

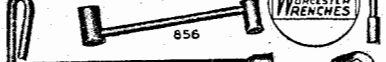
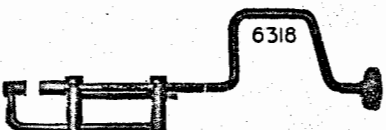
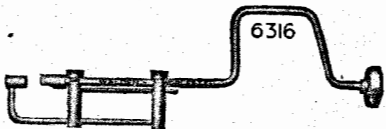
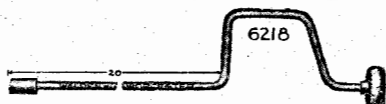
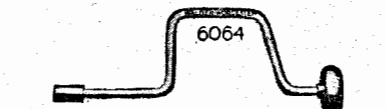
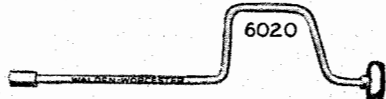
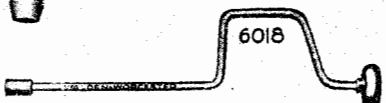
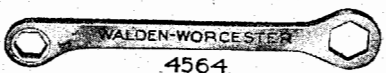
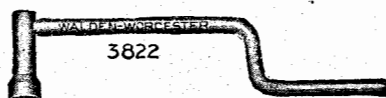
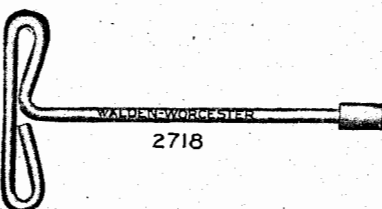
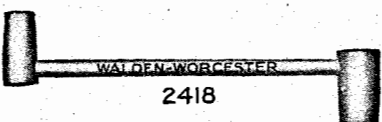
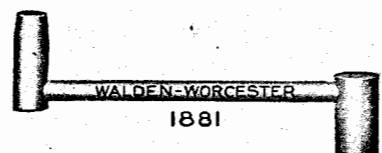
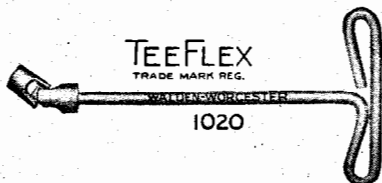
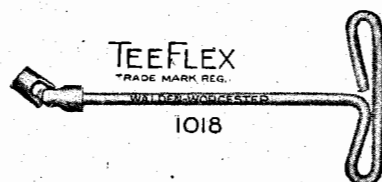
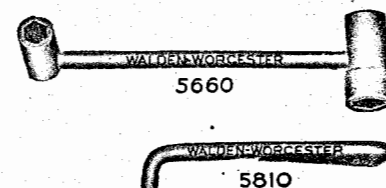
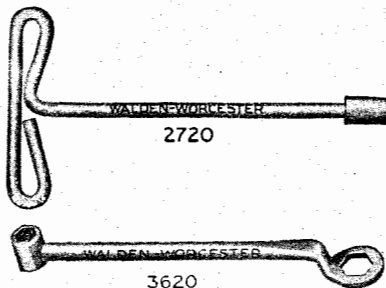
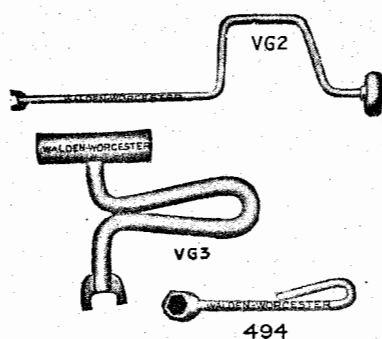
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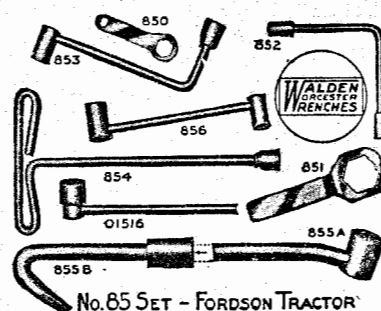
Speed Wrenches

A good set of speed wrenches will do more to cut your time on repair work than almost any other piece of equipment you can purchase. Placing and replacing nuts is about the most tedious and time consuming operation we have, if the proper equipment is not used.

