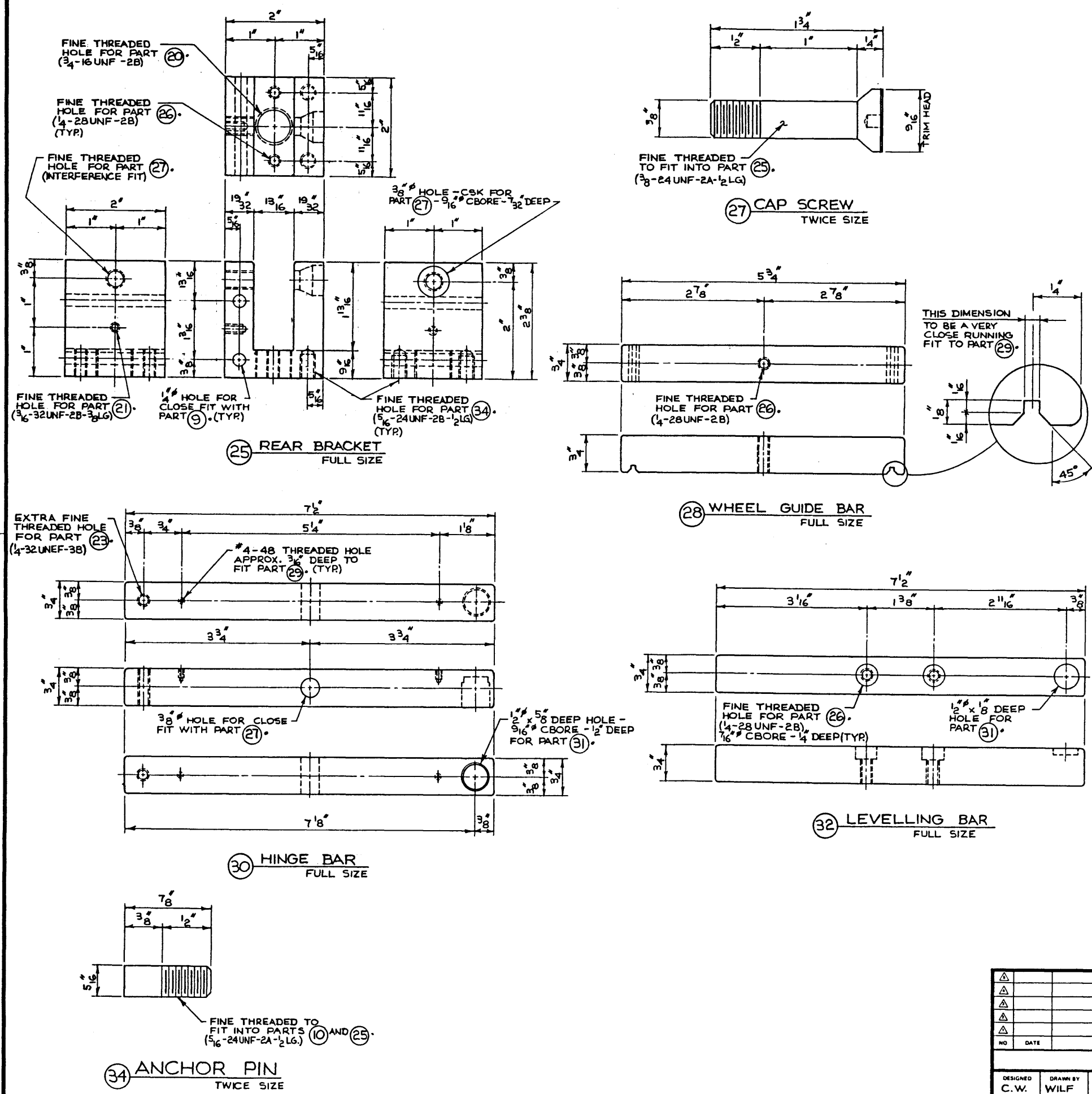


BILL OF MATERIALS

MARK	DESCRIPTION	NO. REQ'D	MATERIAL
1	MASTER PRECISION LEVEL -AVAILABLE "STARRETT" CATALOG NUMBER - NO. 199	1	AS MANUFACTURED
2	DIGITAL MICROMETER -AVAILABLE "MITUTOYO" SERIES 250 NO. 250-208 TYPE "A" (NON-ROTATING SPINDLE ONLY)	1	AS MANUFACTURED
3	DIAL INDICATOR -AVAILABLE "MITUTOYO" SERIES 2 GRAD. 0.0001", RANGE 0.05", NO. 2804	1	AS MANUFACTURED
4	SOCKET HEAD CAP SCREW - $\frac{1}{4}$ " LG. FINE THREAD ($\frac{1}{4}$ -28UNF-2A)	4	STAINLESS STEEL
5	NEOPRENE WASHER OR O-RING WASHER - $\frac{3}{16}$ " O.D. x $\frac{3}{16}$ " THK x $\frac{3}{16}$ " I.D.	1	AS ORDERED
6	SOCKET HEAD CAP SCREW -NO. 10 LG. FINE THREAD (NO. 10-32UNF-2A)	2	STAINLESS STEEL
7	FLAT-END CONTACT POINT -AVAILABLE "STARRETT" AGD DIAL INDICATOR ACCESSORIES (NO. 19)	1	AS MANUFACTURED
8	HEXAGON HEAD MACHINE SCREW - $\frac{3}{8}$ " x $\frac{1}{2}$ " LG. C/W JAM NUT EXTRA FINE THREAD ($\frac{3}{8}$ -32UNEF-3A)	1	STAINLESS STEEL
9	HEXAGON HEAD MACHINE SCREW - $\frac{1}{4}$ " x $2\frac{3}{4}$ " LG. C/W NUT FINE THREAD ($\frac{1}{4}$ -28UNF-2A- $\frac{1}{2}$ LG.)	5	
10	FRONT BRACKET - BAR $2\frac{1}{2}$ " x $2\frac{1}{2}$ "	1	
11	INSTRUMENT CLAMP BAR - $\frac{1}{2}$ " x $5\frac{1}{2}$ " x $4\frac{1}{8}$ "	1	
12	EYE HOOK - MIN $\frac{3}{16}$ " BOLT DIA. - FINE THREAD	2	
13	EXTENSION SPRING : O.D. = 0.240", WIRE DIA. = 0.034" FREE LENGTH = 1.50", RATE = 6.9 lb/in. AVAILABLE: ASSOCIATED SPRING - BARNES GROUP, CATALOG NO. 1 E0240-034-1500	2	
14	SPINDLE SHOE - ROD $\frac{5}{8}$ " x $\frac{3}{4}$ " LG.	1	
15	BALL BEARING - $\frac{7}{16}$ " - ROUGHEN ONE HALF	1	
16	ALIGNMENT PLATE - $\frac{1}{2}$ " x $\frac{1}{2}$ " x $1\frac{1}{2}$ "	2	
17	SPRING RETAINING PIN - $\frac{3}{16}$ " x $1\frac{1}{2}$ " LG. - FINE THREAD ($\frac{3}{16}$ -32UNF-2A- $\frac{3}{8}$ LG.)	1	
18	HEXAGON HEAD MACHINE SCREW - $\frac{3}{8}$ " x $2\frac{1}{2}$ " LG. FINE THREAD ($\frac{3}{8}$ -24UNF-2A), $\frac{3}{16}$ " x 45° CHAMFER	4	
