

## FRA8 115-mm Grubb Parsons Refractor: Restoration/Adaptation

**Issue:** Wanted to adapt an unsigned Grubb multi-wire micrometer for use with the Grubb Parsons refractor

**Action taken:**

1. Designed and fabricated adapter locking ring with a twist lock feature for quick coupling utilizing existing quick-lock features on the faceplate of the micrometer. Note the 4 screws prominent on the flange below.

**Result:**

1. Beautiful "Grubb" micrometer mounted and usable on a equally beautiful Grubb Parson Refractor

2. No change in originality or damage done to either the telescope or micrometer in the process of fitting the micrometer

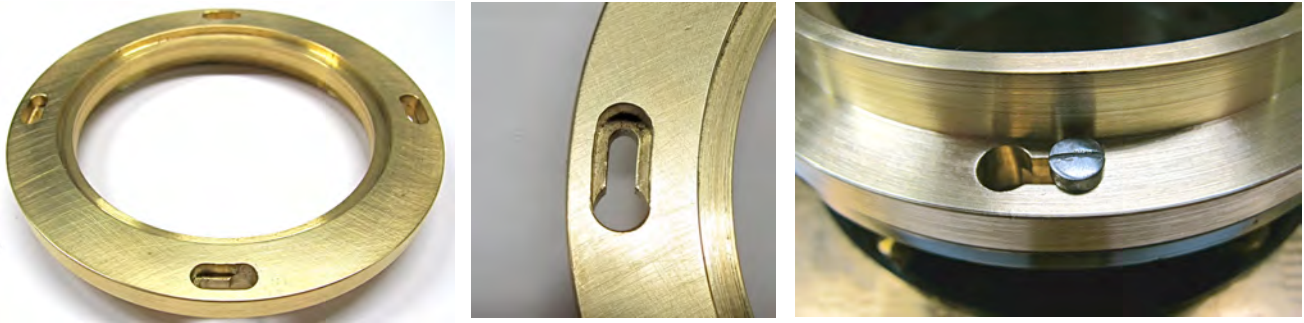


Existing receiver flange on micrometer; Note that the existing machine screws have recessed cross-sections just below the heads. The two adjuster knobs provide coarse xy alignment

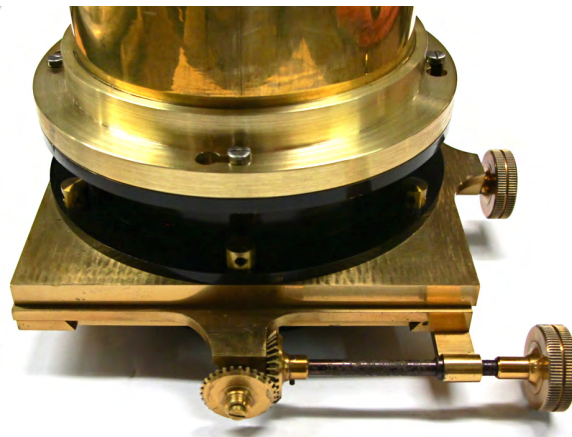


New custom adapter ring locked in position utilizing the four special existing machine screws in a novel a twist- lock design

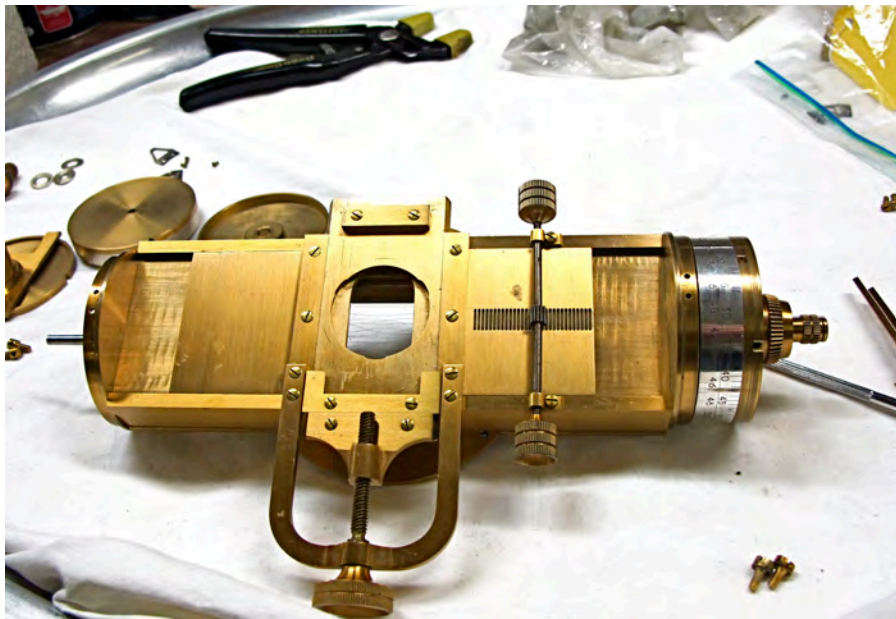
## FRA8 Restoration/Adaptation



Details for attaching adapter ring to micrometer receiver flange; tolerances tight - ring locks with only 1/2 turns of the four fine machine screws that existed on the micrometer receiver flange

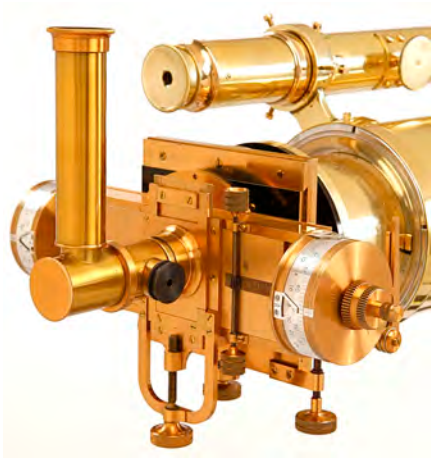


Telescope focuser tube screwed into adapter ring already affixed to the micrometer receiver flange, which has coarse x-y adjusters.

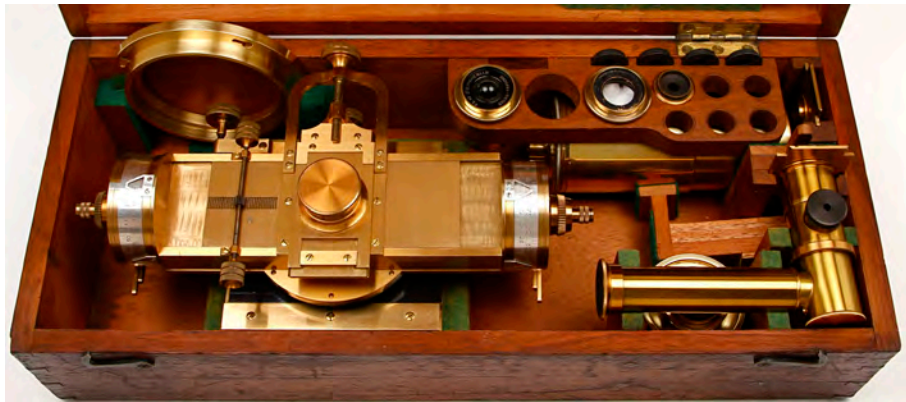


Main part of the unsigned Grubb multi-wire micrometer undergoing restoration. This part attaches to the bottom of the other "half" of the micrometer in the photo immediately above.

## FRA8 Restoration/Adaptation



Attached and operational



Cased with three celestial lenses (Note adapter flange in upper left )



Overview