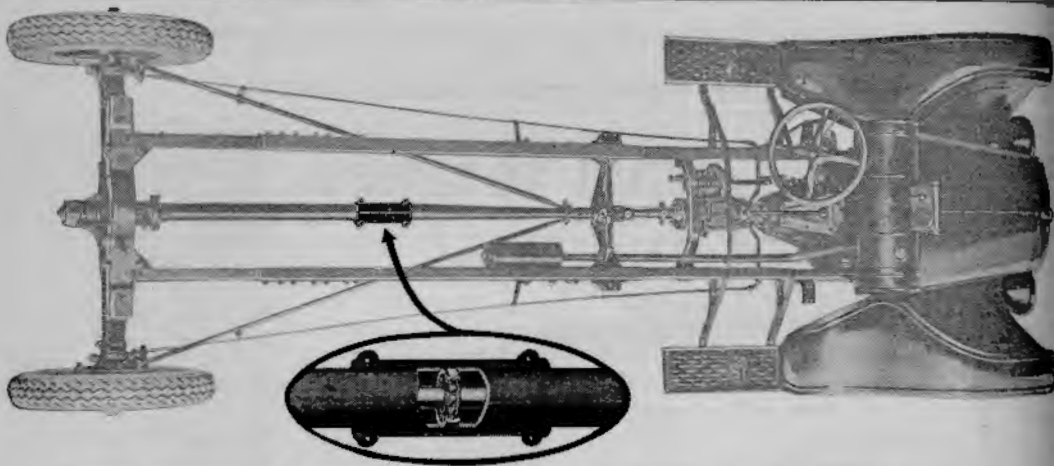
**BOYCE  
MOTO METER**  
TRADE MARK REG. U.S. PAT. OFFICE

The name "Moto Meter" is the registered trade-mark and the exclusive property of this company



On the radiator cap—  
in the direct line of driving

vision



Rugged construction, simplicity of design, freedom from vibration, ease of installation, together with lowest cost, are the outstanding features of the Reeves Frame Extension.

Ford Standard equipment is not changed by installation of the Reeves—it solves bulk and length trucking problems.

Installed by one man in five hours with or without transmission

MADE IN THE FOLLOWING SIZES:

|   |   |
|---|---|
| 15¾ in. making 139¾ in. W. B. 9 ft. body      | 30 in. making 154 in. W. B. 11 ft. body |
| 18 in. making 142 in. W. B. 10 ft. body       | 40 in. making 164 in. W. B. 12 ft. body |
| 24 in. making 148 in. W. B. 10.6 ft. body     | 50 in. making 174 in. W. B. 14 ft. body |
| 60 inch making 184 inch wheelbase 16 ft. body |   |

Write for complete information on the Strait Line Bearing.

## W. G. REEVES

235 MANCHESTER AVE.

DETROIT, MICH.

### Sales Volume

is what every Ford Dealer wants. He will get it by pushing the

### YALE OILING SYSTEM

and the

### YALE WATER CIRCULATING PUMP!

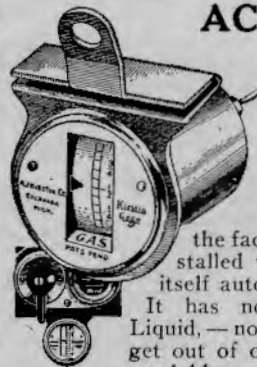
*Sold the World Over.*

*Liberal Discounts.*

*Write Your Jobber or Us.*

**ROLAND & KOCH**

220 Sotello St., Los Angeles, Calif.



**ACCURACY Is Sealed in at the Factory**

KIRSTIN-GAGE is always accurate because it is sealed at the factory. Even when installed wrong it will correct itself automatically.

It has no Floats, Gears or Liquid,—nothing to wear or get out of order. 3 years of dependable service guaranteed.

## Kirstin Gage

For Fords \$3.50 Complete

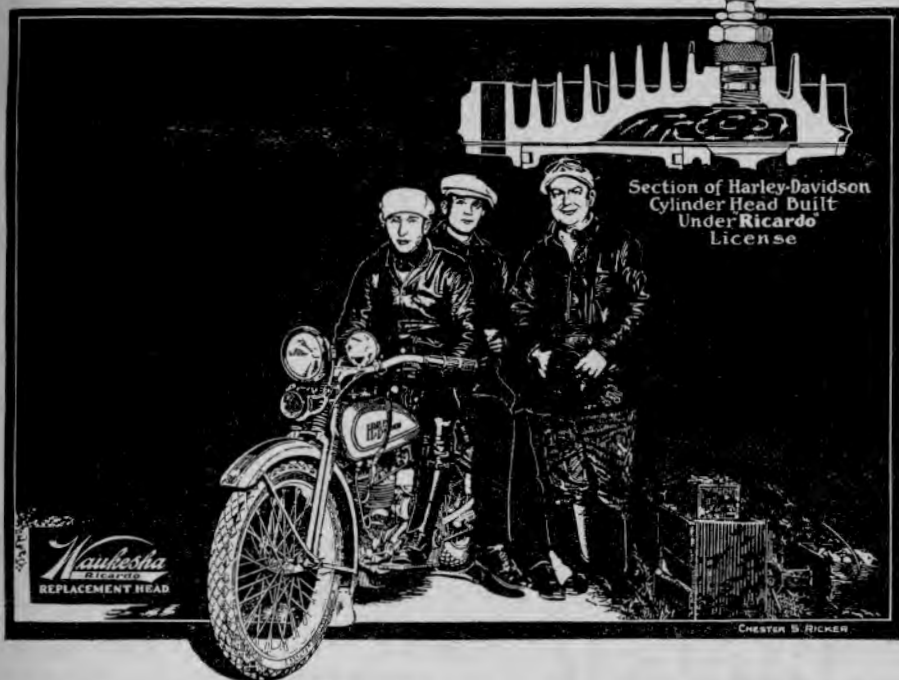
It costs only \$3.50 because expensive parts,—Floats, Gears, Liquids, etc., are not needed. The patented principle simplifies, improves and reduces cost at the same time.

24 hour service from the factory, if your dealer or jobber cannot supply.

**A. J. Kirstin Company**

59 WELLS ST. ESCANABA, MICH.

Harley-Davidson "Single" with "Ricardo Head" does 124.8 miles per gallon



## Pep and Economy

54.54 miles per hour is what this motorcycle averaged at the end of a seven day non-stop reliability run under Am. Motorcycle Assn. Sanction. That required some power from this little engine. A Ford, which is over eight times as big, ought to develop over 50 horsepower if the full effect of a "Ricardo Head" could be used. The Ford crankshaft limits this but a Waukesha "Ricardo Replacement Head" will make a wonderful improvement in power on your Ford or Fordson and on Dodge and Graham Brothers engines too.

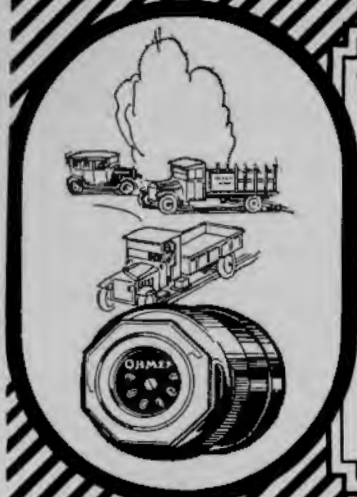
*Economy and power without "ping" are other features of the Waukesha "Ricardo Replacement Head." They are easily installed in an hour, moderate in price and sold with a money back guarantee. Write for "Ricardo Replacement Head" Folder and dealers proposition.*

AUTOMOTIVE EQUIPMENT DIVISION

# WAUKESHA MOTOR COMPANY

WAUKESHA 952 St. Paul Avenue WISCONSIN

*Builders of Heavy Duty Industrial Engines for Over Twenty Years*



## Know Your Transportation Costs

How about the cost per mile of the motor trucks or cars you operate? Have you a record of every mile you receive from the gasoline, oil and tires you purchase?

Excessive transportation costs eats up profits—why not decrease operating costs and increase profits by equipping your motor trucks and cars with

### OHMER HUBODOMETERS

—they record every foot your rolling stock moves both forward and backward and give you an accurate record of the total mileage covered.

Ohmer Hubodometer are tamperproof and are available in styles and sizes (they match the other hubcaps) to fit any type of truck or car.

*You will be interested in our book on transportation—may we mail you a copy?*

# OHMER

REG. U. S. PAT.

## FARE REGISTER CO

DAYTON OHIO U.S.A.

## FORD DEALERS LOOK!

# CORD TIRES

30x3 \$3.00 } *In Lots of 25 or More* } 30x3½ \$3.35

### CLINCHER OR STRAIGHT SIDE

29x4.40 SS. Balloons \$5.95 All 4½ inch Tires \$ 7.50

All 4 inch Tires..... 6.50 All 5 inch Tires 8.50

In lots of 12 or more of assorted sizes.

All Prices F. O. B. Brooklyn

Heavy Grade 1st Tubes, 30x3½, 85c—29x4.40, \$1.05

Heavy Grade 1st Tubes, 32x4, \$1.35

**Poor Tires on Used Cars Lose Many a Good Sale!**

Good tire equipment is your best used-car salesman. These tires are factory adjusted and balloon replacements. All inspected by us and carry our rigid guarantee.—Another tire, no charge, for any that does not give satisfactory service.

New in appearance. No rebuilds or retreads. Product of leading tire manufacturers.

*If the Tires Are Good the Sale Is Half Made!*

Wire or Write Us To Day  
**AUERBACH**

Established 1914

974 Bushwick Ave., Brooklyn, N. Y.

## VISIBLE PRESSURE FEED Oiling System for FORDS

### Watch It Work Thru the Flow Indicator



OIL RETURNED HERE ELIMINATED FLOODING GENERATOR WITH OIL!

### NEW PRICES

One Model Fits All Cars

Visible Type H-U..... \$2.50  
Plain Type H-P..... 1.50

### Dealers

Write direct to factory for money-making proposition

Manufactured by

**AKERS COMPANY, PHILADELPHIA, PA.**  
5702 Chew Street

# THE FULLER

## AUXILIARY TRANSMISSION FOR FORD TRUCKS



# A PRACTICAL TRANSMISSION AT A SENSIBLE PRICE

The FULLER gives the Ford Truck all the extra speed, carrying capacity, and flexibility needed under the most rigorous hauling conditions.

## FULLER FEATURES

Four Speeds Forward—Two Reverse.  
No Neutral Position (Brakes Always Available).

No Added Strain on Motor, Universal Joint, or Drive Shaft.

No Rebuilding Necessary; No Cutting of Drive Shaft.

Installation, 2 to 3 hours, No Special Tools Needed.

Very Simple and Easy to Operate.  
Built by Fuller; Largest Manufacturers of Truck and Bus Transmissions in the World.

Fully Guaranteed for 90 Days  
Against All Defects.

Price—\$60 to Truck Owner.

It provides four speeds forward and two reverse. That's an ample range to meet every road condition.

It gives the truck 80% more pulling ability, enough to haul two-ton loads up the steepest slopes.

Its reserve driving power permits the use of high speed worm gear for heavy hauling. When loaded the truck can cover good roads at 30 miles an hour.

The FULLER fits the Ford Truck to meet every working condition, and its cost is well proportioned to the original low cost of the Ford Truck. It's a practical Auxiliary Transmission at a sensible price.

**PRICE \$60<sup>00</sup> F. O. B. FACTORY**

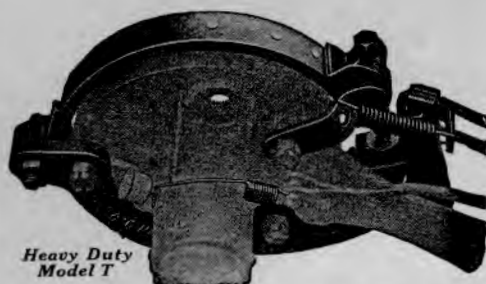
*\$5.00 Additional West of the Rockies*

# FULLER & SONS MFG., CO.

KALAMAZOO

MICHIGAN

TRANSMISSION BUILDERS FOR 24 YEARS



Heavy Duty Model T

Pioneer Brake Builders for Fords Since 1915

## A-C BRAKES

For the New Improved 1926 Ford—and All Previous Models  
**NEW LOW PRICES**

|   |         |
|---|---------|
| TON TRUCK, No. 5.....   | \$20.00 |
| Model T, No. 2.....   | \$12.00 |
| Model T, No. 6, for New Improved 1926 Ford.....                       | 16.00   |
| Model T, No. 4 Special Heavy Duty Drum for All Models Up to 1926..... | 16.00   |

GET YOUR SET NOW! Write direct for full information.

10 Years of Success  
Service Stations all Over the World

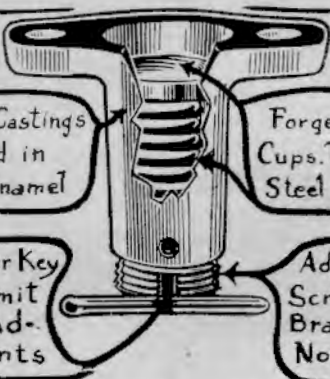
A-C MANUFACTURING COMPANY, Inc.  
417-425 Sherman St. Pontiac, Ill.  
Export Address: Sherman & Sheppard, 10 Bridge St., New York.  
Cable Address: "Tractor"

## HERE'S WHY

Dealers Demand  
**ATTWOOD**  
Radius and Steering Rod  
Anti-Rattlers

Malleable Castings Finished in Baked Enamel

Two Cotter Key Slots Permit 1/4 Turn Adjustments



Forged Steel Cups. Tempered Steel Springs

Adjusting Screw Solid Brass. Will Not Rust

And they cost no more than an ordinary anti-rattler  
List Price 35c a pair

**ATTWOOD**  
Brass Works  
Grand Rapids, Michigan



## BOYLE VALVES

eliminate the Necessity of Rebuilding Worn Valve Seats in Cylinder Block and stop all further wear on valve seats

No matter how worn the valve seat, Boyle Valves are flat seated and overlap the present valve opening. The cushioning action of Boyle Valves stops all further pounding into the valve seat. They give 100% efficiency and are installed in less time than regrinding taper valves.

**No Regrinding—Silent Operation—  
More Power—Economical and Efficient**

----- MAIL NOW -----

Boyle Valve Company  
5822 South Ada Street, Chicago

Dealer ( ) Owner ( )  
Please send free booklet, "First Out of Line With Boyle Valves," also price list.

Name .....

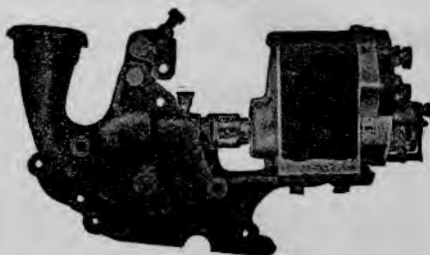
Address .....

(Be sure to mark X whether dealer or owner)

## Ford Owners!

**Eliminate Ignition Troubles—**

by equipping your Ford with a HIGH TENSION MAGNETO—the best known ignition system.



We manufacture the following Attachments for installing high tension Magnetos:

The COLUMBO for all types of Ford cars.

The FORDO for the later types of Ford cars in place of Generator.

Write for Complete Information

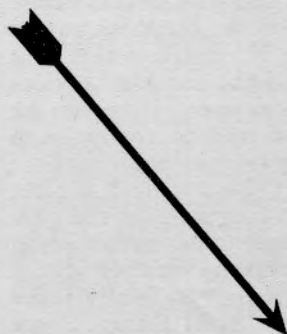
Agents and Dealers Wanted

**APOLLO MAGNETO CORPORATION**  
73 GRAND STREET KINGSTON, N. Y.

Manufacturers—  
Ad Managers—  
Agency Men:

*For your own good read these  
remarks by the Editor—*

“From Broomsticks  
to Bulldogs”  
*and then—*



*(next page)*

“Glad to



See You!”

*IT is not often that the editor gets an opportunity to talk to the advertisers. By tradition the boys in the editorial room are not good salesmen, while the advertisers enjoy talking mostly of sales. But occasionally the editor functions as a fill-in. When the business boys take time out for breath they sometimes tell us to step in and keep the company entertained until they get their second wind. Or when the advertiser is adamant after the best guns of selling oratory have pounded in vain, the gunners try us out as a last resort, although they believe our ammunition to be as so much confetti.*

*At any rate, it appears that our advertising*

*manager, Mr. Goulston, was filled with holiday spirit, for he told me that he had held these pages to allow me to make a few remarks to his clients. Disclaiming any selling talents, I will not use this opportunity to talk business. Instead I shall ask you manufacturers, advertising managers, advertising agency men and all and several who are interested in merchandising the Ford Field to draw up your chairs and listen to this story that may tell you something you did not know before. But remember, I talk only to entertain and therefore shall not even claim that a moral is to be found herein. That is for you to decide.*

*Well, boys, it happened this way:*



**O**N OUR staff we have a field man whom I will call Smith. That is not his name but it will be used since he might object to my making him famous without permission. Proffered publicity sometimes is not well received.

Smith is young and full of ambition. At the beginning of his business career a few years ago he did not feel that any corporation should fight for his services as general sales manager. Instead he felt that the proper way to really learn selling was to study people, wherefore he became for a time a “sheet writer”, which, translated from the language of the profession, means a magazine subscription agent. In this adventurous training school he learned much; enough to finally leave it and move up to better things. Some time ago he joined us.

The other day Smith dropped in at my office after a long trip on the road during which he called on a young army of Ford dealers and their men. I wanted to hear what he had to say about my friends, the readers. Placing the cigarettes within easy reach I asked him what of the trip.

“It was a revelation” said Smith.

“How come?” I asked.

“It was so different from anything I ever experienced in those days before I reformed, when I was a ‘sheet-writer’. In order to show you the contrast between those days and the present I must make some confessions. Thank Heaven, I’m pure now. Don’t be surprised if you see me some night out on a street corner leading in the hymns and telling the assembled throngs how I was saved. But that would not be safe for some of my former customers might be in the crowd.

“I ease my conscience now by remembering that I was in the sheet-writing game to learn—which I did. But we did some things that would bring blushes to some of the most hard-boiled.

“How often we would tell the lady of the house that we were just college boys trying to get along and that if we sold a certain number of dress patterns we would win a scholarship. Why I am one of the best educated men in the world—according to the number of colleges I have attended. The only school these kind ladies did not send me to was Heidelberg. On this dress pattern racket we also included the Blank Magazine just incidentally, of course.



some time. But these fellows were willing to pay in advance for fear of missing a copy later on.

"I have represented dozens of magazines—but this is the only one which ever meant an automatic 'Welcome' when I flashed it. It ought to be a great buy for any advertiser. So long and good-luck. I'll write you from New Orleans."

After my enthusiastic friend Smith departed I took time to look over a number of his analysis sheets. I found from his notations that Ford Dealer & Service Field is endorsed by all dealers in a general way. Then I noticed that parts department men followed it to keep posted on new equipment. A number of service

managers praised it for its technical articles and equipment advertising. In each case the parts department and service men were asked if they purchased accessories and equipment for stock. In every large dealership and most medium sized places these men were the active buyers.

As I sat back and mused over the dozen years that we have really worked to make this magazine the very best of its kind in the world—and our ambition was no less than this—I realized a feeling of some satisfaction. Here were our readers, all men actively working in the Ford Field, telling us that we had won their full endorsement.



*Note: Should there be any advertisers who may believe that the foregoing is more romantic than real they are invited to write for proofs of the regard with which Ford Dealer & Service Field is held among dealers and department heads; a regard which they show in a most convincing way.*

Get under way early for good business that is assured during this year.

Ford Dealer & Service Field  
Alone Covers *All* of Your Market

---

"Or there was the other game: 'The So-and-So Department Store has sent me out to interest you in their plan whereby you can get a premium—and (carelessly in a soft voice)—this magazine.' This was always good until the department store heard of it. Then we would have to try something else.

"We never represented ourselves as seeking subscriptions. That would end an interview at once. Even though we represented reputable national magazines it was always necessary to use the old hocus. You interested the prospect in some premium and then tried to slide the magazine across fast. The magazine was the last thing you would mention—and then very sketchily. Often the buyer was told that the magazine was sent free—it was only necessary to 'pay the postage'.

"We met some credulous and generous buyers, but generally speaking it was a hard graft. I have had doors slammed in my face. I have been threatened and given other receptions that were far from hospitable. In the old game I met everything in the way of turn downs—from broomsticks to bulldogs.

"Well, I have been out for a number of months calling on Ford dealerships and it has been a most unique experience for me. I walk right in at the dealer's front door—which is unusual in the subscription game. I meet the dealer and without any beating around the bush or any misrepresentation I tell him right off the bat that I represent Ford Dealer & Service Field Magazine. What happens?

"In every single case, except one—and he was a chronic crab—the dealer has extended his hand and said: 'Glad to see you!' He has followed by telling me that this magazine is an old friend. In many instances he has taken it since the first issues. He tells me that the boys in the place all read it. He has personally taken me back into the shop and introduced me to his service and parts men and has been glad to have me talk with them. In dozens of cases he has said: 'I want the boys to read that magazine regularly. It helps them and helps me. If they do not subscribe or their subscriptions have run out, tell them to take it. If they are broke I'll pay the bill.'

"And when I have gone into the various departments I have been welcomed like an old friend. I find the parts man with the latest issue of our magazine stuffed in his pocket, where it just fits conveniently, or within easy reach on his shelf. He tells me that he uses it as a buying guide.

"I meet the sales-manager and he tells me that he uses our 'Salesmen, Do You Know Why' articles in his meetings. I get chatting with the service man and he informs me that our mechanical articles are knock-outs and that all of the boys steal his copy regularly. He says that he often gets into a discussion by correspondence with Murray Fahnestock and that Murray is always right.



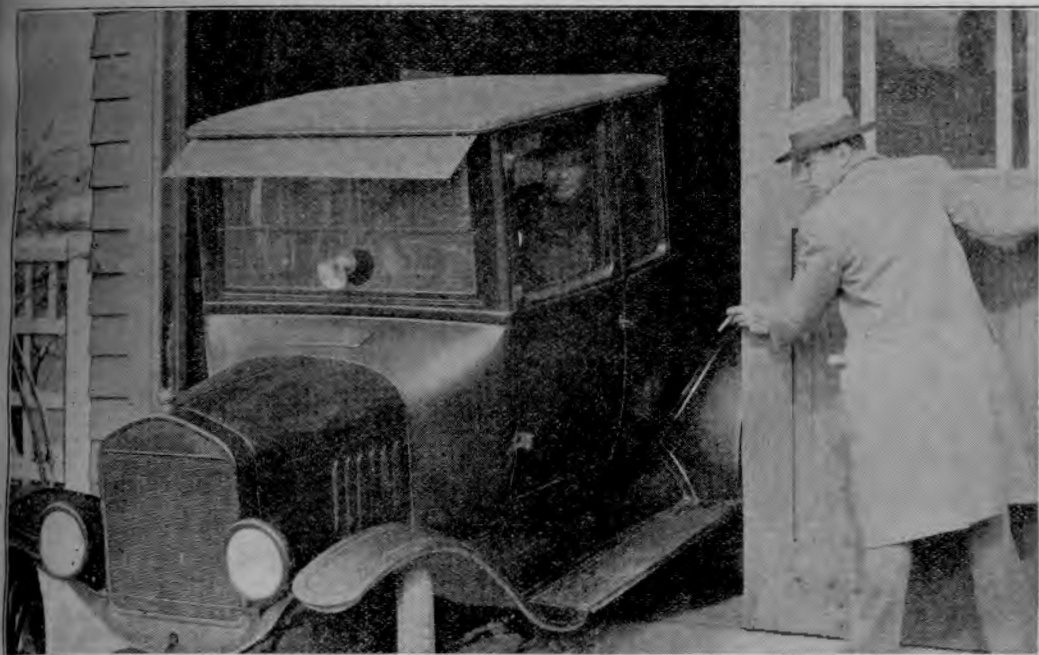
SMITH paused for breath and I asked him what proof he had of this most pleasant condition—beyond his word which I had no reason to doubt.

"Take a look at this", chuckled Smith.

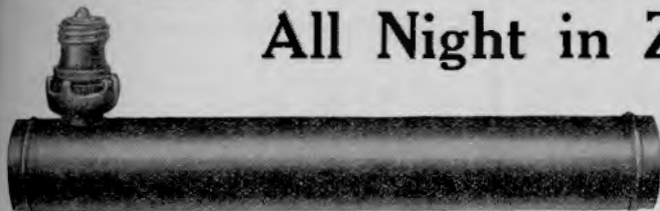
Whereupon he took from his portfolio his record book and showed it full of new subscriptions and renewals from dealers, parts department and service men, sales-managers and salesmen.

In many instances he showed "blanket subscriptions"—cases where the dealer, himself, gave his check to pay for a year's subscription for each of his department heads.

"I suppose that, to make it look as if I was a wizard at selling, I should say that it took a lot of talking to get this business", said Smith. "I'll be 'frank and earnest' with you if it costs me my job. Everyone of those subs was given to me with a smile and without the necessity of any selling. They were all acquainted with Ford Dealer & Service Field and wanted it. You will notice many of them dated ahead. Those are subs that are now in force and that do not expire for



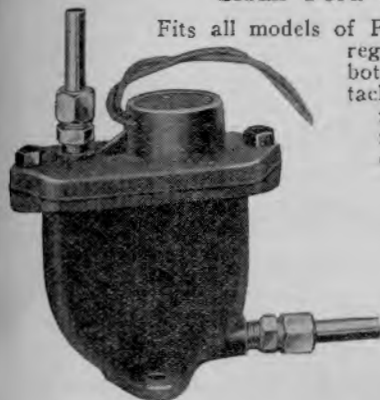
# KEEPS MOTOR BLOCK WARM All Night in Zero Weather



**Sloan Ford Moto-Heater**

Fits all models of Fords. Takes the place of regular water tube at front bottom of motor block. Attaches in 3 minutes. Need never be taken off. Keeps motor block warm and crank case oil at lubricating temperature all night long.

**Only \$3.25 Retail**



**Sloan Standard Moto-Heater**

For all cars except Ford. Easy to attach. Lasts as long as the car. **Only \$7.50.**

For less than 1 cent per hour you can keep warm solution circulating through radiator and water jackets and keep crank case oil at lubricating temperature all night long in coldest weather.

## Sloan Moto - Heater

gives instant starting in the morning; saves running down and recharging batteries; eliminates danger of scored cylinders from driving with stiff oil; avoids thinning down oil from over-choking; makes hard cranking unnecessary—brings Summer comforts to Winter driving.

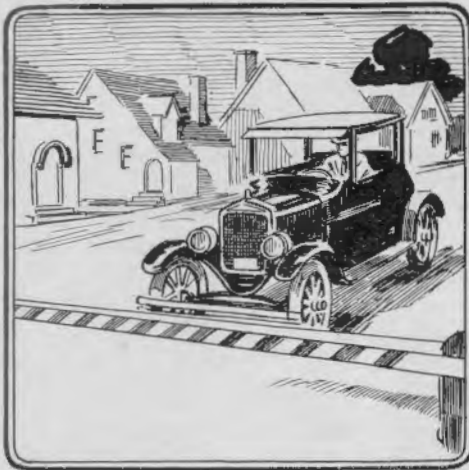
Plugs into garage electric light socket and keeps the block as warm as toast. Saves its cost over and over again, every week, in time saved and repairs avoided.

**If your dealer can't supply, order direct. Any one can install Sloan Moto-Heater in a few minutes.**

**Dealers**  
Get  
discounts  
and  
sales  
plan.

**SLOAN MOTOR HEATER CO.,**

FEDERMAN BUILDING  
PEORIA, ILL.



## Now! Apply Your Brakes!

*If they're all right  
they'll hold*

**B**UT you can't afford to allow an "if" to stand between you and absolute brake control. You endanger not only your life but the lives of others.

Triplewear Transmission Lining was designed to insure perfect braking at all times. The best proof of its success is the growing number of Ford Owners who insist upon its being installed in their cars.

The expense is no greater to them and they realize its dependability and durability—qualities which appeal to every Ford car owner.

### DEALERS!

*Triplewear Transmission Lining will make a good mechanical job better. The best profits are in selling the best transmission lining.*

*Makers*

DURWYLLAN CO., Inc.  
Paterson, New Jersey

**TRIPLEWEAR**  
**TRANSMISSION**  
**-LINING-**  
*for FORDS*

# FORD DEALER *and* SERVICE FIELD

*A monthly magazine devoted solely to the interests of Ford dealers and every department of their organizations, as well as official and independent Ford Service Stations, garages, parts and accessory dealers and jobbers in products for the Ford and Fordson throughout the world. Not connected with the Ford Motor Company.*

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Advertising and the Auto Show

Lowering Speedster Chassis

Merchandising Methods  
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## for Ford Cars and Fordson Tractors

We have developed a highly specialized line of valves for Ford motors because the needs of the Ford service shop and the Ford owner cannot be completely served in any other way. These Toledo valves for Fords simplify the service problem and assure enduring satisfaction to the owner. Responsible wholesalers everywhere have stocks.

**THE TOLEDO STEEL PRODUCTS COMPANY**  
TOLEDO, OHIO

### "Regular" Toledo Valve for Fords

- X-193—Standard head and stem.  
X-194—Standard head with 1/64" oversize stem.  
X-409—1/8" oversize head with standard stem.  
X-410—1/8" oversize head with 1/64" oversize stem.

### "Special" Toledo Valve for Fords

- Semi-finished—Extra thick head.  
X-100—Standard head and stem.  
X-101—Standard head with 1/64" oversize stem.

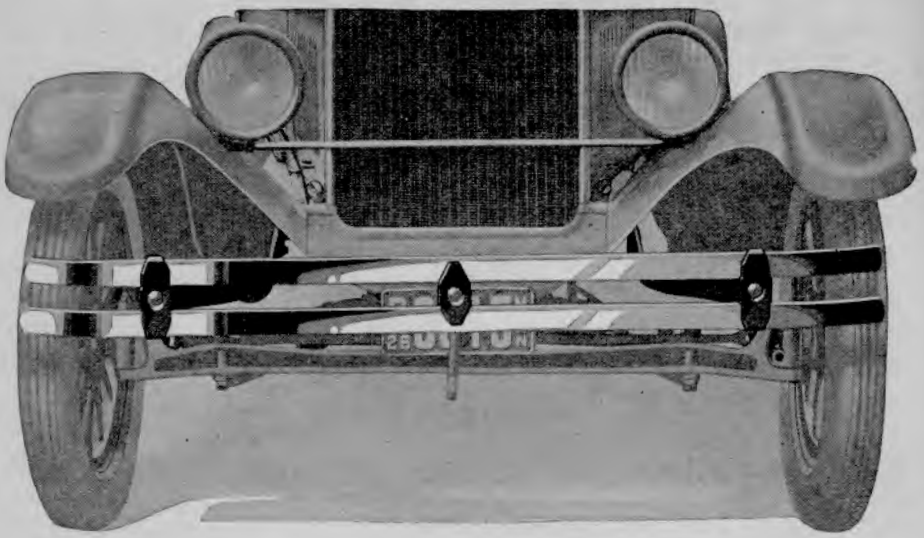
### Fordson Tractor Valve

- X-242—Standard head and stem.  
X-333—1/16" oversize head with 1/64" oversize stem.  
X-416—1 7/8" diameter head with 1/64" oversize stem.  
X-407—1/8" oversize head and standard stem.  
X-441—Standard head and stem, late 1924 and 1925.  
X-441—Standard head with 1/64" oversize stem, late 1924 and 1925.  
X-478—1 3/4" diameter with 1/64" oversize stem.

All valves have drilled stems with exception of X-441, X-442, and X-478, which are grooved.

Valves  
Exclusively  
For  
More  
Than  
Thirteen  
Years





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With this attractive line you can greatly increase your bumper sales. These new front bumpers have genuine spring steel bars and brackets, with three ornamental clamps.

The fender guards have an exclusive T steel reinforcement. Both front and rear equipment is finished in brilliant durable nickel, extra heavy, with copper base. Made by



List  
Price  
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**\$8<sup>75</sup>**

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# MARQUETTE

Reg. U. S. Pat. Off.

Tell your customers these facts and the low list price, \$8.75, front or rear. Order from your jobber or write us.

**MARQUETTE MFG. CO.**  
ST. PAUL, MINN., U. S. A.

# FORD DEALER

and

## SERVICE FIELD

Volume 26

January 1927

Number 4

## You—and the Coming Year

*The Success We Wish for You can be Realized by  
Adopting a Simple Business Formula*

IT is the custom for most magazine editors at this time to compose profound and even poetic editorials around the passing of one year and the advent of the next. Stay, brethren, read on. You are going to be spared anything of that sort.

We shall indulge in no flights of rhetoric. But perhaps you will grant us the privilege of making a remark or two as between businessmen; observing the arrival of the time for a new calendar pad only by such comments as pertain to your business.

Our review of the Ford field during the year just passed shows us that, while some dealers did not do so well, others are smiling at the merry old financial statement. We learn from our men working in the field that they occasionally encountered a dealer in a very lachrymose state, who sobbed out a sad yarn about the good old days being gone forever and that nothing much more cheerful than the almshouse or bread-line was just beyond.

But in the same locality would be other dealers—*working the same field, mind you*—who were humming along and often doing better business than they had ever known before. They had no complaints to offer, being happy and prosperous.

What's the answer?

*Very definitely the answer is that just how good the Ford business is—or is to be—depends upon how good a businessman you are—or are to become.*

WE are in position to know rather accurately that the close of 1926 finds many dealers contemplating a year of good business. These

men are of the sort who have kept step with their businesses. They are the doers; the alert sort that are never idle but always looking for more information and more ways to build the trade. Those who have not done so well are the kind that have expected buyers always to continue to come in and take cars away from them, thus making any sales effort unnecessary.

Now let us forget 1926 except insofar as it may teach us something for the future. Let us realize that while the Ford market may have undergone some changes, it is more sound and as large as before—if not much larger in possibilities. Realize this, that the dealer *must* become the same sort of businessman as are all other men in merchandizing activities.

If you are not such a dealer you can become one if it is your desire and you surely will have the aid and full co-operation of the Ford Motor Company to help you achieve this end.

The formula is simple enough. Make one New Year's resolution that you, your sales-manager, your office force, your shop and parts foremen and every salesman and service man are actually to do the things they already know but may not practice; or learn to do the things that are not yet known to them. Incidentally, we might remark that this magazine is one very good means of such inspiration or education.

That really is all there is to it. Almost wholly it is up to you and your organization whether or not you will realize what we sincerely wish for you, which is—as the old saying hath it—

A Happy and Prosperous New Year.



# SPECIAL PAINT CARS— DO THEY SELL?

By "THIRTEEN-SIX"

## *Pennsylvania Dealer Tells His Experience*

"GENTLEMEN may prefer blondes—but in the experience of Mr. H. M. Mutchler, president of Mutchler-Moody Co., Ford dealers in Pittsburgh, "Gentlemen do not prefer brightly colored Fords sufficiently to pay extra for them."

\* \* \* \* \*

"We hear you are selling 'dressed up' and 'built-to-order' Fords," we said.

"We were. We're not doing it now," replied Mutchler.

"That's too bad," we said. "Because we were counting on you for a good story as to how Ford dealers could make money selling brightly painted Fords. But perhaps as a story as to how Ford dealers should keep from losing money on 'special paint jobs' would be of equal interest," we suggested.

"We thought," said Mr. Mutchler, "that brightly painted Fords might sell well. So we had several Fords painted in pretty colors. Everyone who came in admired them very much. But they didn't buy them. We believe that if we could have sold them at the same price (as Ford dealers now can), we would have sold them promptly. But a good job of painting an enclosed Ford in bright colors requires several coats. This takes time and money and, when we asked a reasonable extra price for the paint—our prospects continued to admire the car. But bought the regular models at the lower price. Don't try to tell me that \$25 or \$50 does not make a difference to the average buyer of a Ford car—just remember what a sales stimulant a reduction of \$50 in Ford prices has always been."

"For instance," continued Mr. Mutchler, "consider the case of a brightly painted Fordor Sedan which we had. The car did not sell promptly, as no one seemed to wish to pay *more* for the brightly colored car. Then there was a change in body models, which made it impossible for us to sell it as a new car. Then there was a price reduction in Ford cars. In addition there was a loss of interest in working capital tied up in this car. I finally sold, at a reduced price, the body off this car (the body was now old style) to a man who wished a body of this type, and installed a new body on the chassis. The car had

been used to some extent as a demonstrator—but certainly not to the extent of the \$218 loss which my bookkeeper tells me is charged against this one car."

"You see," continued Mr. Mutchler, "there is a difference between 'dolling-up' a car by putting accessories on it, and 'painting' a car. The difference being that the accessories can be removed without loss of value (only the spare time of mechanics in putting them on). While a special paint job would be a double loss if we had to paint the car back again to standard color.

"Didn't the brightly colored roadsters sell better than the brightly colored enclosed cars," we asked?

"Yes, they did sell better," said Mr. Mutchler. "But, in many cases, when a prospect wished to buy a special brightly colored roadster, he had his own ideas as to the color and shade and striping he desired. There are far too many colors and shades to keep them all in stock. When a buyer wants 'individuality', he wants it 'to order' and he feels more certain of having the only-Ford-in-town like that if he has the car painted to order. We have been successful in selling 'made-to-order' or custom-built Fords, and have found it very profitable to give the car buyer the exact type of Ford he wants, as regards to color and equipment."

"But there is a very practical difference between finding out exactly what the purchaser wants—and then giving it to him. Or taking a chance on some fancy color—and hoping to find someone who will like that same color better than any other, and also be willing to pay the additional price for it. Possibly one brightly painted roadster, as a 'sample' of the way the car can be painted, will be ample for most Ford dealers. There is no question but that a Ford roadster, finished in red, green, yellow or blue, with perhaps a contrasting stripe around the body belt and hood, or other neat striping, makes a very attractive looking car. When it is 'dolled-up' with brightly colored wire wheels, motometer, and special seat to fit in the luggage compartment at the rear, the difference is still more remarkable. Of course, the brightly colored Fords sell more easily in the spring and summer months."



# SCIENTIFIC SELLING POINTS



# In FORD DESIGN

BY MURRAY FAHNESTOCK

So Illustrated That Ford Salesmen Can Use  
Them in Making Sales

THE winged pyramid was an apt choice for the trade mark of the Ford car. The wings signify speed and lightness, while the triangle denotes stability and strength.

It is eminently fitting that the universal car should include the eternal *triangle* as one of the fundamental elements of its construction. One of the first principles of good engineering design is that the triangle is one of the strongest and most flexible units of construction.

If we take three matches and join the ends together, so that they form a triangle, it is at once apparent that they cannot be forced into any other shape than a triangle—until one of the matches either bends or breaks. But, if we take four matches, and join them together to form a square, we shall find it easy to distort or flatten out the structure, as soon as a force is applied to one of its sides. Thus we find that a square has no strength—other than that of the corner joints.

But, if we connect the lower left hand corner of the square to the upper right hand corner by means of a fifth match, we then convert the square into two triangles, and the square cannot be distorted without bending or breaking one of the matches. Carpenters know this fact, and generally nail a diagonal brace on a square or rectangular frame. The diagonal brace on the farm yard gate is an illustration of this.

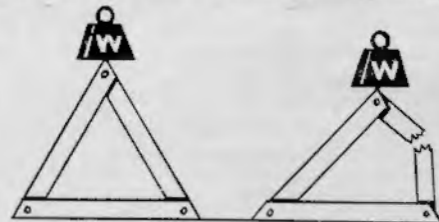
The designing of bridges has been practiced for many years and the principles of bridge engineering are now well established. Let us glance at an average steel bridge and notice the number of triangles used to carry the weight and resist the wind pressure. Even the suspension bridge is based on the principle of the triangle, although the suspension cables are often curved for the sake of beauty and convenience. The same necessity, of combining strength and lightness, exists in both bridge and automobile. The lighter they can be, and yet carry the load safely, the better they are adapted to their purpose.

Having thus proved by geometry and practical experience that the triangle is an excellent unit for engineering design, let's look for triangles in the Ford car.

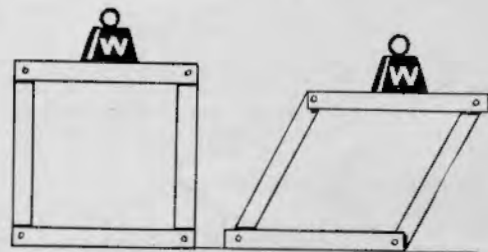
## The Triangular Ford

WE shall find our first triangle formed by the front axle, and by the radius rods or *wish-bone* which holds the front axle in its proper position in spite of all the grievous shocks to which the front wheels may be subjected by rough roads. The front wheels are pushed over the road by the thrust exerted on the front axle through the radius rods. This push is started at the ball joint marked "C".

We find our second triangle formed by the rear axle and the radius rods which hold the axle in alignment. The wheels exert a push on the rear axle which travels forward through the



STRENGTH OF TRIANGLE



WEAKNESS OF SQUARE  
Showing Strength of Triangle

drive shaft housing and radius rods, and pushes the car ahead through the universal ball joint at "D".

The two rear radius rods and the rear axle may be considered as forming one large triangle, having the rear axle as the base of the triangle, and ignoring the drive shaft housing as a factor

## A Word to Ford Salesmen

**S**ALESMEN need more than the gift-of-gab to be good salesmen. Some of the best salesmen are rather quiet talkers, but they are convincing talkers because they **KNOW THEIR PRODUCT**.

What is the salesman's job? Have you ever thought of the answer to that question? Isn't it to find the people who need automobiles in their work and play—and to convince them that the Ford is the car best adapted to their use?

Finding these people is only half the job—though it may be very hard. But the second part is equally important—we must **CONVINCE** the prospect (by explaining just why) that the Ford car is best adapted to his use.

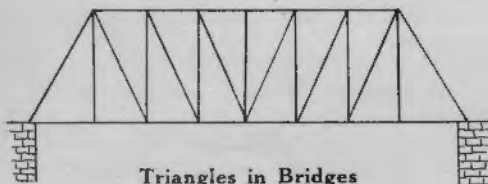
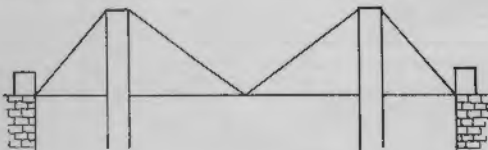
When a salesman is selling shoes, isn't he a better salesman if he knows the difference between canvas and leather? If the salesman is selling steel, shouldn't he know the difference between steel and iron? The best steel salesmen are those who know most about the variations in the different grades of steel. Such salesmen are welcomed by their customers—because they know-their-stuff, and can render their customers a **SERVICE** by explaining the qualities and uses of the different grades of steel. The customer does not always show up the bluffer, (why should he waste time doing so), but the customer is apt to be **IN CONFERENCE** the next time the bluffer calls.

The piano salesman may be a fine talker—but if he knows a little music (he may not always have to use it), isn't he going to get more enjoyment out of his job, and isn't he going to make more sales?

Now the Ford car is a **MECHANICAL** product—a piece of machinery. So mechanical principles are as necessary to the Ford salesman as music is to the piano salesman. We do not wish to suggest that the salesman should talk mechanical features to all his prospects. Yet the fundamentals of engineering should be the solid foundation on which he builds his sales talk, so that his logic rings true. And he has the mechanical knowledge to fall back on as a reserve if needed.

of strength. But the drive shaft housing is intended to take most of the thrust, as well as the torque or twist of the rear axle. Thus it seems better to consider the rear axle system as consisting of two equal triangles "A" and "B" having the drive shaft housing as one leg of each triangle.

If one brake is applied more than the other, the radius rods (as part of the triangle) keep the rear axle from being pulled out of position with relation to the car.