The wrenches shown on this page are manufactured by the Walden-Worcester Manufacturing Company. The complete set is composed of 23 wrenches for Fords and nine wrenches for Fordson Tractors.

These wrenches are sold by John Millen & Son, of Toronto and Montreal, and Cutten & Foster of Toronto, and MacKenzie, White & Dunsmuir of Vancouver.

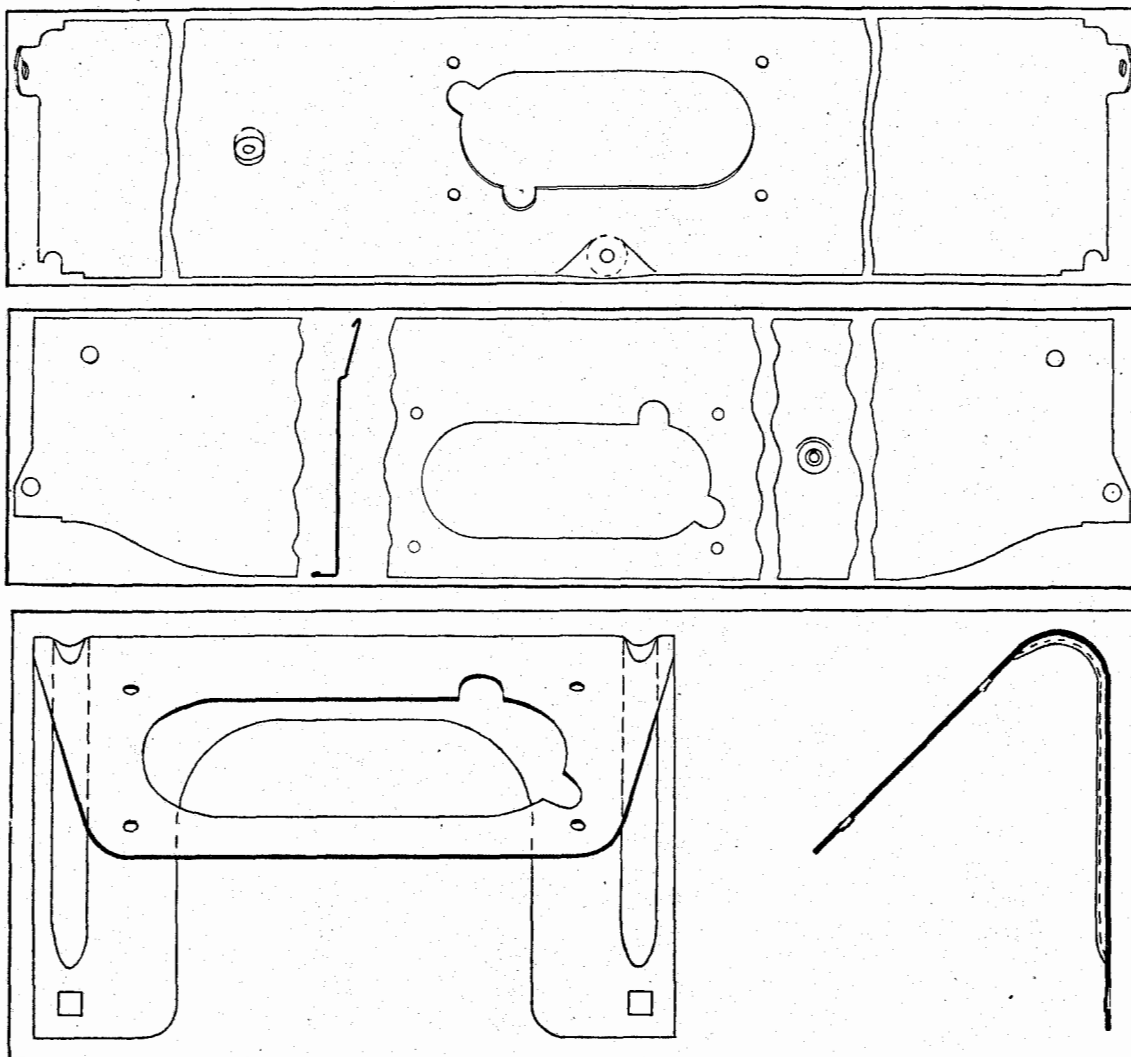
For prices, see following page.



