SEM 0564 - DESENHO TÉCNICO MECÂNICO I

Notas de Aulas v.2018

Aula 04 – Vistas auxiliares, omissão de corte e simplificações

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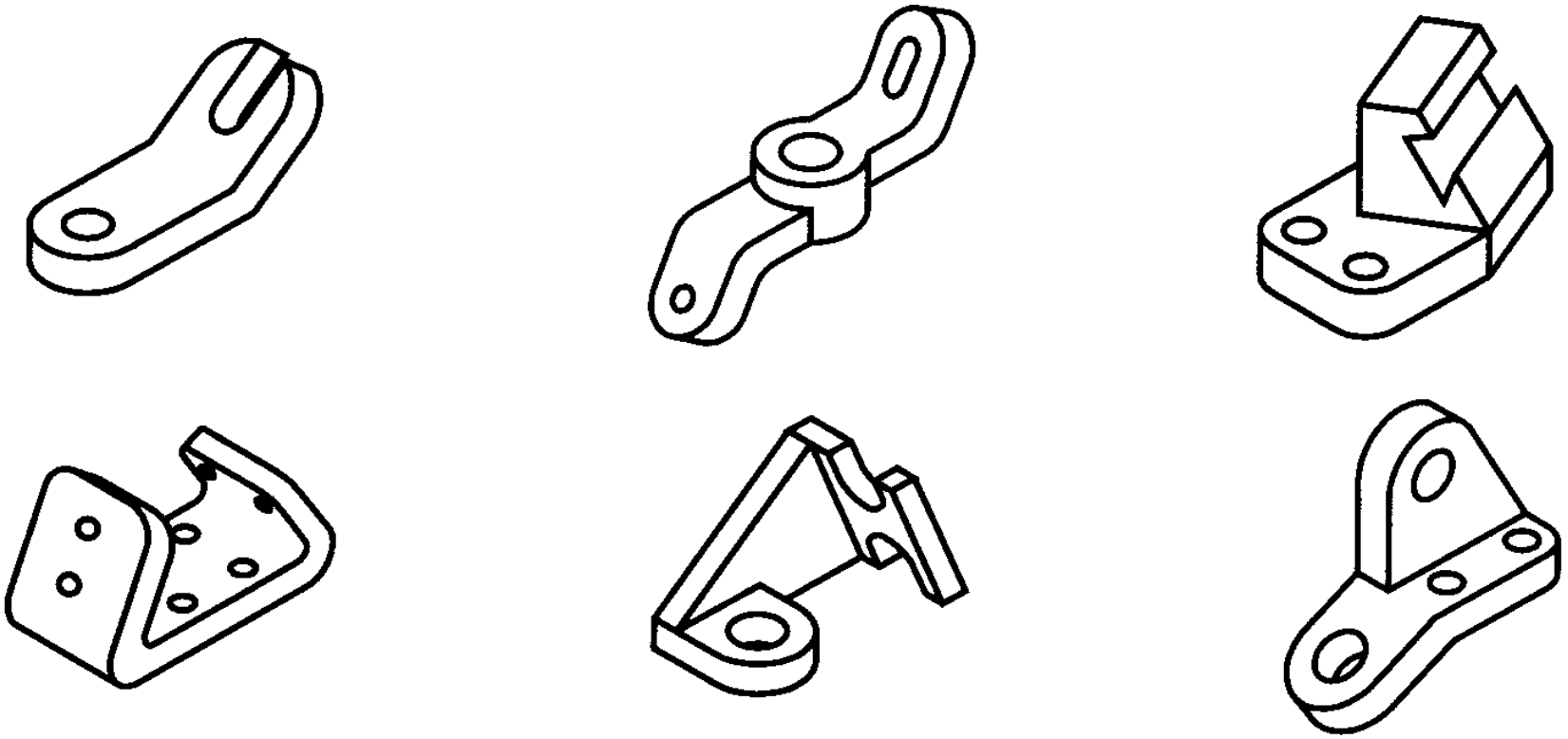
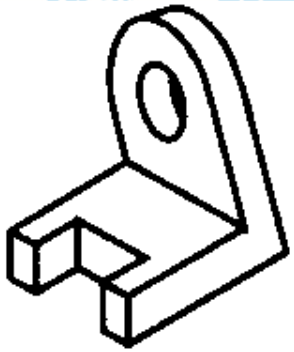
VISTAS AUXILIARES ou projeção ortogonal especial

Linhas inclinadas e planos oblíquos não aparecem com suas dimensões reais em nenhum dos planos normais, aparecem deformadas. Nestes casos aplica-se a vista auxiliar que são representações em planos auxiliares.



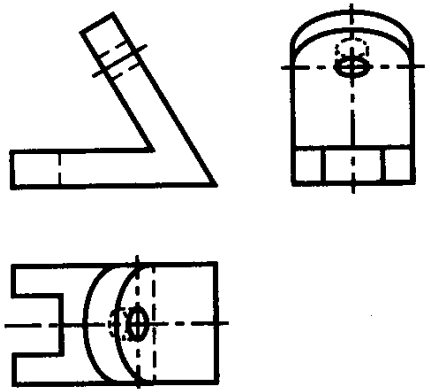
Imagens: Leitura e Interpretação de Desenho Técnico Mecânico. Mecânica. Telecurso 2000

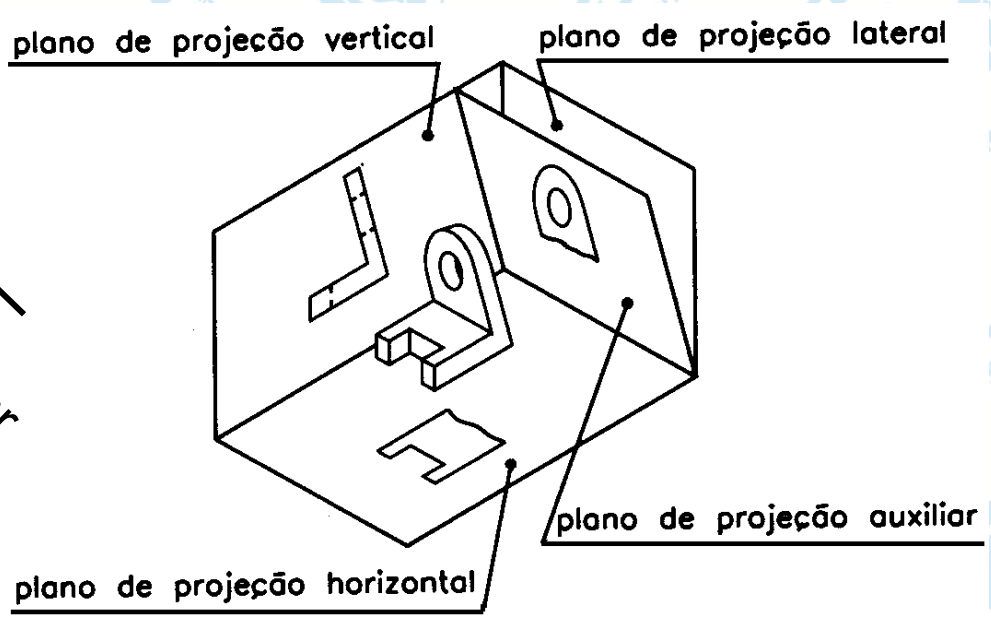
Vistas auxiliares



Projeção ortogonal

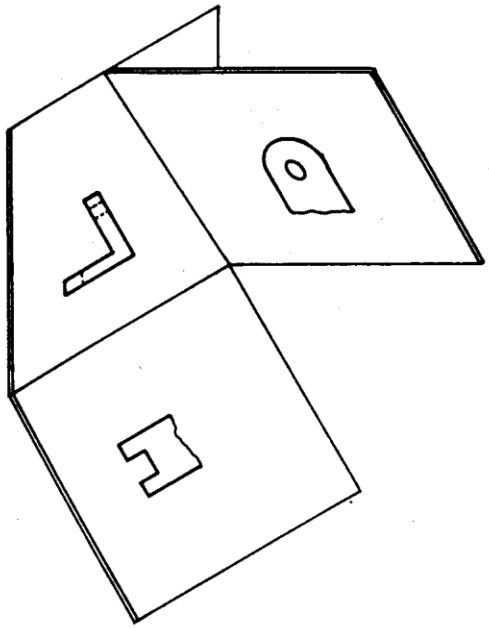
Projeção em plano auxiliar



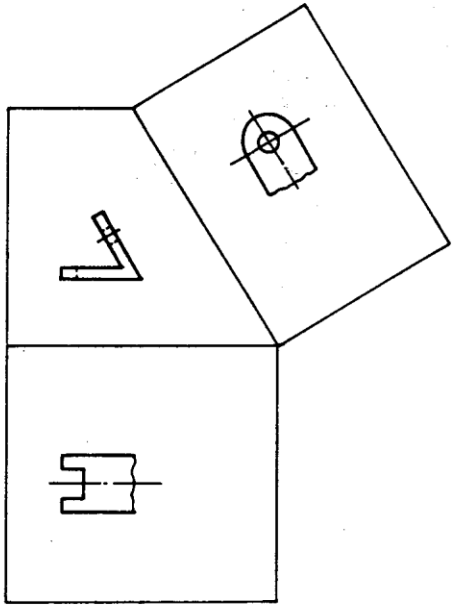


Imagens: Leitura e Interpretação de Desenho Técnico Mecânico. Mecânica. Telecurso 2000