Triangles in Bridges

The steering column, the chassis frame and the dash, form another triangle which gives substantial support to the steering column and steering wheel.

The chassis frame is a rectangle or stretched-out-square—because it would be difficult to mount a practical car body on a three cornered chassis frame. But, as previously explained, a square or rectangular frame is inherently weak—unless it is braced by diagonal members. For this reason, the Ford motor and transmission have been cleverly arranged to act as *diagonals* to brace and strengthen the chassis frame.

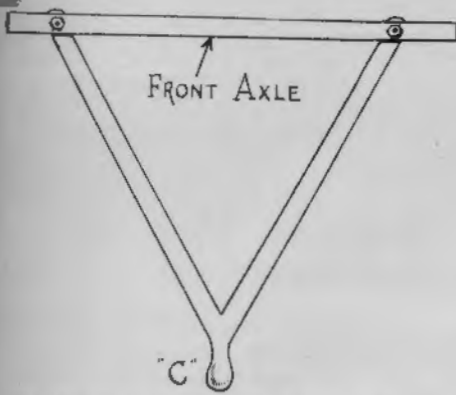
The front end of the motor base, marked "E" is fastened to the middle of the front cross member of the frame. While the two motor supports or arms "F" and also "G" are fastened to the side members of the chassis frame. Thus, diagonal lines can be imagined as being drawn from "E" to "F" and also from "E" to "G".

If a poorly designed truck or bus body is fitted to the Ford chassis, it may throw such severe twisting stresses on the Ford frame that the strain may fracture the motor supports or arms which extend from the crank case to the frame.

### Three-Point Support

**U**P to this point, we have been considering triangles as a method of bracing or strengthening some of the chassis components. Let us now consider three-point suspension as a firm, yet flexible method of holding chassis elements in proper relation to each other.

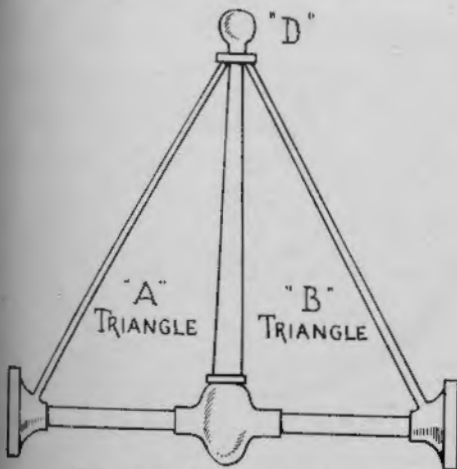
We know from geometry that two points may fix the position of a straight line in space, but



Triangular Bracing of Front Axle

that three points are necessary to determine the position of a plane or flat surface. Thus, if we refer to the sketch, we shall see that, while the triangle can be held by two points, it can still rotate around the line drawn between the two points as an axis. If we use a third point, then the triangle is held firmly in position.

When we consider four points, we find that if all four points are in the same plane, then the surface is kept flat. But if one of these four



Rear Axle Includes Triangles

points is out of position with the other three, then the surface will be warped or twisted. On the same principle, a four-legged stool will not stand firmly on uneven ground, and is apt to be strained or broken if a weight is placed on the stool. But a three-legged stool stands firmly, no matter how uneven the ground, and is not strained by the application of the load.

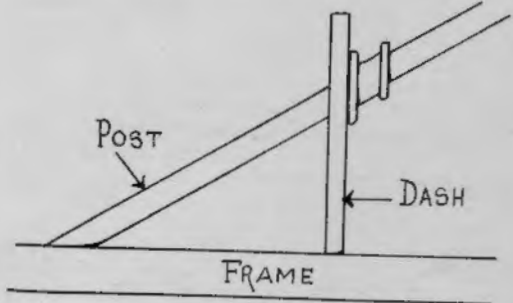
Returning to our three-cornered Ford, we shall find that the engine and transmission are supported at three points. Consequently, no matter how rough the road, or how much the chassis frame bends and twists, the engine and transmission are not affected. This is vitally important for, if the engine and transmission bearings are not

kept in perfect alignment, there will be friction and wear, and the cost of repairs will be much greater.

Combining triangular bracing with three-point suspension is most ingenious engineering, and is a feature of the Ford car of which we may well be proud.

### Three-Point Planetary Gears

ONE of the features of the Ford car, as everyone well knows, is the special, always-in-gear, planetary transmission. But we often over-



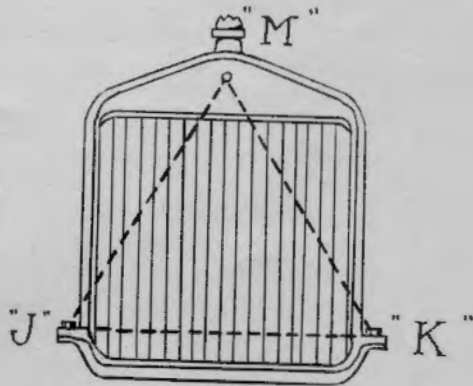
Steering Column Triangle

look the fact that the same efficient type of *balanced* gearing is used in two other parts of the Ford—can you name them?

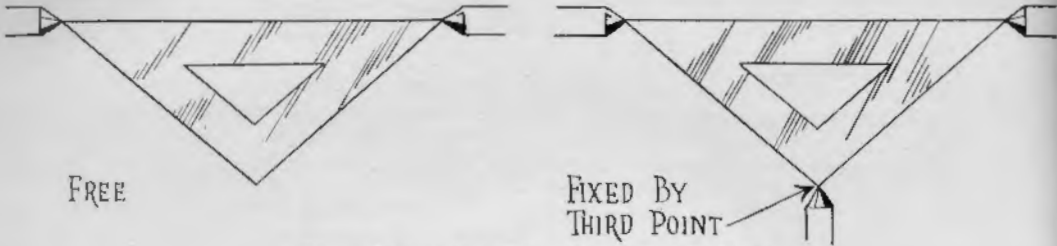
Referring to the sketch, we notice that there is a neat and effective set of planetary gears enclosed in the casing just below the steering column. Casting a penetrating glance through the steel and grease of the rear axle housing, we find another set of three balanced gears in the differential.

It is quite true that the Ford steering gear, the Ford transmission, and the differential would all operate with only one set of gears. Then why does Ford use *three*?

Of course greater strength, reliability and resistance to wear result from the use of three gears, instead of only one. Yet the real reason that Ford uses this construction is to secure better balance and smoothness of operation. Referring



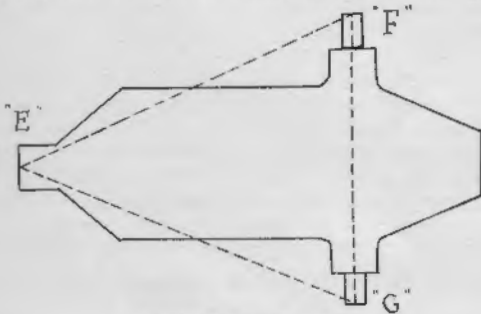
Three Point Radiator Support



Three Points Determine Position of Object

to our diagram, we can readily see that when we place three gears equi-distant around a central gear, then the forces acting on the central gear

Ford axles have been so flexibly attached to the chassis frame that the wheels have a chance to roll over road mountains, rather than plow through them.



Engine Braces Frame

This is accomplished by attaching the Ford chassis frame to the tops of the triangles formed by the front and rear springs and their respective axles. Thus allowing the axles to move freely, without distorting the chassis frame and body.

Another interesting detail, not illustrated, is the manner in which the front axle is held in sideways position by the tips of the spring, while it is maintained in fore-and-aft position by the front radius rods attached to the crank case.

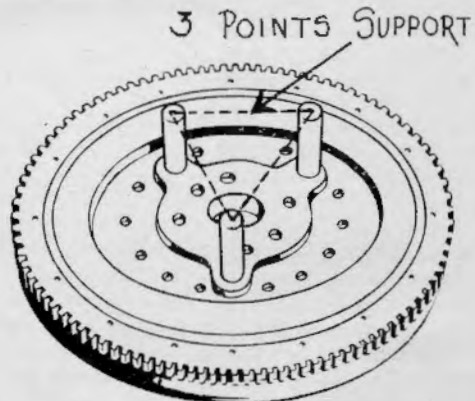
The rear axle is attached to the chassis frame through the ends of the spring and is also kept

are beautifully balanced and there is no tendency to push the central gear to one side or the other during the operation of the gear. Likewise, the internal ring gear, which surrounds the three pinions, is also centered and balanced in its action.

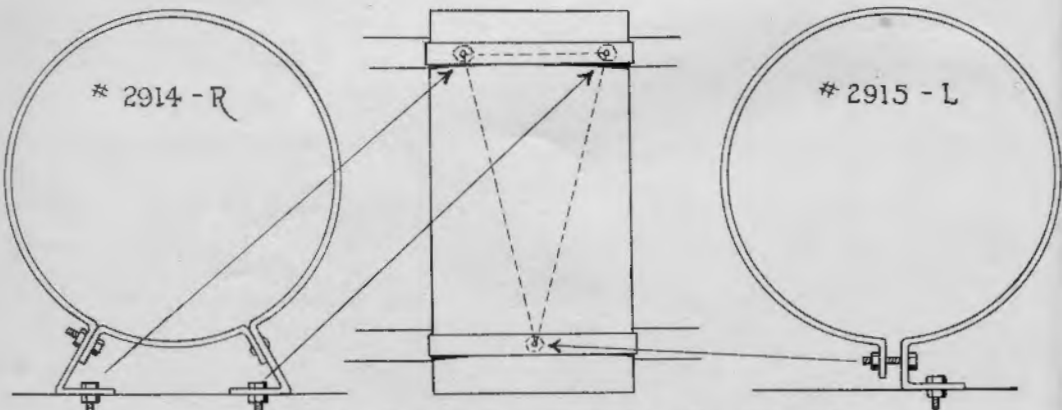
By thus locating and balancing the gearing of the Ford car at three points, we secure much greater strength and reliability, secure smoother operation, and greatly reduce the wear and tear.

### Flexibility of the Ford

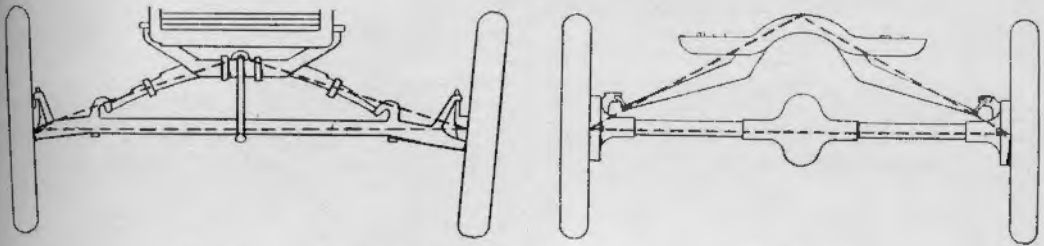
THERE are two ways of getting to the other side of a mountain. We can dig a tunnel through the granite—a slow, expensive job. Or we can go over or around the mountain, which is often the common-sense method. Now the



Three Point Transmission



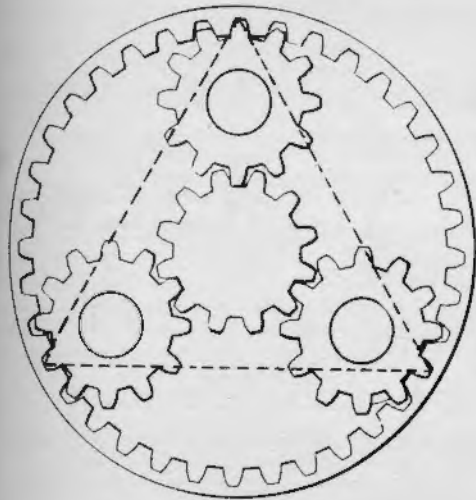
Three Point Support Prevents Straining Gasoline Tank



Supporting Frame at Apex of Springs Gives Flexibility

from fore-and-aft movement by the radius rods and drive shaft housing, connected to the power plant at the universal ball joint.

As automobile radiators are necessarily made rather thin and light (to radiate the heat more efficiently), they must be so supported that they will be free from twisting strains, which would



Triple Gears for Steering

soon break open the soldered joints of the radiator and start leaks. The Ford radiator is supported on the side members of the chassis frame at the points marked "J" and at "K". The third point of support is the radiator-to-dash rod, which is attached near the top of the radiator at the point marked "M". As an extra precaution against straining the Ford radiator, there are coil springs under the bolts holding the radiator to the side members of the chassis frame.

The chief reason why Ford gasoline tanks give so little trouble is because they are ruggedly built. But another important reason is the fact that the Ford fuel tanks have been flexibly supported at three points, thus making it impossible for any weaving or bending of the chassis frame to strain and open up the seams of the tank.

Salesmen of Ford cars, who understand the fundamental principles on which the car is designed, not only take a more intelligent interest in the cars they sell, but are able to talk more

convincingly, because they know *why* the car should be handled thus and so, and do not have to memorize instructions which they are apt to forget. Once *reasons* are understood, it is almost impossible to forget.

Having thus shown how theory and practice make good engineering in which Ford salesmen can take due pride, and having "mixed mathematics and motor mechanics" we shall consider our trip at an end, stop the motor and so "So long."

### FORD-WORD

**W**E'VE met a lot of salesmen  
In our rambles round the map,  
From the "High Commissioned  
Laddie"

to the unsuccessful chap,  
And we've come to this conclusion,  
That you can't "get by" on bluff—  
That the "High Commissioned Laddie"  
Is the boy who knows his stuff.

**I**T takes a heap of study  
If you're goin' to reach the top,  
And a lot of salesmen start it—  
But a lot of salesmen stop!  
You've got to know your subject,  
Up and down and through,  
Forward too, and backward  
And what each part'll do.

**S**O when you're asked a question  
You'll never need to guess,  
You'll have the answer ready  
And can tell 'em No or Yes!  
It makes no earthly difference  
If you're selling Fords or coal,  
The chap who **LEARNS** his subject—  
Is the boy who **EARNs** the roll.

*From Ford News, Canada.*

*Barbecue Day at Sauk Center, Minn. When frost gripped the soil but not the enthusiasm of the several hundred people who attended.*



## Selling Fords on Main Street

*By*

Mr. F. L. Sturr,  
Sturr Ford Agency, Sauk Center, Minnesota

*as Told to*

WYONA DASHWOOD

WHEN the people of Sauk Center first saw my service truck, painted red and lettered gold, hurrying around town in a way of being useful, they shook their heads and generally worried a good deal about it. To them I was one of those city chaps with more notions than sense, and it gave them one further thing to discuss as to the dubious chances for my success. But that truck brought results with the first week. Farmers seeing it on the road helping some car out of the ditch or towing in a car, or simply seeing it gaily on the road, gave it the second look that makes for remembering a thing. Now we are doing 70 per cent of the Ford repair work here—a trade that we had to build up, for there was no Ford agency in Sauk Center before ours. There are still people who shake their head over that truck. Anything noticeable verges on scandal in the small community.

The signs I put up outside of town got the same shake of the head and dam-fool-idea criticism. They are temperate signs, too. Bare announcements. Anything more would have been fatal. As it was, I was getting altogether too smart. The

immediate response those signs brought from tourist trade justified them beyond question. Sooner or later the townsfolk will get used to them, I suppose.

It's trite to say that city methods don't apply to the small town. But it is too true to overlook. In the first place, you come as a stranger. You have prestige to build, friends to make, criticism to meet with, and a traditional suspicion to live down, for the newcomer is always a suspect. He gets minute inspection and usually negative judgment. You can do none of the flagrant selling that is good business in the city where your prospects don't know you from Adam and your one problem is to sell them a car.

Then there are the farmers of the adjoining countryside. The farmer won't come to you. You have to go to him. And the last thing you can talk to him about is buying a car. Weather gets to be a vital subject with you. You study the report and smell the direction of the wind and observe clouds with an avidity that is second only to his. He has a lot of pigs, so you investigate pigs—look at them, read about them, talk to every ex-

pert that comes along. You get so you can talk crops, too—conservatively. You are careful to have the facts at hand upon which you base your judgment. Obviously, you never assume to know more about things than he does. He would recognize you as a rank upstart before you had said two words. It is the old idea about knowing your subject. If you don't know it, keep quiet. If you argue with him about it, you fall equally low in his estimation. Argument, unless you let the brunt of it fall on you, always leaves a scar on a prospect. No man relishes getting the worst of an argument. There is one subject you know down to the ground—Fords. The rest of the time you do well to acknowledge his advantage.

**W**HEN you finally get around to cars with him, he ruminates a bit, and then he is apt to say: "Well, I'll talk it over with my woman."

And there you are. For selling on the farm is slow work. "My woman" is about the first person you see when you go out to the farm. She looks you over curiously. "What do you want him for" she's likely to ask point blank. I always tell her. She is the one who can forward or hinder the sale, and it is unfailingly the latter if you arouse her antagonism. Maybe she'll say then: "Well, he's been thinking some of buying a ———. But it's too expensive to my mind."

Right then and there I enlist her aid to sell him the cheaper car.

"The woman" is hardest worked of all on the farm. Her chores are never done. Not only does she do the housework and the cooking and the dairying, but she goes into the field as well. After supper the farmer gets out of his chair

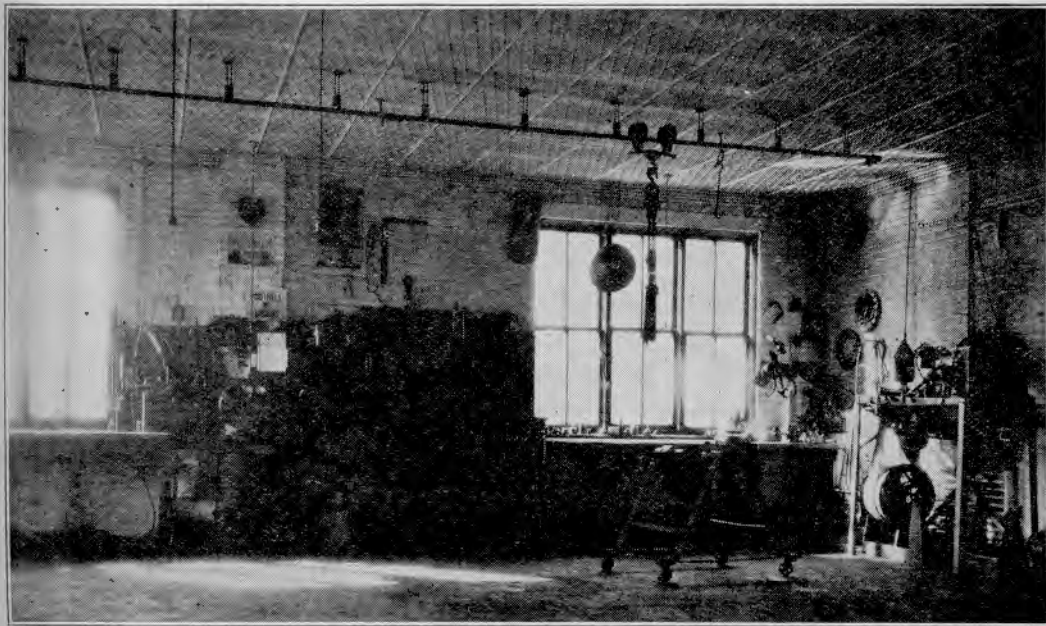
saying, likely: "Well, I guess I'll go to town." He doesn't ask her to go along. She has the dishes to do. He doesn't offer to wait until she's through with them, either. So when she claims that a Fordson isn't necessary compared to how much she needs a washing machine, that it is just something new for him to play with, she has a good deal on her side. She is tired-out most of the time and she resents the new machinery that comes onto the farm for field work. She is the one to humor and consider when you are pushing a sale.

One of the first things you realize with the farmer is the full value and half over of a five dollar bill. He reckons money in terms of acres and his accounting includes the effort that goes into farming five dollars' worth. The surest way to climb the wrong side of the fence with him is to ignore the hard facts of his life. His money comes hard. Sometimes it doesn't come. When it comes, he is apt to have a great notion for spending it, go in for the most expensive car there is about the first thing. Nothing is too good, when times are right. When crops are only middling, he is content enough to go about in a Ford.

When he has his eye on an expensive car, the most effective way to make him see the fallacy in such buying is to estimate the extra cost in acres.

"No," said the farmer to me, "I've set my mind on that car."

"Let's see. It will cost you \$300 more than this Ford," I remarked. It was after supper and we, the farmer and his wife and I, were still at the table.



Shop View in Sturn Food Agency, Sauk Center, Minn. The community itself is about 3,000 people with a considerable farming community about

He set his chin. "I know. But we've been wanting that car for a long time."

"Are you going to build a place for it?" I asked.

"Oh we'll run it into the shed out there," he said. "It'll keep the worst off."

That shed stood just outside, offering the scantiest protection. The new car would look like thirty cents in a short while. In every sense it was uneconomical of him to buy it; the thing was to make him see it that way. My argument would have to fit both him and his wife, because her mind was made up on the expensive buy, too.

"Look here," I said, taking out a blank pad, "what is your average yield per acre here?"

He considered. "Say ten dollars. Sometimes a little better than that. That's the average."

"All right." I wrote some figures on the pad. "You're planning to pay three hundred dollars more than my price for this car, aren't you?"

He nodded.

"Then," I went on, "that means, at an average of ten dollars per acre, you are planning to put in all the sweat it takes to farm thirty of your acres in order to pay for it. If some of your crop doesn't turn out as well as average, it'll take more than thirty acres to pay for it. That's a lot of sweat."

HE hadn't thought of it that way. Putting it in terms of actual labor as the farmer knows it through the blistering summer days, was something else again. He got interested in figuring too. Moreover, considering *his* side of it, all the work he was going to have to put in, convinced him that I had his interests at heart and, consequently, that I knew what I was talking about.

It is climbing the fence that counts. When the prospect knows you are talking from his angle, are weighing his problems, are thinking about the advantage to him, and trying to save money for him, he begins to get interested in you and your product. You can't impress them with an advertising splurge, or anything else that brings undue attention your way, because it is apt to bring the wrong kind of attention. To their way of thinking, it is extravagant. They figure you are making too much money anyway. The only way they want to be impressed is by your gravity and caution. They admire that. It is part of their code of conservatism.

Of course we advertise in the local and county papers. But every month we send out a bulletin. This carries everything—notice that Mrs. B wants to sell a coop of brooder chicks, that Farmer S is in the market for a mare, and all the other items that make up the exchange in a country community. In other words, it is localized, carrying very little of the general bulletin matter that would make it just another circular from the Sturr Ford Agency. It is handled on a news basis so that they will watch for it, will begin to see my business as part of their community life and not the impudence of a city upstart.

When winter comes, circulars aplenty go to the farmers from my desk. No one likes to get mail better than the farmer. Not in summer, for he has ample to keep him busy then. But in the winter when he can't do much outside. Then he reads everything that comes. Then he has time to weigh it and consider its application to his needs. He is in a ripe mind over it when you come around and bring it up to him face to face. Besides, mail in his box puts him in touch. That mailing must be carefully individual; you miss the point by making it indifferent.

Last year at the County Fair a Chesterwhite sow took the hog prize. A good many admired that pig, though few of the farmers about have registered stock. While it pays to breed them, they cost a good deal in the beginning. I bought that sow and her litter, and I announced that I would give away the females to farmer applicants to breed during the next year. In giving away these young pigs, I held the right to all the females in the resultant litter, or half the litter; in other words, a litter averages seven to ten pigs; if four out of ten were females, these came back to me together with one male. These sequent pigs I again turned over to applicants who were reliable and sincere in their wish to bring registered stock onto their farm, selling what males there were.

It makes an endless chain and accrues me a good many pigs. It is an influence with the farmer for registered stock, gives him a start in it and argues for my sincerity as a member of the community. Moreover, it is obviously not "plumb foolishness" on my part, for when he begins to figure out how well off in pigs I must be, he is bound to think it a good stroke of business.

OUR tractor demonstration last Spring threatened to be a failure, for although the weather preceding it gave every evidence of continued mildness, on the day in question the ground was gripped in a tight frost and it was snowing and generally disagreeable. But we went through with it with every semblance of enthusiasm. It was held on the lawn of an old farm right in town. We couldn't work any of the machines, of course, but they were there for everyone to see. Then we had Chef, a big negro imported from upstate—a curiosity in himself, for there are no negroes in Sauk Center—to do the barbecuing. A whole steer turned on the spit. And the good will generated by that big feed is steadily apparent.

A little later last Spring, we put on an automobile show, the first ever held here. It was a miniature of the big one being held at the same time in the East, and the five dealers in other makes here put up their new models, too. Even in this no great outlay was necessary. Inexpensive paper decorations from Minneapolis decorated the old armory here to beat the band, and the ladies of the church used the occasion for a benefit and sold refreshments. A charge of ten cents for each dance more than paid for the show expense.





# Duluth Ford Dealer Illustrates Saving to Buyers

## Unique Idea Attracts Favorable Attention of Passers-by

BY M. V. BRIGGS

A UNIQUE, although not altogether new, advertising and sales idea was recently used by the Sterling Motor Co., a Duluth, Minnesota, Ford dealer, to stress the economy of buying a Ford car.

In the spacious show room of the Sterling company, P. N. Hegvold, manager, arranged new furniture to represent a living room, a dining room and a kitchen. The furniture was obtained from a dealer who loaned it in payment for having a card bearing his name and business posted in a prominent place during the demonstration.

Opposite the roped off spaces, each of which was a replica of a well appointed room, were placed a Ford coupe, sedan and touring car.

Placards, placed on standards, pointed out that the difference in price between the Ford car shown and the next lowest priced car on the market would furnish the room as shown.

As an illustration one placard read:

**COUPE**  
 Nearest Price in  
 Other Make .....\$735  
 FORD .....\$550  
 Save the Difference.....\$185  
 Invest it in Furniture!

Cards depicting the saving and the purchasing power of that saving when other Ford models are bought were similar in text.

The management of the Sterling Motor company announced that the display attracted hundreds of visitors daily and they are convinced that it formed an object lesson of far greater pulling power than any other form of advertising attempted. Sales more than justified the small expenditure.

# Making Your Advertising *an Annex* of the Auto Show

## How Ford Dealers Make "Exhibits" in Newspaper Space Inviting—Good Layout of Page Can Impress Class of Car

BY A. A. SHIELDS

**W**HEN the local automobile show is on, the newspaper space in which the Ford dealer is advertising his exhibit, whether it be at the show or in his own salesroom, becomes an annex to such exhibit.

This annex to the exhibit should be as inviting as possible. And yet some of the most forbidding Ford dealer advertising that appears in the course of the year is presented to the public at showtime.

It's the old, old story of the rush and extra work that surrounds any special event or holiday. The dealer has a lot of additional details to look after and leaves a lot to the judgment of the printers. But, as on all big occasions more advertising is being done locally and the regular printers are hurried and extra ones, less competent, are pressed into service.

Everything that has ever been said on the subject of the value of white space in advertising would bear repetition for those considering advertising in special show editions. But for proof that large areas of white space attract the eye, and by suggesting roominess add to the appearance of the car, nothing is needed except a glance at the half-page which was run by John W. Schmauch, Inc., of Lorain, Ohio. The pillar effect at the left of the page, which probably can be approximated in any printing office, is a good effect. Note, too, the absence of capital letter display lines, a plan that makes it easy to read.

Another good half-page display that includes good-sized cuts of four models and prices, yet does not seem crowded, nor hard to read is that of the J. E. McGuire Sales Company of Washington, Ind. Here, again, the readability of the

# Ford

## at the Show

Visit the Ford exhibit at the Automobile Show and see the features of greater beauty, comfort, convenience and utility that have been built into the improved Ford cars.

You will understand more clearly when you inspect these cars why they continue their undisputed leadership in value, and why the demand for Ford cars is the greatest in Ford history.

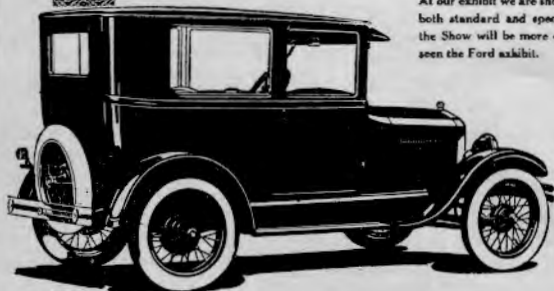
At our exhibit we are showing the improved Ford cars, both standard and specially-equipped. Your visit to the Show will be more complete only when you have seen the Ford exhibit.

### Standard Car Prices:

|              |       |
|--------------|-------|
| Tudor Sedan  | \$520 |
| Coupe        | \$500 |
| Fordor Sedan | \$565 |
| Touring      | \$310 |
| Runabout     | \$290 |

All prices F. O. B. Detroit

\*Load cars in order. Demountable run about extra cost as per card.



**John W. Schmauch**  
INCORPORATED

1735 Broadway

Phone 2257

## The Newly Improved



Roadster, \$290 f.o.b. Detroit



Sedan, 520 f.o.b. Detroit



## At The Show—

You'll find the Improved Ford Models at the New Prices

Steel bodies—Pleasing Colors—Lowered Chassis, make for Beauty—

Ford is Easy to Own -- Easy to Drive--Economical to Operate.

Order Yours During The Show

16 Months to Pay 16

## At New Low Prices



Touring, \$310 f.o.b. Detroit



Coupe, \$500 f.o.b. Detroit

**J. F. McGuire Sales Co.** PHONE 186

advertisement is made possible by the sparing use of capital letters. It has been said time and time again, that lines of capital letters should not be used, but they turn up day after day in Ford dealer advertisements. Remind the advertising man from the local paper of the old comparison—that like a car, the reader's eye, glides around curves (small letters) more quickly and with less effort than it can negotiate a square corner (capital letters.) Ask him to help you provide more pleasant eye-journeys for your prospective customers.

The C. E. Haines Company of Wallace, Idaho had a good plan for laying out a show half-page. The sport roadster model which was shown at the show was featured in the center of the space—"no trouble to identify it. A Good Fellow Among the Aristocrats." Flanking this announcement on either side were three sizable panels, each of which pictured different models, gave a brief description of it and quoted the delivered price. At the bottom of each panel was the display line "See It In Our Show Room."

The Elmer Automobile Company of Hartford, Conn., in its show publicity, advertised that it sold the first Ford in the state of Connecticut.

### An Advertising Service for Dealers

WE have too often advised the use of common sense advertising to make it necessary again to repeat it. However, the dealer may have no particular abilities in the preparation of advertising matter, or he may be too busy to give it attention.

For such dealers—and in fact for all—a new

advertising service has appeared. This consists of a series of newspaper ads, carefully written and designed by experts. They are well written and illustrated and put forth convincing sales talk in a substantial way. Each ad is complete except for the insertion of the dealer's name and address. They are supplied in plate or mat form and a series will appear at regular intervals.

This service has been originated by McKinney, Marsh & Cushing, Inc., 6 Hancock Ave. East, Detroit, Mich. They will be glad to furnish complete details and specimen ads upon request.

### Fordex for Executives

THE Sales Equipment Company, 301 Boydell Bldg., Detroit, Mich., well known as producers of Fordex products and the popular Fordex Survey Data book, have issued a new pocket-size, loose-leaf handbook, "Fordex Reference Data," bound in flexible cowhide, and tabbed in black and gold for instant reference to its various departments covering Ford Passenger Cars, Commercial Cars, Fordson Tractor, Lincoln Cars, Special and Miscellaneous Data. It sells for \$3.50.

This new Fordex was compiled especially as a reference book for Ford Dealer executives. It contains the answer to practically every question that a prospect (or one of your salesmen) may ask about the Ford Motor Company or its products. The overall dimensions, the turning radius, the piston displacement of the Model T, Fordson or Lincoln and hundreds of detailed specifications, weights, serial numbers, comparison charts with other cars, etc., are so arranged and indexed as to be instantly accessible.



*This Accessory Display Made Them Look and Buy*

## Good Displays for Local Auto Shows Draw Interest

Two Booths That Brought Accessory Sales to One Texas Ford Dealer

**H**AVING been gradually handed down to us from the Automobile Show of New York, the county and district shows are getting to be regular annual events now. Some dealers and garagemen take part in the shows as a matter of civic interest; others go in for both civic pride and for the purpose of getting real gain from the shows.

According to Arthur E. Biard, secretary-treasurer of the Barker Motor Company, Ford dealer of Austin, Texas, the gain a concern gets from local shows is largely a matter of display. "Consequently," Mr. Biard explains, "we devote a lot of attention in working out the details of our booth at our shows.

"We try to consider the matter from the standpoint of the public, and show our merchandise accordingly. We go in strongly for accessories every year, because nearly everybody knows the Ford car, but there are a lot of Ford drivers

and prospective Ford drivers who know little about the various accessories that add to the comfort and service of the Ford. There are important accessories the use of which had never occurred to old-time Ford owners until they saw them attractively displayed at our show booths. Seeing the accessories reminded them of their value, and ultimate sales resulted."

In arranging the show booths, the company shops practically every important accessory item for a Ford, including lubricating oil (which is a necessity, not an accessory); and the booth is made large enough so that the display does not appear jammed. Wherever possible, the accessories are shown in actual use. Above all else the booth must be attractive, distinctive enough in fact to make people not only pause but stop and look in passing.

The illustrations here show two typical show booths prepared by the Barker Motor Company.

# How Ford Dealers Are Using the Telephone Directory in Advertising

Some of the *Ideas and Methods* Followed  
by Successful Dealers

**S**UCCESS in building service volume is correlated, in the experience of hundreds of Ford dealers, with success in accomplishing repeat sales. And service is synonymous with the telephone. Advertising to build service business, the dealer should consider the telephone directory first of all.

Satisfaction with directory advertising results comes as the Ford dealer heeds two fundamental characteristics of the medium. The first of these is the manner in which the directory is read.

The newspaper is read with some leisure, the reader bent on finding entertainment and information. The directory is consulted for business purposes. Often the consulting party is in a hurry. He wants to get in touch with a Ford dealer at once. He has, naturally, no time for long-winded advertisements.

He wants the advertisement brief and to the point—giving him the essential points of information quickly. This desire of the reader absolutely must be heeded. The Ford dealer, using phone directory advertising, must say his "piece" in few words.

Brevity, of course, does not mean small space. Indeed, large space actually shortens time spent

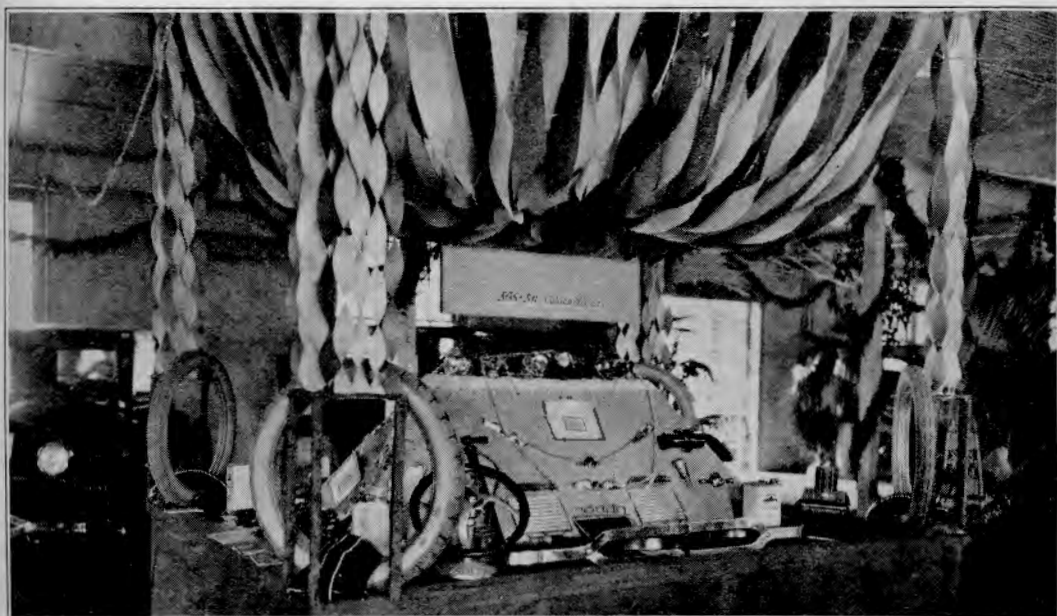
by the reader in getting at facts, and may be very effective practice.

Besides being brief, phone directory copy must be complete. The reason found for this is the infrequency of insertions. Using daily newspaper space, the Ford dealer can tell his story in installments—in a series of advertisements. He can view his first insertion as an experiment, to determine the best appeal, on which when formed he standardizes. The telephone directory, however, is only printed once in several months. The first advertisement, in effect, must be the last one. Moreover, it must tell a story which will go on working throughout the several months of use.

Only complete copy, giving the reader information sufficient to induce a telephone call, is suitable.

## Methods of Dealers

**W**ITH these preliminary observations on telephone directory advertising, let us begin an examination of advertising methods used by various dealers with description of a well-created advertisement of William L. Hughson Company, of Portland, Oregon.



*It Pays to Produce a Really Attractive Booth Such as This*

The space is a quarter page, extending the width of the page, at the point in the directory where automobile dealers and distributors are classified. The central illustration is a sketch of the company's place of business, with the words, "The Ford Corner," in the style lettering standard for Ford. Two emblems are used, about an inch in diameter, circular, one on either side of the sketched building. One of these has the wording, "Day—SERVICE—Night." Half of the circle is black, half white, and the same is true of the lettering.

The emblem on the left of the building consists of a circle within a circle. The inner circle is a reverse plate upon which are the words, "Service First." On the white band between the circumferences of the two circles is the company's name and the territory covered by it.

**P**RESTIGE-building statements are used in, "Oldest and largest Ford dealers on the coast," and, "Authorized sales and service—since 1903." Of course there is a telephone number—always an important feature of telephone directory advertising. This number is a good advertising one—0321.

A Ford dealer cannot always obtain a good advertising number, but he can always endeavor to. Get something very easy to remember. Robinson-Smith Company, another authorized Ford dealer at Portland, has such a one—1100. The Latonia Motor Company, of Latonia, near Cincinnati, has 1600. Mill Creek Motor Company, Cincinnati, has 3050. A sequence is found in the number of Mutchler-Moodey Company, of Pittsburgh. It is 0456.

Some of the types of numbers which are easy to remember can briefly be mentioned. Very low numbers; even hundreds and even thousands; even tens under one hundred; repeated digits, like 333; double repeats, like 4455. Some dealers have obtained for telephone numbers the number of their business premises. An easy-to-remember number always is desirable, and when possessed by a business necessarily doing much selling over the telephone it is of real importance.

The point in the telephone classification where Ford dealers will be looked for is logically a good page for display advertising. One of the best positions on it—perhaps the best—is at the top, where the reader is likely to see it before even the right classification is found. Mutchler-Moodey Company, of Pittsburgh, use this position with an inch advertisement extending clear across the top of the page.

The City Motor Sales Company, of Salt Lake City, uses this position too. However, they employ another directory advertising idea—a reverse plate. Yellow lettering on a solid black background rates extremely high in visibility. As yellow is in most cases the color of the stock on which the classified pages are printed, reverse plates are quite frequently used. The City Motor Sales Company, of Salt Lake City, has a conventional "card" presentation, except that an interesting slogan is used. This is, "Large enough to serve you—small enough to know you."

Easy payment plans are featured in some Ford

dealer directory advertisements. Thus the top-of-the-page strip advertisement of L. D. Wells Motor Co., Chicago, contains the suggestion, "Use the Well's easy payment plan." The Elliott-Stahl Motor Company, of North Clark Street, Chicago, suggest, "Ask about our E Z pay credit plan."

Charles J. Dempsey, Incorporated, authorized Ford dealers on West Madison Street, Chicago, advertise, "Trucks for all purposes."

Chicago Ford Exchange, South Michigan Ave., advertises used Fords, "Sold with a written guarantee—cash or terms." Frank Breska, Incorporated, Chicago, declares, "Five dollars enrolls you." These advertisers use inch directory space—probably the most popular single size with Ford dealers for directory use.

Williamsburgh Auto Service, Bedford Ave., Brooklyn, New York, advertises a day and night phone. This is an authorized Ford service station. The Driverless Ford Company, of Portland, Oregon, uses an inch the width of the page, at the foot. This company chooses to use copy comparatively lengthy. The fact that cars are all new and very latest models; that no guarantee of miles or hours is required; that special rates are offered for long trips; is mentioned. "It is possible to have the use of our cars an entire day at a cost not exceeding \$1," the company advertises.

"Buy it from Burwell," advertises Burwell Motor Company, of Jacksonville, Florida.

Summers-Herrman, Ford dealers at Louisville, Kentucky, have a small reverse plate, about half an inch, which is inserted under the automobiles and also the automobile accessories classification. One of the telephone numbers of this company is "13." The company is located at Third and Breck Streets, "Ford Corner."

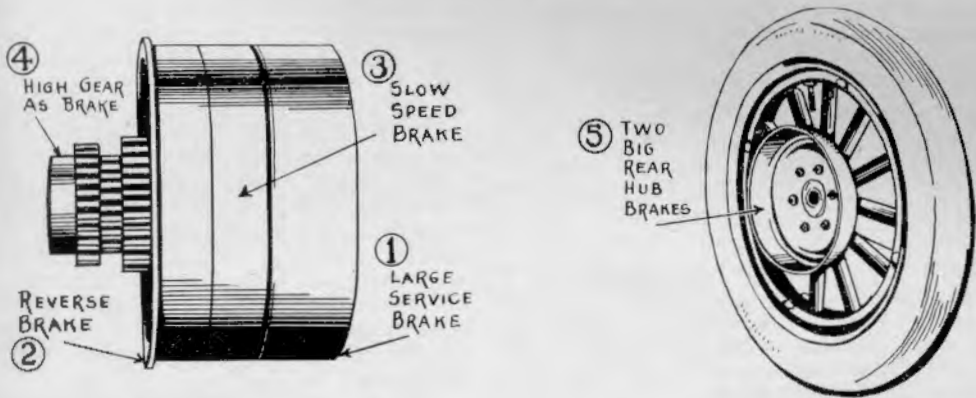
The attention of the reader is attracted to the inch directory advertisement of the Western Hills Motors Company, Cincinnati, through the device of filling in each of the four corners with solid black.

#### Ideas in Advertising

**N**OT until one begins to study telephone directory advertising carefully does realization come of the numerous clever and effective special ideas used in it. Let's consider some of the principal ones.

Measures to emphasize the telephone number. One idea is to place the telephone number at the top of the advertisement, eliminate the border at this place, and curve inward the side borders with arrows at each end. These arrows—sometimes "hands" are used instead—point to the telephone number. Again, a box can be placed in the center of the advertisement for the phone number. Sometimes a large circle is used. Still another way to make the number prominent is to display it with very large numerals.

Maximum listing. Business handling various lines can get classification under a number of different heads. Usually, the more classifications had, the better. Another practice is to list in the classified columns not only the name of the business, but of the principal owners and managers.



# SALESMEN—Do You Know *Why*?

## THE FIVE FORD BRAKES

*Being the Fourteenth of a Series of Three-Minute Chats  
On the Quality of the Ford*

BY MURRAY FAHNESTOCK

The Ford car has *five* practical brakes!  
Count them—and convince yourself.

\* \* \*

1. The Ford foot brake. This brake is oil-cooled, preventing charring and burning when properly used, and greatly reducing wear. This service brake has recently been increased more than 50 per cent in width, giving an even greater increase in wear. The brake lining is now easily replaceable through the transmission cover door, without removing the transmission cover.

2. The reverse band. Since the reverse is normally used so little, experienced drivers use the reverse (alternately with the foot brake) as a brake for retarding the car. When used only for slowing down (using the foot brake for complete stops), the reverse has positively no detrimental effect on any part of a Ford car. This dual, *alternate* use of the two separate foot brakes gives the oil a chance to cool one band lining while the other is in use, thus preventing overheating of bands on the longest and steepest grades. No other car has this dual foot brake feature, or oil cooled brakes.