Prices on Walden-Worcester Wrenches

VG 2.....	Each \$1.23	wheel to brake drum; spindle bolt; spindle connecting rod.
Valve grinder.		
VG 3.....	Each .77	Truck—Brake support; rear axle housing split; rear spring hanger.
Short valve grinder wrench.		
494.....	Each .62	5810..... Each \$0.77
Crank case lower cover; differential drive gear; rear axle housing.		All connecting rod cap nuts.
762.....	Each 1.69	6018..... Each 1.23
Rear spring perch; Truck—Rear spring clip.		Commutator case support; crank case; cylinder cover; fan adjustment; magnet; transmission.
1018.....	Each 3.50	6020..... Each 1.23
Carburetor flange (on cars without self-starter); commutator case support; cylinder valve cover; inlet and exhaust clamp; universal ball cap.		Commutator case support (cars with self-starter); cylinder cover (cars with self-starter); cylinder head.
1020.....	Each 3.50	6022..... Each 1.23
Connecting rod; cylinder head; water cylinder inlet connection.		Truck—Rear axle housing split.
1620.....	Each .98	6064..... Each 1.08
Axle housing; brake shoe support; crank case lower cover; cylinder head; dash bracket to dash; differential drive gear; drive shaft roller bearing; motor support, front; muffler; water cylinder inlet connection; water cylinder outlet connection.		Crank case lower cover; differential drive gear; muffler; rear axle housing; steering tube flange.
1881.....	Each 1.54	6218..... Each 1.54
Crank shaft bolt; piston pin; locking screw; running board; running board to fender.		Front fender iron (side) radiator support.
2418.....	Each 1.12	6316..... Each 4.20
Brake and reverse support; brake shoe support; clutch pedal support; crank case arm; crank shaft bearing nut; crank shaft rear bearing bolt; dash bracket to dash; differential case; fan bracket; front fender iron; front spring clip; inlet and exhaust clamp; radiator support; spindle bolt nut; steering post bracket; steering yoke clamp; universal ball cap.		Rear axle housing bolt and nut.
Truck—Rear axle housing, front; rear axle housing, rear.		6318..... Each 4.20
2718.....	Each .84	Ball socket bolt and nut; crank case arm bolt and nut (side); muffler support bolt and nut; steering post bracket bolt and nut; steering yoke clamp bolt and nut; transmission cover bolt and nut.
Commutator case support; crank case; cylinder cover; fan adjustment; magnet; radiator support; universal ball cap.		51620..... Each .98
2720.....	Each .84	Axle housing bolt and nut; brake shoe support bolt; cylinder head cap screw; dash bracket to dash bolt and nut; drive shaft roller bearing stud nut; water cylinder inlet connection cap screw; water cylinder outlet connection cap screw.
Commutator case support (on cars with self-starter); cylinder cover (cars with self-starter); drive shaft (cars with self-starter); drive shaft roller bearing.		5810..... Each .77
3620.....	Each 1.05	Connecting rod wrench.
Cylinder head; spark plug; water cylinder inlet; water cylinder outlet.		4564..... Each 1.82
3822.....	Each .92	Brake and reverse transmission bands; slow speed connecting lock nut and Champion X spark plugs.
Fly wheel cap screw.		5660..... Each 1.68
4564.....	Each 1.82	Body bracket connecting bolt and nut; front radius rod nut; front spring perch nut; front and rear spring hanger nut; hub bolt and nut; radius rod bolt and nut; rear spring clip nut; spindle bolt with oiler; spindle connecting rod with oiler; spindle connecting rod bolt nut.
Brake and reverse transmission hands; slow speed connecting lock nut.		2418..... Each 1.12
5660.....	Each 1.68	Brake reverse support bolt and nut; brake shoe support bolt; clutch pedal support bolt and nut; crank case arm bolt and nut (side); crank case arm bolt and nut (top); crank shaft bearing bolt nut; crank shaft rear bearing bolt; dash bracket to dash bolt and nut; differential case stud nut; fan bracket bolt; front fender iron bolt and nut (bottom); front spring clip nut; inlet and exhaust clamp stud nut; spindle bolt nut; steering post bracket bolt and nut; steering yoke clamp bolt and nut; Universal ball cap, bolt and nut; Universal ball cap screw.
Body bracket; front radius rod; front spring perch; front spring hanger; radius rod; rear hub nut; rear spring clip; rear spring hanger; rear		