19	SUPPORT PLATE - $\frac{1}{2}$ " x $1\frac{1}{2}$ " x $2\frac{3}{8}$ "	4	
20	ANCHOR BOLT - $1\frac{1}{2}$ " LG. - COARSE THD. (1-BUNC-2A-3LG), FINE THD. ($\frac{3}{4}$ -16UNF-2A- $\frac{1}{2}$ LG.)	2	
21	SPRING RETAINING PIN - $\frac{3}{16}$ " x $\frac{3}{4}$ " LG. - FINE THREAD ($\frac{3}{16}$ -32UNF-2A- $\frac{3}{8}$ LG.)	1	
22	EXTENSION BAR - $\frac{1}{2}$ " x $5\frac{1}{2}$ " x $3\frac{1}{2}$ "	1	
23	LEVELLING SCREW - $\frac{1}{4}$ " x $\frac{3}{4}$ " LG. - EXTRA FINE THREAD ($\frac{1}{4}$ -32UNF-3A- $\frac{1}{4}$ LG.)	1	
24	COMPRESSION SPRING : O.D. = 0.420", WIRE DIA. = 0.035" FREE LENGTH = 1.75", RATE = 5.1 lb/in. AVAILABLE: ASSOCIATED SPRING - BARNES GROUP, CATALOG NO. : CO420-035-1750	1	
25	REAR BRACKET - BAR $2\frac{1}{2}$ " x $2\frac{1}{2}$ " x $2\frac{3}{8}$ "	1	
26	SOCKET HEAD CAP SCREW - $\frac{1}{4}$ " LG. - FINE THREAD ($\frac{1}{4}$ -28UNF-2A)	3	
27	FLAT HEAD CAP SCREW - $\frac{3}{8}$ " x $\frac{1}{2}$ " LG. - FINE THREAD ($\frac{3}{8}$ -24UNF-2A- $\frac{1}{2}$ LG.)	1	
28	WHEEL GUIDE BAR - $\frac{3}{4}$ " x $\frac{3}{4}$ " x $5\frac{3}{4}$ "	1	STAINLESS STEEL
29	ROLLER CONTACT POINT - AVAILABLE "STARRETT" AGD DIAL INDICATOR ACCESSORIES (NO. 25 W.)	2	AS MANUFACTURED
30	HINGE BAR - $\frac{3}{4}$ " x $\frac{3}{4}$ " x $7\frac{1}{2}$ "	1	STAINLESS STEEL
31	COMPRESSION SPRING : O.D. = 0.480", WIRE DIA. = 0.055" FREE LENGTH = 1.50", RATE = 22.0 lb/in. AVAILABLE: ASSOCIATED SPRING - BARNES GROUP, CATALOG NO. : CO480-055-1500	1	
32	LEVELLING BAR - $\frac{3}{4}$ " x $\frac{3}{4}$ " x $7\frac{1}{2}$ "	1	
33	WAVE SPRING WASHER : O.D. = 0.618", I.D. = 0.440", STOCK THK. = 0.008", DEFLECTED LOAD = 3-5 lbs. AVAILABLE: ASSOCIATED SPRING - BARNES GROUP CATALOG NO. : WO618-008-5	2	
34	ANCHOR PIN - ROD $\frac{5}{16}$ " x $\frac{7}{8}$ " LG. - FINE THREAD ($\frac{5}{16}$ -24UNF-2A- $\frac{1}{2}$ LG.)	4	STAINLESS STEEL

