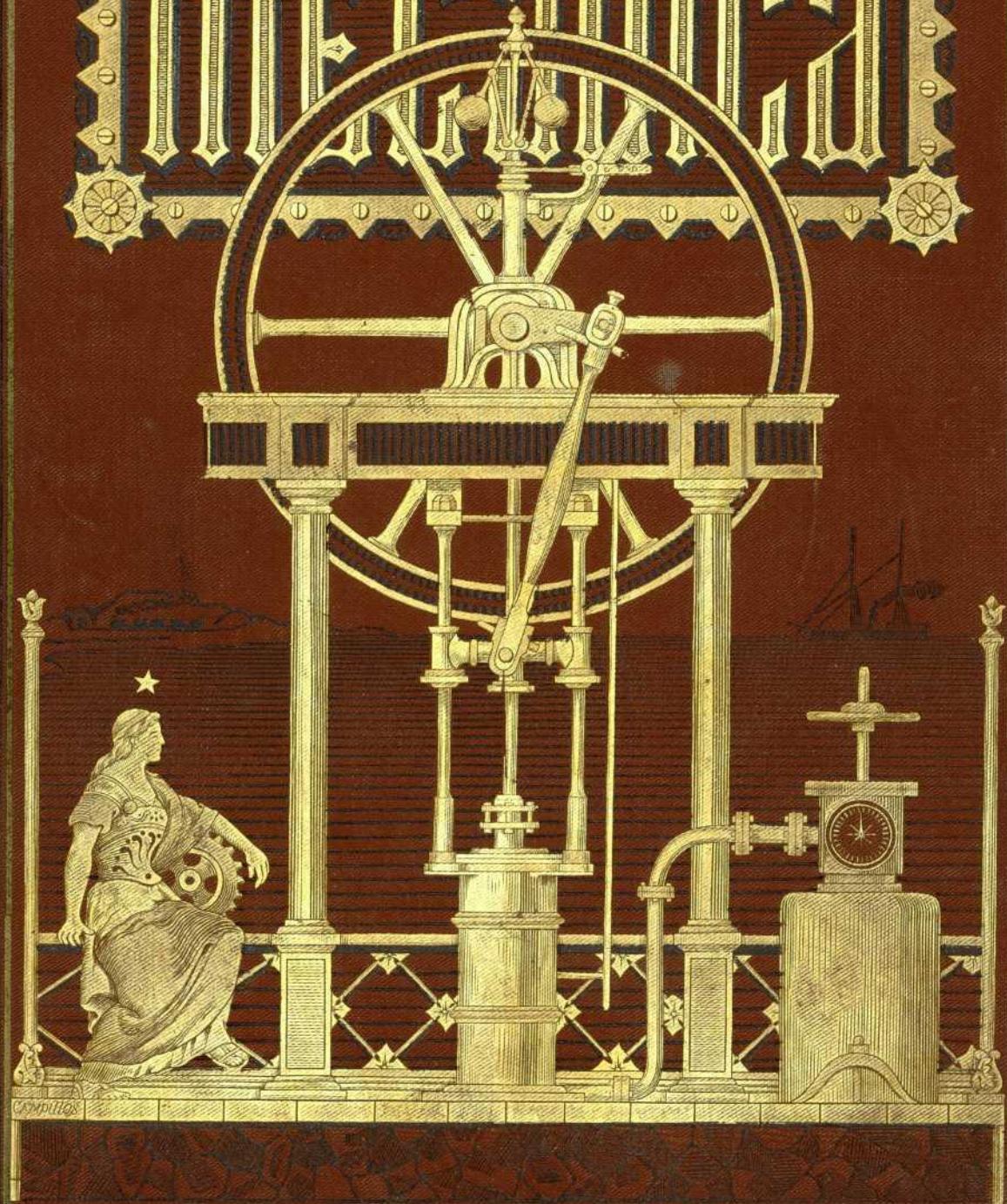
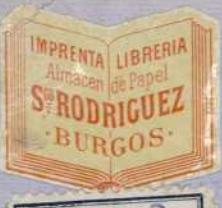


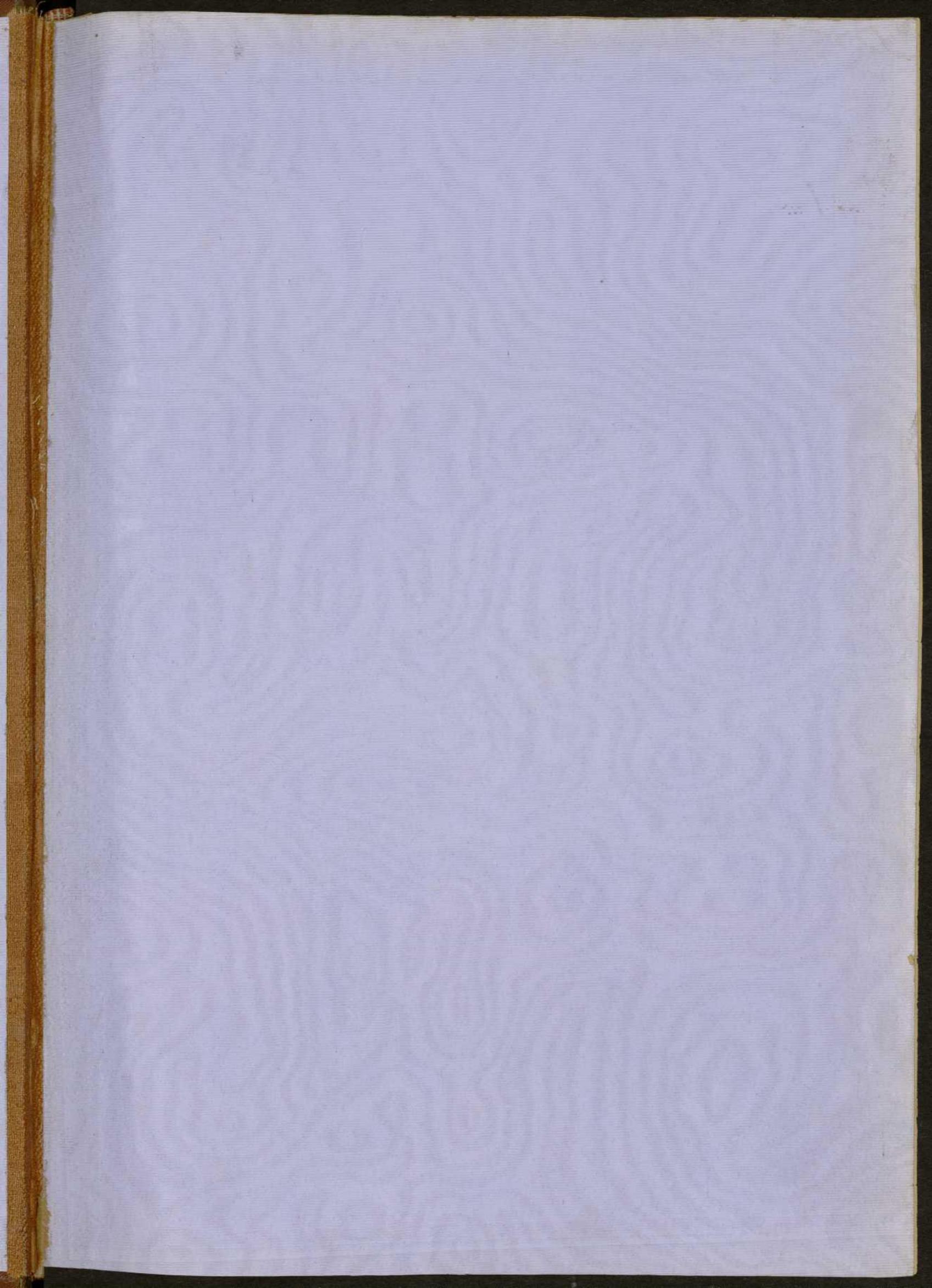
F. REULEAUX

MACHINISTE



CAMPDITH

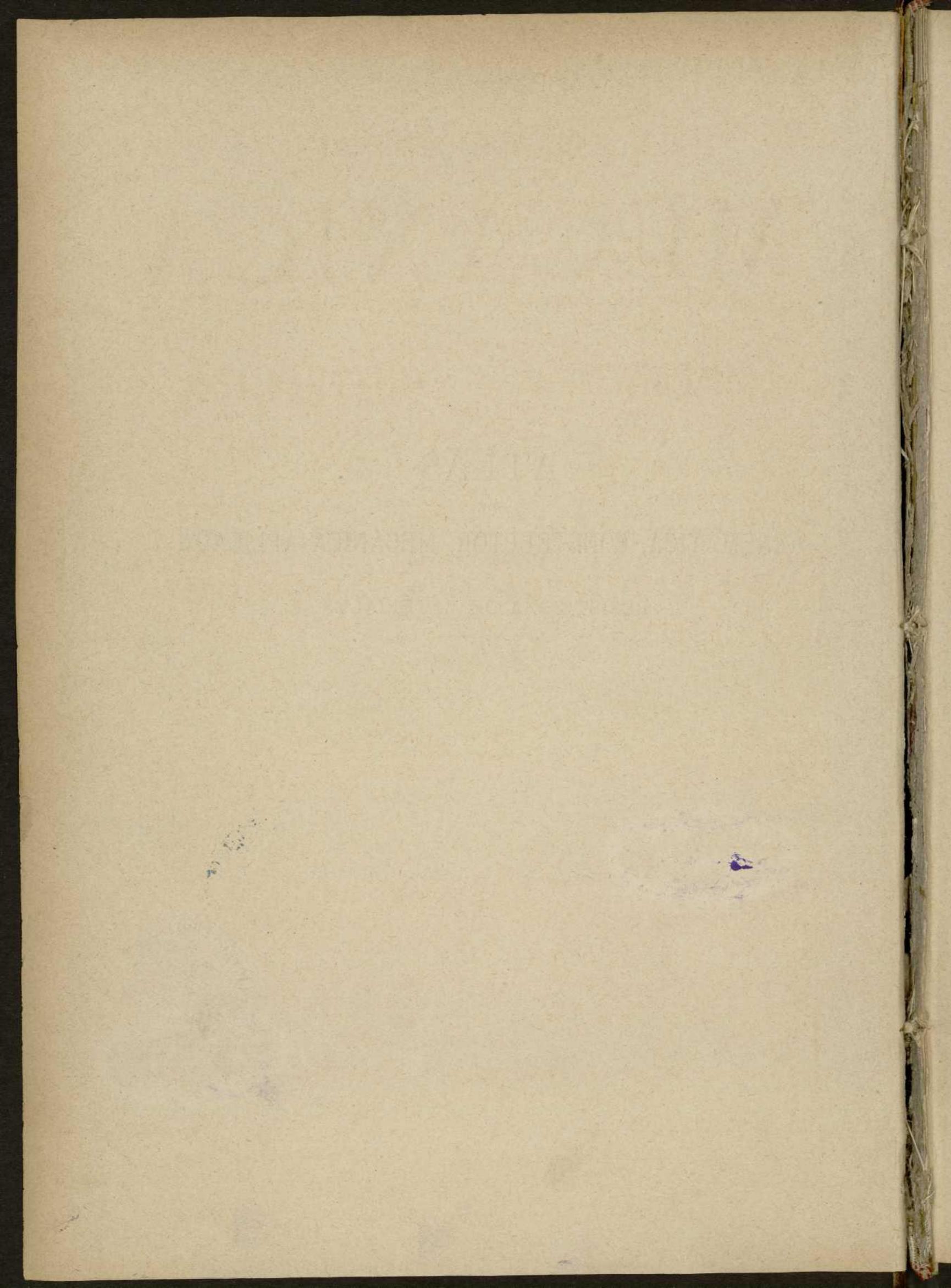




$\frac{n}{255}$

ATLAS
DE
CINEMÁTICA, CONSTRUCTOR, MECÁNICA APLICADA
Y
RESISTENCIA DE MATERIALES





2

TRATADO GENERAL DE MECÁNICA

PARA USO DE INGENIEROS, CONSTRUCTORES, MAQUINISTAS, ARQUITECTOS, &, &

COMPRENDE LAS OBRAS
CINEMÁTICA Y CONSTRUCTOR
DE
V. F. REULEAUX

CATEDRÁTICO DE LA ESCUELA POLITÉCNICA Y DIRECTOR
DE LA ACADEMIA INDUSTRIAL DE BERLÍN, COMISIONADO IMPERIAL EN LAS EXPOSICIONES INTERNACIONALES DE
SYDNEY, MELBOURNA, FILADELFIA &, &

TRADUCCIÓN DE LAS ÚLTIMAS EDICIONES ALEMANAS
AUMENTADA CON LA

MECÁNICA PRÁCTICA Y APLICADA

MÁS MODERNA Y UNIVERSALMENTE ADOPTADA EN LAS NACIONES INDUSTRIALES

PUBLICADA BAJO LA DIRECCIÓN DE

D. FRANCISCO NACENTE Y SOLER

AUTOR DE VARIAS OBRAS CIENTÍFICAS, EX-PRESIDENTE DEL «CENTRO INDUSTRIAL DE CATALUÑA», PRESIDENTE
HONORARIO DEL «FOMENTO INDUSTRIAL» DE BARCELONA

Ilustrada con unas 7.000 á 8.000 figuras de maquinaria comprendidas
en unas 800 láminas grabadas
primorosamente en la piedra e impresas con sumo esmero



ATLAS

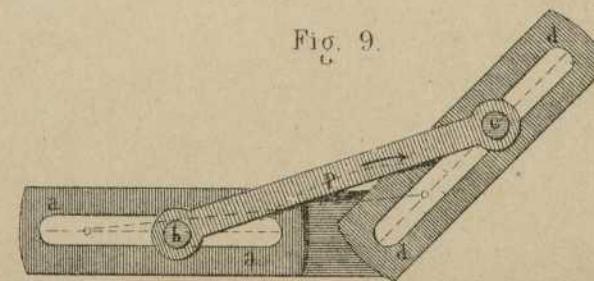
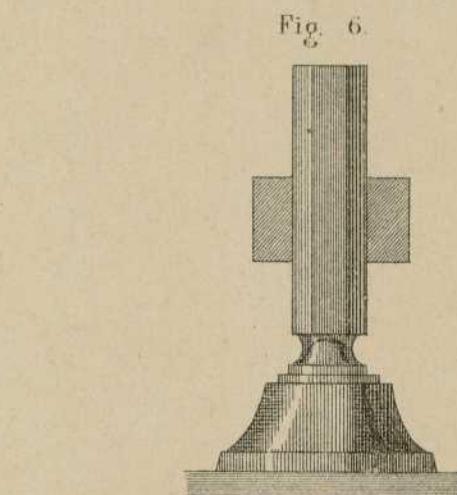
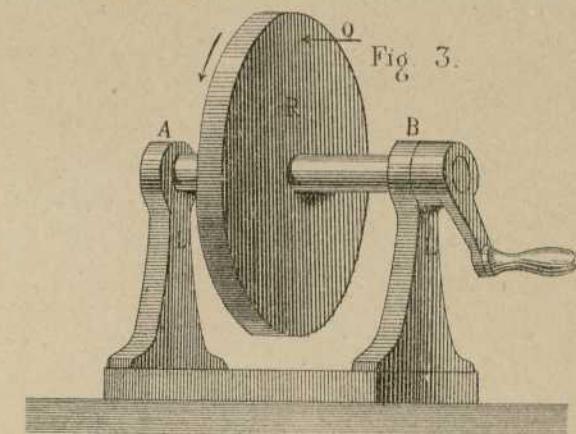
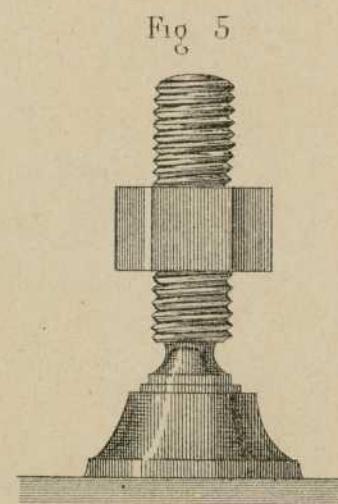
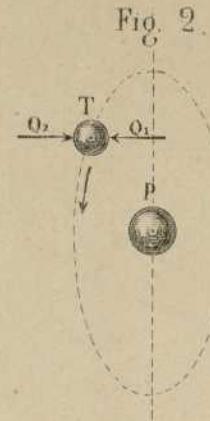
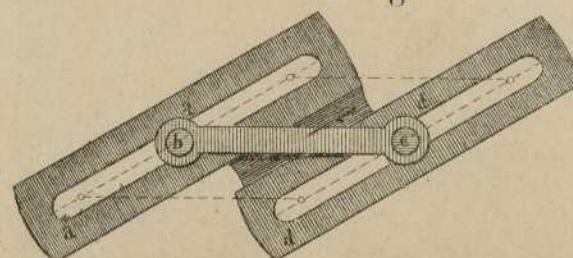
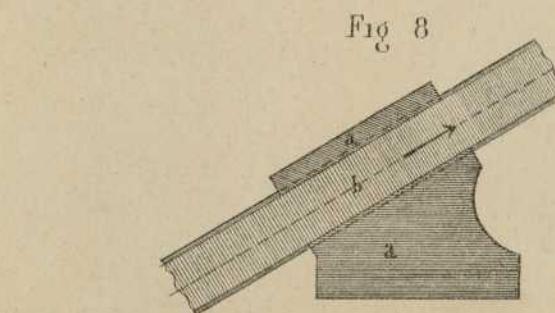
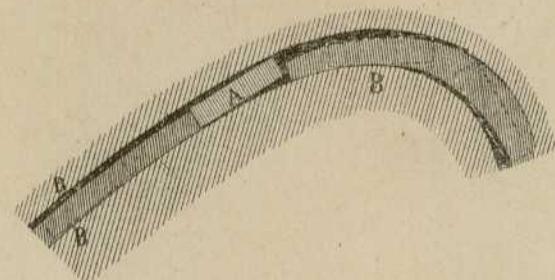
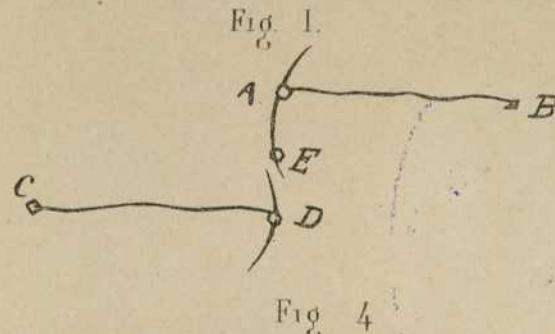


BARCELONA

F. NACENTE, EDITOR: PASEO DE GRACIA, 149
1887



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SECCION TEÓRICA.

CINEMÁTICA.

Lámina 2.^a

Fig. 10.

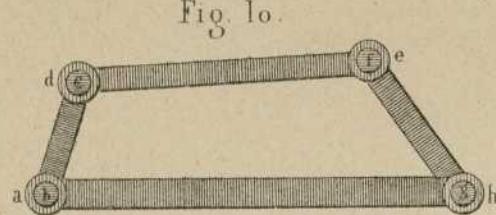


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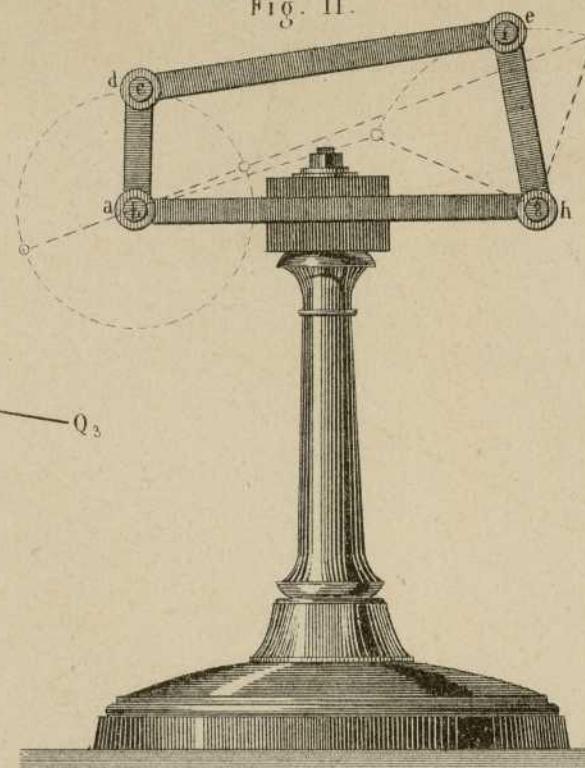


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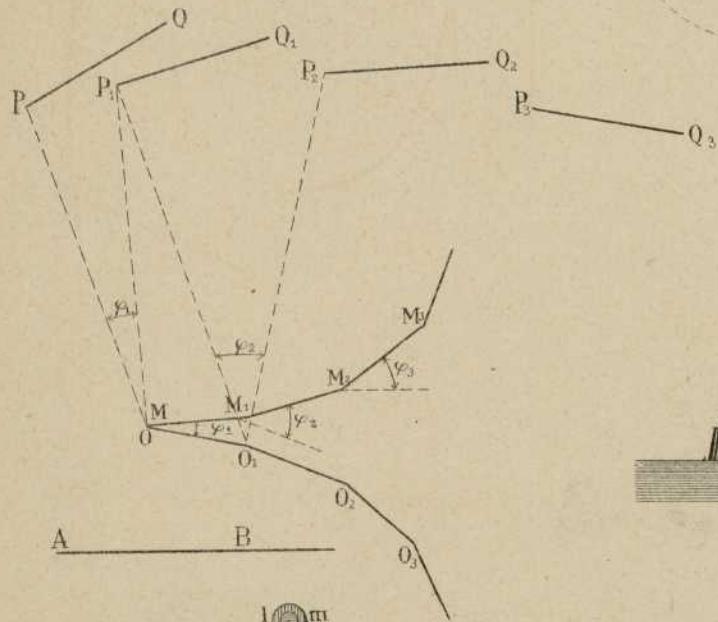


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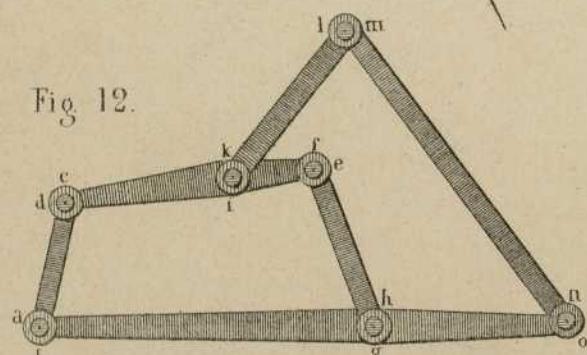


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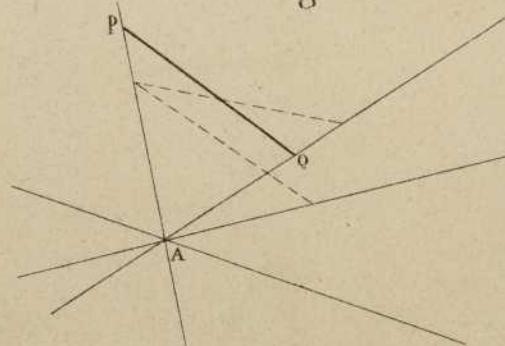


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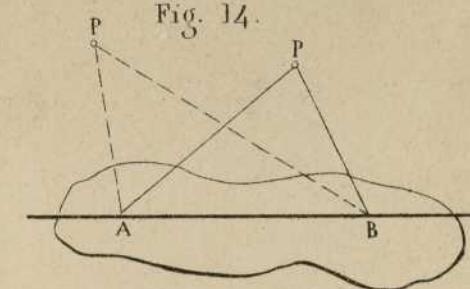


Fig. 13.



Fig. 15.

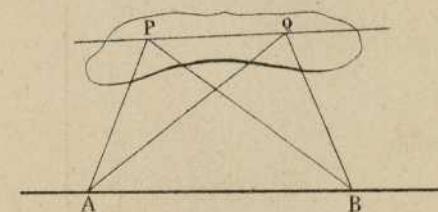


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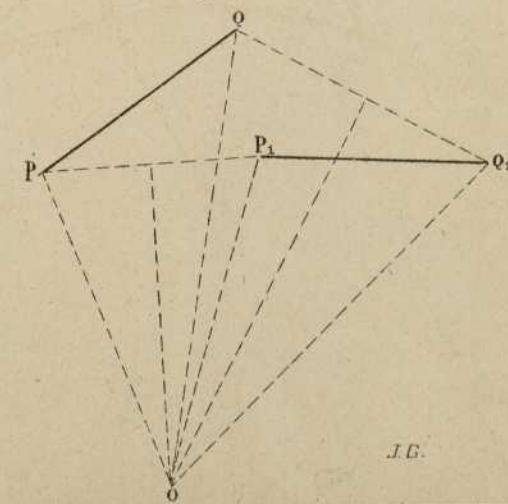


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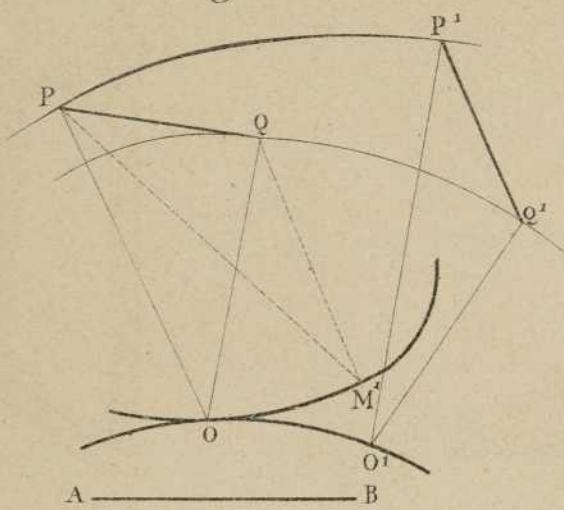


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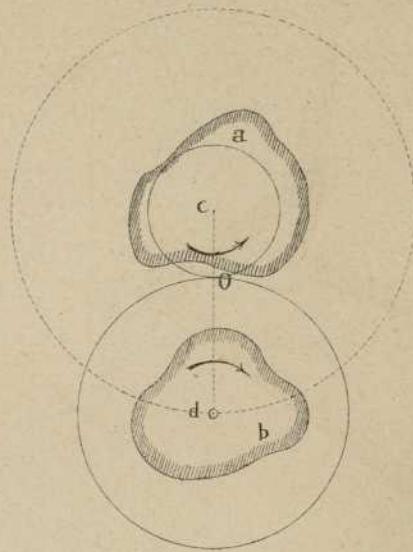


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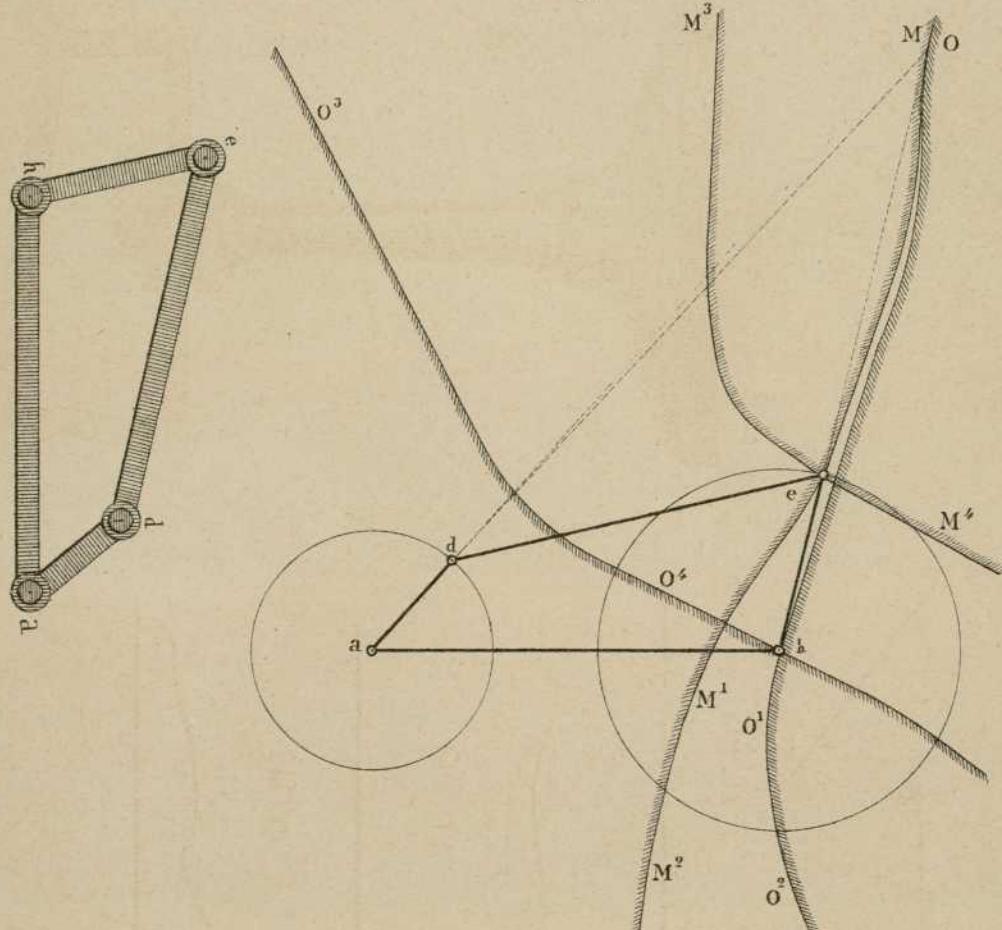


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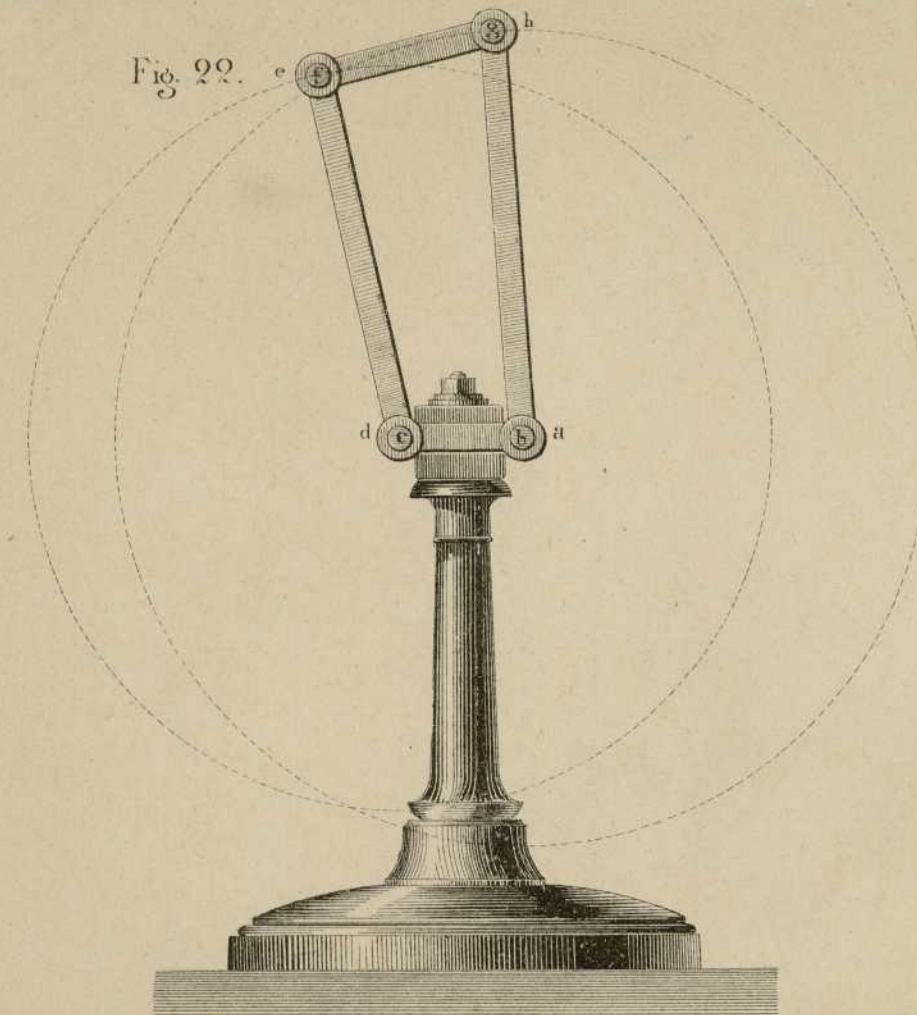


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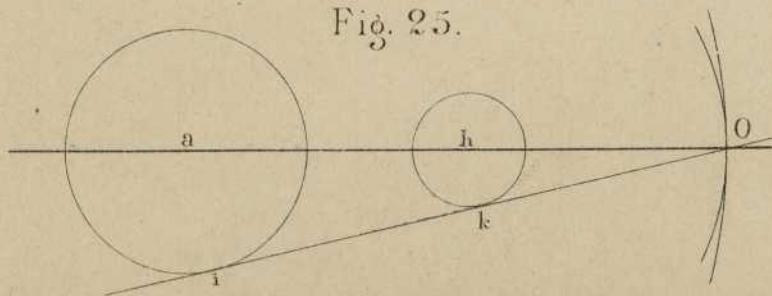


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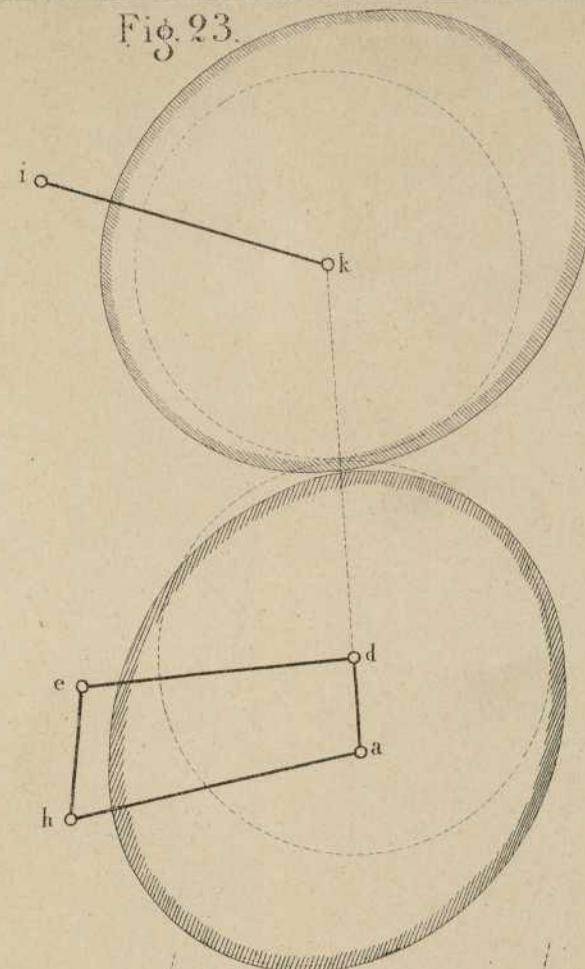
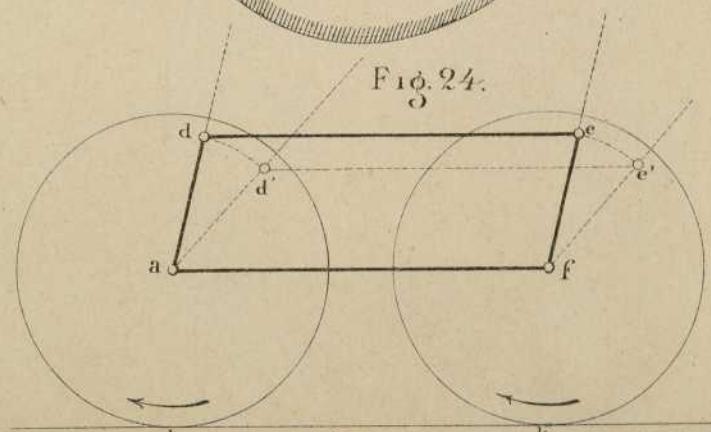


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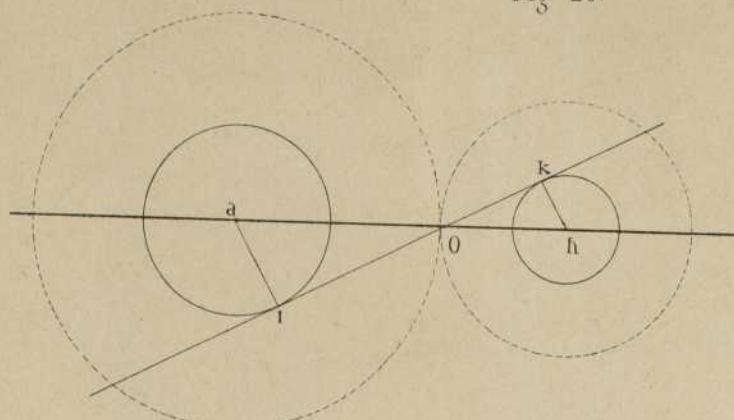


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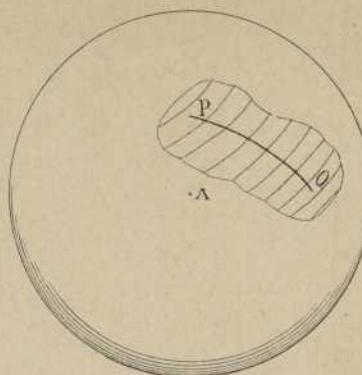


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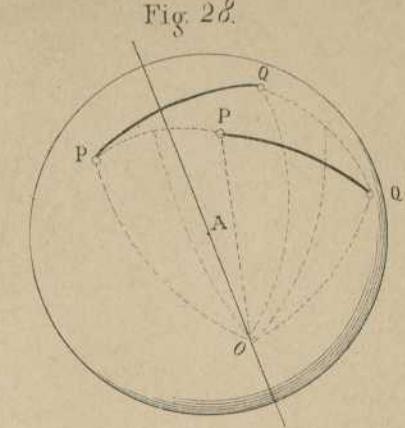


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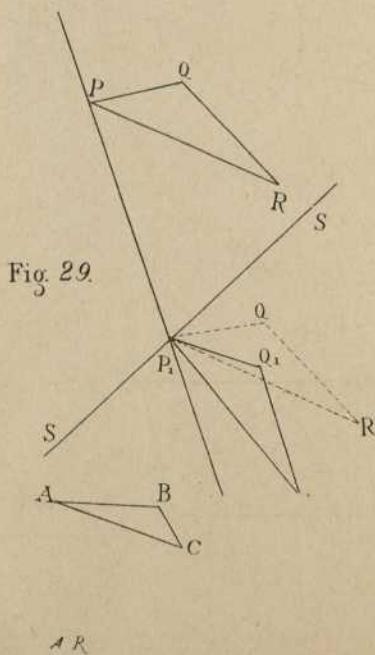


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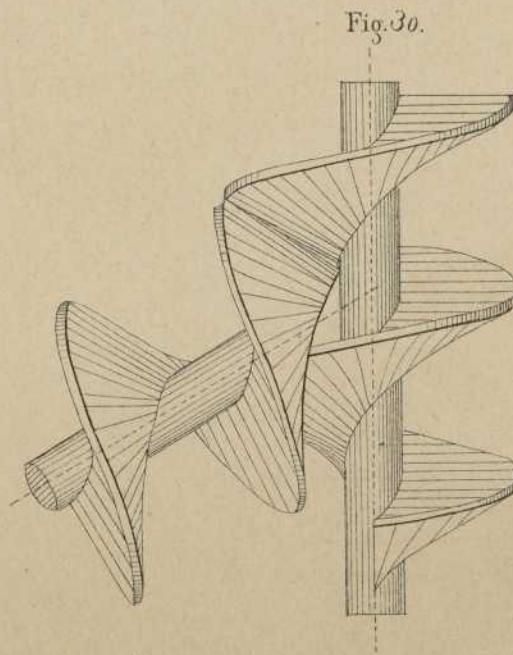


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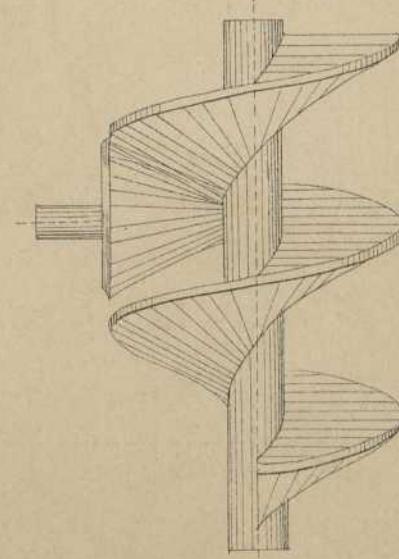


Fig. 31.

Fig. 32.

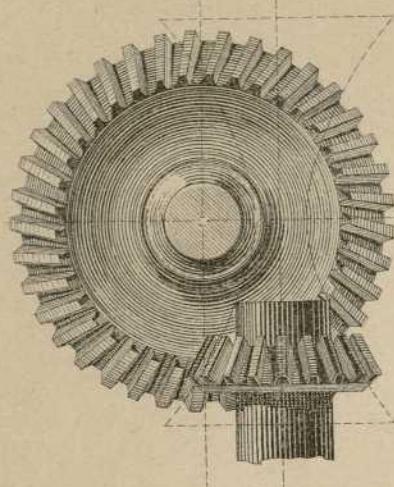


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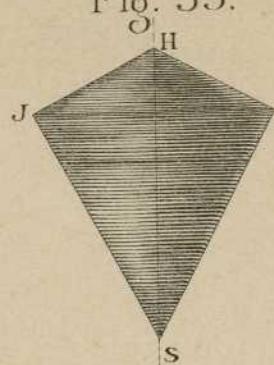


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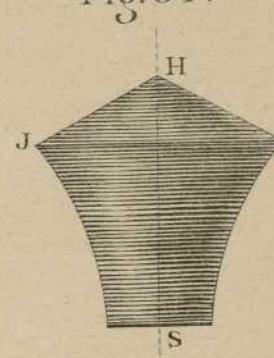


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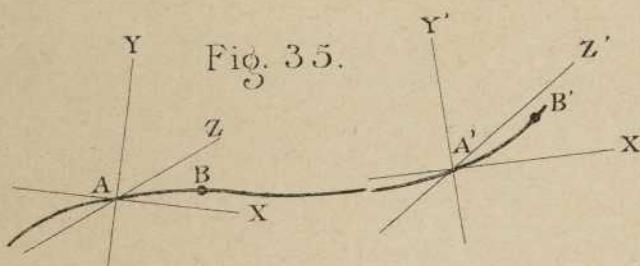


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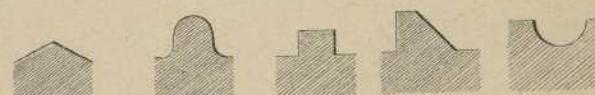


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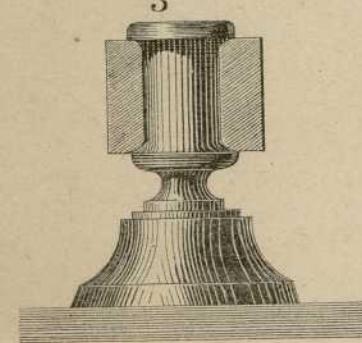


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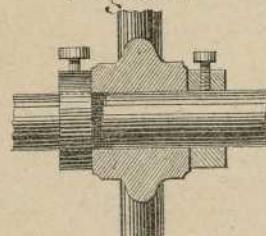


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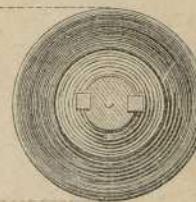


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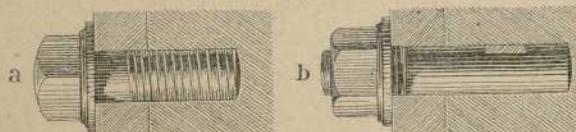


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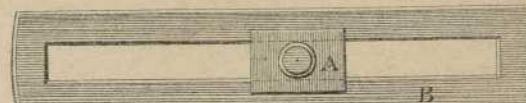


Fig. 42.



SECCION TEÓRICA.

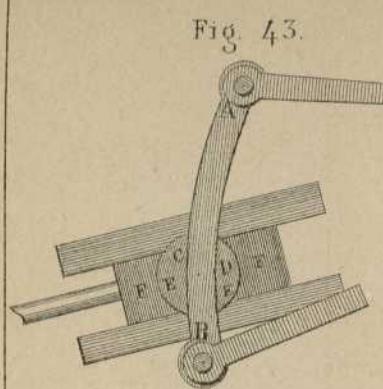
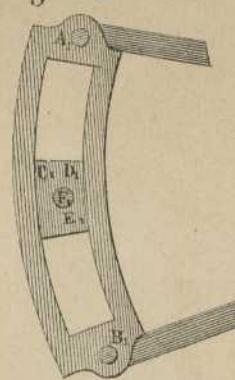


Fig. 43.

Fig. 44



CINEMÁTICA.

Fig. 45.

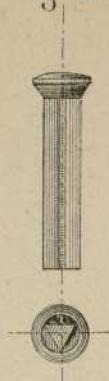


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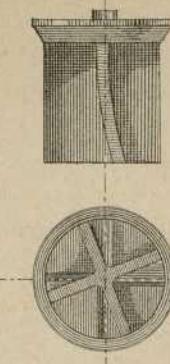


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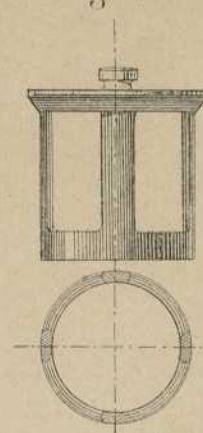


Lámina 7.^a

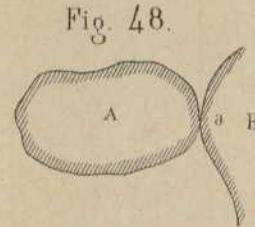


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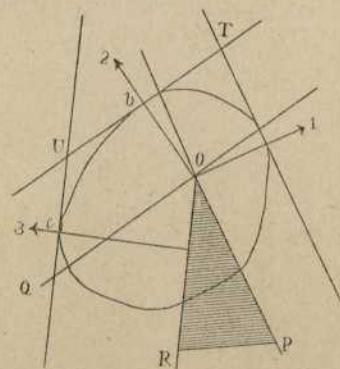


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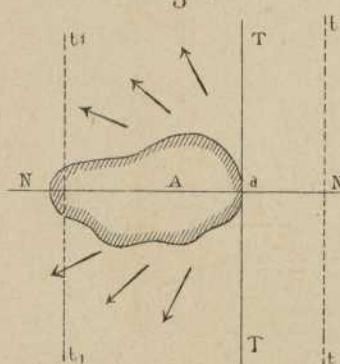


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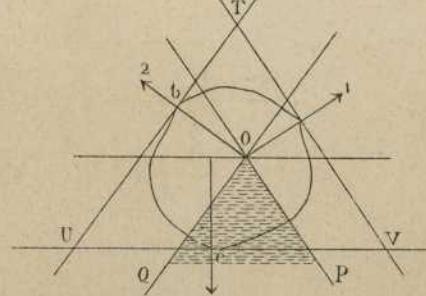


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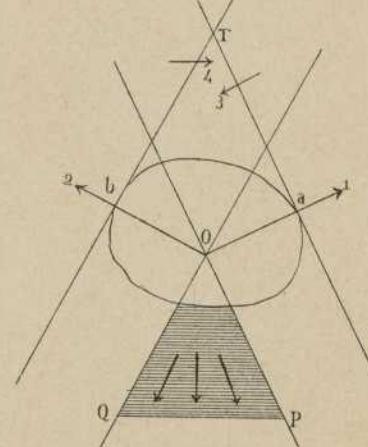


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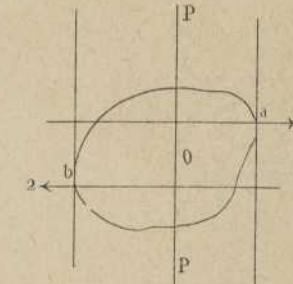


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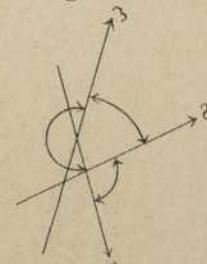


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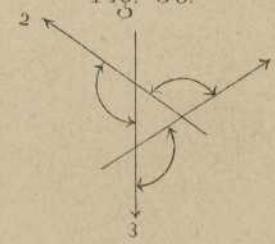


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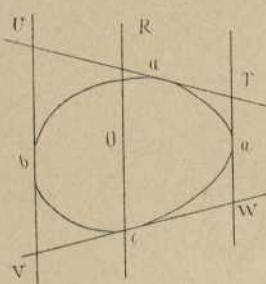


Fig. 57

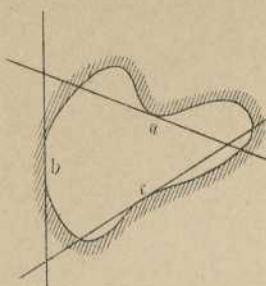


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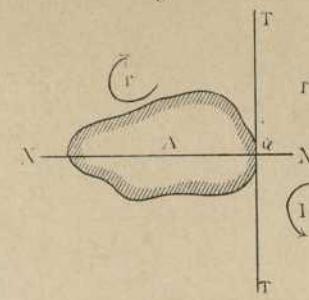


Fig. 59

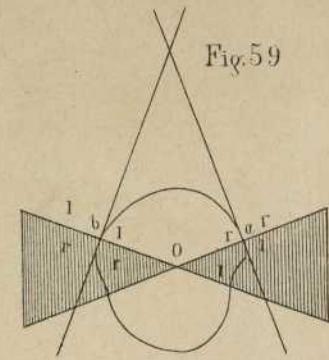


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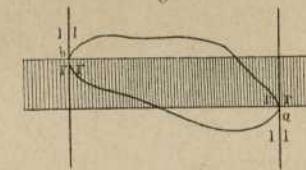


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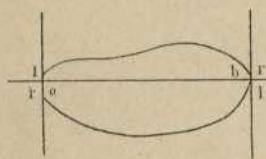


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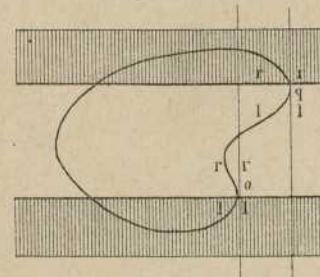


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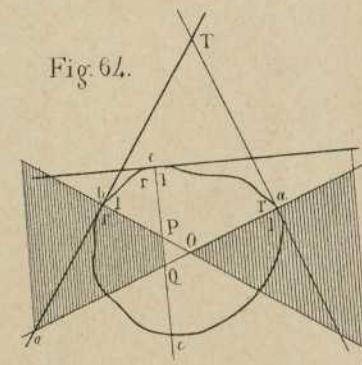


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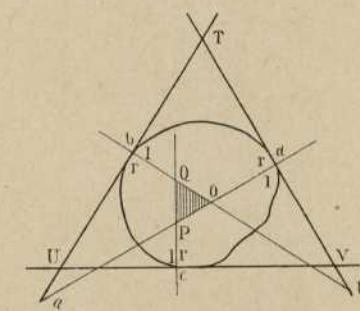


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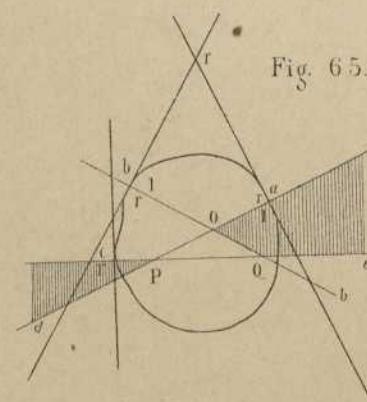


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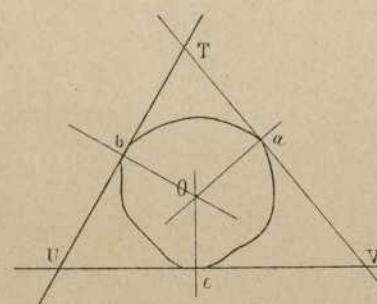


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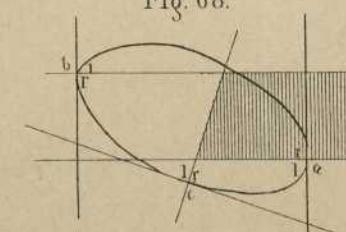
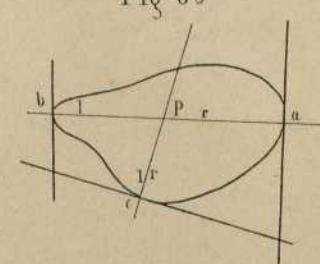


Fig. 69



A.R.

SECCION TEÓRICA.

CINEMÁTICA.

Lámina 9.^a

Fig. 70.

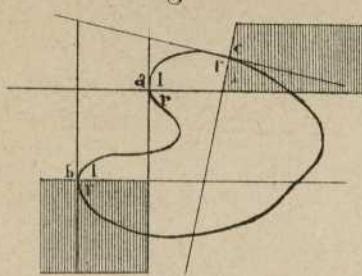


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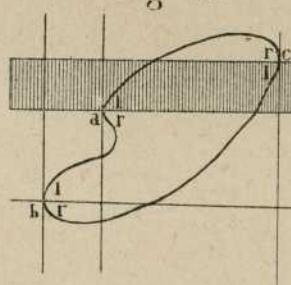


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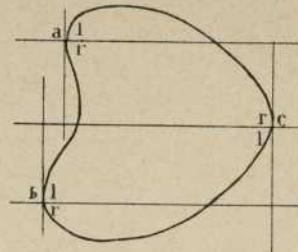


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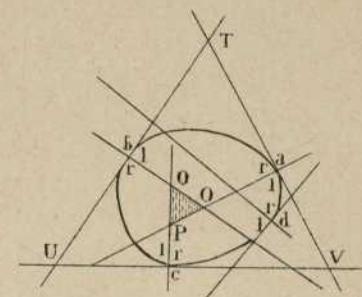


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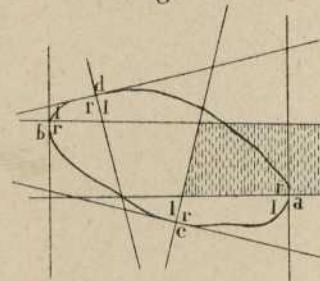


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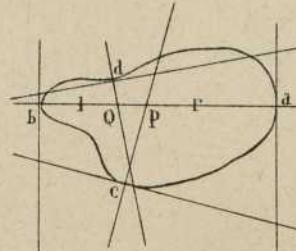


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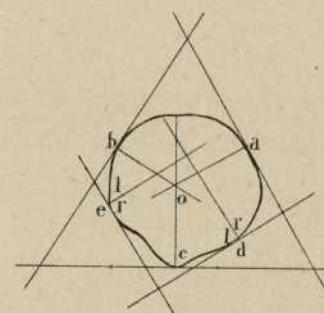


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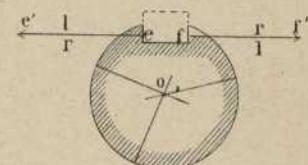


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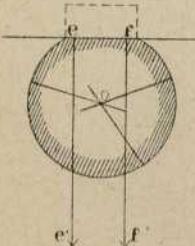


Fig. 79.

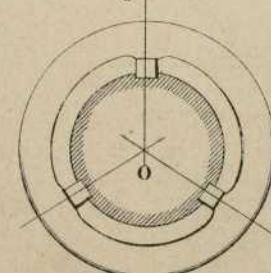


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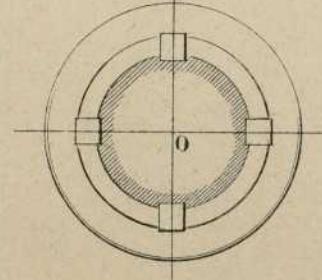


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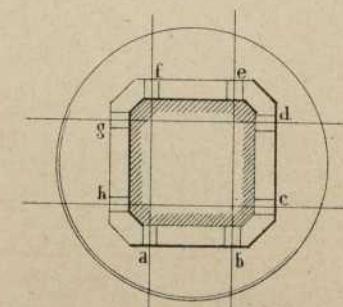


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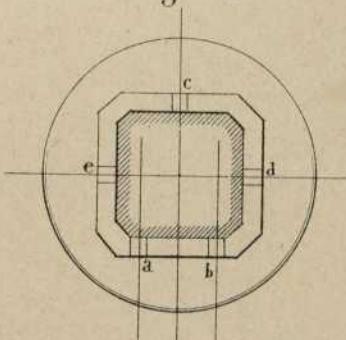


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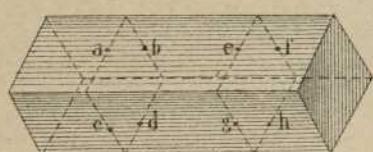


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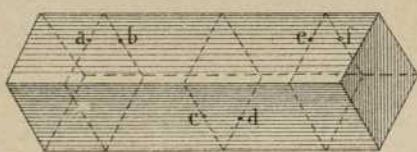


Fig. 85.



Fig. 86.

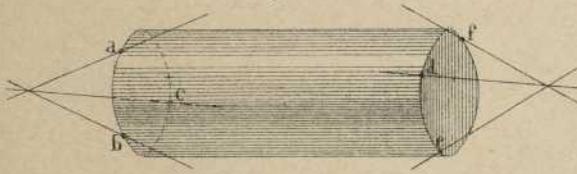


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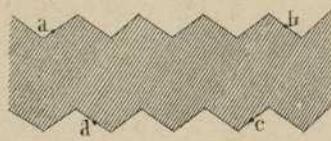


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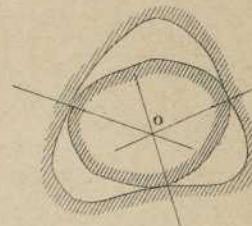


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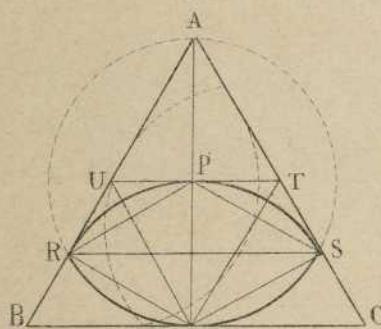


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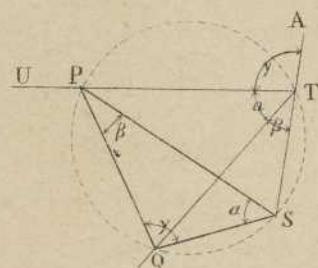


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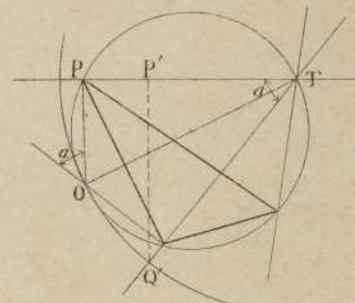


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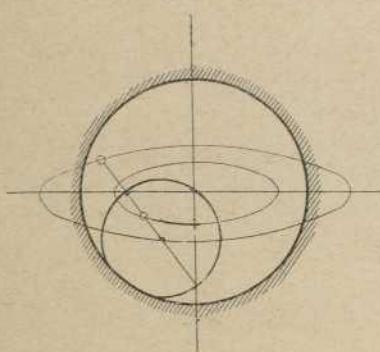


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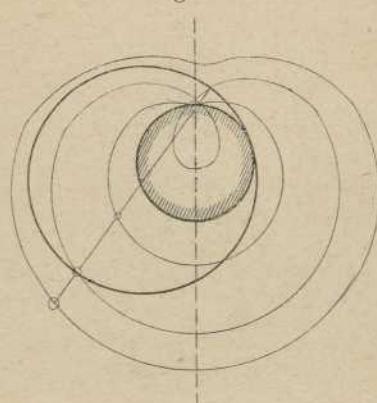


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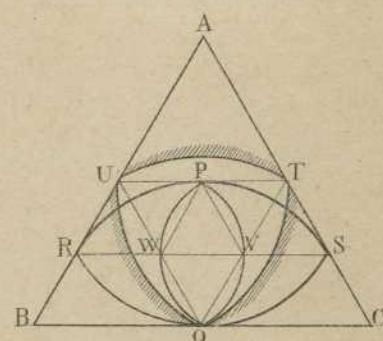


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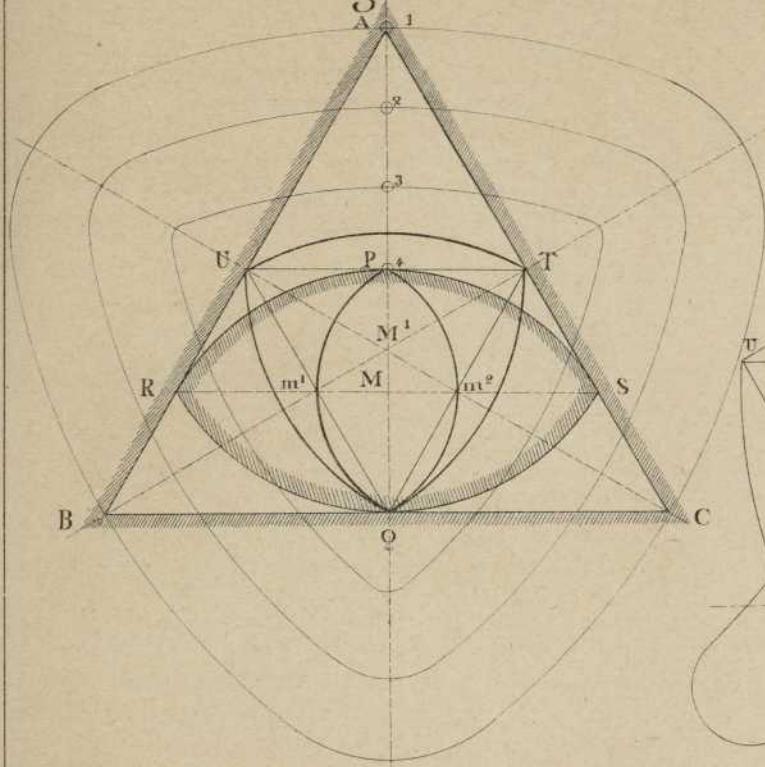


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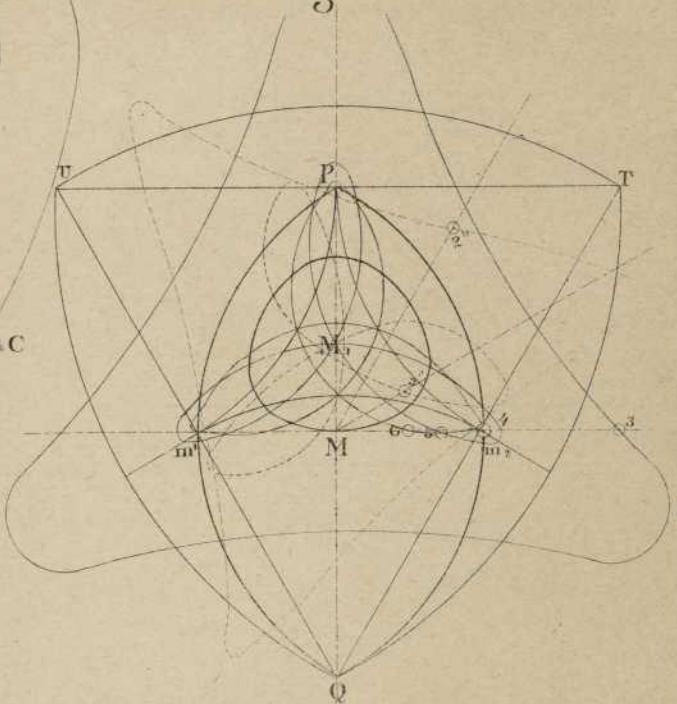


Fig. 97

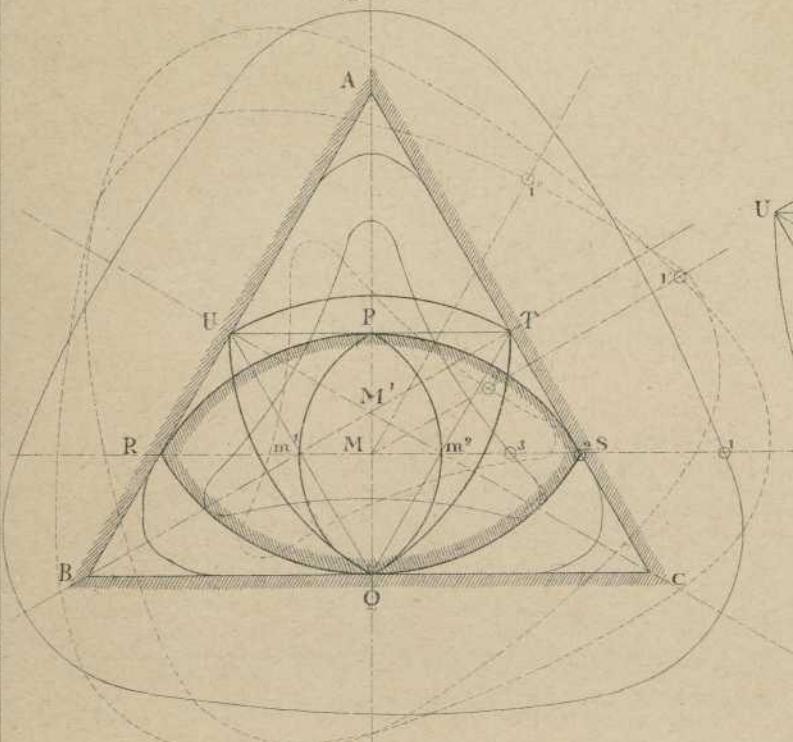


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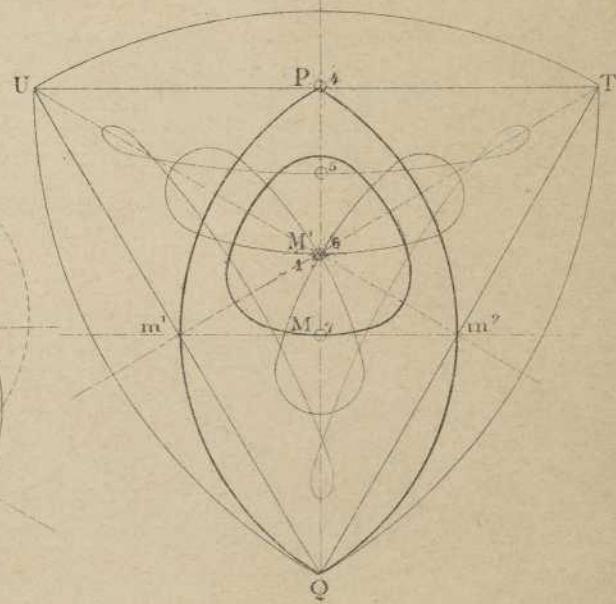


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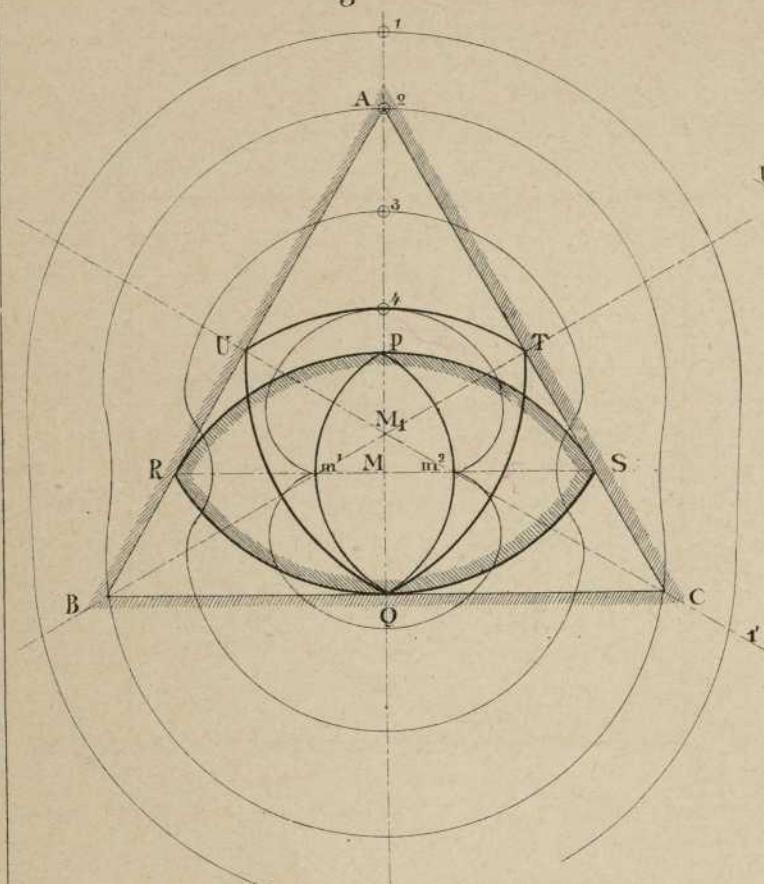


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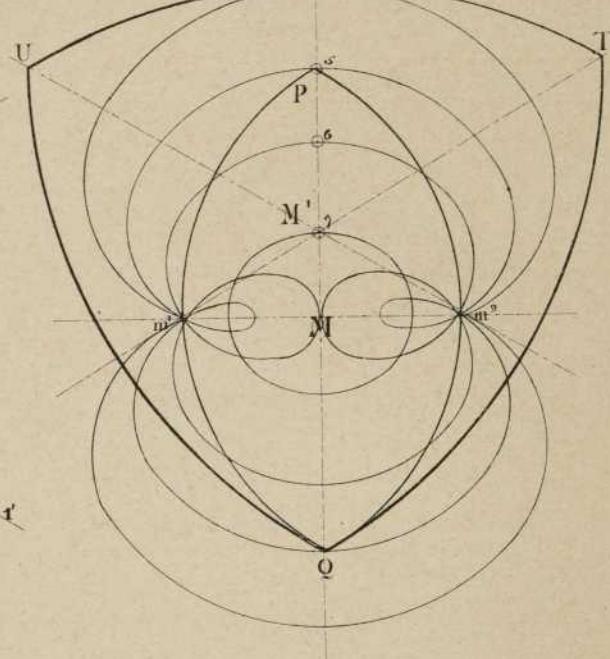
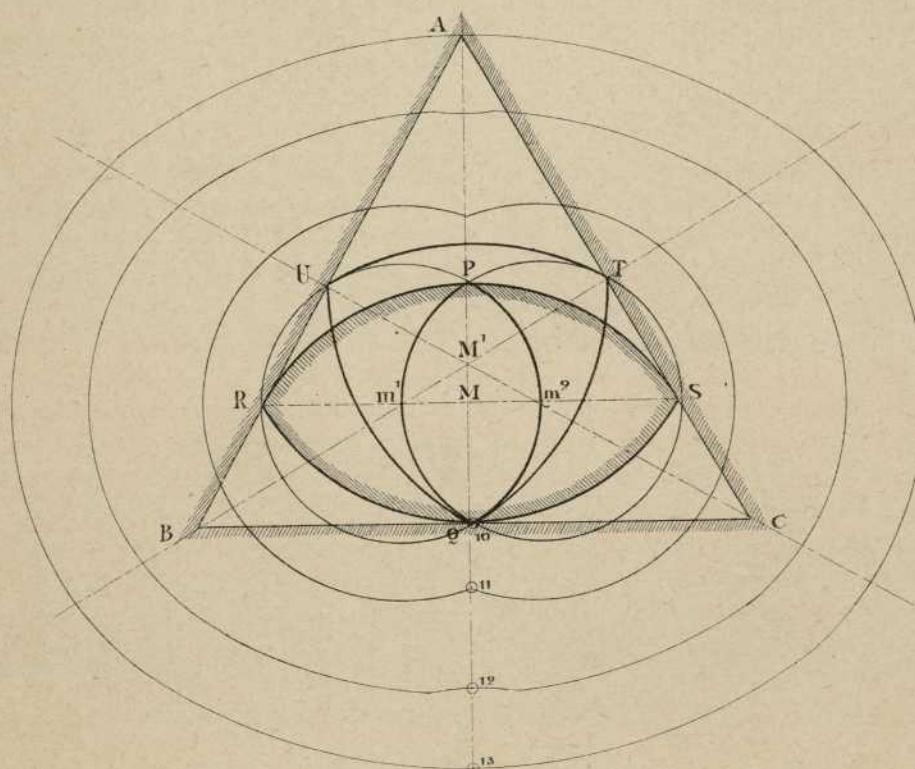


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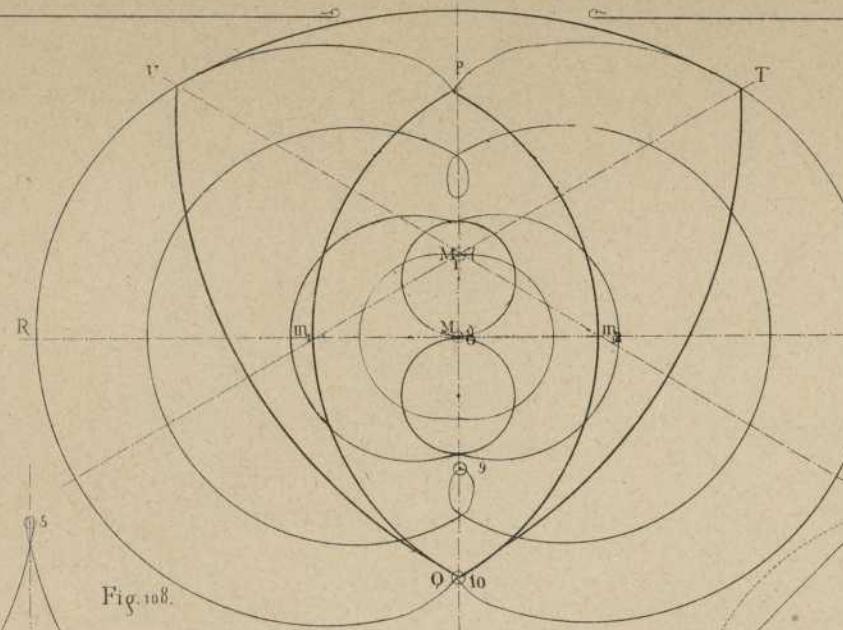
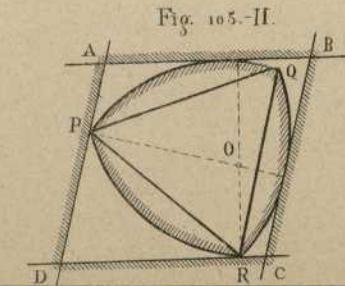
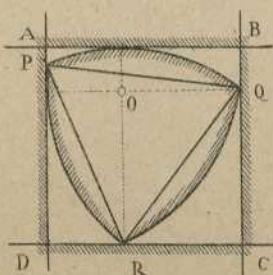
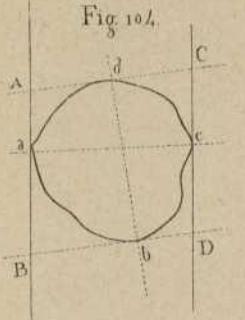
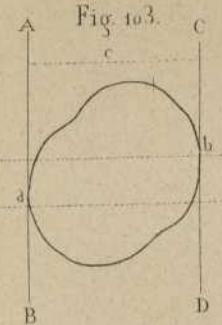
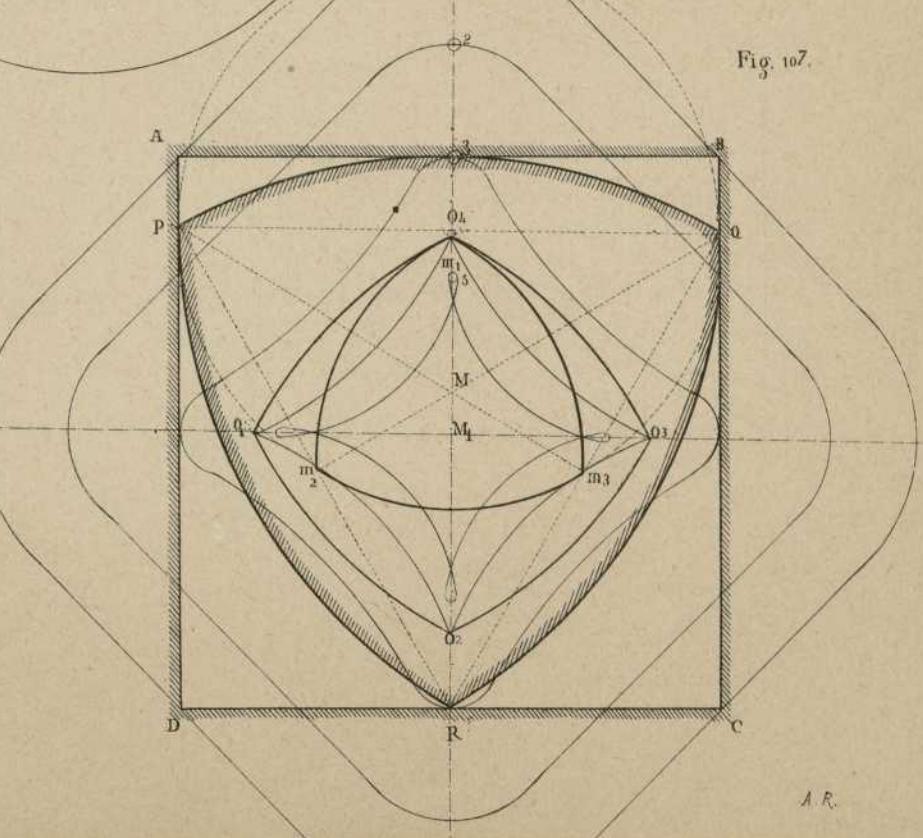
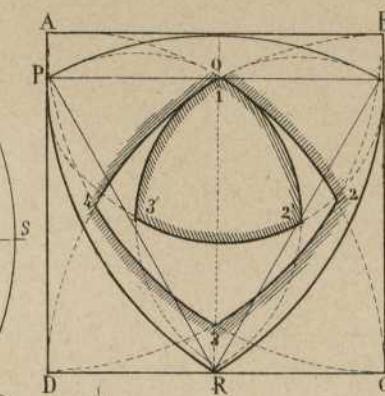


Fig. 102.



A.R.

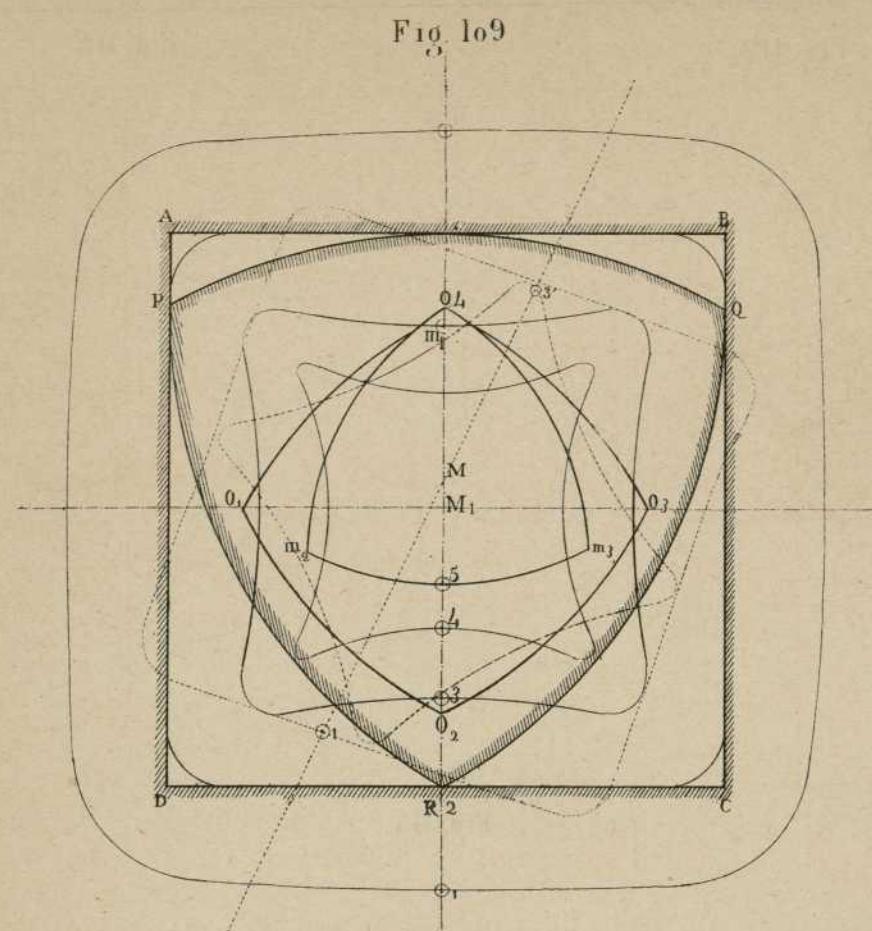


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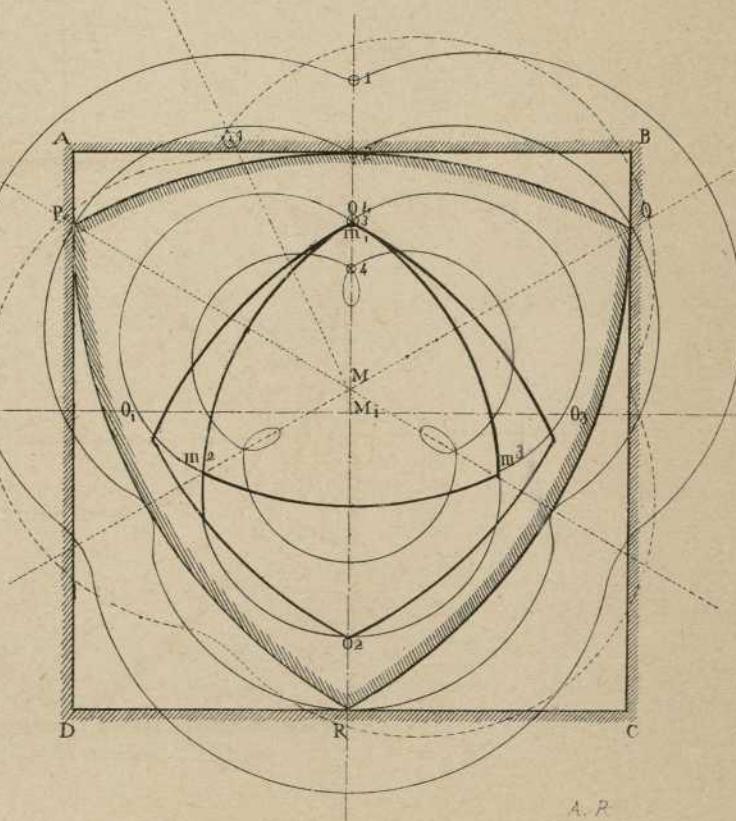


Fig 110.

Fig. II2.

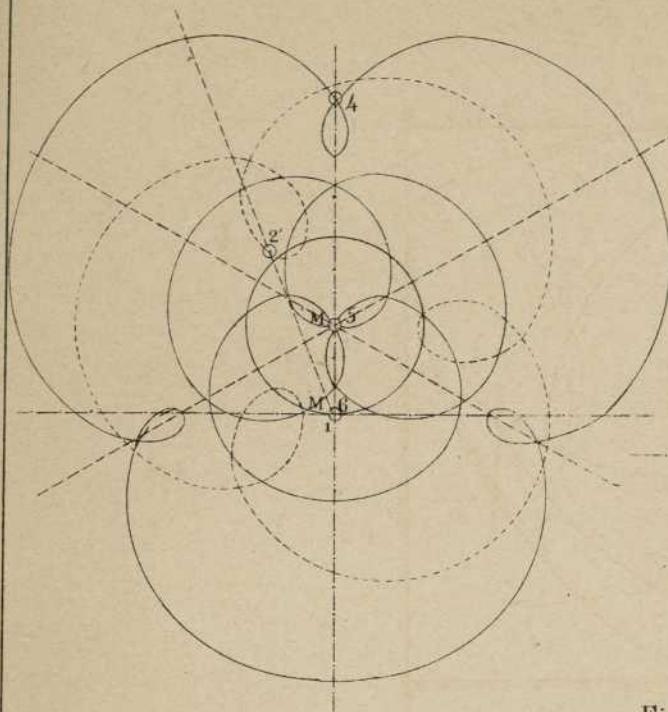


Fig. II4

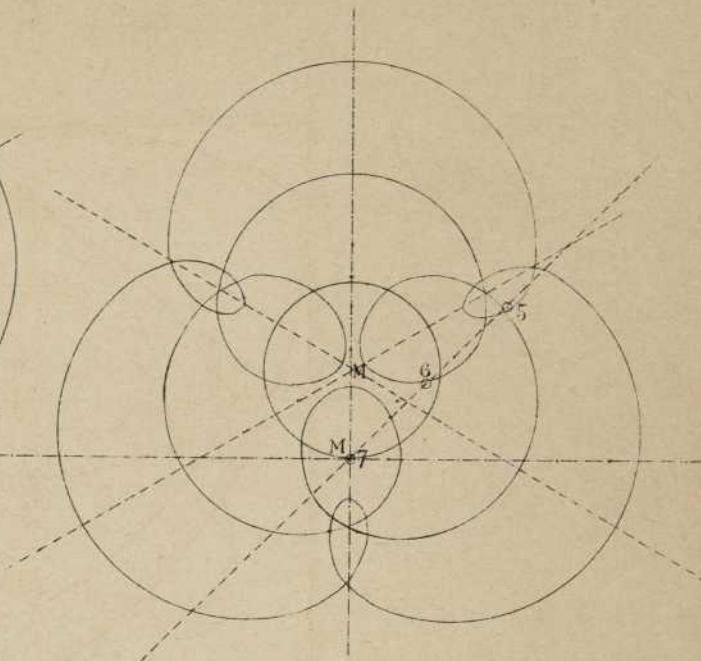
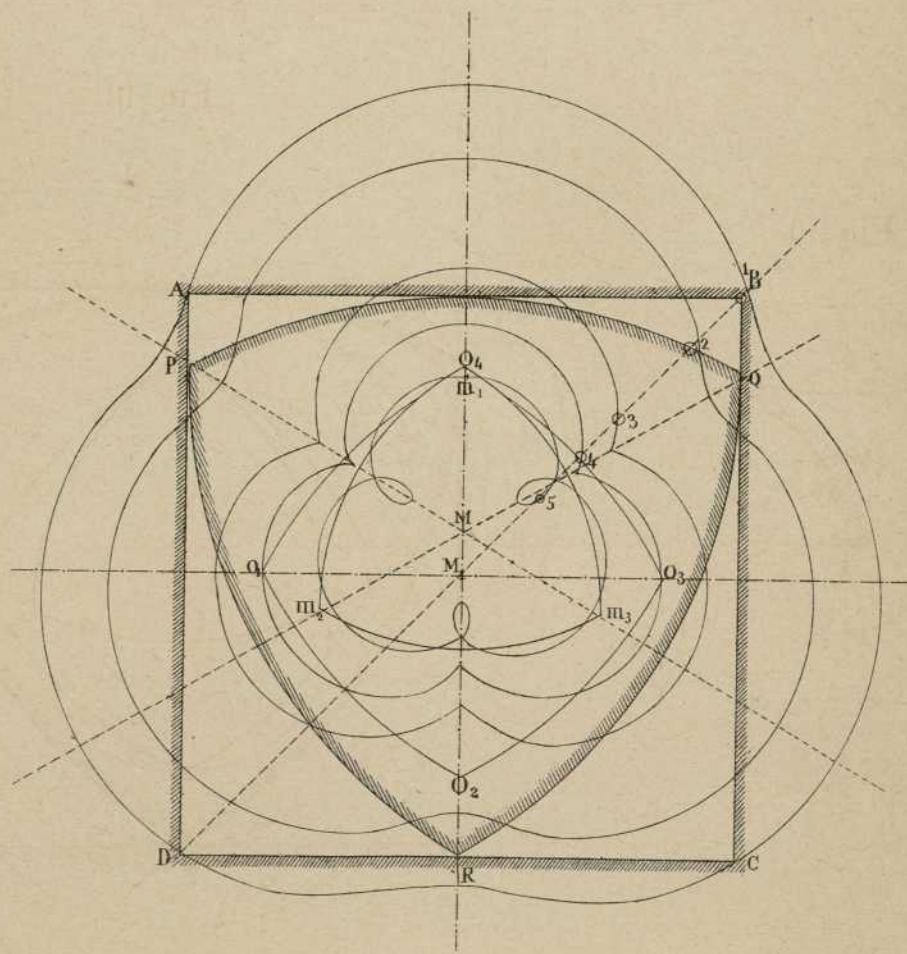


Fig. II3.

*J. G.*

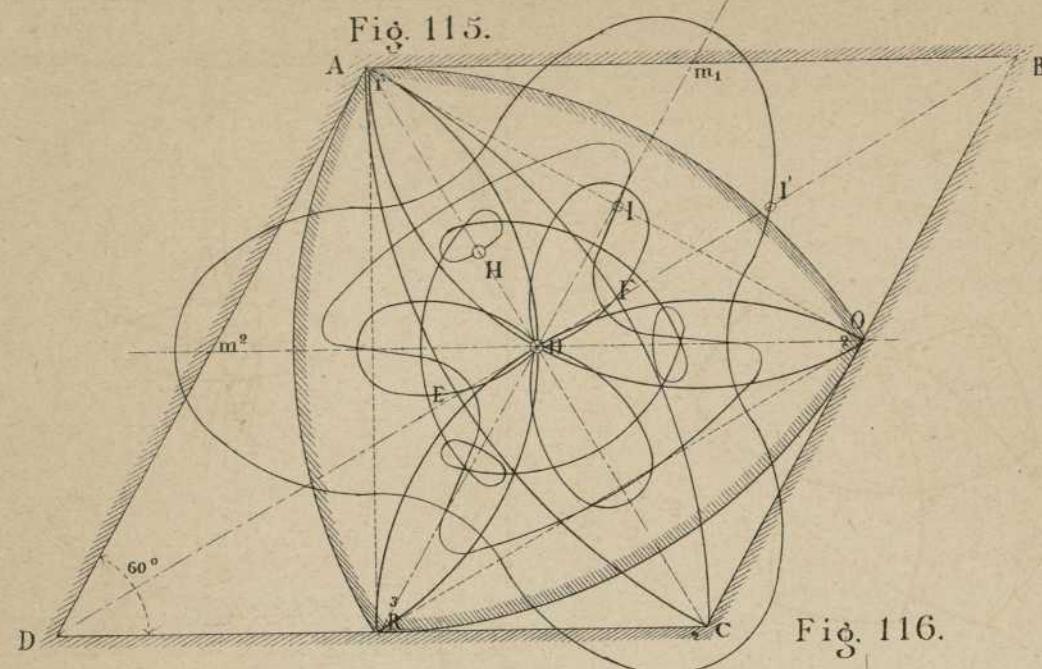


Fig. 116.

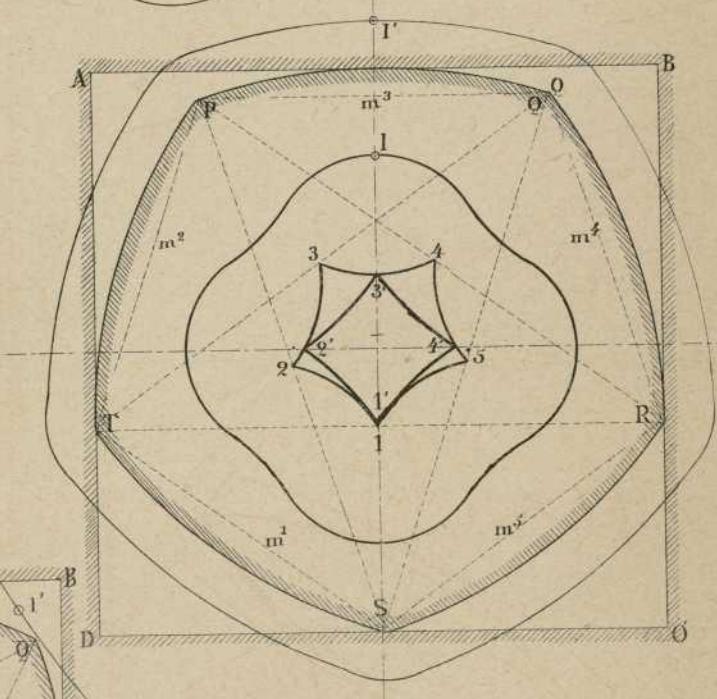
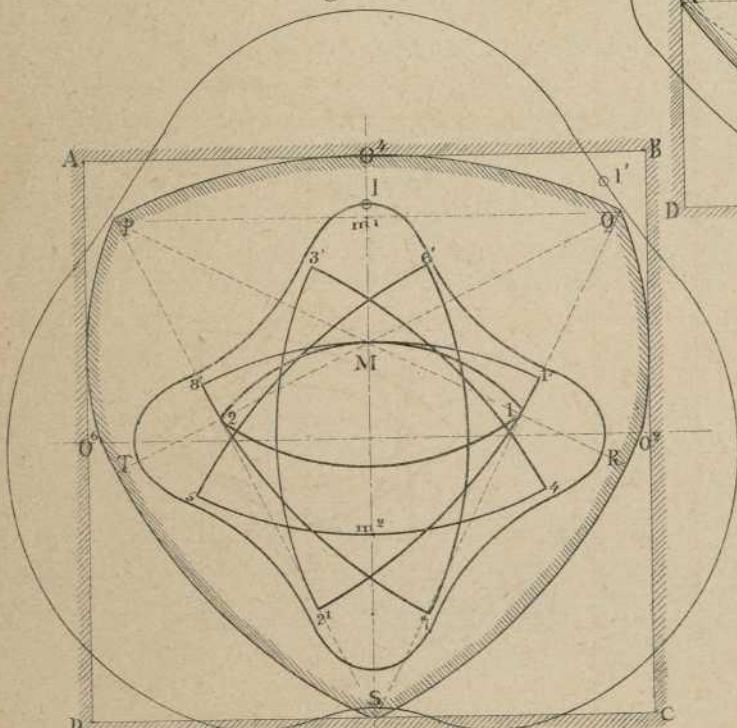


Fig. 117.



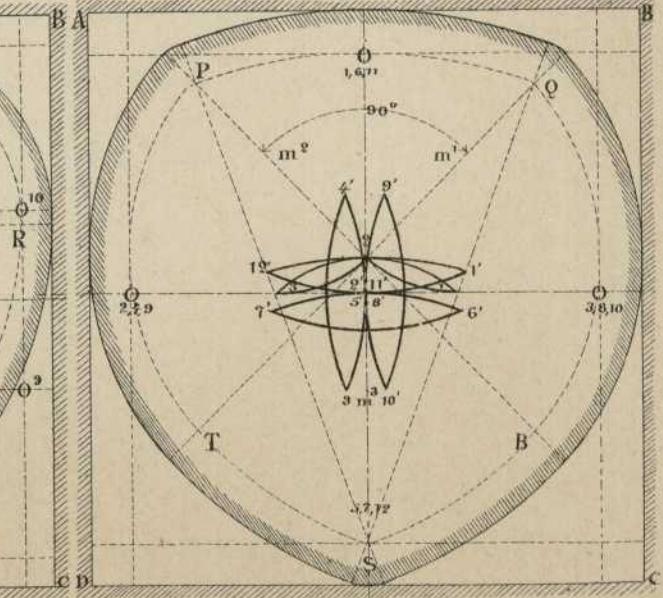
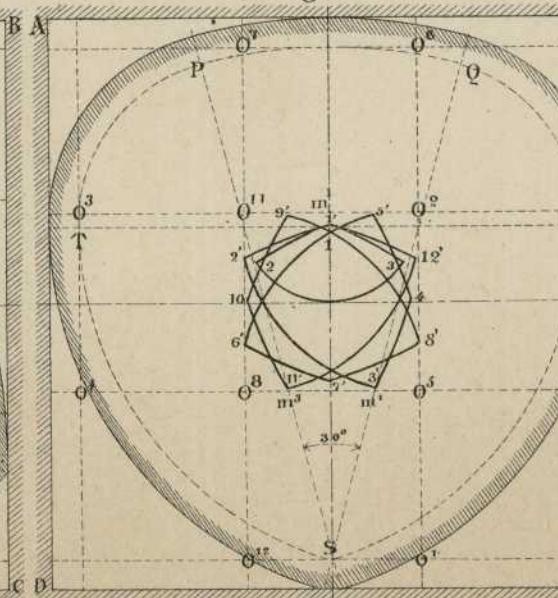
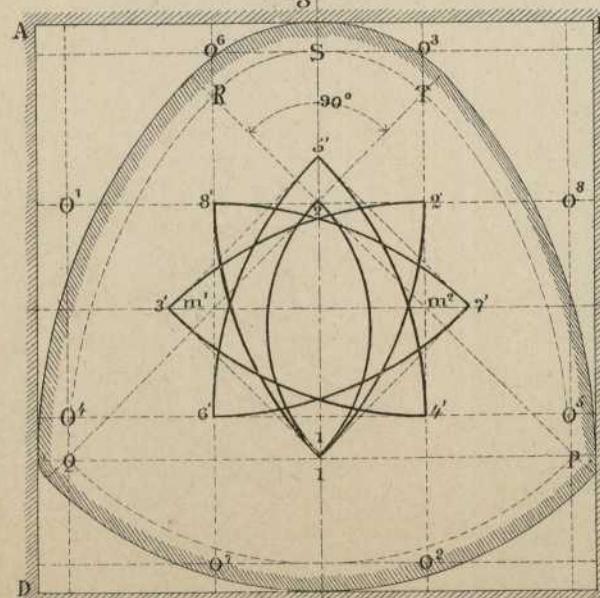
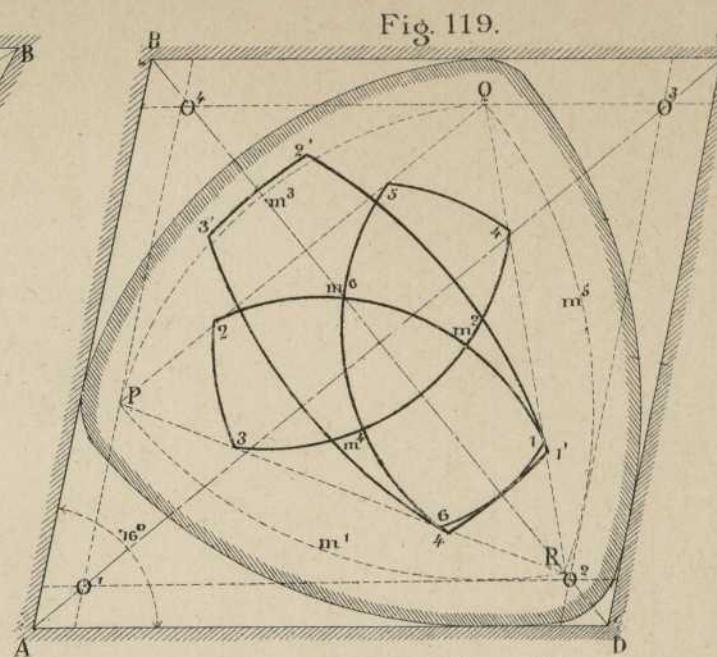
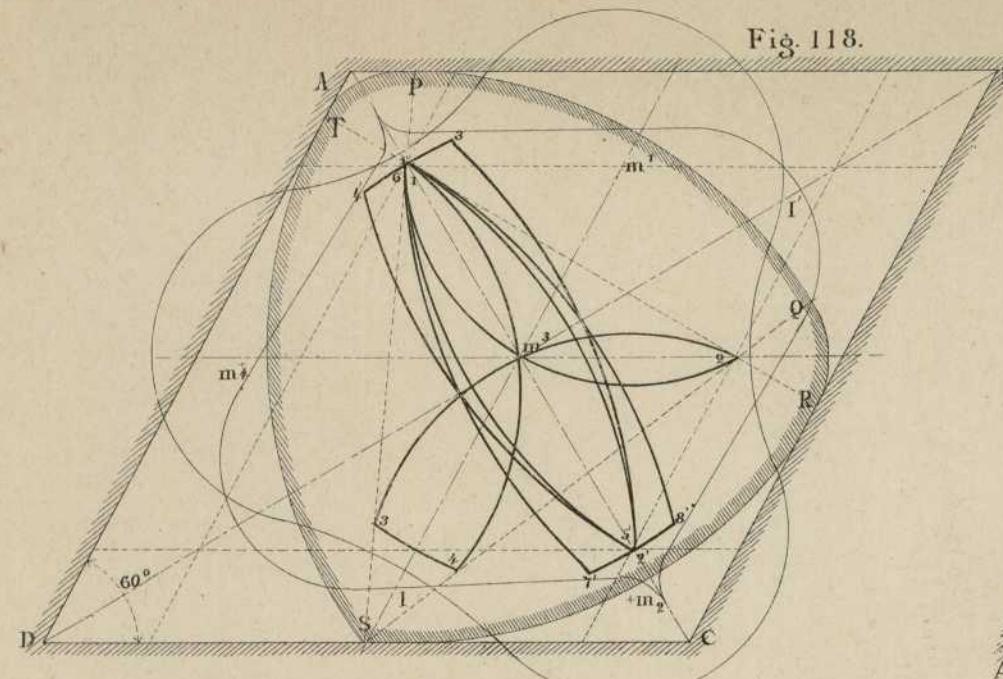


Fig. 123.

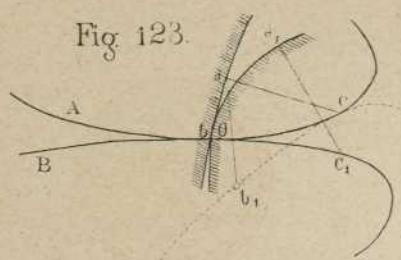


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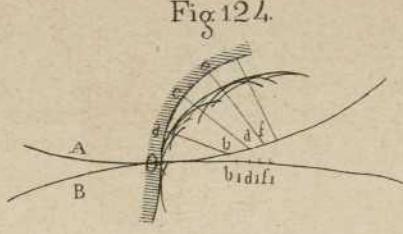


Fig. 127.

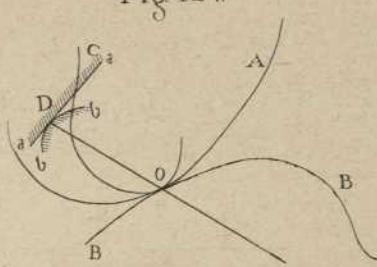


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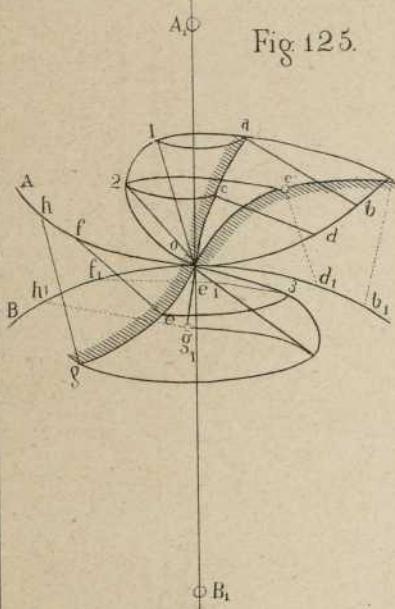


Fig. 126.



Fig. 130.

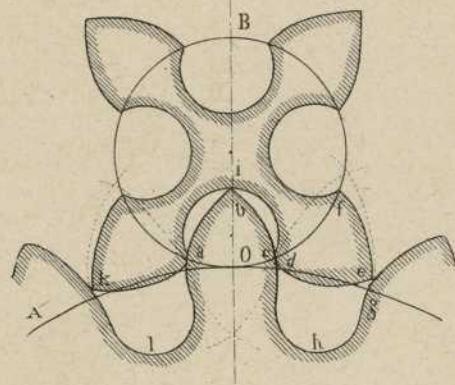


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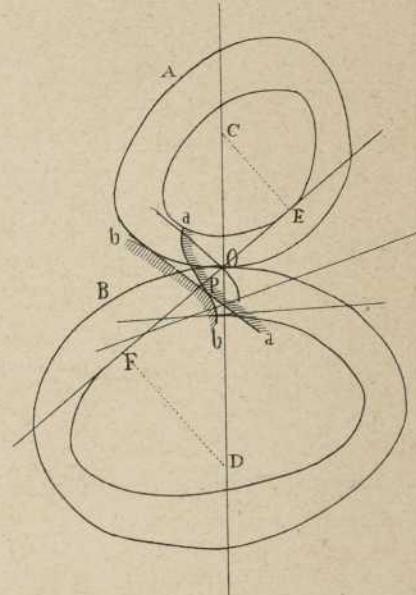


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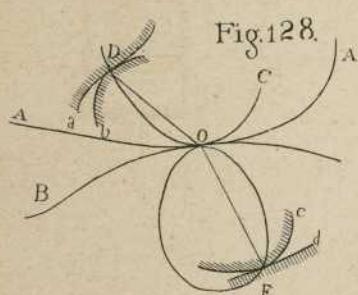


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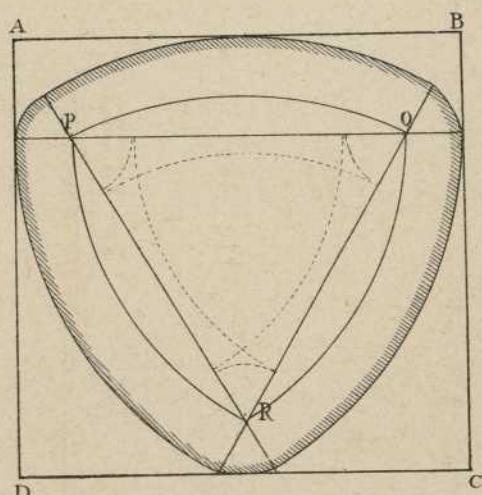


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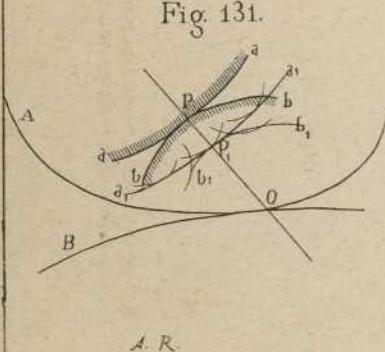


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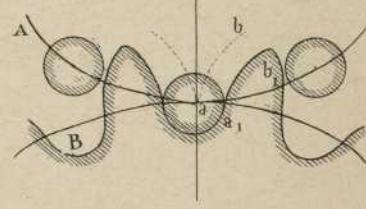
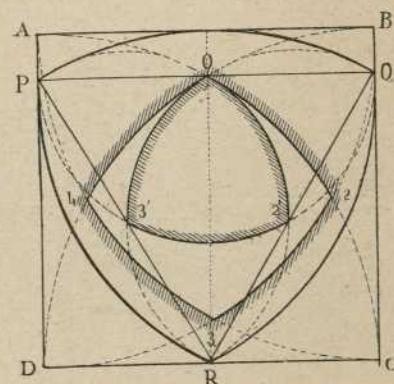


Fig. 133.



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CINEMÁTICA.

Lámina 19.^a

Fig. 135.

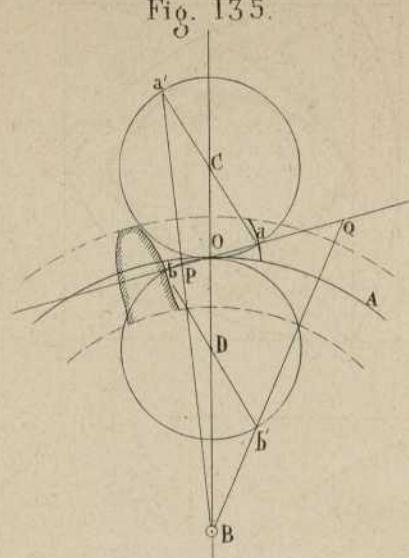


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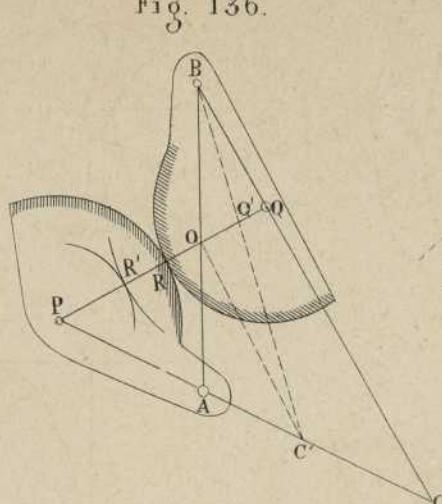


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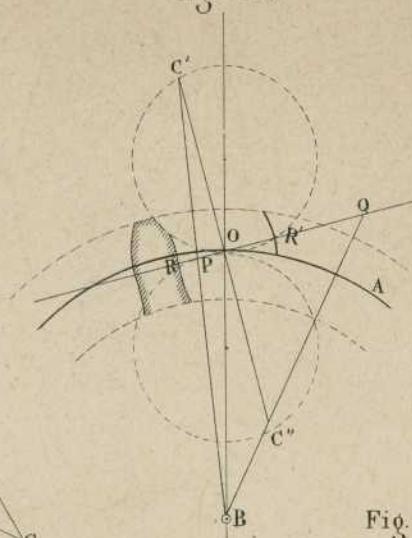


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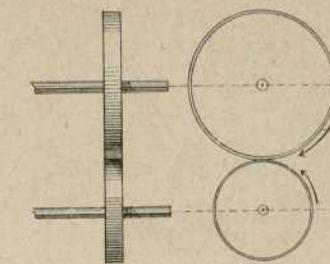


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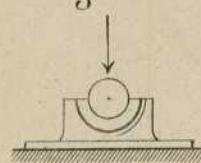


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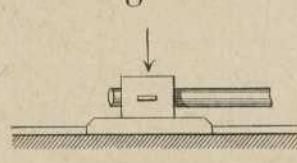


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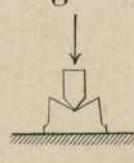


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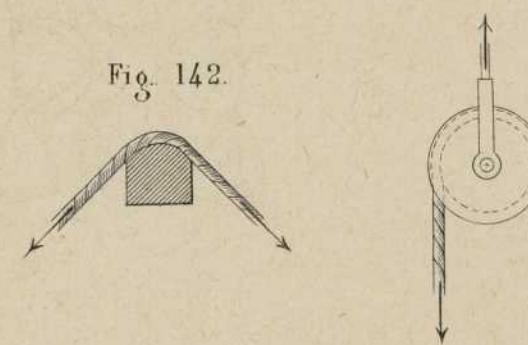


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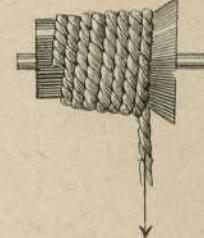


Fig. 145.



Fig. 146.

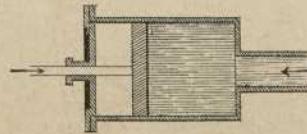
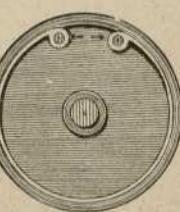
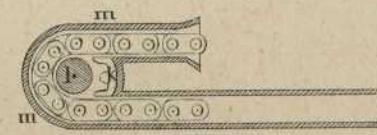
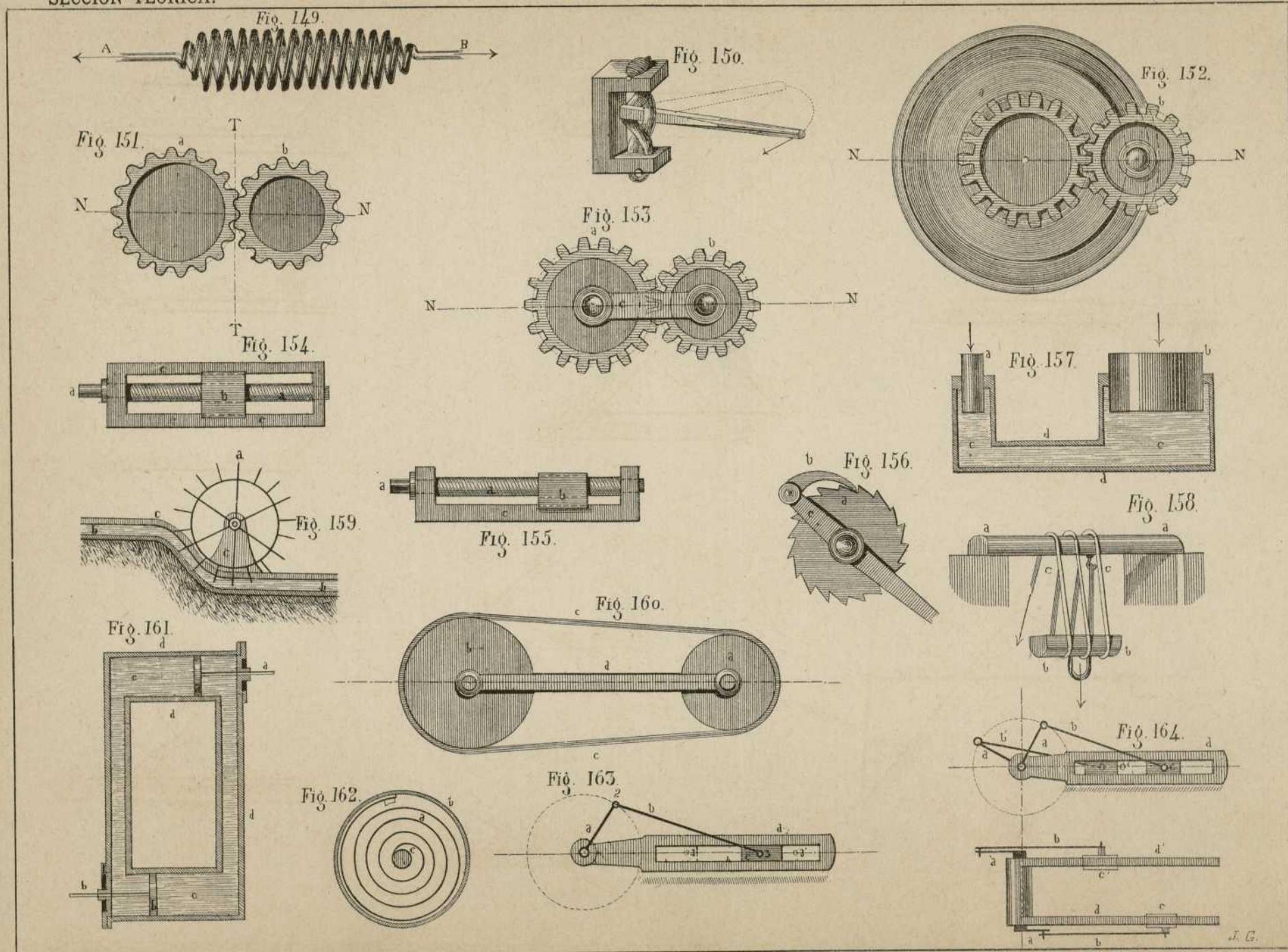
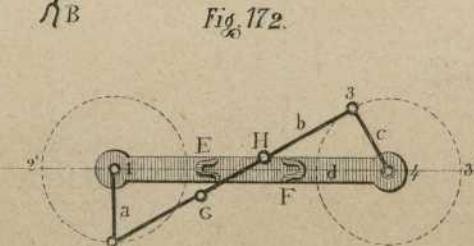
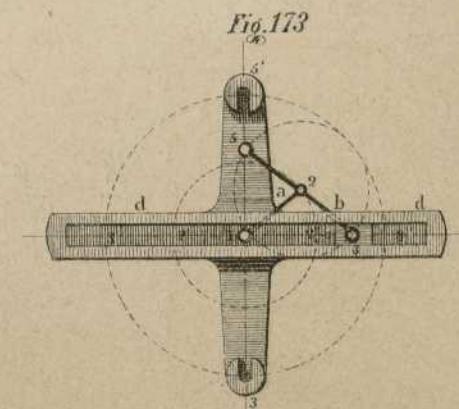
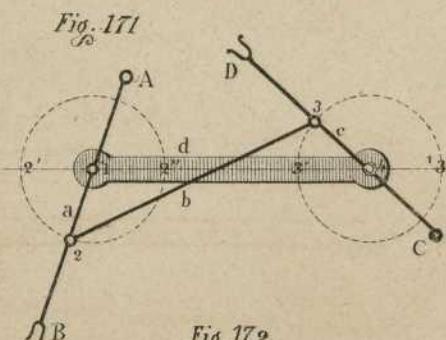
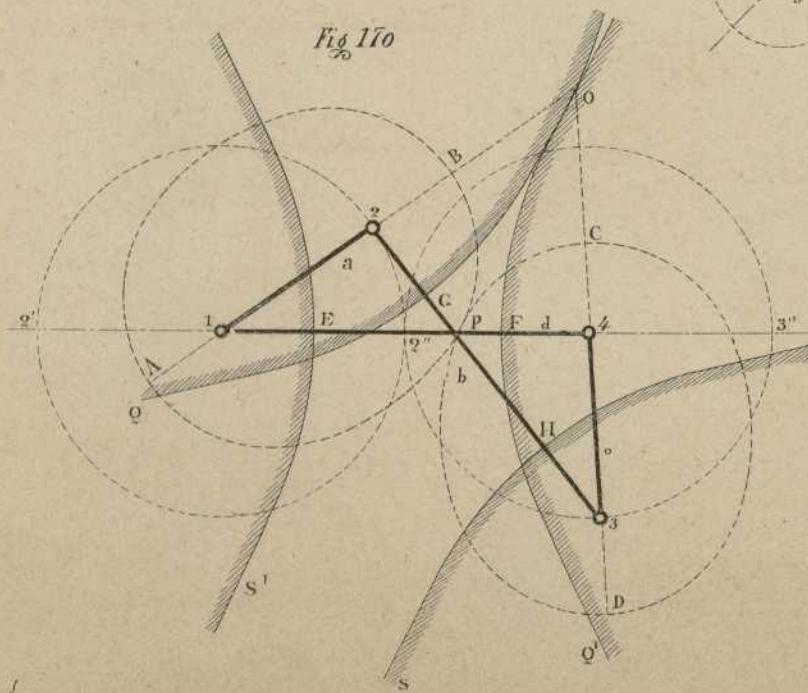
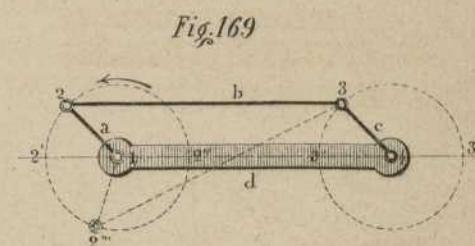
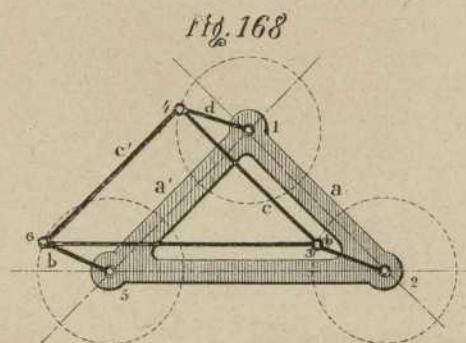
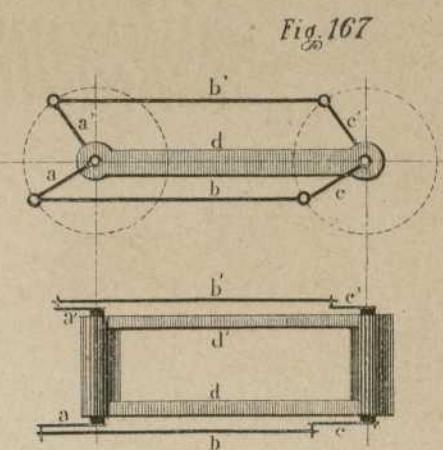
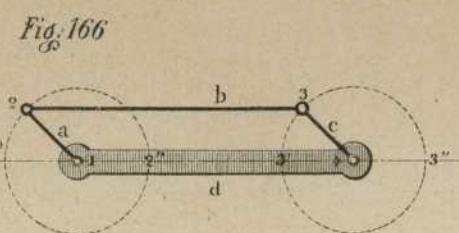
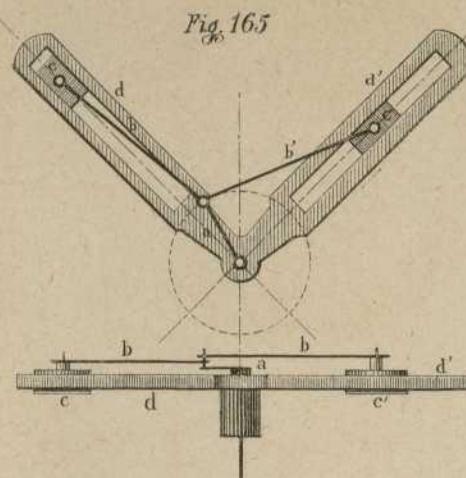


Fig. 147.



J. G.

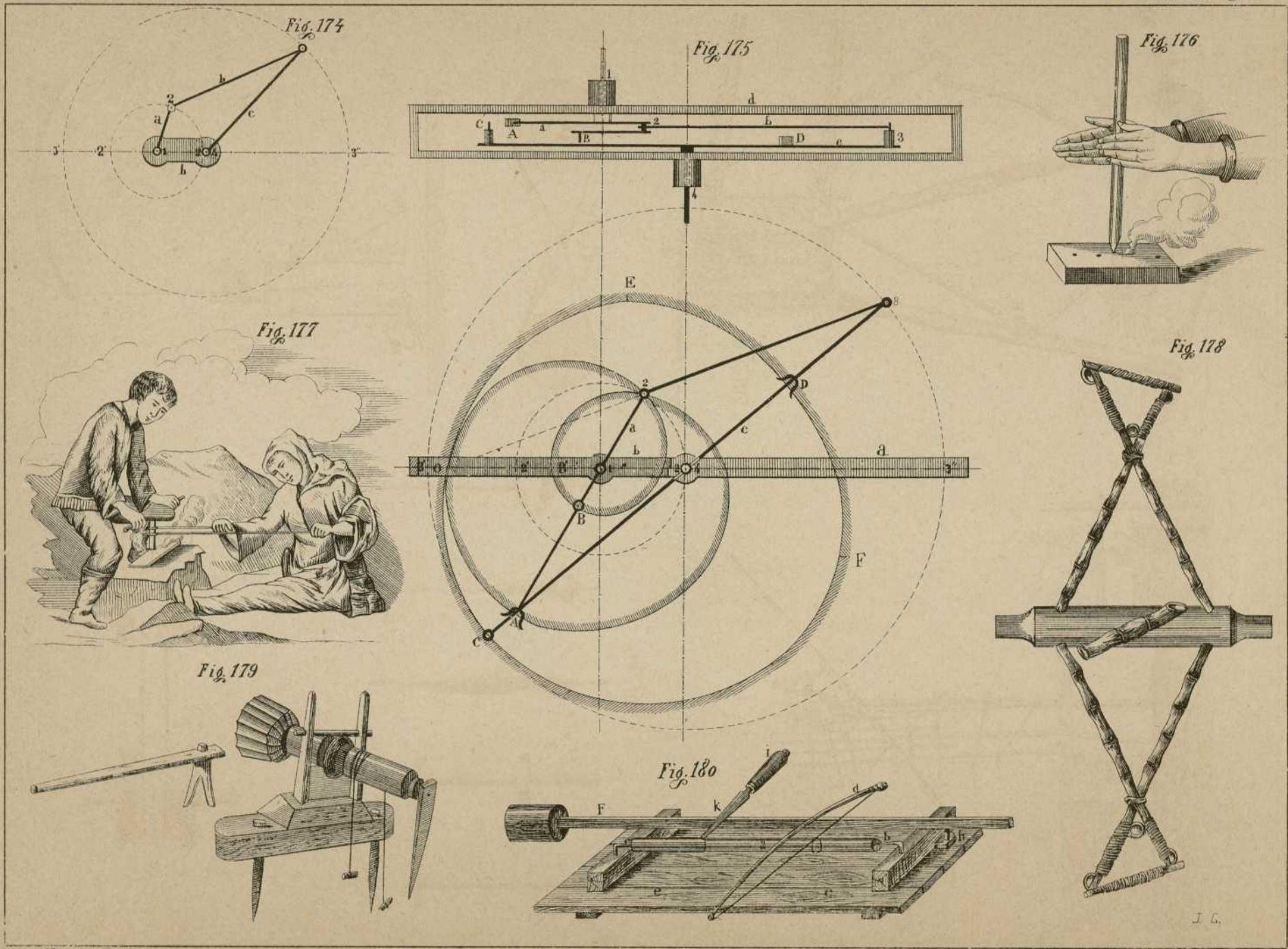




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Lámina 22.^a



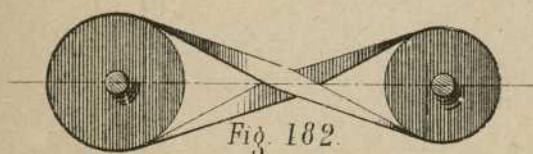
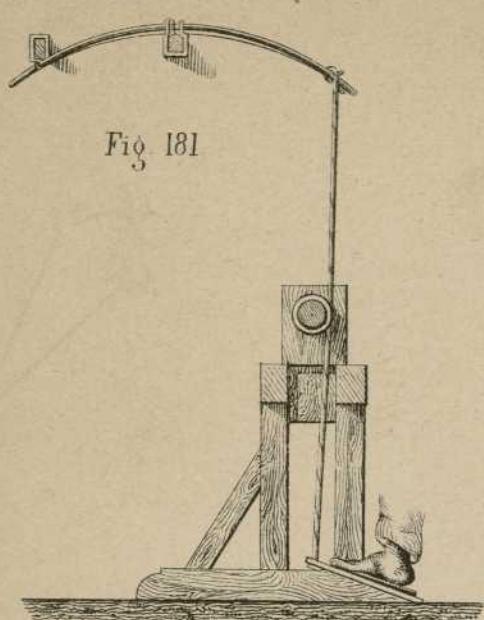
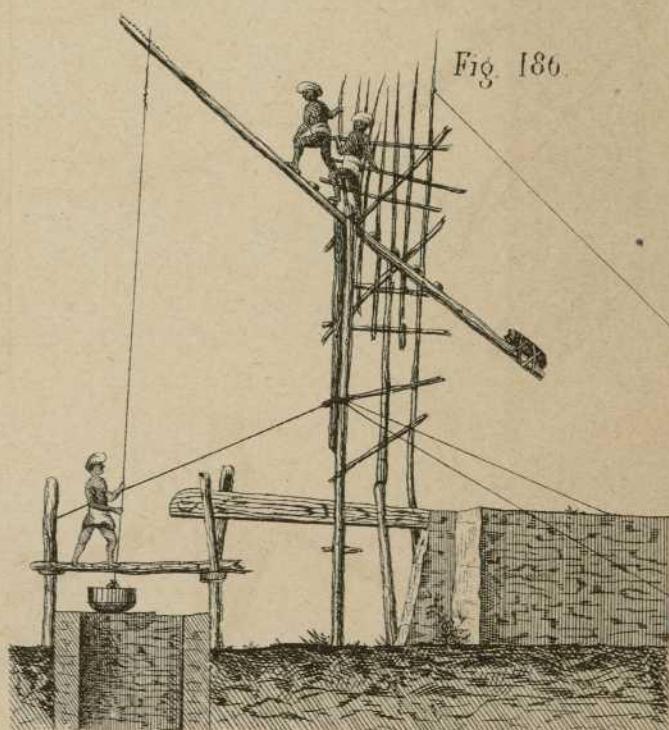
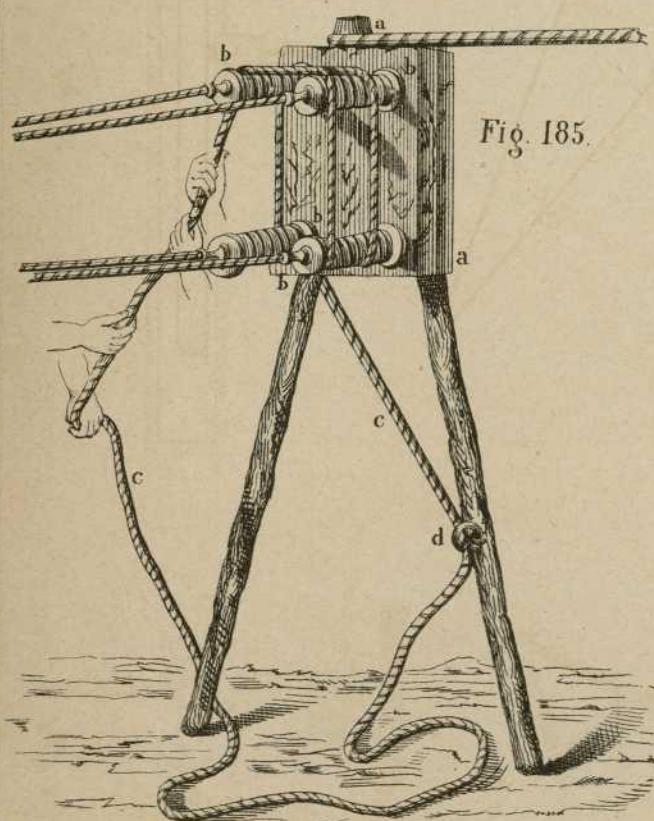
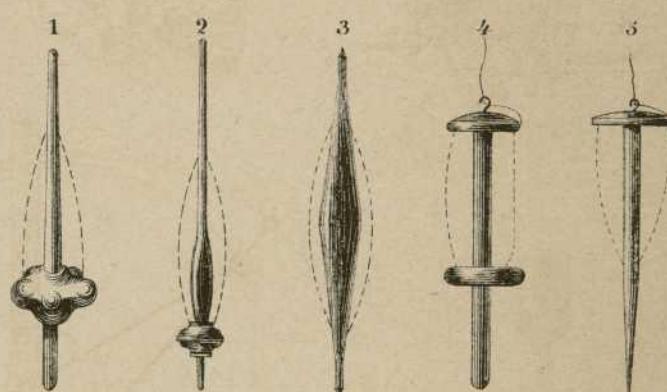
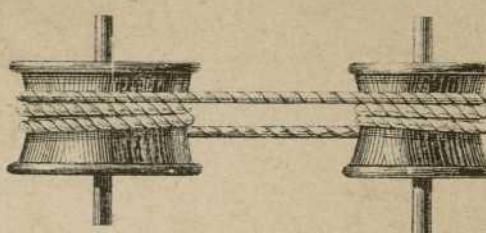


Fig. 183



Φ.

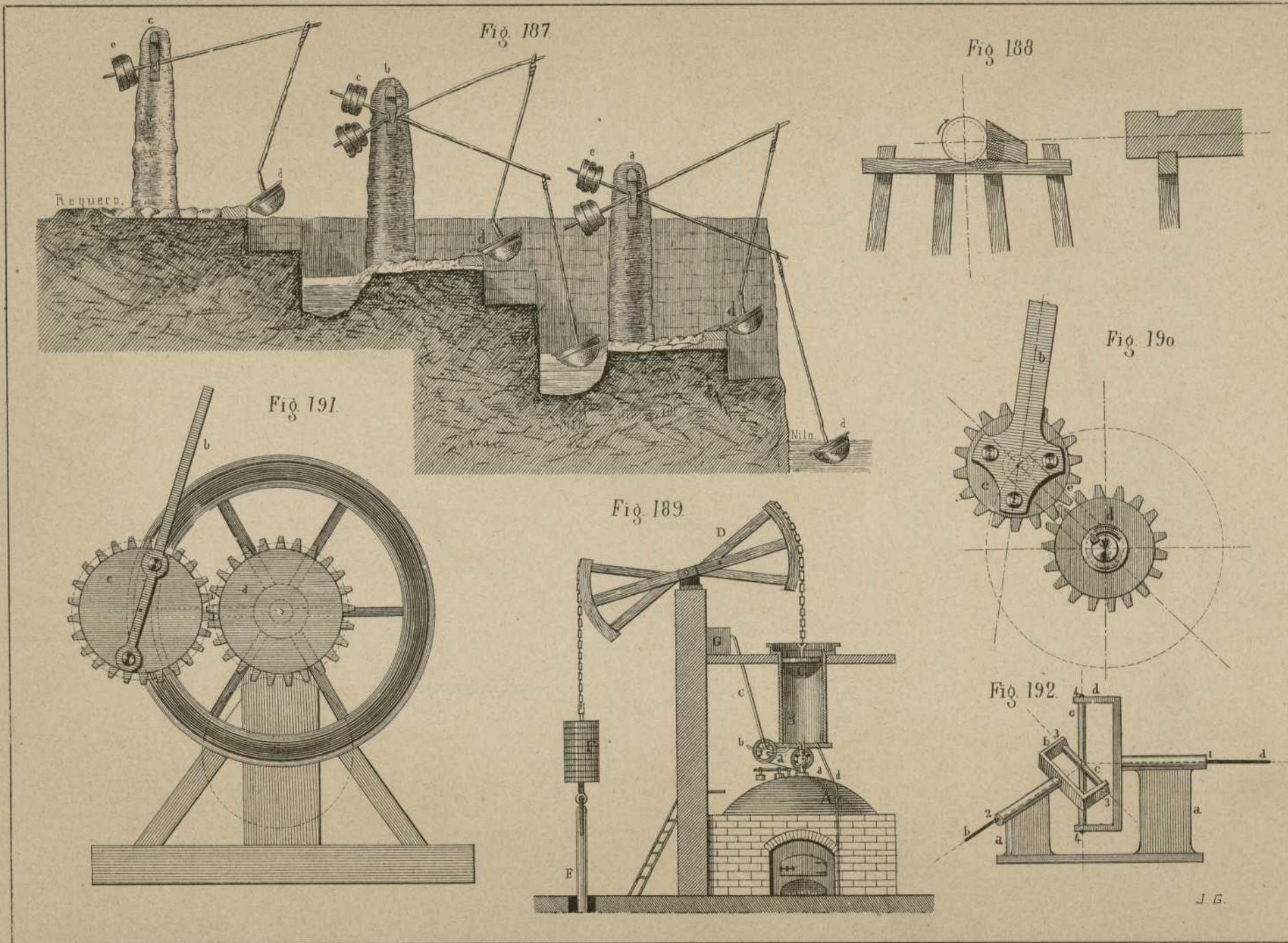


Fig. 193

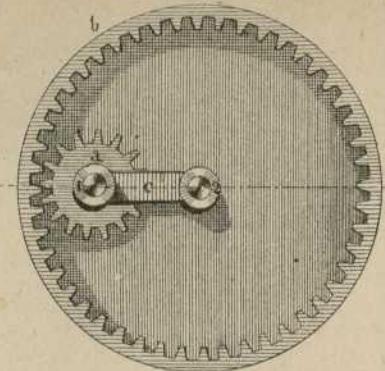


Fig. 195

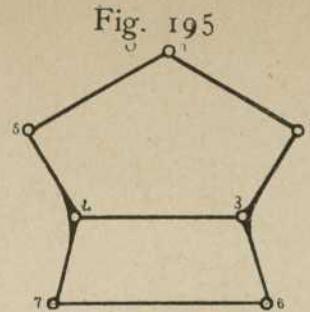


Fig. 194

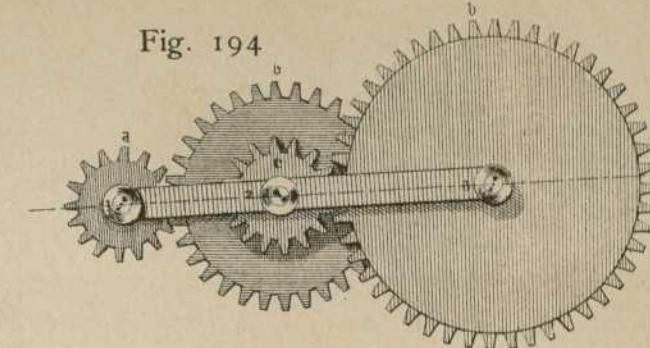


Fig. 196.

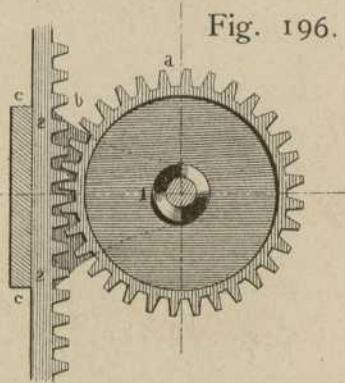


Fig. 202

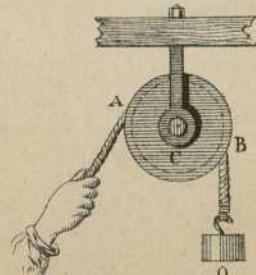


Fig. 199

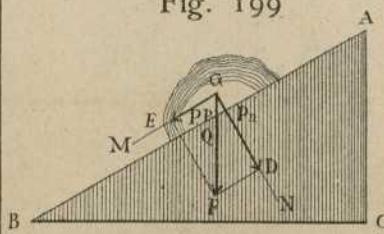


Fig. 201

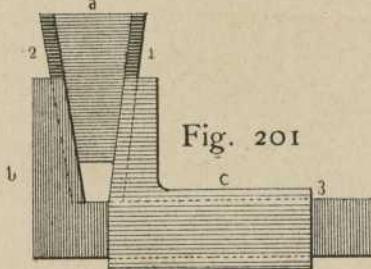


Fig. 203

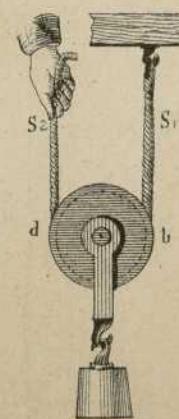


Fig. 197

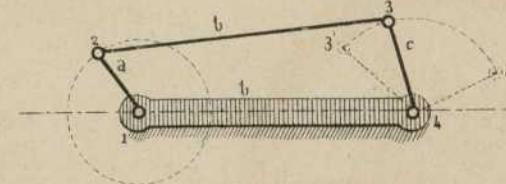


Fig. 204

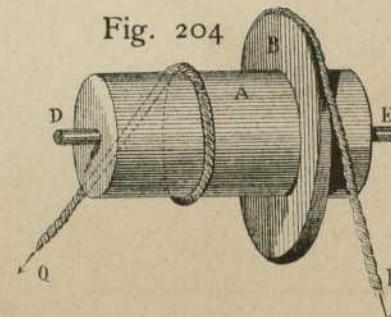
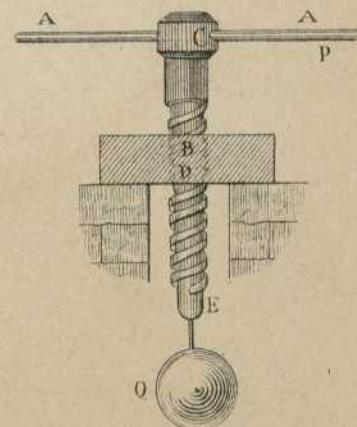


Fig. 200



Fig. 205



SECCION TEÓRICA.

CINEMÁTICA.

Lámina 26.^a

Fig. 206

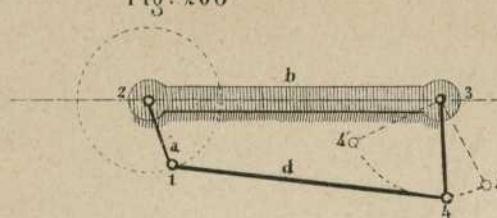


Fig. 212

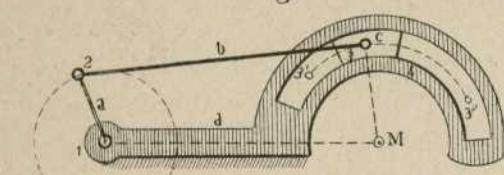


Fig. 209

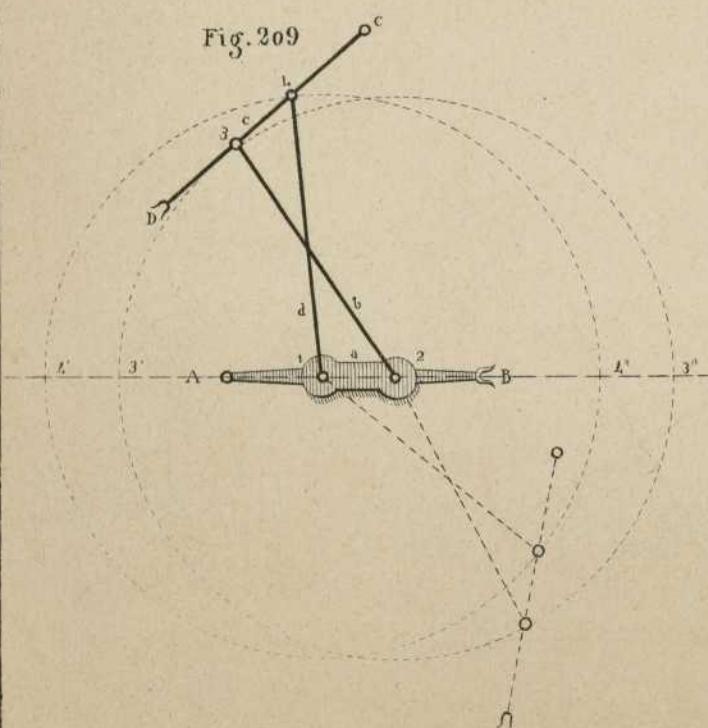


Fig. 207

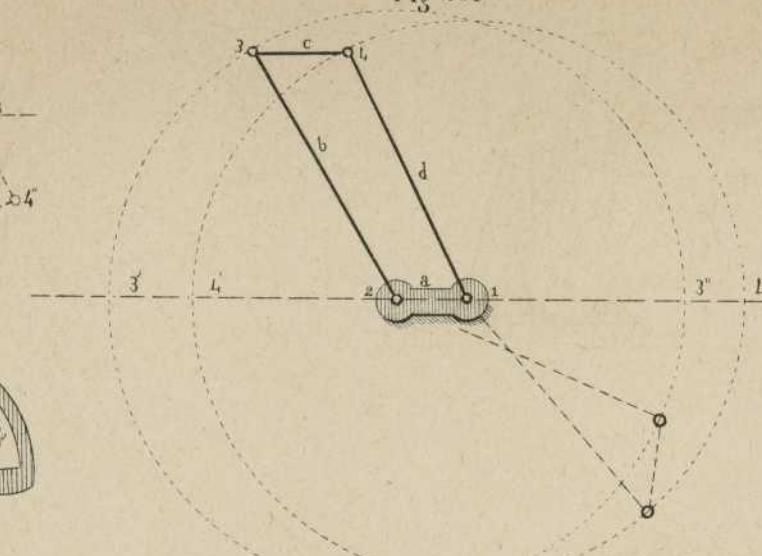


Fig. 213

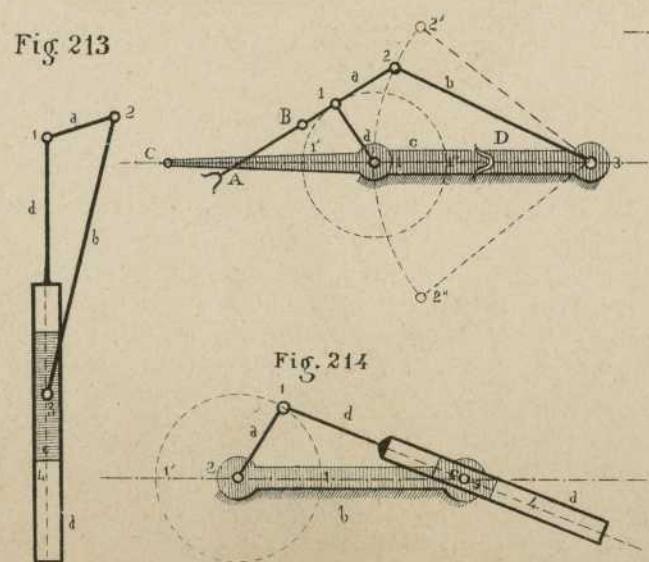


Fig. 214

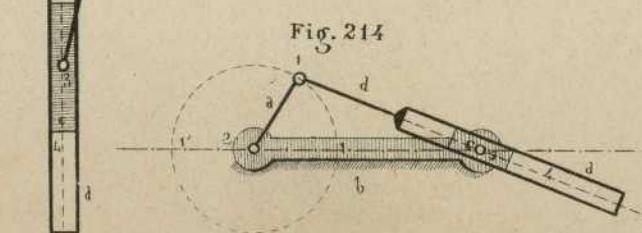


Fig. 208

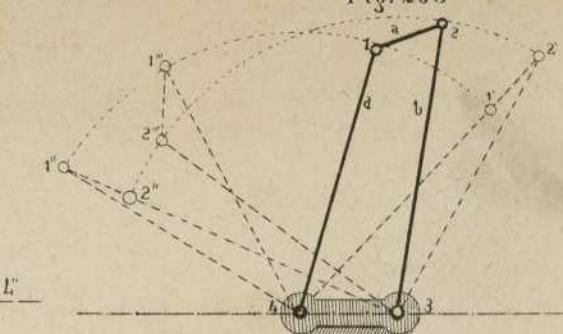


Fig. 210

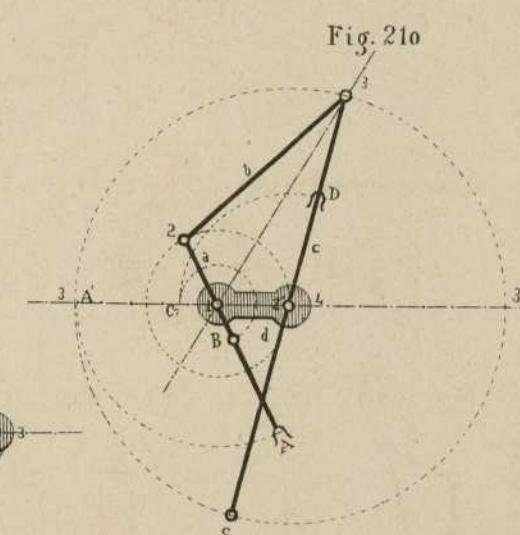
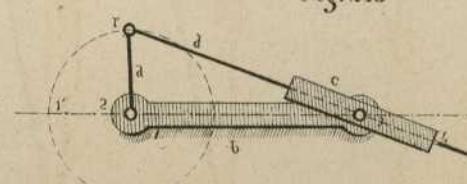


Fig. 215



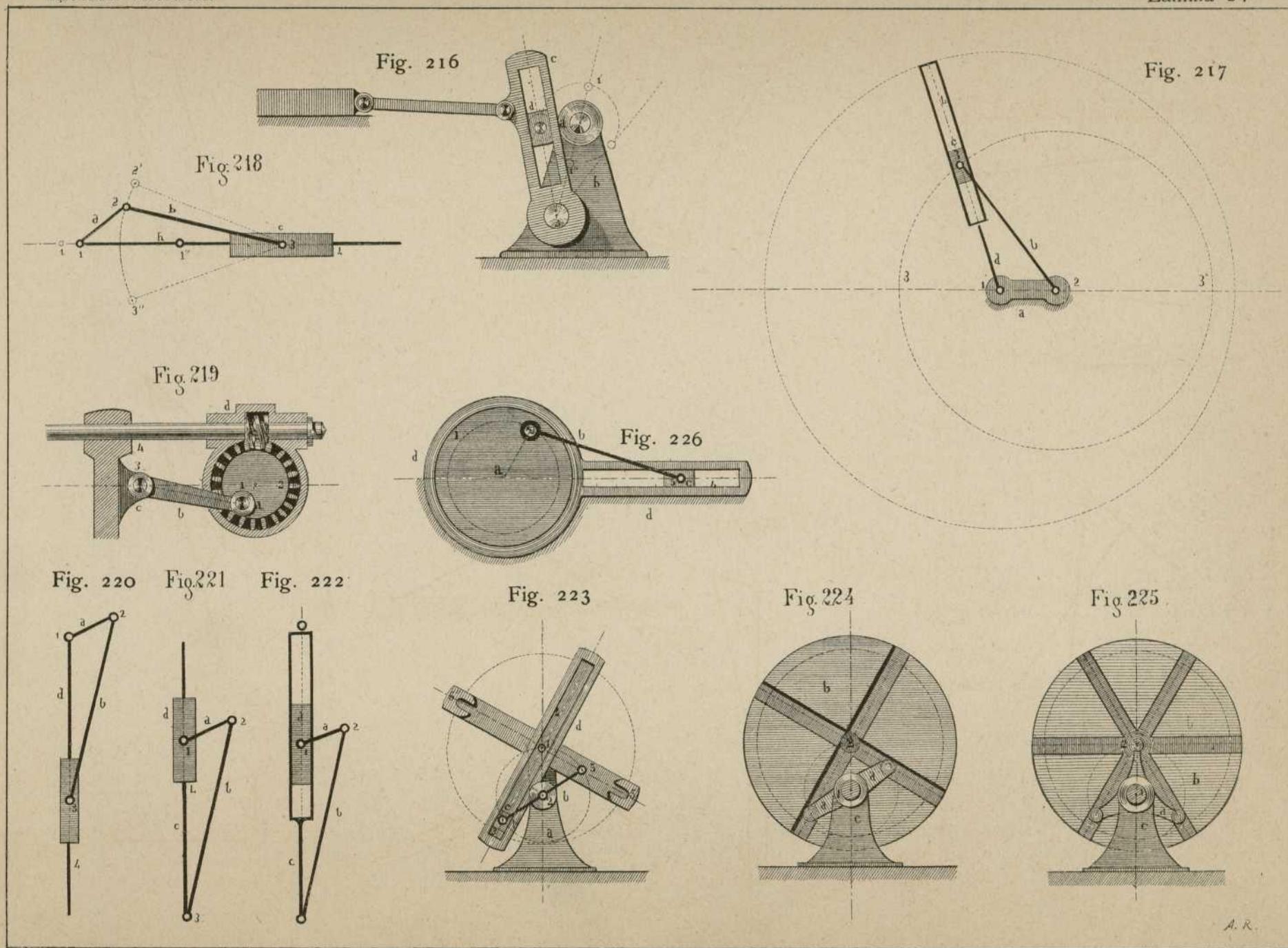


Fig. 227

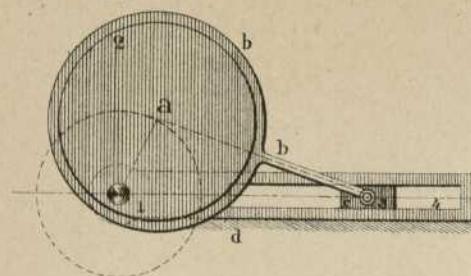


Fig. 228

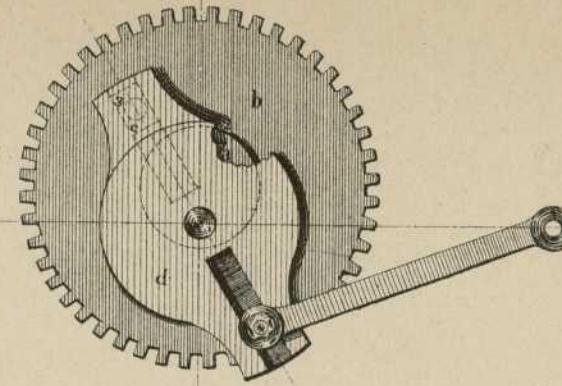


Fig. 229

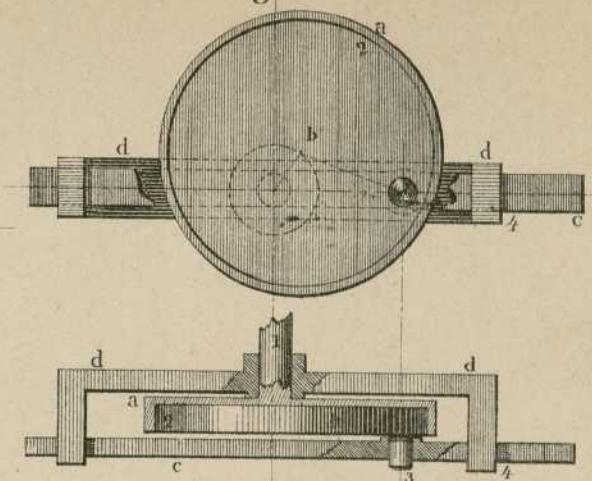


Fig. 230

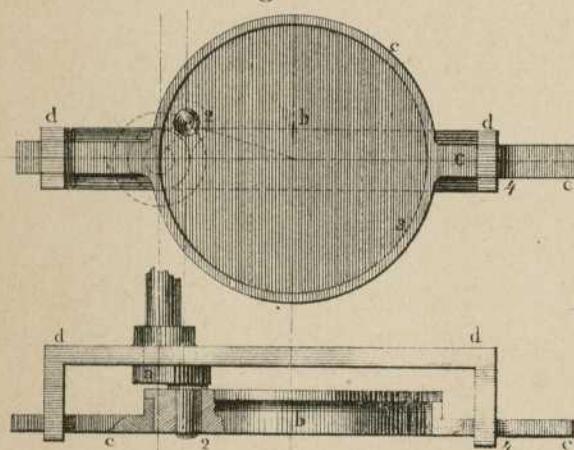


Fig. 231

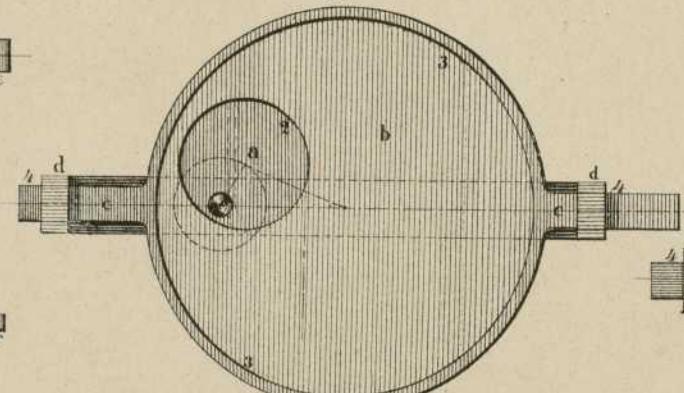


Fig. 232

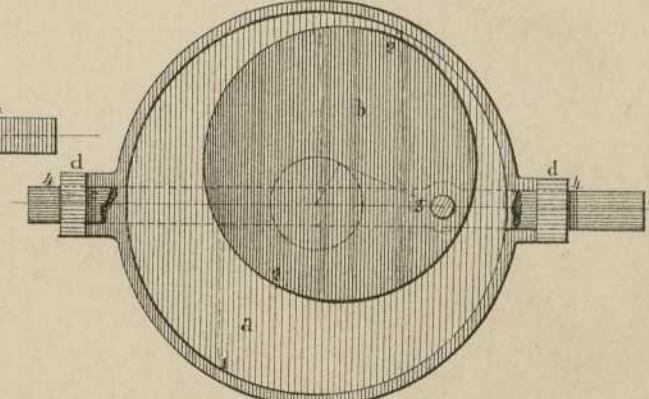


Fig. 233

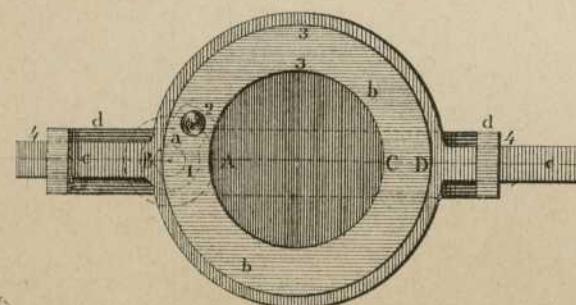


Fig. 235

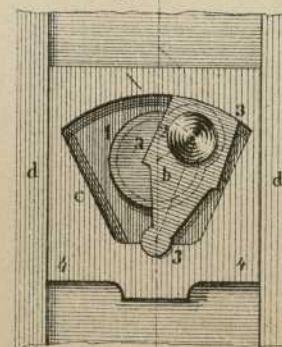
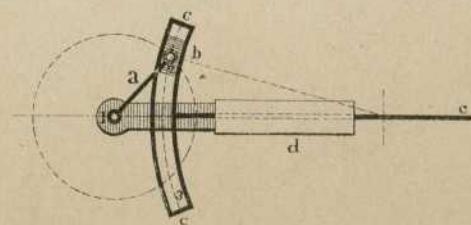
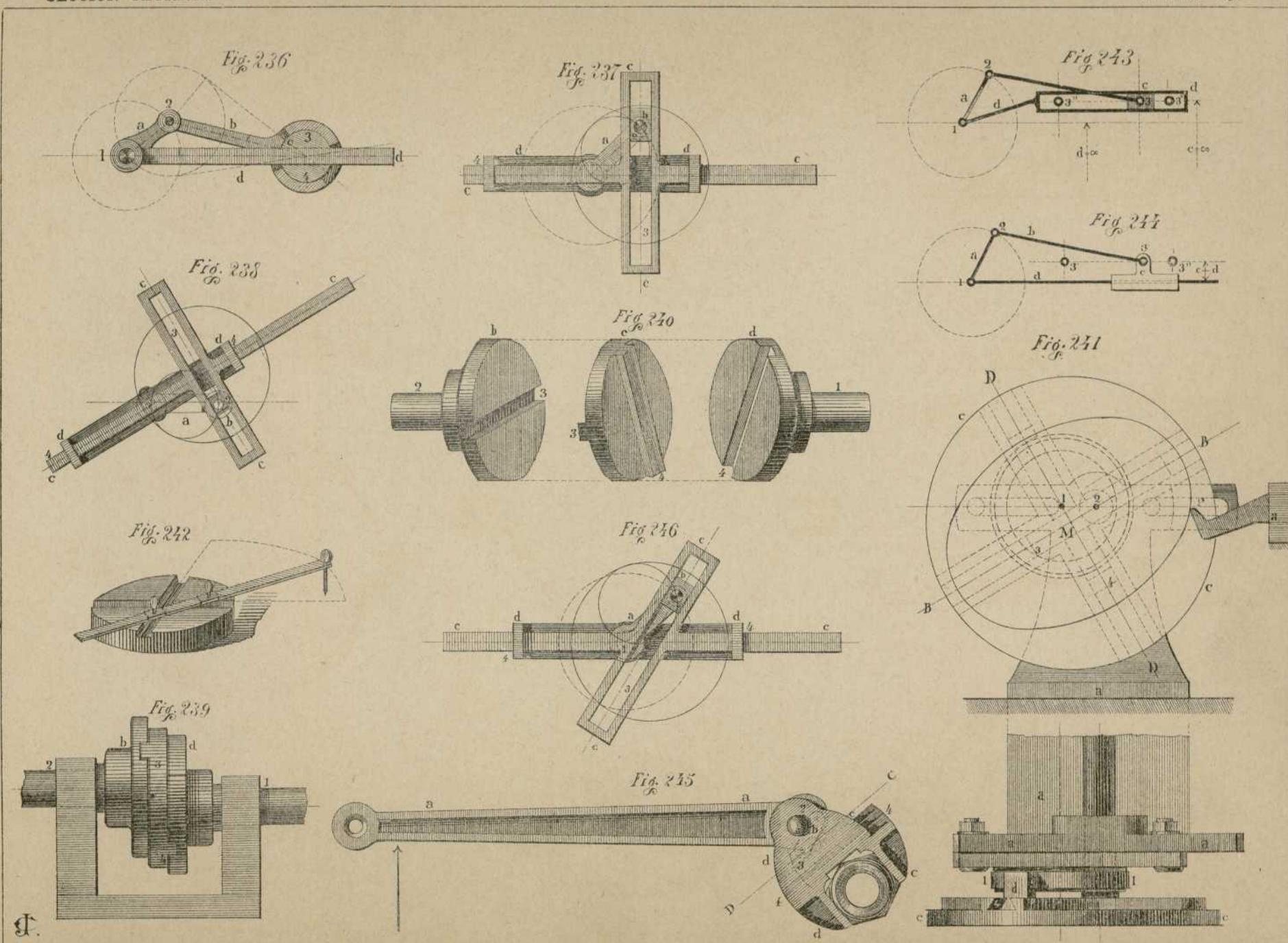


Fig. 234



C.



SECCION TEÓRICA.

CINEMÁTICA.

Lámina 30.^a

Fig. 247

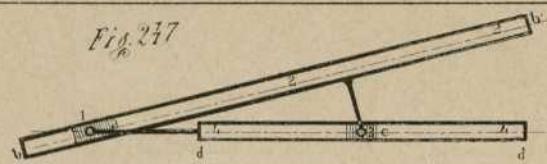


Fig. 250.

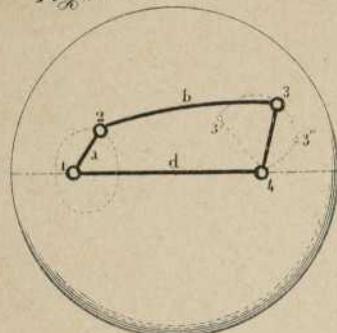


Fig. 254

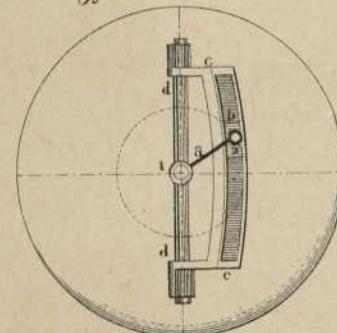


Fig. 255

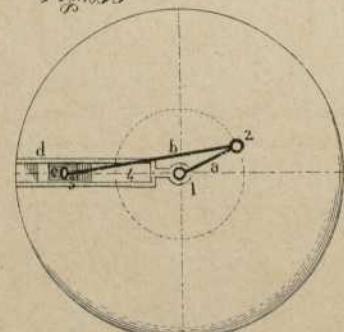


Fig. 251

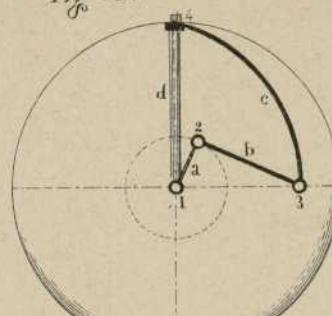


Fig. 253

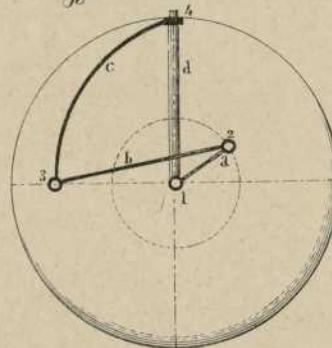


Fig. 256

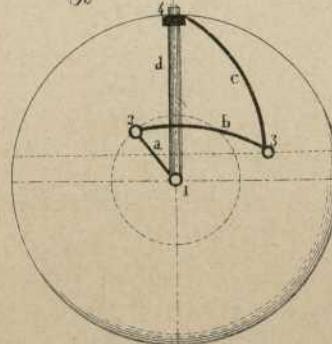


Fig. 248

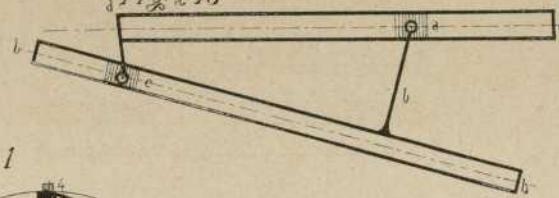


Fig. 252

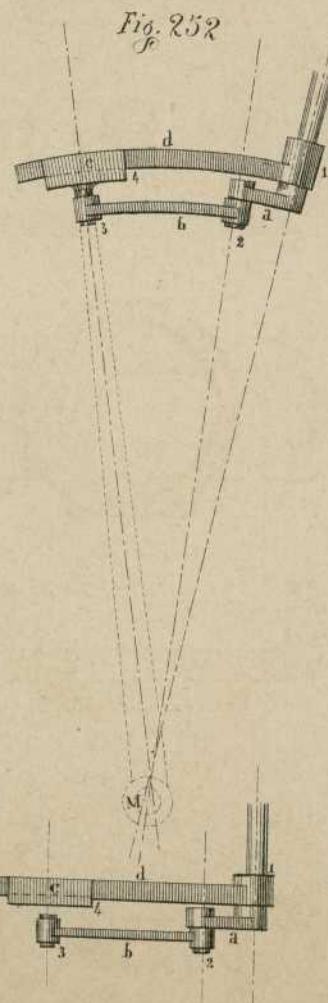


Fig. 249

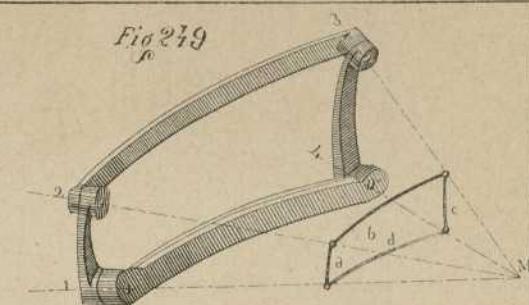


Fig. 257

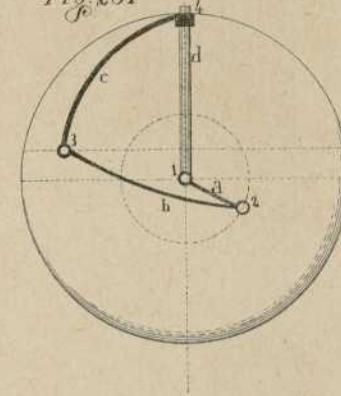


Fig. 258

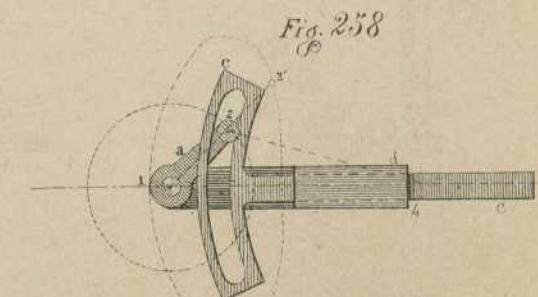
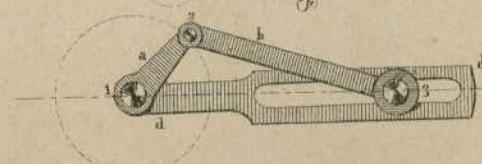


Fig. 259



SECCION TEÓRICA.

CINEMÁTICA.

Lámina 31.^a

Fig. 260.

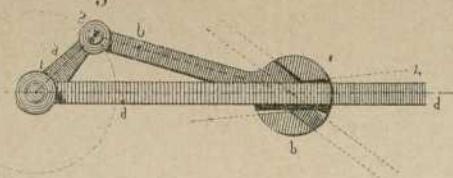


Fig. 261

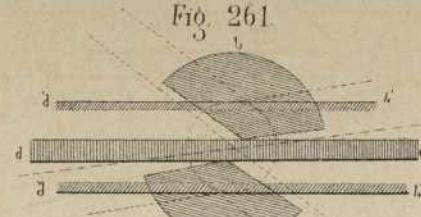


Fig. 263.

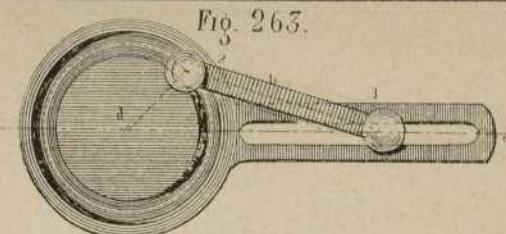


Fig. 262.

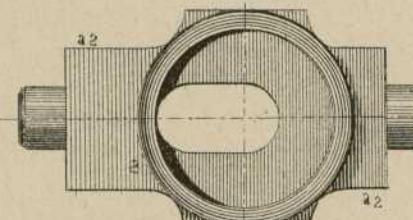
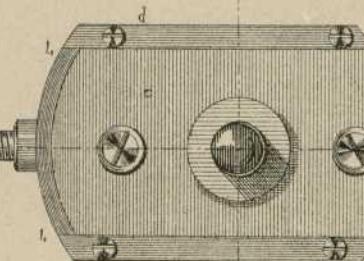
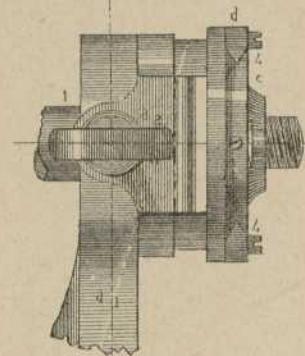


Fig. 264

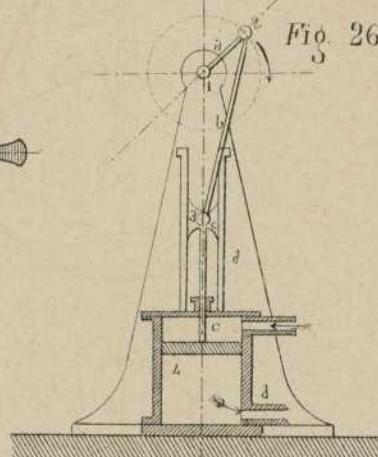
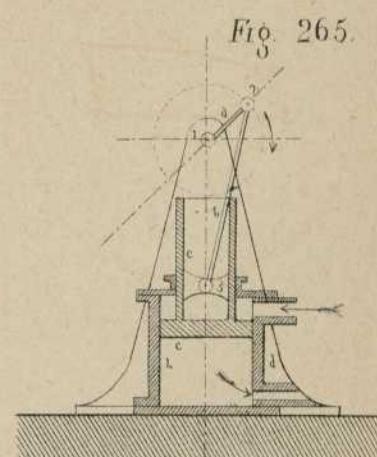


Fig. 265.



$(C_3^{\prime}P^{\perp})^d; (V^{\pm}) = c, d.$

$(C_3^{\prime\prime}P^{\perp})^d; (V^{\pm}) = c, d.$

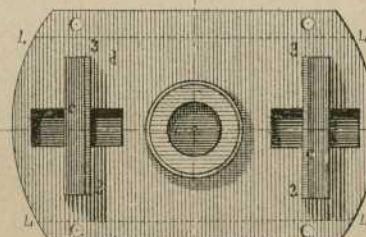
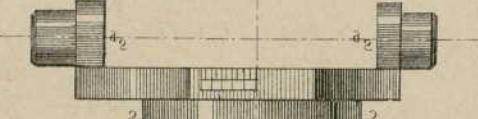
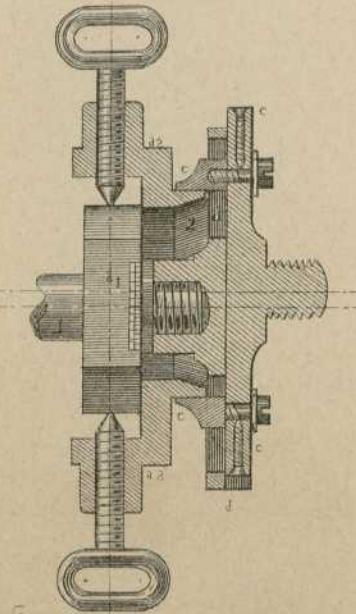
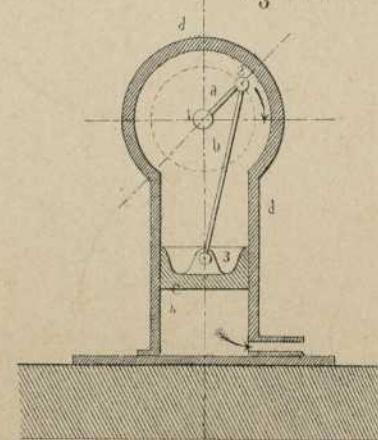
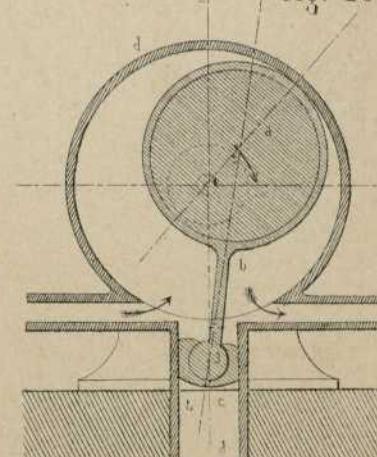


Fig. 266

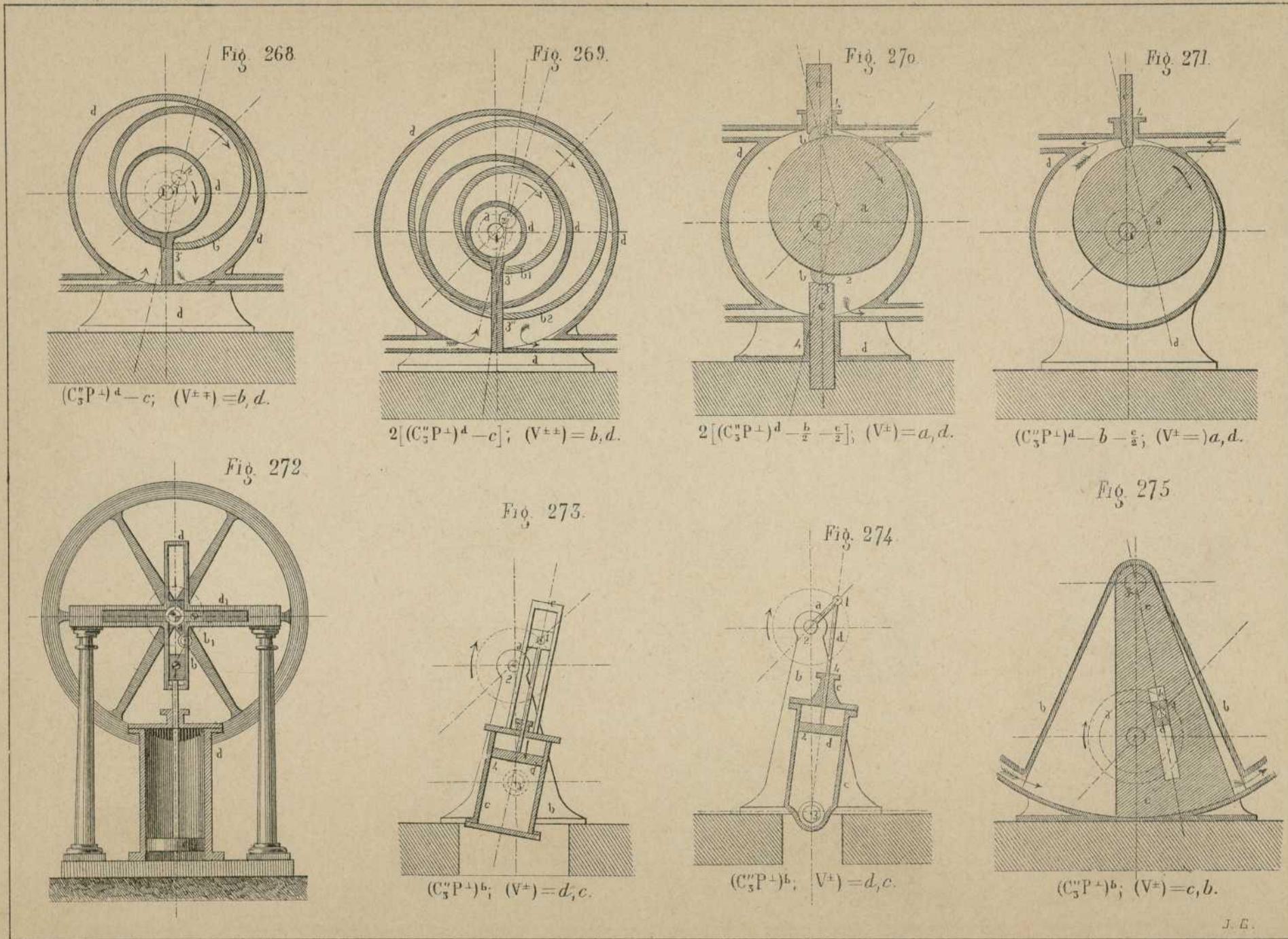


$(C_3^{\prime}P^-)^d; (V^{\pm}) = c, d.$

Fig. 267.



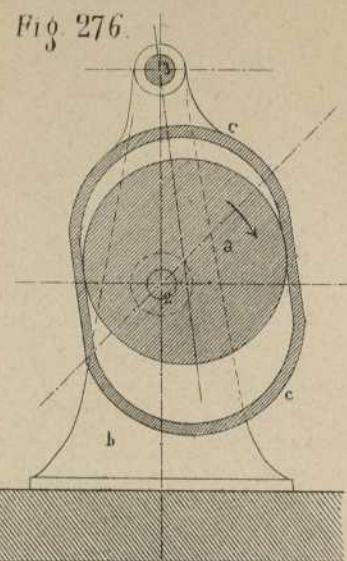
$(C_3^{\prime\prime}P^-)^d; (V^{\pm}) = b, d.$



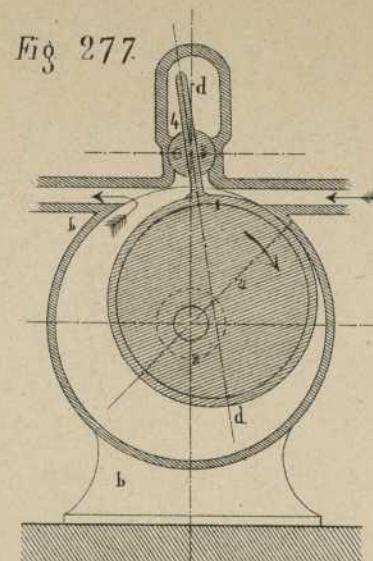
SECCION TEÓRICA.

CINEMÁTICA.

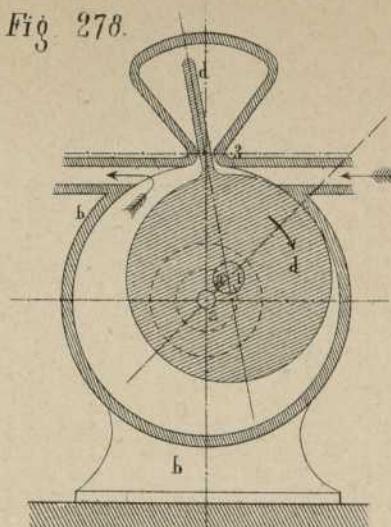
Lámina 33.^a



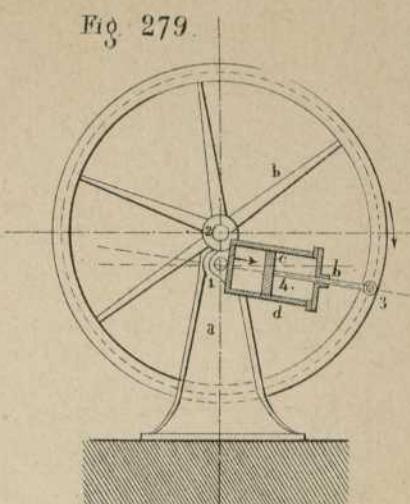
$(C''P^{\perp})^b - d; (V^{\pm}) = a, c.$



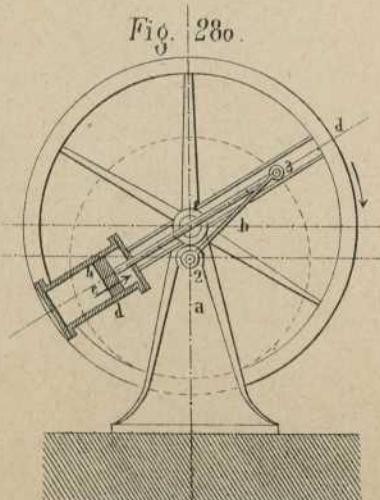
$(C''P^{\perp})^b; (V^{\pm}) = d, b.$



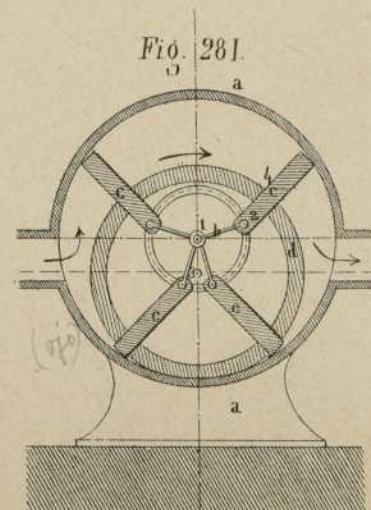
$(C''P^{\perp})^b - c; (V^{\pm}) = d, b.$



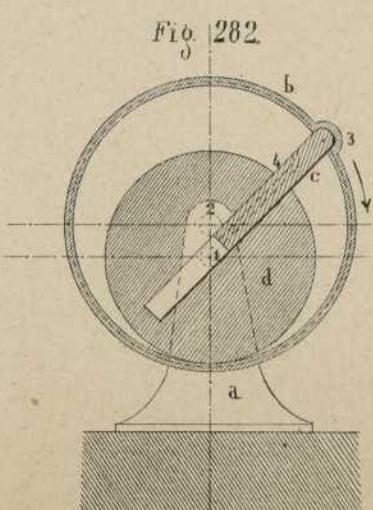
$(C''P^{\perp})^a; (V^{\pm}) = c, d.$



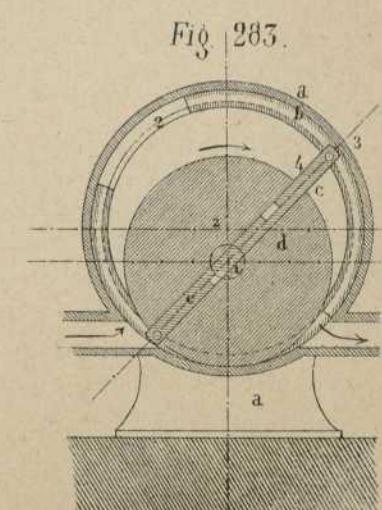
$(C''P^{\perp})^a; (V^{\pm}) = c, d.$



$4(C''P^{\perp})^a; (V^{\pm}) = c, a.$



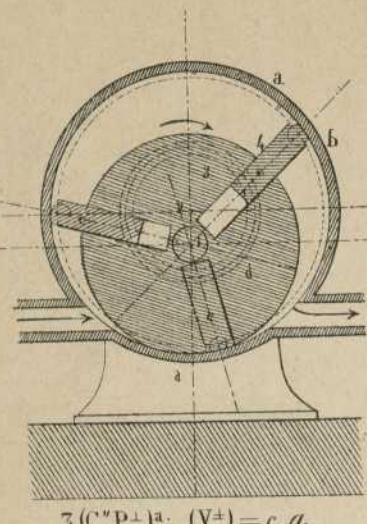
$(C''P^{\perp})^a; (V^{\pm}) = c, b.$



$2(C''P^{\perp})^a; (V^{\pm}) = c, a.$

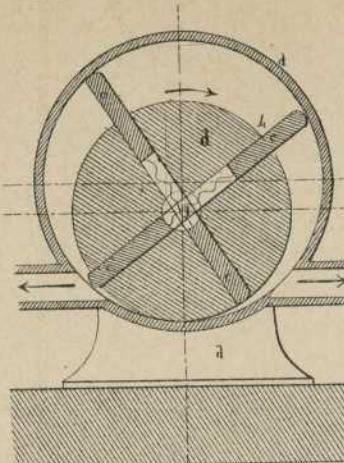
SECCION TEÓRICA.

Fig. 284.



$$3(C_3''P^\perp)^a; (V^\pm) = c, \alpha.$$

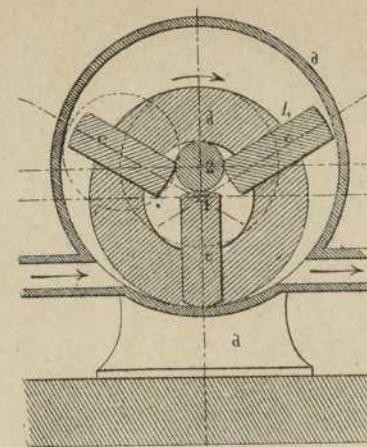
Fig. 285.



$$4[(C_3''P^\perp)^a - b - \frac{c}{2}]; (V^\pm) = c, a$$

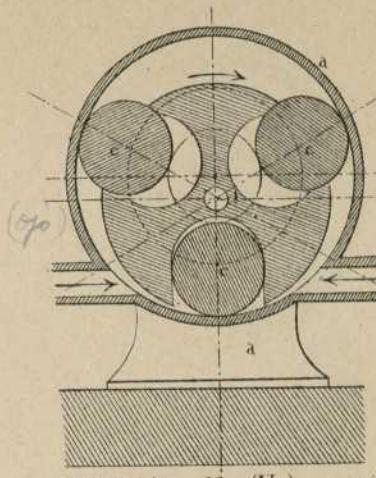
CINEMÁTICA.

Fig. 286.



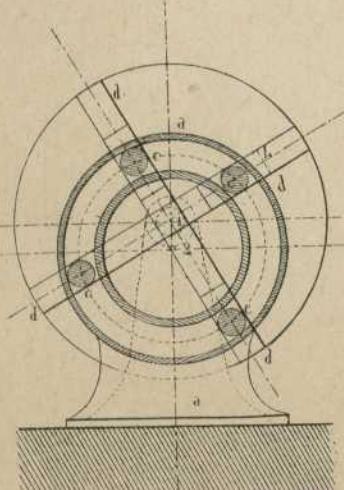
$$3[(C_3''P^\perp)^a - b]; (V^\pm) = c, a$$

Fig. 287.



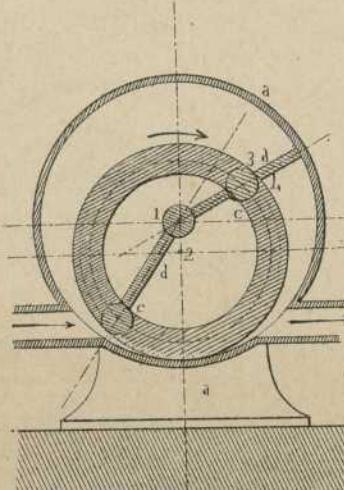
$$3[(C_3''P^\perp)^a - b]; (V^\pm) = c, a$$

Fig. 288.



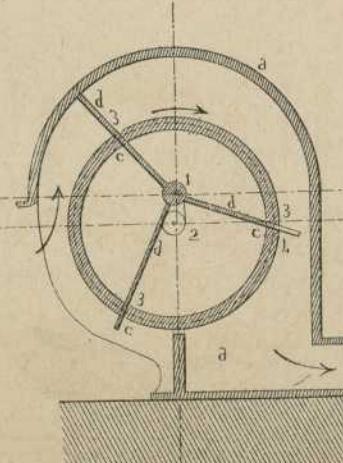
$$4[(C_3''P^\perp)^a - b]; (V^\pm) = c, a$$

Fig. 289.



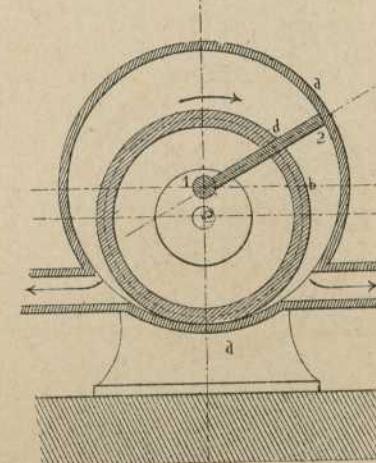
$$2(C_3''P^\perp)^a; (V^\pm) = d, a$$

Fig. 290.



$$3(C_3''P^\perp)^a; (V^\pm) = d, a$$

Fig. 291.



$$(C_3''P^\perp)^a - c; (V^\pm) = d, a$$

A. R.
Nacente, editor.

Fig. 292.

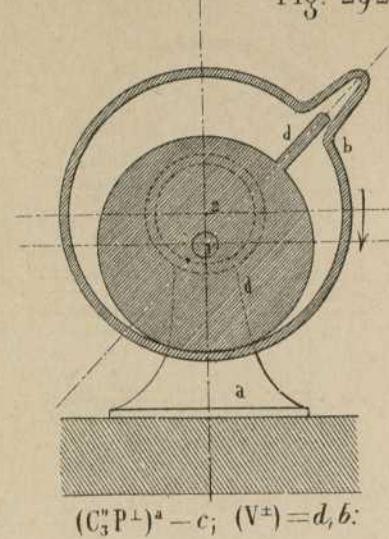


Fig. 293.

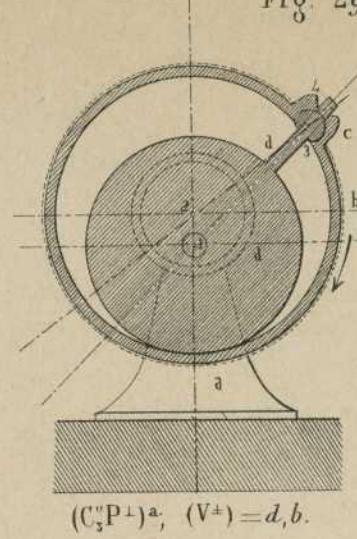


Fig. 294.

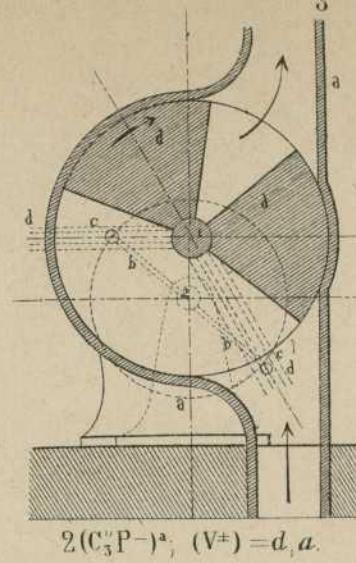


Fig. 295.

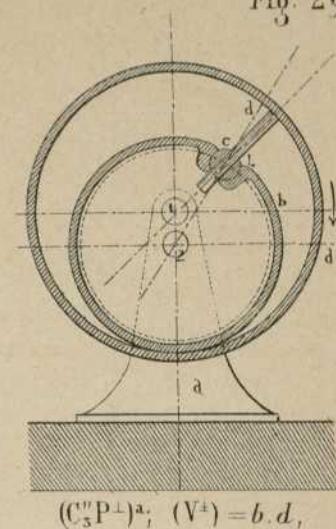


Fig. 296.

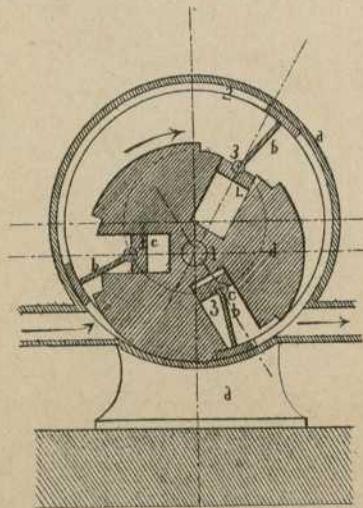


Fig. 297.

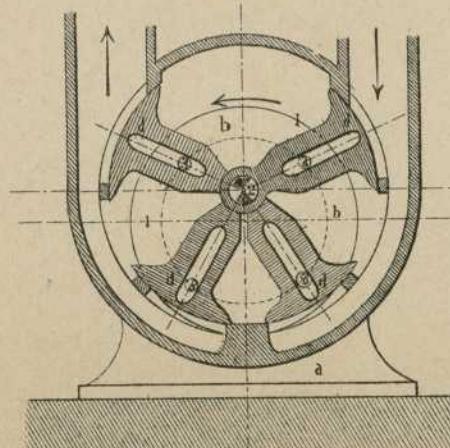


Fig. 298.

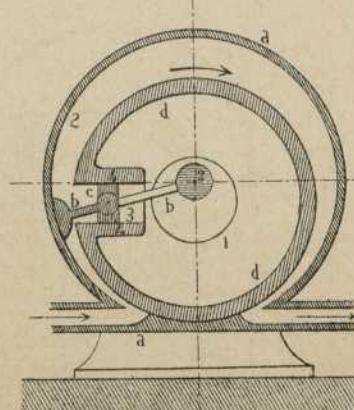
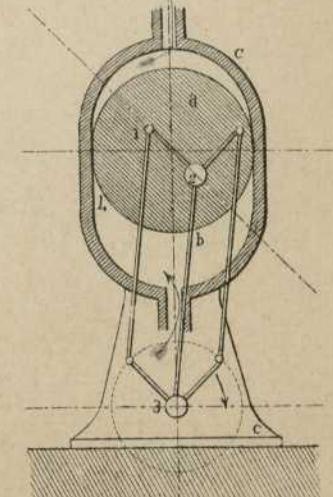


Fig. 299.



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Lámina 36.^a

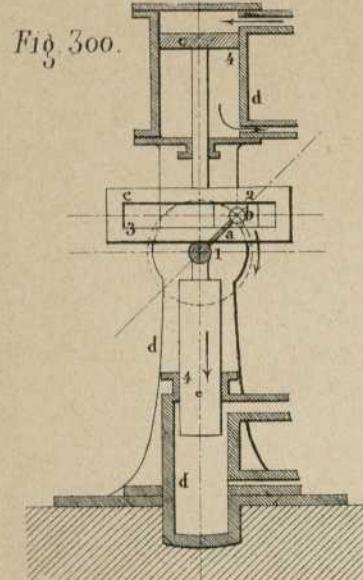


Fig. 300.

$$(C''P_2^{\perp})^d; (V^{\pm})=c, d,$$

Fig. 301.