NOTE: The above prices apply to Ontario and Quebec only.



Top, Fig. 63

Center, Fig. 64

Bottom, Fig. 65

New Design Instrument Panel Used on Tourings, Runabouts and Right Hand Drive Commercial Chassis

Figures 63 and 64 illustrate the old and new design instrument panel. The new panel, Fig. 64, is now being used on all Touring, Roadster and right hand drive Commercial chassis.

This new panel is not only neater in appearance but the top hooks over the cowl when assembled in place and eliminates danger of water dripping through.

The new panel obsoletes the following parts which will be supplied for repairs only.

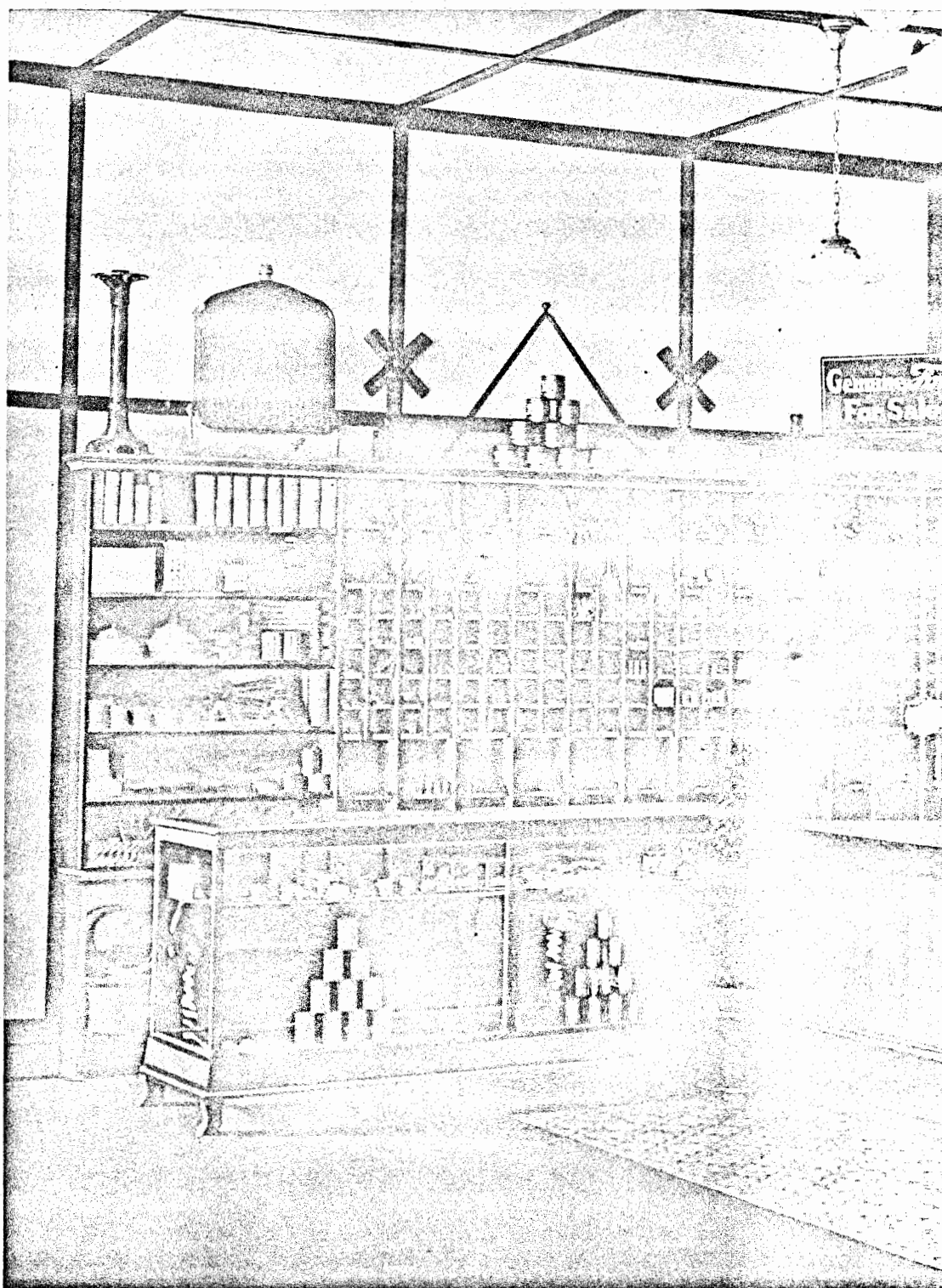
T-6602AR Instrument Panel.
T-7809 Windshield bracket to body bolt—rear.
T-7166 Instrument panel to cowl frame screw.
T-2257B Windshield bracket bolt—upper—rear.