3. The slow speed. In an emergency, pushing the clutch pedal forward not only disengages the clutch, but also causes the slow speed band to grip the drum, thus engaging the low gear. This will slow down the Ford car successfully on the steepest grades. While if the ignition is switched "off," the engine will often stop the car entirely.

4. The high speed. Owing to the fact that the Ford transmission has no gears to shift, it is

always easy to engage high gear, thus causing the engine to act as a brake when the throttle is closed. Keeping the engine in high gear, when descending long, steep grades, utilizes the energy absorbed in the engine (in overcoming compression, friction, etc.) as an effective brake to help in retarding the car. This has detrimental effect on the engine, as the load is so much less than when the engine is pulling the car.

5. The two rear hub brakes. Notice this! The two rear hub brakes, acting directly on the Ford rear wheels, are *not equalized* with each other. The connection is separate-and-direct to the hand brake lever. Consequently, any failure of either brake does not in the least affect the action of the other. This is a distinctive Ford feature and gives the Ford rear hub brakes the reliability of *two separate brakes*, both operated by the same hand brake lever. We could, if we wished, count these as the fifth and sixth! Ford brakes. However, we think five is enough.

A vast improvement has recently been made in the Ford rear hub brakes. The brake drum has been increased from 8 inches to 11 inches in diameter (thus increasing both leverage and frictional area), and the width of the drum from 1-3/16 to inch to 1-27/32 inch, thus greatly improving its effective action.

In addition, the rear hub brake shoes are now made of pressed steel (in place of cast iron), and the flexible brake shoes fit themselves more closely to the brake drums. These pressed steel brake shoes are covered with a heavy, asbestos lining, which renders braking smooth and positive and

eliminates metal-to-metal contact between brake shoe and drum.

### Really and Truly Equalized

The outstanding feature of the Ford service brakes is that they are so beautifully *equalized*. Thus the Ford *brakes* on both rear wheels, instead of only one, as so frequently happens in other makes of cars after they have been in service but a short time.

Not only do perfectly equalized brakes aid in stopping the car promptly, but they also do much to prevent skidding. A brake acting on but one rear wheel naturally swings the car to one side, and tends to cause a skid at a most critical time. With the Ford equalized brakes, the work of stopping the car is distributed between both rear wheels, with the result that neither wheel slides—which is the cause of rapid and destructive wear of tires on cars with poorly equalized brakes.

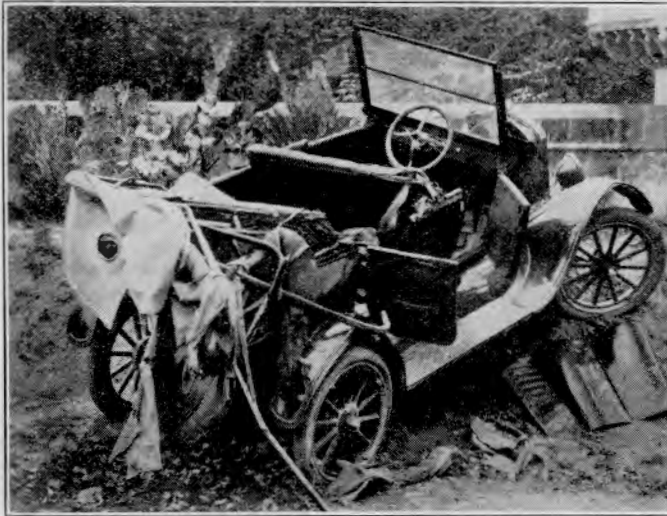
The beauty of the Ford brakes is that the *braking action* is exerted through the *differential gears*—and is thus positively distributed equally

to both rear wheels. Other makes of cars may have clap-trap levers (said to equalize the brakes). But these fail of their purpose because they can only equalize the *pull* to the brake levers, which seldom achieves the desired result. The Ford differential not only has good intentions—it actually does the work!

This perfect equalizing applies to all three of the brakes in transmission housing, the Ford foot brake—which is nearly always used for slowing down and stopping the car; the reverse, which can also be used (alternately with the foot brake) for retarding the car on steep hills with excellent results; and the slow speed, which may be used as a brake for slowing down the car in an emergency.

Like the *service* brakes of other-than-Ford makes of cars, the rear hub brakes of the Ford are not equalized through the differential. But this makes no practical difference in the Ford, as the rear hub brakes are only used to hold the car when it is at rest. Consequently, there is but little wear on these brakes, and they are now made of such ample size that they serve as good emergency brakes, if the need should ever arise.

*Sales Managers: For better sales have your men follow this series. A new sales argument is presented each month.*



An Idea  
For Dealers in  
Behalf of  
Car Buyers

**H**ERE is a photograph which suggests a thought to pass on to Ford dealers. It was sent to us by C. Lancaster & Co., Ford dealers at Delhi, India. They tell us:

"The photograph shows a Ford car after it had been attacked by an elephant. The elephant went mad and after running the car like a wheelbarrow on to a steep bank and bursting both back tires, assaulted it with its tusks, trunk and weight. In spite of this treatment the car, on being pushed off the bank and cleared of the

debris, started at the first turn and was driven home 12 miles without any trouble."

It is our guess that the elephant, long known as the most powerful of beasts, was jealous of the Ford's ability along similar lines. But it takes more than a pachyderm to stop a Ford.

Nevertheless, it would be well to advise your car buyers against associating too freely with elephants. And we do hope that no unscrupulous dealer will suggest an elephant as a pet for car owners just to cash in on resultant service work.



## Young Housewife Ford Dealer's "Star Salesman" for Five Years

Mrs. Ora Shaffer Has Consistently Won Every Cash Prize Contest Harrisburg, Pennsylvania, Agent Has Staged in That Time—Sells Fords for Francis and Has Put Across Some Notable Deals

BY K. H. LANSING

"STAY a moment and meet my 'star' salesman," said A. G. Francis, of the Francis Auto Sales Company, Harrisburg, Pennsylvania, at what I supposed was the conclusion of an interesting chat with him about the features of his thriving business.

I could just about visualize that 'star' salesman—breezy air, snappy step, commanding height, waxed moustache slightly condescending, yet affable manner; you know—regular "high-powered" chap, according to Hoyle. And then—

There was a patter of little feet behind me and I swung around starting up. My hat! There stood a little woman, though not very little. The blue-gray eyes were frank and so was the engaging smile, both evidencing amusement over my surprise. Brown bobbed hair peeped out beneath the turndown straw girdled with a bright-colored band and there was an answering flash from the gay four-in-hand scarf lighting up the severely plain, belted one-piece dress of light blue linen. An introduction, a few words about her five years astonishingly successful work in selling automobiles, a snapshot at the curb and Mrs. Ora Shaffer had sped away in her Ford, presumably to sell more cars.

Here was the "lead" of the real story for FORD DEALER & SERVICE FIELD—the operations of a young housewife in selling Ford products.

From what Mr. Francis, her employer, told and from Mrs. Shaffer's replies to questions, it is a story holding much of interest, for it reveals the winning of success in the selling field under difficulties that might well have defeated one with less patience, courage and enthusiasm and in that word, enthusiasm, lies the real key of this little woman's continued progress in her chosen work.

"Mrs. Shaffer," said Mr. Francis, "has precisely the same zeal to find new prospects and to sell established customers as she had when she first came with us. When I first noted her enthusiasm, I thought 'This is very well for the time being, but it will wear off.' I was mistaken. From time to time we hold sales contests of varied character. Besides Mrs. Shaffer there are four men on our sales force and she has consistently won every contest for years. She has been with us longer than any of the salesmen and her efforts are steady and not confined to

prize contests. She sells many Ford commercial cars as well as passenger cars and she has even sold a Fordson tractor. She is subject to the same rules as the men and has no special privileges. Her work has been favorably commented on at various Ford dealers' meetings. Like our other salesmen, she is paid only on straight commission."

Mrs. Shaffer has been selling Fords for Francis nearly five years. She did not start in the automobile business by selling Fords, but, she says, "I would not now care to sell any other cars."

This is how Mrs. Shaffer came to "break into the selling game." Since 1914 she has driven her own cars.

"I was always interested in the mechanism of automobiles," she said, "and when any repair work was to be done on my car, I would drive it to the garage myself and watch while the mechanic worked on it. Finally, I was able to make many minor repairs myself. One day, in 1917, a garageman had a second-hand automobile for sale and told me he would pay me a commission if I would sell it for him. I did so and got the commission.

"I sold a number of cars in this way and one day I bought a used Hupmobile for \$60 and sold it very soon for \$200. This started me to thinking I might be able to sell cars for a living."

Mrs. Schaffer associated herself with the old "Huffman Six" agency in Harrisburg, sold used cars successfully and later joined the Franklin automobile agency. At this time she was using a Ford roadster to make her calls on prospects and customers. Needing some parts for her car, she called at the Francis Ford agency and there saw Mr. Francis, who asked her why she didn't try selling Ford cars. At that time she wished to stick with the Franklin agency, but calling later for more parts, became interested in Mr. Francis' Ford proposition and came with the company as a salesman. She sold four Ford cars the first week and has been "going strong" ever since.

### Took a Horse in Trade—and Sold It

THE most remarkable sale made by Mrs. Shaffer was when she sold a new Ford commercial car to a farmer on "Ant Hill," near Harrisburg, closing the deal and taking his old horse as a "trade-in," selling it for \$32 the same day—

and after both her employer and his brother, T. E. Francis, had vainly tried to sell the farmer a Ford truck. Mr. Francis, when she came into the office with the check from the farmer and the money for the horse, was amazed and asked her how she ever closed the deal.

"Why, I took his old horse on an exchange basis and have already sold it and here's the money," she added.

"Well," said Mr. Francis, "that's something I never would have thought of doing, but it's just as well. And you got the farmer's check before delivery of the truck. Good work."

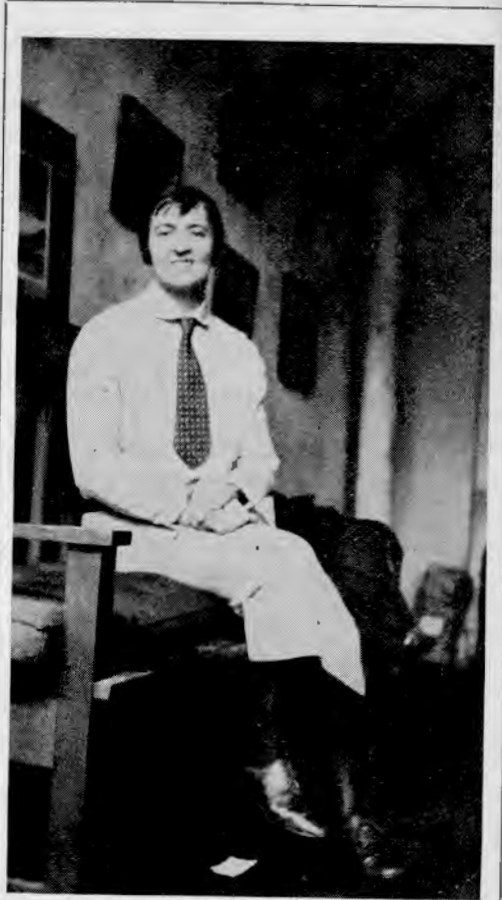
Mrs. Shaffer has been successful, too, in selling accessories. Her best record in this respect was made when she sold exactly \$135 worth of accessories with a single new Ford passenger car! And about the sale of that Fordson tractor. A pipe-bending works in Harrisburg uses trailers in its hauling and Mrs. Shaffer, seeing a chance for a sale, called and talked with the proper authority. The company wished to be sure a Fordson would pull the heavily laden trailers and asked for a demonstration. Mrs. Shaffer accommodated them and as soon as they saw the tractor could do the work, they bought it. Later she sold the same concern a truck. She has numerous repeat sales and has sold a butcher as many as five Ford cars.

#### Active as Wife and Mother

MRS. Shaffer's husband is a railroad man and they have a thirteen-year-old daughter. The wife and mother rises early, gets the family breakfast and attends to other household duties; sends her daughter to school and reports at the Francis Ford agency for work at 8:30 in the morning. She is "on the job" except for one hour at lunch time, when she returns home, prepares the meal and perhaps attends to other matters about the house. Then it's back to the agency and out for more prospects and sales. Mrs. Shaffer returns home to get dinner for the family, but she doesn't always rest long thereafter. Some of her best work in closing deals is done at night, when she can see persons who are employed during the day and difficult to reach during business hours. Talk about zeal and enthusiasm! She loves her work. You note it by the sparkle in her eyes when she talks about it and her employer notes it in the results she obtains. Mrs. Shaffer belongs to no clubs, but she has made many friends.

This extremely active salesman keeps herself in business cars—that is, cars for her own use in making calls—by taking in trade from a customer especially good used cars and paying the company the difference.

She is always able to sell at a profit any of these cars with which she is through. She handles a Ford with almost spectacular ease and it is said of her that she is able to "turn around on a ten-cent-piece" with one, after the manner of a polo pony. She still makes minor repairs on her own cars and she teaches both men and women customers how to drive. She has more men customers than women, as there are more



#### SOME THINGS SHE DOES

*Arrives at agency after getting breakfast, sending her 13-year-old daughter to school and doing housework.*

*Calls on prospects and customers till noon hour, when she returns home to get lunch for family.*

*Returns to agency and works till dinner time, when she returns to get the evening meal for her family.*

*Frequently does some of her best sales work in the evening, in addition to her labors of the day.*

*Teaches both men and women customers how to drive. Keeps her own private record book of sales and employs unusual methods.*

*Unabating enthusiasm as well as sales ability has won success for her.*

prospects among the men, but a considerable number from both sexes are on her sales list.

#### About Her Methods

MRS. Shaffer works hard through the winter to get customers for spring deliveries. She follows up her old customers assiduously and

never overlooks a chance of getting a likely prospect. Sometimes she rings doorbells and frequently she calls up by telephone. She keeps in close touch with customers new and old, and she has her own private record book of customers to whom she has made sales.

"Just before Christmas," said Mrs. Shaffer, "I use this record as an address book from which to send a Christmas card to each of my customers. This card is not at all an advertisement—just a remembrance with best wishes for the holidays. I find this is appreciated."

Questioned further about her methods, Mrs. Shaffer said:

"I call on my prospects quite often—on some of them daily. I make it a point not to say anything about an order, unless there is some particular reason for doing so, on my first call. And I never 'pester' people. If I find a business man, for instance, is a bit 'grouchy', I just talk nicely to him. When calling at a house, if I find both husband and wife together, I talk especially to the wife. I have learned that the business man does not ordinarily consult his wife about the business car he plans to buy, but is apt to defer to her judgment when the family car is concerned. I do not forget to emphasize our service when talking with a prospect.

"And I do not stop calling just because I have 'landed' a prospect as a customer. I find that most of my customers do not forget me and in time I sell them again."

The things she does, and the way she does them, it might be added, are strong reasons why they do not forget her.

"Since Mrs. Shaffer joined our sales force," said Mr. Francis, "we have had other women start to sell for us, but for one reason or another, they haven't lasted. Other companies have tried to get Mrs. Shaffer to sell cars for them, but she only wants to sell Fords."

#### "Francis for Fords"

NOW for the rest of the story, secured before the entrance of the "star" salesman. Sound business methods in selling Ford products and a really "cheerful, friendly service" have caused the Francis business to develop, so that to the three-story plant at 117-121 South Third street, Harrisburg, has been added a branch plant across the Susquehanna river in Lemoyne, at the end of the Market Street bridge. While Lemoyne itself is small, Camp Hill, Wormleysburg and other small towns thereabouts have opened a hitherto untapped area of about 15,000 population—that is, hitherto untapped insofar as the attentions of a permanent agency are concerned. A. G. Francis' brother, T. E. Francis, is in charge of this branch, which has a new, thoroughly modern sales and service building and equipment. Since the start of the Francis business in Harrisburg, two buildings have been outgrown.

"We are proud of our friendly service," said A. G. Francis. "It is actually friendly and cheerfully given, because our constant personal super-

vision of the department insures it. I try to see as many customers who come there with their car, as I can.

"Every job is guaranteed for thirty days and this is printed on the shop card, of which the customer receives a copy. The guarantee means just what it says and we never argue with the customer. One reason why we owe so much to our service is that there is never any doubt about who is responsible for 'come-back' work. By our system that responsibility is placed and the work is done over again promptly. We pay the mechanic on the job 50 per cent of the labor charge and if he is not working, he is not earning a cent. We use the Ford flat rate labor charge system in our shop. We can afford to take care of 'come-back' jobs, as the mechanic must guarantee the job to me and I to the customer. If a job comes back as improperly done, the mechanic must do the work on his own time, and do it right. This system makes for greater perfection of workmanship than the ordinary shop method and pleases the customer more, we have found. The foreman and mechanics tell their friends and acquaintances to bring their cars to the Francis shop, sometimes making evening calls to get this trade, and this helps to keep the shop working. Service letters are sent to customers once a month."

#### Telling the World

AS for sales, about the first advice Francis gives to a new salesman is to "Tell the pop-eyed world you're selling 'Fords for Francis'—spread this news around wherever you are and whoever you meet. Repeat it, constantly." Sales meetings are held every morning. All the leads A. G. and T. E. Francis personally get are turned over to the salesman, each of whom has his own calling car and stands its expense, except that the company sells supplies, oil and gasoline to them at a substantial discount. Owners are followed up periodically and salesmen make a point of continuing to show interest in a customer after the sale of a car. By this friendly attitude much valuable information is obtained and leads secured from customers. Circular letters to customers and prospects are issued from time to time and occasionally the preparation of this copy shows a humorous topical twist, to add interest and get away from the humdrum.

This was the case when the Market street toll-bridge over the Susquehanna river was about to be widened at a cost of a million dollars. The company made advertising capital out of the plan in a series of campaign letters, in which it jestingly sought to show, among other things, that the real reason for widening the bridge was because of the extra width and length of the improved new Fords, the length being a factor in complicating the parking facilities at the West Shore end of the span and causing inconvenience in the double line of vehicles coming and going and going over it. A follow-up letter to the first in the series was headed "They Shall not Pass," and commented jokingly on the placing of the

# Builds Business in Oregon Town

## E. C. Simmons a Real Business Getter

BY GLENN RADABAUGH

EVERY fourth person in the city of Eugene, Oregon, a city of 12,000, has bought a Ford at some time during the past ten years.

Sale of 300 Fords a year for the ten years that the E. C. Simmons Company of Eugene has been in business has set an enviable record and has also brought an expansion which has demanded larger quarters.

To celebrate their tenth anniversary in business, this company moved into a new \$65,000 home on May 29 of this year.

A concrete and white-pressed brick building of three stories houses the business which has already outgrown two locations, including its present quarters and two large warehouses.

Probably the most original feature of the building, which was designed by L. E. Simmons, one of the partners of the firm, is that every business transaction necessary to buying a car, paying an account, securing parts, inspecting new

and second-hand machines or any other necessary incidentals may be done within the radius of 50 feet, and all within full view of the manager's office.

Sitting in his office in the rear corner of a big display room, the manager can look through a rear window into the service department, on his right into the parts department, has full view of the display room, can immediately see every person who enters there and every driver who runs his machine into the driveway.

A total floor space of 38,400 square feet is included in the three stories of the building, all of which is used exclusively for the garage. On the first floor, which is 80x160 feet, the greater part of the space is devoted to the display room, the floor of which is of red flat slab construction, and the walls tinted. Reed furniture and draperies add to the furnishings of the room. A 32-unit Lupton parts department runs across the rear of the room, with 414 feet of Lupton show case around it. An unenclosed office, 12x60 feet is placed opposite the parts department, with 62 feet of Lupton show case around it.

Just in the rear of the office and parts department is the service floor and storage space for used cars. A rest room for mechanics and tourists is placed in one corner and an elevator of 5-ton capacity in the other. The elevator is 9x21 feet, capable of transporting two machines at a time to the floors above.

A 30x40 furnace room contains a steam heating plant which furnishes heat for the entire building.

On the second floor is a machine shop 80x160. On it is an auxiliary parts room with a small elevator running to the main parts room below. A dressing and lounging room for mechanics, fitted with showers and other conveniences, occupies a 10x20 space at one side of the room. Steel sash ventilating windows completely around the building will give all the light possible. New equipment totaling \$15,000, in addition to the large outlay of machinery now in use, was installed in the shop when the building was opened.

The third floor is a tractor and implement display room and service shop for new cars. From the time a car is unloaded until it comes down the elevator ready for the customer only five hours elapse, according to Mr. Simmons.

The payroll of this growing firm now includes 33 employees. Salesmen work on a straight salary basis with no commission, and mechanics on the 50-50 mechanics' system. During the past four years the mechanics' wages have averaged 76 cents an hour under this system.

## Young House-Wife Star Salesman

(CONTINUED)

"sun-treasures," or toll-collectors' shanties, in the middle of the bridge, instead of leaving them at the ends. All this fun drew favorable attention to the Ford car and the agency. This bridge, by the way, is a mile and a half in length and has the heaviest traffic, it is claimed, of any bridge of similar length in the entire country.

### No Used Car Problem

"A USED car problem? We have none here," said Mr. Francis. My brother coined the phrase, 'Our Used Car Department is a Playground—not a Graveyard,' and that sums up the situation pretty well. We simply do not take the customer's car in exchange unless we can get it at a reasonable price and can make a profit on it in resale. We lose considerable business in this way, but it is the kind we prefer to lose and we never become stocked up with used cars we are unable to move. At present we have just six used cars in stock and we never have had more than seventeen at one time. That is what keeps us from having any bothersome used car problem and why the department is a playground—not a graveyard.

"We get our truck prospects through out-and-out canvass, as a usual thing and the same men sell both passenger cars and trucks. We have to keep on hand only enough tractors to have one in stock at all times."



# Do Business the Ford Way

## These Men Do and Prove That the Policy Pays

BY ARCHIE R. RICHARDSON

**D**OING business the Ford way is given credit for the success of the Beaudry Motor Company, of Atlanta, Georgia, by E. G. Beaudry, the president.

There probably is no Ford agency in the country that is more than "100 per cent Ford" than this. The methods of selling, accounting and servicing, the equipment and arrangement of the plant all follow the general Ford plan. And no change is made in any department of the business without first consulting experts of the Ford Motor Company. It was while employed by the Atlanta branch of the Ford Motor Company that Mr. Beaudry acquired a tremendous respect for the methods of his company and the assistance given dealers. He learned how the policies recommended to dealers were worked out and the why of these policies. When he went into business for himself, there was never a question in his mind as to the advisability of adopting the Ford plan of doing business one hundred per cent.

"Many dealers," said Mr. Beaudry in telling of his experiences, "make a practice of following the Ford policies where they appeal to them and substituting other methods where the recommended policies do not strike their fancy.

"They overlook the fact that the methods recommended have been carefully worked out by some of the most able men in the automotive in-

dustry and given to the dealers only after they have been thoroughly tried out and found practical in every way. They are given to the dealers to enable them to handle more cars, and incidentally make more money for themselves, because the dealer's success means more business and more profits for the company.

"It looks to me like a rather short-sighted policy for a dealer whose experience is decidedly limited in comparison with that of the manufacturers and their organization of experts to discard plans worked out for his benefit because they do not appeal to him, in many cases solely because he fails to understand the reasons back of them."

**M**R. Beaudry was in charge of the retail sales department of the Atlanta branch of the Ford Motor Company for one year previous to its discontinuance in 1916. In this position he made a notable success, doubling the sales of the previous year.

It was but natural that he should be given the first franchise in Atlanta when the retail department of this branch was discontinued. He organized the Beaudry Motor Company, which in ten years has become one of the outstanding automotive houses of the city.

At the outstart he realized the importance of

a location in the heart of the city, and obtained a building that is now almost in the shadow of some of the larger office buildings that have been erected since. He has continued in this location, with only one move which carried him just across the street.

Proximity to the business section is of particular interest to the business man whose car needs servicing. Instead of parking his car at the usual place, he can leave it at the service station, walk a few blocks to his place of business and call for it in the afternoon when he is ready to leave for home.

Complete service is another factor that appeals to the busy business man, it has been found. Beaudry's is equipped to do almost anything that can be done to a car at the factory, and other dealers of the Atlanta territory often call on them for work they are unable to handle.

The battery department is placed in a very conspicuous part of the building for the definite purpose of showing it to all who pass in front of the building or who drive into the service department. The average car owner, it was found, does not associate a battery department with a service station and is accustomed to having his battery work done elsewhere. Seeing the battery department here, he realizes that this service station is equipped to take care of his battery and that it is no longer for him to make a special trip to a battery service station but can have it looked after without loss of time while his car is in the service station for other repairs.

**T**HE company is now servicing an average of sixty cars a day.

An interesting thing found in the mechanical department is a blackboard on which is posted at the end of each day the sale price of the work done by each man, although the mechanics are all paid straight salaries instead of working on piece. This plan, it has been found, gives a man an opportunity to check up on himself and shows him when his work is falling down. In a measure his pay is based on the selling price of the work he turns out, and the system gives him an incentive to do his best. The fact that his fellow-workers watch his figures as well as their own gives another incentive that proves almost as strong as the desire for better pay.

There was recently installed in the parts department, at a cost of about \$3,000, steel equipment that makes this department perhaps the most up-to-date of its kind in the south. There is a steel bin, rack or holder for everything that is kept in stock, which enables it being kept where it can be found quickly and so that it will occupy the least possible room.

A feature of this department is the rack for plate glass windshields. Formerly there was a great deal of breakage in this stock, but it is now a rarity that a piece is broken and then it is due to the carelessness of someone.

The stockroom is so arranged that the things most often called for are placed nearest the window, which saves time for the men calling for material as well as for the clerk in charge. The sav-

ing of time for the workmen and clerks through elimination of delays in furnishing parts and material will soon pay for the new equipment.

In making the inventory of stock every six months, three or four Ford stock men are obtained and the stock-taking is done on Sunday or at some time when it will not interfere with business. The stock men are thoroughly familiar with the goods and can do the work more quickly and more accurately than the regular employees.

## Better Canvassing for Prospects

"**A**BOUT two years ago," said G. C. Woodard, Manager of the Vollmer Brothers Ford Agency, Colorado Springs, Colorado, "we decided that we had conducted our last wholesale canvassing of prospects. It had taken us three months to straighten out the miscellaneous and incomplete data collected by people engaged for that purpose in house-to-house territory. How-do-you-do? Do you own a Ford car? No, I'm not trying to sell you one \* \* \* census of Ford owners here. You don't? Do you intend to buy one? Not if you can buy a Delux? Ha-ha. Thank you. Good-bye.—It was formless interviewing. We wanted closer contact. We believed that canvassing had opportunities in it that deserved so much more careful handling than this that it was worth the efforts of one of our best men.

"One of our salesmen was bored with floor-work. He liked people and people liked him. In the course of an average day's selling inside, he didn't see half enough people to suit him. He was the one we assigned to canvassing. We didn't give him any printed slips to carry. As far as we were concerned, printed slips had seen and disproved their usefulness. What he did carry was a sample copy of the Dearborn Independent. Ostensibly, it was this that took him up front-steps. This that got first mention in the conversation.

"But there is something different about that salesman. He gets to visting with strangers as easily as most people chat with their friends. He finds out how long they have lived there, how many children there are, what the husband does—all the things, important and unimportant, that go to make up the sum-total of information you like to have about prospects. And before he leaves he has talked Ford car. Maybe he has sold one—that has happened to him a good many times. For he is not only boosting our quota of 400 subscriptions a year to the Dearborn Independent, and making close to 25 calls every day, but *he is selling as many cars as any of the other men*. People remember him, too. They come in and say: Mr. So-and-So called on us the other day. We would like to look at that touring car—

"He reports his calls every night and on these we base our residence follow-up. It is a perpetual method and accurate, and it is the best line we have thrown out yet in the direction of this class of prospects."

## Trade Press Appraisals of Used Ford Cars

In the table below find the zone in which your branch is located. Then note the desired appraisals as given in that column. The figures given form a reliable basis of appraisal in your territory. Dealers or salesmen should always use these appraisals from Ford Dealer and Service Field Magazine. If you have a "used car problem" these appraisals will help solve it.

|                         | ZONE-1   | ZONE-2  | ZONE-3  | ZONE-4                   | ZONE-5   | ZONE-6                            | ZONE-7              | ZONE-8                                      | ZONE-9  |
|-------------------------|----------|---|---|--------------------------|--|-----------------------------------|---------------------|---|---|
|                         | Detroit. | Buffalo.<br>Cleveland.<br>Columbus.<br>Pittsburg.<br>Chicago.<br>New York | Cincinnati.<br>Indianapolis.<br>Louisville.<br>Milwaukee.<br>Philadelphia.<br>St. Louis.<br>Washington.<br>Cambridge.<br>Norfolk. | Des Moines.<br>St. Paul. | Charlotte.<br>Kansas City.<br>Memphis.<br>Omaha. | Atlanta<br>Fargo.<br>New Orleans. | Dallas.<br>Houston. | Denver.<br>Salt Lake City.<br>Jacksonville. | Los Angeles.<br>Portland.<br>San Francisco.<br>Seattle. |
|                         | Zone 1   | Zone 2  | Zone 3  | Zone 4                   | Zone 5   | Zone 6                            | Zone 7              | Zone 8                                      | Zone 9  |
| <b>1926 Series:</b>     |          |   |   |                          |  |                                   |                     |   |   |
| Touring.....            | 165      | 185   | 190   | 195                      | 200  | 210                               | 215                 | 230   | 235   |
| Roadster.....           | 155      | 180   | 185   | 190                      | 195  | 205                               | 210                 | 225   | 230   |
| Coupe.....              | 275      | 295   | 300   | 305                      | 310  | 320                               | 325                 | 340   | 345   |
| Tudor.....              | 295      | 330   | 335   | 340                      | 345  | 355                               | 360                 | 375   | 380   |
| Fordor.....             | 330      | 350   | 355   | 360                      | 365  | 375                               | 380                 | 395   | 400   |
| <b>1925—Late Model</b>  |          |   |   |                          |  |                                   |                     |   |   |
| Touring.....            | 120      | 135   | 140   | 145                      | 150  | 160                               | 165                 | 180   | 185   |
| Roadster.....           | 110      | 130   | 135   | 140                      | 145  | 155                               | 160                 | 175   | 180   |
| Coupe.....              | 215      | 240   | 245   | 250                      | 255  | 265                               | 270                 | 285   | 290   |
| Tudor.....              | 240      | 265   | 270   | 275                      | 280  | 290                               | 295                 | 310   | 315   |
| Fordor.....             | 275      | 295   | 300   | 305                      | 310  | 320                               | 325                 | 340   | 345   |
| <b>1925—Early Model</b> |          |   |   |                          |  |                                   |                     |   |   |
| Touring.....            | 95       | 110   | 115   | 120                      | 125  | 135                               | 140                 | 155   | 160   |
| Roadster.....           | 90       | 105   | 110   | 115                      | 120  | 130                               | 135                 | 150   | 155   |
| Coupe.....              | 175      | 190   | 195   | 200                      | 205  | 215                               | 220                 | 230   | 235   |
| Tudor.....              | 195      | 210   | 220   | 225                      | 230  | 240                               | 245                 | 260   | 265   |
| Fordor.....             | 215      | 235   | 240   | 245                      | 250  | 260                               | 265                 | 280   | 285   |
| <b>1924—Series:</b>     |          |   |   |                          |  |                                   |                     |   |   |
| Touring.....            | 55       | 70  | 75  | 80                       | 85   | 95                                | 100                 | 115   | 120   |
| Roadster.....           | 50       | 65  | 70  | 75                       | 80   | 90                                | 95                  | 110   | 115   |
| Coupe.....              | 110      | 135   | 140   | 145                      | 150  | 160                               | 165                 | 180   | 185   |
| Tudor.....              | 125      | 145   | 150   | 155                      | 160  | 170                               | 175                 | 190   | 195   |
| Fordor.....             | 135      | 145   | 160   | 165                      | 170  | 180                               | 185                 | 200   | 205   |
| <b>1923—Series:</b>     |          |   |   |                          |  |                                   |                     |   |   |
| Touring.....            | 30       | 40  | 45  | 50                       | 55   | 65                                | 70                  | 85  | 90  |
| Roadster.....           | 25       | 35  | 40  | 45                       | 50   | 60                                | 65                  | 70  | 85  |
| Coupe—Low Back.....     | 55       | 70  | 75  | 80                       | 85   | 95                                | 100                 | 110   | 115   |
| Coupe—High Back.....    | 75       | 90  | 95  | 100                      | 105  | 115                               | 120                 | 135   | 140   |
| Tudor.....              | 90       | 105   | 110   | 115                      | 120  | 125                               | 130                 | 145   | 150   |
| 2-Door-Sedan.....       | 75       | 90  | 95  | 100                      | 105  | 115                               | 120                 | 135   | 140   |
| 4-Door-Sedan.....       | 105      | 120   | 125   | 130                      | 135  | 145                               | 150                 | 165   | 170   |

1. All appraisals on both open and closed models presume that cars are equipped with starter and demountable rims.

2. All appraisals presume that cars are in fair condition. Fair condition is understood to mean that the car can be offered for resale with only minor adjustments.

3. All cars below fair condition should be appraised with a deduction covering the cost of parts and labor which may be required to bring the car to standard or fair condition.

4. Appraisals furnished by us are based upon liquidating value. Our appraisals anticipate that the dealer in establishing a resale price will add twenty-five per cent to the take-in price.

The Auto Appraisal Co., 2970 West Grand Boulevard, Detroit, Mich., compiled the data for Trade Press Appraisals. They also publish a loose leaf, pocket size book furnishing appraisals and serial numbers covering all makes of cars.

## CURRENT FORD PRICES

|  | F. O. B.<br>Detroit | Tax | Del'y | Retail |
|--|---------------------|-----|-------|--------|
| Touring with Starter and Demountable.....                    | \$380.00            |     |       |        |
| Runabout with Starter and Demountable.....                   | 360.00              |     |       |        |
| Coupe with Starter and Demountable.....                      | 485.00              |     |       |        |
| Sedan Tudor with Starter and Demountable.....                | 495.00              |     |       |        |
| Sedan Fordor with Starter and Demountable.....               | 545.00              |     |       |        |
| Chassis with Starter and Demountable.....                    | 300.00              |     |       |        |
| Runabout, Starter Demountable Balloon Tires—Pick-up Body.... | 381.00              |     |       |        |

## FORD ONE TON TRUCK PRICES

|   | F. O. B.<br>Detroit | Del'y | Retail |
|---|---------------------|-------|--------|
| Truck Pneumatic.....  | \$325.00            |       |        |
| Truck with Open Cab only.....   | 390.00              |       |        |
| Truck with Open Cab and Express Body.....                             | 445.00              |       |        |
| Truck with Open Cab, Express Body and Canopy Roof.....                | 475.00              |       |        |
| Truck with Open Cab Express Body, Canopy and Scrns.....               | 500.00              |       |        |
| Truck with Open Cab and Stake Body.....                               | 455.00              |       |        |
| Truck with Open Cab and Platform Body.....                            | 440.00              |       |        |
| Truck with Closed Cab only.....                                       | 410.00              |       |        |
| Truck with Closed Cab and Express Body.....                           | 465.00              |       |        |
| Truck with Closed Cab, Express Body and Canopy Roof.....              | 495.00              |       |        |
| Truck with Closed Cab, Express Body, Canopy Roof and Screens.....     | 520.00              |       |        |
| Truck with Closed Cab and Stake Body.....                             | 475.00              |       |        |
| Truck with Closed Cab and Platform Body.....                          | 460.00              |       |        |
| Truck with Express Body only.....                                     | 380.00              |       |        |
| Truck with Express Body and Canopy Roof.....                          | 410.00              |       |        |
| Truck with Express Body, Canopy Roof and Screens.....                 | 435.00              |       |        |
| Truck with Stake Body only.....                                       | 390.00              |       |        |
| Truck with Platform Body only.....                                    | 375.00              |       |        |
| Truck Pneumatic with Starter.....                                     | 375.00              |       |        |
| Truck Pneumatic, Starter Open Cab only.....                           | 440.00              |       |        |
| Truck Pneumatic Starter Open Cab and Express Body.....                | 495.00              |       |        |
| Truck Pneumatic Starter Open Cab, Express Body and Canopy Roof.....   | 525.00              |       |        |
| Truck Pneumatic Starter Open Cab, Express Body, Canopy and Scrns..... | 550.00              |       |        |
| Truck Pneumatic Starter Open Cab and Stake Body.....                  | 505.00              |       |        |
| Truck Pneumatic Starter Open Cab Platform Body.....                   | 490.00              |       |        |
| Truck Pneumatic Starter Closed Cab only.....                          | 460.00              |       |        |
| Truck Pneumatic Starter Closed Cab, Express Body.....                 | 515.00              |       |        |
| Truck Pneumatic Starter Closed Cab, Express Body, Canopy Roof.....    | 545.00              |       |        |
| Truck Pneumatic Starter Closed Cab, Express Body, Canopy & Scrns..... | 570.00              |       |        |
| Truck Pneumatic Starter Closed Cab Stake Body.....                    | 525.00              |       |        |
| Truck Pneumatic Starter Closed Cab Platform Body.....                 | 510.00              |       |        |
| Truck Pneumatic Starter Express Body only.....                        | 430.00              |       |        |
| Truck Pneumatic Starter Express Body Canopy Roof.....                 | 460.00              |       |        |
| Truck Pneumatic Starter Express Body Canopy Roof and Screens.....     | 485.00              |       |        |
| Truck Pneumatic Starter Stake Body only.....                          | 440.00              |       |        |
| Truck Pneumatic Starter Platform Body only.....                       | 425.00              |       |        |



# OFFICE EFFICIENCY

A Department Devoted to Practical Aid in Accounting, Modern Business Methods and the Selection of Needed Equipment for the Business Departments of the Modern Ford Dealership and Service Station

## They Keep the Prospect File Organized

An Interview With J. W. Frazer, President, Frazer Motor Company, Lexington, Ky., Secured by  
Russell Raymond Voorhees

### Article 2

IT'S a hard enough task to get prospects for automobiles without having some dissatisfied salesman gumming up the works when he gets peeved and quits. Many a dealer has found that when some salesman left he had to start the new man right in at the bottom and work up a new list of prospects. All of this takes time and costs money. Worse than that it can be avoided if the prospect file is kept organized and intact.

The Frazer Motor Co., of Lexington, Ky. of which J. W. Frazer is President, has worked out a plan whereby they keep their prospect file also organized and should a salesman quit and a new one start in, the new one starts in right where the old one left off without any hitches of any sort.

"The old difficulty of not knowing who were prospects and what had been done on them every time a salesman quit and a new one had to be broken in is one of the wastes in the automotive industry that I have tried to overcome in the prospect system that we use here in this company," says Mr. Frazer in discussing his prospect file system: "To begin with we have two prospect files, each being practically a duplicate of the other. There is a very minor difference and I will indicate that when I come to it. The same card form is used in both files so you see there can be but little difference between the two files.

"We have an A to Z file and another file divided from 1 to 31 for each salesman we employ. By making the index cards for each salesman a different color and using the same color for each of his two files, we are able to quickly tell the different salesmen's files apart. Now for the system that we follow in our prospect file.

"Each salesman has a pad of printed forms. He carries this pad with him and every time he gets a prospect he writes the full name and ad-

dress of the prospect, date, make of car owned, year, model and also indicates what the prospect is interested in. There are convenient blanks for the salesman to indicate the preference of the prospect. At the bottom of these slips there is a blank line on which the salesman writes when he is to call again. And as a final act he signs his own name at the bottom of the slip.

"When the salesman returns to the office he turns in the new prospect slips that he made out during that day. They are turned over to the file clerk and she handles them.

"We have four colors of cards each of which is a different form. The white card is for car prospects, the salmon one for truck prospects, the yellow one for tractor prospects and the blue card for Lincoln customers. The file clerk in making out the file cards naturally uses the one that the slip indicates should be used.

"The file clerk takes the slips that each salesman turns in every day and makes out two file cards for each slip turned in to her. Each card is made out identically alike with the exception that the card intended for the A to Z file which is what we call our master file is made out without any comment. In other words, if the prospect told the salesman that he would be in the market for a car in about six weeks, that information is omitted from the master file card but is put on the card for the 1 to 31 file which we call the date file.

"These cards are then filed, the one without the comment being filed under the proper letter according to the prospect's name in the salesman's master file. The other card, the one with the comment is filed in the date file of that salesman under the proper date. For instance if the prospect is to be seen again on the 10th the card for the date file is filed under 10.

Name ..... Date .....

Address .....

Make of car owned ..... Year ..... Model .....

Interested in Ford  Truck  Tractor  Lincoln Roadster  Touring  Sedan  Coupe  Chassis Do you know any one going to buy a Car  Truck  Tractor 

Date to call again .....

Salesman .....

*Prospect Card Which Keeps Records Straight*

"THEN every day the file clerk goes through the date file and takes the cards for the next day out, doing this for each salesman. She then takes all of one salesman's cards and makes a slip out—the same sort of a slip that the salesman carries to make out for each prospect—writing on that slip the name and address. The slips are then given to the proper salesman. The cards are kept in the desk drawer of the file clerk with a rubber band around each salesman's cards.

"The salesman takes the slips that are handed to him every morning and naturally because each represents a prospect of his, he knows how far he has gone with them. He calls on these prospects who are due to be seen that day and when the call is finished he writes the comment on the bottom of the slip.

"At night he turns in to the file clerk the slips of those prospects he has seen during the day. Those prospects he has been unable to see are to be seen again the next day so their slips are kept by the salesman. The file clerk then takes the slips that each salesman turns in and enters the comment written by the salesman on the slip on the date file card. Each salesman's date file cards are then filed according to the date when the prospect is to be seen again at which time the card automatically comes up again for attention.

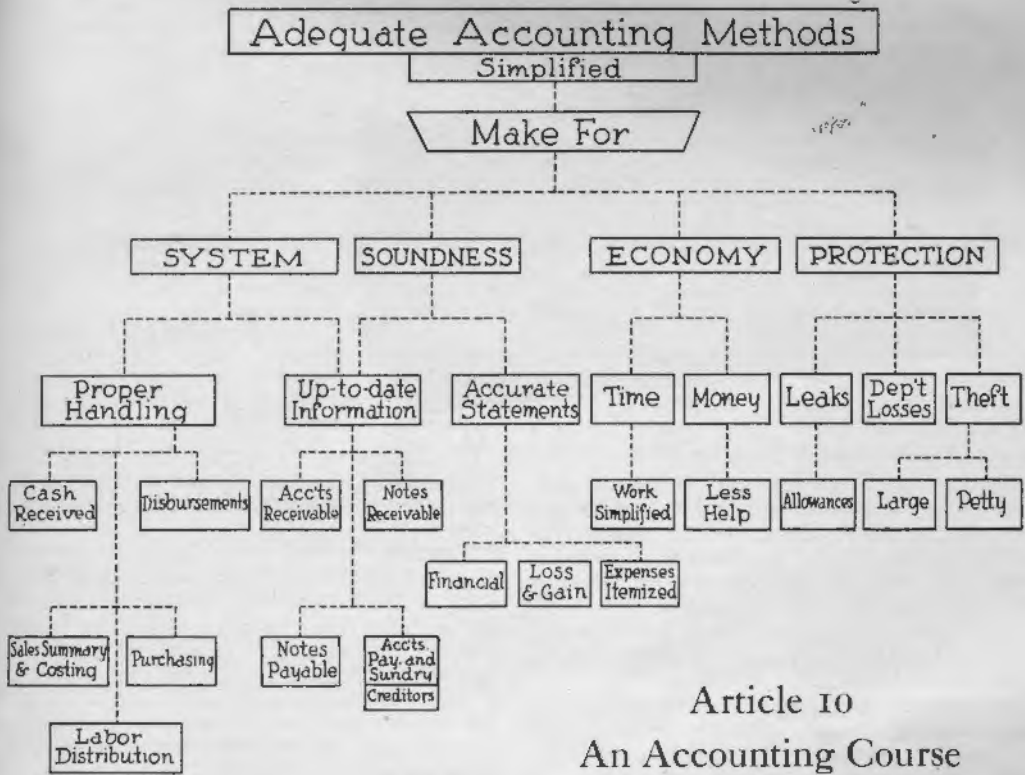
"When a salesman wants to kill a prospect card he writes KILL on the paper slip that the file clerk gives to him and she kills it. The slip, however, is kept for thirty days in case there is some dispute about it later.

