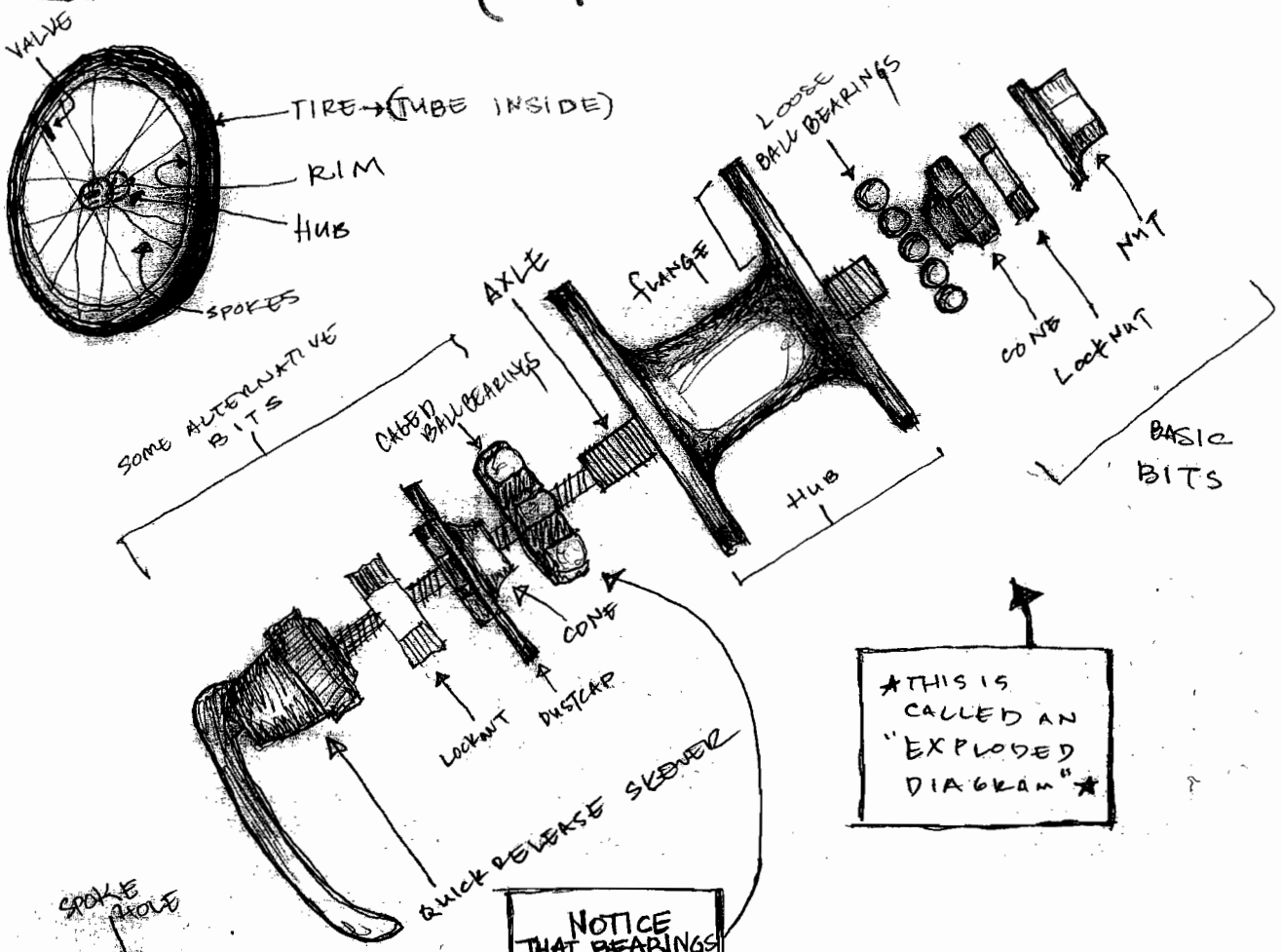
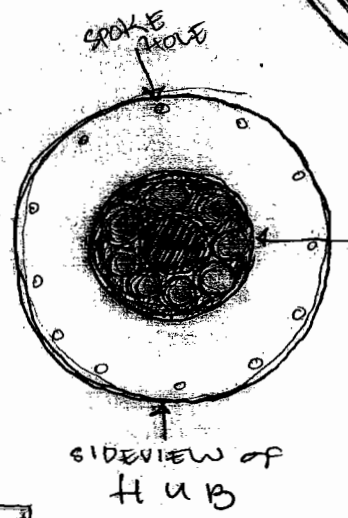
WTF! WORKSHOP #1