New Design Instrument Panel for Trucks, Commercial Chassis, Left Hand Control With or Without Starter

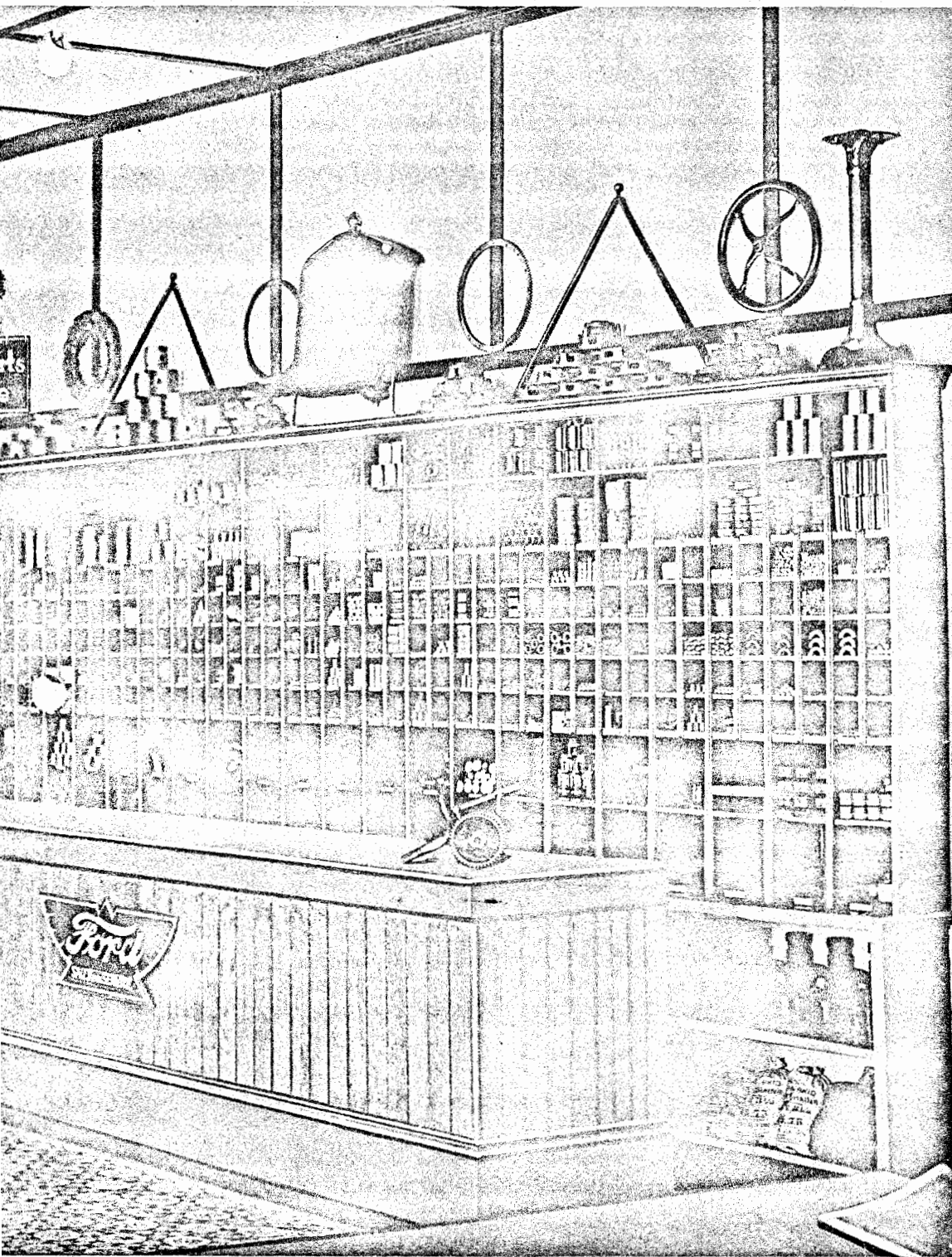
Figure 65 illustrates the new design instrument panel now being used on all trucks and commercial chassis, left hand control, with or without starter.

The new panel is bolted to the dash by two No. 3513-C instrument panel to dash bolts and 926 nut and T-624 washer. The new panel obsoletes the following parts:

TT-8933-R Instrument panel bracket block.
TT-8934-R Instrument panel bracket block screw—upper.
TT-8935-R Instrument panel bracket block screw—lower.
TT-6602 Panel.



The above attractive stockroom was recently built in o
and Melrose are to be complim...



new dealer's premises at Listowel. The Messrs. McIntyre
on its neat and orderly appearance.

Ford Mechanics' Section

(Continued from Page 79, March Service Bulletin)

The Drive Shaft Assembly

The drive shaft assembly (Fig. 67) is that part of the rear axle assembly which serves to connect the motor to the axle itself. It is composed of several assemblies, as follows:

Drive shaft housing assembly 2582

Universal joint assembly 7571

Rear radius rods 2547A and 2547B

Roller bearing 7587

Thrust bearing assembly includes 2-2591 and 1-2591B

The Drive Shaft 2595B

The drive shaft No. 2595B is the main driving unit which passes down through the center of the assembly and is supported by three bearings, first by a babbit bearing No. 2581 at the front end, by a roller bearing assembly No. 2587 and a ball end thrust at the rear.

The babbit bearing is used in front as we have only a turning action here with very little tendency for wear. However, at the rear end we have a different condition in that on account of the drive pinion, which is bevelled, we have a heavy thrust in two directions. The radial thrust is taken care of by the roller bearing which operated on a drive shaft sleeve No. 2596, which is hardened and pressed over the drive shaft and on the inside of the housing, which is also hardened. The end thrust is taken by the ball bearing assembly, which is composed of two hardened washers No. 2591 and a ball bearing assembly, No. 2591B. This bearing fits between the end of the drive shaft sleeve and the rear end of the drive shaft housing.

Universal Joint Coupling

A universal joint is a joint which allows one shaft to drive another at an angle.

On the Ford car the axle operates on a lower plane from the motor and it is also

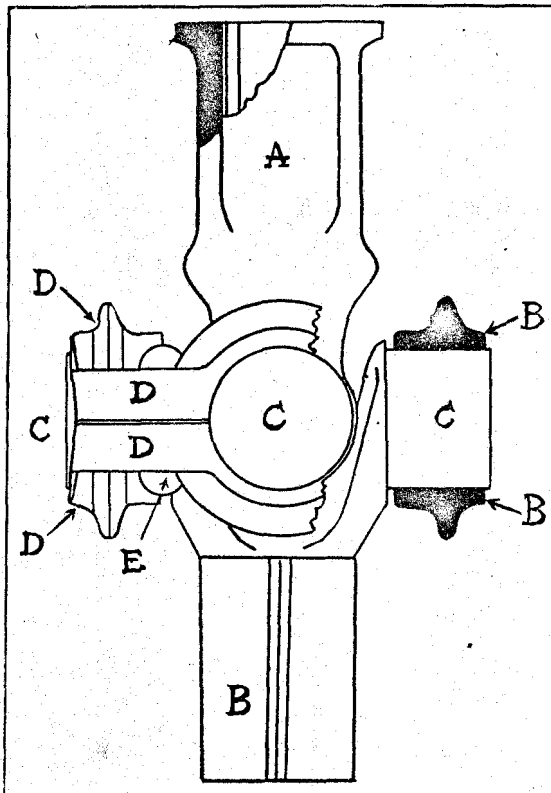


Fig. 66

subjected to uneven road conditions, which makes the use of a universal joint necessary. The peculiar action attained in the universal joint is obtained by two short shafts A and B, Fig. 66, each having a double shaft running in the opposite direction. Each set of these shafts have a bearing at opposite angles from each other in the joint ring D, which is made in two halves and riveted together by four rivets E. By studying the cut you can see that the shaft B is permitted to drive the

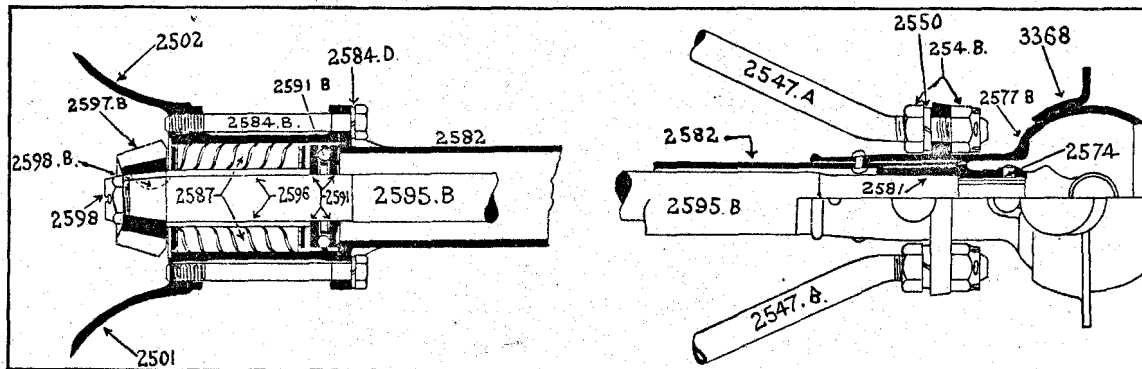


Fig. 67

shaft A, even though it is operating at a different angle.

The square end of the universal joint B is square and slips into the square hole in the end of the brake drum shaft. The end B is square inside and fastens over the end of the drive shaft, which is square and fastened by a round pin which is riveted in place.

Drive Shaft Pinion

The drive shaft pinion is of hardened alloy steel, is drilled with a tapered hole and grooved for a key. The end of the drive shaft is tapered and cut for a key to match the pinion. The pinion is held on the shaft by a $\frac{5}{8}$ x 18 thread nut and cotter keyed.