"The cards in the master file are never removed from the drawer in which they are kept. They remain there as a source of record and as an index because the only way it is possible to tell what progress has been made with any customer is to first look in the master file of the salesman who has that prospect and see when the next call is to be made. These master file cards have

the time for the next call written on them each time a call is made but they haven't the comment. Then by referring to the date file under the date indicated on the master file card, a full history of that prospect can be had. The cards in the date file are removed day by day from each salesman's file but always the next day they are returned to their proper places.

"The advantage of this system is that at all times the dealer is in full possession of all of the data for his prospect file. If a salesman gets dissatisfied and quits, he cannot mess up the entire territory that he worked in because we have all of the cards. A salesman is never given any of the prospect's cards. When occasion demands that we get a new salesman, we turn over to him a territory that is partly worked up. He takes up the work from the very place where the previous salesman left it, making the calls as per schedule. Not only does this system prevent the salesman from messing up the territory but it enables us to get better and better men because we are able to turn over to them a going territory instead of just so much territory that they will have to work up for themselves. In addition to this we have a steadily increasing mailing list which is valuable to us.

"It might seem that keeping two complete files would take up a lot of room but such is not the case. I have found that about 300 prospects is about all that one salesman can handle. Figuring 25 work days in a month that gives him better than 10 a day to see. It has been found by experience that a salesman if he will route himself can make 20 calls a day and do justice to himself, his house and to the car that he is selling. You can see from this that the entire system would not take up much space. Cards are continually being taken out and new ones are being added as sales are made and others are killed so that it remains about stationary in size. Of all the prospect files that I have seen or used, I have found that this is by far the best."



Article 10  
An Accounting Course

# Modern Accounting Methods for Ford Dealers

THE above outline is intended to picture to you the importance and value of an adequate accounting system in your business. The writer will explain briefly each step.

An adequate Accounting System makes for System, Soundness, Economy and Protection. Note carefully in the outline the word "Simplified." A system need not be elaborate, in fact very elaborate systems sometimes prove expensive. "System" and "Soundness" work very much hand-in-hand.

Your accounting methods should be systematized by the proper handling of your cash received, disbursements, summary of sales and costing of sales, purchases, and distribution of labor. "Soundness" is created by "up-to-date information" and "accurate statements."

An adequate accounting system will call for system in the handling of your accounts receivable, notes receivable, accounts payable, sundry creditors and notes payable. You will be able to have up to the minute information on each of the above with such a system properly handled.

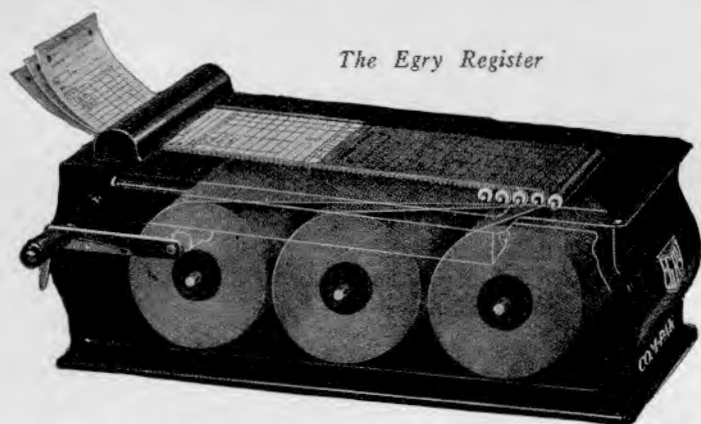
Accurate statements mean more than any one

thing to a dealer, whether he be prosperous or not. Your financial, profit and loss statements and detailed itemization of your expenses compiled accurately provide the necessary information to determine the soundness of your business. "Economy" is gained in time and money saved.

With such a system as mentioned above the accounting is simplified and of course requires less help than a complicated system. Of course where dealers never have had an accounting system of any sort it may be difficult to see where any money is saved by employing a bookkeeper. Your money is saved many times by knowing your exact status, such as an adequate accounting system will provide if kept properly.

"Protection" by bringing leaks, department losses and thefts to light is one of the main points found in a system mentioned herein.

Allowances are so very easy to make and it is surprising the amount of money they can total. No dealer without accurate accounting methods in force can tell what the total expenditure for allowances in his dealership for the past six months have been. Many leaks are brought to the dealer's attention from adequate account-



The Egrý Register

For  
Better Control  
of Business  
Transactions

ing methods and much can be saved if action is taken. Petty and large thefts can be determined.

Department losses are readily learned from your financial and loss and gain statements. It protects you from *carrying-on* in manner you have fallen into. Do not gamble with your dealership. Start the New Year off *right* by having an adequate accounting system installed.

## Questions and Answers

*Question: We would appreciate it if you will recommend a good accounting system for us. We have about one hundred-fifty car contract. What do you think this should cost?*

*Answer:* There are many good accounting systems on the market. Two of the best are H. C. Miller, 342 Broadway, Milwaukee, Wis., and The Burroughs Adding Machine Co., Detroit, Mich. Both are very complete. The Miller System costs \$47.50 for forms and binders. The Burroughs system will vary, depending on the type of machine purchased.

*Question: Do you recommend charging officers' salaries through each month as an expense or charging them to a separate account showing it in the liabilities in "red"?*

*Answer:* The writer would recommend charging officers' salaries through each month as an expense and not accumulate a total to write off at the end of the year.

*Question: What should the \$7.00 collected on each new car sale be credited to?*

*Answer:* Credit the \$7.00 collected on each new car sale to a revenue account headed "Setting-up Charges." Debit this account with the cost of assembling or drive-out.

*Question: We want to build up a reserve for bad debts, income tax and depreciation during 1927. How much is advisable on a percentage basis or is another plan better?*

*Answer:* The writer deems the percentage basis best and suggests .005 for income tax and depreciation each, and .001 for bad debts. These percentages are figured each month on your volume of sales.

WITH the need for better business records business with a better control, came the development of the Egrý Com-Pak Register for a convenient making and issuance of all initial business records.

Forms are printed to each customer, individual requirements in continuous length, Roll or Flat Pack style—consecutively numbered in sets and punched for filing on post or transfer binders, adapted for convenience in handling, posting and checking purposes.

Forms are placed in the supply compartment of the register and brought up over a solid steel writing table and there interleaved with carbon paper from a roll contained in the carbon box along the left side of the Register. The carbon supply is thus continuous and can be revived by opening the carbon shutter and pulling the carbon past the worn portion and then detaching by tearing against the sharp edge thereof after closing the shutter.

The transaction is then hand written and issued automatically to a uniform size by one forward turn of the register handle. Perfect registration is secured and maintained through the application of a simple yet practical mechanical principal—new to automatic registers and exclusive to the EGRY COM-PAK.

Systems for Sales, Cash or Charge, Received on Account, Paid Out, Repair & Work Orders—Buying & Receiving, Stock Book Requisitions, Receipt and Cost Records for the Garage & Accessory Business are efficiently and economically handled while convenience and accuracy are prominent factors in the satisfaction obtained in their operation. This is a product of the Egrý Register Co., Dayton, Ohio.

## Open House at Ford Branch

"The "Open House" week at the Seattle factory branch of the Ford Motor Company, recently, was reported a success beyond expectations. Approximately 6,500 persons passed through the many different operations in the making of the completed product during the afternoons and evenings of the week. Dealers throughout Seattle and King County also reported keen interest by the public who were pleased by the welcome reception of the Ford dealers.

# Where "Hungry Salesmen" Are Not Wanted

Vandemoer-Taylor Use Only Men Who Are Not Satisfied with Just a "Living Wage"

By WILLIS H. PARKER

A SALESMAN who is content with just a living wage is not wanted on the staff of the Vandemoer-Taylor Motor company, Thirteenth and Lawrence streets, Denver, Colo., representatives, as dealers, of the Ford Motor company according to Mr. W. L. Taylor, who declares that, with only five salesmen, his firm has been able to dispose of as many cars as other dealers with from fifteen to eighteen salesmen.

Every salesman on the staff must earn at least \$250 a month and there is an understanding among the sales force that if the average salary or commission of a salesman falls below \$250 a month, one man will be laid off, and if conditions are such that the remaining four cannot average \$250 a month, another man will be cut off the staff.

The more money a salesman makes for himself, the more he makes for the firm and that is the reason the firm is not satisfied with a man who is content with just a living wage—\$150. By retaining a small staff, the inter-organization competition is lessened and the company's influence in each salesman's behalf is far greater than would be possible with a larger number of men.

Every salesman on the staff is a married man. One of them has five children, another has two, a third has one child and the other two have none. Married men, therefore, seem to be preferred by the firm, since it is expected that a married man will be steadier and more determined to get all the business he can get every day in the month. A single man, who is content with the wages that a single man can exist upon, may work hard two weeks out of the month to obtain his \$150 commissions and loaf the balance of the month. No inexperienced salesmen need apply for a job, either, for it is the policy of the firm that salesmen shall come to them for positions rather than the firm go after men.

One of the big problems in the automobile game is the labor turn-over, especially among Ford salesmen. There are two months of the year at least when weather conditions and other causes, makes sales few and far between. When these months come along, the salesman who hasn't prepared for this eventuality finds his finances in desperate condition. He becomes disgruntled with his work and a disgruntled salesman may lose sales where, were he in a more cheerful frame of



mind, he would make them. In other words when he's hungry he's a poor salesman. This applies in any line of selling and is not peculiar to selling Ford automobiles.

Now, to guard against such a condition, the firm builds up a sort of surplus which is held in abeyance to care for the salesman as a drawing account during the lean months. This drawing account is provided when he joins the organization and it amounts to \$150 a month. A certain percentage of his commissions above \$150 is held back to create this surplus. The percentage varies. On some of the men, the best ones, it is 20 per cent and on others it is 10 per cent, depending upon the sales ability of the man. This is continued until he has built up a surplus of \$300 which will tide him over two months on the minimum wage deemed possible for a man to live on. It is kept in reserve until the first of June when it is paid over to him in a lump sum, for it is suspected that from June 1 until fall he can build up another \$300 surplus to tide him over the lean months of winter until the following June. This surplus is paid the man should he quit the services of the company in the meantime.

TWO important things are accomplished by this method. The first is already obvious—that of keeping the salesmen in a cheerful frame of mind all year round and especially in the lean months when sales are harder to make and a cheerful disposition is more necessary than ever. The second advantage is that of preventing labor turn-over. It is not the question of a salesman

quitting this company and going with another Ford dealer and taking with him a list of prospects he has in mind for Spring sales, for it is seldom that a salesman can carry any business of this nature with him, for the firm always has a list of such prospects anyway, and, incidentally, the prospects deal with the firm and not with the individual salesman, unless it should be a close friend or a relative of the salesman. But it is in the breaking in of new salesmen that the firm loses most. A new salesman is a stranger around the establishment for about two months and being not fully posted on the company's policies as to sales and service, he is likely to drive away more business than he brings in, while he is learning the firm's way of doing business.

That is the reason the firm is so anxious to keep its sales force intact year in and year out. Furthermore, cheap men are expensive because of the trade they drive away. And by feeling certain that the staff will remain intact twelve months out of the year and year after year, the firm can plan future selling campaigns upon a greater certainty that it will have a trained force to carry out the plans.

WHEN some firms may have four men on the floor, this firm has but one man and he's on the floor but half a day at a time—that is an extra floor man besides the salesmanager, Mr. W. B. Cooper, or either Mr. Taylor or Mr. Vandemoer. This man comes on at noon but he gets the commissions on all sales made in the morning at the office. The five salesmen take turns, one day each at a time, to be on the floor. This makes it fair all around, and gives the company an experienced salesman to look after the prospects

who wander into the place in search of a car. In the mornings all of the salesmen are outside looking for business.

But the salesmen must have the support of the firm to make this plan of few salesmen and lots of business a success. The company's policy must be such as to make it easy for the salesman to satisfy the customers he makes and to obtain their assistance in getting additional prospects and business. This support may be summed up quickly in the sentence "The customer must always be satisfied and he is always right". As Mr. Cooper, the salesmanager remarks, "We find that the great majority of people are honest. If we treat them fair, they certainly will reciprocate, and, when we sell an automobile, the customer's word regarding its condition after the sale, is accepted without reservation, unless we strike a fellow who is obviously unreasonable and determined to be crooked, and anything that goes wrong, we right immediately, and without charge."

To offset possible dissatisfaction after the purchase of a new car, the company spends at least \$6 breaking in every new car that goes out of the shop. It is taken to one part of the building where it is run continuously for from 10 to 20 hours to test out the motor and to limber it up. When the car goes out of the place it is ready to run and doesn't have to be broken in by the customer himself. This saves coming back afterwards and asking that this be done and that be adjusted, all of which would lead many customers to feel that the car wasn't a first class machine when sold. All of this makes friends for the firm and for the salesmen who obtain many additional prospects from these satisfied customers.

## Dealers Who Never Say Die

THIS illustration shows what a hurricane did to the Pedro Alvarez Mena Company, a branch of the D. L. Shackelford Motor Company, well-known Ford dealers of Miami, Florida.

Did the Shackelford boys throw up their hands and groan? You may judge for yourself from their letter:

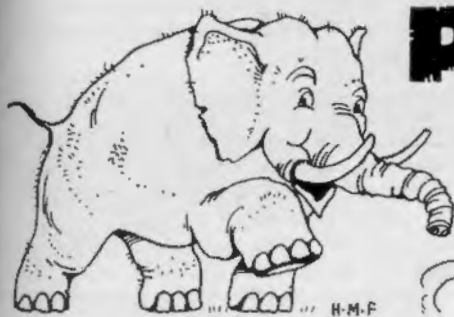
*"Owing to this calamity it was necessary for us to get a new place of business and we were fortunate in securing a garage covering a solid block.*

*"Possibly through this unfortunate affair our business will duplicate or triplicate because of better facilities. Anyway, we are looking at it from that standpoint."*

Our hats are off to you, gentlemen. It would



be indeed an ill wind that would not blow some good to fellows like you. We are not extending our sympathies—for dealers like you seldom are in need of sympathy.



## More Methods of Lowering Speedster Chassis

Part One

By ED. TECHNICAL

**V**ARIOUS methods of lowering the chassis, as suggested by the Laurel Motors Corp., were described in our May, 1926 issue, page 62. Other methods of lowering the chassis were illustrated in June, 1926, page 62, and Chevrolet's method was described in August, 1926, page 70.

Additional methods of lowering the chassis, are given in this article, with particular attention to lowering Fords previous to the "improved" models, as Ford speedsters are usually built from older cars.

The Fordspeed underslung fixtures lower the chassis frame 4 inches. Brackets are clamped to the front axle by through bolts which make a very secure attachment. The front brackets are strengthened by reinforcing ribs, and are so arranged that either the new or the older type of Ford front radius rods can be used. Front axle is placed 3 inches forward, at correct angle to ensure easy steering.

Rear fixtures do not require reversing the rear axle, as the frame is cut and lapped to carry the rear spring at the new position. No change is required in drive shaft or radius rods. The spring perches can often be turned to the required vertical position without even removing the wheels.

A special eye-bolt, with large adjustment nut, carries most of the weight on the regular spring perches, while the forward end of the rod on which the spring shackle oscillates is attached to the rear radius rod.

The Swing-lo underslung brackets give a drop of 4 inches. The bracket is attached to the front axle by a through bolt, making a very secure anchorage. The spring perch is attached to this bracket.

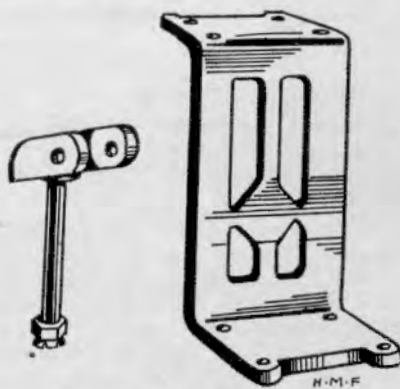
At the rear, the spring perch is reversed and a  $\frac{3}{4}$  inch rod, extending through the spring perch and bolted at the front end to the radius rod, carries a special long spring shackle, which drops the spring the desired amount. The frame

is not cut, as the rear spring is clipped to a 2-inch flat steel bar, which bolts across between the side members of the chassis frame.

### Reversible Type Fixtures

**R**EVERSIBLE type fixtures, as made by different manufacturers, are designed to give 7 inch road clearance and to lengthen the wheel base 3 inches. These parts are installed as follows:

Front system: Remove front axle from under car and take out the spring perches. Reverse



Cast Steel Front Brackets

their position, inserting them from the bottom of the axle. Now take parts "A", which are the tips of extensions for the front radius rods. Slip the front spring shackles "C" on the big ends of the radius rod tips, and insert the bolt ends of these radius rod tips into the holes of the spring perches, originally meant for the radius rods.

Take the braces, parts "B", which are to act as

supports for the radius rods, and slip the tip of the Ford radius rod through one hole. Now insert the radius rod in the tip, part "A", and place the top end of brace, part "B", over the bolt end of the spring perch on the top of the axle.

Take a wrench and place on the hexagon section of part "A" and, by turning same, the Ford radius rod can be screwed up into the extension tip or part "A". Place nuts on the front or bolt end of tip, part "A", which is extending through the spring perch, and tighten. Put nut on the top of the spring perch and screw down, holding the brace "B" in place and the spring perch in the axle. The front springs may now be dropped into place. This finishes the front end.

Rear system: Remove the rear axle from the car and disassemble the housings. Take the left housing and, after turning it over so the housing is upside down, place back into position. Do this with the right housing also. Now the axle is the same, but the housings are changed from right to left, and they are upside down. Remove the rear spring perches. Turn them upside down, and put back into position so that they are turned upwards toward the bottom of the housing. Knock the bushings out of the spring perches so the shaft of "F" will fit into the spring perch.

NOW—remove the rivets from the back cross

be used by knocking out the bushing from the crank holder on the front cross member of the chassis frame.

### Moves Front Axle Forward

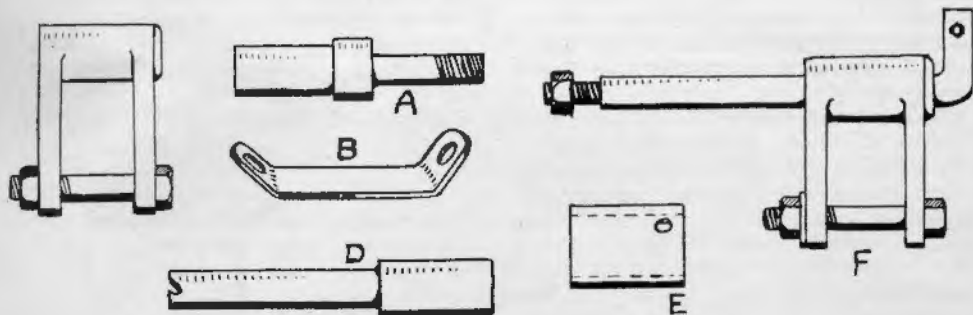
ANOTHER method of front spring suspension is the way often used on Ford racing cars, which can be used to secure a drop of from four to seven inches as desired.

In this method, the entire front spring and front axle system are moved ahead as a unit. The top or middle of the front spring is supported in a short piece of channel steel. This piece is best made by using the middle section of a discarded front cross member of a Ford chassis frame.

A tie-bolt keeps the spring from slipping sideways, even though the spring clip or U-bolts should be allowed to become a trifle loose. The old-style front spring clips or U-bolts No. 3808 should be used to bolt the spring to the new off-set brackets.

Sometimes the top part or web of the channel steel is bent upwards at the ends for about a quarter of an inch. The lips thus formed, resting against the sides of the steel straps or goosenecks prevent the possibility of the channel steel slipping sideways on the spring.

The straps or goosenecks should be made of



Reversible Type Front and Rear Brackets

member of the chassis frame and set the rear cross member forward five and three-fourths inches. This will bring the rear spring in front of the rear axle. Take parts "F" and insert them in the spring perches from the front of the axle, so that the hook ends are upwards. The shafts should have the rear spring shackles mounted on them.

Place axle under car and drop the springs into the shackles. The hooked ends of parts "F" are now hooked over the rear radius rods, and bolted through the holes to the radius rods. These act as a support for the rear spring hangers. The job is now complete. Part "E" is to make an extension to the crank shaft. This part is slipped onto the crank shaft into the fan pulley, and is held in place by the fan pulley pin. Part "D" is an extension for the starting crank, which may

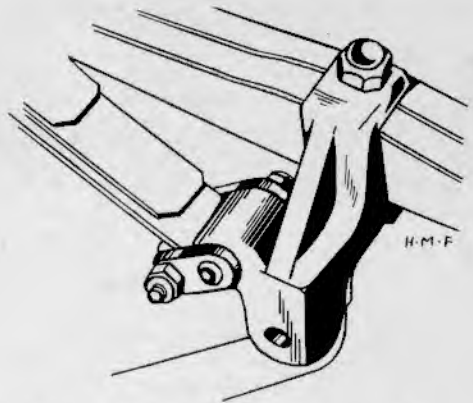
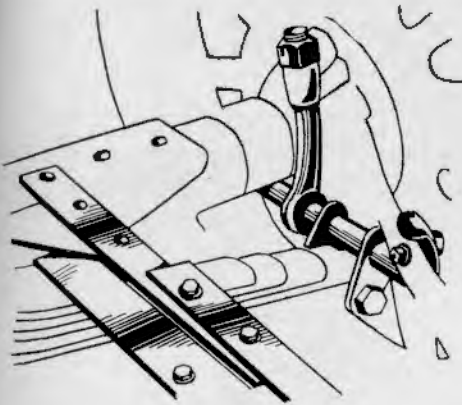
steel, and should be two inches wide by one-half inch thick, and of a length depending on the drop that one desires to give the front end of the frame.

From the side view, it will be seen that the front ends of the goosenecks are securely bolted to the channel and front spring by the same clips that usually fasten the spring to the front cross member of the chassis frame.

The lower ends of the goosenecks are fastened to the front cross member of the chassis frame by means of a pair of the old style front spring clips or U-bolts, No. 3808, which are placed with the threaded ends down for easier access to the nuts.

Bolts are fitted right through the side flanges of the front cross member, and through the upright sections of the goose-necks, thus making a





Fordspeed Front and Rear Underslinging Fixture

more rigid construction. These bolts have spacers of iron pipe or tubing, to allow the bolts to be securely tightened, without crushing the chassis frame.

While the straps could be moved closer together and held to the cross member of the chassis frame by the same spring clips that hold the starting crank bearing bracket; it has been found much more solid and substantial to keep the brackets farther apart, and to use individual bolts for fastening the separate brackets.

Instead of using two separate goose necks, a single plate of steel can be given two bends at right angles to each other and used as a complete front spring support. But a plate is rather difficult to bend and, if this type of bracket is desired, a Fronty bracket of cast steel will probably be the preferable construction.

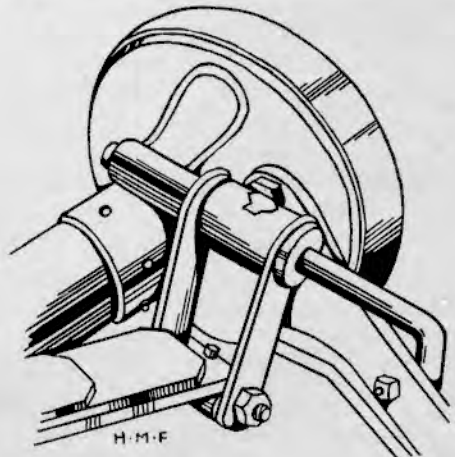
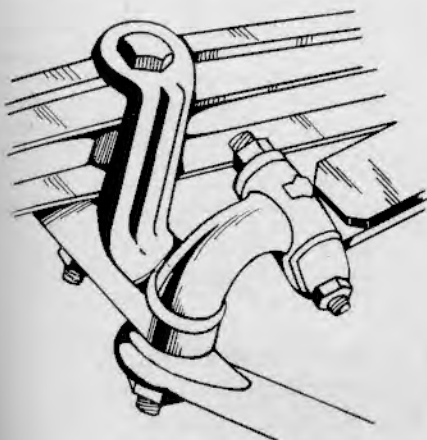
Fronty front axle underslung parts keep the spring over the axle, take out side sway and are well adapted to racing car use. The offset bracket is a high grade steel casting, and the lower end is bolted under the front cross member of the chassis frame, while the top is bolted to the middle of the front spring.

### Strap Steel Brackets

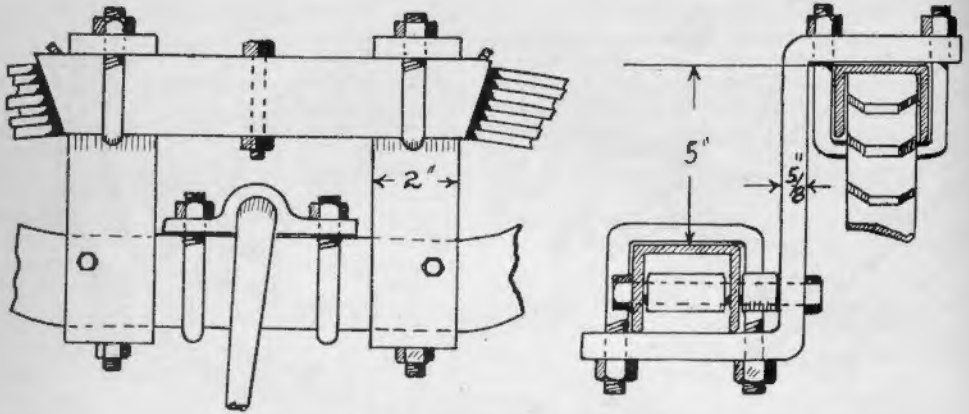
TO lower the front end of the chassis, brackets made of flat steel, 2 inches wide by one-half inch thick, can be bent to surround the front axle and hold it in front of and above the spring perch. The doubled-over construction affords additional security where the strains are greatest, while the single thickness of metal in front of the axle is amply strong, and no material is wasted.

These brackets move the front axle forward and lengthen the wheel base a couple of inches. They drop the front axle a distance equal to the difference between the heights of the top and bottom of the axle, approximately  $2\frac{1}{2}$  inches. It is necessary to cut off the shanks of the spring perch and to rethread the shank, so that the front radius rod can be bolted to the spring perch in its new position.

Axle forgings sometimes differ slightly. In order to get a snug fit, it is better to check up on the dimensions of the parts that are used—the measurements on the sketch being given merely as a general guide.



Swingle Front and Rear Underslinging Brackets

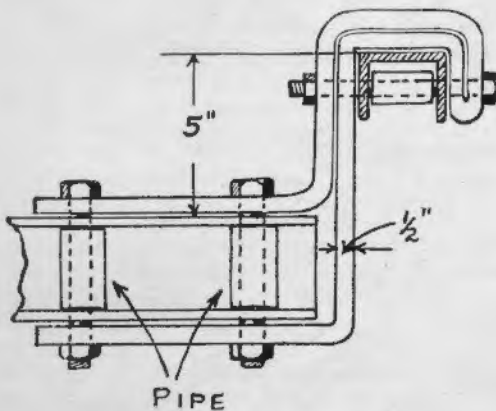


Home-Made Front Axle Brackets

In the strap steel type of bracket, the rear cross member is cut from the side members of the chassis frame and rivetted to off-set extensions, which are made from strips of steel, one-half inch thick and about an inch and a half wide.

This strip of steel should be of good material, so that it can be doubled over and bent at right angles without cracking. Such steel can be had, though it is not always easy to obtain. Strap iron is not good enough for this use.

We have noticed Ford speedsters made with off-set brackets consisting of only a single thickness of half-inch steel, about 2 inches wide. But we do not approve of such weak constructions, and will not illustrate them here.



Strap Steel Rear Brackets

When fitting these off-set frame extensions, one should allow plenty of space in the center-to-center distances between the two bolts which hold the bracket to the side members of the chassis frame. If this distance is too short, there will be racking and twisting strains on the side members of the chassis frame. Don't skimp materials at the vital corners.

As shown in the sketch, pieces of pipe have been fitted as bushings or spacers between the top and bottom flanges of the side and rear members of the chassis frame. These spacers are very important, as they form a solid backing for tightening the nuts on the bolts. If not used, it will be impossible to tighten the bolts securely, as the flanges of the side members will be simply squashed down out of shape.

The nuts can be held to the bolts by using castle nuts, with cotter pin holes drilled through the bolts, or perhaps (although we prefer the cotter pins) by using lock washers under the nuts.

Some of the Ford racers which we have examined have been fitted with forged, off-set brackets, made of heavy iron. Such brackets can be made by almost any blacksmith. The shanks of these brackets are made wide enough to be a neat fit between the upper and lower flanges of the side members of the chassis frame.

A couple of long  $\frac{3}{8}$  inch bolts, extending through the brackets and top and bottom flanges hold the assembly in place. Half-inch bolts should not be used, as it is better not to drill the holes through top and bottom flanges any larger than is absolutely necessary. In making these brackets, the shanks should not be made too short. If they are, then severe prying strains will be placed on the top and bottom flanges of the side members of the chassis frame, while longer shanks on the brackets act as reinforcements to strengthen the frame.

The rear cross member is almost surrounded by the bracket, and the connection does not depend on the holding bolt for its real security, as the bolt is only used to hold the bracket in place and does not carry the load. Use a spacer in the rear cross member.

*Part Two of this article will be continued in the February, 1927 issue.*



*In Wildrose Camp*

## Just to See What an Old Ford Car Can Do

The Standard Oil Company Sent One on a Hard Trip  
Across Death Valley

**I**N ITS sixth year of Company service, with an excess of 75,000 miles of travel already to its credit, a Ford Roadster set forth from the Laboratory of the Standard Oil Company of California on a six day trip of 1167 miles over some of the best and some of the worst road surfaces created by man and nature that the States of California and Nevada have to offer users of motor cars.

This demonstration and test was conducted by the Standard Oil Company of California for its own information in connection with the development of a new oil for Fords. With the data se-

cured it planned to check up performances of other Fords on runs that had been made at frequent intervals in conjunction with exhaustive laboratory tests. So the Company did not fool itself with a tuned-up car, and it sought more severe operating conditions than are ordinarily encountered by Ford cars. They undoubtedly were all of that.

The log of the run includes a record of starts, stops—when, where and why, fillings of oil, gasoline and water used. Instruments with which the machine was equipped registered the respective temperature of the differential lubricant, crankcase oil, and cooling water, and were installed so that readings could be taken while the car was operating. Readings were taken and recorded approximately each half-hour during a major portion of the run.

The route selected for this adventurer took it to Sonora and through the mother-lode country immortalized by Bret Harte and Mark Twain, over Ebbett's Pass, through Markleeville to Minden and Carson City. From the Nevada capital it proceeded south and east, skirting the west shore of Walker Lake on its way to Tonopah and Goldfield, thence to Beatty. From the latter points its way lay between the Funeral Mountains and the Grapevine Range, and down 168 feet below sea level into Death Valley, which it crossed. It wended its way through the Panamint Mountains, which form the valley's east-



*Effecting a Temporary Improvement in the  
Road Bed*

ern wall, and into the Panamint Valley, not so notorious as the first named area with the fearsome name, but in general aspect and character differing little from it. This also was crossed, then traveled its entire length, and placed to the rear through use of the Slate Mountain Grade, the road over which descends into the Searls Lake basin and to Trona. From there the course was through the Salt Wells Canyon, across Indian Wells Valley to Inyokern, over the Tehachapi Pass, and down into Bakersfield. From the oil city the car traveled up through the San Joaquin Valley to its starting point.

**F**OR numerous reasons, that section of the run which included the crossing of Death Valley, was the outstanding feature of the trip. Leaving the desert mining town of Beatty, Nevada, where ore specimens are seen on exhibition in any direction one may glance—the residents all are optimists and ready to bet their last shirt that a boom will be in full swing before the year runs out—the Ford Roadster proceeded to the abandoned town of Rhyolite, the skeleton remains of which testify as to its former glory. Much of the road to this deserted town is over the grade established for the railroad that once operated to this point. The rails and ties have been salvaged and resultant depressions form a stretch of corduroy that is a perfect specimen of its kind. There is a healthy, man-sized jolt for every absent tie.

The next point reached was Daylight Spring, which is a short distance across the boundary-line dividing Nevada and California. From here one looks down into Death Valley, a vast basin of superheated atmosphere, forbidding, threatening. Out of the haze across the valley rose the magnificent Panamint Mountains which form its western rim. The little Ford accepted the challenge; down through Boundary Canyon (12 miles), across the floor of the valley (7 miles) up through the Panamint Range (15 miles) down the other side (10 miles), eight miles across the Panamint Valley, and four miles up Floyd's Canyon, the little Ford plugged its way.

This represents a total of fifty-six miles, every foot of which, save only two miles where a dry lake bed was crossed, was low-gear work, because of grade or roadbed, or of both. It was accomplished on five gallons of gasoline, five gallons of radiator water and less than one quart of oil.

It was truly an ordeal for the car, also something of an ordeal for the occupants of the car. On the floor of Death Valley not one single specimen of animal life was seen—no jackrabbits, no birds, no snakes, or lizards, no insects—not even a fly. There is every reason to believe that none is ever seen there.

The highest shade temperature recorded on the trip in Death Valley—117. Here 117 degrees indicates a comparatively cool day, shade temperatures during summer months usually being in the 130's.

## Dealership Changes Hands

William Hayworth, Berkie Walton and Jack Ogle have taken over the Kansas Motor Car Company, located in Kansas, Illinois. Though the personnel of the firm has changed, the name will remain the same, and complete Ford service extended to Ford owners in that territory.

## The New Highway

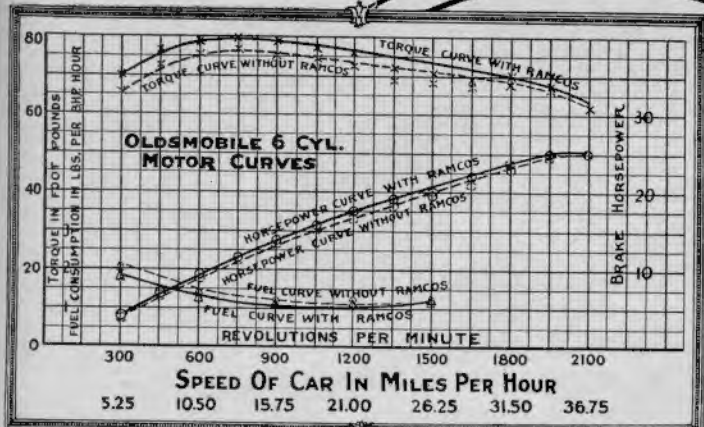
**I** PIERCE through lanes of living green  
Where vast trees shut the sky from view,  
And push my way beyond their screen  
To where the sunlight filters through.

Full many a noble tree gave way  
To let my shining lengths slip by  
And for their brothers as they lay  
Their living comrades toss and sigh.

My breast is hard and cold they say,  
But still I love the forest green;  
Twixt it and men I lowly lie,  
A humble, faithful go-between.



*Dry Lake Beds Are Found in Desert Regions*



**Test No. 10  
Oldsmobile**

*Graph at left shows results of the tenth test in a series made by an impartial firm of engineers of acknowledged authority. Name gladly sent on request*

# Proof

Here's further proof that the true purpose of RAMCOS has been successfully obtained by their present design—as revealed in recent dynamometer bloc tests on a *New Oldsmobile Six Motor*. (Some of the results are shown briefly at right.)

The improvements that RAMCOS made in the motor's performance, were made without in the least increasing the pressure of piston rings against cylinder walls—or causing other objectionable action of any kind whatever.

Thousands of miles of hardest kinds of driving by busses, trucks and pleasure cars in actual service have proved that RAMCO improvements are permanent. . . . RAMCOS are the one make of inner rings that can be safely used to cure piston slap, oil pumping and kindred ailments, as actual tests show. Use RAMCOS in every over-haul job—and use new piston rings too, for lasting results.

Sold by leading jobbers everywhere

# RAMCO

*Cushion*

# INNER RINGS

(Registered U. S. Patent Office)

RAMSEY ACCESSORIES MFG. CORP., ST. LOUIS, MO.

## What the test showed

In this test, a 1926 Oldsmobile 6-cylinder motor was used— $2\frac{3}{4}$ " dia. bore by  $4\frac{3}{4}$ " stroke. It was new and in fine condition. Tests were first run and recorded with motor just as received. RAMCOS were then inserted and the tests repeated—no other change was made.

At a motor speed of 1200 r.p.m., (equivalent to a car speed of 21 miles per hour), the brake horsepower increased from 16.60 H.P. to 17.20. Torque obtained increased from 72.62 to 75.25 foot pounds. The rate of gasoline consumption was lowered from 1.14 to 1.10 pounds per brake horsepower per hour, *throttle wide open*. Average compression improved from 82.5 to 83.8 pounds per square inch. Temperature of the cooling water did not change appreciably. Oil consumption was at the rate of 2,016 miles per gallon.

Engineers now universally acknowledge that RAMCOS stop piston slap, and reduce oil consumption. Now road tests are under way to show that RAMCOS do not cause undue cylinder and ring wear. We are at your service.

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## of Special Articles Which Appeared in Ford Dealer & Service Field During 1926

**B**ECAUSE of the great amount of general material appearing in each issue of Ford Dealer & Service Field it is obviously impractical to list all articles which have been published covering the activities of dealers and service men. For this reason, only leading articles, principally of a technical nature, together with regular departmental features, are listed in the following index which is provided for the convenience of our many readers who maintain complete files of this magazine.

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for the  
Truck Owner!

## HI-LOS PLAY PART in Florida Land Development

**D**OWN in the land of perpetual summer, the Perry-Gwinn Corporation is rapidly turning 120,000 acres of Florida's choicest land into 6,000 farms; building splendid highways in this vast development, and constructing homes for aged and retired ministers of every denomination, giving them house rent, free. The sale of vegetables, produce, etc., from this rich tract amounts to about one million dollars per month.

It is interesting to watch the corporation's big fleet of Ford trucks hauling capacity loads of road material through

deepest sand which puts each truck to the supreme test every hour of the day. It is equally interesting to know that every one of these trucks is equipped with a Twin-High Hi-Lo Transmission.

Mr. Brock, Superintendent of Construction, states: "Realizing the unusual hard work that the trucks would be put to at all times, it was very important that we got a transmission which could stand up under the very roughest treatment. After all of the best known makes of transmissions were carefully considered and given a thorough try-out, the Hi-Lo was accepted. We haven't had a particle of trouble with our Hi-Los."

*Have you demonstrated Hi-Lo to the truck fleet owners in your territory?*

### Twin-High for Passenger Cars

Is the easiest operating, quietest auxiliary transmission for Fords. Gives increased power, saves fuel and brake bands. Assures all-around efficiency.

**The Continuous Torque Trans. Co.**  
CLEVELAND, OHIO

**National Twin-High Sales Corp.**  
SYRACUSE, N. Y.

**Kimball Hi-Lo Transmission Co.**  
SAN FRANCISCO, CAL.

### Twin-High for Trucks

Doubles Ford truck tonnage, increases load-carrying capacity, gives wider range of speeds, reduces wear and tear. The easiest shifting transmission on the market.

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Months and Page Numbers — February, 100 — March, 89 — April, 96 — May, 106 — June, 106 — July, 100 — August, 98 — September, 96 — October, 90 — November, 100 — December, 87.

### Advertising

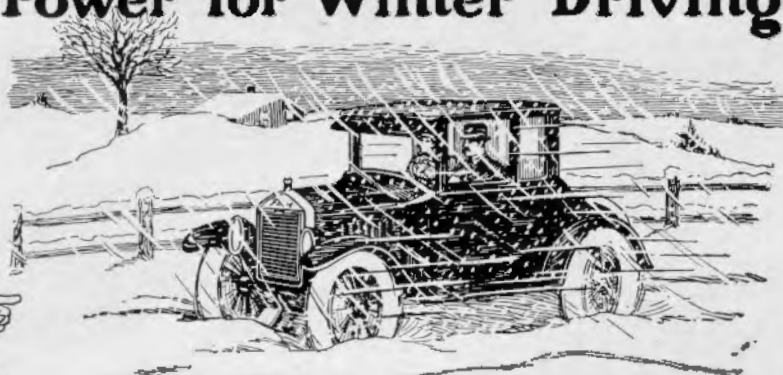
Every issue has carried one or more articles on Ford dealer advertising. These will be found with general articles on selling and business methods in the fore part of each issue.



# More Power for Winter Driving



Pioneer Bill

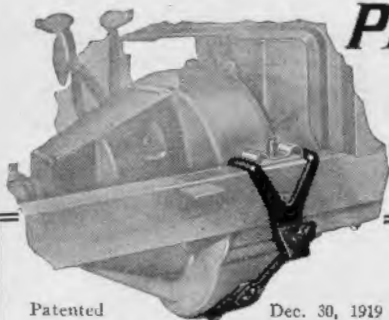


## Pioneer Bill Says:

"When the highways are piled with snowdrifts an' icy winds sap the car's engine power, more'n ever the Ford driver needs a

## Pioneer Engine Support

(Trade Mark Registered in U. S. Patent Office)



Patented

Dec. 30, 1919

### What the "Pioneer" does

- tightens Ford Chassis
- eliminates Vibration
- prevents Broken Crankcase Arm
- sets Crankcase Arms already broken
- cuts Repair Bills
- reduces Oil Leakage
- keeps Nuts and Bolts from loosening
- gives Smoother Running Engine
- increases Riding Comfort

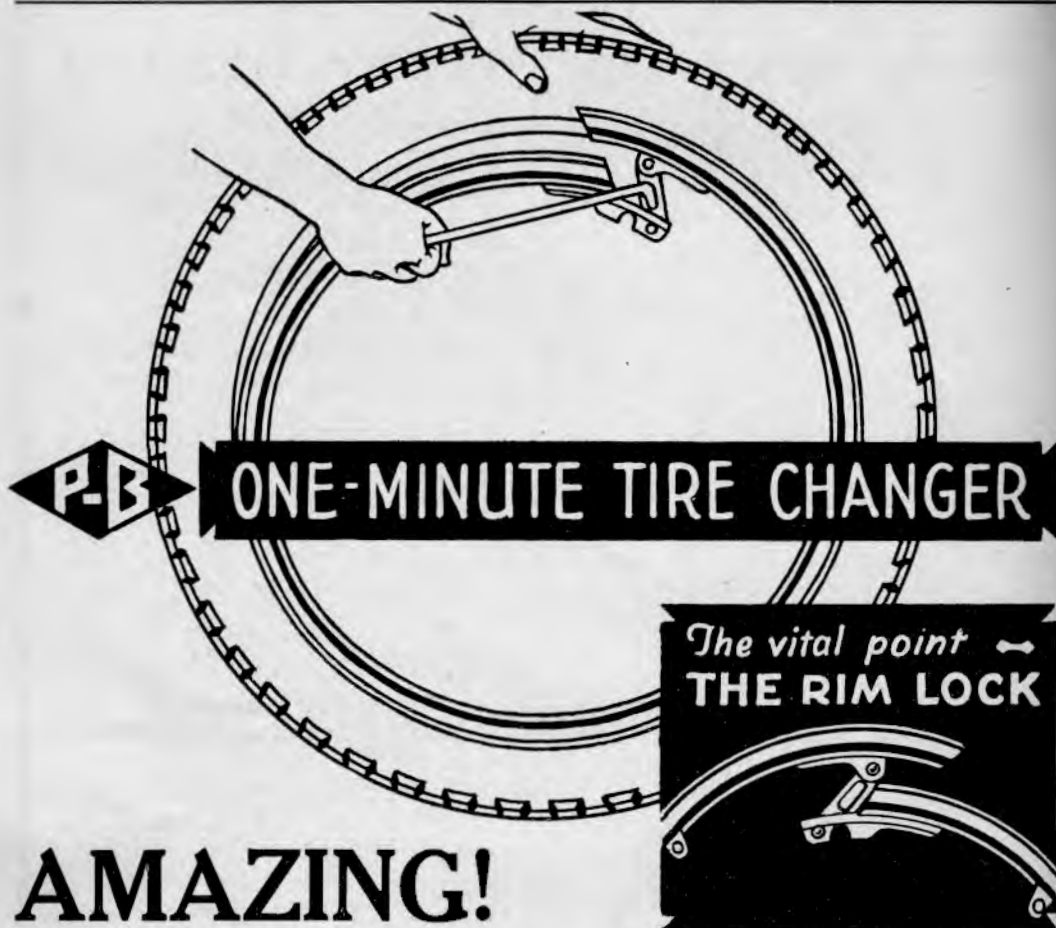
**Only \$300**

By lessening vibration and keeping engine in perfect alignment, the Pioneer Engine Support helps conserve engine power when it is most needed. Here's a good point to get over to those Ford drivers in your town.