WHEELS (of FORTUNE!) ★

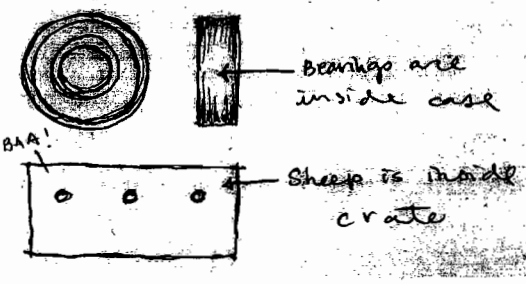


★THIS IS CALLED AN "EXPLODED DIAGRAM"★

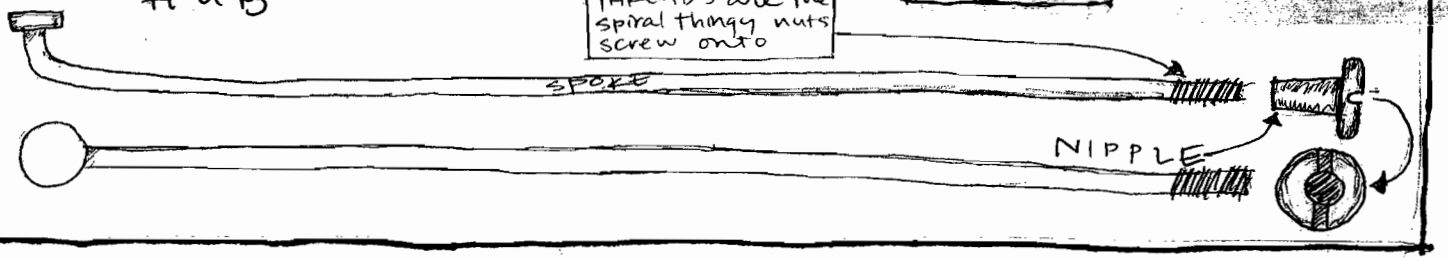
NOTICE THAT BEARINGS FACE RACE & CAGE FACES CONE



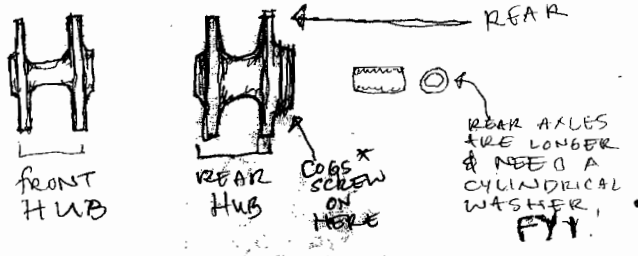
★ if you HAVE A FANCY BIKE, YOUR HUB WILL HAVE SEALED BEARINGS:



THREADS are the spiral thingy nuts screw onto



THE MOST IMPORTANT STUFF ABOUT WHEELS:



★ON REAR WHEELS, YOU GENERALLY NEED TO REMOVE THE COGSET TO GET THE AXLE OUT. YOU ALWAYS HAVE TO REMOVE IT TO REPLACE SPOKES.★

YOUR WHEEL WILL ROLL WELL IF...	...& POORLY IF...
① YOUR PARTS ARE SMOOTH	→ YOUR BEARINGS, RACES OR CONES ARE PITTED.
② YOUR PARTS ARE CLEANED & GREASED THOROUGHLY.	→ YOU'RE UNDERGREASED OR LADEN WITH GRIT
③ YOU ADJUST IT JUST RIGHT	→ IT'S A LITTLE TOO TIGHT (RESISTS ROLLING) OR LOOSE (AXLE WOBBLES IN HUB)
④ YOU TIGHTEN THE CONE & LOCKNUT AGAINST EACH OTHER, LOCKING THEM IN PLACE.	→ THEY CAN MOVE AROUND & LOOSEN YOUR HUB.

WHAT HAPPENS IF...

