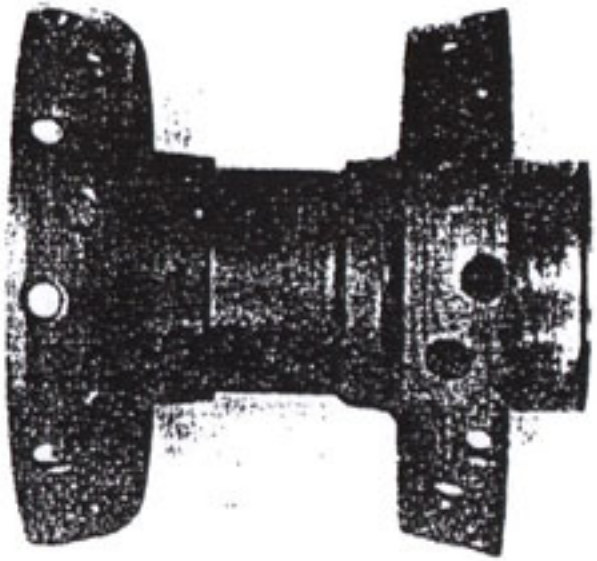

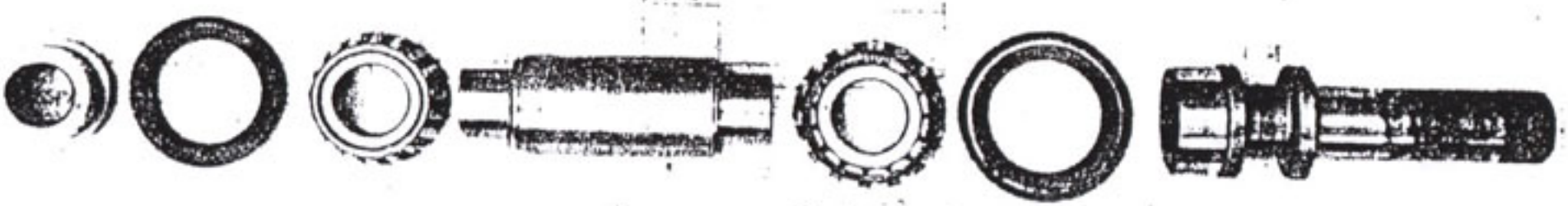

Star Hubs

Many of you have found your Harley star hubs, that's the 136–66 type, totally worn out and beyond repair. Some have taken them to Harley shops that has put in caged ballbearings, and payed large money for that. Ride & Glide comes with another suggestion: do it yourself or use help from any machine-shop with a lathe. Should be cheap 'cause if anything says H-D it often means expensive. And as a bonus the result is even better than the ball-bearing trick. Of course you can use your starcovers for a stock look. The idea and drawings are our layout man Peter's, a perfectionist and a designer. Check the drawings and then start, satisfaction guaranteed.

As Harley never have been heavy in the precision department you have to check some measurements on the actual parts you're using, all these figures have a ring around them. OK? Also note if it is to be a front or rear hub, the axle diameters are not alike. All measurements are in millimeters. 1 mm = 0,0395 inch

Step one is to make place for the outer races. Put the hub up in a lathe and enlarge the holes to the outer diameters (they differ) of the bearings, large one the on brake side. Make it a pressfit and on the brake side about 28 mm deep, on starside 21 mm. Part one is now ready except that you have to make room for the roller retainer, that's the 1.5 mm recess on brake side at bottom of hole.

These are the measurements of the inner items, some exact and some dependent on your actual parts. The material you use is a good grade steel. The machinist can help you. The left spacer, brake side, is to protrude exactly as the original so take a measure before disassembling from outside stock spacer to hub and check that with our measures, can differ a little. The length of the inner spacer, from bearing to bearing surfaces, is very important, very! You have to press outer races into hub and then install inner races with rollers and take a very exact measure, sorry to emphasize but it's important. The result X in the drawing, determines the axialplay and that should be freerunning, no noticable play but easy to spin. Check this with axle installed. After inner spacer is made tighten the axle nut with spacers on, the way it sits on bike, if it spins without drag and no sideplay you're home, otherwise alter until that happens, OK?

The small recess on middle spacer indicated by arrow and 26 is to give room the roller retainer, same as in hub, remember?