You can increase your sale of Pioneer Engine Supports if you send for our Pioneer Bill display card and our Pioneer Engine Support circulars for Ford car drivers and Ford truck owners. Put these little folders on your counter, or slip them in your mail. They'll get results.

*Are you on our dealers list? If not, write today, for our attractive proposition.*

**THE BREWER-TITCHENER CORPORATION**  
107 Port Watson St., **CORTLAND, N. Y.**



# AMAZING!

*— the sales — possibilities and the assured profits of this device!*

**G**IVE the car owner something to fill a long-felt need, and you'll make a lot of money! Here it is—the first positive, dependable, quick-change rim-lock ever marketed. One motion opens the rim for removal of the tire—one motion closes it after tire is replaced. When closed it's positively locked—and rim is perfectly in alignment.

P-B One Minute Tire Changer lasts as long as the car—saves time, tires, and

temper—stops tube pinching and hammering of tires. They can be applied to any rims by any mechanic.

***Territory Open -- Write!***

We are now appointing Field Sales Directors, Jobbers and Dealers. Good territory is open—even a county can make you thousands of dollars in profits. If you are alive, this is your opportunity; write or wire us for proposition today.

### RETAIL PRICE

Set of Five Locks  
With Wrench

# \$5

West of Rockies \$5.25

## P-B MFG. CO., St. Louis, Mo.

(Parks & Bohne, Inc.)

Manufacturers of the Famous P-B Quick Change Transmission Bands for Fords

# Servicing the Ford



## Think It Over

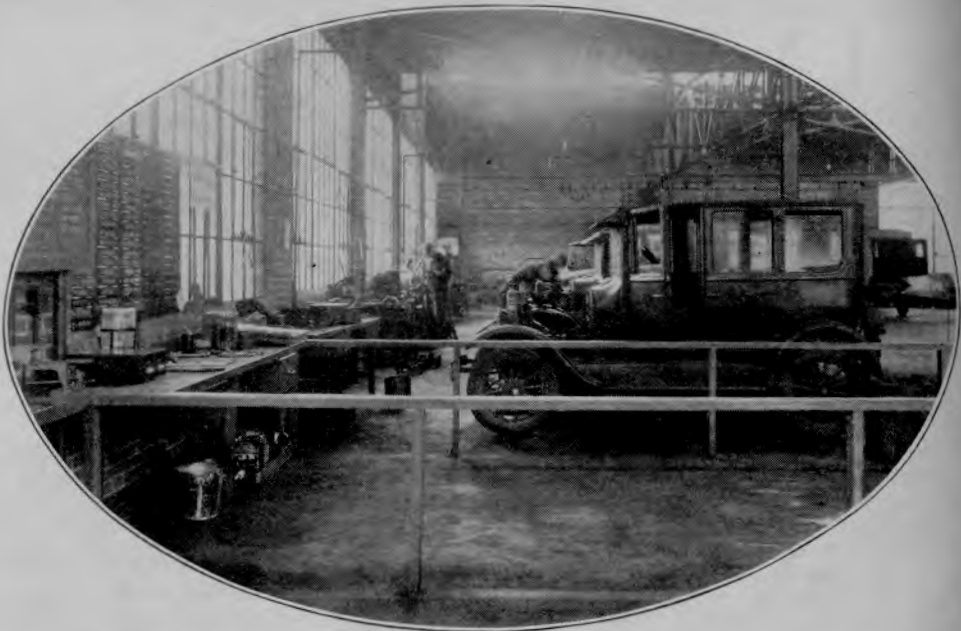
**D**ID you ever stop to think that *now* is the only time that exists? That a year is just a string of *today's*?

Just ponder over that obvious philosophy so that when you make a resolution and say: "This year I am going to improve myself", you will realize that "this year" is not some special period that will come sometime during the next twelve months.

This year is *now*. Today is the only part of it you will ever have to work with.

Make the most of today—and do that every day.

*Ford Dealer and Service Field Puts the  
Ford Mechanic on a Solid Footing  
for Business Growth*



*Looking down the row of workbenches well lighted and showing some of the shop equipment. A blackboard lists the 31 operations of the Special Check-Up Service and it attracts no little attention.*

## How Real Merchandising Methods Sell Service for Dutee Wilcox Flint, Inc.

Some of the Reasons Why Well-Known Eastern Dealer Has Won Big Success

By C. P. SHATTUCK

**T**HAT SERVICE can be sold, merchandised as a commodity, has been proven by S. L. Tuthill, manager of the Bridgeport, Conn., branch of Dutee Wilcox Flint, Inc. Records prove the case. Mr. Tuthill assumed charge of the branch on January 1, 1925. At the end of the year the sale of shop labor had increased 29 per cent. On August 1, 1926 the increase over the preceding year was 84 per cent. Records of sales of accessories, supplies and equipment also indicate what can be accomplished by intensive merchandising. From March 1925 to March 1926 the increase has been 367 per cent! The sale of parts, percentage and volume, kept close pace with labor.

The writer was privileged to examine the charts maintained by Mr. Tuthill and including the items above referred to as well as those dealing with passenger car and trucks. While the sale of motor vehicles has increased, such increase does not explain the marked gain in the sale of parts and shop labor. The explanation is merchandising.

Granting a Ford service station operates on the standard flat rate it will not attain volume merely on prices. With the vast number of shops specializing on Ford repairs the big service station cannot increase its normal average business, registration or sales increase of new cars and trucks being taken into consideration unless there is some effort other than waiting on the customer when he comes in. It is getting the customer to the shop and holding him as a steady patron that builds volume.

While this is done in the Bridgeport service station manager Tuthill is several jumps ahead of the average big service station head in that he is out in the field selling his service in exactly the same manner as does any salesman representing a good product with a fair price. An unusual feature of this merchandising campaign is that Mr. Tuthill does not delegate his selling work to a subordinate. He is the salesman.

Some time ago, and after he had the organization machinery running smoothly, Mr. Tuthill conceived the idea of selling the fleet owners a

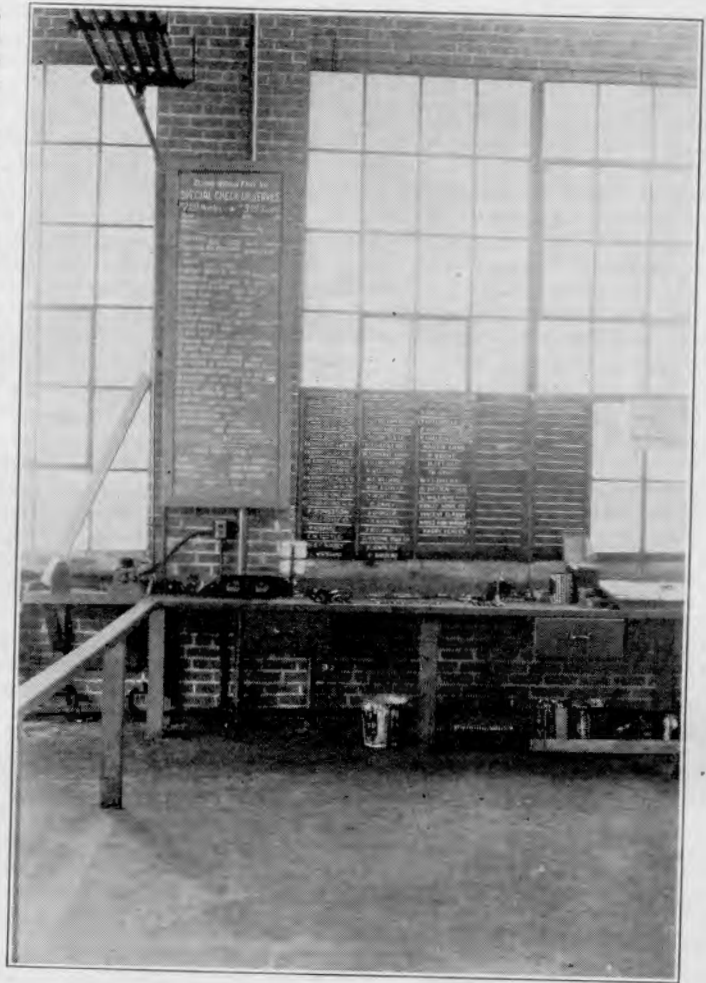
cars and trucks what he terms a special check-up service. Careful consideration was given as to what this service should be, its price and psychological appeal. The basic fundamental considered first of all was a type of service that would reduce and keep down operating and maintenance costs to the business man, and thereby boost new car and truck sales.

Mr. Tuthill was keen enough to appreciate the fact that the business concern buying cars and trucks is interested in only one angle, how much will it cost per mile or per ton mile. In other words, as in the truck business and dealing with the heavy capacity types, it is the final cost that gets the name on the dotted line when it comes to repeat orders.

After careful study the following Special Check-Up Service was decided upon. As may be noted there are 31 operations. (inset form)

**I**MMEDIATELY at the left of the service entrance two spaces were set off and these railed in and the framework painted gray. Metal flags or pennants, bearing the word SPECIAL in white on a red background, are attached to newel post of each space. These flags catch the eye on entering the station. Immediately back of this is a large blackboard extending from the work bench, (on which the tools, etc., are neatly arranged), to the top of the ceiling. The check-up operations are listed. At the right of the lower section of the board is the record rack, another appealing innovation. In this rack are metal strips about 10 x 12 inches. One side is painted red and the other black. On both sides is painted the names of the fleet owners, also the numbers of the cars or trucks.

When a car or truck comes in for the service, and after it is completed, the black side is turned to red, indicating that this car has received its monthly service. The black, of course, indicates the car or truck has not come in. If, by the 20th of the month, the business house has not sent in all its cars, it is called up and reminded of the service. Inasmuch as the rack shows those not having been in it is a simple matter for the man in charge to get in touch with the business house. There is a card index with names, addresses and telephone number of each customer of the service, also the name and number of the man having charge of the cars. Where there are



*The rack at right bears the names and fleet car numbers of customers contracting for the service. After car is serviced the sign is turned from black to red indicating work completed for month.*

several cars and trucks, and there are many houses in Bridgeport operating fleets of Fords, each driver is given an identification card which he presents.

The fleet owner signs a contract on the yearly basis or at the rate of \$3, per month. The contract is made out in duplicate, the original going to the buyer and the copy to the service station. A record finds its way to the index card box and the metal strips painted with the name of the customer and numbered.

The mechanic in charge of this special service was hand picked. He is considered the most reliable and dependable mechanic and is, also, fairly fast. As may be noted by the form there is a motor report and a road test. There is also space for making recommendations of work needed other than that listed in the check-up service. A report is made on the compression of all cylinders, carbon if present and condition of the valves. Other necessary work is filled in. As

the buyer of the service receives each month the original of the form, not the contract form but the work record shown herewith, he knows the condition of the car. Now assuming that it is found that the engine is full of carbon and the valves badly need attention, and the facts are reported over the signature of the mechanic and service superintendent, both of whom have to sign every report, and the business house fails to take the hint, then the selling begins. Having established contact with the man in charge of the cars the service superintendent can get in touch with him and obtain better results than if there had been no service contract. The needed work is on record and by using the tickler method the service head can keep a check-up on the failure of the car to come in for the advised work. Under these conditions the work can generally be sold over the telephone. This extra work, needed attention, is one of the several advantages of the check-up service.

### Service Must Be Sold

**B**UT THIS service has to be sold. It is a job for the manager notwithstanding opinions to the contrary. The large business concerns, that is to say the executives in authority, are not easily reached and the ordinary salesman would hardly get to first base. The presentation of the card of the manager of the Flint branch has a psychological appeal. Mr. Tuthill is a salesman who knows the Ford branch of the automotive industry. He sells the executive on low and ultimate car and truck costs, pointing out why the Special Check-Up Service will greatly reduce annual maintenance costs and insure dependable service by the vehicles. The fact that there is

\$8.50 worth of service for the small sum of \$3 has its sales value, of course, but as previously stated, the business house using cars is scanning motor vehicle costs more carefully than heretofore.

A large number of concerns have been sold this service which has been in effect but a short time. There are numbers of others who have heard of the service and made inquiries with the result that their names have been placed on the dotted line. Individuals entering the service station note the Special places, the board and racks and numbers of these prospects have been converted into customers by the service superintendent.

Anticipating can \$8.50 worth of work be sold for \$3 and the service station get by? It is to be doubted that an even break can be obtained where an old car comes in for the service and does not come back again within a reasonable time for another check-up. On the other hand it is up to the selling organization of the service station to keep the customer sold after the first service and the percent of those who have not come back is very small. It should also be borne in mind that after the first service the car, insofar as the 3 operations are concerned, is in good condition, and that on the second or third visit the showing will be on the right side of the ledger. Also it must be considered that the motor report and road test will disclose any needed work and that this can be sold to a fair proportion of the customers.

The check-up service is a great aid to the new car sales department because if maintenance costs can be kept down by frequent inspection and adjustment the average owner will be more easily,



Manager S. L. Tuthill has his office in the showroom and is accessible to all.—He is shown at extreme right at desk.

convinced to repeat when he is in need of a new car. Furthermore, the other service rendered keeps the tie-up with the service station. Relative to selling this check-up service. Mr. Tuthill stated that he is considering placing a service salesman in the field to sell the check-up plan now that it is well under way for Mr. Tuthill is devising new methods to increase business. It is quite probable that the ice will be broken for the salesman by letters and the use of references from those concerns using the service.

There is a sign in the service station asking customers to bring to the attention of the manager any failure of the organization to render courteous and satisfactory service. Mr. Tuthill personally handles any complaints and his method is explained by his statement he will have no dissatisfied customers. Mr. Tuthill's desk is in the salesroom where he can be seen and met by any and all customers or prospects. There is a suite of offices on the second floor of the building but the office of the manager is not there.

Reference has been made to the sales of labor, parts, accessories and equipment and of the increase. The heads of these departments have access to these charts and can see what their department is doing week by week and month by month. As a result each department head strives to keep the curve going up and up. One may ask how can parts be sold other than to supply the demand. They are in this case, for the parts department employees not only fill the customers' wants, but with the shops wants supplied, suggest stocking certain parts and go over the same with the customer. Sale of accessories and supplies, and equipment have been increased 367 per cent by these methods of merchandising. If a new item is stocked it is shown and explained. There are no novel sales methods, just plain every day selling, but the employees have been sold by Mr. Tuthill on the value of selling, not order taking. All accessories and equipment are sold at installed prices which is conventional.

A Modern Station

UNLIKE most Ford service stations Mr. Tuthill has the battery department in front in the service station between the two entrances and where the public can see a real

**SPECIAL CHECK-UP SERVICE**  
**\$8.50 Worth of Service for \$3.00**

**IMPORTANT -- READ CAREFULLY.**

This Service is for your protection and benefit. You will notice in reading this form that it covers a very systematic mechanical check up of all of the vital parts of your car. The charge for this Service, based on monthly check up for the year, is \$2.50 per month. Single check up of any time during the year \$1.00. These prices are subject to change without notice. This is a service that every Ford owner should take advantage of. By using this Service monthly it will show a substantial saving in the course of a year as against allowing your Ford to get in a run-down condition, with a consequent expense for unnecessary repairs. Talk with our Service Superintendent or the Salesman who sold you the car about this service immediately.

Name \_\_\_\_\_ Date \_\_\_\_\_ Shop Order No. \_\_\_\_\_  
 Address \_\_\_\_\_ Phone No. \_\_\_\_\_ Motor No. \_\_\_\_\_  
 City \_\_\_\_\_ Reg. No. \_\_\_\_\_

**1. BATTERY** Cell-1 \_\_\_\_\_  
 " -2 \_\_\_\_\_  
 " -3 \_\_\_\_\_  
 Water Corrosion Volts Gravity Connections Cables

**2. COIL AND COIL BOX TER.** **3. SPARK PLUGS**  
 Cond. of points Tighten Ter. Check for firing and adjust Clean Check Gaps

**4. COMMUTATOR AND LOOM** **5. FAN** **FAN BELT**  
 Condition Oil Chafed Wires Oil Loose Blades Condition Tighten

**6. GENERATOR** **7. HOSE CONNECTIONS** **8. STARTER**  
 Charging rate Oil Condition and Tighten Top-Side-Bottom Tighten Oil Leaks

**9. BANDS** **10. UNIV. JOINT AND BALL CAP** **11. MOTOR SUPPORTS (REAR)**  
 Condition Adjust Play Grease Oil Leaks Tighten

**12. FRONT WHEELS** **13. SPINDLE BODY BOLTS AND ARM BOLTS**  
 Line Up Tighten against bearings Grease Cond Spindle Bushings Oil and Tighten

**14. FRONT AND REAR RADIUS ROD AND FRONT SPRING U BOLT** **15. REAR WHEELS**  
 Condition Tighten Tighten Tighten

**16. STEERING GEAR CON. ROD AND SPINDLE CON. ROD**  
 Tighten Oil

**17. INSPECT OUTER ROLLER BEARINGS FOR WEAR AND GREASE** **18. REAR END**  
 Condition Grease Grease Leaks at Wheels Grease Leaks Grease

**19. DRIVE SHAFT AND AXLE HOUSING** **20. REAR RADIUS RODS** **21. SEDIMENT BULB**  
 Tighten Tighten Clean

**22. REAR RADIUS ROD LOCK NUTS** **23. EMERGENCY BRAKE** **24. MUFFLER**  
 Tighten Condition Adjust Tighten

**25. OIL LEAKS** **26. OIL IN CRANK CASE**  
 Around Crank Case Arms Ticks Cover Drain Quality Amt. found in case

**27. SPRINGS FRONT AND REAR** **28. LIGHTS** **29. TOP REPORT**  
 Oil Head Tail Bounce Lash Condition and Recommendation

**30. RADIATOR** **31. FRONT MOTOR SUPPORT**  
 Inspect for Leaks Put in fresh water Condition

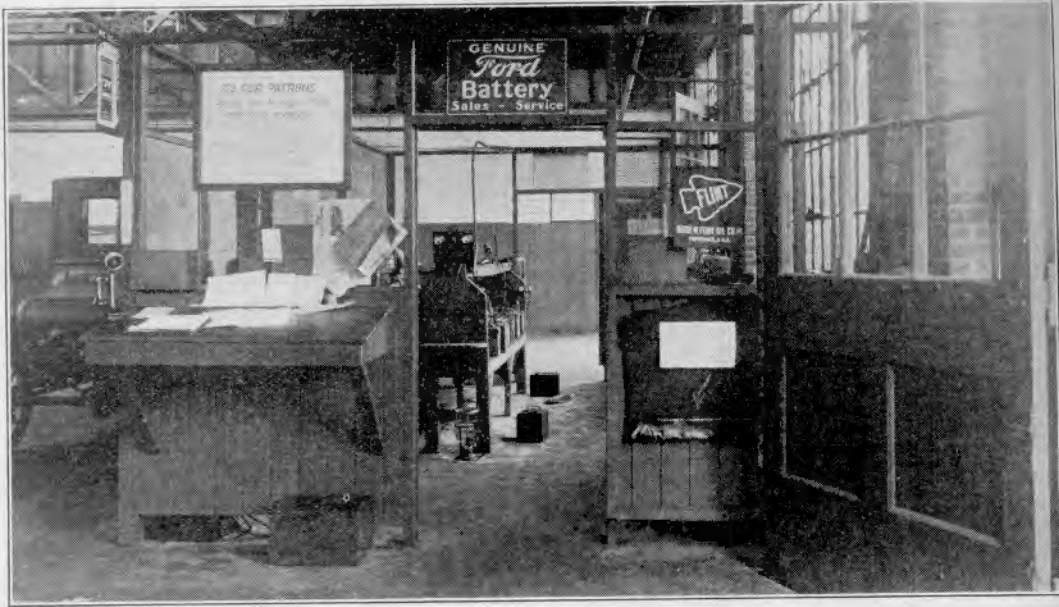
**MOTOR REPORT AND ROAD TEST**

Brake Pistons Rings Main Bearings  
 COMPRESSION No. 1 No. 2 No. 3 No. 4  
 CARBON \_\_\_\_\_  
 VALVES \_\_\_\_\_

All Recommendations made below should be given your careful consideration.

**DUTEE WILCOX FLINT, Inc.** Signature of Mechanic \_\_\_\_\_  
 Service Supt. Sign Here \_\_\_\_\_  
 BRANCH \_\_\_\_\_

*This is the practical Service Check-Up List that aids Car Conditioning.*



*The battery service department is located near the entrance as it is sold to the customers. Note the door upholstery protective sign at right and service slogan to customers over superintendent's desk.*

battery department. It is well equipped. Indefinite free service is given on batteries and as a result of selling the car and truck owner on the service there is little if any battery complaint. This department is profitable.

With the approach of cold weather a drive is on for comfort for the owners and specials are offered in the way of enclosures and other protective methods handled by the top and upholstery department which transacts quite a volume of business annually.

The service station is equipped with modern time and labor saving devices and there is a rail or track for moving heavy parts around the station. There is a washing department and pays in this manner, i.e. the washing of the organization's cars, new and used, involve no expense.

While the mechanics work on a flat rate basis and salary, a check is maintained by the service superintendent, L. M. Harrison and foreman. If a man falls below production a watch record is kept and the case investigated. A reasonable day's work is expected but the station is no place for a time killer.

The service station is unusually clean and the writer has seen quite a number in various parts of this country. The shop janitor cleans under a schedule. His daily schedule is to sweep sidewalks, scrub parts room lobby, sweep garage floor and clean up oil spots, pick up around wall, and wipe off oil tanks. The washroom and toilets are cleaned daily and disinfectant used weekly. The stockroom and service station windows are washed inside and out on Mondays and Thurs-

days, and on Tuesdays and Fridays the machinery is wiped. The janitor is quite a busy man with the other departments. On six days a week he must clean offices and washrooms, and twice daily empty the waste baskets. Twice a week the salesroom floor is swept and washed the other two days. The cars displayed are dusted daily, wiped up and polished once a week. The show room furniture is dusted and cleaned daily and polished once a week. The desks are polished twice a week. The show room windows, a total of 48 panes of glass and not small ones either, are washed inside and out twice a week. This schedule is maintained and is possible. To give some idea of the system in vogue, Mr. Tuthill made watch or time studies before he arranged the schedule. The janitor is quite a busy man, however. Inspection is made by Mr. Tuthill for he is a crank on a clean place, including the service station.

The branch is open from 8 in the morning until 5:30 at night. The clerical staff consists of a combination cashier and switchboard girl, a stenographer, a bookkeeper and an assistant. The cashier is located near a window separating the parts room and cash is always collected. The shop forms and others are conventional, as are the sales charts, quota systems, etc. Tractors are not serviced, however, there being a special tractor department at New Haven.

Mr. Tuthill stages seasonal window and show rooms displays and includes in these a very attractive hunting display, tying up the car with the sport and camp. When he is not putting pep into his organization he does a little hunting



himself. Another favorite outdoor sport is motor boating. Mr. Tuthill can be found at his desk long before the branch opens which, with his merchandising methods, accounts for the success he is making of this Bridgeport branch of the Flint organization.

### To Our Patrons

We are here to render SERVICE.

You May Expect

Courteous treatment; satisfactory work and your car when promised. Should we fail at any time to meet these requirements, we trust you will bring it to our attention.

*S. L. Tuthill, Manager.*

*Why ruin your door upholstery? Let us save it for you in this manner.*

*Now is the time to have your top repaired.*

*Special prices for a short time only.*

*Close up your car for fall and winter.*

*We Do Window Repairing.*

Please Do Not Embarrass Our Manager by Asking for Credit.

All Parts & Repairs Strictly Cash.

### To Our Employees

**YOU** will succeed as an employee of this company in the measure you render satisfactory service to those upon whom we depend for our success—Our Customers.

We have surrounded you with every modern facility and equipment necessary for the proper execution of your respective tasks. There are no restrictions or barriers to prevent you from rendering 100 per cent service and satisfaction.

Always bear in mind that every customer is important. We look upon everyone who enters our business home as a friend and anyone who injures or fails to please our friends cannot remain a member of this organization.

### To Our Patrons

Our employees are required to give prompt and courteous service at all times. If you do not receive it, please report the case immediately to the manager.

#### CARBURETOR ADJUSTMENT

How many thousandths of an inch is the needle valve of the Ford carburetor lowered, when turned down one-quarter turn as recommended by the Ford Motor Company.

The Ford carburetor adjusting needle has 32 threads per inch. Consequently, one turn of the needle valve lowers the point .03125 inch. While one-quarter turn, as recommended by the Ford Motor Company, is but one-fourth of this distance or practically .008 inch.

## If I Were Again A Ford Mechanic



By R. GAGE, Service Department  
Ford Motor Company of Canada

**I**F I were again a Ford mechanic, I would ask my foreman to let me read every copy of the Ford Service Bulletin. Also any magazines (which the firm gets) which have a direct bearing on my work. I would buy some good technical books on automobiles, and spend much of my time digesting information printed therein. I would be continually looking for short-cuts, and for more efficient methods of performing each operation. A wise mechanic learns not alone from his own experience, but from the printed experiences of others.

**AS** a Ford mechanic, I would not make the owner pay for my lack of knowledge, but would investigate every source of information. I would get all the help possible from my fellow employees, when in doubt. I would not hesitate to ask them for helpful information—because I would always be willing to give to the best of my ability when asked. I would try to discover a cause for every effect, and in this way become proficient in the adjusting and repairing of Ford cars.

**AS** a Ford mechanic, I would be proud of my trade. I would keep myself as neat and clean as possible. I would use slip covers on every job where they might be needed to keep customer's cars as clean as possible. I would keep my tools and equipment clean and in good condition. I would take the same care of the tools supplied by the Ford dealer as if they were my own.



## Locomotive Makes a Good Window Display

*W. H. Colson, Parts Manager for Burwell Company Works  
Out Clever Idea*

ONE usually expects to see automobiles displayed in the show windows of automobile dealers, and once in a great while we see a few automobile parts displayed in a symmetrical and regular manner, but it remained for the Burwell Motor Co., Ford dealers of Jacksonville, Fla. to display some of the Ford parts in an entirely different and unique way.

Let Blair Burwell, president of the Company tell it to you in his own way.

"This fellow D. J. Tucker, manager of our parts department said to me one day, 'Boss, you always take up the window space with the latest models, how about the parts department using some of the space to advertise its wares?' I like an employe who has some initiative and ideas of his own, so I said 'sure, go as far as you like'. I had forgotten the conversation when several days later upon arriving at my office I was surprised to find a fair sized locomotive about 6 feet long and 2½ ft high, sitting up in the window. Inquiry developed that Tucker had taken me at my word and had arranged a display of some Ford parts in a way entirely foreign to the orthodox way. The locomotive is made up entirely of Ford parts as may readily be recognized by anyone half way familiar with this brand of automobile. The display has attracted worlds of attention from passersby. We took advantage of

the display to tie it up with a few of the late models placed in the background. The airship hung above the locomotive is made entirely of Ford parts, but was not an original idea, the information for putting it together having been gotten from a magazine recently. A small electric motor is installed in the airplane and keeps the propeller revolving at a rapid rate."

The parts used in making up this locomotive are as follows:

|    |                 |    |                     |
|----|-----------------|----|---------------------|
| 2  | 5158            | 2  | 3021R               |
| 6  | 2815            | 4  | 3311                |
| 4  | 4830C old style | 2  | 3331                |
| 18 | 1117            | 4  | 3332                |
| 3  | 3327B           | 2  | S-709B              |
| 3  | 3006            | 2  | 2741                |
| 1  | 3380            | 2  | 3074                |
| 1  | 3021R           | 2  | 2584B               |
| 1  | 1116            | 2  | 2584D               |
| 1  | 2819            | 4  | ¾ths flat washers   |
| 1  | 2596            | 10 | 4074B               |
| 1  | 7669X           | 12 | 4073B               |
| 1  | 4056B           | 14 | 3277                |
| 1  | 4057B           | 6  | 3083                |
| 1  | 2900C           | 1  | ½-in. Little Giant  |
| 1  | 2909            |    | anti-rattler spring |
| 4  | 3024            | 2  | 2514B               |
| 20 | 3007            | 4  | 3066B               |
| 1  | 3944            |    |                     |

# LINCOLN · REPAIRING

## HOME · STUDY · COURSE

### Clutch and Transmission Adjustments

#### *Lesson IV — With Questions*

By ED. TECHNICAL



**T**HE clutch and transmission are both enclosed in an aluminum housing, bolted to the crank case back of the fly wheel. All moving parts of the transmission and clutch are fabricated with the necessary care, so that the mechanism is practically noiseless and the engagement of the clutch is remarkably smooth.

The transmission unit may be removed, without disturbing the engine, as follows:

Disconnect brake pull rods from levers on transmission case.

Disconnect speedometer (flexible) drive shaft at gear housing.

Remove nuts from six studs on rear of flange at front end of speedometer gear housing at front end of torque tube.

Disconnect all three brake pull rods at rear axle.

Jack up or suspend rear end of car to relieve the tension on the springs.

Remove the lower spring eye shackle bolts from both ends of both rear springs.

The axle can now be rolled back sufficiently (approximately 3 inches) to remove the transmission, or the axle may be completely removed from under the car.

#### The Clutch

**T**HE clutch is a multiple disc dry-plate, and requires no lubrication of any kind. There are fifteen steel discs. Seven discs, known as the driving discs, have facing of friction fabric attached to each side. They alternate with the other eight discs of saw-blade steel, known as the driven discs.

The driving discs have teeth on the outer diameter, meshing with and sliding in the internal teeth in the clutch driving ring, which is bolted to the fly wheel.

The driven discs have teeth on the inner diameter, meshing with and sliding on corresponding teeth on the clutch shaft driver. When the clutch is engaged, a heavy coil spring slides and firmly compresses the two sets of discs together, so that the power from the engine is carried through into the transmission. The pressure which the spring exerts on the two sets of discs, is released

when the clutch pedal is pushed forward, and the driving discs continue to revolve with the fly wheel. The driven discs, which are in effect integral with the transmission gearing, remain stationary with the gear shift lever in neutral.

#### Adjustment of Clutch Pedal

**D**O not habitually rest the foot on the clutch pedal while driving. Although unnoticed, this may cause the clutch to slip and needlessly wear the facing on the discs.

The pedal is adjusted at the factory, and should need no further adjustment until the disc facings have worn so that, although the clutch pedal will return to normal position, the discs are prevented from fully engaging. This condition causes slippage and rapid wear.

To determine whether this condition exists, press the clutch pedal. It should have a decidedly appreciable movement, before it starts to disengage the clutch. The point at which the clutch begins to disengage can be determined by removing the clutch housing over (19) on the top of the transmission case and noting when the clutch bearing fork (29) on the clutch pedal shaft engages the clutch release bearing (17) at the rear of the clutch spring spider (20).

If no free motion exists at this point, or if the fork clutch release (29) rests against the clutch release bearing (17), adjustment is necessary and should be made. This condition may be compensated for by the adjusting nut located between the forked end of the clutch pedal under the front floor boards, on the left side of the transmission case. The nut should be screwed up (anti-clockwise) one-half revolution at a time, until the clutch pedal will move forward approximately one inch, at the foot pad, before commencing to release the clutch.

#### Clutch Release Bearing

When the clutch pedal is pushed down, the clutch release fork (29) presses on the release bearing (17) and compresses the clutch spring (25). This release bearing will require occasional lubricating, with the pressure gun in the tool kit. Use gear lubricant every 2,000 miles.

## Transmission

### General Description and Operation:

The Lincoln transmission is of the selective sliding gear type, providing for three speeds forward and one reverse. The gear changes are accomplished by the movement of the gear shift lever at the driver's right.

Two shafts function in transmitting the power through the transmission unit: The transmission drive shaft (13) and the countershaft (33). The clutch shaft (23), projects into the transmission and transmits the power to it.

The upper shaft (13) is called the transmission drive shaft. The lower shaft (33) is the countershaft and with it revolve all four gears (32), (34), (35) and (37). Nos. (34), (35) and (37) are forged as a single unit, No. (32) being riveted securely to a flange is part of this forging. The transmission drive shaft (13) is splined to carry the two sliding gears (11) and (14). This shaft and clutch shaft (23) form the direct drive or power connection from the clutch to the propeller shaft which drives the rear axle.

The shaft (23) which is rotated by the clutch is called the clutch shaft. Gear teeth are cut integral on the large end of the clutch shaft, which is supported by the annular bearings (16) and (24). Number (24) bearing is mounted in the crank shaft. When the clutch is engaged, the clutch shaft revolves with the crank shaft, and the bearing (24) is inoperative. This bearing only functions when the clutch is released.

The cut shows the gears in the neutral position. The driving gear (15), which is integral with the clutch shaft (23), is constantly in mesh with the countershaft gear (33), thus rotating the countershaft gears Nos. (33), (34), (35) and (37) when the clutch is engaged.

When the car is at rest with the engine running, the clutch engaged, and the gear shift lever in neutral position, all gears are in motion excepting the first and second speed gears (11) and (14) which are a sliding fit upon the splined transmission drive shaft (13). No power can be transmitted to the propeller shaft and rear axle until either one of these gears (11) or (14) is meshed with one of the gears on the revolving counter shaft — or gear (14) shifted into mesh with clutch shaft gear (15), thereby caus-

ing the transmission drive shaft (13) to be rotated at engine speed.

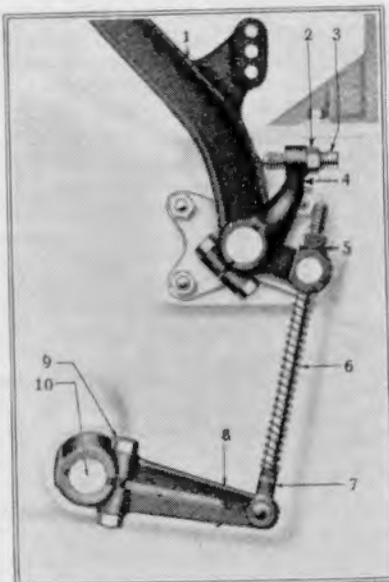
## Change Speed Action

**LOW SPEED.** Moving the gear shift lever into first or low speed position, causes the low and reverse speed gear (11) to slide forward on the transmission drive shaft (13), and engage with the first speed counter shaft gear (35). When the clutch is engaged, the car will move forward through the lowest transmission gear ratio. Power is transmitted to the rear axle through the constant mesh gears (15) and (32), and the first speed and low speed gears (35) and (11). Gear (14) is mounted on transmission drive shaft (13) which, as a consequence, is revolved and transmits power through the propeller shaft to the rear axle.

**SECOND SPEED.** Or intermediate speed, is achieved by the high and second speed sliding gear (14) being moved backward on shaft (13) and engaging with the second speed countershaft gear (34). When the clutch is engaged, the car will move forward through the second gear ratio. Power is transmitted to the propeller shaft and thence to the rear axle through the constant mesh gears (15 and 32) and the second speed gears (34) and (14). Gear (17) being mounted on shaft (16), transmits power as previously described.

**THIRD SPEED OR HIGH SPEED.** High speed or direct drive is achieved by high and second speed gear (14) being moved forward on the shaft (13), and engaging its *internal* teeth with the teeth on the end of the clutch shaft (15). When the clutch is engaged, the rear axle now has a direct power connection with the engine. There being no gearing interposed, the power is transmitted directly through the shafts

(Continued on Page 94)



### Clutch Pedal Adjustment

| Reference Number | Name of Part                                   |
|------------------|--|
| 1.               | Clutch pedal.                                  |
| 2.               | Lock nut for pedal adjusting screw.            |
| 3.               | Clutch pedal release stop arm adjusting screw. |
| 4.               | Clutch pedal release stop arm.                 |
| 5.               | Clutch pedal adjusting nut.                    |
| 6.               | Clutch pedal release rod spring.               |
| 7.               | Clutch pedal release rod.                      |
| 8.               | Clutch release shaft arm.                      |
| 9.               | Clutch release shaft arm clamp bolt.           |
| 10.              | Clutch release fork shaft.                     |

Clutch Pedal Adjustment

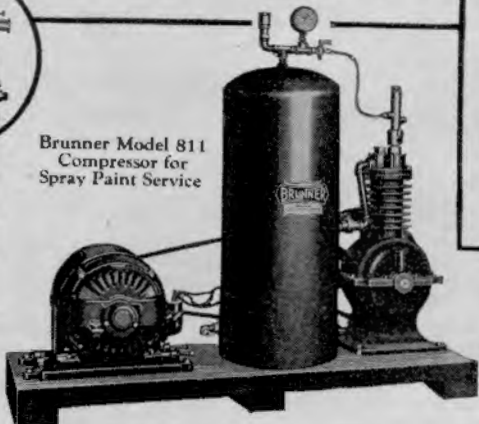
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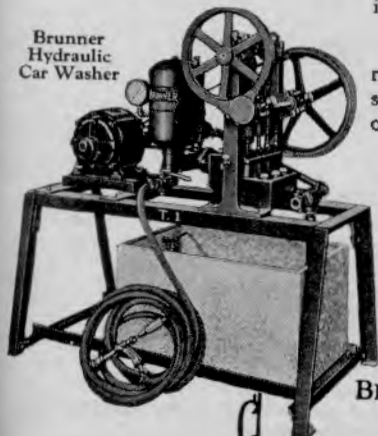


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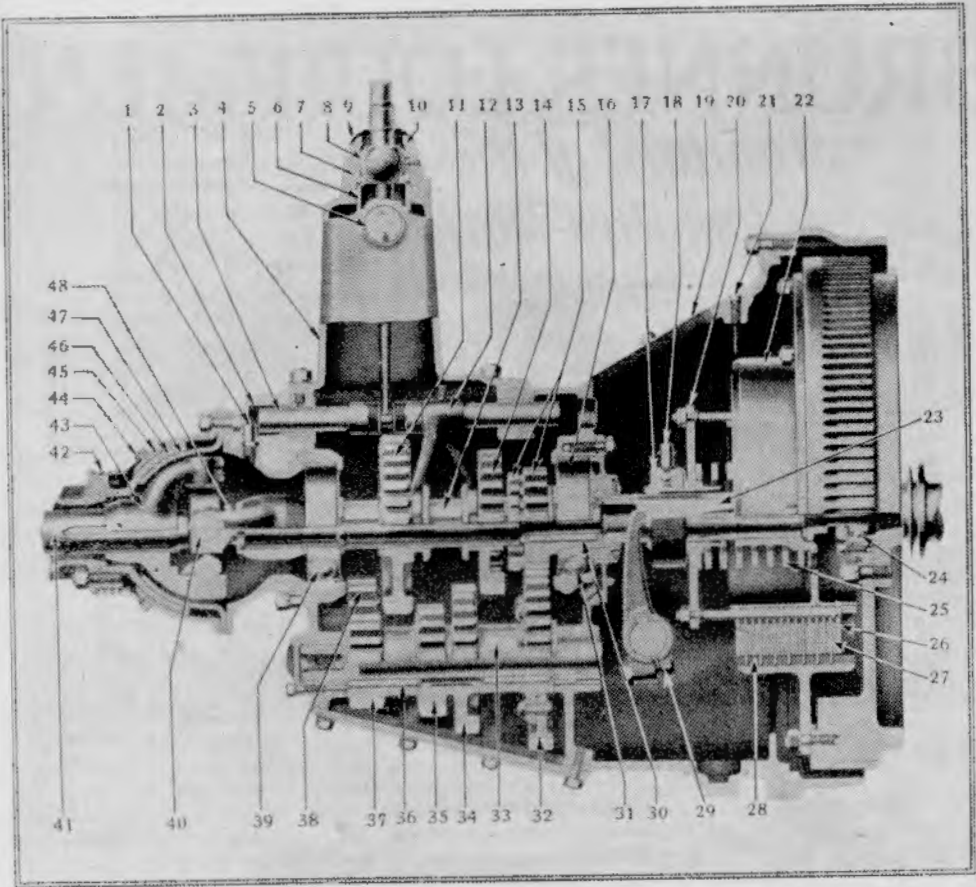
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## *Clutch and Transmission Assembly*

| Reference Number | Name of Part   | Reference Number | Name of Part   |
|------------------|--|------------------|--|
| 1.               | Lubricator connection.   | 26.              | Clutch driven spider.  |
| 2.               | Shift bar dust cap—rear.   | 27.              | Clutch driving disc.   |
| 3.               | High and intermediate speed shifter shaft and low and reverse speed shifter shaft. | 28.              | Clutch disc.   |
| 4.               | Gear shift lever housing.  | 29.              | Clutch release fork.   |
| 5.               | Transmission neutral lock (misplaced).   | 30.              | Transmission drive shaft pilot bearing.                            |
| 6.               | Gear shift lever ball adjusting nut.   | 31.              | Clutch shaft and high speed gear bearing (rear).                   |
| 7.               | Gear lever ball seat cover.  | 32.              | Transmission countershaft constant mesh gear.                      |
| 8.               | Gear shift lever ball.   | 33.              | Countershaft.  |
| 9.               | Gear shift lever cap.  | 34.              | Countershaft second speed gear.                                    |
| 10.              | Gear shift lever ball seat—upper.  | 35.              | Countershaft first speed gear.                                     |
| 11.              | Low and reverse speed sliding gear.  | 36.              | Countershaft gear bearing.   |
| 12.              | Gear shifter fork.   | 37.              | Countershaft reverse gear.   |
| 13.              | Transmission drive shaft.  | 38.              | Reverse idler gear.  |
| 14.              | High and second speed sliding gear.  | 39.              | Transmission drive shaft rear bearing.                             |
| 15.              | Clutch shaft and high speed gear (integral).                                       | 40.              | Universal joint center cross.                                      |
| 16.              | Clutch shaft and high speed gear bearings (rear).                                  | 41.              | Propeller shaft.   |
| 17.              | Clutch release bearing.  | 42.              | Torque tube ball and socket joint lubricant retainer spring.       |
| 18.              | Lubricator connection.   | 43.              | Universal joint assembly.  |
| 19.              | Clutch cover.  | 44.              | Torque tube ball and socket joint lubricant retainer packing felt. |
| 20.              | Clutch spring spider.  | 45.              | Torque tube ball and socket joint cup—outer.                       |
| 21.              | Indicator for engine timing marks on clutch driving ring.                          | 46.              | Torque tube ball and socket joint cup—center.                      |
| 22.              | Clutch driving ring.   | 47.              | Torque tube ball and socket joint cup—inner.                       |
| 23.              | Clutch shaft and high speed gear.  | 48.              | Universal joint yoke. (front).                                     |
| 24.              | Clutch shaft and high speed gear bearing (front).                                  |                  |  |
| 25.              | Clutch spring (main).  |                  |  |



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**STEVENS-WALDEN-WORCESTER**

(23) and (13), which revolve at engine speed and transmit power as described above.

