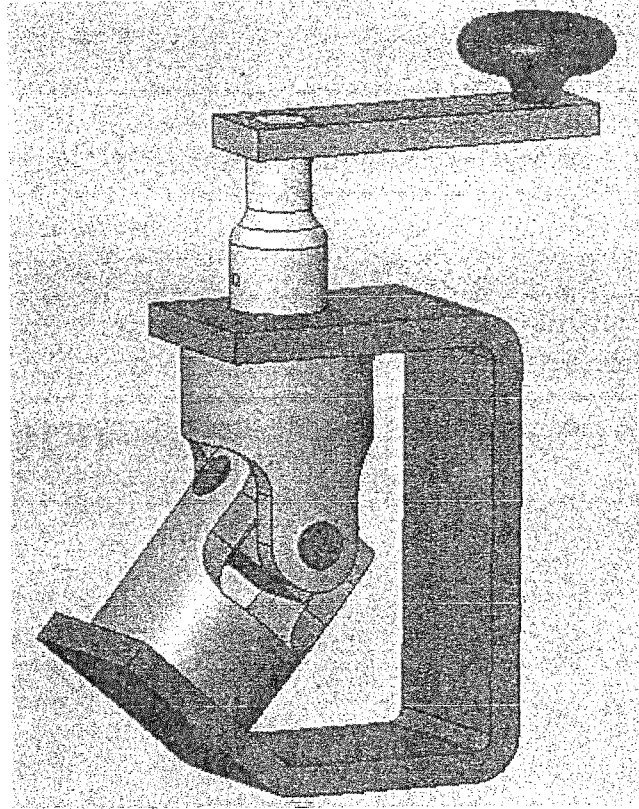


T.C  
GAZİ ÜNİVERSİTESİ  
TEKNİK EĞİTİM FAKÜLTESİ  
MAKİNA EĞİTİMİ BÖLÜMÜ  
MAKİNA RESMİ VE KONSTRÜKSİYONU  
EĞİTİMİ ANABİLİM DALI

CAD II DERSİ UYGULAMALARI



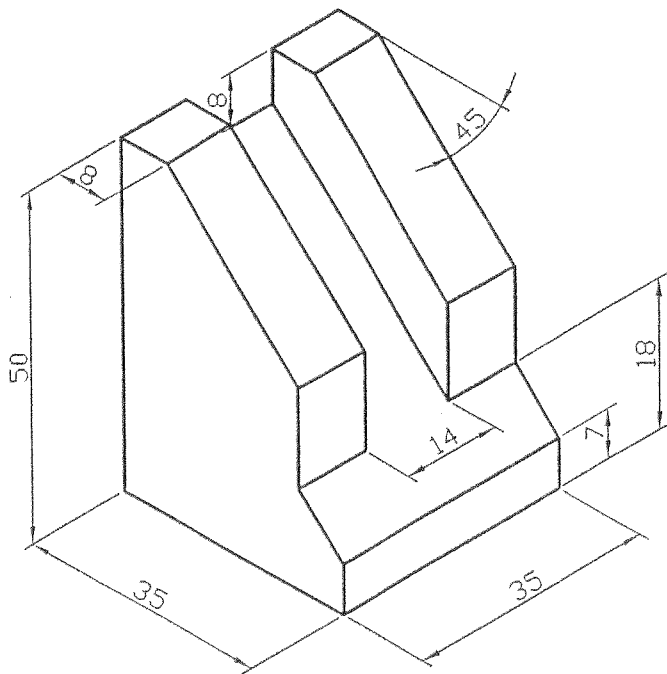
Hazırlayanlar

Prof. Dr. Faruk MENDİ  
Dr. İhsan TOKTAŞ

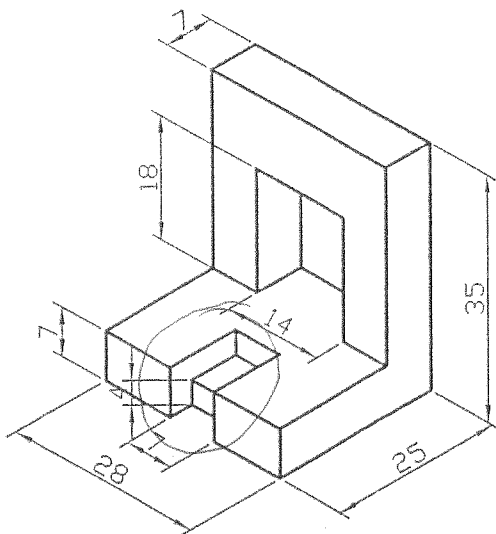
Öğr. Gör. Sıtkı AKINCIÖĞLU

ANKARA-2005

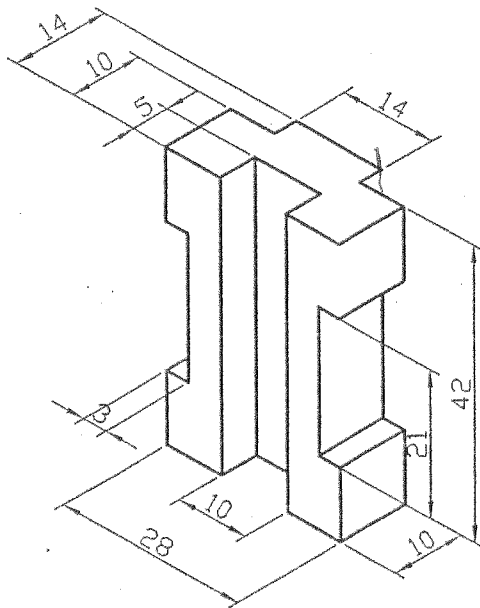
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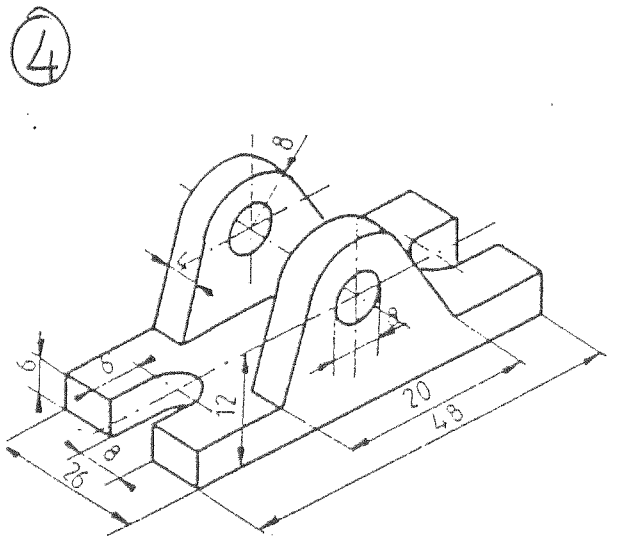
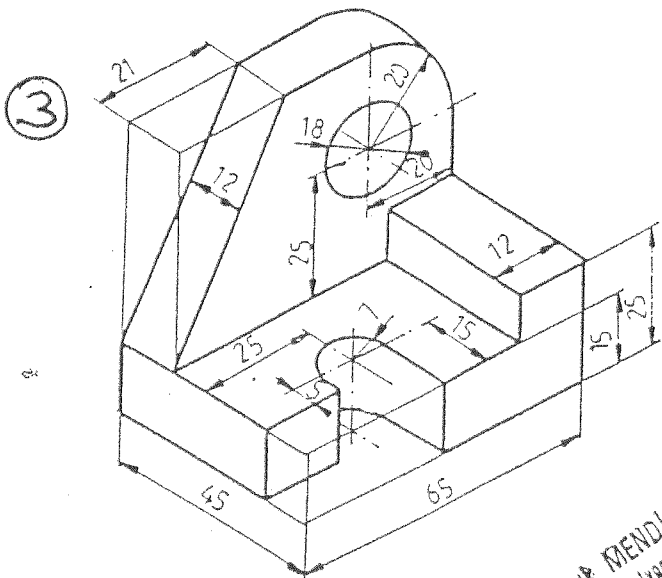
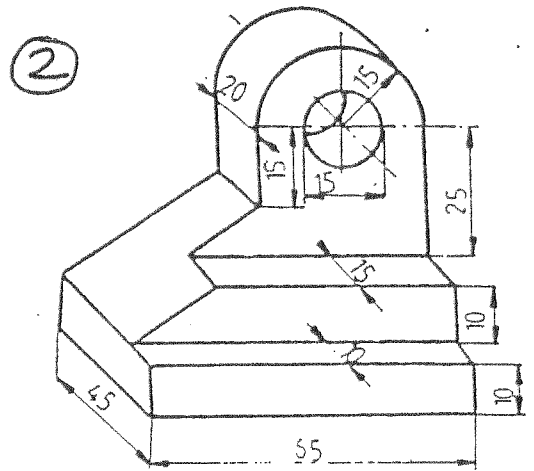
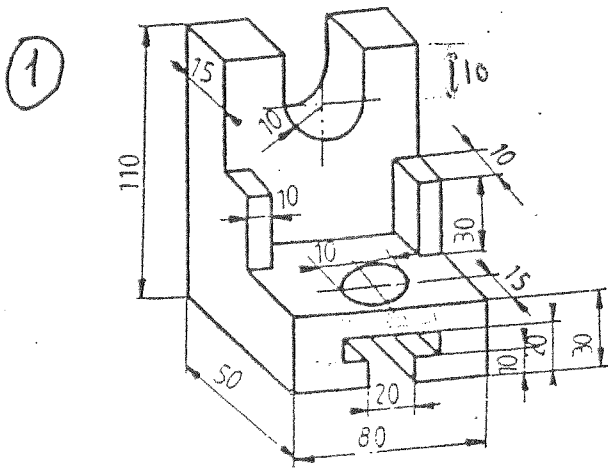


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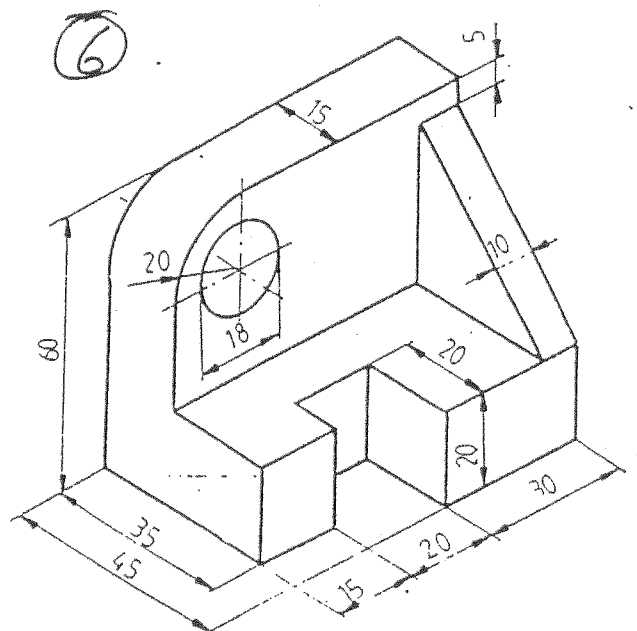
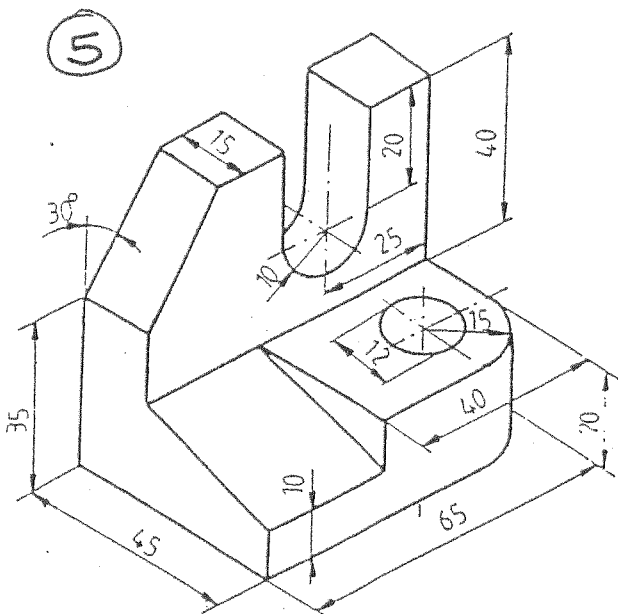


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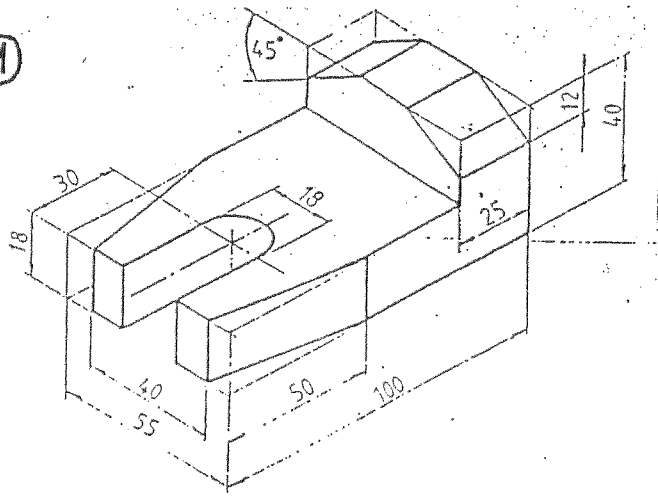




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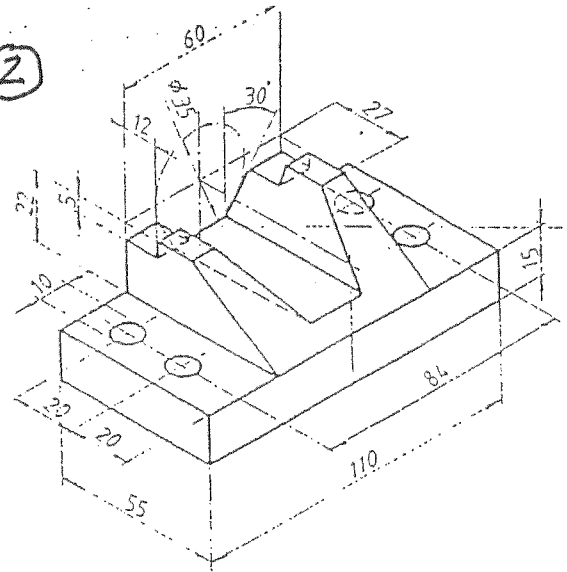


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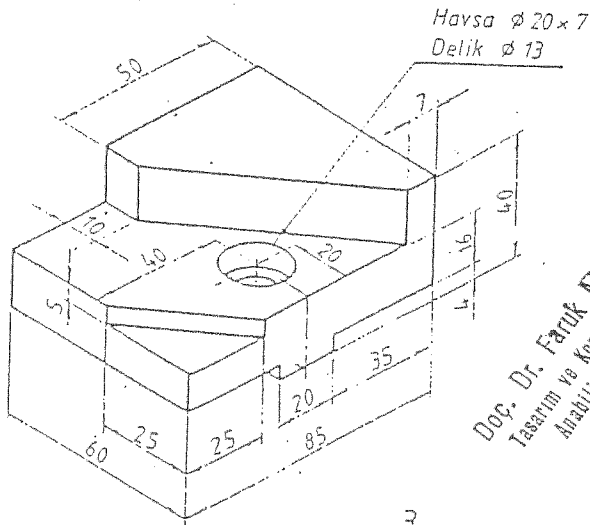


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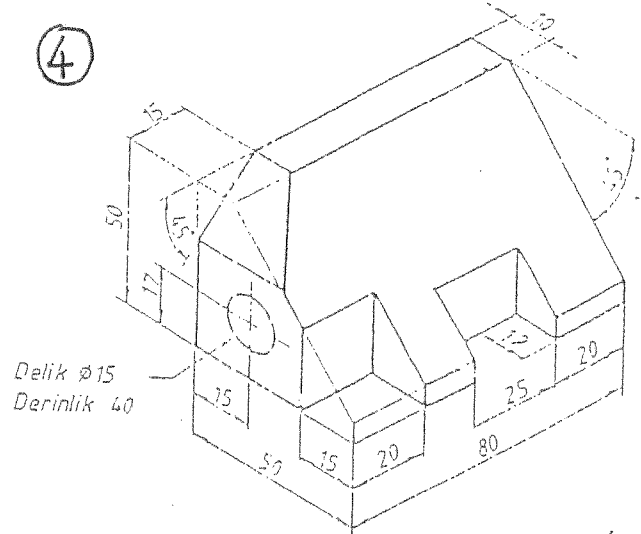


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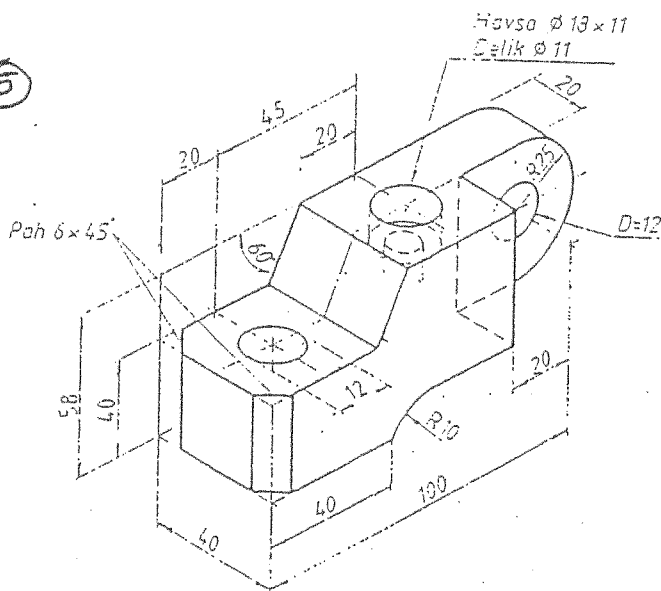
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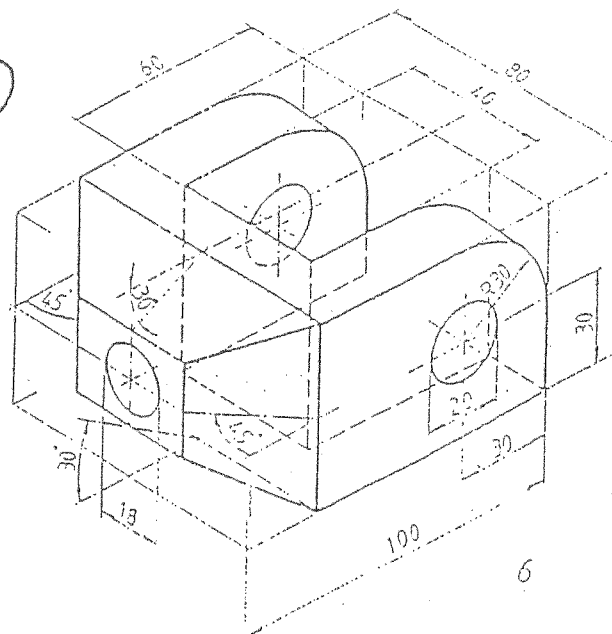
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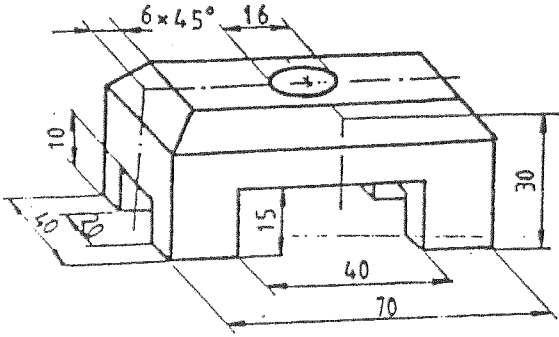
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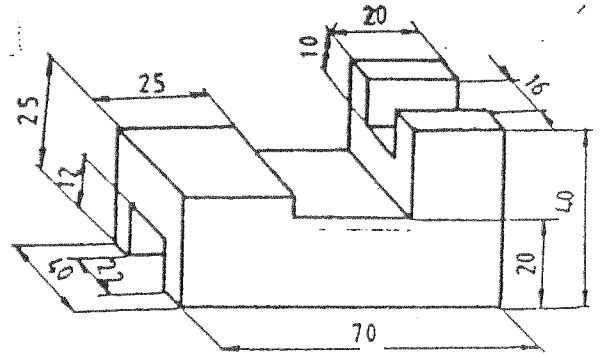


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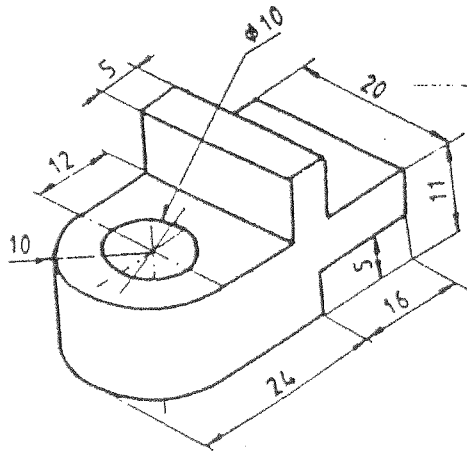
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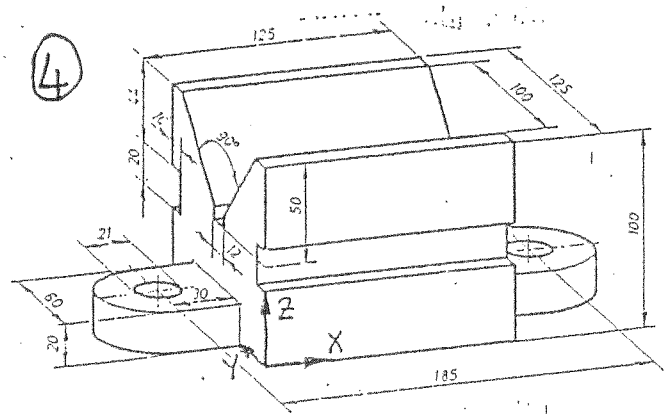
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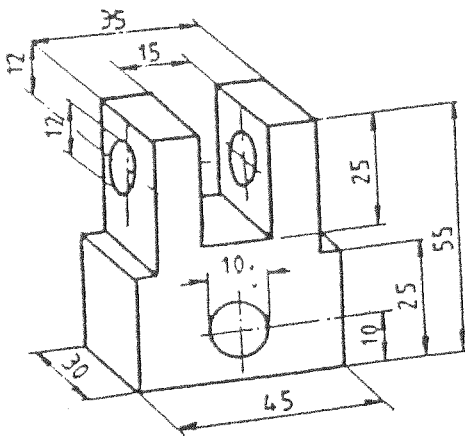
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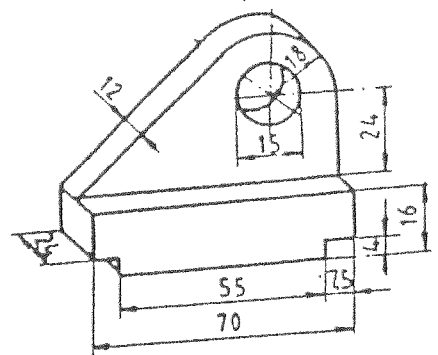
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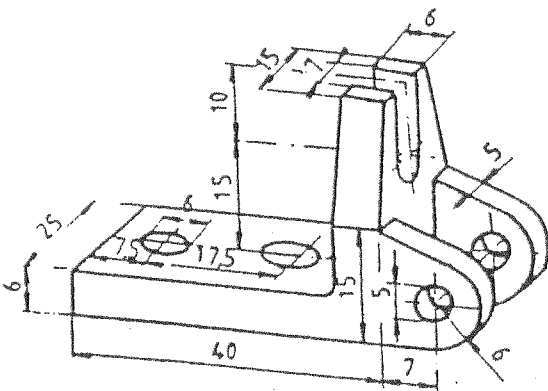


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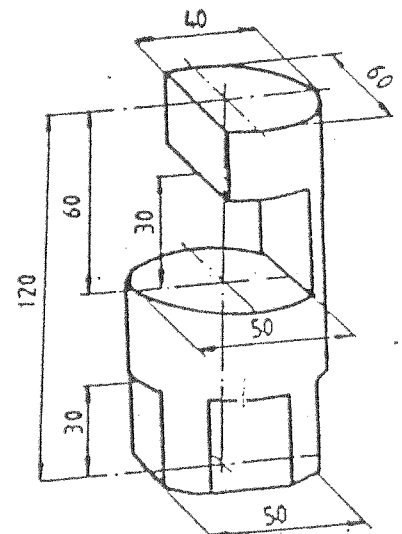


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 Anabilim Dalı

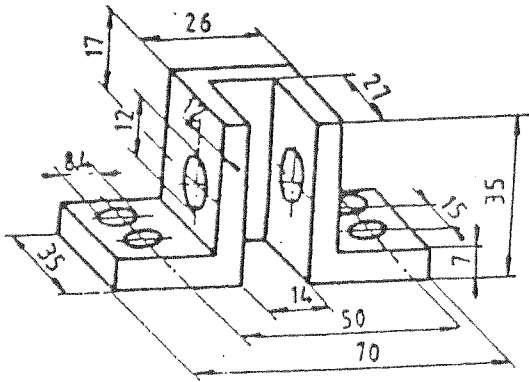
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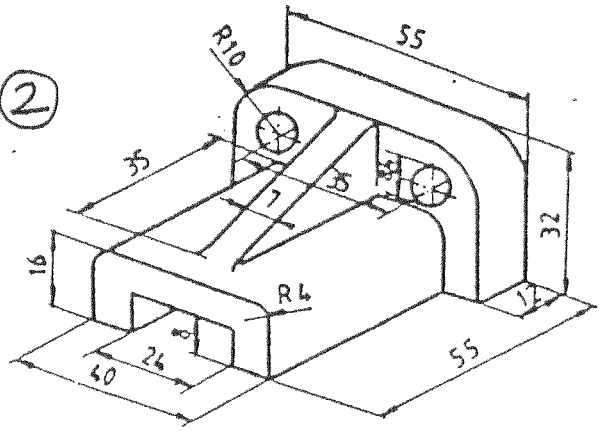
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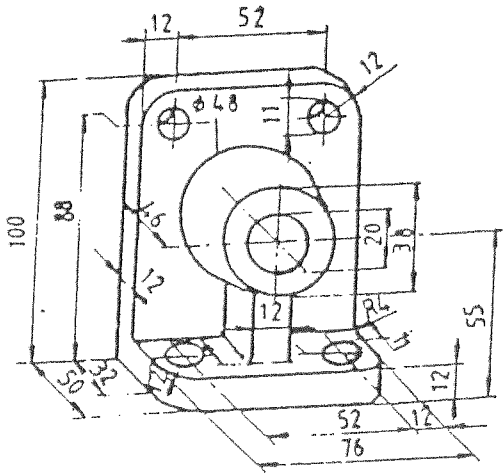
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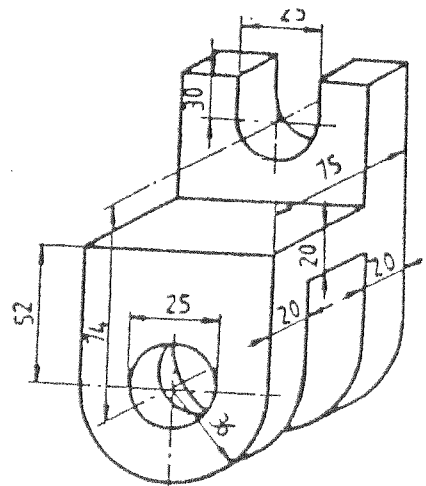
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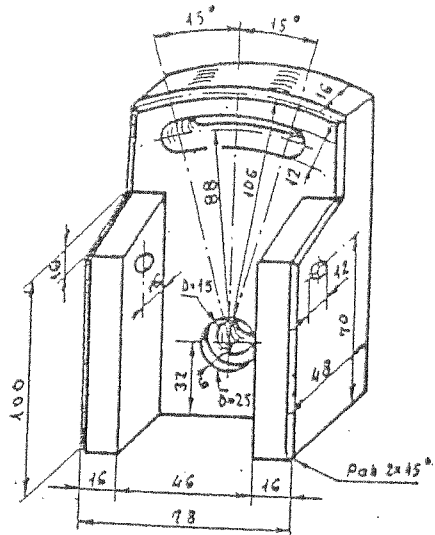


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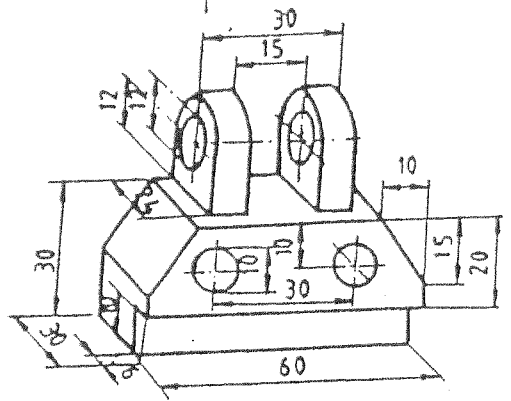


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Araştırma

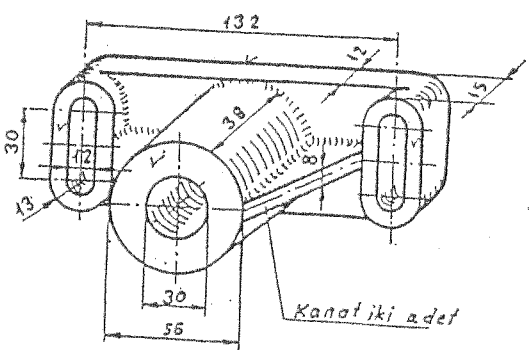
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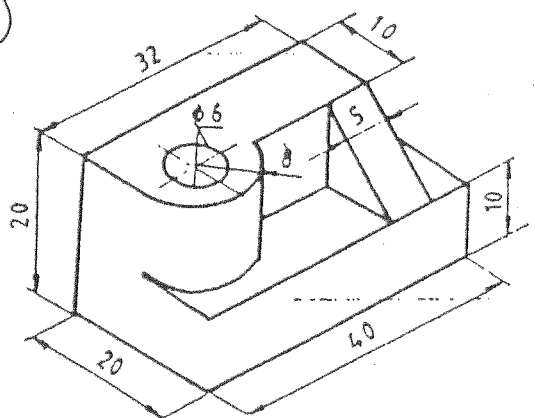
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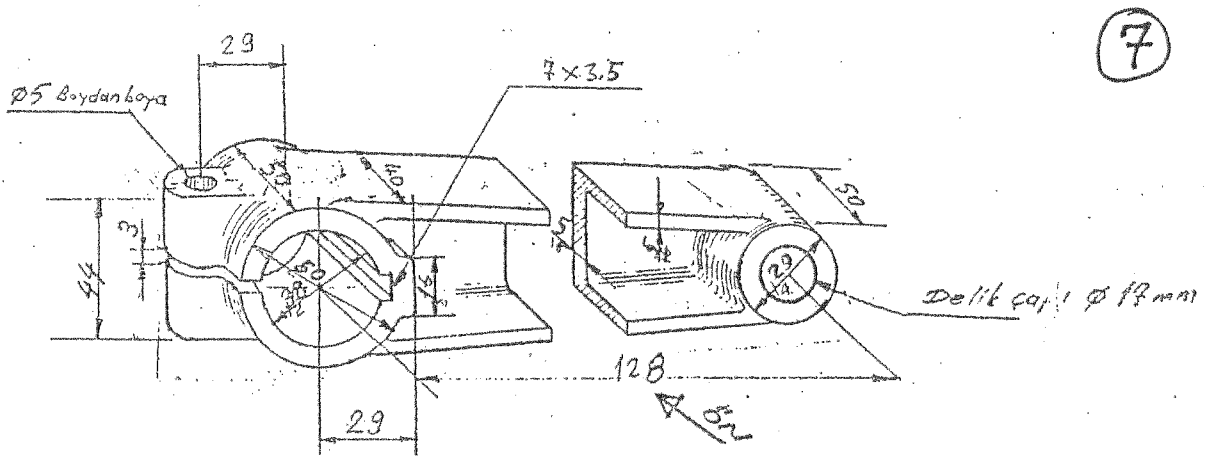
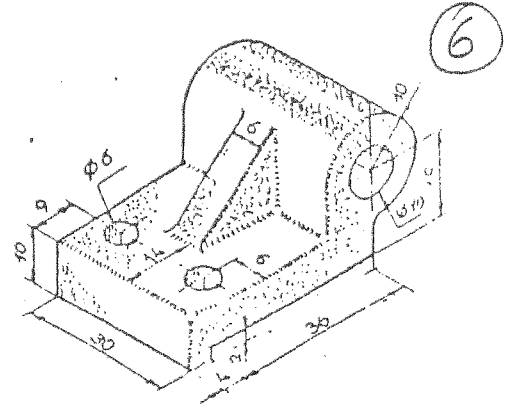
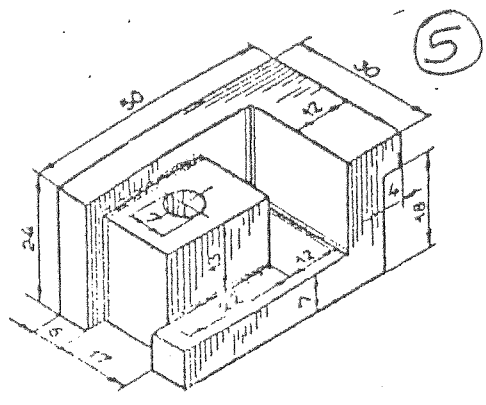
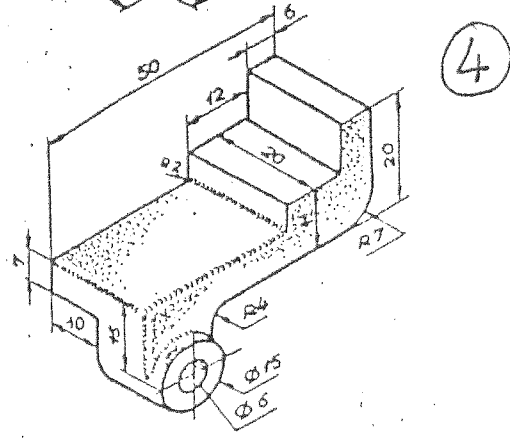
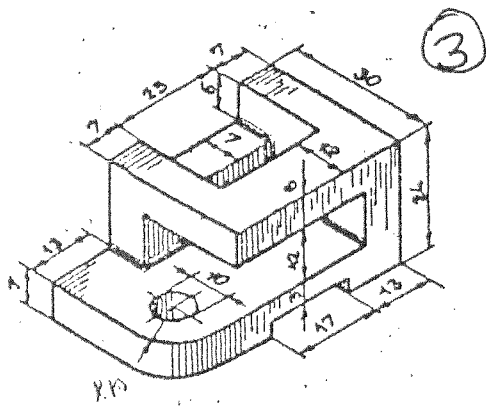
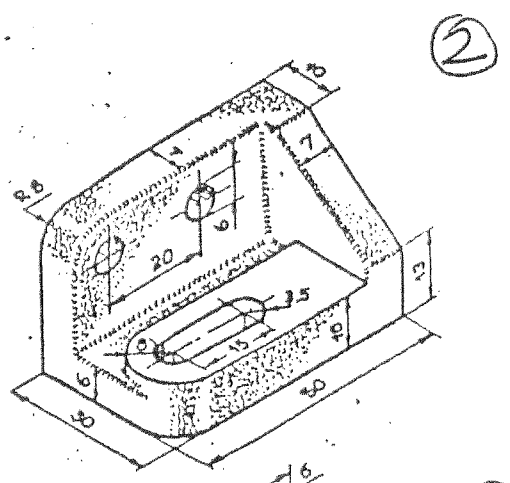
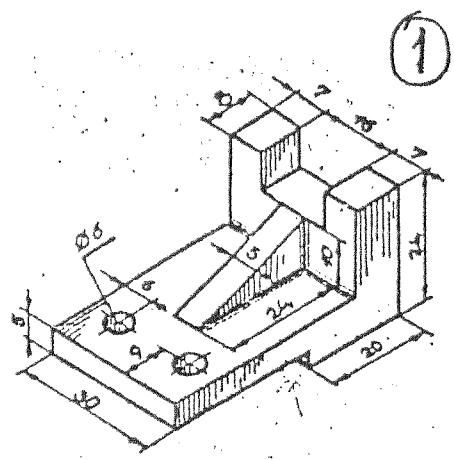
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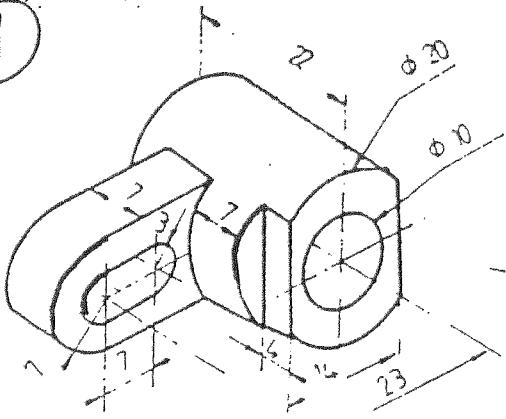
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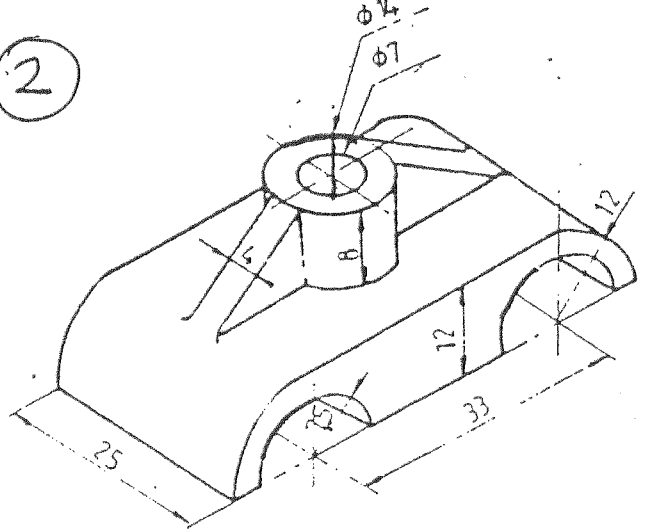
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 Bölümü



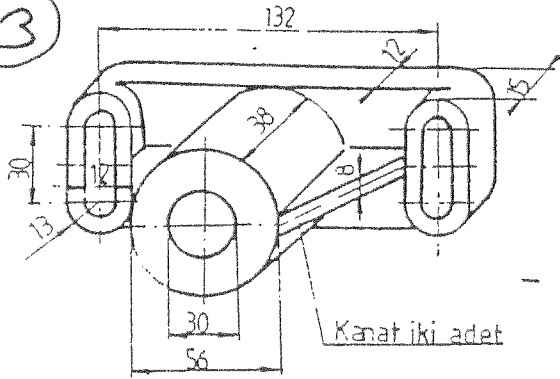
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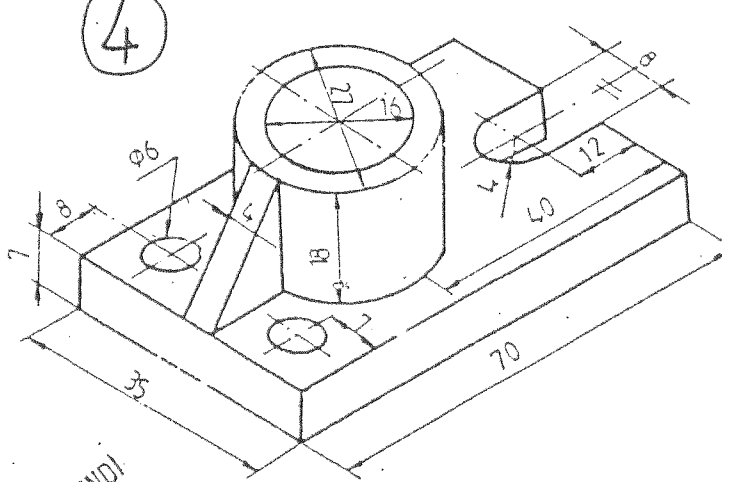
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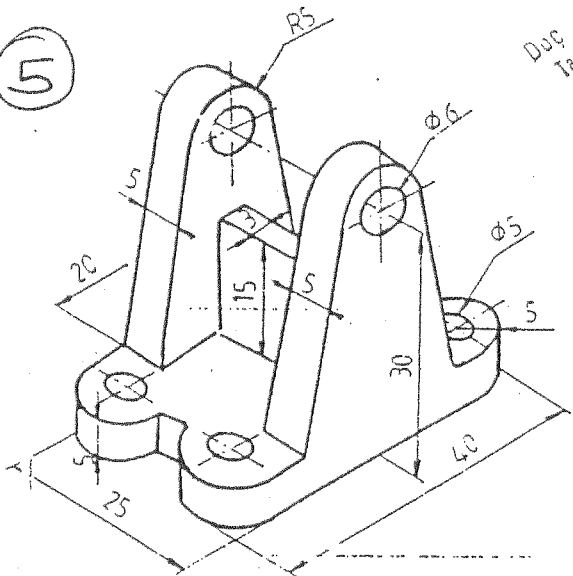
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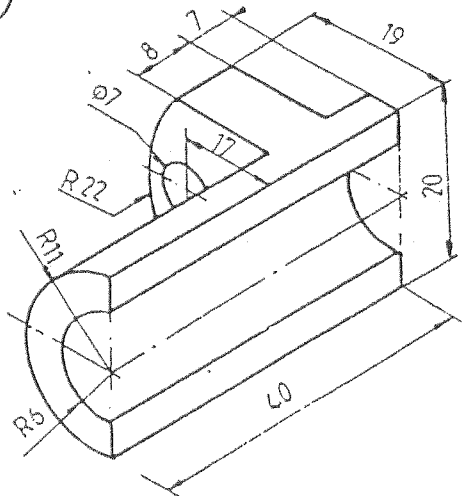
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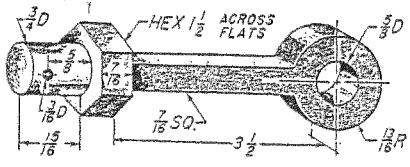
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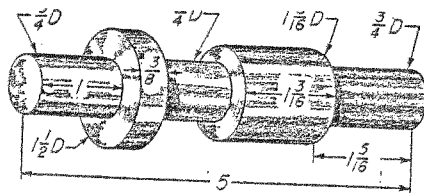
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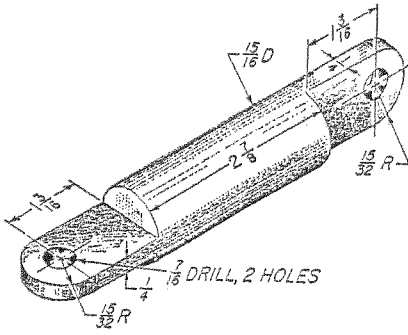
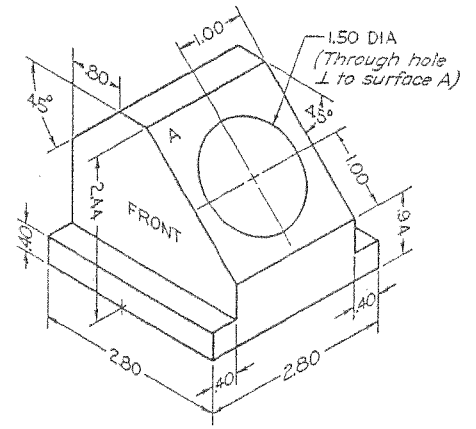
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Bölüm Başkanı



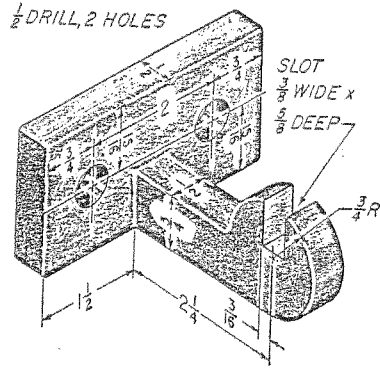
Prob. 2-50.



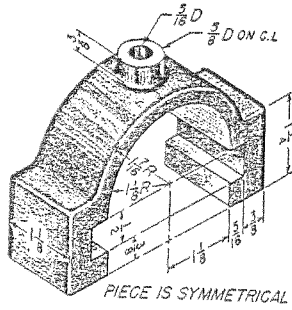
Prob. 2-51.



Prob. 2-52.



Prob. 2-53.



Prob. 2-54.

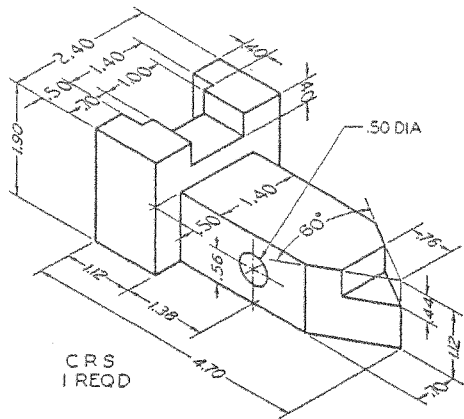
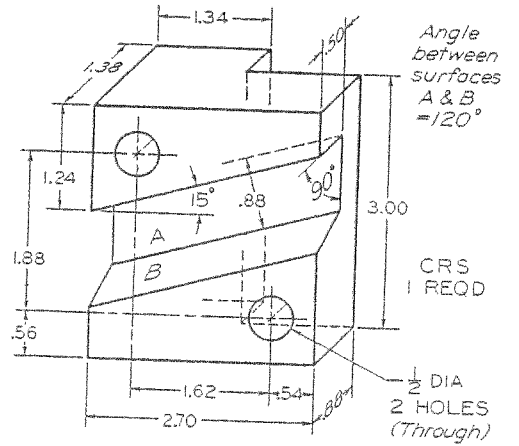


Fig. 7.55 Safety Key (Layout A-3).\*

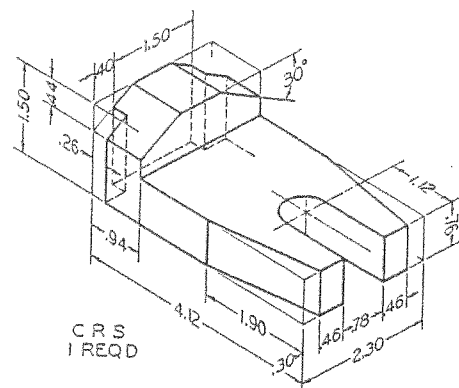


Fig. 7.56 Finger Guide (Layout A-3).\*

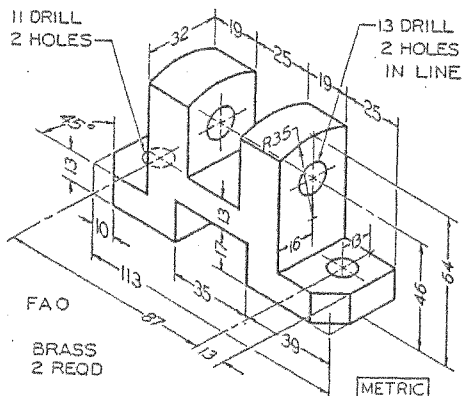


Fig. 7.57 Rod Support (Layout A-3).\*

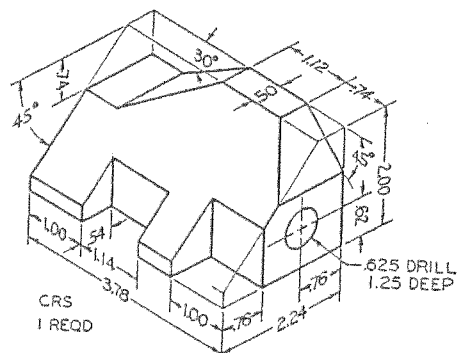
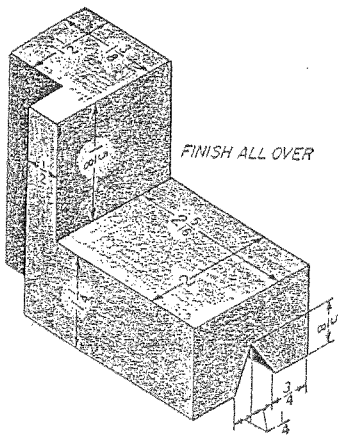
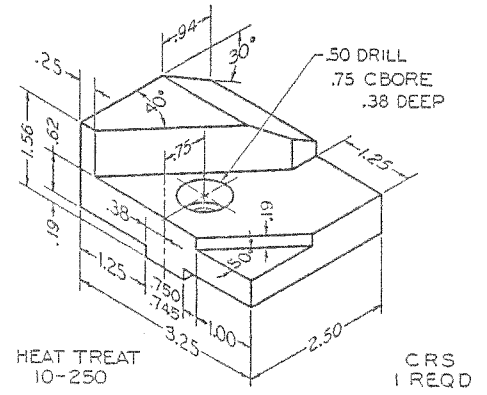
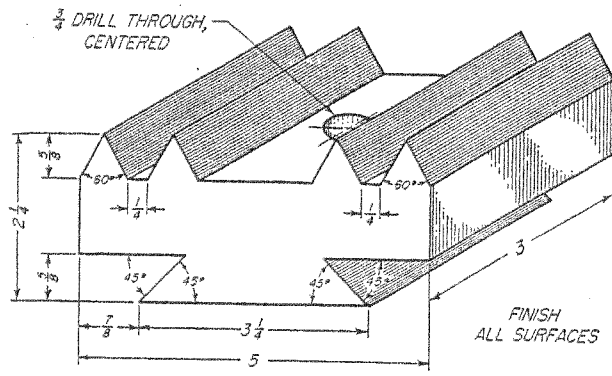
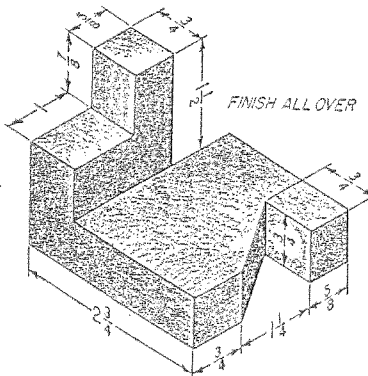


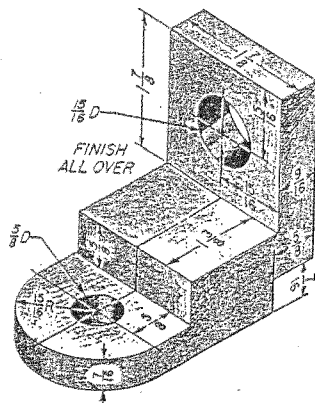
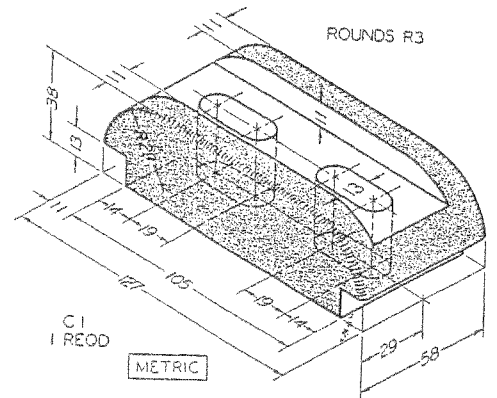
Fig. 7.58 Tool Holder (Layout A-3).\*



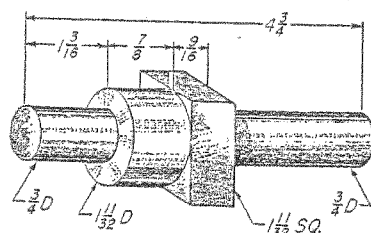
Prob. 2-44.



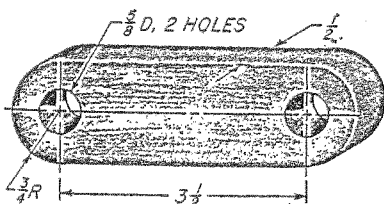
Prob. 2-45.



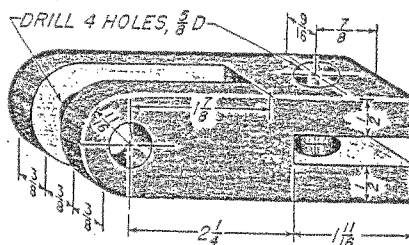
Prob. 2-46.



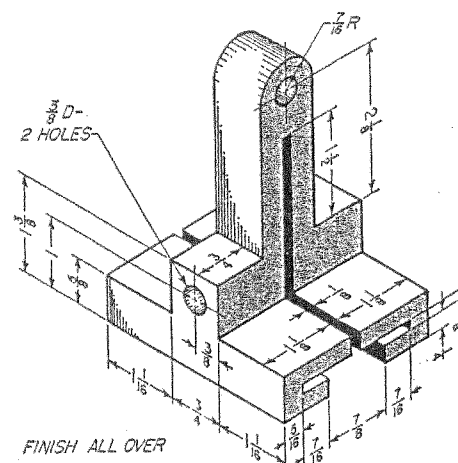
Prob. 2-47.



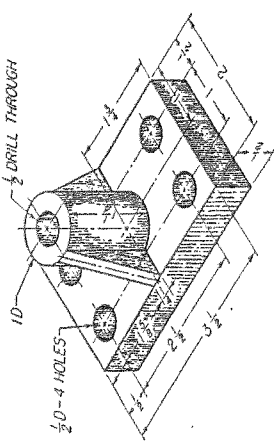
Prob. 2-48.



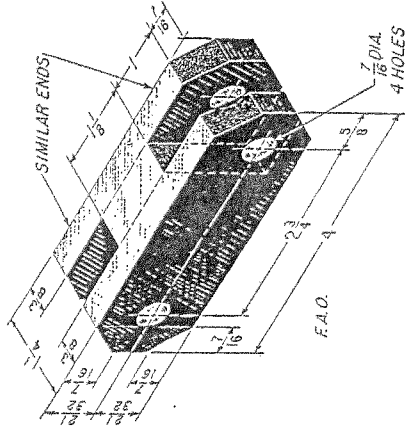
Prob. 2-49.



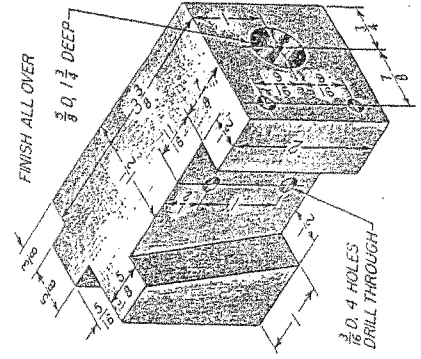
Prob. 11-14. Adjusting clamp.



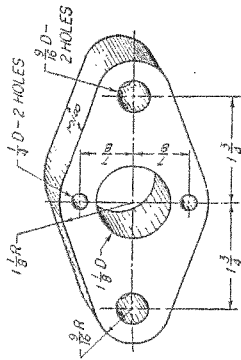
3-22. Rod support, cast iron. Draw two views.



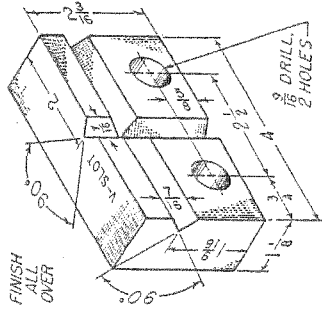
3-24. Link, steel. Draw two views.



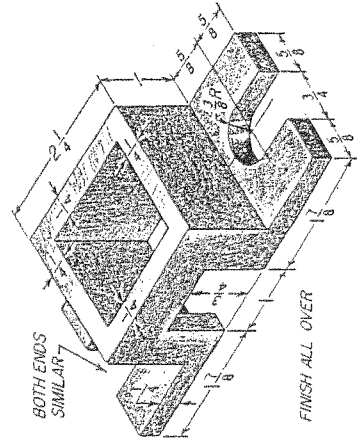
3-26. Taper fixture, steel. Draw three views.



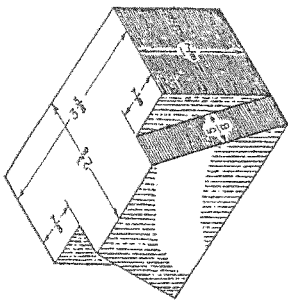
3-21. Cover plate, cast iron. Draw two views.



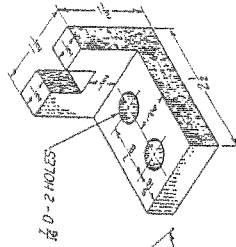
3-23. Vise jaw, steel. Draw three views.



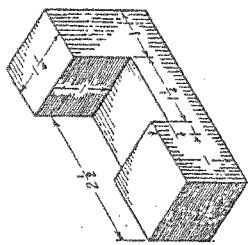
3-25. Lock catch, brass. Draw three views.



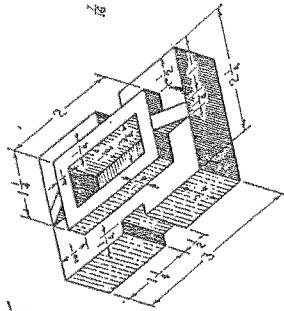
3-15. Guide block, cast iron. Draw three views.



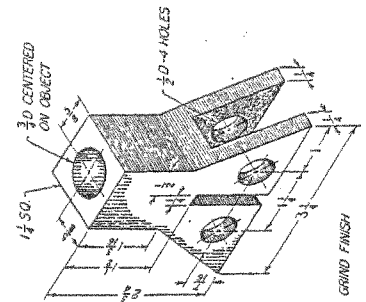
3-18. Stop block, cast iron. Draw three views.



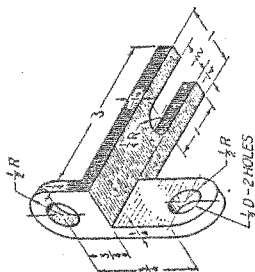
3-14. Block, cast iron. Draw three views.



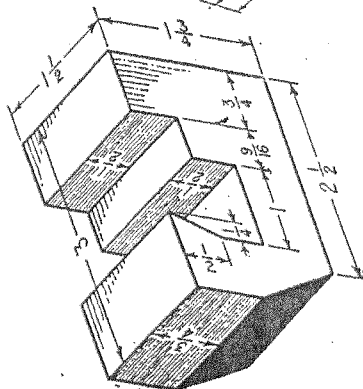
3-17. Column base, cast steel. Draw three views.



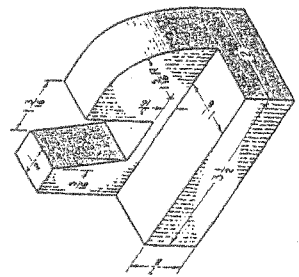
3-20. Base connector, steel. Draw three views.



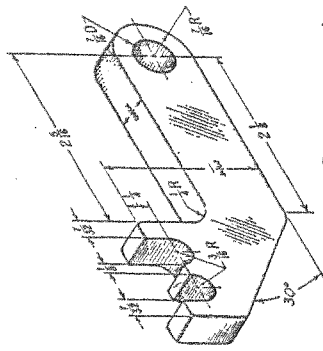
3-13. Rod guide, steel. Draw three views.



3-16. Gage block, steel. Draw three views.

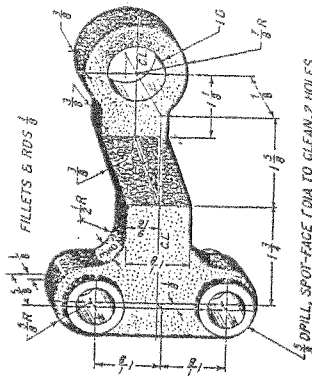


3-19. Tool rest, steel. Draw three views.



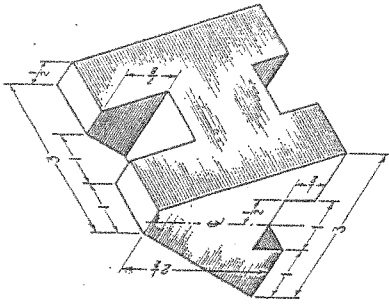
FILLETS & ROUNDS  $\frac{1}{8}$

7-22. Make a suitable working drawing of the steel adjusting lever. (Time. 2 hr.)

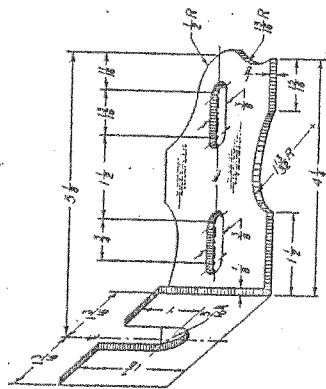


$\frac{1}{2}$  DRILL, SPOT-FACE TO CLEAN, 2 HOLES

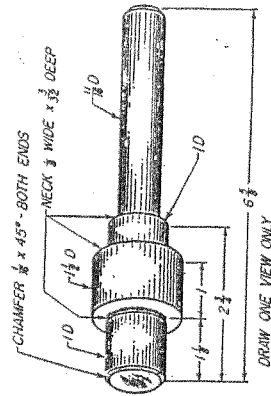
7-23. Make a suitable working drawing of the wrought-iron-frame shaft support. (Time. 3 hr.)



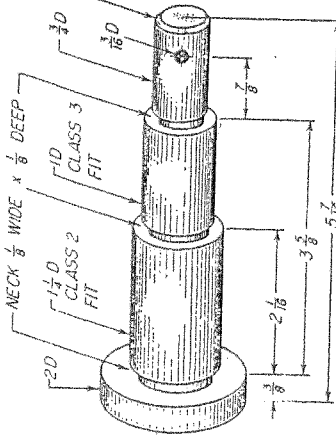
7-25. Change the fractional dimensions to decimal dimensions reduced to two places, and make a suitable working drawing of the wedge block. (Time. 2 hr.)



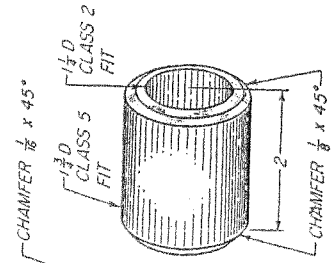
7-24. Make a suitable working drawing of the steel hinge. (Time. 2 hr.)



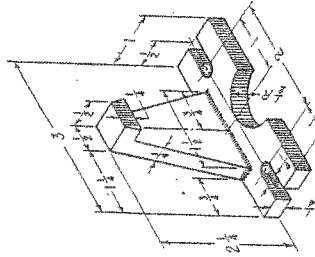
7-26. Change all dimensions with the exception of those for the necks and chamfers to decimals of four places, and make a suitable working drawing of the steel shaft. (Time. 1 3/4 hr.)



7-27. Make suitable working drawings of the steel stud shaft and bronze bushing on the same sheet. Change all dimensions with the exception of those for the necks

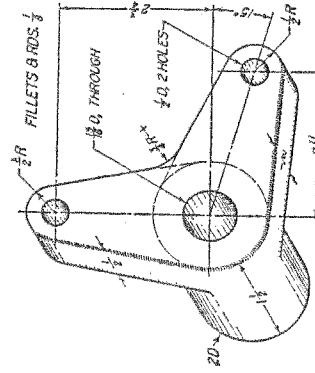


and chamfers to decimals of four places. Compute the dimensions for the classes of fits from the tables in the Appendix. (Time. 4 1/2 hr.)

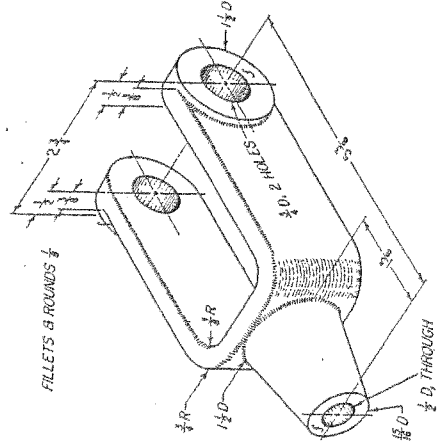


FINISH ALL OVER

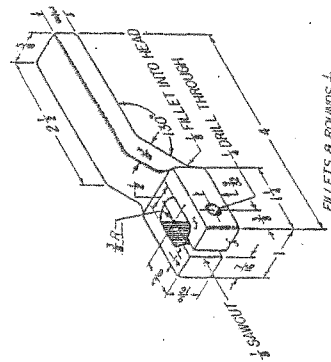
7-28. Make a suitable working drawing of the brass lock base. (Time. 2 1/2 hr.)



7-29. Make a suitable working drawing of the cast-iron rocker arm. (Time. 2 1/2 hr.)



7-30. Make a suitable working drawing of the steel clevis. (Time. 2 1/2 hr.)



7-31. Make a suitable working drawing of the brass valve handle. (Time. 2 1/2 hr.)

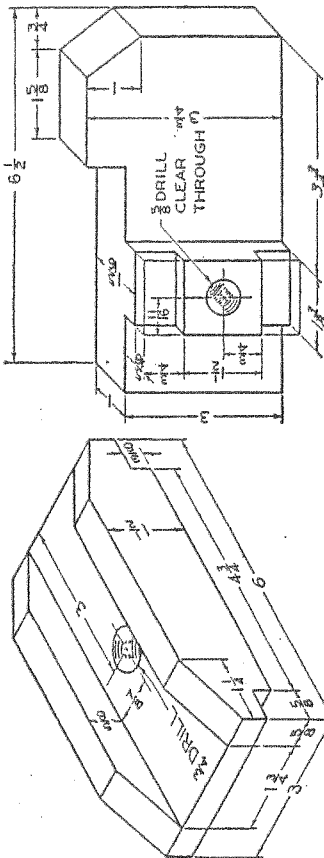


FIG. 328 TAILSTOCK CLAMP.  
Draw necessary views.\*

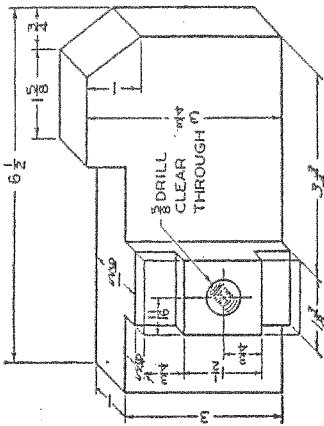


FIG. 329 STOP BLOCK.  
Draw necessary views.\*

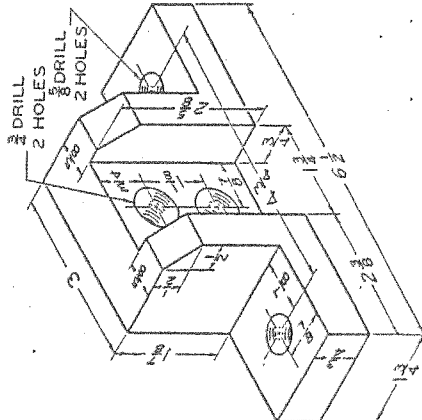


FIG. 330 SUPPORT BRACKET.  
Draw necessary views.\*

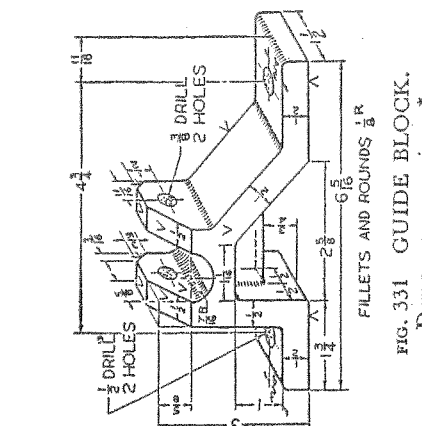


FIG. 331 GUIDE BLOCK.  
Draw necessary views.\*

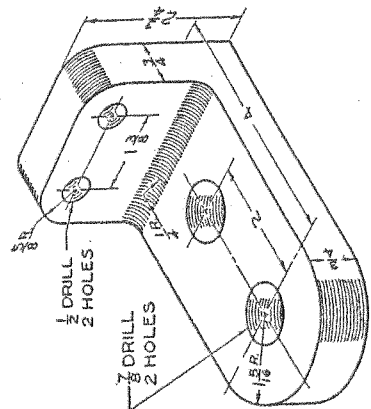


FIG. 332 ANGLE BRACKET.  
Draw necessary views.\*

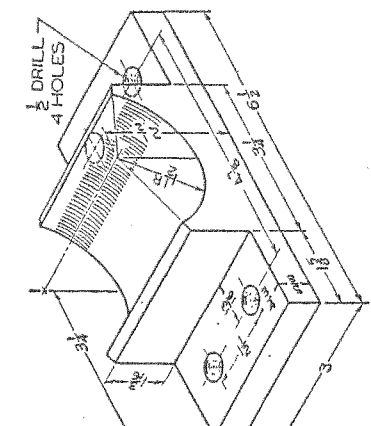


FIG. 333 TRUNNION BLOCK.  
Draw necessary views.\*

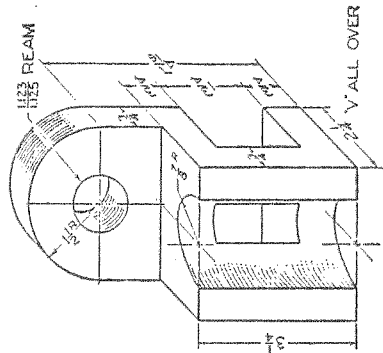


FIG. 334 SLIDING LINK.  
Draw necessary views.\*

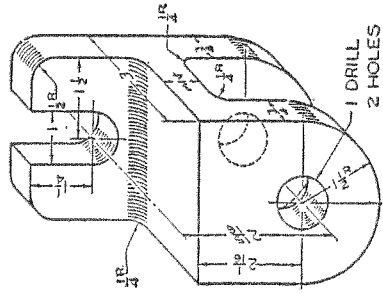


FIG. 335 ADJUSTER YOKE.  
Draw necessary views.\*

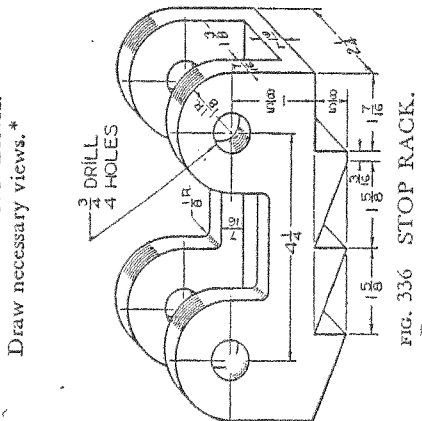


FIG. 336 STOP RACK.  
Draw necessary views.\*

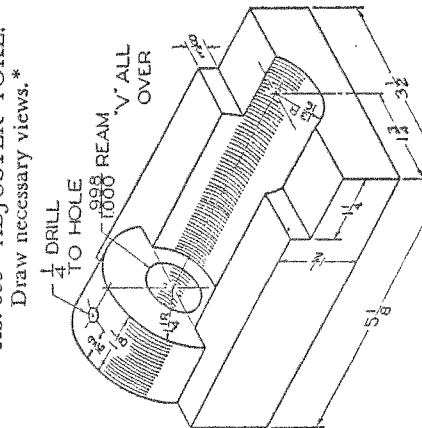


FIG. 337 COLUMN GUIDE.  
Draw necessary views.\*

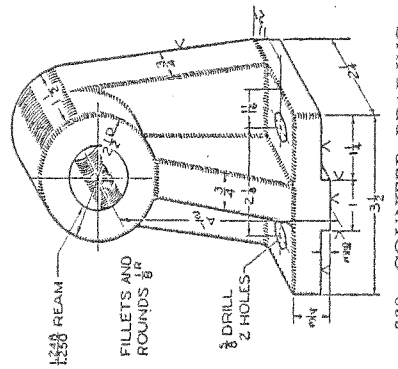


FIG. 338 COUNTER BEARING BRACKET.  
Draw necessary views.\*

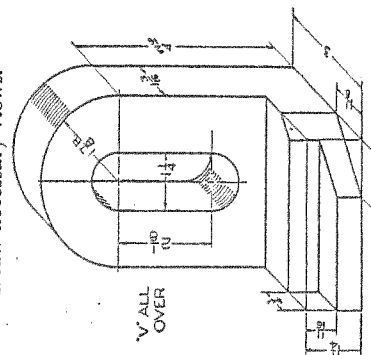
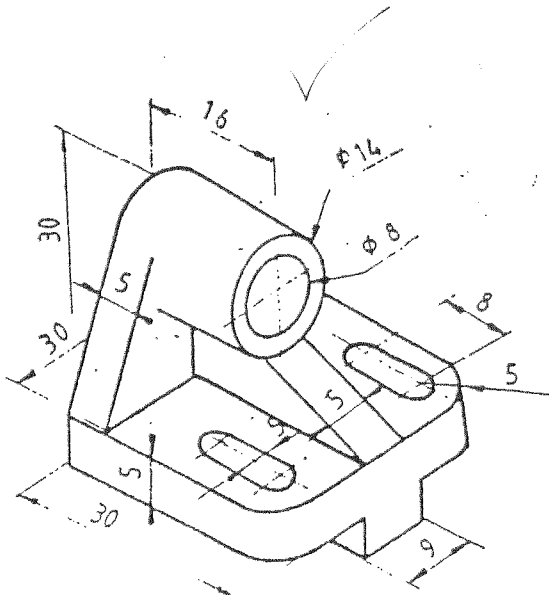
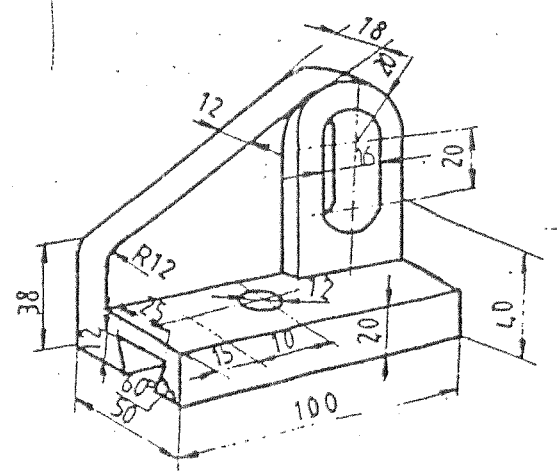


FIG. 339 IDLER GUIDE.  
Draw necessary views.\*

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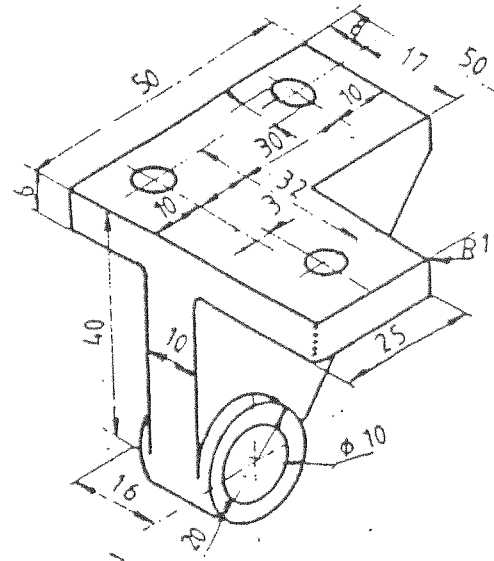


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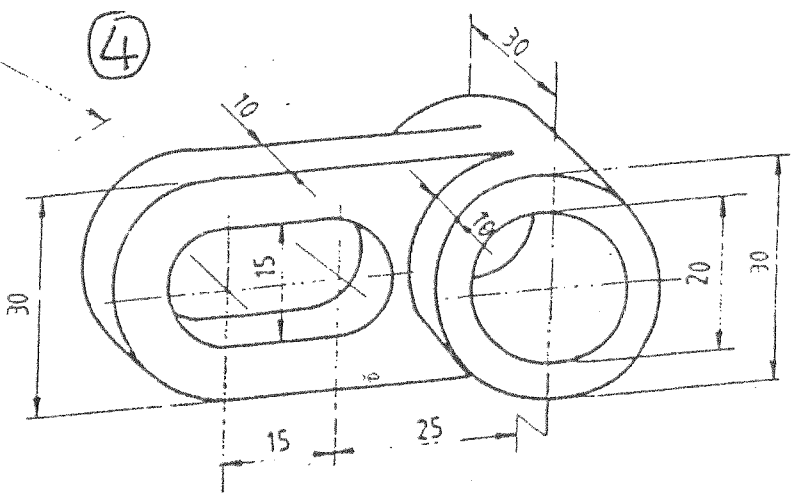


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Araştırma

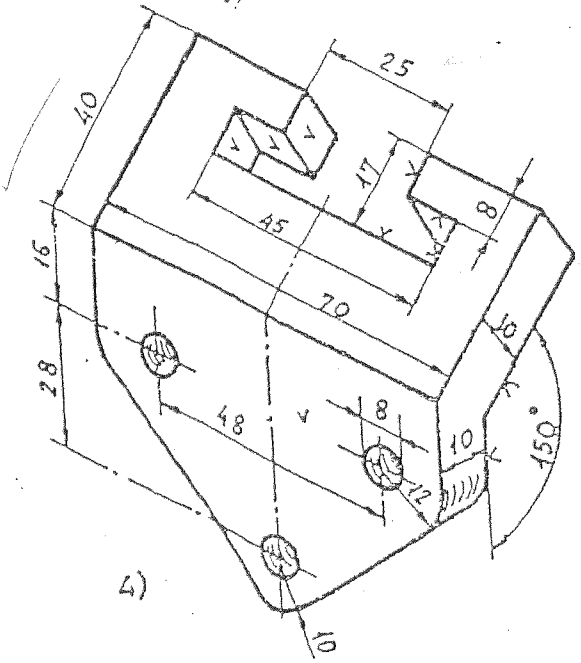
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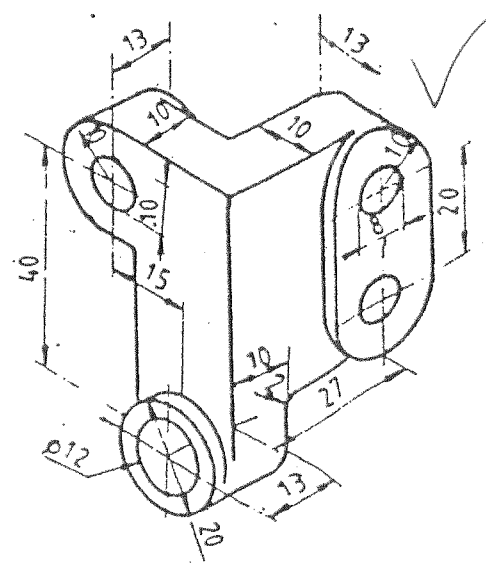
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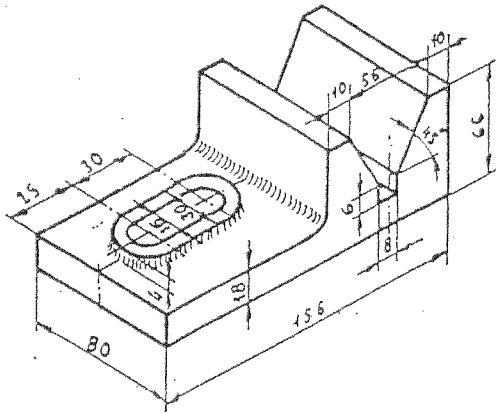
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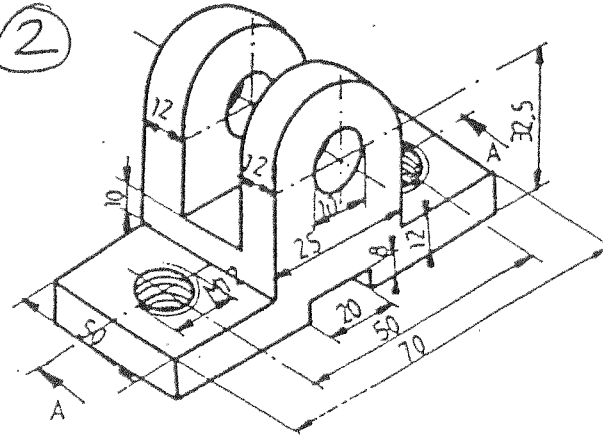
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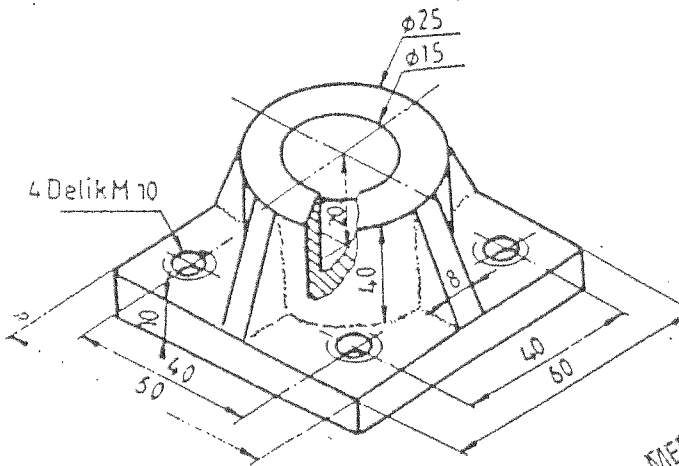
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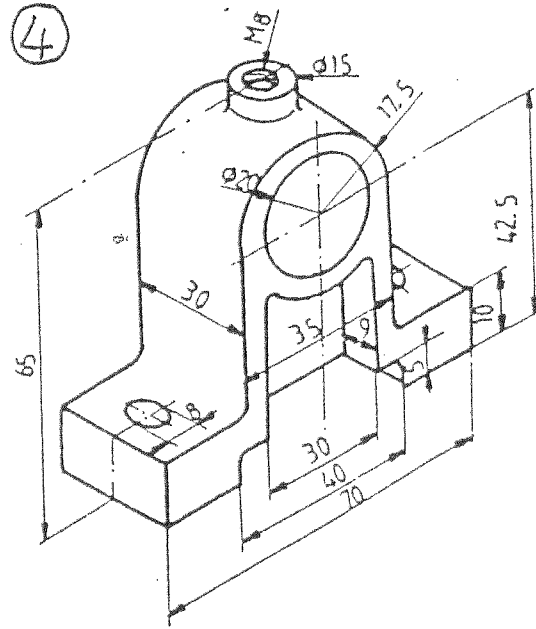
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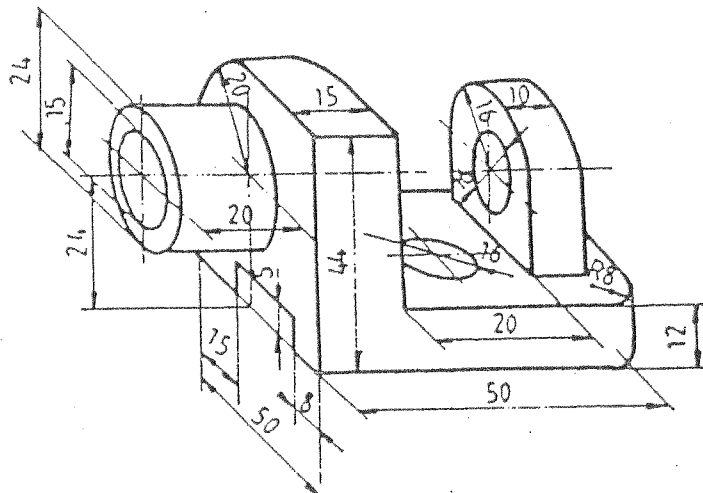
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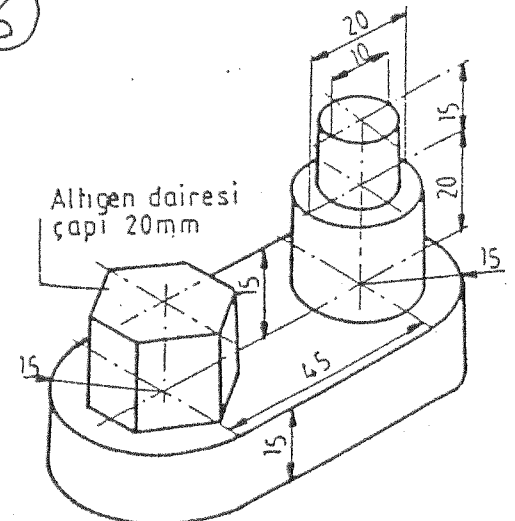


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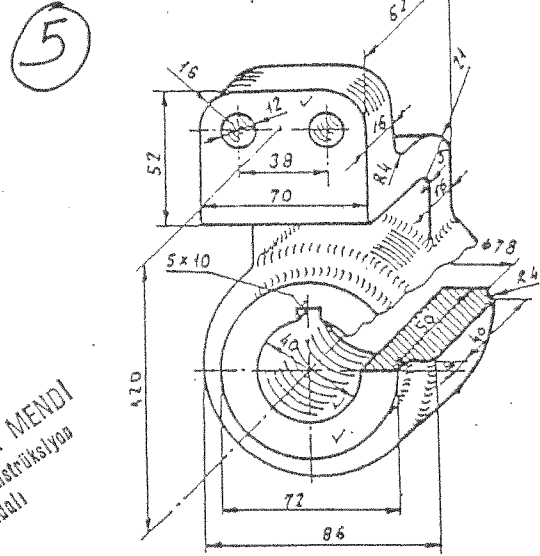
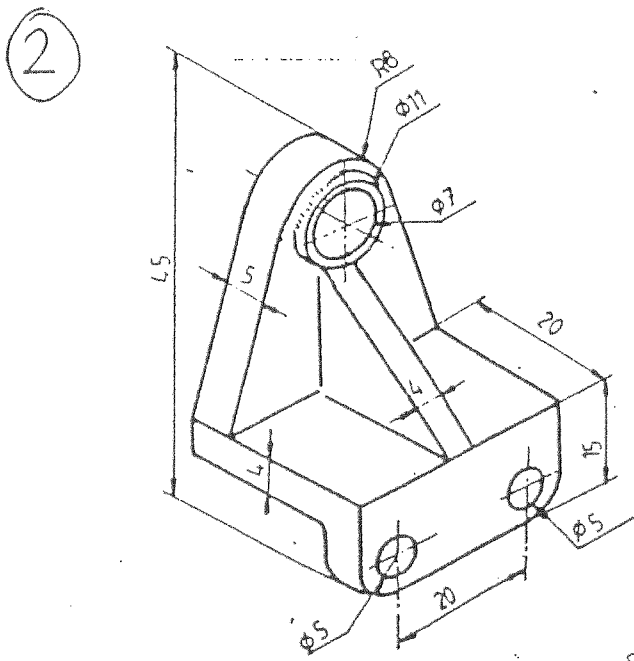
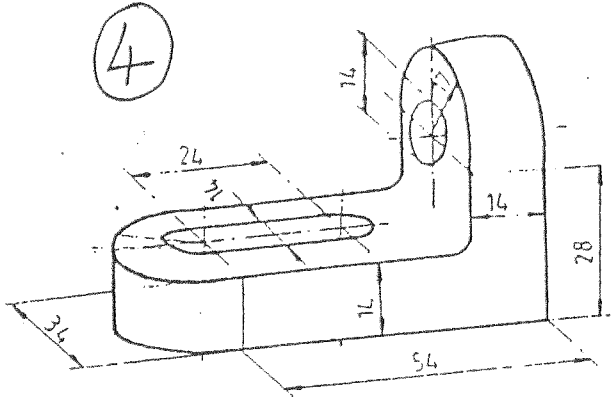
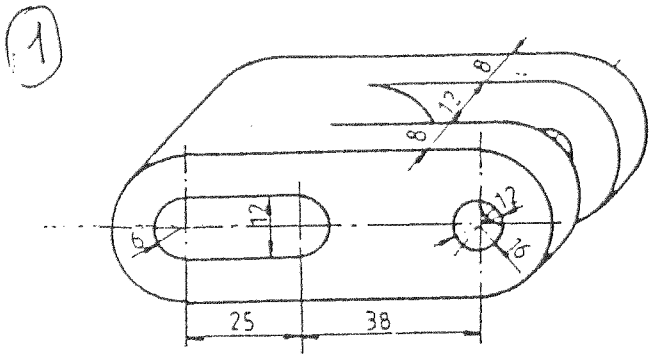


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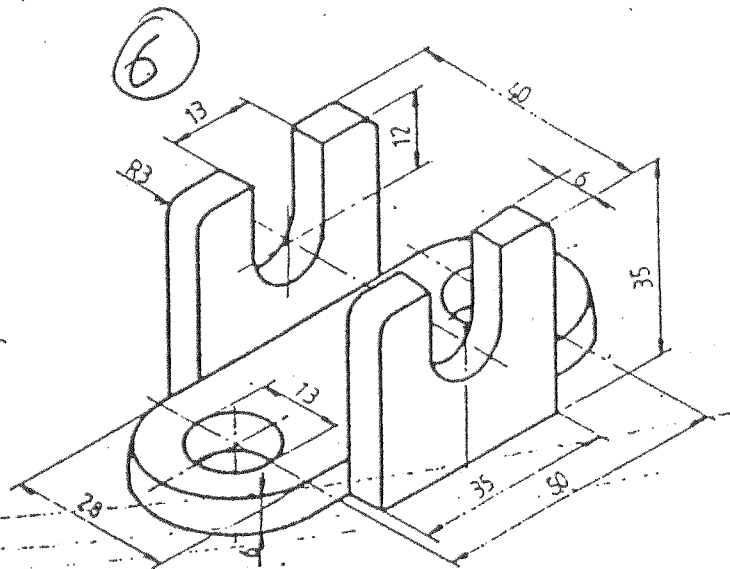
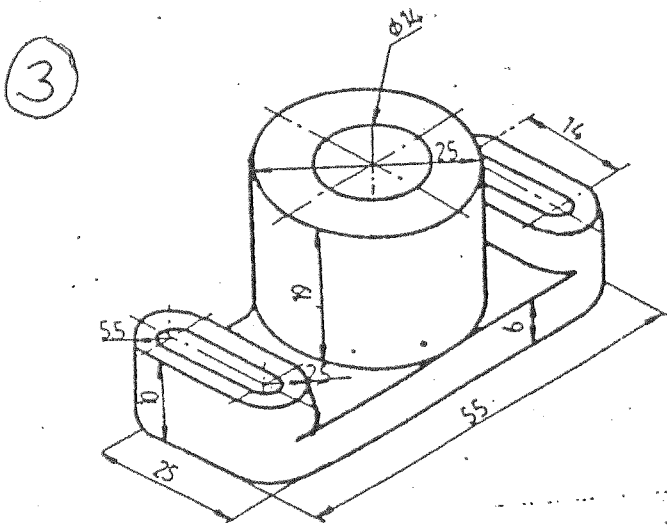
6



Alınan daire  
çapı 20mm



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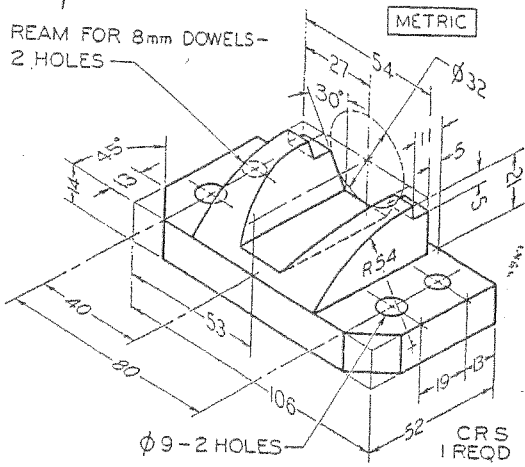


Fig. 7.67 Locating Finger (Layout A-3).\*

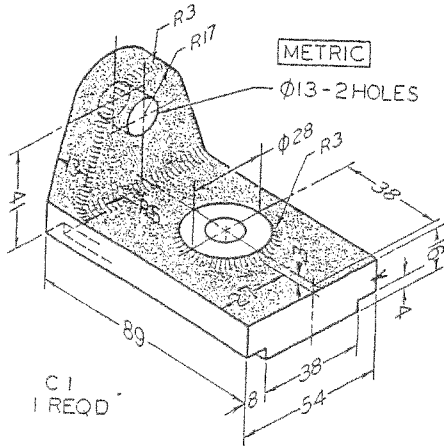


Fig. 7.69 Cut-off Holder (Layout A-3).\*

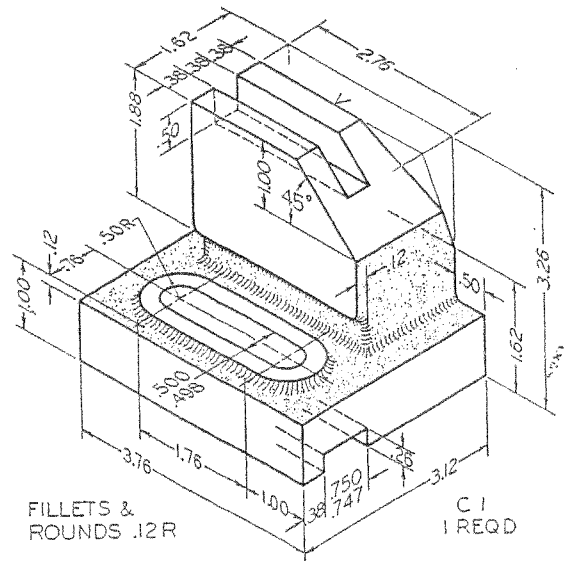
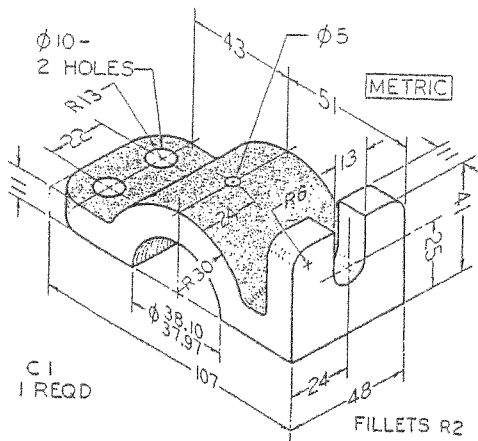
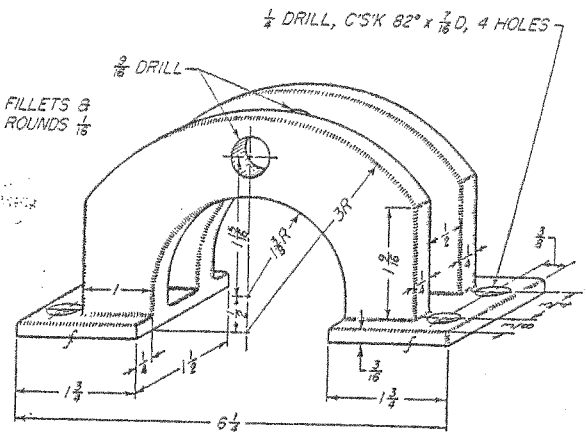
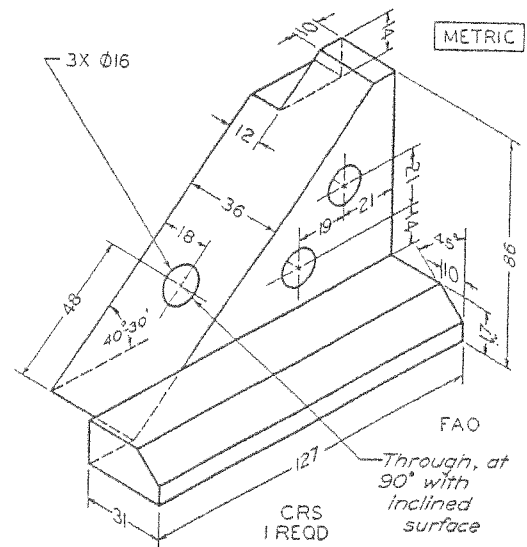
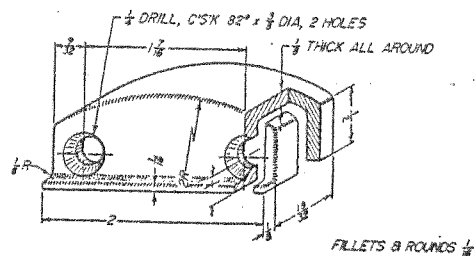


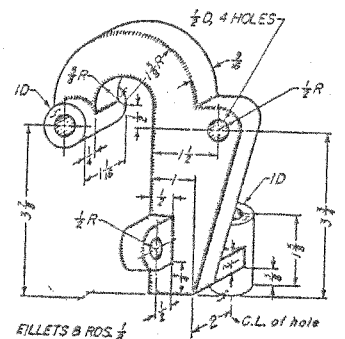
Fig. 7.91 Door Bearing (Layout B-3).\*



7-32. Make a suitable working drawing of the aluminum pulley bracket. (Time: 3 hr.)



7-33. Make a suitable working drawing of the brass lock catch. (Time: 2 hr.)



7-34. Make a suitable drawing of the steel arm spindle. (Time: 3 hr.)

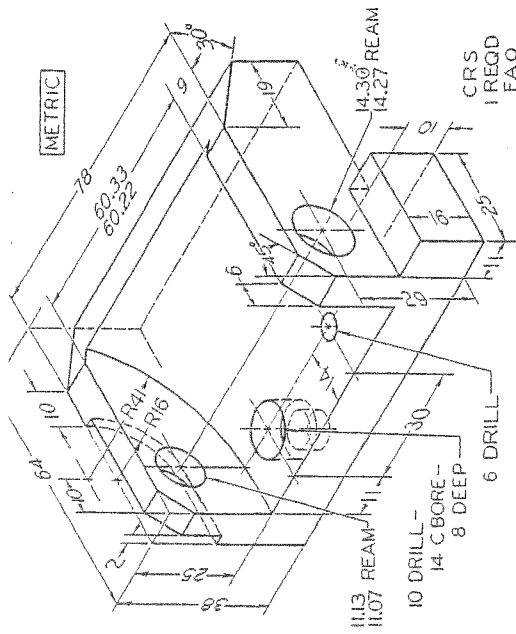


Fig. 7.79 Hinge Block (Layout A-3).\*

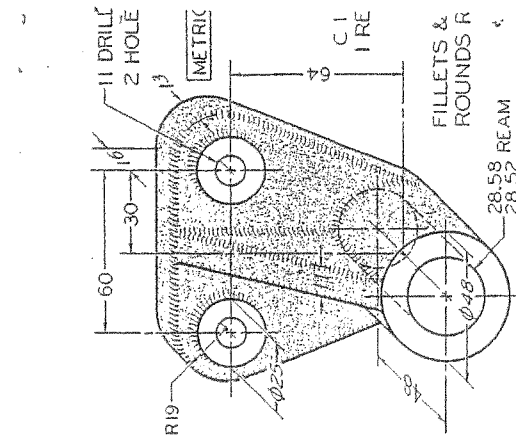


Fig. 7.80 Feed Rod Bearing (Layout A-3).

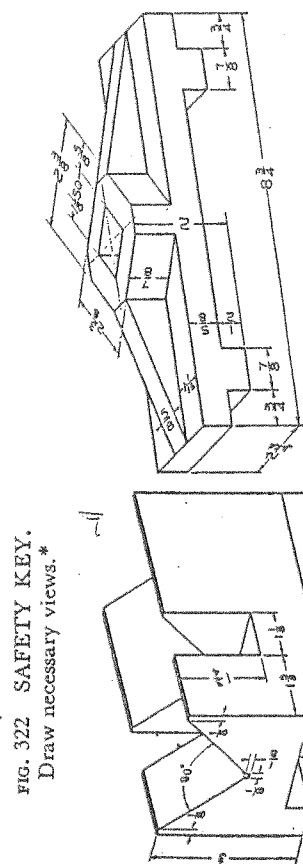


Fig. 322 SAFETY KEY. Draw necessary views.\*

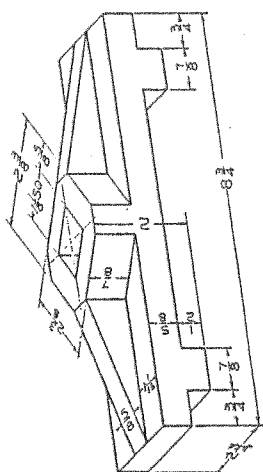


Fig. 323 FINGER GUIDE. Draw necessary views.\*

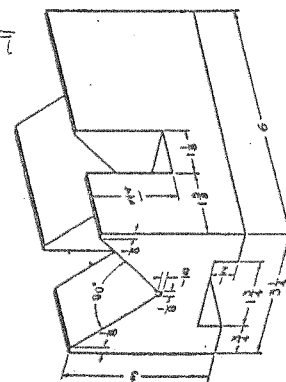


Fig. 324 V-BLOCK. Draw necessary views.\*

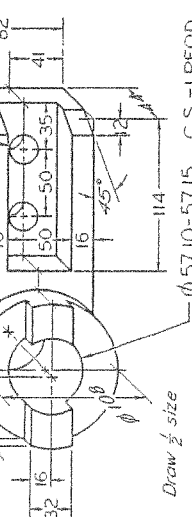


Fig. 7.81 Lever Hub (Layout A-3).\*

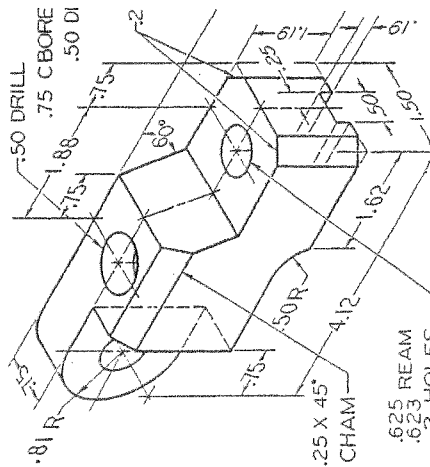


Fig. 7.82 Vibrator Arm (Layout A-3).\*

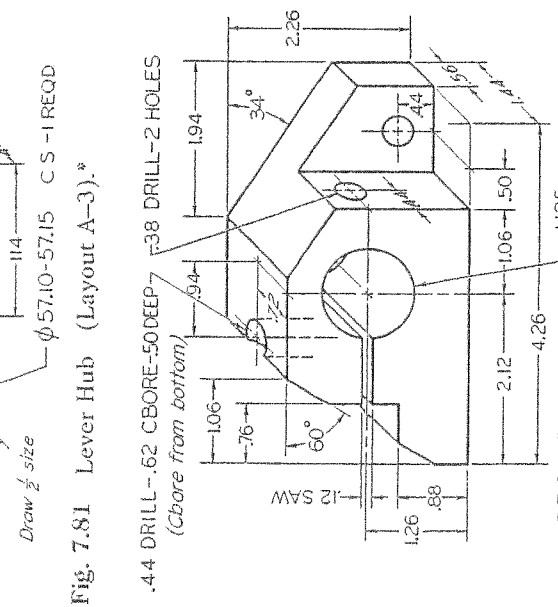


Fig. 327 BASE BLOCK. Draw necessary views.\*

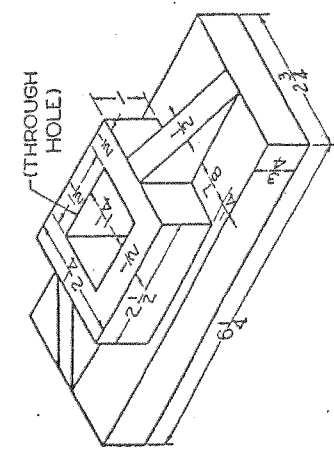
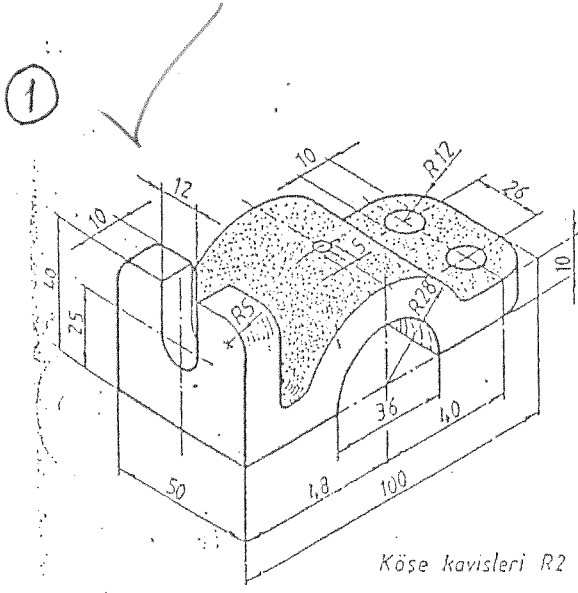
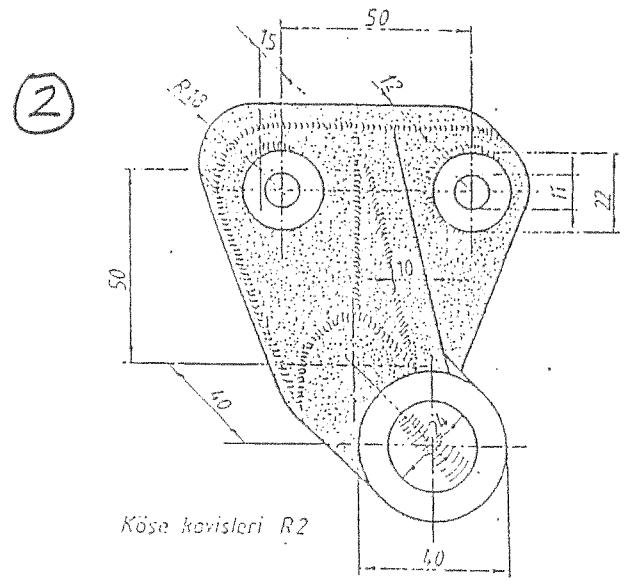


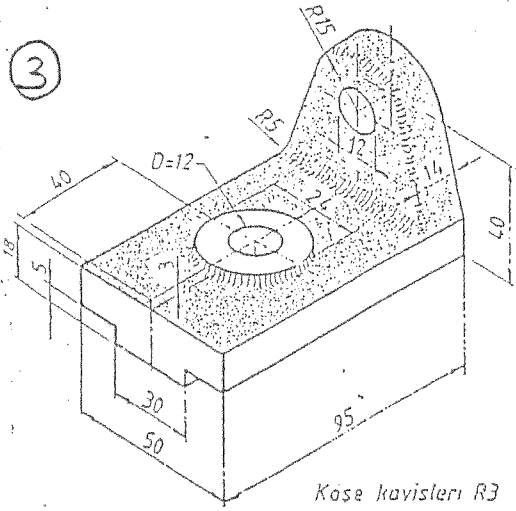
Fig. 326 STEADY REST CLAMP. Draw necessary views.\*



KAPAK

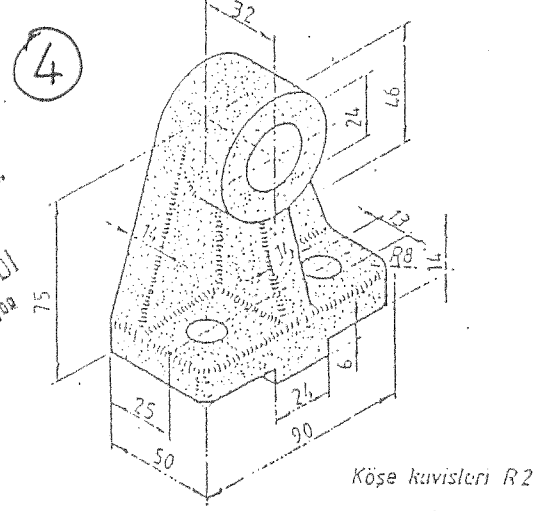


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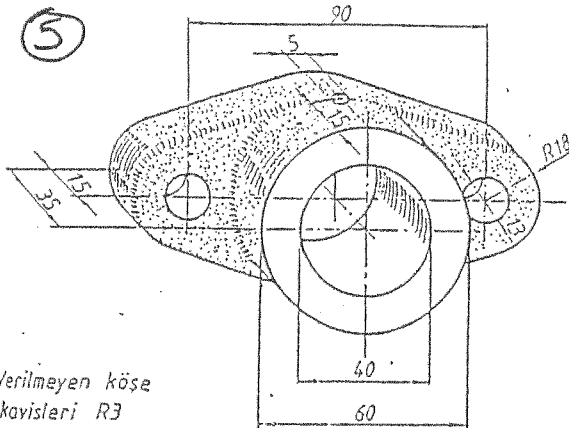


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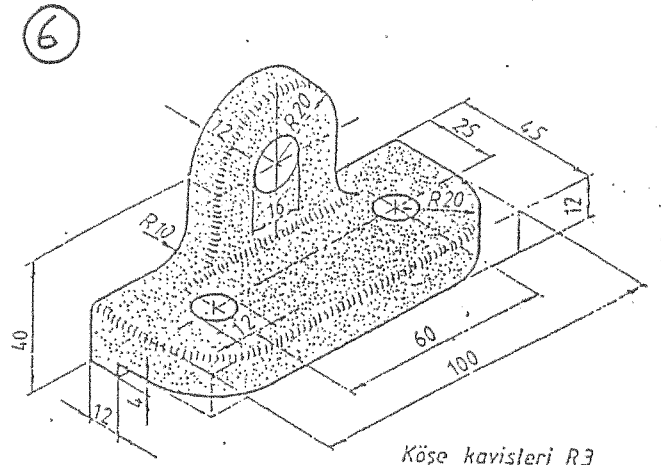
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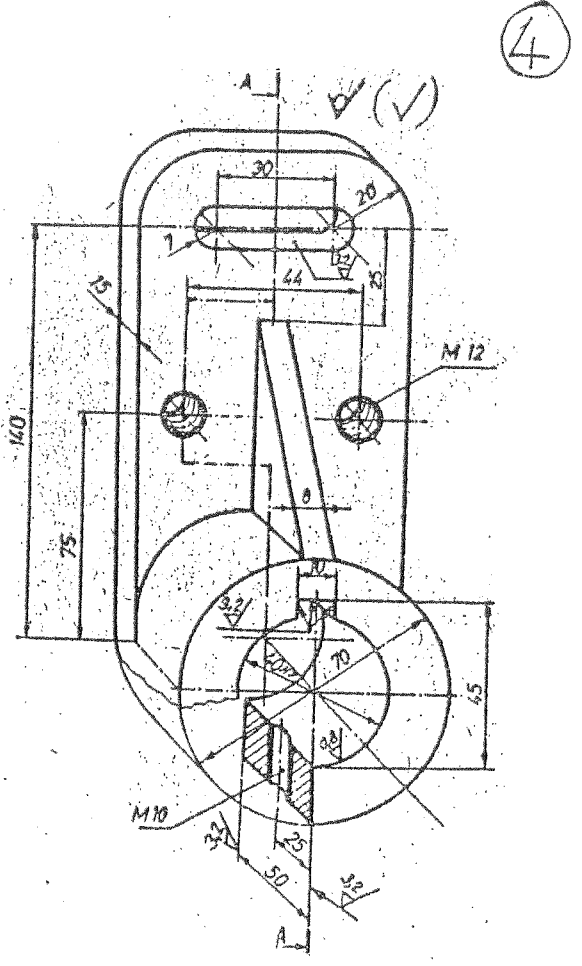
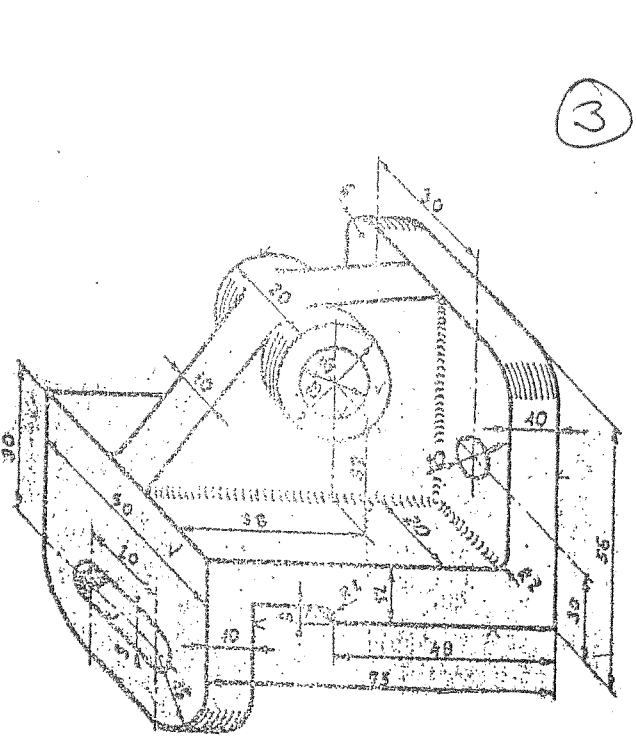
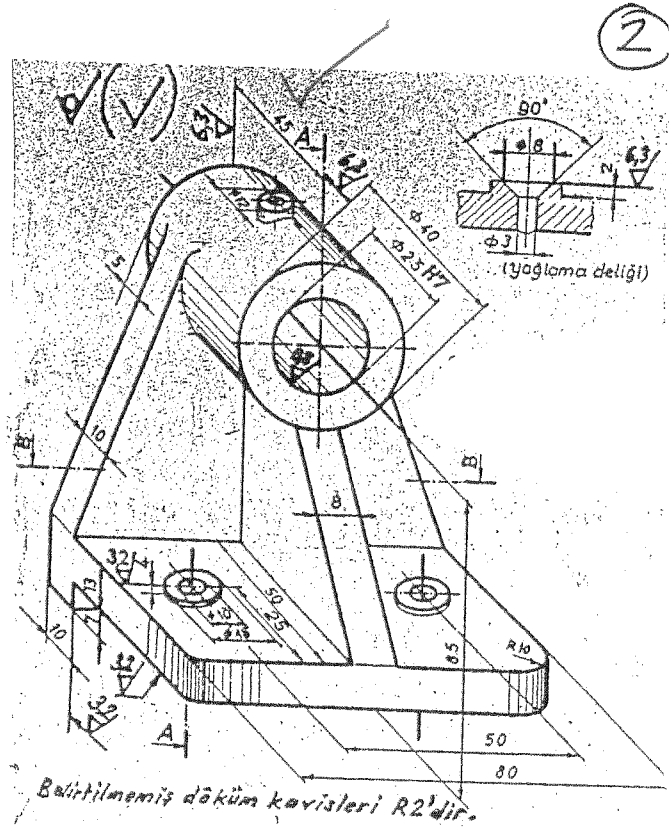
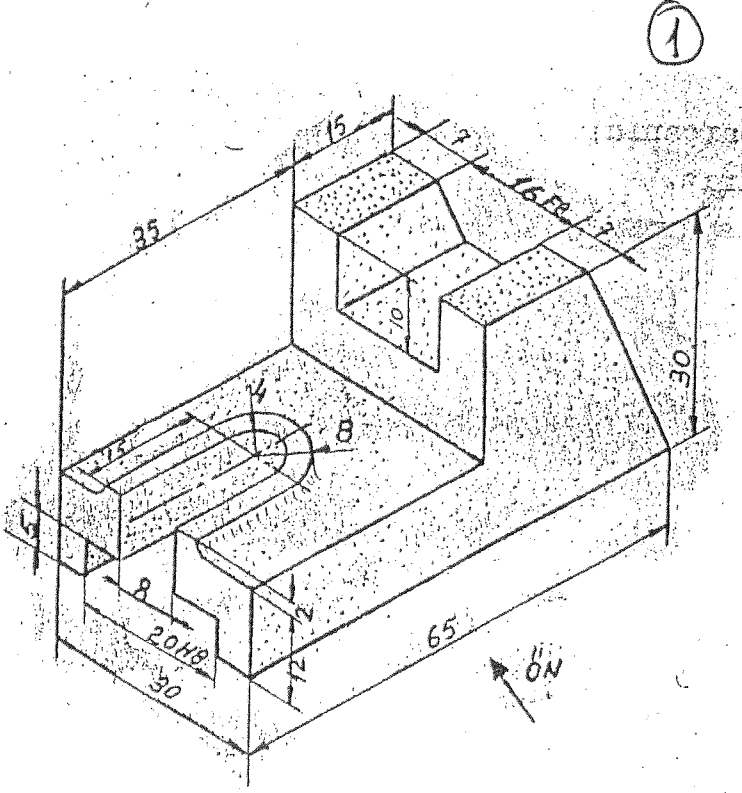
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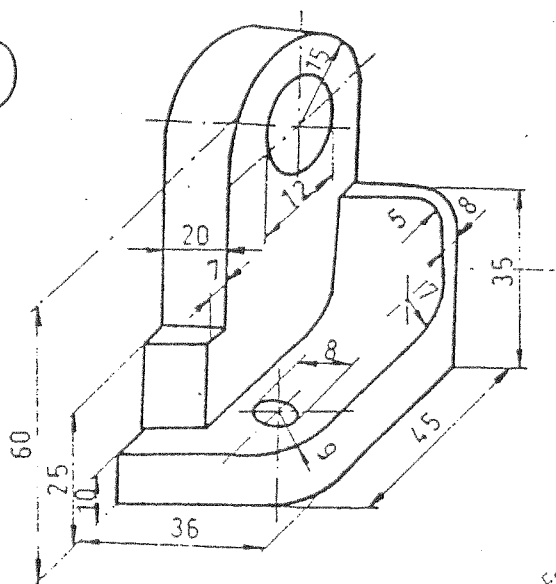


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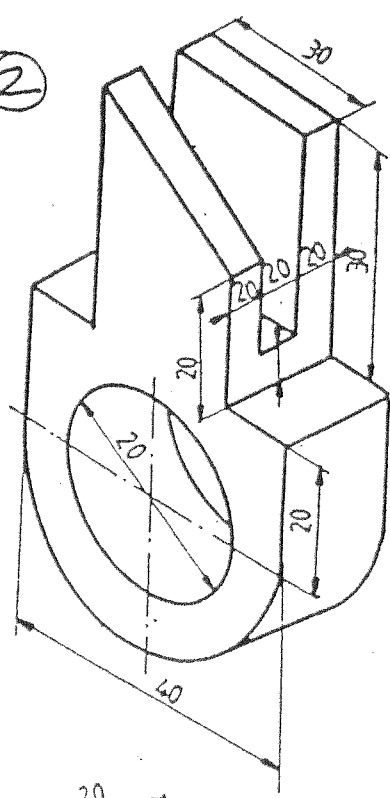


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Kurulması

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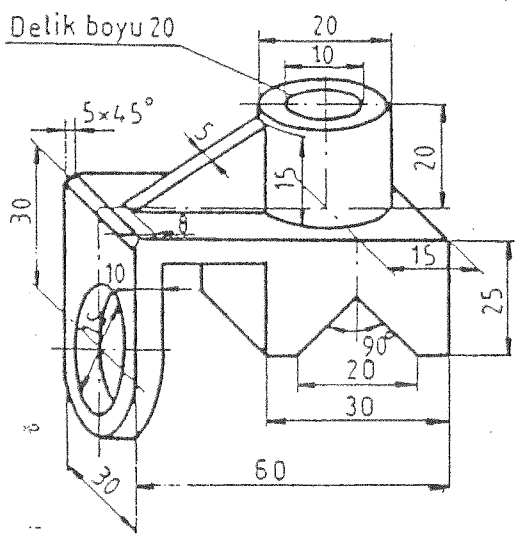


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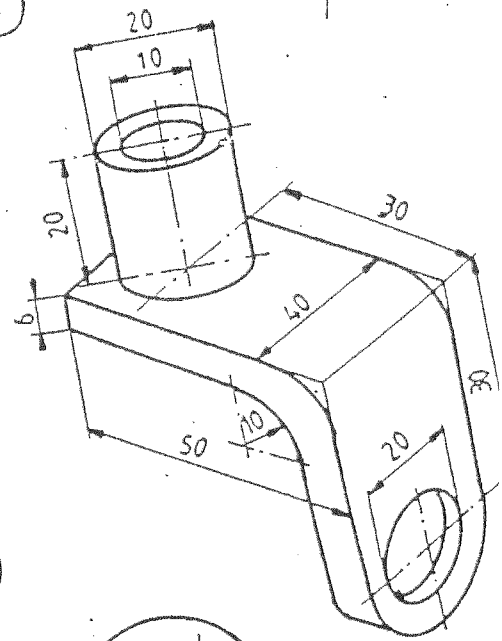


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Kabinanı

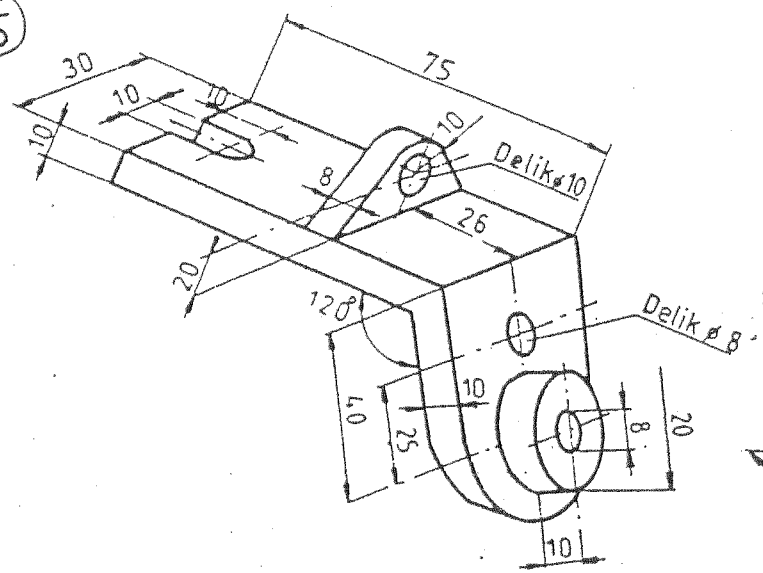
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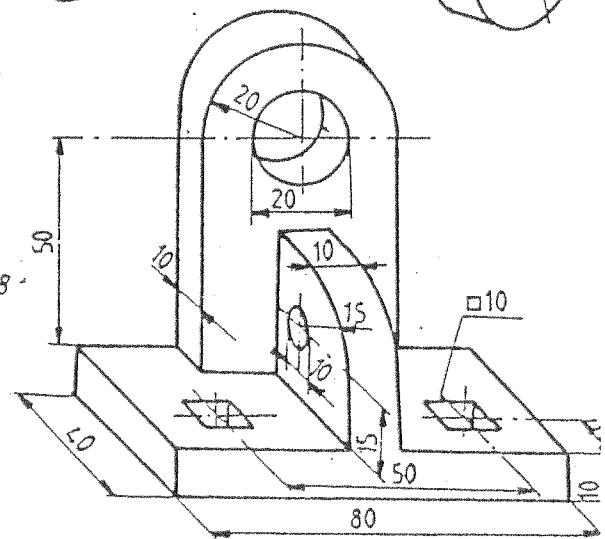
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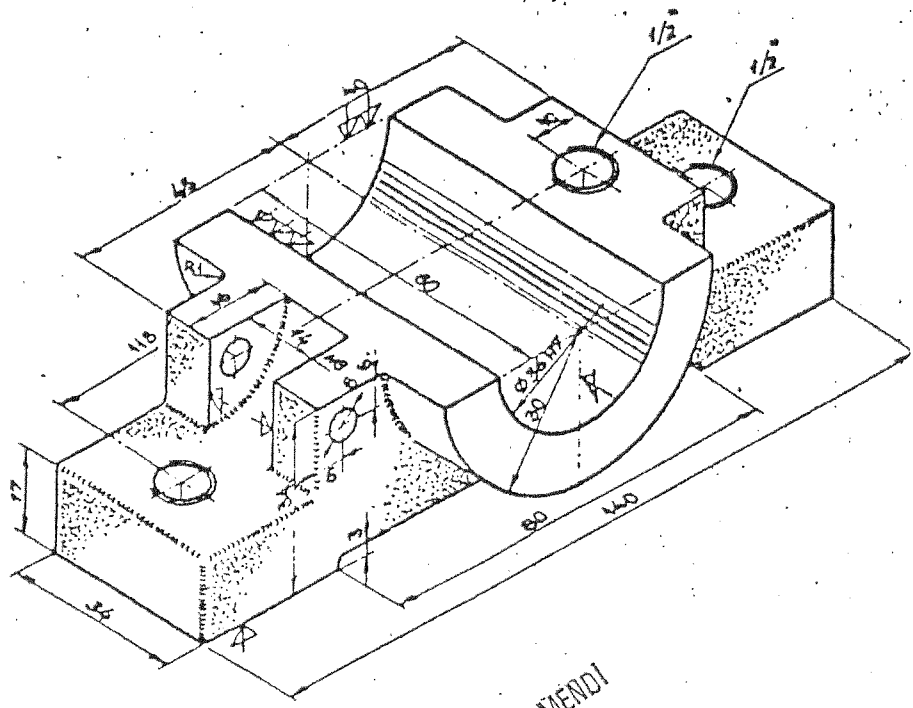
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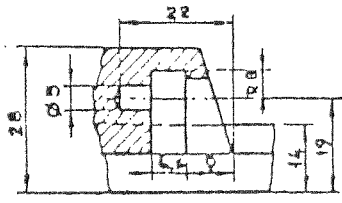


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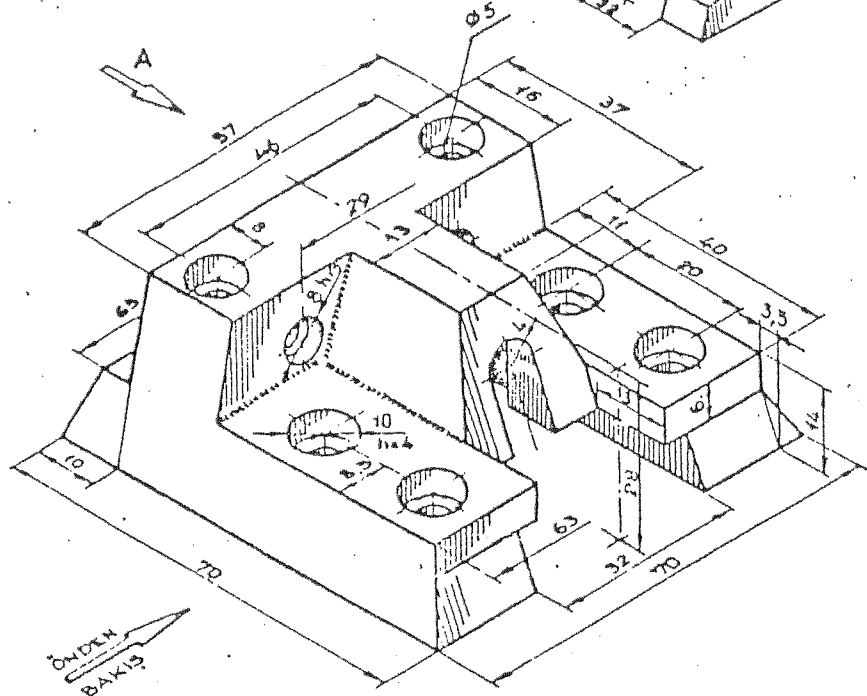
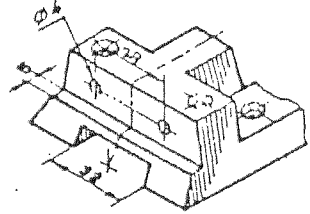


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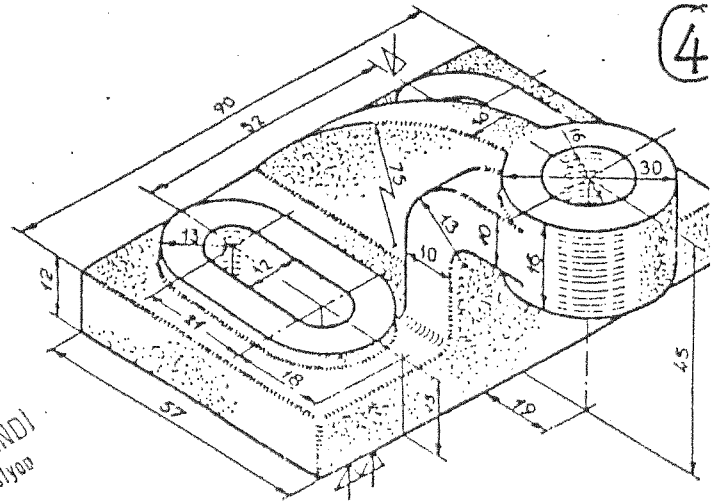
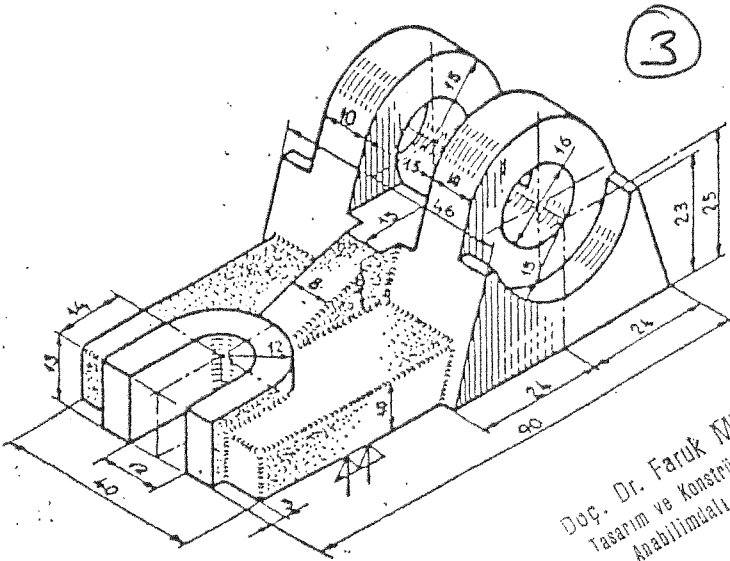
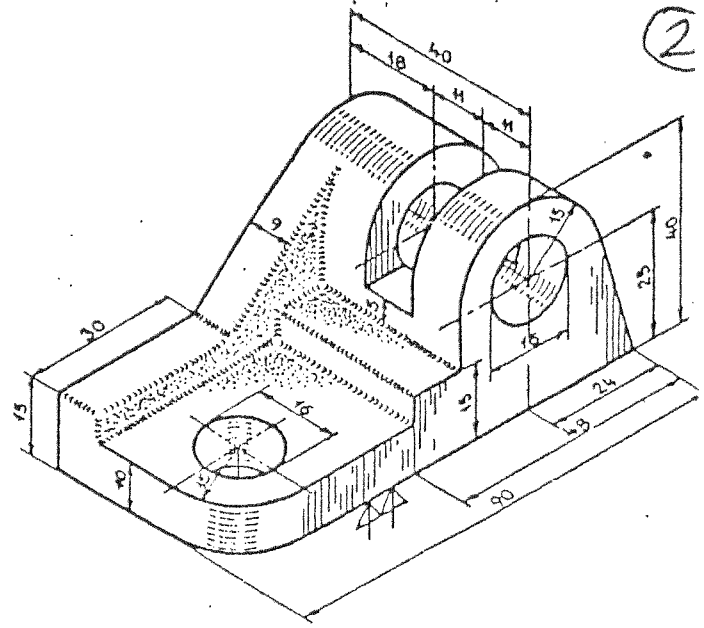
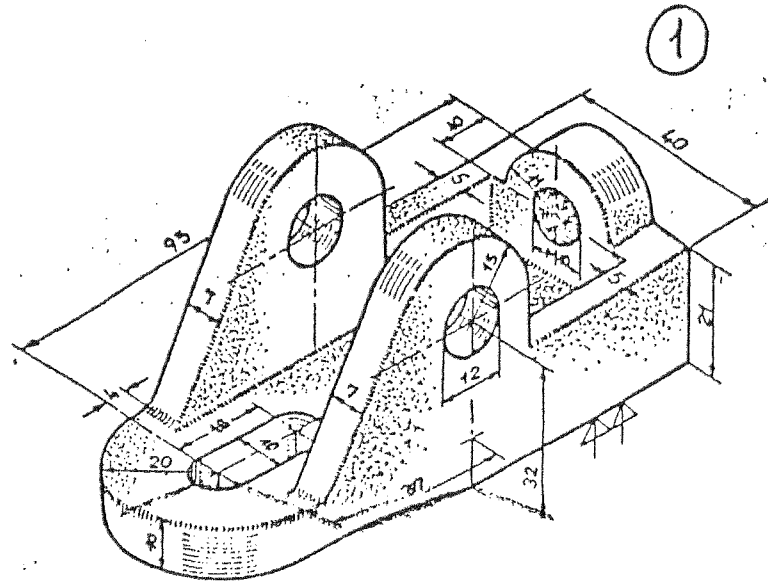
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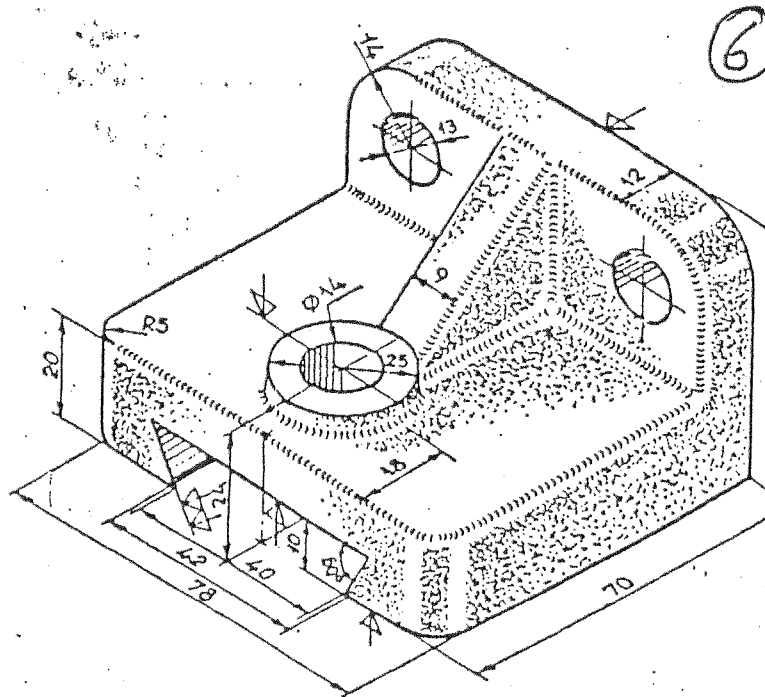
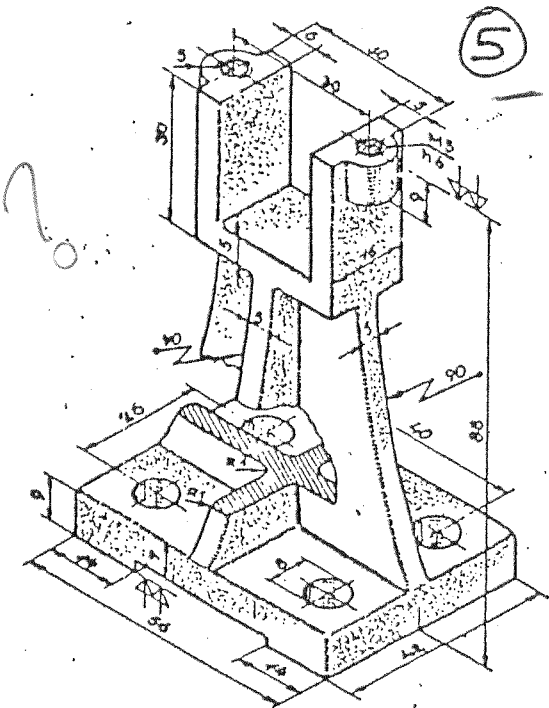
A' BAKIŞI

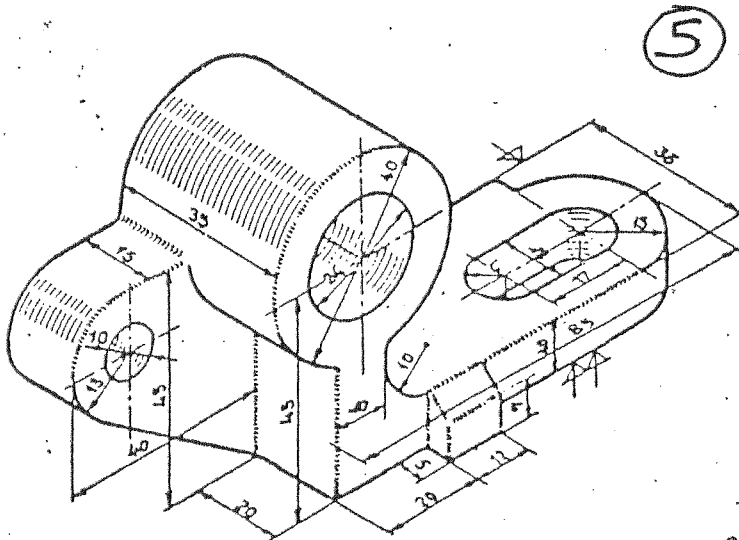
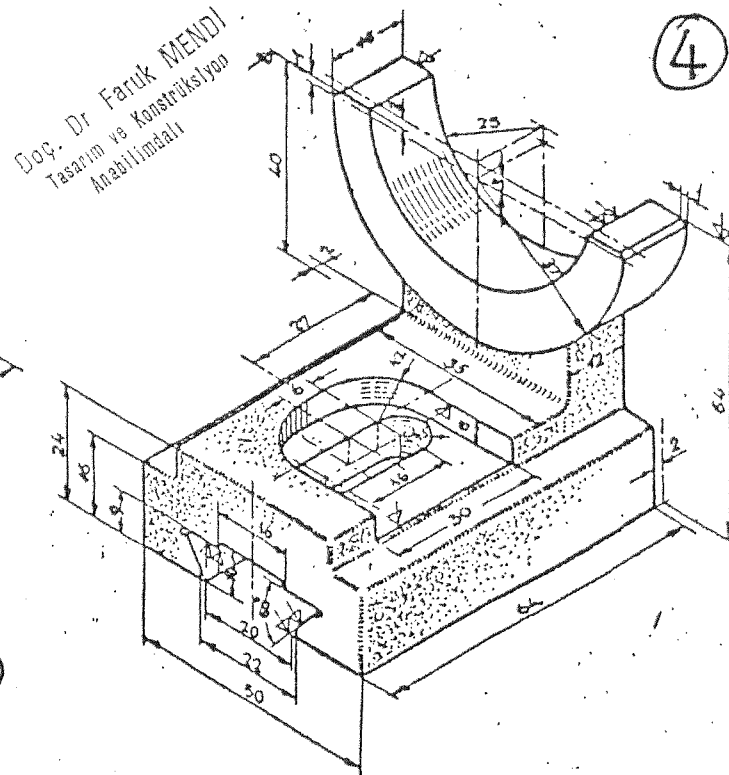
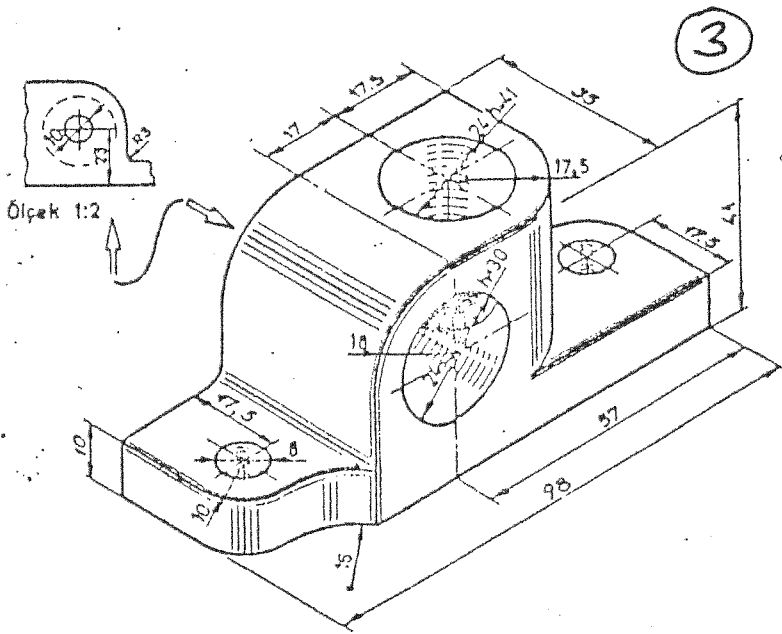
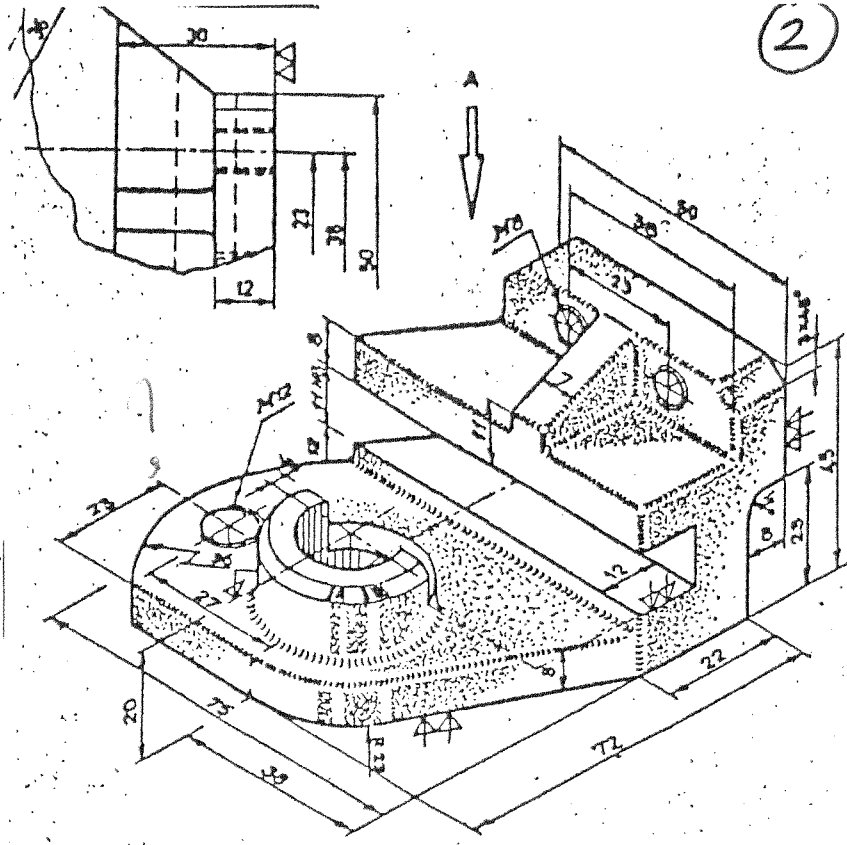
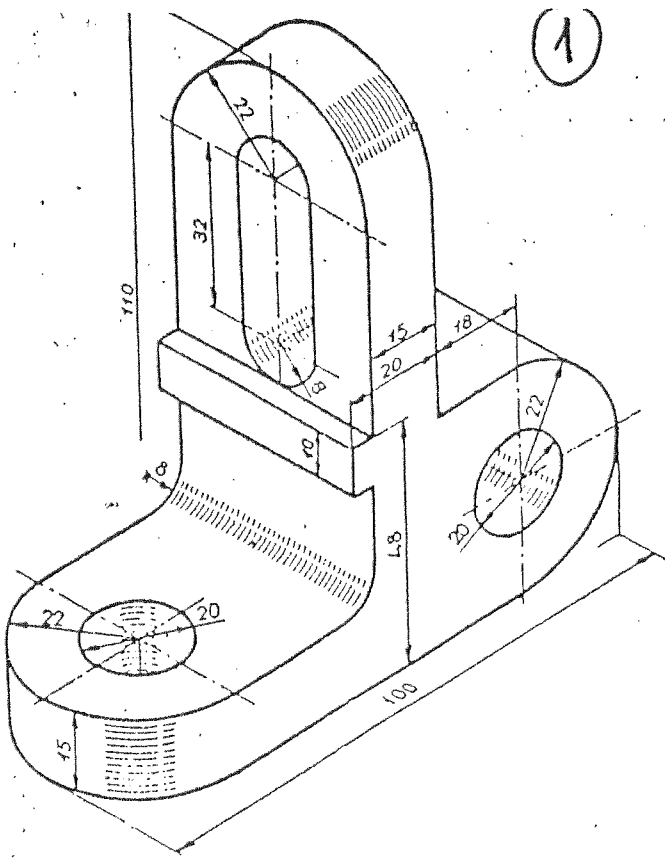


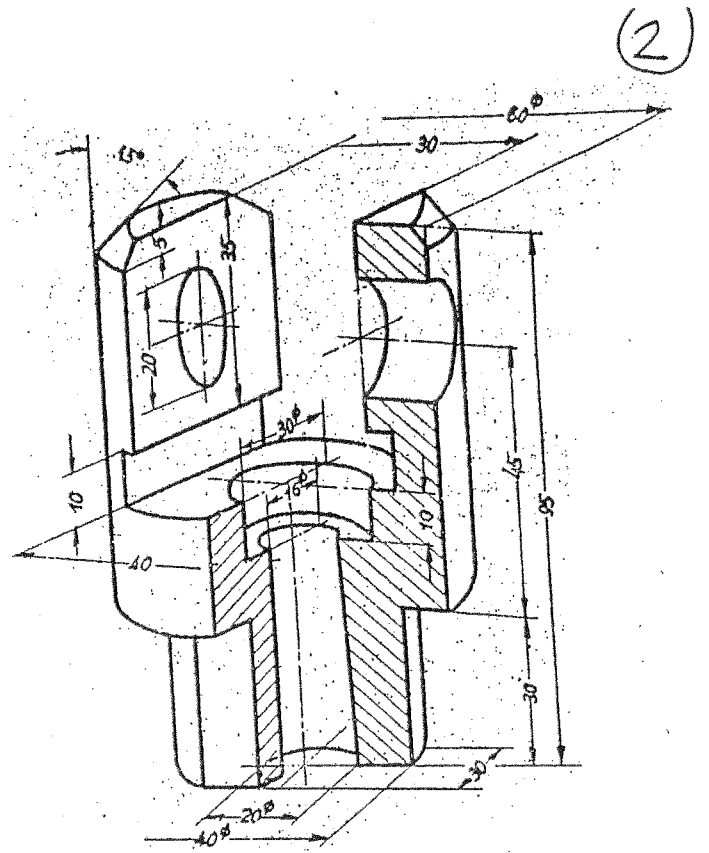
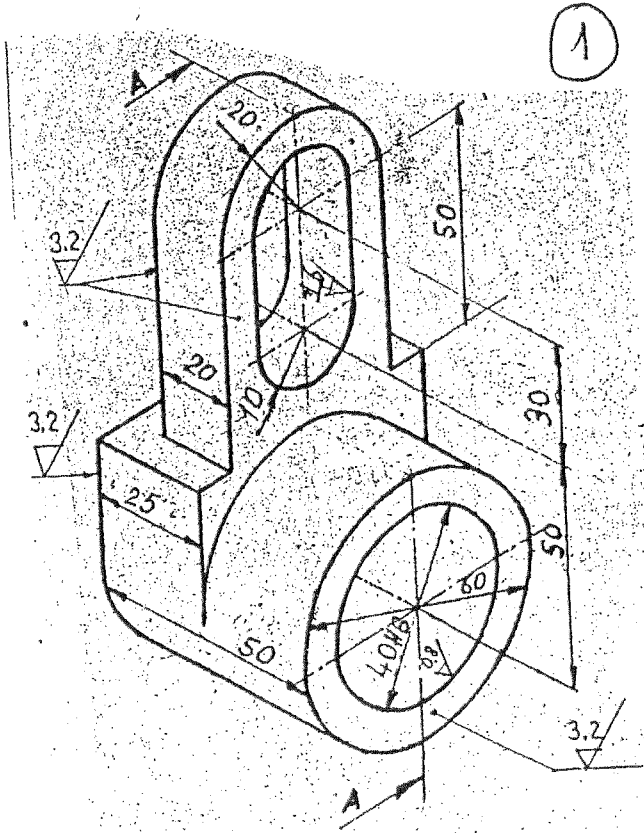
ÖN DEN BAKIŞ



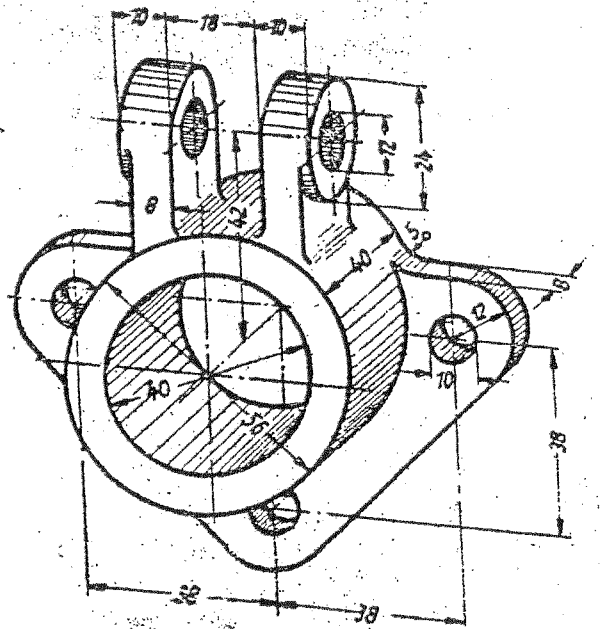
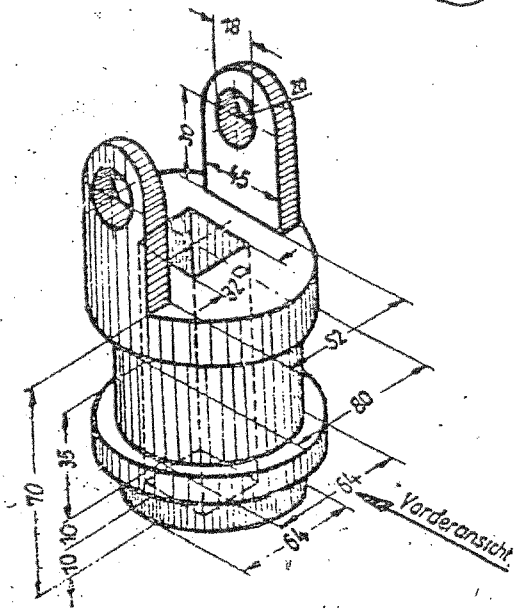
Doç. Dr. Faruk MENDİ  
Tasarım ve İnşaat Bilimi



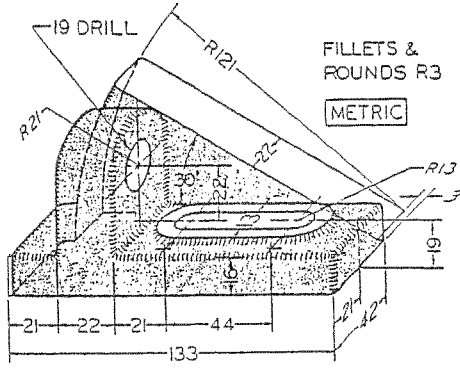




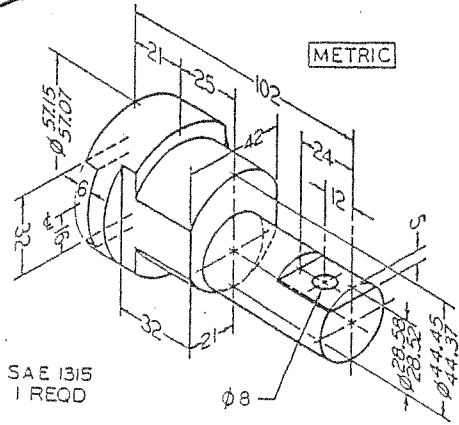
Doç. Dr. Faruk MENDİ  
Tasarım ve Konstrüksiyon  
Anabilim Dalı



①

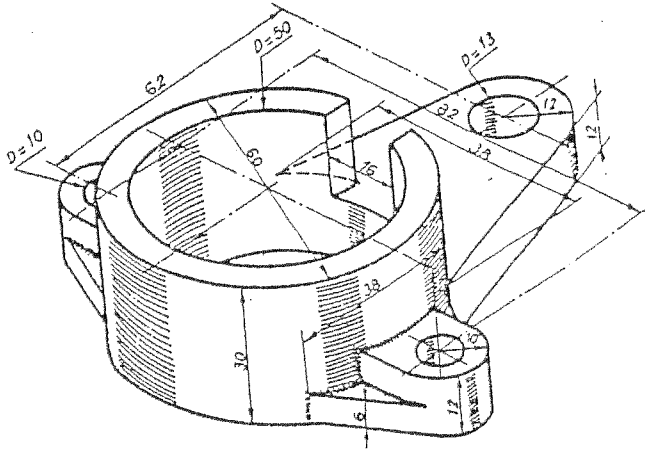


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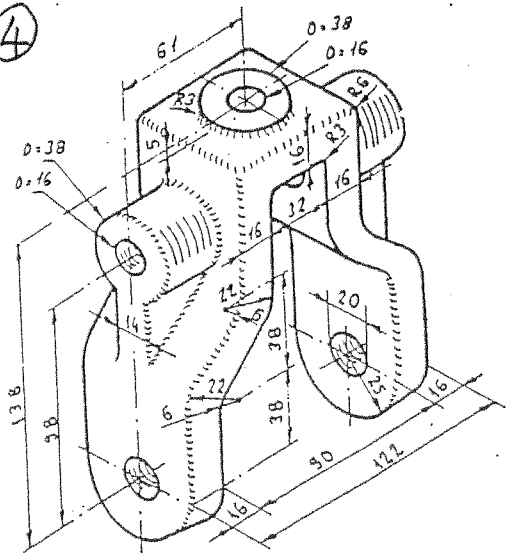


Doç. Dr. Faruk MENDİ  
Tasarım ve İnşaat  
Akademi

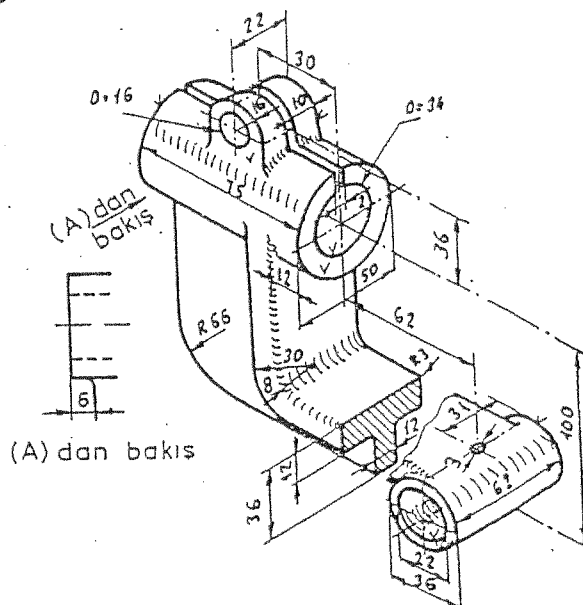
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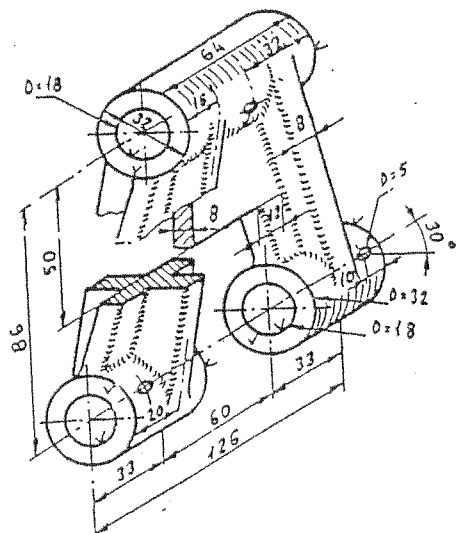
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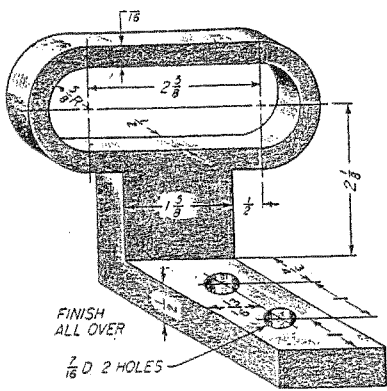


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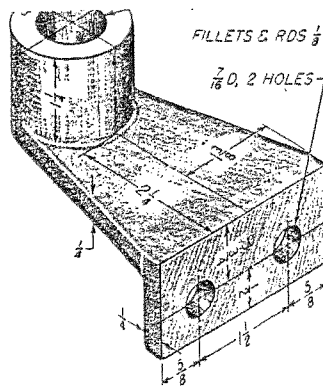


⑥

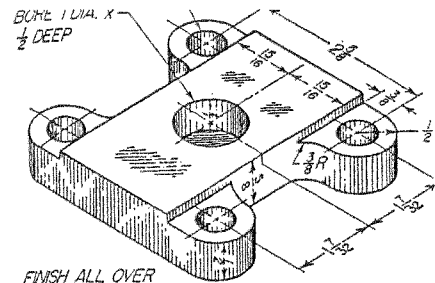




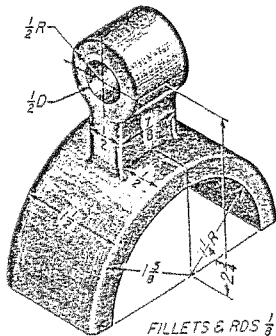
7-43. Steel anchor.



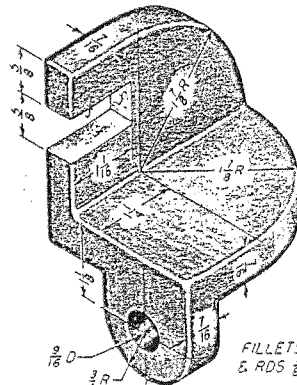
7-44. Steel shaft guide.



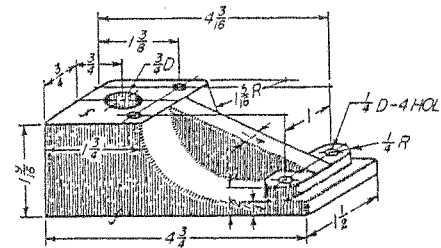
8-12. Face plate. Draw two views. Make one a full offset section. Dimension completely. (Time. 2 1/2 hr.)



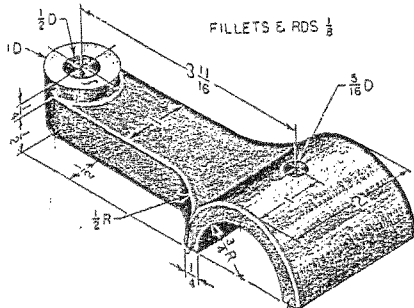
7-45. Steel cable anchor.



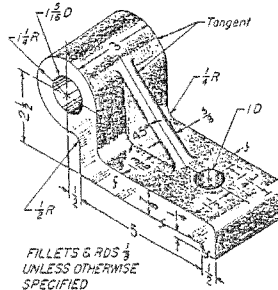
7-46. Aluminum belt guide.



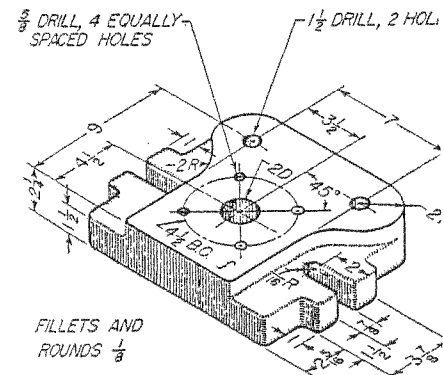
8-13. Float bracket. Draw a front and top view. Make the front view a suitable full offset section. Dimension completely. (Time. 3 hr.)



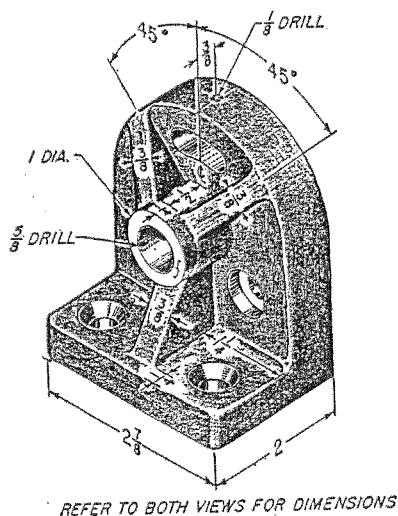
7-47. Steel bearing clamp.



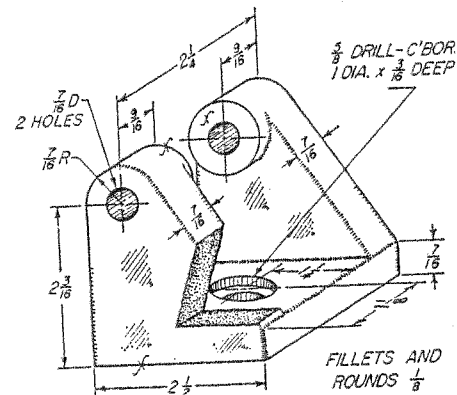
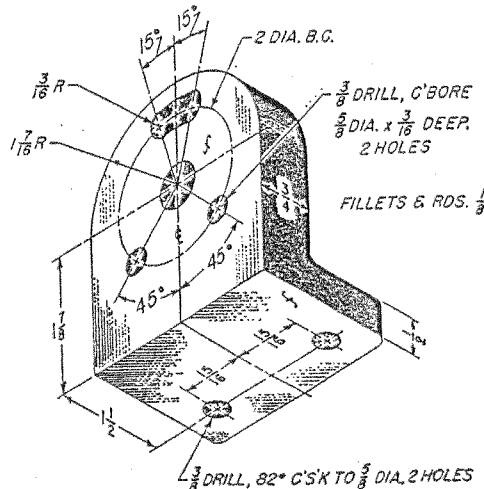
7-48. Steel rod support.



8-15. Die shoe. This offers varied treatment as a stationing problem. The choice is left to the student. Draw three views, and dimension completely. Make object half size on an 8 1/2 by 11-in. sheet. (Time. 4 hr.)



REFER TO BOTH VIEWS FOR DIMENSIONS



8-11. Castor frame. Make three views. Show one view as a full offset section. Dimension completely. (Time. 2 1/2 hr.)



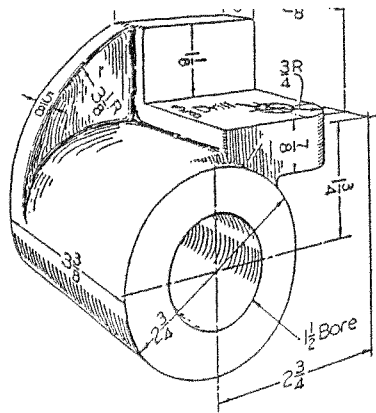


Fig. 9.46. Shaft guide.

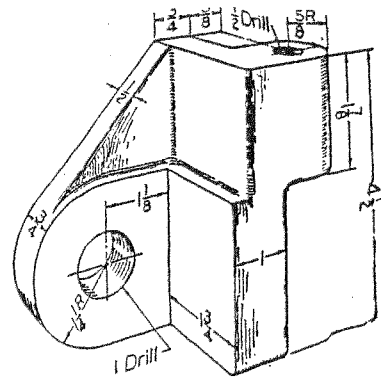


Fig. 9.47. Clamp block.

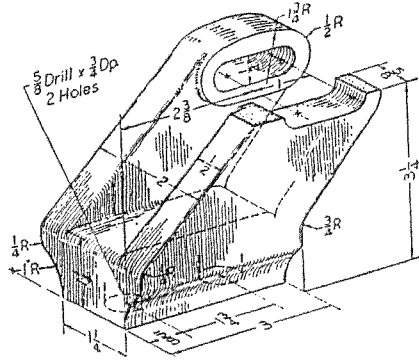


Fig. 9.48. Offset yoke.

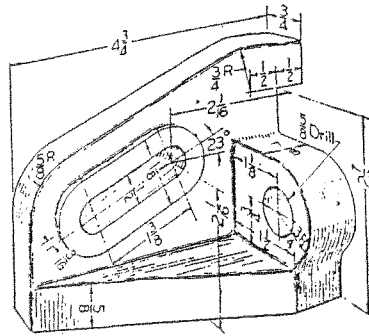


Fig. 9.49. Angle connector.

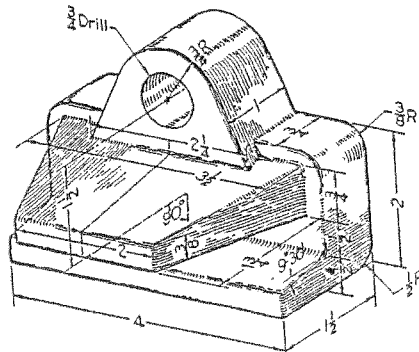


Fig. 9.50. Buckstay clamp.

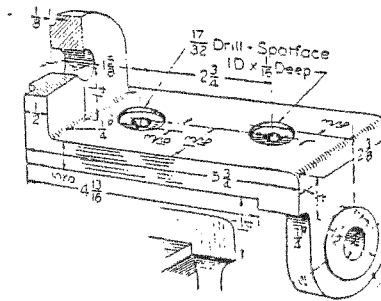
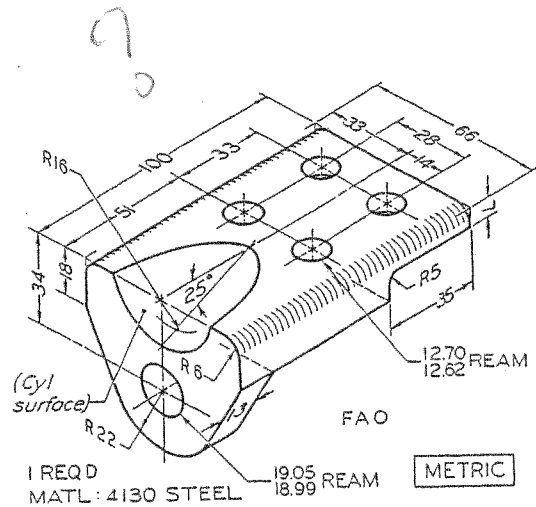
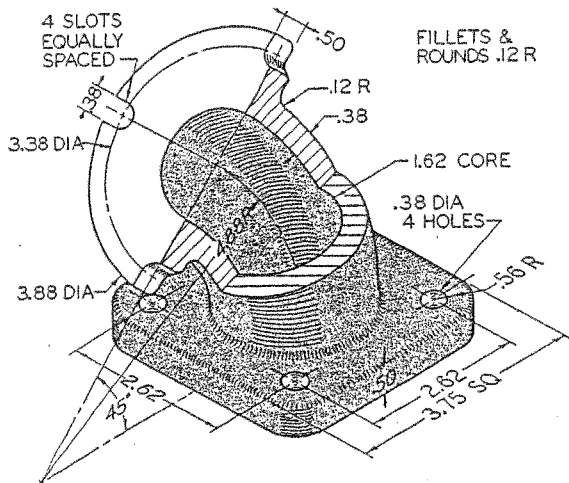


Fig. 9.51. Stop base.



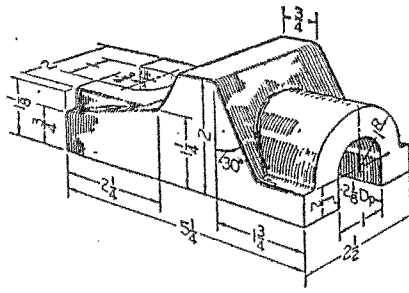


Fig. 9.40. Bedplate stop.

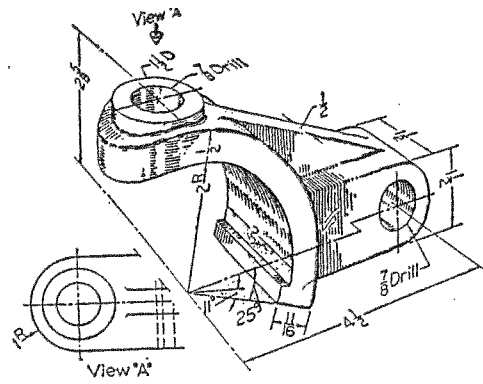


Fig. 9.41. Spanner bracket.

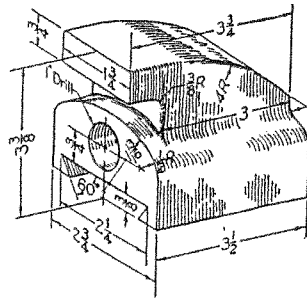


Fig. 9.42. Sliding stop.

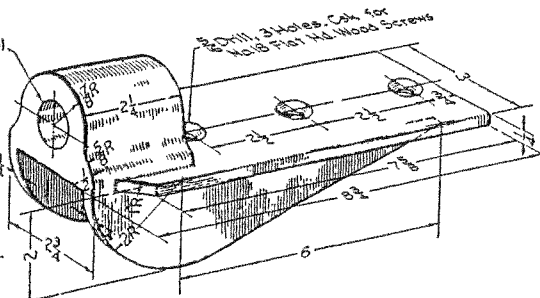


Fig. 9.43. Clamp bracket.

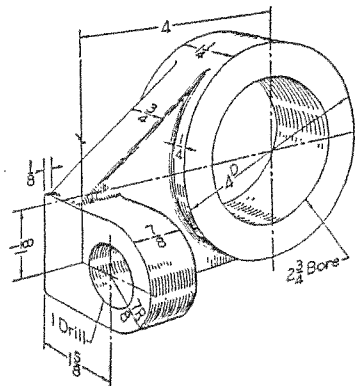


Fig. 9.44. Tube hanger.

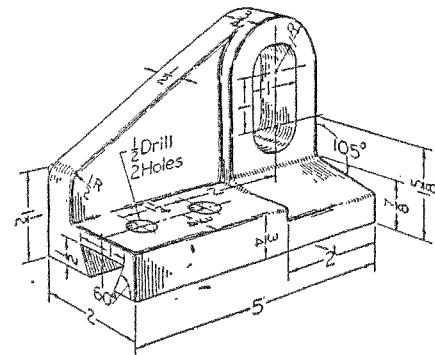
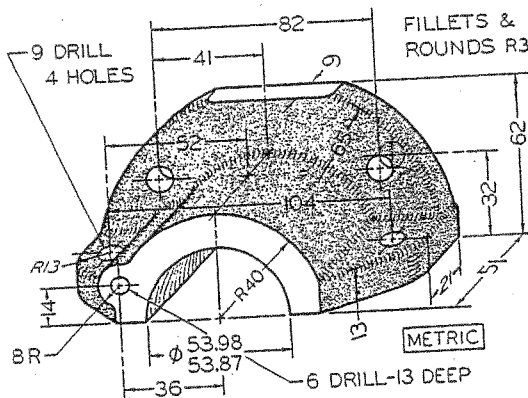
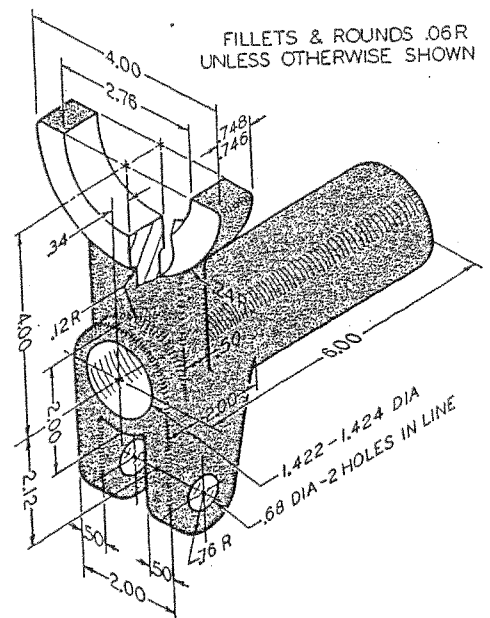


Fig. 9.45. Gage holder.



FILLETS & ROUNDS .06R UNLESS OTHERWISE SHOWN



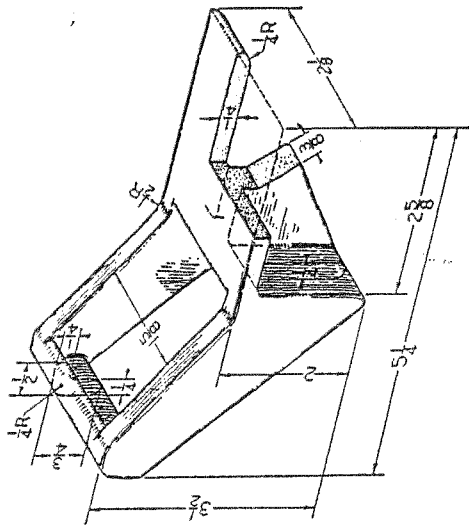


Fig. 9.35. Adjustable jaw.

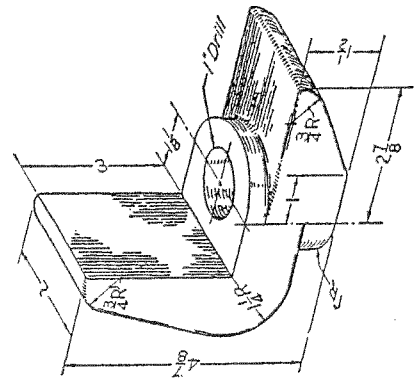


Fig. 9.34. Hanger jaw.

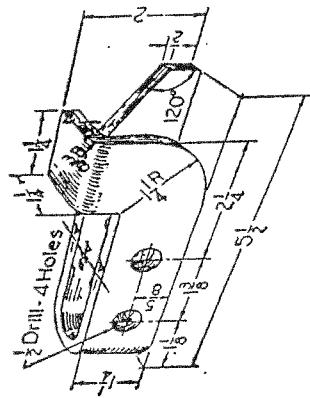


Fig. 9.37. Mounting bracket.

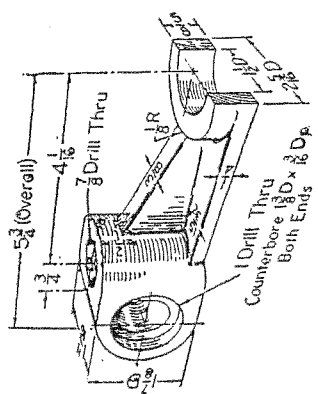


Fig. 9.36. Shifter fork.

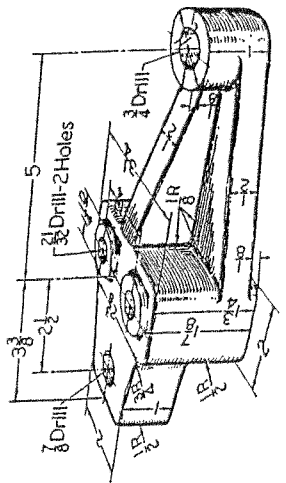


Fig. 9.39. Clamp lever.

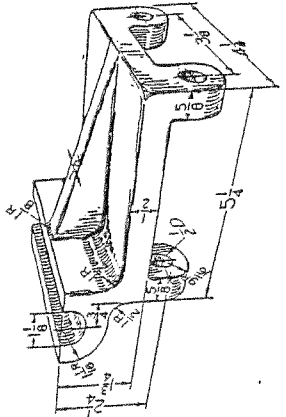


Fig. 9.38. Hinged bearing.

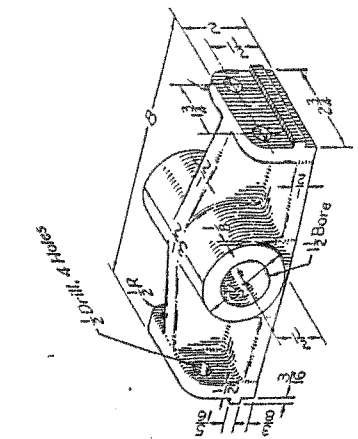


Fig. 9.29. Truss bearing.

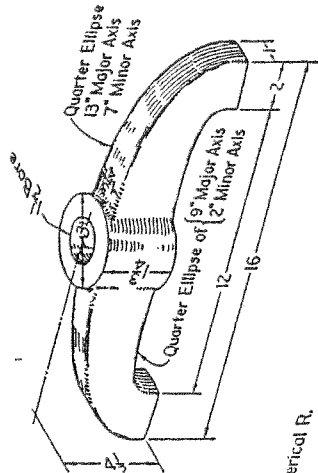


Fig. 9.31. Cover clamp.

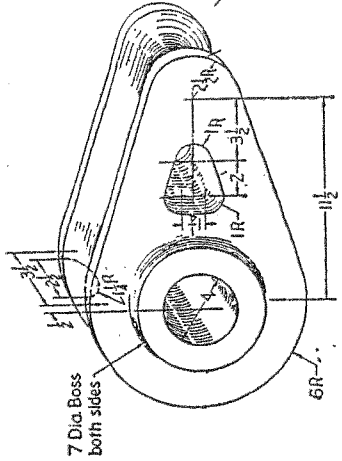


Fig. 9.33. Wire thimble.

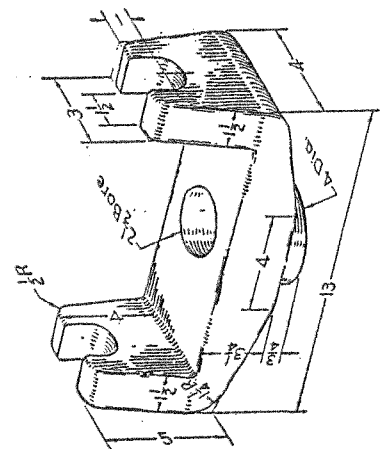


Fig. 9.28. Swivel yoke.

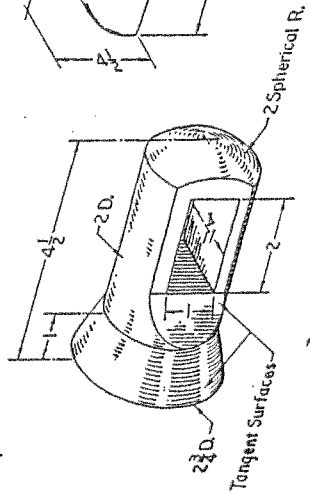


Fig. 9.30. Sliding-pin hanger.

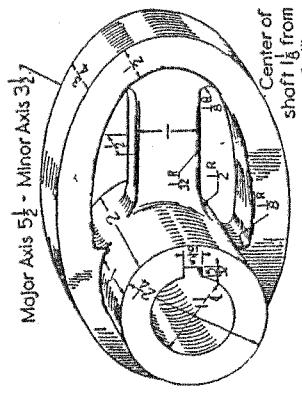
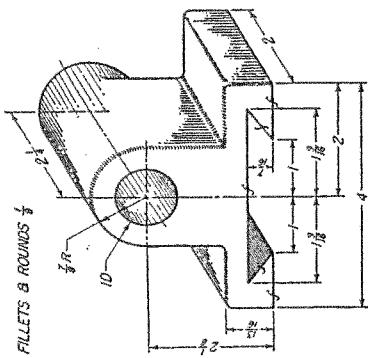
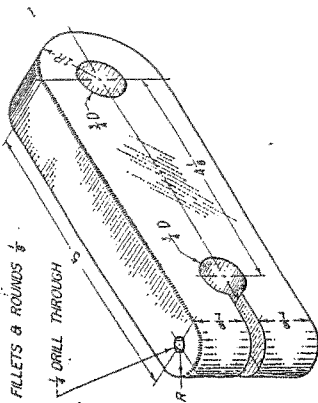


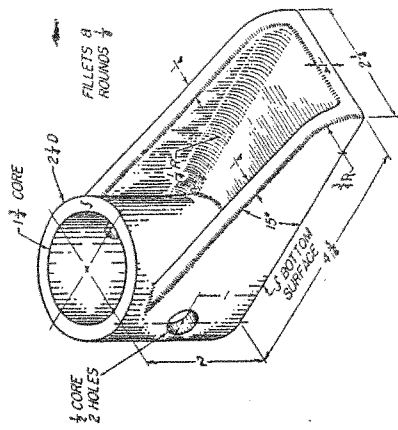
Fig. 9.32. Elliptical cam.



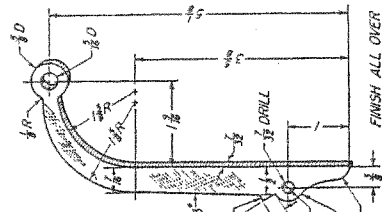
7-10. Make a suitable working drawing of the cast-iron rod guide. (Time, 1½ hr.)



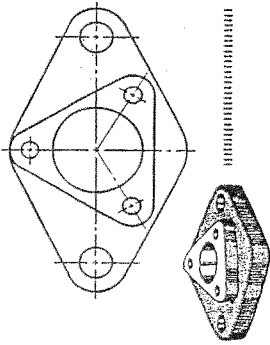
7-11. Make a suitable working drawing of the steel clamp. (Time, 1½ hr.)



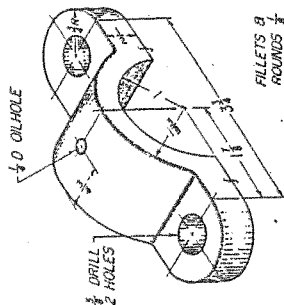
7-13. Make a suitable working drawing of the steel chassis lift. (Time, 2 hr.)



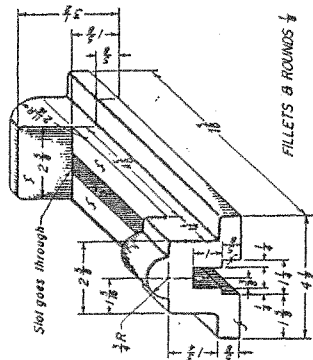
7-15. Make a suitable working drawing of the brass lever. (Time, 2 hr.)



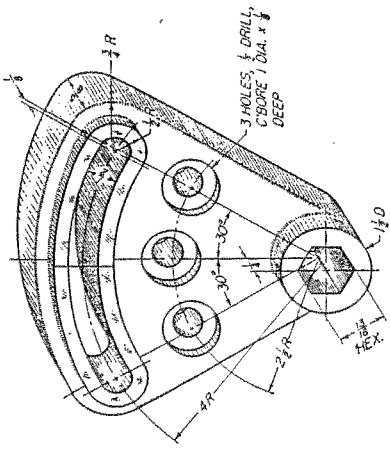
7-16. Transfer the two views of the cast-iron base to your drawing sheet, adding the notes and dimensions required for a suitable working drawing. The scale shown on the illustration indicates 3/8 in. divisions. (Time, 2 hr.)



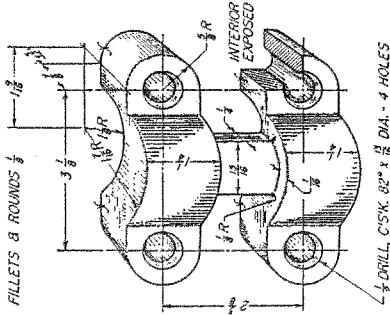
7-12. Make a suitable working drawing of the cast-iron bearing cap. (Time, 1½ hr.)



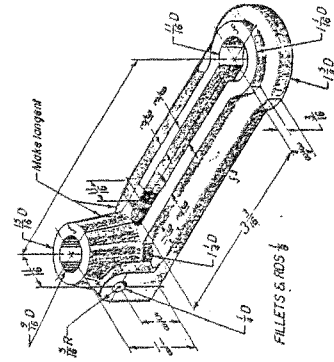
7-14. Make a suitable working drawing of the steel vise jaw. (Time, 3 hr.)



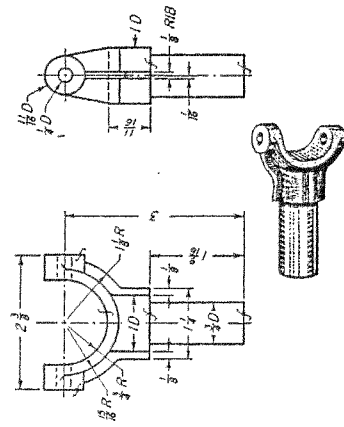
7-17. Make a suitable working drawing of the cast-iron adjusting bracket. (Time, 4 hr.)



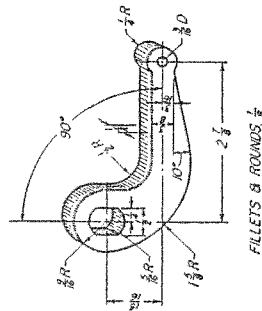
7-19. Make a suitable working drawing of the cast-iron clamp bracket. (Time, 3 hr.)



7-21. Make a suitable working drawing of the steel tool support. (Time, 4 hr.)



7-18. Redraw the given views of the steel yoke, rearranging the dimensions you feel are improperly placed so as to satisfy the principles of proper dimensioning procedure, and present a suitable working drawing. (Time, 2 hr.)



7-20. Make a suitable working drawing of the brass brake arm. (Time, 3 hr.)

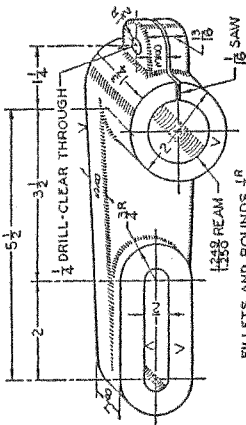


FIG. 376 ANCHOR BRACKET.  
Draw necessary views.\*

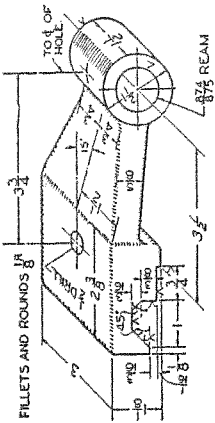


FIG. 377 TAPER ATTACHMENT CLAMP.  
Draw necessary views.\*

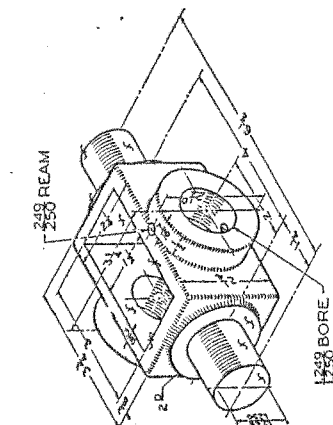


FIG. 378 COUPLING.  
Draw necessary views.\*

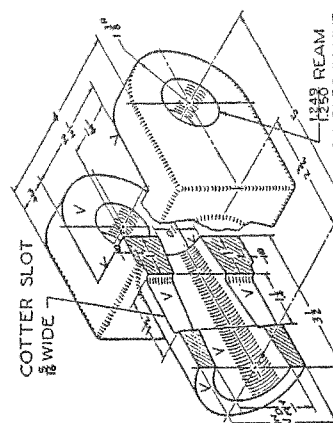


FIG. 379 UNIVERSAL LINK.  
Draw necessary views.\*

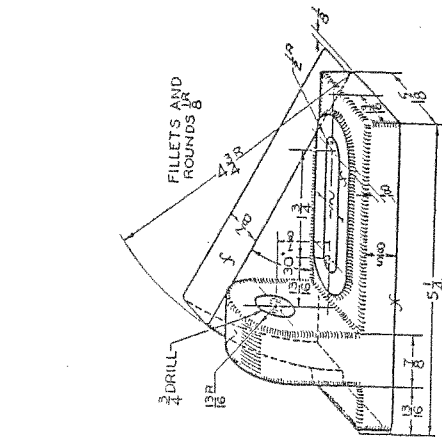


FIG. 382 CENTERING WEDGE.  
Draw necessary views.\*

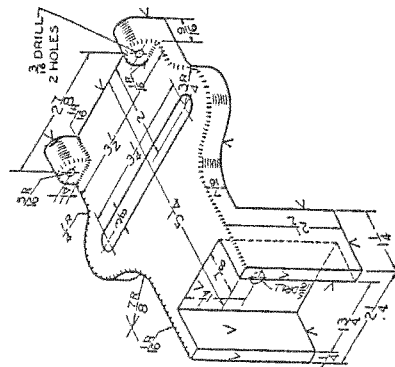


FIG. 384 OFFSET GUIDE.  
Draw necessary views.\*

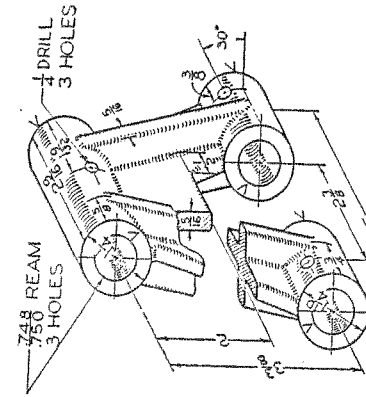


FIG. 383 ELEVATOR LINK.  
Draw necessary views.\*

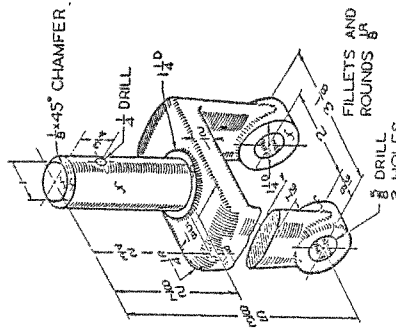


FIG. 385 SWIVEL SUPPORT.  
Draw necessary views.\*

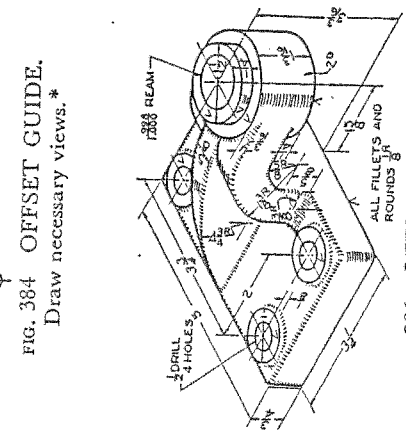


FIG. 386 OFFSET BEARING.  
Draw necessary views.\*

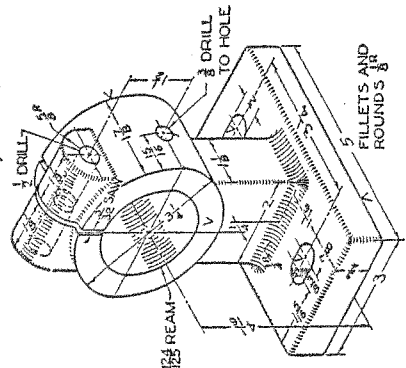


FIG. 387 FEED GUIDE.  
Draw necessary views.\*



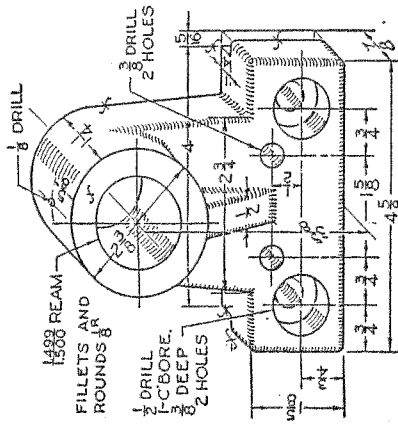


FIG. 352 BACK-UP PLATE.  
Draw necessary views.\*

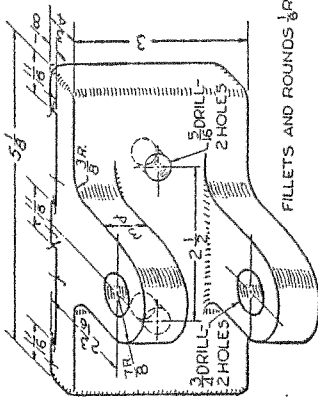


FIG. 353 CONTROL BASE.  
Draw necessary views.\*

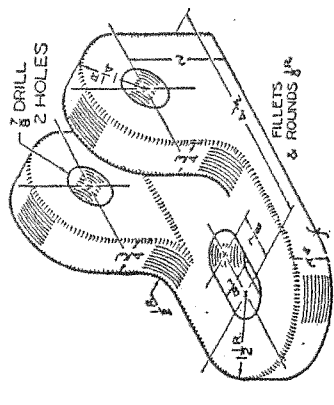


FIG. 355 CAM SUPPORT.  
Draw necessary views.\*

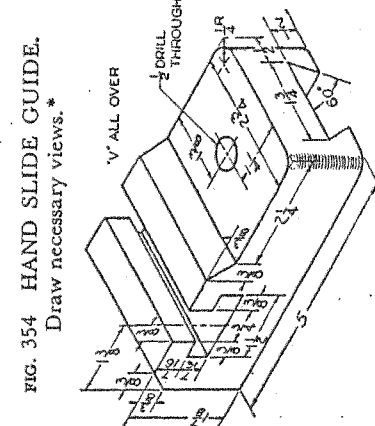


FIG. 354 HAND SLIDE GUIDE.  
Draw necessary views.\*

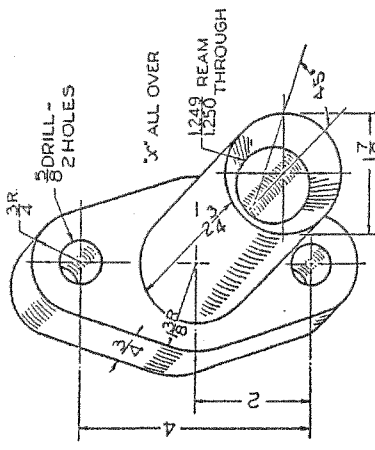


FIG. 357 STUFFING GLAND.  
Draw necessary views.\*

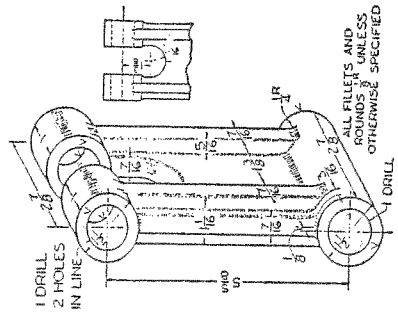


FIG. 358 BRACKET.  
Draw necessary views.\*

ALL FILLETS AND ROUNDS 1/8 UNLESS OTHERWISE SPECIFIED

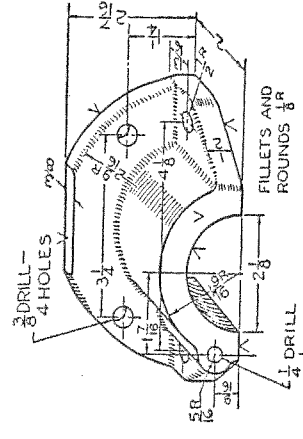


FIG. 360 DUST CAP.  
Draw necessary views.\*

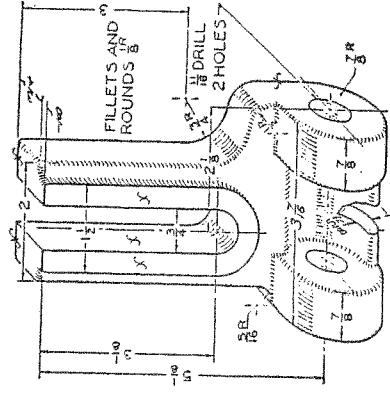


FIG. 359 FEEDER FINGER.  
Draw necessary views.\*

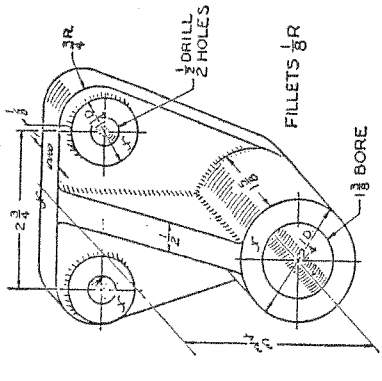


FIG. 361 FEED ROD BEARING.  
Draw necessary views.\*

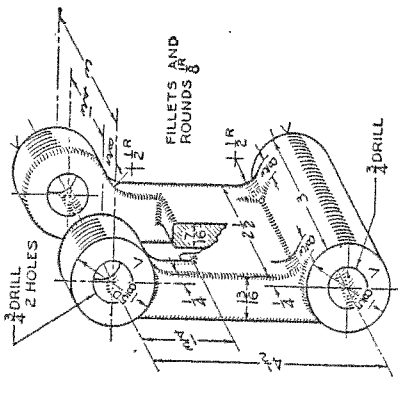


FIG. 362 SAFETY LINK.  
Draw necessary views.\*

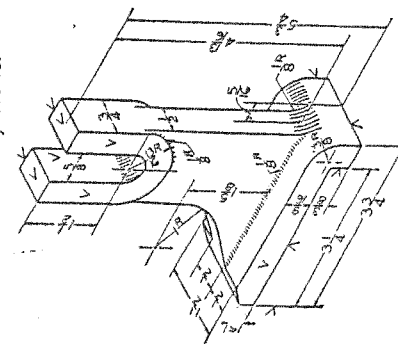


FIG. 363 CAM SUPPORT.  
Draw necessary views.\*

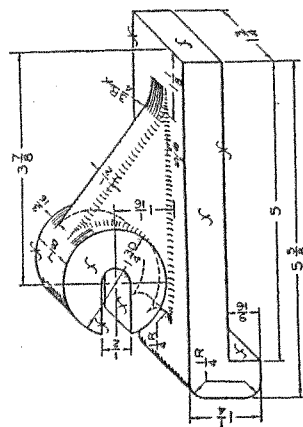


FIG. 364 ROCKER ARM BRACKET CAP.  
Draw necessary views.\*

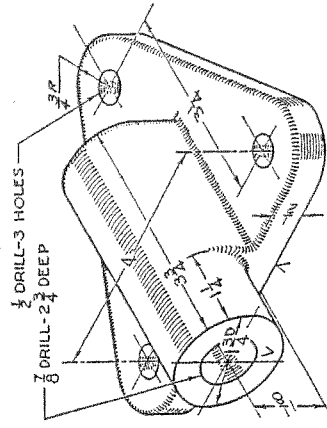


FIG. 365 SOCKET BEARING.  
Draw necessary views.\*

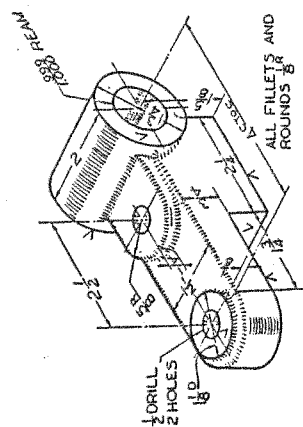


FIG. 366 INDEX ARM.  
Draw necessary views.\*

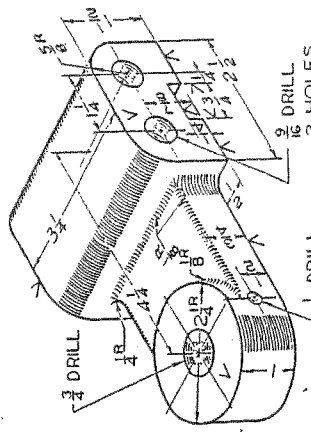


FIG. 367 TAPER ARM.  
Draw necessary views.\*

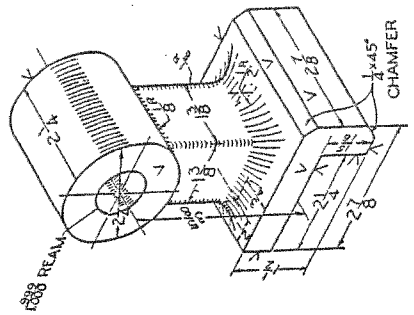


FIG. 369 GUIDE.  
Draw necessary views.\*

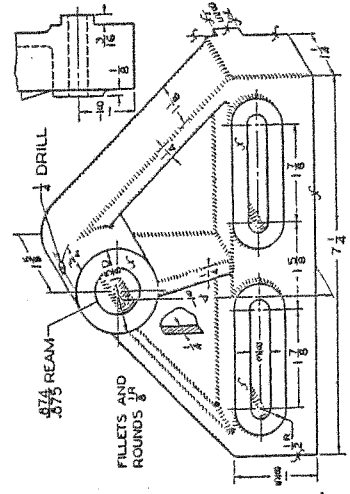


FIG. 368 IDLER TENSION BRACKET  
Draw necessary views.\*

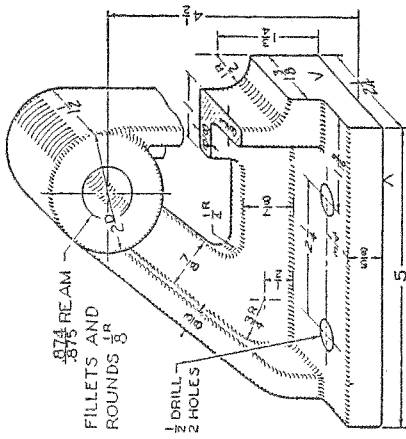


FIG. 370 BLOCK SLIDE GUIDE.  
Draw necessary views.\*

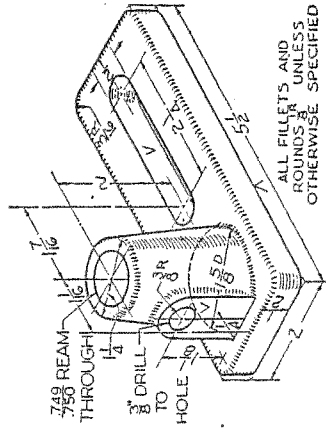


FIG. 372 TOOL POST.  
Draw necessary views.\*

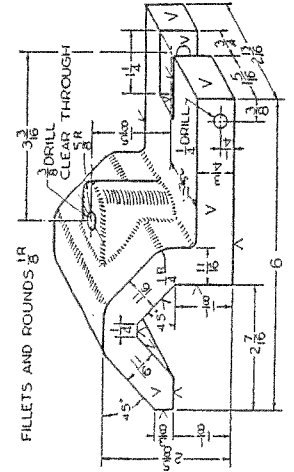


FIG. 374 TAPER ATTACHMENT LOCK.  
Draw necessary views.\*

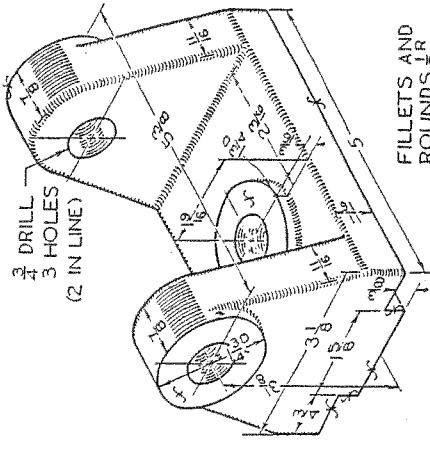


FIG. 371 SPINDLE HEAD.  
Draw necessary views.\*

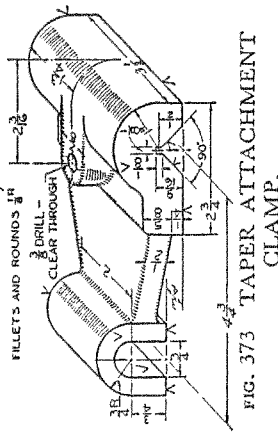


FIG. 373 TAPER ATTACHMENT CLAMP.  
Draw necessary views.\*

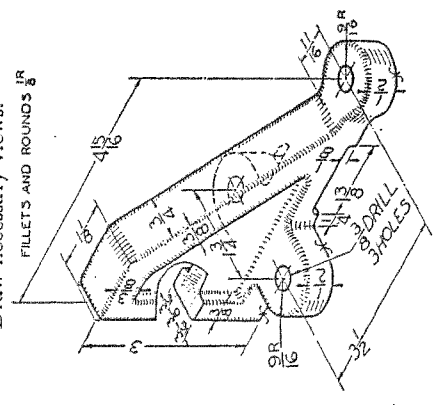


FIG. 375 WHEEL GUARD.  
Draw necessary views.\*

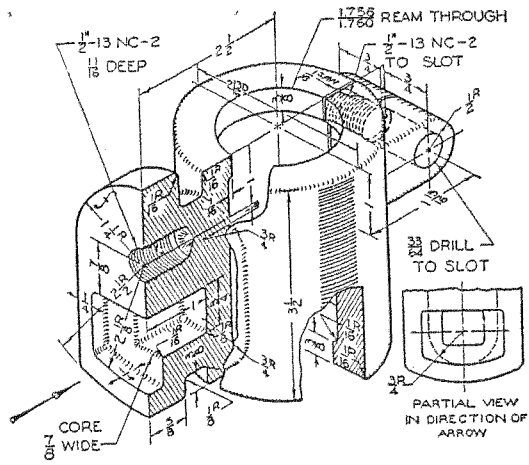


FIG. 868 TABLE BRACKET.  
Make detail drawing.

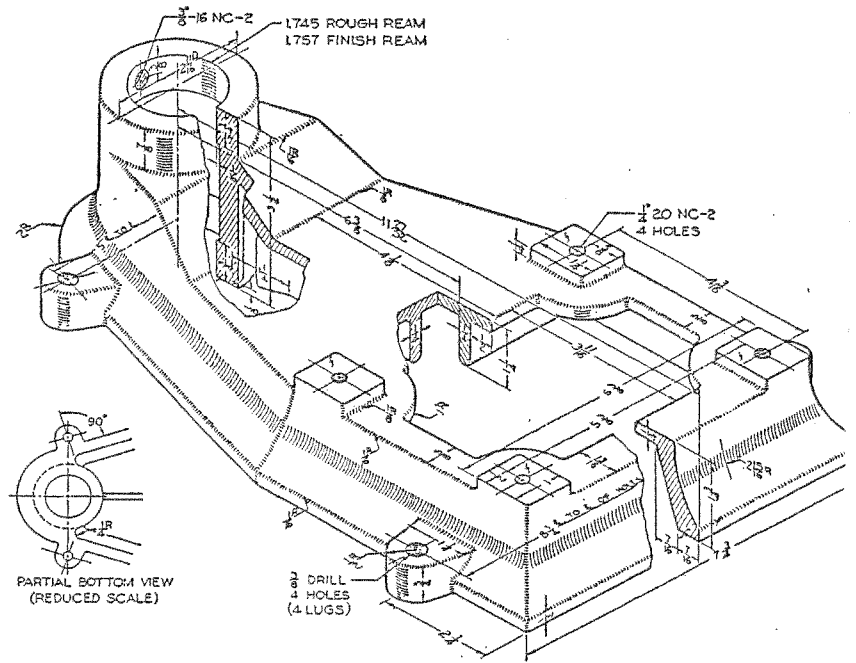


FIG. 866 DRILL PRESS BASE. Make detail drawing.

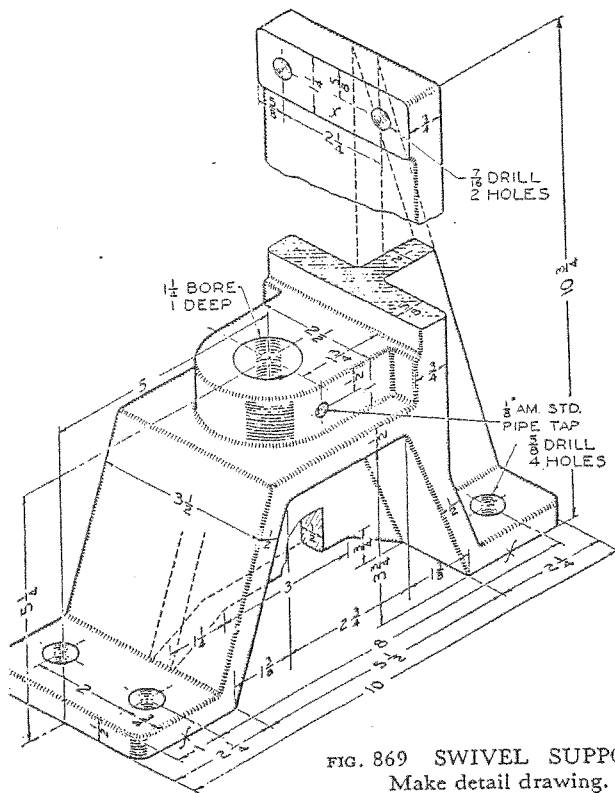


FIG. 869 SWIVEL SUPPORT.  
Make detail drawing.

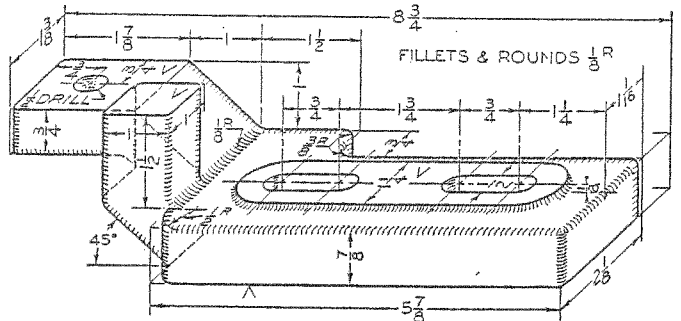
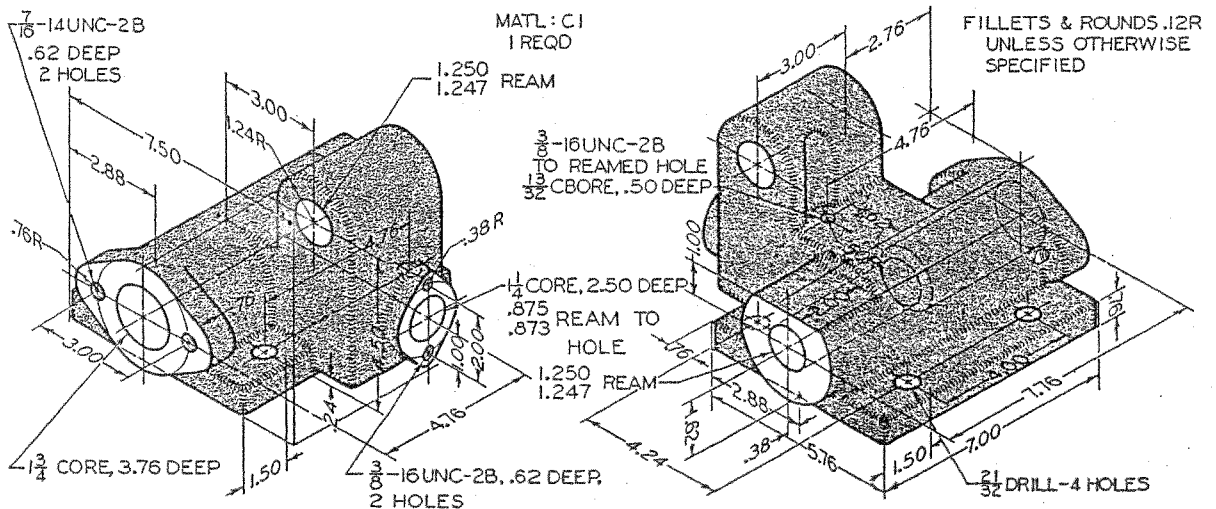


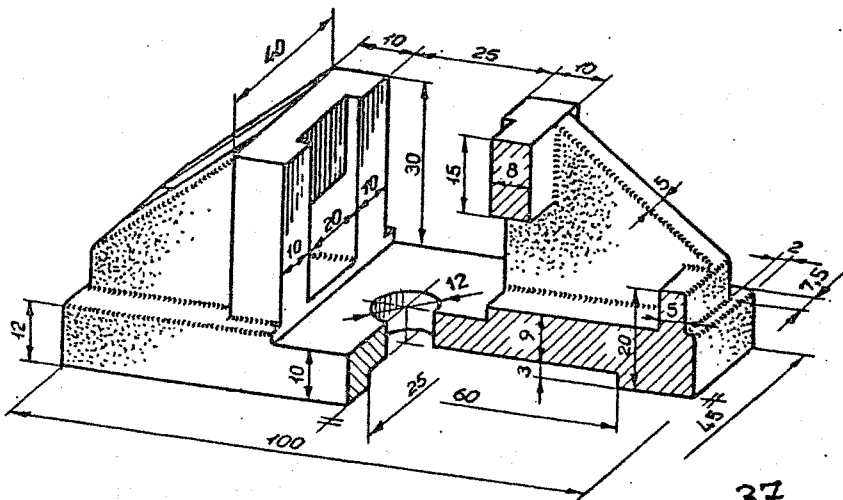
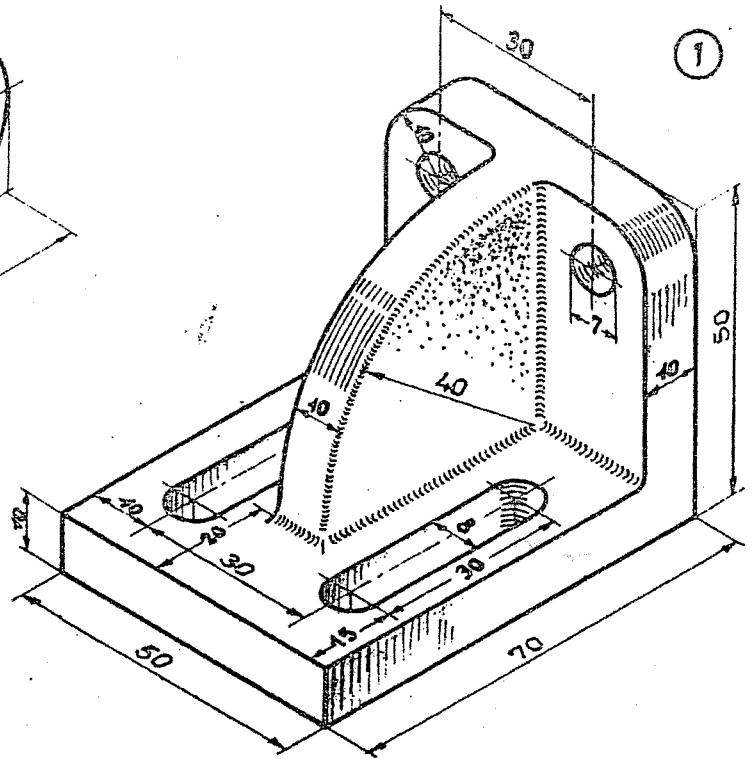
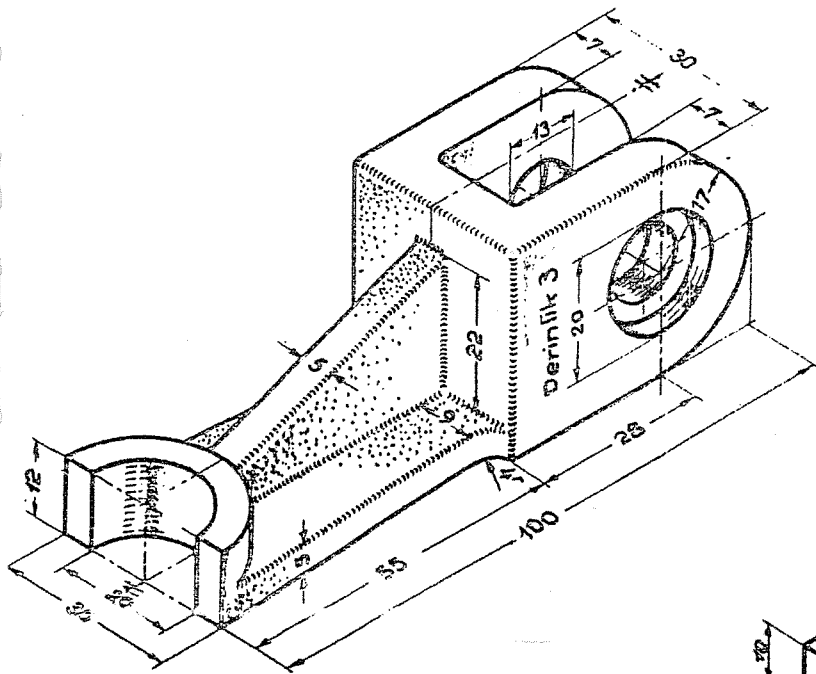
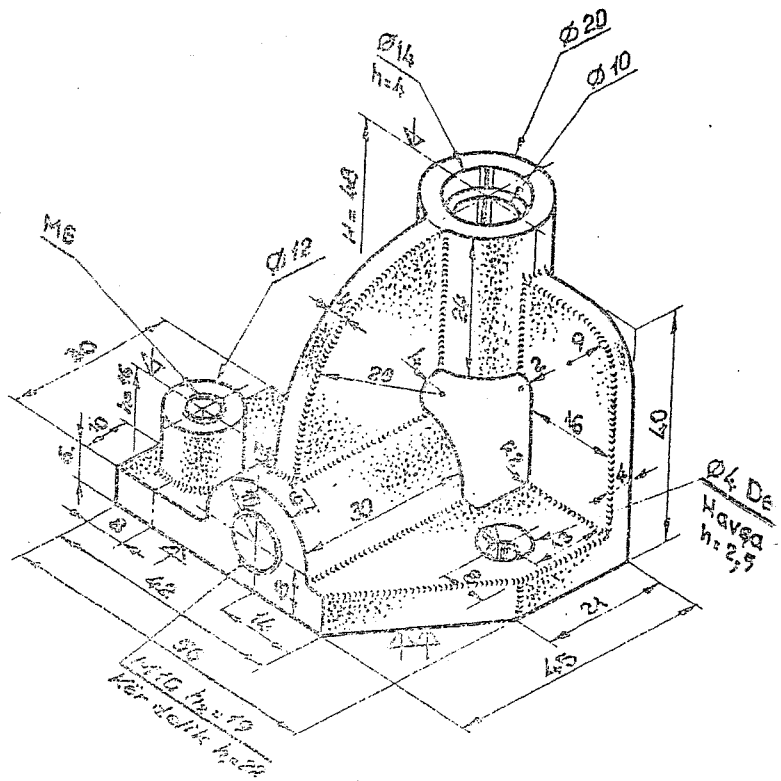
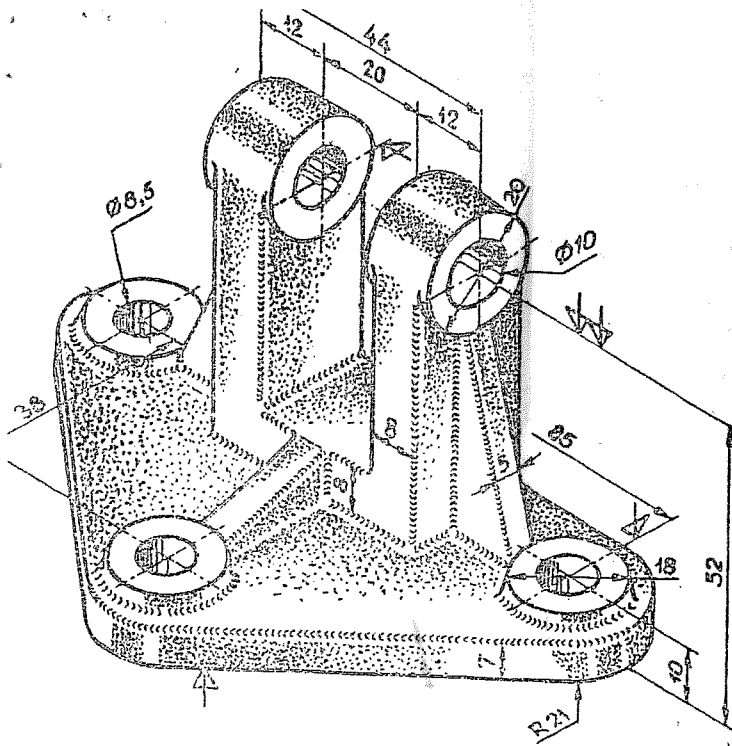
FIG. 867 REST HOLDER. Make detail drawing.

526

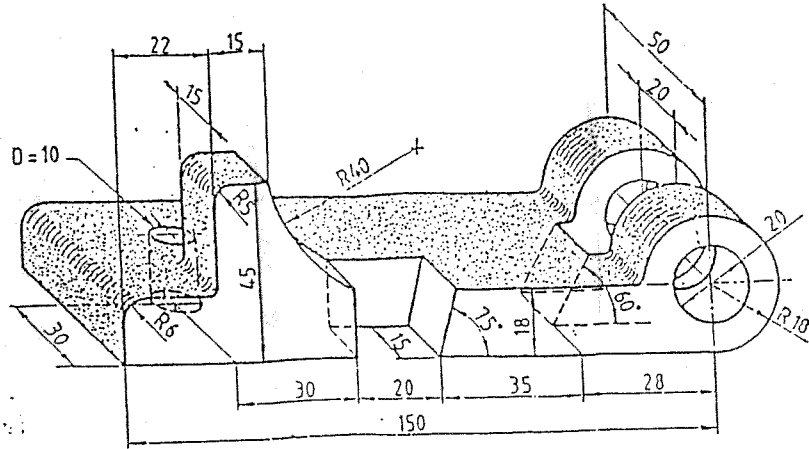
525



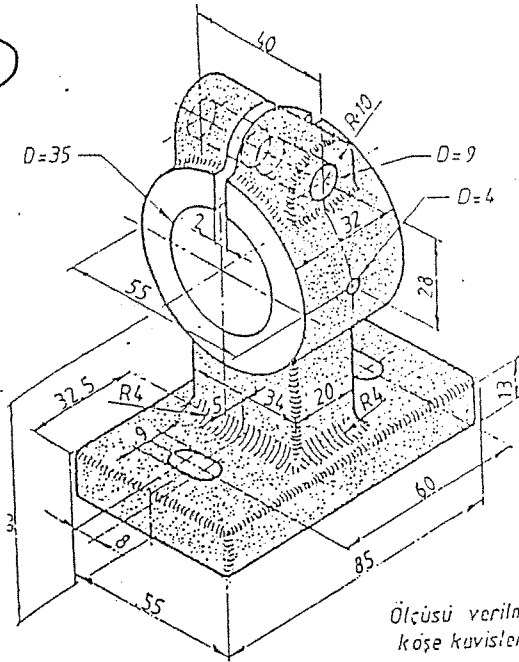
527



1

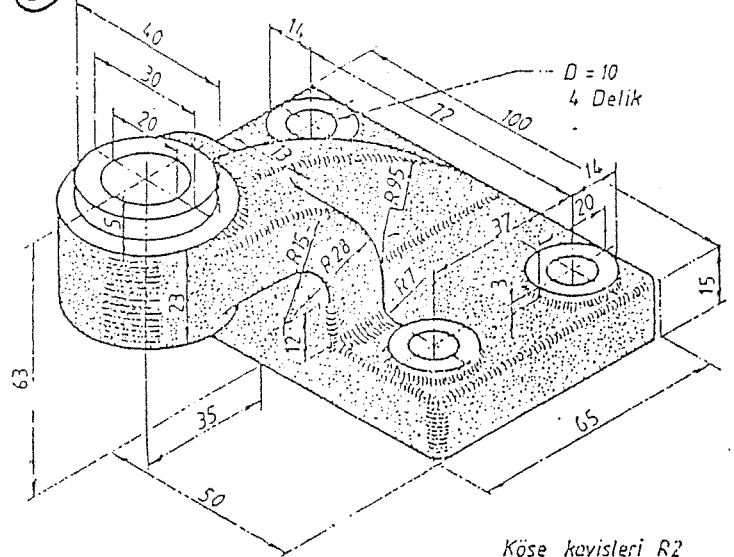


2



Ölçüsü verilmeyen köşe kavimleri R2

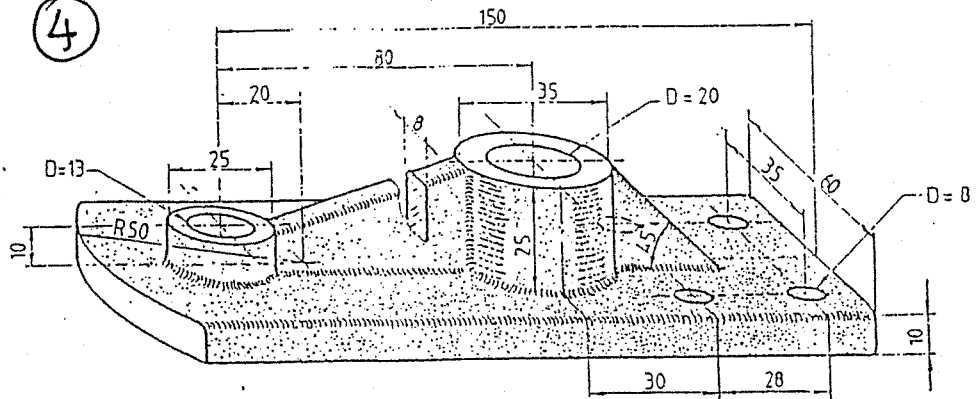
3



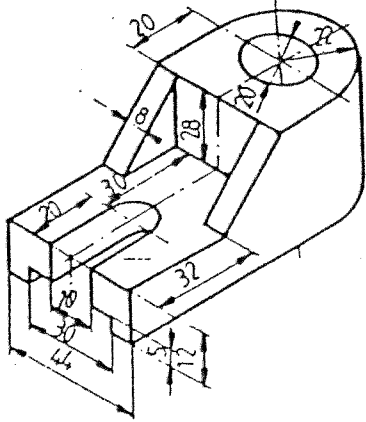
Köşe kavimleri R2

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Anabilim Dalı

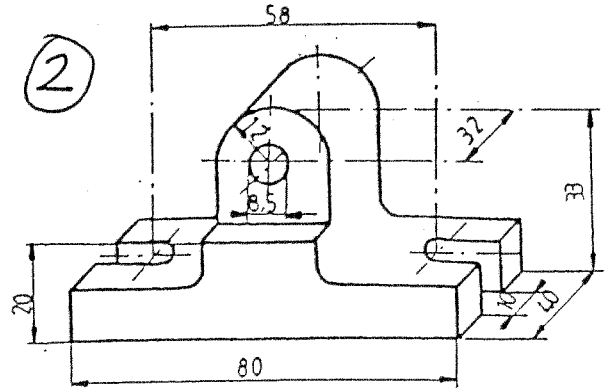
4



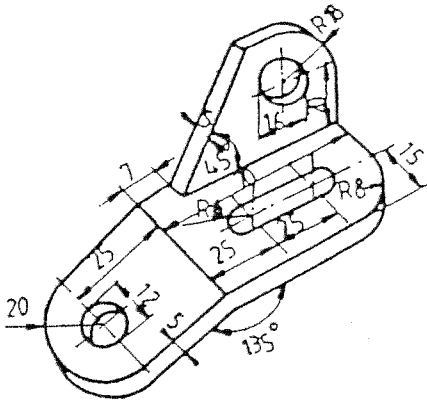
1



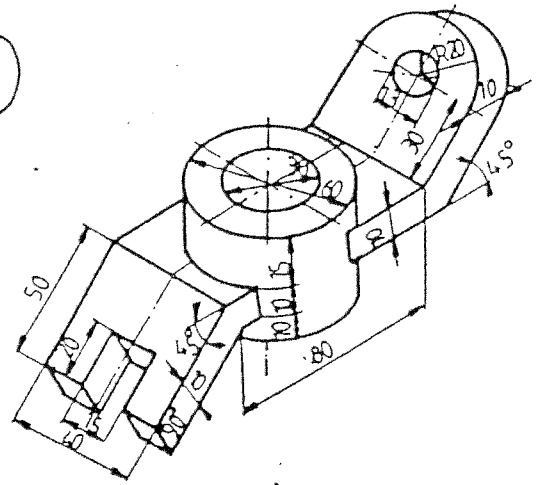
2



3

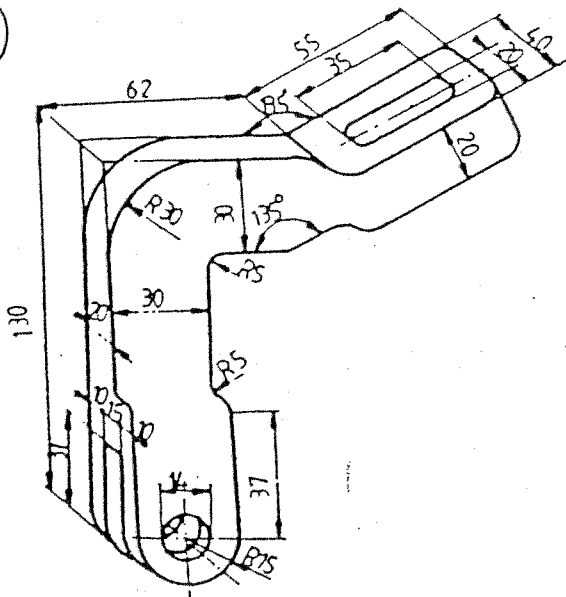


4

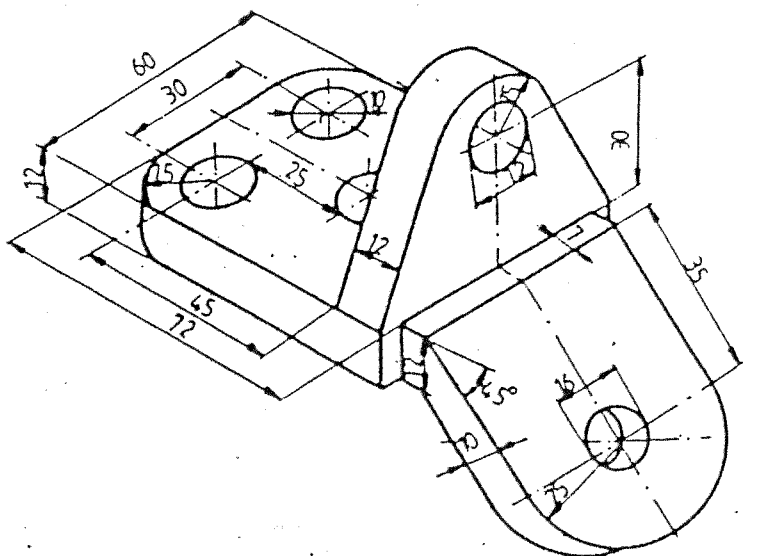


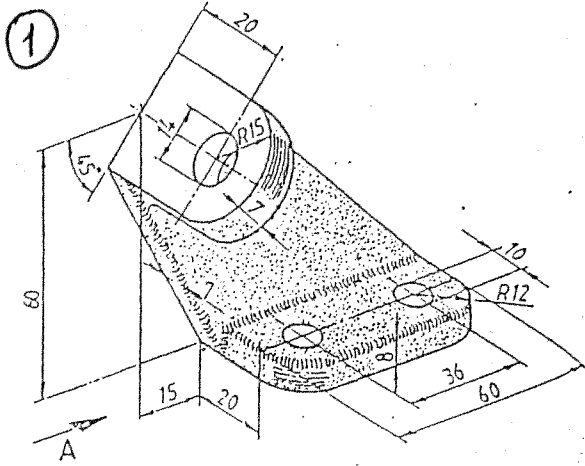
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Anabilim Dalı

5



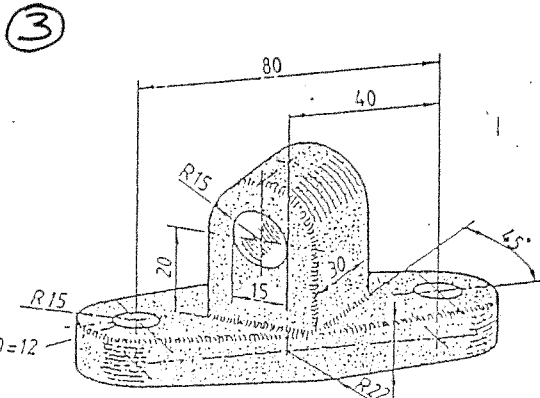
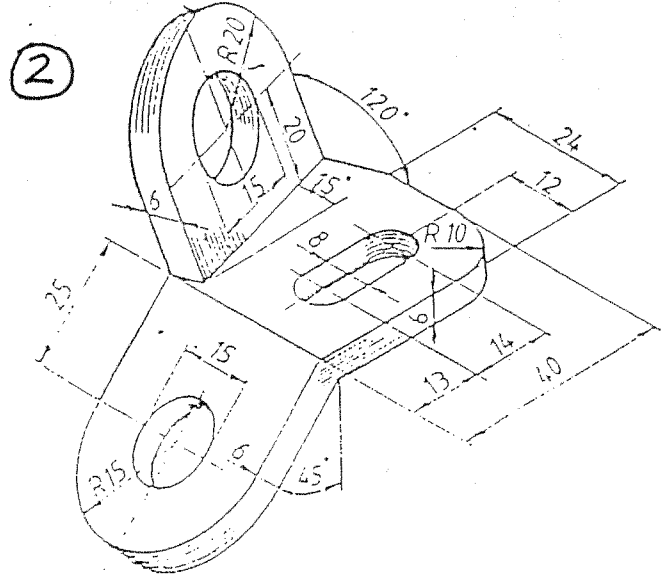
6





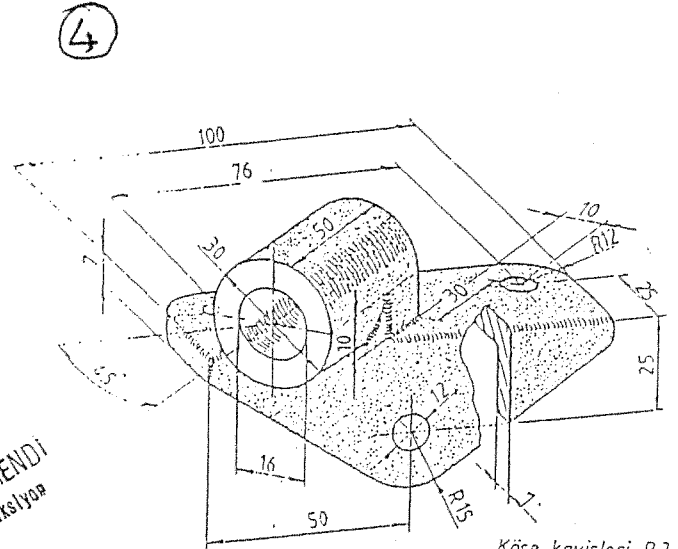
DESTİ

Köşe kavileri R2



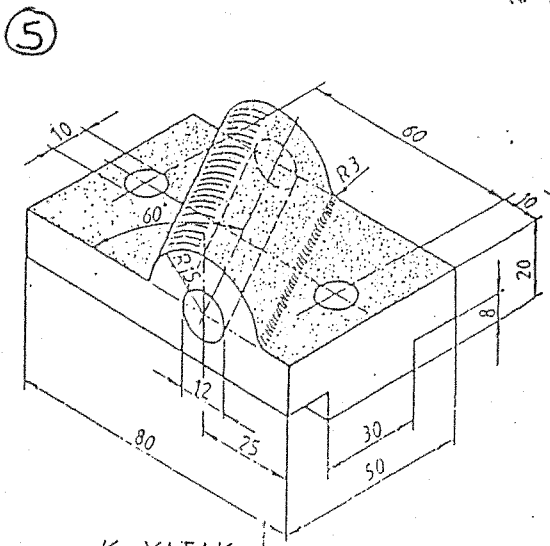
YATAK

Köşe kavileri R2

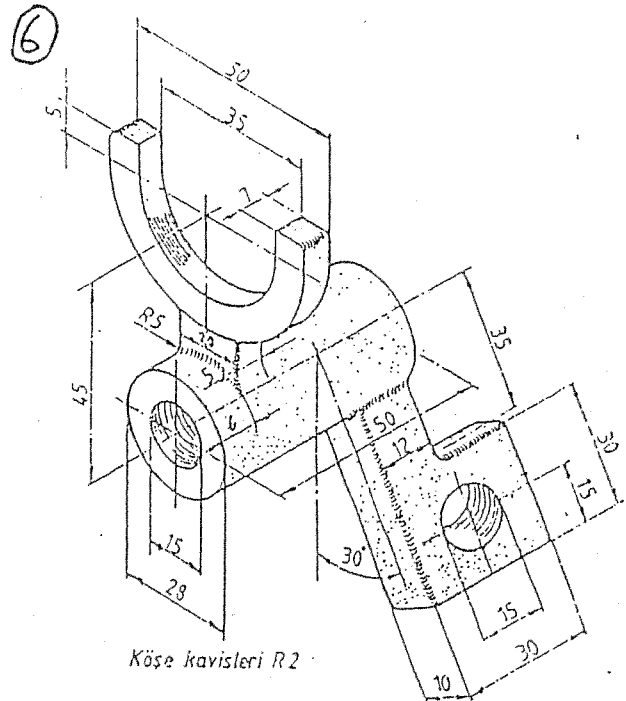


Köşe kavileri R2

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Tasarım ve Konstrüksiyon  
Anabilim Dalı



LUK YATAK



Köşe kavileri R2

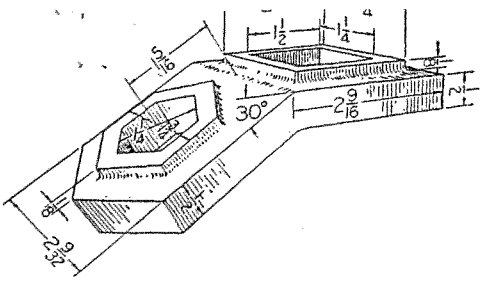


Fig. 10.28. Holder.

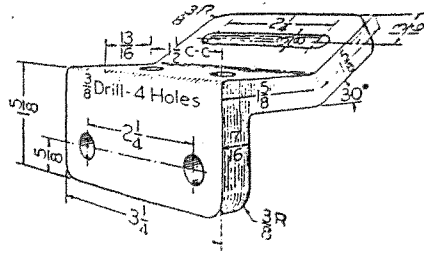


Fig. 10.29. Slotted anchor.

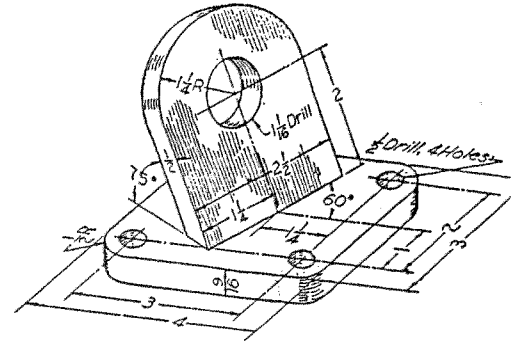


Fig. 10.30. Connector strip.

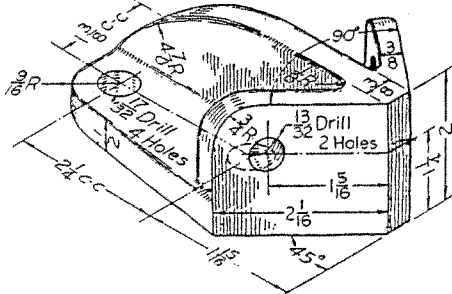


Fig. 10.31. Push plate.

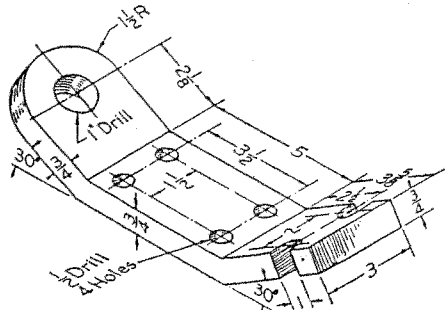


Fig. 10.40. Catenary clip.

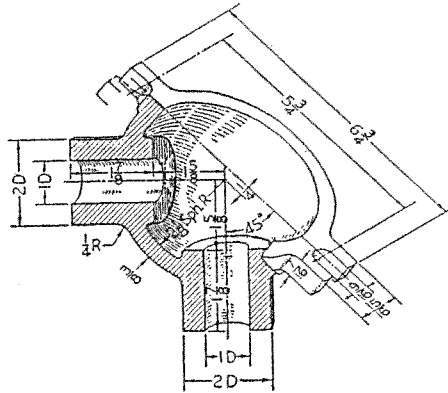


Fig. 10.41. Bevel-gear housing.

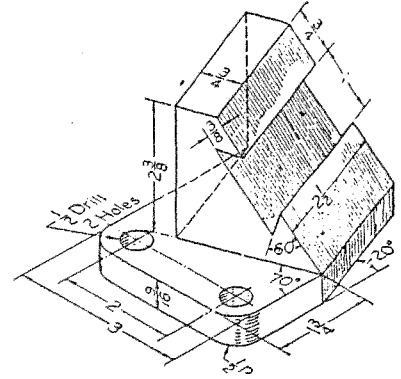


Fig. 11.11. Dovetail clip.

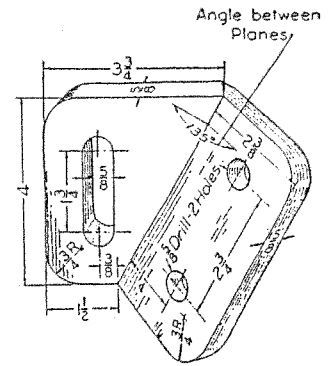


Fig. 11.13. Adjusting clip.

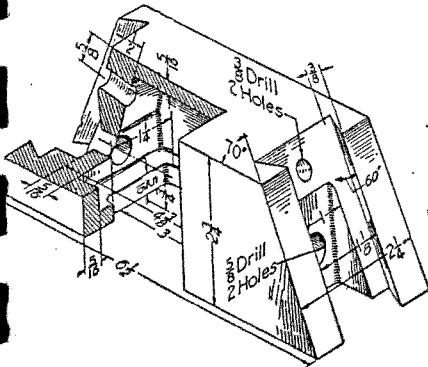


Fig. 10.42. Slide base.

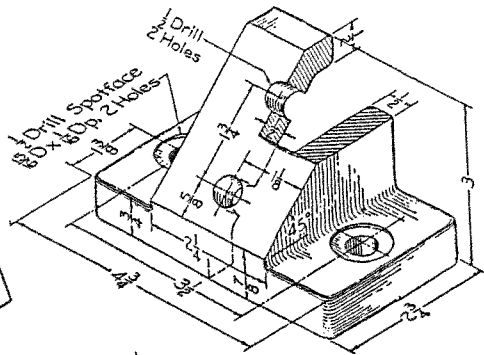


Fig. 10.43. Idler bracket.

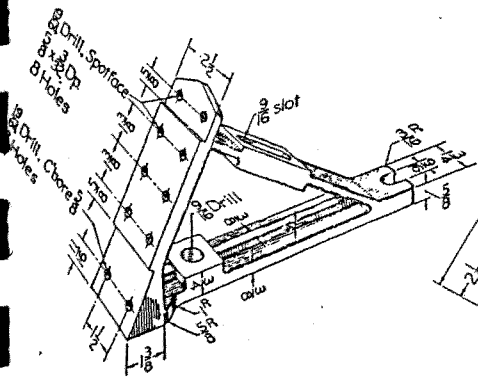
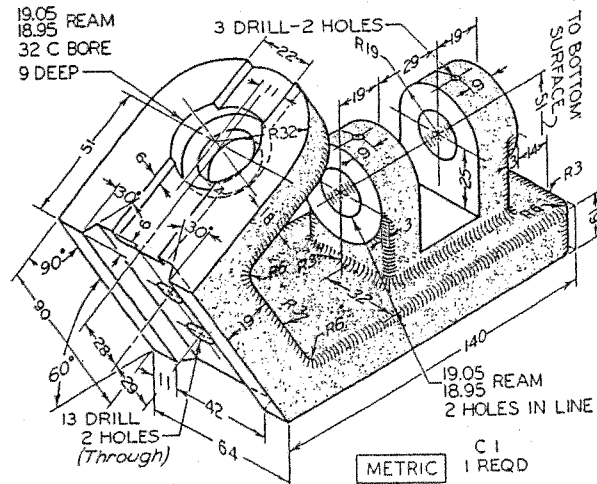


Fig. 10.44. Corner brace.



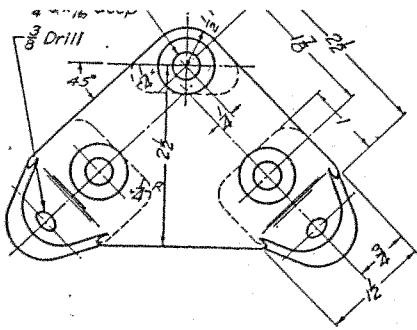


Fig. 11.15. Cable anchor.

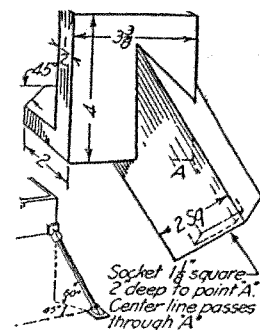
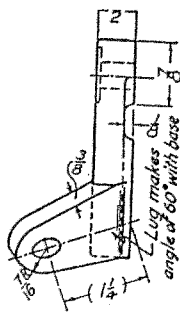


Fig. 11.16. Corner bracket.

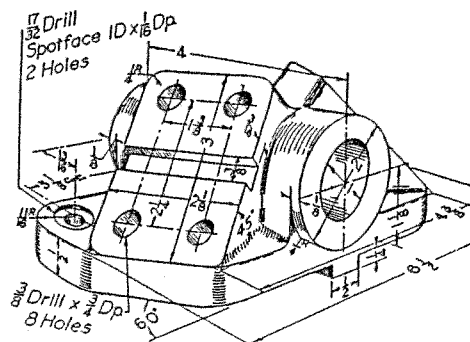
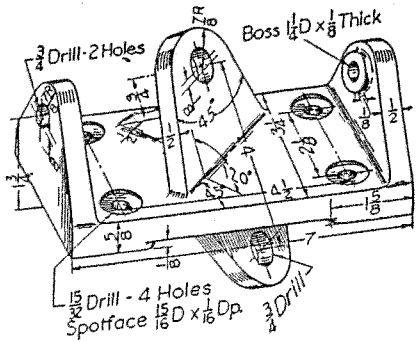
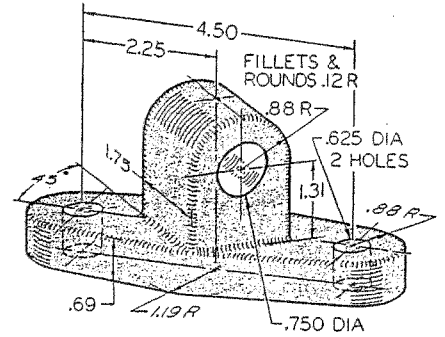
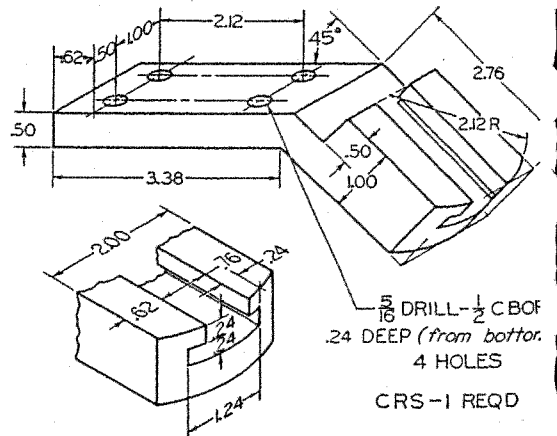
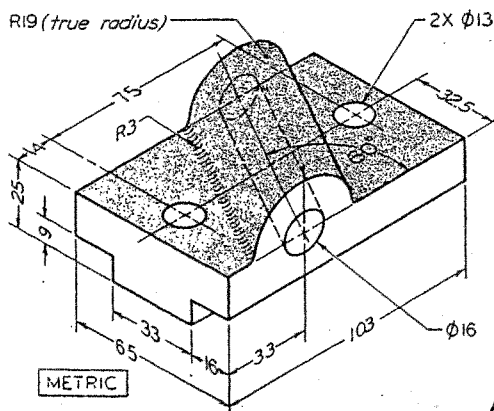
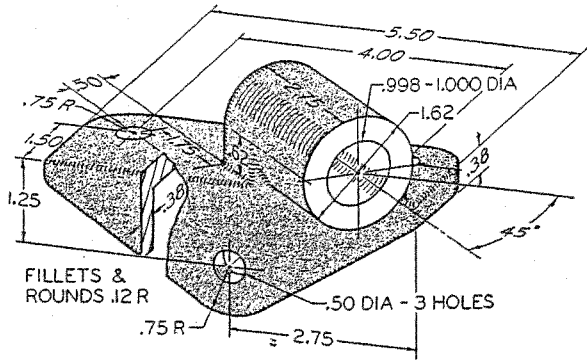
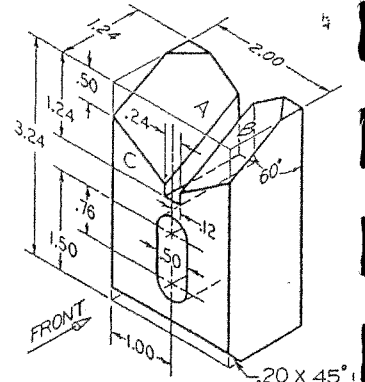
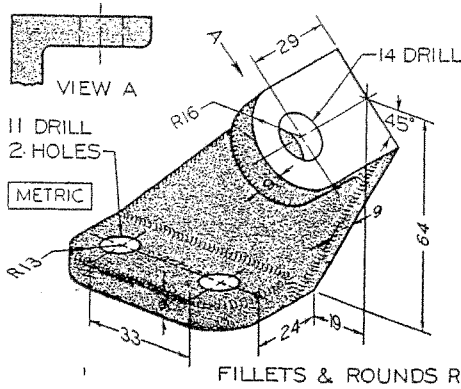
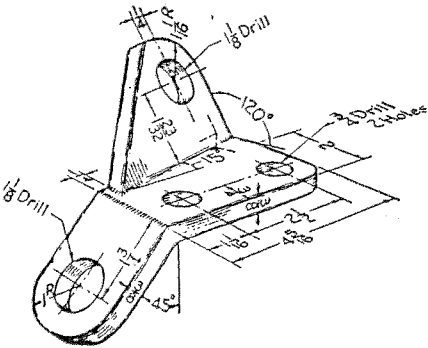
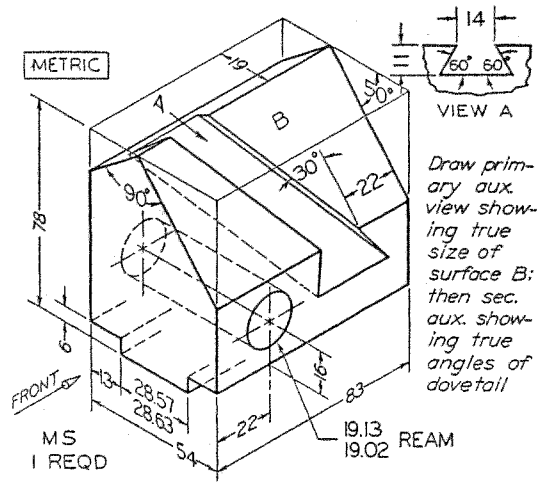


Fig. 11.18. Chamfer tool base.





Draw primary aux view showing true size of surface B; then sec. aux. showing true angles of dovetail

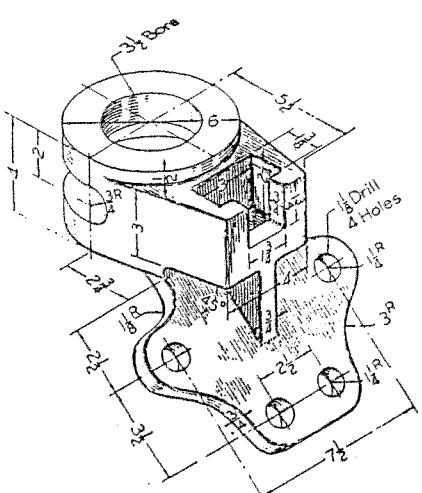
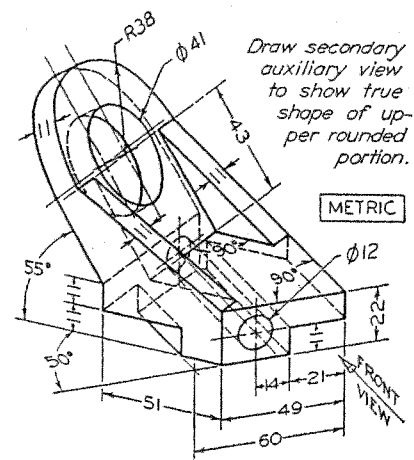


Fig. 28.19. Conveyor hanger.

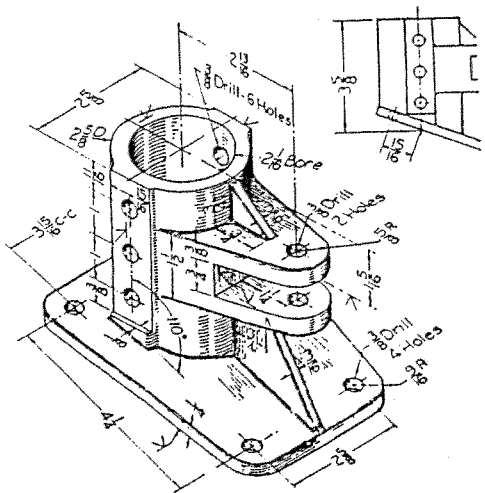
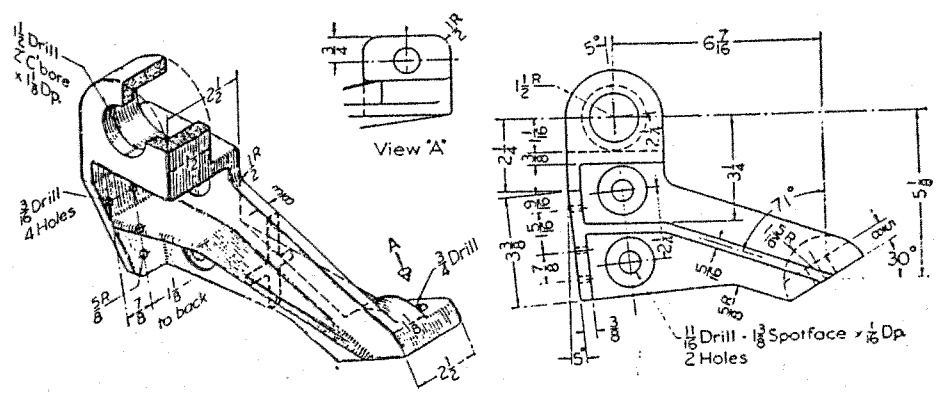
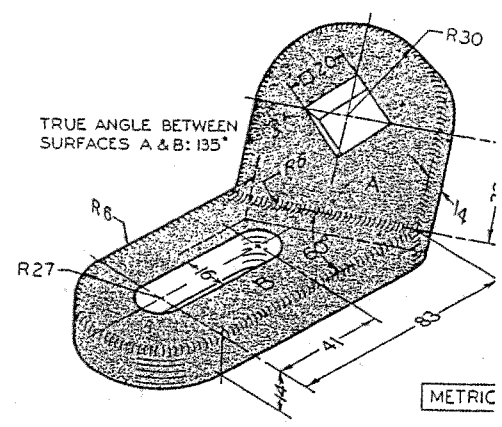


Fig. 28.20. Strut base.



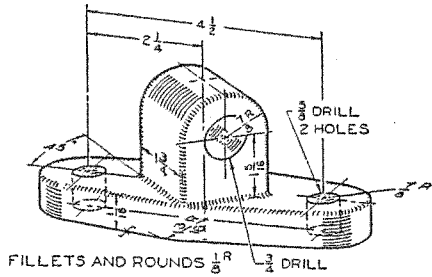


FIG. 501 ROD GUIDE.

Draw necessary views, including complete auxiliary view showing true shape of upper rounded portion.\*

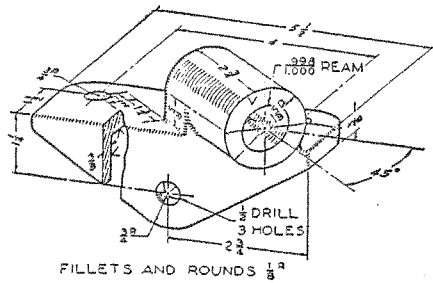


FIG. 502 BRACE ANCHOR.

Draw necessary views, including partial auxiliary view showing true shape of cylindrical portion.\*

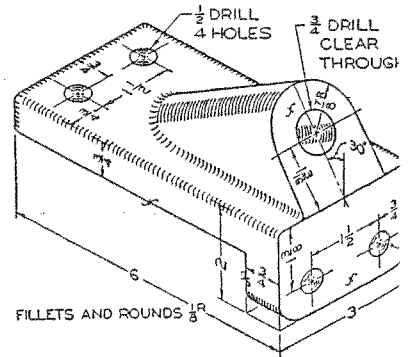


FIG. 505 ANCHOR SUPPORT

Draw necessary views, including partial auxiliary view showing true shape of upper rounded portion, and partial views showing upper left end and lower right end.

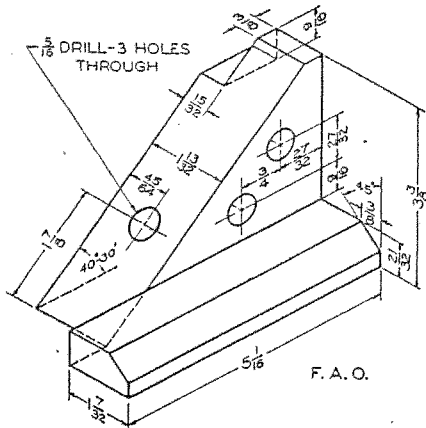


FIG. 503 ADJUSTOR BLOCK.

Draw necessary views, including complete auxiliary view showing true shape of inclined surface.\*

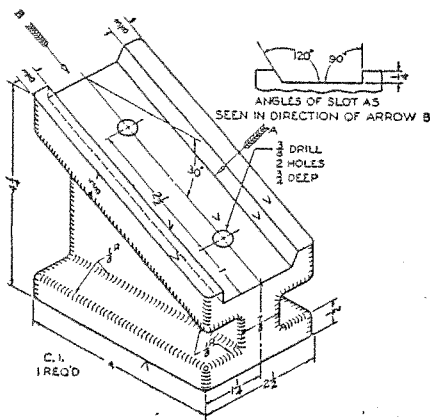


FIG. 504 ANGLE BRACKET.

Draw necessary views, including complete auxiliary views taken in directions of arrows A and B.\*

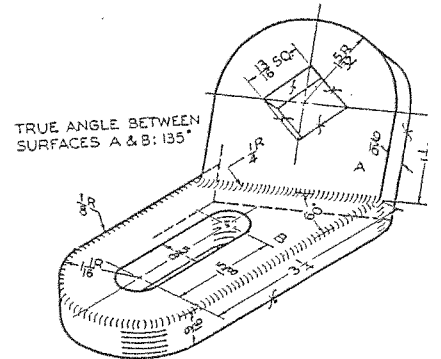


FIG. 511 CONTROL BRACKET.

Draw given views and primary and secondary auxiliary views so that the latter shows true shape of oblique surface.\*

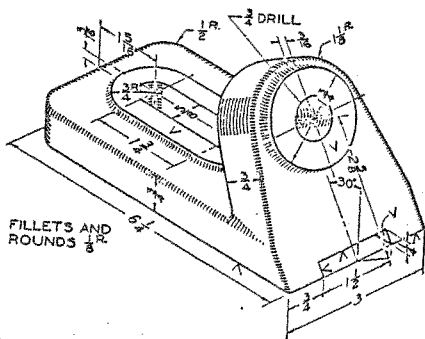


FIG. 509 SLIDE GUIDE.

Draw necessary views, including partial top view showing true shape of slot, and a partial auxiliary view showing true shape of inclined portion.\*

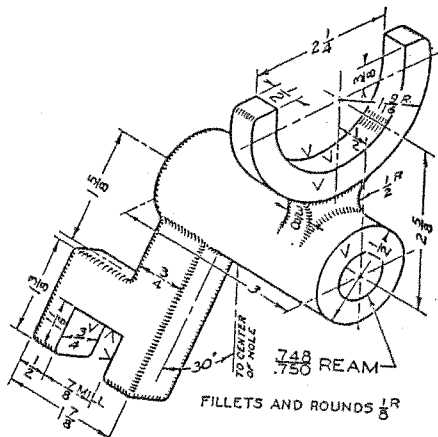


FIG. 510 SHIFTER FORK.

Draw necessary views, including partial auxiliary view showing true shape of inclined arm.\*

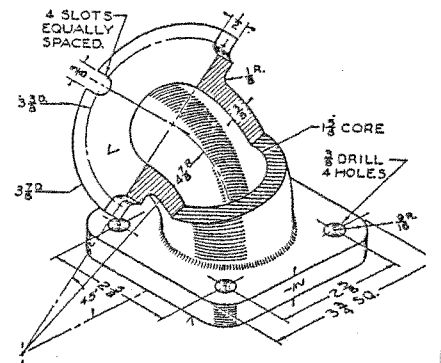


FIG. 506 45° ELBOW.

Draw necessary views, including broken section and two half views of flanges.\*

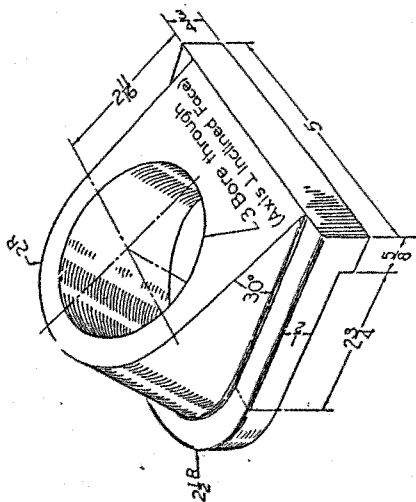


Fig. 10.32. Bevel washer.

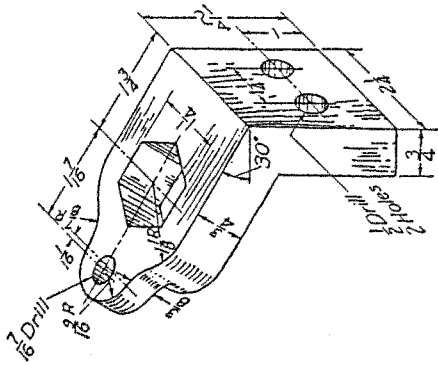


Fig. 10.33. Jig angle.

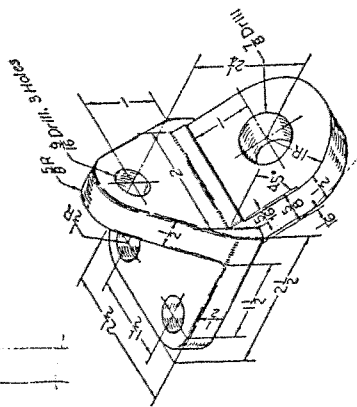


Fig. 10.36. Corner tie.

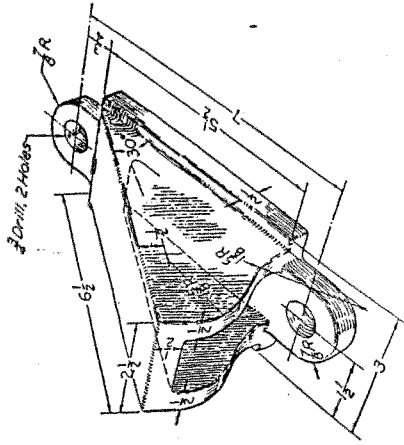


Fig. 10.37. Channel support.

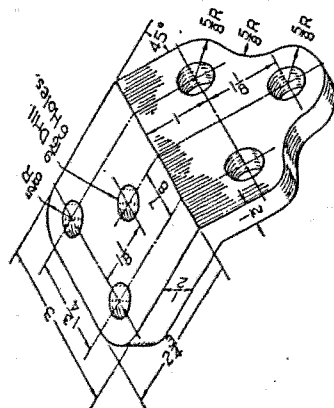


Fig. 10.34. Angle clip.

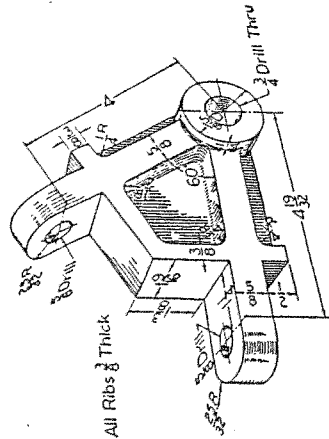


Fig. 10.38. Radial swing block.

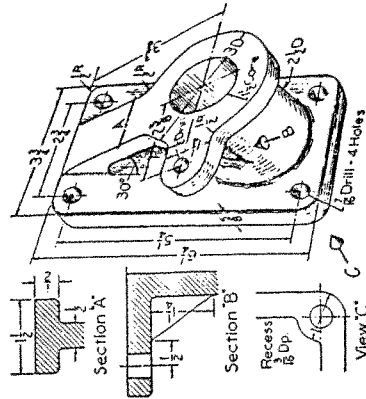


Fig. 10.39. Angle-shaft base.

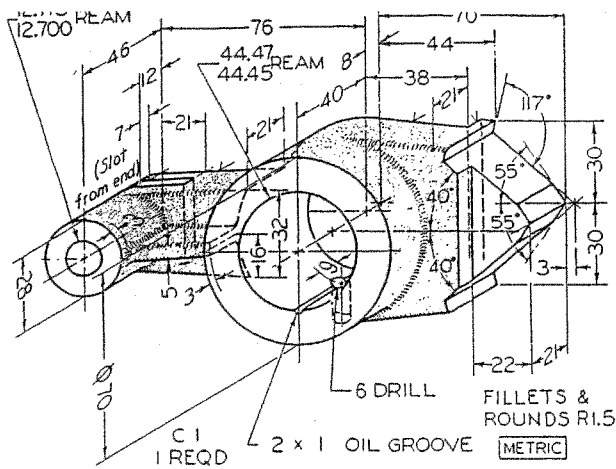


Fig. 7.97 Motor Switch Lever. Draw or sketch necessary views (Layout B-3 or A3-3).\*

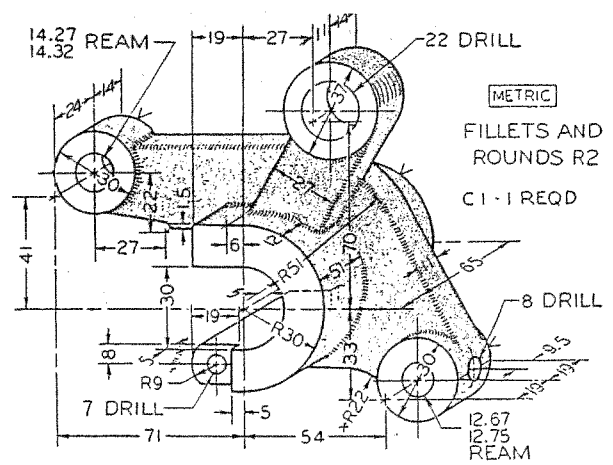


Fig. 7.98 Socket Form Roller—LH. Draw or sketch necessary views (Layout B-4 or A3-4 adjusted).\*

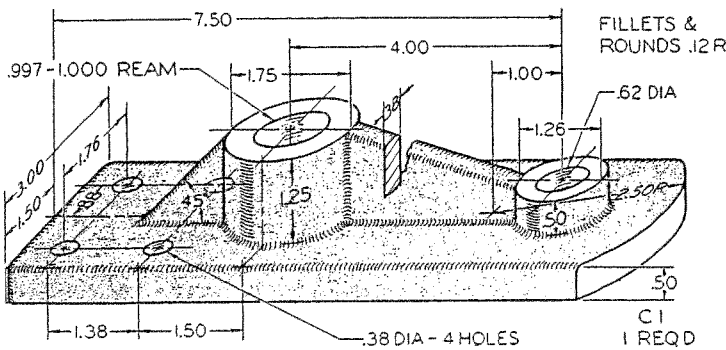


Fig. 7.99 Stop Base. Draw or sketch necessary views (Layout B-3 or A3-3).\*

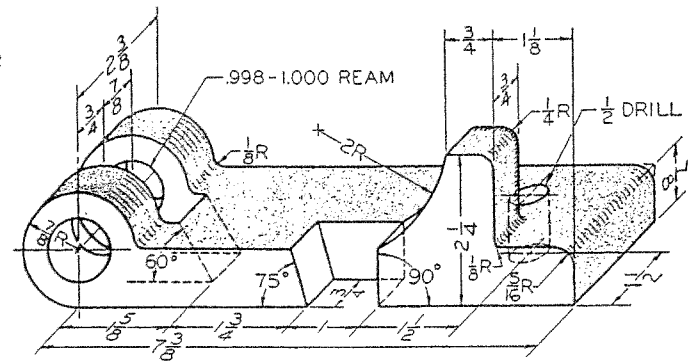


Fig. 7.100 Hinge Base. Draw or sketch necessary views (Layout B-3 or A3-3).\*

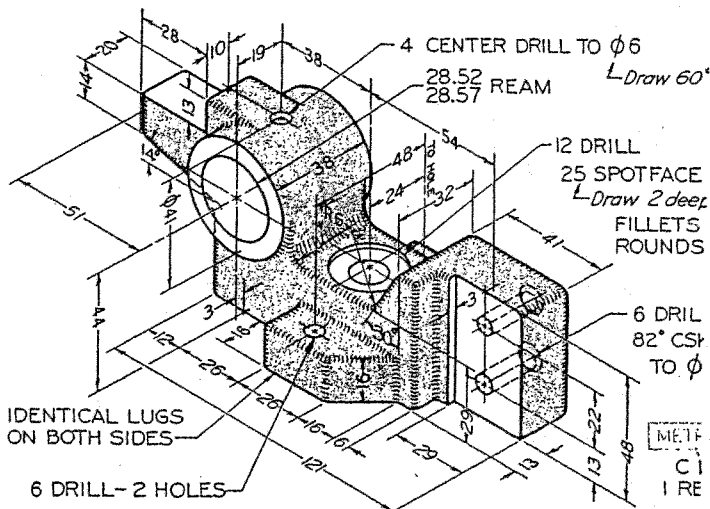
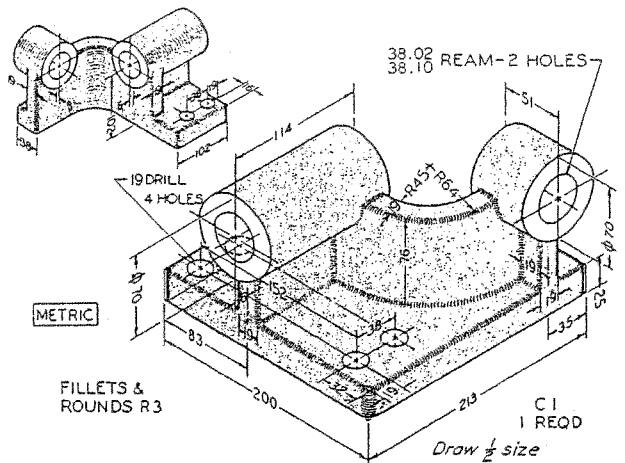
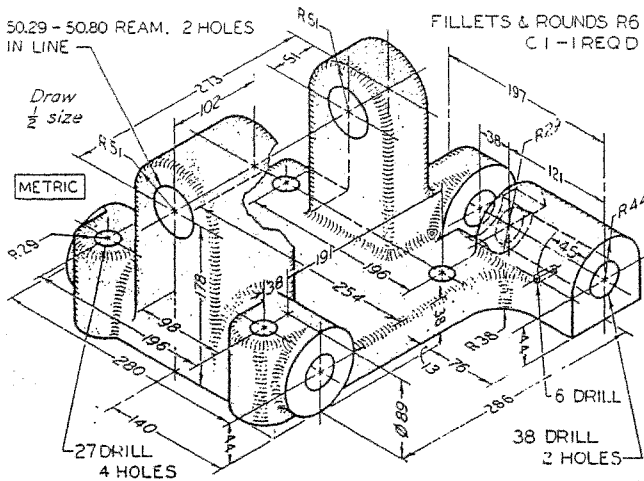
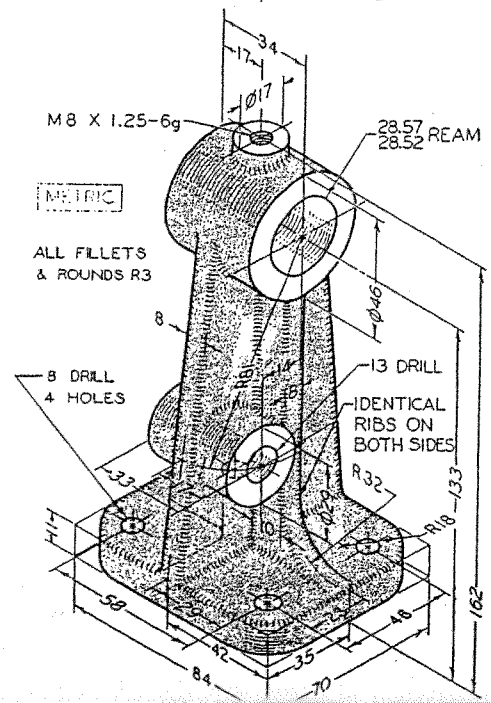
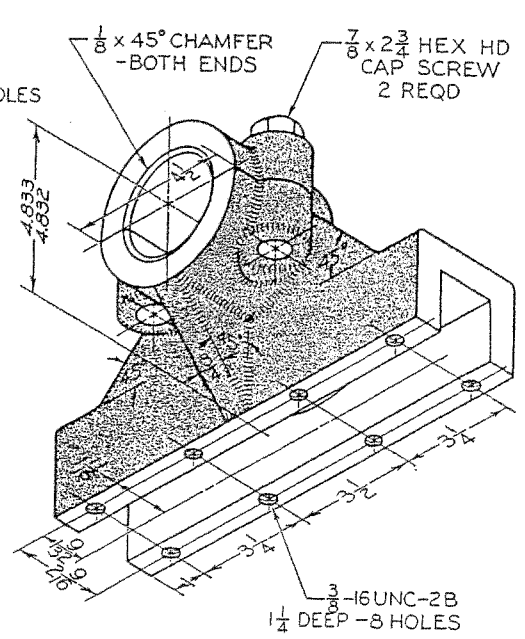
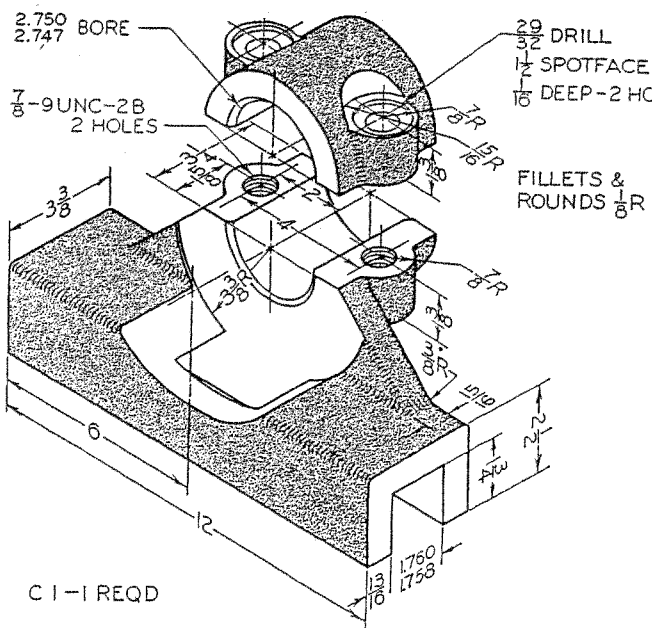


Fig. 7.104 Gripper Rod Center. Draw or sketch necessary views (Layout B-3 or A3-3).\*







Some dimensions of each part are given on mating part.

WALL THICKNESS 3/16 UNLESS OTHERWISE SPECIFIED  
FILLETS & ROUNDS 1/8 R

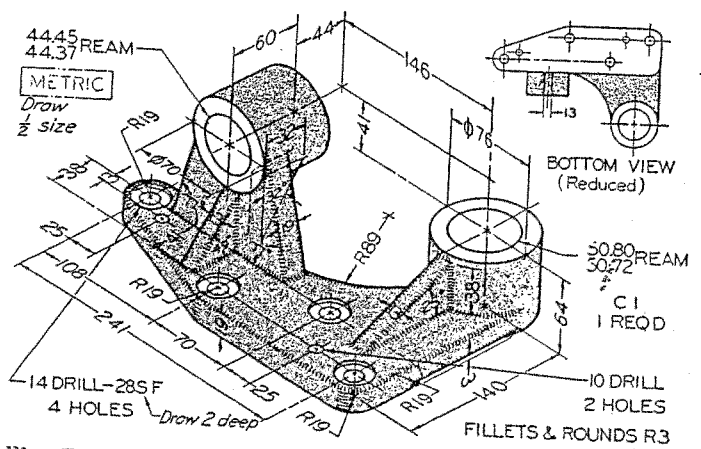
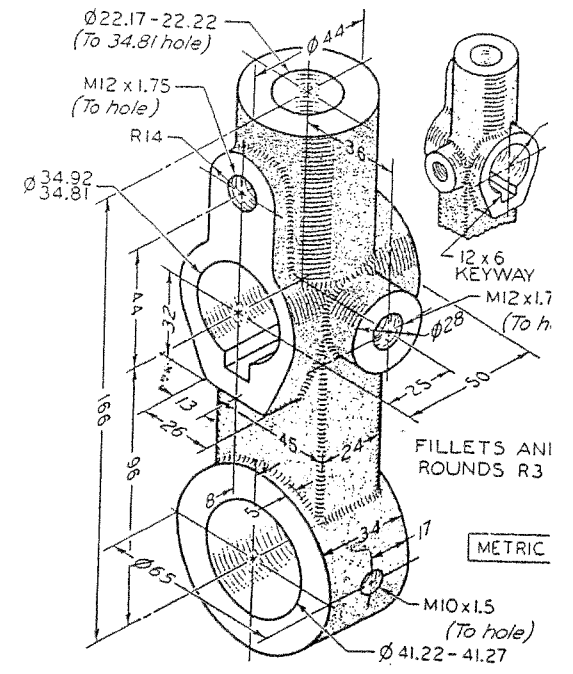
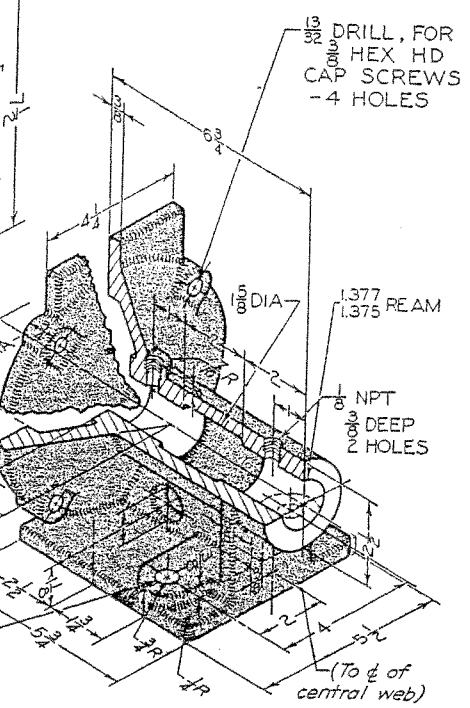
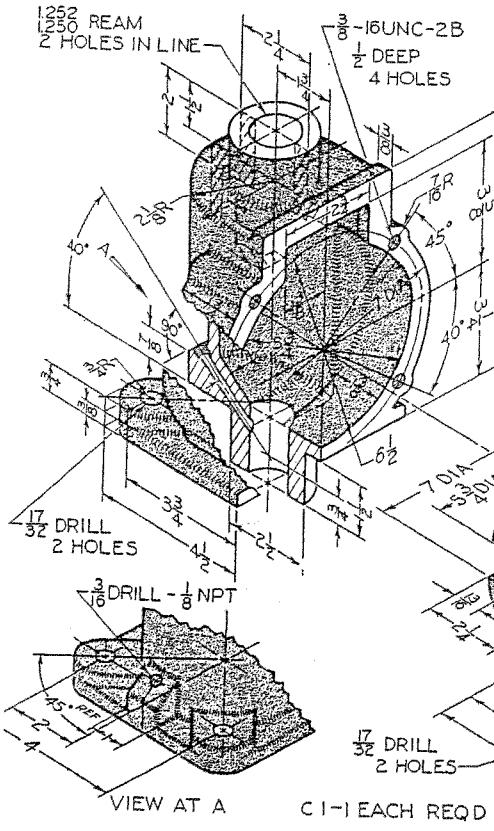


Fig. 7.103 Lever Bracket. Draw or sketch necessary views (Layout C-3 or A2-3).\*

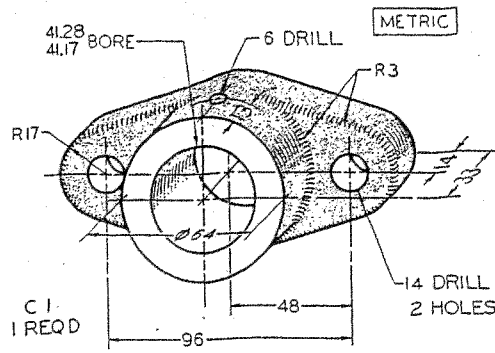


Fig. 7.61 Bearing (Layout A-3).\*

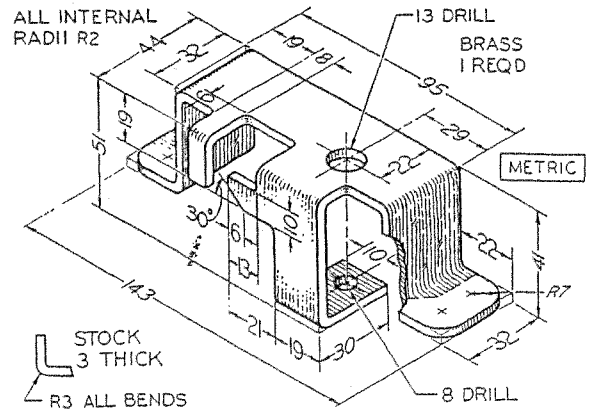


Fig. 7.62 Holder Clip (Layout A-3).\*

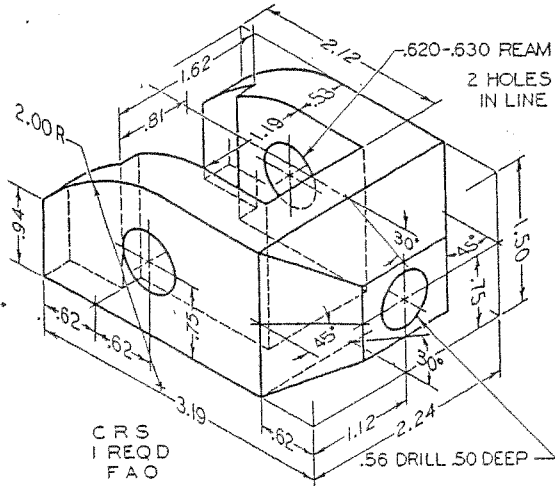


Fig. 7.63 Cam (Layout A-3).\*

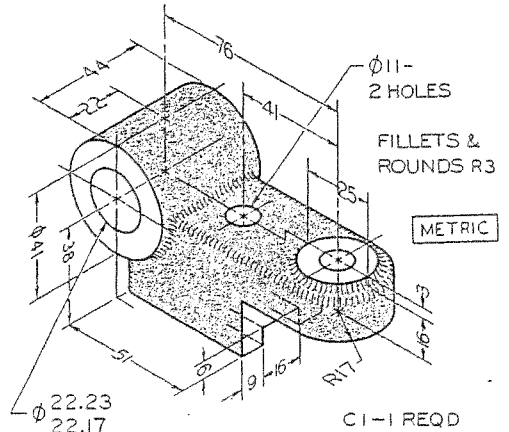


Fig. 7.64 Index Arm (Layout A-3).\*

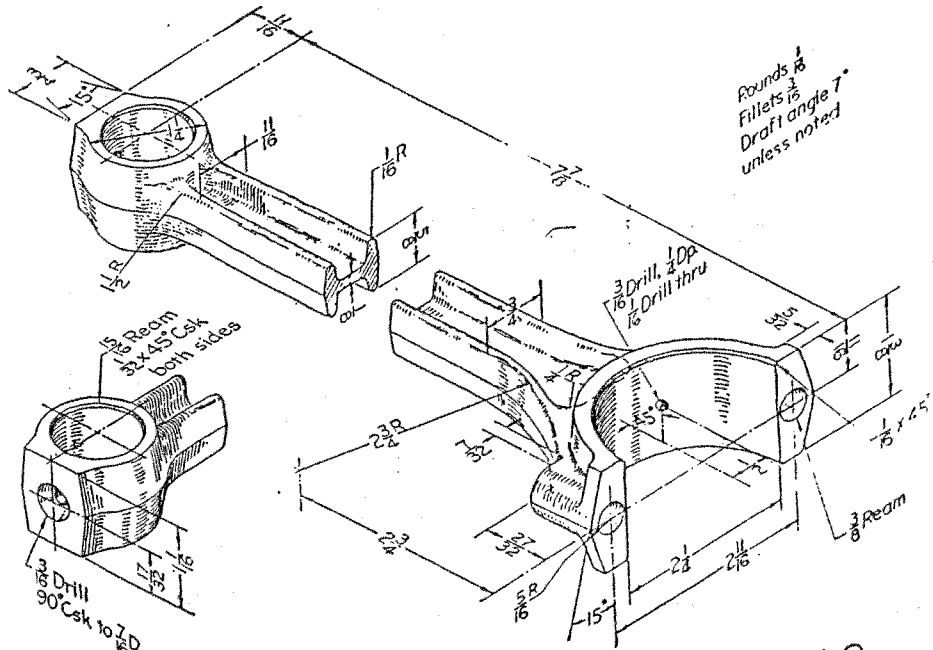
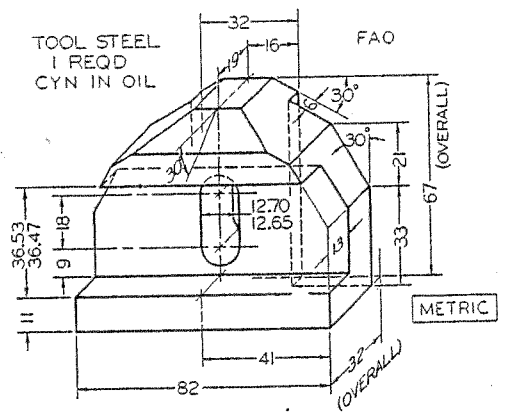
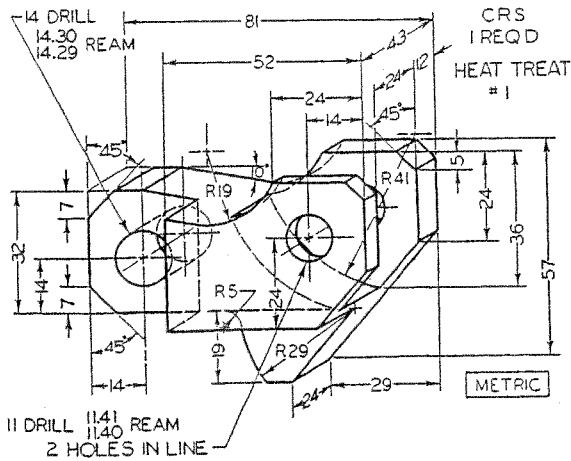


Fig. 2B.32. Automotive connecting rod.

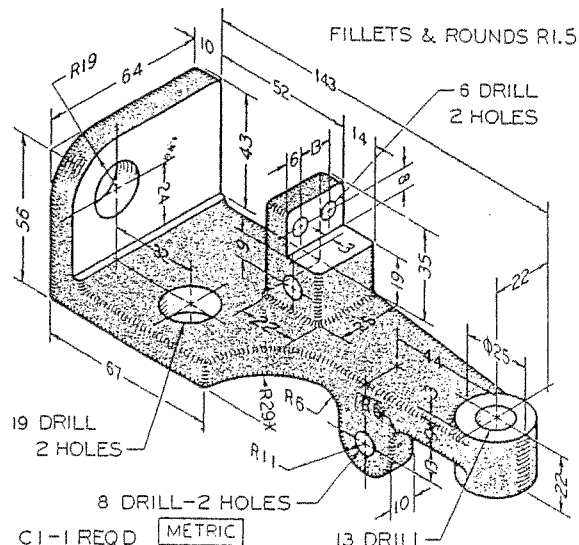
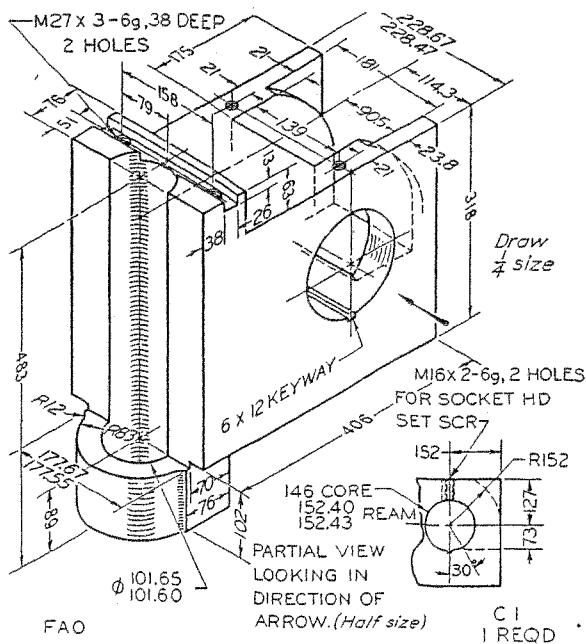


Fig. 7.106 Link Arm Connector. Draw or sketch necessary views (Layout B-3 or A3-3).<sup>a</sup> For threads, see §§15.9 and 15.10.

Fig. 7.107 Mounting Bracket. Draw or sketch necessary views (Layout B-3 or A3-3).<sup>a</sup>

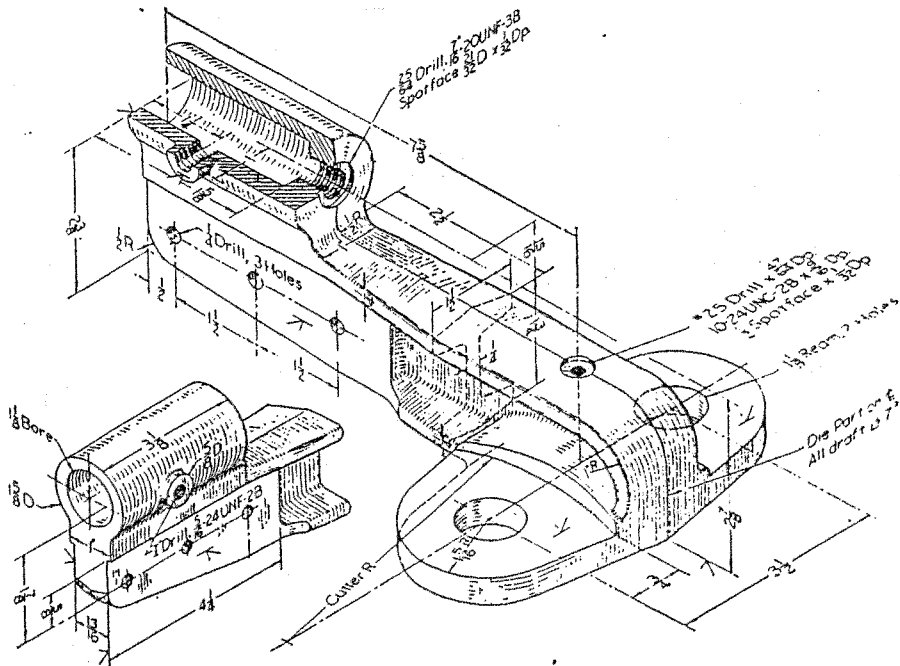
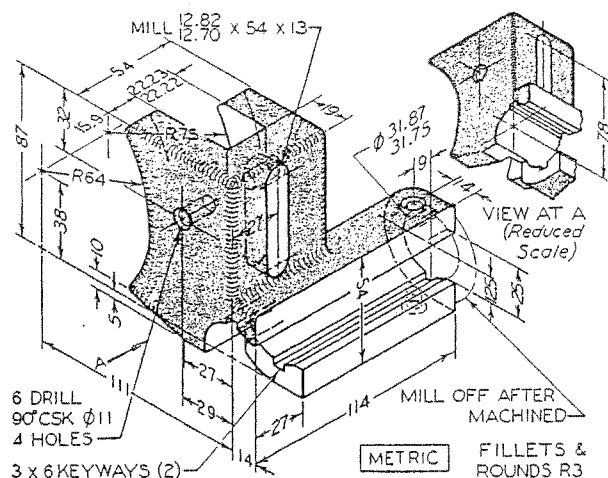
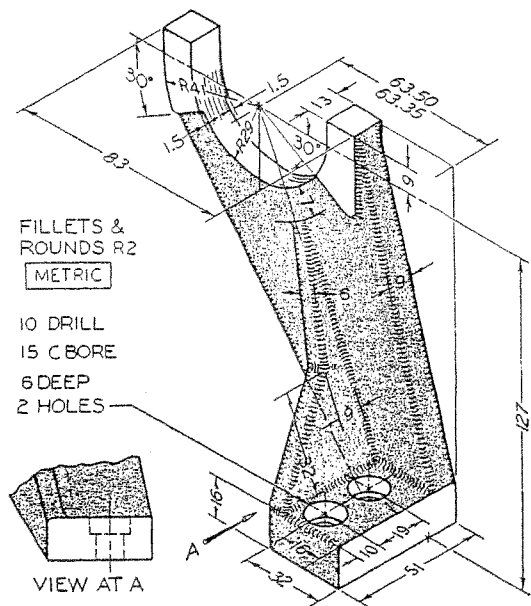


Fig. 28.33. Torque-tube support.

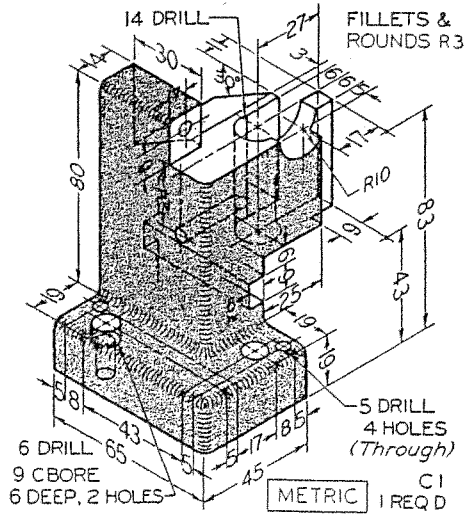


Fig. 7.110 Fixture Base (Layout C-4).\*

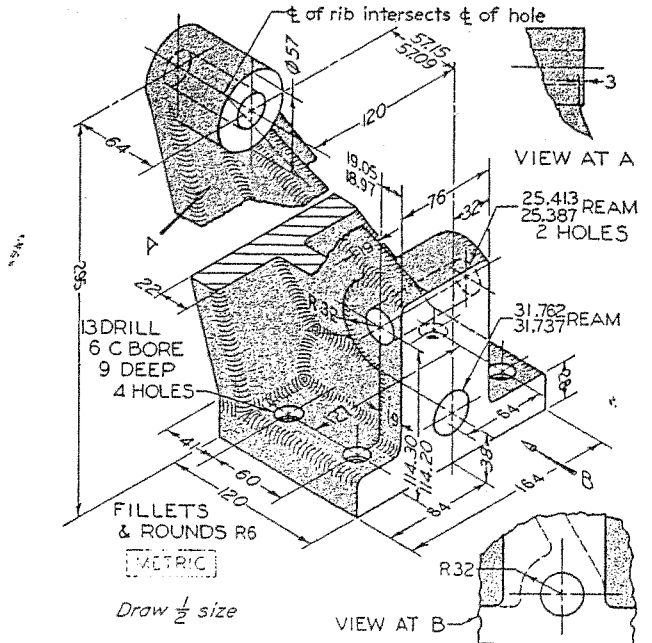
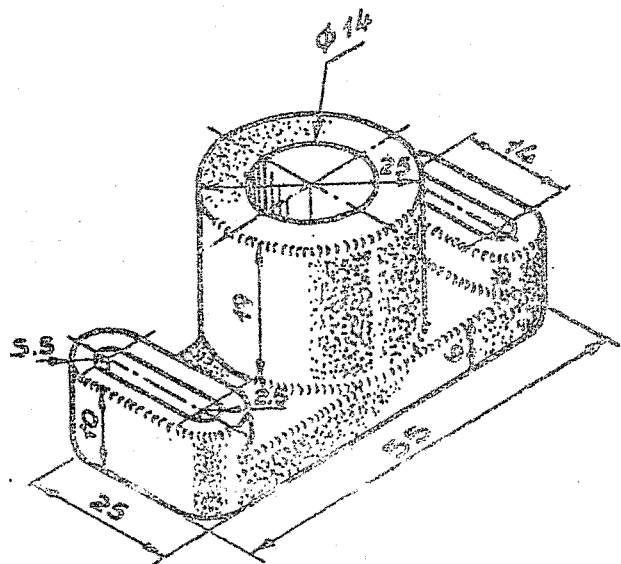
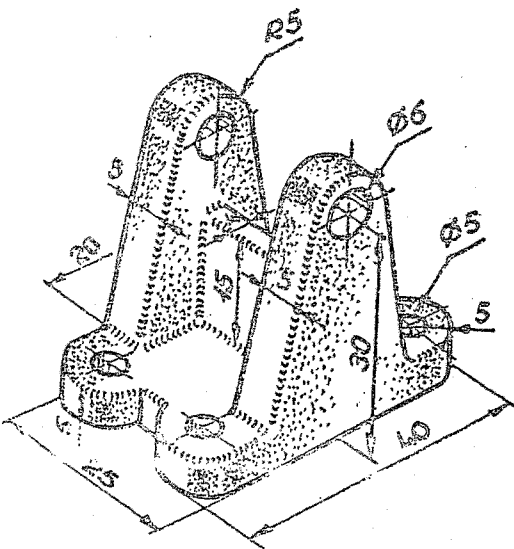
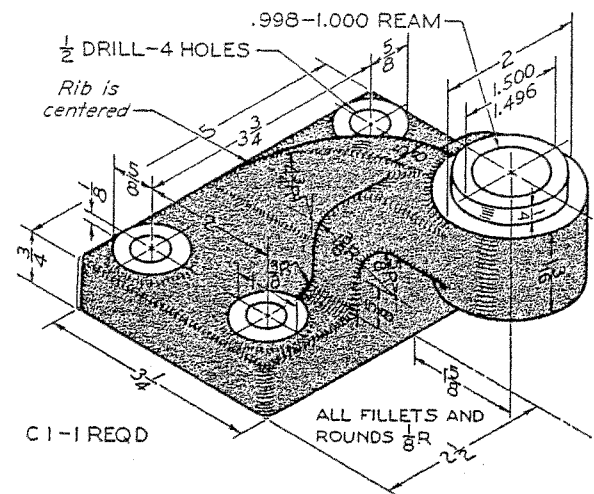
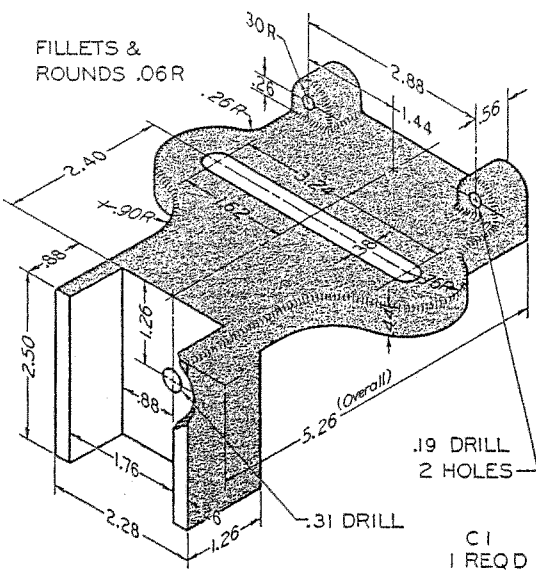


Fig. 7.111 Ejector Base (Layout C-4).\*



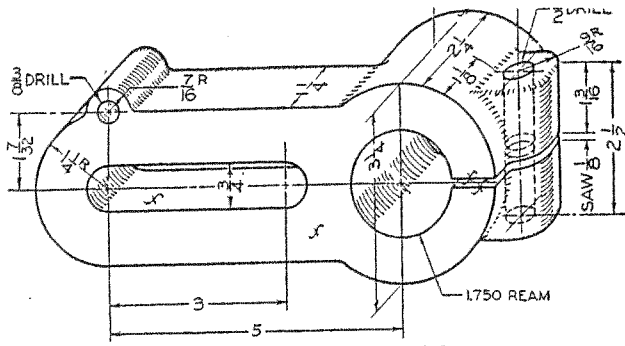


FIG. 388 ANCHOR ARM.  
Draw necessary views.\*

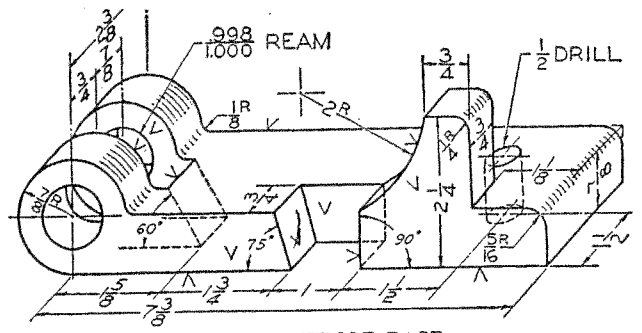


FIG. 389 HINGE BASE.  
Draw necessary views.\*

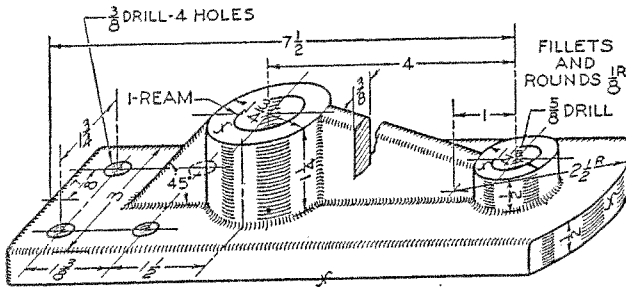


FIG. 390 STOP BASE.  
Draw necessary views.\*

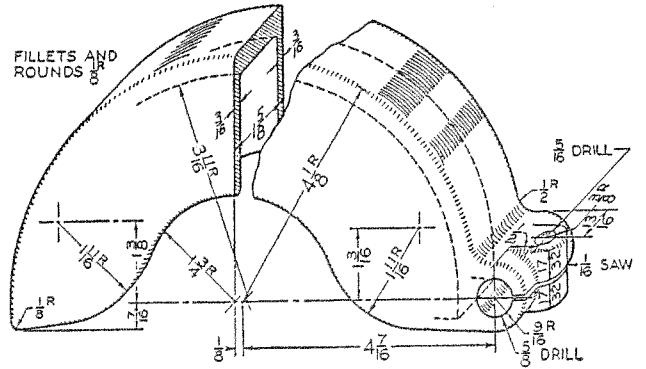


FIG. 391 GRINDER GUARD.  
Draw necessary views.\*

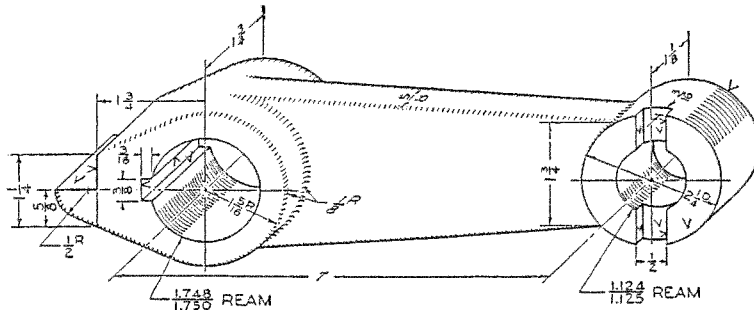


FIG. 466 CRANK ARM. Draw necessary views, with revolved section.\*

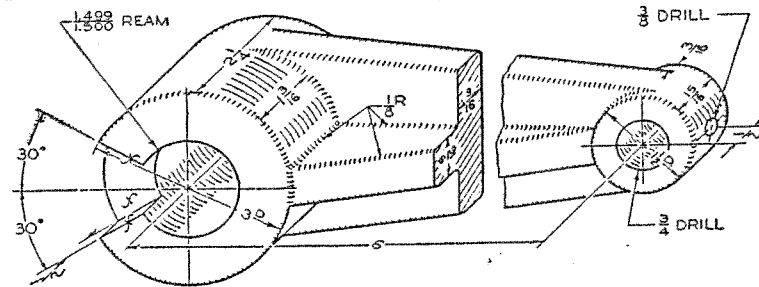


FIG. 467 CRANK ARM. Draw necessary views, with revolved section.\*

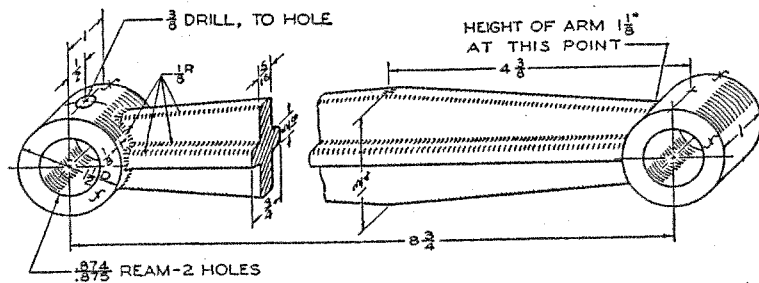


FIG. 468 CAM LINK. Draw necessary views, with revolved section.\*

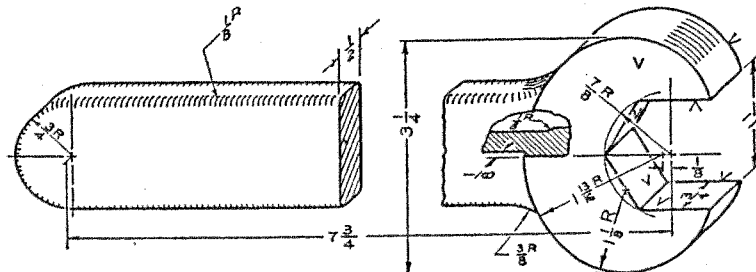


FIG. 469 WRENCH. Draw necessary views, with revolved section.\*

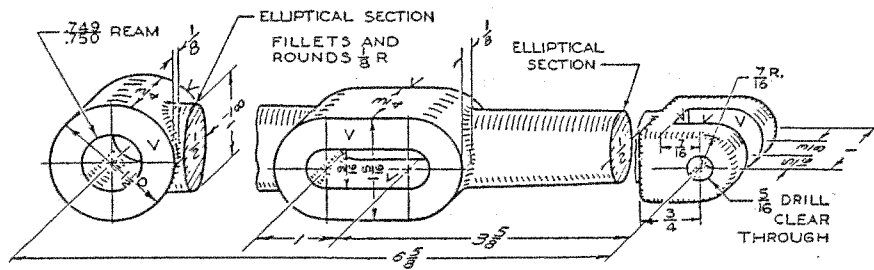


FIG. 470 ADJUSTABLE ARM. Draw necessary views, with removed sections.\*

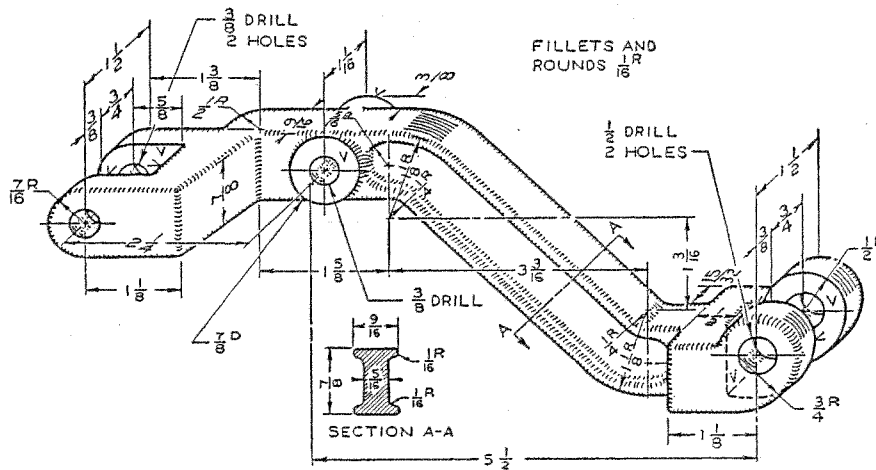


FIG. 471 DASH POT LIFTER. Draw necessary views, with removed section.\*

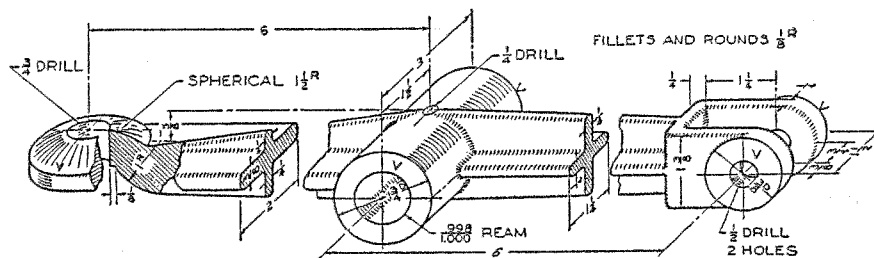
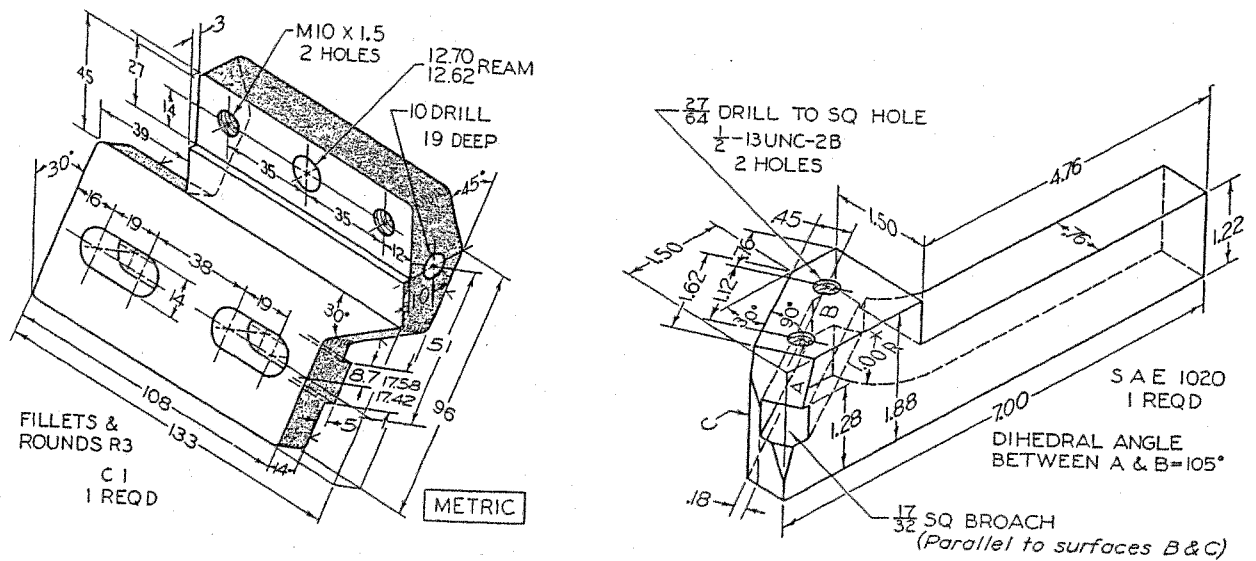
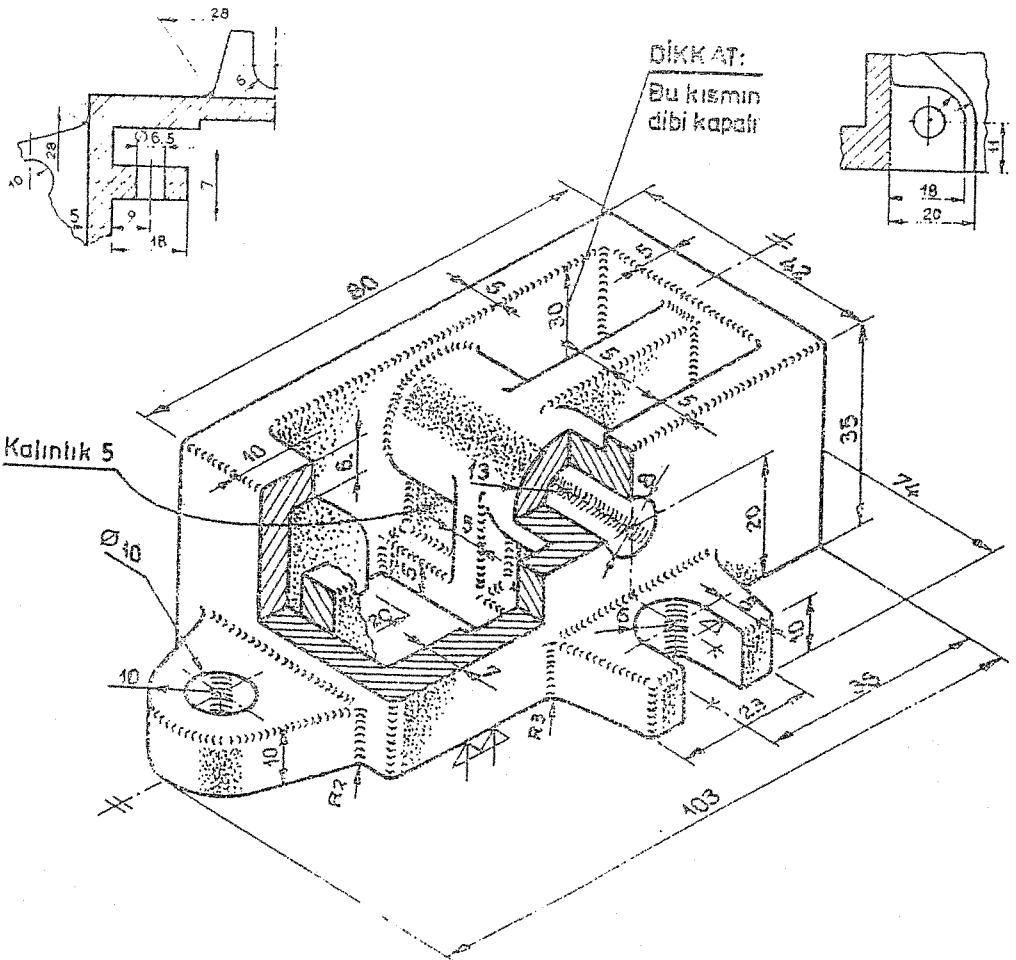
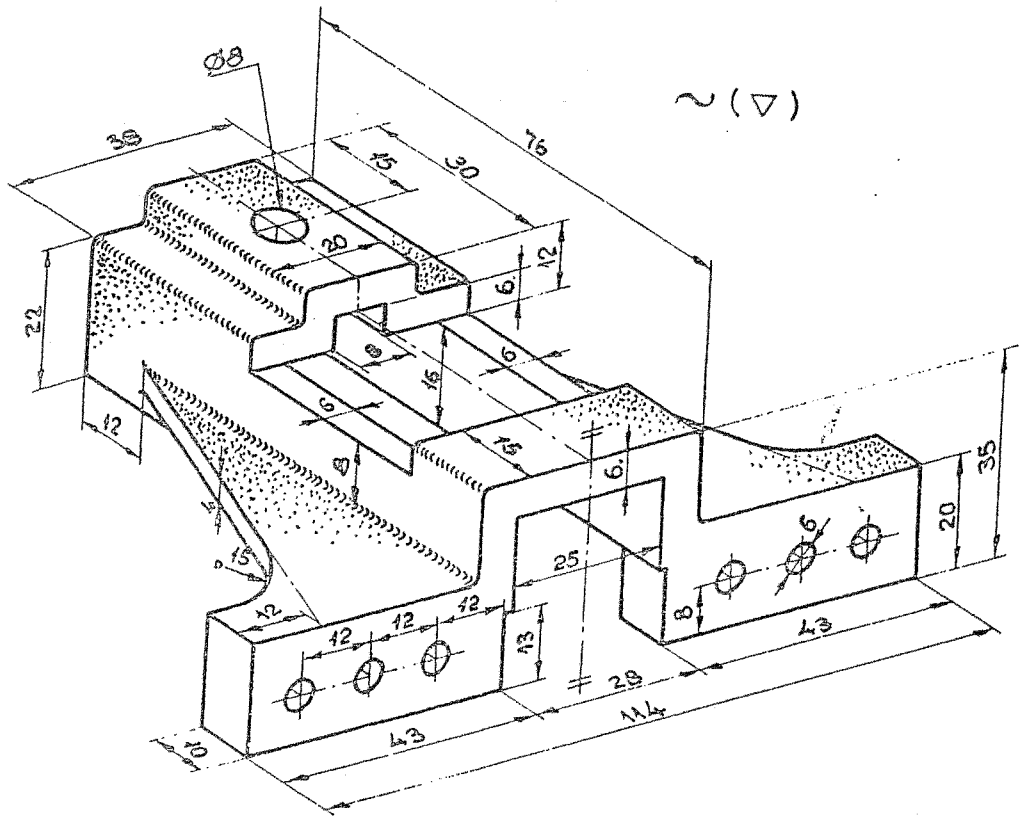


FIG. 472 ROCKER ARM. Draw necessary views, with removed sections.\*





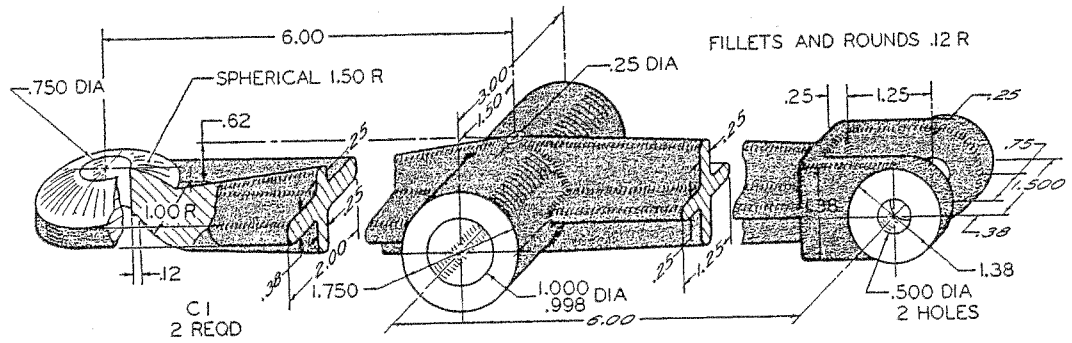


Fig. 9.55 Rocker Arm. Draw necessary views, with revolved sections (Layout B-4).<sup>a</sup>

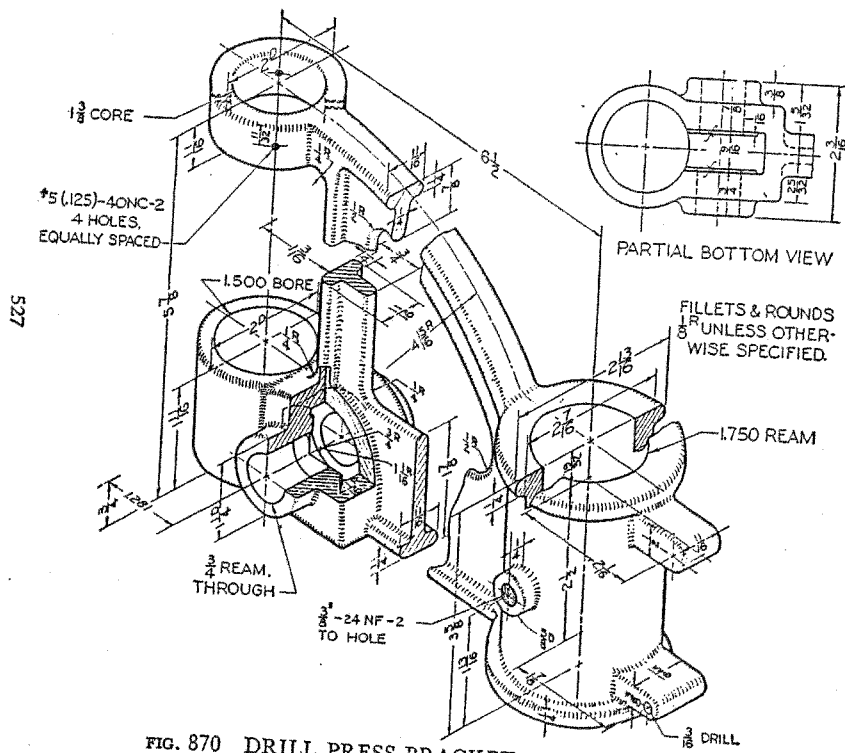
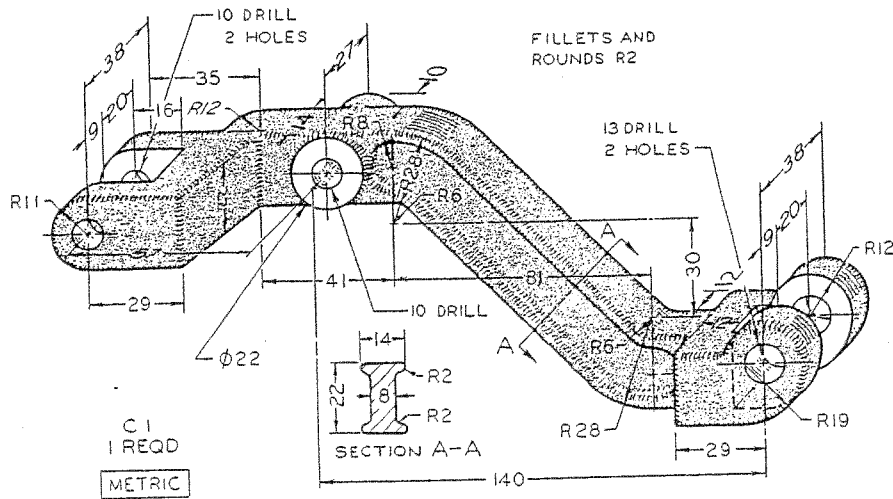
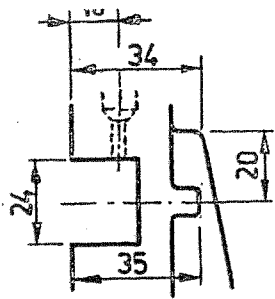
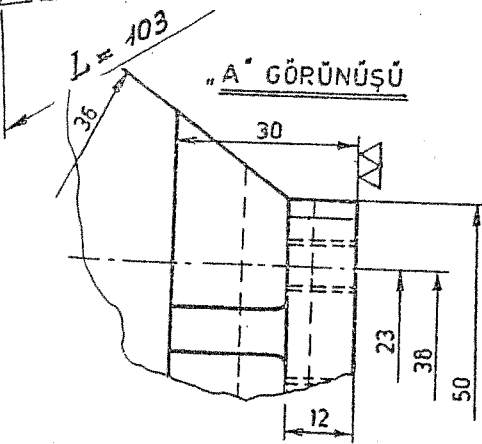
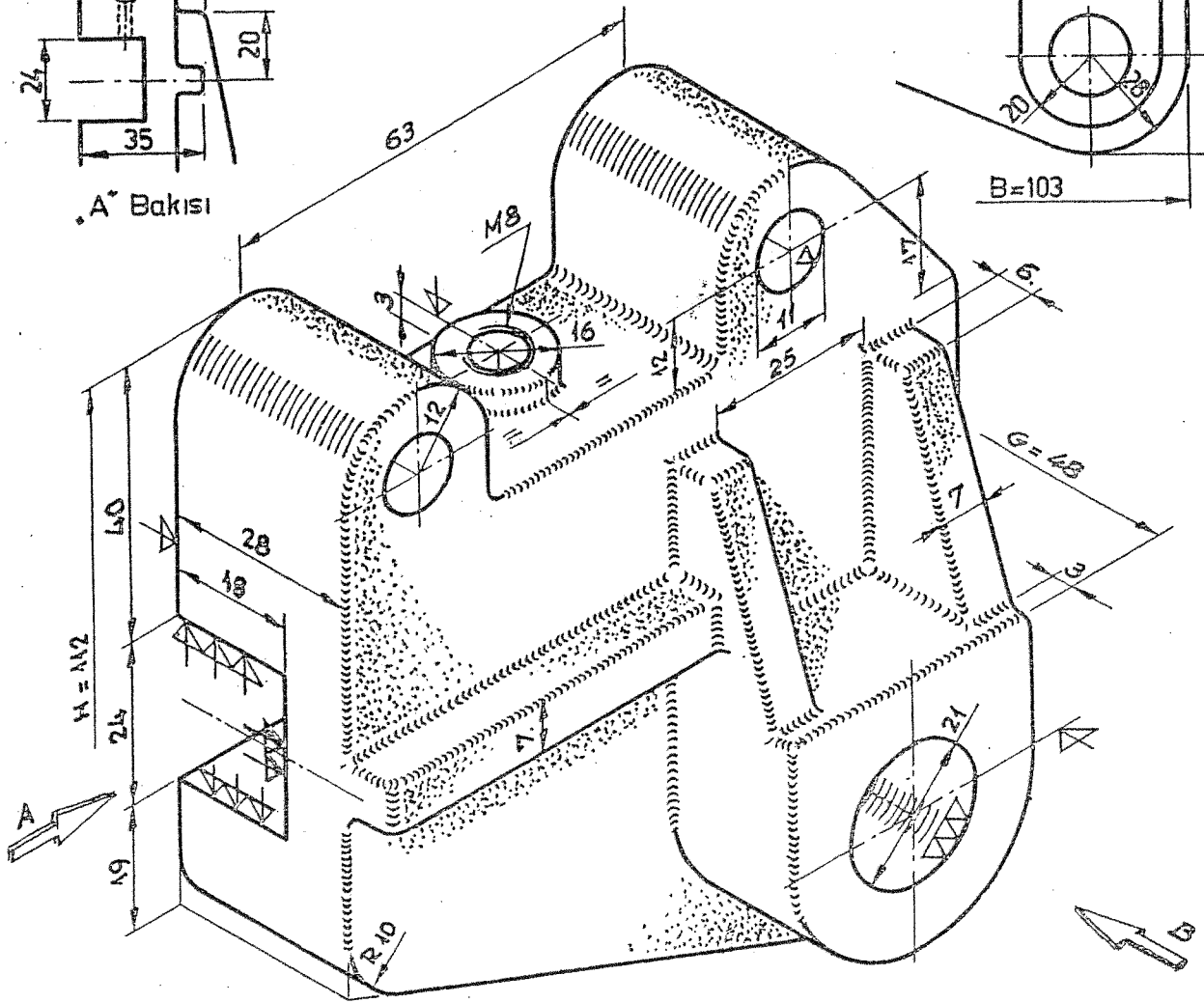
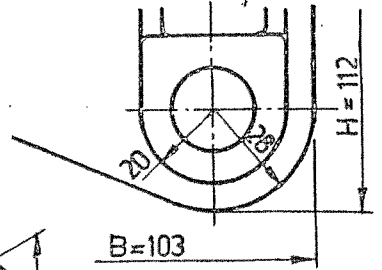


FIG. 870 DRILL PRESS BRACKET. Make detail drawing.



"A" Bakışı

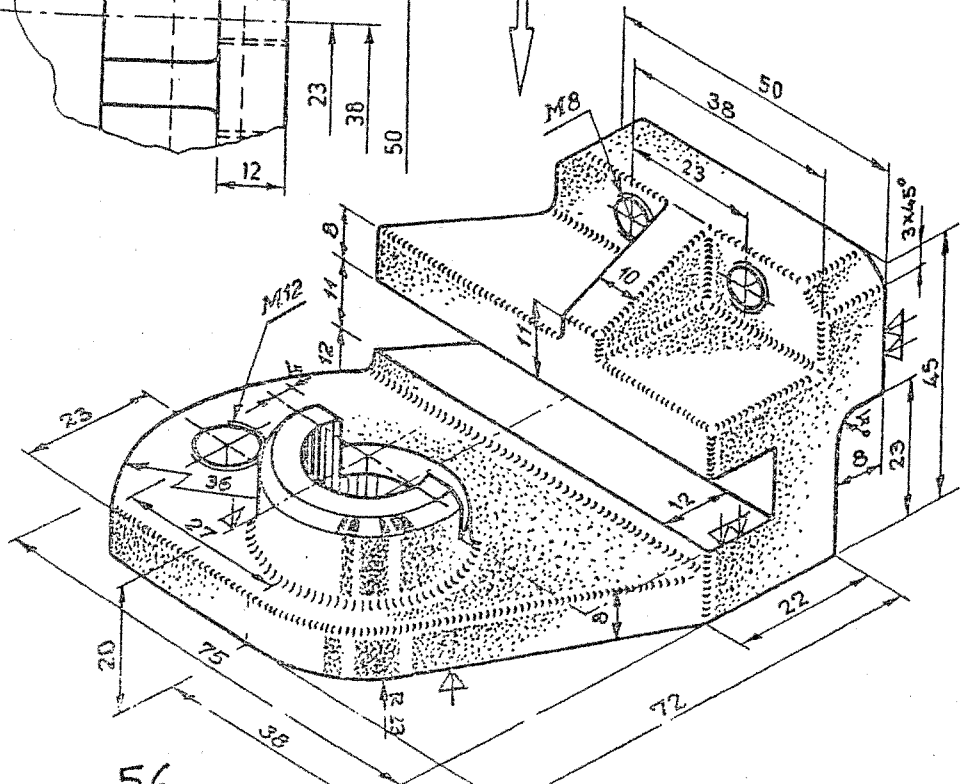
"B" Bakışı



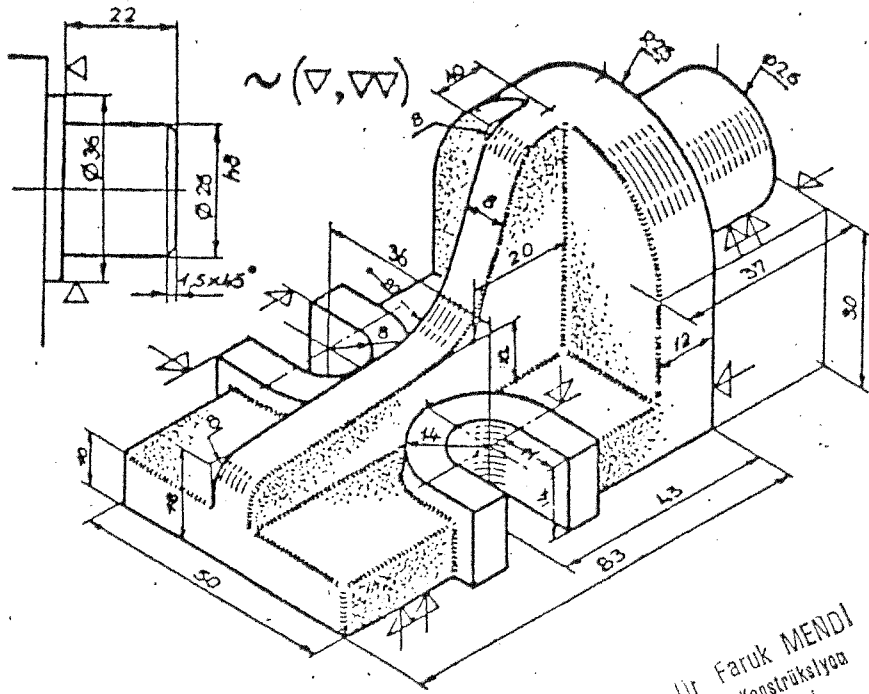
"A" GÖRÜNÜŞÜ

~ (▽, ▽)

Delik çapı 19  
Göbek çapı 32  
Pah 2x45°

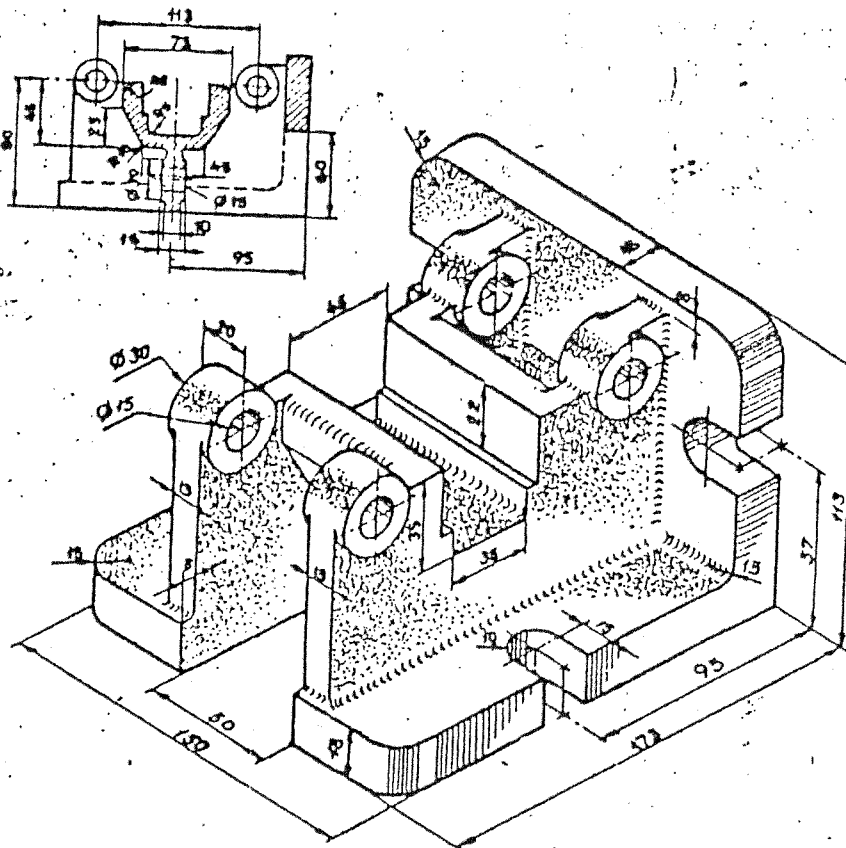


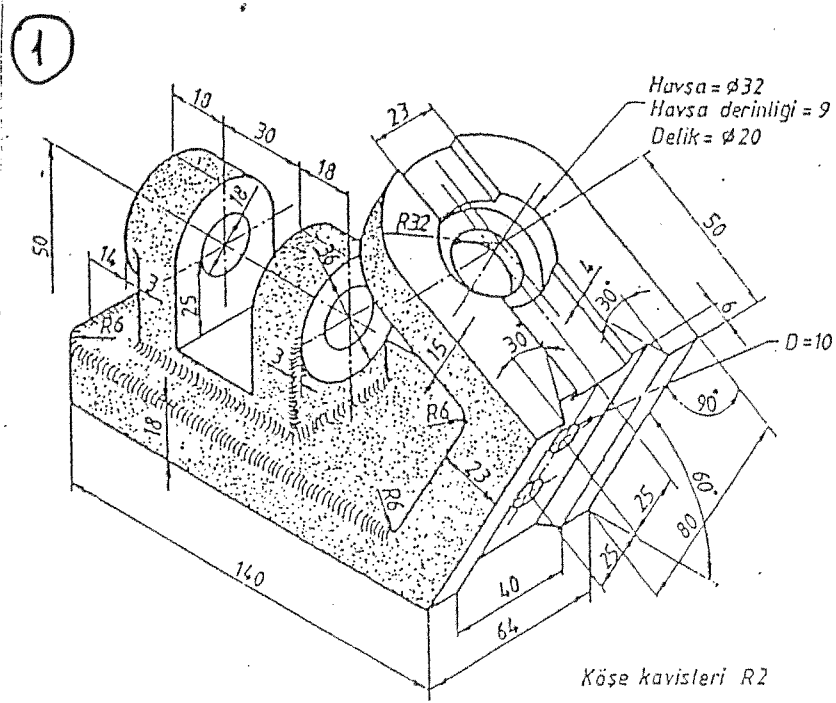
1



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Anabilim Dalı

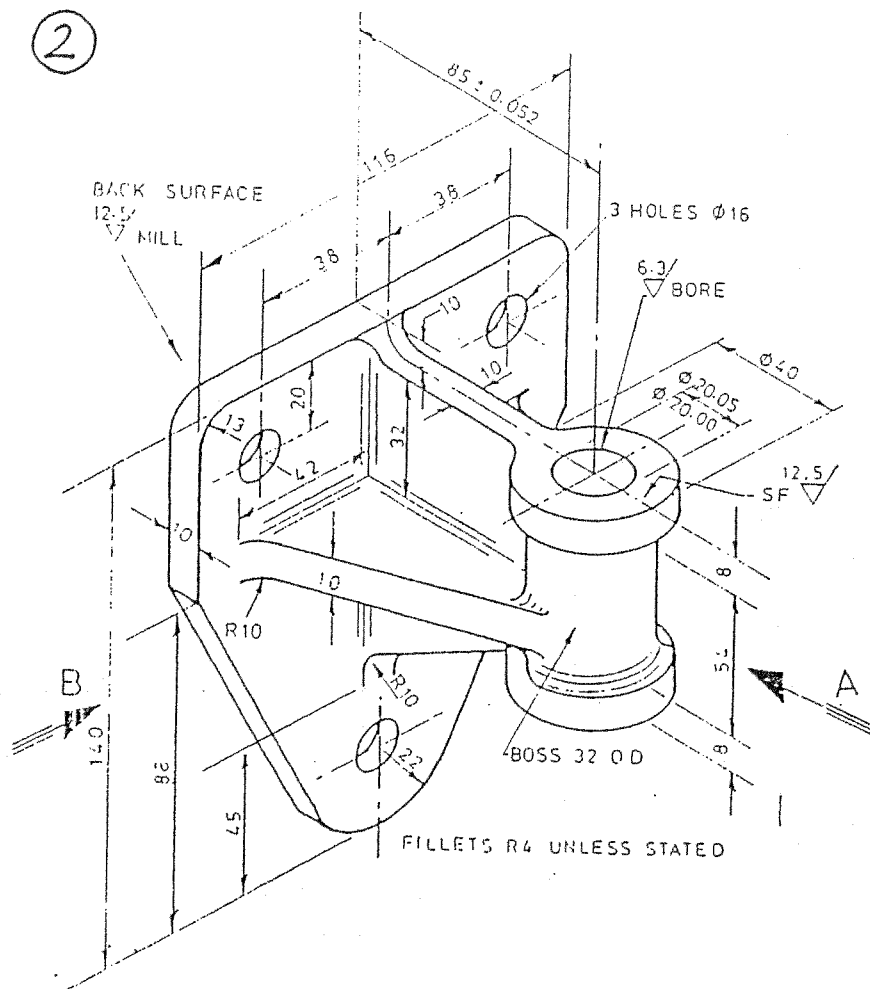
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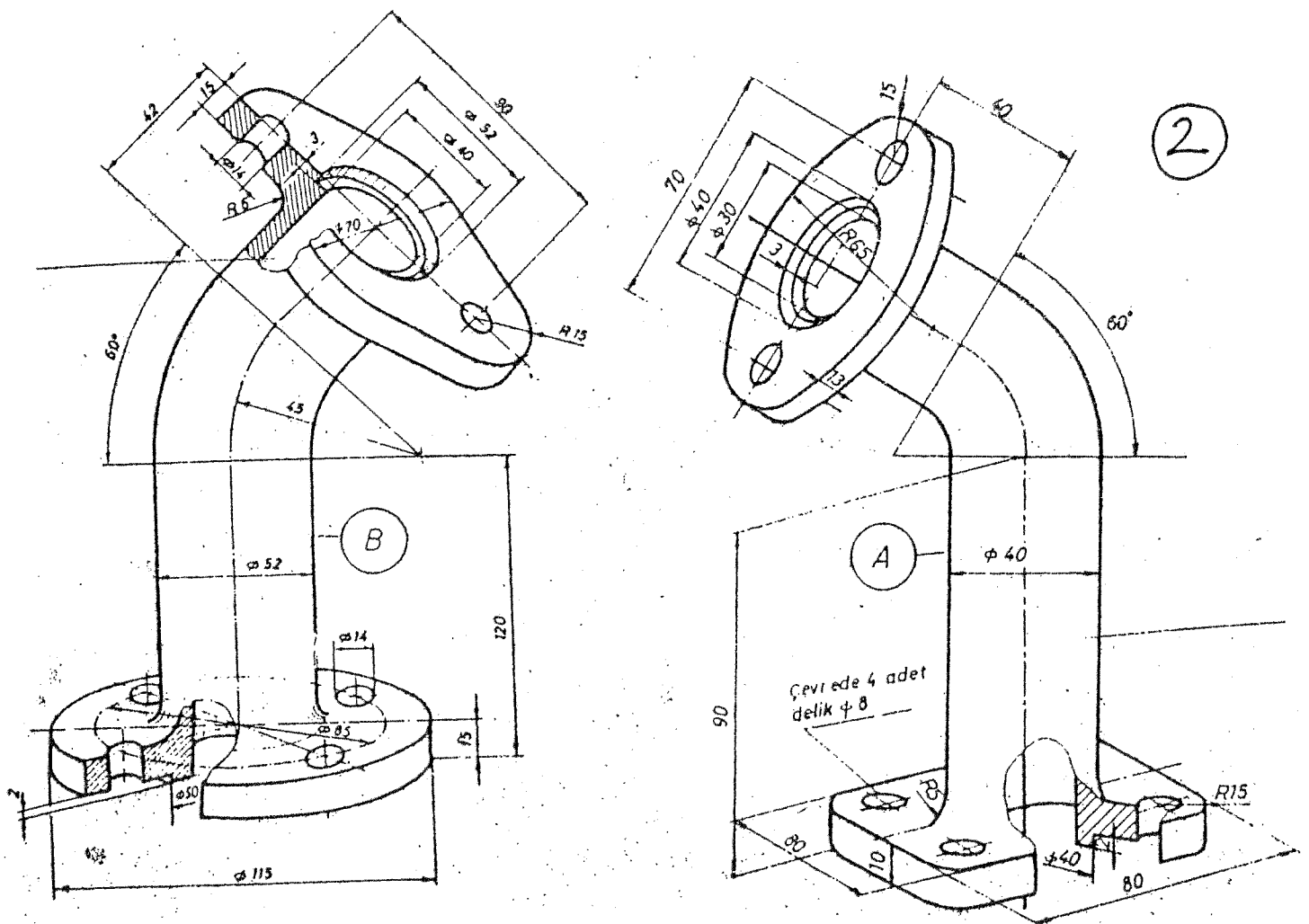
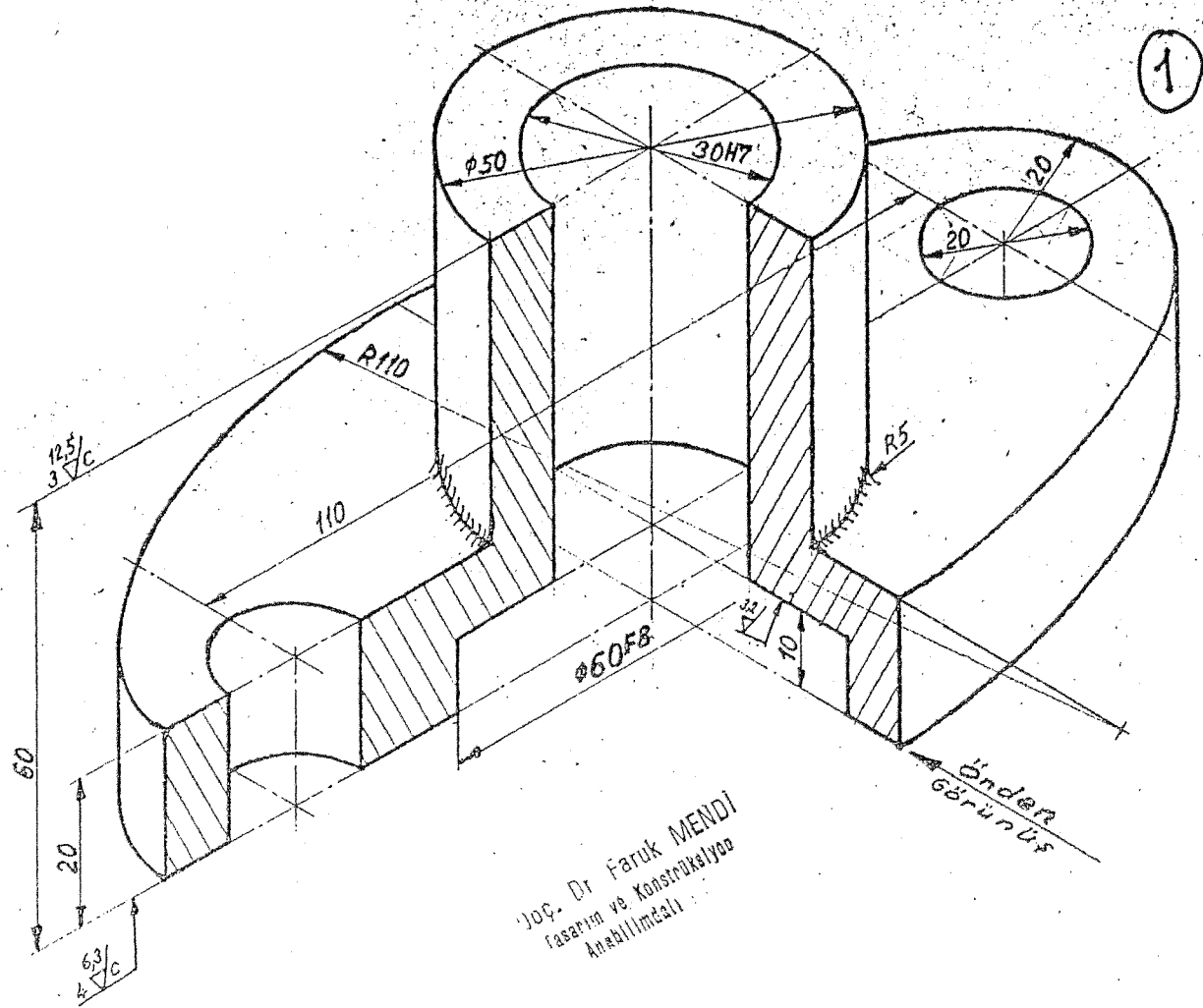


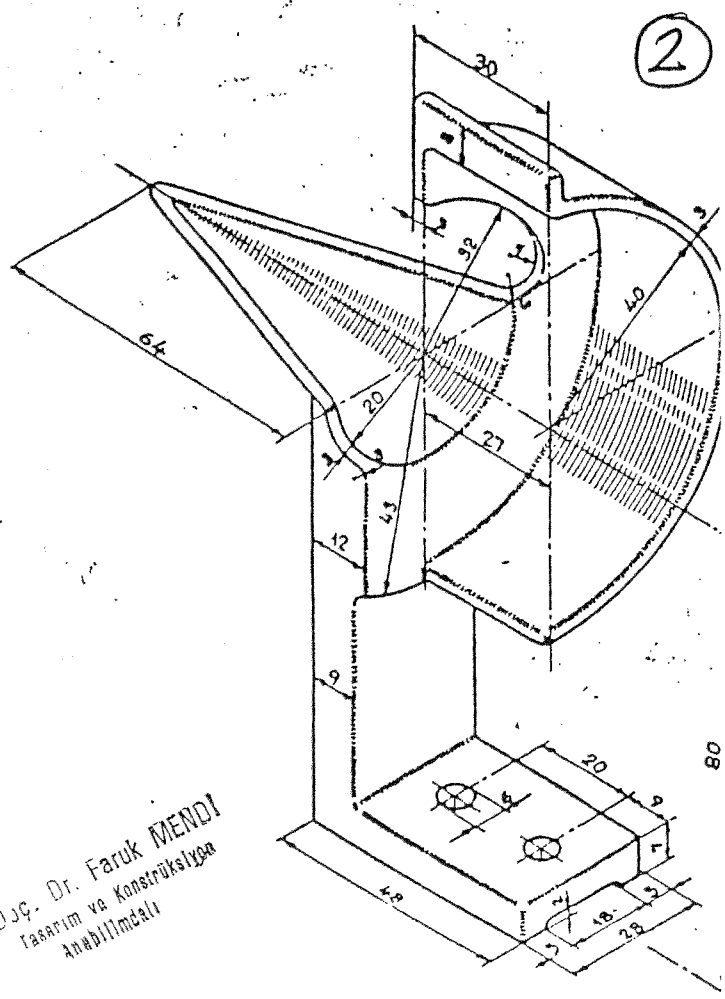
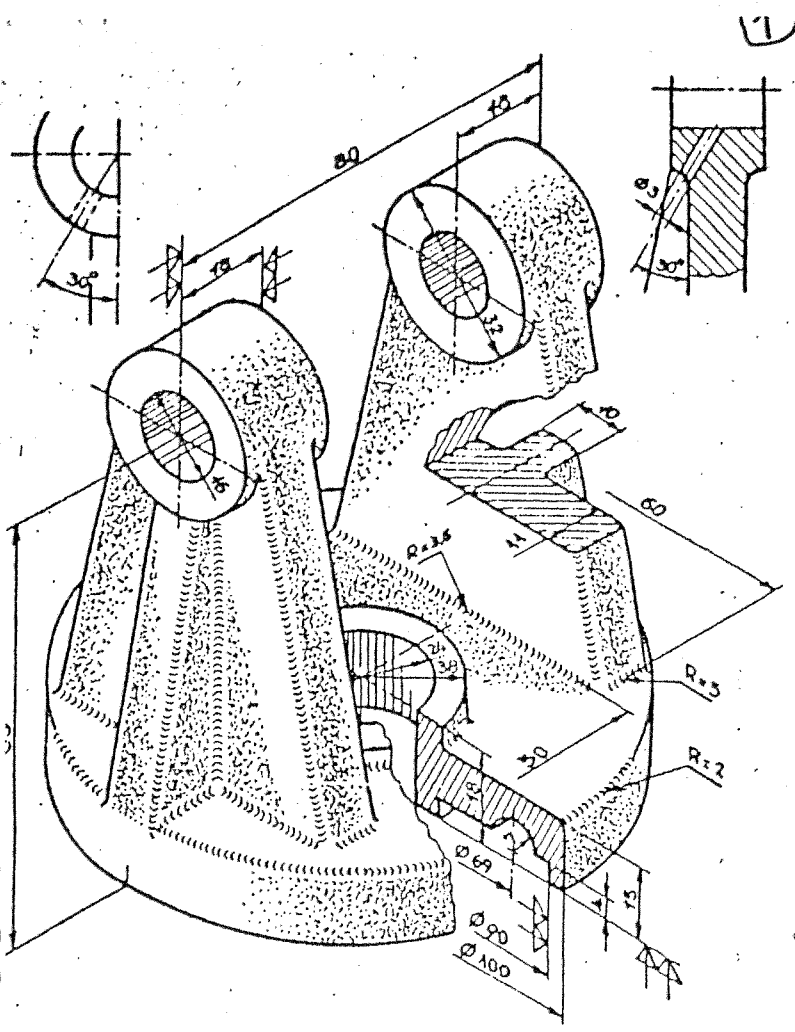


EGİK YATAK

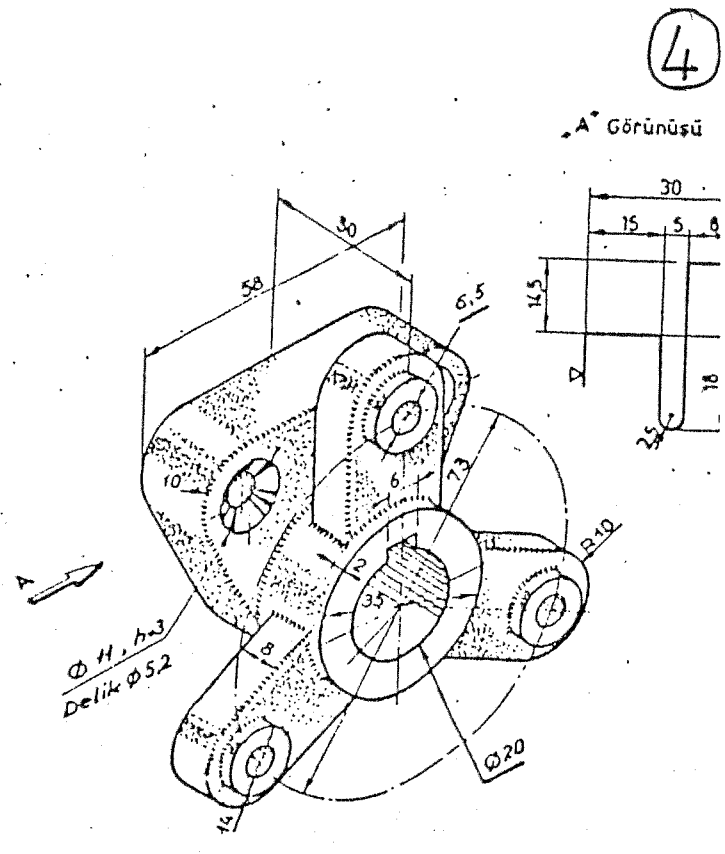
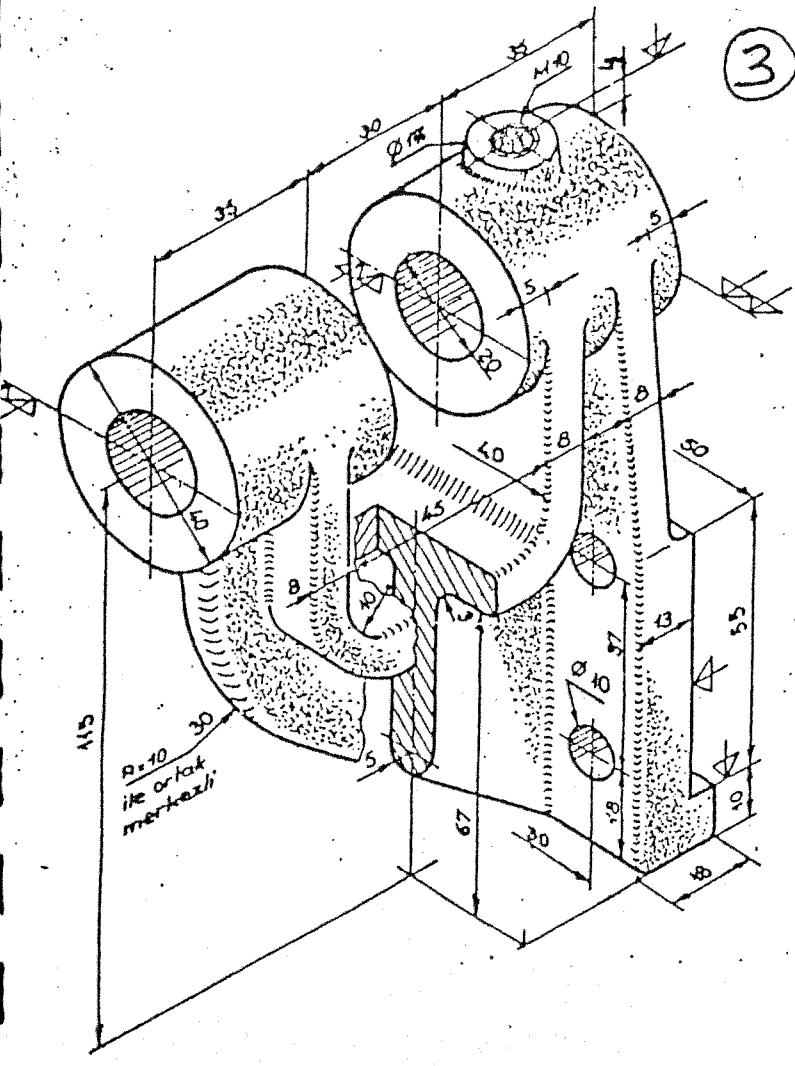
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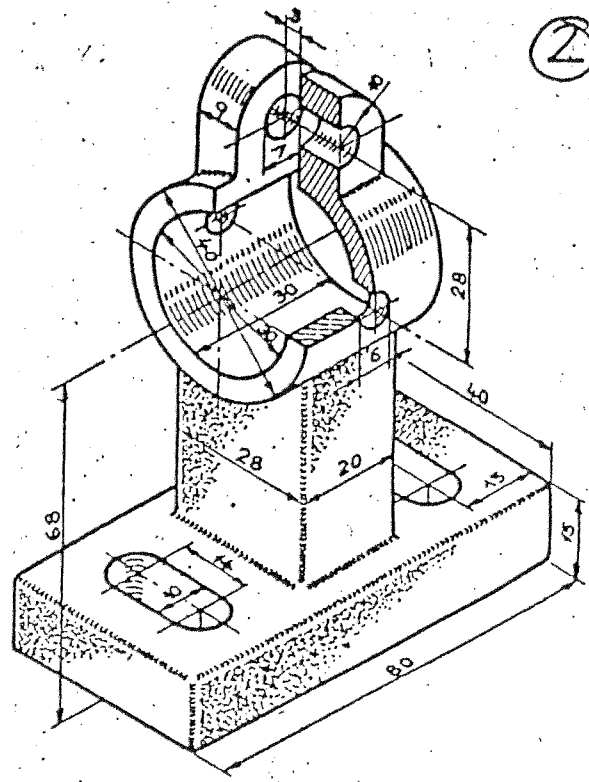
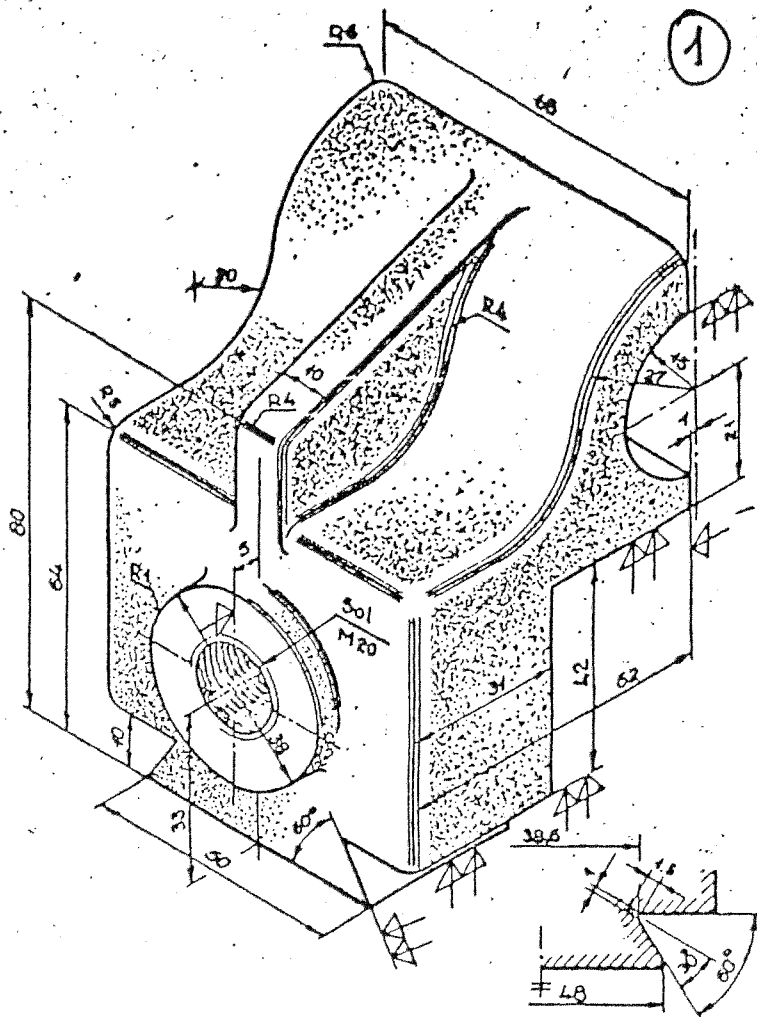




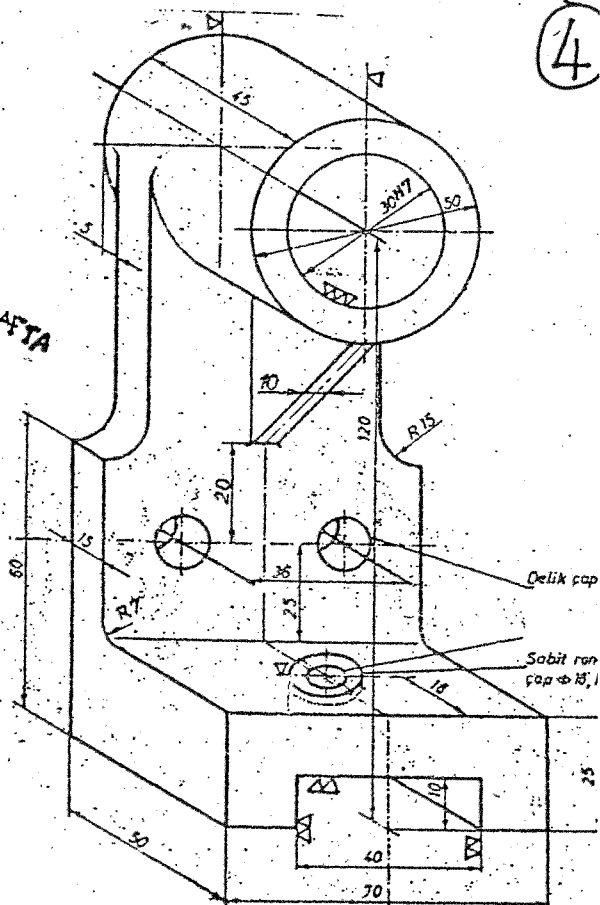
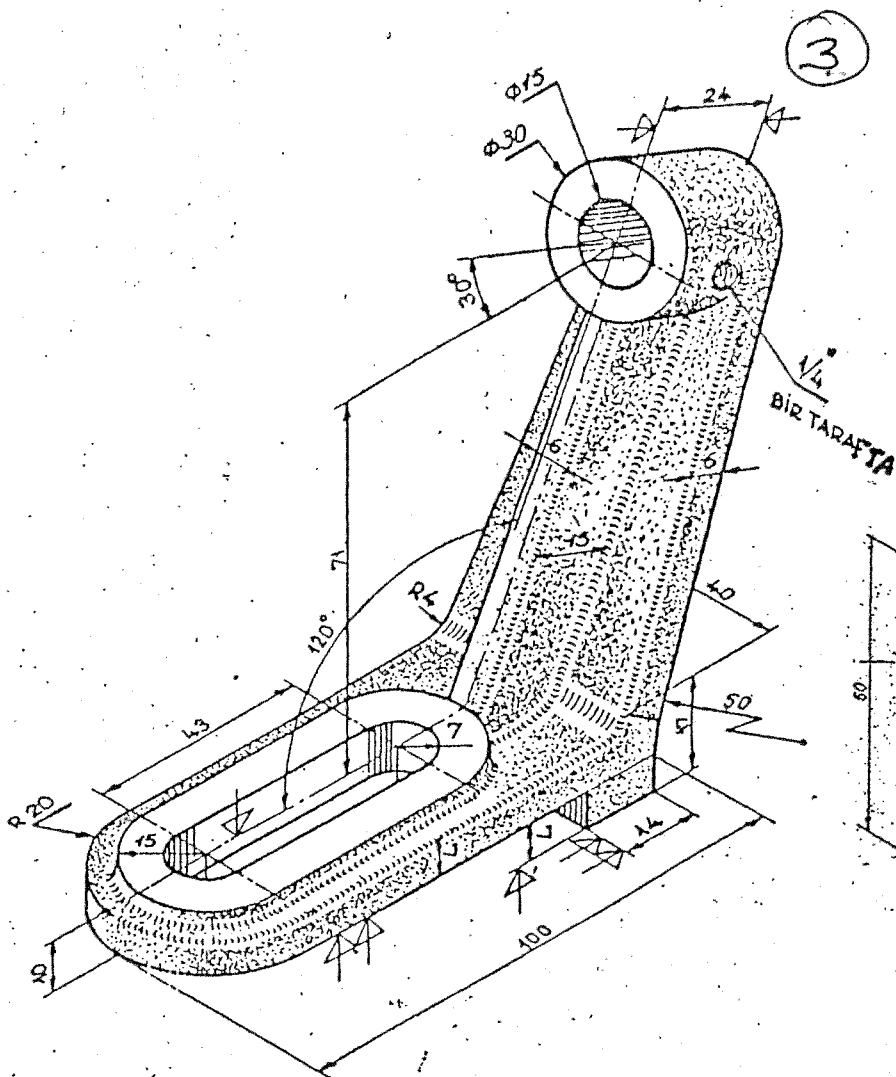
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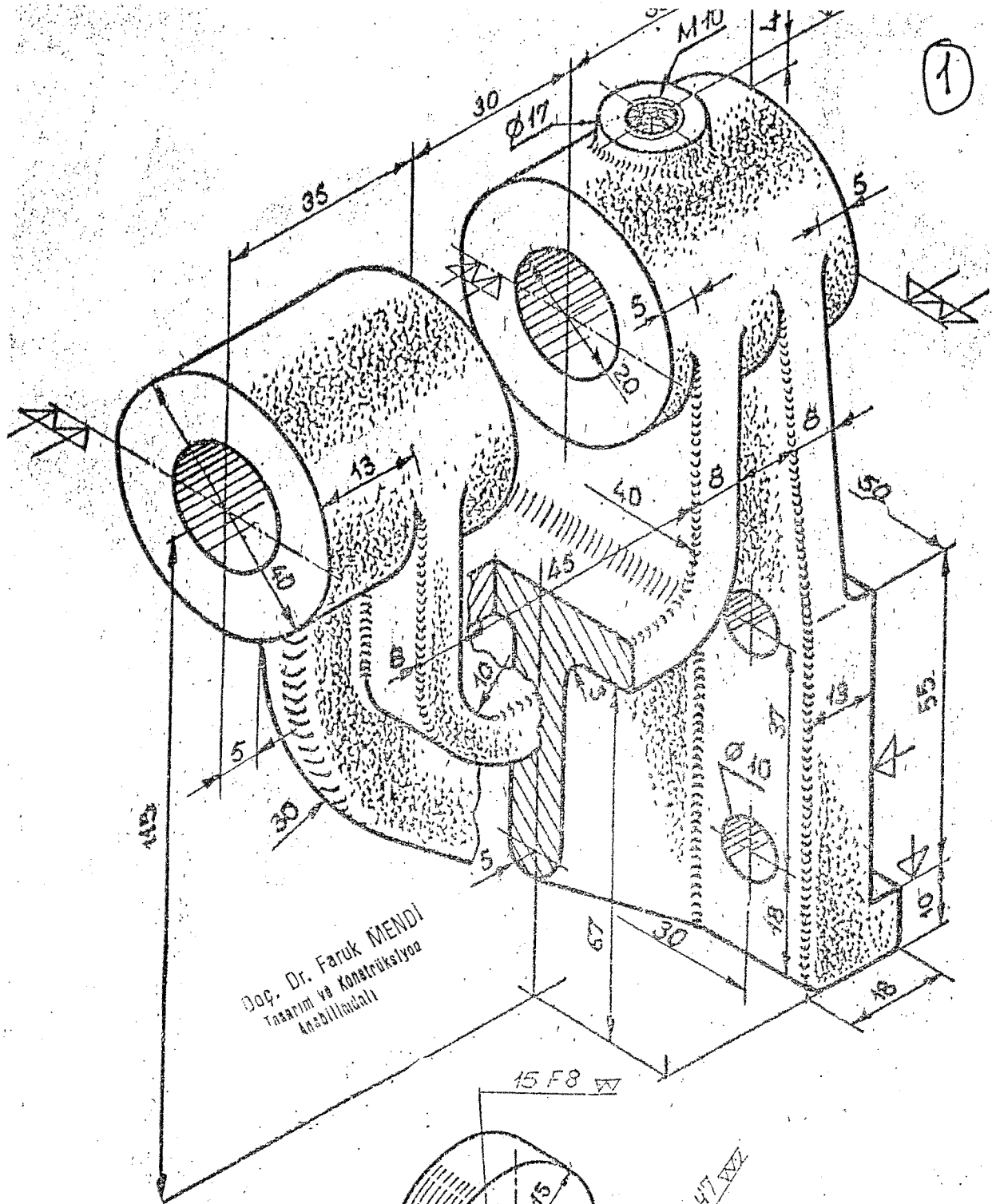


A' Görünüşü

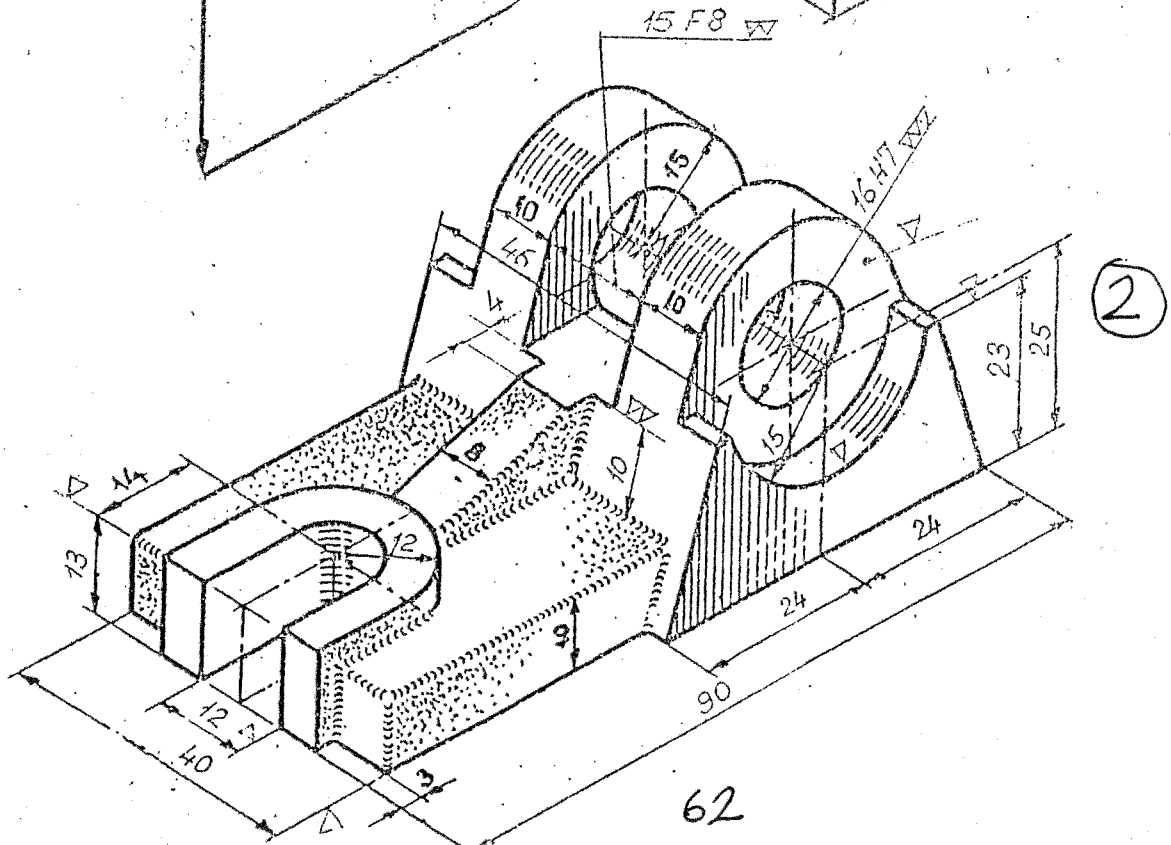


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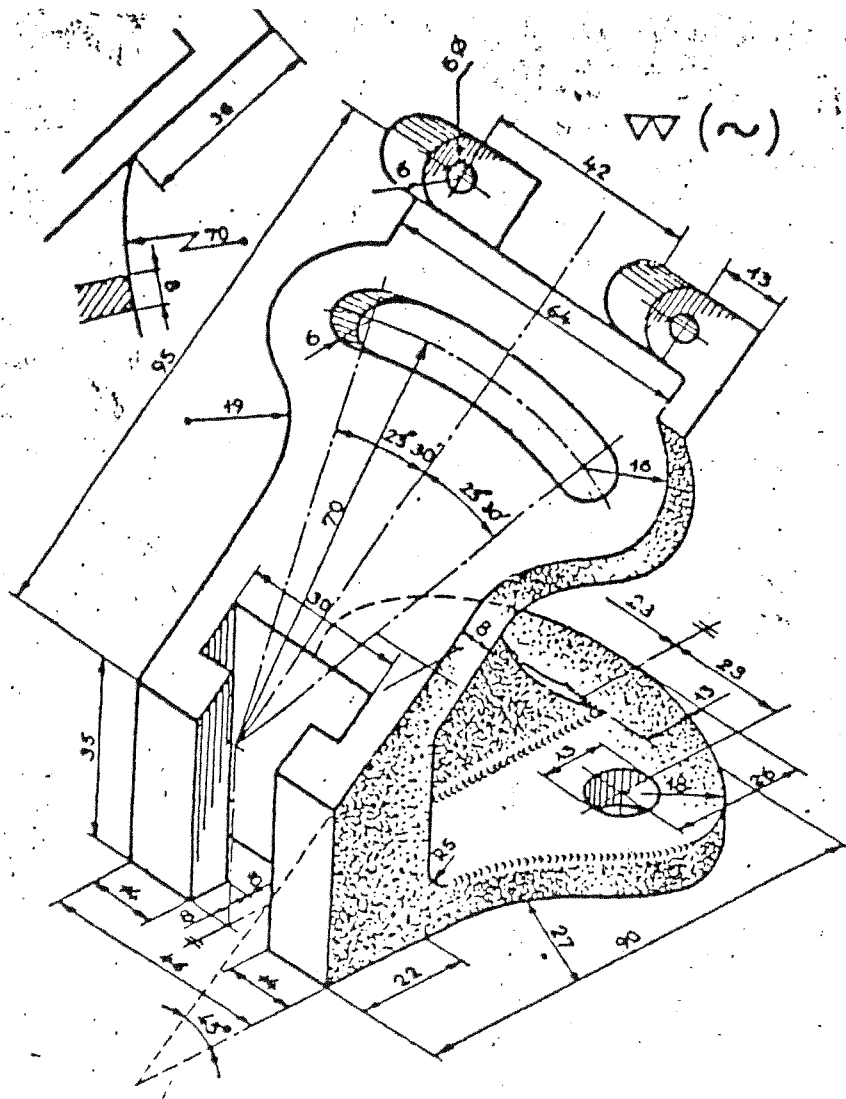




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Anabilim Dalı

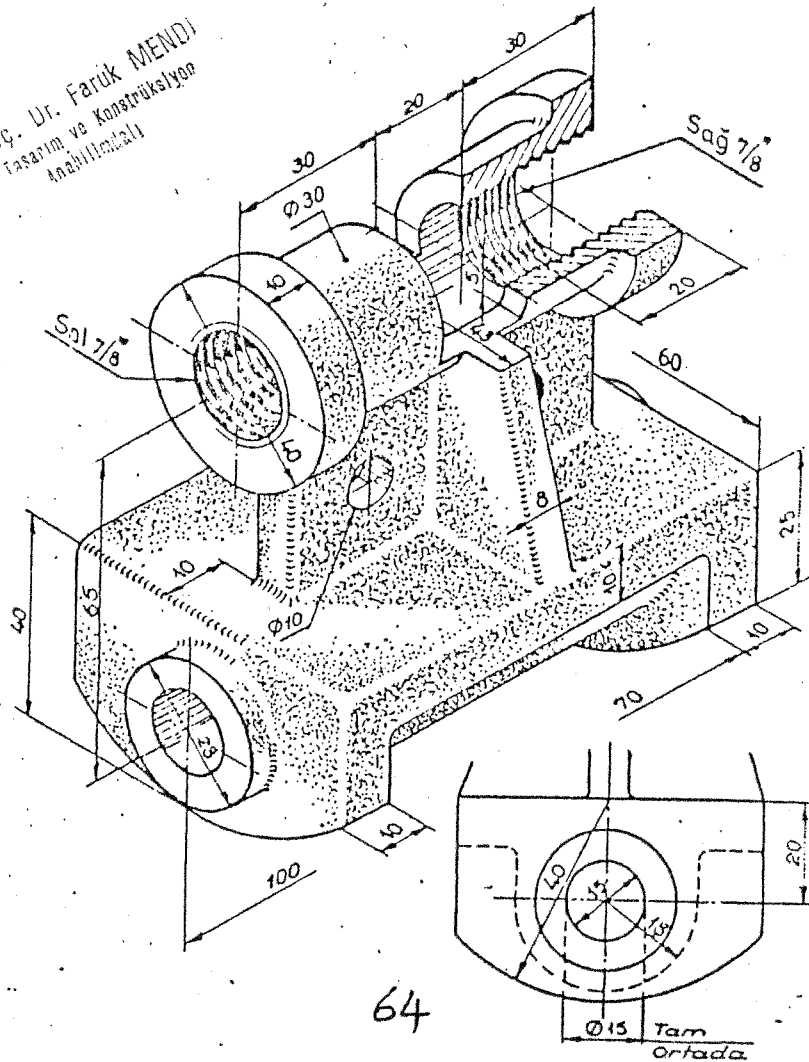






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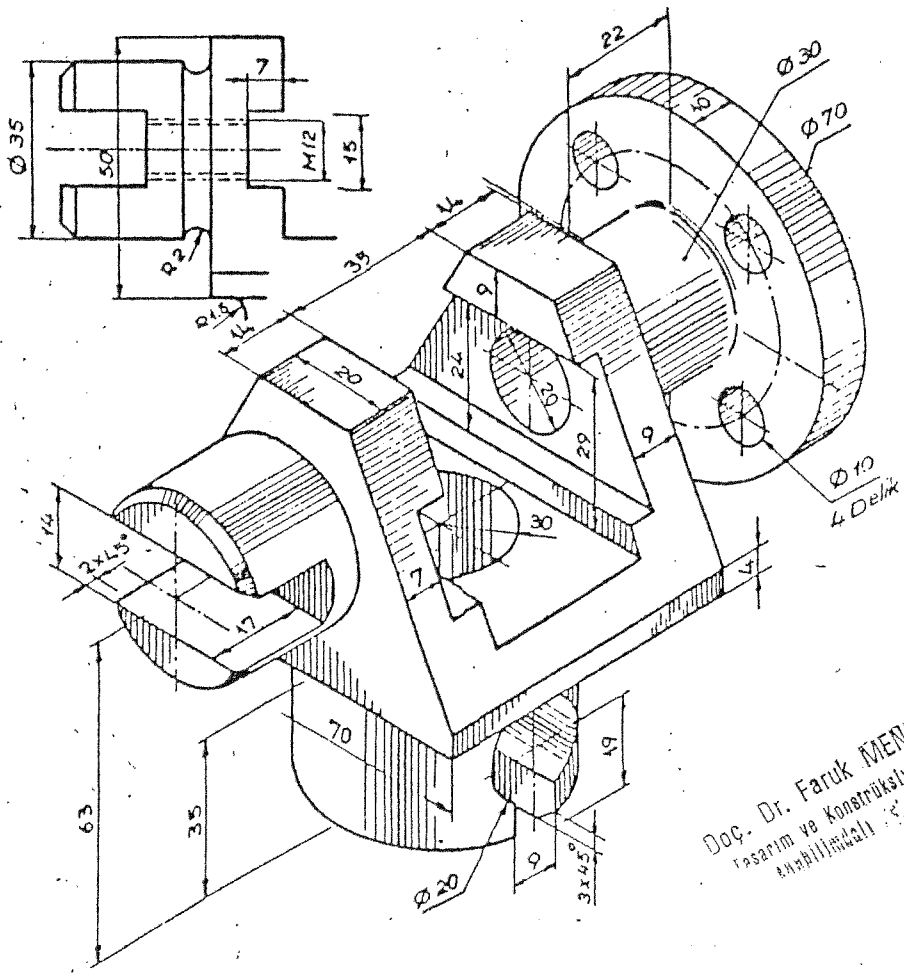
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Anabilim Dalı



(2)

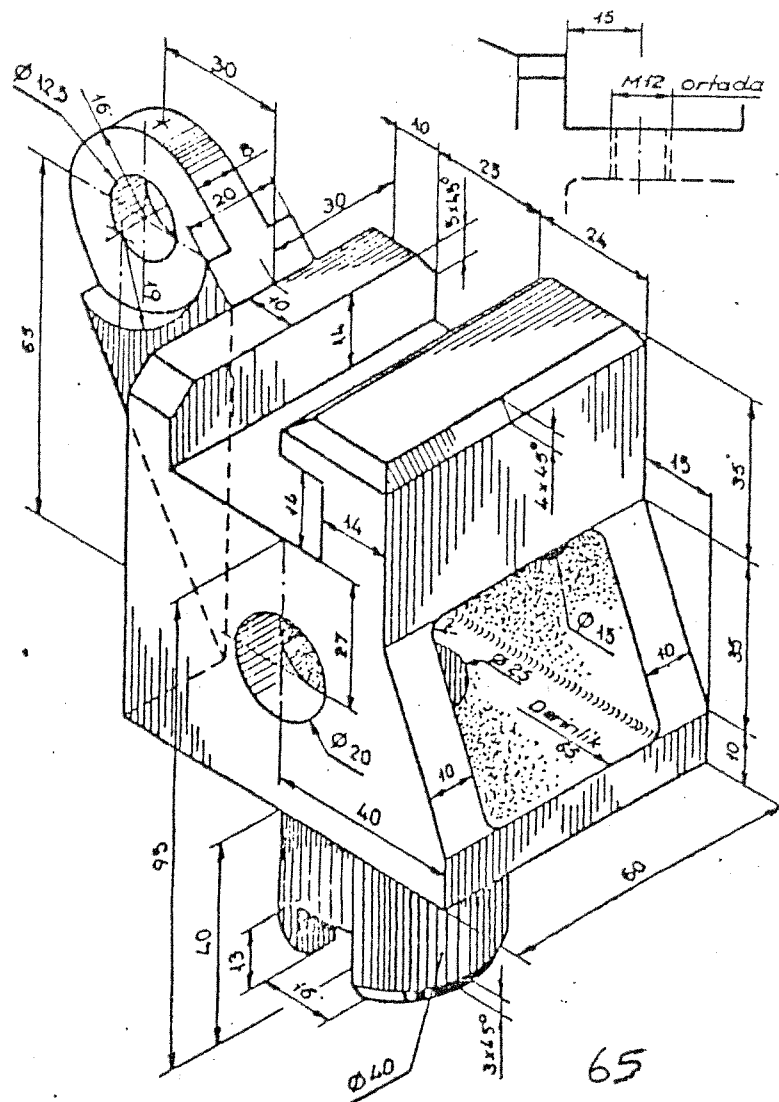
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$\Phi 15$  Tam ortada



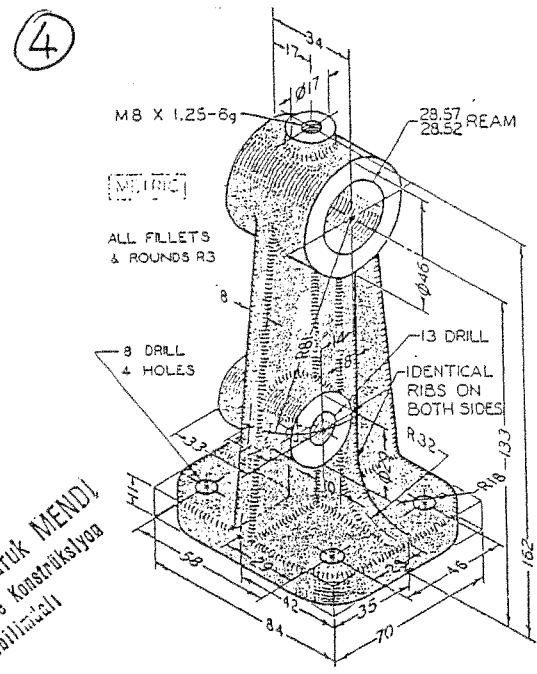
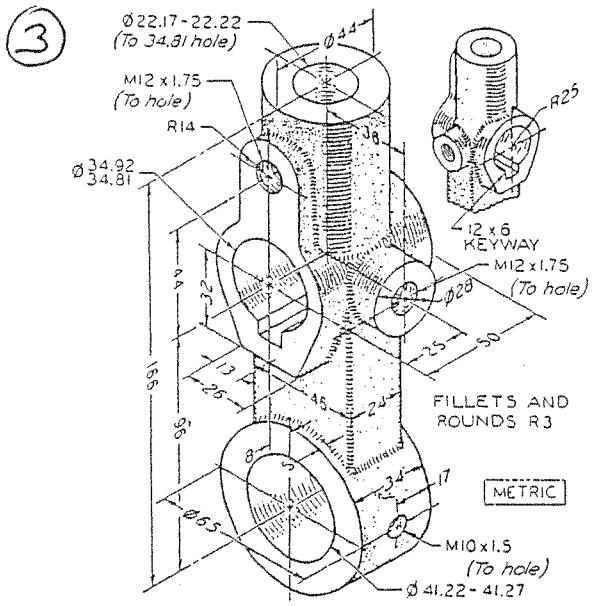
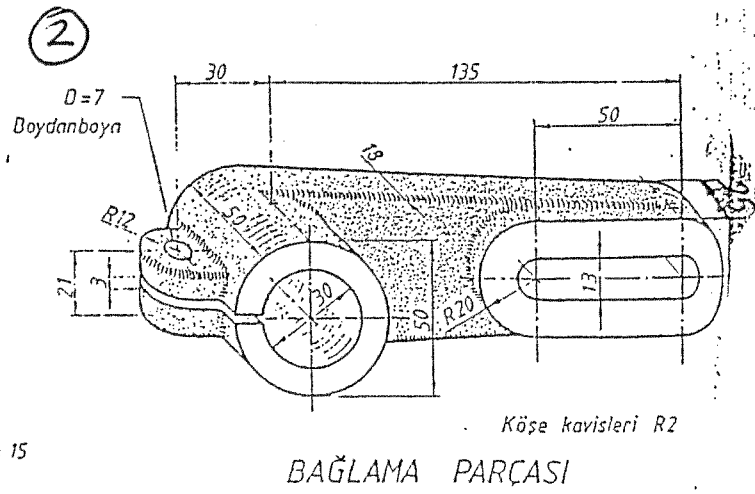
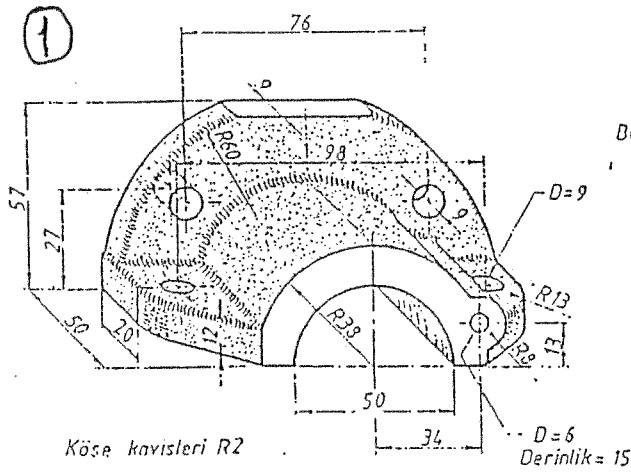
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 Mühendisliği

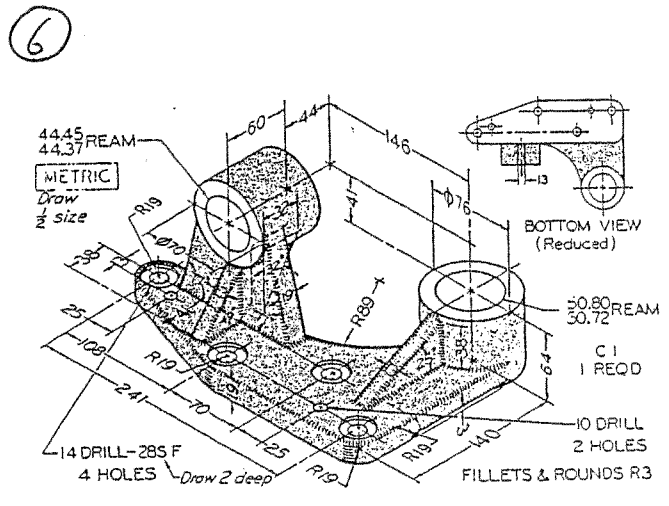
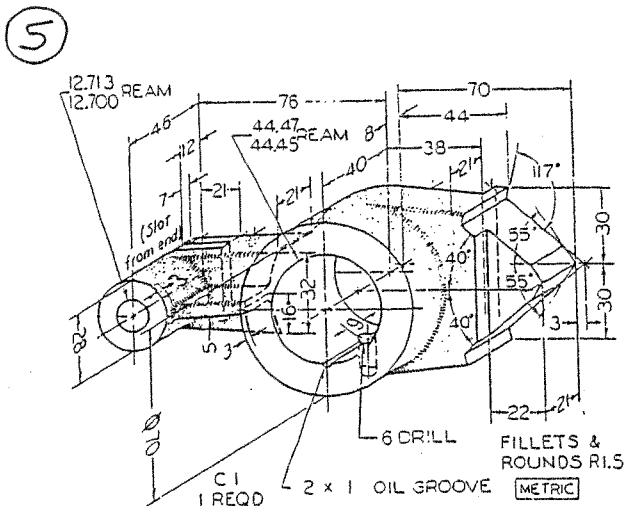


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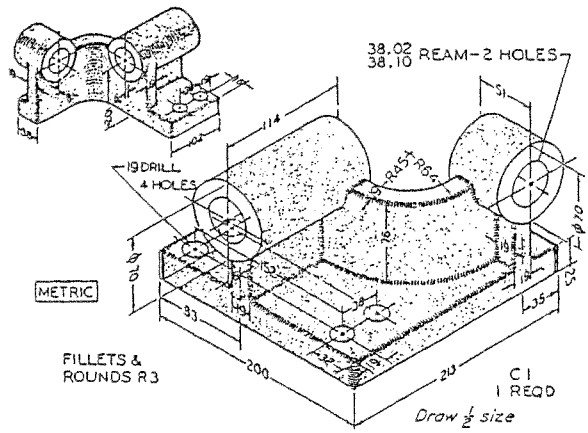


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Mühendisi

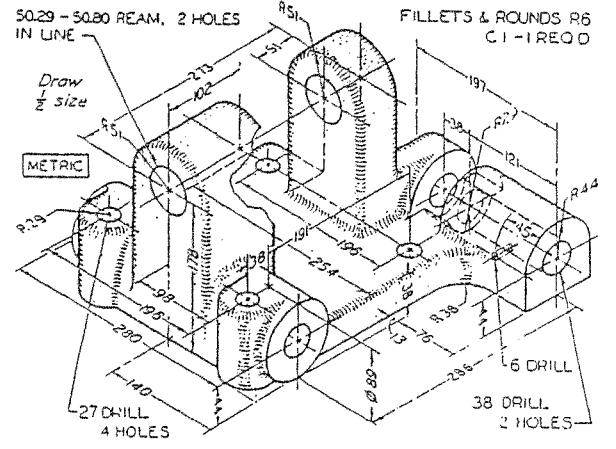




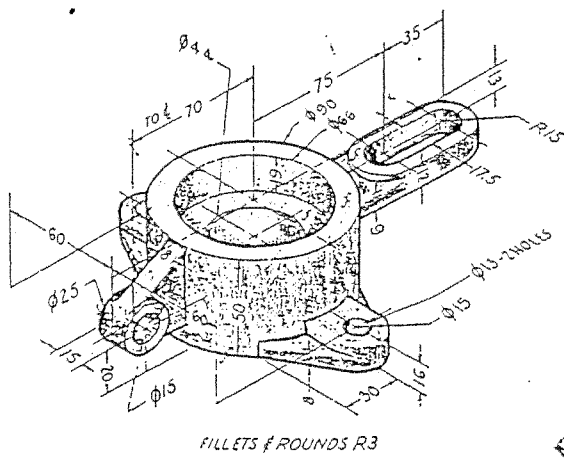
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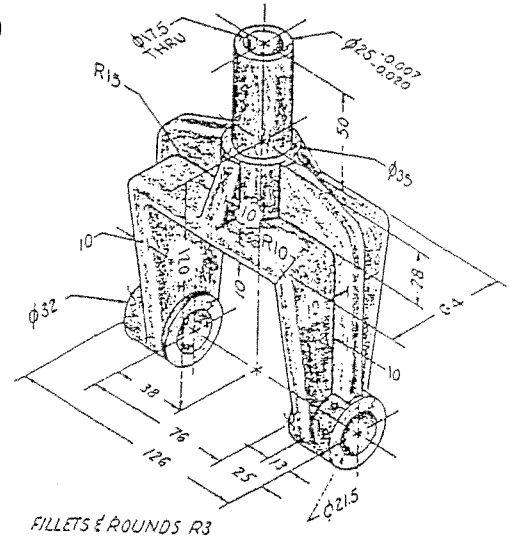
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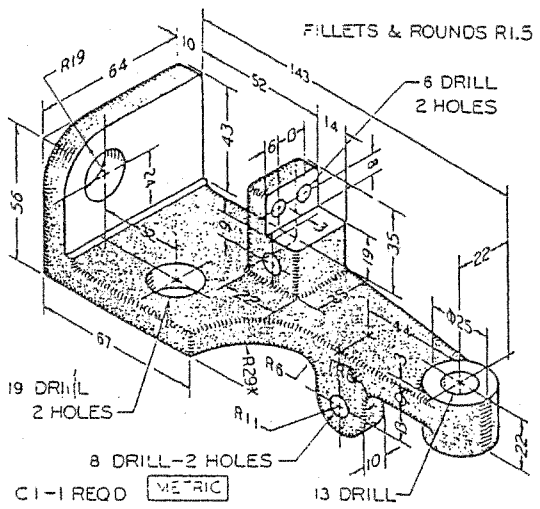
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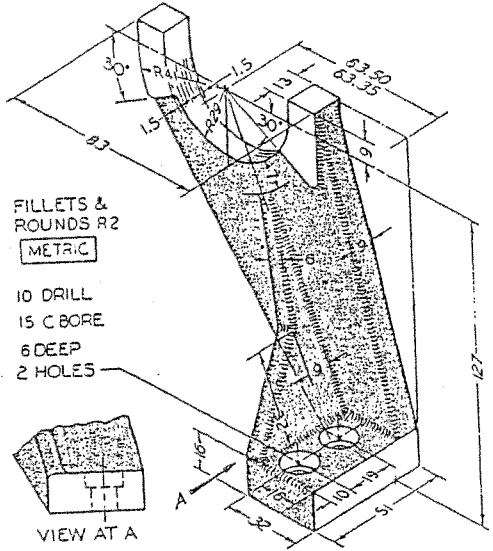
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5



6



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Mühendisliği

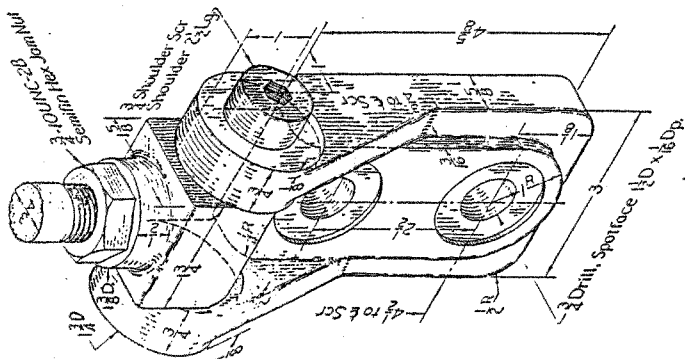


Fig. 28.62. Stay-rod pivot.

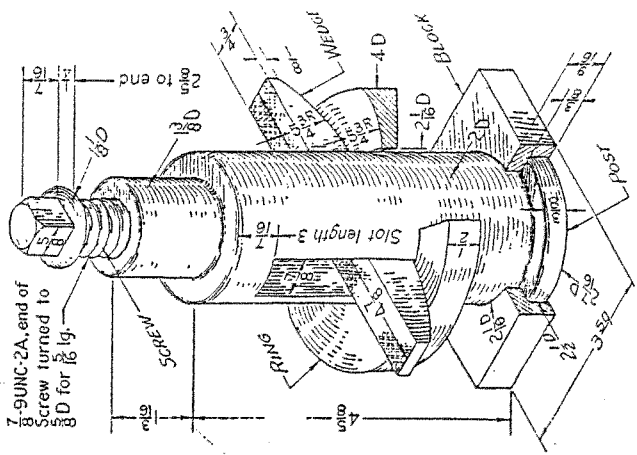


Fig. 28.63. Tool post.

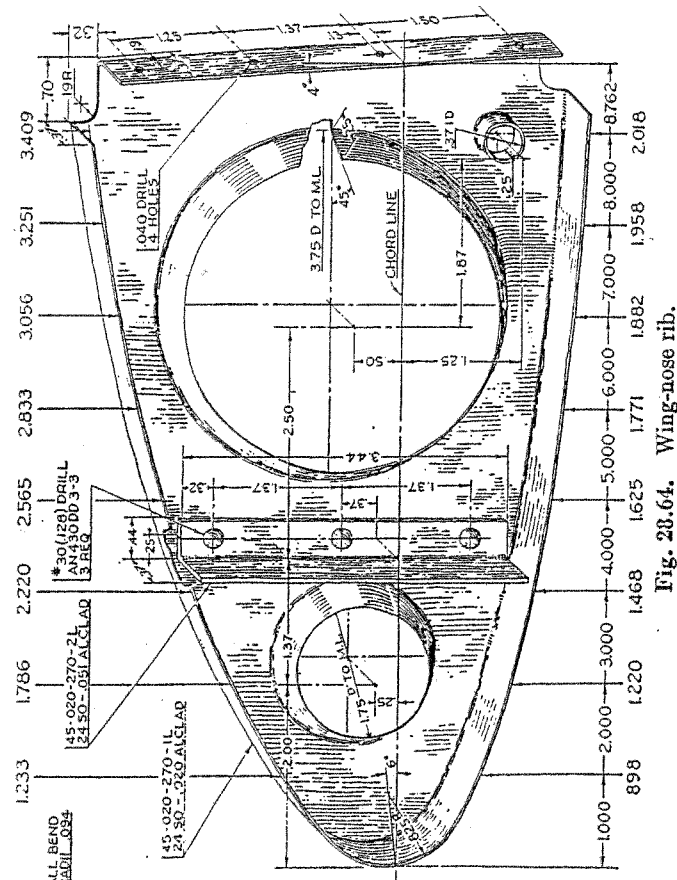


Fig. 28.64. Wing-nose rib.

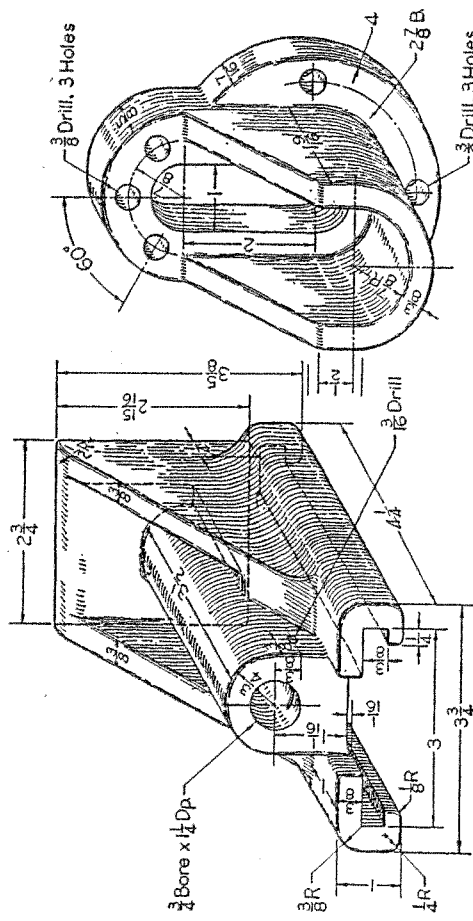


Fig. 9.52. Sliding buttress.

Fig. 9.53. End plate.

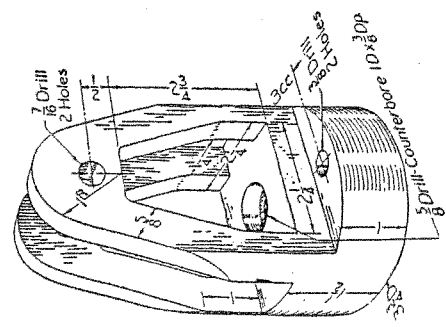


Fig. 9.54. Switch base.

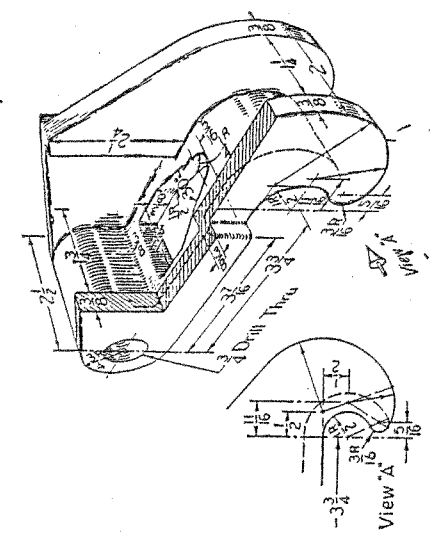
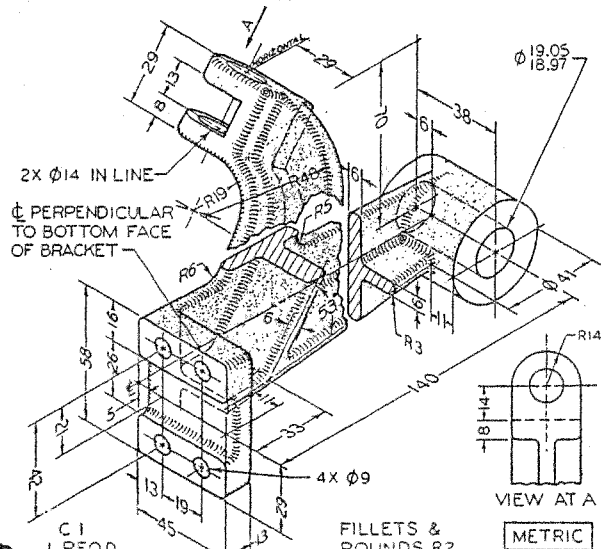
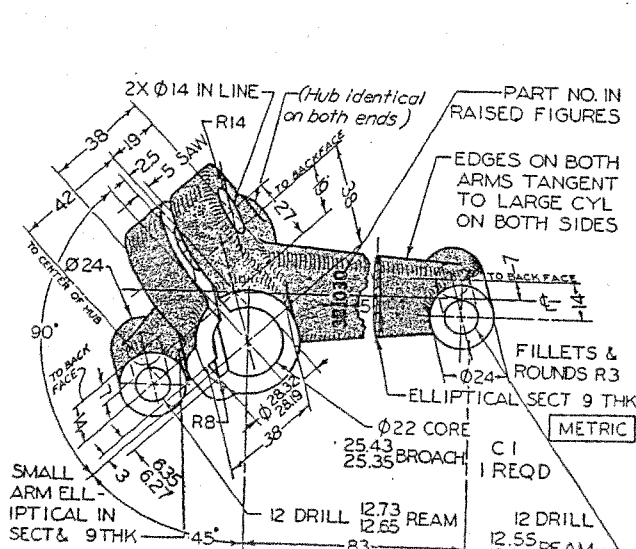
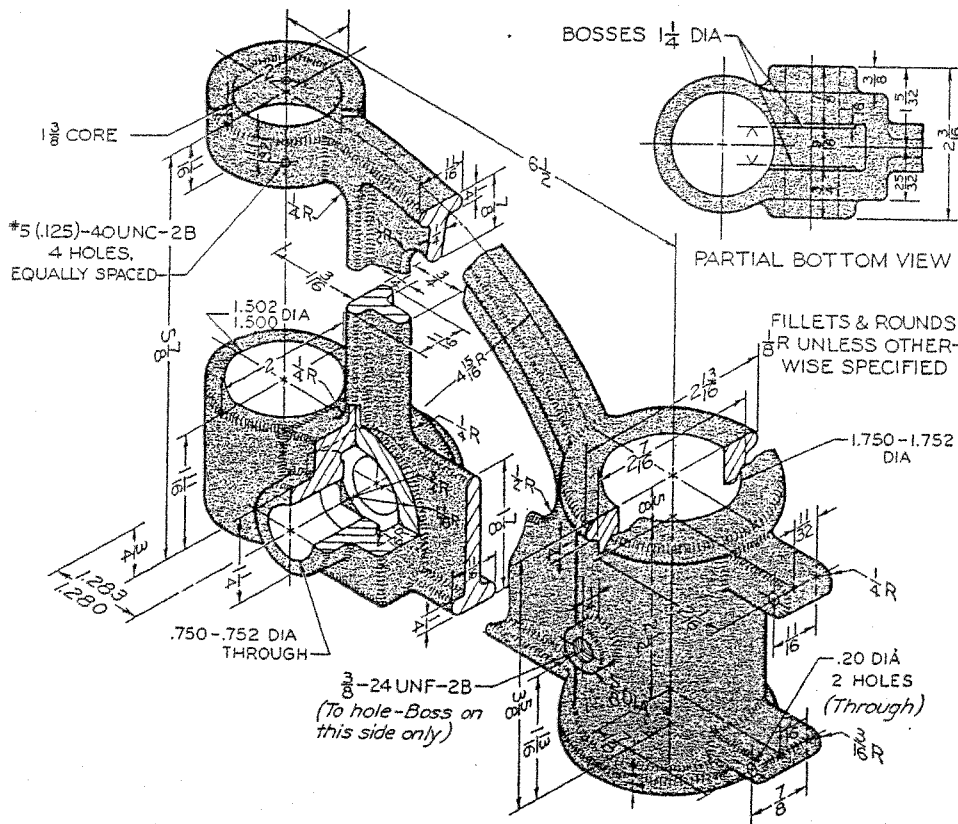
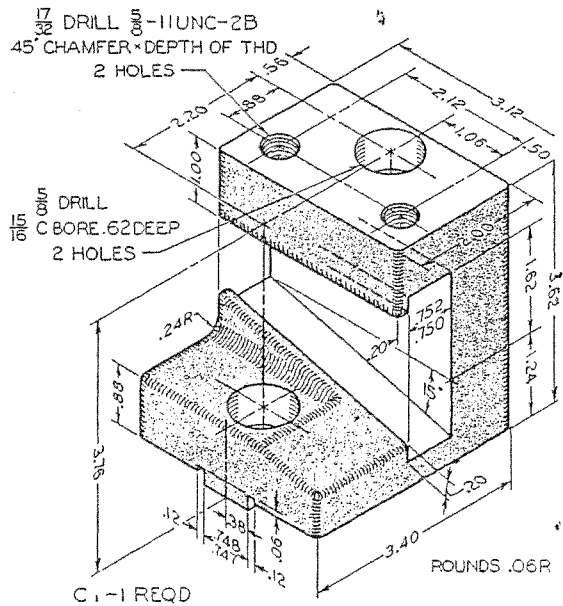
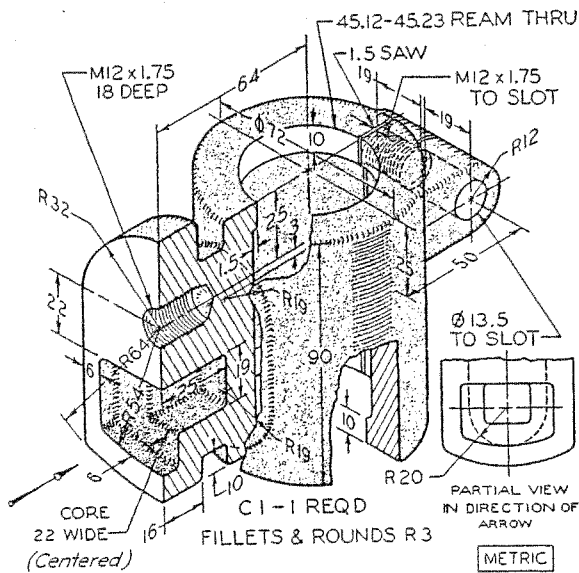


Fig. 9.55. Pawl hook.





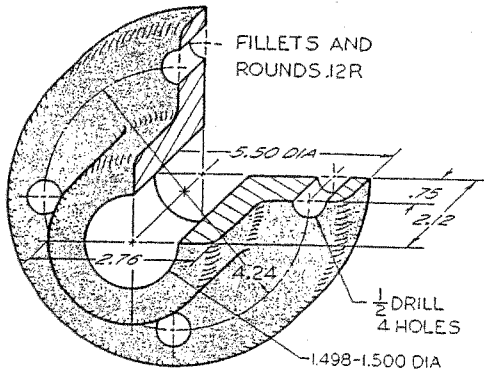


Fig. 9.41 Bearing. Draw necessary views, with full section. (Layout A-3).\*

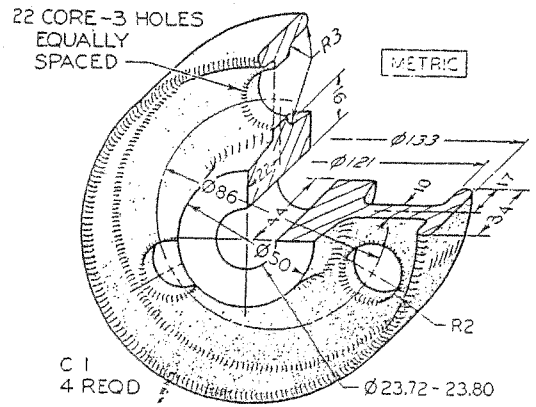


Fig. 9.42 Truck Wheel. Draw necessary views, with half section (Layout A-3).\*

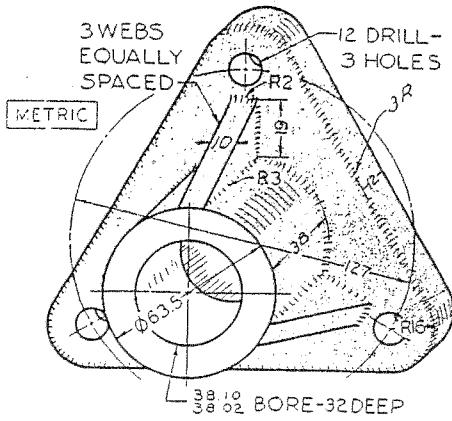


Fig. 9.43 Column Support. Draw necessary views, with full section (Layout A-3).\*

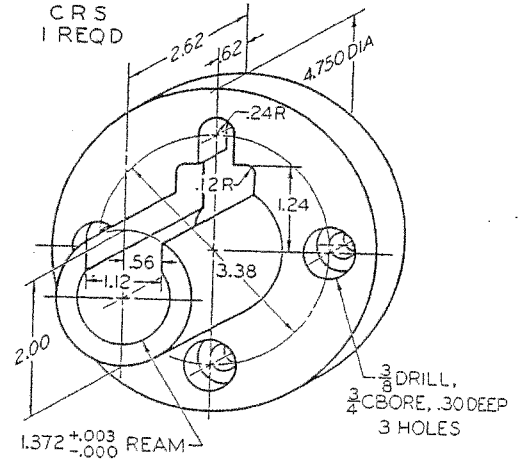
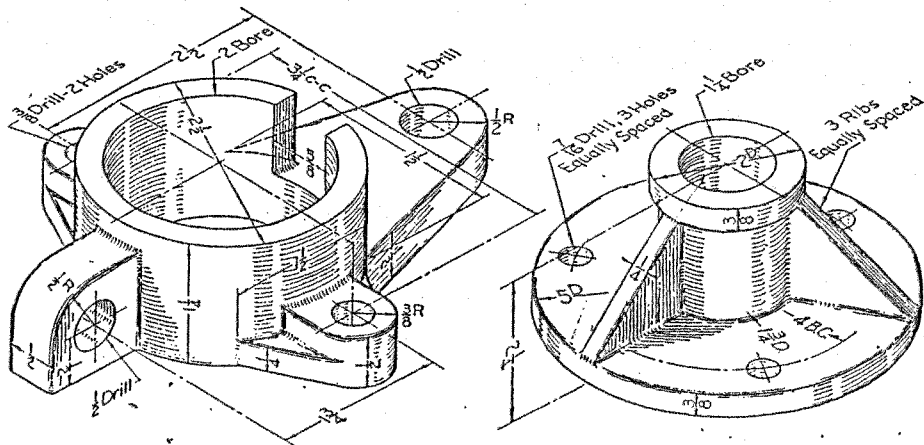
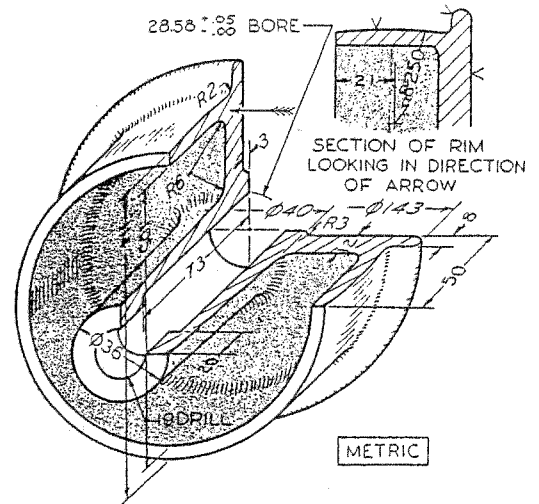
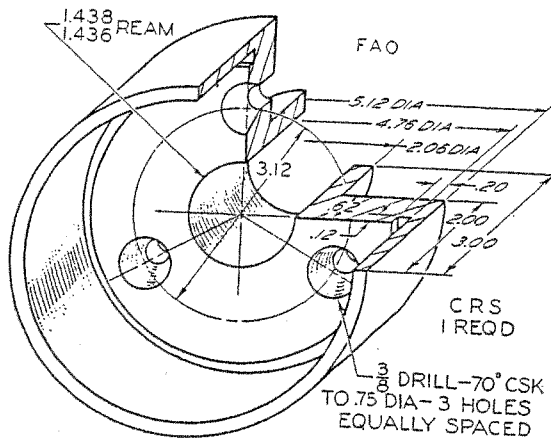


Fig. 9.44 Centering Bushing. Draw necessary views, with full section (Layout A-3).\*



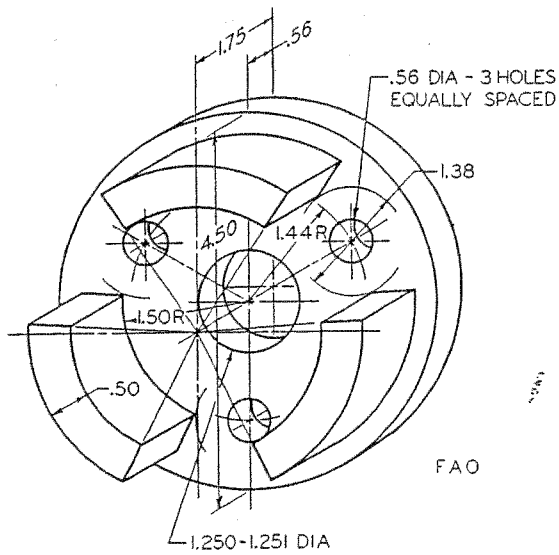


Fig. 9.47 Cup Washer. Draw necessary views, with full section (Layout A-3 or A4-3 adjusted).\*

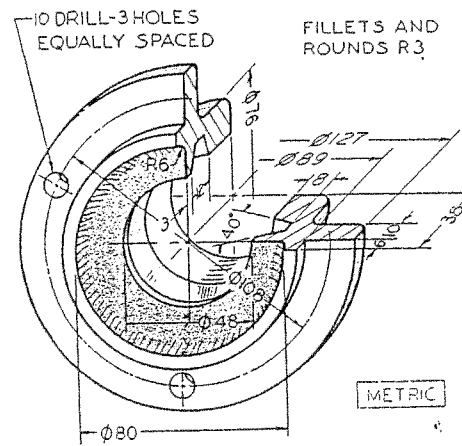


Fig. 9.48 Fixed Bearing Cup. Draw necessary views, with full section (Layout A-3 or A4-3 adjusted).\*

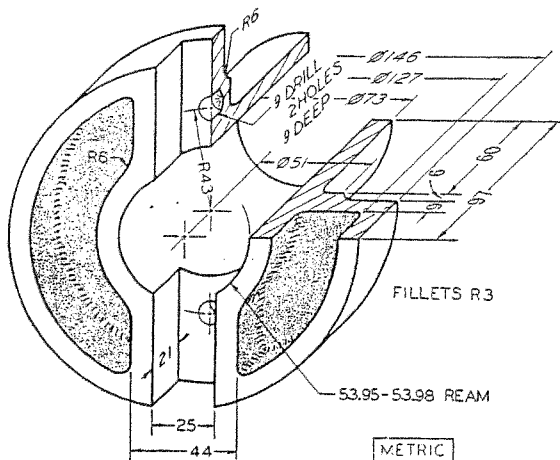


Fig. 9.49 Stock Guide. Draw necessary views, with half section (Layout B-4 or A3-4 adjusted).\*

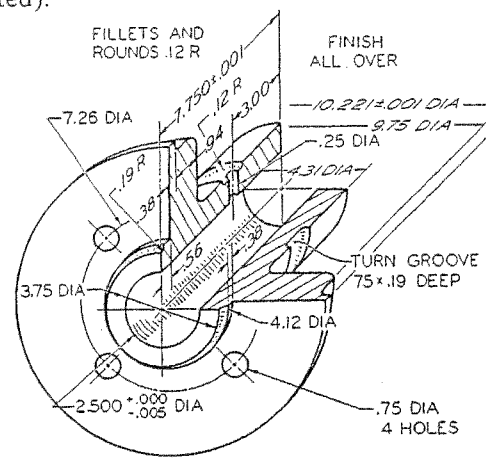
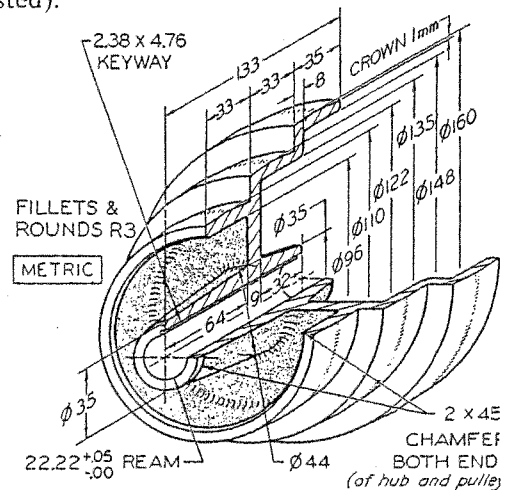
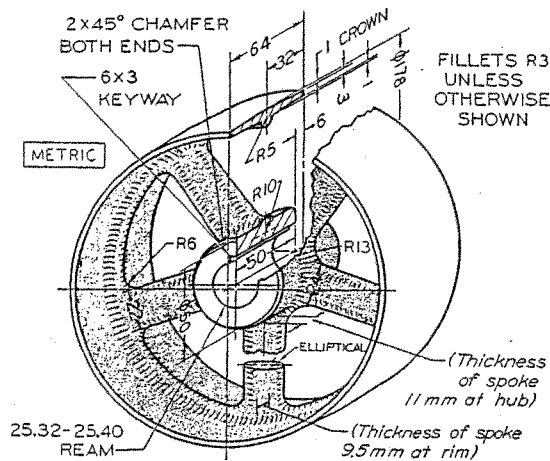
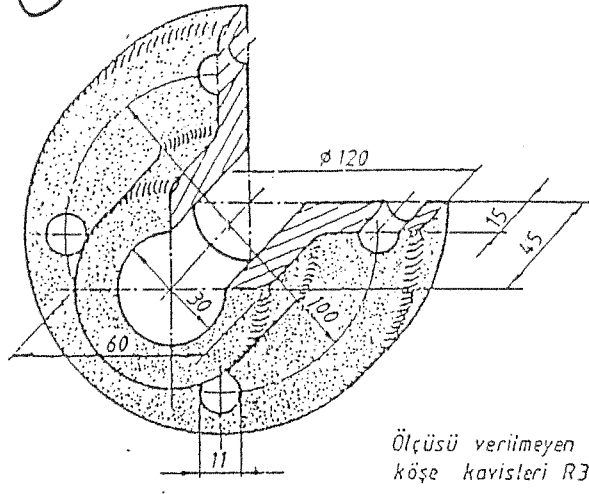


Fig. 9.50 Bearing. Draw necessary views with full section. Scale: half size (Layout B-4 or A3-4 adjusted).\*



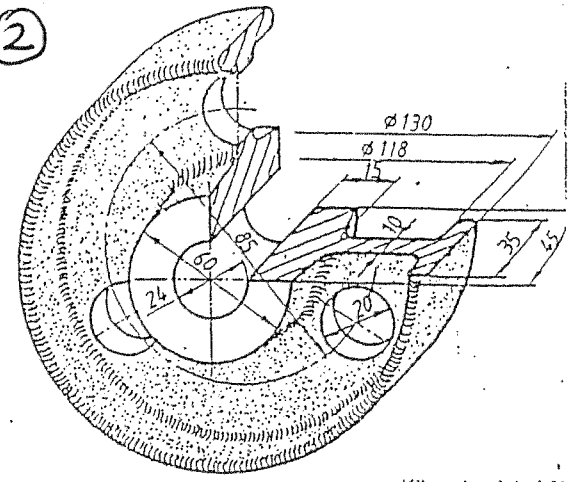
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YATAK

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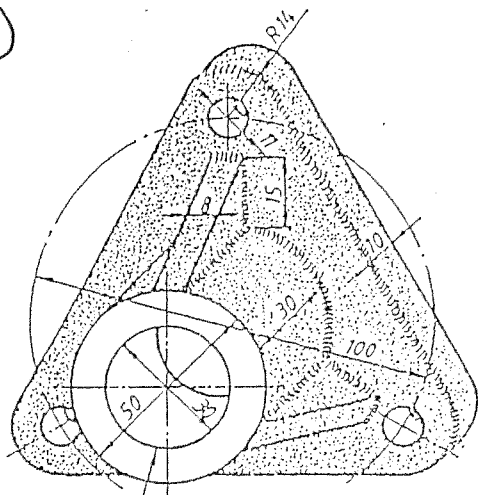
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TEKERLEK

Köşe kavisteleri R1

3

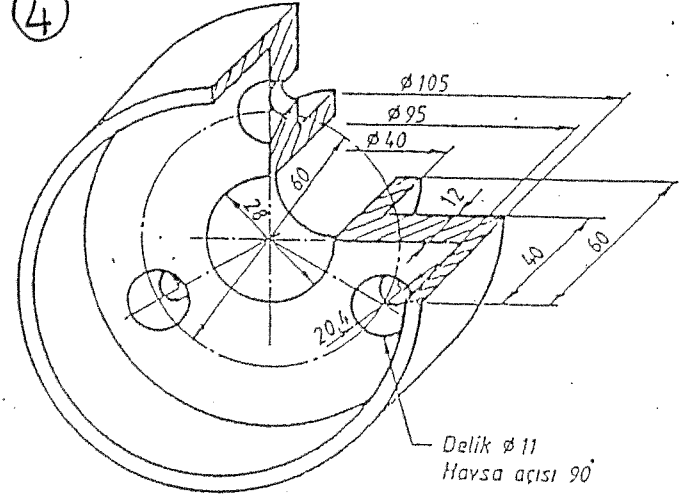


MİL TAŞIYICISI

Köşe kavisteleri R3

Delik derinliği: 25

4

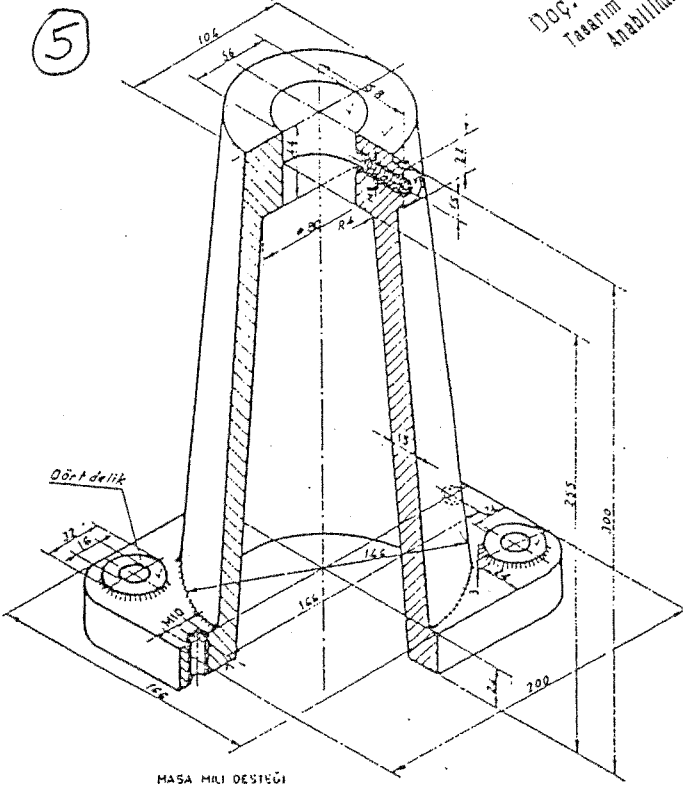


ÖZEL YATAK

Delik  $\phi 11$   
Havsa açısı 90°

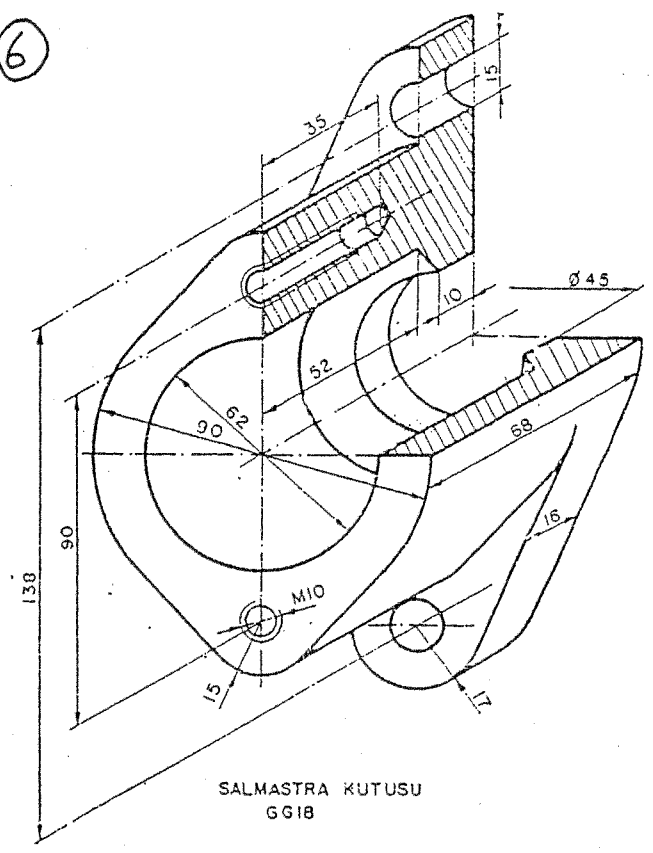
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5



MASA MİL DESTEĞİ  
GG 22

6



SALMASTRA KUTUSU  
GG 18

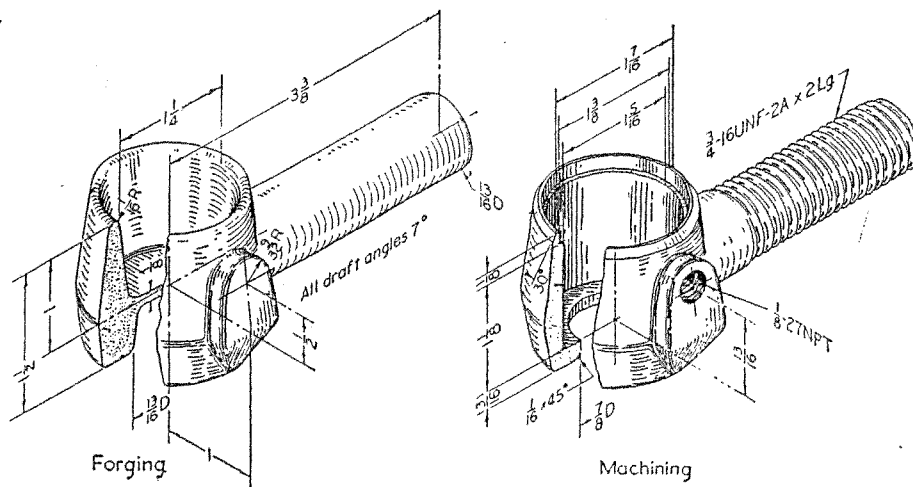


Fig. 28.29. Steering knuckle.

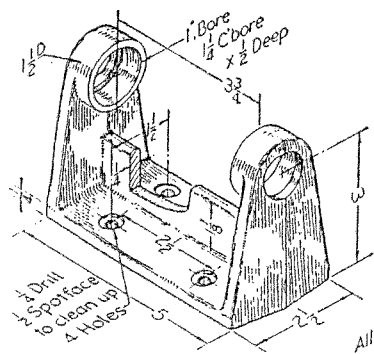


Fig. 28.30. Buffer stand.

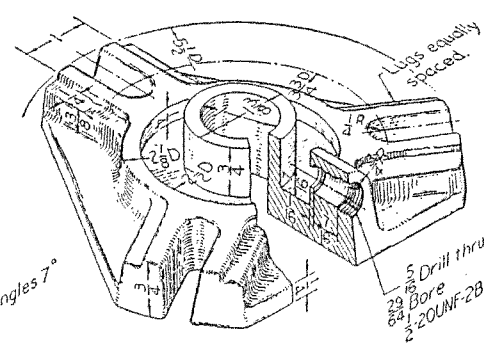
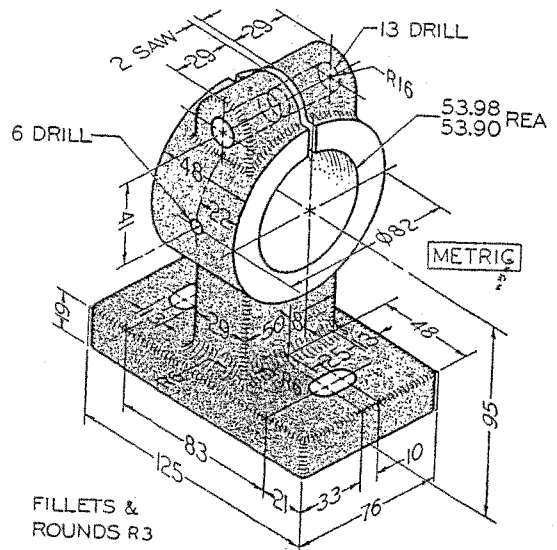
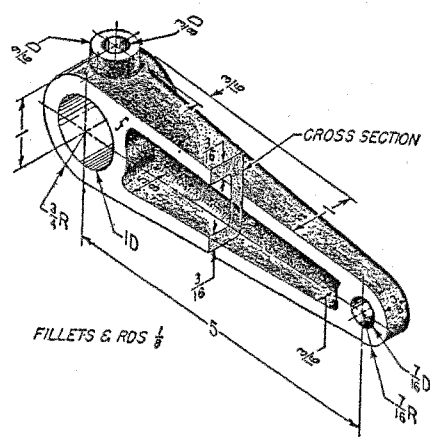
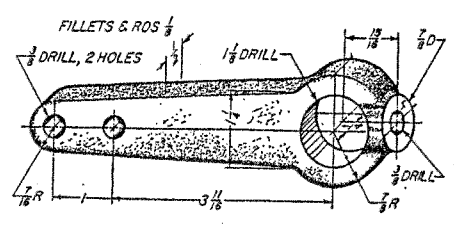
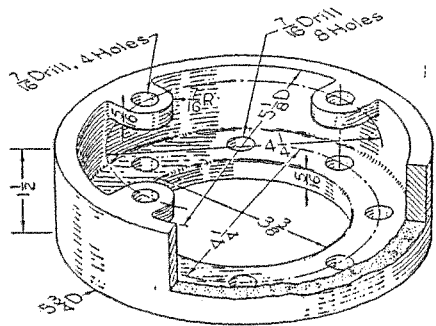
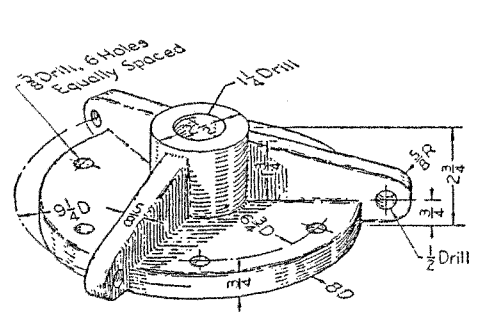


Fig. 28.31. Puller body.



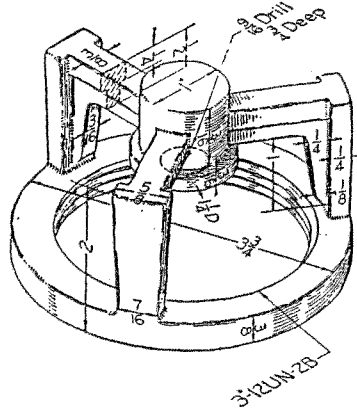


Fig. 28.22. Valve cage.

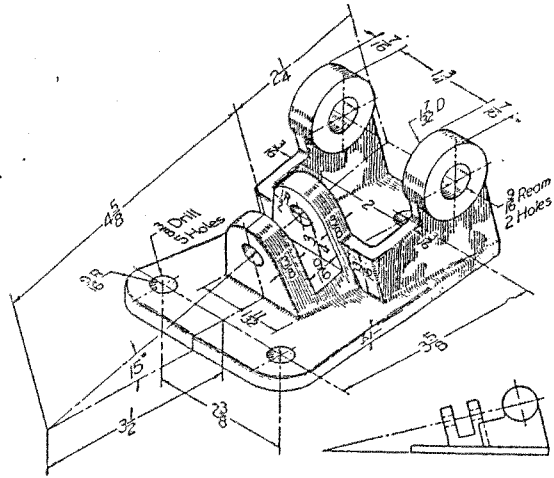


Fig. 28.23. Brace plate.

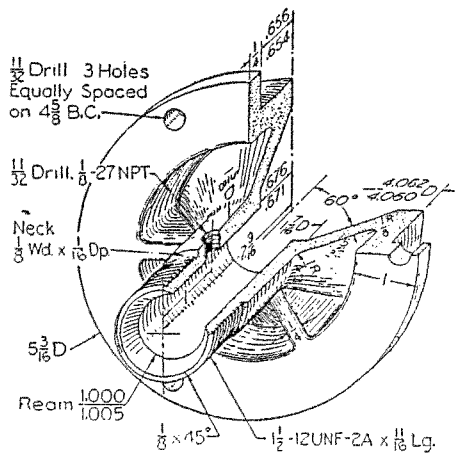


Fig. 28.24. Water-pump cover.

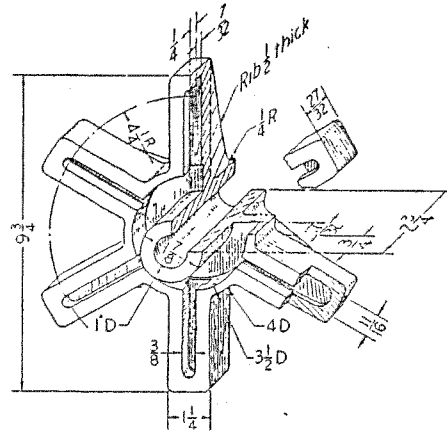


Fig. 28.25. Slotted spider.

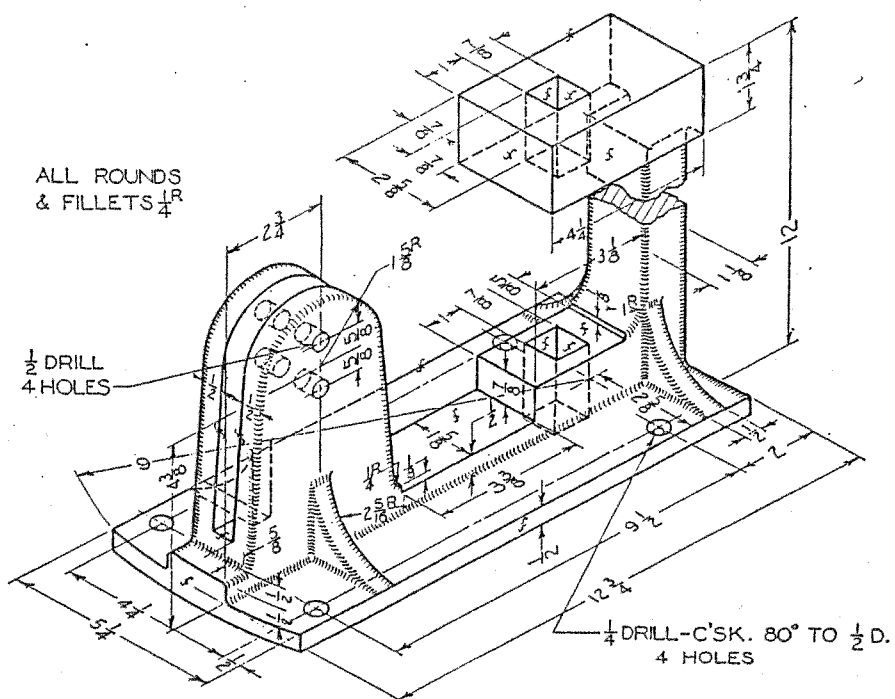


FIG. 872 SOAP PRESS BRACKET. Make detail drawing.

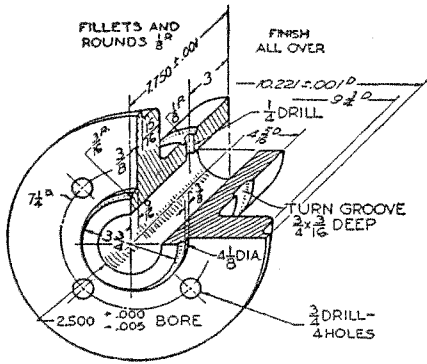


FIG. 460 BEARING.

Draw necessary views, with half section.\*

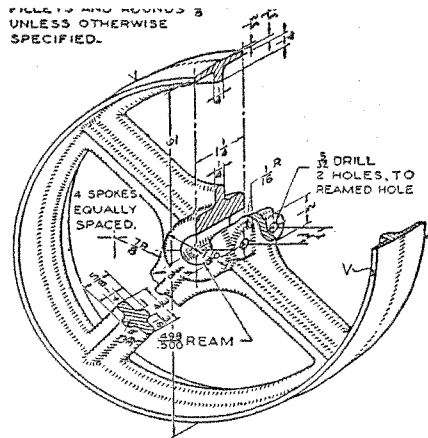


FIG. 461 PULLEY.

Draw necessary views, with full section, revolved section of spoke, and partial auxiliary view of two bosses (§ 244).\*

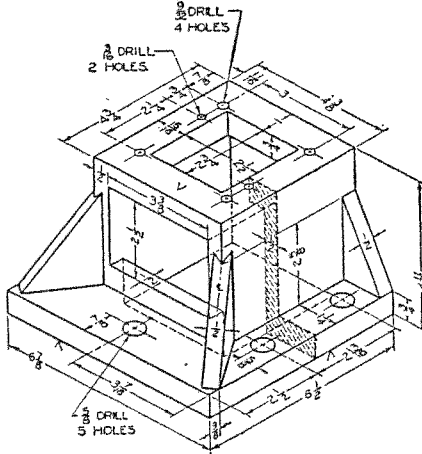


FIG. 462 MOTOR BASE.

Draw necessary views, including a full section at all ends.

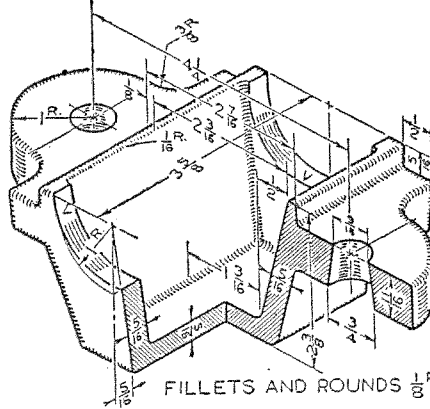


FIG. 463 BEARING HOUSING.

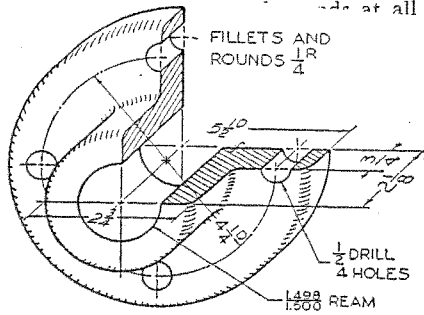


FIG. 448 BEARING.

Draw necessary views, with full section.\*

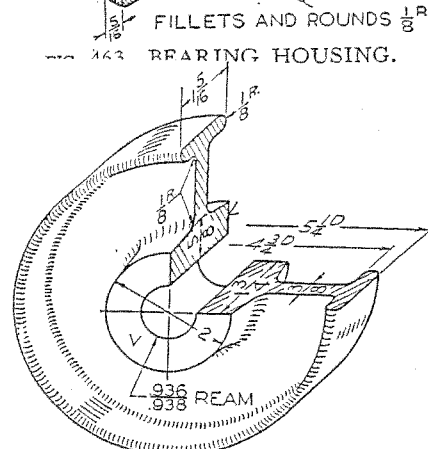


FIG. 449 TRUCK WHEEL.

Draw necessary views, with half section.\*

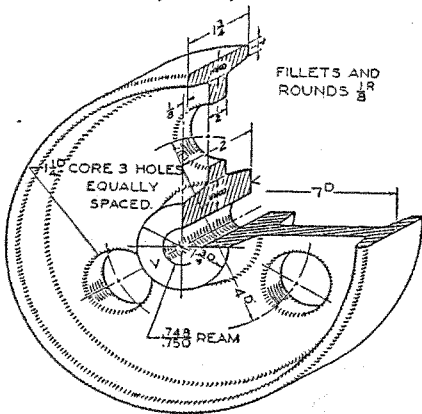


FIG. 450 CONVEYOR WHEEL.

Draw necessary views, with full section.\*

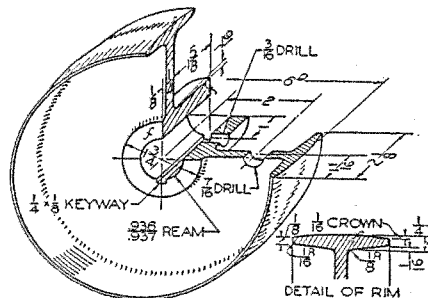
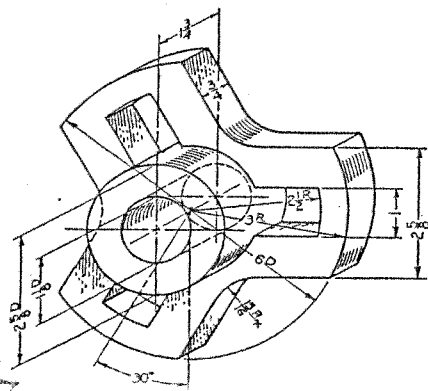
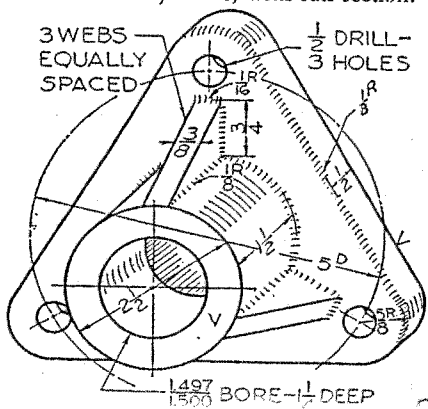


FIG. 451 PULLEY.

Draw necessary views, with full section.\*



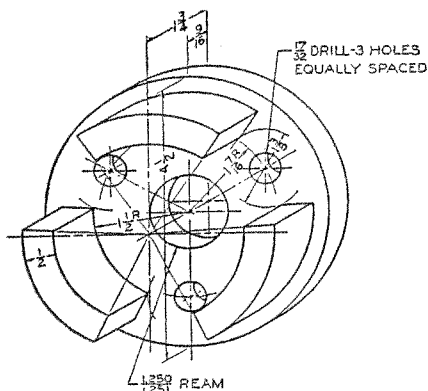


FIG. 454 CUP WASHER.  
Draw necessary views, with full section.\*

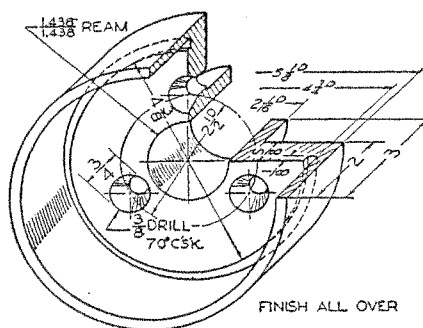


FIG. 455 SPECIAL BEARING.  
Draw necessary views, with full section.\*

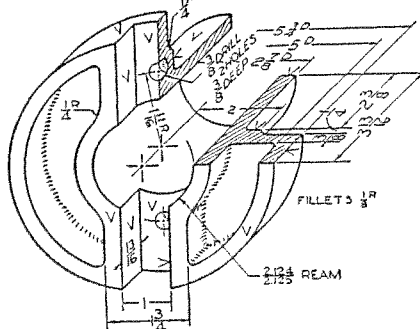


FIG. 456 STOCK GUIDE.  
Draw necessary views, with half section.\*

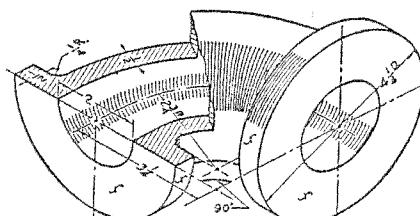


FIG. 457 90° ELBOW.  
Draw necessary views, with broken-out section.\*

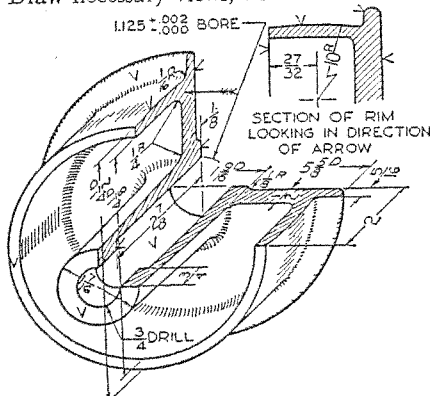


FIG. 458 IDLER PULLEY.  
Draw necessary views, with full section.\*

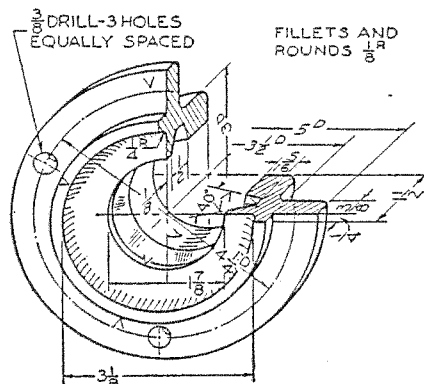
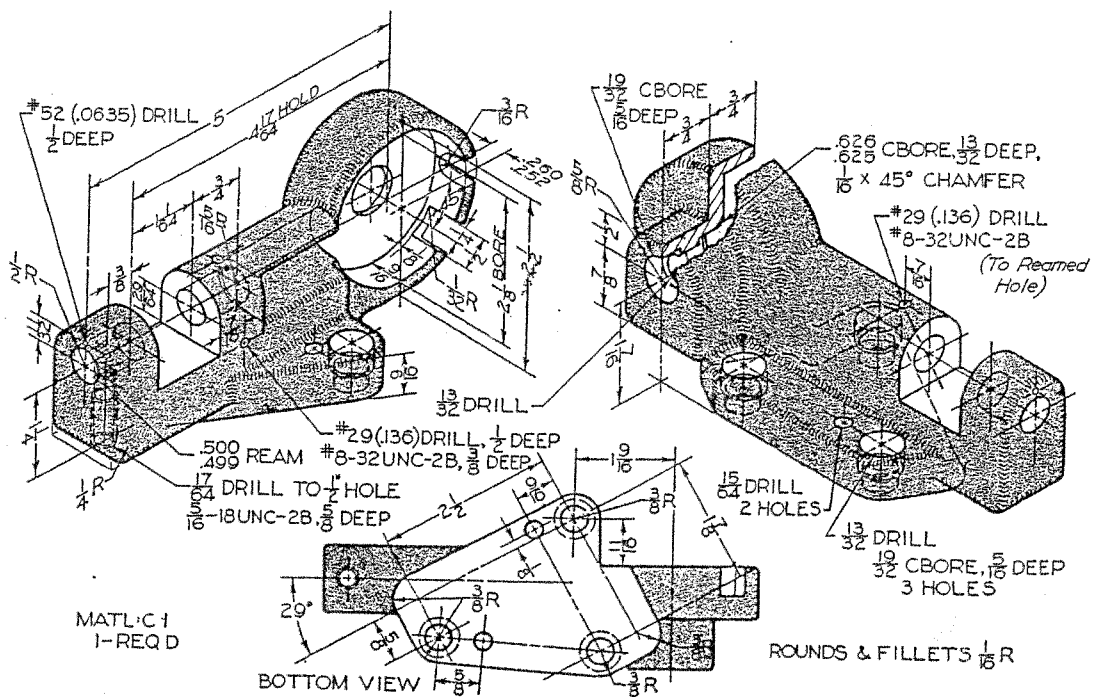
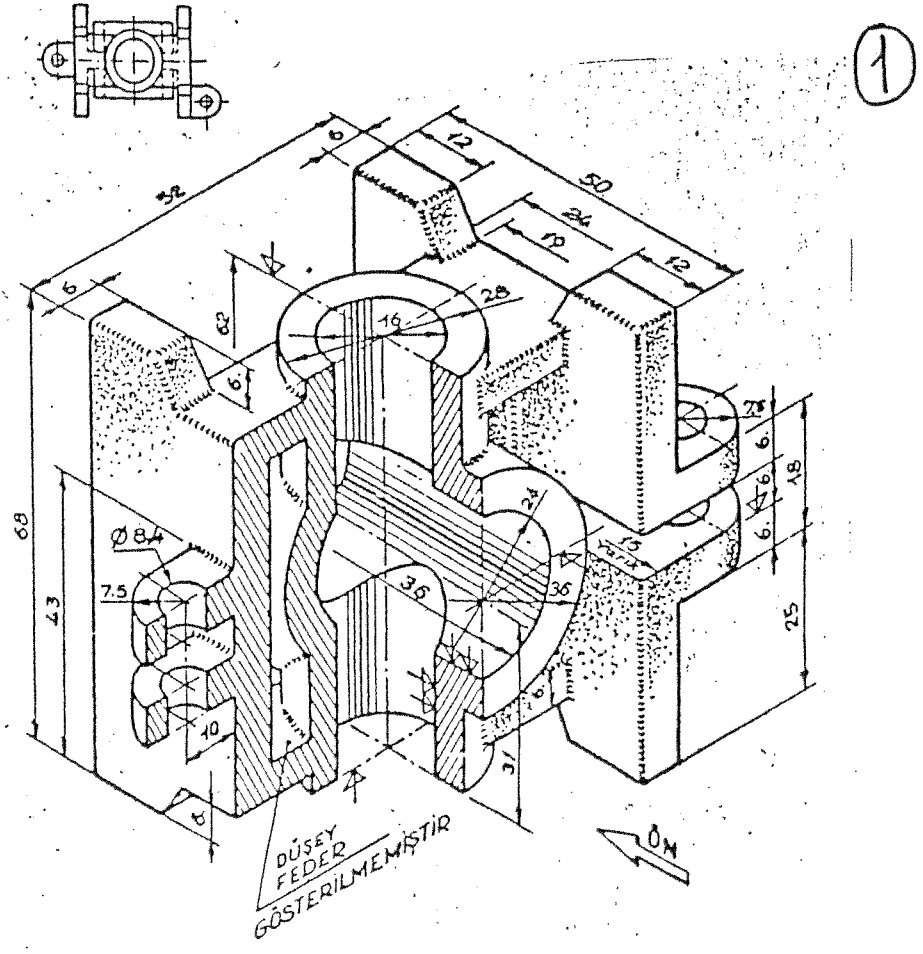
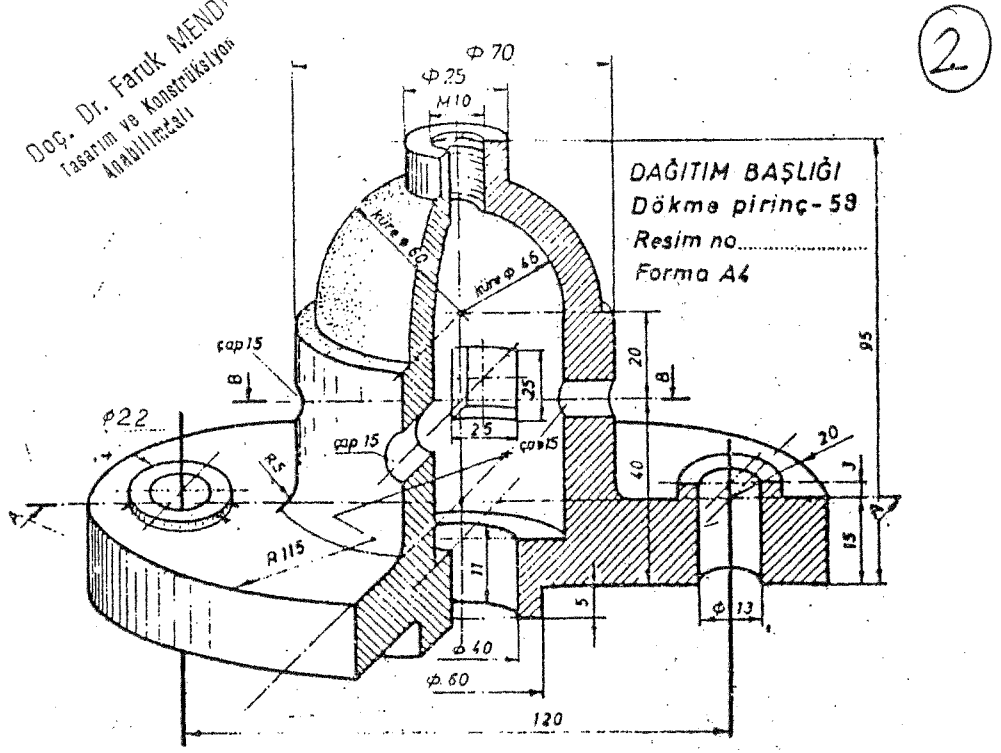


FIG. 459 FIXED BEARING CUP.  
Draw necessary views, with full section.\*





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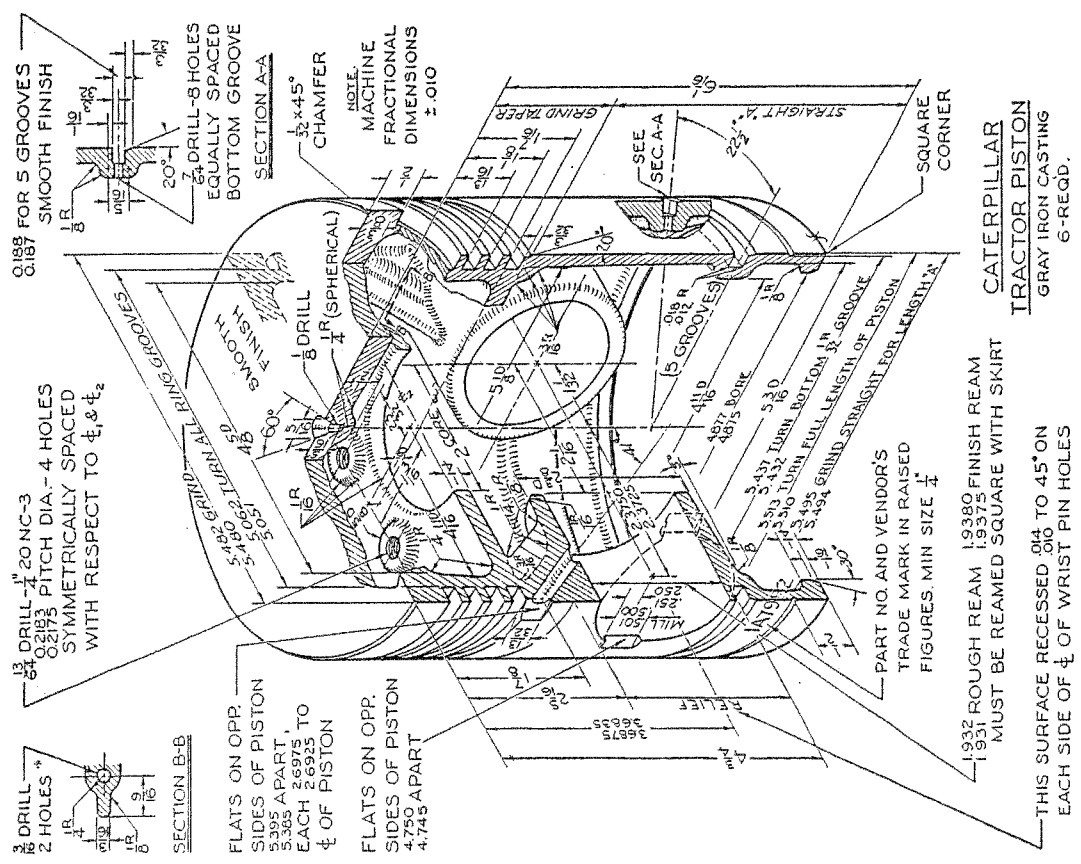
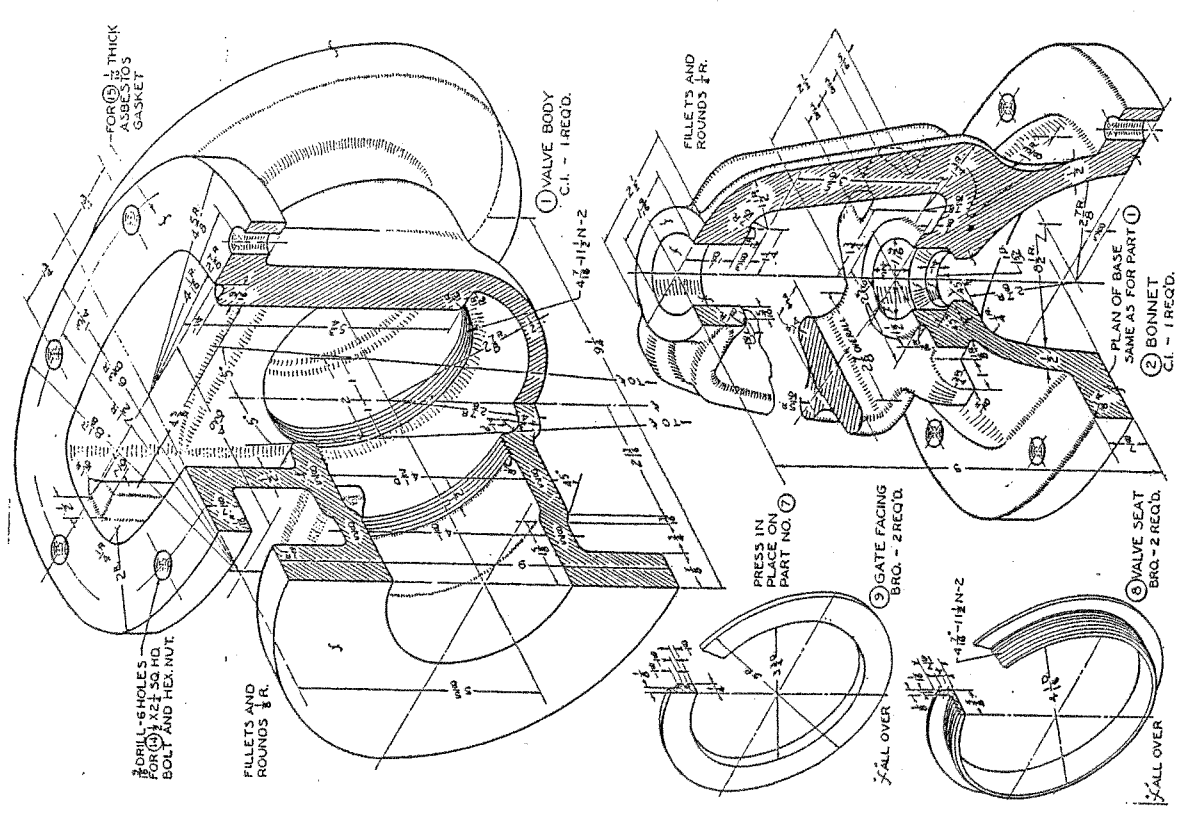
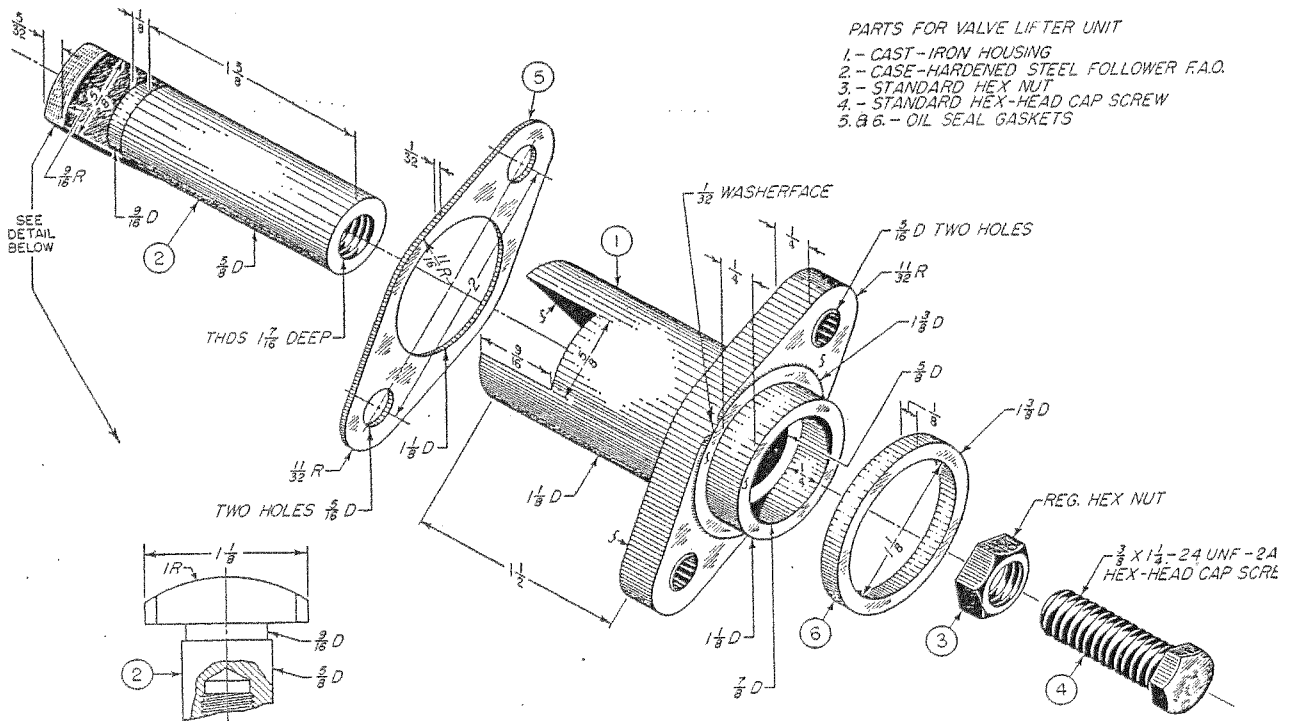
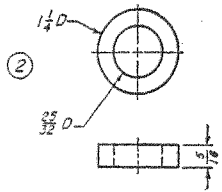
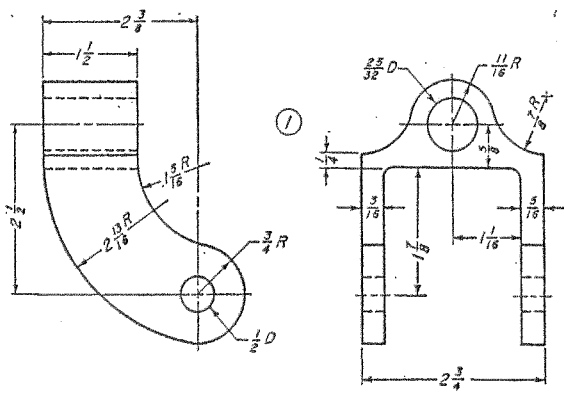
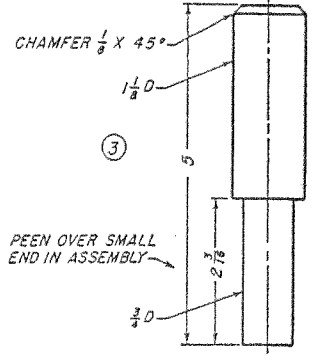
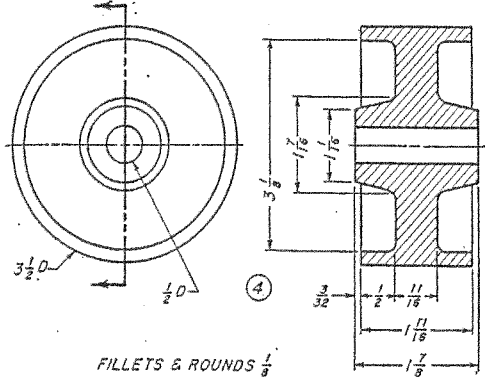
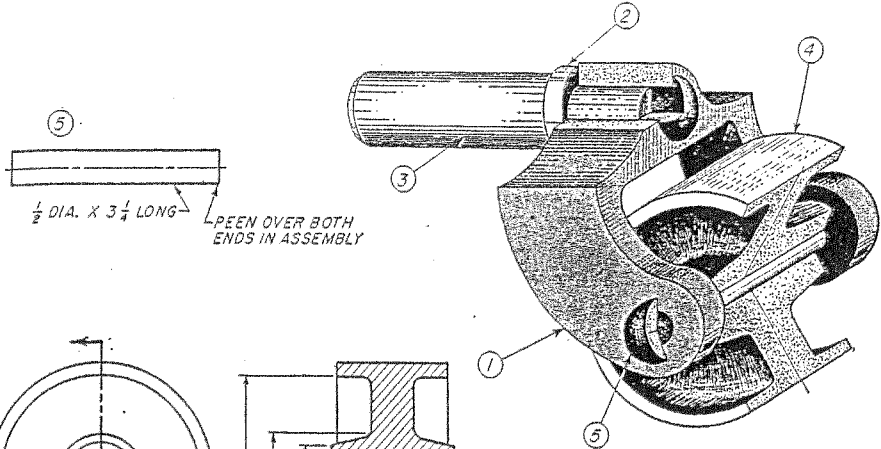


FIG. 885 CATERPILLAR TRACTOR PISTON. Make detail drawing.





- PARTS FOR VALVE LIFTER UNIT
- 1.- CAST-IRON HOUSING
  - 2.- CASE-HARDENED STEEL FOLLOWER F.A.O.
  - 3.- STANDARD HEX NUT
  - 4.- STANDARD HEX-HEAD CAP SCREW
  - 5. & 6.- OIL SEAL GASKETS



13-10. Make a two-view working-assembly drawing of the caster. Draw it on an 8 1/2 by 11-in. sheet. Dimension completely, and include a title block and bill of materials. Show sectioning where desirable. The parts are (1) frame, cast steel; (2) collar, steel; (3) shaft, cold-rolled steel; (4) wheel, cast iron; (5) pin, cold-rolled steel. (Time, 6 hr.)

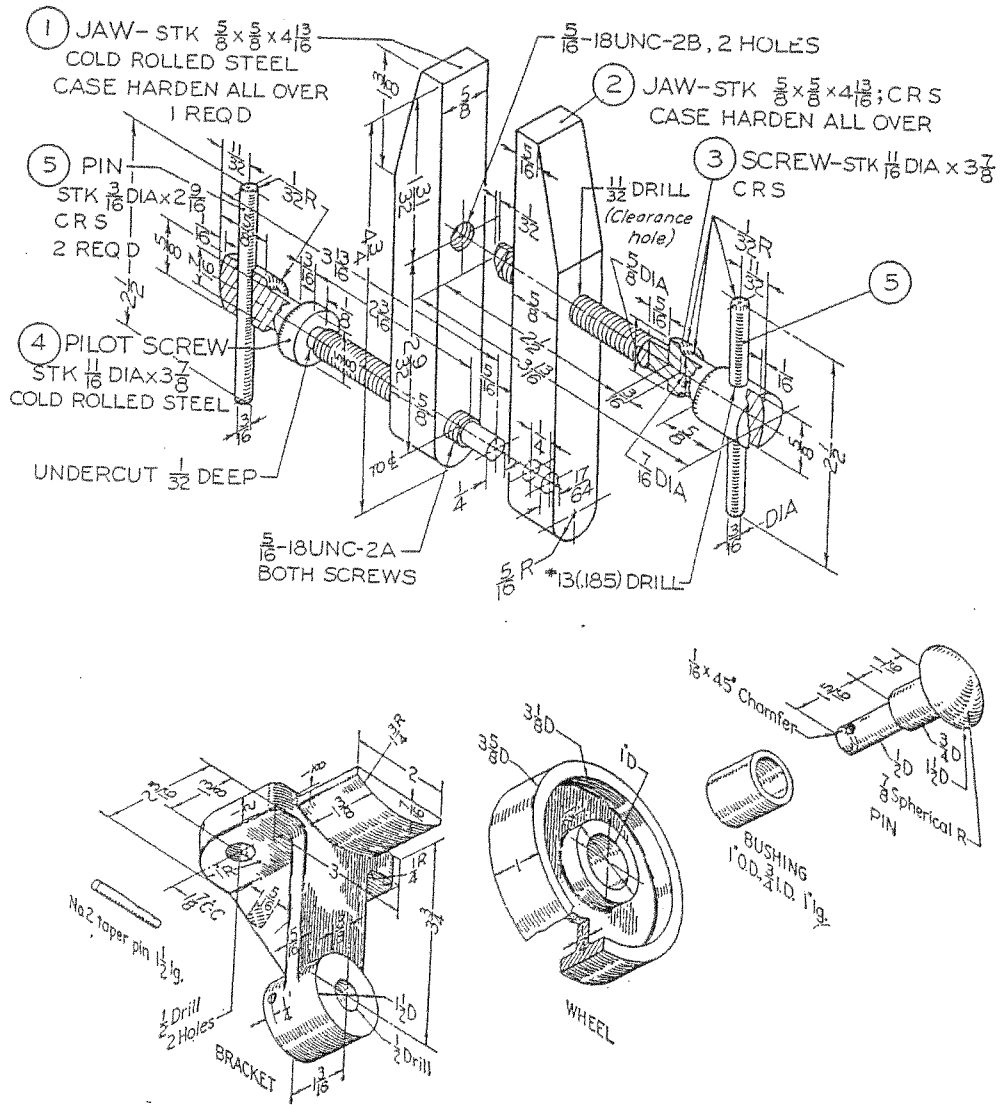
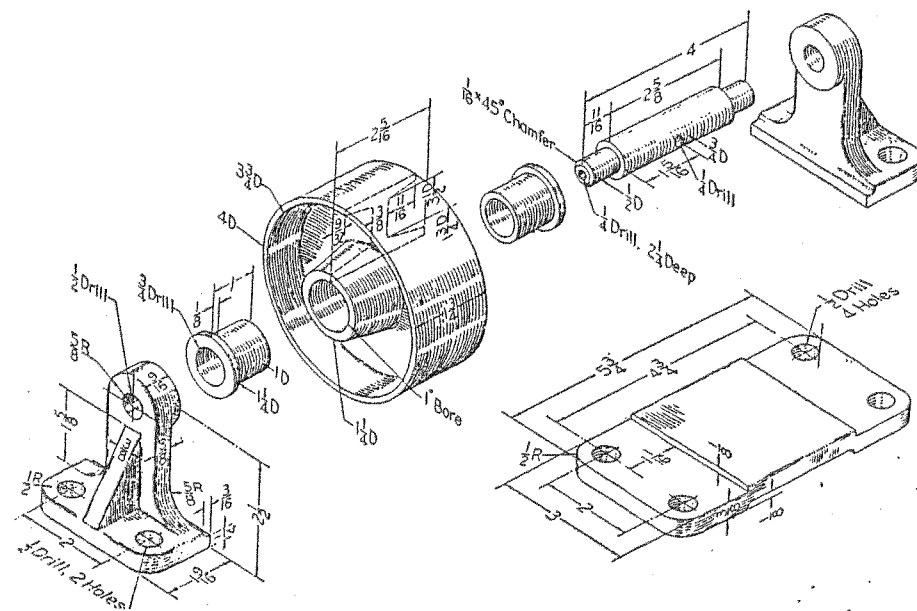


Fig. 13.69. Sliding-door guide.



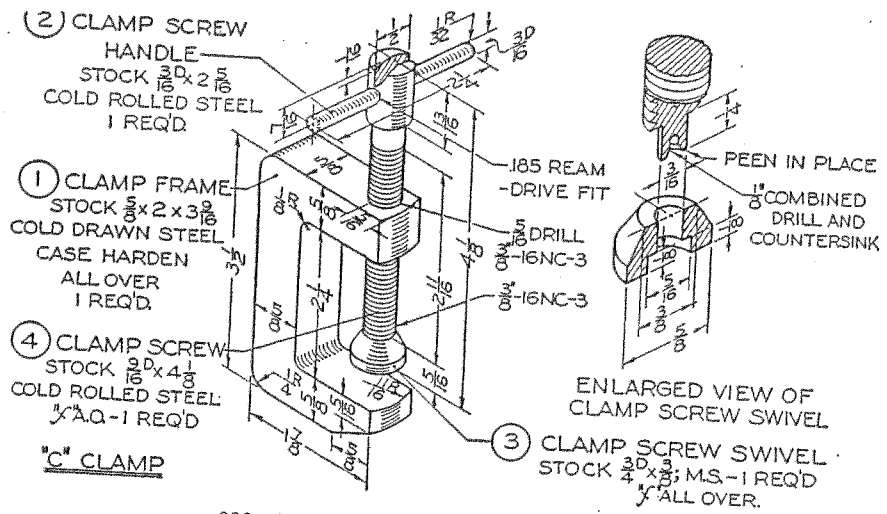


FIG. 888 "C" CLAMP. Draw details and assembly.

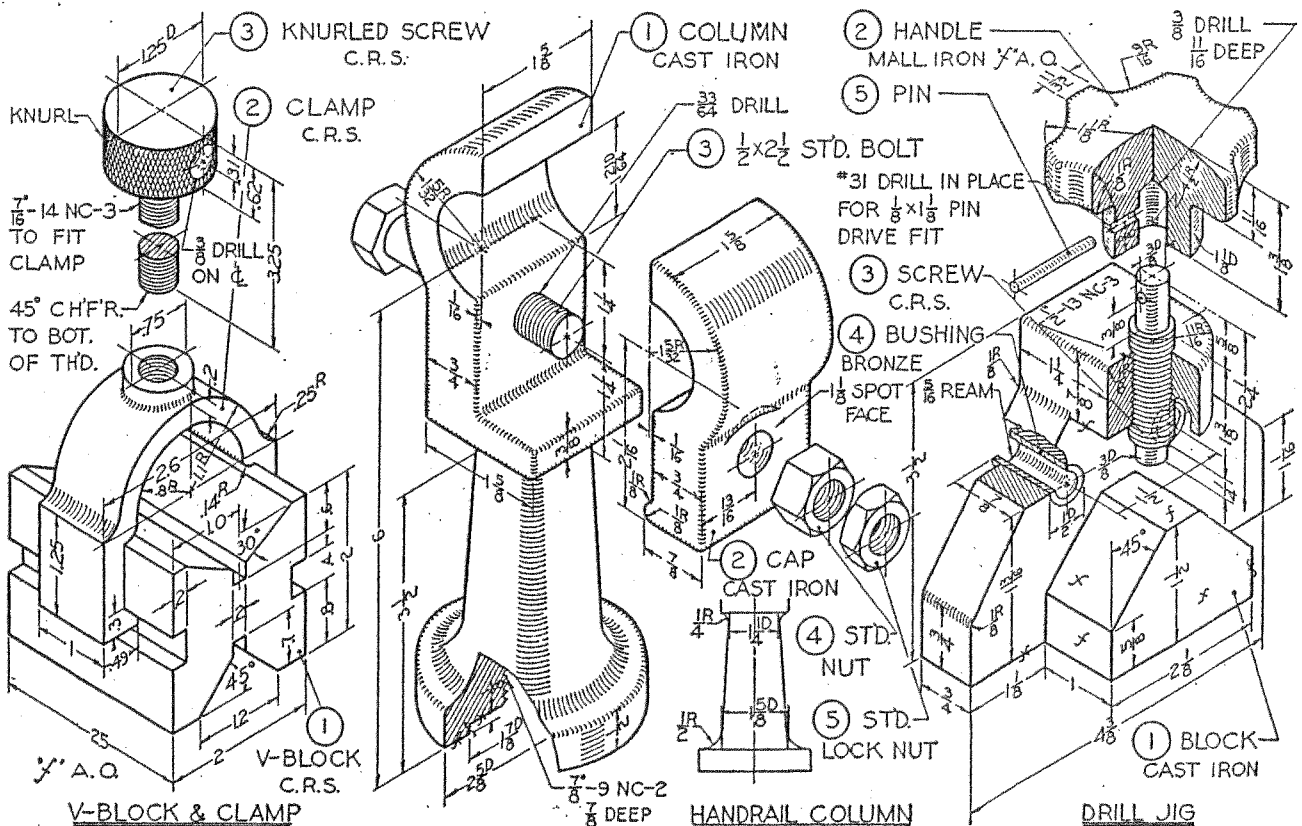
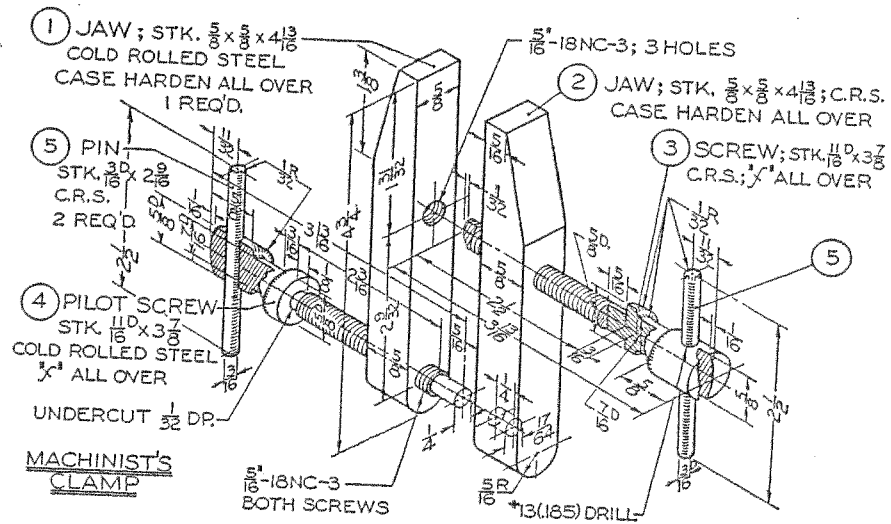
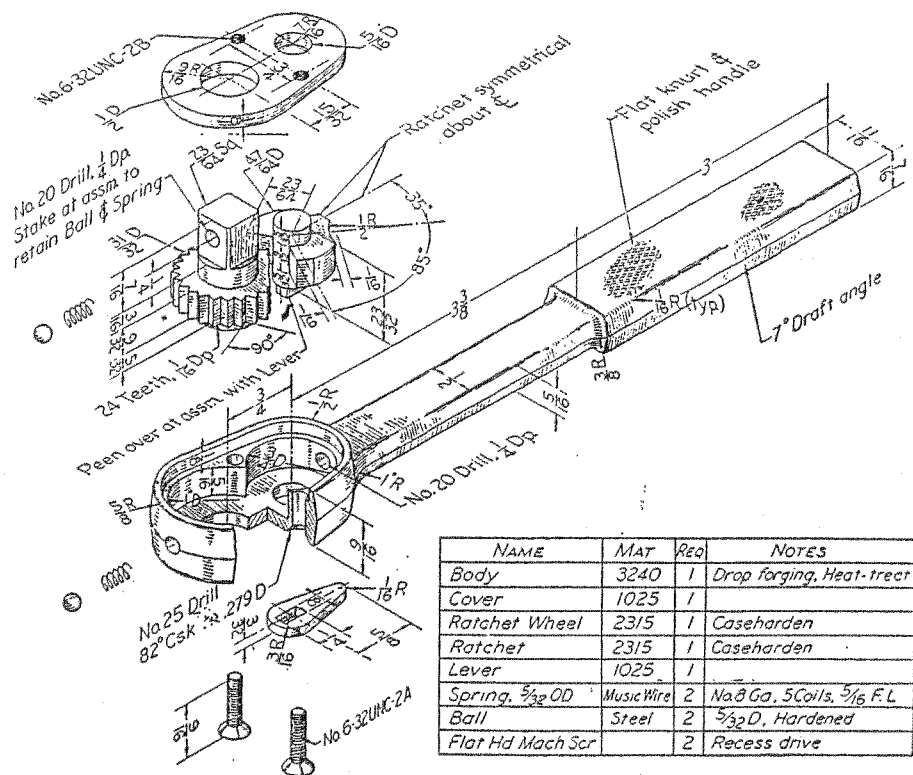
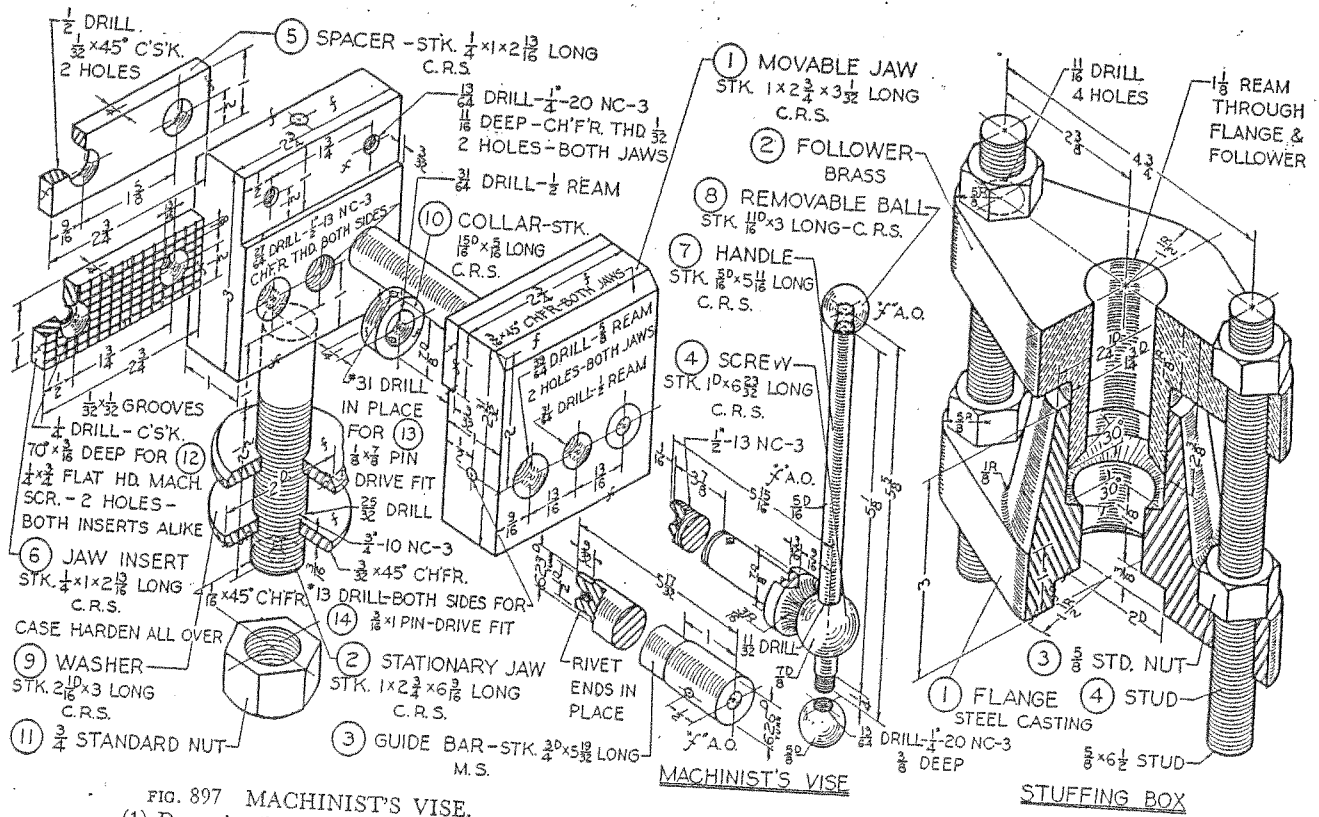


FIG. 894 V-BLOCK and CLAMP. Draw details and assembly.

FIG. 895 HANDRAIL COLUMN. Draw details and assembly.

FIG. 896 DRILL JIG. Draw details and assembly.



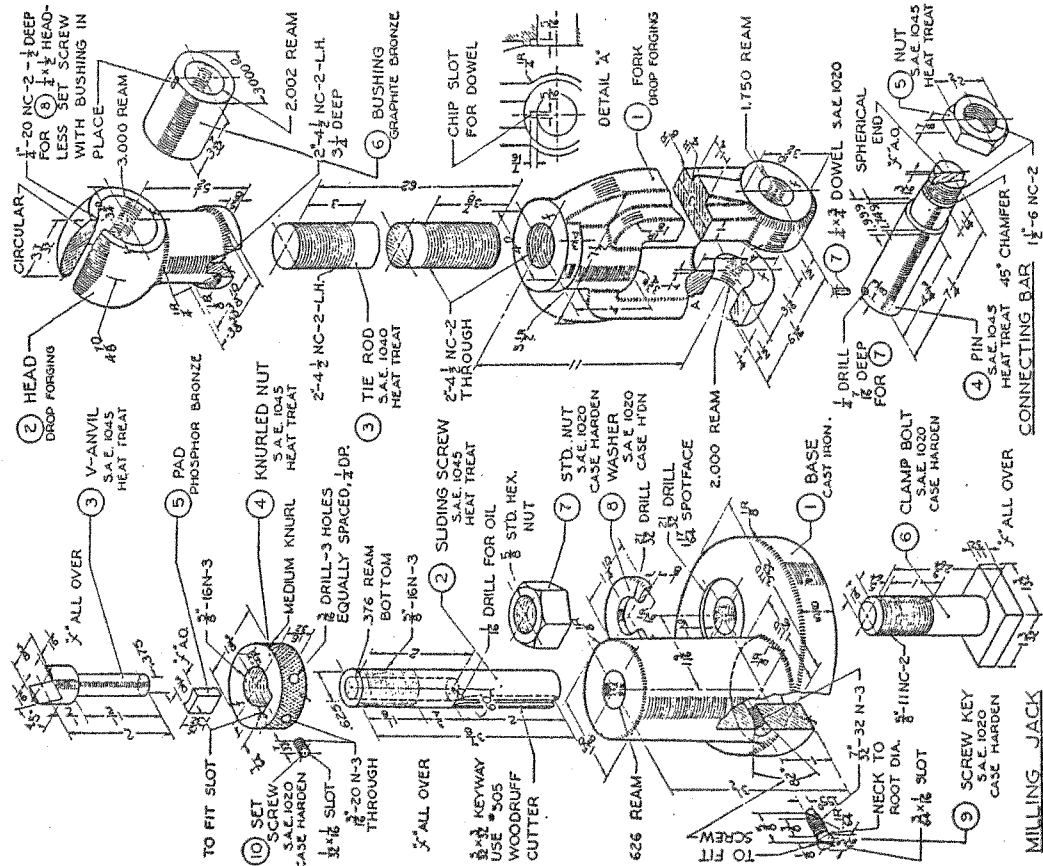


FIG. 891 MILLING JACK.

(1) Draw details. (2) Draw assembly.

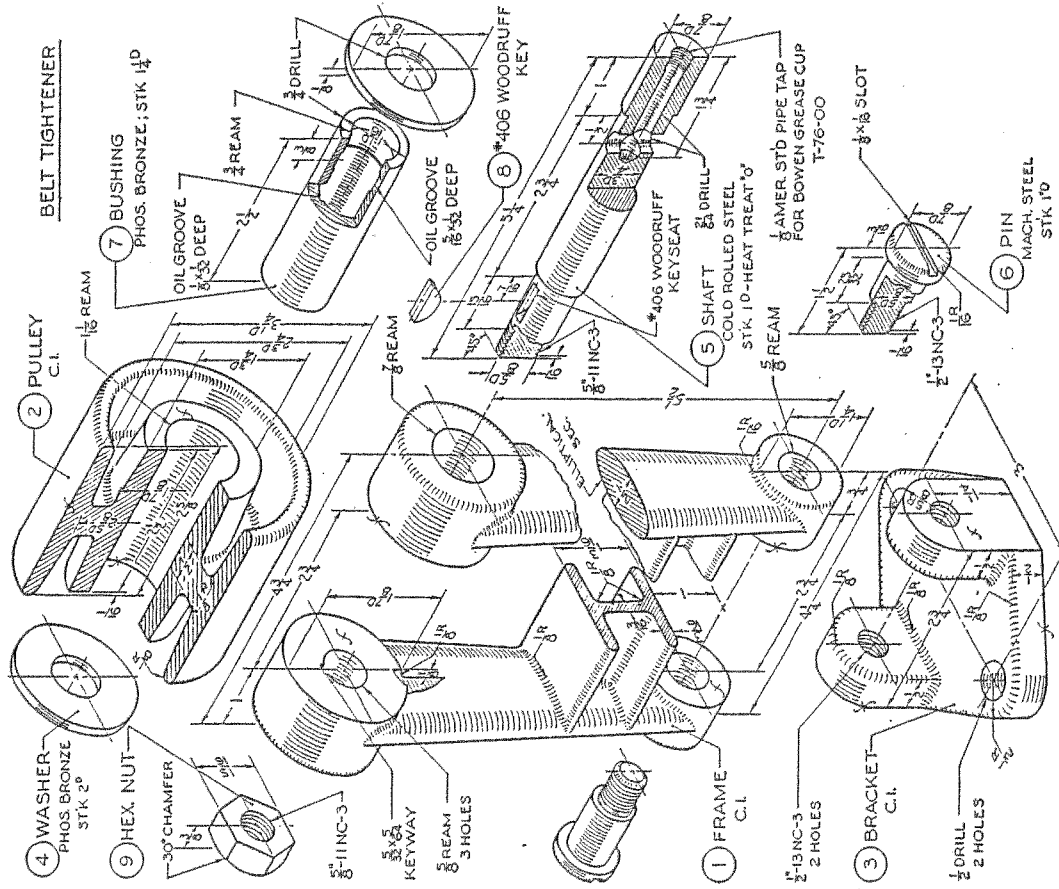
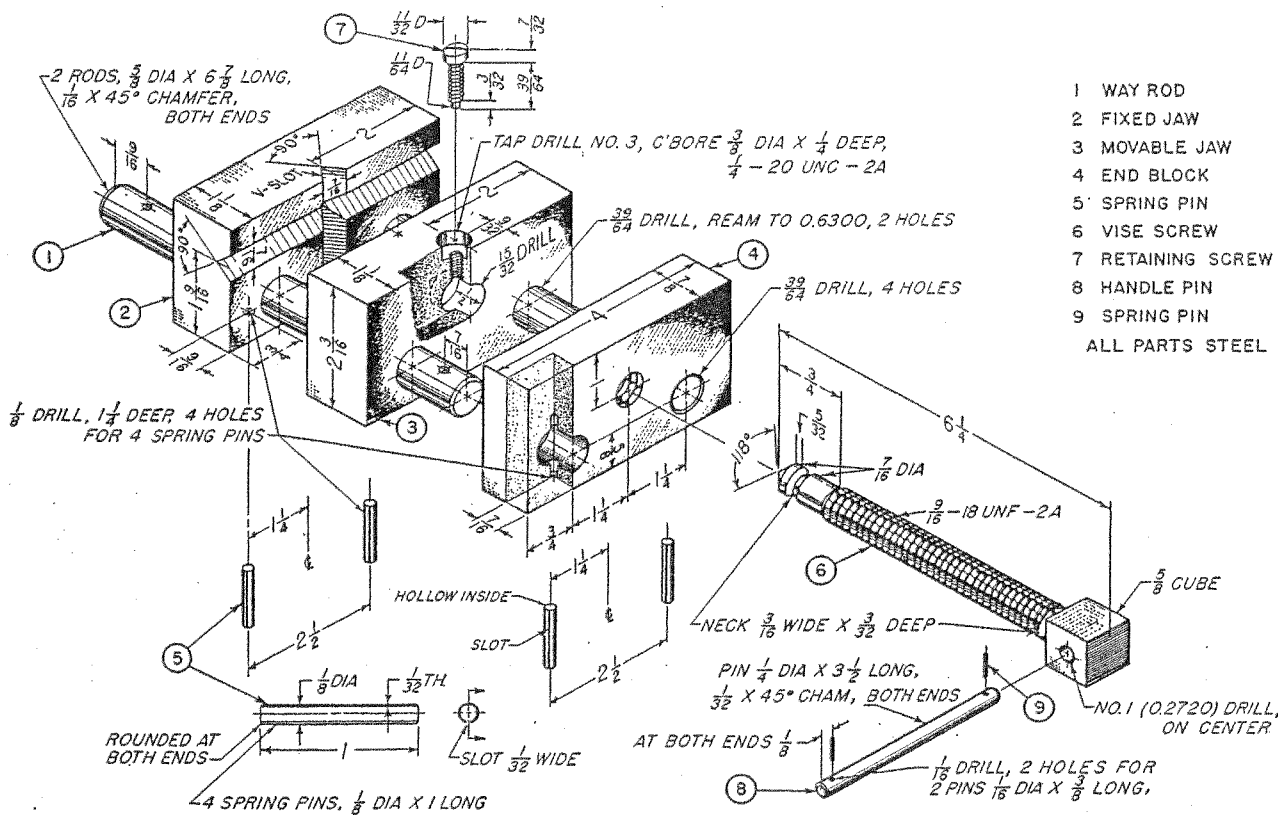
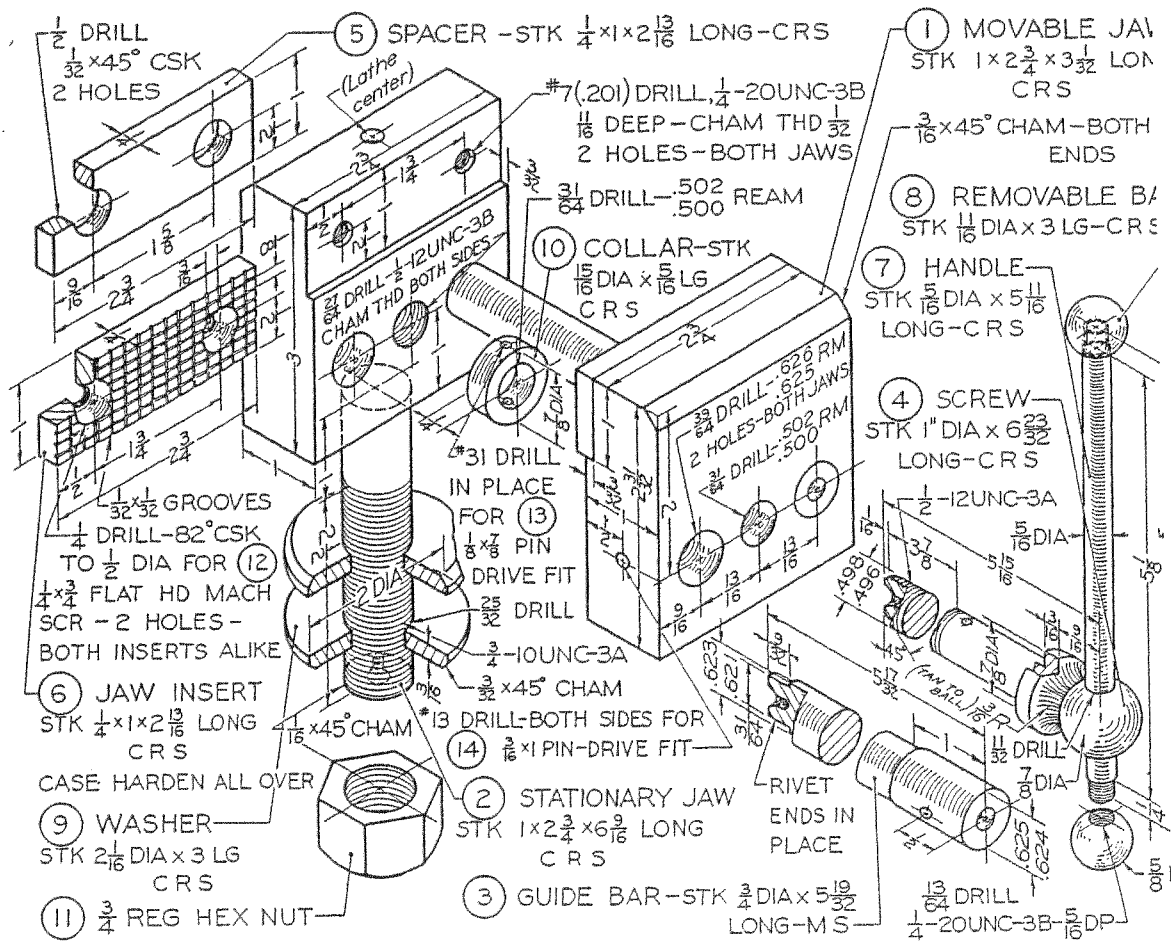


FIG. 893 BELT TIGHTENER. (1) Draw details. (2) Draw assembly.

FIG. 892 CONNECTING BAR.

(1) Draw details. (2) Draw assembly.



- 1 WAY ROD
  - 2 FIXED JAW
  - 3 MOVABLE JAW
  - 4 END BLOCK
  - 5 SPRING PIN
  - 6 VISE SCREW
  - 7 RETAINING SCREW
  - 8 HANDLE PIN
  - 9 SPRING PIN
- ALL PARTS STEEL

13-24. Make a two-view general assembly of the table vise on an 11- by 17-in. sheet. Use sectioning where

desirable. Show a title block with a bill of materials on the sheet. Do not dimension. (Time: 12 hr.)

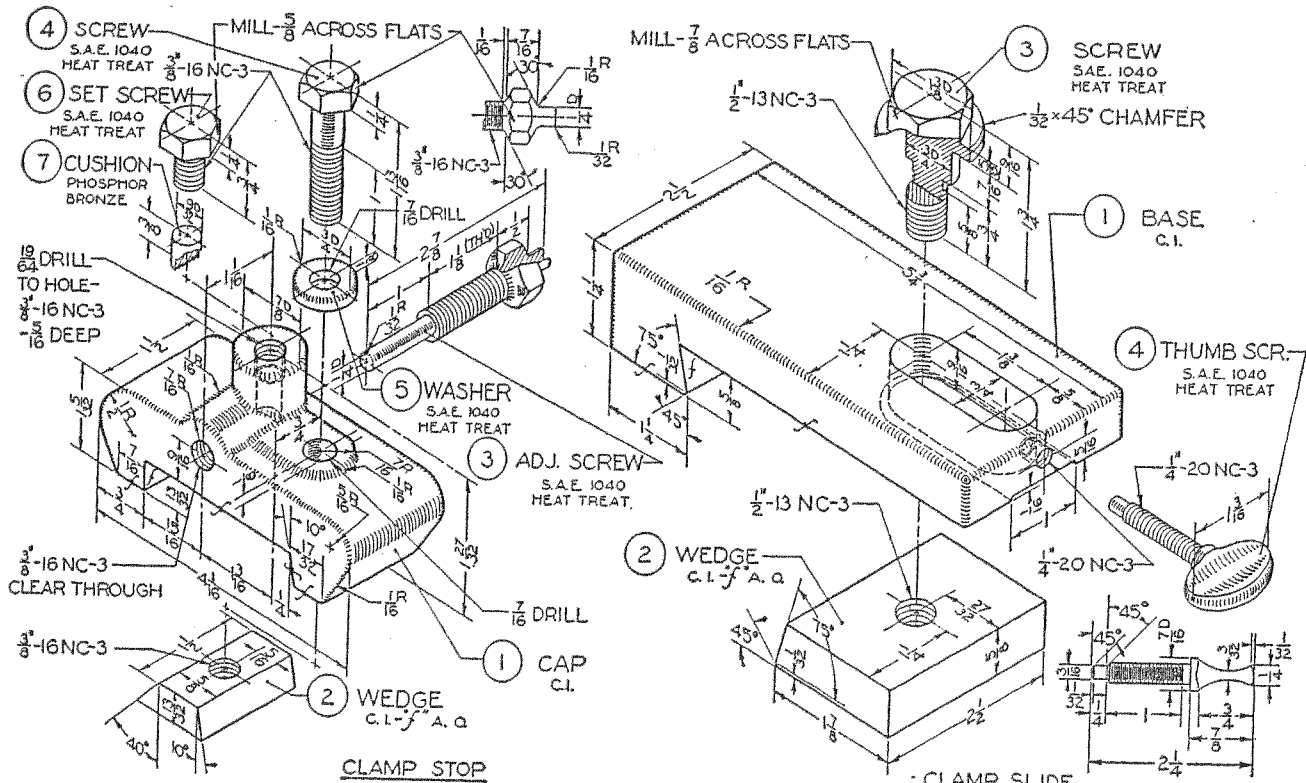
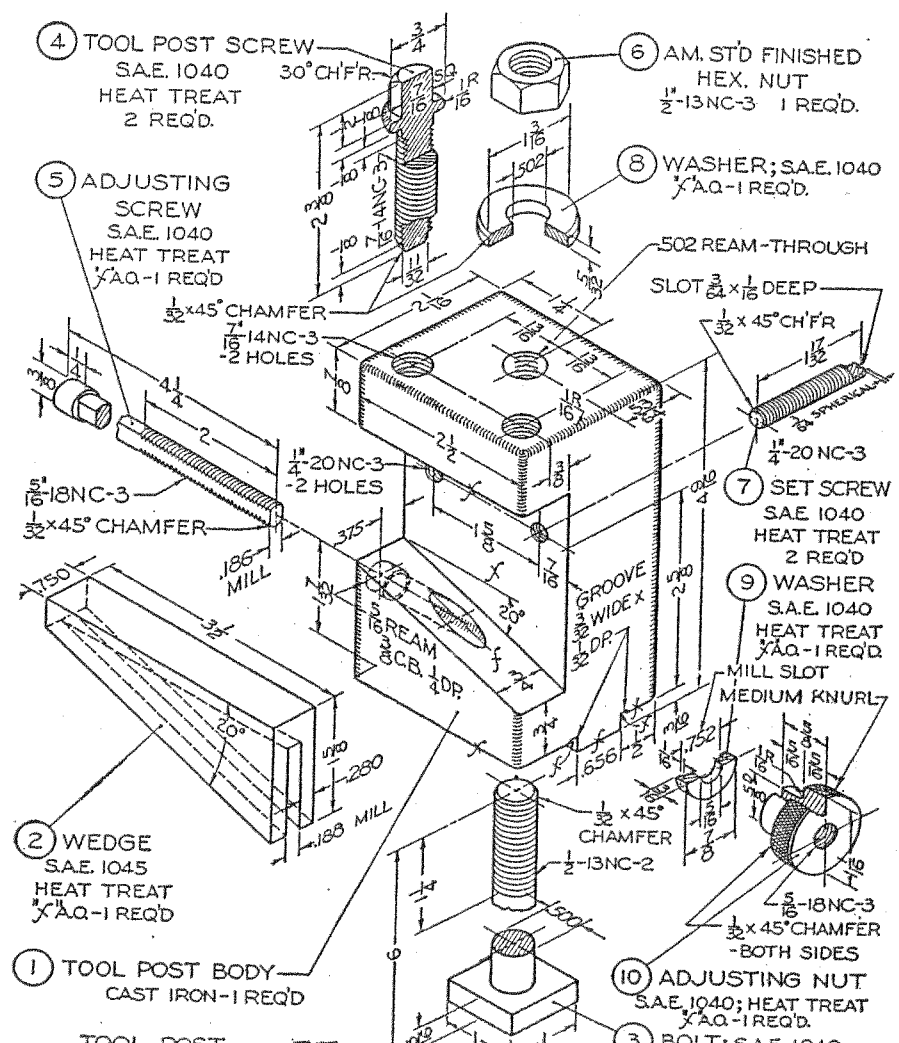


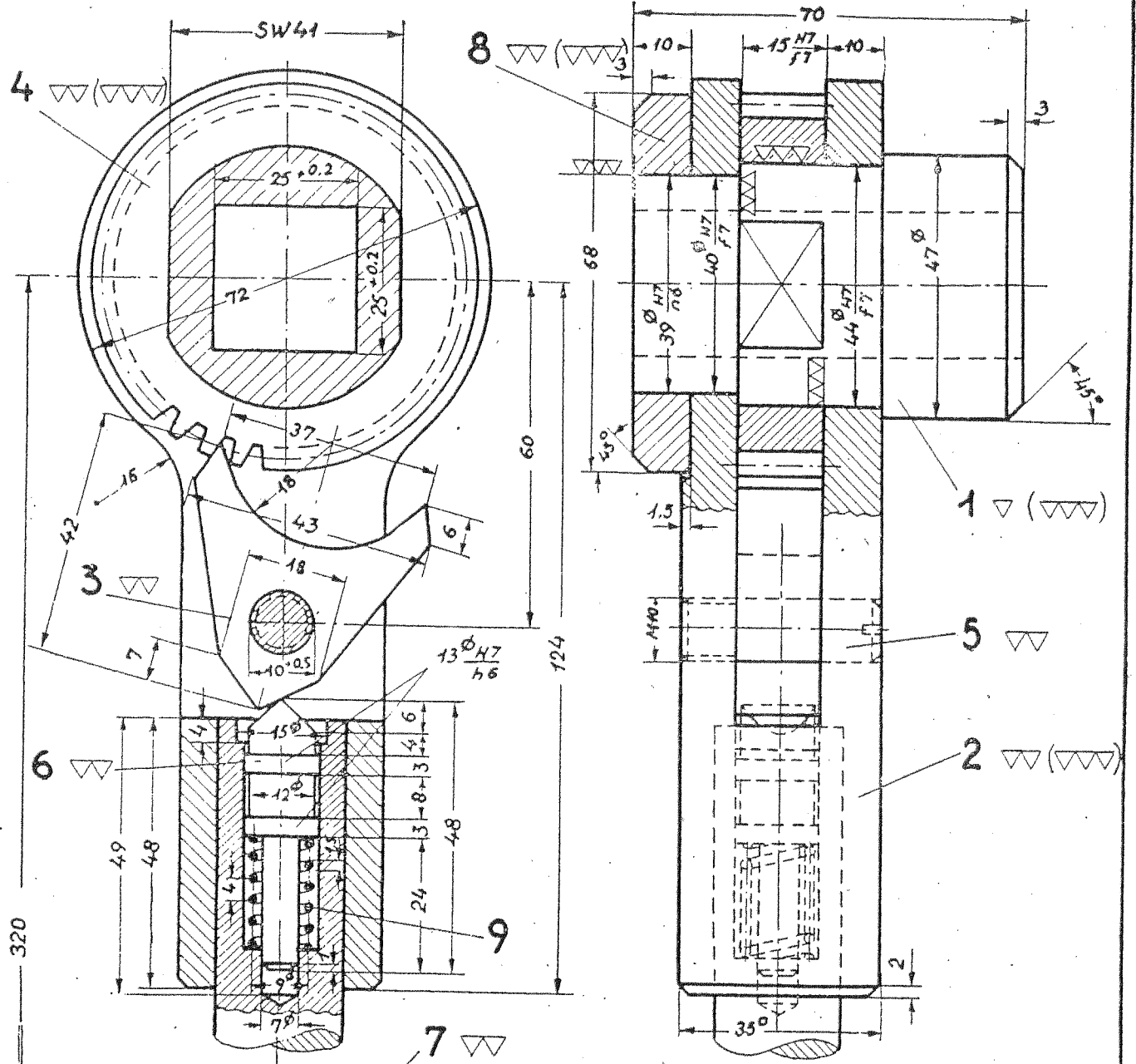
FIG. 886 CLAMP STOP.  
 (1) Draw details. (2) Draw assembly.

FIG. 887 CLAMP SLIDE.  
 (1) Draw details. (2) Draw assembly.



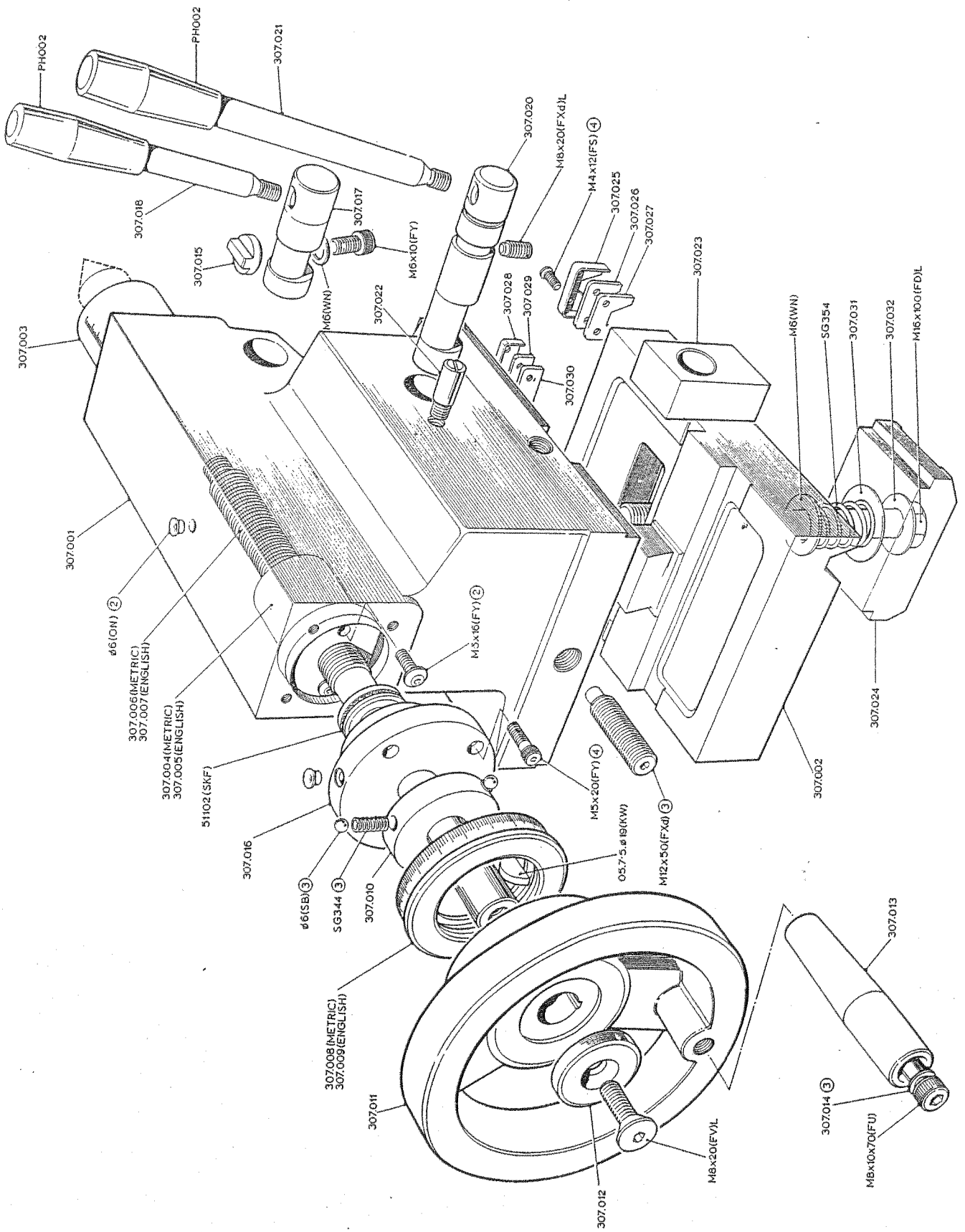
TOOL POST



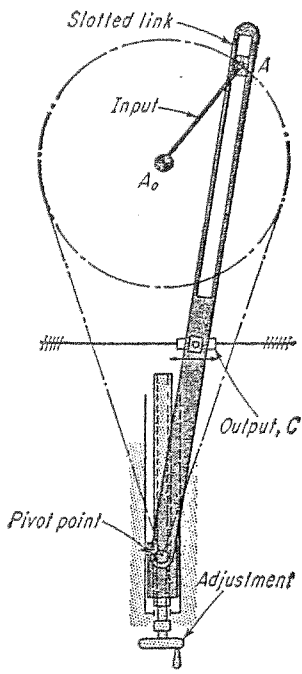
**PROBLEM:**

ANAHTARIN DETAYLANDIRILMIŞ İMALÂT RESMİNİ ÇİZİNİZ.

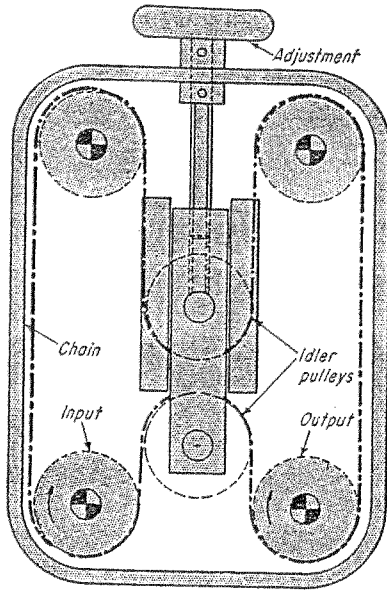
1	Basınç Yayı	9	50 M7H
1	YUVA TESPİT CONTASI	8	St 37.11
1	Anahtar Kolu	7	St 37.11
1	Basınç Pimi	6	C 35
1	Mandal Pimi M10 x 34,5	5	4 D
1	Kilit Dişlisi m=2, Z=32	4	C 60
1	Mandal	3	C 60
1	Çatal Bas	2	St. 50.11
1	Yuva (Burç)	1	St. 50.11
Adet	Parçanın Adı	Par.Nº	Gereç
Ölçek:	<b>CIRCIR ANAHTARI</b>		
1:1	<b>TRABZON-ERK.SANAT ENSTİT.</b>		
Çizen:	A H OLU	Tarih	2 İ 1954
Kontrol		Sınıf.	V



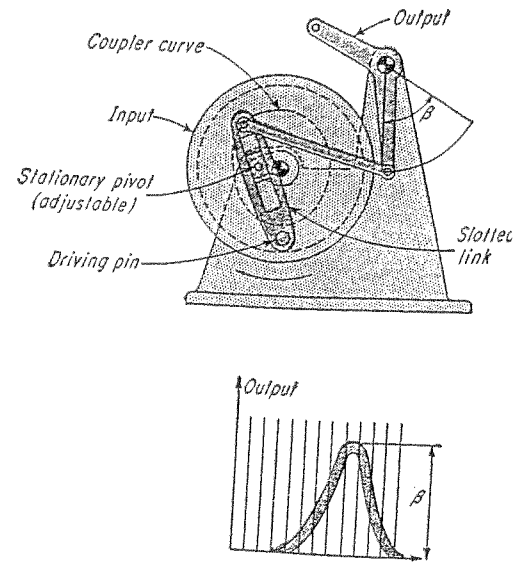
Adjustable slider drive



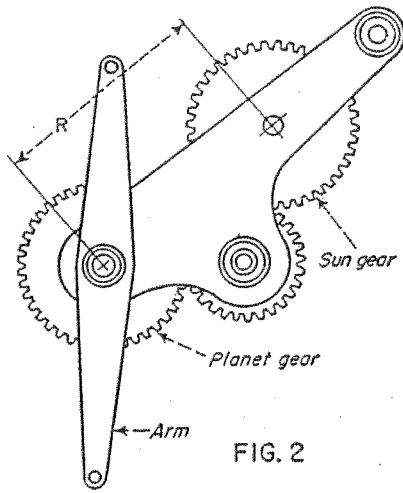
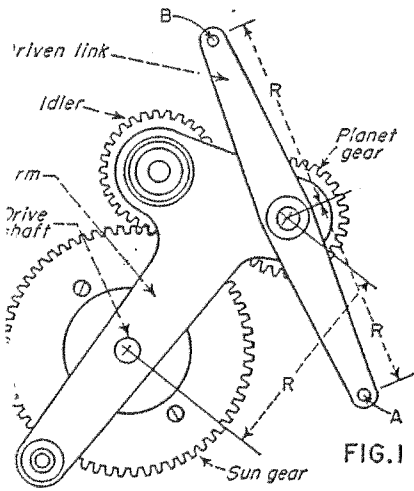
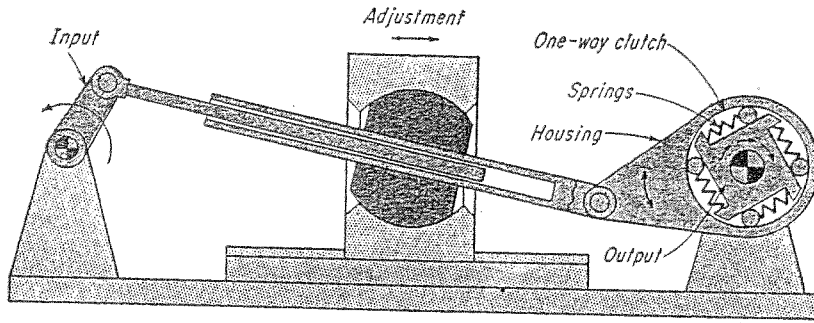
Adjustable chain drive



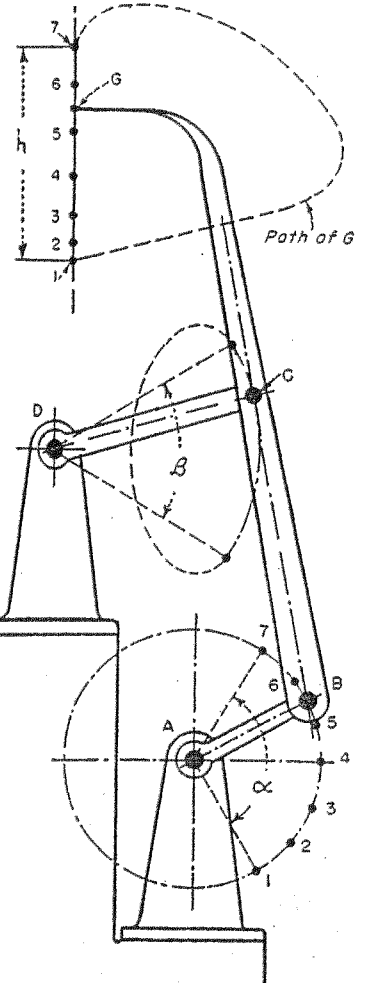
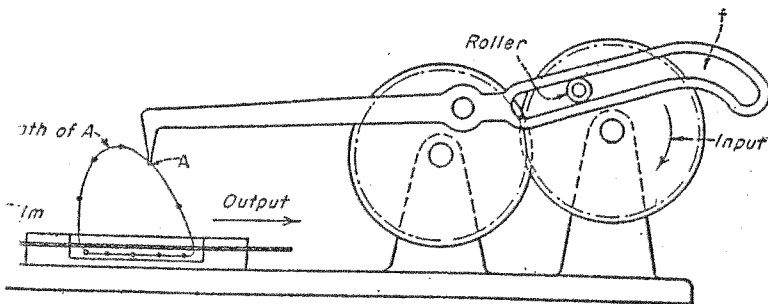
Adjustable-pivot drive

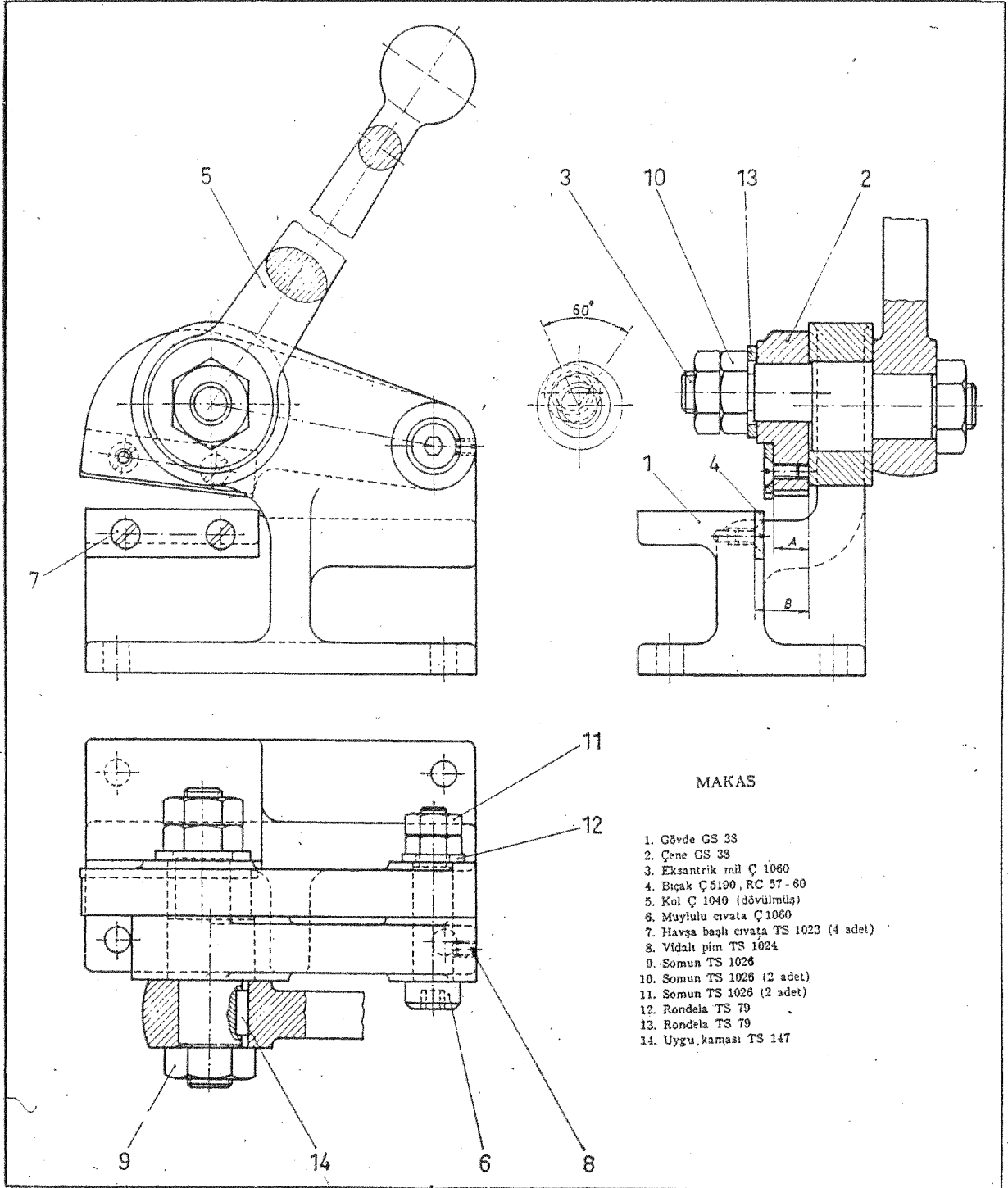


Adjustable clutch drive



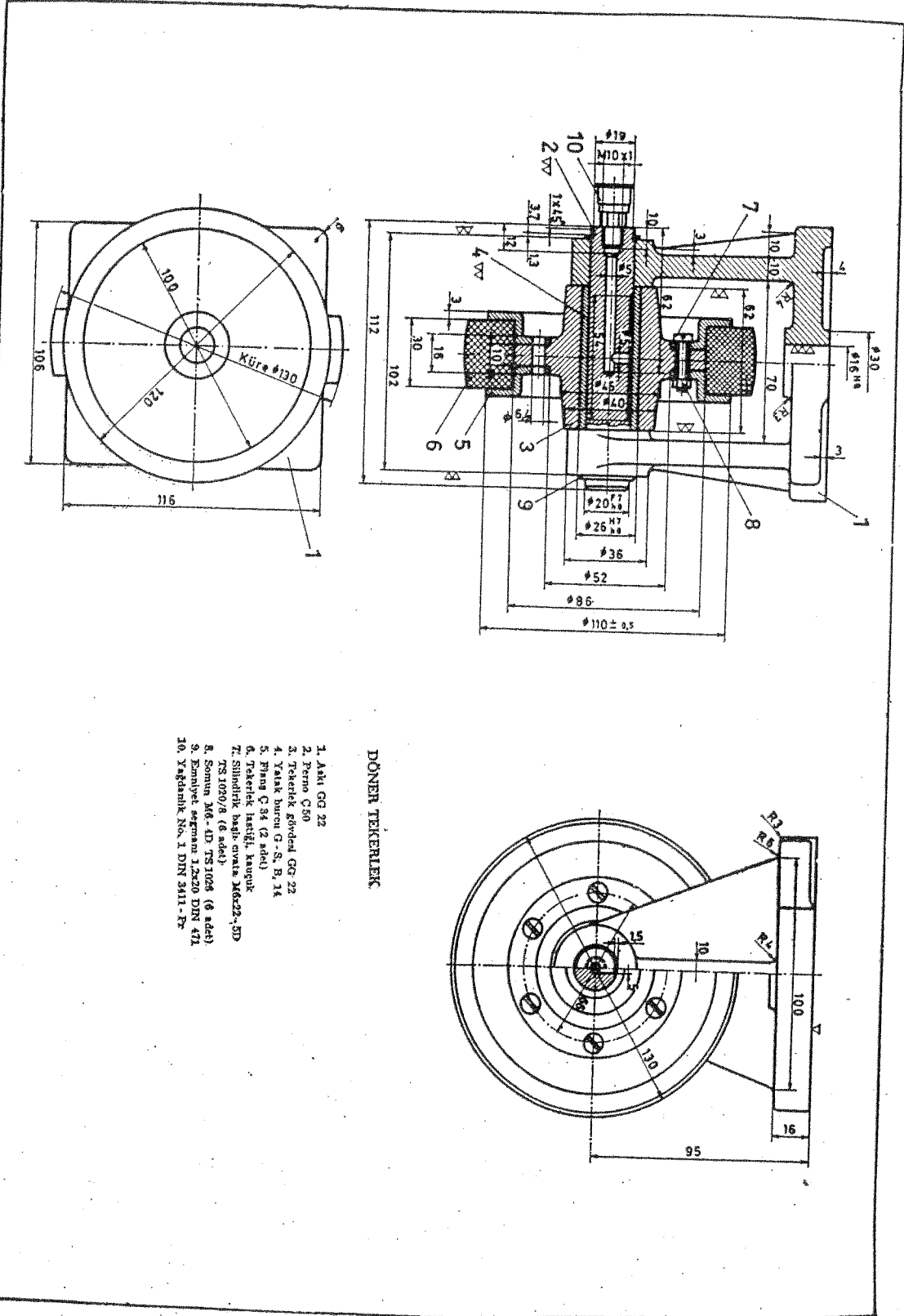
Parallel Motion

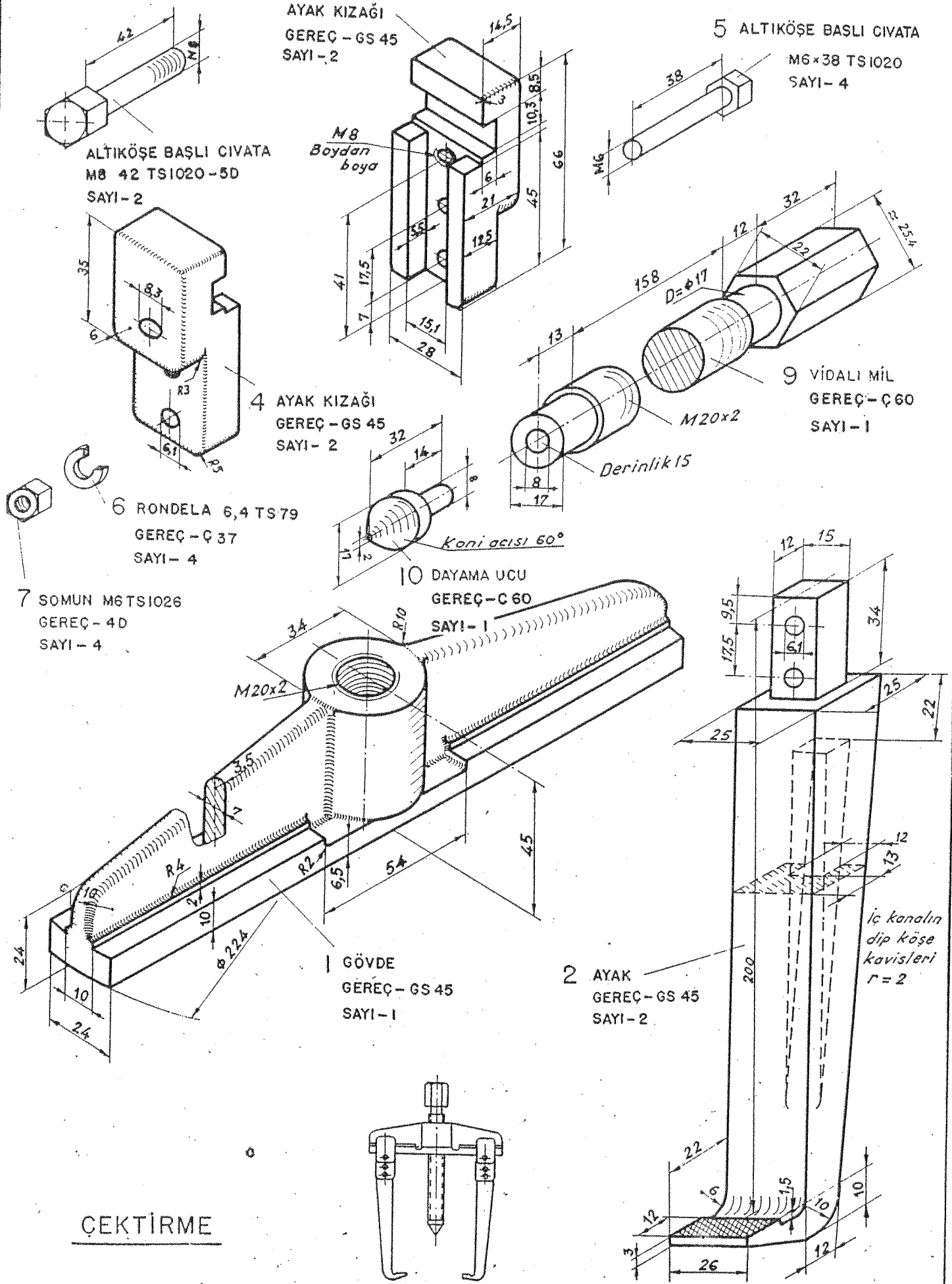




Şekil 11.30 Makas

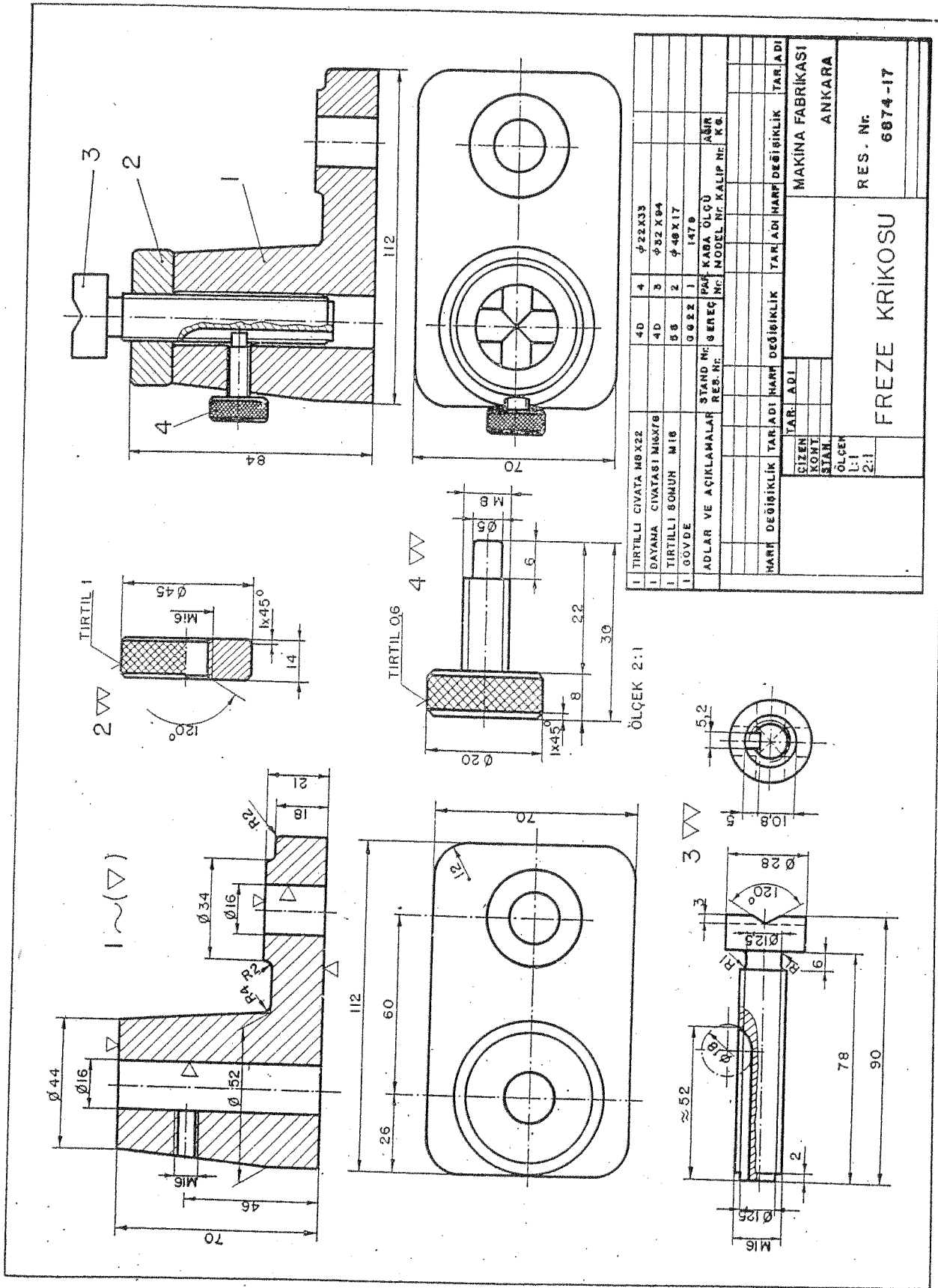
Şekil 11.22 Döner Tekerlek



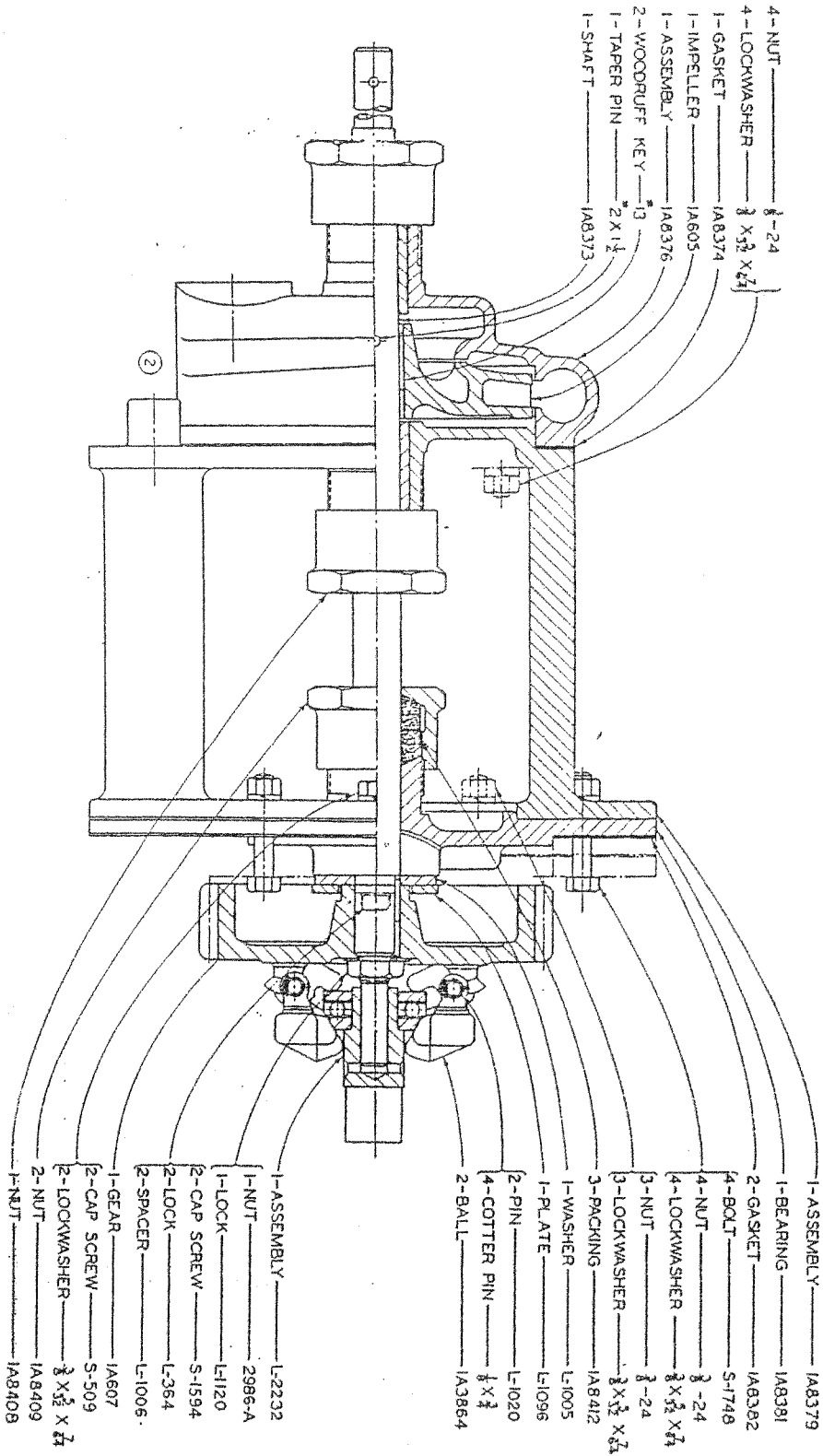


ÇEKTİRME

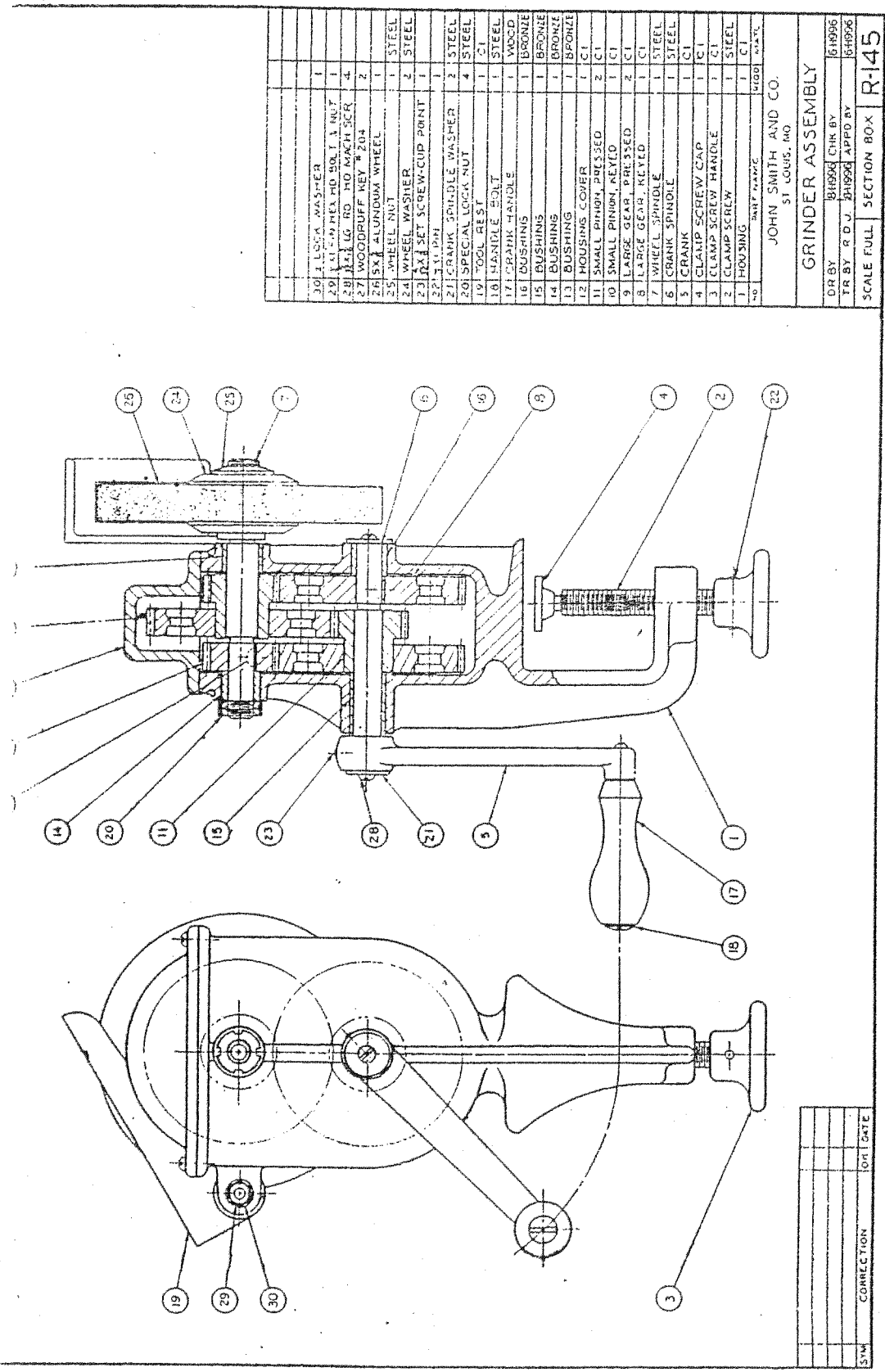
Şekil 11.19 Çektirme



Şekil 11.5 Freze Krikosunun yapım resmi



CHANGED VIEW		REWORK	
DATE		BY	
CHANGE NOTICE			
HEAT TREATMENT			
CATERPILLAR TRACTOR CO.			
ACCESSORY SHAFT GROUP			
1A8400			



30	1 LOCK WASHER	1	STEEL
29	1 1/2" DIA. HD. SOL. NUT	1	STEEL
28	1 1/2" LG. HD. MACH SCR	4	STEEL
27	WOODRUFF KEY # 204	2	STEEL
26	ALUMINUM WHEEL	1	ALUMINUM
25	WHEEL NUT	2	STEEL
24	WHEEL WASHER	2	STEEL
23	AXIS SET SCREW-CUP POINT	1	STEEL
22	AXIS POINT	1	STEEL
21	CRANK SPINDLE WASHER	2	STEEL
20	SPECIAL LOCK NUT	4	STEEL
19	TOOL REST	1	STEEL
18	HANDLE BOLT	1	STEEL
17	CRANK HANDLE	1	WOOD
16	BUSHINGS	1	BRONZE
15	BUSHINGS	1	BRONZE
14	BUSHING	1	BRONZE
13	BUSHING	1	BRONZE
12	HOUSING COVER	1	CI
11	SMALL PINION, PRESSED	2	CI
10	SMALL PINION, KEYS	1	CI
9	LARGE GEAR, PRESSED	2	CI
8	LARGE GEAR, KEYS	1	CI
7	WHEEL SPINDLE	1	STEEL
6	CRANK SPINDLE	1	STEEL
5	CRANK	1	CI
4	CLAMP SCREW CAP	1	CI
3	CLAMP SCREW HANDLE	1	STEEL
2	CLAMP SCREW	1	STEEL
1	HOUSING	1	CI
NO	DATE MADE	4/10/00	DATE

JOHN SMITH AND CO.  
ST. LOUIS, MO.

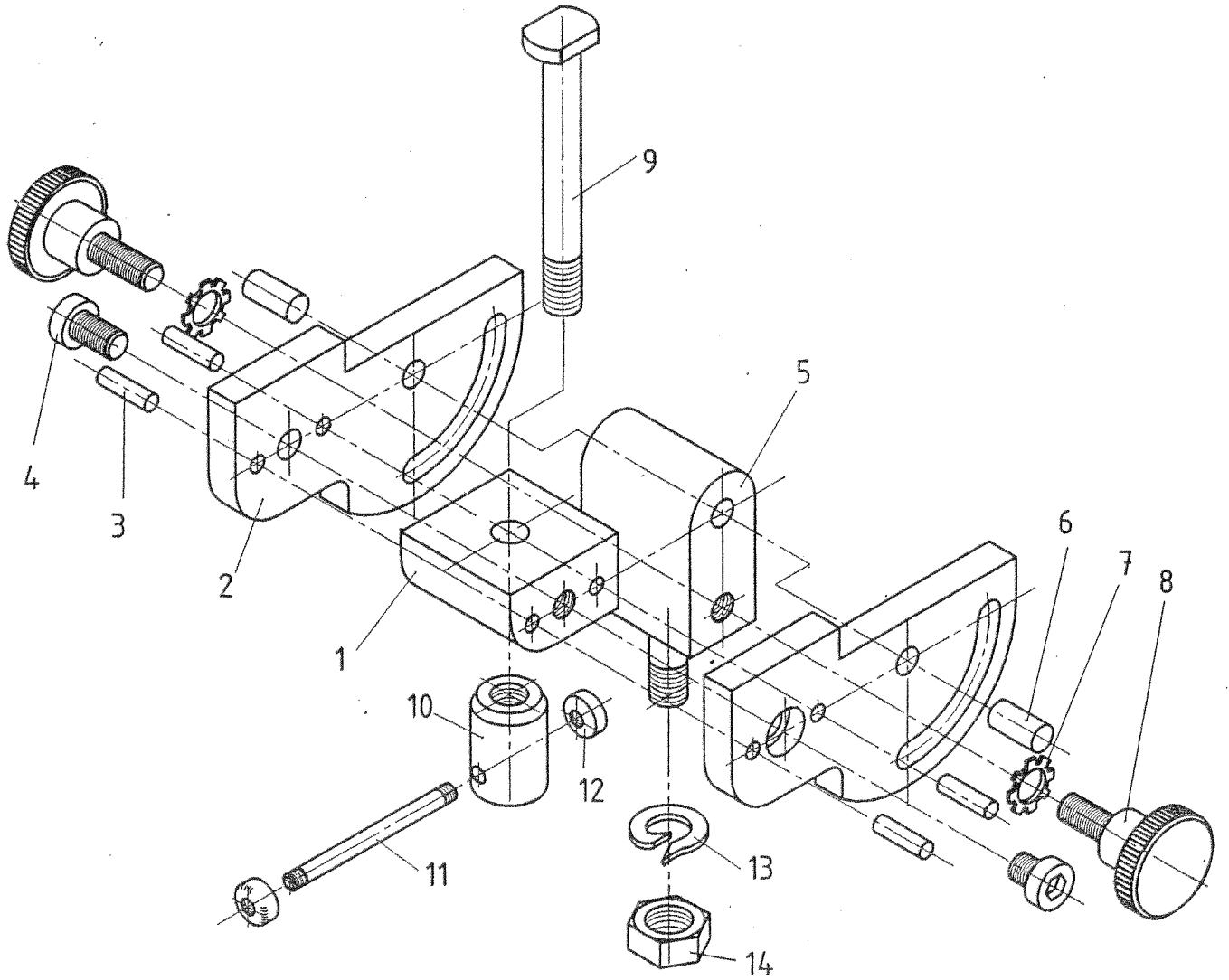
**GRINDER ASSEMBLY**

DR BY B18936 CHK BY B18936  
TR BY R D J B18936 APPR BY B18936

SCALE FULL SECTION BOX **R-145**

SYM	CORRECTION	LOT	DATE





**SORU:**

Yukarıda;ÜNİVERSAL MENGENE'ye ait 2.numaralı HAREKET SİSTEMİ grubunun 1.organı olan AÇISAL HAREKET ORGANI'nın parçaları demontaj halde, perspektif olarak görülmektedir.Aynı organın standart olmayan 1,2,5,8,9,10,11, ve 12 numaralı parçaların ölçülendirilmiş resimleri de "Forma 47" de verilmektedir.

"Forma 48" de verilen ana yerleştirme eksenlerine göre ve cevap formunu inceyerek bu organın montaj resminin;

a- Önden görünüşünü,A-A ve B-B kesitlerini 1:1 ölçekle çiziniz.

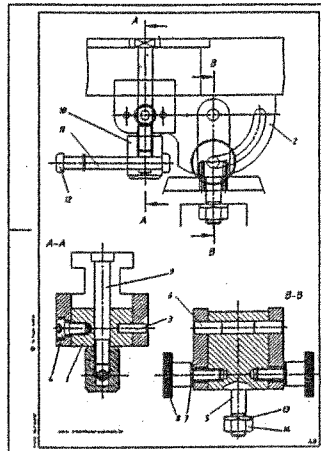
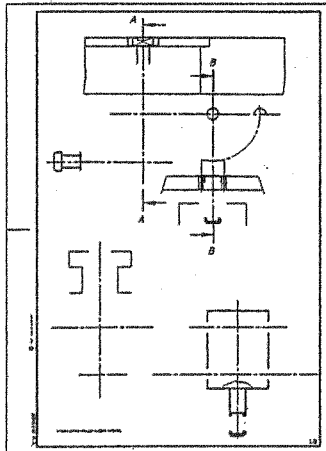
b- Montaj resmini numaralandırınız.

c- "Forma 49" da verilen anteti doldurunuz.

*Soru formu*

*Cevap formu*

*Parça listesi:*



- ✓ 1- Ara parçası, 1 adet, 16MnCr5
- ✓ 2- Kol, 2 adet, Fe 37
- ✓ 3- Silindirik pim TS 2337/2-A 5m6x20-Fe 50K, 4 adet
- ✓ 4- Silindir başlı vida TS 1020/16-M8x15-8.8, 2 adet
- ✓ 5- Mafsal parçası, 1 adet, 16MnCr5
- ✓ 6- Silindirik pim TS 2337/2-A 8m6x20-Fe 50K, 2 adet
- ✓ 7- Dişli rondela TS 79/36 - A8.4-Yay çeliği ,2 adet
- ✓ 8- Tırtıl başlı vida, 2 adet, C35
- ✓ 9- Kılavuz vida,1 adet, C35
- ✓ 10- Sıkıştırma somunu, 1 adet, C15
- ✓ 11- Sap, 1 adet, C15
- ✓ 12- Sap burcu, 2 adet, C15
- ✓ 13- Yaylı rondela TS 79/27-B10-Yay çeliği, 1 adet
- ✓ 14- Somun TS 1026/1- M10-6, 1 adet

Çizen		Ölçek	Konu:	
Sınıf-Nr.				
Tarih			İş:	
Kontrol			99	Resim-Ödev Nr. 31



**Ek uygulama :** Bir **DELME KALIBI**'nin aksonometrik detayları verilmiştir.

a. Delme kalıbının komple görünüşünü çizerek yazı alanını doldurunuz.

b. Delme kalıbının detay resimlerini çiziniz.

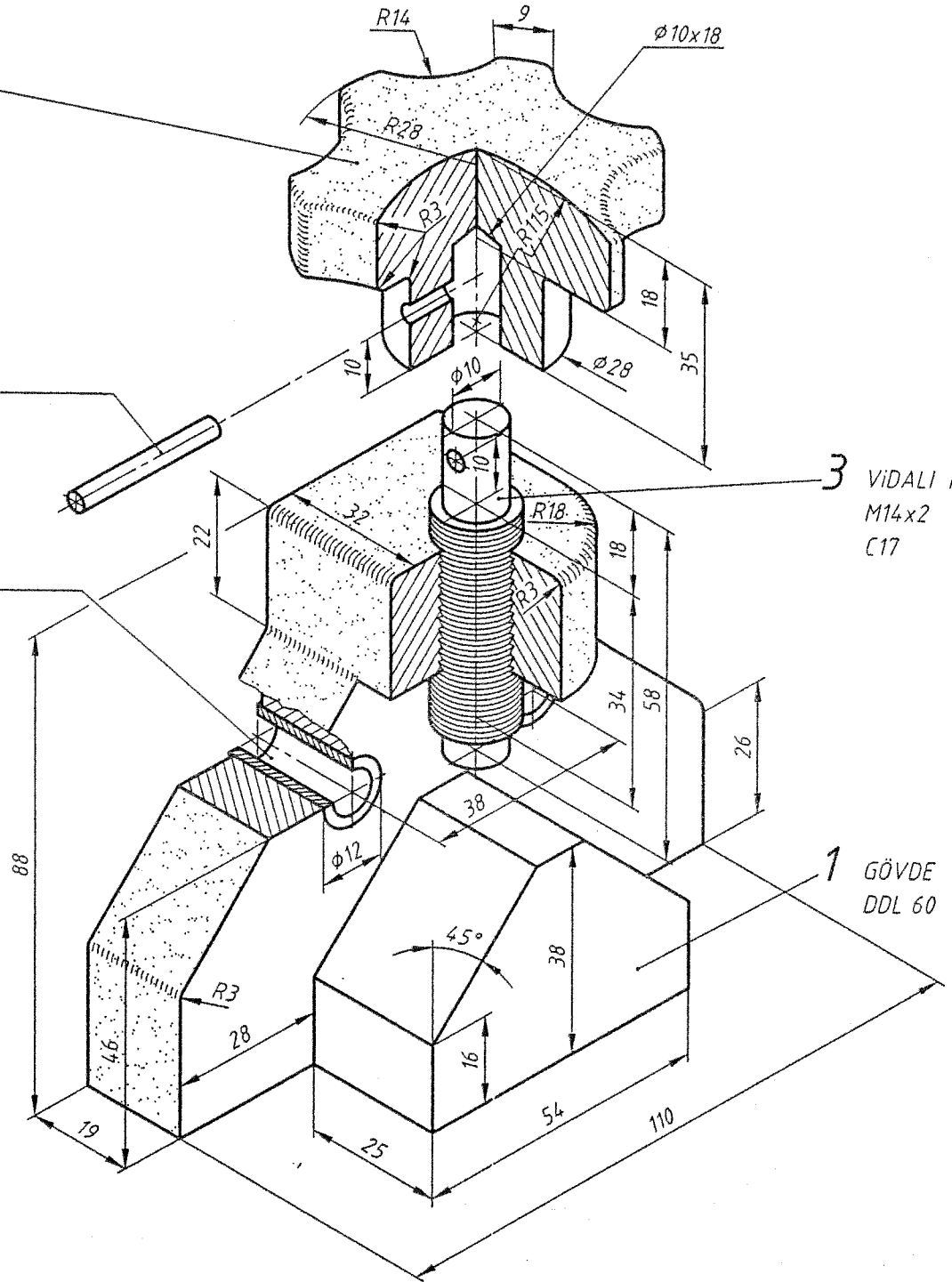
2 EL VOLANI  
DDL 20

5 PİM A3 m6x28  
TS 2337/1

4 BURÇ A8x20  
DIN 179

3 VIDALI MİL  
M14x2  
C17

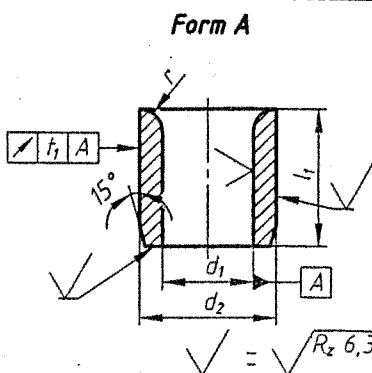
1 GÖVDE  
DDL 60



Sabit burç (DIN 179)

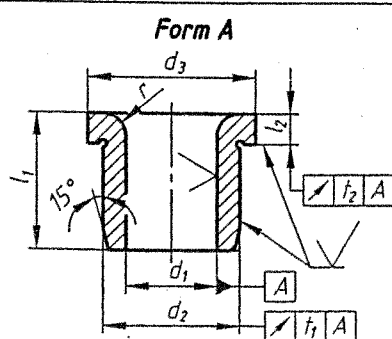
Faturalı burç (DIN 172)

Sabit ve Faturalı Burcun Standart Ölçüleri



Örnek : Form A,  $d_1=18\text{mm}$  ve  $l_1=16\text{mm}$   
burcun gösterimi

Burç DIN 179 - A 18 x 16



Örnek : Form A,  $d_1=22\text{mm}$  ve  $l_1=36\text{mm}$   
burcun gösterimi

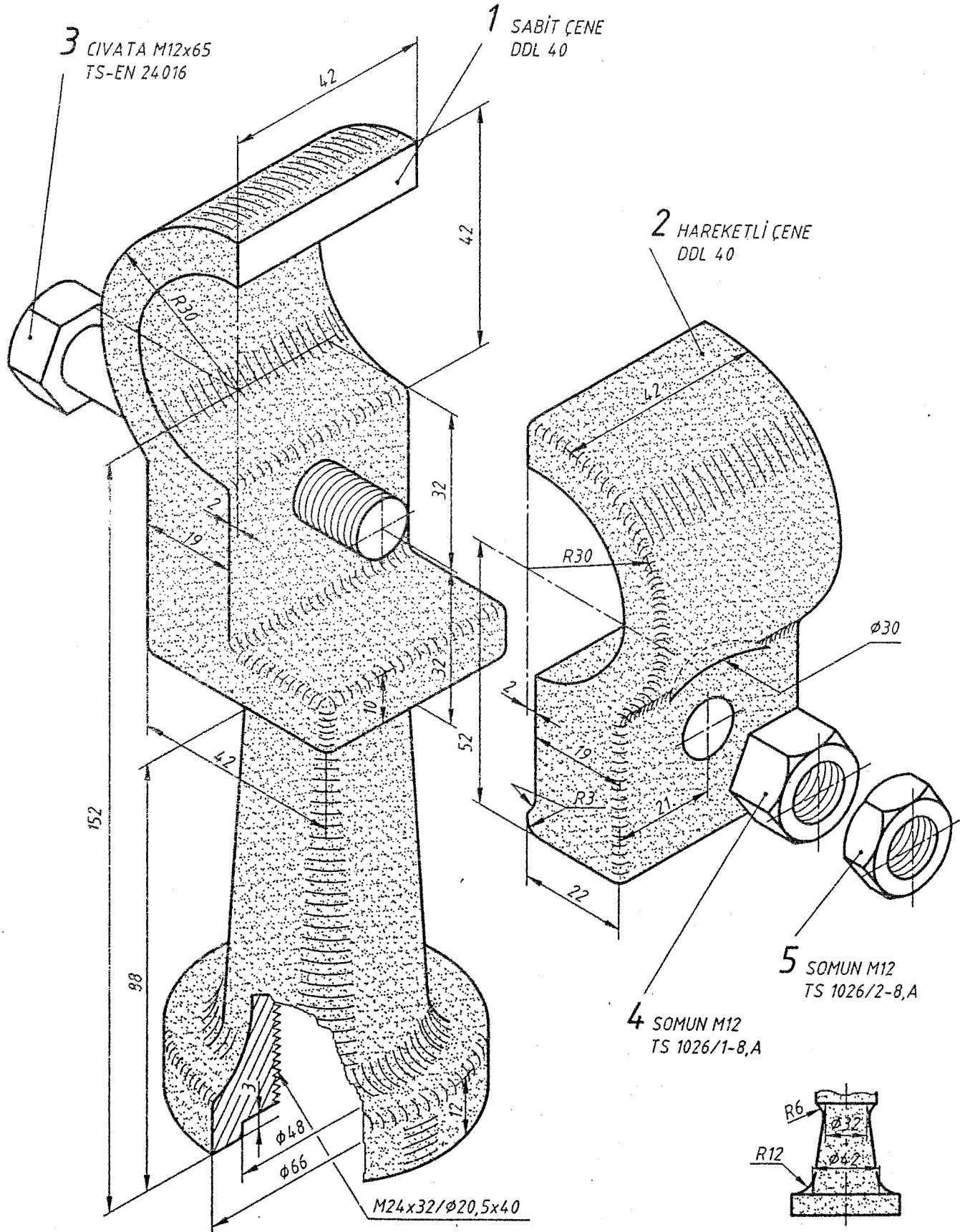
Burç DIN 172 - A 22 x 36

$d_1^{F7}$	1	1,8	2,6	3,3	4	5	6	8	10	12	15	18	22	26
	1,8	2,6	3,3	4	5	6	8	10	12	15	18	22	26	30
Kısa	6		8			10		12		16		20		25
$l_1$ Orta	9		12			16		20		28		36		45
Uzun	-		16			20		25		36		45		56
$d_2^{n6}$	4	5	6	7	8	10	12	15	18	22	26	30	35	42
$d_3$	7	8	9	10	11	13	15	18	22	26	30	34	39	46
$l_2$	2		2,5		3		4		5					
r	1		1		1,5		2		3					
$f_1$		0,01			0,02									
$f_2$		0,03						0,05						

**Ek uygulama:** Civatalı KELEPÇE'nin aksonometrik görünüşü verilmiştir.

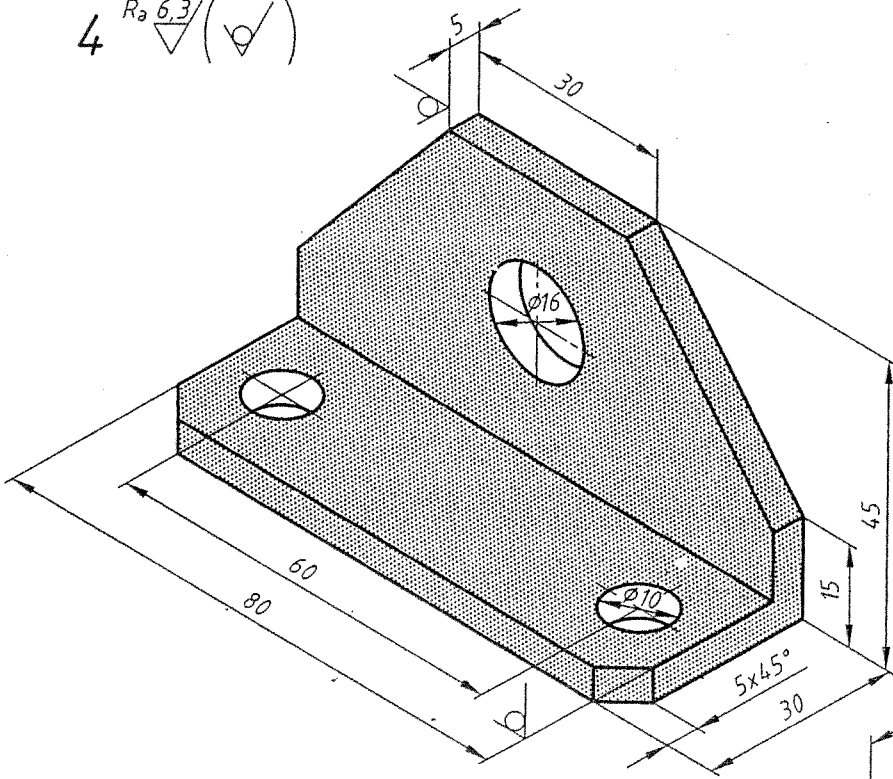
a. Kelepçenin komple görünüşlerini çizerek yazı alanını doldurunuz.

b. Kelepçenin detay resimlerini çiziniz.

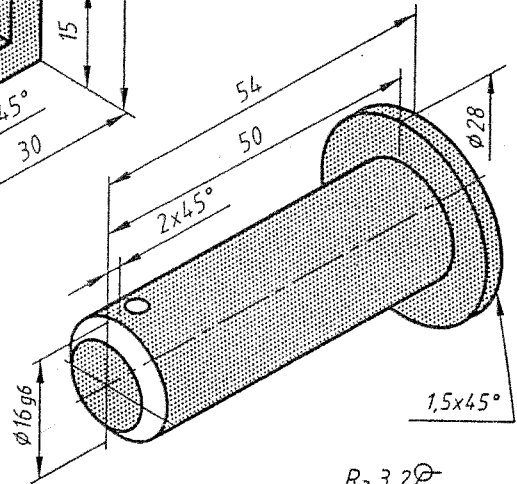


Kasnak Düzeninin Aksonometrik Detayları

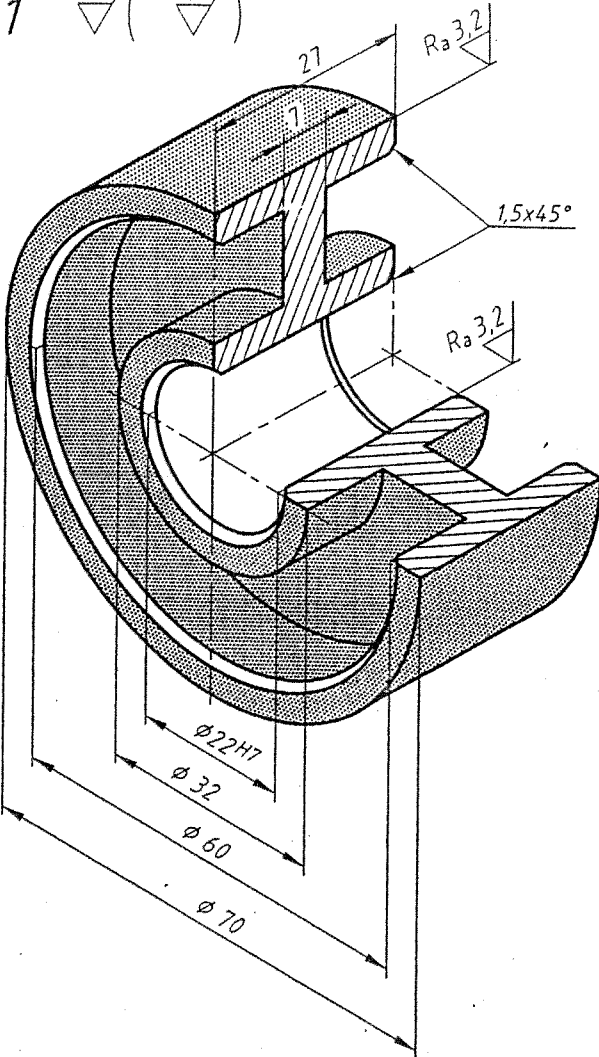
4  $R_a 6,3 / (\sphericalangle)$



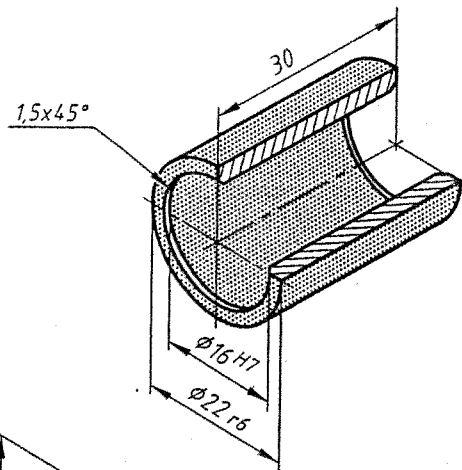
2  $R_a 3,2 \ominus$



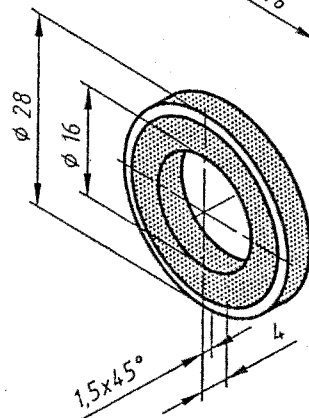
1  $R_a 6,3 / (R_a 3,2 /)$

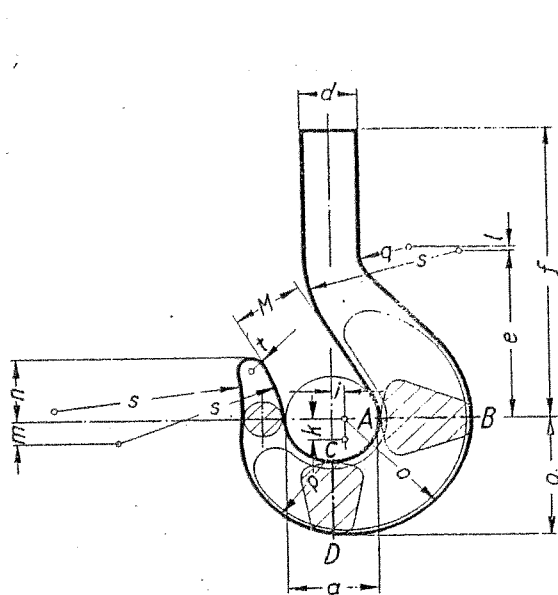


3  $R_a 3,2 \ominus$

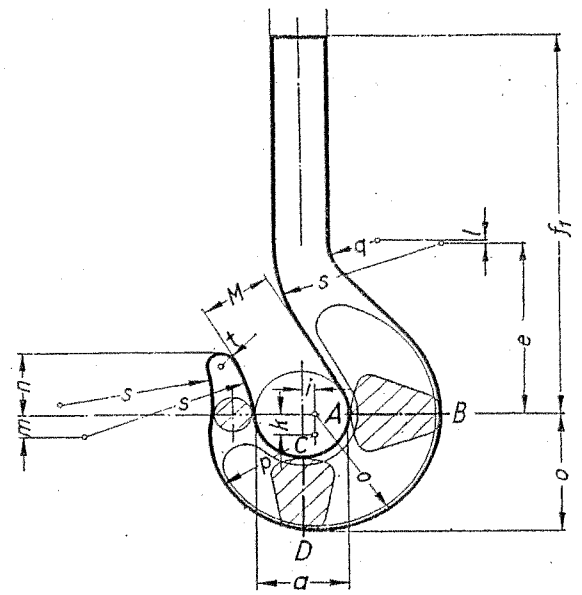


5  $R_a 6,3 \ominus$

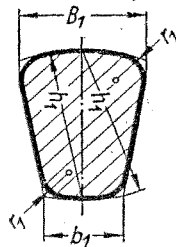
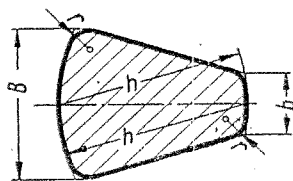




Schnitt A-B



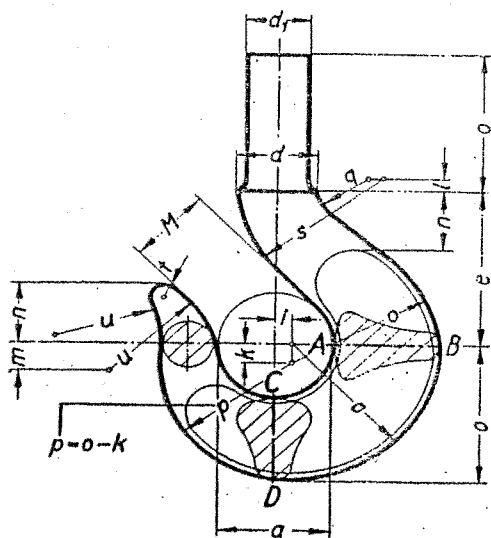
Schnitt C-D



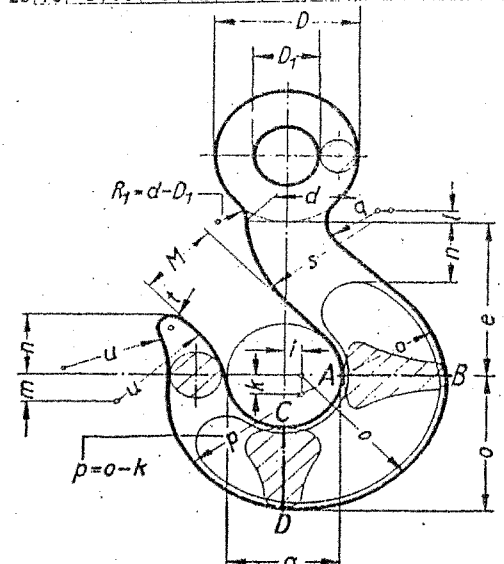
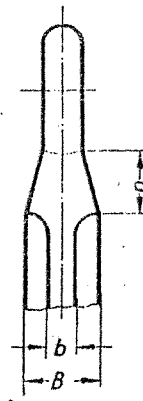
Bezeichnung eines kurzen Lasthakens für 10 000 kg Tragkraft:  
Lasthaken A 10000 DIN 687

Bezeichnung eines langen Lasthakens für 10 000 kg Tragkraft:  
Lasthaken B 10000 DIN 687

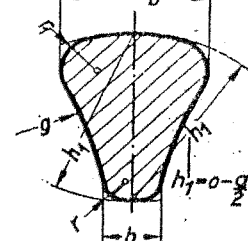
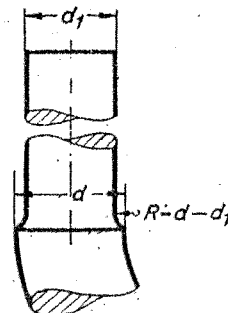
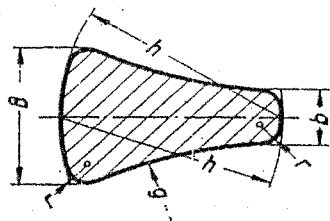
Tragkraft <sup>1)</sup> kg	Maul		Schaft		Längenmaße			Schnitt A-B			Schnitt C-D			Halbmesser						Gewicht kg							
	Durchmesser	Weite	Kerndurchmesser des Gewindes	Kleinmaß	e	f	f <sub>1</sub>	h	B	b	r	h <sub>1</sub>	B <sub>1</sub>	b <sub>1</sub>	r <sub>1</sub>	i	k	l	m	n	o	p	q	s	t	kurz	lang
1 000	50	40	32	20,5	120	215	320	50	35	15	9	45	32	23	10	5	10	5	12	50	70	60	40	130	10	3,5	4



Schnitt A-B



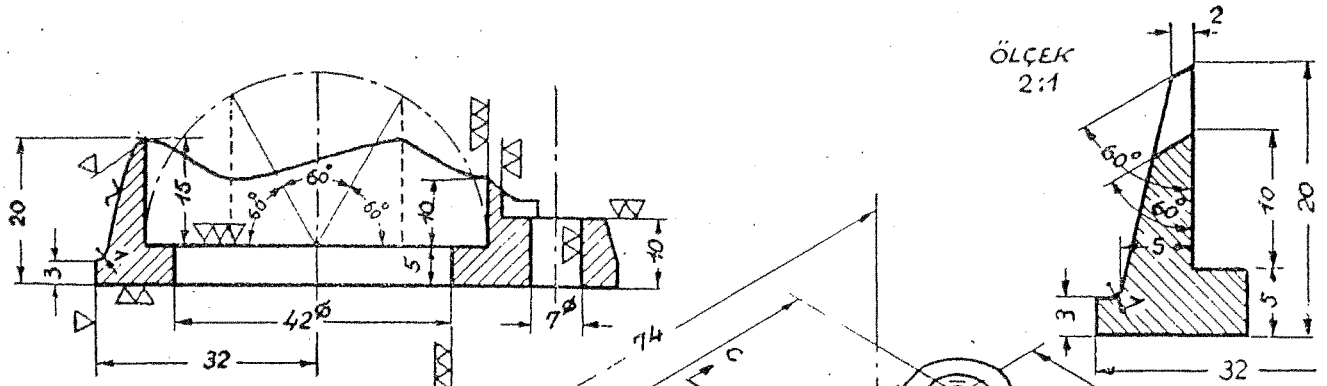
Schnitt C-D



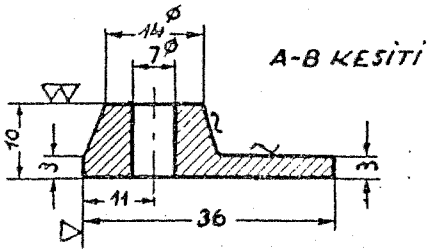
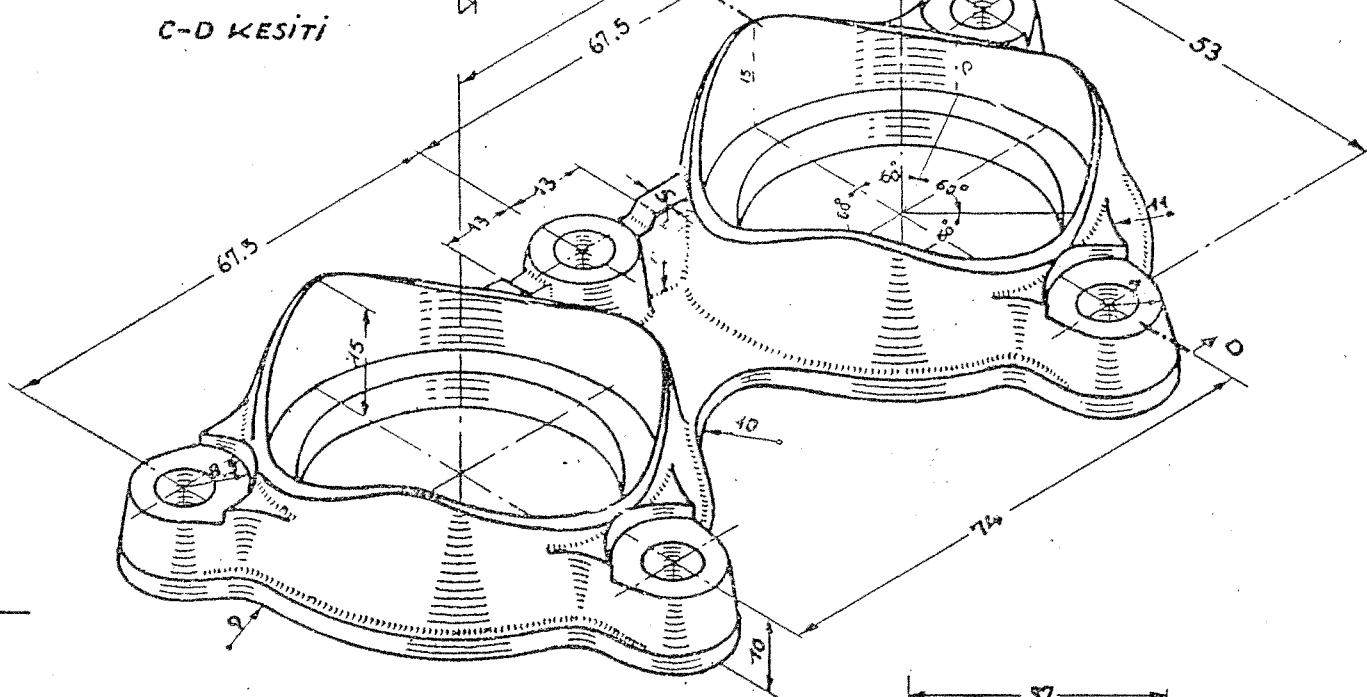
Bezeichnung eines Lasthakens Form A für Handhubwerk (H) mit Zapfen für 1000 kg Tragkraft:  
Lasthaken A H 1000 DIN 688

Bezeichnung eines Lasthakens Form B für Handhubwerk (H) mit Öse für 1000 kg Tragkraft:  
Lasthaken B H 1000 DIN 688

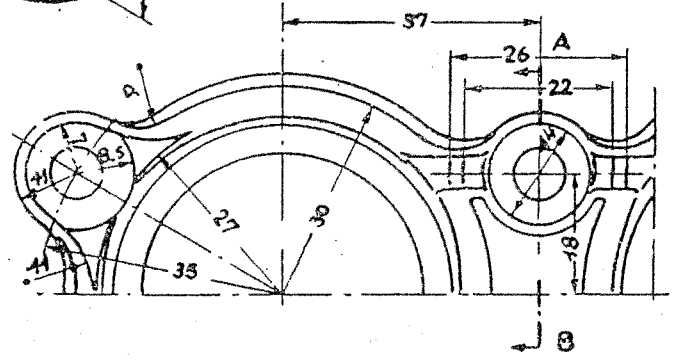
Tragkraft <sup>1)</sup> kg	Maul		Schaft		Öse	Längenmaße	Schnitt A-B und C-D	Halbmesser	Gewicht <sup>2)</sup> kg	
	Durchmesser	Weite	Kerndurchmesser des Gewindes						mit	mit



C-D KESİTİ



A-B KESİTİ



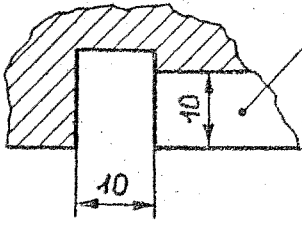
- a - Parçanın adı : GÖZLÜK YUVA  
b - Yapım miktarı : 500 Adet  
c - Malzeme : Düralümin  
d - Grup Resim N° : 84553/22  
e - Parça N° : 95482  
f - İşleme : Parçanın tabii tutulacağı işlem şekilde gösterilmiştir.  
[ ~ , ▽ , ▽▽ , ▽▽▽ ]

**PROBLEM:**

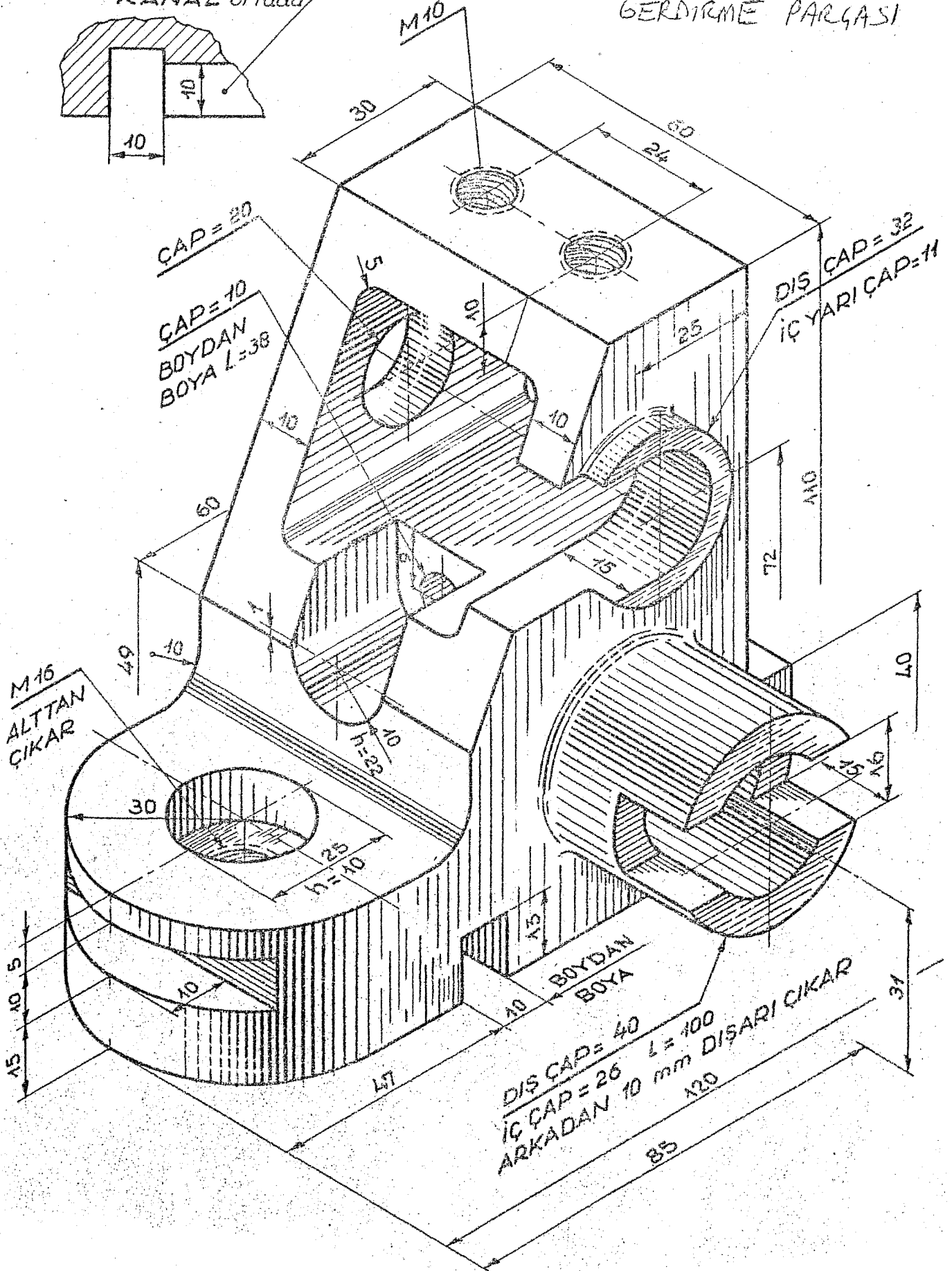
Yukarıdaki parçanın A4 Norm kağıdına 1:1 olarak İMALÂT RESMİ ni çizmek için serbest elle ölçülü krokisini çiziniz.

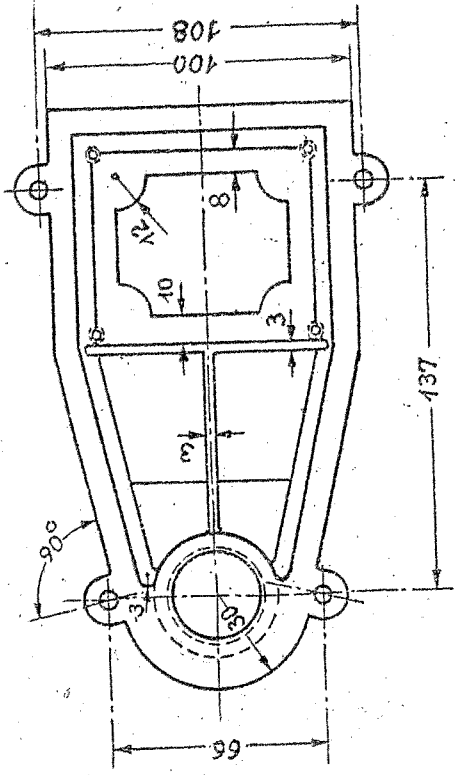
Tarih	27. Mayıs. 1955	ANKARA AKŞ. TEKNİKER OK.
Çizen	[Signature]	
Kontrol	[Signature]	
<b>SERBEST ELLE KROKİ</b>		

30 mm Genişlikte L=63  
KANAL ortada



GERDİRME PARÇASI

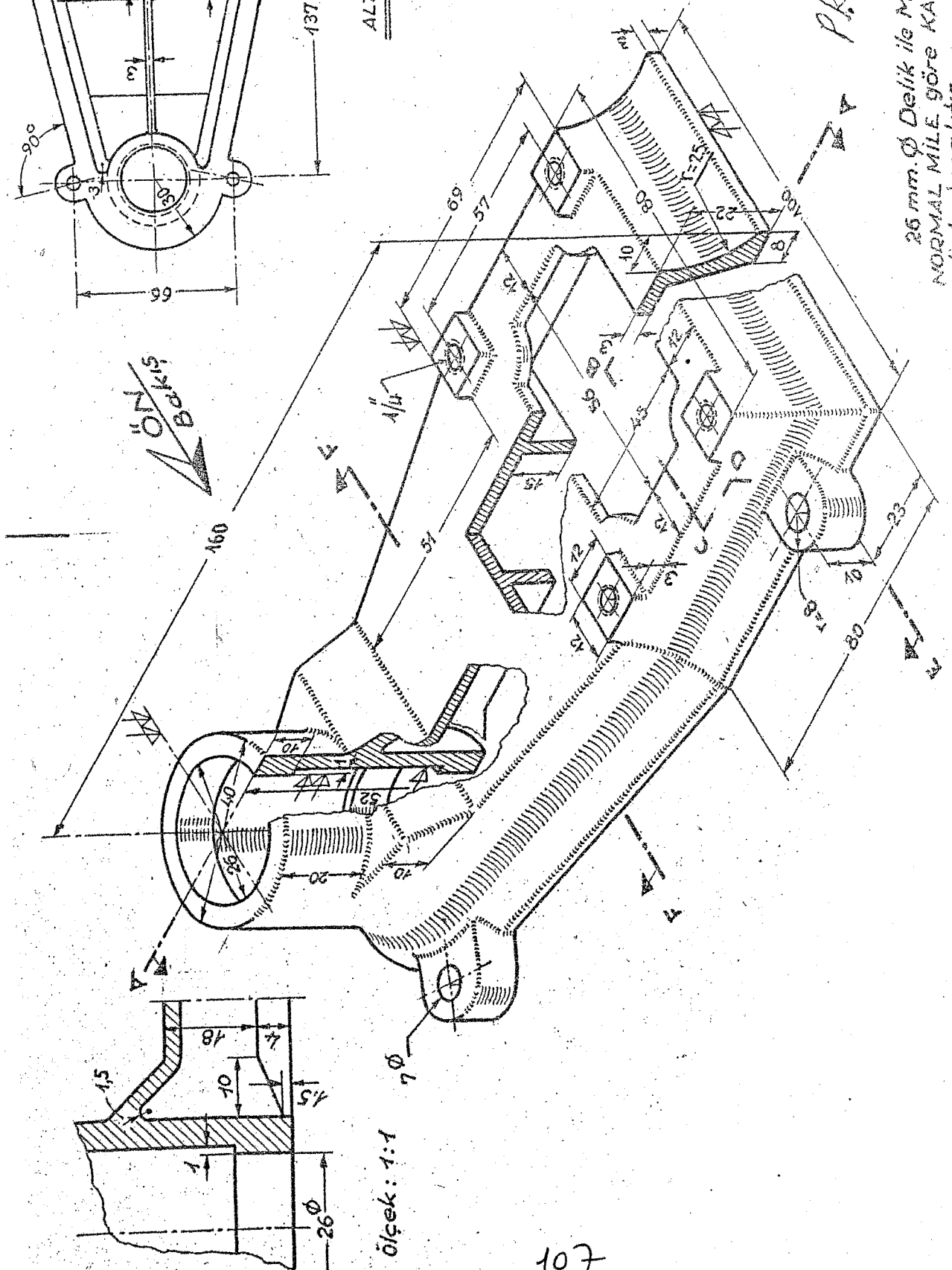




ALT TAN GÖRÜNÜŞÜ

ölçek: 1:2,5

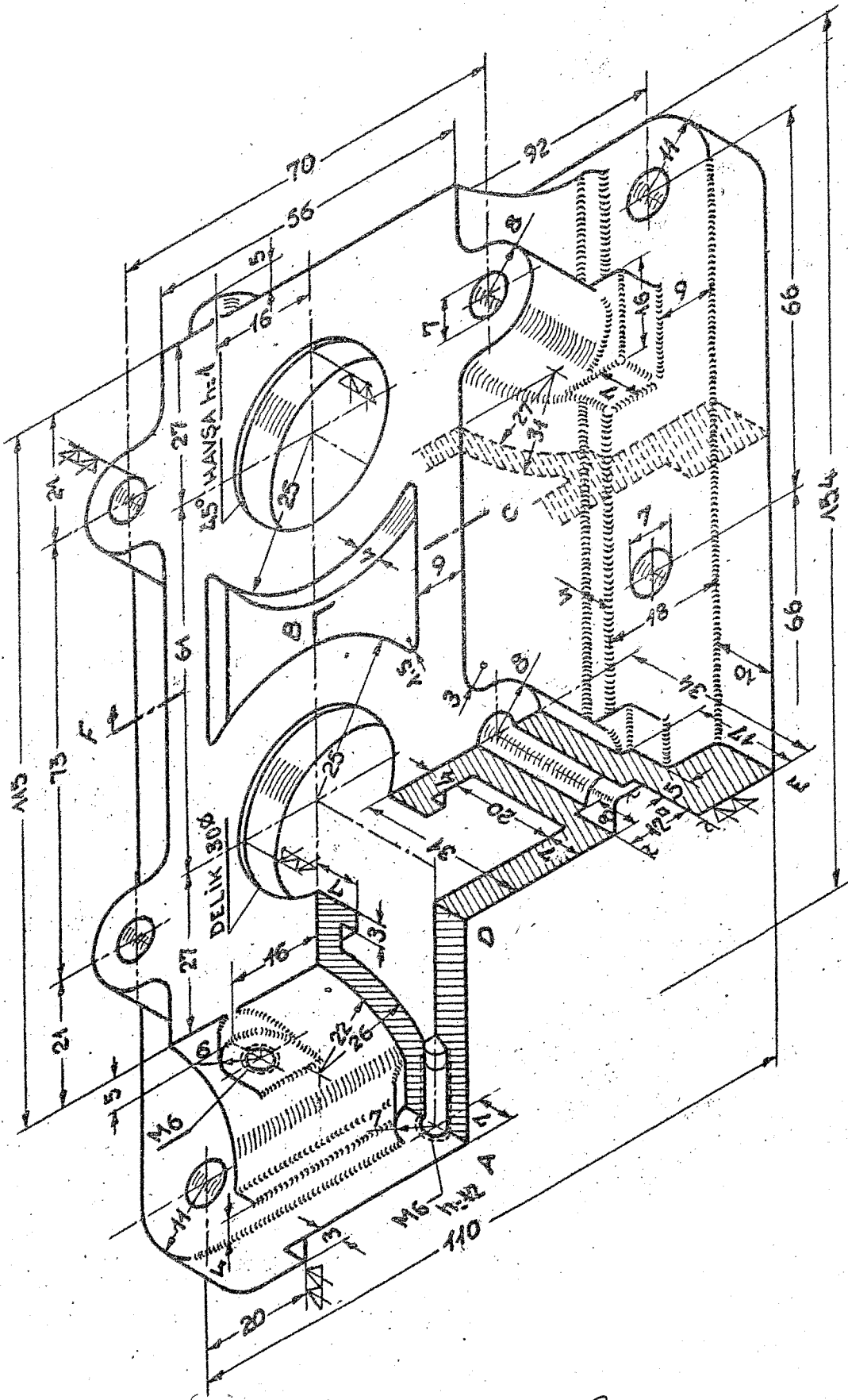
ÖN BAKIŞ



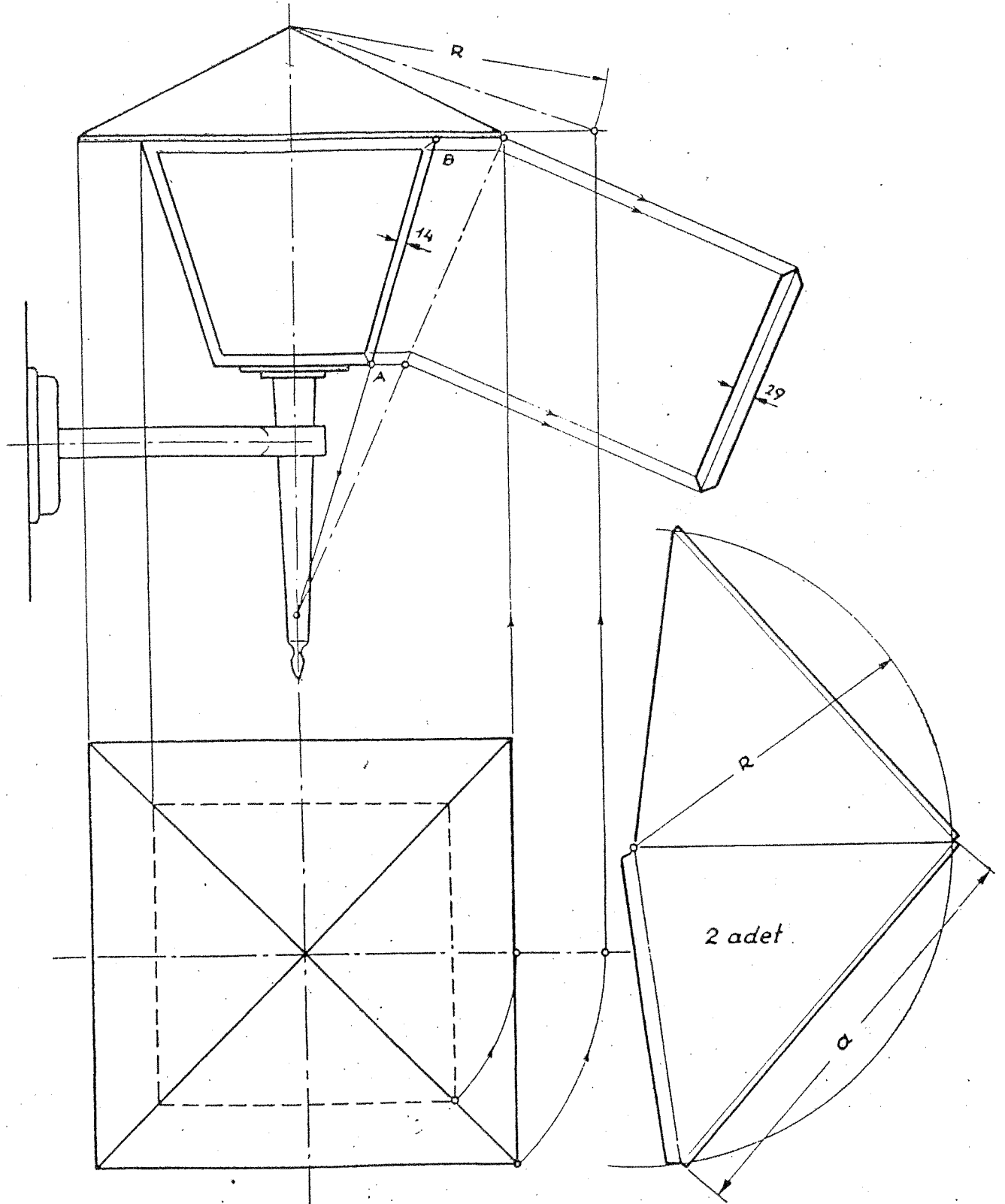
ölçek: 1:1

PRES. KAİDESİ

25 mm. Ø Delik ile Mil ISA Sisteminde  
NORMAL MİLE göre KAYGIN GEÇME olarak  
alıştırılacaktır.



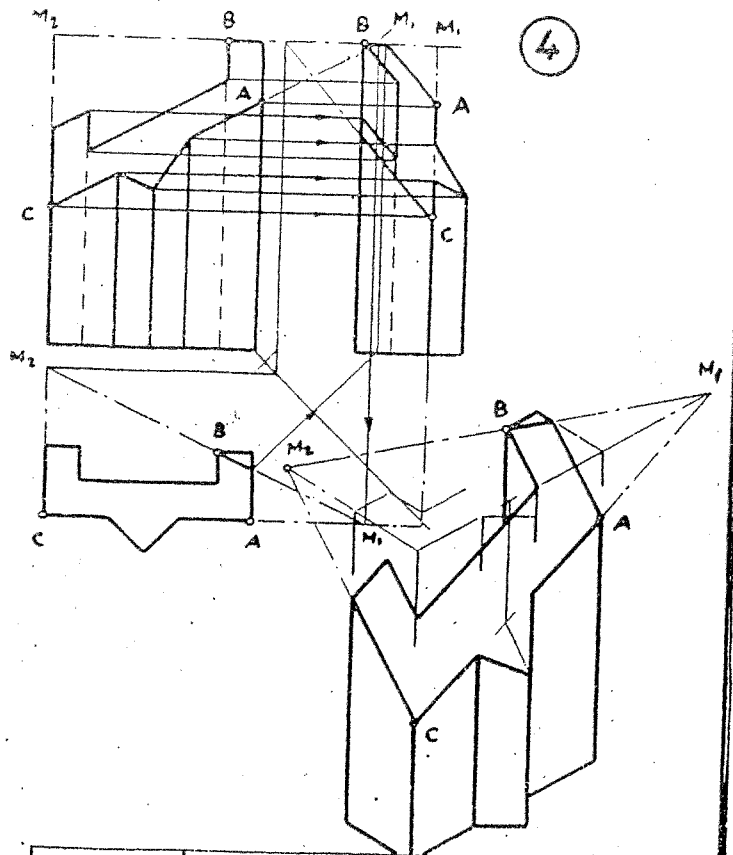
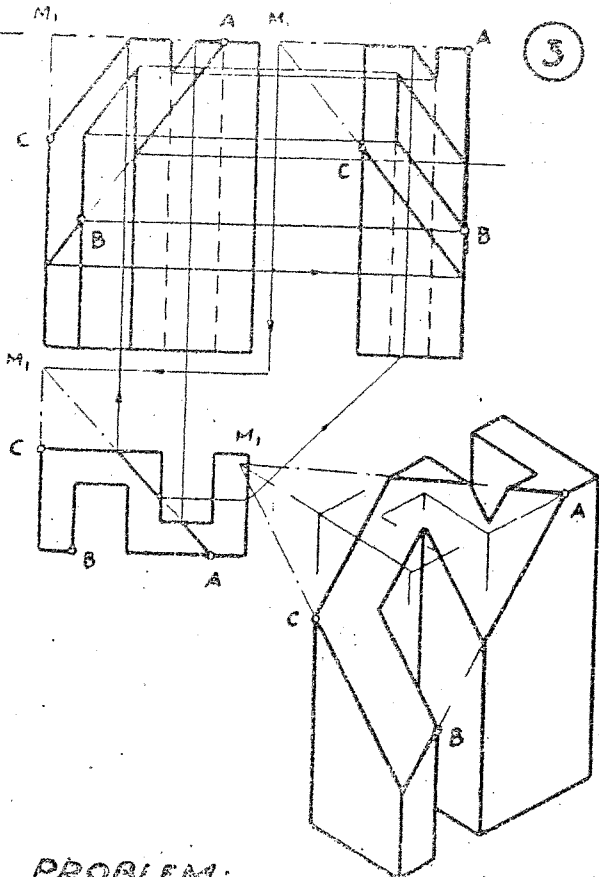
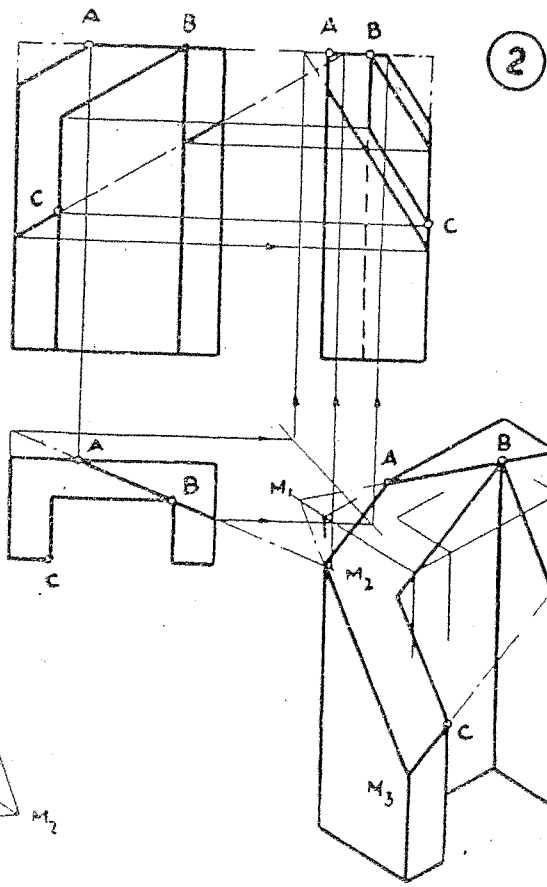
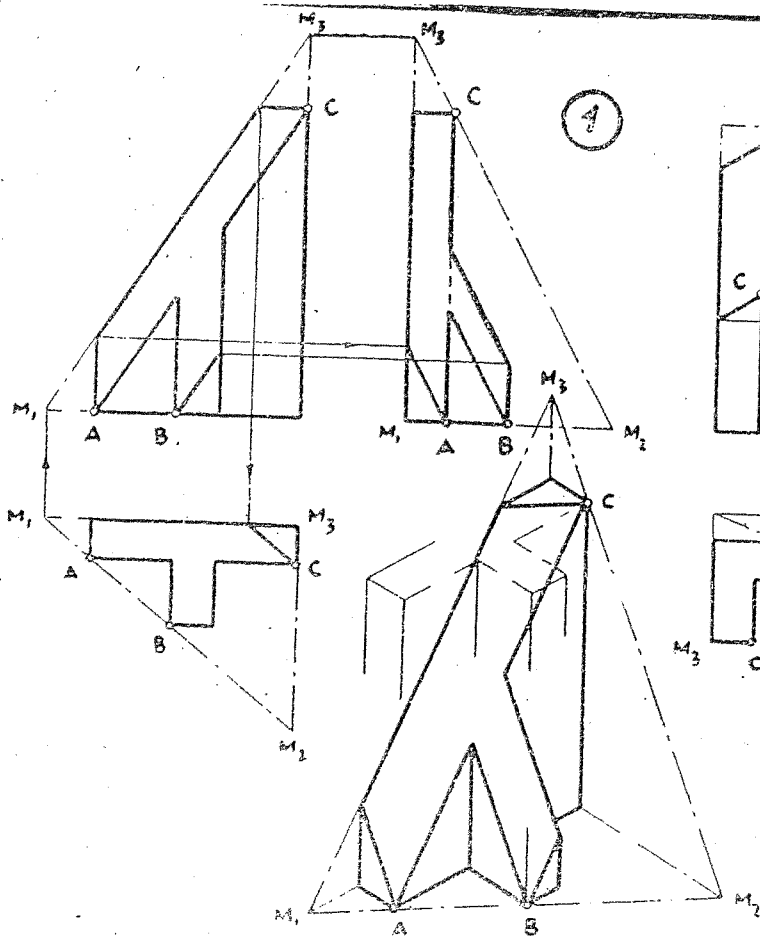
ÖN

**PROBLEM:**

YUKARDAKİ FENERİN DAMININ VE "AB" KENARININ HAKİKİ BOYUTLARINI  
BULARAK,  
α - DAMIN İKİ PARÇALI OLARAK  
b - "AB" KENARININ YAPIM AÇIYIMLARINI  
ÇİZİNİZ.

Tarih	15. VII. 1952	TRABZON Erk. San. Ens.
Çizen	A. H. ÖZLÜ	
Kontrol		

HAKİKİ BOYUT VE AÇINIM



**PROBLEM:**  
 PRİZMALAR ÜZERİNDE ALINMIŞ ABC  
 NOKTALARINDAN GEÇEN DÜZLEMLERİN  
 MEYDANA GETİRECEKLERİ KESİTLERİ  
 ÇİZİNİZ.

Tarih	10. Mart. 1953	ANKARA AŞ. TEKNİK OK.
Çizen	A. H. ÖZLÜ	
Kontrol		
<b>DÜZLEM GEÇİRMEK</b>		

**PROBLEM :**

PARÇADA ABC NOKTALARINDAN  
GEÇEN DÜZLEMİN MEYDANA GETİR  
DİĞİ ARAKESİTİ

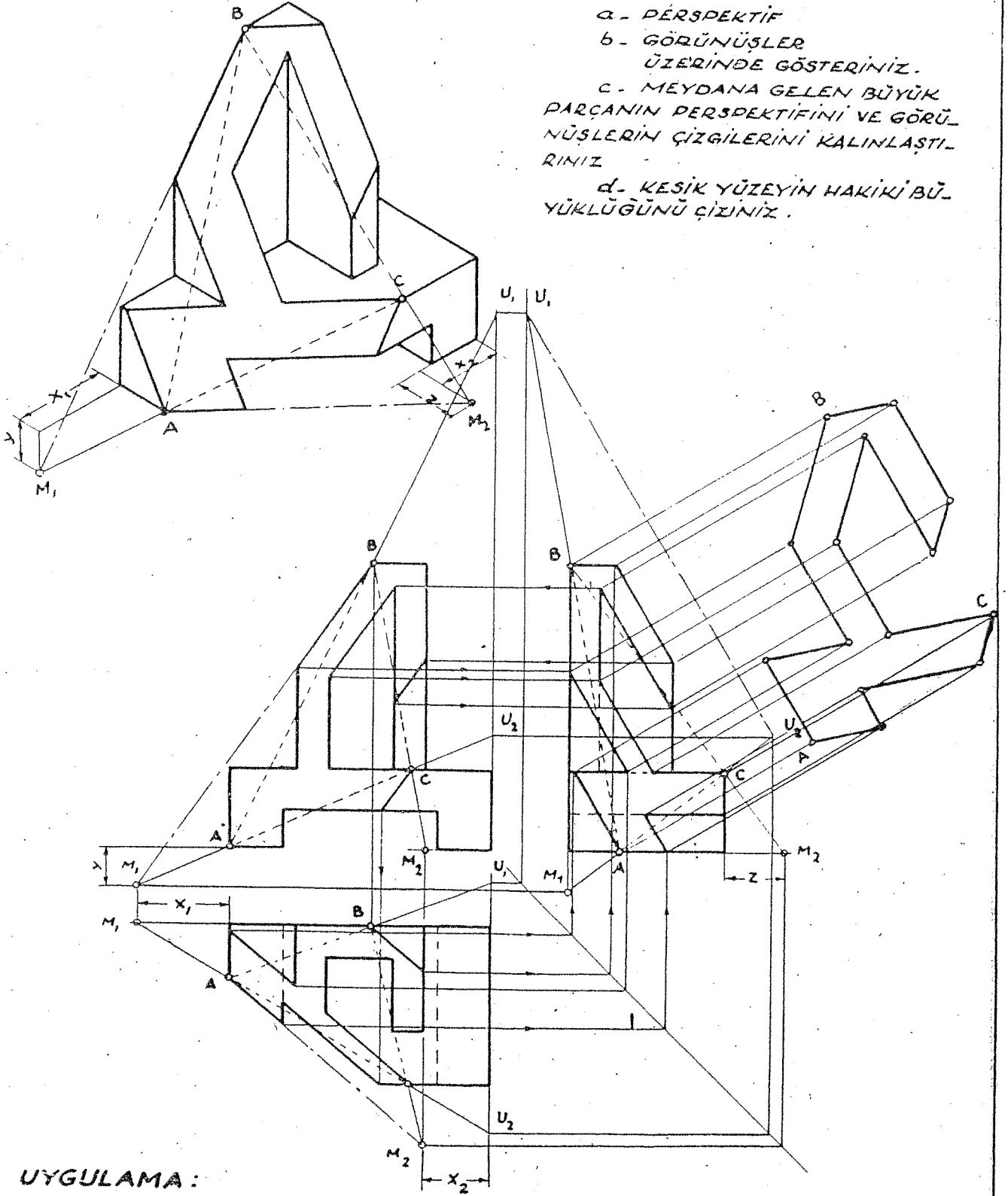
a - PERSPEKTİF

b - GÖRÜNÜŞLER

ÜZERİNDE GÖSTERİNİZ .

c - MEYDANA GELEN BÜYÜK  
PARÇANIN PERSPEKTİFİNİ VE GÖRÜ  
NÜŞLERİN ÇİZGİLERİNİ KALINLAŞTI  
RINIZ

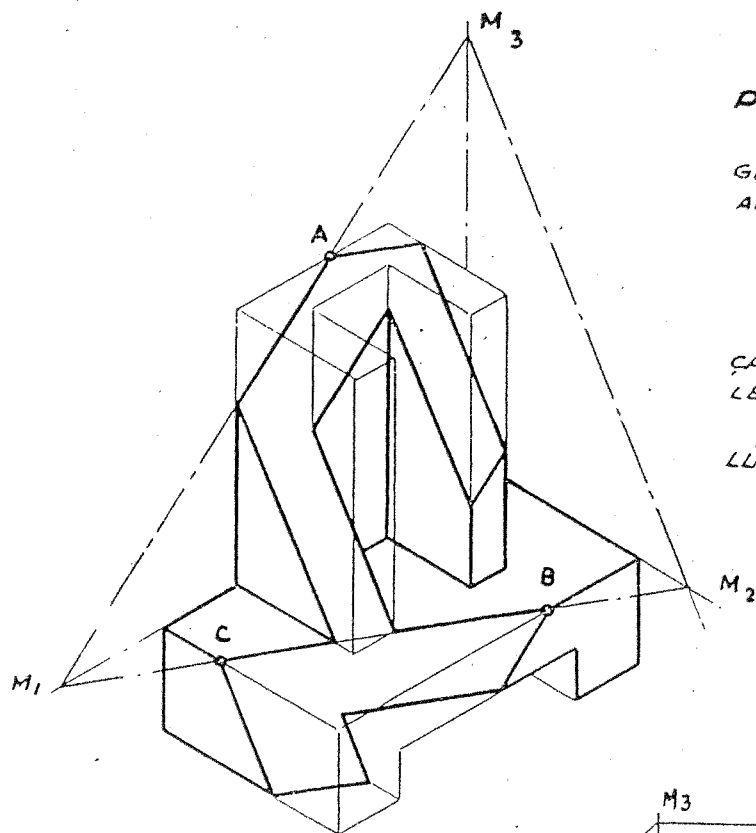
d - KESİK YÜZEYİN HAKİKİ BÜ  
YÜKLÜĞÜNÜ ÇİZİNİZ .



**UYGULAMA :**

ABC NOKTALARI PERSPEKTİF  
ÜZERİNDE ÖĞRETMEN TARAFINDAN  
VERİLEREK , BU NOKTALARDAN GEÇEN  
DÜZLEMİN MEYDANA GETİRDİĞİ  
KESİT İSTENMİŞTİR .

Tarih	25.VI.1958	ANKARA AKŞ. TEKNİKERO. D.
Çizen	A.H.ÖZLÜ	
Kontrol		
<b>DÜZLEM GEÇİRMEK</b>		



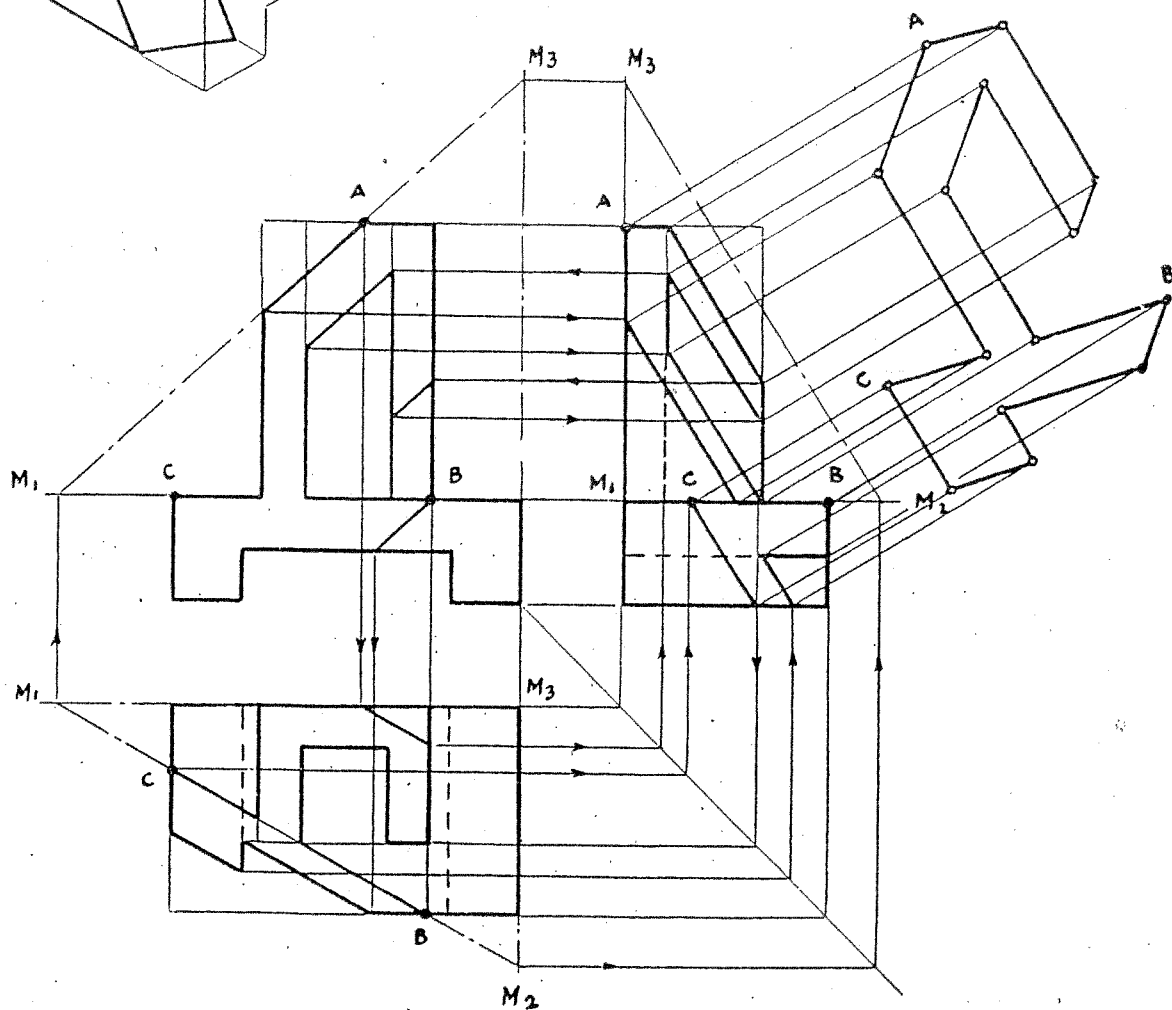
**PROBLEM :**

PARÇADA A, B, C NOKTALARINDAN GEÇEN DÜZLEMİN MEYDANA GETİRDİĞİ ARA KESİTİ.

a - PERSPEKTİF  
b - GÖRÜNÜŞLER  
ÜZERİNDE GÖSTERİNİZ.

c - MEYDANA GELEN BÜYÜK PARÇANIN PERSPEKTİFİNİ VE GÖRÜNÜŞLERİN ÇİZGİLERİNİ KALINLAŞTIRINIZ.

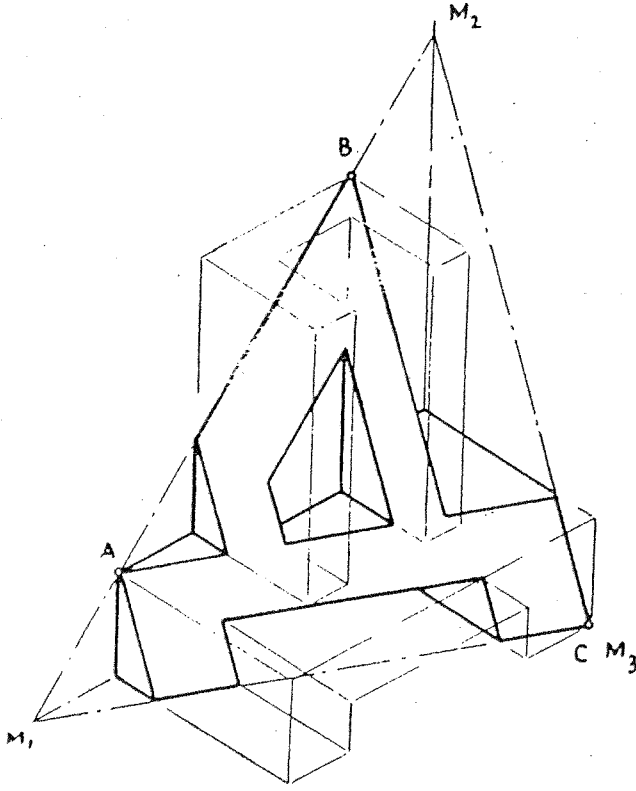
d - KESİK YÜZEYİN HAKİKİ BÜYÜKLÜĞÜNÜ ÇİZİNİZ.



**UYGULAMA :**

ABC NOKTALARI PERSPEKTİF ÜZERİNDE ÖĞRETMEN TARAFINDAN VERİLMİŞ, BU NOKTALARDAN GEÇEN DÜZLEMİN MEYDANA GETİRDİĞİ KESİT İSTENMİŞTİR.

Tarih	2.11.1958	ANKARA AKŞ. TEKNİKER OK.
Çizen	A. H. ÖZLÜ	
Kontrol		
<b>DÜZLEM GEÇİRMEK</b>		



### PROBLEM

PARÇADA A,B,C NOKTALARINDAN GEÇEN DÜZLEMİN MEYDANA GETİRDİĞİ ARAKESİTİ

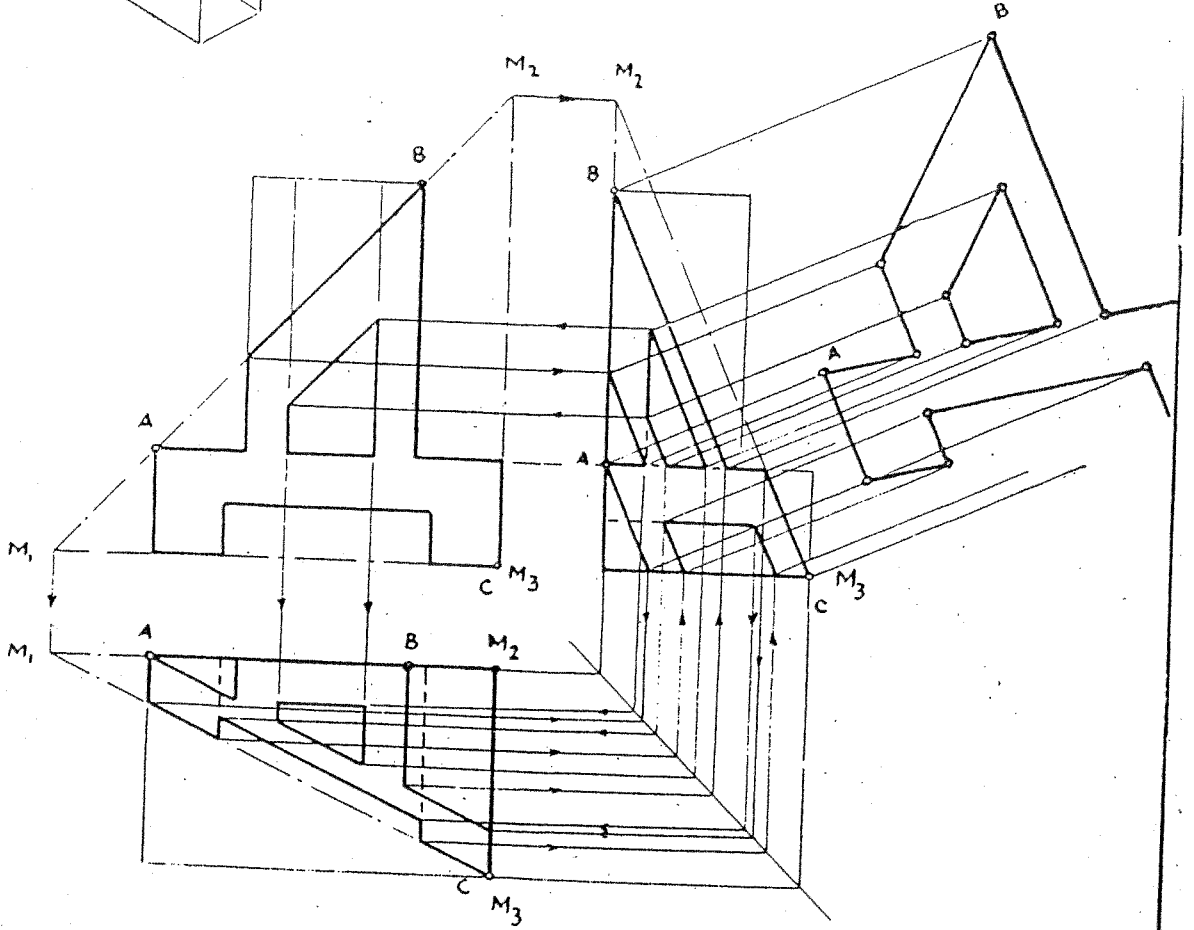
a - PERSPEKTİF

b - GÖRÜNÜŞLER

ÜZERİNDE GÖSTERİNİZ.

c - MEYDANA GELEN BÜYÜK PARÇANIN PERSPEKTİFİNİ VE GÖRÜNÜŞLERİN ÇİZGİLERİNİ KALINLAŞTIRINIZ

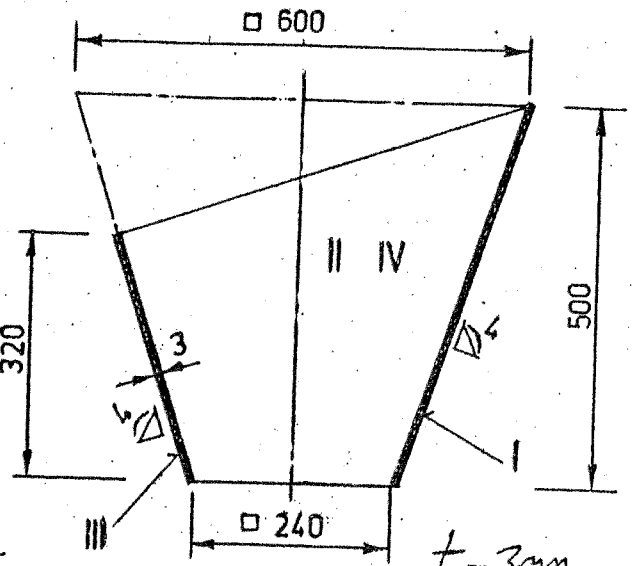
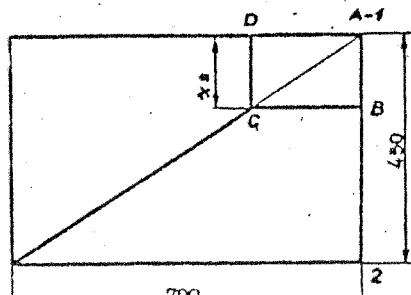
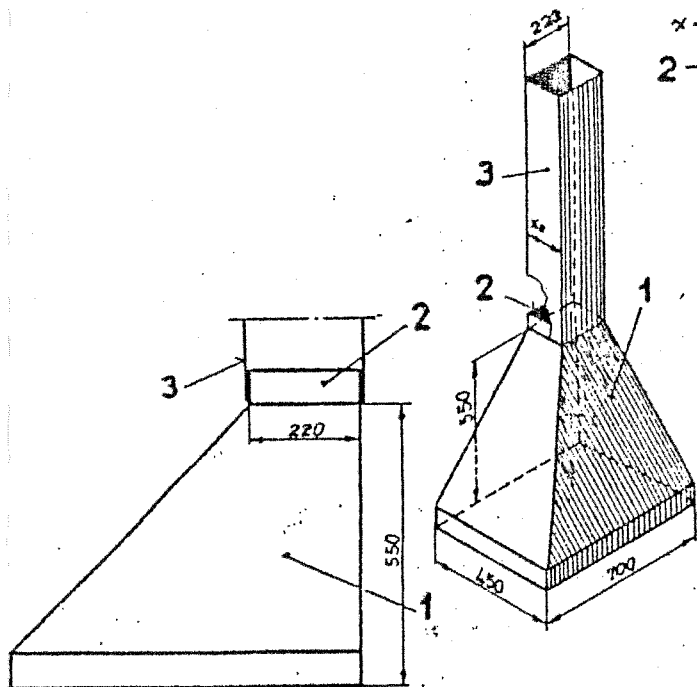
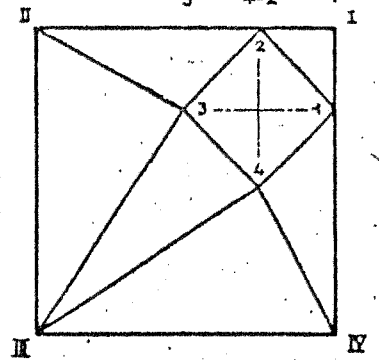
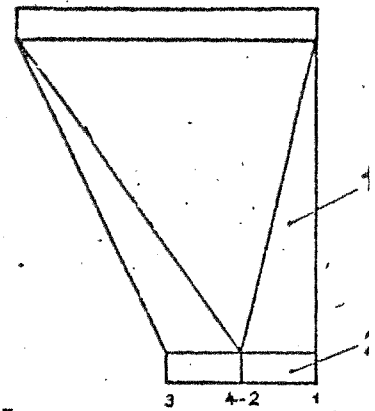
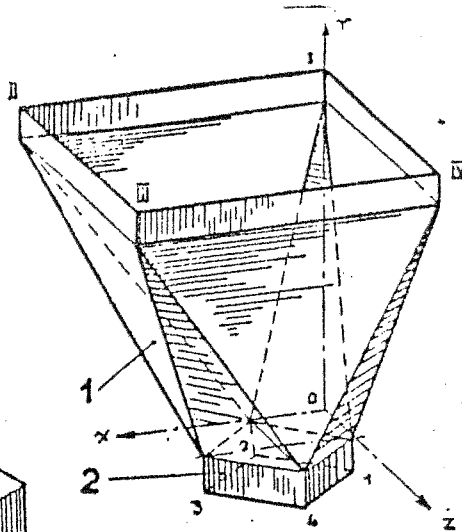
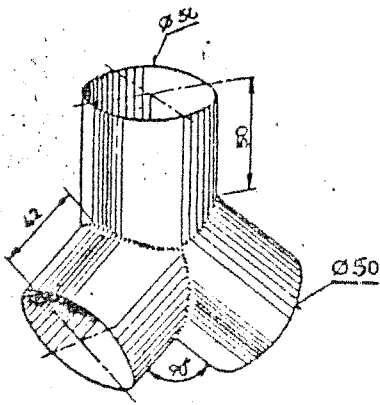
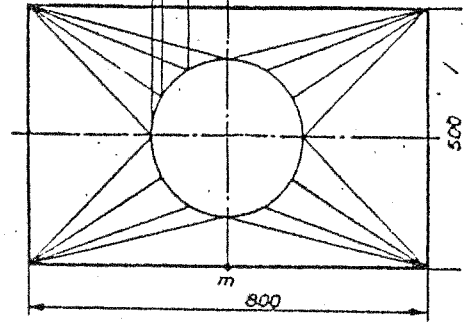
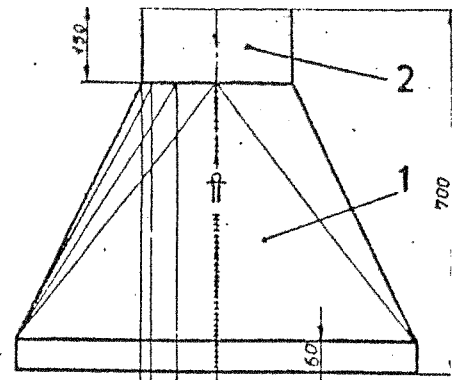
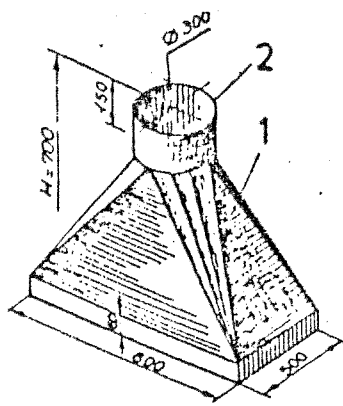
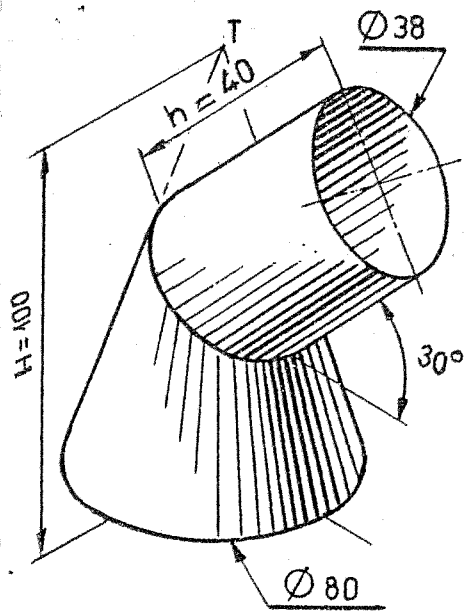
d - KESİK YÜZEYİN HAKİKİ BÜYÜKLÜĞÜNÜ ÇİZİNİZ.



### UYGULAMA:

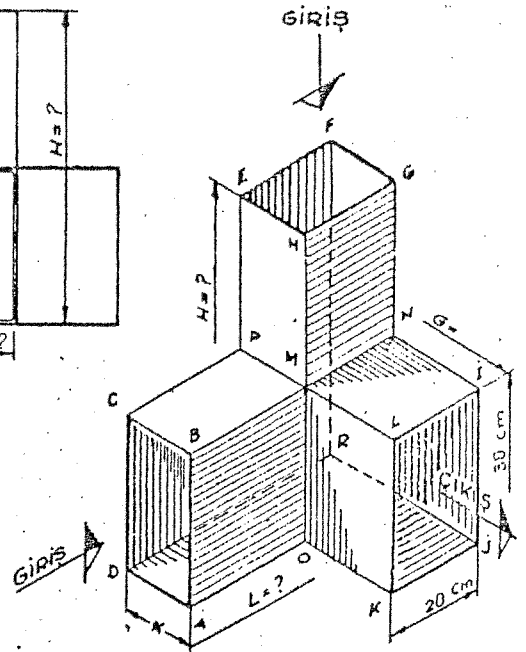
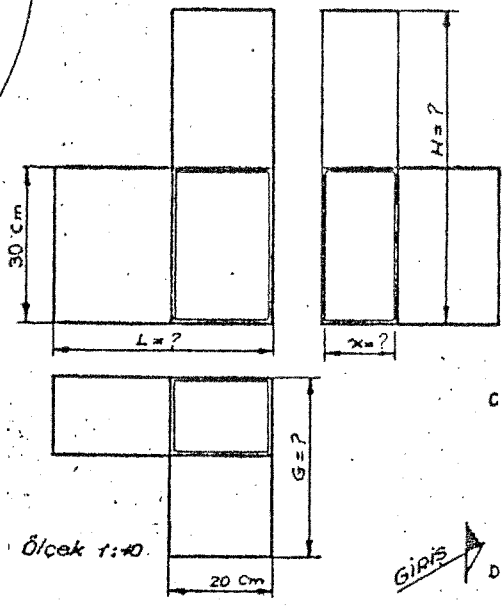
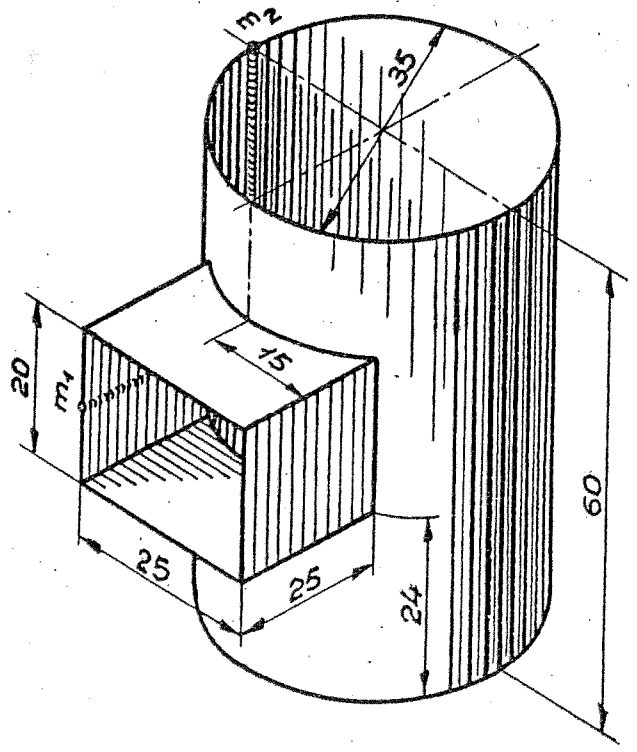
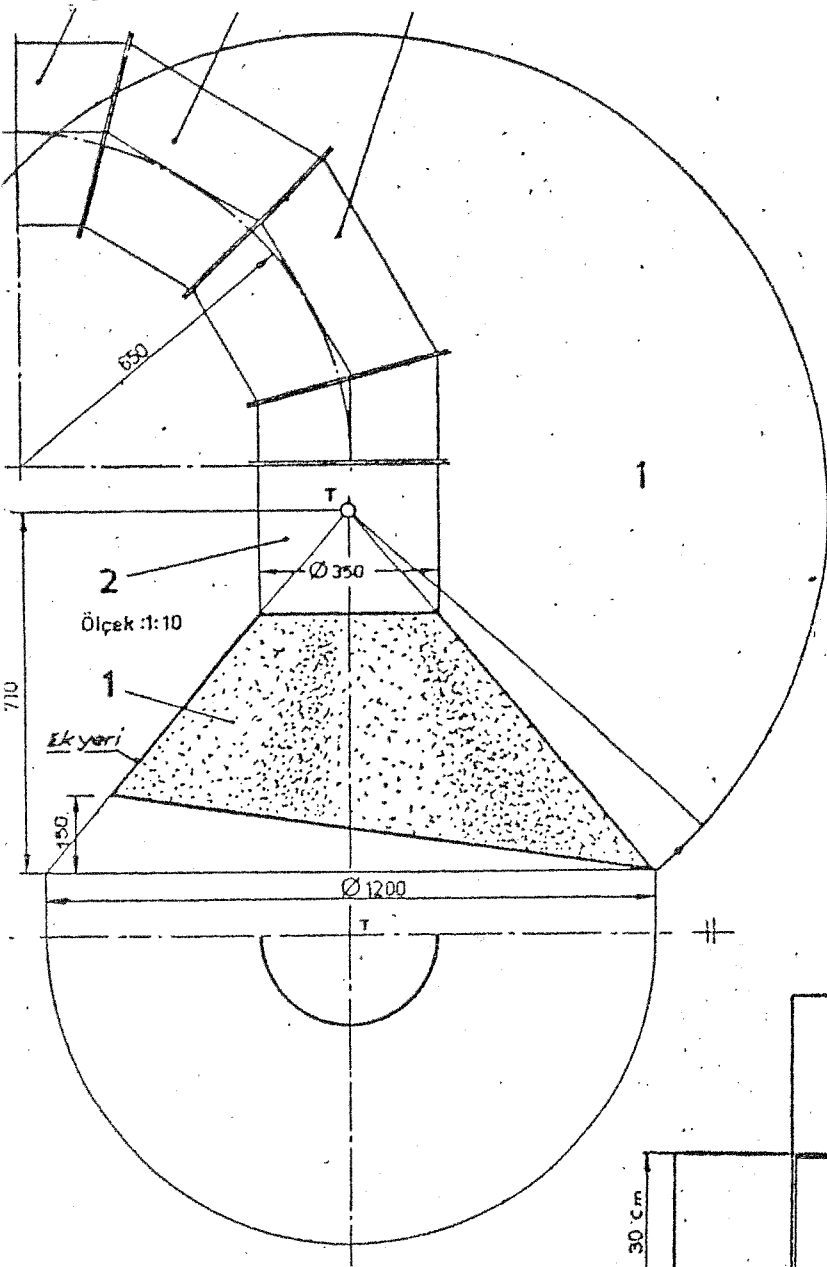
ABC NOKTALARI PERSPEKTİF ÜZERİNDE ÖĞRETMEN TARAFINDAN VERİLEREK, BU NOKTALARDAN GEÇEN DÜZLEMİN MEYDANA GETİRDİĞİ KESİT İSTENMİŞTİR.

Tarih	10. III. 1958	ANKARA AKŞ. TEKNİKER OK.
Çizen	A. H. ÖZLÜ	
Kontrol		
<b>DÜZLEM GEÇİRMEK</b>		



114

$t = 3mm$



**PROBLEM:**

**ÜÇ AĞIZLI DİRSEK**

Yukarıda görünümleri ve perspektifi görülen DİRSEK, aşağıdaki koşullar ile tek perçalı bir açınım dan yapılmak istenilmektedir,

- a - Mevcut sac ölçüleri : 1,20 x 2,40 m  
1,20 x 1,20 m
- b - Ek yerleri gaz (G) kaynağı ile birleştirilecektir.
- c - Kesme ve kaynak işgillikleri ile artık sac miktarının çok az olması arzulanmaktadır.
- d - Çıkış borusu kesit alanının, giriş boruları kesit alanları toplamına eşit olması gerekmektedir.

Bunlara göre:

- 1 - Dirseğin (X) ölçüsü ne olmalıdır?
- 2 - Açınım şekli ve ölçüleri ne olur?

