

## **Rear Axle Rebuild**

When rebuilding a Model T rear axle, the outside rear axle bearings receive little attention. The metal cups over the ends of the rear axle (which hold the felt seal or new neoprene seal) often become oversized after being removed or replaced a few times. The solution to this problem is relatively simple: slot the sides of the cup in four places with a hack saw (cut only about ½ inch into the cup) and use a strap type radiator hose clamp around the outside of the cup to hold it in place. This allows the felt or neoprene seal to fit tighter and allows for easy removal when necessary.

Another rear axle task is filling the grease cups for the outside bearings, and then lubricating the bearings by screwing down the grease cups. The solution to this messy job is quite simple. Go to your local auto parts store and ask for replacement grease fittings with a 1/8 R pipe thread (this is the same thread size as the grease cup filling itself). Take the base of the grease cup and thread the **INSIDE** of the grease cup base with a 1/8 R tap. Then take the new grease fitting and screw it into the base of the old grease cup. Screw the base of the grease cup into the axle housing, grease the bearing if necessary, and screw the grease cup lid onto the base. What you have is an original-appearing grease cup with a modern grease fitting installed, which can be easily lubricated with a modern type of grease gun. The mess is over.

## **Rear Axle Nut**

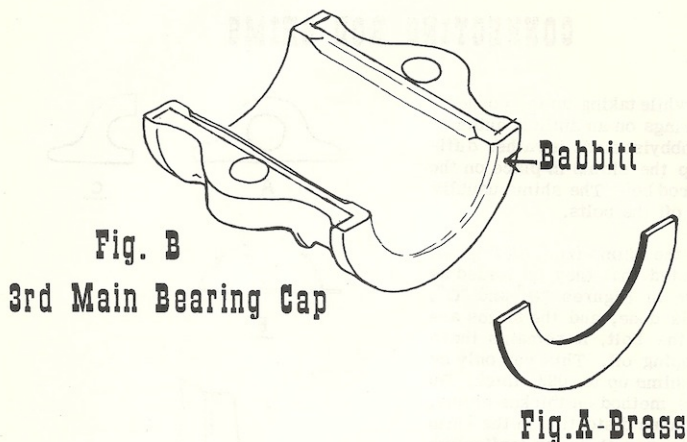
One of the nuts that is tightened and removed most often, and one that is usually loose, is the rear axle nut. The threads on this nut are usually worn, and with the wear on the threads of the axle, there can be quite a bit of “slop” between the two. If you are fortunate enough to have accessory wire wheels on your car, another problem is trying to install the cotter pin in the axle and nut.

The solution is quite simple. Instead of installing the old castellated nut, go to your auto supply store and purchase a modern, self-locking nut. Once this nut is tightened you do not need a cotter pin, it will be very difficult to remove, and the new threads on the nut provide enough bite to stay tight on the axle. If you remove the nut more than once, I recommend you replace the nut.

## The Model T Ford — Its Service And Repair

by Lester A. Klee, Technical Editor

### THRUST BABBITTS



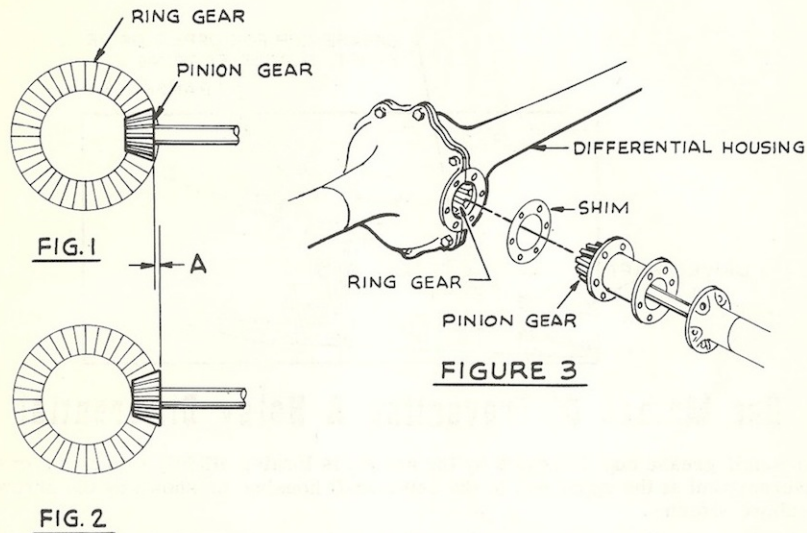
The following material is submitted through the courtesy of Frank Gonsiorowski. Model T Fords are used in parades to a considerable extent. The average owner does not realize the forces that are applied to the thrust babbitt on the third main bearing by constant parade stopping and starting.

Whenever the motor is idling, the entire force of the high-speed clutch spring is against this bearing babbitt causing wear and excess longitudinal movement of the crankshaft. Longitudinal movement, or end play, of the crankshaft should be kept to a minimum. If not, one can expect more wear on the connecting rods, wrist pins and cylinder walls. Also, when the car is in starting position, the entire assembly of the crankshaft and transmission is pulled backwards permitting the flywheel magnets to be pulled too far away from the field coils. Thus, hard starting.

To overcome this excess wear, it is recommended that a piece of brass, as shown in Figure "A", be properly shaped, cleaned, tinned and soldered to the FRONT end of the third main bearing cap, as indicated in Figure "B".

One final note, too. Now that the driving season is again at hand, make sure your Model T is as safe and mechanically sound as possible. Take all the extra time that is required to thoroughly check every facet of mechanical performance. Use your common sense to assure the highest possible degree of trouble-free operation. Don't leave a single thing to chance. You'll be time and effort ahead all season long.

# The Model T Ford — Its Service And Repair



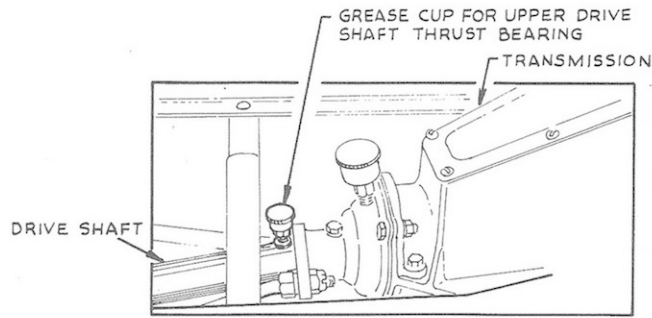
## Noisy Differential Gears

In some instances near gears and other new parts are installed in the differential and the owner finds that the gears are still too noisy.

Our members have learned that in some instances the drive shaft pinion protrudes out too far. This results in the pinion gear being located too far into the ring gear, as shown in Fig. 1, Dimension "A". The ends of the teeth of the pinion gear should be flush with the ends of the teeth of the ring gear, as shown in Fig. 2.

We assume that this condition came about by the aggregate of parts, as shown in Fig. 3, having been machined to the minimum side of the tolerance at the time of manufacture.

Should this condition exist on your "T", it then becomes necessary that you measure the distance of the misalignment, as shown on Fig. 1, Dimension "A", and make a shim of the same thickness as the measurement and install, as shown in Fig. 3.



## One Method Of Preventing A Noisy Differential

The small grease cup, indicated by the arrow, is located slightly to the rear of the universal joint at the upper end of the drive shaft housing, as shown by the arrow in the above sketch.

There is a babbitt thrust bearing located at this area that controls the longitudinal movement of the drive shaft (End Play).

Very few Model "T" owners realize that this bearing is involved in maintaining the correct mesh of the drive shaft pinion and the differential ring gear. Any slight amount of wear on the collar of this babbitt bearing will cause the gears in the differential to become noisy.

It is somewhat a mystery as to why Henry Ford equipped his "Ts" with this small size grease cup at this very important area where lubrication is most essential. Use a good grade of soft grease and insert a grease cup full to the bearing at least every 200 miles.