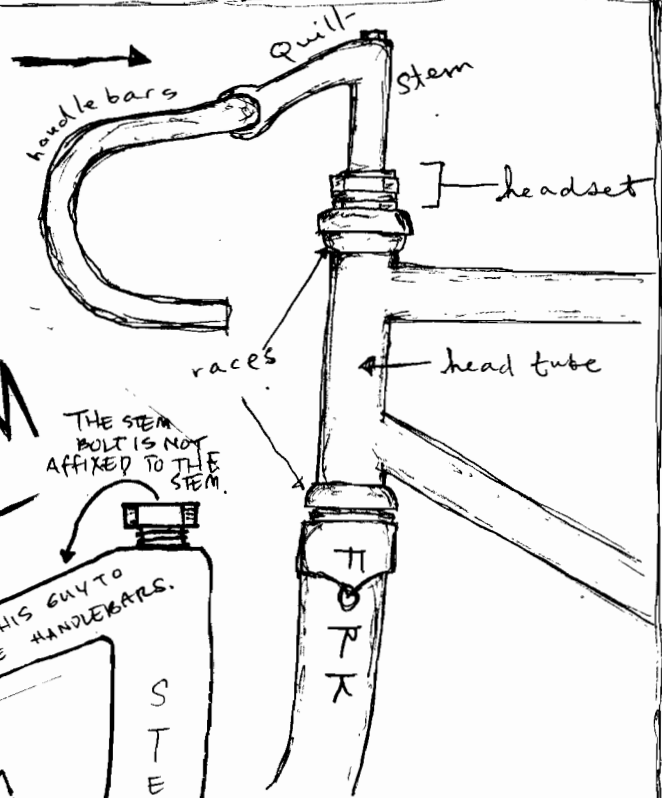
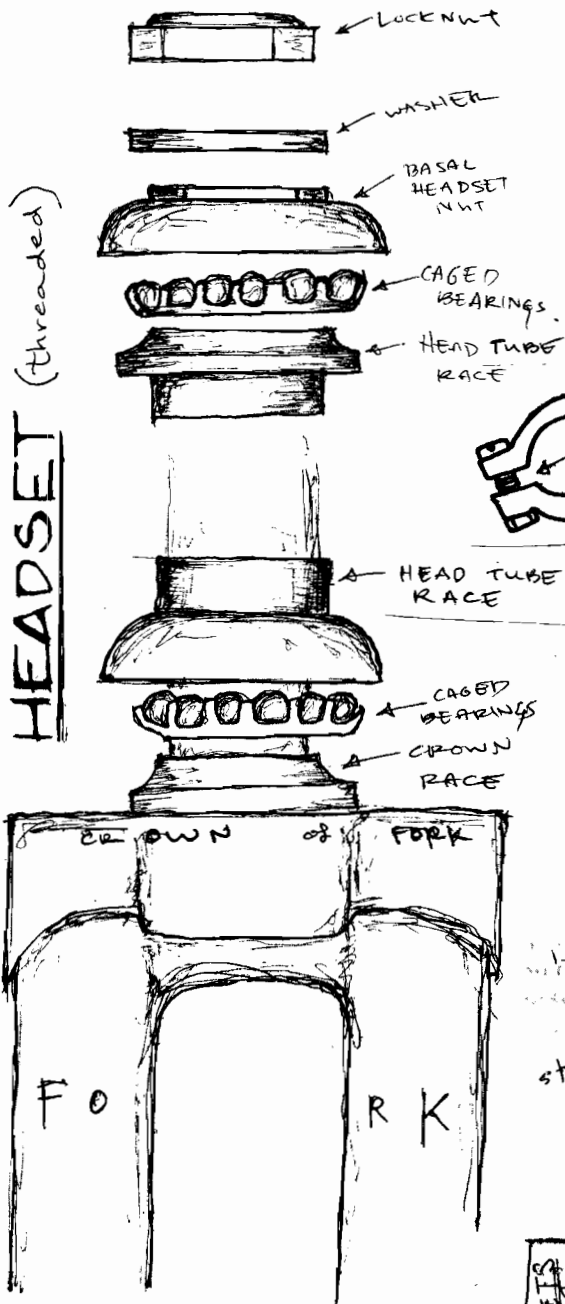