THE HUB'S TOO LOOSE? →
- SMASHES BEARING CAGE & WRECKS BEARINGS ETC
- LETS GRIT IN, PITTING BEARINGS ETC.
- BENDS AXLE
- OH, POOP.

I OVER-GREASE? → NO SUCH THING.

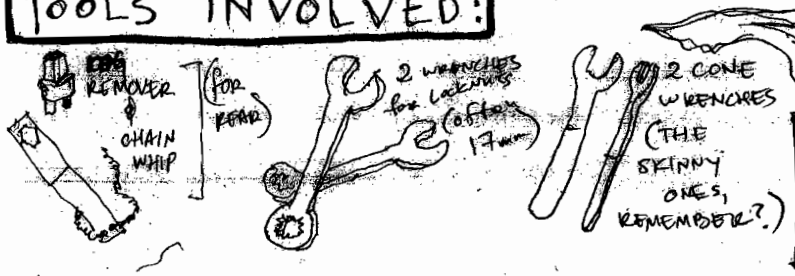
IT'S DIRTY IN THERE? →
- IT'LL GRIND EVEN WHEN ADJUSTED RIGHT
- YOU'LL HAVE TO CLEAN IT AGAIN

PIECES ARE PITTED? →
- GRINDING! → MORE PITTING
- YOU'LL HAVE TO REPLACE THE PART

★WHEN REPLACING ANY PART: CHECK FOR SIZE (WIDTH, LENGTH, HOLE DIAMETER ETC.), THREADING-COMPATABILITY, SMOOTHNESS OF SURFACE / DAMAGE TO THREADS, EDGES (of NUTS), & BEARING-CONTACT SITES, & BILATERAL SYMMETRY ACROSS THE HUB★

★IF REPLACING A SPOKE, METICULOUSLY follow LACING PATTERN★

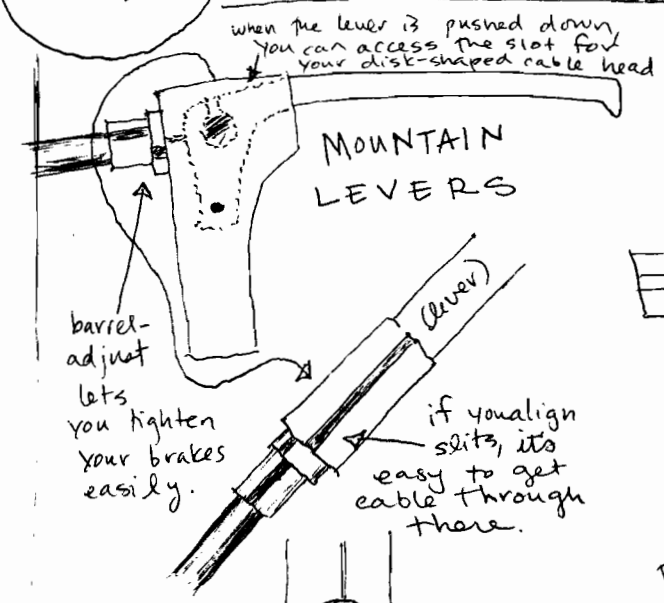
TOOLS INVOLVED:

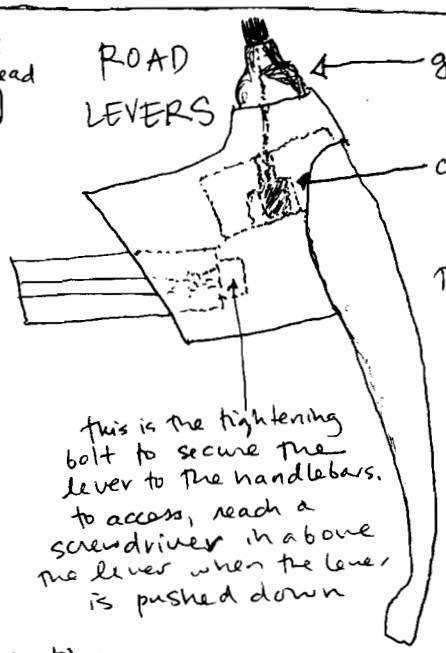


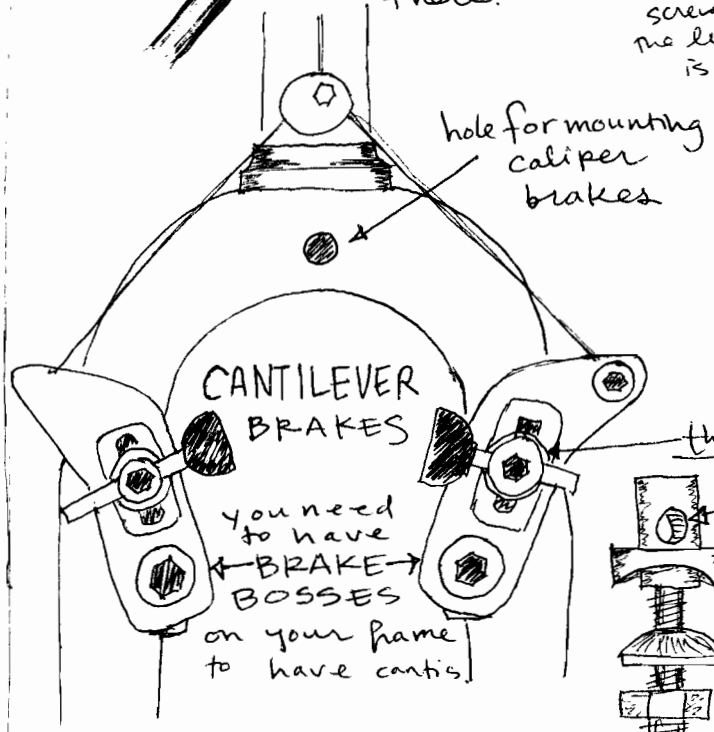
★COGS ARE GOING TO GET TALKED ABOUT WITH DERAILLEURS & GEARS.

WTF workshop 2

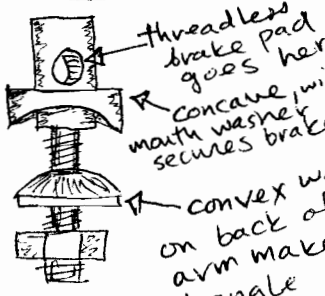
BRAKES!





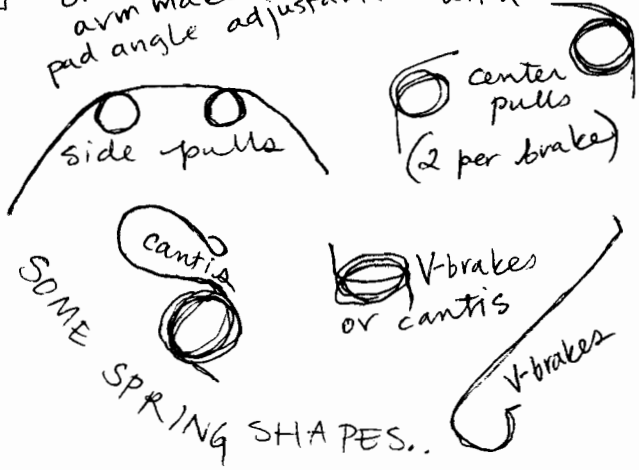


CANTILEVERS ARE COOL because they are adjustable in several dimensions: you can change the height of the brake pad, its extension from the brake arm, its angle with regard to the brakearm, & its angle on the horizontal axis. HOWEVER THEY CAN BE A PAIN IN THE NECK to adjust as a result of this versatility. Try playing around with 'em.