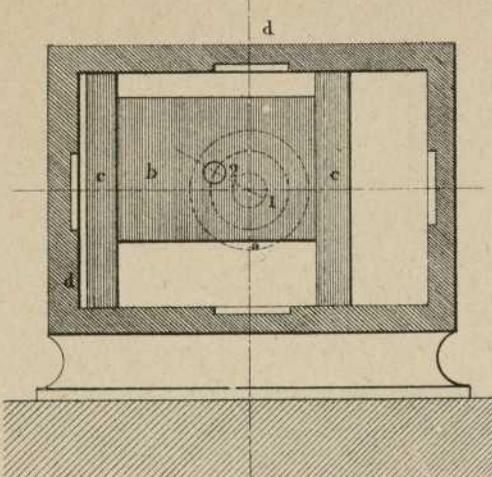
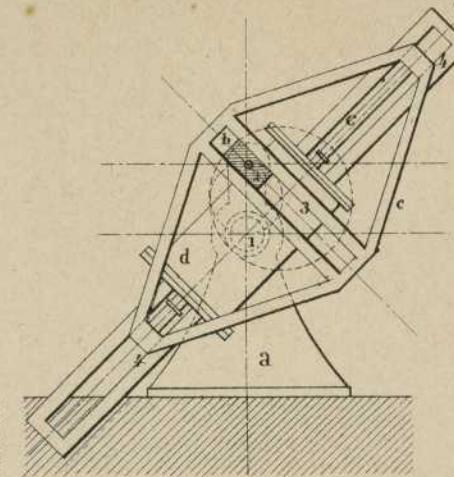
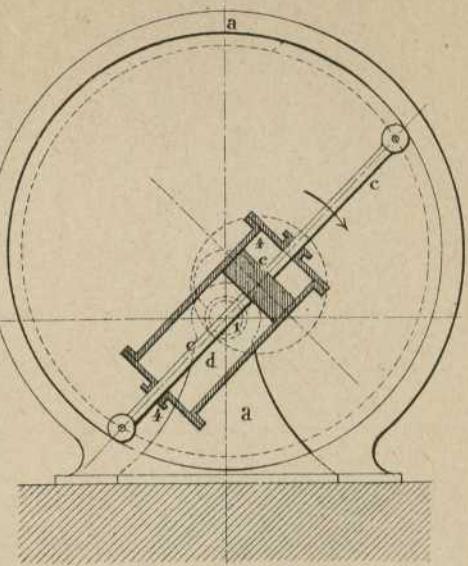


Fig. 302.



$$(C''P_2^{\perp})^a; (V^{\pm})=c, d.$$

Fig. 303.



$$(C''P_2^{\perp})^b; (V^{\pm})=c, d.$$

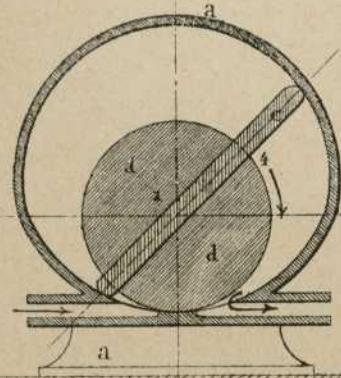


Fig. 304.

$$\Phi. \quad (C''P_2^{\perp})^a-b; (V^{\pm})=c, a.$$

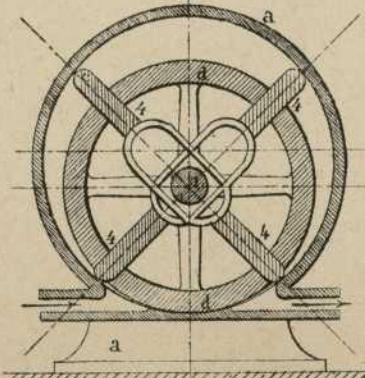


Fig. 305.

$$2 \quad (C''P_2^{\perp})^a-b; (V^{\pm})=c, a.$$

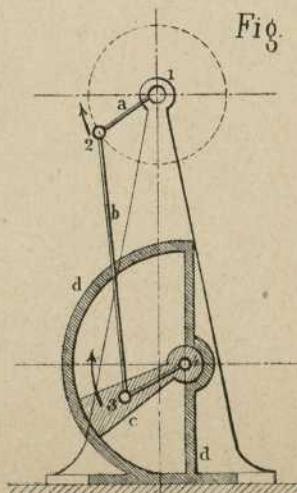
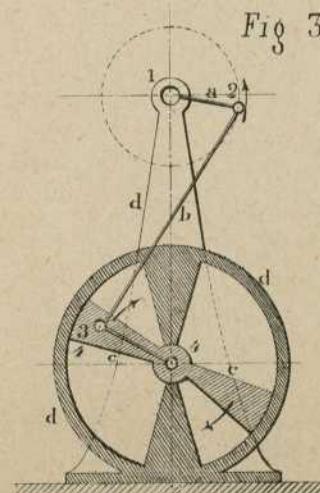


Fig. 306.

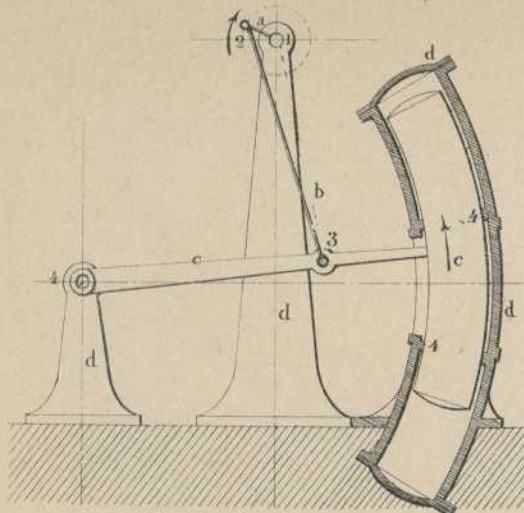
$$(C'')^d; (V^{\pm})=c, d.$$

Fig. 307.



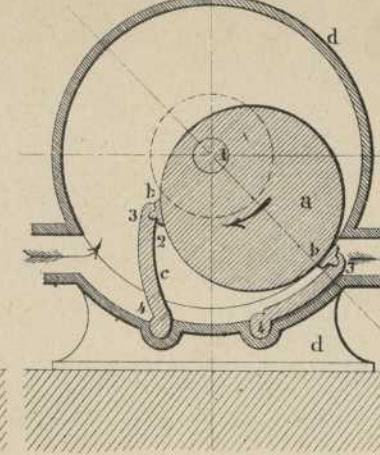
$$(C'')^d; (V^{\pm})=c, d.$$

Fig. 308.



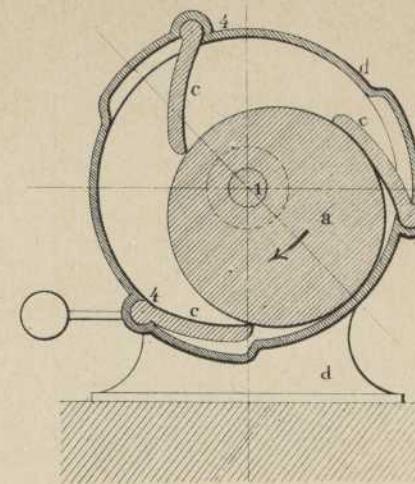
$$(C_4^{\prime})^d; (V^{\pm}) = c, d.$$

Fig. 309.



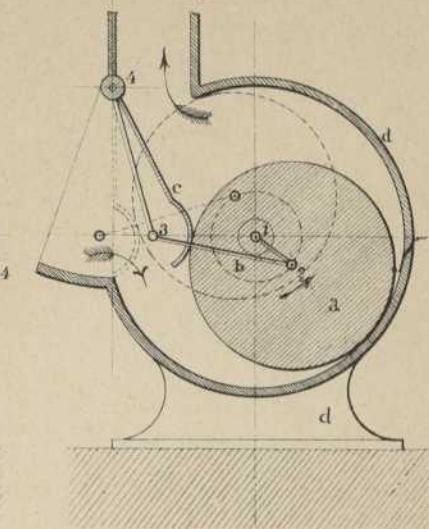
$$2[(C_4^{\prime})^d - \frac{b}{2}]; (V^{\pm}) = a, d.$$

Fig. 310.



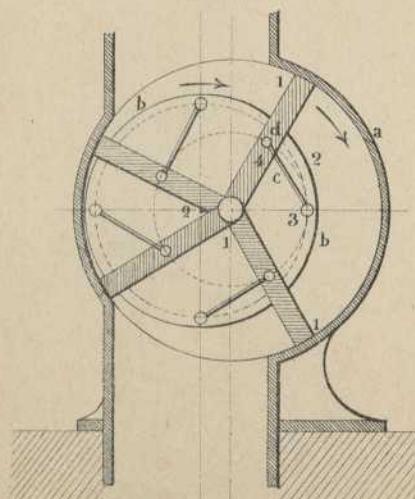
$$3[(C_4^{\prime})^d - b - \frac{c}{2}]; (V^{\pm}) = a, d.$$

Fig. 311.



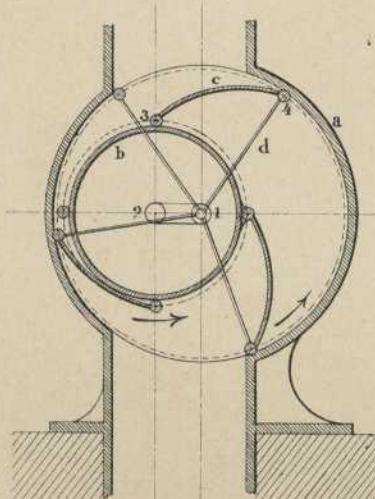
$$(C_4^{\prime})^d; (V^{\pm}) = a, d.$$

Fig. 312.



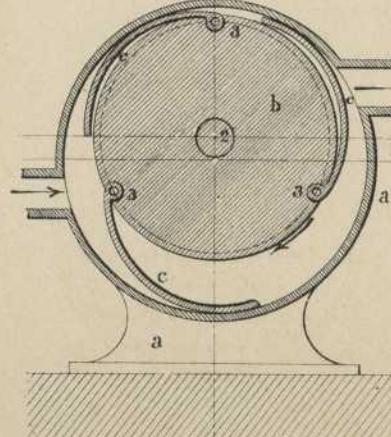
$$4(C_4^{\prime})^a; (V^{\pm}) = c, a.$$

Fig. 313.



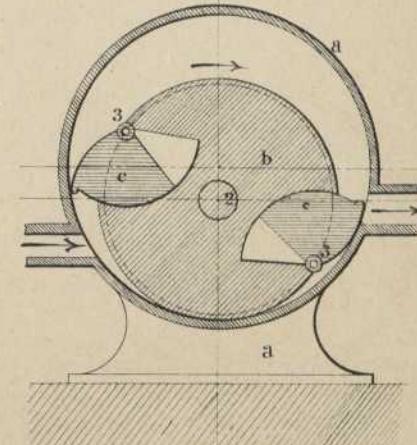
$$4(C_4^{\prime})^a; (V^{\pm}) = c, a.$$

Fig. 314.



$$3[(C_4^{\prime})^a - d - \frac{c}{2}]; (V^{\pm}) = c, a.$$

Fig. 315.



$$2[(C_4^{\prime})^a - d - \frac{c}{2}]; (V^{\pm}) = c, a.$$

Fig. 316.

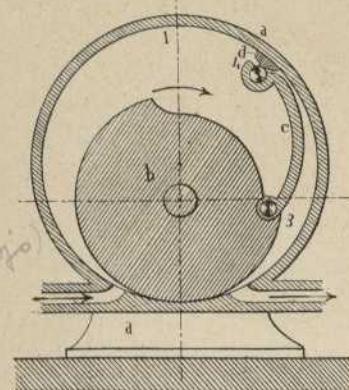
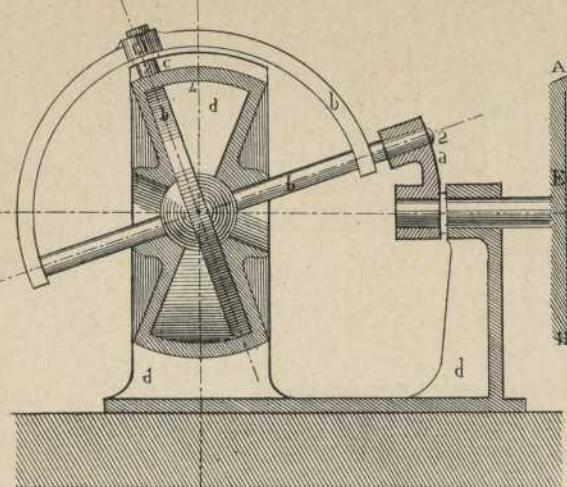
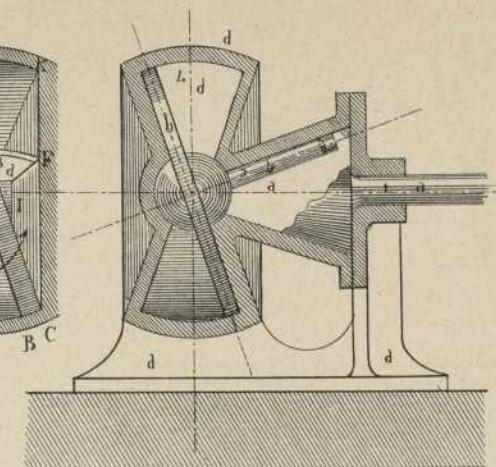


Fig. 317.



$$(C_3^{\perp} C^{\angle})^d; (V^{\pm}) = b, d.$$

Fig. 318.



$$(C_3^{\perp} C^{\angle})^d; (V^{\pm}) = b, d.$$

Fig. 319.

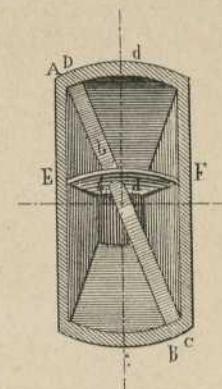
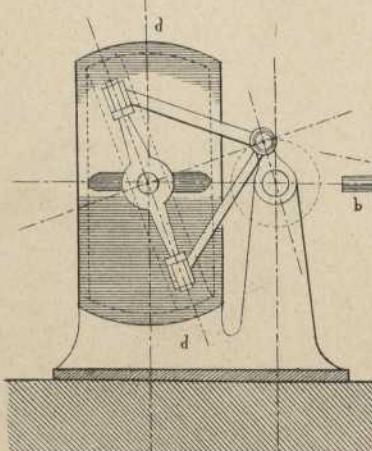
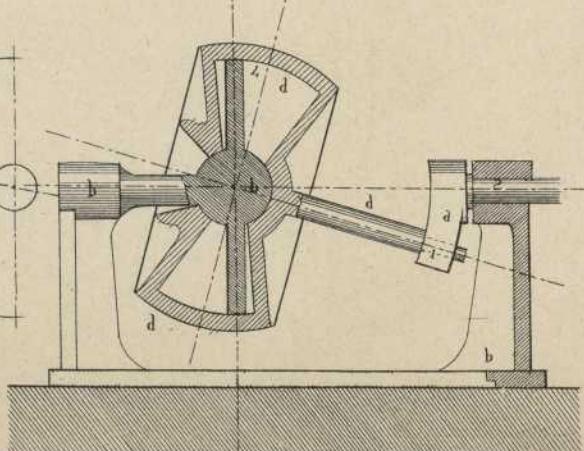


Fig. 320.



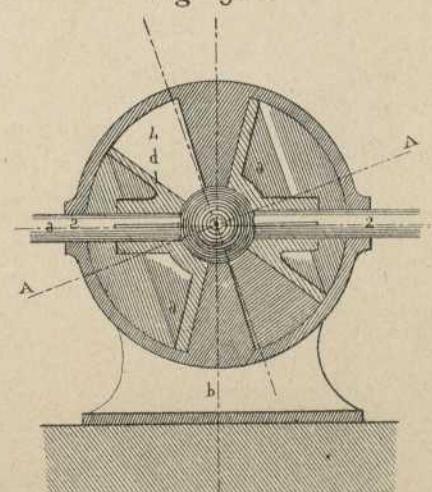
$$(C_3^{\perp} C^{\angle})^d - c - a + (C_2 G)_i; (V^{\pm}) = b, d$$

Fig. 321.



$$(C_3^{\perp} C^{\angle})^b; (V^{\pm}) = b, d.$$

Fig. 322.



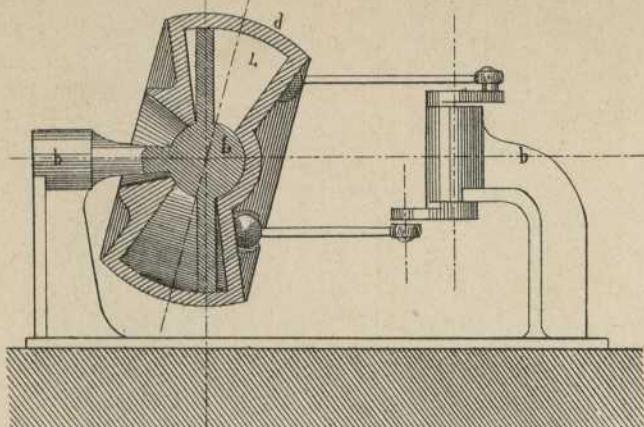
$$(C_3^{\perp} C^{\angle})^b; (V^{\pm}) = a, b$$

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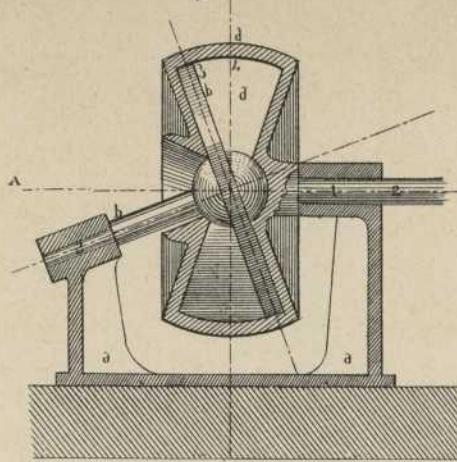
Lámina 39^a

Fig. 323.



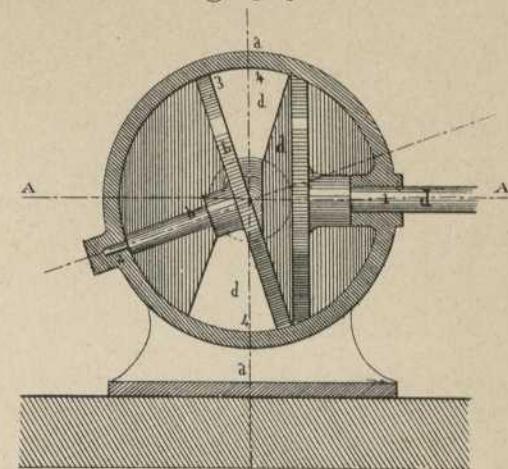
$$(C_3^{\perp} C^{\angle})^b - a + (CG_4) \quad (V^{\pm}) = b, d.$$

Fig. 324.



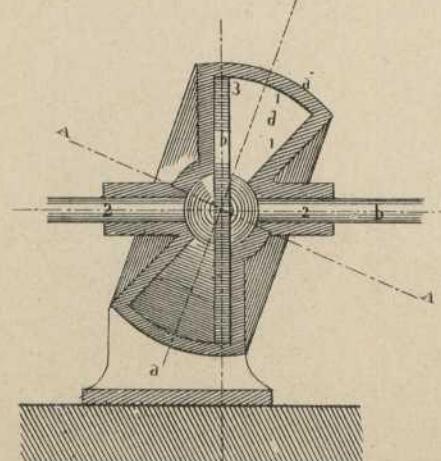
$$(C_3^{\perp} C^{\angle})^a; \quad (V^{\pm}) = b, d.$$

Fig. 325.



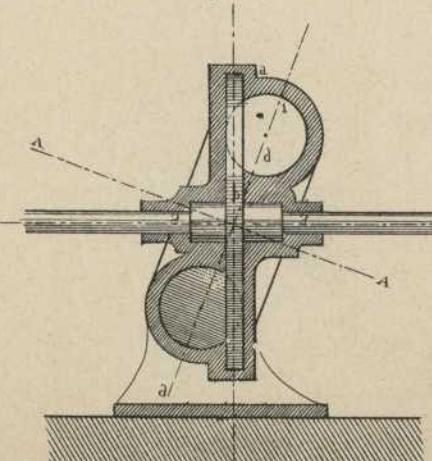
$$(C_3^{\perp} C^{\angle})^a; \quad (V^{\pm}) = d, a.$$

Fig. 326.



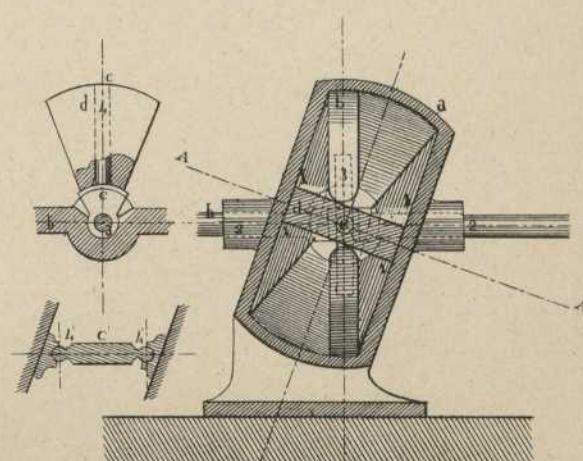
$$(C_3^{\perp} C^{\angle})^a; \quad (V^{\pm}) = d, a.$$

Fig. 327.

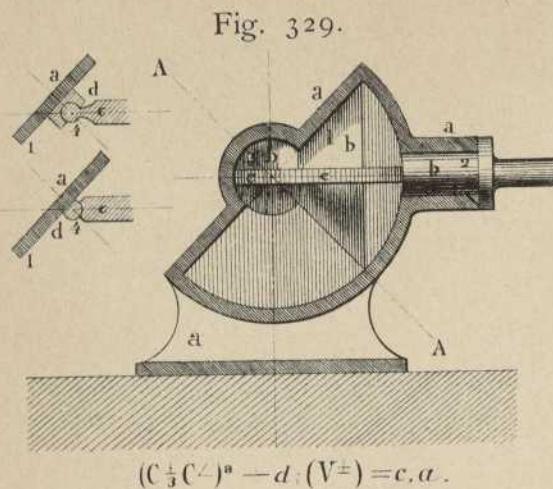


$$(C_3^{\perp} C^{\angle})^a; \quad (V^{\pm}) = d, a.$$

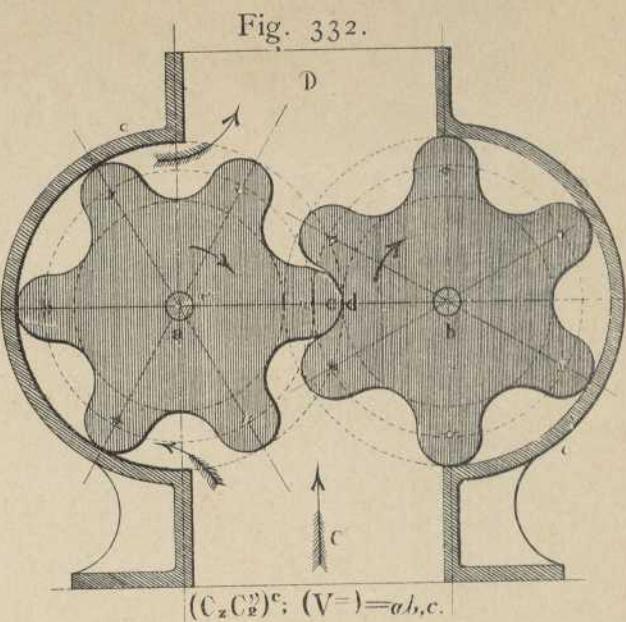
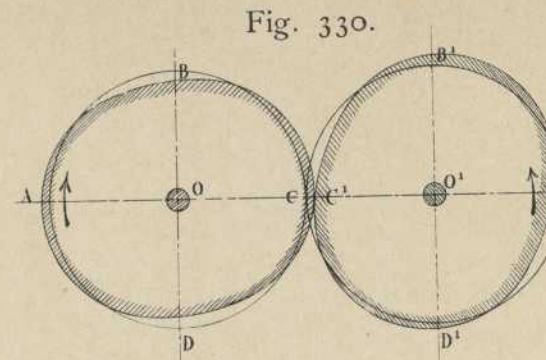
Fig. 328.



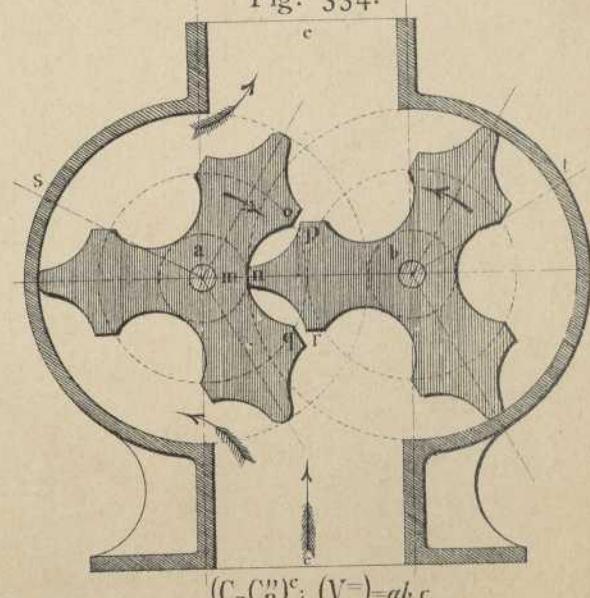
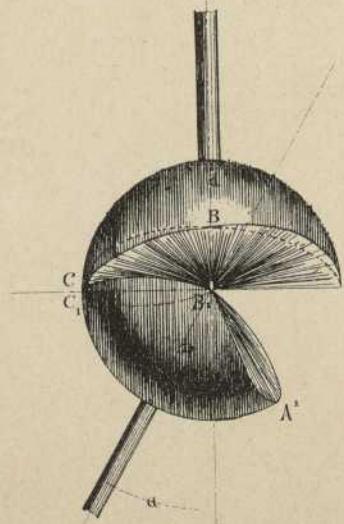
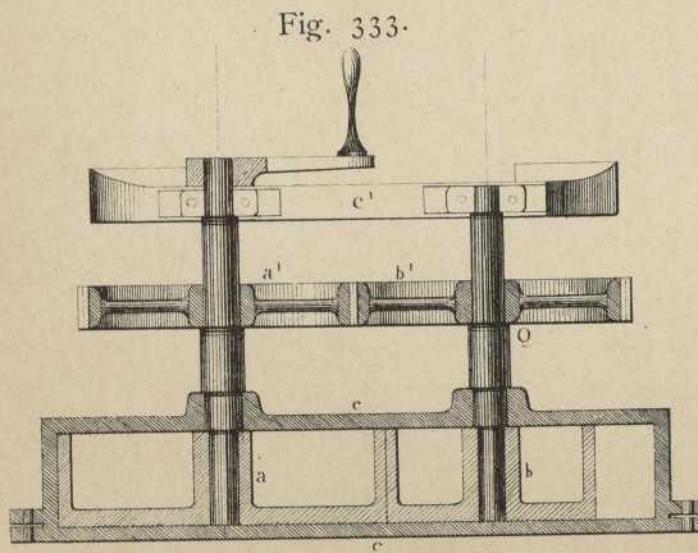
$$(C_3^{\perp} C^{\angle})^a; \quad (V^{\pm}) = d, a.$$



$$(C_z C^z)^a - d \cdot (V^z) = c \cdot a.$$



$$(C_z C^z)^c; (V^z) = ab.c.$$



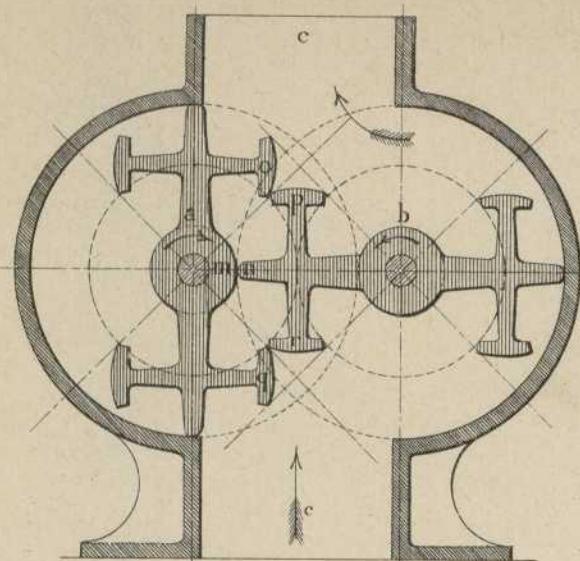
$$(C_z C^z)^c; (V^z) = ab.c.$$

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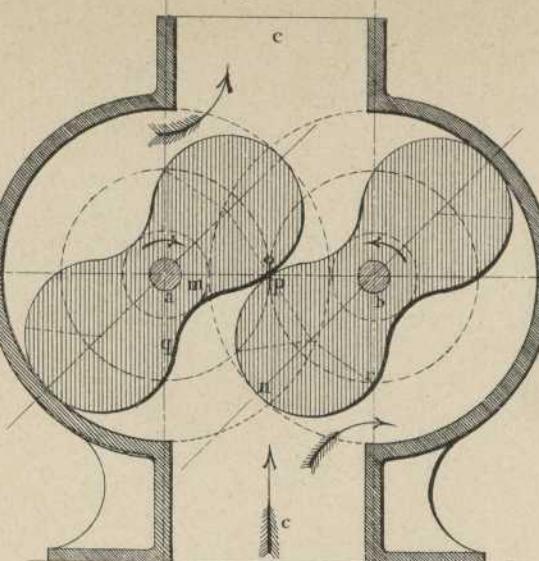
Lámina 41.^a

Fig. 335.



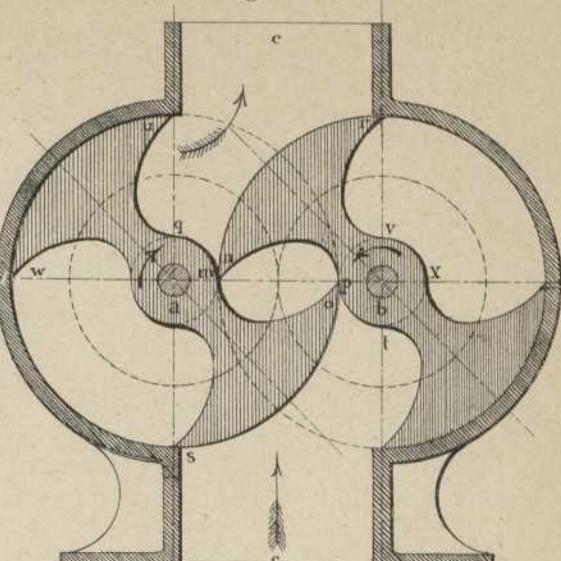
$(C_z C_2^y)^c; (V^\pm) = ab, c.$

Fig. 336.



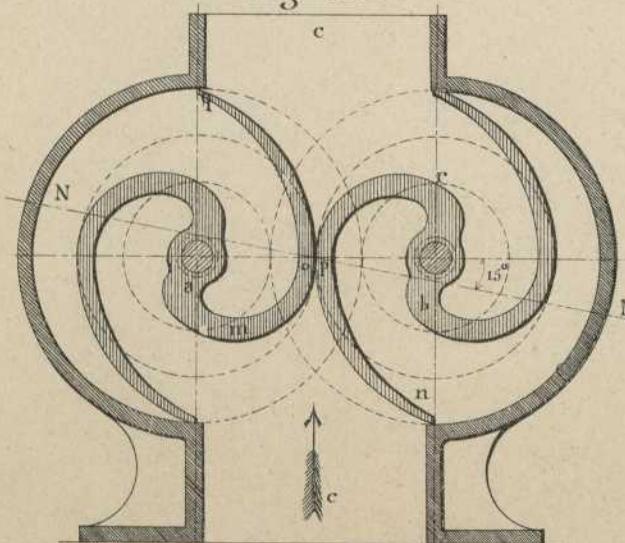
$(C_z C_2^y)^c; (V^\pm) = ab, c.$

Fig. 337.



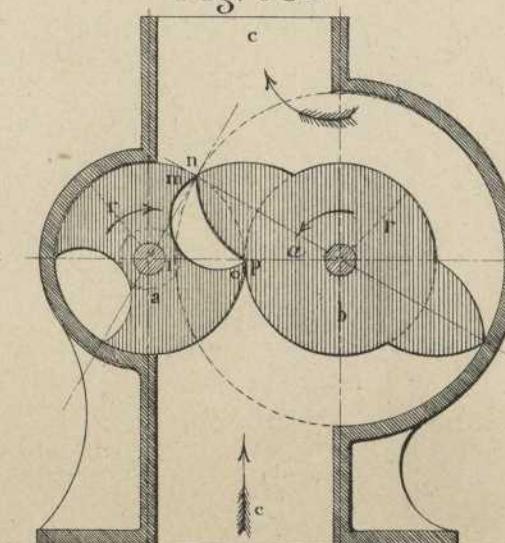
$(C_z C_2^y)^c; (V^\pm) = ab, c.$

Fig. 338.



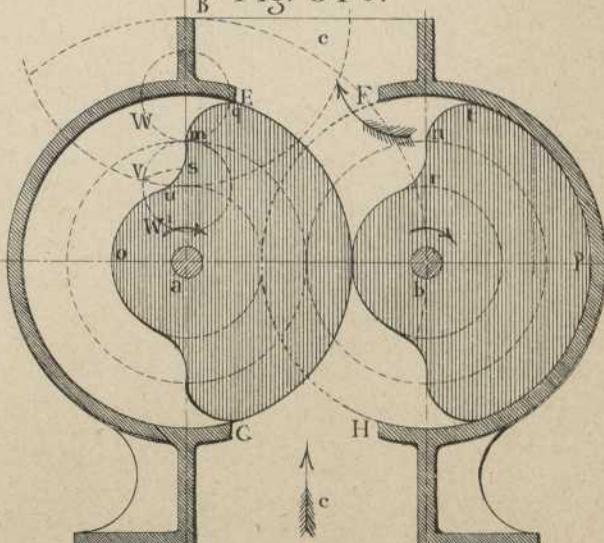
$(C_z C_2^y)^c; (V^\pm) = ab, c.$

Fig. 339.



$(C_z C_2^y)^c; (V^\pm) = ab, c.$

B' Fig. 340.



$(C_z C_2^y)^c; (V^\pm) = b, c.$

Fig. 341.

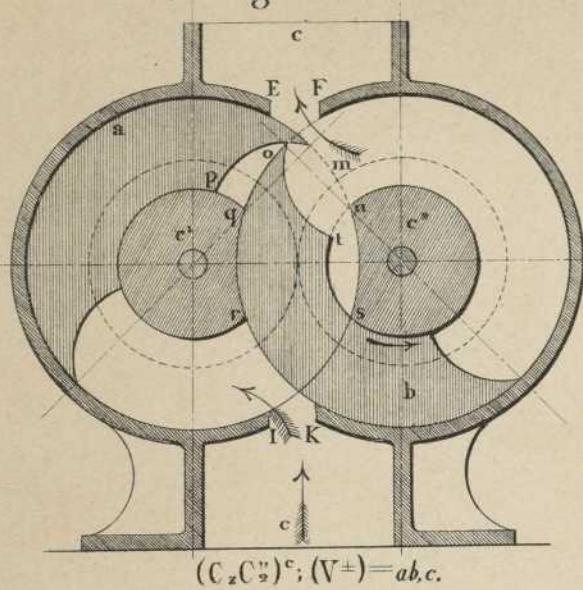


Fig. 342.

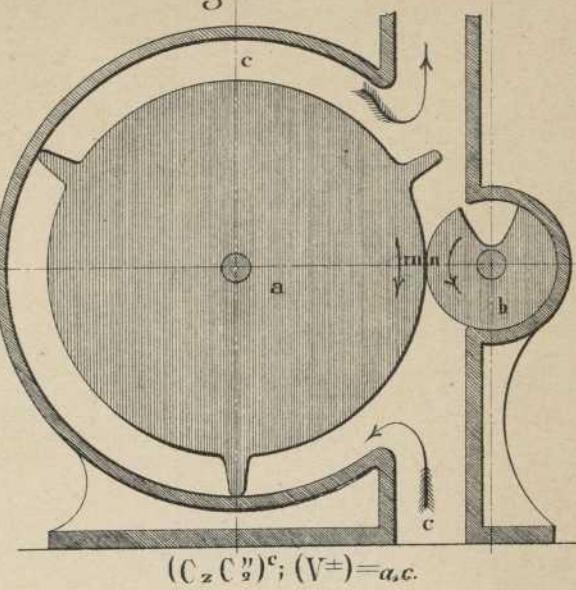


Fig. 343.

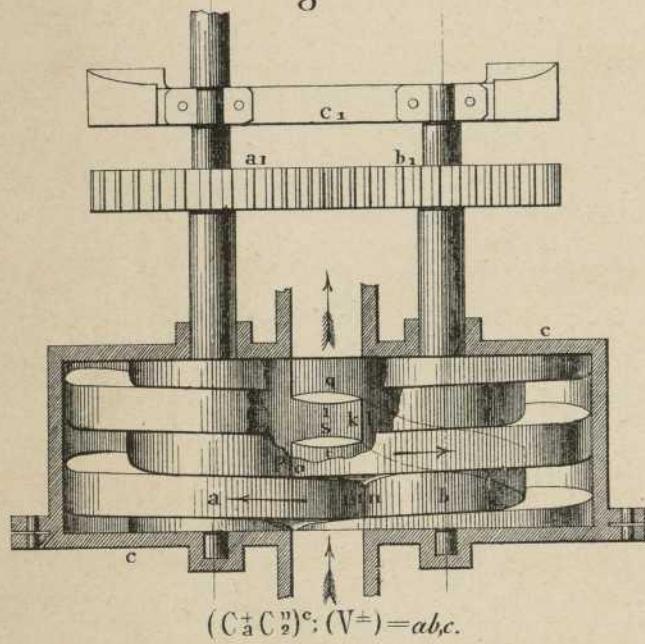


Fig. 345.

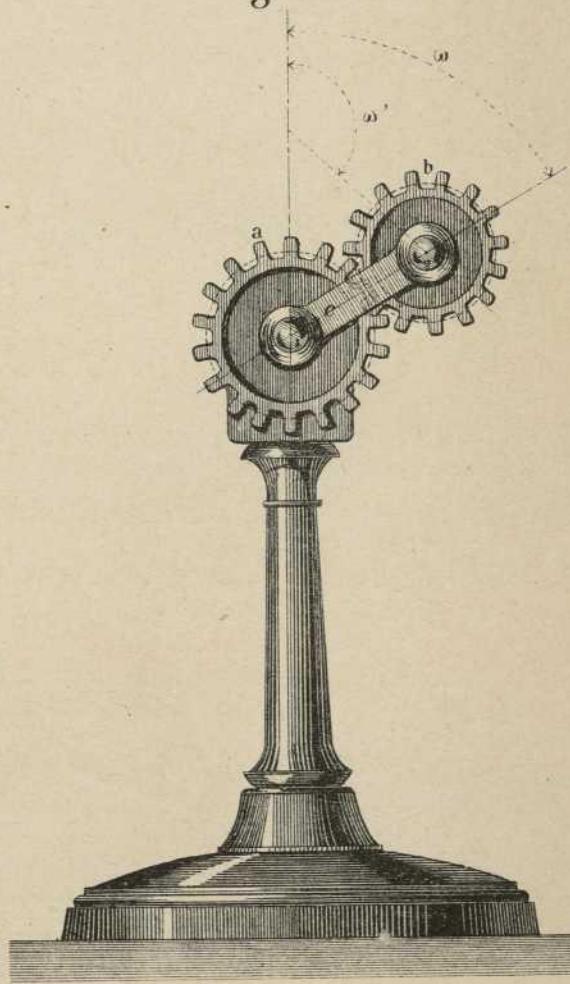
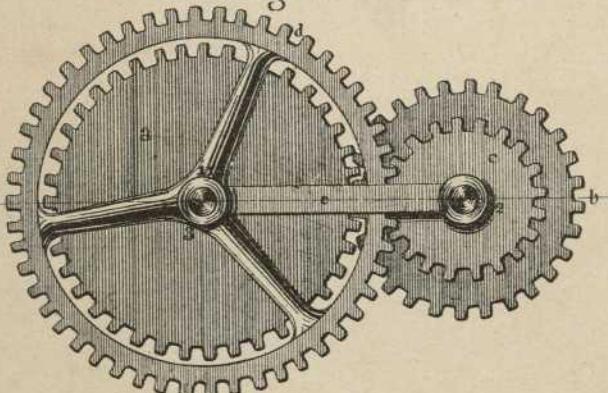
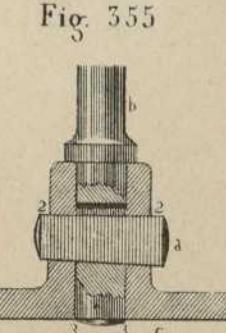
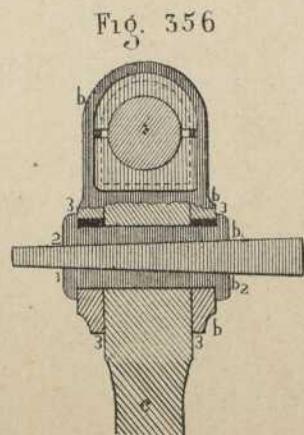
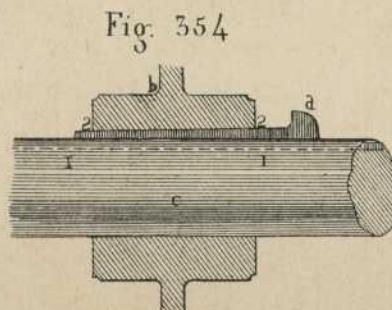
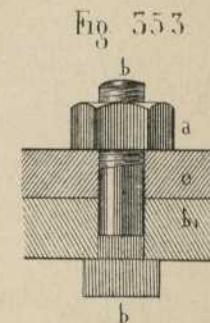
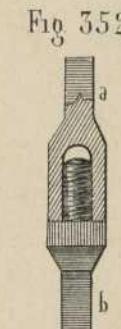
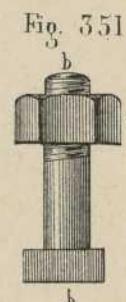
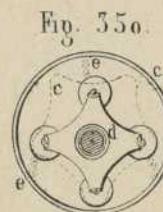
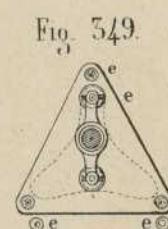
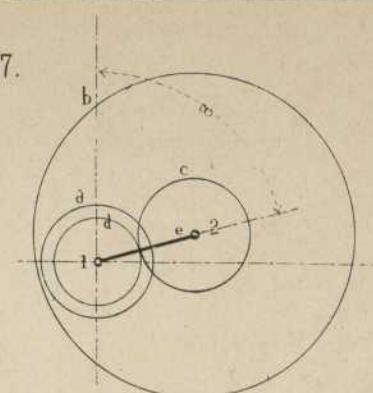
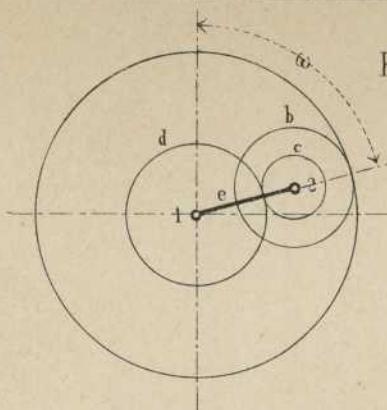
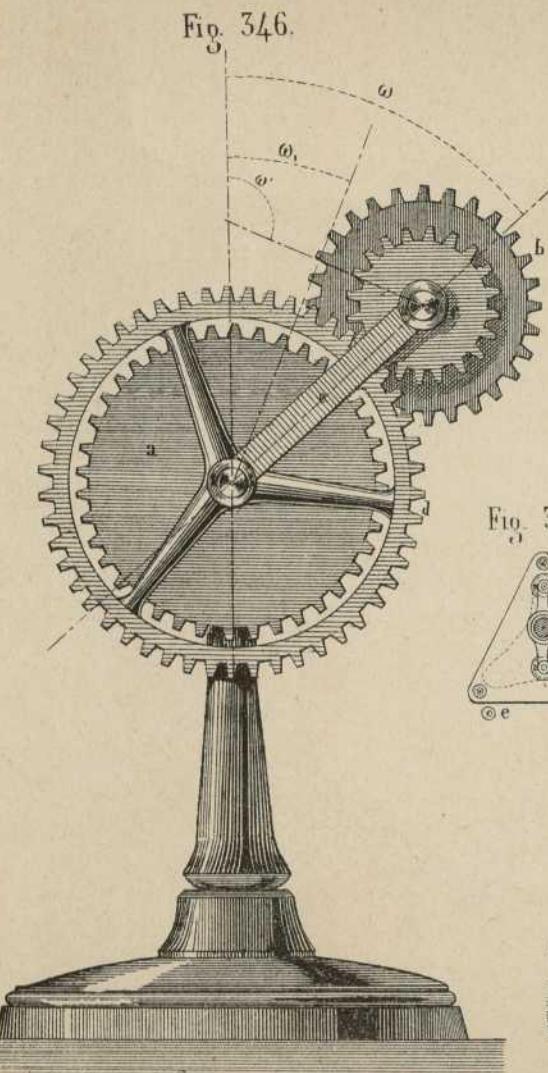


Fig. 344.



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J.G.

Fig. 357

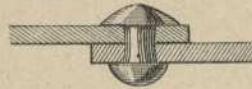


Fig. 358

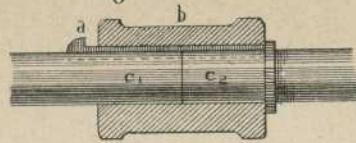


Fig. 360

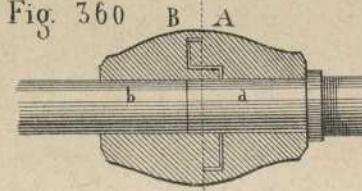


Fig. 359

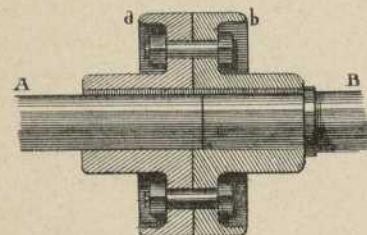


Fig. 364

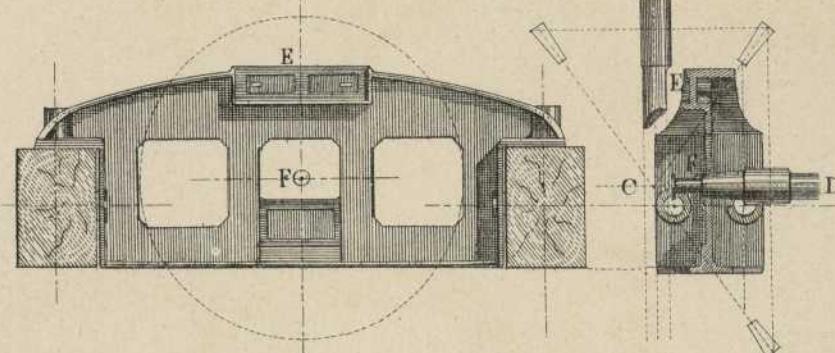


Fig. 362

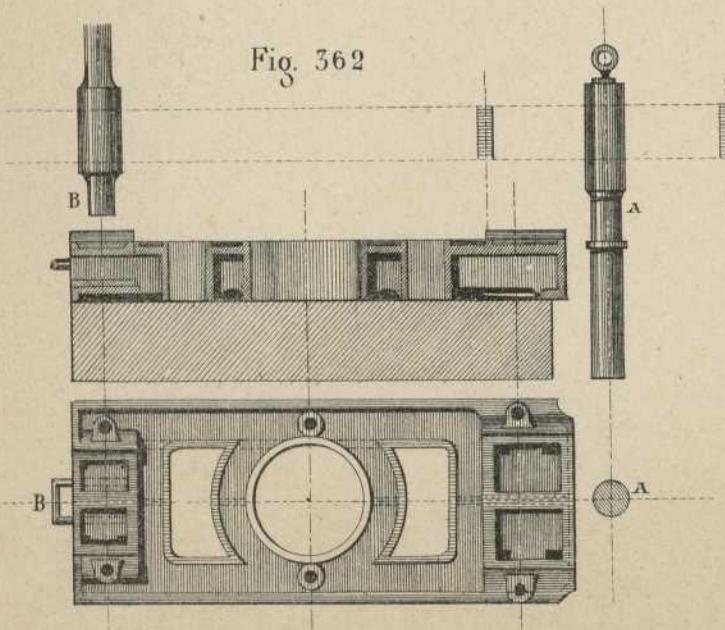


Fig. 361

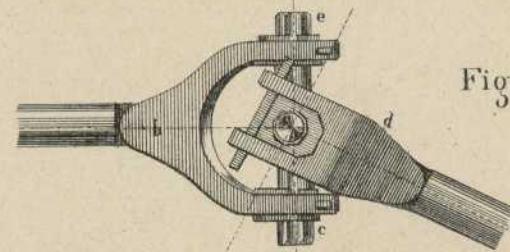


Fig. 365



Fig. 365



Fig. 366

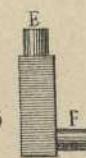
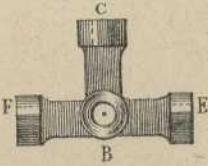


Fig. 367



J.G.

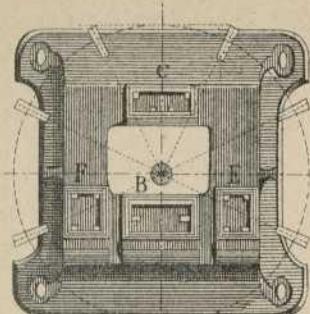


Fig. 368.

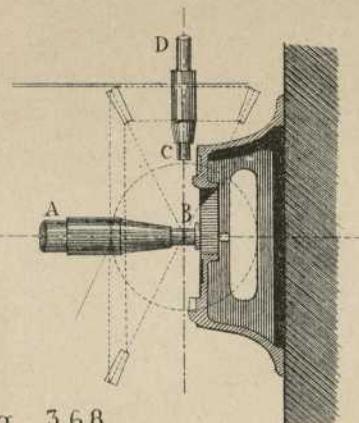


Fig. 369.

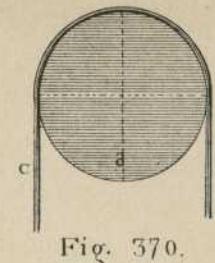
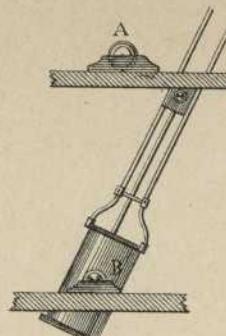


Fig. 370.

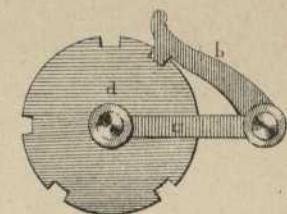


Fig. 375.

Fig. 379.

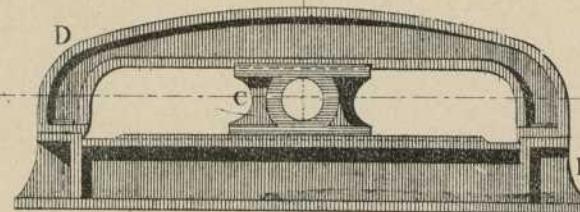
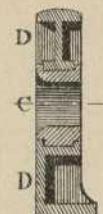


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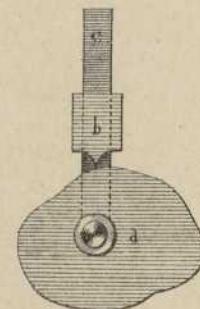


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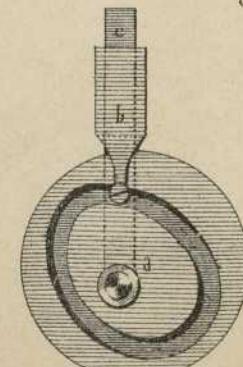


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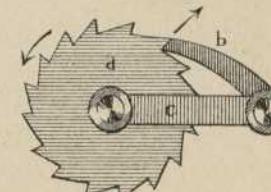


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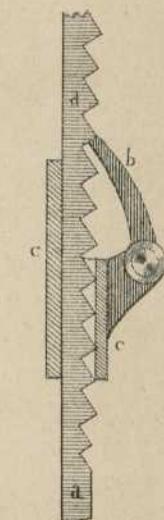


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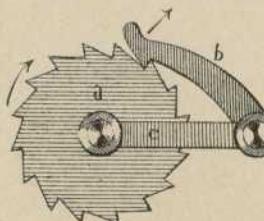


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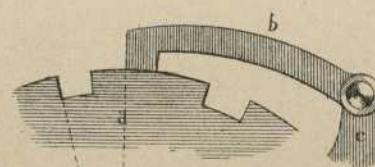


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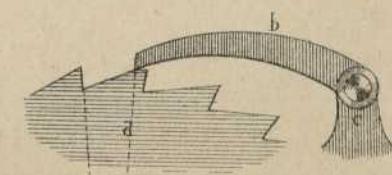


Fig. 377.

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Fig. 381.

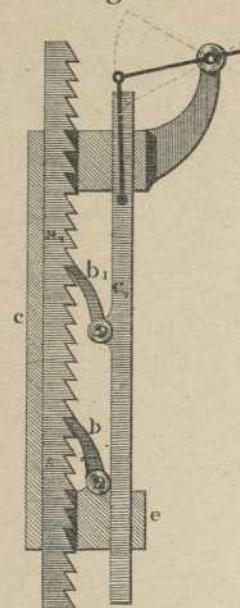


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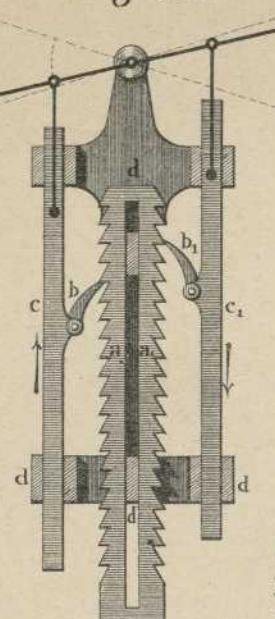


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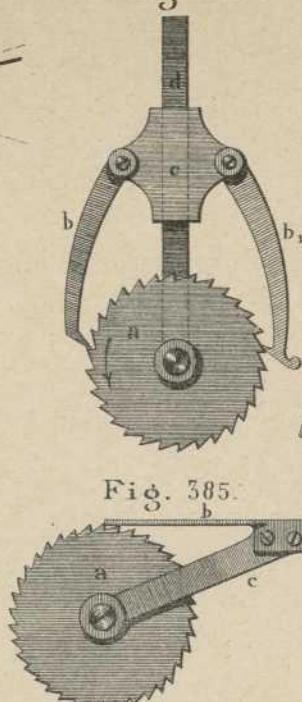


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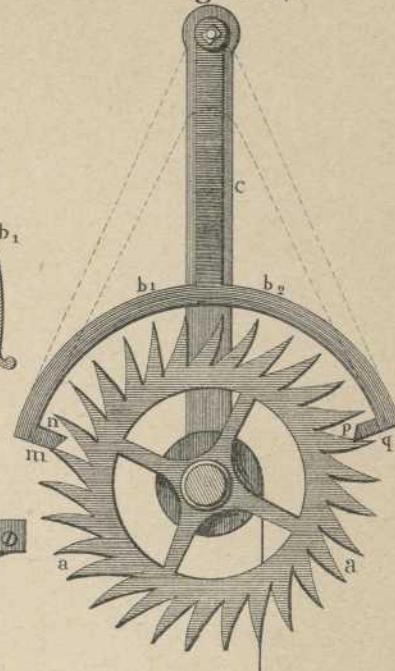


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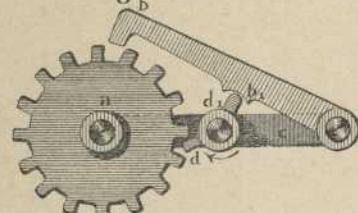


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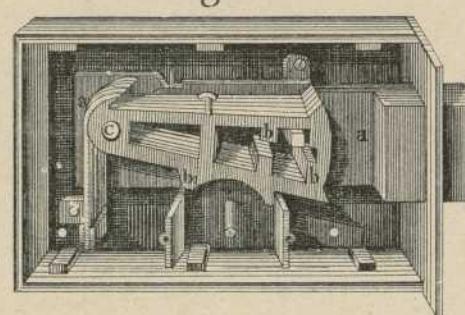


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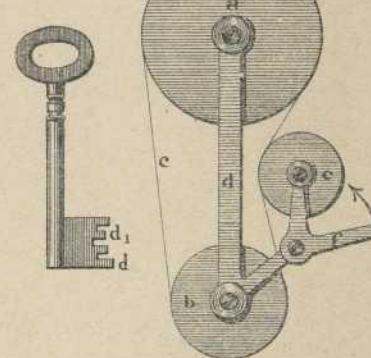


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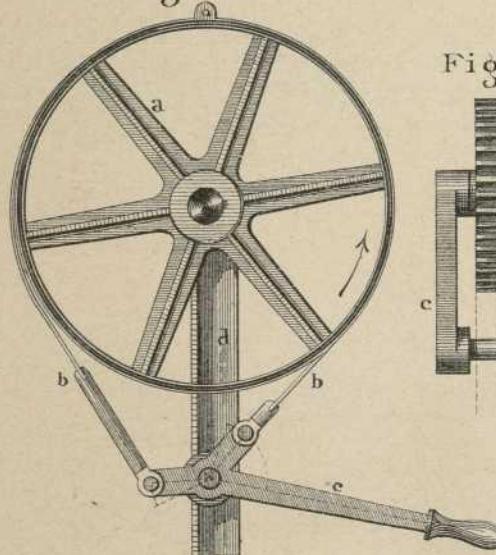


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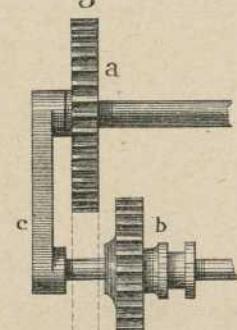


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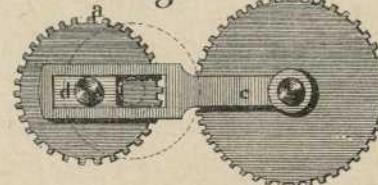


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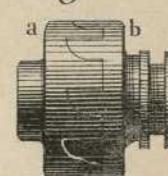


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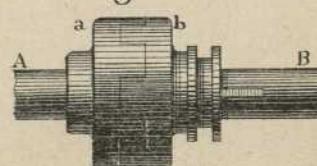
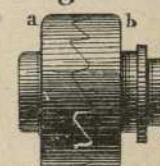


Fig. 393.



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Fig. 395.

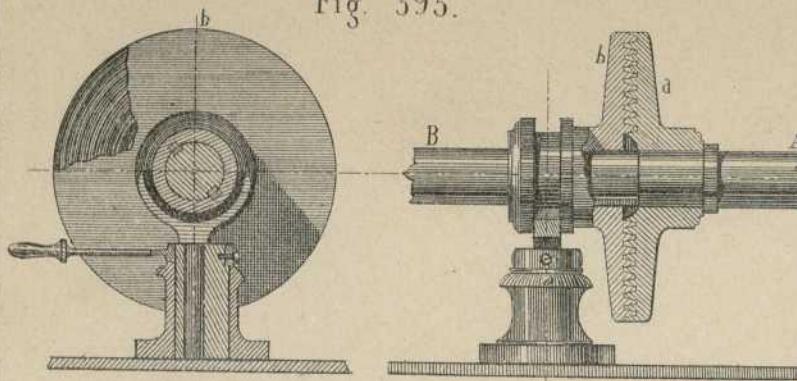


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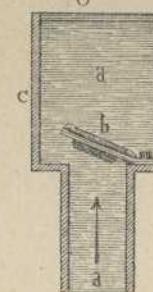


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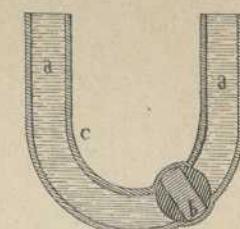


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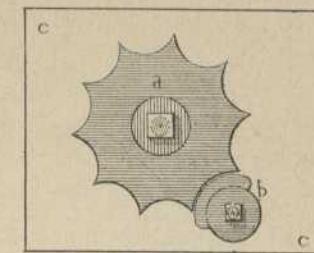


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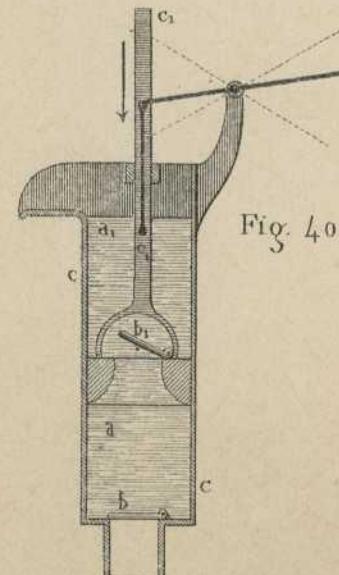
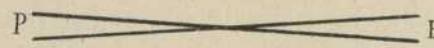
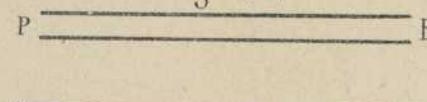


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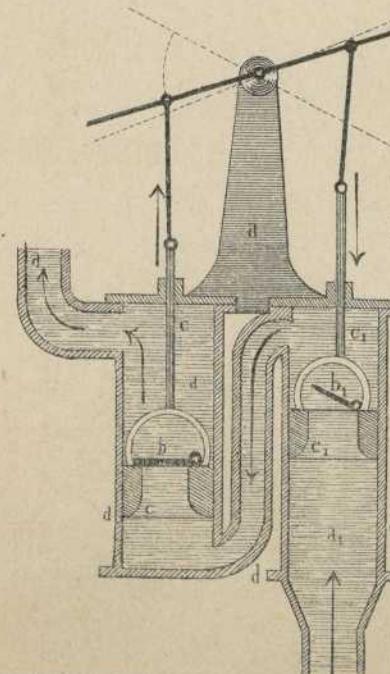


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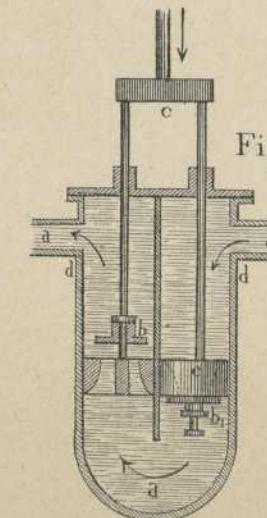
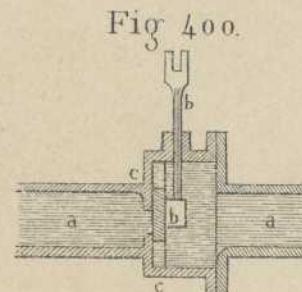


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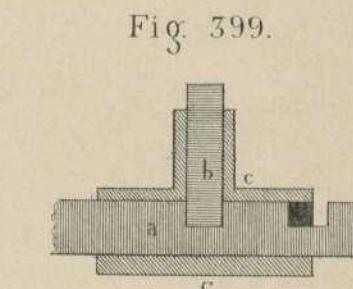


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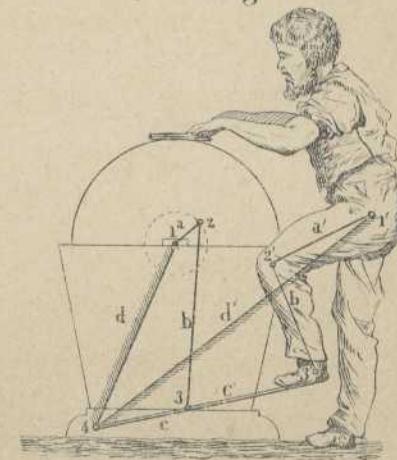


Fig. 406.



Fig. 407.

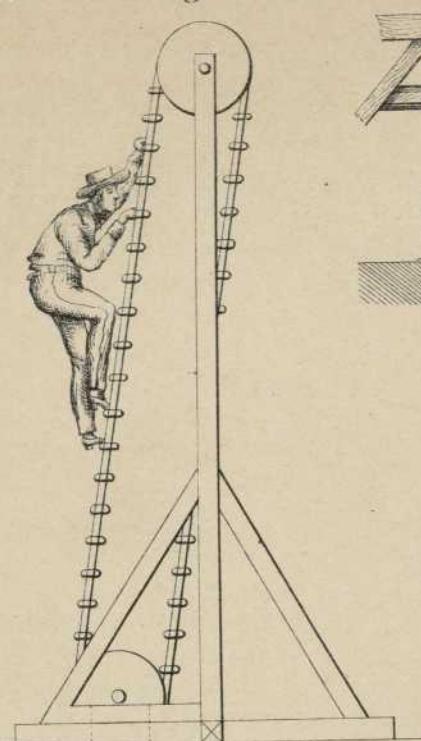


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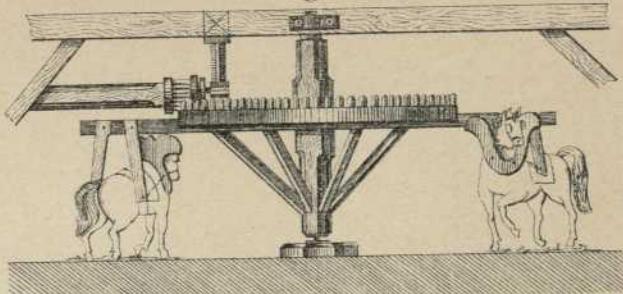


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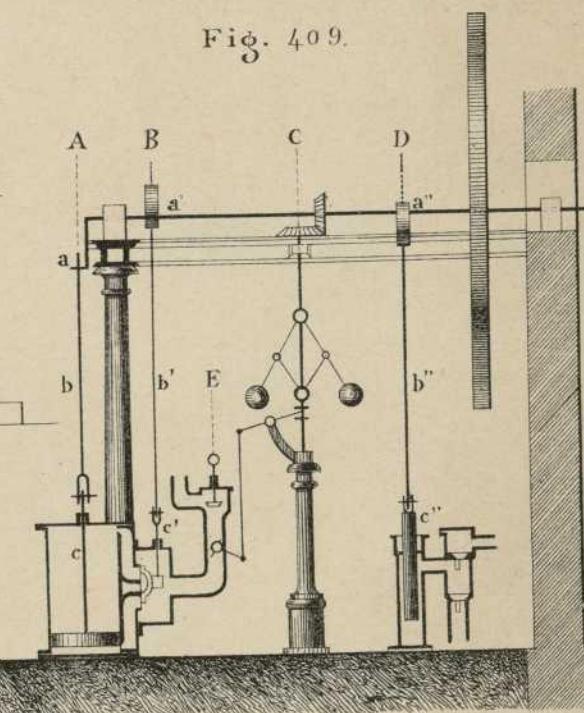


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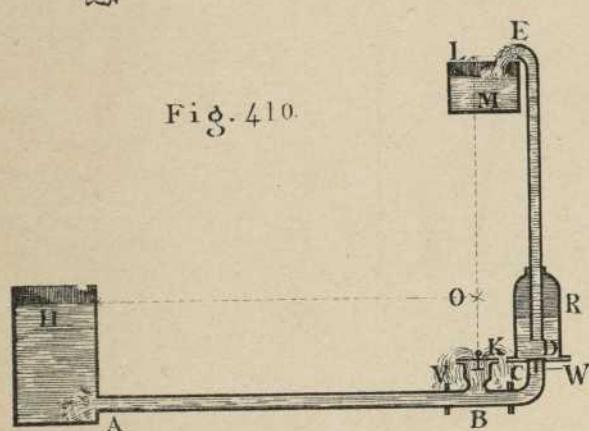


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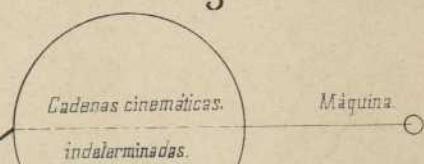
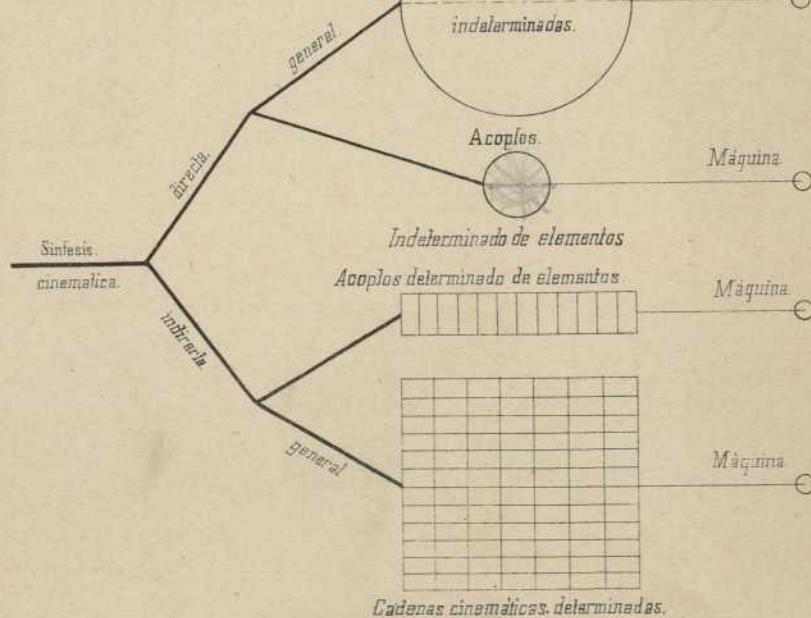
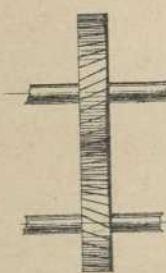


Fig. 412.



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Lámina 49.^a

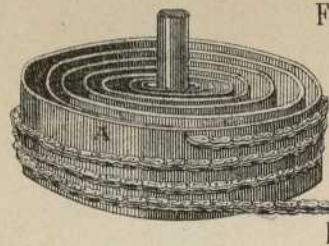


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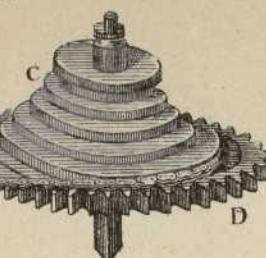


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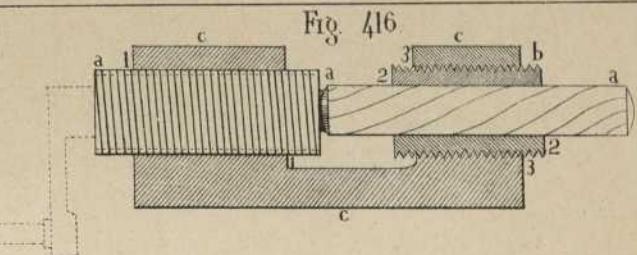


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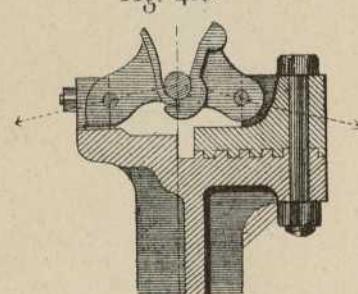


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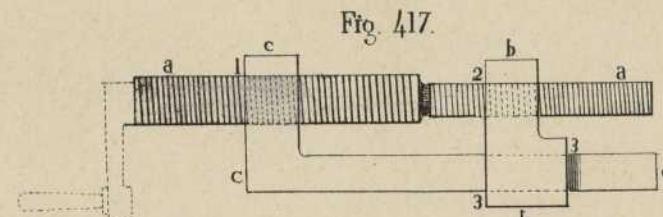


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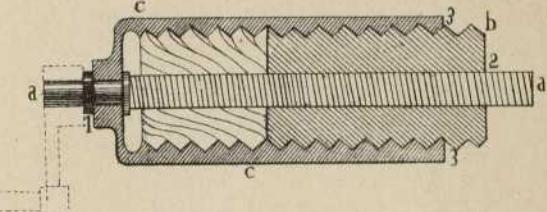


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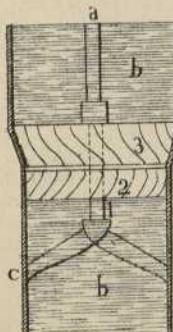


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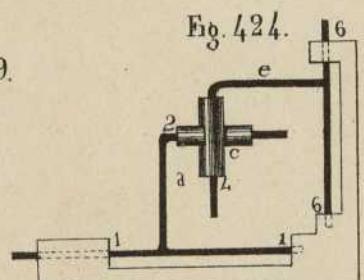


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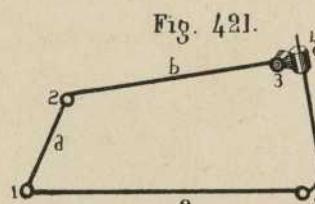


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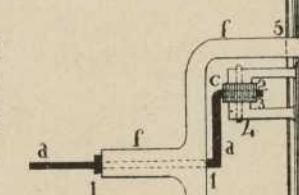


Fig. 425.

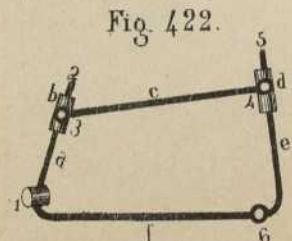


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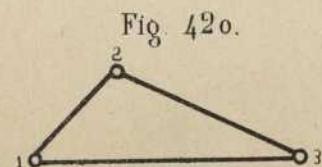


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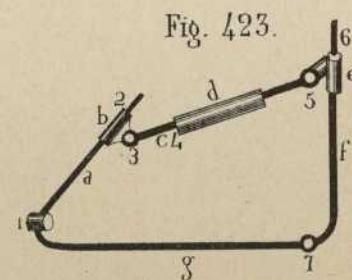


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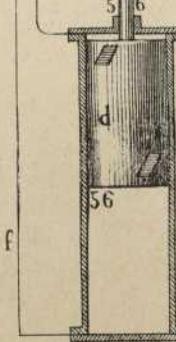
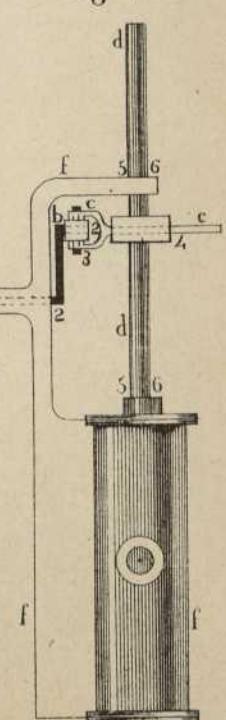


Fig. 426.



J. G.

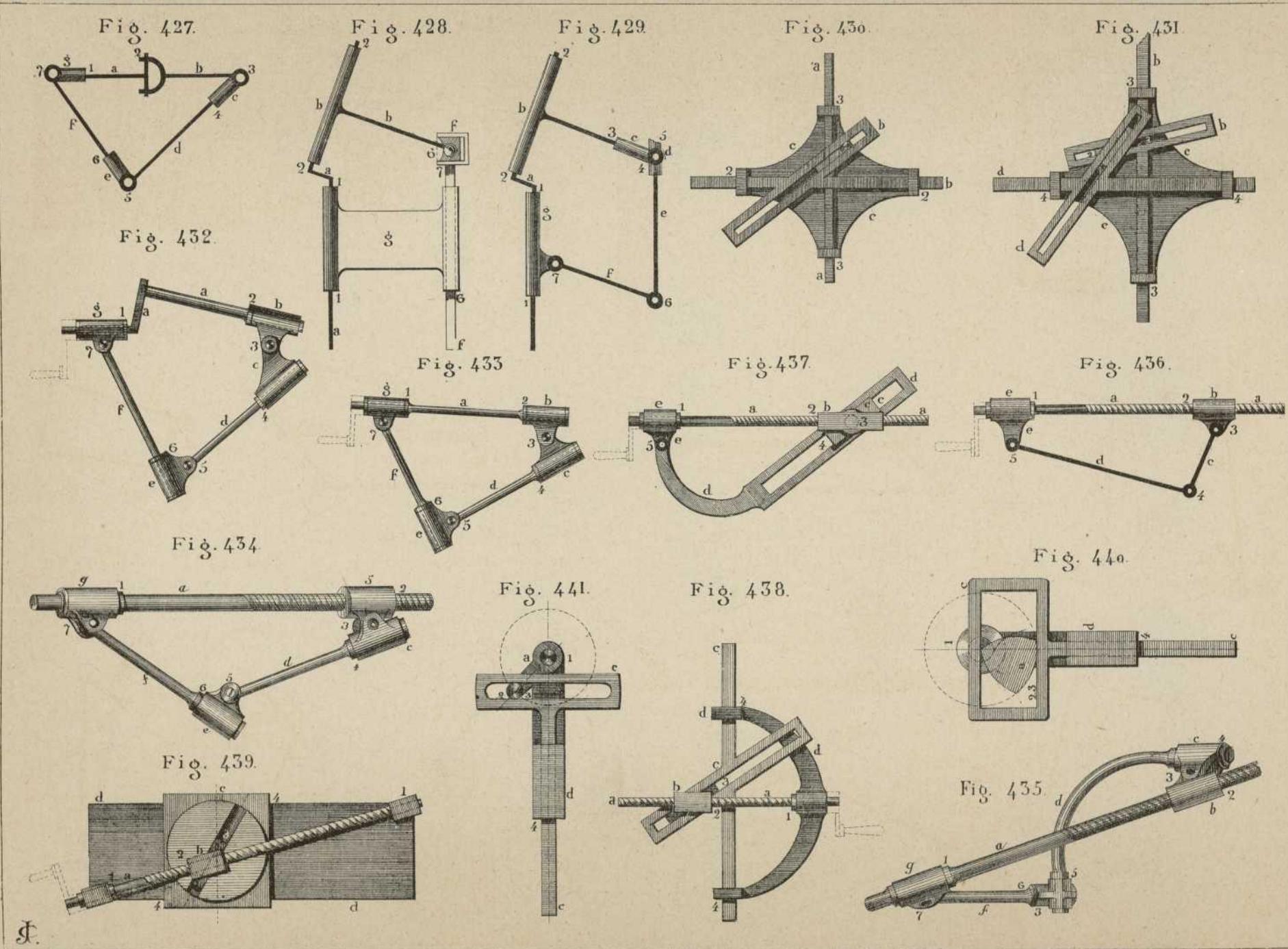


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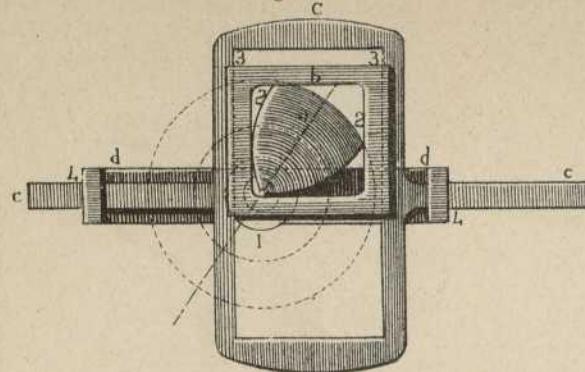


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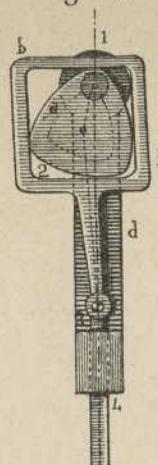


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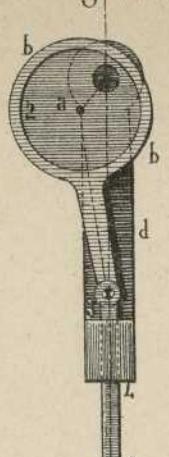


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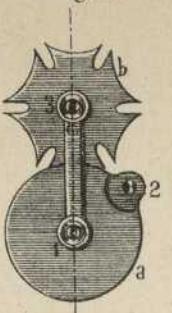


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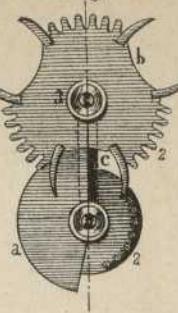


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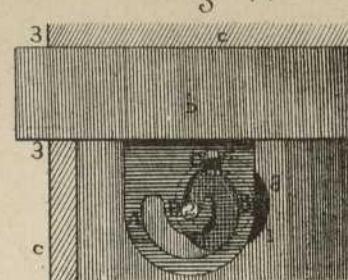


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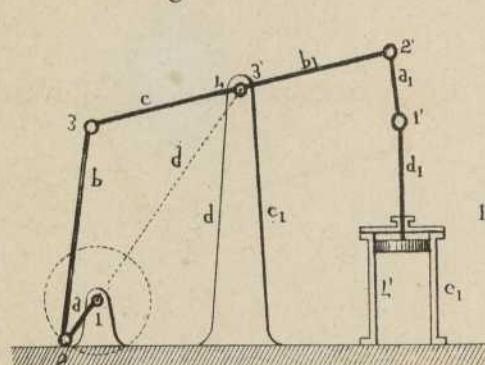


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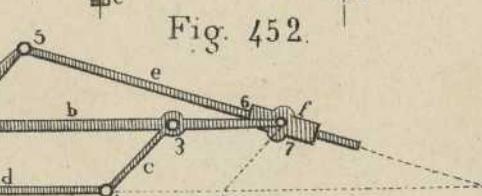


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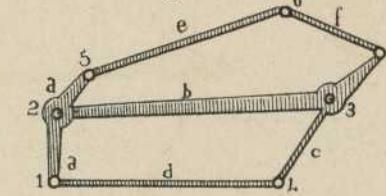


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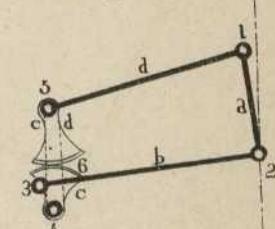


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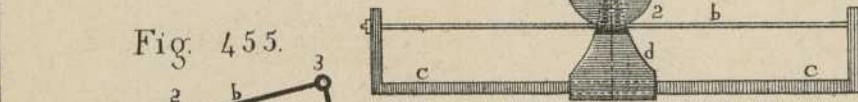


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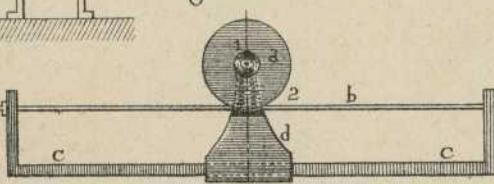


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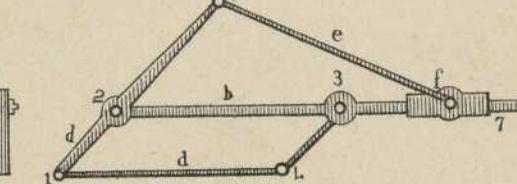


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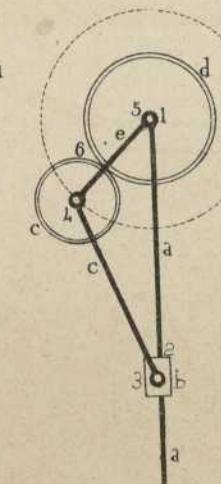


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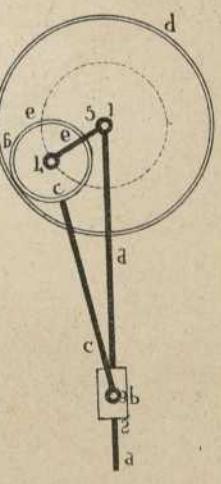


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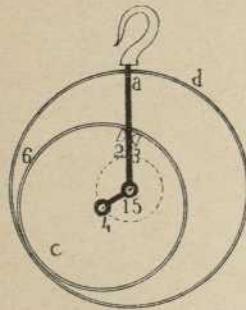


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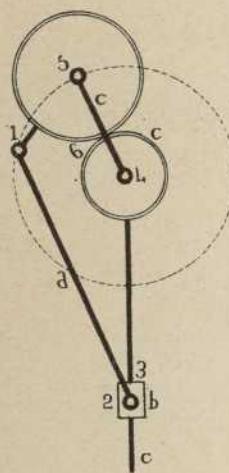


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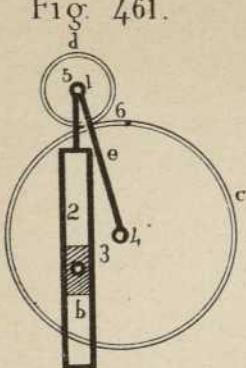


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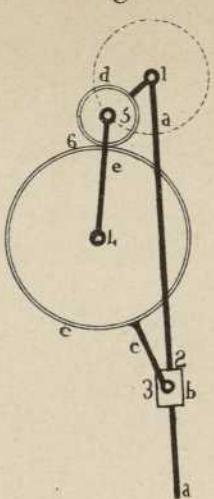


Fig. 463

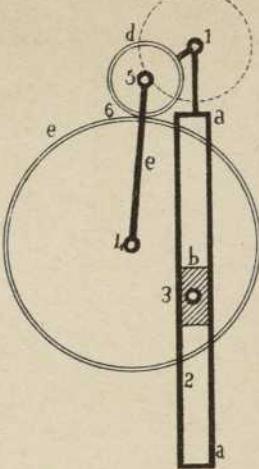


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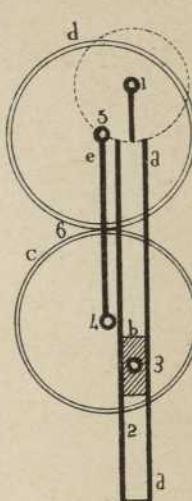


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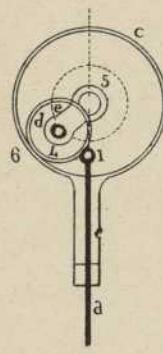


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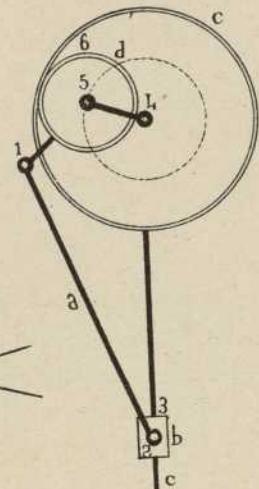


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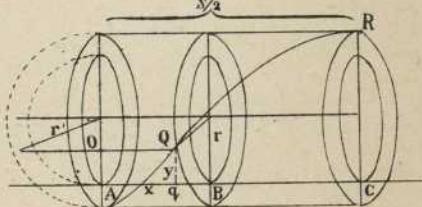


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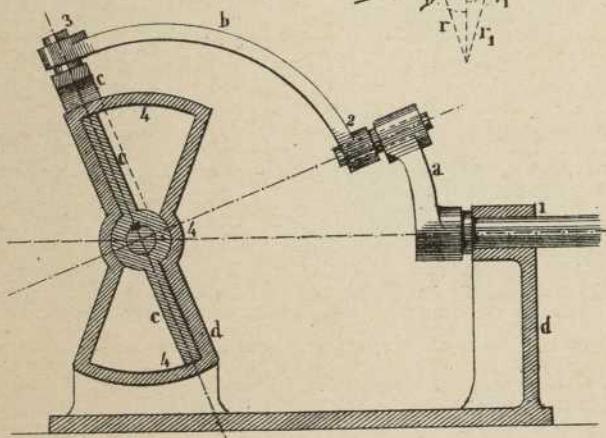


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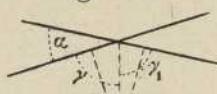


Fig. 471.



Fig. 469.

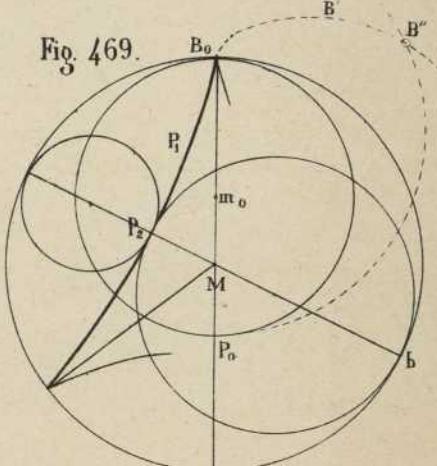


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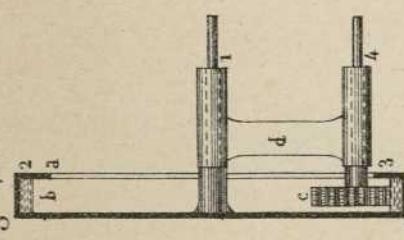


Fig. 470.

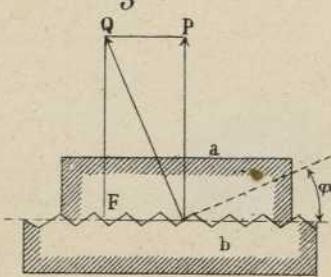


Fig. 473.

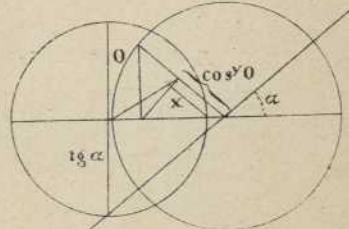


Fig. 1.

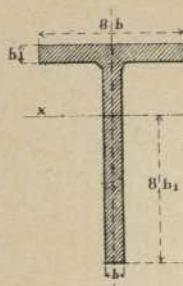


Fig. 2.

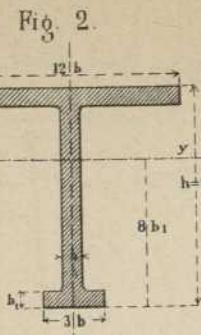


Fig. 3.

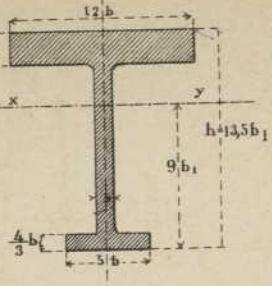


Fig. 5.

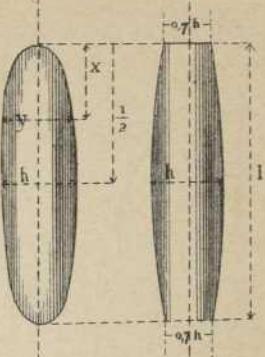


Fig. 4.

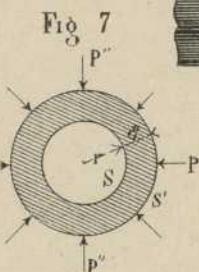
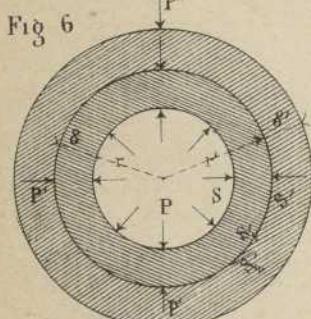
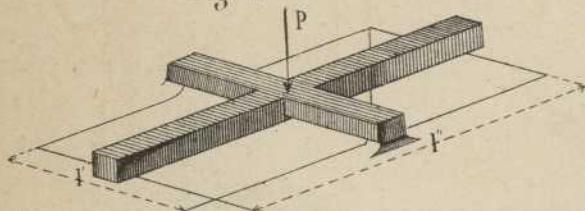
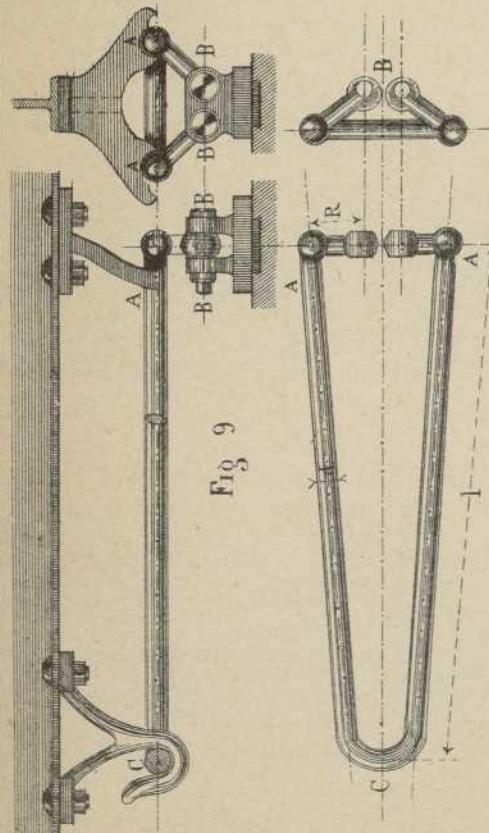
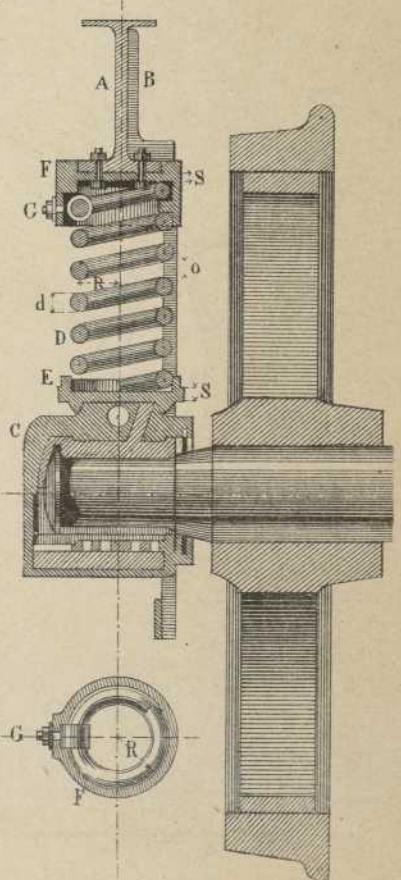
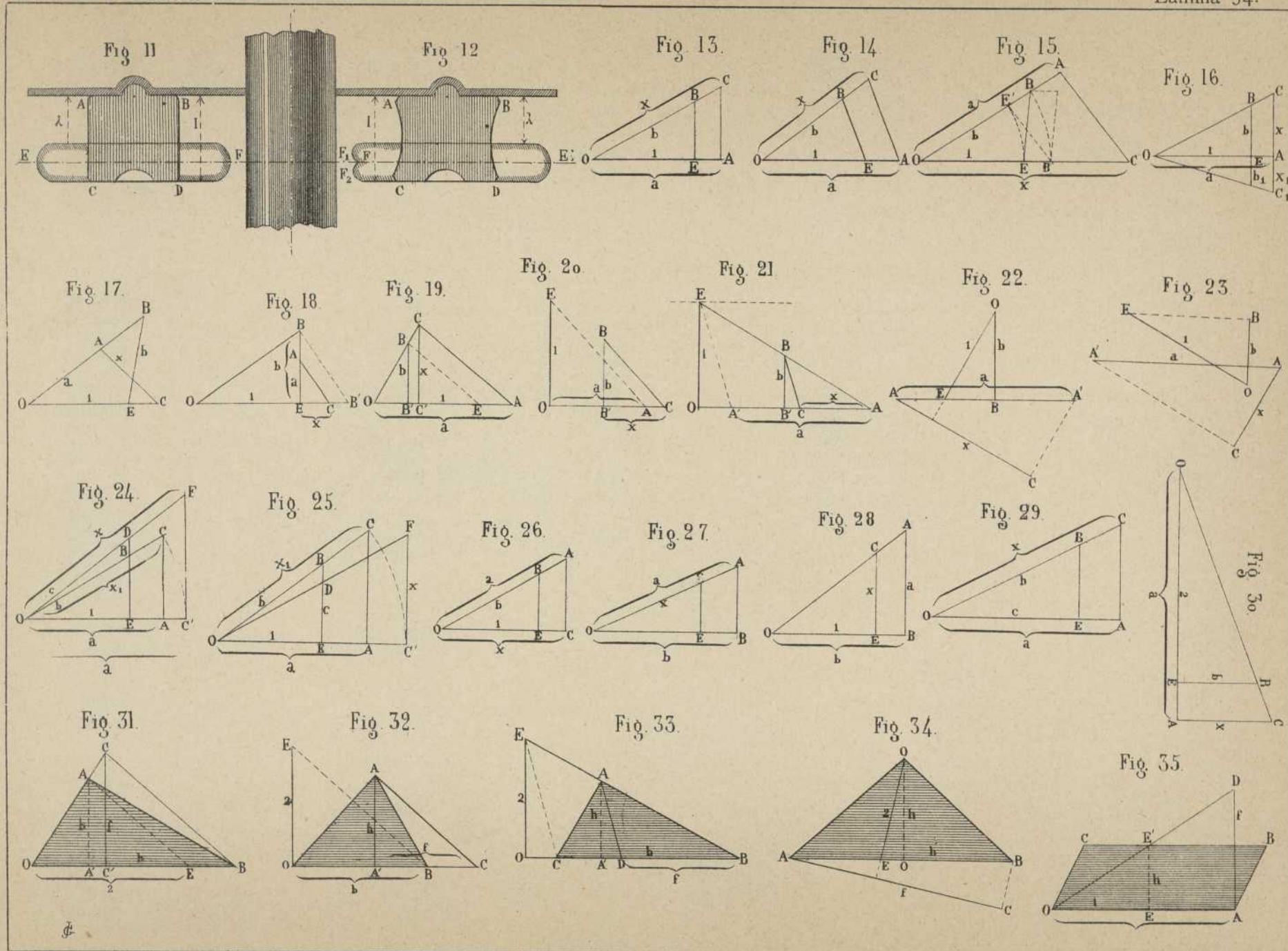


Fig. 10.

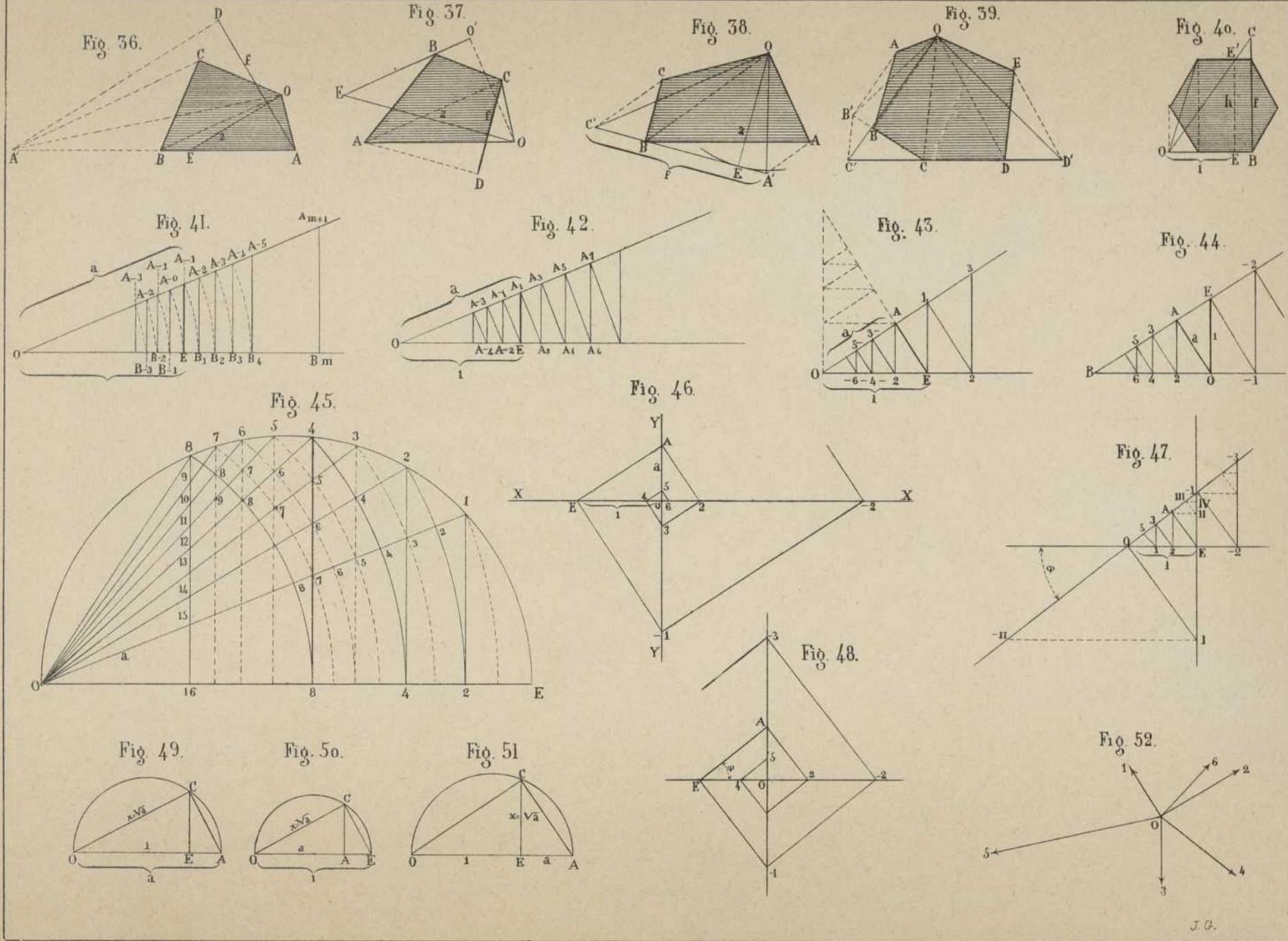


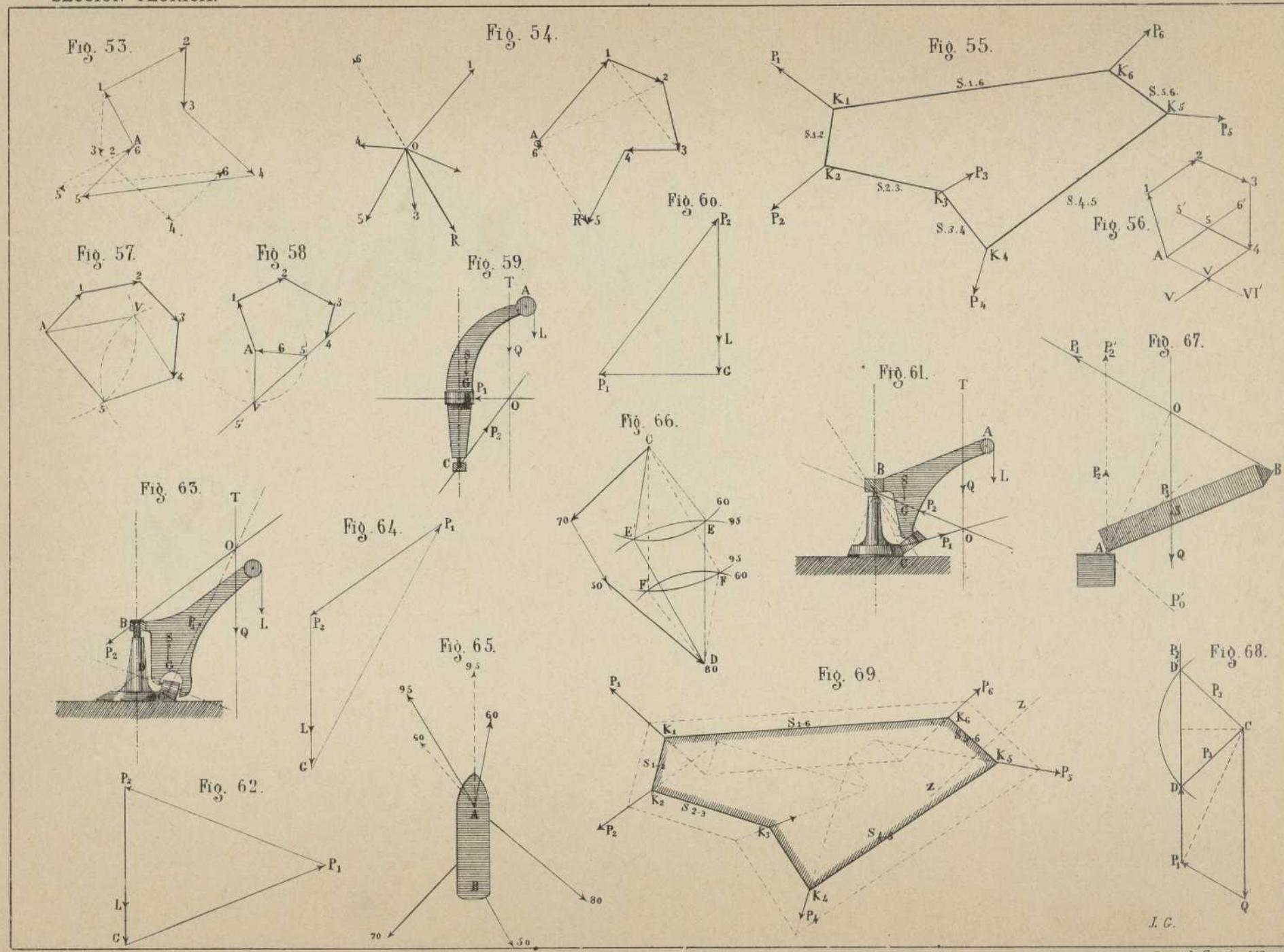


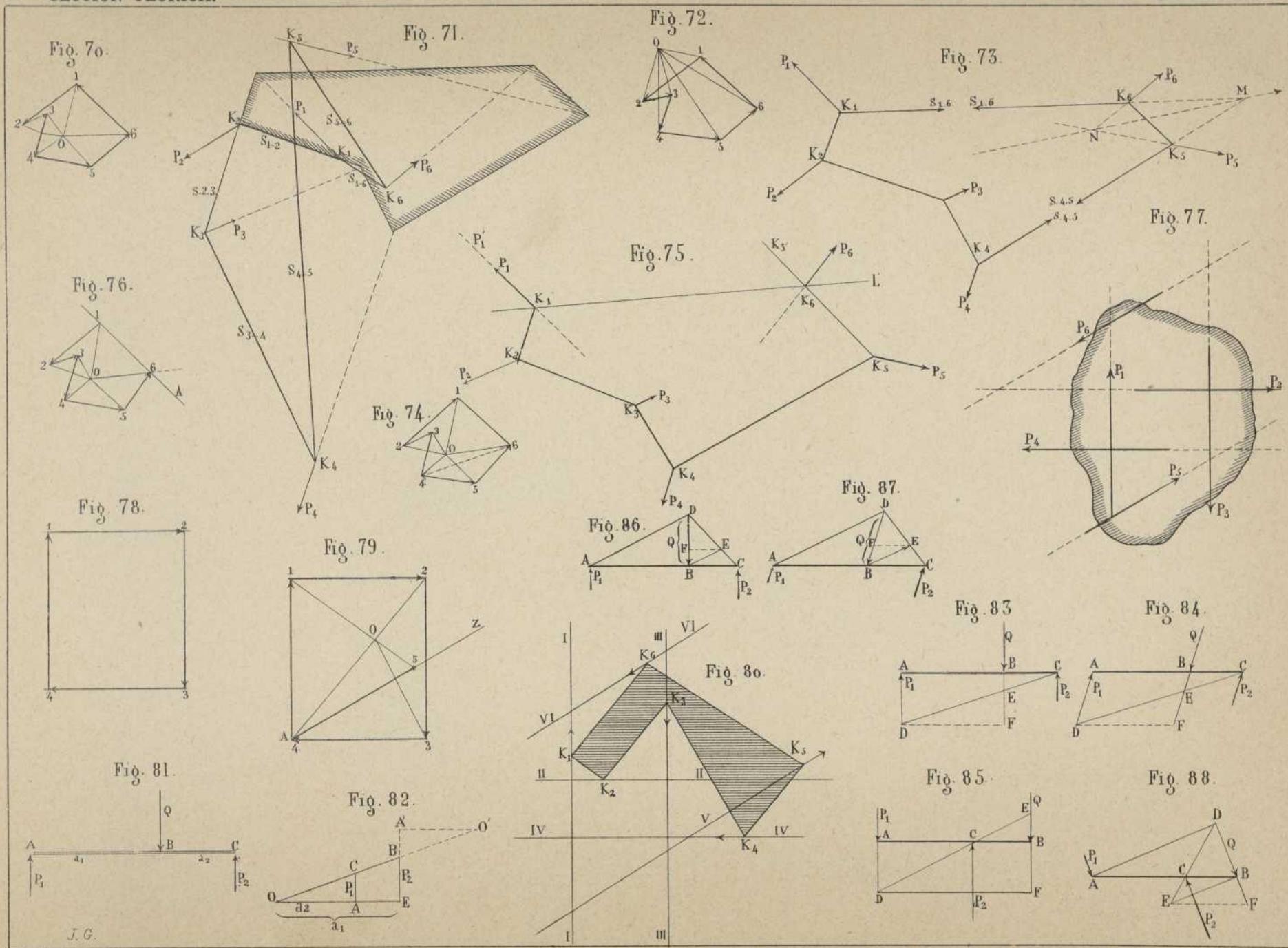
SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 55.^a



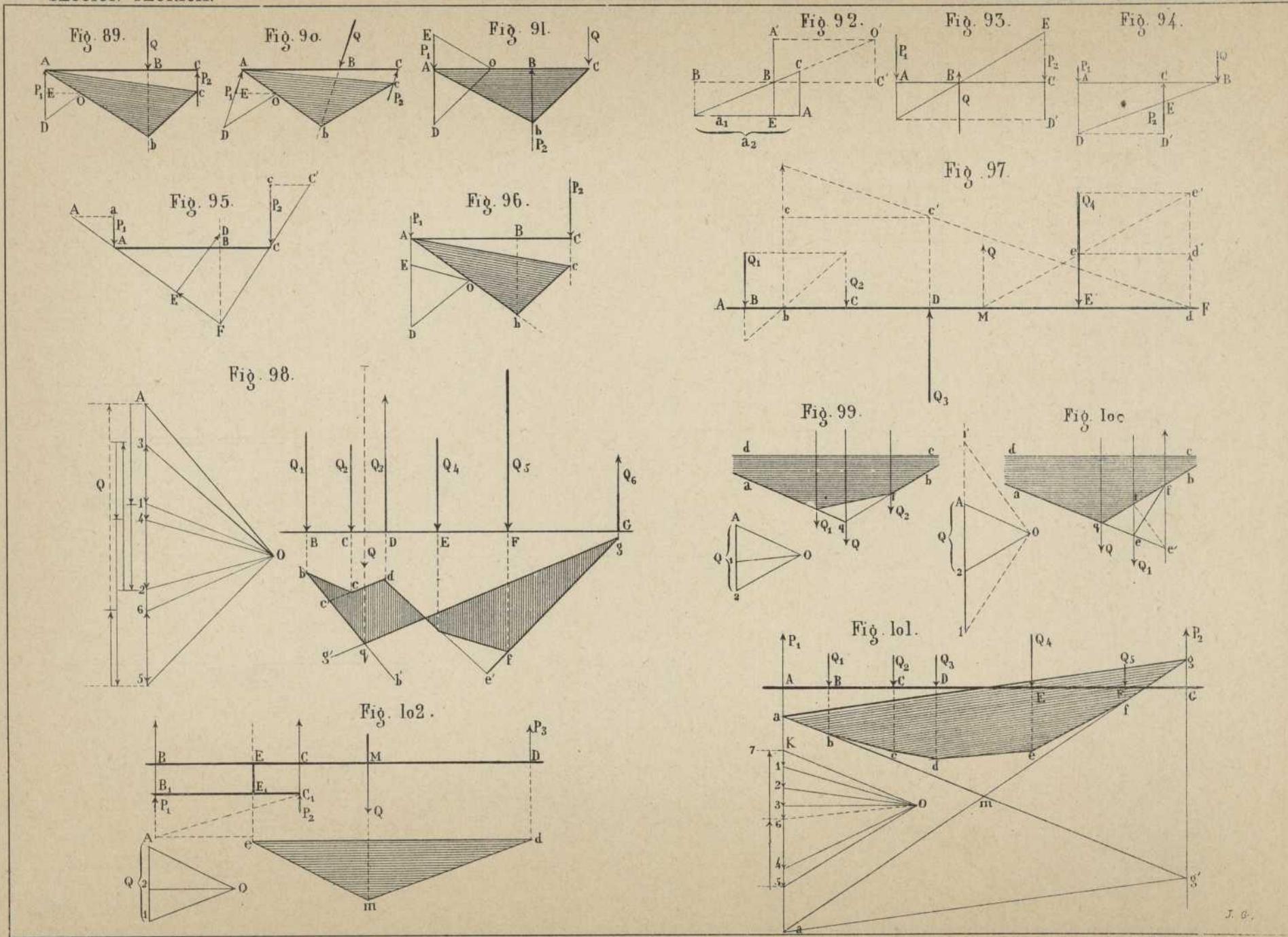


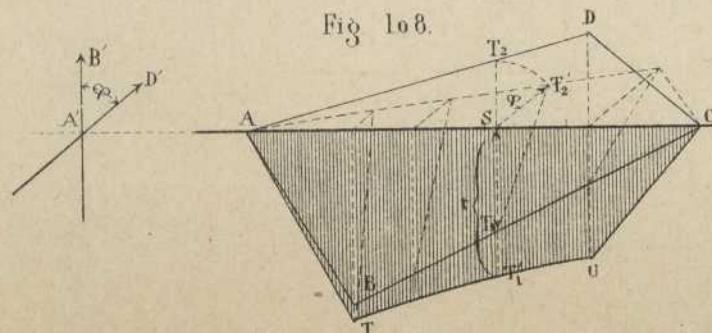
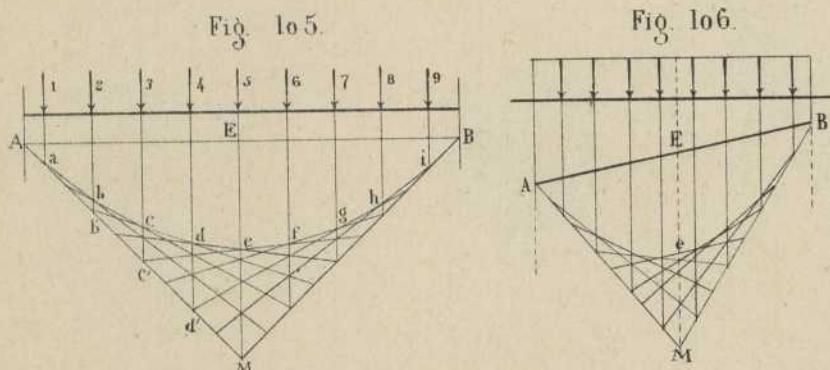
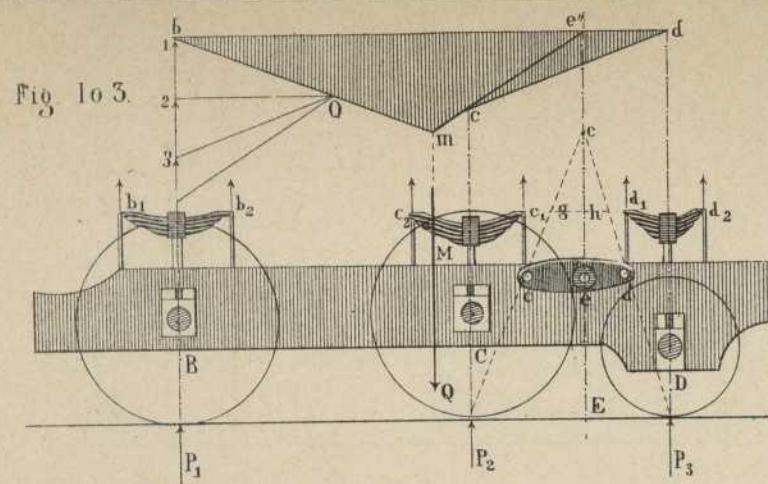


SECCION TEÓRICA.

CONSTRUCTOR.

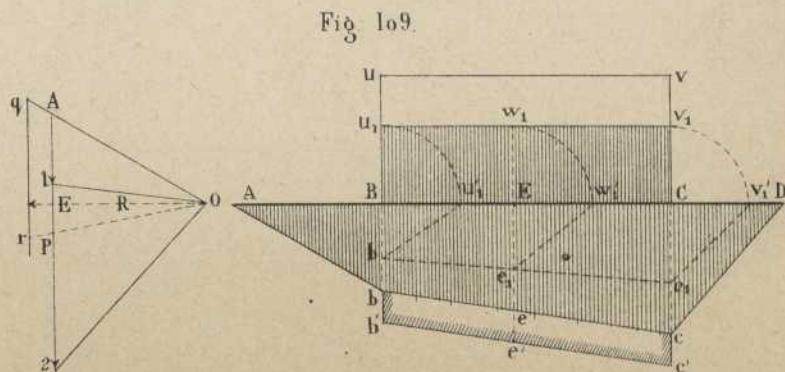
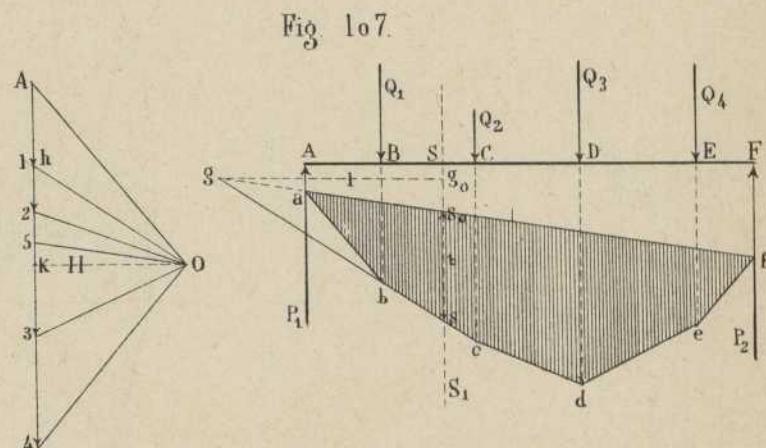
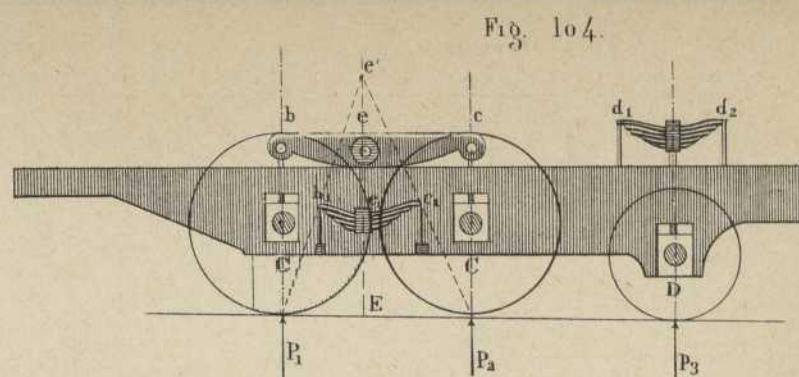
Lámina 58.^a





J. G.

Nestor, editor.



Paseo de Gracia, 139.

Fig. 110.

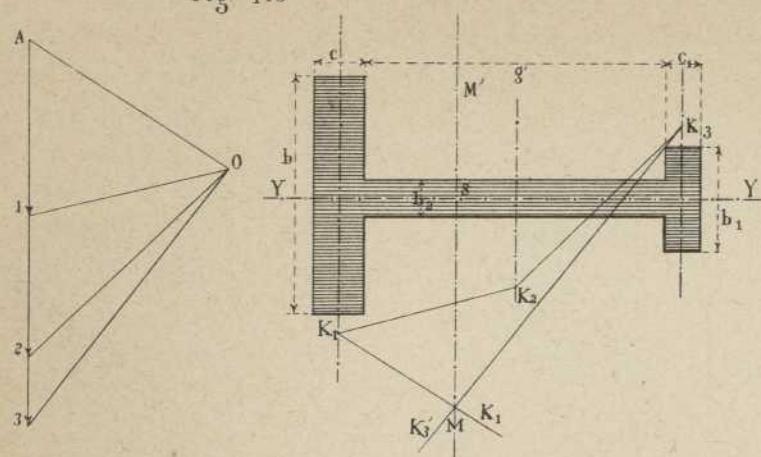


Fig. 112.

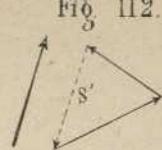


Fig. 113.



Fig. III.

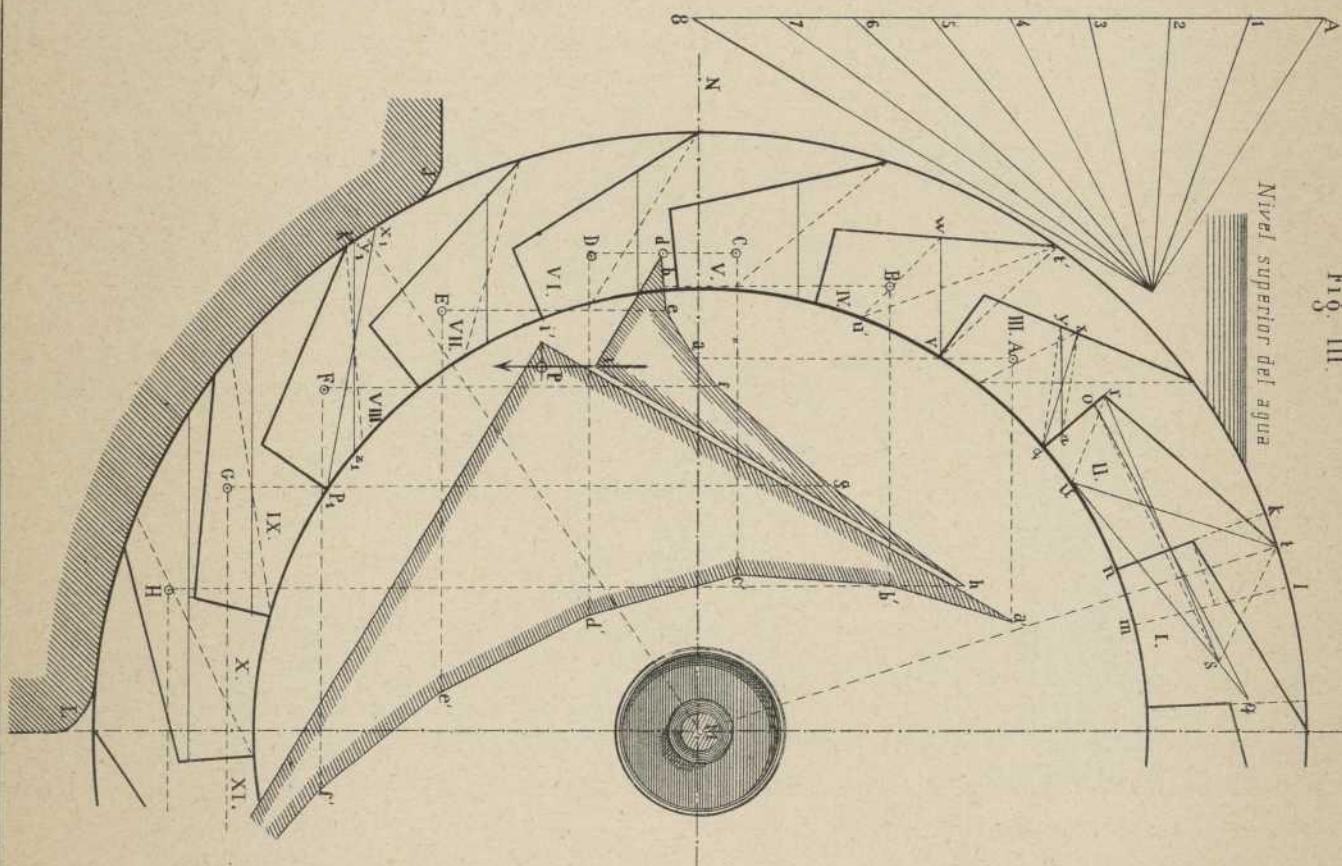


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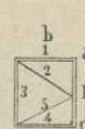
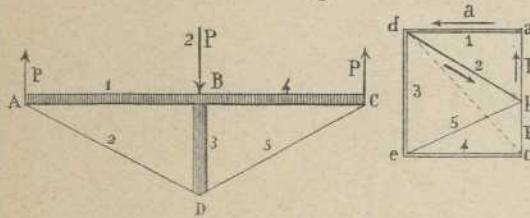
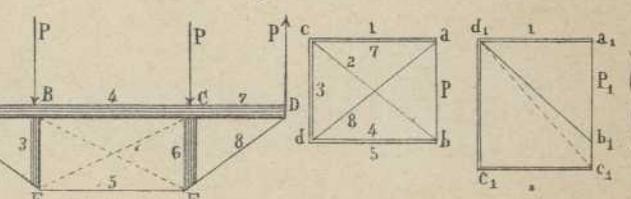


Fig. 114.

Fig. 115.



J. G.

Fig. 116.

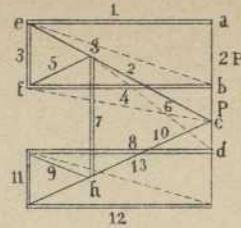
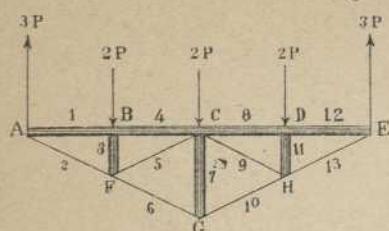
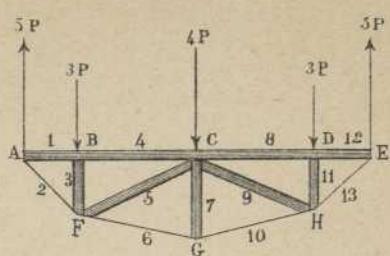


Fig. 117.



o

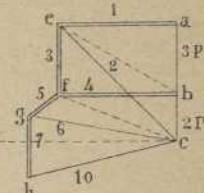


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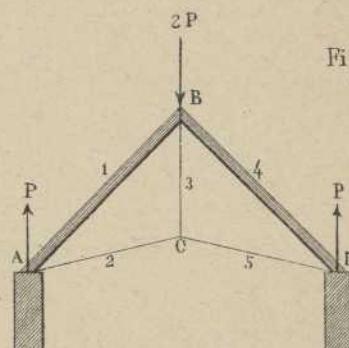
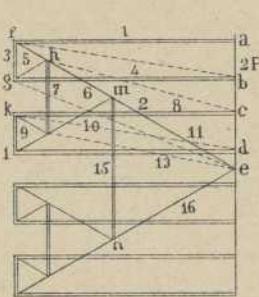
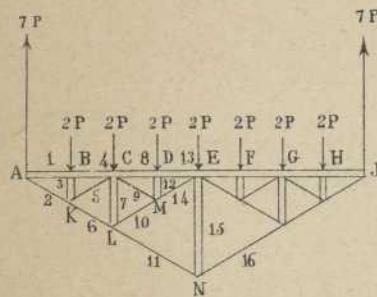


Fig. 119.

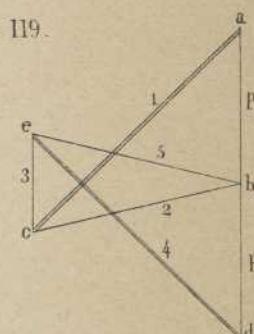


Fig. 120.

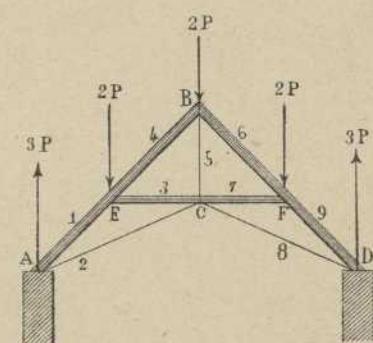
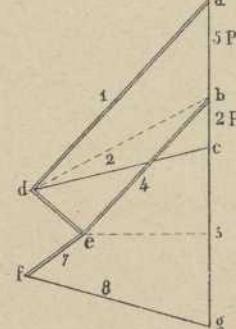
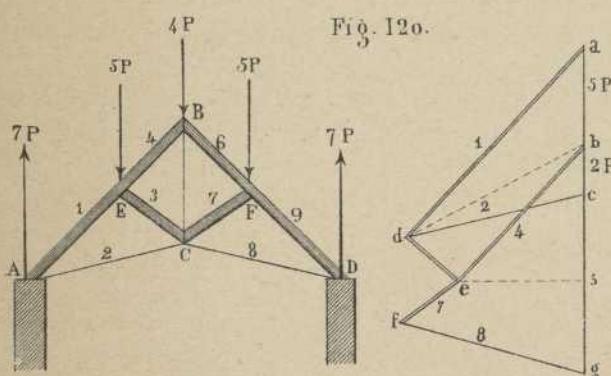


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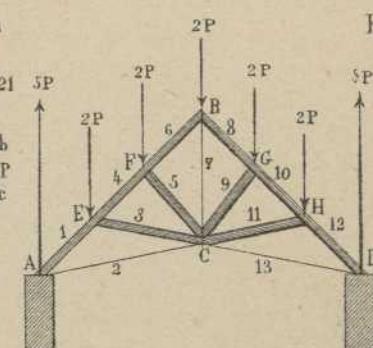
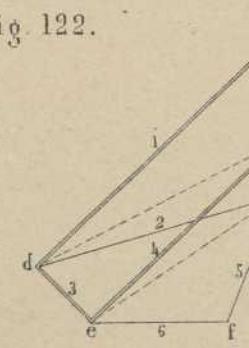
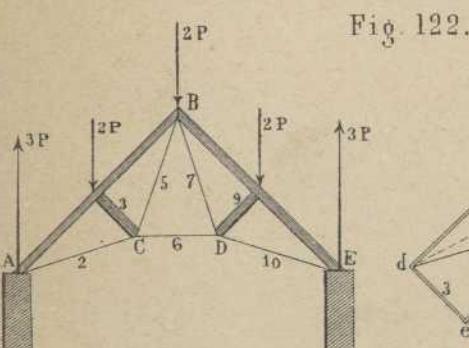


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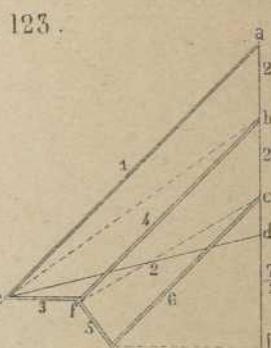


Fig. 124

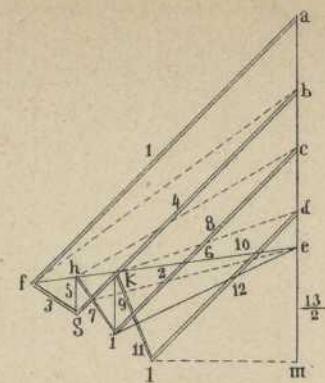
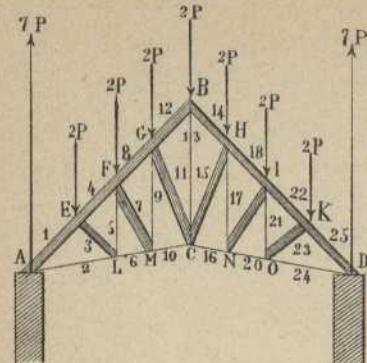


Fig. 125

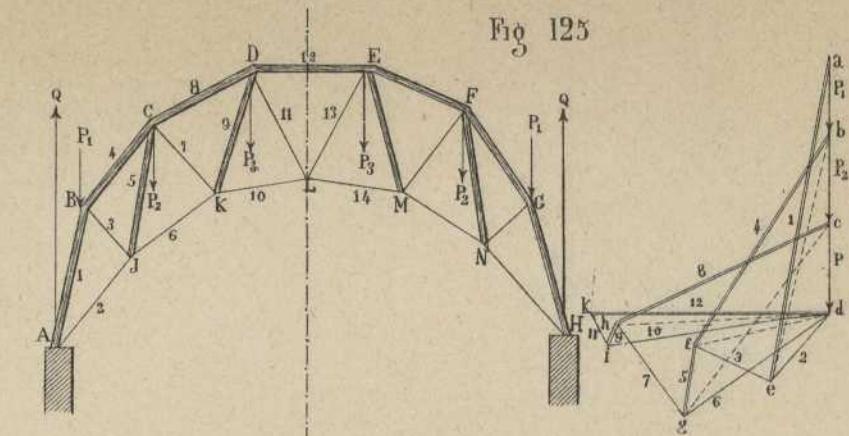


Fig. 127

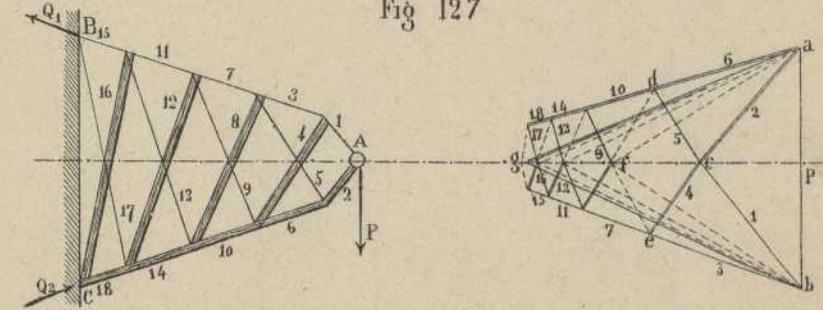


Fig. 126

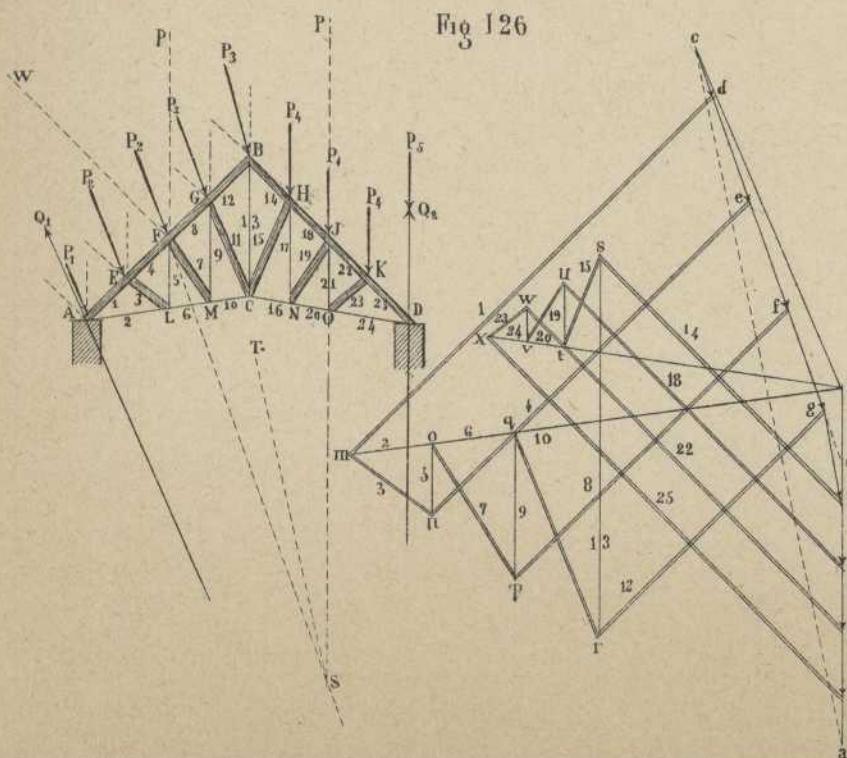
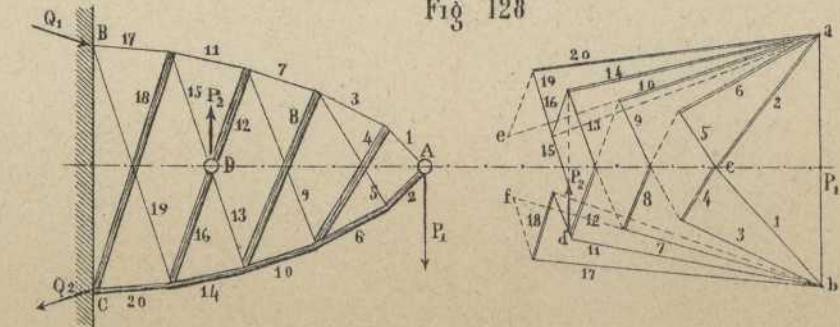


Fig. 128



J. G.

Fig. 129.

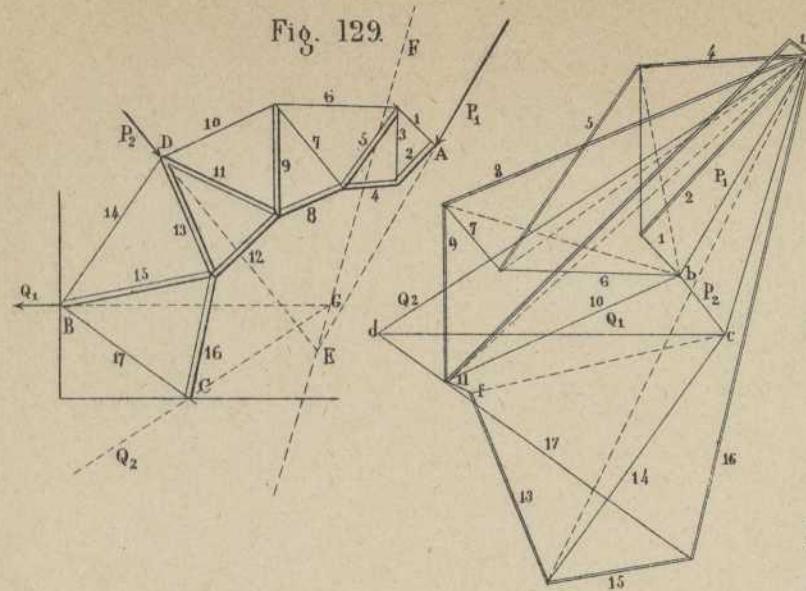


Fig. 130.

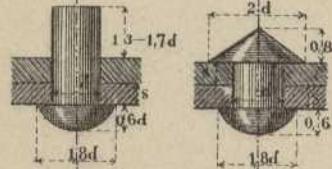


Fig. 131.



Fig. 132.

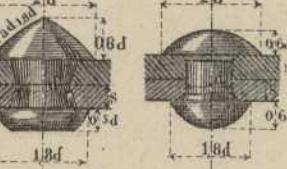


Fig. 133.

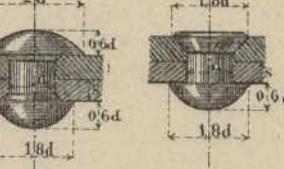


Fig. 134.

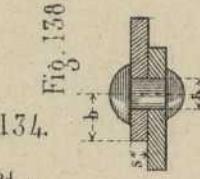


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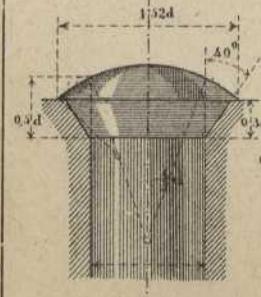


Fig. 137.

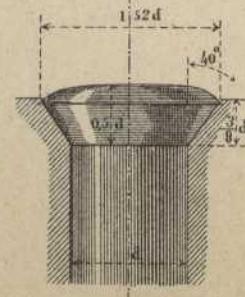


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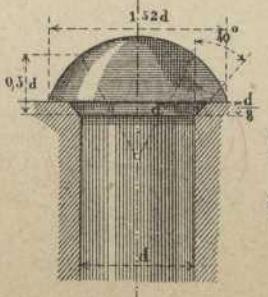


Fig. 140.

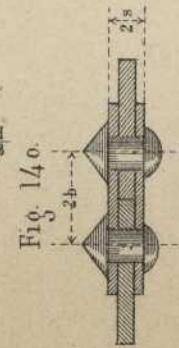
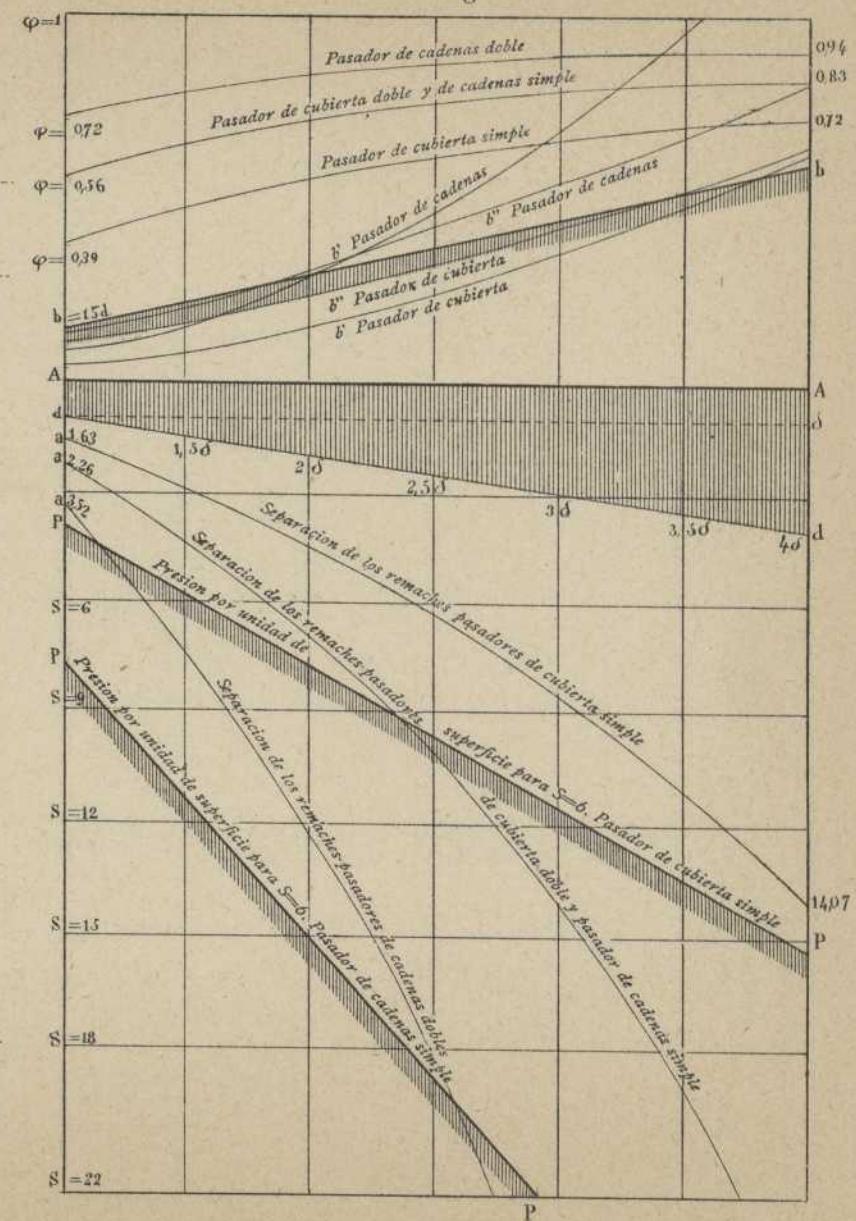


Fig. 141.



SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 64.^a

Fig. 142.

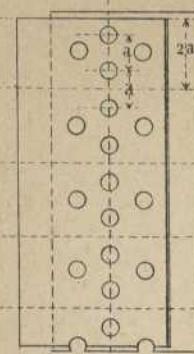


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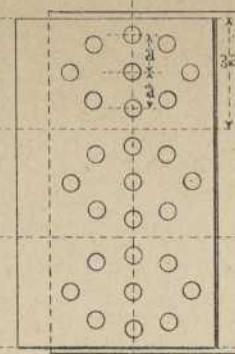


Fig. 144.
I. II. III. IV. V. VI. VII.

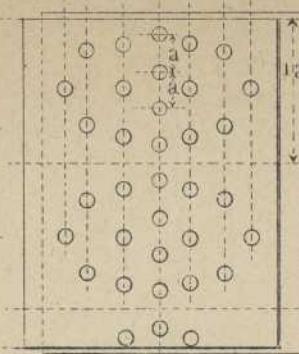


Fig. 145.

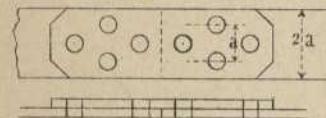


Fig. 146.

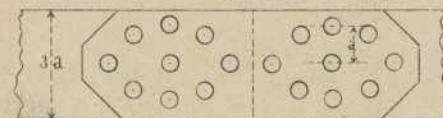


Fig. 151.



Fig. 152.



Fig. 153.



CONSTRUCTOR.

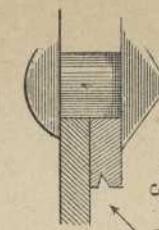


Fig. 147.

Fig. 150.

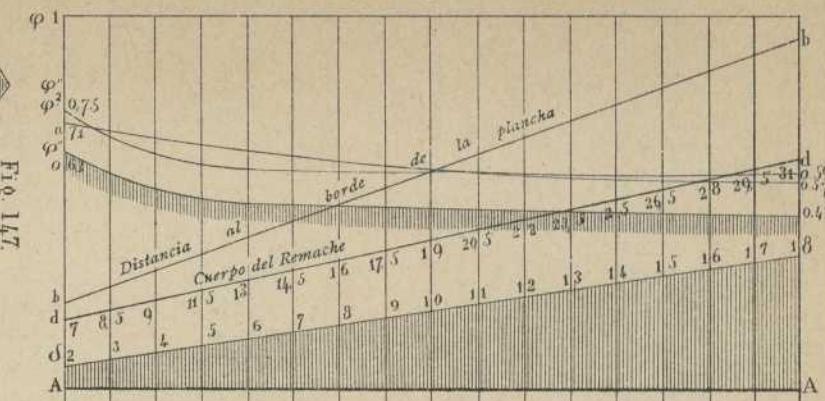


Fig. 148.

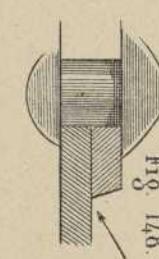
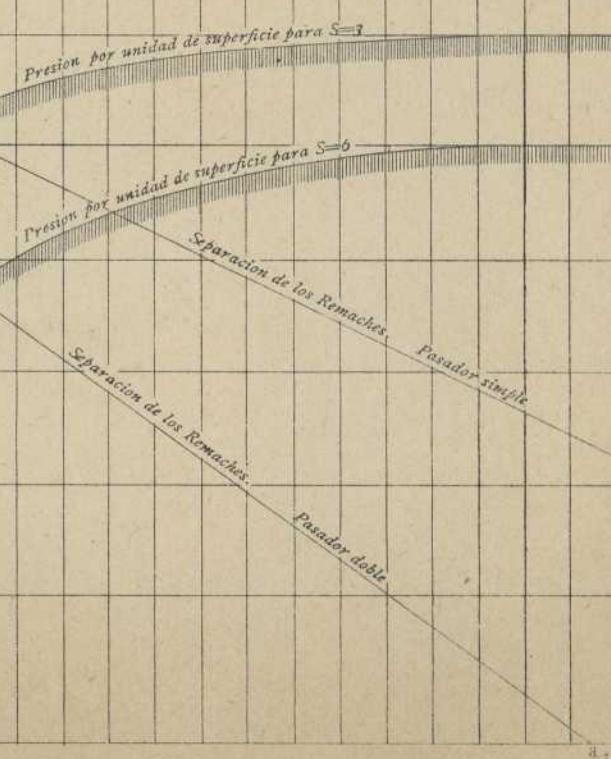
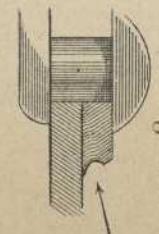


Fig. 149.



J. G.

SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 65.^a

Fig. 154.



Fig. 155.

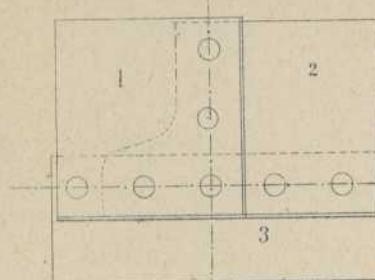


Fig. 162.

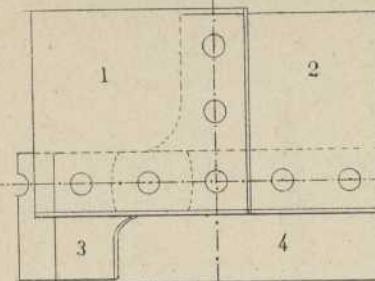


Fig. 163.

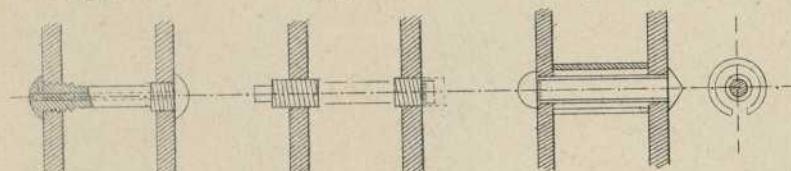


Fig. 164.

Fig. 165. Fig. 166

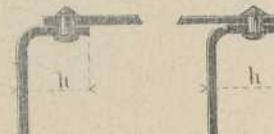


Fig. 169

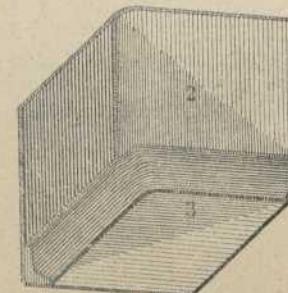
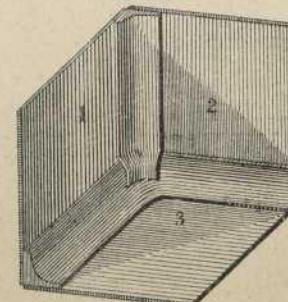


Fig. 167



Fig. 170.



CONSTRUCTOR.

Fig. 156.



Fig. 157.



Fig. 159

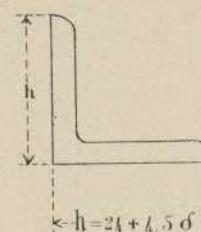


Fig. 171

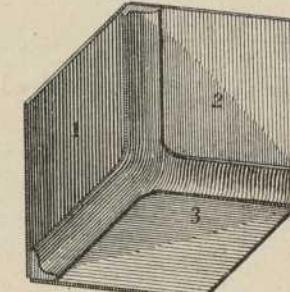


Fig. 160.

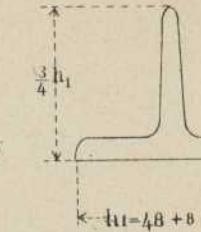


Fig. 161.

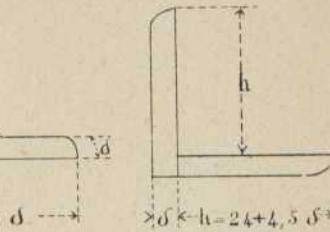


Fig. 172

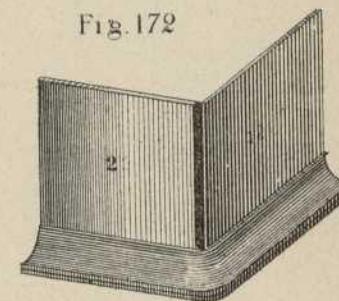


Fig. 158

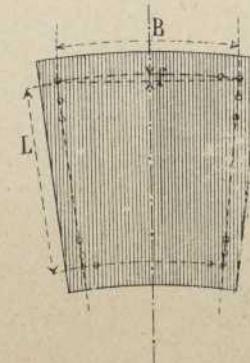


Fig. 173

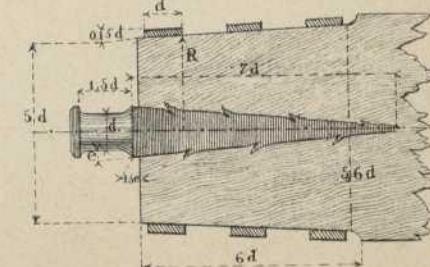
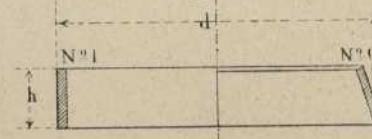


Fig. 174.



SECCION TEÓRICA.

Fig. 175.

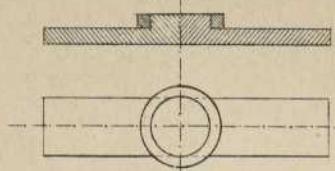


Fig. 178.

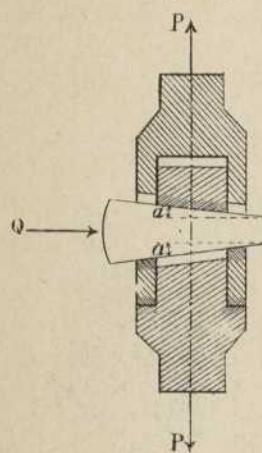


Fig. 184

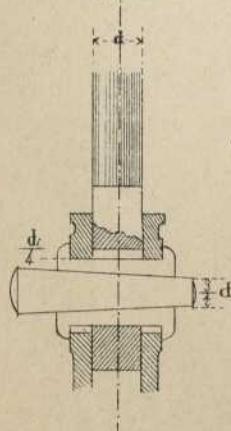


Fig. 177.

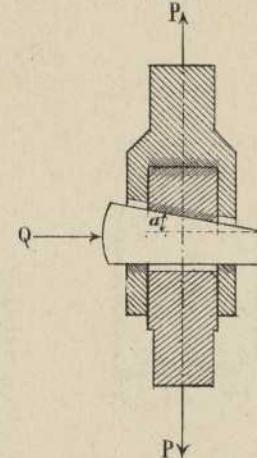
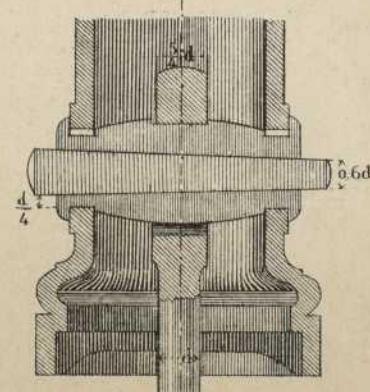


Fig. 185



CONSTRUCTOR.

Fig. 176

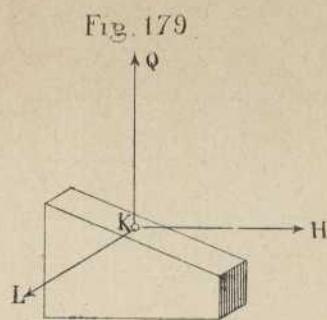
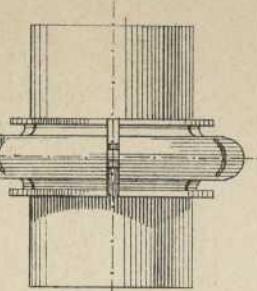
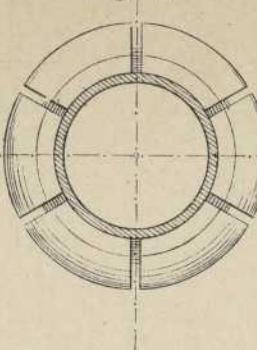


Fig. 180

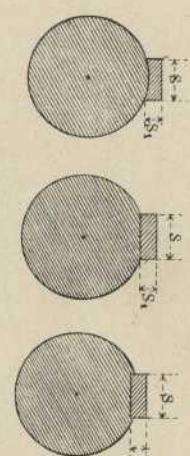


Fig. 186

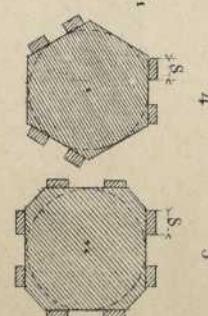


Fig. 187

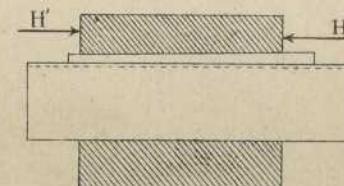


Fig. 182

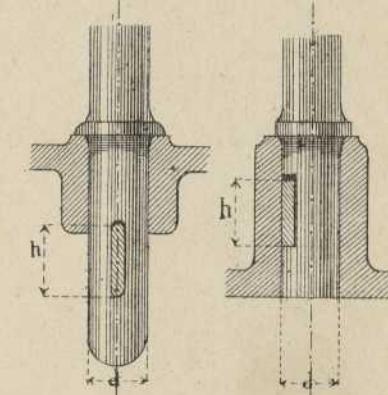


Fig. 183.

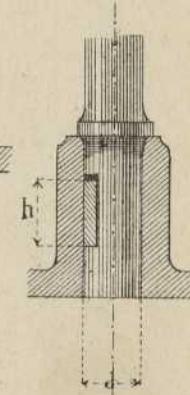
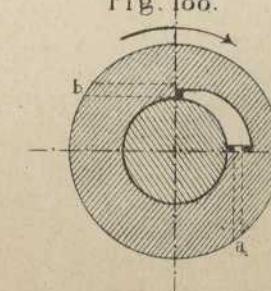


Fig. 188.



SECCION TEÓRICA.

CONSTRUCTOR

Lámina 67.^a

Fig.189.

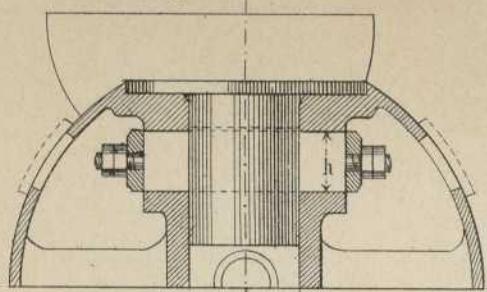


Fig.190.

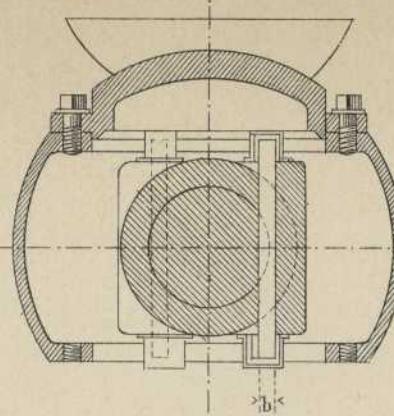


Fig.191.

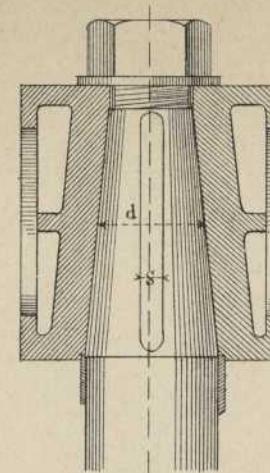


Fig.192.

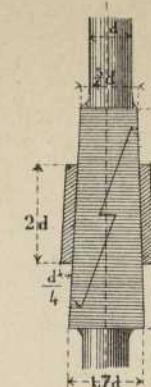


Fig.193.

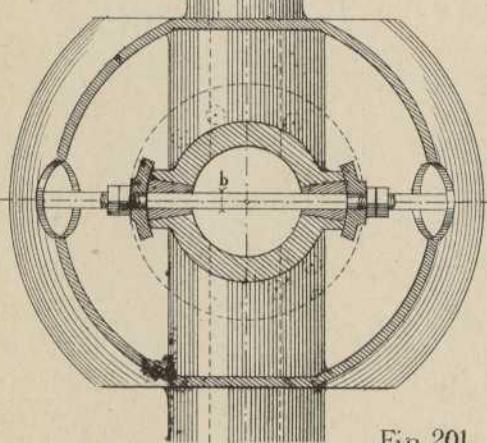
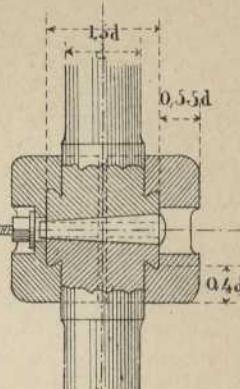


Fig.201.

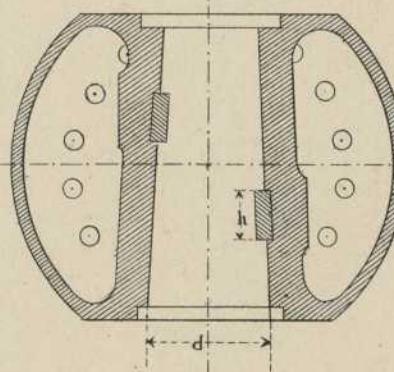


Fig.194.

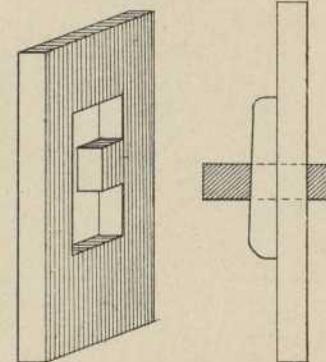


Fig.195.

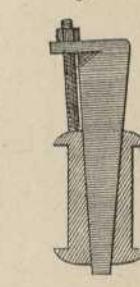


Fig.196.

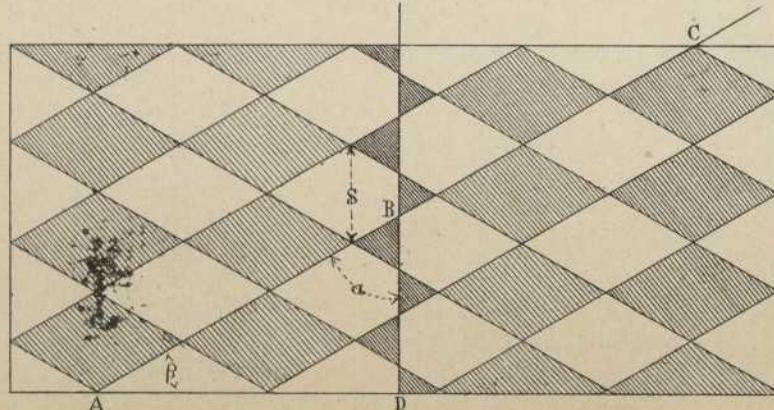


Fig.200.

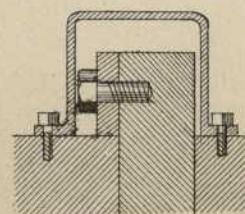


Fig.197.



Fig.198.

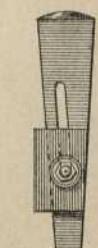


Fig.199.

J. G.

SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 68.^a

Fig. 202

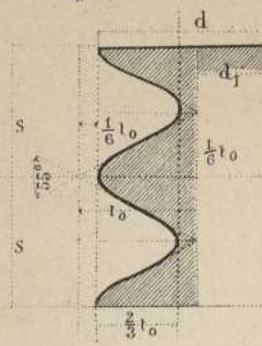


Fig. 205

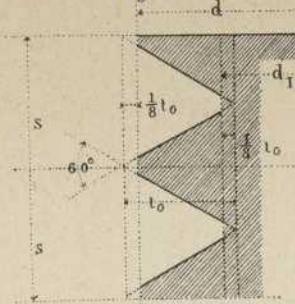


Fig. 204

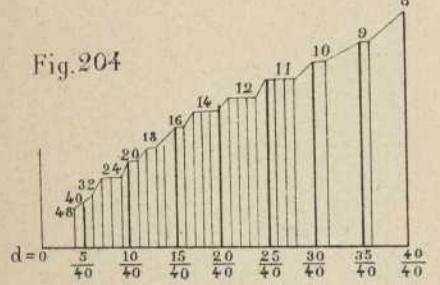


Fig. 209

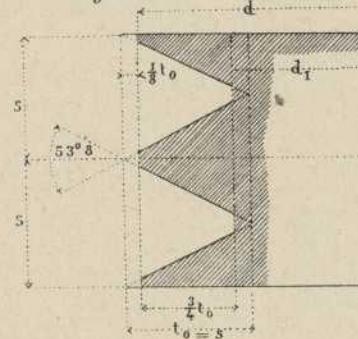
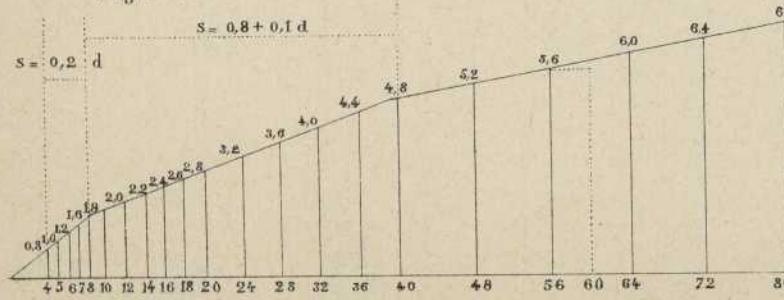
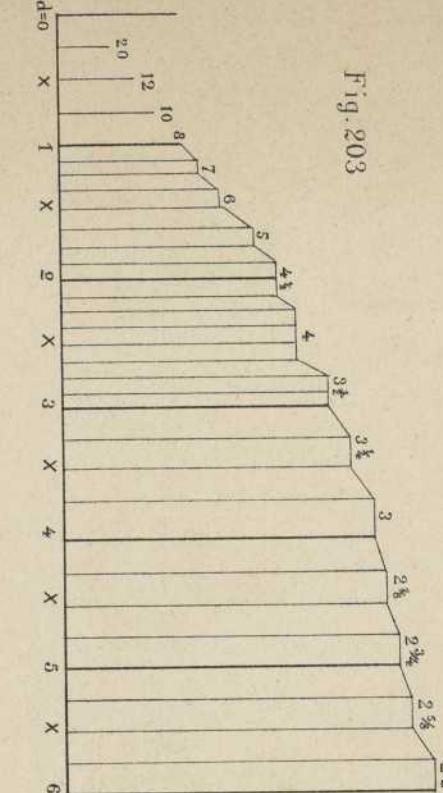


Fig. 208



$d =$	6	8	10	12	14	16	18	20	24	28	32	36	40	48	56	64	72	80
$s =$	1,0	1,2	1,4	1,6	1,8	2,0	2,2	2,4	2,8	3,2	3,6	4,0	4,4	4,8	5,2	5,6	6,0	6,4

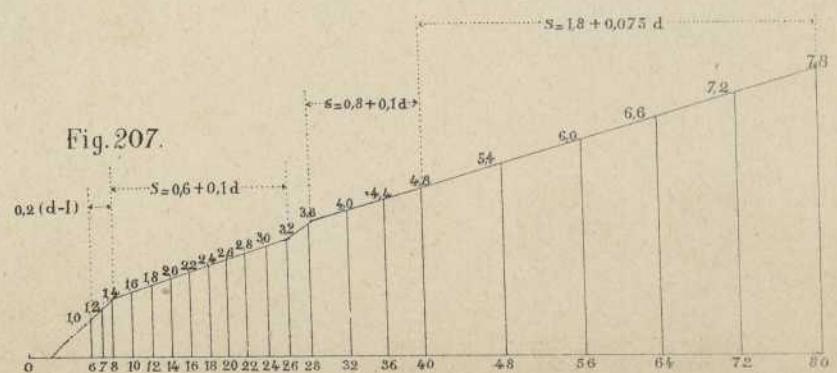


$d =$	4	5	6	7	8	10	12	14	16	18	20	24	28	32	36	40	48	56	64	72	80
$s =$	0,8	1,0	1,2	1,4	1,6	1,8	2,0	2,2	2,4	2,6	2,8	3,2	3,6	4,0	4,4	4,8	5,2	5,6	6,0	6,4	7,8

Fig. 206



$s = 2,4 + 0,05 d$



$d =$	6	7	8	10	12	14	16	18	20	22	24	26	28	32	38	40	44	48	54	60	66	72	78
$s =$	1,0	1,2	1,4	1,6	1,8	2,0	2,2	2,4	2,6	2,8	3,0	3,2	3,6	4,0	4,4	4,8	5,2	5,6	6,0	6,6	7,2	7,8	

SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 69.^a

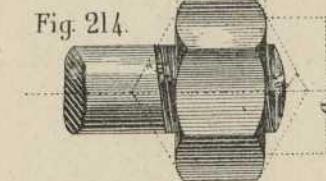
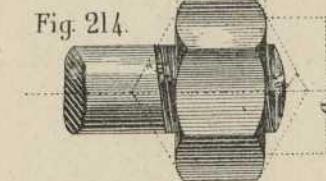
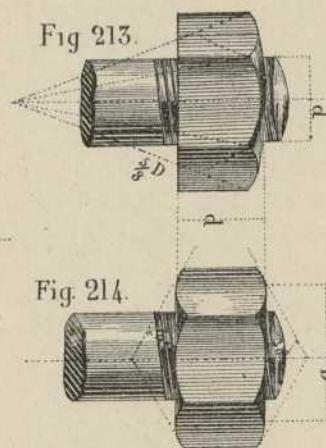
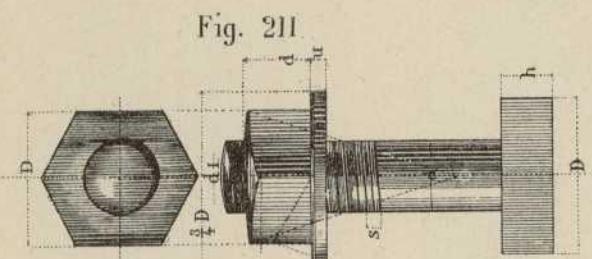
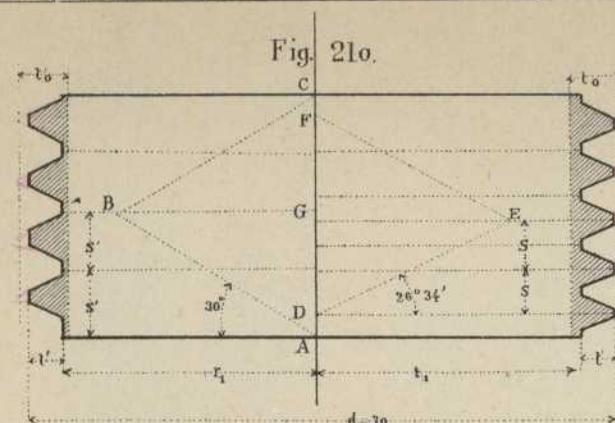


Fig. 216.

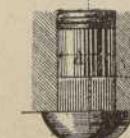
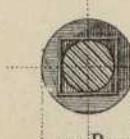


Fig. 217.



Fig. 218.

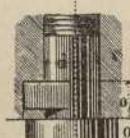
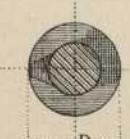


Fig. 219.

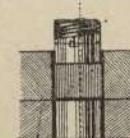
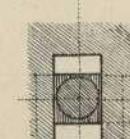


Fig. 220.

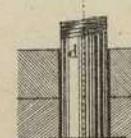
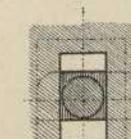
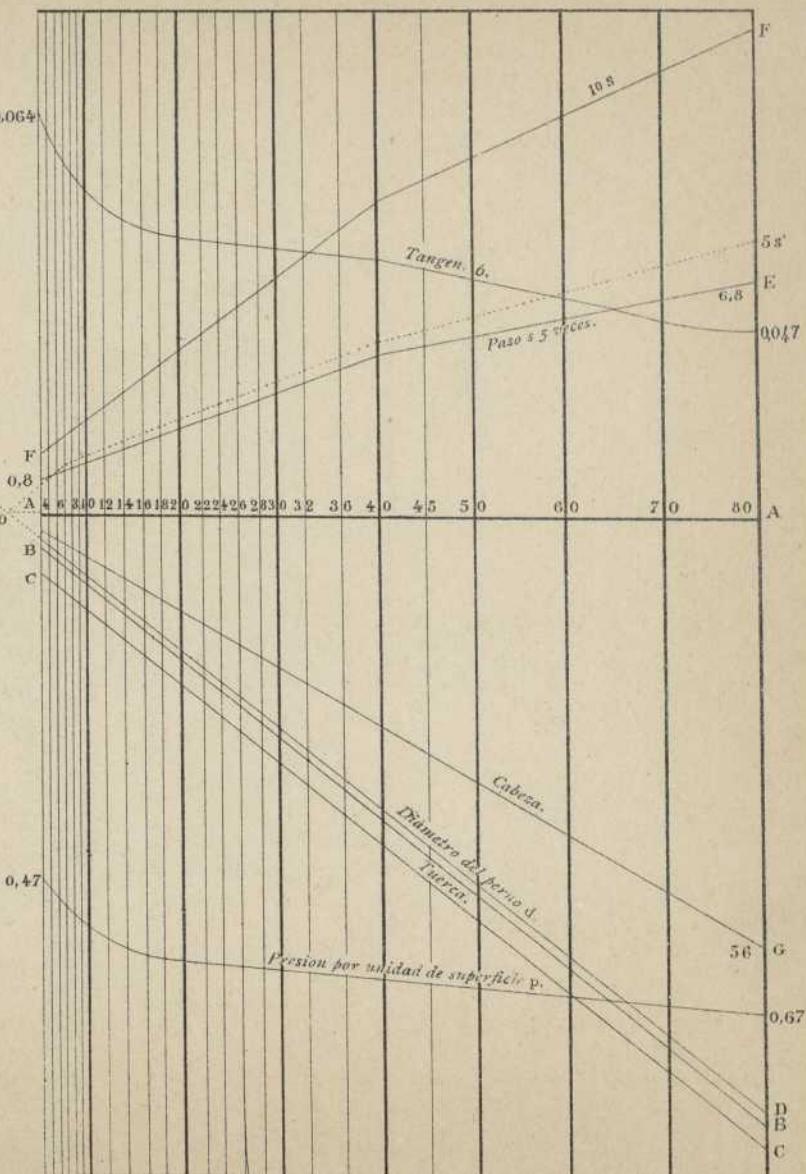
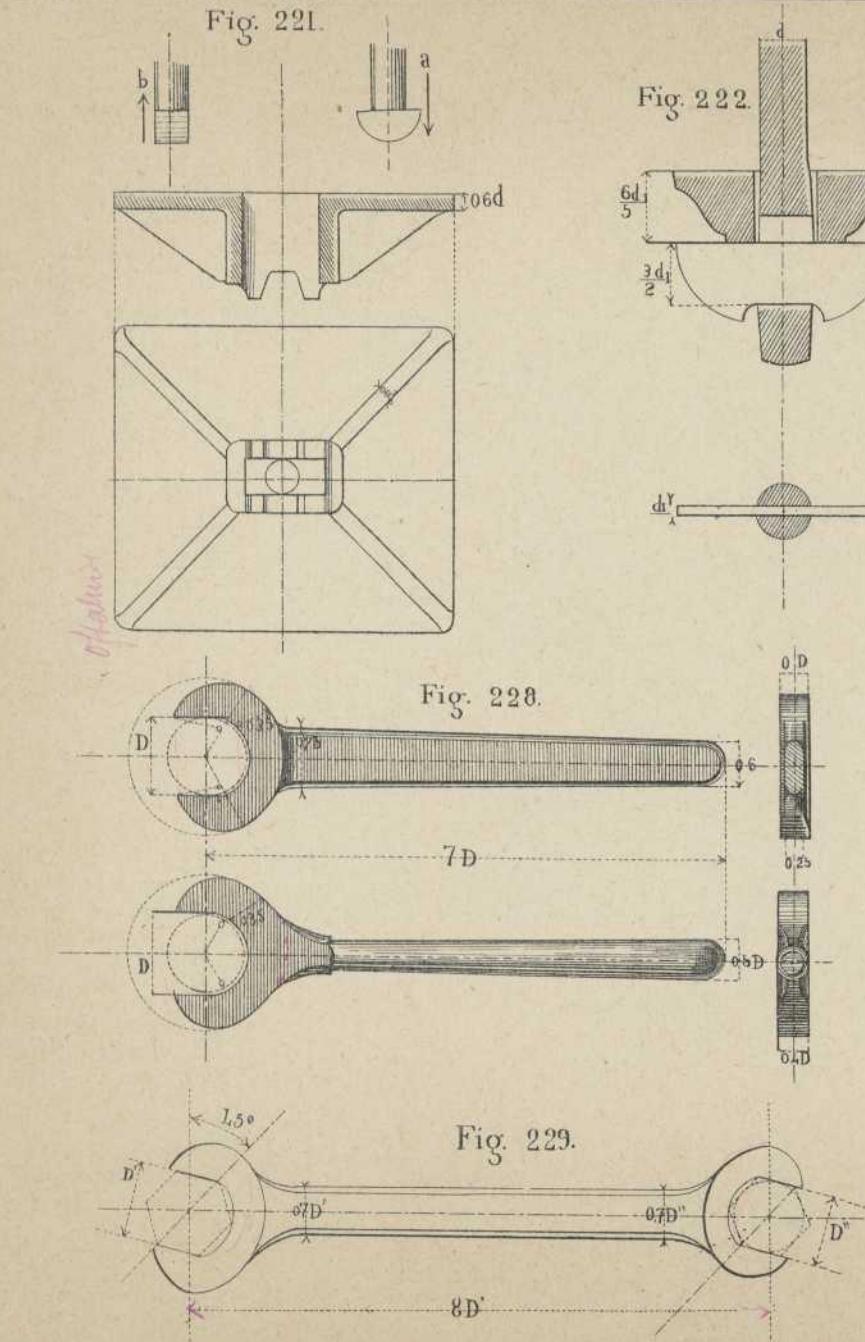


Fig. 215.



SECCION TEÓRICA.



CONSTRUCTOR.

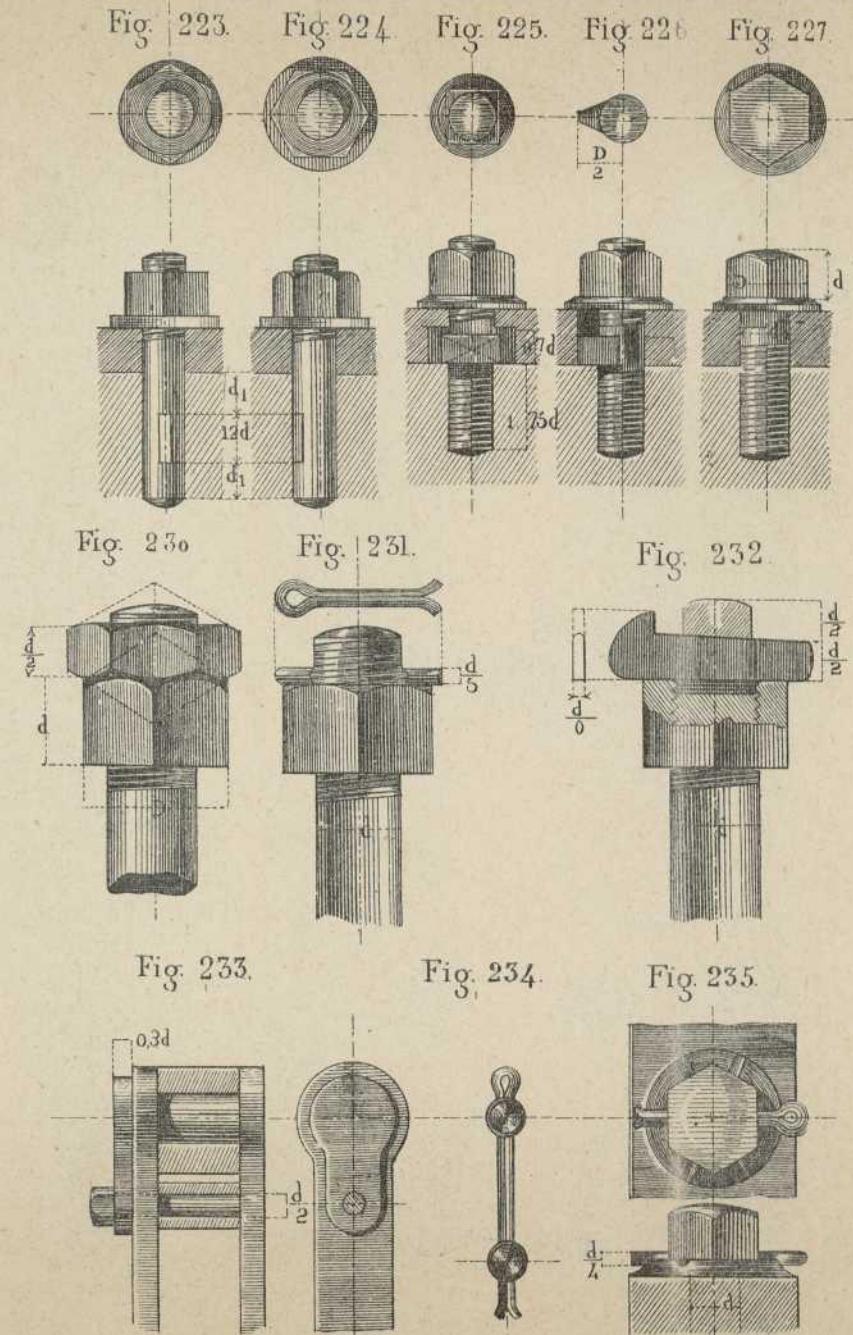


Lámina 70.^a

SECCION TEÓRICA.

Fig. 236.

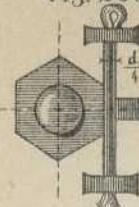


Fig. 237.

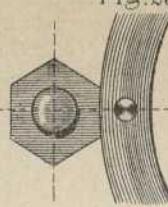
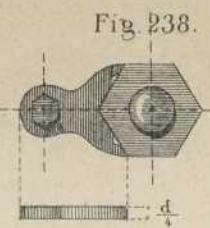


Fig. 238.



CONSTRUCTOR.

Lámina 71.^a

Fig. 239.

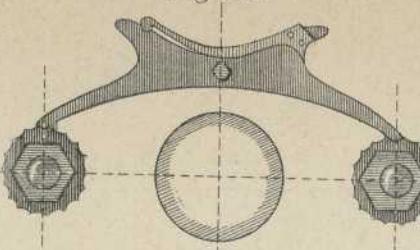


Fig. 240.

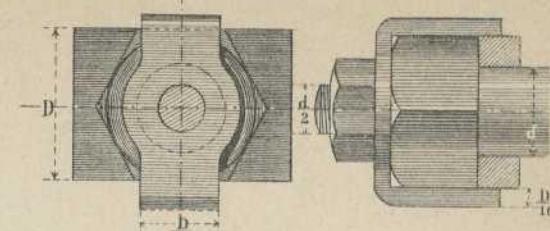


Fig. 241.

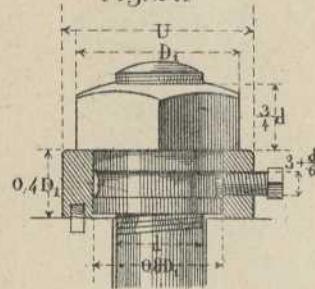


Fig. 243.

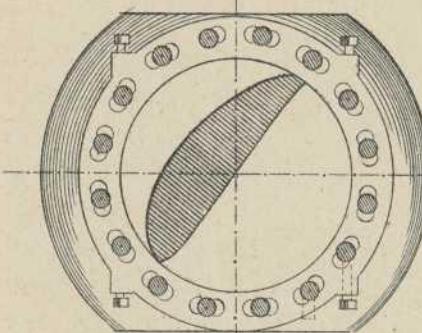


Fig. 245.

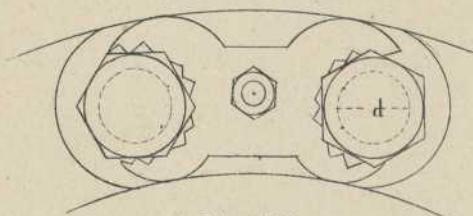


Fig. 246.

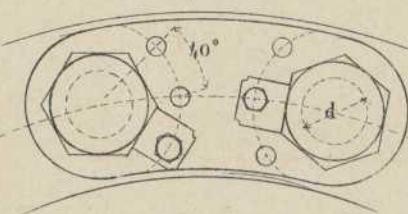


Fig. 249.

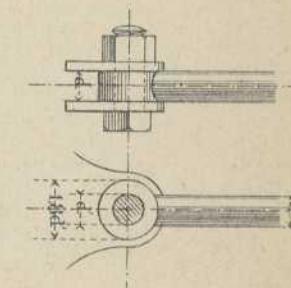


Fig. 242.

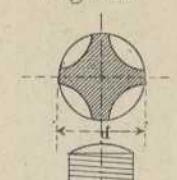


Fig. 244.

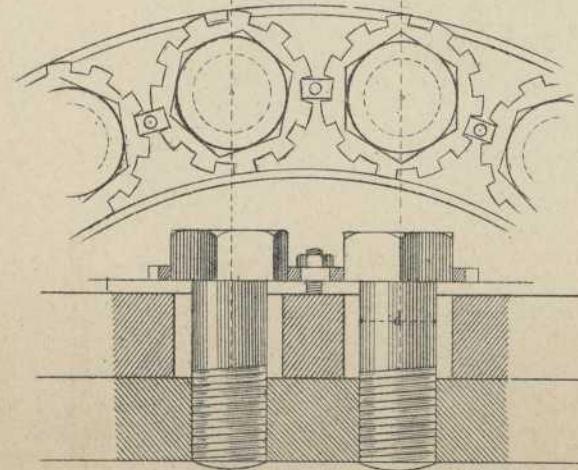


Fig. 247.

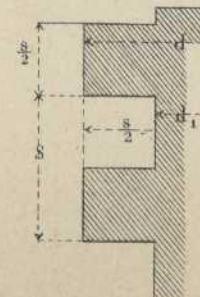


Fig. 248.

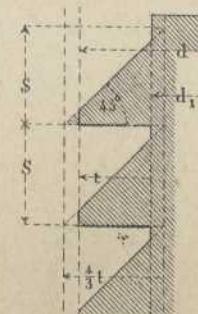
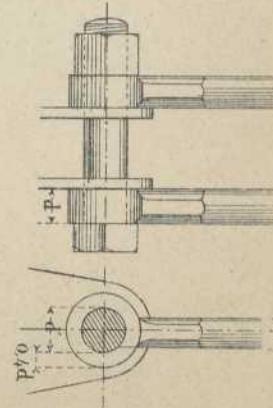


Fig. 250.



J. G.

SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 72.^a

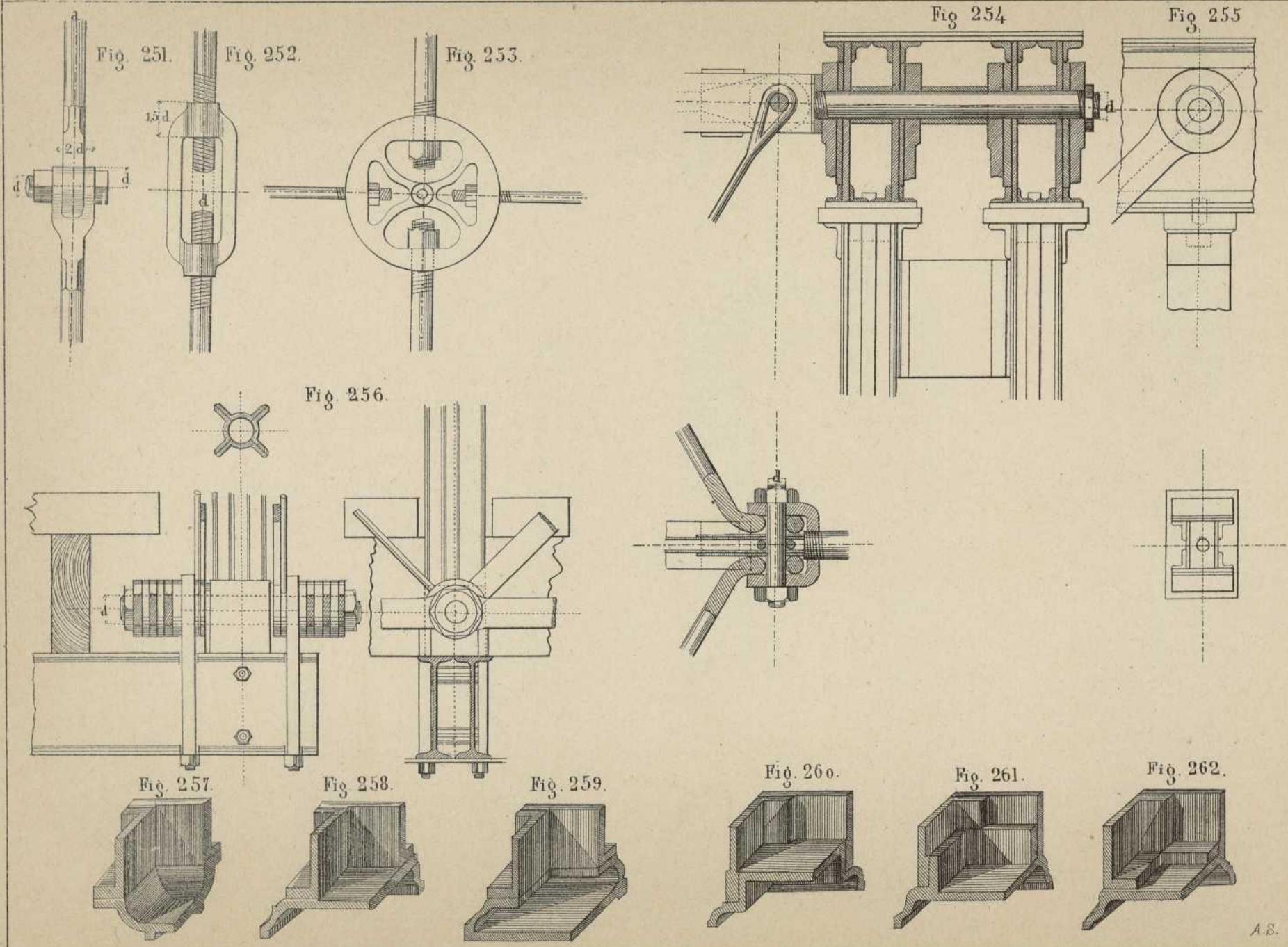


Fig. 263.

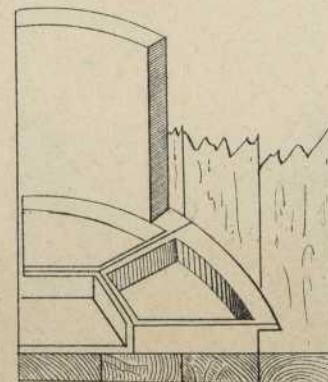
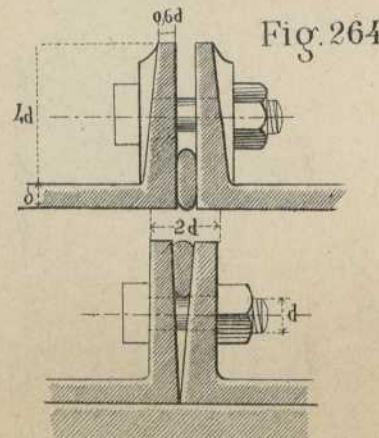
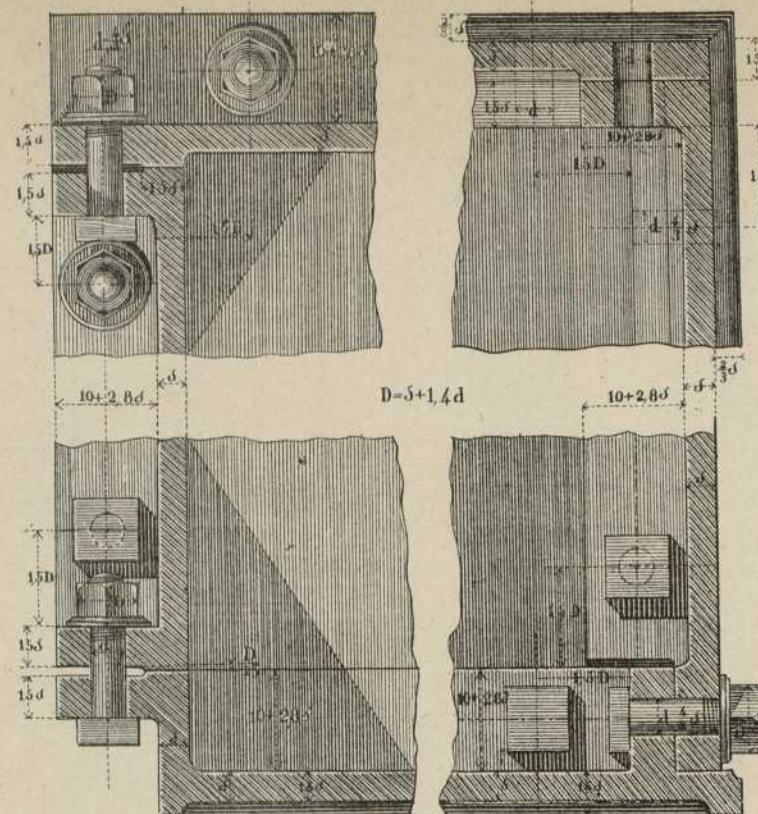


Fig. 265

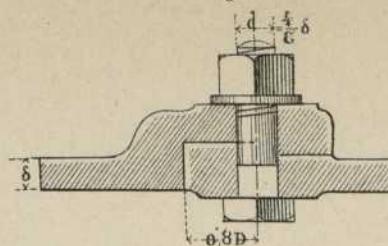


Fig. 267.

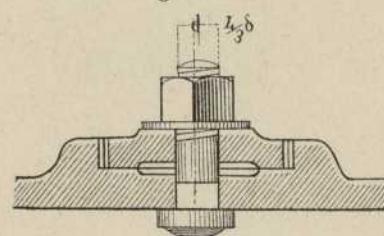


Fig. 266.

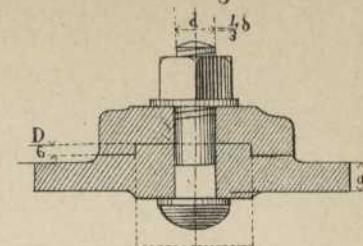
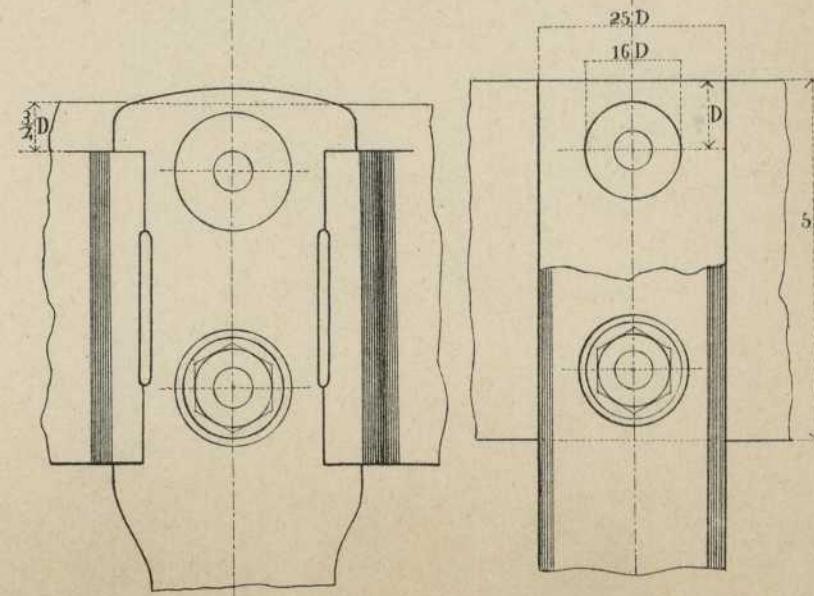
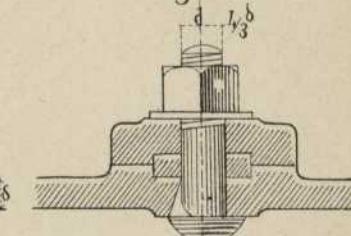


Fig. 268.



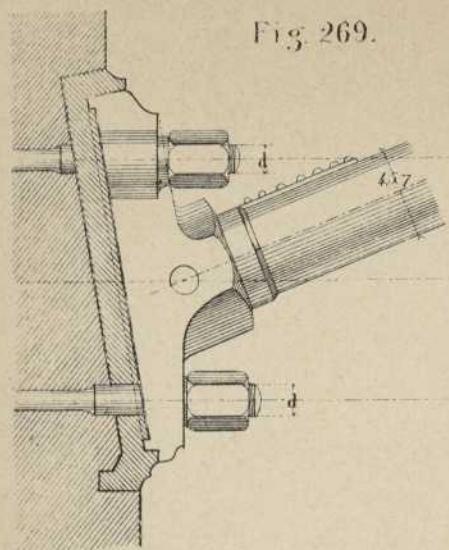


Fig. 269.

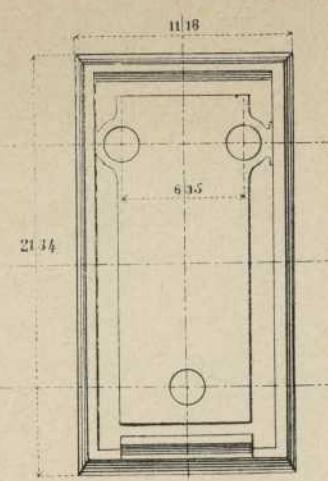


Fig. 270.

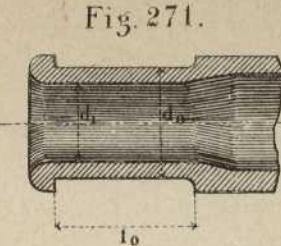


Fig. 271.

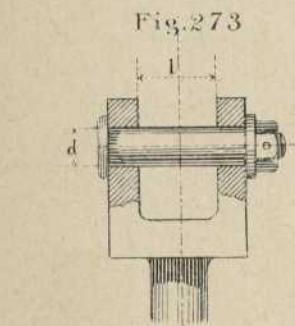


Fig. 273.

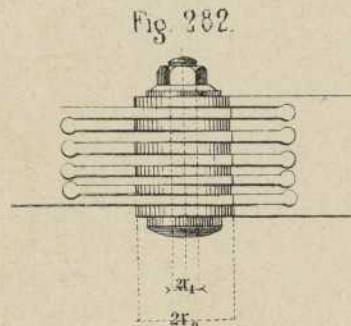


Fig. 272.

Fig. 275

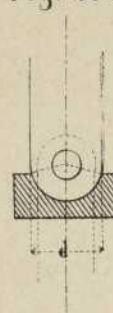


Fig. 276.

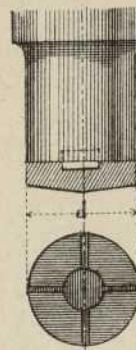


Fig. 274.

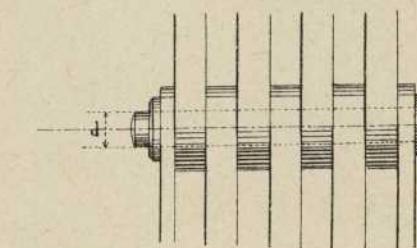


Fig. 277.

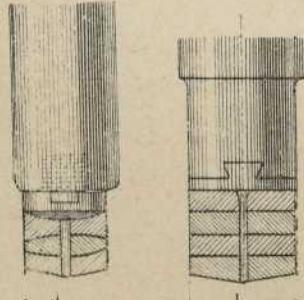


Fig. 278.

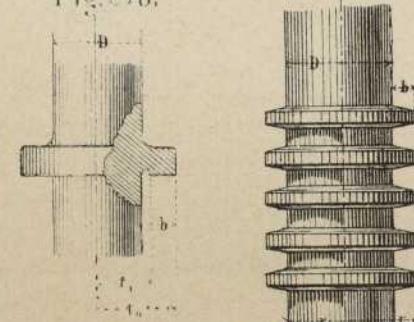


Fig. 279.

Fig. 280.

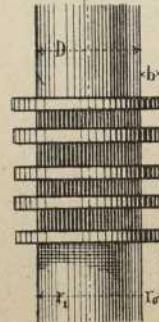


Fig. 281.

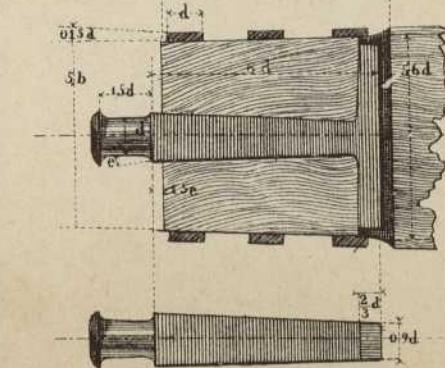


Fig. 283.

SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 75.^o

Fig. 284.

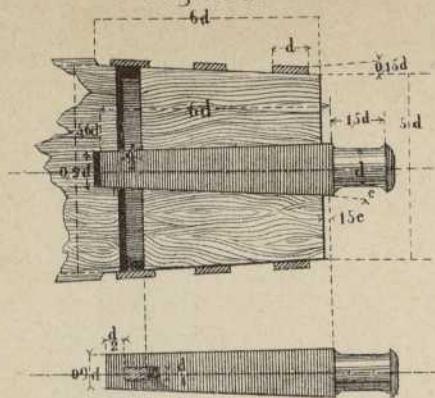


Fig. 285.

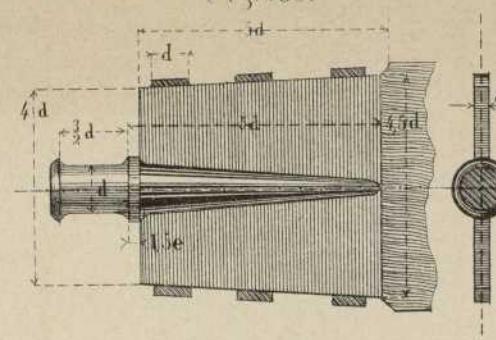


Fig. 286

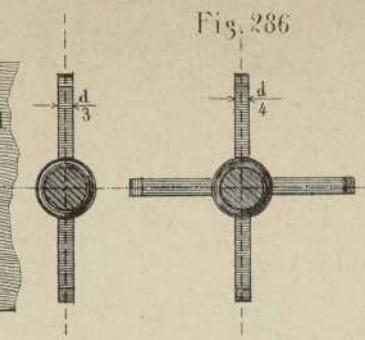


Fig. 289.

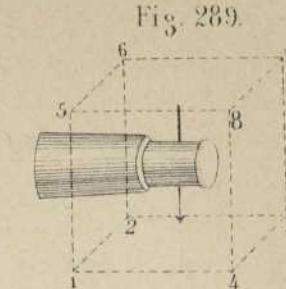


Fig. 288.

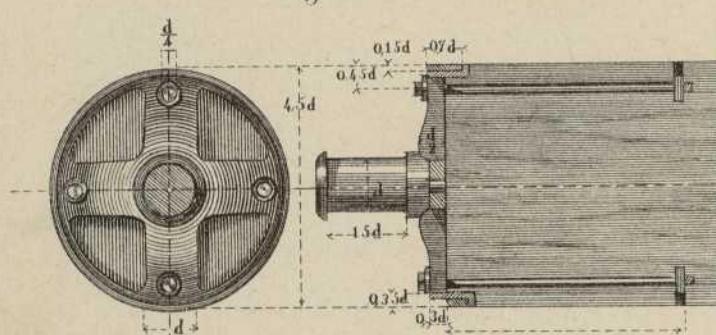


Fig. 290

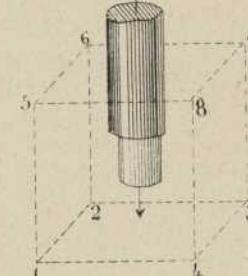


Fig. 291

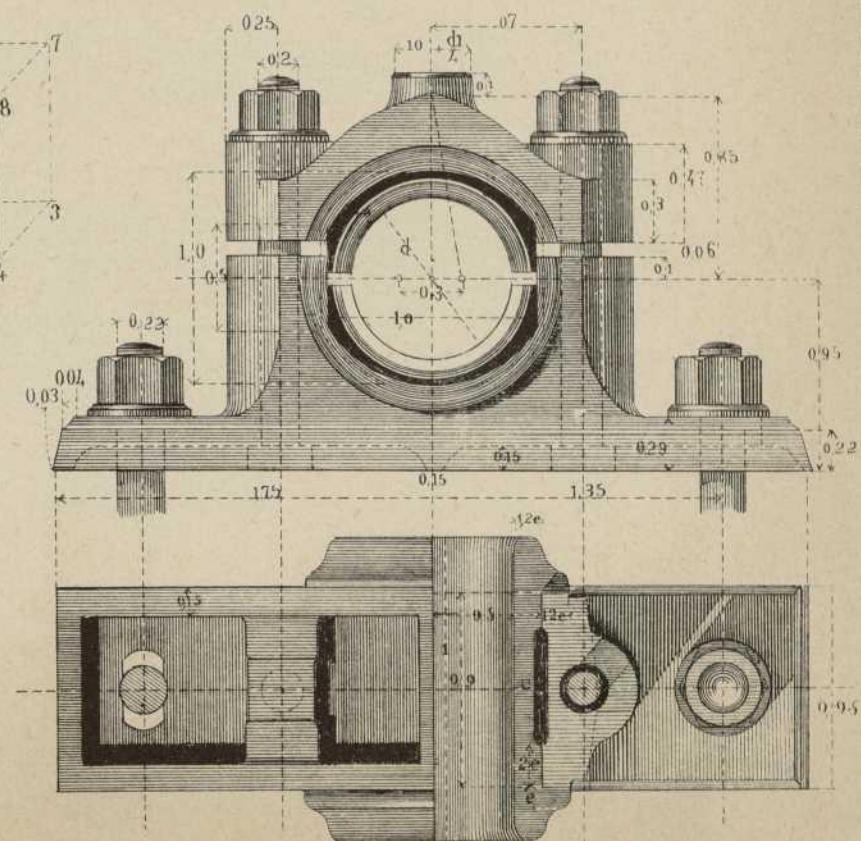
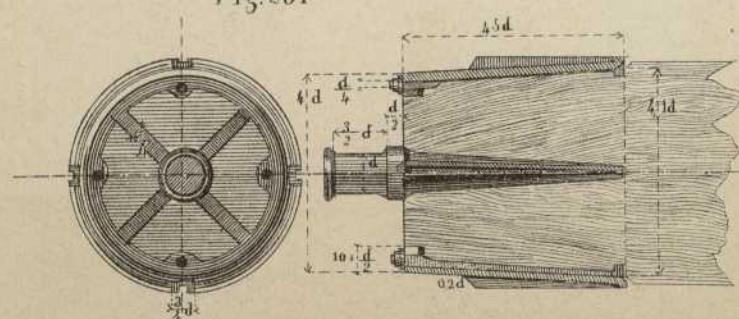


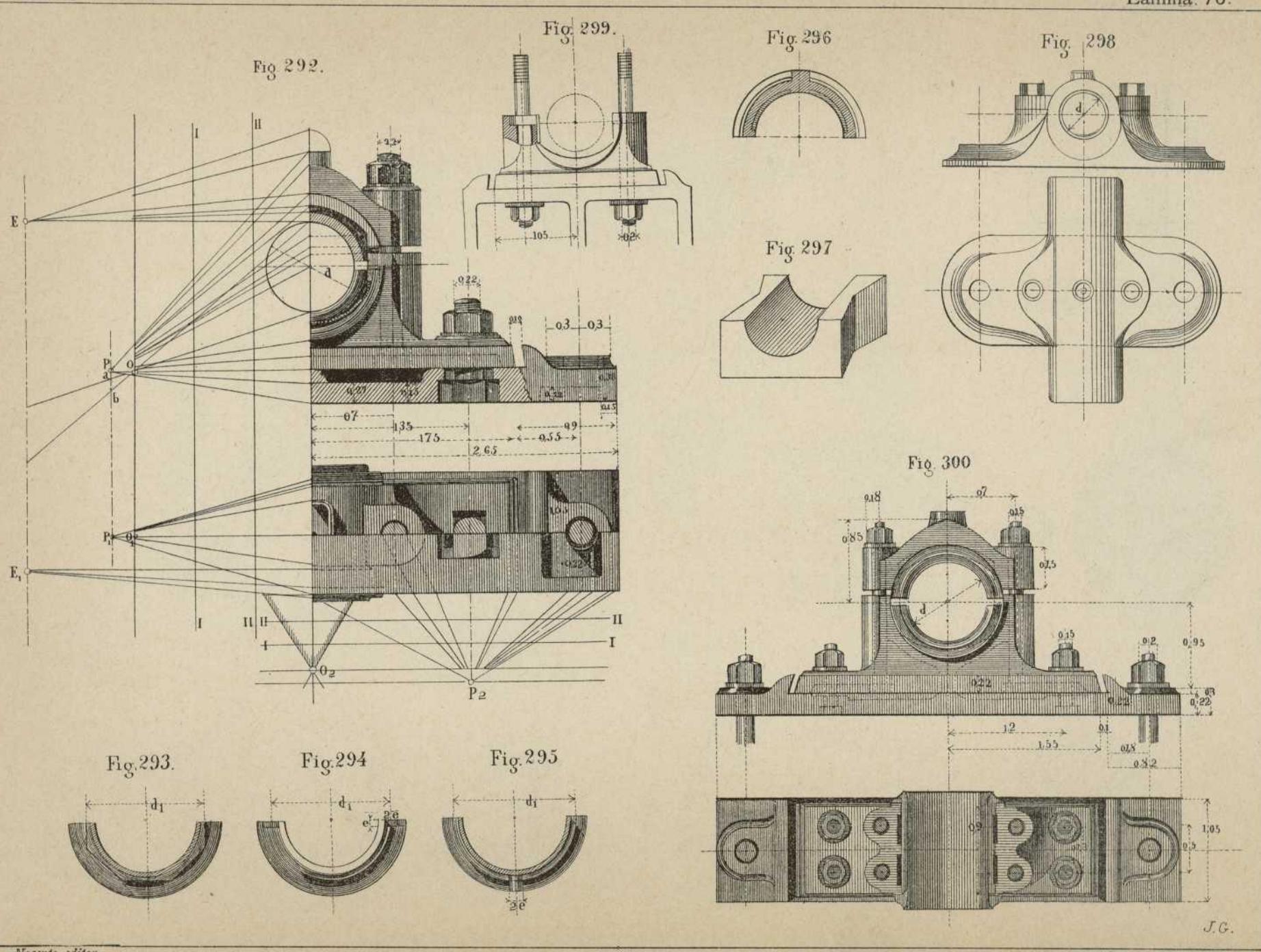
Fig. 287

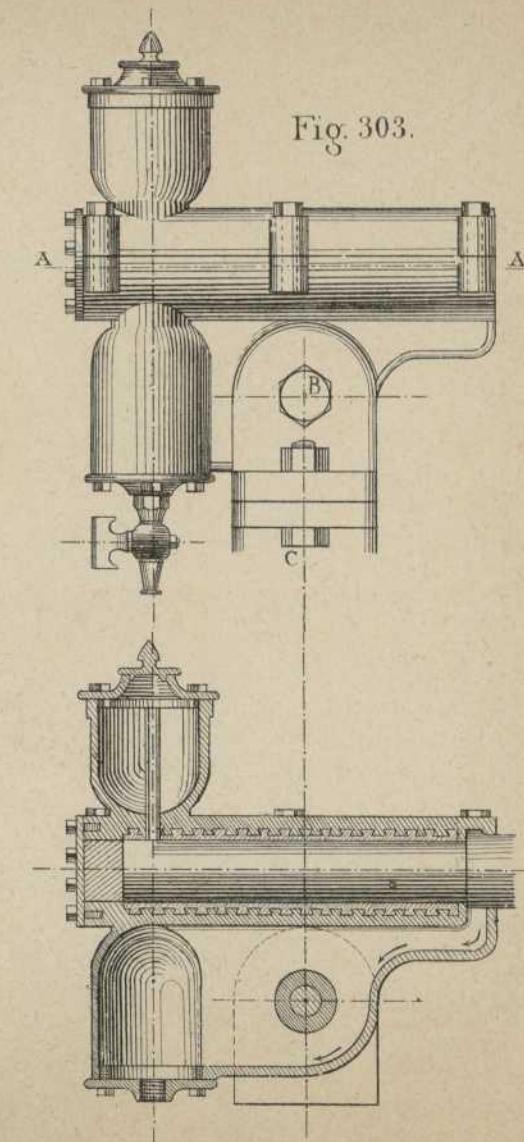
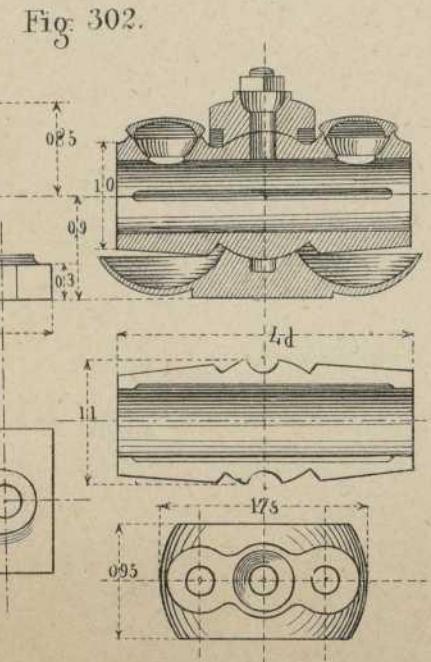
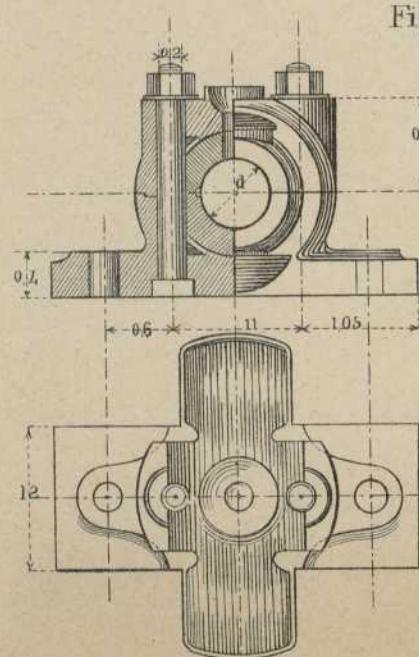
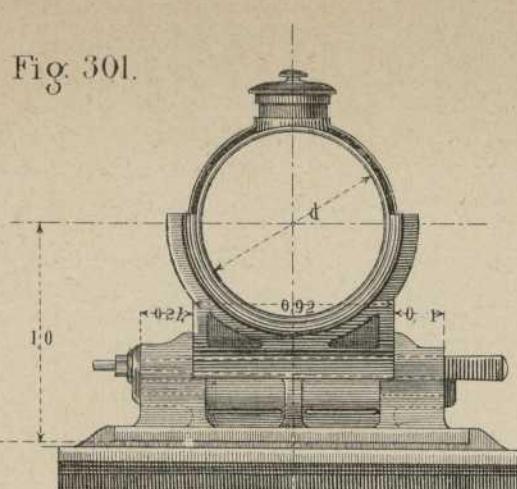
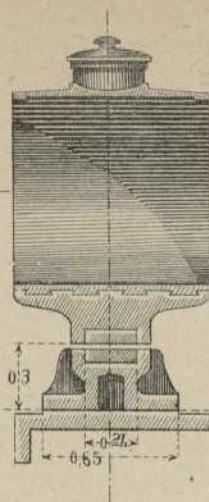


SECCION TEÓRICA.

CONSTRUCTOR.

Lámina. 76.^a





SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 78.^a

Fig. 306.

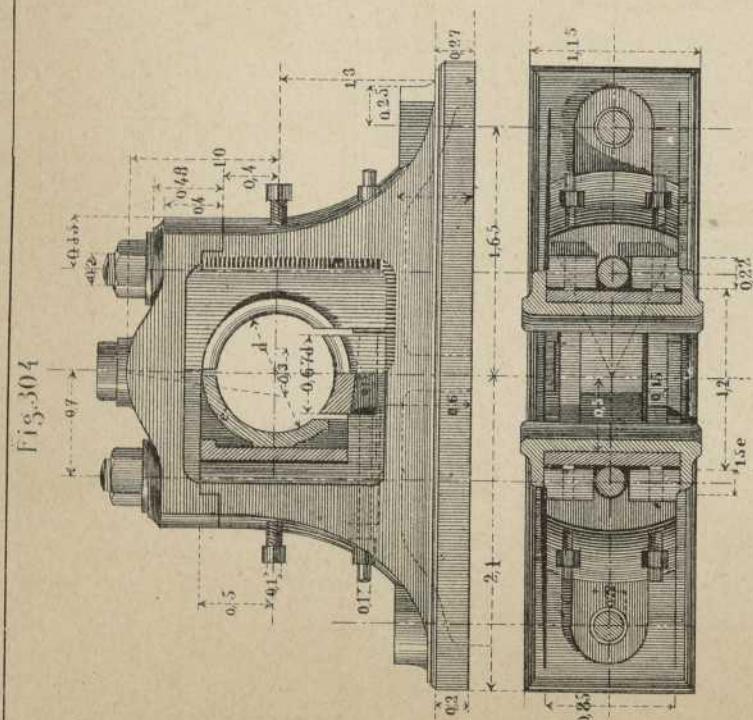
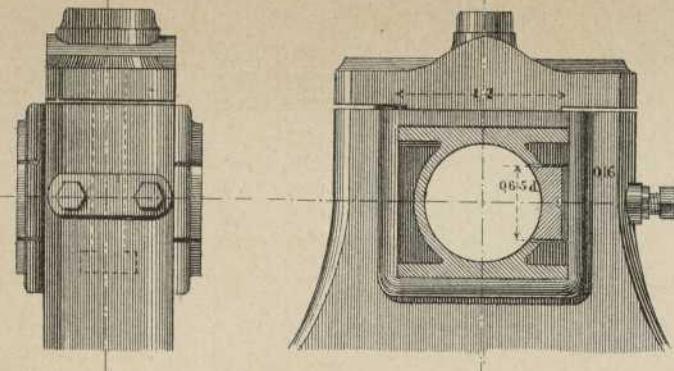


Fig. 307.

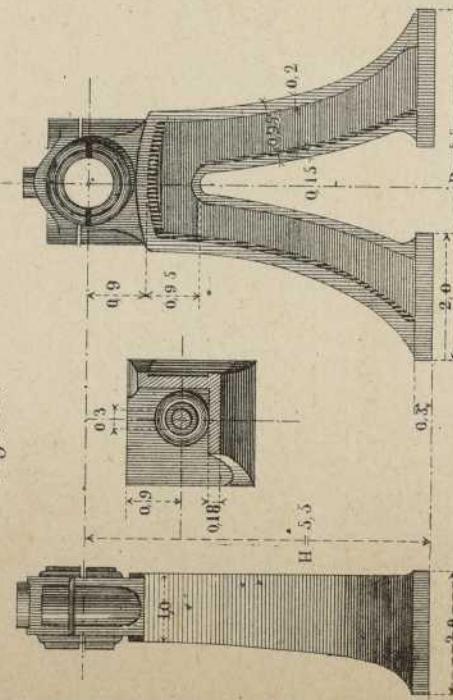


Fig. 308.

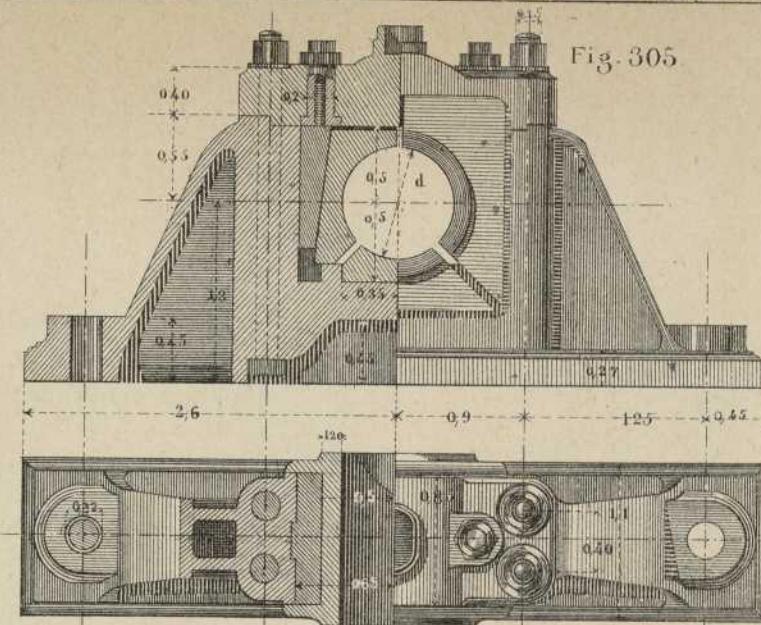
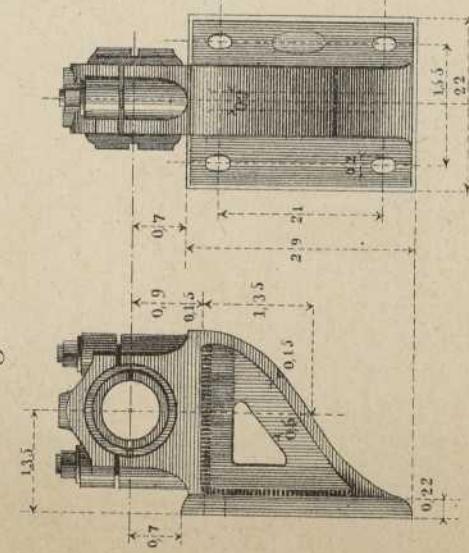


Fig. 309.

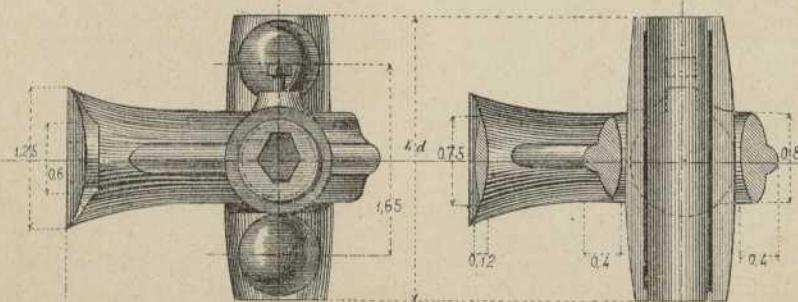
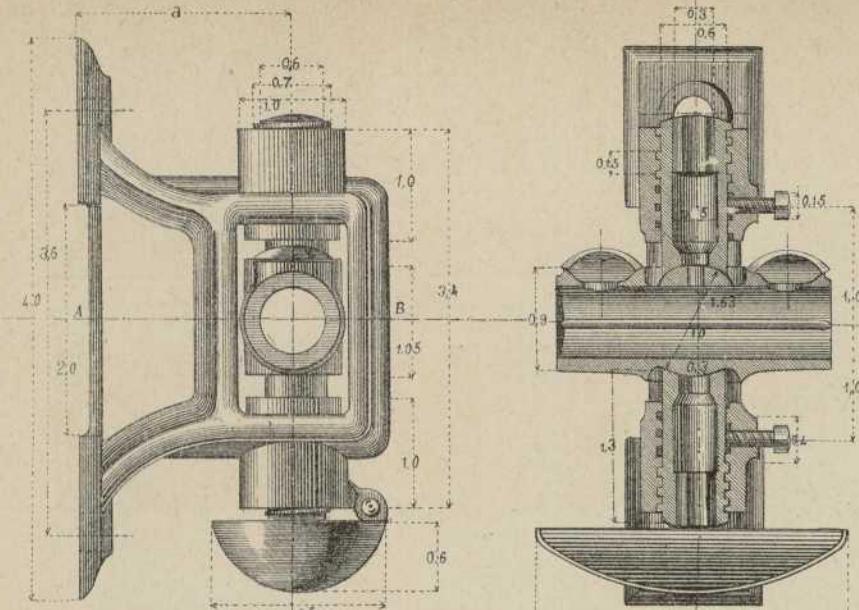


Fig. 312

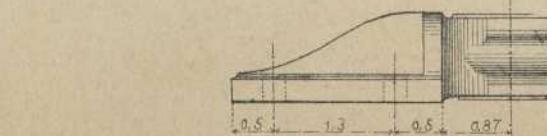


Fig. 310.

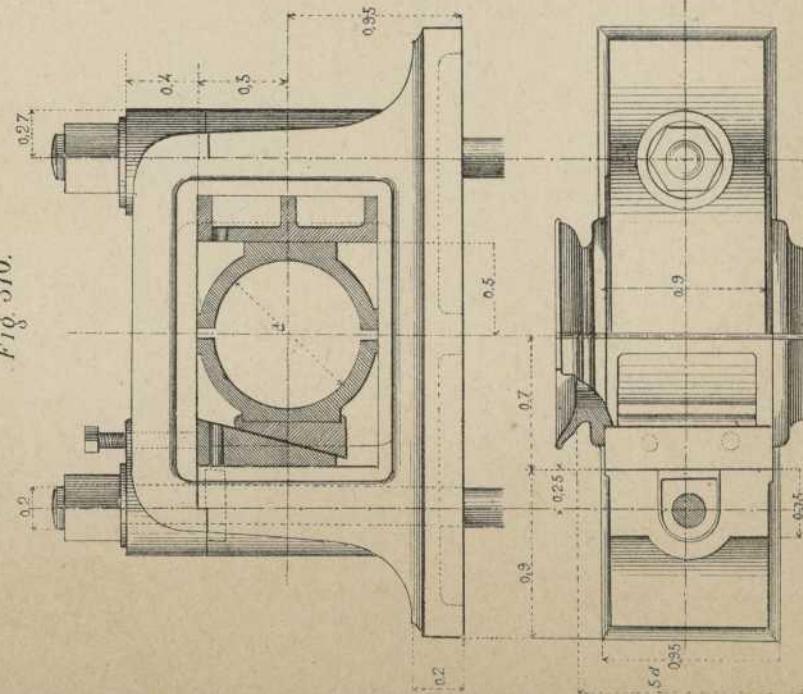
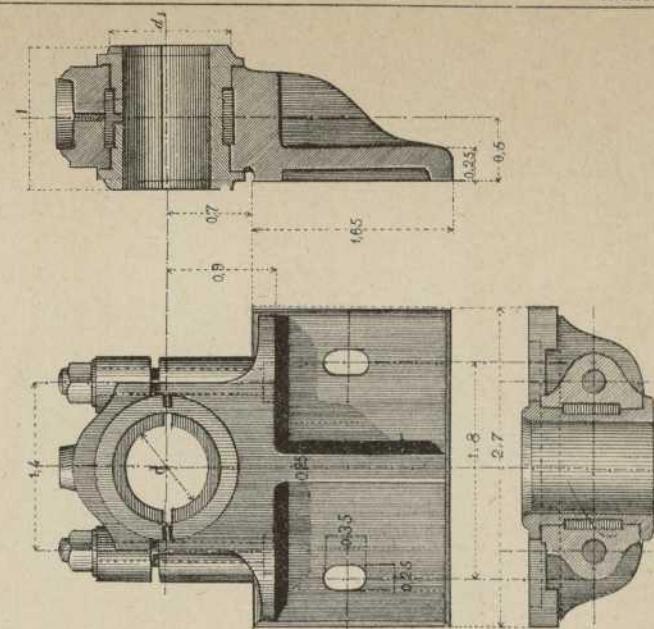


Fig. 311.



SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 80.^a

Fig. 313

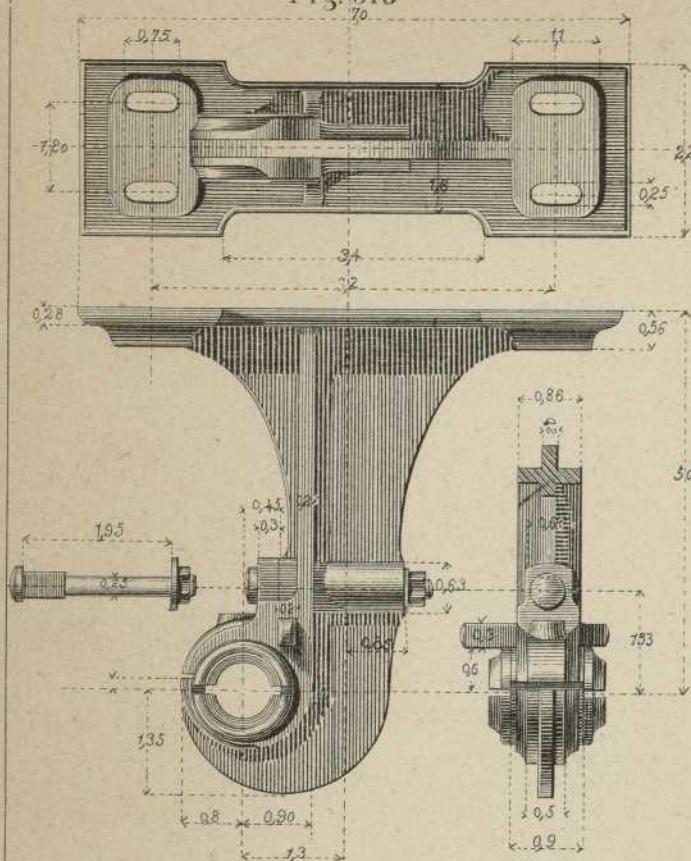


Fig. 314

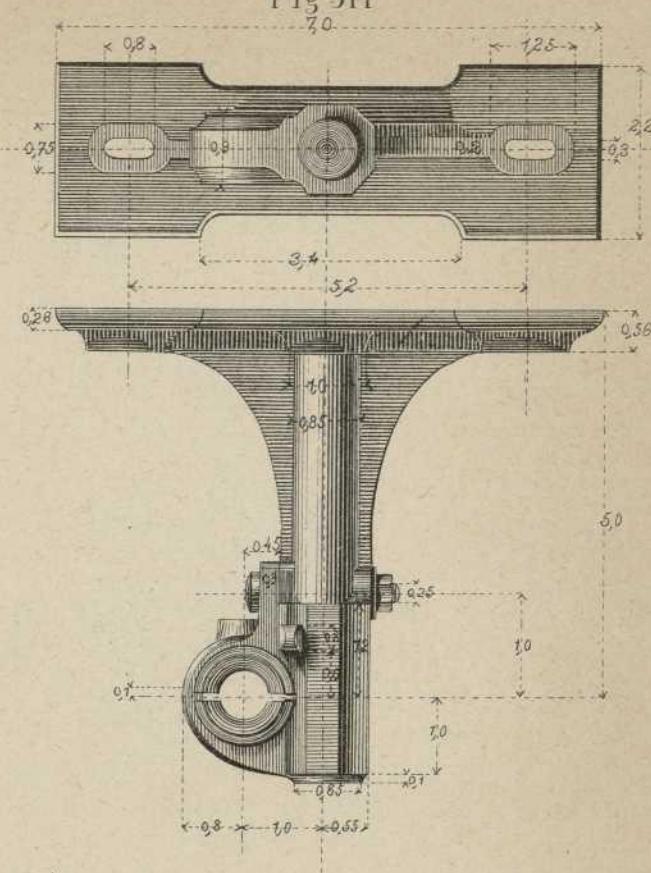


Fig. 315

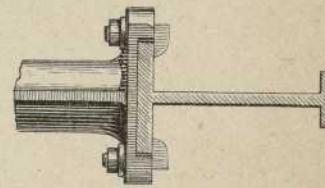


Fig. 316.

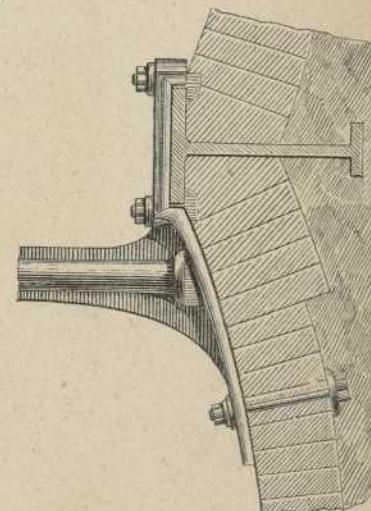
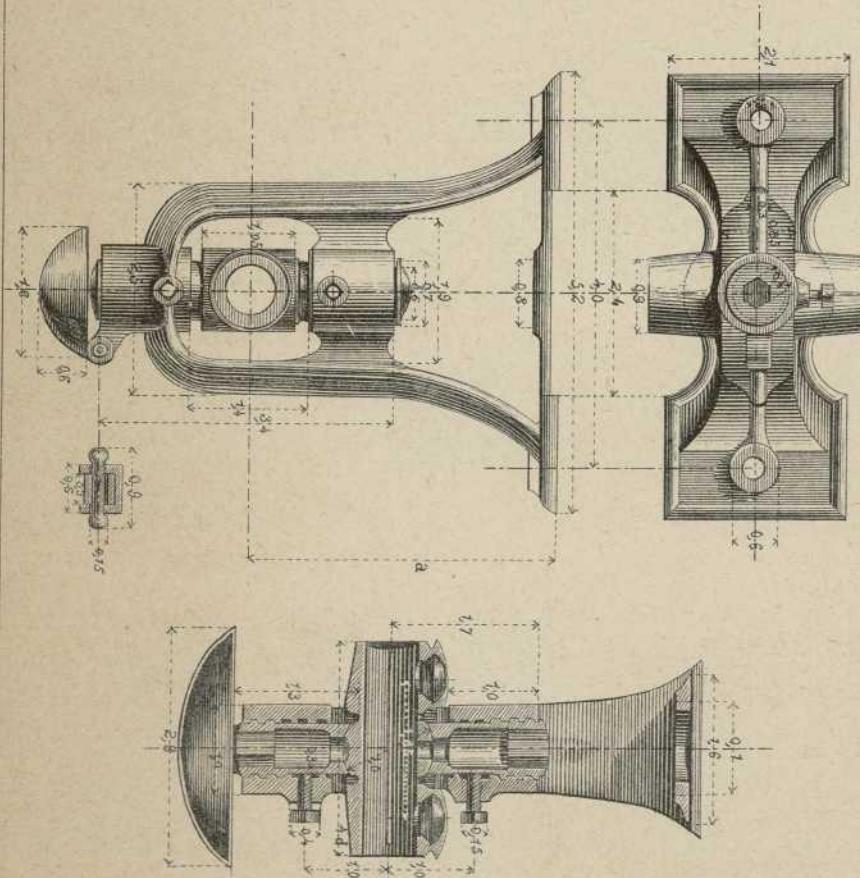


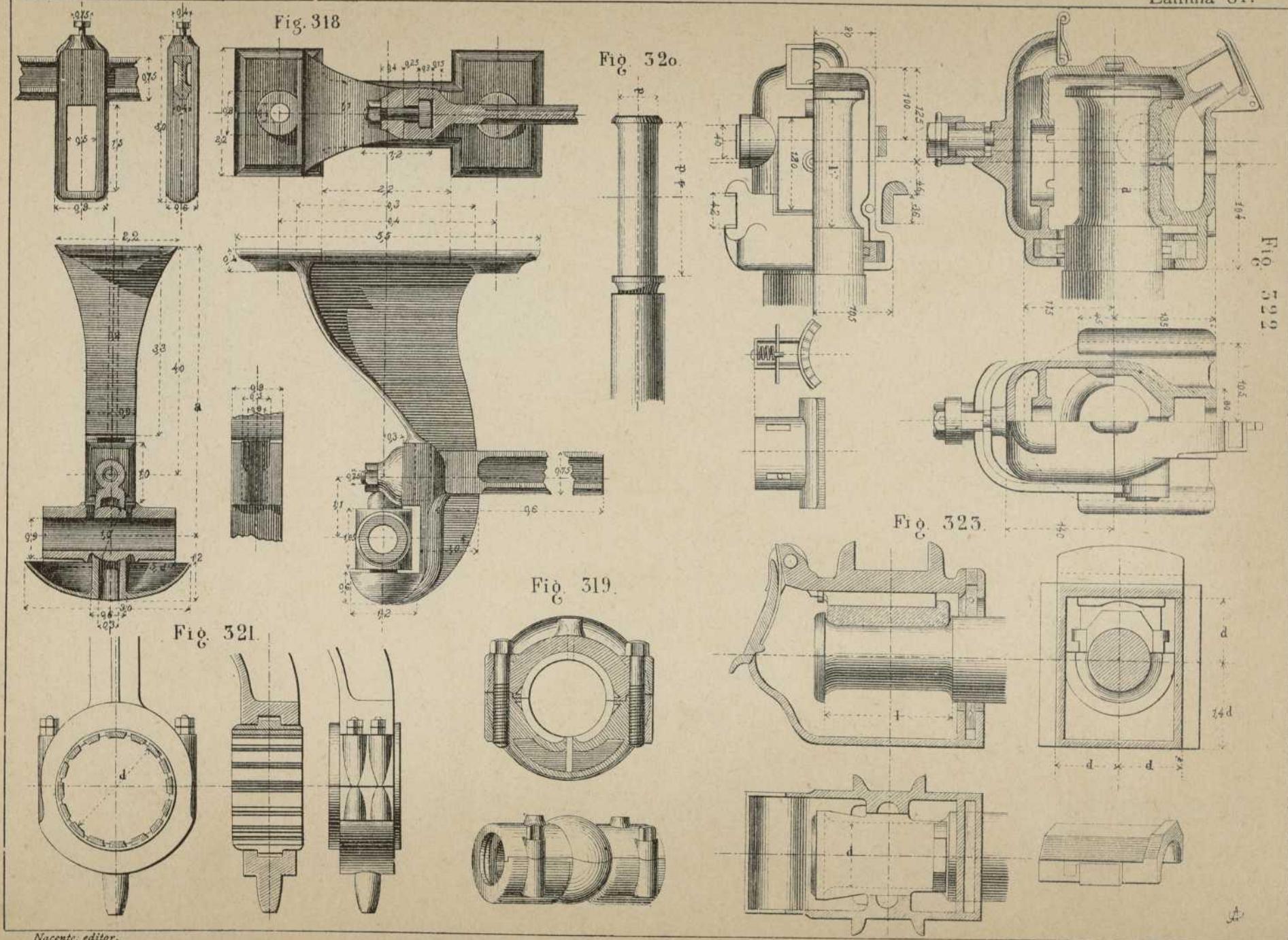
Fig. 317.



SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 81^a



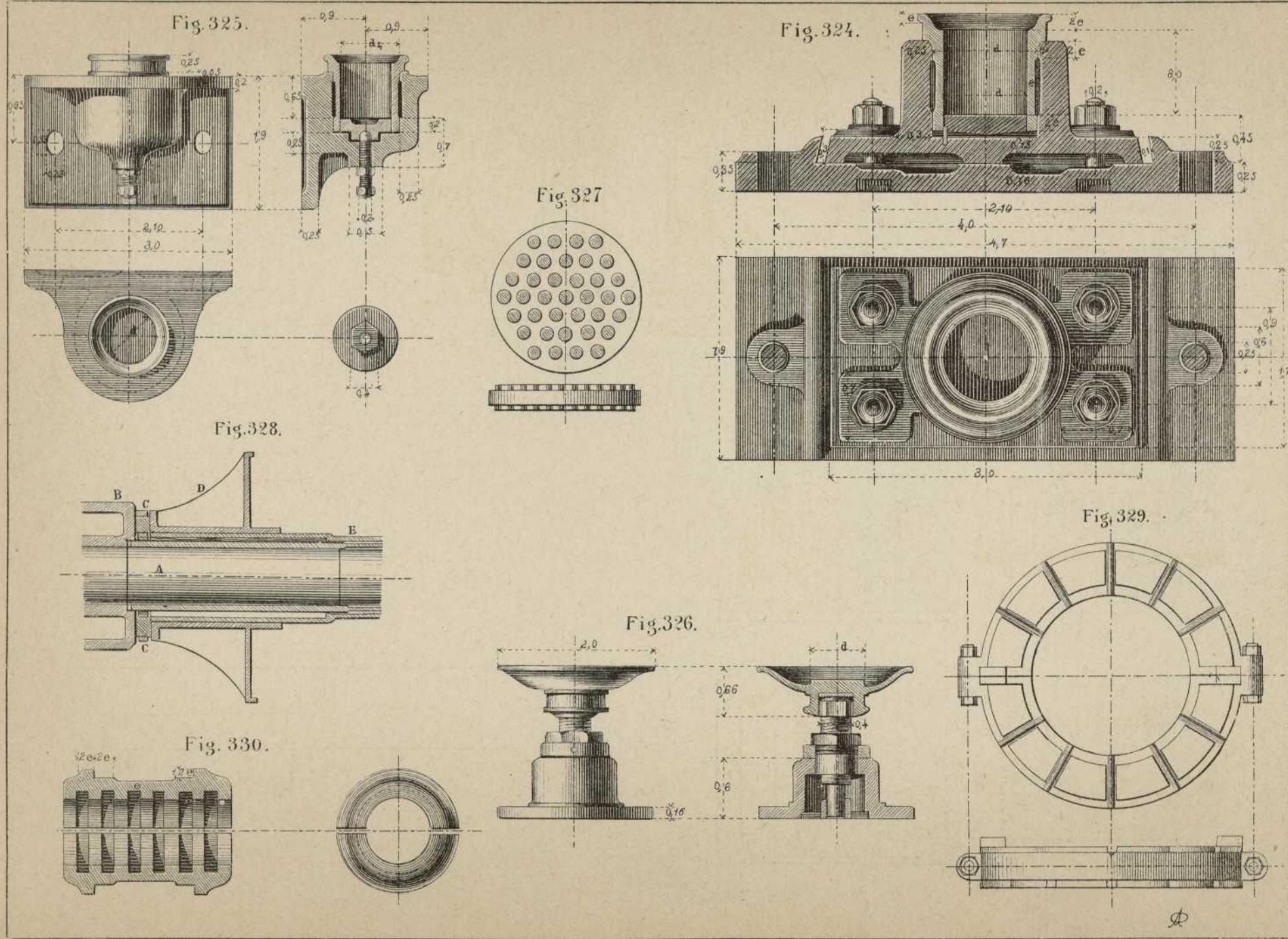


Fig. 331.

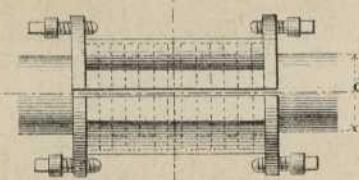


Fig. 332.

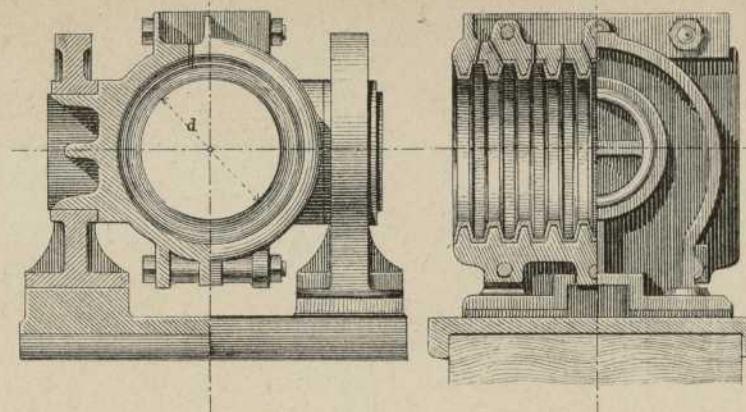


Fig. 333.

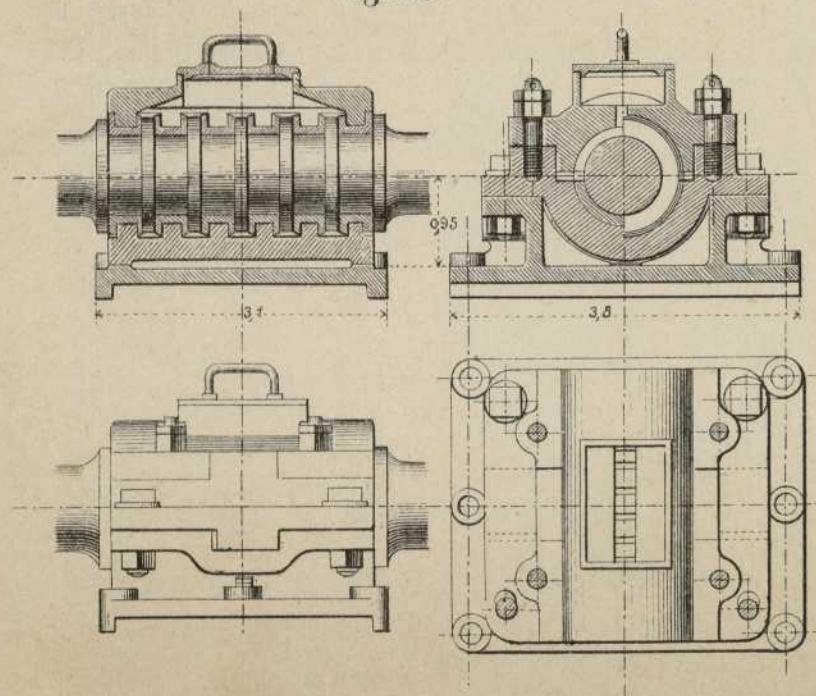


Fig. 334

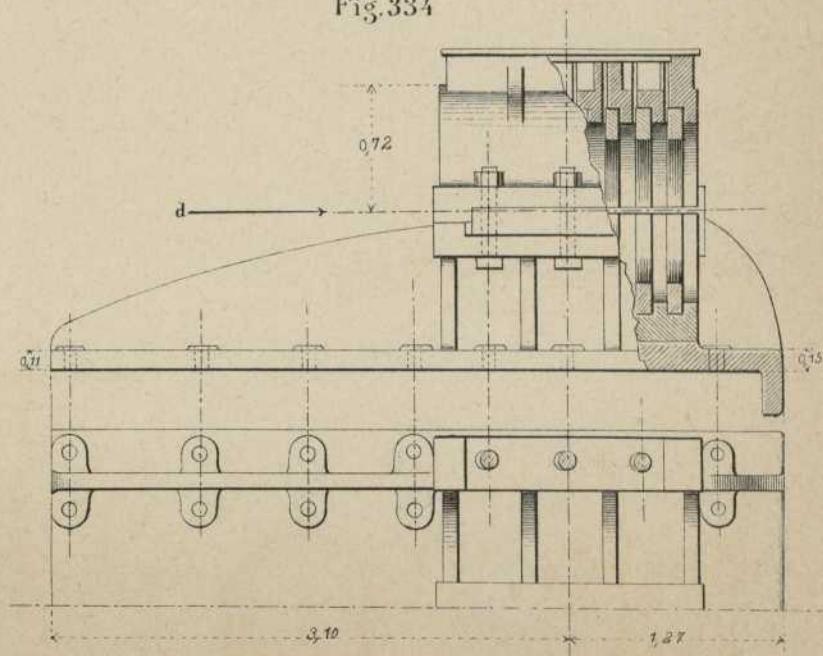
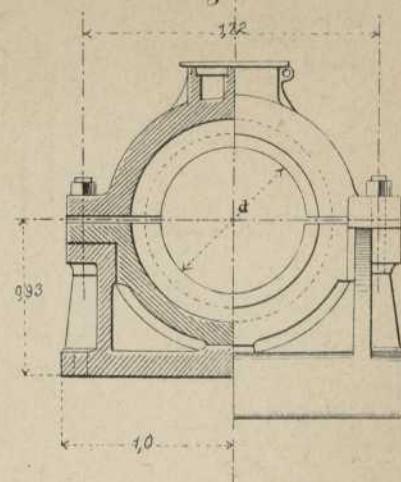


Fig. 335.



SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 84.^a

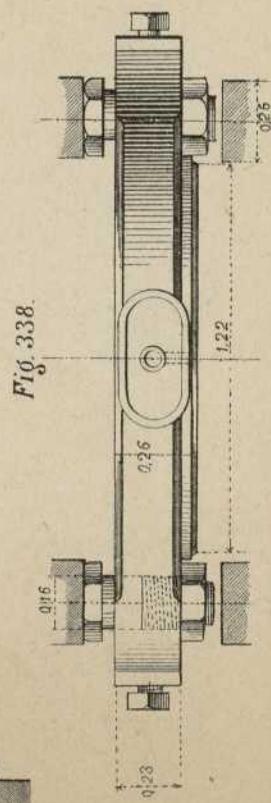
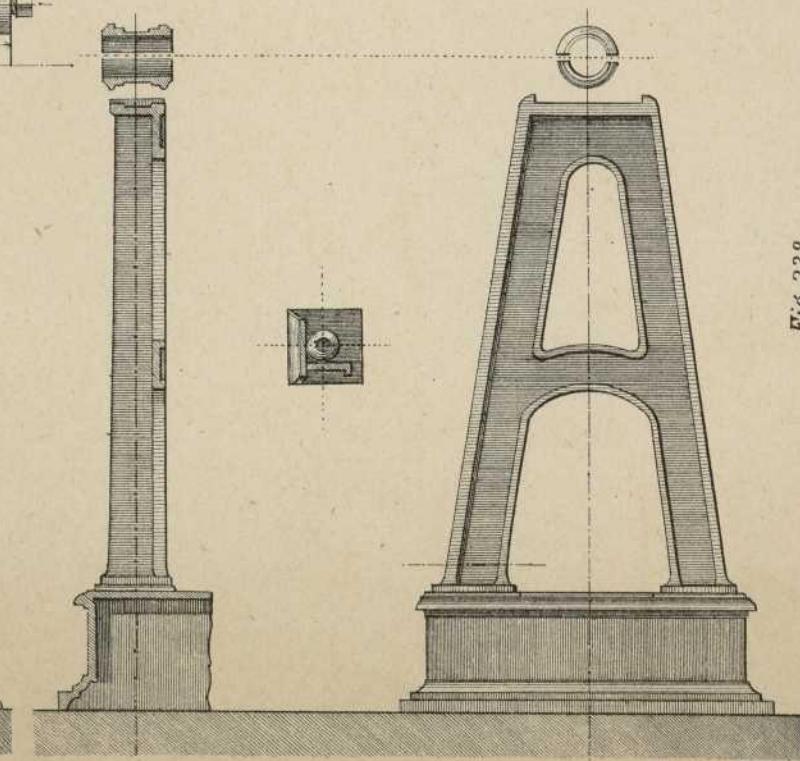
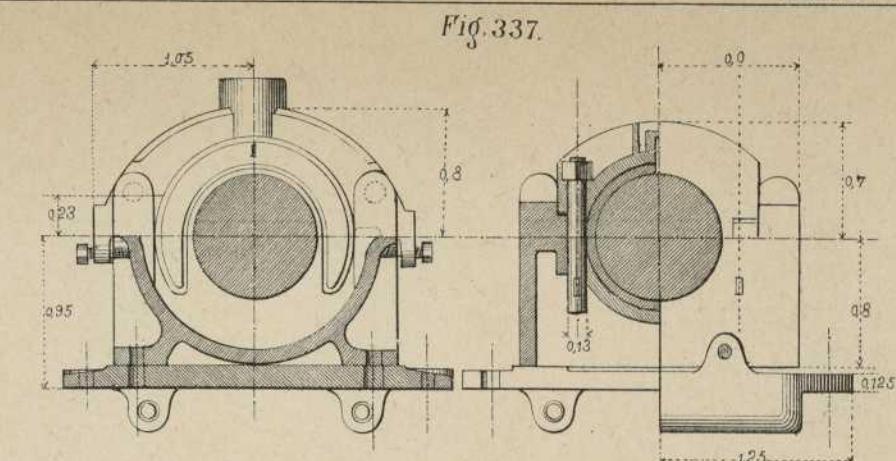
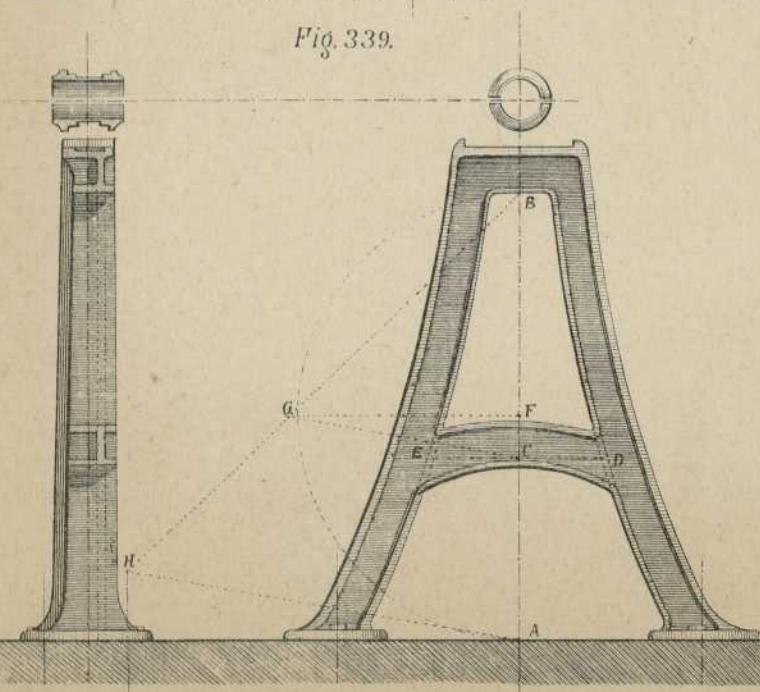
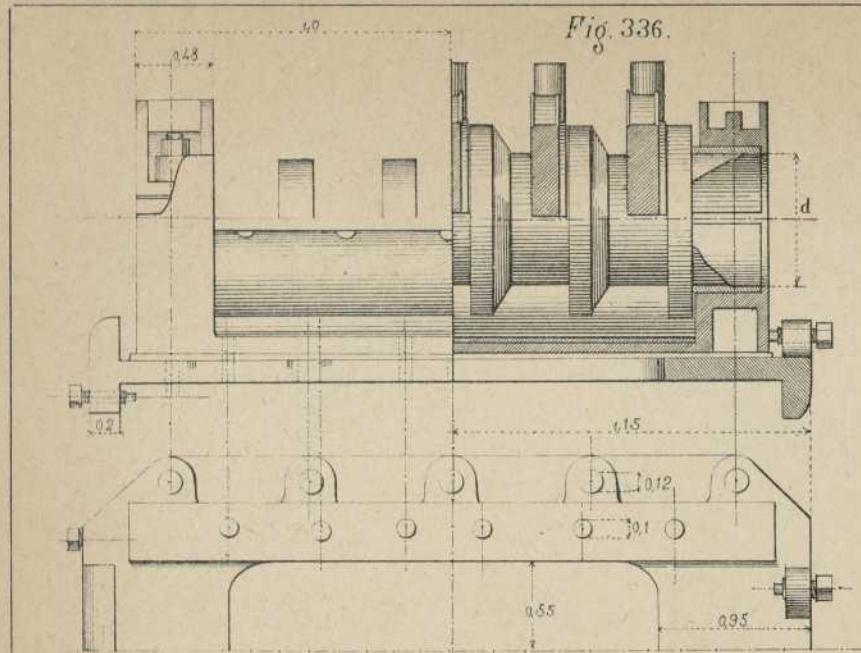


Fig. 341.

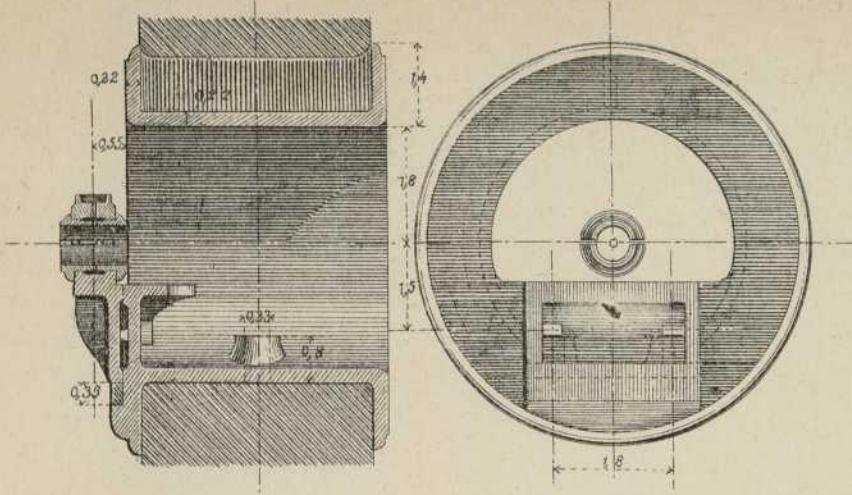


Fig. 345.

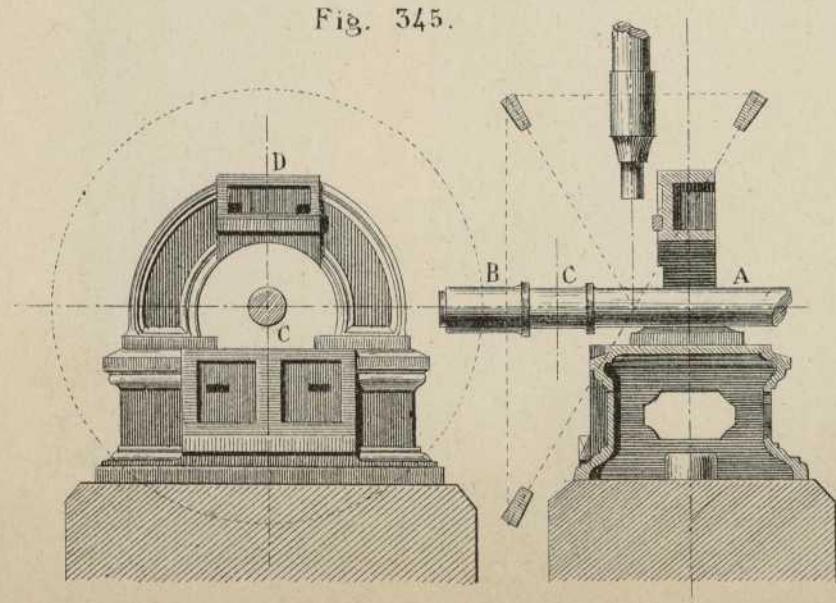


Fig. 344.

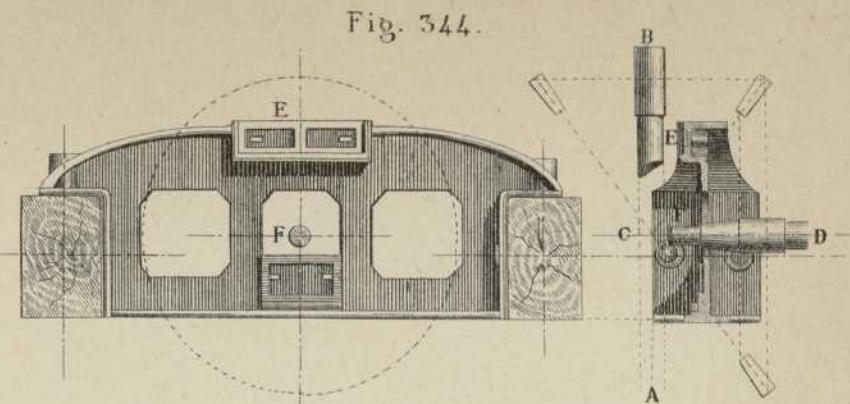


Fig. 343.