**REVERSE.** This is obtained by moving the gear shift lever into reverse position. This causes the low and reverse speed sliding gear (11) to move backward on shaft (13), and engage with reverse gear (38); which is in line with and is always running in constant mesh with gear (37), through the constant mesh gears (15) and (32).

This reverses the direction of the transmission shaft drive shaft (13) and, when the clutch is engaged, the car will move backward through the reverse gearing. Power is transmitted to the propeller shaft and thus to the rear axle through the constant mesh gears (15) and (32), the sliding gear (11) and the reverse gear (38). Gear (11) being mounted on shaft (13) transmits the power as previously described.

### Gear Shifting

**T**HE clutch must always be disengaged when shifting gears. Because, when meshing, the gears must be free to rotate at the same speed.

If the gears to be meshed are both revolving at the same *peripheral* speed, the shifting operation will be practically noiseless. The more closely this ideal condition is approached, the more quietly will gear shifting be accomplished. This explains why it is advisable to pause for an instant in the neutral position when shifting from low to intermediate. It also explains why the method previously given for shifting from

high to intermediate will, if followed, result in a practically noiseless shift.

### Cleaning the Transmission

**A**BOUT once every 5,000 miles, the gear lubricant should be drained from the transmission, and the interior of the case thoroughly flushed with kerosene and refilled with four pints of fresh gear lubricant. The drain plug is located in the gear compartment cover on the bottom of the transmission case. The filler hole is located on the right side of the case at the proper lubricant level.

### Universal Joint

**T**HERE is but one universal joint (40), (43), and (48). It is attached to the rear end of the transmission drive shaft (13). It is enclosed by a spherical housing bolted to the rear of the transmission case. This housing takes the axle torque and the drive, leaving the universal free to transmit the power to the rear axle. The spherical housing is filled with gear lubricant at the factory for lubricating the universal and speedometer driving gears, and may perhaps, require the addition of one-half pint of transmission lubricant at the end of each 5,000 miles. Lubrication is effected through the lubricator connection (1) located on the top side of the forward half of the spherical housing. Use the lubricator gun furnished in the tool kit. Use gear lubricant, NEVER use cup grease.

## Questions on Lincoln Clutch and Transmission

1. Can the transmission be removed without disturbing the engine? If so, list parts which must be disconnected. Is it necessary to pull back rear axle? If so, how far?
2. What type of clutch is used in Lincoln? Does it run in oil? Why not?
3. How many discs has the Lincoln clutch? Which discs are faced with lining? Why are they the ones faced with lining?
4. What makes it necessary to adjust the clutch pedal? How is the need determined? How much should clutch pedal move forward, at the foot pad, before commencing to release the clutch?
5. How often should the clutch release bearing be lubricated? How is this done?
6. Trace the path of the power drive when in low gear. When in intermediate gear. When in high gear. When in reverse.
7. Why must clutch be always disengaged when shifting gear?
8. Should gears to be meshed be revolving at the same revolutions per minute? What do we mean by peripheral speed?
9. How often should the transmission be cleaned? How is this done? How much gear lubricant should be used? How do we know when there is enough lubricant in the transmission?
10. What does the universal joint do? How often should it be lubricated? How is this done? What kinds of lubricant should and should not be used?



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T-304—Transmission Driven Gear Puller. Even when the gear is frozen it must yield to this powerful puller. Price, \$3.00.

T-301—Transmission Clutch Drum Puller. Gets a non-slip hold on the drum. Swivel "cup" on screw prevents slipping. Price, \$4.50.

T-155—Axle Shaft Sleeve Puller. Removes the most stubborn sleeve, even with axle shaft in place. Serves as an Insert when reversing operation. Price, \$7.00. T-156—Sleeve Tongs, \$2.00.

T-284—Puller for Ford Universal Joint. Shears the pin that holds the joint and drive shaft. Quickly applied to lower end of shaft. Price, \$3.00.

T-122—Puller for Drive Shaft Sleeve No. 2596. Performs this difficult operation swiftly. Price, \$6.50. Driver for same, \$2.00. Puller and Driver, \$8.00.

T-231—Extractor for Drive Shaft Bushing No. 2581. Spring-acting jaws grip lower edge of bushing securely and the big handle does the rest. Price, Ford Car, \$3.50. Ford Ton Truck, \$4.00.

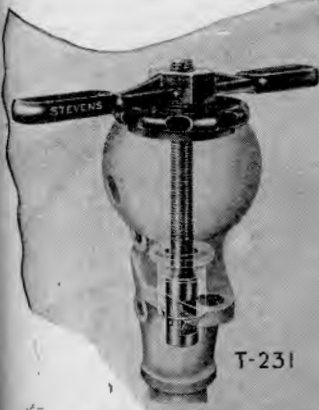
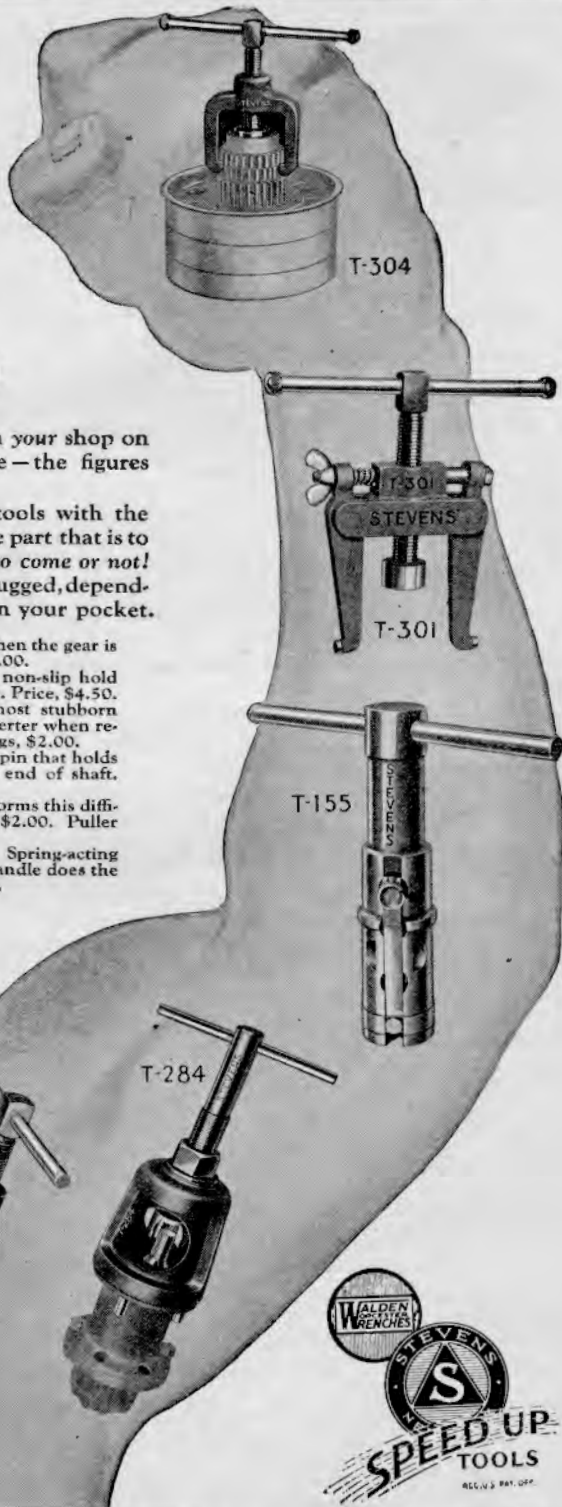
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# You Can Build a Slip-on Body for a Roadster

Some Helpful Suggestions for Dealers and Mechanics Who Have a Knack for Building Things

By MURRAY FAINESTOCK

will be required, which may be either finished or rough:

## Carpentry Work

FORD dealers sometimes require slip-on bodies for their own service cars. Other repairshops may find it advisable to have their mechanics build a few slip-on bodies during the winter months, when business is slack, for sale to car buyers in the spring. Even if such slip-on bodies are not given as fine a finish as the bodies made by wagon makers, the bodies may be sold to prospects who require strong and sturdy slip-on bodies for rough work.

These slip-on bodies can be used mounted, with a few slight modifications, on the trailer chassis, which was described in an article on **YOU CAN BUILD A TRAILER**, recently published in this magazine.

These plans have been carefully worked out and, as all the necessary body irons, forged to shape, and neatly packed in a box, can be purchased from a company whose name and address will be gladly furnished on request; the workmanship required for building this body is easy for any Ford mechanic.

Since the workmanship, the body irons, and the design are good it will pay to build a first class job by using good lumber. While good lumber costs money, we want this to be a substantial body in which we can take enduring pride.

The plans call for a body having inside dimensions of approximately 4 feet 4 inches long, by 2 feet and 10 $\frac{1}{4}$  inches wide. The following boards

AFTER the wood, as given on the lumber material list, has been secured and cut to the exact sizes given, proceed as follows: Care, of course, must be taken to saw all boards true and square, because careless sawing will show up badly in the finished body.

Make 45 degree cuts, and then round the ends of the rear sill (h) as shown in the sketch. Drill a  $\frac{1}{2}$  inch hole in each end, the center-to-center distance between these two holes being 3 feet, 5 $\frac{1}{2}$  inches.

Now place front and middle sills (g) and the rear sill (h) upon the floor, and place bottom boards (a) upon the sills. Take care that the assembly is perfectly square and true. Attach each board to each sill with two screws, spaced diagonally as shown in the sketch. If hardwood is used, it is advisable to use an electric drill to drill small holes for the screws, to speed up the work and prevent splitting of the wood.

We are now ready to prepare the inside bracing blocks (f) for the front corners. This is done by drilling  $\frac{1}{4}$  inch holes, as shown in the sketch. The outer holes are 6 $\frac{1}{2}$  inch center-to-center distance from each other. While the inner holes (drilled at right angles with the other two holes) are spaced on a center-to-center distance of 5 $\frac{7}{8}$  inches. Mark the side of the bracing block (having the holes closer together) with a double cross (xx).

Place bracing blocks (f) upon side board (b), putting side xx, (which is the side with holes spaced

## Lumber to Be Purchased

(Sizes given are for finished lumber)

- Mark a, Six 6 in. x  $\frac{7}{8}$  in. x 4 ft. 5 in. long for Bottom.
- Mark b, Two 8 in. x  $\frac{7}{8}$  in. x 4 ft. 7 in. long for Sides.
- Mark c, One 8 in. x  $\frac{7}{8}$  in. x 2 ft. 10 $\frac{3}{4}$  in. long for Front.
- Mark d, One 10 $\frac{1}{4}$  in. x  $\frac{7}{8}$  in. x 3 ft.  $\frac{1}{4}$  inch long for Tail Gate.
- Mark e, Two 5 in. x  $\frac{7}{8}$  in. x 4 ft. 2 inch long for Flare Boards.
- Mark f, Two 1 $\frac{3}{4}$  in. x 1 $\frac{3}{4}$  in. x 8 inch Blocks, for inside braces of front corners.
- Mark g, Two 3 $\frac{1}{2}$  in. x 1 in. x 3 ft.  $\frac{1}{4}$  in. Bottom Cross Sills (front and middle).
- Mark h, One 3 $\frac{1}{2}$  in. x 1 $\frac{1}{4}$  in. x 3 ft. 8 $\frac{1}{4}$  inch Bottom Cross Sill (rear)



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and many cans of KANT-RUST*

The Pint-Size With Long Spout.  
For general use, on farms and in home garages for automobile springs and underbody lubrication. Fits the new gun. Sells at \$1.00.



The Handy 3-ounce Can

Much in demand for home use for lubricating anything from clocks to lawn mowers.



Kant-Rust is also sold in 5, 10 and 25 gallon drums and in gallon cans.

### What Kant-Rust Is

Kant-Rust is scientifically made to have extreme penetrating qualities. It contains (colloidal) graphite made by a patented electrical process. Kant-Rust graphite is free from grit and other impurities and so fine it stays in suspension. (It never settles.) Because of this the graphite penetrates into the inaccessible places.

Here is a new lubricating gun that is as easy to sell as gasoline or oil—simply because it does a necessary thing easier, quicker and better.

The new Kant-Rust Gun operates like this: A pint can of Kant-Rust Penetrating Graphite Lubricant is screwed into the gun. Then three or four strokes of the easy hand pump creates sufficient air pressure to **throw a steady stream of Kant-Rust a distance of five or six feet for a full minute.** A patented feature of the new Kant-Rust Gun is its automatic shut-off. The stream is stopped at any time simply by turning the gun over so that the can is upside-down.

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The price of this gun is only \$1.25. But even at this low price it gives you a fine profit. In addition it will produce an infinitely greater number of sales of the pint-size Kant-Rust. This gun means that customers will use Kant-Rust more than ever.

Kant-Rust is the original and only penetrating lubricant that carries pure graphite in suspension. Penetrates anywhere, forming a rust-resisting, friction-proof surface. Removes all squeaks instantly. Loosens rusted bolts and nuts.

Write today or ask your jobber for prices and discounts. You'll find Kant-Rust a mighty profitable line. You should learn about the money-making possibilities of Kant-Rust Underbody Lubrication Service, too.

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# KANT-RUST

(Trade Mark)

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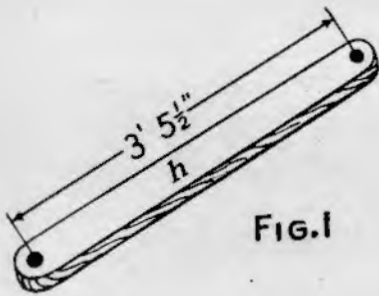


FIG. 1

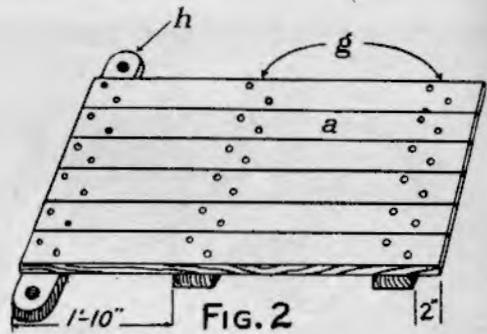


FIG. 2

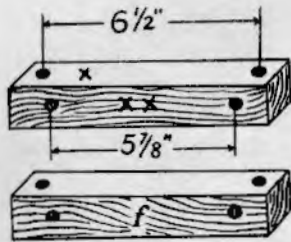


FIG. 3

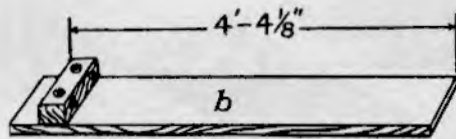


FIG. 4

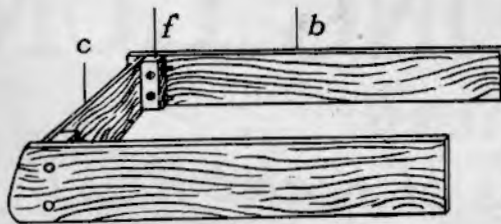


FIG. 5

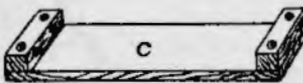


FIG. 6

#### Lumber Sizes for Slip-on Body

5/8 inch apart) next to the side board. The distance from the end of the side board to the farther side of the bracing block should be just 4 feet 4 7/8 inches. Now drill holes in side board to match holes in bracing block (f).

Now reverse bracing block (f), placing the side x (which is the side with holes spaced 6 1/2 inch apart) next to front board (c). Drill holes in front board to match blocks (f), after which bolt blocks (f) to the front board (c), as shown in sketch. Use 1/4 inch by 2 1/2 inch bolts, placing washers next to block under nuts.

Stand the side boards (b) and the front board (c) on edge. Bolt them together, with 1/4 inch by 2 1/2 inch bolts, using washers under the nuts as shown in the sketch.

Place the completed bottom, as shown in sketch, upon the side boards, and attach with flat head wood screws around the edges. Countersink the wood if necessary to fit screw heads flush with surface of the wood.

#### Body Hardware Furnished

Each package of body iron hardware contains all necessary fittings for building a slip-on body,

including following parts:

- Mark A, 2 Tail Gate Hooks
- Mark B, 2 Tail Gate Eyes
- Mark C, 2 Long Hinges
- Mark D, 2 Short Hinges
- Mark E, 2 Rear Braces (outside)
- Mark F, 2 Rear Braces (inside)
- Mark G, 4 Flare Irons (bent)
- Mark H, 2 Bushings for Gate Hooks

#### Ready for Body Irons

MUCH of the strength of this slip-on body depends on the body irons. The woodwork holds the luggage, while the body irons are the substantial means of holding the woodwork together. For bolts used in attaching these body irons, follow the list as given in our bill of materials. Since the carpentry work has been completed, we are now ready to fit the body irons.

Proceed by laying flare irons (G) on body, as shown in the assembly drawing. Drill 1/4 inch holes from irons through woodwork and bolt irons to body.

After attaching the flare irons (G) place the

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### List of Bolts, Screws and Washers

- Two,  $\frac{1}{4}$  in. x  $2\frac{3}{4}$  in. Machine Bolts for Hinge.  
 Two,  $\frac{1}{4}$  in. x  $2\frac{3}{4}$  in. Machine Bolts for Hook.  
 Two,  $\frac{1}{4}$  in. x  $1\frac{1}{2}$  in. Carriage Bolts for rear Inside Braces.  
 Twenty,  $\frac{1}{4}$  in. x  $1\frac{1}{2}$  in. Carriage Bolts for Flare Irons.  
 Four,  $\frac{1}{4}$  in. x  $1\frac{1}{2}$  in. Carriage Bolts for Tail Gate Eyes.  
 Six,  $\frac{1}{4}$  in. x  $1\frac{1}{2}$  in. Carriage Bolts for Long Hinges.  
 Eight,  $\frac{1}{4}$  in. x  $2\frac{1}{2}$  in. Carriage Bolts for Front Corner Blocks.  
 Six,  $\frac{1}{4}$  in. x  $2\frac{3}{4}$  in. Carriage Bolts for Short Hinges and Rear Inside Braces.  
 Four,  $\frac{3}{8}$  in. x 3 in. Carriage Bolts for Complete Body to Frame.  
 Sixty,  $1\frac{1}{2}$  in. x No. 12 Screws, for bottom to side board, for beam to bottom board, and front board to bottom.  
 Two,  $\frac{3}{8}$  in. Washers for Hooks.  
 Eight,  $\frac{1}{4}$  in. Washers for Front Corner Bracing Blocks.

flare boards (e) upon them, and drill bolt holes to match irons, and attach boards to irons.

Place tail gate in position and mark to exact width of outside of body, and saw to length. Lay long hinges (C) on tail gate board, and locate on each side of center as shown. Drill holes and bolt hinges to board.

Attach short hinges (D) to the long hinges (C) with hinge bolts. After placing tail gate in position, place short hinges against bottom of rear sill, mark holes for short hinges, and drill. Then bolt short hinges to body.

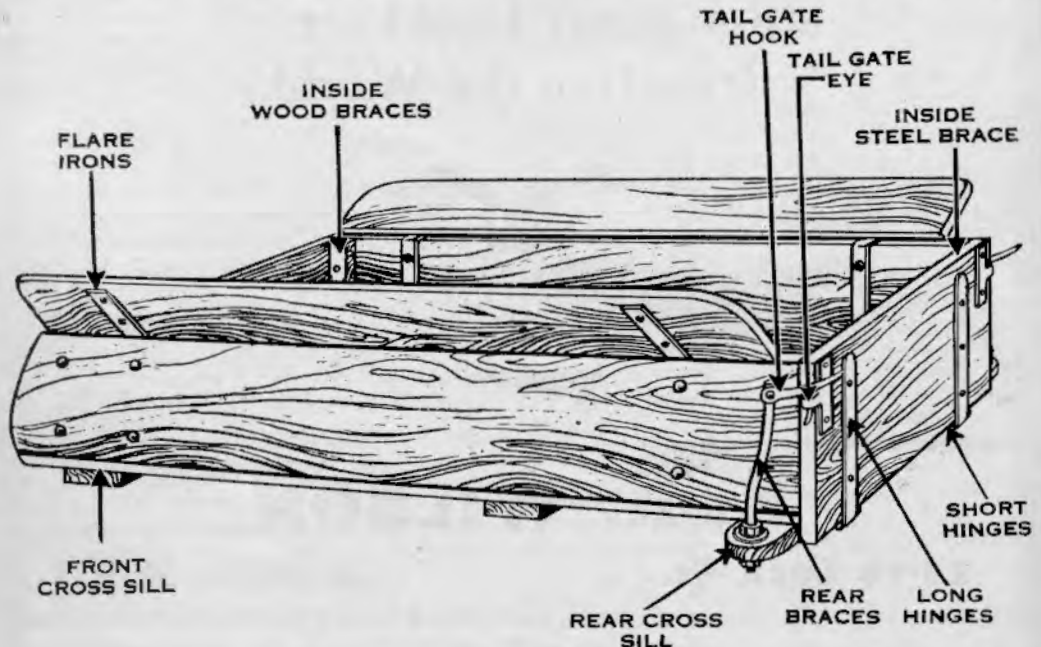
Now with the tail gate closed, proceed to locate hole for bolt which holds rear braces, and upon which tail gate hook swings. To do this, hold eye (B) against outside of tail gate, placing hook (A) against outside of body, being sure that it works freely in eye. Raise or lower hook,

and place rear inside brace (F) in such a position that the hole in hook will match top hole in rear inside brace (F). Mark, and drill hole at this point.

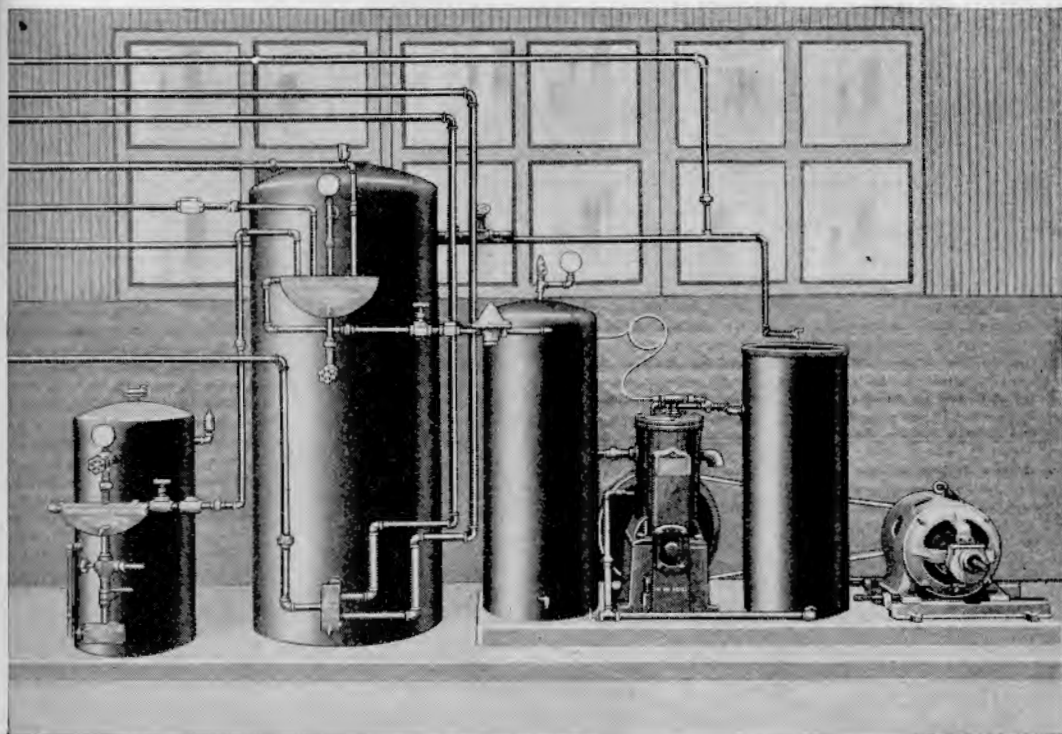
To locate remaining holes for rear inside braces (F), place a bolt temporarily through the hole just drilled, running it through top hole of inside brace. Mark, and drill remaining two holes for rear inside brace, bolting brace to body, leaving top hole open.

Remove lower nut and washer on rear outside brace (E). Set in place without tightening nuts. After placing  $\frac{3}{8}$  inch washer and hook with bushing upon hook bolt, run this bolt through hole in outside brace (E). Then through body and inside brace (F). Place nut on inside and tighten. Now tighten nuts on rear outside braces (E).

With tail gate closed, place eye (B) in posi-



*Names of Component Parts of the Slip-on Body*



## Now "Cleaning Up" in 42 States!

A successful Car Washing Business and the Auto-Laundry System are synonymous. Owners in 42 States are "Cleaning up" \$50 and more a day with the Auto-Laundry Machine—the original atomization and mist system—not pressure or steam. Cleans a car in less than 15 minutes at an operating cost of less than 6 cents a car. Needs no mechanical experience to install or operate.

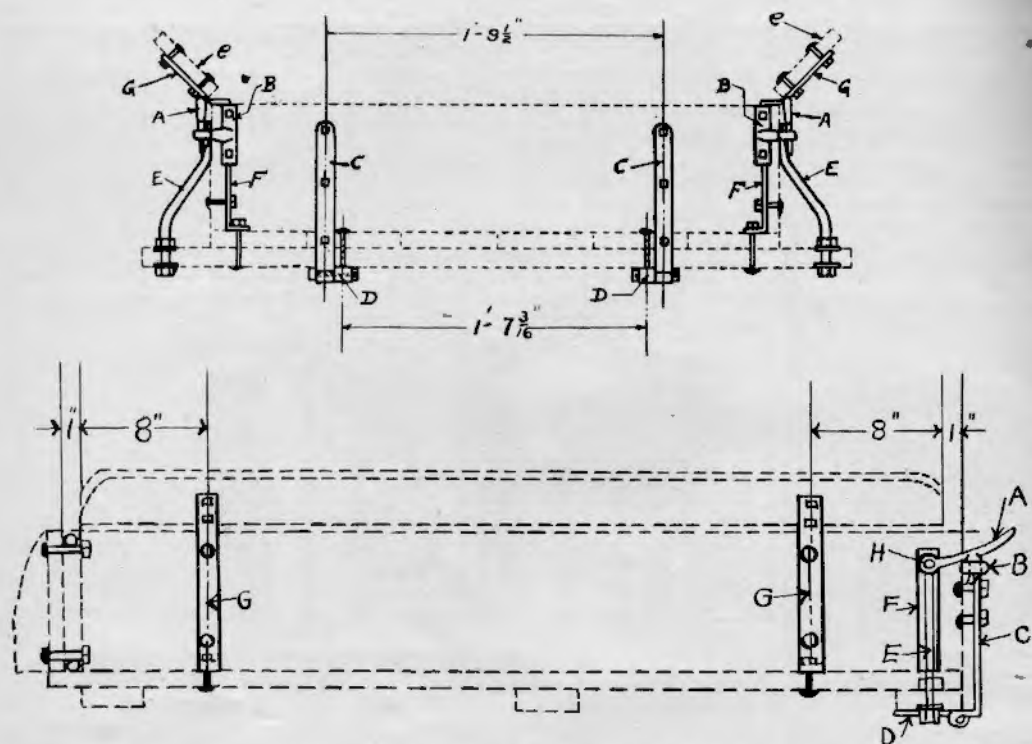
As far as we know, the Auto-Laundry Machine is the only mechanical car washing unit that can offer proof of profitable operation over a period of years from hundreds of satisfied owners. Some of the largest corporations in the country who combed the market for the most efficient car washing machine to clean their automotive equipment, installed an Auto-Laundry System Machine. This machine is ready to operate when you set it up, without buying an endless chain of extras.

Write for Illustrated Circular and Terms today and Letters from Purchasers showing what they think of this machine.

Machine Complete—No Extras—f. o. b. St. Louis, Model A—\$990.00, Model B—\$796.50, Model C—\$643.50. All machines have two or more wash guns; blow-out gun, kerosene gun and unit.

(\*Auto Laundry" Reg. U. S. Pat. Off.)

**Auto-Laundry System Co.**  
5764 Delmar Blvd. St. Louis, Mo.  
Member St. Louis Chamber of Commerce



Assembly Drawings of Complete Slip-on Body

tion, so hook (A) works freely. Drill holes for eye (B) in tail gate, bolting same in position.

Now place completed body upon Ford chassis frame and mark the body to match holes in

frame. Drill body with  $\frac{3}{8}$  inch drill, after which bolt completed body to chassis frame with the  $\frac{3}{8}$  inch by 3 inch bolts furnished with the set of body irons.

## Goes Out After Service Work

**A**NOTHER go-getting dealership is the Fries-Malwitz Motor Co. Inc., of Chicago, Ill. They are prompt to act on every possibility of more business. This was evidenced when, after a national magazine had published an article regarding the automobile situation in which it did not present facts when referring to Ford

production, these dealers sent out cards which gave the real truth and offset any false impression resulting from the article.

The latest direct mail idea of the Fries-Malwitz Co., is the issuance of the following letter to service prospects:

We hope you will remember us when your Ford car needs repairs or adjustments again.

You favored us with your repair order a few months ago and we thought you might want (before cold weather comes) to have your car put into good condition to run through the winter.

We are also anxious to have you bring your car in soon to have the magneto tested FREE with the new Magneto Tester and Charger we recently installed.

On September 27 we adopted a new plan in our shop by which we will give you QUICKER and BETTER service than before.

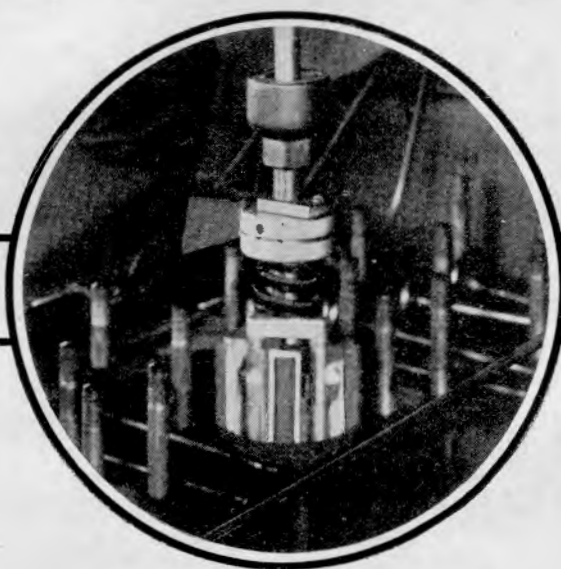
If you can tell us how we can improve our service to you we will appreciate your advice.

Yours truly,

FRIES-MALWITZ MOTOR CO., INC.



# Make a



# Profit

**W**HY send those cylinder reconditioning jobs out of your shop? Why not make the regrinders' profit on labor and parts for yourself?

Ninety per cent of the cylinder reconditioning jobs that come to your shop can be done quickly and easily with the new Model X

**HALL** 2 Hones in 1 **HONE**

**\$35**

Any mechanic who can grind valves can do a honing job satisfactorily and at more profit than on any other motor operation.

The Model X Hall Hone is the fastest cutting cylinder reconditioning tool made, yet is so accurate that the operator can tell from the "feel" or the sound of the drill speed when

the cylinder is sized within one-half thousandth.

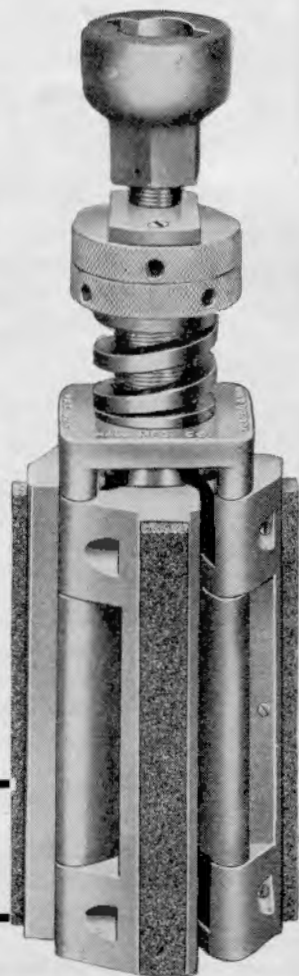
Absolutely rigid and perfectly parallel under either solid or spring pressure. Impossible to finish a cylinder out of round or parallel. Pressure can be changed with a turn of the wrist without removing drill from the Hone or the Hone from the cylinder.

#### ASK YOUR JOBBER

for the new Model X Hall Hone,—the factory approved tool. Then sell your trade complete reconditioning at less cost and complete satisfaction to them and more profit to yourself.

## The Hall Mfg. Company

1622 Woodland Avenue, Toledo, Ohio



*Order thru your Jobber today or write for illustrated circular.*



# MECHANICS

## *Can You Answer These Questions?*



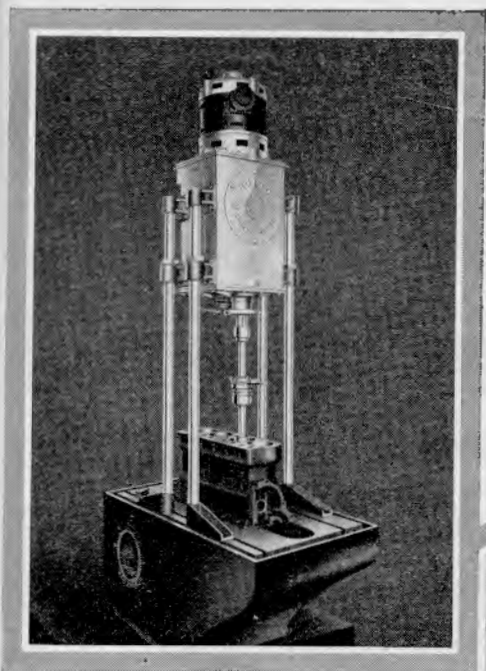
By MURRAY FAHNESTOCK

*The Twelfth of a Series of Questions-and-Answers Forming a Home-Study Course for Ford Mechanics*

The answers to these Questions will be published in February,

### *Questions for January*

1. What is a magneto? What is the difference between a magneto and a generator?
2. What are the advantages of using a Ford magneto in preference to a battery?
3. What type is the Ford magneto? What kind of current does it generate?
4. Are there any moving contacts in the Ford magneto?
5. What are the principal parts of the Ford magneto?
6. Why does a permanent magnet retain its magnetism?
7. How many magnets on the Ford flywheel? How are they placed with relation to each other on the fly wheel?
8. How many coils on the Ford magneto coil assembly? Why?
9. How many turns on the magneto coils? What is the shape of the wire and why? What is the size of the wire?
10. What is the shape of the coils on the Ford magneto? Why are they of this shape?
11. How are the coils of the Ford magneto connected?
12. What is a high-tension current? Low-tension current? Voltage? Amperage? Direct current? Alternating current?
13. What are the advantages of having the Ford magneto deliver a low-tension current?
14. How can we tell if the Ford magneto is weak?
15. What could cause a weak magneto?
16. What could cause the magnets of the Ford magneto to lose their strength?
17. Does a magneto build up its strength or become weaker in use? Why?
18. How can we tell if the Ford magneto is dead?
19. How do we test a Ford magneto for short-circuits? How do we test for grounds?
20. Why do we insulate the coils of a Ford magneto with varnish?
21. What effect does dirty oil have on the Ford magneto.
22. What are some of the causes of a short-circuit in the Ford magneto?



## Hutto Ground Cylinders the Basis of Perfect Motor Service

Perfect motor service is assured when cylinders are ground with HUTTO CYLINDER GRINDERS, for all errors, such as tapering and out of round are easily corrected.

HUTTO Grinders are not merely finishing or polishing tools, but a positive grinder which removes enough stock to correct errors or scores, bringing the bore back to original condition in less time than by any other method.

Limits are held to  $\frac{1}{2}$  thousandth because of its ease of operator control, positive adjustment, self-aligning and self centering feature.

HUTTO GRINDERS make it possible to re-grind one or all cylinders without removing engine block from chassis. Accuracy, speed and production on re-conditioning work is attained when the HUTTO Twin Three Grinder is used.

### The New Hutto Grinding Machine

This new machine brings to the small production shop or service garage a self contained power plant, with adjustable stroking mechanism used for grinding cylinder blocks without removal from chassis, assuring the same high quality of work as the more expensive machines used in production. Universal range of adjustment, swivel feet, fasten to top of cylinder block. Stroking started or stopped at will by operator. Grinds horizontal cylinders easily. Light, sturdy, compact and ball bearing equipped throughout.



### Hutto Stroking Stand

Mechanically limits the up and down stroking movement, impossible to push or pull grinder too far in or out of bore, making a re-conditioning job, simple, easy and fast. The stroking stand is equally efficient for bench or portable electric drill.

For regrinding cylinder bores accurately and smoothly by hand, the HUTTO TWIN THREE SERVICE Grinder is efficiently powered with a  $\frac{5}{8}$  inch heavy duty electric drill.

*At Your Jobbers.*

## Hutto Engineering Co.

510 Lycaste Ave.

Detroit, Mich.



Model "A" Twin Three Service Grinder, comes packed in a heavy metal container. Price \$55.00 complete with set of six stones.

PROFIT FROM THE DAILY GRIND

# Answers to December Questions

**1.** There are several ways in which stripped threads in cylinder block can be repaired. By using a tap of the same thread pitch as the original bolt, but  $1/16$  inch larger diameter, and then using  $9/16$  by 14 thread bolts from Stevens. If we prefer to use bolts of *standard* size, we can bore out holes, tap and fit Stevens bushings, which are threaded on the inside to fit standard Ford  $7/16$  by 14 thread bolts.

**2.** If threads in fly wheel become stripped, drill the hole oversize and tap it out for plug. The plug is a piece of steel rod cut to the same thread as the oversize hole, with a hack-saw cut part of the way through the rod just above the thread. Next the plug is screwed into the hole with a pipe wrench. When tight, break the rod by striking it with a hammer. Pene the plug on both sides of the fly wheel, and then cut it off flush with the face, using a sharp cold chisel.

Mark the center of the plug with center punch and, with this mark as the center, drill and tap the plug for the size of screw used. When repairing the hole for the crank shaft flange cap screw, a  $1/8$  inch hole should be drilled (using the edge of the plug as the center) and a piece of  $1/8$  inch rod should be hammered into the hole as an anchor. The other holes need no anchor when the plug has been perfectly riveted. The

table below gives the drill and tap sizes for repairing holes in fly wheels.

|             |                        |                        |              |
|-------------|------------------------|------------------------|--------------|
| Oversize    | $21/64$ inch           | $1/2$ inch             | $1/2$ inch   |
| Tap         | $3/8$ by 24            | $9/16$ by 18           | $9/16$ by 18 |
| Drill       | $7/32$ inch            | $21/64$ inch           | $3/8$ inch   |
| Countersink | $1/4$ with $1/4$ drill | $1/8$ with $3/8$ drill |              |
| Tap         | 14 by 24               | $3/8$ by 24            | $7/16$ by 20 |

**3.** When valve guides do not bore out properly, the valve guides are bored out and Ford part No. 3053 $1/2$  is pressed in. When cylinder blocks are repaired in this manner, they are as good or better than new blocks as, in case of wear, it is easy to replace the bushing.

**4.** When valve seat has been hadly damaged, we can bore down through the valve port with a Ford valve seat reamer; and then cut a new seat with a Fordson tractor reamer, and install a Fordson tractor valve. This necessitates cutting out the cylinder head and gasket to allow room for the larger valve. Even simpler, we can install a Boyle flat seat valve which seats on the top surface of the cylinder block and does not use the old valve seat at all.

**5.** Ford valves may have either regular, or else  $1/64$  inch oversize stems to use when the guides are worn. When valves with  $1/64$  inch oversize stems are used, it is necessary to ream the guides. The reamer should be held in a special jig, made for just this purpose, in order to ensure accurate alignment.

**6.** When piston shows out of round, remove the piston and lightly tap it with a raw-hide mallet on the greatest diameter of the skirt, to true it up.

**7.** When fitting new pistons in repair work, they may be filed from the bottom up to the bottom ring.

**8.** Pistons are furnished in .0025 and .005 inch oversizes to be fitted to worn standard size cylinders. They are furnished in .010 inch oversize, for use in reground cylinders. They are furnished in .03125 inch oversize for rebored cylinders, and .033 inch for use in worn rebored cylinders.

**9.** Only four different sizes of rings are required for repair work, the standard  $33/4$  inch ring, the .010 inch oversize ring, the .031 and the .038 inch oversize rings.

**10.** Only the standard size cam shaft bearings are now supplied. The oversize cam shaft bearings, once supplied by the Ford Motor Company, have been discontinued.



**WRIGHT**  
**HOIST UNIT**

Just a continuous service that can be depended upon at all times to deliver at top speed.

Ask Us for Facts  
Wright Manufacturing Company  
Lisbon, Ohio.

© STAFF

THERE'S nothing that will help you to get a real "kick" out of your job like having the right tools back of you—Starrett's.

If doing every job right means anything to you, you owe it to yourself to own a full kit of Starrett Tools.

Catalog No. 231G illustrates and describes them all. If you haven't a copy, ask us to send you one.

THE L. S. STARRETT CO  
World's Greatest Toolmakers  
Manufacturers of Hacksaws Unexcelled  
Steel Tapes—Standard for Accuracy  
ATHOL, MASS.



Here are some of the tools that every motor mechanic needs

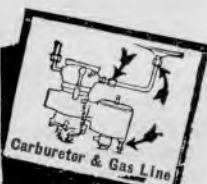
Thickness Gage No. 172D. Stainless Steel Tape No. 520. Combination Square No. 11. Telescoping Gage No. 229. Cylinder Gage No. 452. Micrometer Caliper No. 436. Micrometer Caliper No. 224A. Hacksaw Frame No. 151. Micrometer Caliper No. 230.

470

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Starrett Tools



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Gaskets  
Tight!



Carburetor & Gas Line



Battery Terminals



Transmission Housing Gaskets



Painting Tire Rims

YOU never hear anything more from leaky gaskets—once they're sealed with Key Graphite Paste. They're sealed to stay! And the job is done so quickly—almost before you know it. Like an extra mechanic in the shop.

A garage man in Pennsylvania repeats the experience of many others in saying: "No one will want to go back to using shellac after trying Key Graphite Paste."

A few of the many uses of Key Graphite Paste: Seals all gaskets; seals all screw threads; prevents rust and corrosion; eliminates all body and chassis friction; prevents oil and gas leaks.

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That's the only way to test it for yourself. See how it expands under heat. Notice how unaffected it is by oil, gasoline or acids. And you'll never find it corroding or oxidizing in the joints. Send for your sample today.

Distributors in All Principal Cities

Key Boiler Equipment Co.  
East St. Louis, Ill.

**KEY  
GRAPHITE PASTE**

FDSF-1-27.

Key Boiler Equipment Co.  
27th & McCasland Ave., East St. Louis, Ill.

I am enclosing ten cents in stamps. Please send me sample can of Key Graphite Paste and free descriptive leaflet on where and how to use it.

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# WHAT FLAT RATES SHOULD INCLUDE

Beating Unfair Competition  
 . . . in Labor Charges . . .

BY ED. TECHNICAL

**F**LAT Rates have generally brought about a uniformity of labor charges in your individual community, haven't they, Mr. Ford Dealer? When you change your rates—every independent repair shop does the same thing. Since your labor charges are the same as those of other shops, what are your selling points to enable you to secure your fair share of the repair work in your territory?