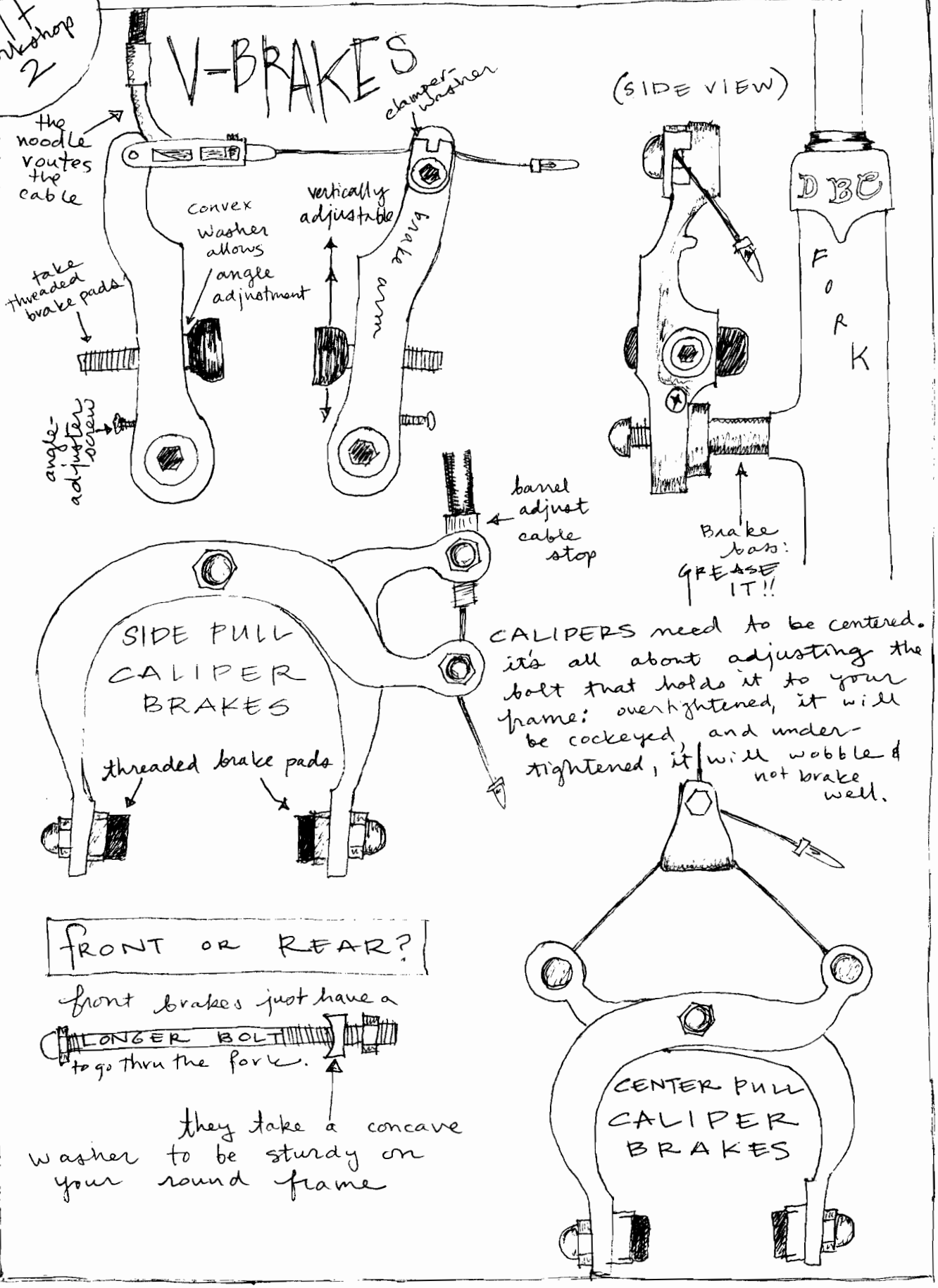
A WORD ON SPRINGS

all normal brakes require springs to work. The springs push the arms back to their original position, open. Brake bosses often have multiple holes to allow you to reposition the spring.



WTF workshop 2

V-BRAKES



FRONT OR REAR?

front brakes just have a LONGER BOLT to go thru the fork.

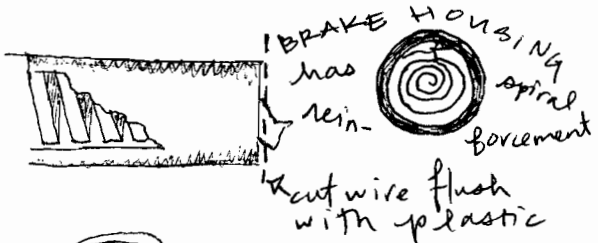
they take a concave washer to be sturdy on your round frame

WTF Workshop 2

CABLES & HOUSING

WHAT IS HOUSING FOR?

it allows the linear force of your brake lever to go around curves, & receives the cable's "equal & opposite" force to the lever.