NOTES

- ALL FILLETS AND ROUNDS = $\frac{1}{16}$ " R. FILLET AND ROUND CORNERS AS SHOWN.
- TOLERANCES, DIMENSIONS AND COMMERCIALLY AVAILABLE PARTS ARE SHOWN WITH THE PURPOSE OF FACILITATING CONSTRUCTION. SUBSTITUTIONS AND CHANGES MAY BE MADE IF FUNCTION AND DURABILITY OF FINISHED ITEM IS MAINTAINED. SUBSTITUTIONS TO BE APPROVED BY BRIDGE BRANCH DESIGN OFFICE.
- TRUENESS AND SQUARENESS OF ASSEMBLY SHALL BE ENSURED BY GOOD MACHINING PRACTICE. ALL CONTACT SURFACES SHALL BE MACHINED TRUE. ALL FASTENER HOLES AND THREADS SHALL BE AT RIGHT ANGLES TO THE CONTACT SURFACES THROUGH WHICH THEY PASS.
- STAINLESS STEEL GRADES SHALL BE CHOSEN FOR HIGH CORROSION RESISTANCE AND GOOD MACHINEABILITY.
- WELDING TO BE DONE BEFORE MACHINING SO AS TO MAINTAIN TRUENESS OF FINISHED ITEM.



DESIGNED		DRAWN BY		DATE		CHECKED BY		DATE		STREAM		LOCATION		HWY NO		SCALE		FILE NO		SHEET		DWG NO	
C.W. PETERSON		WILF SCHNEIDER		NOV, 79												AS NOTED		3 OF 3		S-1191			