# STEERING

headsets, handlebars and forks

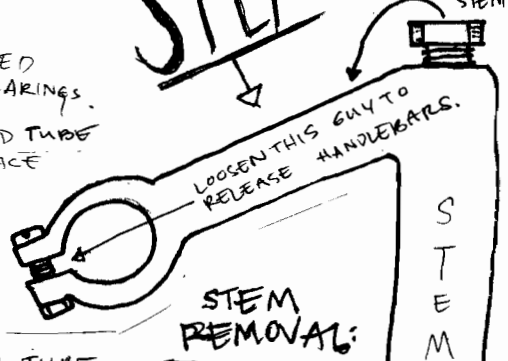


HEADSET (threaded)



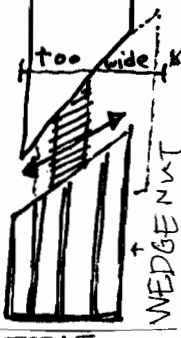
## QUILL STEM

THE STEM BOLT IS NOT AFFIXED TO THE STEM.

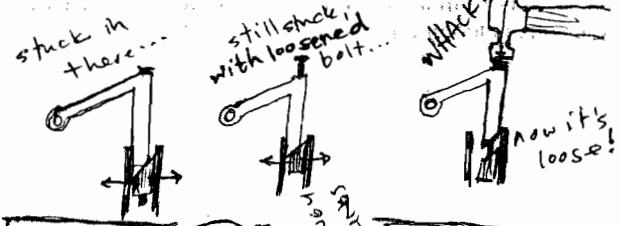


### STEM REMOVAL:

- 1 LOOSEN (NOT ALL THE WAY!!) THE STEM BOLT.
  - 2 WHACK THE BOLT HEAD WITH A HAMMER, HARD.
- BOLT HEAD SHOULD DROP & STEM SHOULD SWIVEL. IF NOT, LOOSEN A LITTLE MORE & REPEAT.

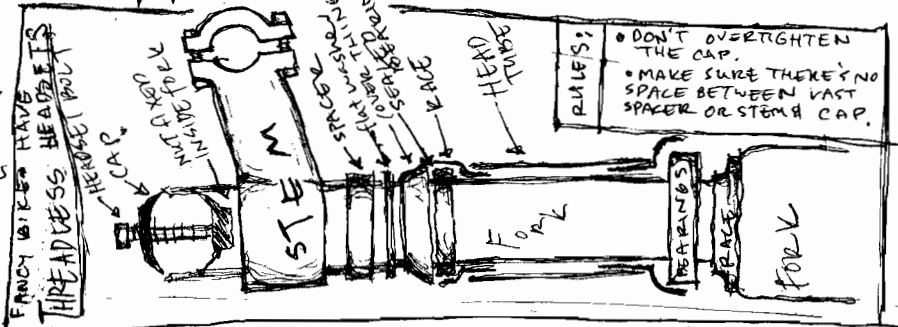


AS YOU TIGHTEN THE STEM BOLT IT BRINGS THIS WEDGE PIECE UP. THE BOLT ONLY THREADS INTO THE WEDGE - IT IS FREE TO WIGGLE AROUND IN THE STEM ITSELF. THEREFORE AS THE BOLT RAISES THE WEDGE-NUT IT WILL SLIDE SIDWAYS AS IT RUNS INTO THE STEM, WIDENING THE CROSS SECTION OF THE WEDGE APPARATUS - IT SQUEEZES OUTWARD AGAINST THE WALLS OF THE FORK TUBE - ITS HELD BY PURE FRICTION.\*

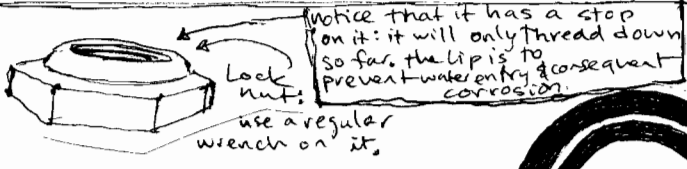


it's so liberating.

★ A NOTE ON FORK & HEADSETS: ★  
it will annoy you to discover that there are several diameters of forks, and several pitches of threading. As usual, you'll have the most trouble with french and italian bikes. Good luck!