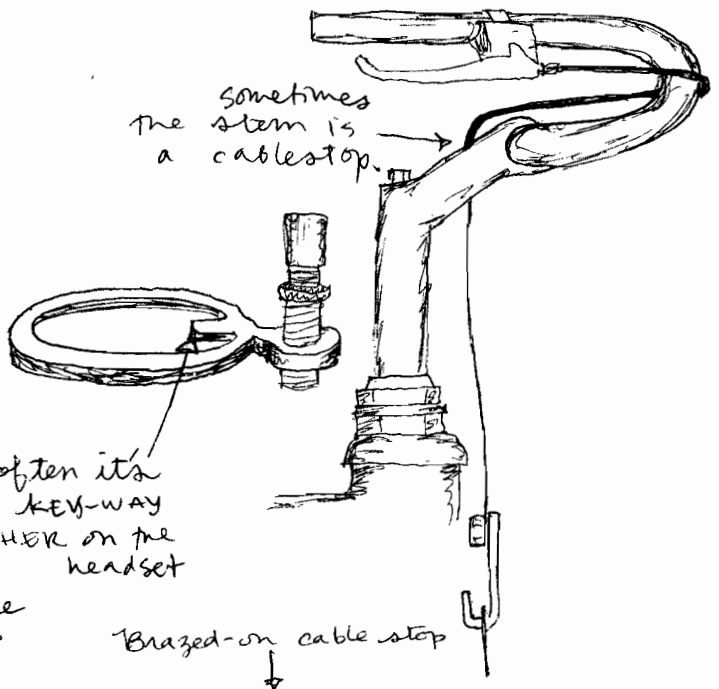


Sheldon Brown's four COMMANDMENTS of CABLE ROUTING:

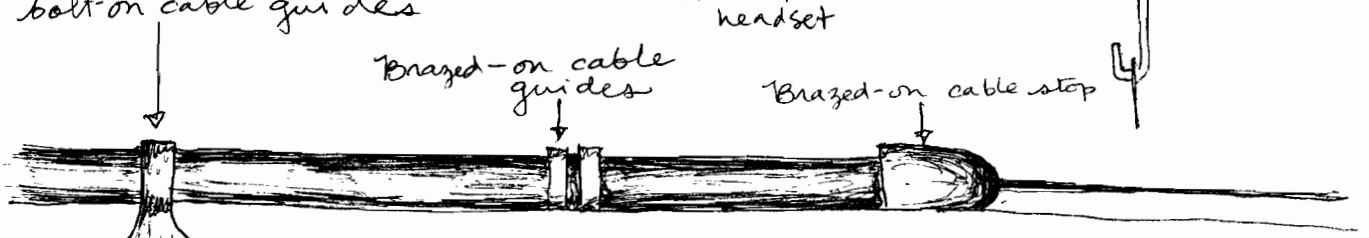
1. Allows handlebars their full range of motion (does not limit turning.)
2. Curves shouldn't make wrong-way bends, as in:  NOT .
3. All curves should be as wide as possible:
4. Make housing as short as possible without violating the above rules.

FERRULES

are these little metal housing-tips. you only need them where the housing doesn't fit snugly in the cable stop.



★SIDEPULLS & ~~V~~-BRAKES DON'T REQUIRE CABLE-DANGLING DEVICES, BUT CANTIS & CENTERPULLS DO.



WHERE DO I PUT THE CABLE? → the bike will give you hints: if this is the frame, on top you'll see some structures that direct the cable.

WTF workshop #2

TOP FIVE REASONS WHY YOUR BRAKES SUCK:

1. Poor friction due to buildup of crap on your rims or pads: try filing the surface of your brakepad & cleaning your rim.

2. They're poorly aligned:

3. They're too loose: you can tighten them using your barrel adjust for only so long before you have to loosen the nut holding your cable, squeeze your brakes together, pull the cable tight & re-secure the cable in there. Make sure to put barrel adjust in middle position first!

4. If the brakearms don't open up again after you brake, you've probably got excessive friction in your housing. Sometimes it works to clean & lube it, but if it's too corroded you might just have to replace the housing entirely.

5. Your brakearms are asymmetrical: one pad contacts the rim before the other, making it squeaky & not effective at braking.

TOOLS for BRAKE ADJUSTMENT: