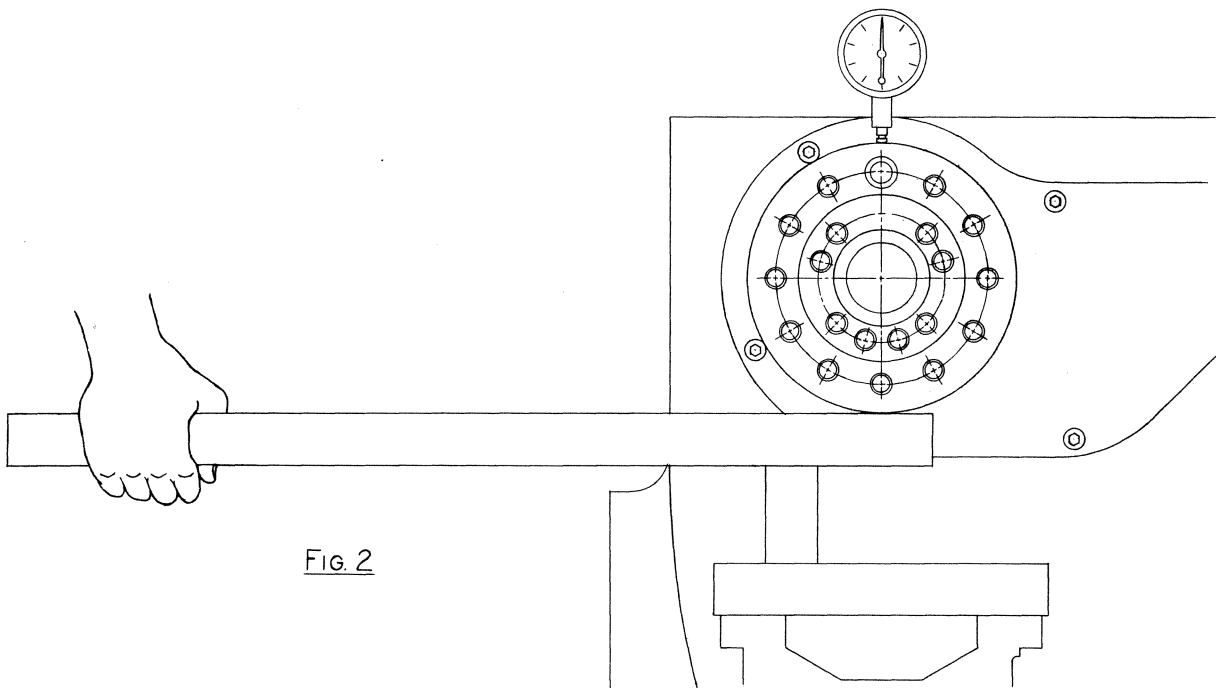
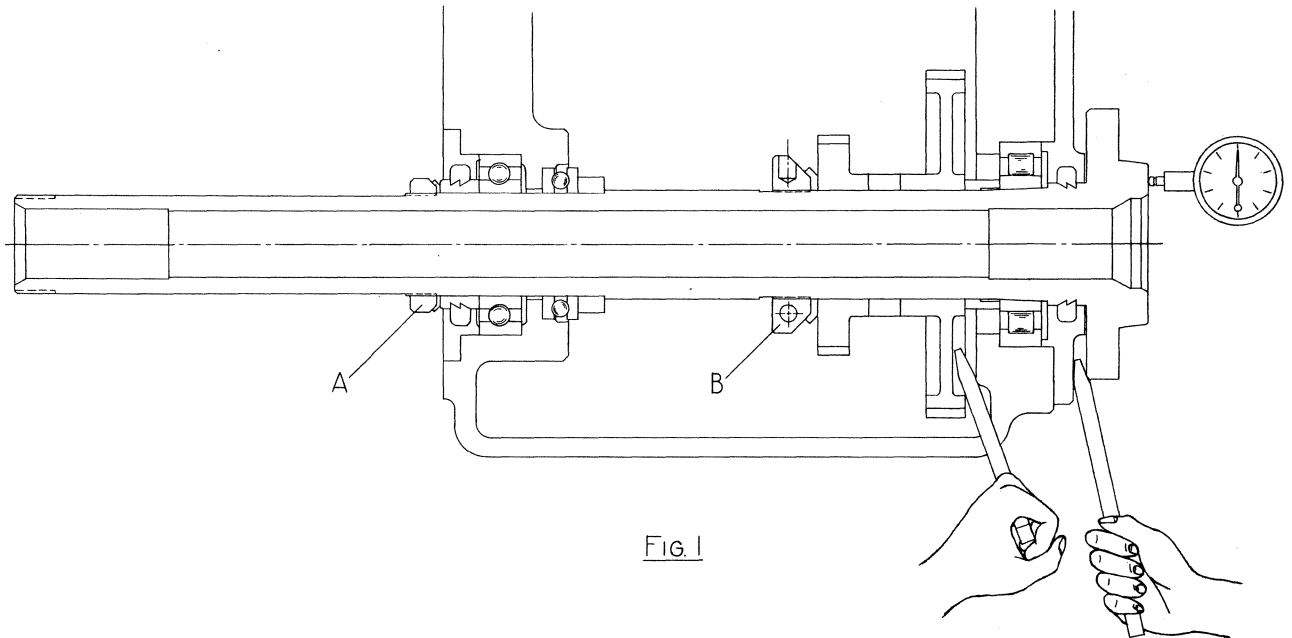