To us it seems the answer is in two words:

1. COMPLETENESS.
2. QUALITY.

It seems to us that many Ford dealers have been overlooking the idea of *completeness*, which has a very definite sales value—when brought to the attention of the car owner. Suppose that every dry-goods merchant sells muslin at 8 cents a yard. If one merchant sells a *wider* goods at the same price, isn't he going to clinch the sales when he calls the attention of customers to this definite gain?

Let's see, for example, what the Flat Rate

should include in Operation Number 15, Grind Valves and Clean Carbon, at \$3.75. This is probably the most frequent of Ford repair operations. We'll try a list as a starter, though you may be able to make a better one:

- Drain water.
- Install car covers (Do your competitors do that?)
- Lift off the hood.
- Remove cylinder head.
- Remove valve chamber cover.
- Clean carbon off cylinder and pistons.
- Mark valves.
- Take out pins and valves.
- Clean and inspect valves and seats.
- Reface valves on electric valve refacer (Do your competitors?)
- Ream valve seats (Do your competitors?)
- Narrow valve seats with special reamers (Do your competitors?)
- Final touch-up with grinding compound.
- Wash compound off valves and seats in cylinder block.
- Replace valves.
- Assemble pins and pins.
- Time valves by piston position. (This is important for power and speed. Most repairmen time by tappet clearance, which does not give nearly as good engine performance.)
- Replace valve chamber cover.
- Inspect gasket and, if possible, replace same gasket. (Many repairmen always install new gasket, an added expense for owner.)
- Replace cylinder head.
- Run down and tighten bolts.
- Clean spark plugs and adjust gap.
- Test and adjust coil units (Does your competitor?)
- Clean and inspect timer (Does your competitor?)
- Refill radiator with water.
- Test oil level.
- Replace hood.
- Remove car covers.

When the car owner see this list (all for \$3.75), he cannot fail to be impressed by the *completeness* of the job. So he feels that he is getting real value for his money.

Some repairmen may feel that tune-up of the ignition system should not be included in this job. That is for you to decide. But some Ford dealers have told us that they cannot afford to let a valve grinding job go out without perfect ignition, or the customer may blame the shop for a poor job of valve grinding.



## Mechanics Proud of CORNWELL Hand Forged Tools

**M**ORE than 100,000 mechanics throughout the United States are proud of their Cornwell Tools and use no others...Cornwell Tools accomplish results where other tools fail...You can put them to any test...Use them in shop or home and get your money back if you are not absolutely satisfied that they are the finest tools you ever saw...The widespread use of Cornwell Tools is the astounding evidence of their quality.

### Tools of Amazing Strength

Chisels, rivet busters, punches, wrenches, screw drivers, pry bars, socket wrenches, universal joints, pliers—for use in garage, shop or anywhere where strong tools are required...Nothing like them in the world—if you ever saw tools as good as these, return your order and get your money back.

### Test These Tools at Our Risk

Try any test described in booklet...If the tools fall or show the slightest harm, we will instantly replace them or give you your money back...Can any guarantee be stronger than this?



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CORNWELL QUALITY TOOLS CO.,

Dept. 103, Cuyahoga Falls, Ohio.

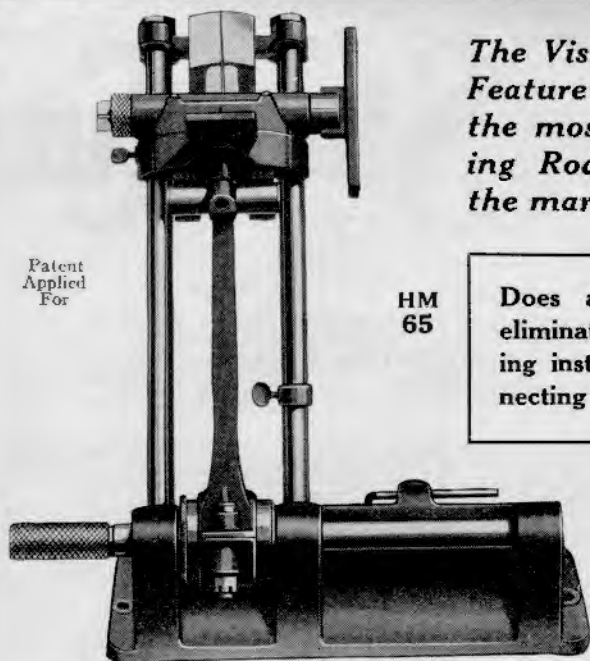
Send me illustrated booklet with prices on full line of Cornwell Hand-Made Tools.

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Patent Applied For

HM 65

*The Visible and Self Indicating Feature of this Aligner stamps it the most pronounced Connecting Rod and Piston Aligner on the market.*

Does away with guesswork and eliminates the use of feelers, showing instantly any deflection in connecting rod, wrist pin or piston.

Adopted by several of the leading car manufacturers as part of their service equipment.

**Price \$35<sup>00</sup>**

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**HINCKLEY MYERS CO.**

New York Office  
136 Liberty Street

JACKSON, MICH.

**P**ETER KAUTZ, of Homer, Nebraska, says, "The Roth Charger has more than paid for itself, and I am sure that it is as good today as it was a year ago. It will make me plenty of money now, since it is paid for."

Thousands of Roth owners have found that their charging sets have paid for themselves, in power saving, in faster,

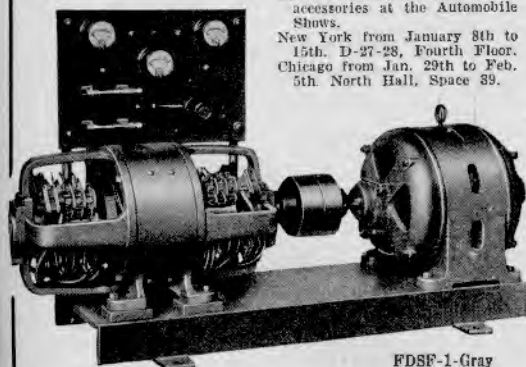
safer charging, and by increased business. And Roth owners all across the country agree with Mr. Kautz that their machines are "as good today as a year ago".

Roth Constant Potential Charging Sets are built to stand hard service without requiring extra attention, or frequent repairs. They are fully protected against the severe conditions in the average battery shop, and the experience of years proves that they last longer.

Write for the facts on Constant Potential Charging. Get all the details of Roth design and construction, and decide for yourself. You'll see why so many progressive battery station operators have selected the Roth set, and why they are all enthusiastic about its performance.

See Roth Charging Sets and new accessories at the Automobile Shows.

New York from January 8th to 15th. D-27-28, Fourth Floor. Chicago from Jan. 29th to Feb. 5th. North Hall, Space 39.



FDSF-1-Gray

**ROTH BROTHERS & CO.**  
1406 W. Adams Street, Chicago, Ill.

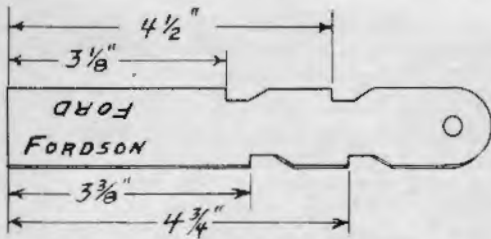
# Shop Short Cuts



Have you any good suggestions that will save time in shop work? If so, send us a rough sketch and a description. If acceptable, we will pay \$1 apiece for your ideas.

## Jig Guides Reamer

To accurately ream the shaft front bushing No. 5106 of the Ford electric starting motor, a jig can be made as follows: Saw a starter mounting bracket off close up on Bendix guide end, leaving a good shoulder. Leave old bushing (Ford part No. 5105) in the part of starter mounting bracket being used, but ream it true so it will take spindle body bushings. Now press into this old bracket two Ford spindle body bushings, Ford part No. 2713, until they meet, one from each end. These two bushings form the long guide for the reamer. Leave thrust flanges on bushings as they are not in the way at all.



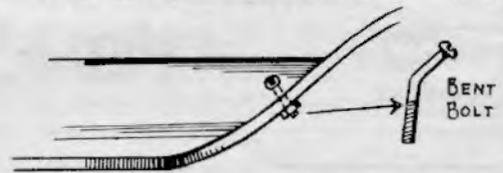
Ream spindle body bushings with reamer to be used. Break reamer off at the beginning of second reamer blades. Now grind these blades to size of starter armature shaft on small end. The fixture can be held on starting motor yoke by two or three screws, part No. 3266. The brush end, Ford part No. 5102 being in place, with new bushing, part No. 5106 pressed in.

Reaming is best done by hand, using a tap wrench very slowly, as otherwise reamer will cut oversize in soft metal. Brush end, part No.

5102, does not have to be removed any more.  
J. H. BREWINGTON, WACO, TEX.

## Prevents Metal Shield Rattle

To prevent such rattles as occur between fender and metal shield, bend a small stove bolt at about a 45-degree angle. Drill a hole through



metal shield, then tip drill up so the hole in the fender can be drilled. Push bolt through the two holes, and put two nuts on the bolt to prevent working loose.

H. W. DILL,  
SCHENETADY, N. Y.

## Bracing Tire Carriers

When an improved Ford has had a rear end collision, the lower arm of the tire carrier is often bent under. A good brace can be made from an old Ford rear radius rod. The two lower hub bolts of the carrier can be removed, and longer bolts used to attach the forked ends of the rear radius rod to the tire carrier. A 5/16 inch hole is drilled in bottom arm of tire carrier and in brace, after the brace has been shaped to fit against the carrier, and bolted.

R. M. SHELTON,  
DALLAS, TEX.

## Chapman Quick Action Motor Tester



This quality TOOL locates knocks in piston slap, pin, rod and main bearing; Worn Rings and cylinders; Tests valve action; 18,000 in use; Show your customer and get that extra job. Send for Complete Descriptive Circular.

FITS ALL MOTORS

## SPECIAL FOR FORD MECHANICS!

To start this classy and serviceable article, for all Fords; We will send during January, a

### REMOVABLE CRANK DEVICE

#### NICKEL PLATED CAP

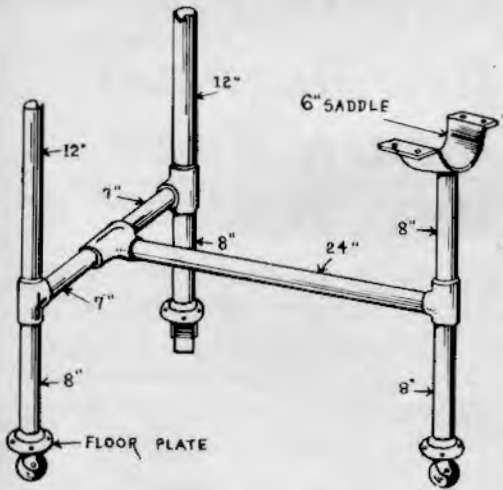
to any Ford Mechanic for only 75c each; Regular price \$1.50; Use your crank like a big car; Works perfectly; stops crank rattles; Send for it today.

CHAPMAN TOOL & MFG. CO.  
6332 South Broadway St. Louis, Mo.



## Dolly of Pipe Fittings

AFTER pushing wooden motor dollies around the shop for several years, and never being quite satisfied with the model suggested by Ford Motor Company, we designed dollies to suit us.



The total cost, at our local hardware store, was \$6.75 each, which is about one-third the cost of the average steel dolly. A good mechanic should assemble it in an hour.

The distance between the two notched up-rights should be just right to support an engine with a broken crank case arm. The entire assembly is 1 1/4 inch pipe with malleable fittings. All parts, with the exception of the casters, can be purchased at any hardware store. Holes can be drilled through the Tee connections and reamed for taper pins or bolts to keep the pipe from twisting. In place of the 6 inch steam pipe saddle, a Tee connection and two Ells could be used to form a saddle for the front end of the crank case.

MILES S. HOUSER,  
ANDERSON, IND.

## Attaching the Hoist

WHEN removing an axle of the improved Ford cars, the chain hoist can be hooked onto the tire carrier, as near to the body as possible, with the hook on top. Pieces of card board can be used to prevent scratching the body of a Sedan. When raising a Sedan, the car can be pulled forward and the front wheels blocked, to keep the chain hoist away from the rear of the body. The tire carriers of the improved Fords are much stronger than those of earlier Fords. Putting jacks or boxes under the running boards is an extra precaution for safety.

R. M. SHELTON,  
DALLAS, TEX.

## The New Heavy-Duty Kess Valve Grinder

For Fords,  
All Passenger Cars,  
Trucks and Tractors.

The new Kess answers the call for a high-speed grinder capable of prolonged operation. Operates in 1/4 in. drill chuck. A genuine money-maker in every repair shop.

\$7.50 at your jobber's or by parcel post from the makers

KESS MANUFACTURING COMPANY  
810 Harrison Building, Philadelphia



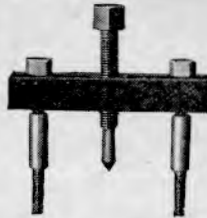
## Timing Gear Puller

A Necessity  
for Every Shop

Screws are made of chrome nickel steel, heat treated. Can be used on all sizes of timing gears and other gears which have tapped holes.

Price \$3.90

We make a complete line of garage tools. Write for catalog No. 25. Order thru your jobber.



National Machine & Tool Company  
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## BOOKKEEPING MADE EASY!

With competition keener than ever before, the overloads and leaks which before seemed trivial MUST be discovered and corrected to insure success.

This can be easily and quickly done with the modern

Miller Standardized System of  
Accounting for Ford Dealers

It gives full and accurate information with a minimum of time and effort—the dealer can install and operate it himself.

A simple, complete bookkeeping system at a surprisingly low cost.

Complete information and sample forms cheerfully supplied. WRITE TODAY.

H. C. MILLER CO.

338 Broadway Milwaukee

## A New Money-Maker

For the FORD Service Station

Those small scratches and scuffs that you notice that mar an otherwise perfect finish on the body or fenders are now easily removed with the Binks Touch-Up Gun.

Compared to the old, messy, smeary hand-brush job this new method is a revelation. Simply attach the color cup to the gun, press the trigger and the finely regulated spray eliminates these scratches that come to your attention. Write today for details.



BINKS  
Touch-Up  
Gun

With a Cup for Every Color

BINKS SPRAY EQUIPMENT CO., 3106 Carroll Av., Chicago



*“I wouldn't be without this Magazine for ten times its cost!”*

“Every month FORD DEALER AND SERVICE FIELD gives me new slants on Ford service and Ford repairing. I expect

to start a shop myself some day and this magazine has been one of my biggest helps in this direction.”

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***Important***

Please check your  
occupation.

- Ford Dealer.....
- Ford Mechanic.....
- Ford Salesman.....
- Ford Sales Mgr.....
- Ford Parts Mgr.....
- Ford Service Mgr.....
- Ford Service Station.....
- Independent Service.....
- Accessory Jobber.....
- Accessory Dist.....
- Retail Accessories.....
- Other Occupation.....

# A Legal Point for the Dealer to Consider

## Right of Automobile Dealer to Recover Under "Dealer's Open Policy" for Loss of Car While Out of His Possession

(By LESLIE CHILDS)

THE QUESTION of what may amount to a violation of a "possession" clause, in a "Dealer's open policy" of insurance, is one of considerable importance to automobile dealers in general. This is true because clauses of this kind are peculiarly liable to be violated, if cars are permitted out of the dealer's possession in a haphazard manner. And, since a clear violation of such a clause will usually void the insurance, care should be taken in respect to acts that may violate provisions of this kind.

It is, of course, obvious that each case of this kind must be decided in the light of its facts, and the terms of the policy involved, which precludes the statement of a general rule that would apply in all situations. However, as an illustration of judicial reasoning on the question of what may amount to a violation of clauses of this kind, a recent New York case is well worth an examination.

### Automobile Dealer Carries "Dealer's Open Policy".

In this case the plaintiff was a dealer in automobiles, and carried a "dealer's open policy" of insurance upon his stock in trade. This policy provided, among other things, that it should cover such cars as became the property of the plaintiff until they were "delivered to the purchaser, or until same otherwise passes out of the possession of the assured". The policy further designated a certain storage location for the cars covered, and provided that upon a change of this location the insurance company should be notified.

While this policy was in force the plaintiff permitted one of his employees to take a certain car upon a pleasure trip to Saratoga Lake. The employee was gone for a period of two weeks, and during this time the car was destroyed by fire.

On this state of facts, the insurance company denied liability on the grounds that permitting the employee to have the car for the purpose of his own pleasure, constituted a violation of the "possession" clause of the policy noted heretofore. The insurance company further contended that by permitting the car to be away from its designated place of storage for a period of two weeks, without giving notice thereof, also violated the "storage" provision of the policy which relieved it from liability under the terms of the

policy. In passing upon these contentions, in the light of the facts and the terms of the policy, the court, among other things, said:

"I believe that the motion for a nonsuit should be granted \* \* \* on the ground that under provision 5 of the policy the automobile was no longer covered by the policy when it passed out of the possession of the insured, and on the further ground that the storage location of the automobile is made a vital matter for consideration under the terms of the policy, and that the automobile in question was removed from its usual place of storage without any report to the company, and given into the possession of an employee to be used for his own pleasure and convenience. \* \* \*"

But the plaintiff appears to have contended that the word "possession" as used in the policy indicated a change of ownership before it would be violated. In discussing this phase of the subject the court, in part, said:

### The Word "Possession" Construed

"It would be placing an unnatural and forced construction upon the word 'possession' as conveying the idea of passing out of the ownership of the assured. The word 'possession' must be given the meaning commonly attributed to it by the average business man in relation to personal property, namely, the physical possession of the automobile by the insured or of his agents within the scope of their employment. \* \* \*

"Surely the plaintiff was not in personal possession of the car at the time, and the question is whether it was in possession of his agent or representative acting within the line of his duty. If he was acting beyond the scope of his employment, the servant is as much a stranger to his master as any third person. \* \* \*

"It is plain to me that the plaintiff's employee in this case was not at the time acting for the interests of his employer or within the scope of his employment. \* \* \* I have reached the conclusion that the car passed out of the possession of the assured when he delivered it to his employee in the manner stated, and that the policy was terminated as to that automobile, at least until the insured resumed possession and control of the machine. \* \* \*"

Following the above disposition of the "possession" phase of the case, the court directed its attention to a further consideration of why it should be held that the storage clause of the pol-

icy was also violated. In this connection the court, in part, said:

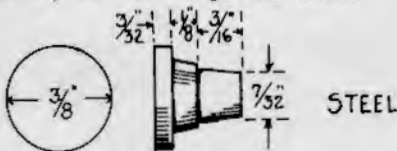
**"Storage" Clause Held Violated**

"It seems to me that the storage location of the car is of the essence of the contract, and while it was not contemplated that the car should be kept absolutely at a fixed storage location and not otherwise, the reasonable interpretation of the policy is that the car should be usually kept at a specified location, and when removed therefrom that it should be removed only for the purposes naturally and necessarily incident to the conduct of dealing in automobiles on sale, which would not include its removal for pleasure purposes of the employees of the assured while enjoying a two weeks' vacation at a summer camp, and thus exposed to a hazard not reasonable incident to the business. \* \* \*

In conclusion the court held there could be no recovery under the policy for the loss of the car in question. This for the reasons, as outlined above in the language of the court, that the plaintiff, the dealer, had violated both the "possession" and the "storage" clauses of the policy, in permitting his employees to have possession of the car in the manner stated.

**The Puzzle Corner**

A STEEL peg, with head and shoulders, is sold separately to be used for repair purposes, if the original forms part of 1926 and earlier cars. Recently a change has been made. What is that part, and why has the change been made?

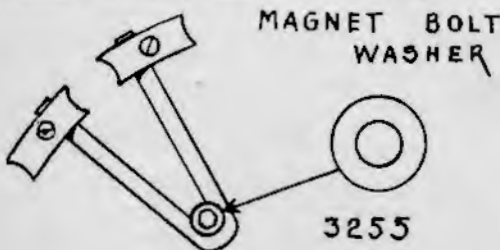


**WHATTIZIT ???**

To Ben L. Bentley, Franklin, Pa. goes the dollar for having suggested the prize winning puzzle part. No reward is paid for answers to puzzles.

**Answer to December Puzzle**

There are 16 of these heavy steel magnet bolt washers No. 3255, which bolt the bends of the



**Ask Me!**  
**A Department Wherein Your Questions Are Answered**

Conducted by  
**Murray Fahnestock**

**SUGGESTS FORD IMPROVEMENTS**

Would the following changes in the Ford increase the price to a prohibitive degree, taking into consideration the purchasing power of the Ford Motor Company? A small bore, long stroke, high-compression engine. A two ball-bearing crank shaft, of 2 1/4 inch or more diameter; gear pump to circulate oil through a cleaner or filter? Sleeve valves or overhead cam shaft? Then a fleet owner, using a spare cylinder head, could replace a head with a clean head, in which the valves were ground and adjusted.

A great saving in metal and labor should be possible by replacing Ford magneto and coil units with Delco or other modern ignition. Would not a three speed transmission, interchangeable with the planetary, be a sales advantage?

Are not single plate clutches cheaper to make than multiple disc? Would not this overcome, to a large extent, the drag now present when starting a Ford engine in cold weather? Would not a special steering gear, of big-car type, relieve the driver of jolts and jars?

The advantages of 4-wheel brakes are overwhelmingly apparent, as the greatest hazards of driving, skidding and inability to stop quickly, are greatly reduced by use of four-wheel brakes.

A small bore, long stroke engine requires a much larger and heavier cylinder block and crank case (and a heavier car to carry them) than does the present Ford block. As to making the Ford a high-compression engine, this is now being done by thousands of owners, who are installing Ricardo high compression cylinder heads on their cars.

Ball-bearing crank shafts have not proven generally successful. The pounding of a knocking engine wrecks the bearings. Also, large ball bearings are very expensive, and how about connecting rod friction on the 2 1/4 inch crank shaft?

Many thousands of Ford owners agree with you that some form of single-spark battery ignition is desirable, and are installing Atwater Kent, Delco, and Bosch ignition. Also, they are installing auxiliary transmissions. But since owners are already so well taken care of in this manner, it is better for the Ford Motor Company to concentrate its efforts on the regular Ford. The single-plate clutch may be cheaper. But it would be difficult to get it inside the planetary transmission. Also, the Ford clutch is very reliable in actual use.

Many car owners, who prefer special steering gears, are installing them. And the same applies to 4-wheel brakes, now made by several different manufacturers.

**FORDSON LOW-SPEED ADJUSTMENT**

What is the low speed adjusting needle on the late Fordson tractors for? We have tried to make the adjustment, in accordance with the instructions in Fordson Manual under "How is the vaporizer adjusted."

We are unable to see any difference whatever in the adjustment as to the way the tractor runs—although there may be a difference in fuel consumption.

Instructions for making the low speed adjustment on the Fordson tractor are as follows:

"—after adjusting high speed. Loosen lock nut and turn slow speed adjusting needle until it seats. Then open 1 1/4 turns.

Close throttle and adjust slow speed needle down until engine begins to misfires. Then open the adjustment until the engine runs smoothly."

Do you think that you have been trying to make the slow speed adjustment with the throttle open too wide?

magnets to the hub of the fly wheel. The washers are of heavy steel because the bolts are tightened firmly, and there is lots of pressure on the washers. It is not necessary to have these washers of brass (to insulate the magnetism) because there is no external magnetism to be short-circuited at the middle or bend of the magnets.

To E. A. Swaney, of Bath, Me., goes the dollar for having suggested this prize winning part. No reward is paid for answers to puzzles.

### TWO PISTONS CRACKED

About nine months ago, a customer came to our shop saying that his 1925 Ford Sedan ran unevenly at low speeds. So I got orders to grind the valves and scrape carbon. While doing so, I noticed that No. 1 and No. 2 pistons were cracked in the head. So I replaced all four pistons. Also put in new rings of special make—with no better result. But the customer took the car, saying that he had to have it.

Recently the car was again brought in to have the valves ground, when I noticed the same thing with the No. 1 and No. 2 pistons. The engine still runs unevenly at low speeds. I checked the opening of the valves and found them all right.

Water leaking into the front cylinders could easily cause misfiring at slow speeds and, falling on heated pistons, might crack them. Look for slight cracks in block or head (which expand when heated) or for a defective cylinder head gasket.

### ENGINE MISFIRES

We have a 1920 Ford Coupe on which we have ground valves, put in one piston, put rings on the other three pistons. One piston was scored. We put in new timer, roller and wires. The coils were firing good. But we still had a miss at slow speed. The engine idles very smoothly.

The engine seems to be worse when changing from low to high gear. It is not a very bad miss, it just seems as if it were jumping the spark across the dash sometimes.

Sometimes a defective spark plug porcelain will allow the spark to leak through (instead of jumping the gap as it should), when the resistance between the points is increased by opening the throttle and sending more gasoline vapor into the cylinders. Try new spark plugs.

You might also make sure of the coil units on a coil unit testing machine, adjusting them to take from 1.2 to 1.4 amperes and to send a single "whappy" spark at each of the sixteen divisions of the dial. This is the only adequate method of adjusting coil units.

Try the compression and see that the valves are timed by piston position in order to secure a sweet running engine.

### VARIED QUESTIONS

What size of piston rings should be installed in a Ford which was rebored to .031 inch oversize four years ago?

What clearance or gap should be allowed between the ends of the piston rings?

What gap should be allowed between the magnets and the poles of the magneto coil assembly?

The valve seats have become too wide from repeated grinding—how can they be narrowed?

What causes sparking of the coil points?

As the car has been driven four years since the reboring, it is possible that you can use the .038 inch oversize rings to advantage in the rebored block. Better lap shoulders from cylinder walls before installing new rings.

Gap for top ring is .005 to .012 inch, for middle .006 to .008 inch and for bottom ring from .004 to .006 inch.

Gap for magneto should be .025 to .040 inch.

For broad valve seat, use 15-degree and 75 degree reamers.

If coil points are not pitted or dirty or out of alignment then sparking may be caused by defective condenser in coil unit.

### WHY SPARK ADVANCE?

Assuming that you are familiar with the Stevens Timing Tester. With spark lever at fully retarded position, the tester shows that the spark occurs slightly ahead of top dead center of piston. The amount of such advance is shown by a movement of 1½ to 2 inches of the crank handle before the ball in the tester remains down. Yet in actual road driving, the spark lever is usually carried at about two-thirds advance for best results—with full advance for high speeds. Now—Why???

Some mechanics advise not more than one-half advance. Others reputed to be good Ford men, advise carrying full advance to avoid burning valves.

Burning the charge in the cylinders is like BURNING a piece of paper—rather than a true EXPLOSION. It takes TIME for the flame, beginning at the spark plug, to burn across all the gas in the cylinder.

To secure complete burning of the fuel before the piston commences its downward stroke, it is necessary to START the combustion considerably before top dead center. That is why you have to advance the spark lever. The best position for the spark lever is that at which it gives most power and speed without knocking. This position changes for every change in power and speed of the engine.

## What's New?

### A Review of Activities Among the Manufacturers

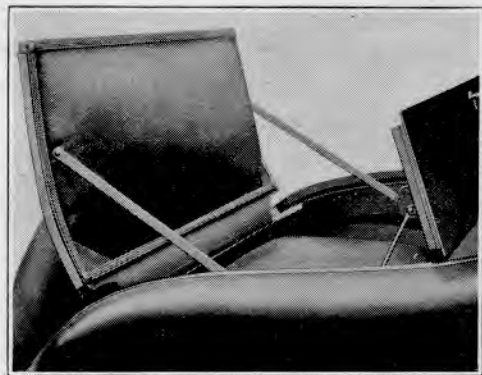
#### REX RUMBLE SEAT A BIG SELLER

The old saw to the effect that "two is company, three is a crowd", which once applied most aptly to the Ford runabout or coupe has been put into the antique and obsolete class by the Rex Manufacturing Co., of Connersville, Ind. These Hoosier builders need no introduction to the Ford field as they have long been known as capable body builders, but this introduces their new Rex Rumble Seat for the Improved Ford Runabout and Coupe.



With the Rex Rumble Seat either model of car can be easily and quickly converted into a comfortable and roomy four-passenger car. This is done by removing the regular "turtle-back" deck lid and installing the Rumble Seat. Nothing is done to mar the appearance of the car nor reduce its efficiency. Seats are furnished in standard colors to agree with the finish of the car. Here are further facts presented by the manufacturers:

The REX Rumble Seat is made up of three major units: rear deck-lid (which forms the seat back for the passengers); front deck-lid and the cushion.



Premier wire, woven in helical coil springs, used throughout—in cushion and in the back.

Durable grade of leather cloth used in trimming cushion and back.

Forgings are all sturdy, to withstand rough usage.

Outside surface is lacquered and polished to match the body of car.

Neat aluminum castings are bolted to right rear fender for step plates.

Special top-supporting irons for attaching to running board (roadster) for use when top is lowered.

#### NEW COLPIN CORPORATION

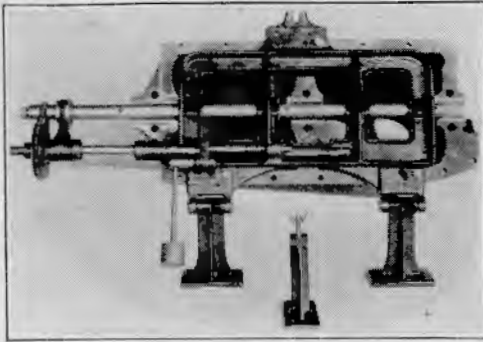
Magnetizer Mfg. Company and the Colpin Sales Co., have been reorganized and incorporated under the same name, viz, Colpin Corporation.

The Colpin Sales Company was formerly the sales division of the Magnetizer Mfg. Company and the entire management remains practically the same. J. W. McColpin, president; C. R. Fernando, Vice-president; W. K. Robbins, Secretary; Carl McColpin, Treasurer; Fred E. Peterson, Attorney.

The company has just recently announced a complete line of testing equipment, including an entirely new Magneto Recharger and a one-day Battery Charger.

**SPECIAL EQUIPMENT FOR FORD BEARING WORK**

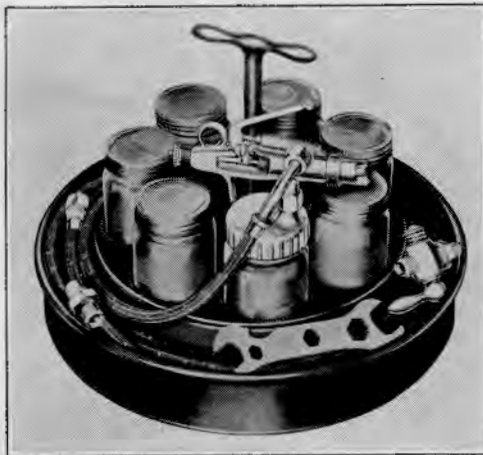
High speed fixtures especially developed for Ford bearing work are contained in the Junior Main Line Boring Machine, product of the Shoemaker Automotive Equipment Company, well known makers of rebarbbiting equipment. This machine is inexpensive and accurate and can be



driven by hand or with electric drill. Hinged to the bench the fixture can be locked to the bench for boring or rocked back for tool adjusting and observation. The chips fall away from the work. The fixture can also be used on Chevrolet and Overland blocks. Further particulars may be had by addressing the company at Freeport, Ill.

**DE VILBISS TOUCH-UP OUTFIT**

An outfit which properly, effectively and quickly touches up damaged automobile finishes whether varnish or lacquer enamel jobs is contained in the DeVilbiss Touch-Up



Outfit, which features the Type C Spray-Gun. It can also be used for patching or refinishing after removal of dents on bodies or fenders, as well as for painting motors, wheels, radiator cores and other small parts. The Type C spray gun has a 6-oz. glass container, which has a label section, sandblasted on the side on which to write color specifications or other information. A gentle pressure on the trigger of the gun produces a fine mist of color which is applied on the mar or scratch, filling it in and blending it with the surrounding surface. A slight rubbing finishes the job. The gun is simple in construction, and easy to clean. Six extra 6-oz. cups are furnished so that different colors can be kept in readiness for instant use. There is also furnished light-weight braided air hose with connections, a hose coupling, an air cock, a wrench, and a light convenient and durable tray for holding and carrying the outfit. Further information may be had by addressing the DeVilbiss Company, Toledo, Ohio.

**BOOK ON GASOLINE SERVICE STATIONS**

Those who wish to enter the service business of supplying gasoline, oil and accessories to car owners will find much to interest them in an 86-page, 7 by 10 inch book called "How To Run a Service Station at a Profit", published by the Battelle Publishing Co., of Los Angeles, Calif.

**GOOD SOURCE OF PROFIT IN RAMCO INNER RINGS**

Service stations and repair shops in all parts of the country are finding a good, steady source of profit in Ramco cushion inner rings.

Since any car, truck and tractor will develop oil pumping, piston slapping and kindred ills in time, the repair man can install Ramcos to prevent these troubles in the cars that come in for other repairs, as well as installing them in the cars that come in to have these ailments cured.

According to makers the repair man can safely guarantee Ramcos to prevent and cure these ills when a motor requires re boring. Ramcos should also be installed with new piston rings to prevent a further repetition of this trouble.

The car owner easily sees how Ramcos can save him the greater cost of re boring his cylinders, when installed in time. Ramcos also cut down oil and fuel costs—and provide better equalized compression—by sealing the cylinders properly.

One of the strong arguments of Ramcos is that they do this without causing "dragging" or scraping on the cylinder walls. They simply cushion the piston rings—restoring to them what heat and wear take away. New piston rings are recommended at the same time.

Extensive tests have been run by well-known consulting engineers on ten different makes of motors, and records made of their findings. These records are free to anyone writing the manufacturers, Ramsey Accessories Manufacturing Corporation, St. Louis, Mo.

One particularly profitable feature of this brand of inner ring, is the Ramco service station plan. This enables a dealer or shop in a locality to act as the Ramco distributor for other shops around him. It enables him to secure a better discount on the inner rings he buys for resale, and for his own use.

Complete information on this feature may also be had by writing the Ramsey Accessories Manufacturing Corp., St. Louis, Mo.

**SELL COMFORT TO THE CAR OWNER**

Realizing that it will be a long time before all roads and streets are made as smooth as dance floors, engineers are still working toward the production of the perfect shock-absorbing device. That their efforts are being rewarded in improvement is revealed in the "Cushers", a product of the Chicago Roller Skate Co., 4406-58 W. Lake St., Chicago, Ill.

The manufacturers tell us that Cushers apply their shock absorbing action in a quarter second, or "flash action" and are free from the friction found in some spring devices. We quote them further:

When a bump or depression is met and your car springs compress, the slack caused in the Cusher cable is taken up by the coil spring actuated pulley. The



moment the car spring whips back, the always taut cable transmits the action to the floating cam inside the Cusher. This cam in its attempt to turn with the cable pulley is governed by a stationary cam on the end of the main stud which forces the floating cam back against the pulley. Here the Cusher action starts. A brake lining with a definite "coefficient of friction" in the form of a free floating disc is found between the floating cam and the pulley. When these surfaces engage, the "coefficient of friction" grips the floating cam and endeavors to turn it with the pulley.

The more violent the spring rebound, the harder the pull on the cable, the more the stationary or governing cam forces the floating cam back against the pulley. This automatic brake acts until the upward movement of the car stops.

**LONG WEARING AND TOUGH**

Asbestos defies many physical ravages which prove the undoing of other substances. This is one of the reasons for the unusual long-wearing qualities of Wearbestos Transmission Sets for Ford cars. These bands are guaranteed for one year and have been known to last three years on a Ford truck used in mountain districts.



Wearbestos is made from long fibre asbestos yarn treated with a secret formula. It contains no wire, is soft and flexible and remains unaffected by oil. Its quality makes it a sensible item for any dealer to stock. Prices may be had from the manufacturers, Asbestos & Allied Products Co., 17 West 60th St., New York City.

**RADIATOR CAP AND MOTOR TROUBLE INDICATOR**

This combined radiator cap and motor trouble indicator for Ford cars is manufactured by the RED FLASH MFG. CO., Chicago, Ill. It is a nickel plated, self locking, hinged radiator cap combined with indicating means in the form of a disc one and one-half inches in diameter which flashes into view instantly upon the approach of a dangerous motor condition. It is brass lined throughout and is so hinged that a Ford driver may fill the radiator



at the same time that crank case is being filled. It was particularly designed for use on Ford cars and is in no wise affected by external temperatures. It is light in weight but still gives that appearance of massiveness. In contrast to the bright nickel finish are inlays of weather proof green enamel which makes it very distinctive. In selling this device the Ford dealer has no assembly to make, just screw it on. It is guaranteed for the life of the car.

**AKRON HED POPULAR**

This Akron-Hed racer has been a consistent winner on dirt tracks in and around Akron, Ohio. In its last three starts, the car has returned two winners and one second place. The most recent race at the Northampton track, near Akron, was for 50 miles and was won in 51 minutes, 49.4/10 seconds. The dirt track is half a mile around. The Akron-Hed, made by the Williams Foundry & Machine Company of Akron, is an overhead valve head made for Fords, which reduces gasoline consumption and materially increases the speed. It was developed by the maker of the old Hal-Head which was very popular a few years ago. The Akron-Hed, however, contains many improved features which were not found in the Hal-Head. Further information may be had by addressing the makers.

**TUTTLE EXTERNAL ADJUSTER FOR FORD BANDS**

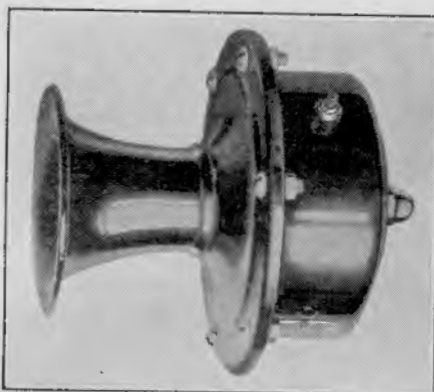
So well does one Ford dealer think of the Tuttle External Adjuster that he is putting them on all new cars that he sells, explaining that he more than gets his money back, as when the cars are brought in for band adjustment during the free service period of 90 days the job can be done in five minutes as compared with about an hour when the cars are not so equipped.

This adjuster for Ford Bands is interchangeable with the Ford brake and reverse pedal shafts, and can be installed on any Ford transmission without drilling or tapping of holes. With the device the taking up of bands becomes a clean job and one which can be done by anyone in five minutes. Once the adjuster is installed it is unnecessary to remove the transmission cover to adjust any of the bands, or, in fact, to remove it at all until new bands are needed. It is well made and has no threads extending into the transmission case to be battered and burred by the ears of the bands. Selling for \$2.50 per set, this should make a good stock accessory for the dealer, and one that is easy to sell. For further information write the Barker Factory, Inc., Norwalk, Conn.

**NEW MODEL NORTHEASTER**

Another important addition to the line of NORTHEASTER horns has now been made. The new model is known as the NORTHEASTER Sergeant and is specially designed for motorcycle, taxicab, and truck use.

One of the special features of this new model is the short projector which is only 2 1/2" long, making the overall length of the horn but a little over 4 1/2". Its diameter is 4 7/8", the same as the Standard NORTHEASTER. Because of its compactness this horn is particularly suited for outside mounting or for applying in locations where space is limited.



Due to the special form of the projector on this new model it produces a particularly incisive, compelling tone, which is proving to be especially effective for the classes of service for which it is designed.

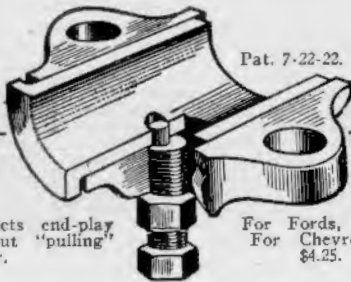
A further advantage of the peculiar tone quality of the new NORTHEASTER Sergeant is its adaptability for combining with either the NORTHEASTER Standard or the NORTHEASTER Special to produce a powerful blended tone where a super-roadclearer is desired, as for motor busses, high-speed or heavy trucks, and big high-powered cars.

The NORTHEASTER Sergeant retails for \$7.50 including mounting bracket, and is the product of the North East Electric Co., Rochester, N. Y.

**BOOKS FOR FORD DEALERS**

As sure as death and taxes, we know that it will be necessary to have a complete and accurate inventory, when the time comes to making our statement of United States Income taxes. Then the Ford Dealer's Inventory Record will be of value. It contains about two hundred pages of 8 1/2 by 10 1/2 inch size, neatly bound in fabric leather, with pages for each department of the Ford dealer's business, including financial, shop equipment, stock of cars and parts on hand, etc. The parts lists are interesting, the name of the part is given, then the parts number, then a space for quantity "on hand", the list price per unit, and in quantities of 10 and 100 and 1,000, making it easy to figure the correct valuation.

Another book, by the same publishers, is the Master Price List of Ford Model T Chassis and Body Parts. This bound volume contains 160 pages of 8 by 10 inch size, and lists all Ford parts by name, with year, and parts number, then price changes or remarks, and prices singly or in lots of 10, or 100 or 1000. Both books are by the Inventory Record Co. of Larned, Kansas.



Corrects end-play  
without "pulling"  
motor.

For Fords, \$3.75;  
For Chevrolets,  
\$4.25.

Repairmen and dealers are already stocking for the spring demand, which they know will come, for the C-A ADJUSTABLE BEARING. This demand, by the way, will be practically doubled by the addition of the new model for Chevrolet motors. Are you stocking up, too? May we send you more details?

### Adjustable Bearing Co., Inc.

405-407 Virginia Ave.

INDIANAPOLIS, IND.



### WEDFORD AIR-SPRING BACK CUSHION

Wedford Air-Spring Cushions are designed primarily for the use of short-limbed drivers and they add remarkable comfort because of their ingenious construction which causes them to seem to be tailored to one's anatomy. They are equally appropriate for use on boats, lounges, swings, etc. More complete details than those which follow may be had from the manufacturers, Wedder-Shuford Co., 1116 South Grand Blvd., St. Louis, Mo.



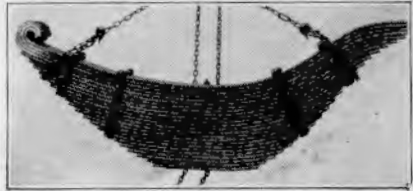
In each Wedford Air-Spring Back Cushion there are thirty spring coils each in a separate pocket and encased in double burlap, making one unit of soft springy comfort, and over the double burlap casing is flexible woven straw to give a smooth surface through which the spring coils will make no impression and protrusion and still permit ventilation through the cushion.

The outside covering is of powder blue collegiate corduroy, harmonizing with most every car interior besides being artistic and stylish.

The center oval in face of cushion is porous, allowing air to pass in and out with each depression and expansion of the springs—a puff of cool air with each action. No wrinkles or discomfort.

### GIANT SPRING MADE BY THE TUTHILL SPRING CO.

Making a mammoth spring to carry a load of 35 tons is all in a day's work, according to Mr. R. A. Olsen, Sales Manager for the Tuthill Spring Company of Chicago. A pair of such springs weighing 567 pounds each, were recently made especially for a heavy machinery mover to be used on one of their 35 ton tandem trailers. The



springs are made of 25 leaves each, 4 inches wide and  $\frac{1}{4}$  inch thick, and are built to withstand the roughest usage. Serving under extra heavy loads of machinery and traveling over all kinds of streets, these springs are subjected to the most severe tests known.

The Tuthill Spring Company says it is not unusual for them to make such springs, in the manufacture of which they have been very successful.

### RESTO-VAC JUNIOR CLEANER

A Vacuum Cleaner which weighs but  $4\frac{1}{4}$  lbs. and is only 12 inches long overall, has been designed and placed on the market by the Metal Specialties Mfg. Company, 338-352 N. Kedzie Ave., Chicago, Illinois. This vacuum cleaner contains a blower operated by a small 110-V motor. The motor also drives a revolving brush which loosens the dirt so that it can be easily drawn into the bag.