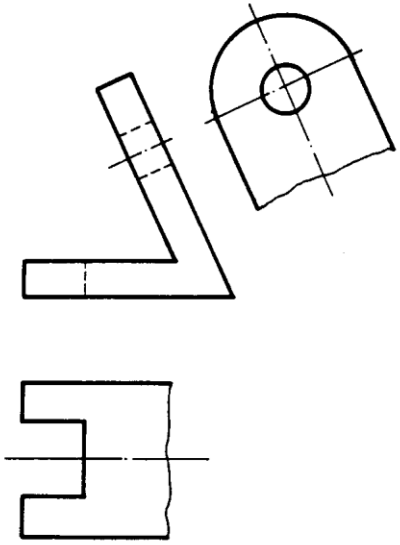
Rebatimento do plano auxiliar



Planos

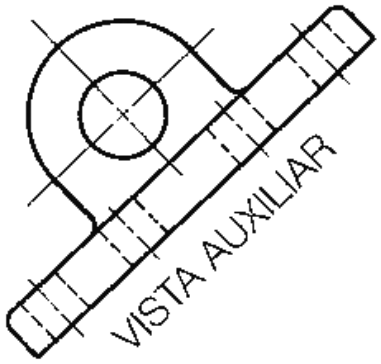


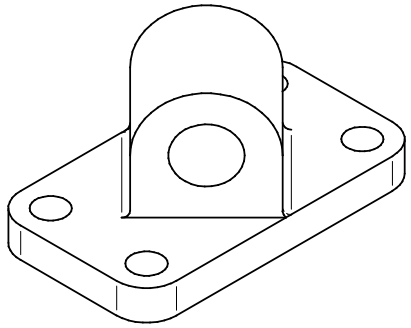
Rebatimento

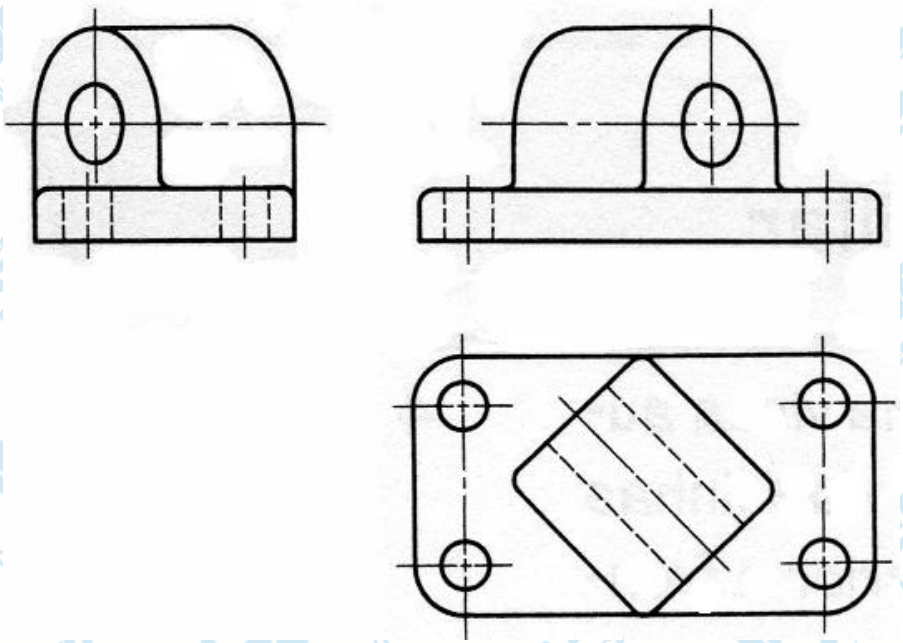


Resultado

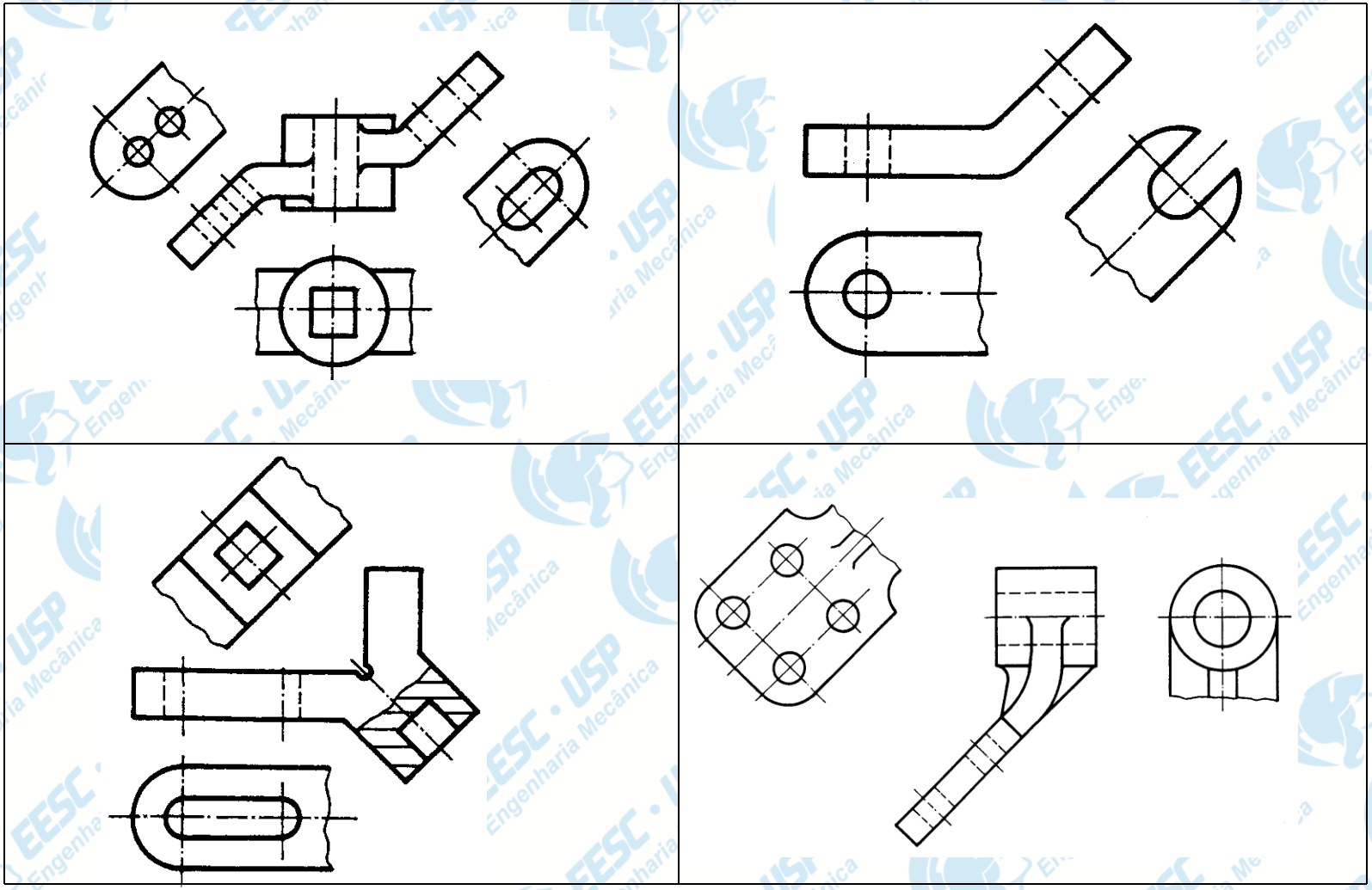
Exemplo



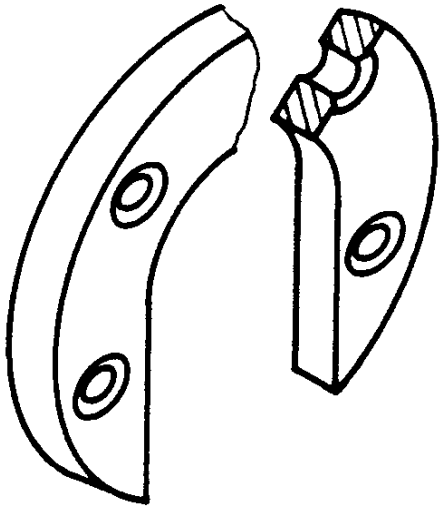


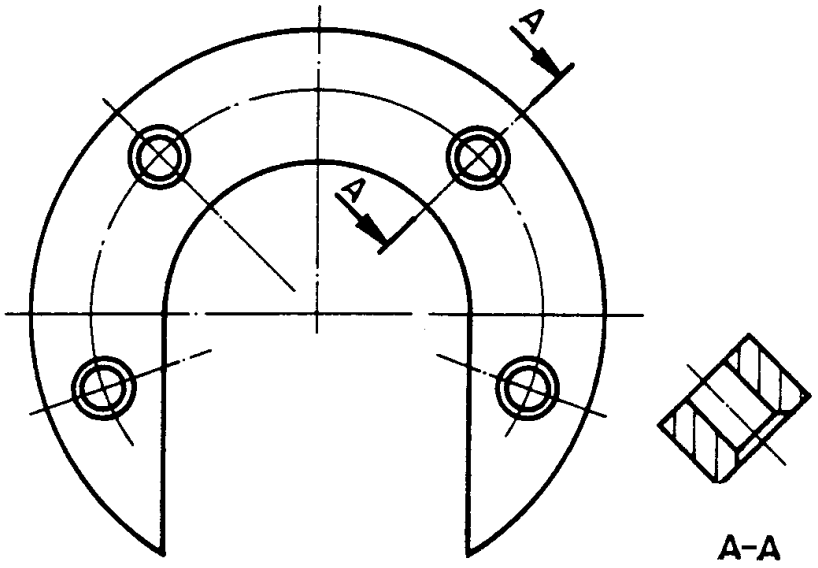


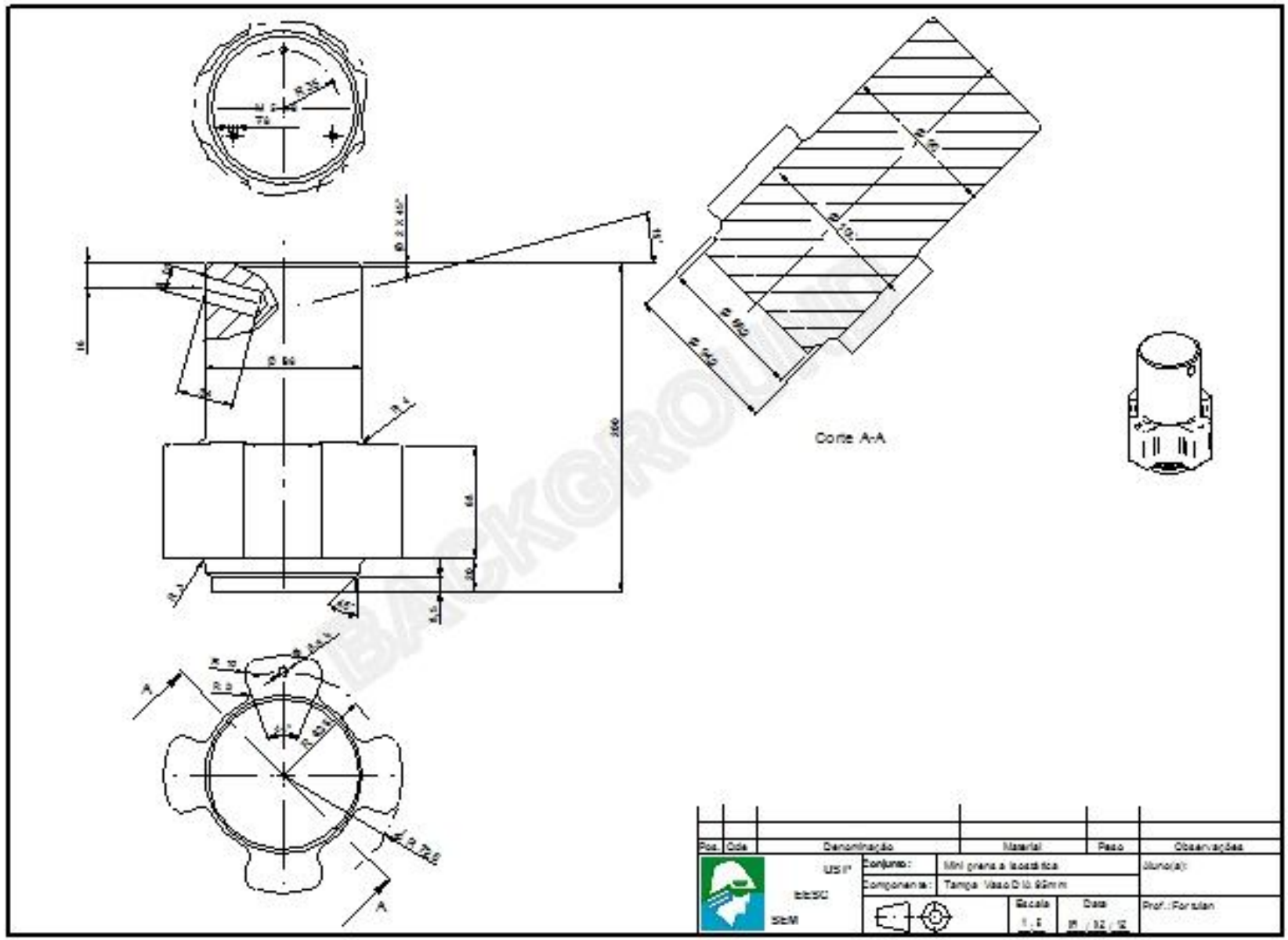
Exemplos



Seção em vista auxiliar - Fora da vista com indicação

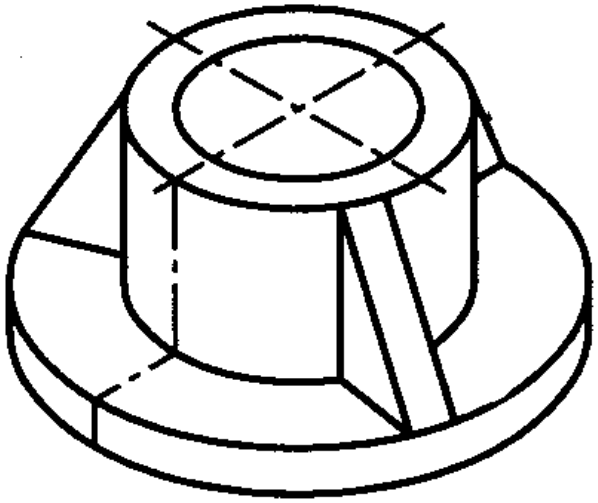


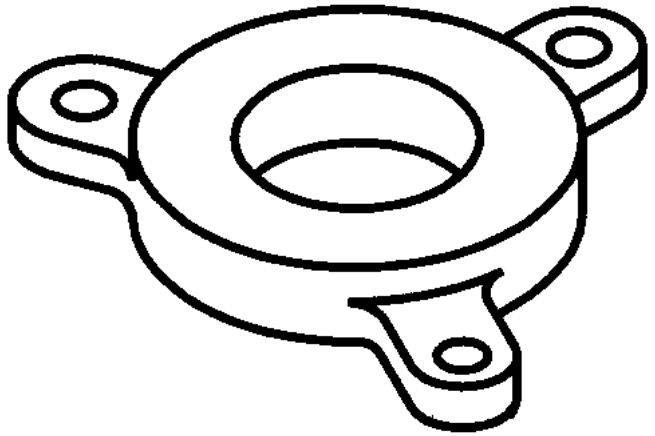



Corte A-A
Pos. | Qde | Denominação | Material | Peso | Observações
Conjunto: Mini prensa a isostática
Componente: Tampa Vaso D.I. 95mm
USP
EESC
SEMI
Escala 1 : 5
Data 21 / 12 / 12
Aluno(a):
Prof.: Fortulan

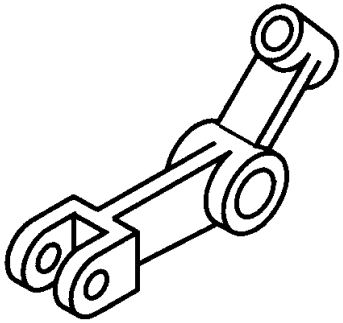
Projeção com rotação

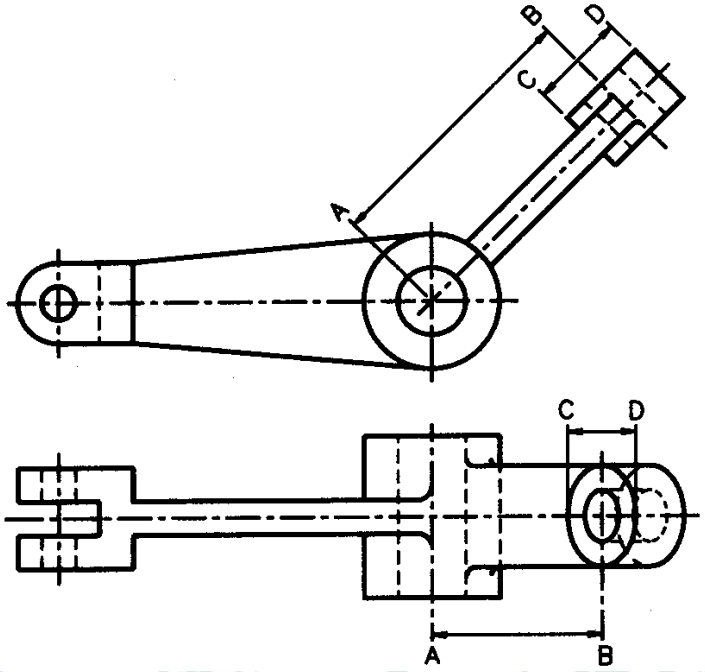
Peças que contém partes ou elementos oblíquos, por convenção, são representadas pela rotação dessas partes sobre o eixo principal. Evita-se assim a deformação e o encurtamento delas na projeção ortogonal normal.

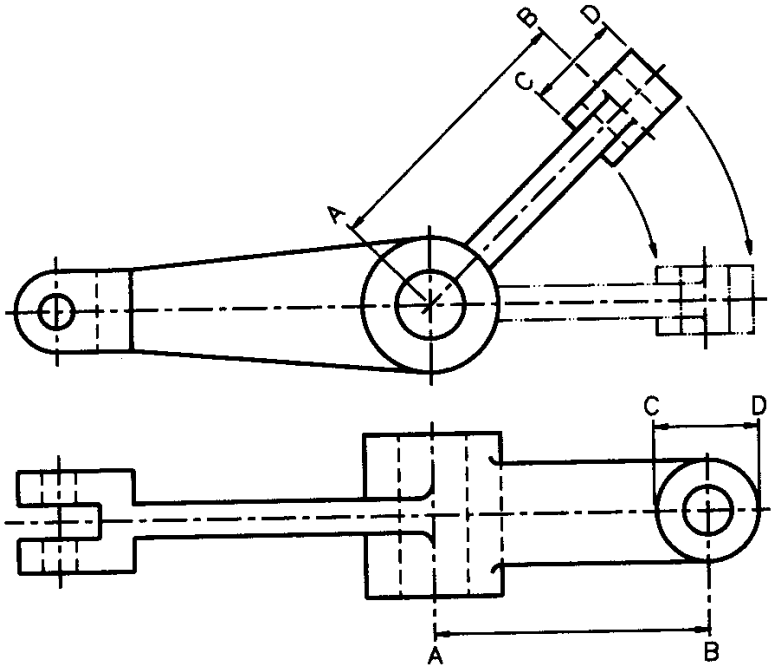




Projeção com rotação: exemplo



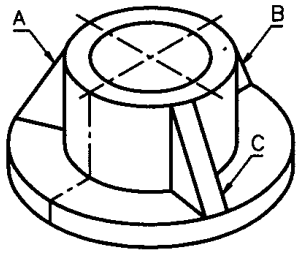


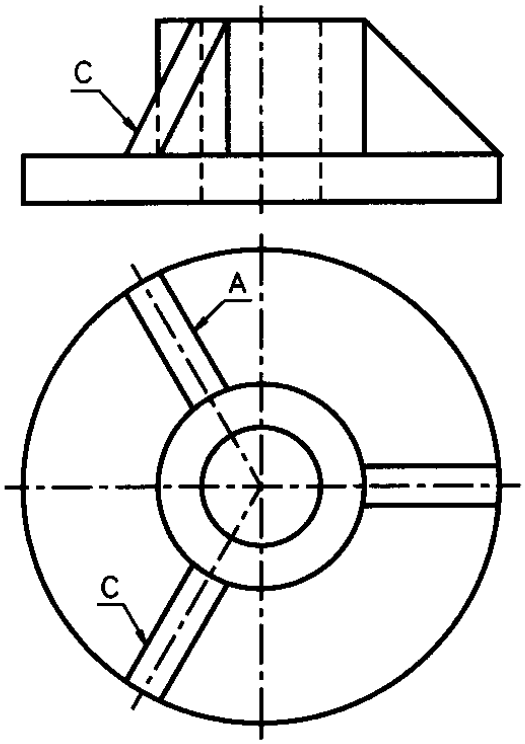


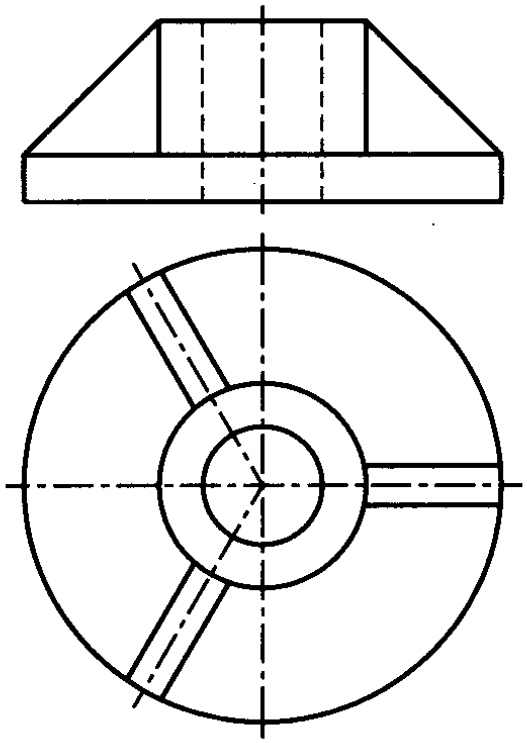
Normal: *inadequado*

com Rotação

Projeção com rotação: exemplo





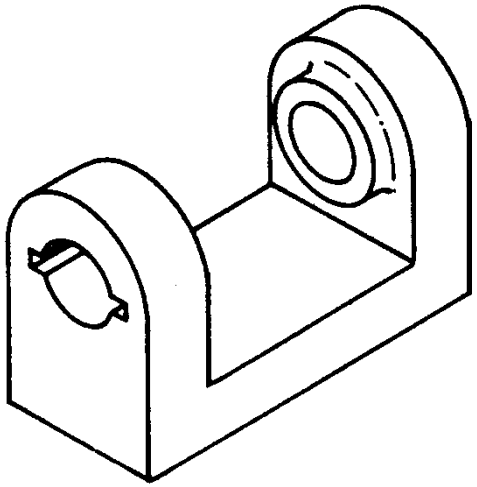


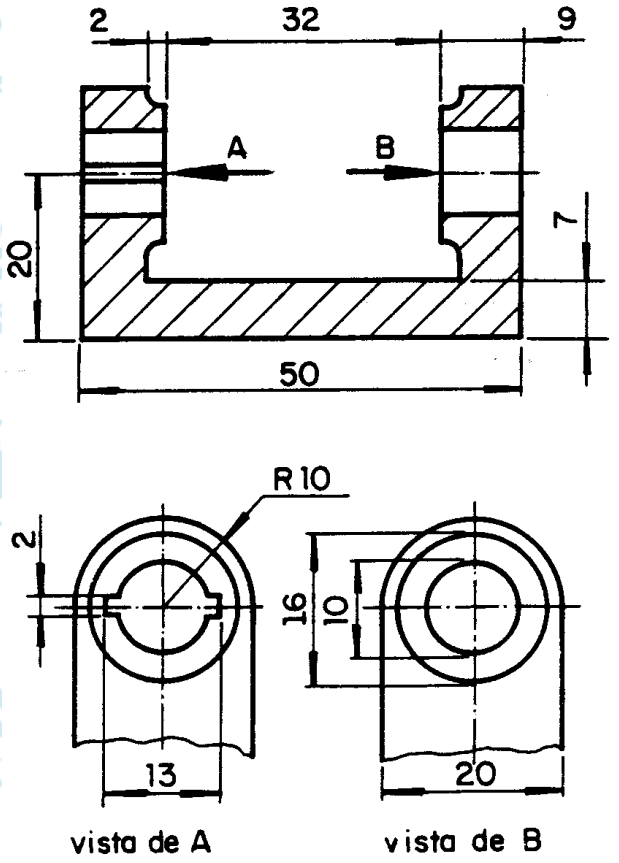
Normal: *inadequado*

com Rotação

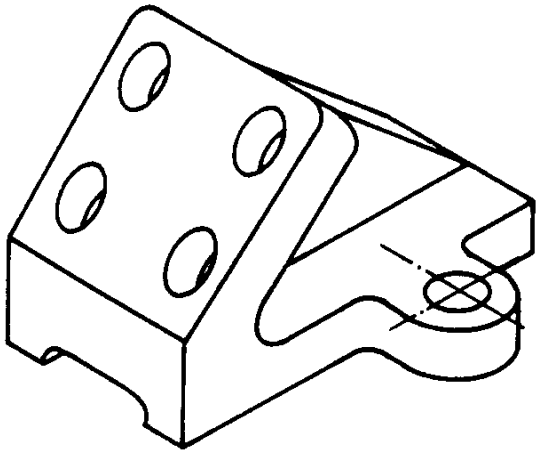
Vistas Especiais

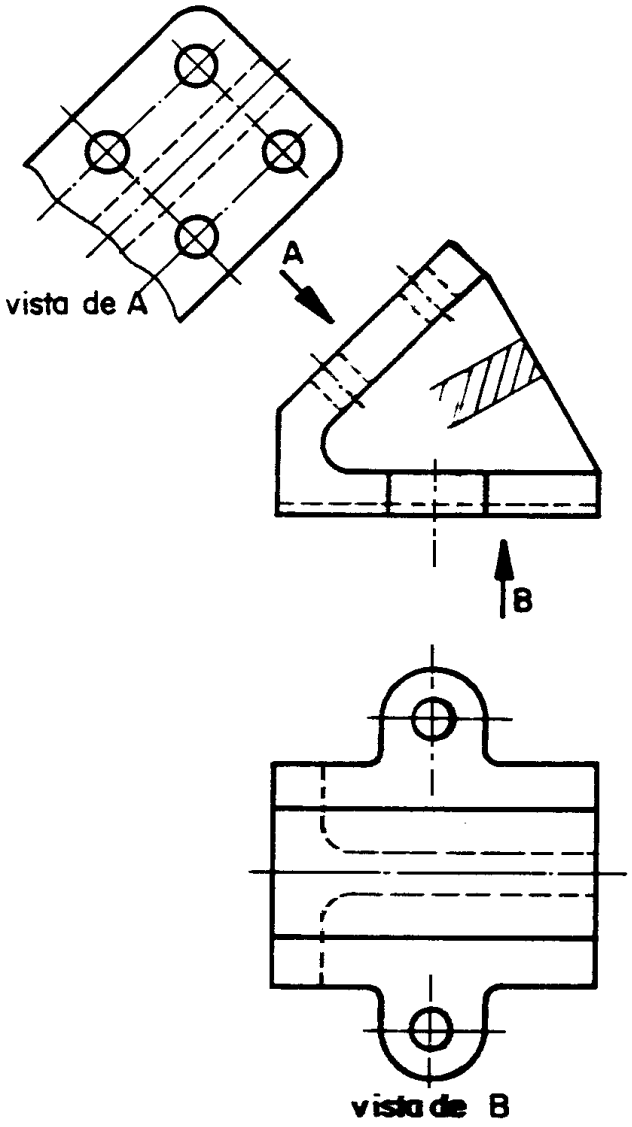
São projeções especiais representadas conforme a posição do observador. São indicadas por setas e letras.