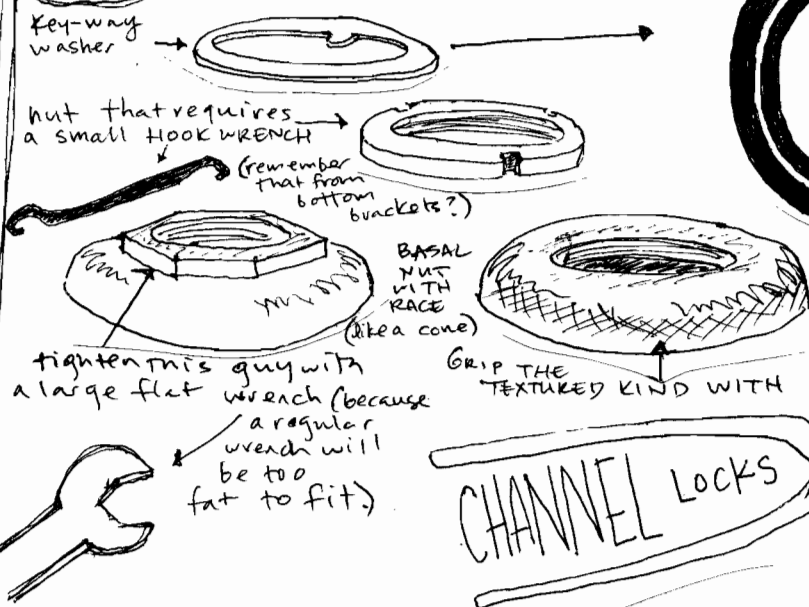


\* it's designed to twist if it gets knocked real hard, so if you crash you won't damage anything.



**ON KEY-WAY WASHERS:**

This tooth keeps them from rotating, & as a result, if you turn one nut, the other (on the opposite side of the washer) won't go with it. The washer is fixed, with its little tooth stuck in a slot cut vertically across the fork tube's threads. Thus, the only force transferred between the nuts is **VERTICAL, NOT ROTATIONAL.**



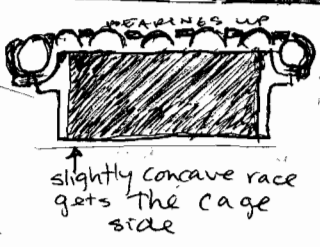
**\*DO NOT EVER FORGET!\***  
 TO CROSS-TIGHTEN THE LOCKNUT & BASAL NUT. REMEMBER THAT THE REASON YOUR HEADSET DOESN'T RANDOMLY COME LOOSE AS YOU TURN THE HANDLEBARS IS THAT THE FORCE OF FRICTION BETWEEN THE NUTS EXCEEDS THAT BETWEEN THE MOVING AND NON-MOVING PARTS.

**HEADSET PIECES**

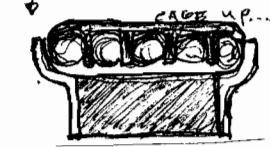
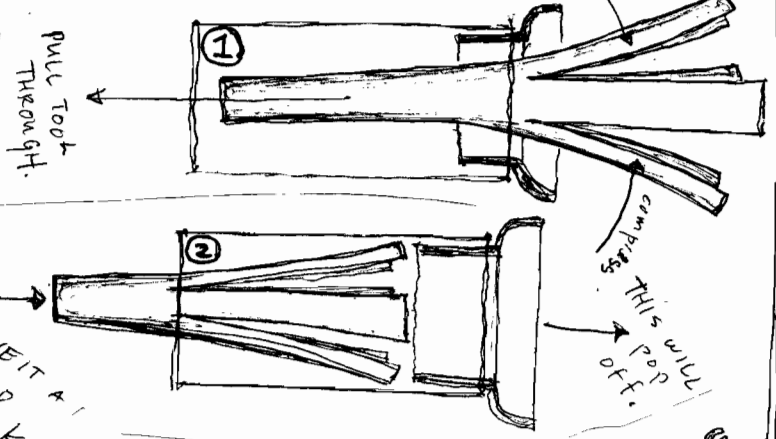
HAPPEN IN A WIDE VARIETY OF CONFIGURATIONS & TYPES. THE IMPORTANT THING  
 → IS HAVING A BASAL NUT THAT COMPLIMENTS YOUR HEAD TUBE RACE  
 → COVERS BEARINGS ENTIRELY  
 → IS A LOCKNUT TO KEEP IT FROM COMING LOOSE AS YOU STEER  
 → IS THAT THE LOCKNUT ACTUALLY CREATES PRESSURE AGAINST THE BASAL NUT - THAT IS, THE LIP SHOULD NOT ACTUALLY TOUCH THE TOP OF THE FORK TUBE - ALL THE NUT'S PRESSURE SHOULD BE ON THE PIECES BENEATH IT.

**A DAY AT THE RACES**

Very concave (cup-shaped) race gets the bearings side.



**REMOVING HEADTUBE RACES**



TO PUT NEW RACES ON YOUR HEADTUBE, USE THE HEADSET PRESS: as you thread down the ends they'll compress the races neatly into the frame.