This vacuum cleaner is designed in neat and compact form so that not only the vacuum effect, but also the brush (which is self-contained in the cleaner) may be carried directly to the work to be done.

The motor is 110-V universal type, so that it may be used on either alternating or direct current, and it is controlled by a positive action toggle switch in the handle.

It is equipped with 15 feet of cord and attachment plug, which may be screwed into any convenient electric light socket.

### THOMPSON PRODUCTS EXPAND

Establishment of a Chicago factory branch and warehouse, the third of seven to be located at principal distributing points, is announced by E. G. Thompson, Vice-President of Thompson Products, Inc., Cleveland.

The Chicago branch which began operating December 6th is located at 134 S. Clinton Street. The warehouse there contains adequate stocks to serve distributors in Indiana, Illinois, Iowa, Minnesota, Michigan, Wisconsin, Nebraska and the Dakotas, the majority of whom have 24-hour delivery by the new arrangement. Previously most of this territory was served direct from the Cleveland factory. C. W. Sawyer, formerly of the Thompson sales force, is in charge of the branch under the supervision of Paul V. Spain, Chicago District Manager.

Thompson branches are also operating in Detroit and San Francisco. Others soon to follow will be located in New York, Kansas City, Atlanta and Toronto. Thompson Products manufacture valves, king, spring and tie-rod bolts and bushings, and starting cranks.



**COMPLETE, EQUALIZED BRAKE ACTION**

There is no need of stressing the importance of good brakes and the popularity of 4-wheel brakes on many makes of cars is an endorsement of the idea. Further there is no reason why such brake action might not well be added to the other points of advantage of the Ford. This thought prompted the making of the Zim System by the Zim Manufacturing Co., 3047 Carroll Ave., Chicago. Here is what the manufacturers say of their product:

Any Ford car or truck may now have all the advantages of four-wheel brakes. The Zim System of Triple



Brake Action makes this possible. When you press the brake pedal on any Ford equipped with this system—both the rear wheel brakes and the transmission brake are applied. Chatter is entirely eliminated—and side skidding done away with by this powerful combination of brakes.

It takes but a few minutes to install the Zim action on any Ford—no drilling or cutting—only a Ford wrench and pair of pliers needed to do the whole job and do it right.

Any Ford car equipped with the Zim system will stop as quickly and as surely, as smoothly and as quietly as larger late model cars with four-wheel brakes.

**NEW BONNEY CHROME VANADIUM CYLINDER HEAD WRENCH**

Bonney Forge & Tool Works, Allentown, Pa., announces a new "CV Chrome Vanadium Cylinder Head Wrench.

A New Chrome Vanadium Wrench with a hexagonal box head at one end for Ford cylinder head stud nuts,



and an open-end head at the other end to fit 7/8 inch Spark Plugs.

The wrench is properly offset to make it easy to get at the cylinder head nuts and to assure easiest position in removing spark plugs.

**NEW A. M. A. OFFICERS**

The following officers and directors were elected at the annual meeting of the Automotive Manufacturers' Association, held at Chicago, December 3, 1926:

**PRESIDENT**  
JOHN W. ANDERSON, The Anderson Co., Gary, Ind.

**FIRST VICE-PRESIDENT**  
JOHN F. SHUFORD, The Wedler-Shuford Co., St. Louis, Mo.

**SECOND VICE-PRESIDENT**  
C. D. PETTINGELL, Apco Mfg. Co., Providence, R. I.

**DIRECTORS (2 year term)**  
J. A. ANDERSON, Stone Mfg. Co., Chicago, Ill.

F. S. ARMSTRONG, Vesta Battery Corp., Chicago Ill.

B. J. KORAL, E. Edelmann & Co., Chicago, Ill.

ELMER RICH, The Simoniz Co., Chicago, Ill.

C. C. SECRIST, Victor Mfg. & Gasket Co., Chicago Ill.

J. C. SHAW, Chicago Solder Co., Chicago, Ill.

**DIRECTORS (1 year term to fill vacancies)**  
G. F. DISHER, Gemco Mfg. Co., Milwaukee, Wis.

P. C. THOMPSON, Thompson-Neaylon Mfg. Co., Chicago, Ill.

**DIRECTORS HELD OVER (terms expire December 1927)**  
A. R. JOHNSON, Jefferson Electric Mfg. Co., Chicago, Ill.

B. N. MacGREGOR, Packard Electric Co. Warren Ohio.

N. A. PETRY, N. A. Petry Co., Inc., Philadelphia, Pa.

J. P. WHITAKER, Whitaker Battery Supply Co., Kansas City, Mo.

A feature of the meeting was an address by Mr. E. C. Guthard, president of the Lincoln Products Company.



Ford Dealers! Service Stations!

**Get In On These BIG SELLERS**

Now —at the beginning of our

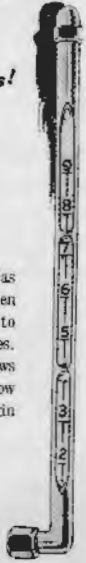
big national consumer advertising campaign—get ready for your share of the Sphinx Gas Reserve and Sphinx Gas Gauge business. Every Ford needs them. Don't wait for our salesman.

**Order now!** Liberal discounts.

The Sphinx Gas Reserve tells when gas gets down to last thirty miles. The Gauge shows at all times how much gas is in tank.

**NATIONAL EQUIPMENT CO.**

821 Market St., SAN FRANCISCO, CAL.



**THE Dyneto**

**6 Big Selling Features**

Show the Dyneto Wiper to a customer and he'll want it. Here are features that clinch the sale:

1. Uses less than one ampere.
2. Has ample power to drive one or two blades.
3. Uniform, unchanged operation on hills.
4. Compact, good looking.
5. Simple design.
6. Extremely low price.

**\$4.50** With Single Blade

**DOUBLE VISION—GREATER SAFETY**

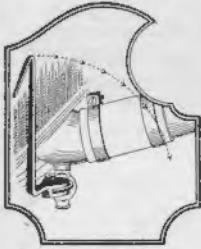
With the help of our dealer aids you can turn every wiper prospect into a Dyneto customer. With our special tandem demonstrator, you can sell the customer the double blade attachment. Double vision means greater safety to the car owner, and more profit for you. Dealers everywhere are finding that Dyneto Wipers are fast sellers. Write today, for complete information about our dealer proposition.

**\$6.00** With Two Blades

**OWEN-DYNETO CORPORATION**  
DEPT. G. Syracuse, New York

**ELECTRIC WINDSHIELD WIPER**

## The WISE RADIATOR PET COCK WRENCH



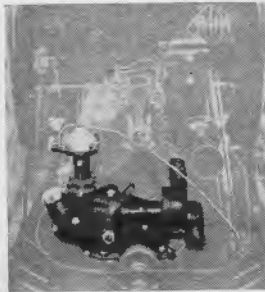
Just a turn of the handle and the radiator pet cock is opened or closed. Either operation can be performed standing up.

**Keeps Clothes Clean**  
Every Ford owner wants one of these handy devices. Order a dozen on a display card and watch them sell in a jiffy.

**WISE WRENCH CO.**  
2941 N. Oakley Ave.  
Chicago, Ill.

Dealers: Write Us Today.

## TRI-UNIT IGNITION, WATER & OILING SYSTEM FOR FORDS



Prevents freezing, gives proper lubrication and easy starting in coldest weather. Saves gas, oil and repairs. Fits all models — no machine changes. Also furnished with battery ignition. Special type for speedy Fords. Write today.

**TRI-UNIT MFG. CO.**  
3630 S. Grand  
ST. LOUIS, MO.

## The New Rigg Carburetor

New Principal in Carburetion

Results of years of experiments. More pep — more power — 20 per cent better economy. Our guarantee means satisfaction to you.

This carburetor is made of brass carefully machined and sells

\$12.00 retail

Special Proposition to Agents

**RIGG CARBURETOR COMPANY**

3404 Whittier Blvd. LOS ANGELES, CAL.



## Advertisers

and

## Agency Men!

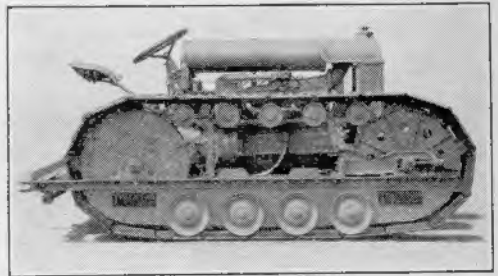
Read that article starting on Page 29!

### A NEW FULL CRAWLER

The new, heavy-duty model Trackson Full-Crawler for Fordsons, manufactured by the Full-Crawler Company, 502 Clinton Street, Milwaukee, Wis., has successfully completed all tests of its durability and performance, and is now in production.

This new model, which is known as "Model D", is designed for work where drawbar pull is of prime importance. It does not replace the Standard Model Trackson Full-Crawler, but is a special machine built for slow, heavy pulling.

The "Model D" has been produced to meet the increasing demand for a powerful crawler tractor between the 2 and 5 ton sizes, which will have the pulling power of from 6 to 12 horses, combined with a great track area which will carry the tractor over the most difficult ground conditions, no matter how rough, slippery, or soft.



It is 75 inches wide, 120 inches long, has a rigid frame of great strength, and weighs a total of 4100 pounds. This makes it especially adaptable to use with diggers, hoists, loaders, snow plows, etc., where great crowding action at low speeds is desirable, and where the tractor carries extra weight.

The "Model D" is made of the same high-grade electric alloy steel which is used in the Standard Model Trackson Full-Crawler. Since the power at the drawbar, the ground pressure, and the tractor's ability to go through soft or rough ground conditions depends on the amount of track which is on the ground, the track area of the "Model D" has been increased to 1600 square inches.

Like the Standard Model Trackson, the "Model D" necessitates no changes in the Fordson, and maintains the regular ground clearance.

This new model Trackson Full-Crawler will be on display at the 1927 Good Roads Show, January 10-14, Chicago, in Booth N. C.—24, the New Coliseum.

### HASTINGS OIL-CIRCULATING PISTON RINGS IN ACTIVE DEMAND

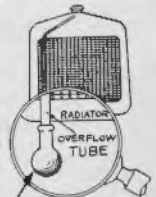
Word has been received from the Hastings Manufacturing Company, makers of Oil-Circulating and Dual-Test Piston Rings, stating that sales volume thus far this year eclipses that of the corresponding period of 1925 by better than 40 per cent.

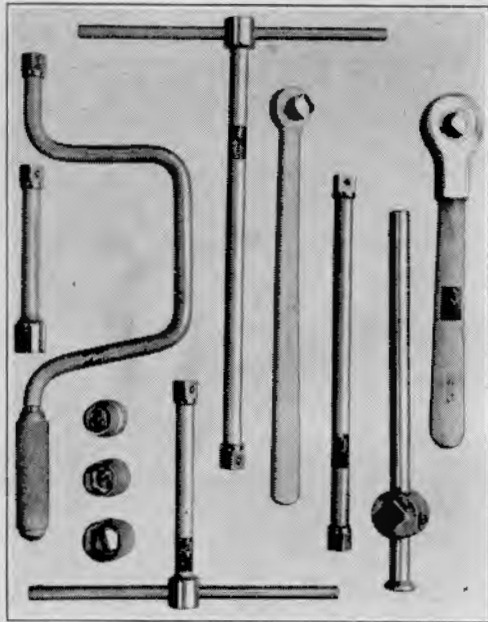
With the numerous new sales contacts established at the N. S. P. A. and A. E. A. Shows in Chicago, company officials are expecting a still sharper upturn in sales volume, and continued active demand extending into the new year.

One of the features of the Hastings Oil-Circulating Ring is the positive and automatic oil control which the ring makes possible. At the downward stroke of a piston, the lower groove of which is equipped with a Hastings Oil-Circulating Ring, all excess oil is wiped from the surface of the cylinder by the knife edge on the ring, and returned to the crankcase through drain holes drilled at a 45 degree angle in the lower side of the ring groove of the piston. A distinctive feature of the ring is that there are no grooves, holes or slots in the wearing surface of the ring.

### SAVES WATER AND ALCOHOL

A new device known as Vapotrap has just been announced which is claimed by the manufacturer to prevent the evaporation of water and alcohol in the radiator. It consists of an overflow tube which is attached to the overflow pipe of the radiator. Sells for 15c. For further information write to Jo. Berge Company, 233 Broadway, New York City.





#### BONNEY CHROME VANADIUM WRENCH FOR LOCKHEED HYDRAULIC BRAKE ADJUSTMENTS

One of the new products of the Bonney Forge & Tool Works, which attracted wide interest at the A. E. A. exhibit is a special Bonney \*CV Chrome Vanadium Wrench designed expressly for the adjustment of Lockheed Hydraulic Brakes.

The adjustment nut on Lockheed Brakes is so located that only a slight turn can be made and most wrenches can not get at the nut for this delicate adjustment. The openings of the special Bonney Wrench are set at two different angles, 22½ and 60 degrees. The jaws are pear-shaped and at one end the handle is cut away slightly to permit greater clearance. These features make it possible to take hold of the adjustment nut, whatever its position, and 4 bites with alternate ends of the wrench make a 1/6 turn of the hexagonal nut. \*CV Chrome Vanadium permits greater length and thinness and also guarantees the wrench against breakage.

Manufactured by the Bonney Forge & Tool Works, Allentown, Pa.

#### FOR THE FORD SERVICE SHOP

To prevent the loss of tools, parts, etc. the Marquette Manufacturing Company of St. Paul, Minn. offer a handy portable service cart which takes all the mechanics tools to the job. It keeps the parts of the motor safely together, handy for reassembling. It has three trays, with room for every tool from a reamer to a heavy power drill. Also an extra tray for placing under motor to catch dripping oil when taking down motor, and several handy compartments for rings, pins, pistons, bolts and small parts. It is of all steel construction and weighs 60 pounds.

A valuable addition to the service car is the Marquette Tow Pole. This saves the time of an extra man as it steers one or two towed cars in the same tracks as the pulling car. A hook-up can be made in a few minutes with the tow pole fastened to the axle and tie rod of the towed car. Strong construction throughout, with ample safety allowance.

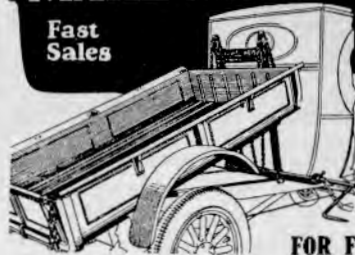
Entirely different in design and construction the Marquette tire service jack is said to be easy to use and with a sure grip. It lifts either end of the heaviest car with ease. It employs the cantilever lift principle using traveling pawls and a stationary pawl rack.

A long handle gives a big leverage and clears gas tank, bumpers, trunks, spare tires, etc. Of heavy steel construction, this universal jack will give good service. Further particulars on these products may be had from the Marquette Mfg. Company.

## MAKE MORE MONEY

Fast  
Sales

Clean  
Business



SELL  
DEPENDABLE  
DUMP  
HOISTS  
FOR FORD TRUCKS

Instantly converts the Ford Truck into a dump outfit at small cost. Fits Ford chassis without alteration. Adjustable to all bodies. Small space used. Quickly attached and easily operated. Once introduced sells itself. Five consecutive years of satisfactory service. Thousands of satisfied users in practically every civilized country in the world.

#### FULLY GUARANTEED

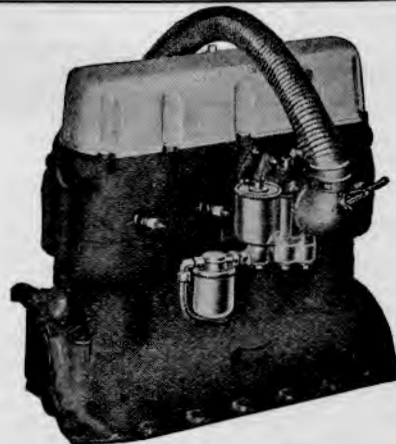
Also have a HEAVY DUTY HOIST for the CHEVROLET, REO, etc.

Write for Circular and Prices.

## Dependable Mfg. Co.

STREATOR, ILLINOIS

804 EAST MAIN STREET



### It Wins the Races

Who wouldn't like to have the same motor head in his Ford that takes racers to victory and world's records? This is it. Fronty-equipped Fords do 5 to 40 miles in 16 seconds—make 60 miles an hour—practically double the power and pick-up—run smoother and cooler—and save enough fuel in a year's driving to pay for the head. Be the dealer in your community. Send us your name in the margin for full details.

## Frontenac

CYLINDER HEAD

Chevrolet Bros. Mfg. Co.  
410 West Tenth Street  
Indianapolis, Ind., U. S. A.



# RED BALL \$1.75 GASOLINE GAUGE For Late Model Fords

A gauge you can sell, for it sells on sight. Positive action—absolute dependability, easy to read from driver's seat—fits all late models.

At a price that creates sales in volume. Cash in on the growing demand—hit the ball with RED BALL. Write today for full information and dealer helps.

**Woodstock Metal Products Co.**  
11 N. Market St., Chicago, Ill.



Trainor 10-Plus

SERVICE ALL FORDS WITH THIS NEW SPRING!

Write us for Prices and Catalog!

TRAINOR NATIONAL SPRING CO., Newcastle, Pa.

## TRAINOR SPRINGS

### Baker Disc Wheels

Baker Disc Wheels give to every model of Ford that low slung appearance—harmonizing perfectly with its design.

With the rumble eliminated and no tendency to shimmy, they are strong, perfectly balanced and as light in weight as the standard wood wheel. It has been so constructed that dust does not collect on its face.

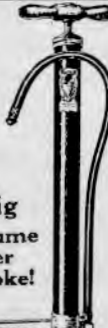
**BAKER WHEEL & RIM CO.**  
10228 Woodward Ave. Detroit

# ROSE

Easy Valve Action

# TIRE PUMP

Big Volume Per Stroke!



**FRANK ROSE MFG. CO., Hastings, Nebr.**

### PUSHES EVER-TITE BOLT

When a rapable sales executive connects with a worthy product then some real sales should result. Such an instance has occurred in the news that Frank Kinnaird is already well under way in his new appointment as general sales manager for the Ever-Tite Bolt Company with his Chicago office being at 4750 Sheridan road.

Mr. Kinnaird is well known as an experienced merchandizer of automotive equipment and has chosen well in aligning himself with as popular a product as Ever-Tite Bolts. The product is growing in popularity and sales and a big year is looked forward to.

### BLACKHAWK LICENSE PLATE HOLDERS

Here's something every dealer should have. It's a sure winner and every car owner wants a set. It is the most efficient, reliable and simplest way of attaching license plate. No nuts or screws to fuss with; easily attached without tools.



**BLACKHAWK LICENSE PLATE HOLDERS**

Set of 4 Sells at 25¢

Get in line and receive your share of this wonderful business. License Plate Holders come packed in a box—to retail at the remarkably low price of 25 cents. Fifty boxes in an attractive counter display carton.

### DELTA-LEVOLIER DIMING SWITCH INTRODUCED

A dimming switch that mounts on a spoke of the steering wheel and that permits switching from brights to dim, or combination of dimmers and roadlight and spotlight, with a flip of the thumb in any direction, has just been introduced to the trade by the Delta Electric Company of Marion, Indiana.

It is known as the Delta-Lovolier Dimming Switch—its name being derived from the fact that the lever tilts in any direction and automatically levels itself by coming back quickly to vertical position.

It dims headlights and turns on roadlight or spotlight at the same time giving the driver whatever combination he needs.

With the Levolier a driver can instantly change his headlights from bright to dim or dim to bright without taking his hand from the wheel, without taking his eyes from the road, without lifting a foot from the pedals or changing his driving position, only the thumb to move to work it.

It lists at \$2.75. In Canada \$3.70. The manufacturer will furnish further information upon request.



### AN INTERESTING BOOKLET

A very interesting booklet has just been issued to the trade by the Duroseal Corporation, 6511 Cedar Ave., Cleveland, Ohio. The piece is an illustrated review of the new Durator Piston and Ring produced by this company and in an interesting way tells much about the principles behind piston and ring principle and performance. Copies of the booklet may be had by addressing the manufacturers.

NOVEL AND PRACTICAL

A radiator locking cap, which is ornamental in design, and said to be theft proof, rust proof, and leak proof should find favor with motor car owners, and prove to be a good seller for dealers. The caps are highly polished,



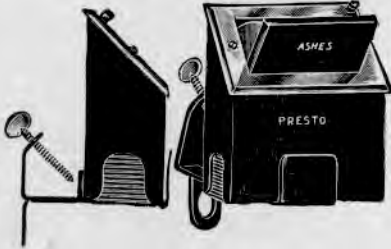
nickel plated, and come in two sizes, 10 1/4 inch and 7 3/4 inch. The large size sells for \$6.00, the small for \$4.00. For an additional 25c initials or emblems will be furnished. For further particulars write the Sterling Auto Devices, 2016 W. Lake St., Chicago, Ill.

PRESTO-FARGO ASH RECEIVER

The PRESTO-FARGO Ash Receiver shown above is a new modification of the Fargo Ash Receiver, which has been on the market for several years. The Metal Specialties Mfg. Company of 338-352 North Kedzie Avenue, Chicago, Illinois, have recently purchased the Fargo Ash Receiver business, including exclusive license on all of the Fargo patents in the United States and Canada.

This Ash Receiver has been modified to a clamp-on type, so that it may be clamped-on to the bottom edge of any automobile dash by tightening up one thumb screw.

As there are no holes to drill in installing, any man or boy can easily install one of these on the dash in two minutes' time and in any position desired.



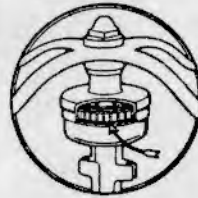
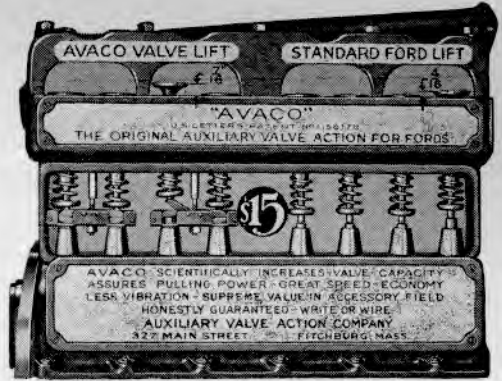
This Ash Receiver has a tight cover, which flies open instantly upon touching a spring catch button, and the patented construction prevents ashes from blowing out or to one side when using same.

The exposed rim of the Ash Receiver is made of brass, nickel-plated, giving the article an attractive appearance. The balance of the article is made of steel, protected by two coats of baked black enamel to prevent rusting.

Two other models are also being placed on the market and covered by the same patent, one a flush type which may be mounted through a hole cut in the dash, and the other a wall type, which may be fastened with three screws to the back of the front seat or the side wall of the car in any convenient position.

IN THE FIELD FOR THOMAS

L. W. Kilpatrick, formerly Sales Manager of the W. H. Thomas Mfg. Company, Spencer, Iowa, manufacturers of Bull Dog Foot Accelerators and other automotive equipment has taken charge of the factory territory and will devote his time on outside promotional work for the above company.



STIMCO

Steering Stabilizer FOR FORD CARS

Something mechanically different. Makes Ford Steering gear irreversible. Easy to install; out of sight; nothing to rattle. Takes all road shocks and yanks from the steering wheel.

A Patented, High Grade Article. Retail \$2.50, no expense to install. Type A for high pressure tire gear. Type B for balloon tire gear.

If your dealer or jobber does not carry, write for literature and full description.

STEERING IMPROVEMENT CO.

Box 42

Portsmouth, N. H.

SPEEDWAY BODIES and RACING EQUIPMENT

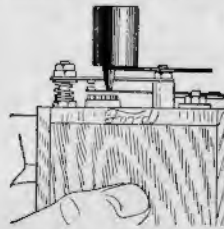


SEND FOR FREE CATALOG

MORTON & BRETT, Indianapolis Ind.,

Tune Up Your Motor With the

SIMO COIL TUNER



A pocket size tester with which anyone can perfectly adjust coil vibrator and points on the road or in the field.

DOES A PERFECT JOB

No longer is it necessary to go to the service man to have your vibrator points adjusted. You can do it yourself—with the Simo Coil Tuner. Ask any dealer or sent prepaid on receipt of price.

Price 75 Cents

SIMONSEN IRON WORKS  
SIOUX RAPIDS, IOWA

# 2 in 1

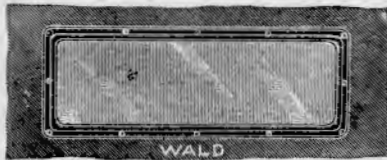
## Proved Money-Makers

You can make friends and money with Turner 2-in-1 Timers. The best Ford timer ever built! Also—Turner "Jr." Timer, New Foot Accelerator, Fan Belts, Carburetor Control, Oil Gauge, etc.

Ask your jobber or write today for complete information.

**TURNER MFG. CO.**  
KOKOMO, INDIANA, U. S. A.

### JOBBER: Look Into This!



We are leaders in one of the best lines of accessories being put on the market. Write us today for full information.

Dealers Order Thru Jobbers

**WALD MFG. CO., Inc.**  
MAYSVILLE, KENTUCKY



### CHATTER

eliminated by installing BREDDAR'S BALL SHIM in Fords. Ford dealers recommend them and make real customers. 85% of Fords need BREDDAR'S BALL SHIMS.

TEST ALL FORDS—take up floor board; pull brake lever back and forth; if you see excess play at ball joint install BREDDAR'S BALL SHIM.

List Price Only 45c. Your jobber has them.

**NIC BREDDAR'S SON MFG. CO.**

2529 Fifth Avenue, Rock Island, Ill.

LIBERTY MOTOR EQUIPMENT CO., 27 Dundee St., Boston  
Distributors for Massachusetts

**SILENTLY - SMOOTHLY**

*Fords take the Lead*

when equipped with

**MILWAUKEE Highway Special**

**3 1/4 to 1**

**The GEAR You Need for Power & Speed**

*Correct for Balloon Tires*

**50 Per Hour - No Effort**

**MILWAUKEE FORGE & MACHINE CO., Milwaukee, Wis.**

### ONAN UNIVERSAL TESTAND

Compact, universal, simple, powerful and inexpensive this testand will handle testing of every kind, style and model of generator, magneto or starter, on new Fords and old.

THE UNIVERSAL TESTAND is particularly adapted for use in shops where heretofore the amount of Generator and Electrical Work did not warrant installation of Electrical Testing Equipment. The important parts of more costly and complicated stands are incorporated in Onan Universal Testand without investment in unnecessary units.



Unnecessary parts are not used but everything essential is provided. The design is such that a generator or other unit can be tested quickly without interfering noises other than those created by the generator itself. All noises such as Brushes, Bearings and Rubbing Armatures are located quickly and surely.

Each equipment comes complete, ready to put in operation. Further information may be had by addressing the makers, David W. Onan, 43 Royalston Avenue, Minneapolis, Minn.

### THE RIGG CARBURETOR

Considerable interest is being shown in the Rigg Carburetor for Fords, a product of the Rigg Carburetor Co., of Los Angeles, Cal. With this device its inventor claims to have solved the problem of operating a motor with cold air intake and still show a substantial economy in fuel and an increase in power.

On hill climbing it is said that the Rigg Carburetor has shown unusual power and smoothness of operation and many builders of speedster Fords have adopted the device with complete satisfaction. The carburetor appears after a long period of thorough experimentation to assure the realization of a finished product. It is advertised elsewhere in this issue.



### CLOSED CAR WING GOOD SELLER

Although primarily designed to give more comfort and convenience in winter driving, the sales records of the Kokomo Closed Car Wing, manufactured by the Kokomo Automotive Manufacturing Co., Kokomo, Indiana, reveal that the device has enjoyed unusual popularity in all seasons.

By deflecting air currents from the side of the car, the wings create a suction that removes smoke, gas and foul air from the interior. This suction, in addition to providing ventilation, prevents dust from entering.

The glass used in the Kokomo Closed Car Wing is seven inches wide, and is made in the following lengths: 16, 17, 18, 19, 20, 21, and 22 inches.

The Fulton Company, of Milwaukee, Wis., is exclusive sales representatives for all Kokomo Products.

**THE CHAPMAN TROUBLE FINDER**

We have often preached to mechanics the wisdom of using proper equipment, under such heads as "Don't Guess—Measure". Thus, when we see mechanics who claim to be able to detect knocks by shorting spark-plugs with a screwdriver, we feel that this is indeed an interesting ability, but we also would feel a greater confidence if the mechanic used a more definite and reliable means such as the Chapman Trouble Finder.

The Chapman Trouble Finder is a device which its manufacturers claim will quickly detect knocks, compression leaks, faulty valve action and mistiming and under these general heads it locates the where and reveals the why, as, for instance, it shows whether a knock comes from wrist pin, connecting rod, loose tappets, pistons or main bearing. It is silent in action and its double action signal is important in making tests.

In every shop much time is consumed in locating trouble, this often requiring more time than the actual adjustment and repair. As a time-saver the Chapman device is strongly endorsed while it certainly is more reliable than the guesswork of even the most experienced mechanic. Dealers and shop men would do well to investigate this interesting piece of equipment and full details may be had from the manufacturers, the Chapman Tool & Manufacturing Company, 6632 So. Broadway, St. Louis, Mo.

**ANNOUNCEMENT**

The Bergan Supply Company has taken over the business of the Utica Cycle & Supply Company, Inc., and will continue to operate as one of the best stocked wholesale automotive and garage supply companies in central New York. The company will be known as the Bergan Supply Company, and is located at Utica, N. Y. Thomas B. Bergan heads the company.

**LYON STEEL FENDER RACK**

The Lyon Steel Fender Rack shown above is but one of eleven Steel Racks, each designed to store some type of auto part which, in most stockrooms, occupies an inconvenient amount of space because of its clumsy size or shape.



The Fender stores the fenders flat on their sides snugly nested. It will carry many times more fenders than the illustration shows. If the stock of fenders is not very large, the shelves may be used to store wheels, radiators, long parts and any other unhandy parts.

Made of Lyon Commercial Shelving, it can be put up or knocked down quickly or moved about without disassembly. Shelves are easily adjusted on 1/4 centers.

The Lyon Metallic Manufacturing Company, makers of this rack have made a special study of automotive stockrooms. This was done in the interest of helping the service department to operate at the lowest possible cost. The work has already effected important economies in parts storage methods.



**MORE**—and longer-lasting—  
power for the Ford or Lincoln  
owner; more profit for you. Ask  
the Thompson Jobber for  
**Thompson Valves**  
THOMPSON PRODUCTS, INC.  
CLEVELAND, OHIO

*For Safety's Sake*  
**DAMN THAT GLARE**



**GUMSHAN  
ANTI-GLARE  
VISORS**

DAMN THAT GLARE

**GUMSHAN AUTO PRODUCTS CO.**  
656 Muskego Avenue Milwaukee, Wisconsin

**PUNCTURE-PROOFS  
Tires in ONE minute**

Tires hammered full of nails, leak no air. Amazing new invention banishes puncture trouble forever. Punctures heal instantly while driving. Stops slow leaks. Preserves rubber. Increases tire life. Clean—scientifically correct.

**Agents \$50—\$85 a week**  
Immediate—tremendous profits. No talking—just drive nails in an old tire. Schedule cleared \$19.00 in an hour—Willecox, \$60.00 first day. Get the facts. Territory going fast. Full particulars and **FREE** sample offer by return mail. **ACT NOW.**

**C.F. JOHNSON & CO., 19 W. Jackson Blvd., Dept. 433 Chicago**

**35¢**  
Per Tire  
in 3 1/2  
in.  
SIZE



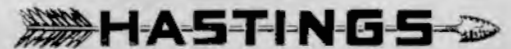
**A Simple, Powerful  
Pump for Fords  
and Fordsons**

By speeding up circulation Hastings Pumps prevent evaporation of alcohol solution, and also retard freezing.

They are simple, practical, logically located, and easy to install.  
Recommend them to your trade.

**HASTINGS MANUFACTURING CO.**  
Pat. June 19, 1923 360 E. Mill St., Hastings, Mich.

The Hastings Line also includes Real Glass Windows for Ford Bear Curtains and Oil-Circulating and Dubl-Test Piston Rings for all automotive vehicles.



**THE SMOOTH ENGINE BALANCE OF QUALITY CARS**



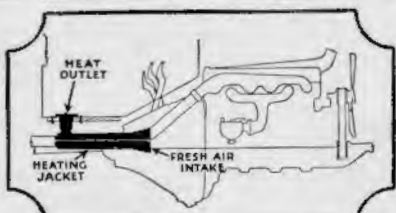
provided by counter balanced crank shaft design can now be given four cylinder cars by installing

**DUNN COUNTER BALANCES**

Designed by the same counter balance engineers who perfected the ESSEX vibrationless crank shaft. Easily installed in new or old cars. Does away with loose bearings and other results of vibration. Sold by most dealers. Money back guarantee. Liberal trade discount. Address 26 Main St.

**PRICES**  
Ford, Chevrolet, Overland, Star \$5.95  
Dodge \$7.50

**Dunn Manufacturing Co.**  
Clarinda Iowa, U.S.A.



**Perfection Heaters**

**\$5** Fits any model Ford regardless of special manifolds or carburetors. Not a manifold heater. Quick, clean, safe heat.

**THE PERFECTION HEATER & MFG. CO.**  
6545 Carnegie Ave. Cleveland, Ohio

**A RATTLING GOOD FORD**



will cover the ground but **A RATTLE-LESS FORD** brings its OWNER **More Pleasure**

**JORGENSEN DOOR SILENCERS**  
Eliminates Door Rattles. Absorb shock of closing doors. Saving window breakage.

**JORGENSEN HOOD SILENCERS**  
Eliminate Hood Rattles. Prevent shifting of the Hood.

**DEALERS:—**  
Write for prices  
**DOOR SILENCERS**  
\$1.00 set (8)  
**HOOD SILENCERS**  
45c set (4)  
**JORGENSEN SPECIALTY CO., Erie, Penna.**

**NEW BRUNNER MODEL 300 SPRAY GUN**

The very latest development in a spray gun is the new model 300 Gun, designed by Brunner.

Light weight but strong and durable, nicely balanced, easily cleaned and with ready adjustment of material control, the Model 300 will handle lacquer or enamels, undercoatings and chassis paint, for production work at fast speed or careful close work as a touchup gun. Either

fan or round spray is obtained by a turn of the nozzle. According to makers the gun affords perfect atomization of materials and sprays clean without coating the nozzle tip. It is held by a comfortable grip that fits any hand and has an easy trigger control by two or three fingers.



Another innovation is its die cast construction with all parts machined with special jigs and fixtures, guaranteeing standardized production and ready replacement.

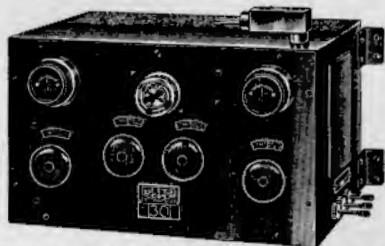
A substantial hanger ring, properly placed, balances the gun when hung up and an ingenious fork at the bottom of the grip prevents the cup from tipping and provides a natural placing of material hose when used with pressure or gravity feed. Air connections may be made either above or below the hand.

Further particulars may be had from the Brunner Manufacturing Company, Utica, N. Y.

**BLITZ FULL WAVE CHARGER**

The Blitz Full Wave One Way Charger is said to be designed to meet the demands for quick charging service. Its stated capacity is 1 to 15 batteries at 12 amperes full wave, or 1 to 30 batteries at 6 amperes. This outfit charges batteries in 8 to 12 hours by utilizing full wave rectification, and the Company claims by this latest Blitz development it is using the best method for fast charging. Some of the features mentioned for this charger by the manufacturers, Blitz Electric Co. Inc., 3115 Archer Ave., Chicago, are as follows:—

This charger has the added advantages that it can be left operating day or night with the least attention making



the charger a labor and time saving apparatus. The double capacity of this charger to charge 1 to 30 batteries at 6 amperes with the greater utility to charge 1 to 15 batteries in 8 to 12 hours at 12 amperes. This double capacity charger gives the Battery Man an outfit that will allow keeping pace with the increasing demands for faster charging service. The rectification of full alternating current wave is accomplished with a special designed transformer and operates with two rectifier bulbs. The charging rate is controlled by four separate controls. Either side can be used separately or both together at different charging rates if desired.

**Thomas**

CATALOG UPON REQUEST

**THOMAS AUTO TOP COMPANY, MUNCIE, INDIANA**

**TIRE COVERS — TOP COVERS  
SEAT COVERS  
ALSO WINTER ENCLOSURES FOR  
FORDS AND CHEVROLETS**



# CLASSIFIED ADVERTISEMENTS

Advertisements inserted under this classification for 15c per word; name and address must be counted; no order for less than \$3.00. Cash must accompany order. Advertising copy due by the 10th of the month preceding date of issue. Write for classified rates on twelve-time contracts. This gets big results.

## AGENTS WANTED

**BIG MONEY AND FAST SALES**—Every owner buys Gold Initials for his auto. You charge \$1.50; make \$1.55. Ten orders daily easy. Write for particulars and free samples. **American Monogram Co., Dept. 216, East Orange, N. J.**

**Factory Distributors Wanted for Holeproof Radiator Cement.** Sell Garages, Filling Stations, Stores, etc. Particulars, Samples Free. **Old Reliable Manufacturing Co., Dept. A., Mitchell, Ind.**

## ACCESSORY SALESMEN Would You Like to Earn Your Traveling Expenses?

You can do this easily by taking subscription orders for this magazine. Every Ford dealer, service station, Ford mechanic, Ford salesman, accessory store is your live prospect. Clip this ad and mail it today to: **Circulation Manager, FORD DEALER AND SERVICE FIELD MAGAZINE, 129-135 Michigan St., Milwaukee, Wis.**

**Make \$4 Daily. Distribute Free Samples Stop-Leak Rivets.** Steady work. Send 6c stamps for samples and instructions. Either sex. **Rivj-ette Co., Cohoes, N. Y.**

## BUSINESS OPPORTUNITIES

**Earn \$15.00 Daily. Qualify us as an Expert Automobile Refinisher, Retrimmer, Cleaner, Interior Decorator, Mfg. Automobile Specialties.** Modern trade practice easily learned at home. Endorsed everywhere. **DEWILDE, Sheboygan, Wis.**

**DISTRIBUTORS — AGENTS:** When prospect drives Equal Action Cable Brake Equipped Ford, feeling smooth, powerful Brake performance, he instantly buys. Today's fastest seller. Protected territory. Write today. **Villa-Dudley Co., 80 Seventh St., L. I. City, N. Y.**

## DISTRIBUTORS WANTED

**Genuine TOWNSAN VALVE ADJUSTERS** Now sold at 125 stores of Western Auto Supply Company in Ariz., Calif., Colo., Idaho, N. Mex., Wash., Ore., Utah and Hawaiian Islands—proves they are what Ford Owners want. Other distributors wanted. Sold direct for \$1 for set of 8 complete. **Chadbourne Sales Co., 723 Cedar Lake Road, Minneapolis, Minn.**

**Distributors and Factory Representatives.** Some choice territory open. See advertisement in this issue. **RED FLASH MFG. CO., 2451 West Madison St., Chicago, Ill.**

## FORD MILEAGE DOUBLED

Wonderful Vapor Humidifier and Gas Saver. Gives that marvelous night-time driving efficiency. Moisture does it. Automatically eliminates hard carbon. Starts Ford instantly any weather. 1 free to advertise. **CRITCHLOW, C-130 Wheaton, Ill.**

## PATENTS

**Inventors—Don't lose your rights to patent protection.** Send for blank form "Evidence of Conception" to be signed and witnessed and information bulletin "How to establish your rights." Both are free and very desirable to proper patent procedure. **Lancaster and Allwine, Registered Patent Attorneys in United States and Canada, 238 Ouray Bldg., Washington, D. C.**

## PATENTS — Continued

**PATENTS—TRADEMARKS—WRITE for free Guide Books and "Record of Invention Blank" before disclosing inventions.** Send models or sketch of your invention for inspection and instructions free. Terms reasonable. **Victor J. Evans & Co., 627 Ninth, Washington, D. C.**

## PRINTING

**500 Bond Letterheads 8½x11 and 250 No. 6½ envelopes \$3.00. Cards, Statements, Billheads, 200 \$1.00, printed, delivered. G. BEYERLE CO., Aurora, Ill.**

## SALESMEN WANTED

**LIGHTNING strange battery compound.** Charges discharged batteries instantly. Eliminates old method entirely. Gallon free to agents. **Ford Batteries \$6.20. Lightning Co., St. Paul, Minn.**

**WE TEACH YOU absolutely free how to reseat valves in ¼ the usual time without valve lathes, grinding compounds, etc.** Real factory job. **Write Douick Mfg. Co., Burlington, Mich.**

**Antifreeze prevents radiators freezing. No evaporation, cheaper, better than alcohol.** Greatest winter seller to filling stations, garages. Gallon free. **Antifreeze Co., St. Paul, Minn.**

**Salesmen calling on garages and oil stations, to sell motor garments, commission basis.** State present lines and references. **Charles Fasoldt, Manufacturer, Grand Rapids, Mich.**

## VULCANIZING EQUIPMENT FOR SALE

**Vulcanizing Auto Tires is a Paying Business.** We have plants near you \$50 up. Catalog free. **Instruction Book \$1.00. Equipment Exchange, 116 East 11th, Los Angeles, Calif. B-t-f**

## MISCELLANEOUS

**INVENTIONS COMMERCIALIZED on cash or royalty basis.** Patented or unpatented. In business twenty-four years. Complete facilities. References. **Write Adam Fisher Mfg. Co., 530 Enright, St. Louis, Mo.**

## SPEEDY BOAT

**Blueprints and directions for easily built Ford speedboat mailed for sixty cents or C. O. D.**

**HUBBELL MARINE COOLERS** convert Ford engines into marine motors. Satisfied users in twenty-five States. Easily attached, no drilling or cutting of metal. Booklet free to boat owners and Ford dealers. **C. C. Hubbell, 4A East Ave., Norwalk, Conn.**

## SPORT BODY PATTERNS

"Red-i-Kut" life size with simple instructions make it easy for you to build. Write for complete literature. We will help you fit up your Sportster with fenders, underslings and speed necessities. **K U E M P E L C O M P A N Y, GUTTENBERG, IOWA.**

**SPECIAL!!! Inch Display Advertisement 100 Magazines One Year Only \$32. J. Herman Wood's Popular Advertising Service, Atlantic City, N. J.**

## SUPER FORD 55 M. P. H.

**20% More Power and Pick-up. No vibration at any speed. No overhead valves, standard gear ratio, smooth as Big 6. Full instructions, with photographs of each operation to alter your motor, mailed for \$1.00. SHOPS and MECHANICS this is A MONEY MAKER TO YOU. No braces used. **Address Mechanical Engineer & Designer, P. O. Box 243, Huntington Park, Cal****

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# A saving of \$3,000,000 in long distance charges

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|  | N.Y.  | CHI   | StL   | SanF   |
| N.Y.  |  | \$3.40  | \$4.05  | \$11.30  |
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BY THE RECENT READJUSTMENT in long distance rates, it is calculated that telephone users will save \$3,000,000 annually. Interstate and intersectional rates are substantially lower. The greater the distance, the greater the reduction. Here are typical station-to-station day rates, old and new: New York to Pittsburgh, formerly \$2.10; now \$1.70. Chicago to Boston, \$5.45—\$3.95. Atlanta to San Francisco, \$13.65—\$9.40.

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100% **Lincoln** 30%  
More Power **UTILI-TT TRANSMISSION** More Speed

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*If interested in dominating the truck business in your locality  
—write or wire for full details of the Lincoln Sales Policy.*



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Sales Dept. for LINCOLN MANUFACTURING CO., Connersville, Indiana