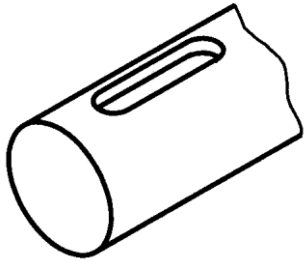


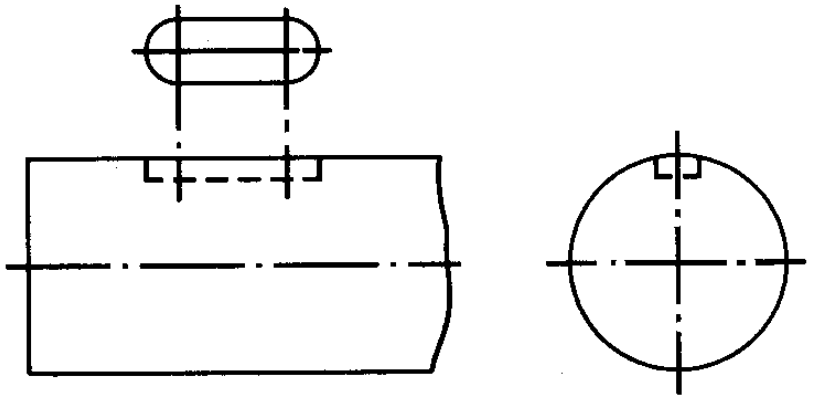
Vistas especiais

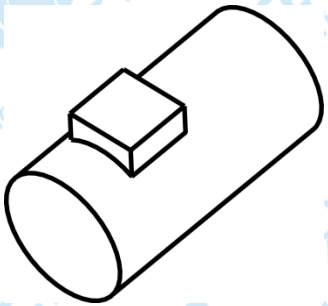


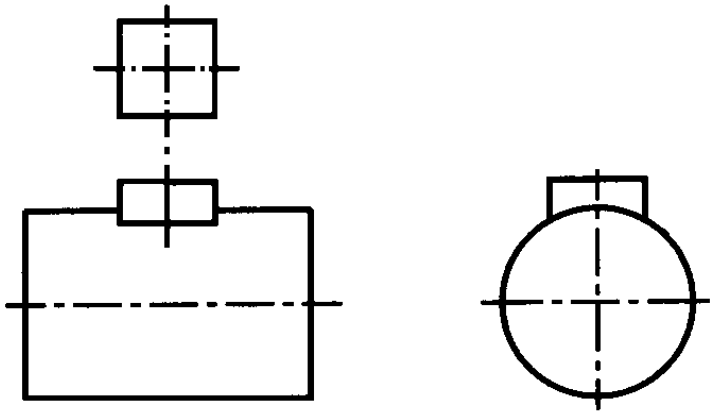


Vistas localizadas



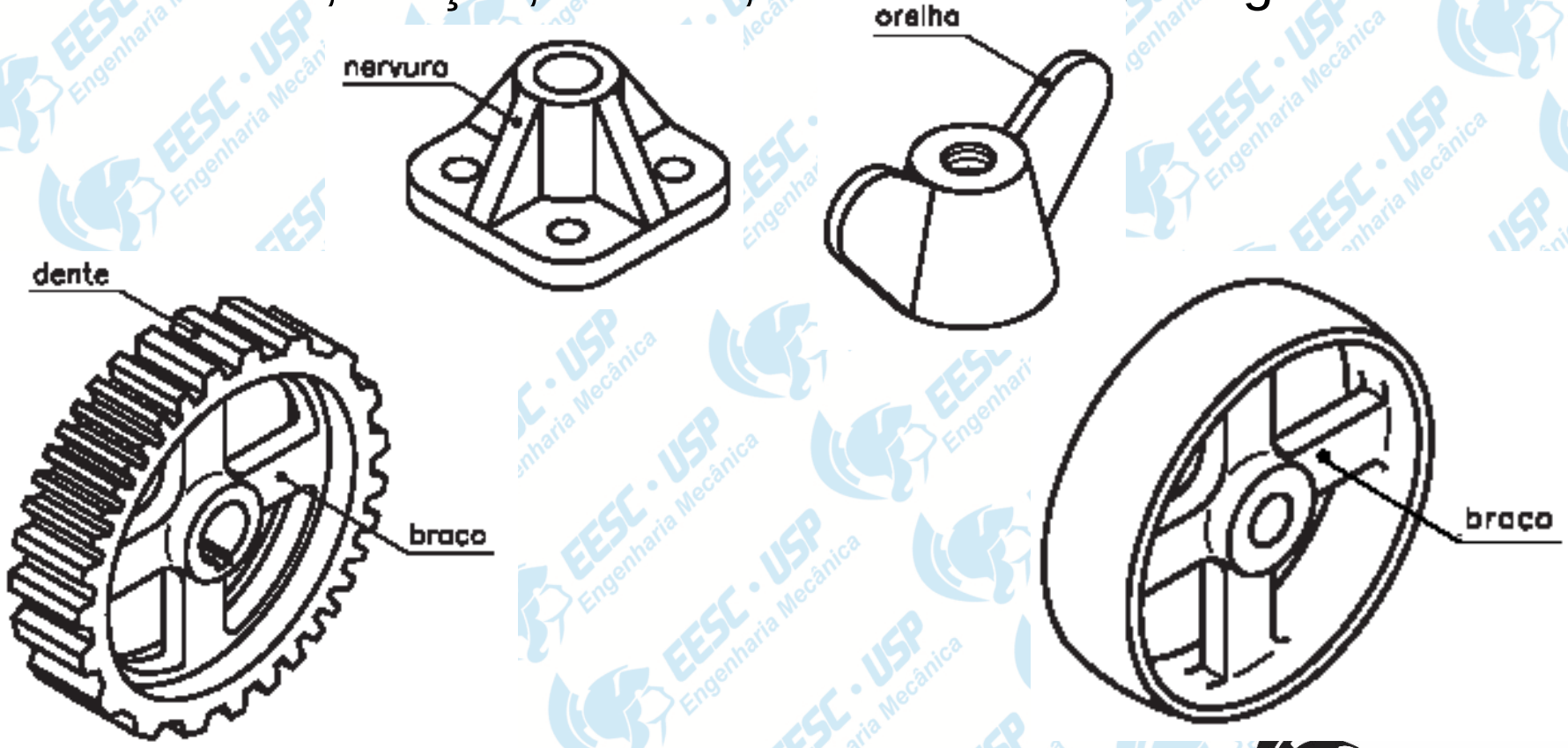




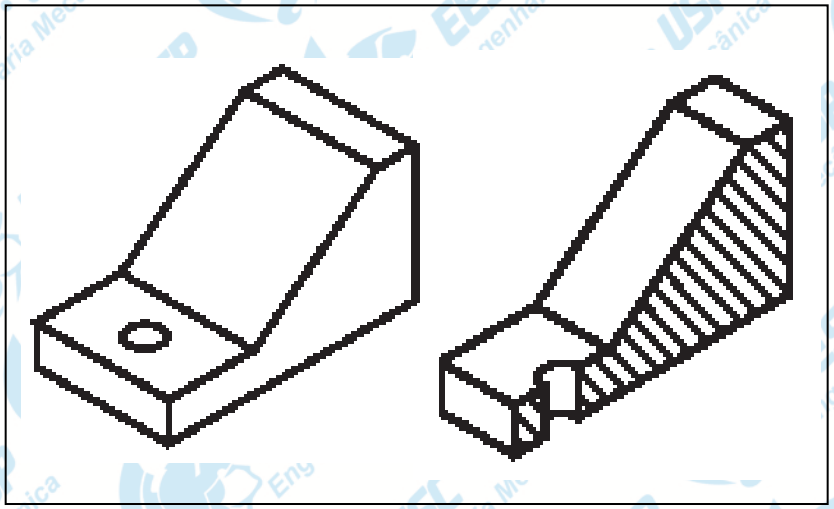


Omissão de corte

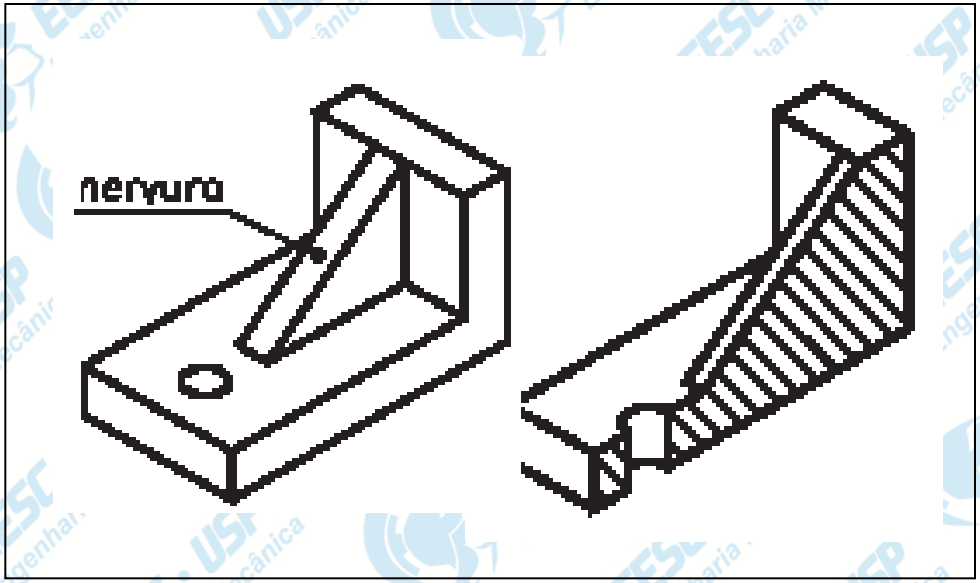
Recurso utilizado para garantir a leitura de peça especiais quando representada em corte. É representada pela ausência de hachuras e é usada para destacar certos detalhes em corte como: nervuras, braços, orelhas, dentes de engrenagem.