What you have to buy are the material, good grade steel, the bearings and the oilseals. The large bearing has number 3020 4 (SKF) and the 32004 (SKF) nearly all manufacturers have the same code numbers on bearings but unfortunately not on the seals. They should have no problem supplying them though because they combine with the bearings, same outer dimensions.

Now you take another look at the cut-through drawing and all is clear to you, at least I hope so. It's a rather simple construction much like H-D's later discbrake hubs, only this is custom made for star hubs. Go get dirty now and ride many miles on your trick hubs, Peter does.

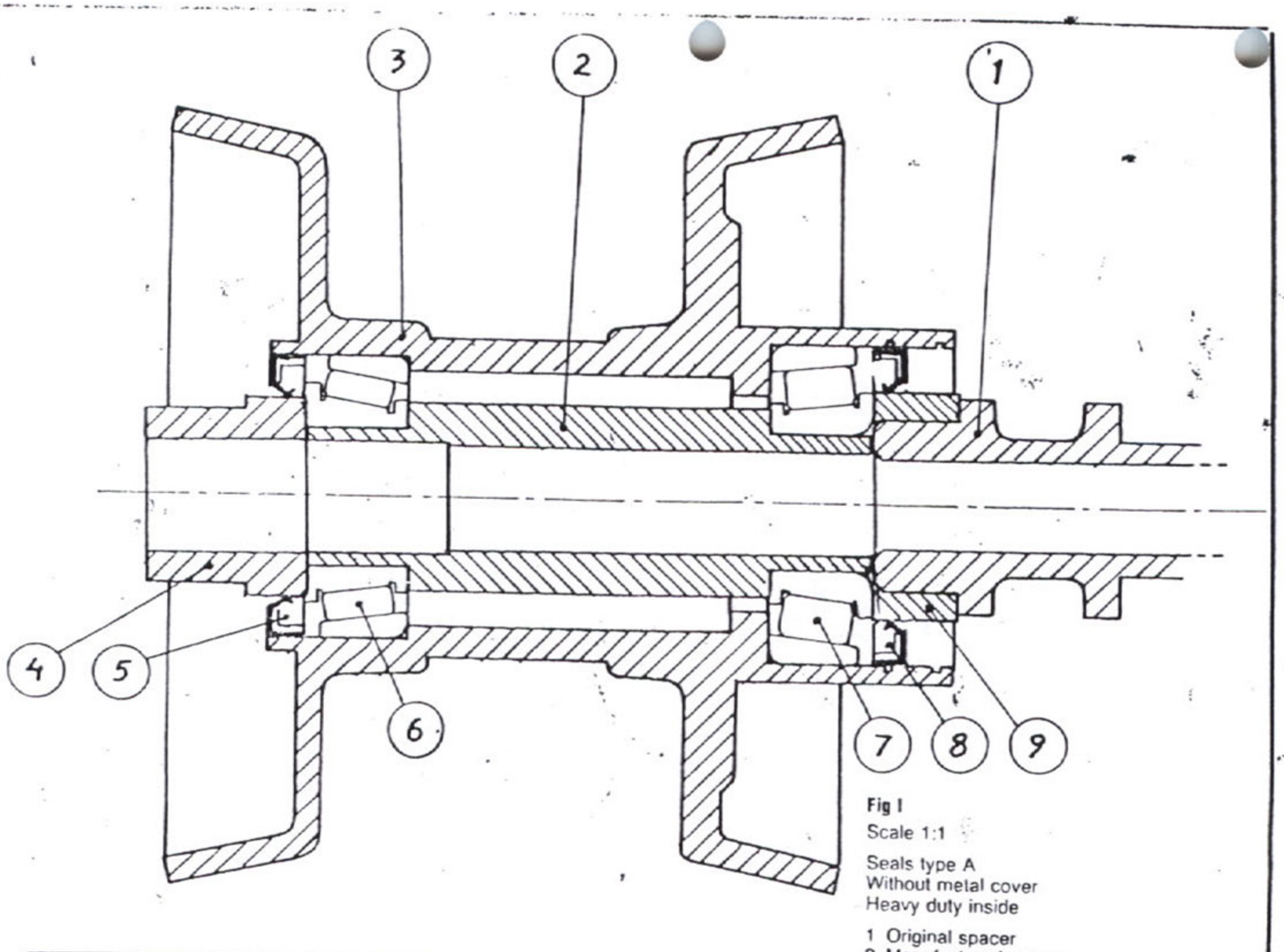

Fig I
Scale 1:1

Seals type A
Without metal cover
Heavy duty inside

1 Original spacer
2 Manufactured spacer
3 Hub
4 Manufactured spacer
5 Seal D=42 d=30
6 Bearing D=42 d=20 b=15.0
7 Bearing D=47 d=20 b=15.25
8 Seal D=47 d=34
9 Manufactured bushing