BARDONS & OLIVER NO. 2 GEARED ELECTRIC TURRET LATHE

PROCEDURE FOR THE ADJUSTMENT OF THE SPINDLE  
BEARINGS



As shown by Figure 1 the spindle is mounted on a precision cylindrical roller bearing at the head end and a precision deep groove ball bearing in combination with a ball thrust bearing at the tail end. The advantages of this type of spindle mounting are three-fold:

The greatest possible rigidity for both radial and thrust loads and consequently a remarkable freedom from chatter.

High spindle speeds without undue heating of bearings.

Long life.

To obtain these advantages to the fullest extent, it is necessary for the user to extend PROPER CARE TO THE MACHINE. The lubrication of bearings is important. We recommend strongly the use of a high grade SAE 10 motor oil in the head.

Dirt and foreign particles will ruin bearings rapidly. At all times TAKE CARE TO KEEP HEAD AND BEARINGS SCRUPULOUSLY CLEAN.

If it is suspected that the spindle bearings are in need of adjustment test the looseness as shown by Figure 2. When undue looseness is indicated procede as follows:

Remove head housing and small cover on top of head end bracket. Test axial spindle play as per Figure 1. When doing this hold spindle from rocking to prevent incorrect indicator reading. If axial play is found to exist tighten Nut A slightly and make a new reading. Proceede thus step by step until dial reading shows that all axial play has been eliminated. But be absolutely certain NOT TO TIGHTEN NUT A BEYOND THE POINT WHERE THE AXIAL PLAY DIS-

APPEARS, as doing so would preload the ball bearings and result in greatly shortening their life.

The cylindrical roller bearing at head end of spindle has a tapered bore. It can be adjusted by Nut B. Tighten the nut slightly, a little at a time, and at each step read the bearing looseness on indicator as shown by Figure 2. Proceede thus until all bearing looseness has been removed, BUT BE VERY CERTAIN NOT TO TIGHTEN THE BEARING BEYOND THIS POINT. To do so would preload the bearing and result in greatly diminishing its life.

When making indicator readings be sure to hold spindle from being rocked by the action of the lever as this would result in an error in indicator reading.

When the adjustments are finished be sure to lock the nuts.

During this work of adjusting BE VERY CAREFUL NOT TO ALLOW DIRT OR FOREIGN PARTICLES TO GET INTO THE HEAD as these would be apt to cause serious damage to bearings and gears.

**BARDONS & OLIVER, Inc.**

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