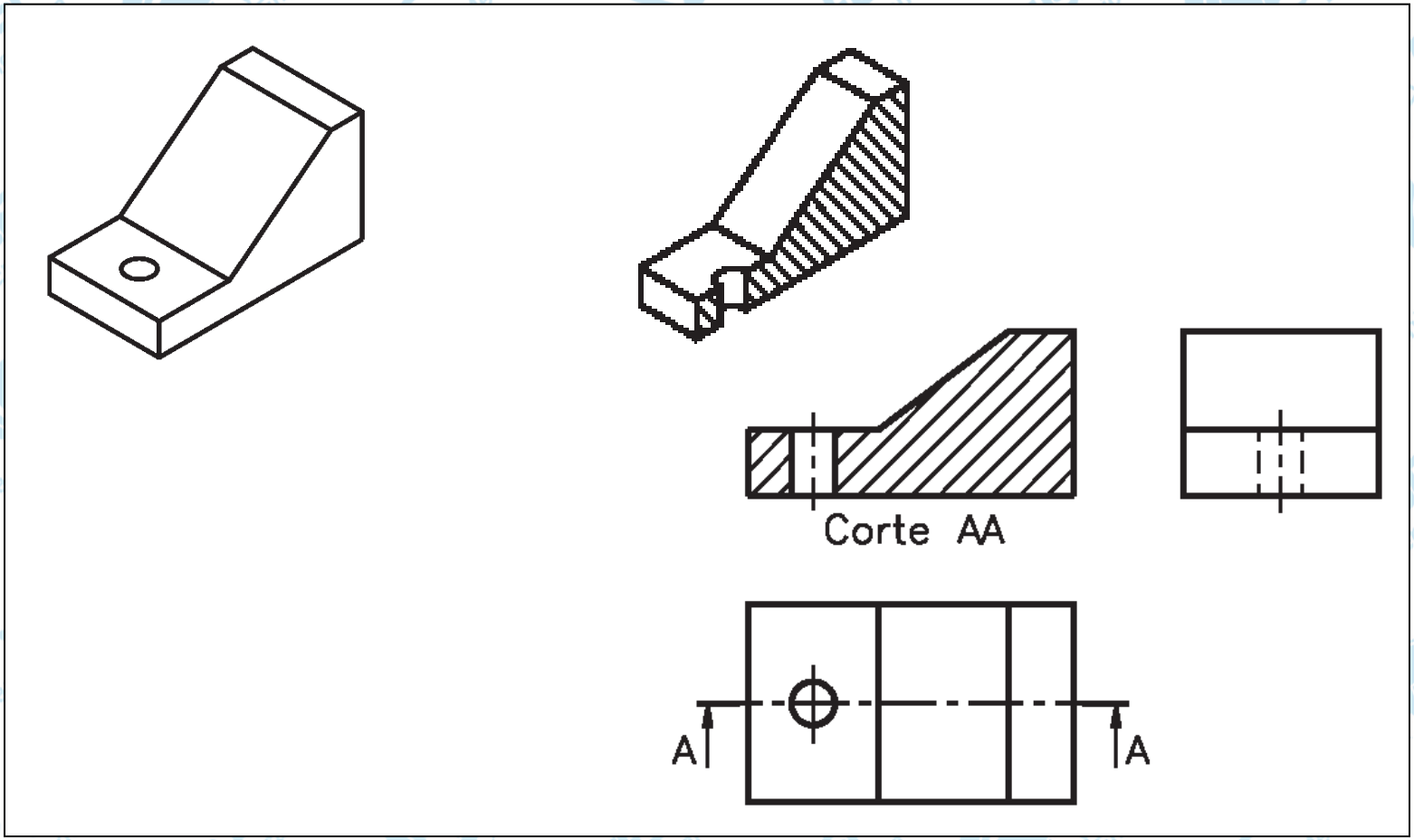
Sem omissão de corte



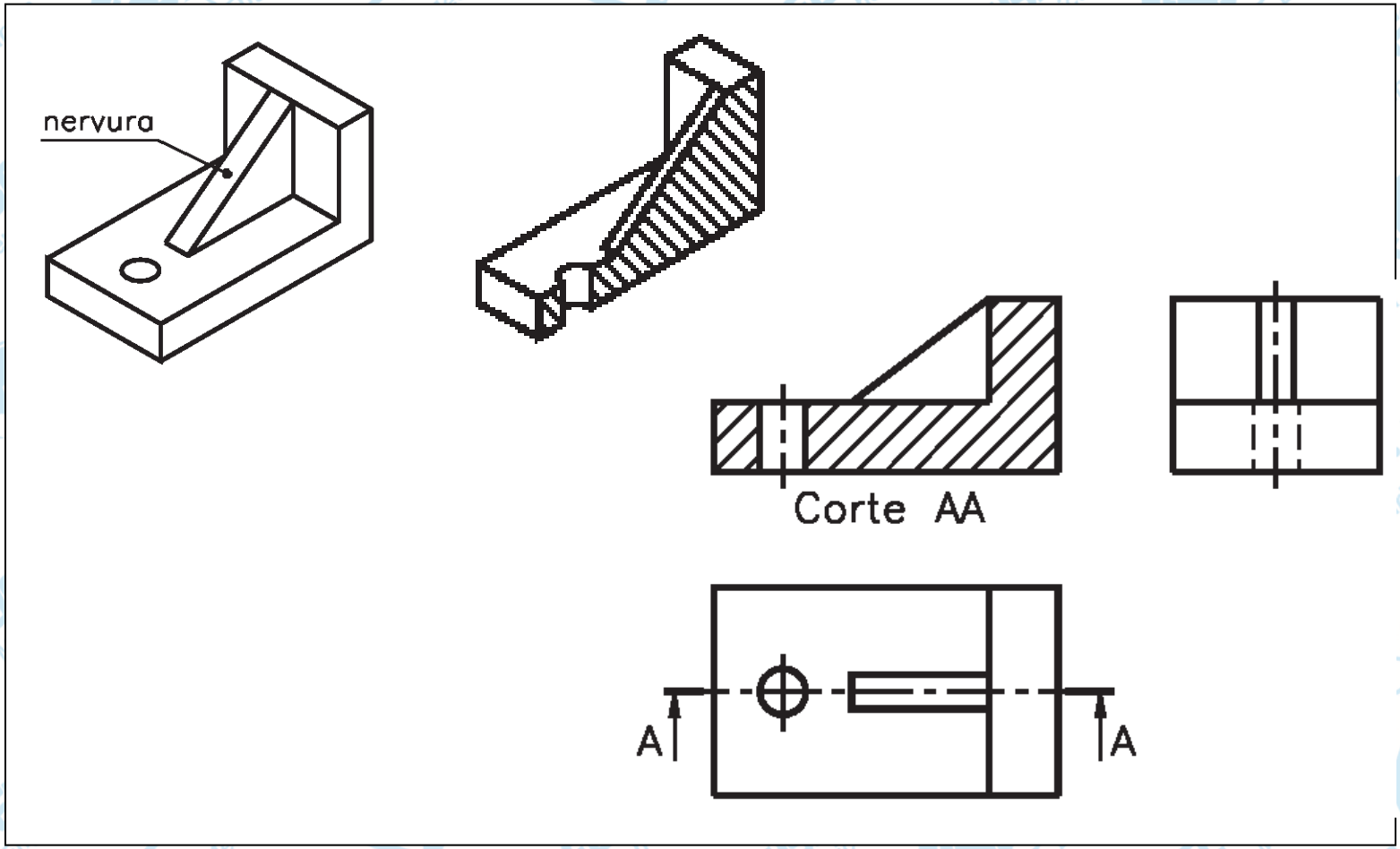
Com omissão de corte - nervura



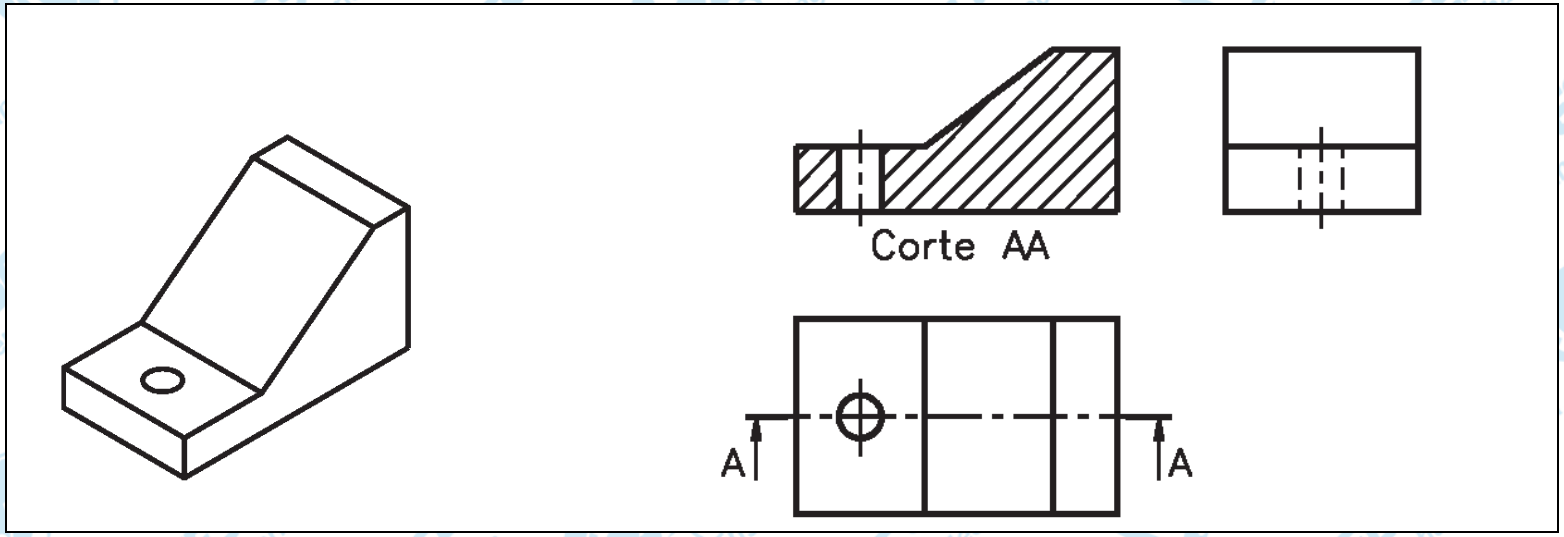
Sem omissão de corte

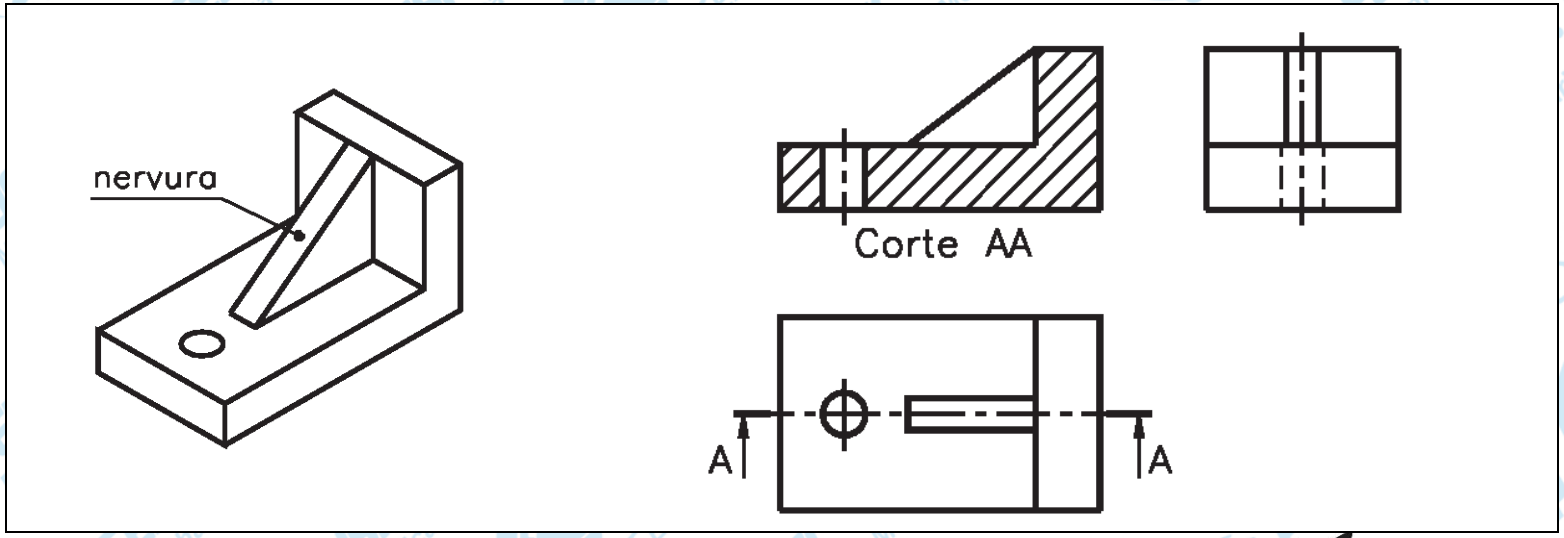


Omissão de corte - nervura

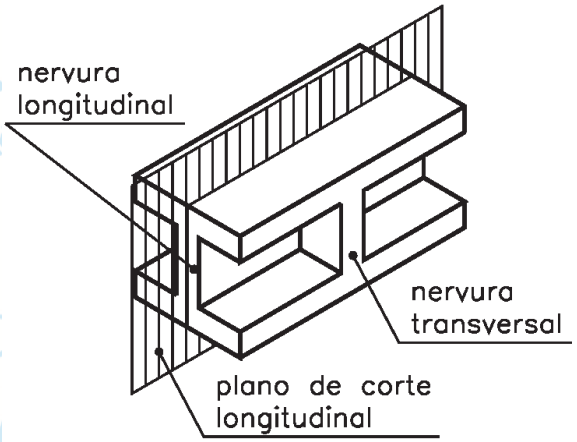


Omissão de corte - nervura

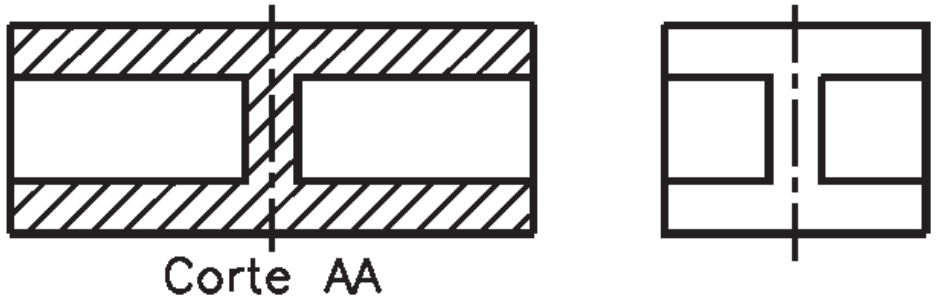




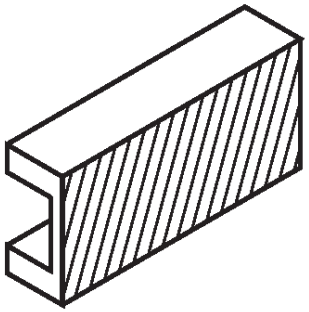
Omissão de corte - nervuras



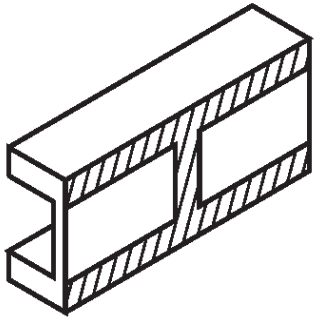
Projeção ortogonal

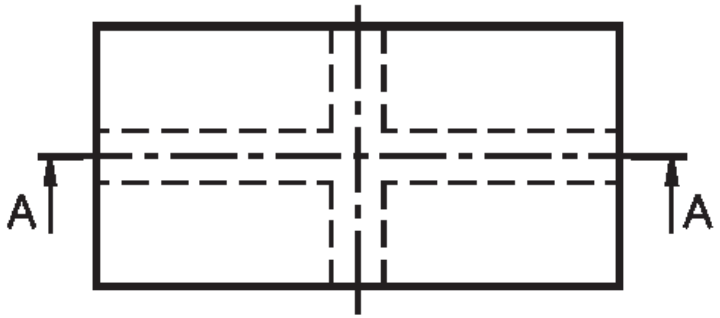


Sem omissão (errado)



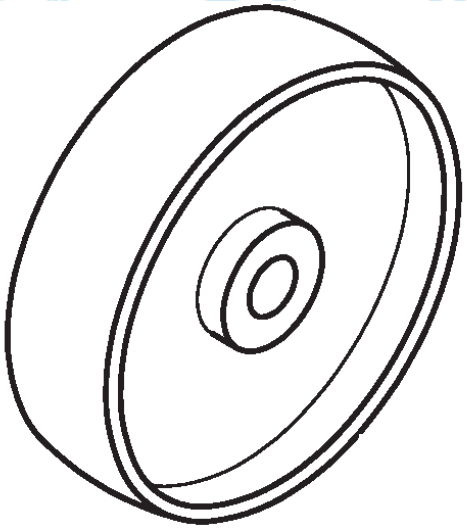
Com omissão (correto)

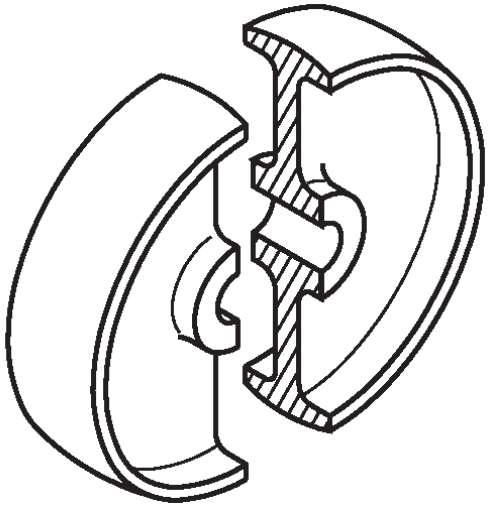




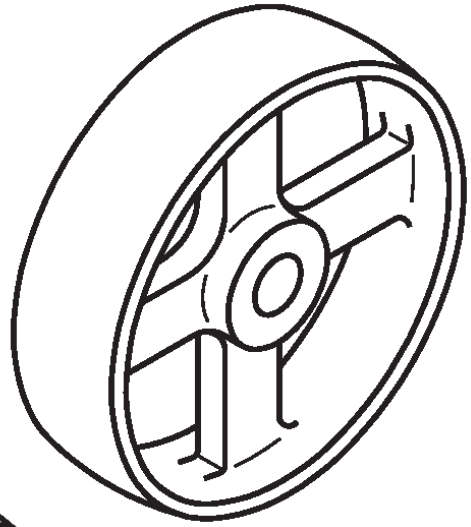
Omissão de corte - braços

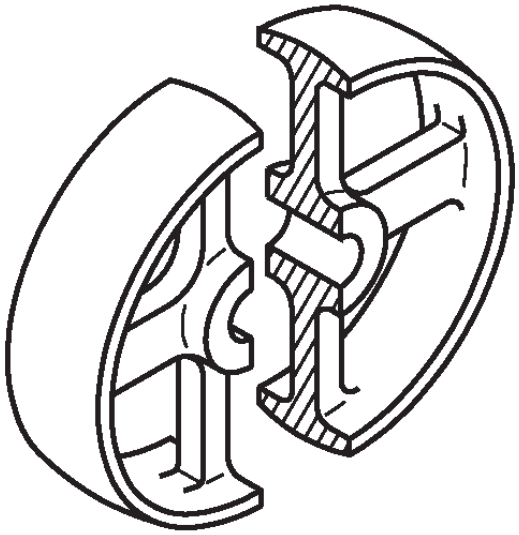
Polia de disco



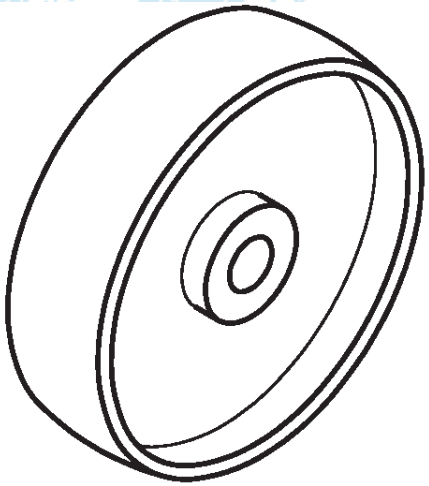


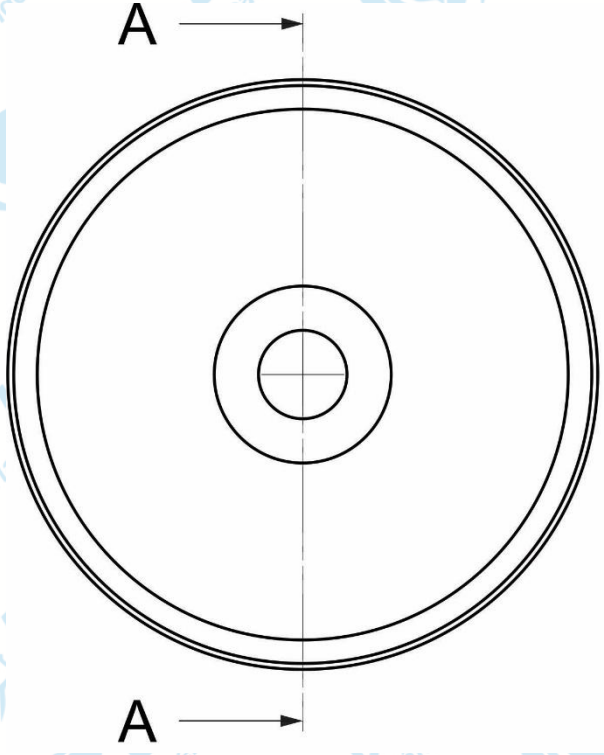
Polia com braço

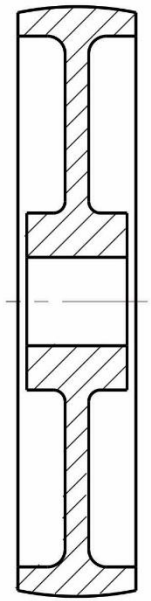




Polia disco - Representação sem omissão de corte

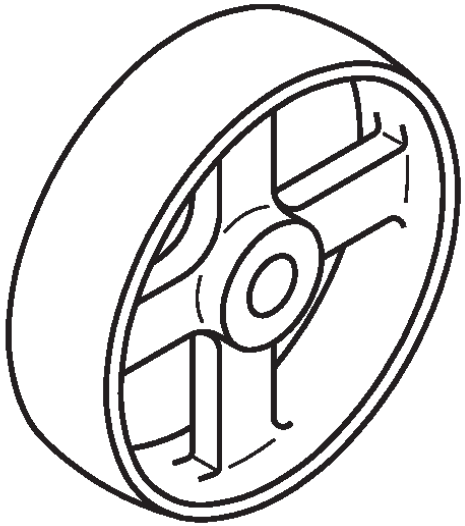


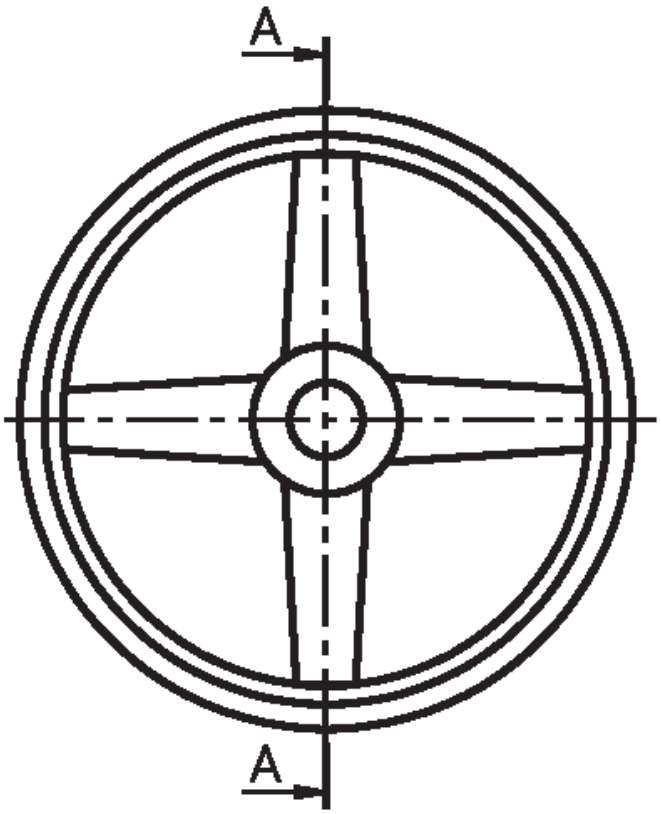


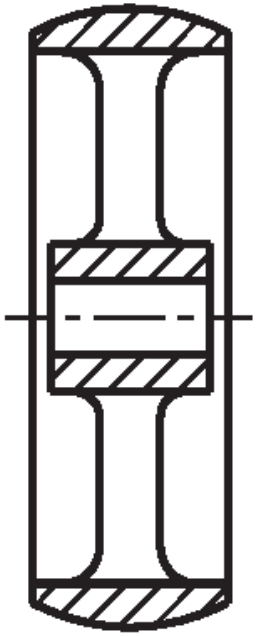


Corte A-A

Braços – Representação com omissão de corte

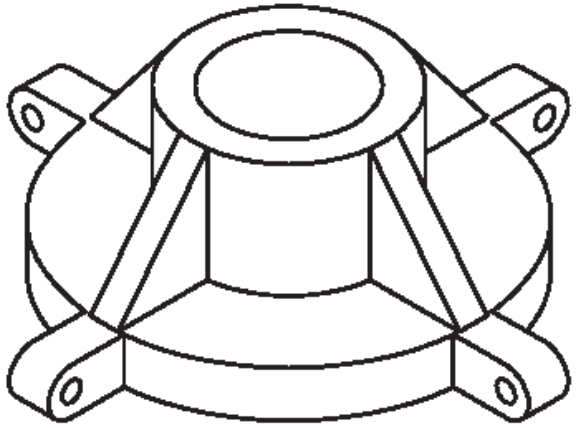


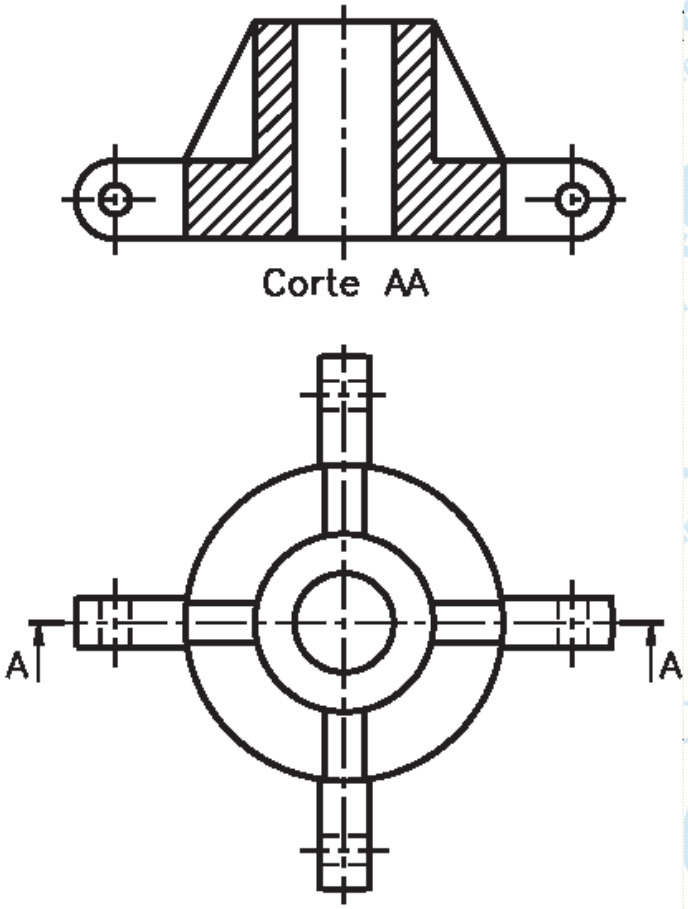




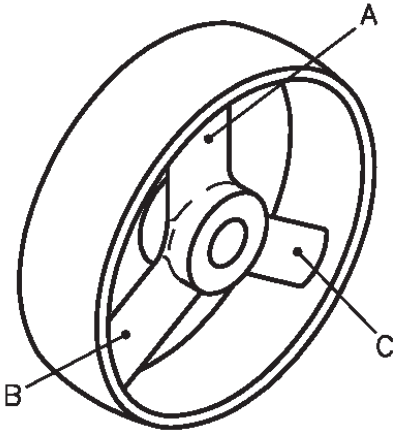
Corte AA

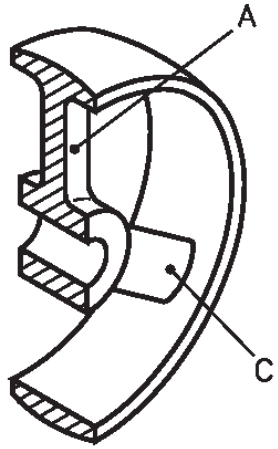
Omissão de corte – nervura e orelha

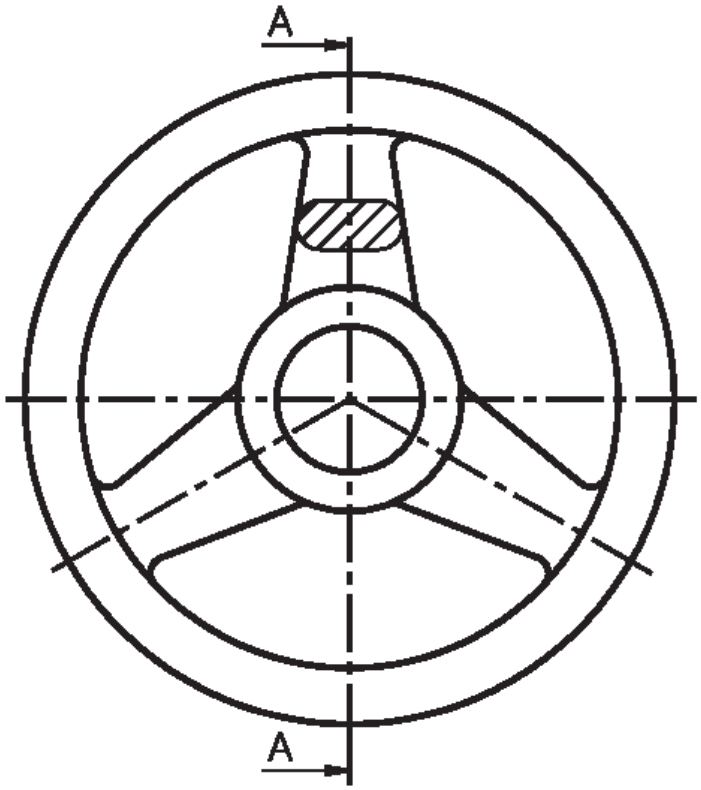


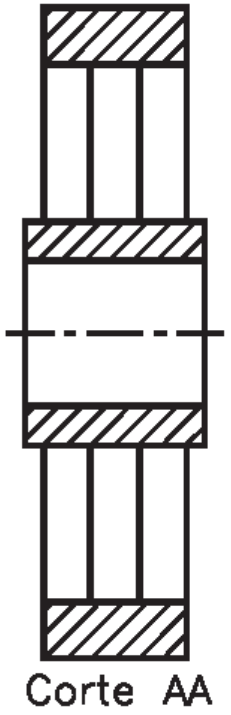


Omissão de corte e rotação

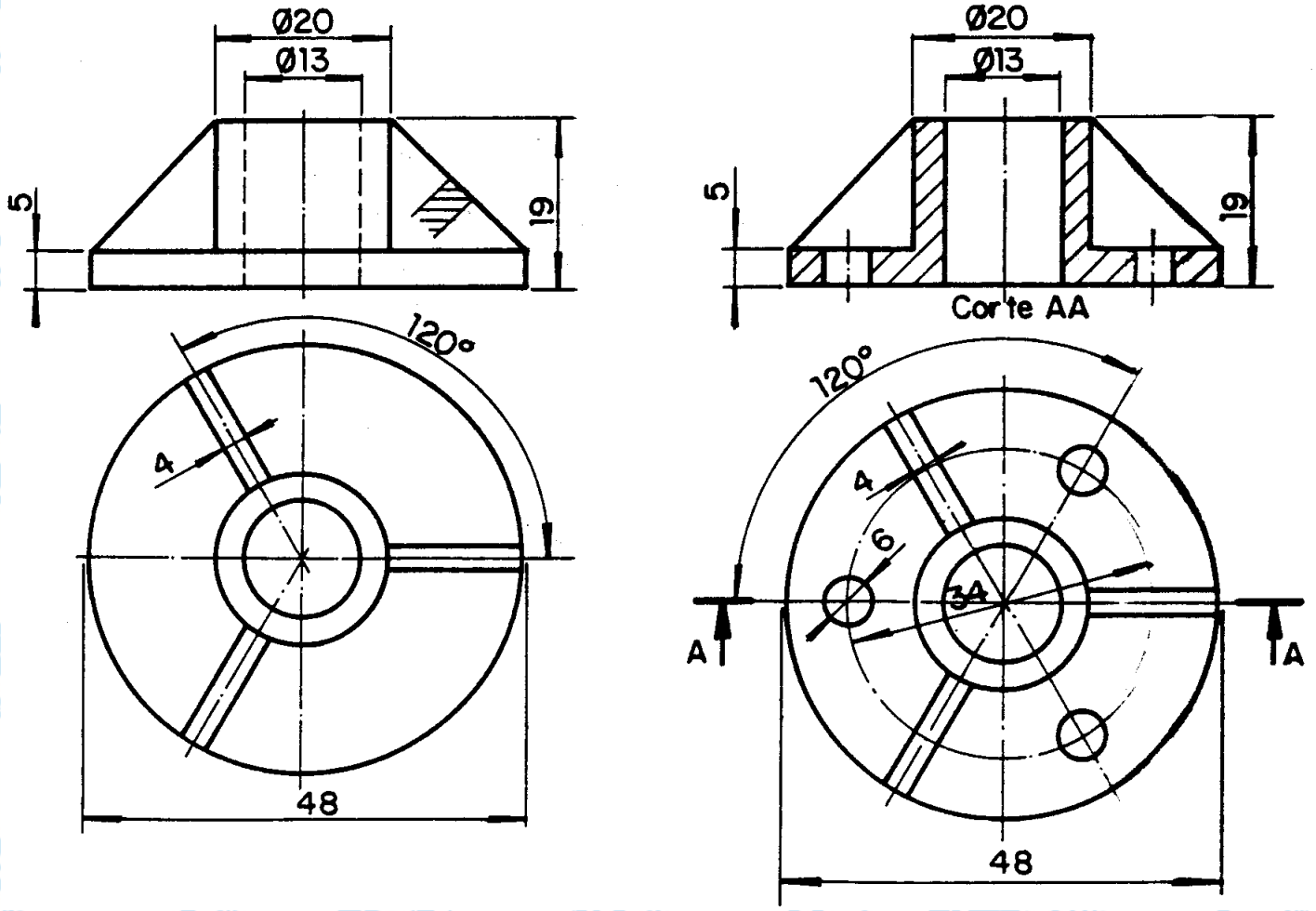




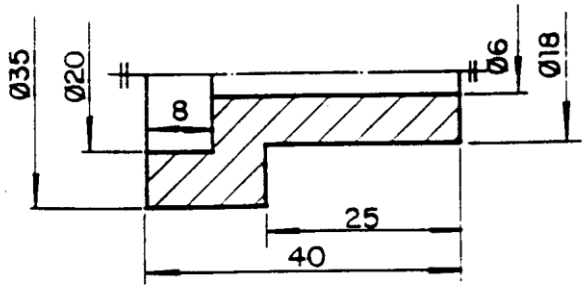


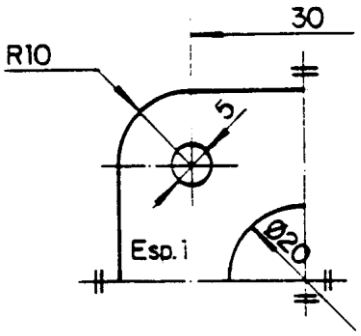


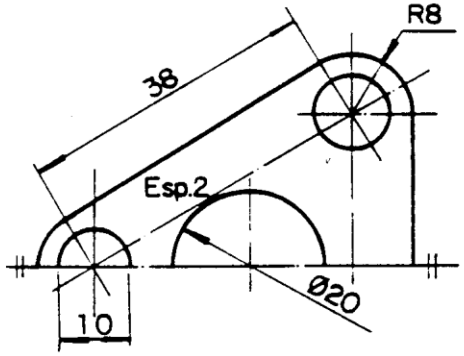
Omissão de corte e rotação

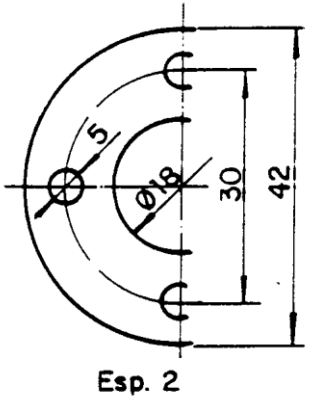


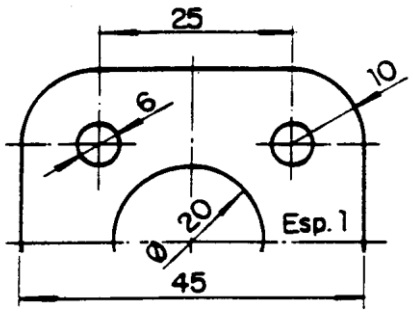
Meio-corte representação simplificada de peças simétricas





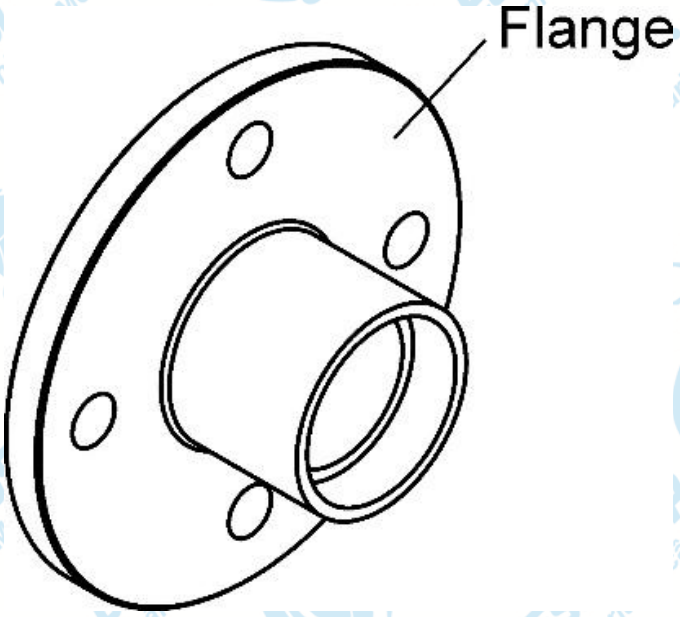






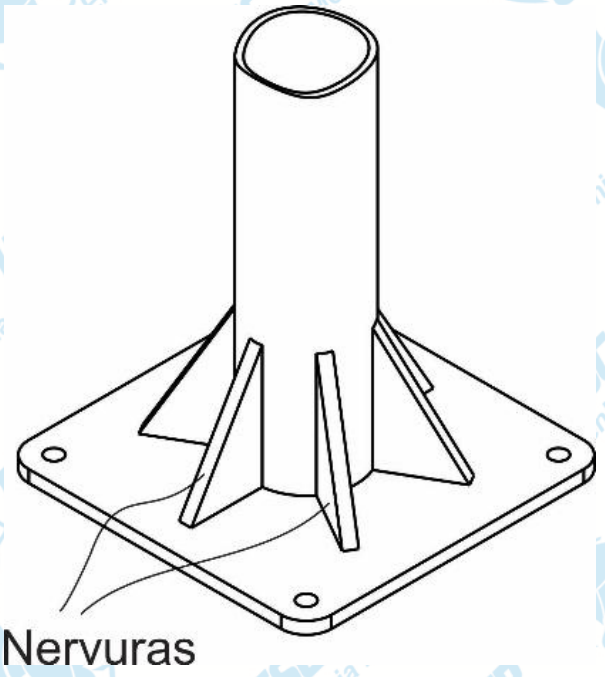
Elementos de Máquinas – glossário

Flange

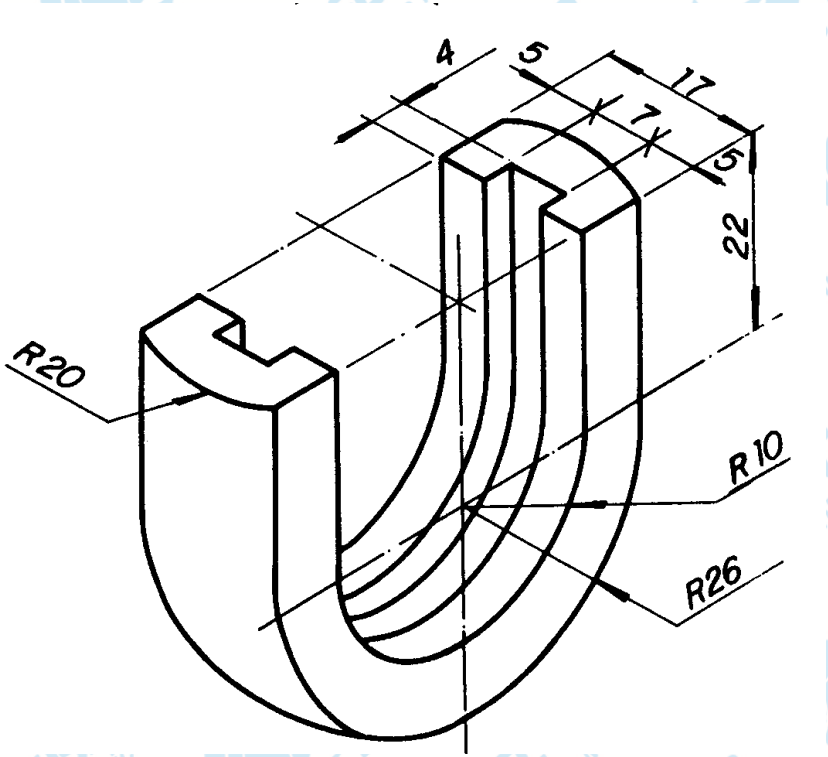


Aba relativamente fina em torno de uma peça normalmente empregada para montagem e fixação.

Nervura



Saliência, chapa ou filete para conferir maior resistência a uma estrutura mecânica.

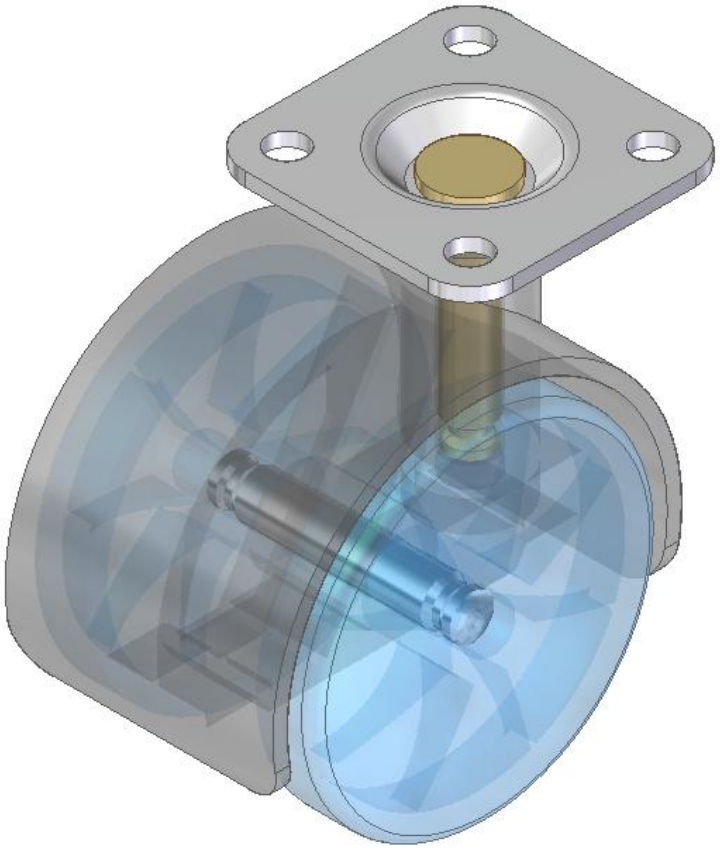


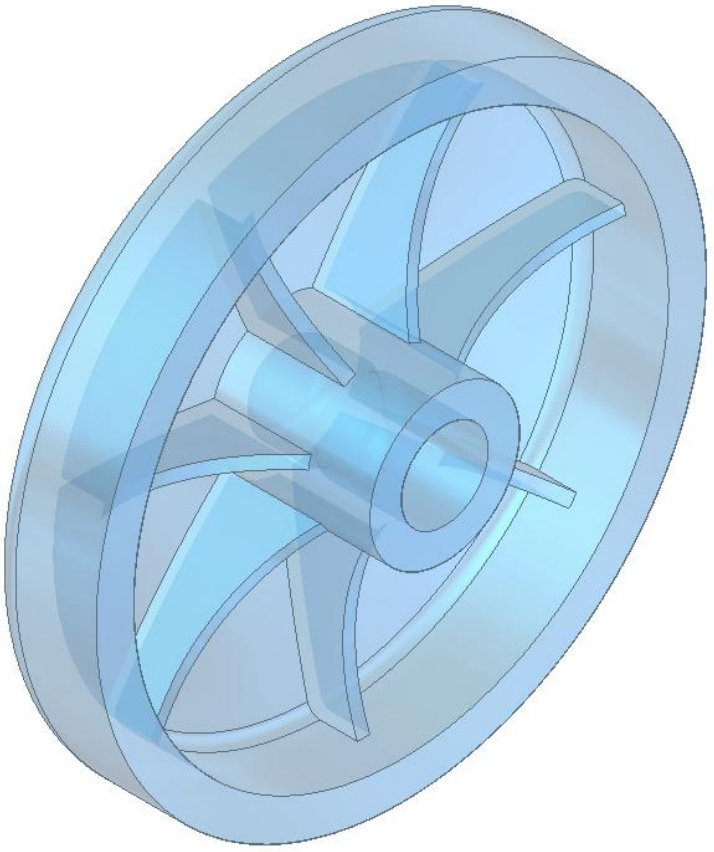
Ex. 4.01 – Desenhe a peças em vista frontal e uma seção em vista auxiliar.

Nome:_____

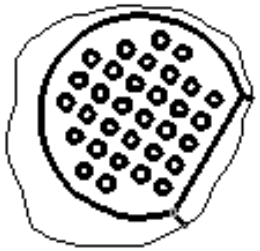
Nº_____ Turma _____

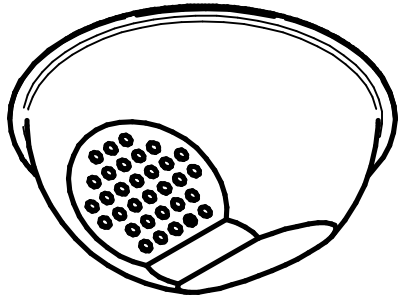
Ex 4.02. Considere o escorredor de arroz ao lado, desenhe as projeções convenientes. O ângulo é de 30º e a largura do apoio plano é de 32mm.

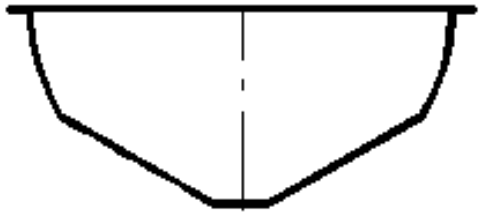




Ex 4.03. Considere o rodízio de uma cadeira de rodas, observe a roda e faça um desenho com vistas: frontal, superior e lateral esquerda em corte total. Dimensões aproximadas: Øe= 50mm, Øfuro= 7mm, largura total 15mm, largura da banda de rodagem= 7mm, espessura geral=2mm, espessura das nervuras=1mm.







Corte A-A