Fig II
42. Press fit of the smaller bearing
47. Press fit of the larger bearing
28. Distance turned out on lathe, stop at large fin

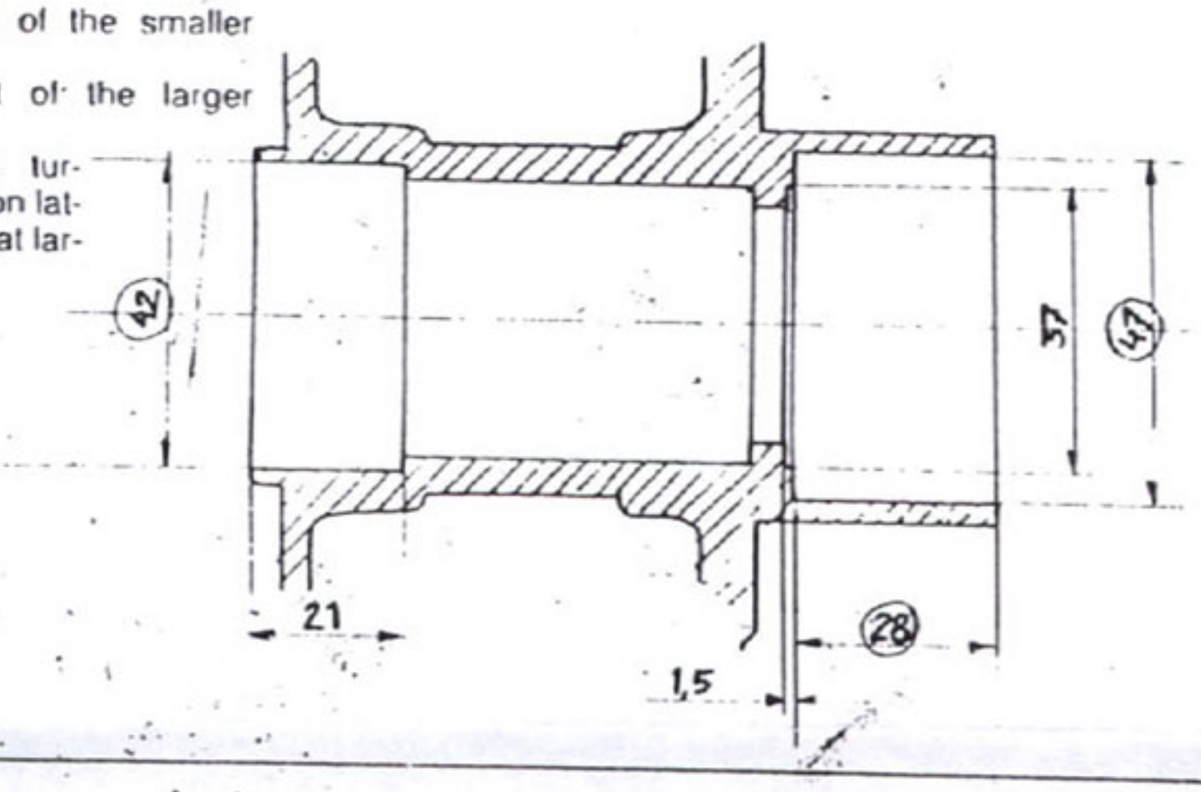

Fig III

M = Sliding fit on inner axle. NOTE, larger diameter
m = Sliding fit on inner axle. NOTE, smaller dia (for frontaxle)
15 = Width of the smaller bearing minus 0,2 mm
15.25 = Width of the large bearing minus 0,1 mm
13 = Same width as the original spacer
P = Press fit on original spacer
X = Distance between bearings. NOTE, VERY IMPORTANT MEASURE