

Improvement of adjusting pad for double row roller bearings

[Cylindrical roller bearings](#) are often used as the front bearing bearings (outer ring separable) in the spindle structure of machine tools. This kind of bearing has many advantages: for example, the inner ring of the bearing has 1:12 taper hole and the main shaft journal matching, by adjusting the nut to make the inner ring tighten and expand, eliminate the gap; apply preload, can be lack of higher working accuracy. But if the position of the adjusting pad is not properly designed, it will be difficult to assemble and adjust the luggage of the spindle box.

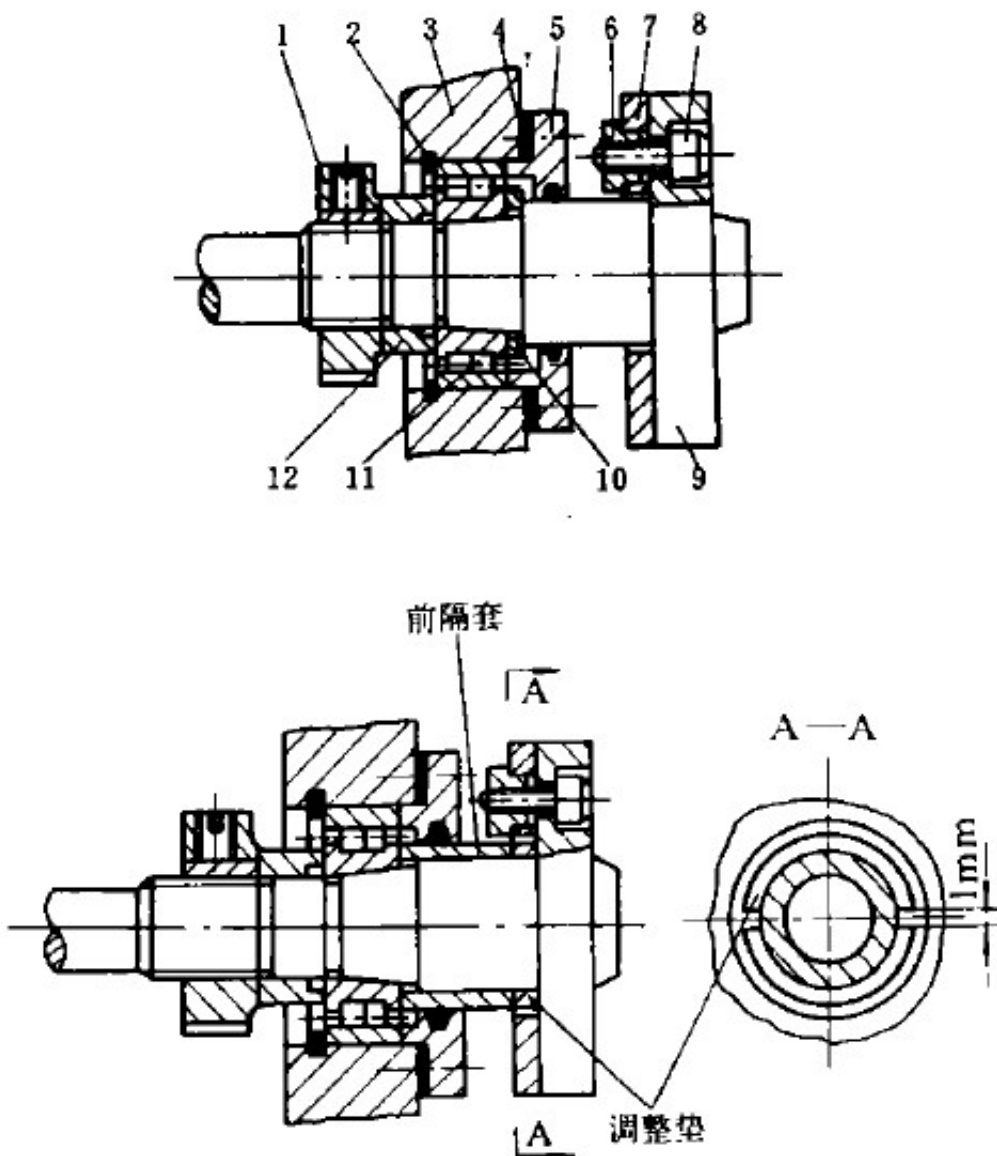


Fig. 1 shows the front support structure of a horizontal lathe spindle. As can be seen from the drawings, due to structural constraints, before assembling the spindle box, it is necessary to

install bearing 11, sleeve 12, nut 1 and precast adjusting pad 10 on the spindle before assembling. When the test accuracy is not up to the requirement, only the main shaft is removed from the box and the grinding pad is re adjusted. [To solve the above problems](#), the structure of Fig. 1 has been improved (Fig. 2). The adjusting pad 10 is made into two semicircles, mounted on the inner end face of the spindle 9, and a front spacer sleeve is added between the adjusting pad 10 and the bearing n. When adjusting, just unload the screw 8, move the pad 7 backward, loosen the nut 1, take out the 2-semicircle adjusting pad to grind, and then lock the nut 1.