Drive shaft pinions are furnished in two sizes i. e., 11 toothed and 10 toothed. The 11 toothed pinion is used on touring and run-about axles and the ten toothed on closed cars and light delivery trucks. This gives a 3 7-11 to 1 reduction and a 4 to 1 reduction, as the large driven gear has 40 teeth.

Rear Radius Rods 2547A and 2547B

In order to keep the gears working in perfect alignment rear radius rods are used. These connect with the outside ends of the axle housings and the front end of the drive shaft housing. The end which connects to the drive shaft housing have long threads and are fastened with a $\frac{5}{16}$ x 18 thread nut on each end of the support. This is to allow for adjustment when fastening them in place.

The drive shaft assembly is fastened to the rear axle by six cap screws No. 2584B, which pass through drive shaft flange and roller bearing housing and screw into the rear axle housings.

New Wiring on Non-Starter Type Cars

Fig. 69 illustrates a new type of wiring now being used on all non-starter type cars.

This change was made in order to more completely standardize the electrical equipment on all Ford cars.

Starting and Lighting Switch

The starting and lighting switch No. 5012, is now being used on all Ford cars. However, in order to adapt it for non-starter type, a change in the method of assembling the wires was necessary. In order to assist in this a pasteboard card is punched and placed over the terminals with the proper leads marked on it. The cut of the switch in the right hand upper corner illustrates this and where the wires are connected, a plate No. T1840 fits into the Ammeter opening.

Note—In order to use this switch however it is necessary to turn the key on battery side for magneto current and if a battery is used for starting, it is connected to the left hand terminal on the three terminal dash block and to ground and the key must be turned on magneto side for starting.

The numbers of the new parts used are as follows, on all non-starter models:

- 1—T-1951 Terminal block
- 3—5045 Terminal block to dash screw
- 1—T-1840 Meter hole filler plate
- 3—5061 Meter hole filler plate screw
- 3—T-2057 Meter hole filler plate screw lock washer
- 1—T-4759 Terminal block to magneto contact wire assembly.
- 1—T-7660 Wire assembly on body
- 1—T-7502-C Commutator wire assembly

The new wiring obsoletes the following parts, which will however be supplied for repairs only.

- 5000—Coil Assembly with switch
- 5030—Commutator wire assembly
- 6589X—Head lamp switch
- 6559X—Head lamp switch screw
- 7487X—Head lamp switch to terminal wire assembly

Note—All switches 5012 having the seven terminals cannot be used on non-starter type cars, but the new six terminal switch which we are now supplying is interchangeable on all models.

(To be Continued)

Tractor Cylinder Assembly

In order to assist dealers in rebuilding old tractors, Branches will supply Tractor cylinder assemblies comprising the following parts:

Cylinder	Valves
Pistons	Valve springs
Crank shaft	Push rod
Connecting rods	Cam shaft nut—large
Large time gear	Cam shaft nut—small
Small time gear	Valve spring cover
Cam shaft	Commutator brush

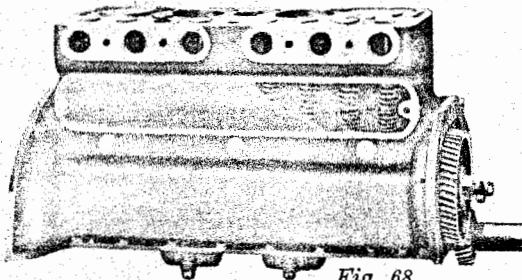


Fig. 68

(Continued on Page 88)

As a large percentage of the parts require renewal when overhauling tractors that have been in service for a considerable period, a saving in time can be effected for the owner as well as the dealer by installing a cylinder with the crank shaft, pistons and bearings properly fitted and run in. In localities where

The price of the tractor cylinder assembly as illustrated in Fig. 68 is \$100, less 25% to dealers.