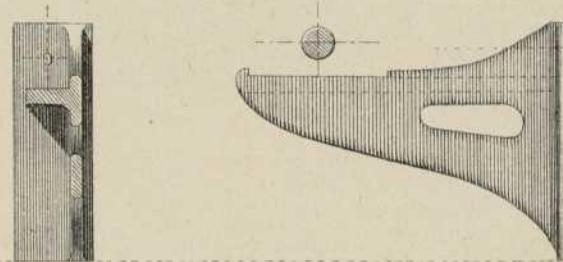
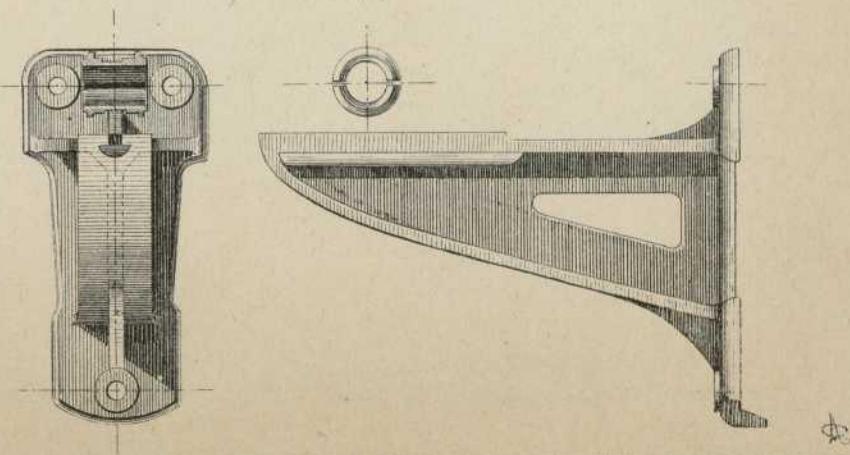
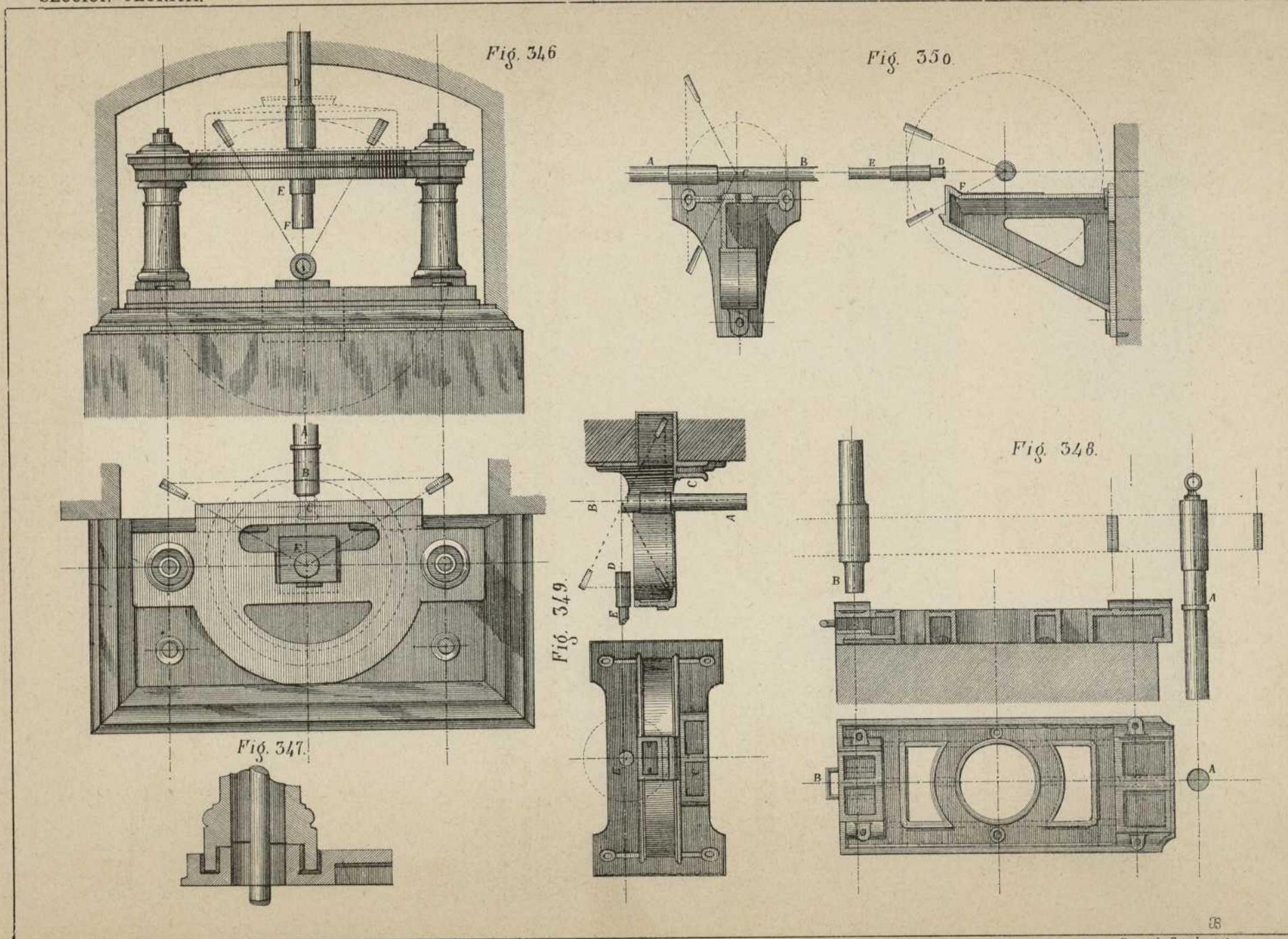


Fig. 342.





SECCION TEÓRICA.

CONSTRUCTOR.

Lámina 87.^a

Fig.351.

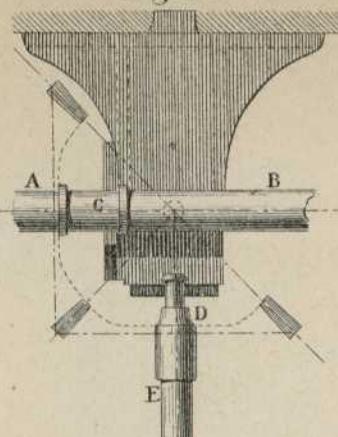


Fig.352

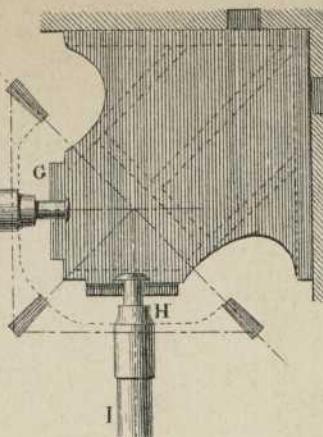


Fig.353.

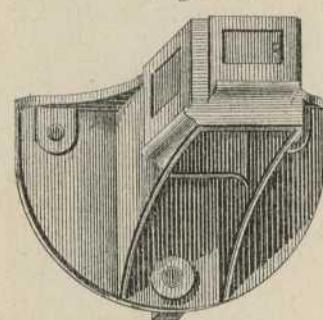


Fig.354.

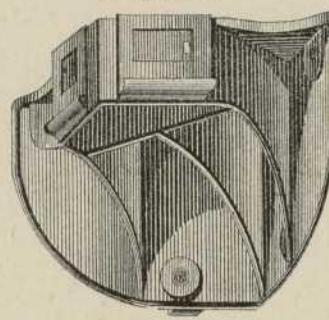
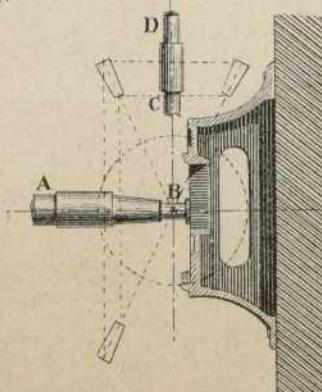
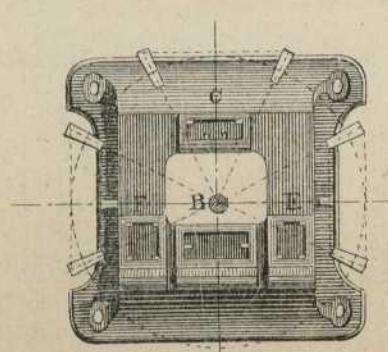


Fig.356



CONSTRUCTOR.

Fig.355.

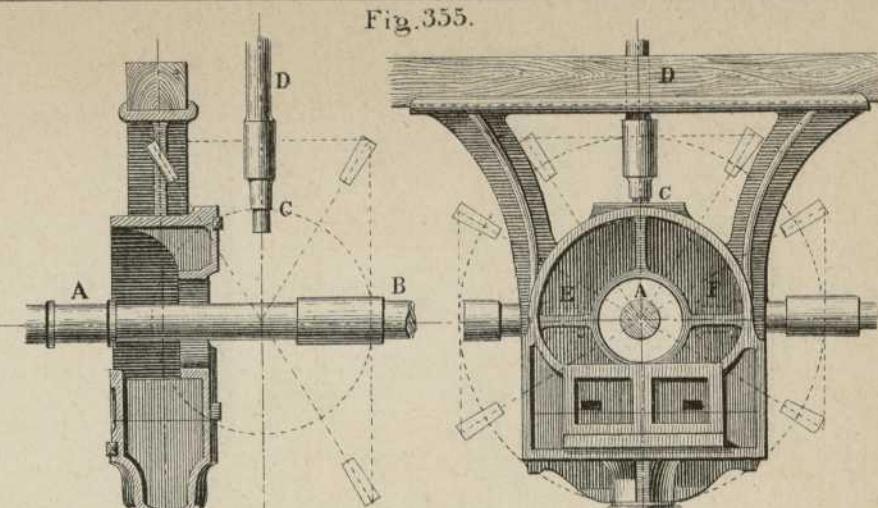


Fig.358.

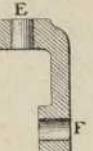


Fig.359.

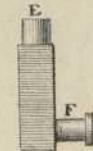


Fig.360.

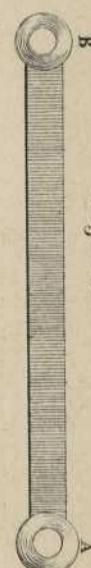
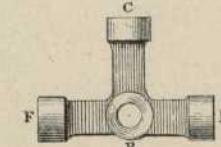


Fig.357.

A

D

Fig. 361.

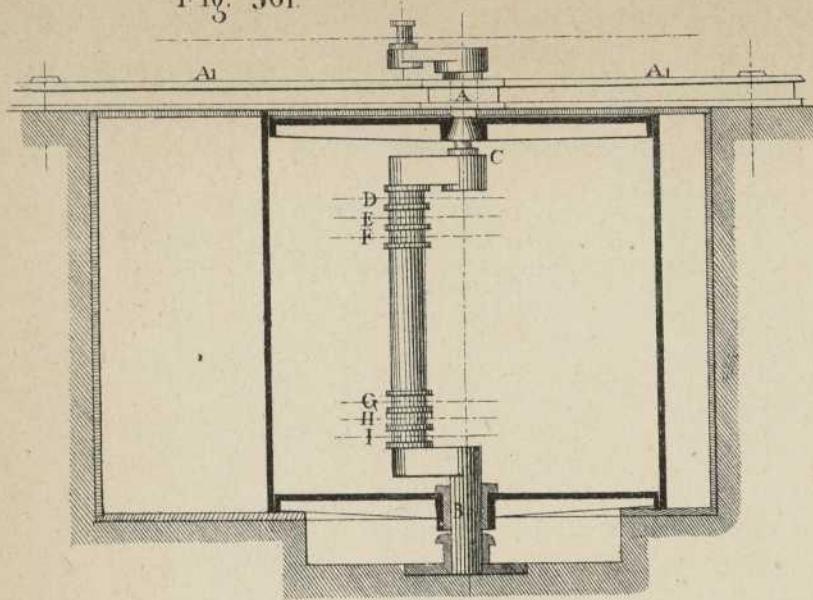


Fig. 370.

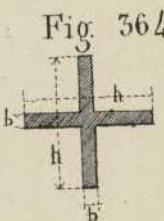
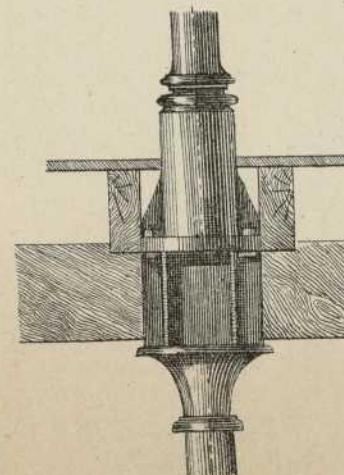
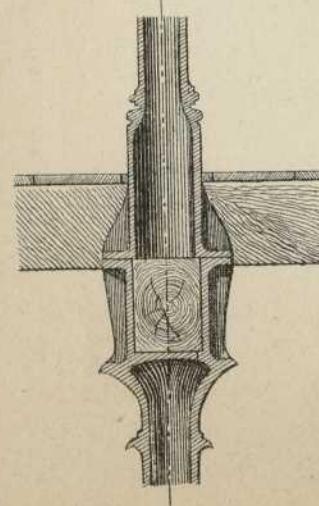


Fig. 363.

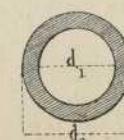


Fig. 367.

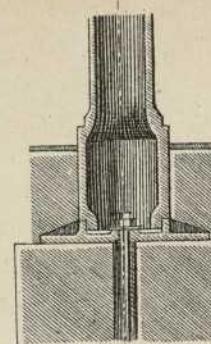


Fig. 368.

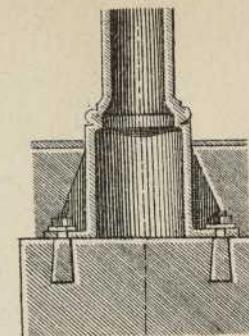


Fig. 369

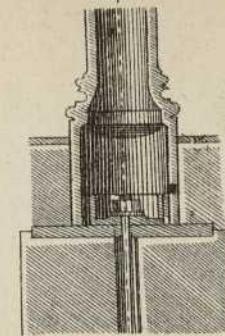


Fig. 365

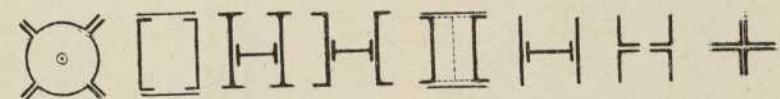


Fig. 366.

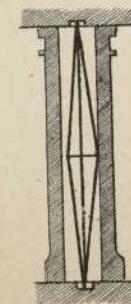


Fig. 362.

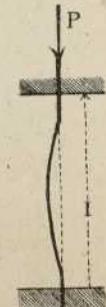
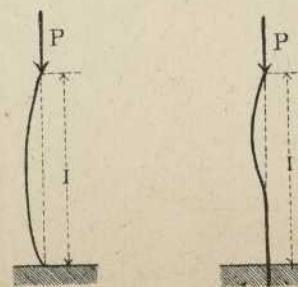


Fig. 371.

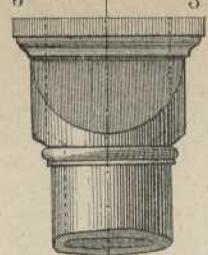


Fig. 372.

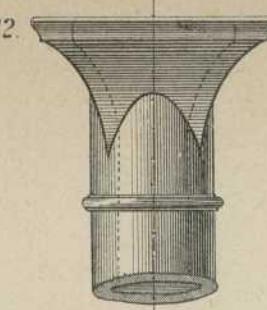


Fig. 373.

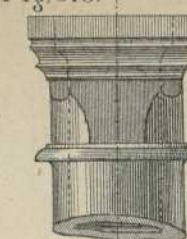


Fig. 374.

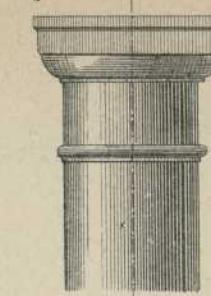


Fig. 375.

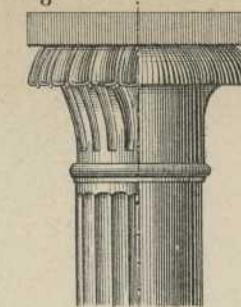


Fig. 376.

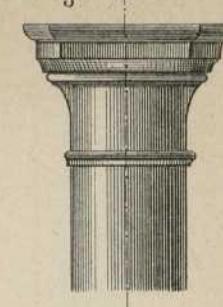


Fig. 377.

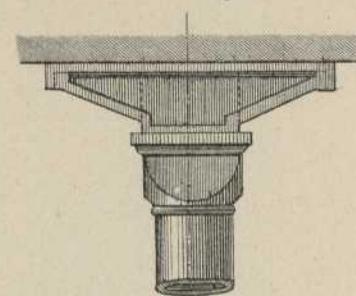


Fig. 379.

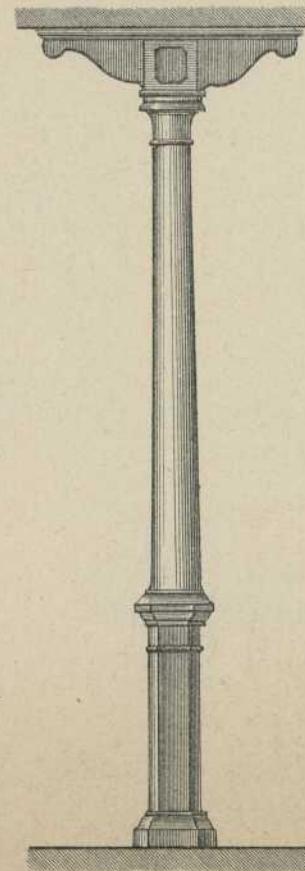


Fig. 381.

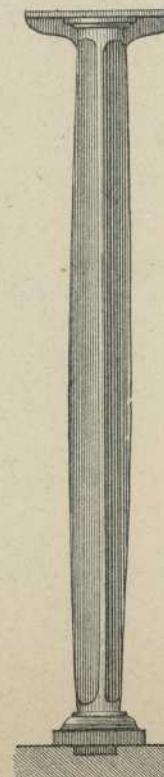


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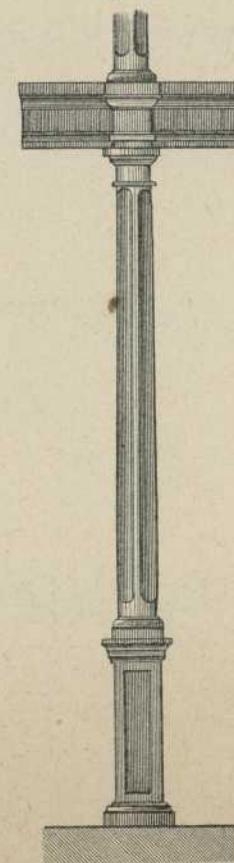


Fig. 383.

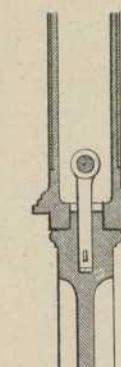


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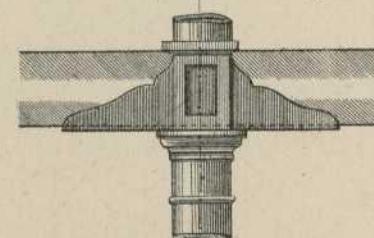
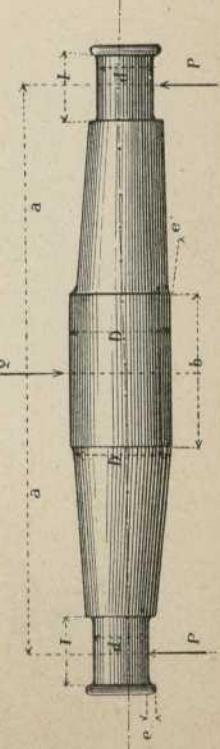
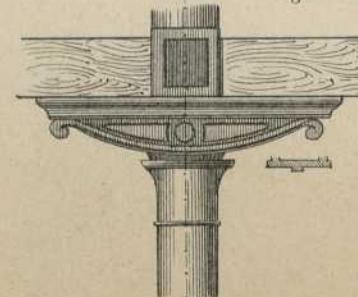


Fig. 380.



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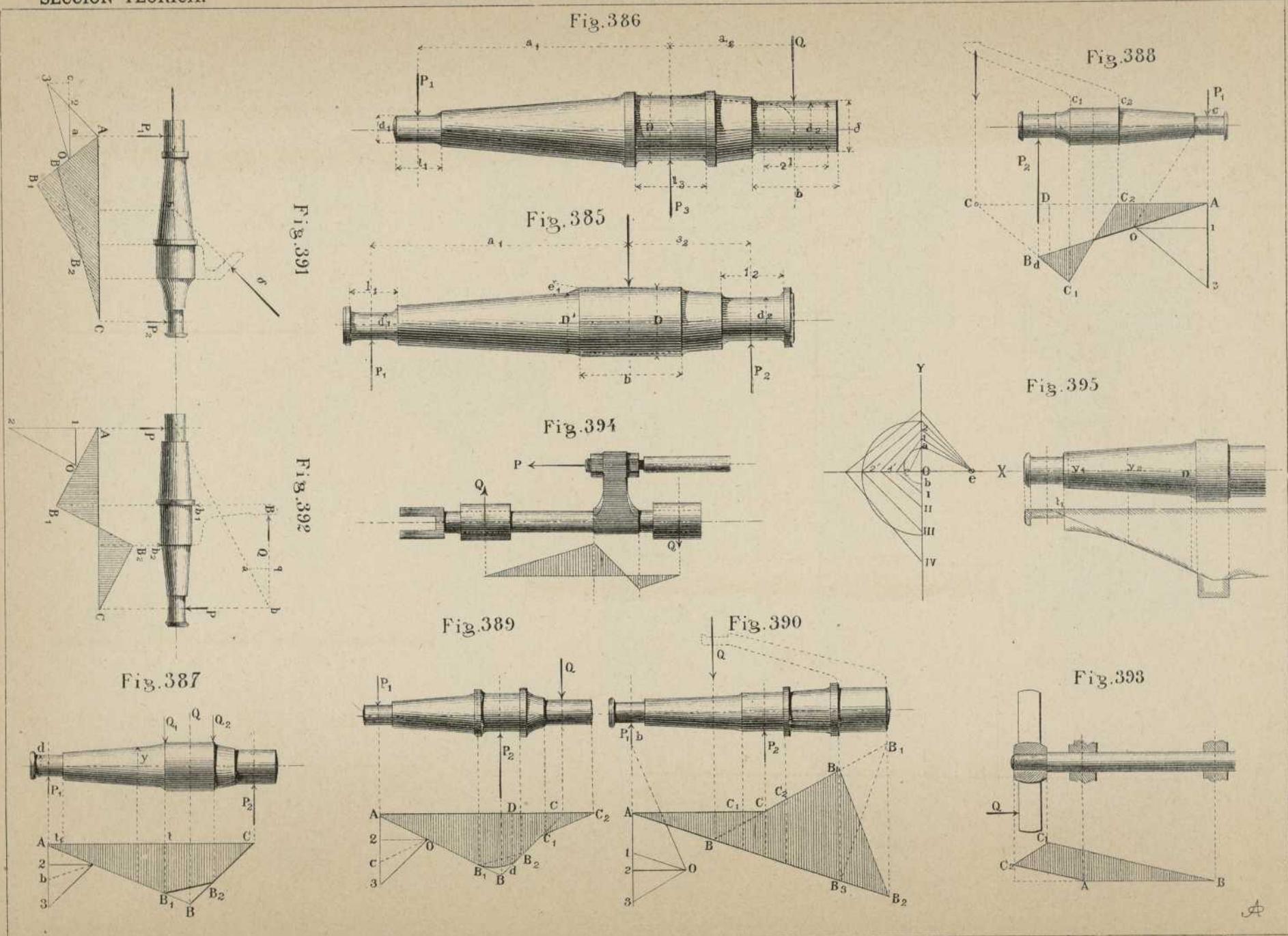


Fig. 397

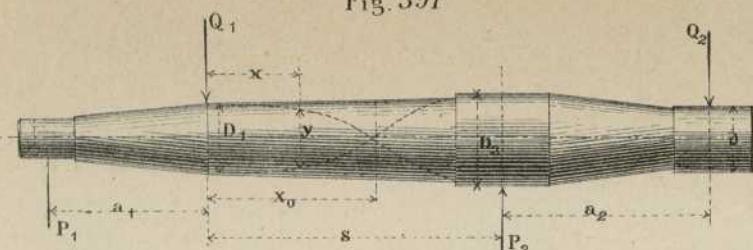


Fig. 396

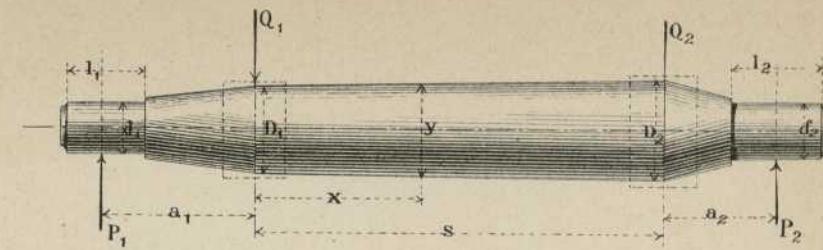


Fig. 405

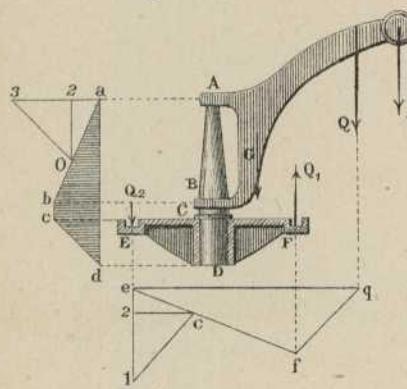


Fig. 406

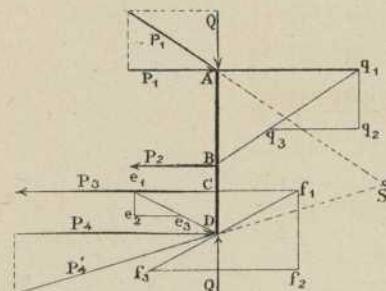


Fig. 398

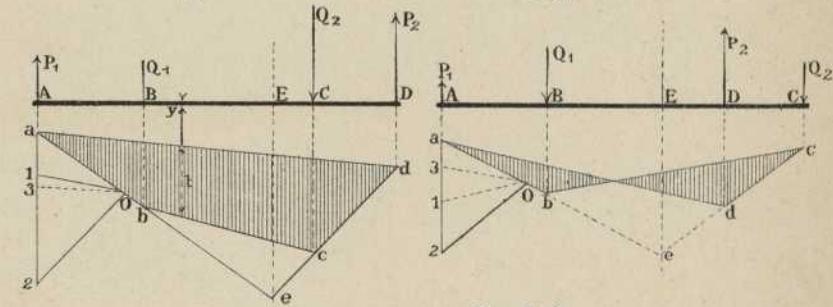


Fig. 399

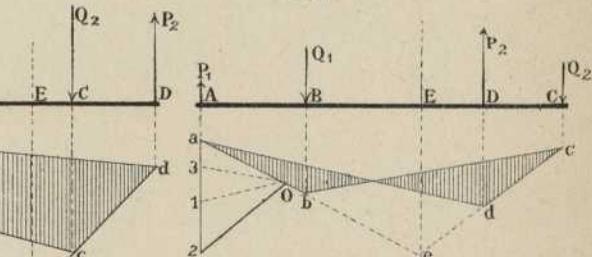


Fig. 403

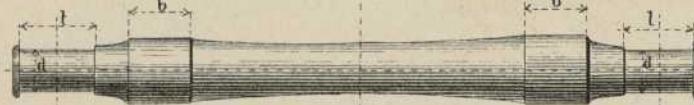


Fig. 400

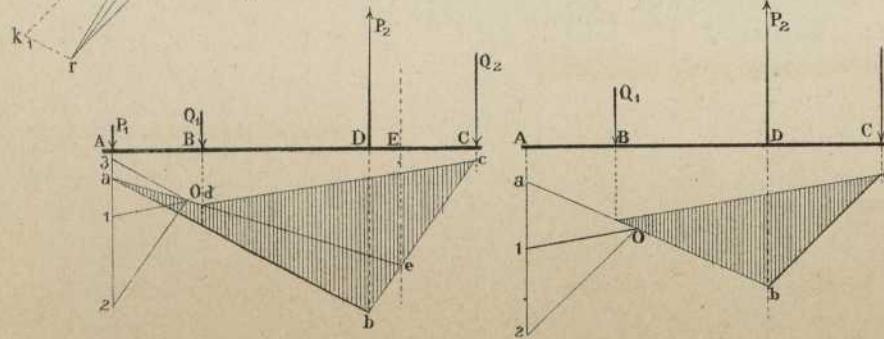


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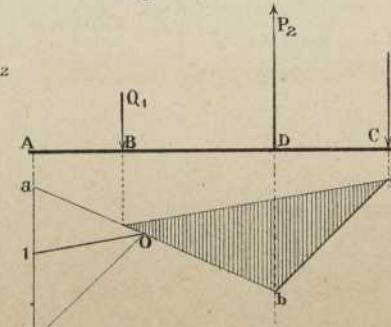
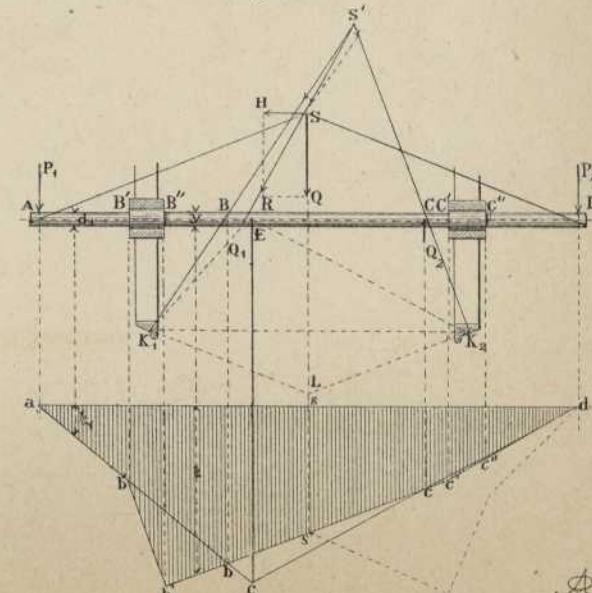
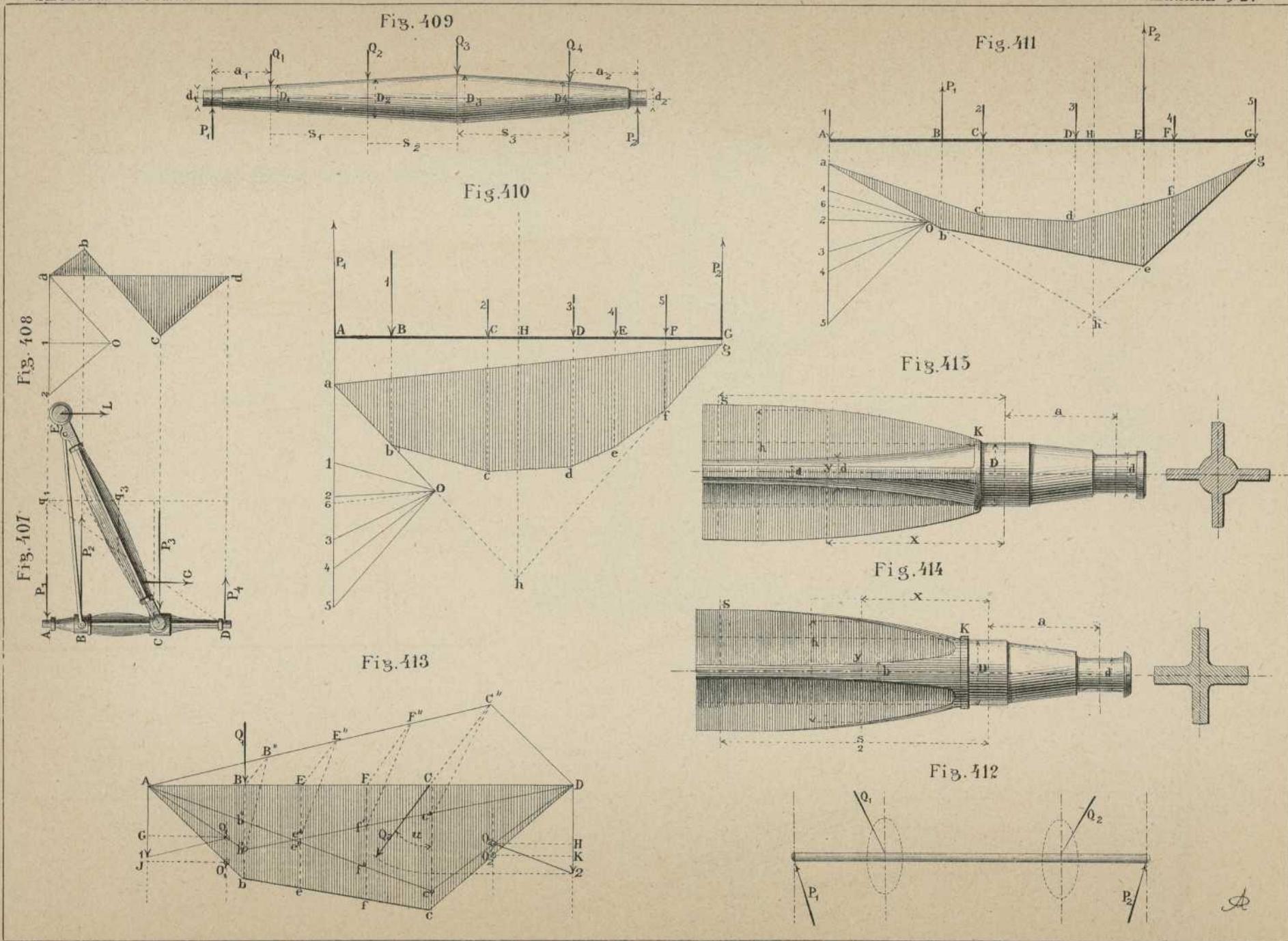


Fig. 402





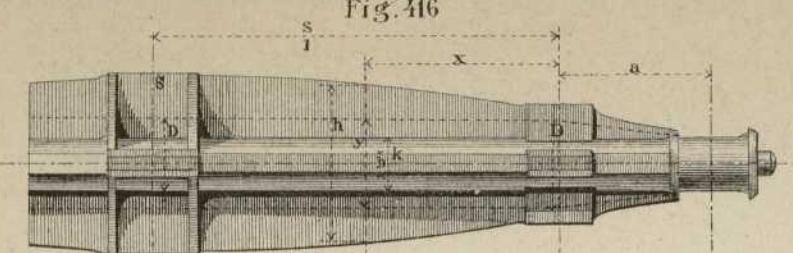


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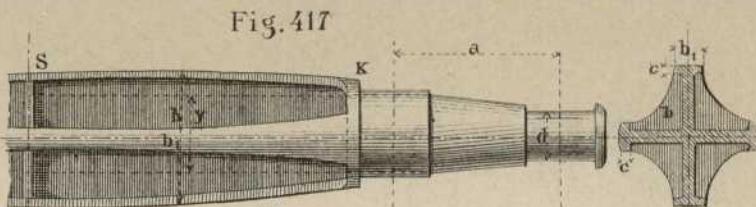


Fig. 417

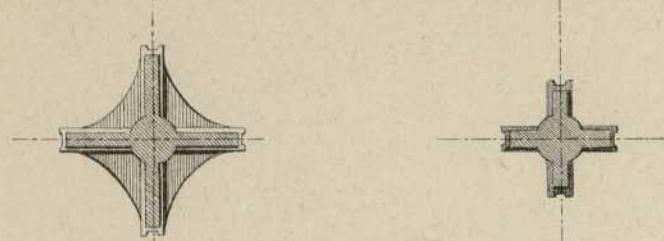


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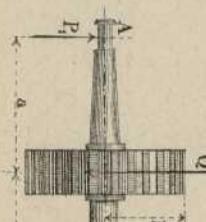


Fig. 419

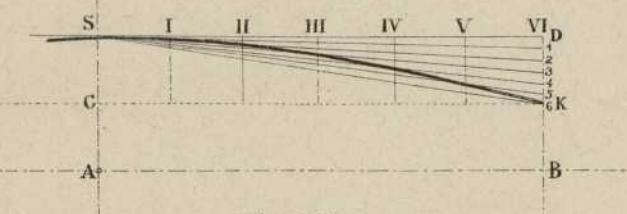


Fig. 420

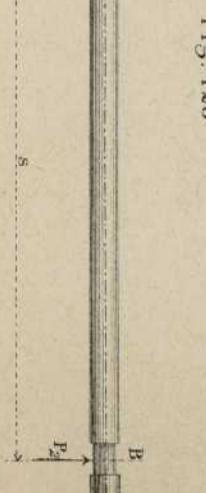


Fig. 421

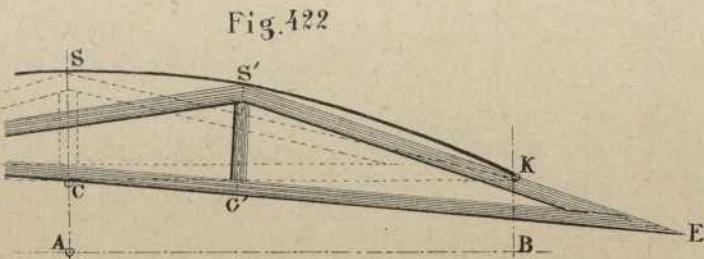


Fig. 422

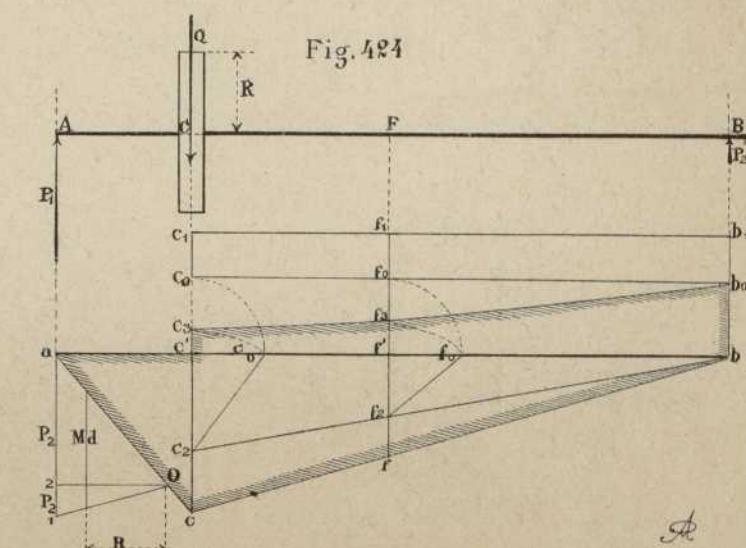


Fig. 424

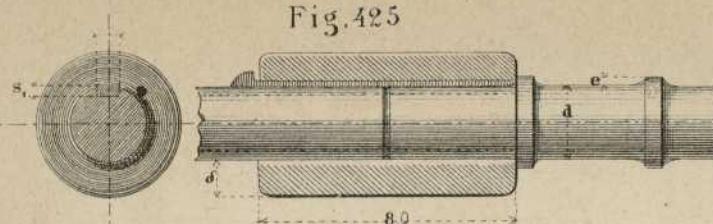


Fig. 425



Fig. 427

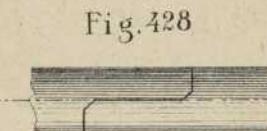


Fig. 428

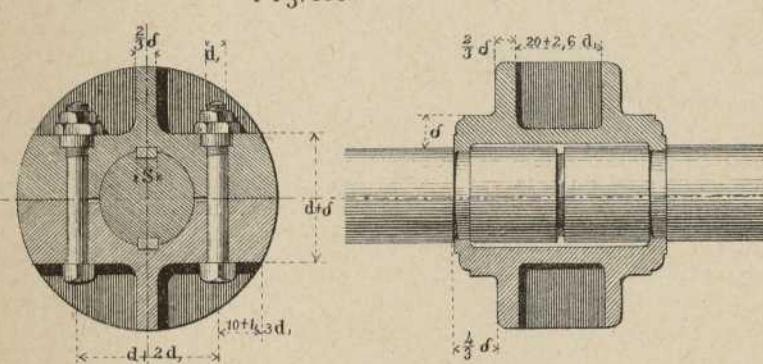


Fig. 430

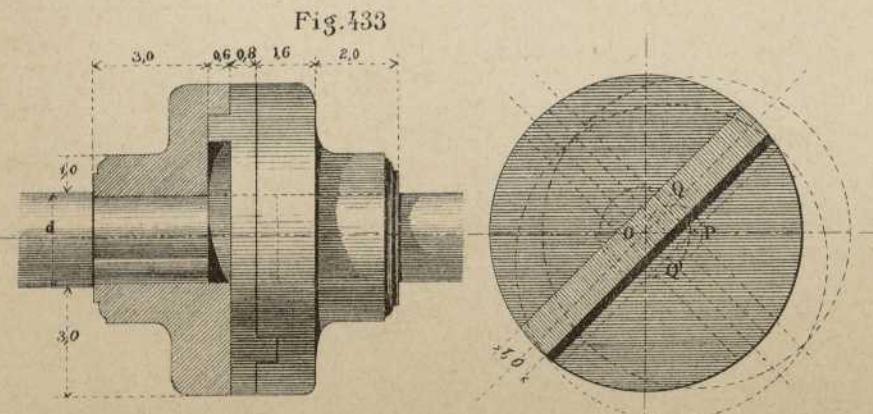


Fig. 433

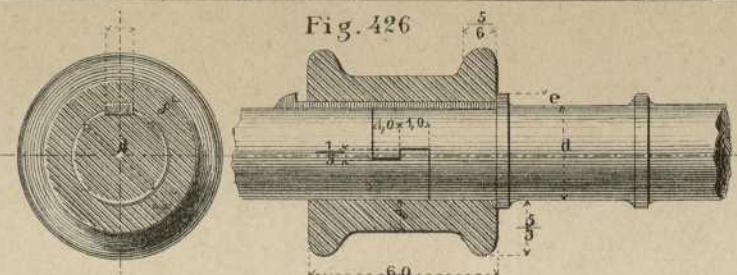


Fig. 426

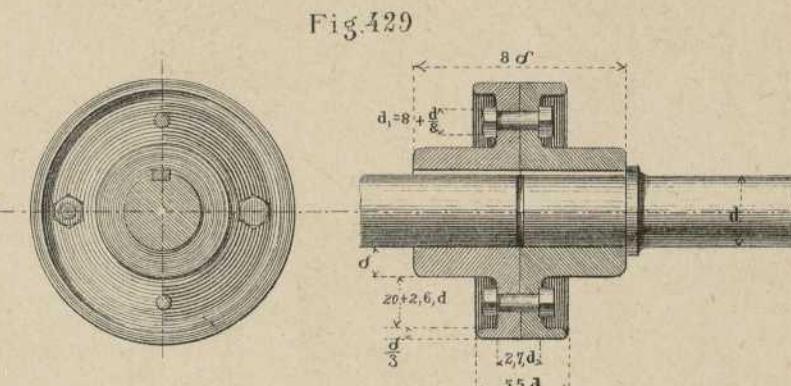


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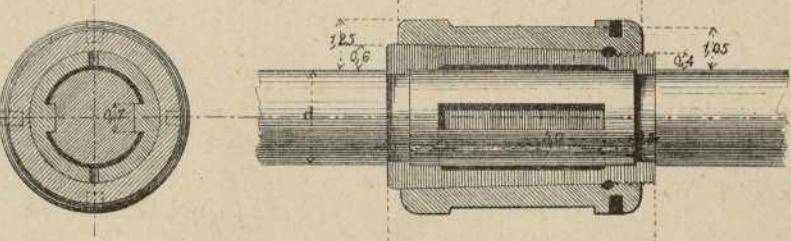


Fig. 431

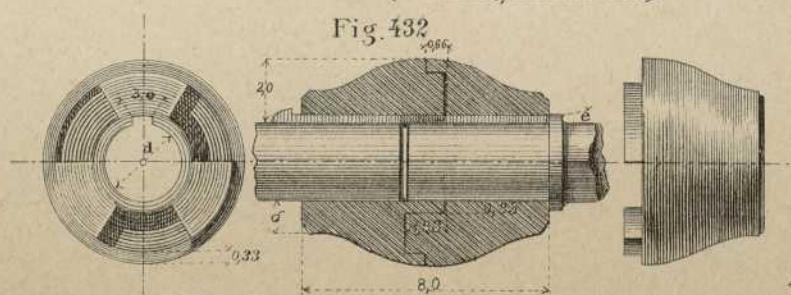


Fig. 432

Fig.439

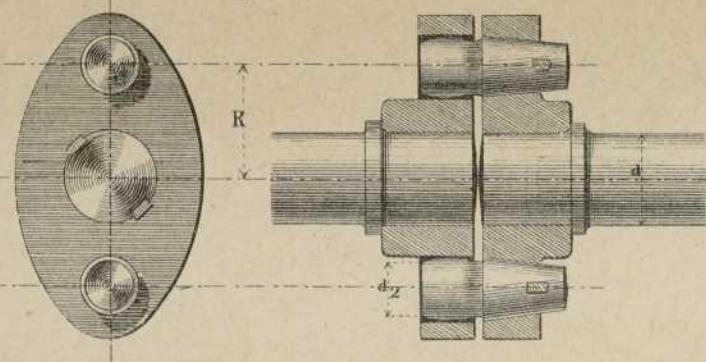


Fig.436

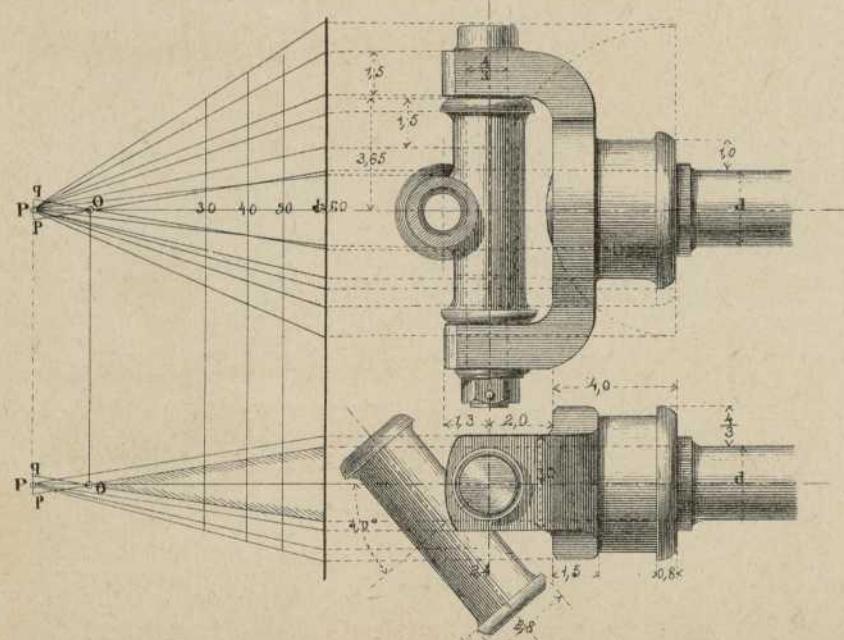


Fig.438

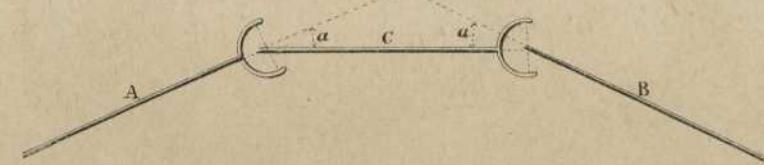


Fig.435

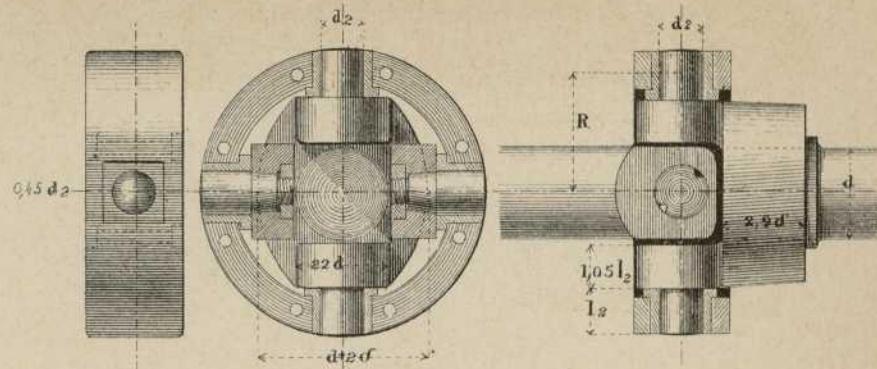


Fig.437

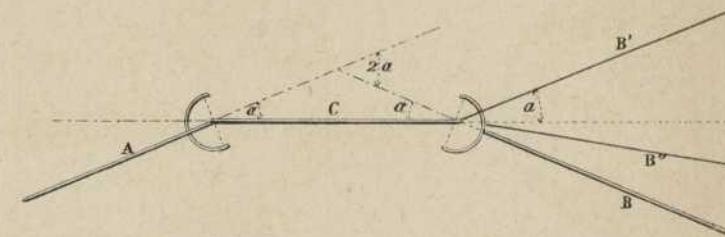


Fig.434

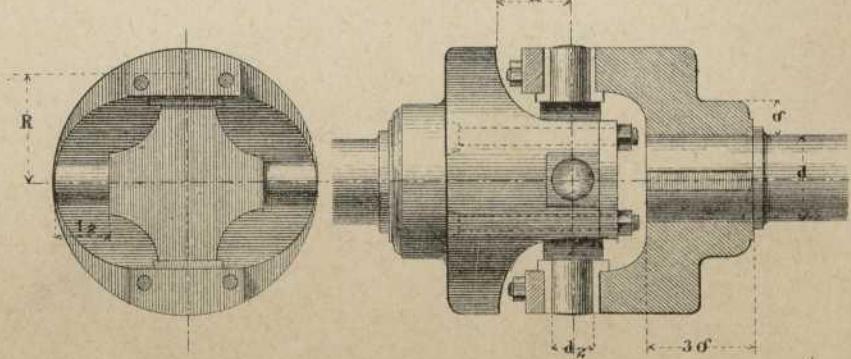


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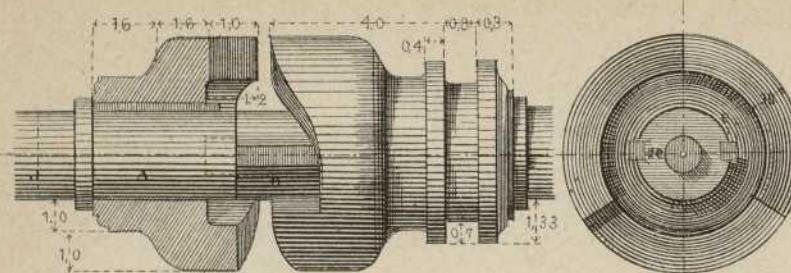


Fig. 442.

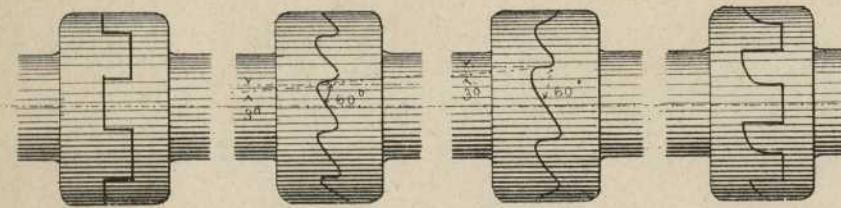


Fig. 444.

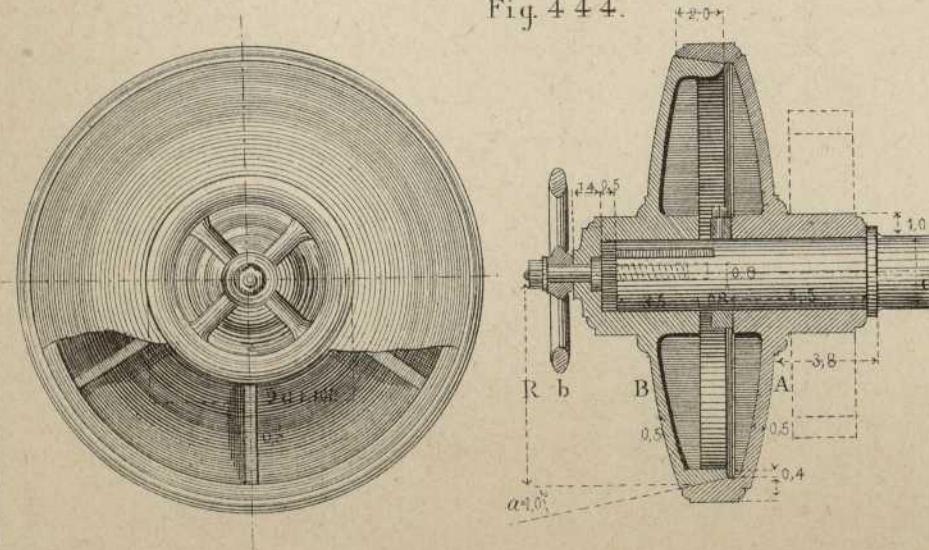


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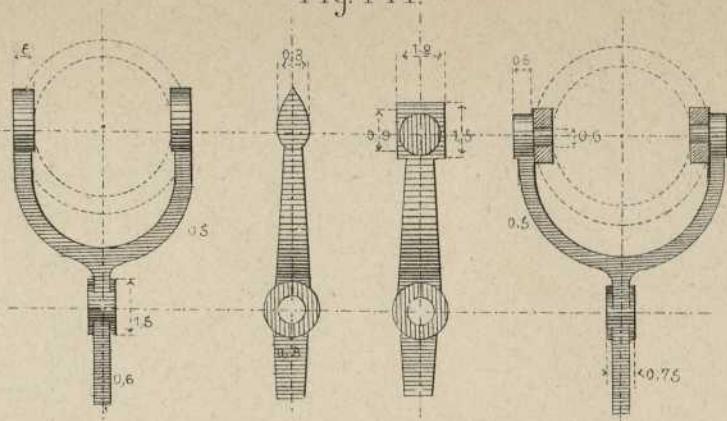


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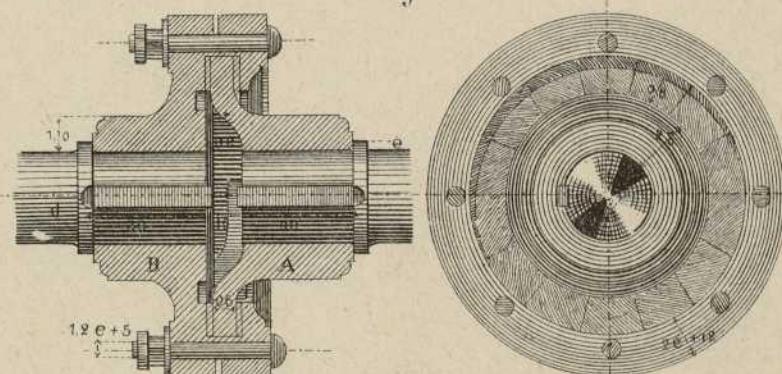


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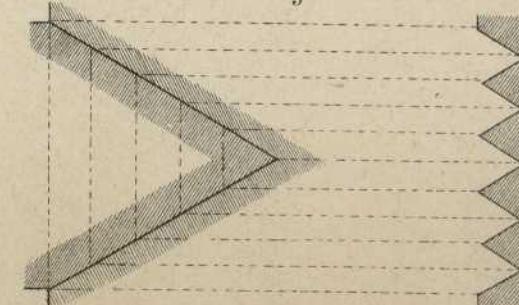


Fig. 446

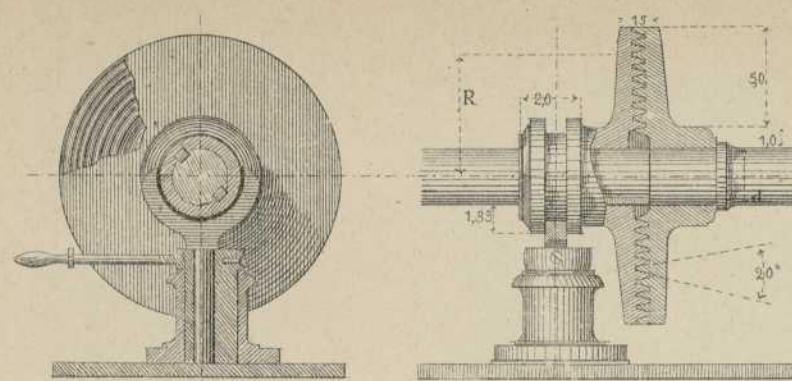


Fig. 448

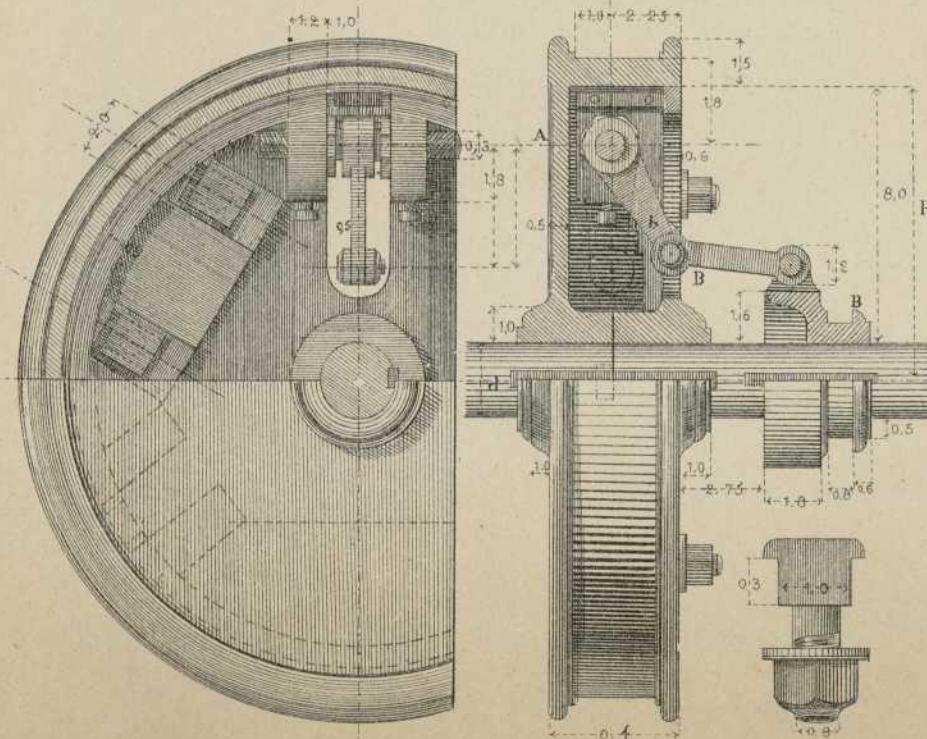


Fig. 447

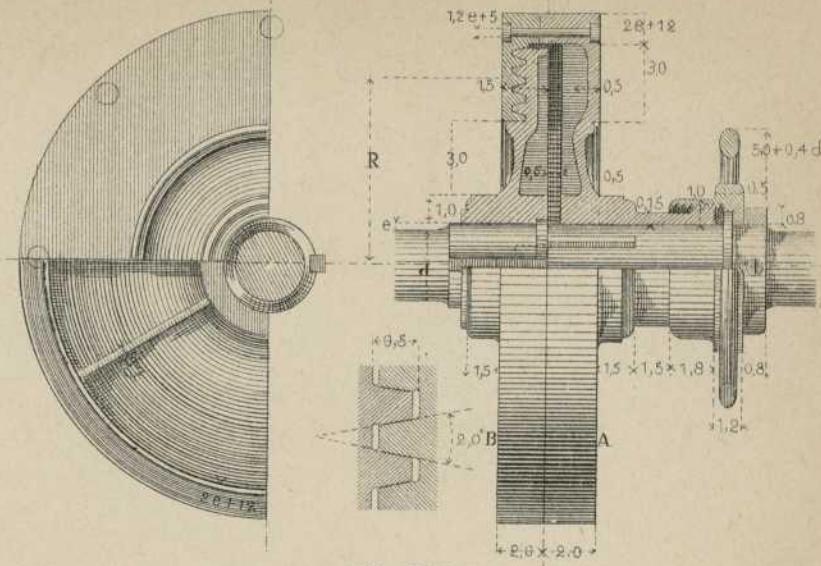


Fig. 449

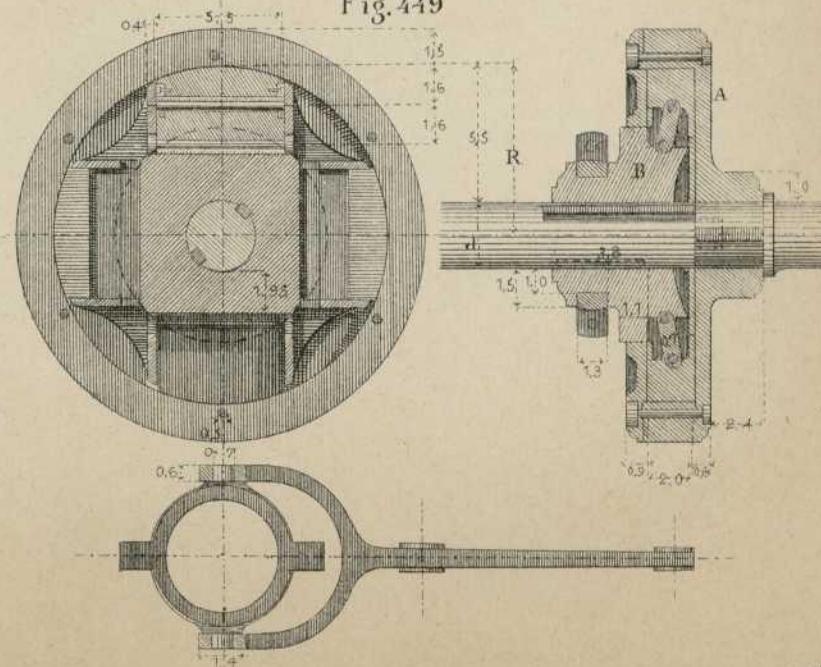


Fig. 450

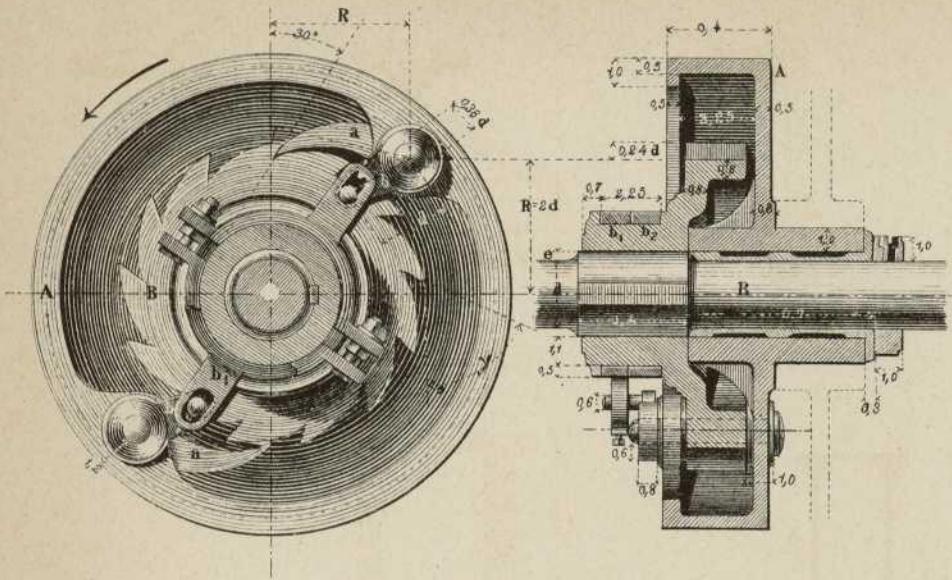


Fig. 451

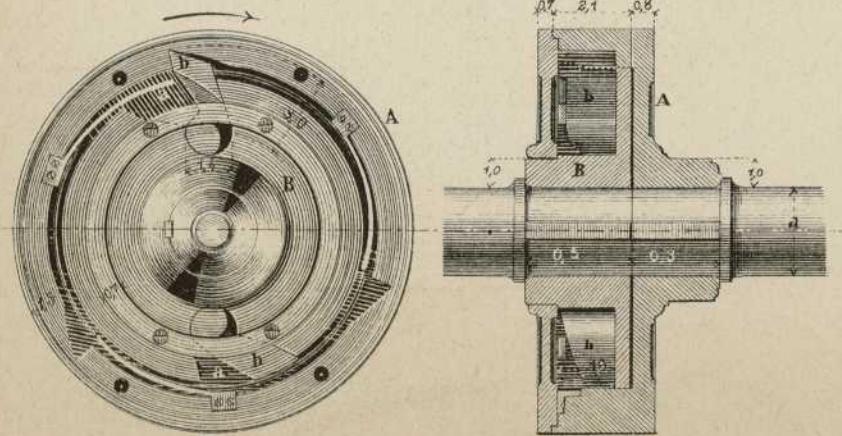


Fig. 452

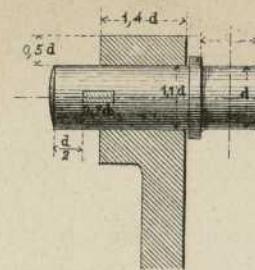


Fig. 453

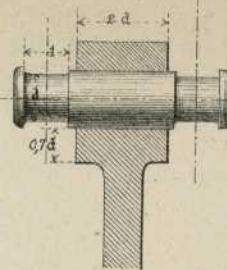


Fig. 454

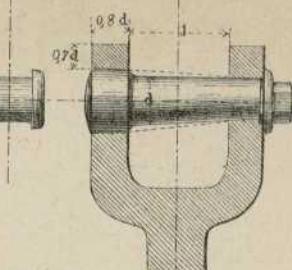


Fig. 455

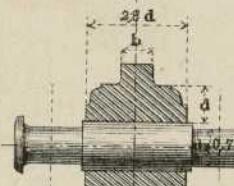


Fig. 456

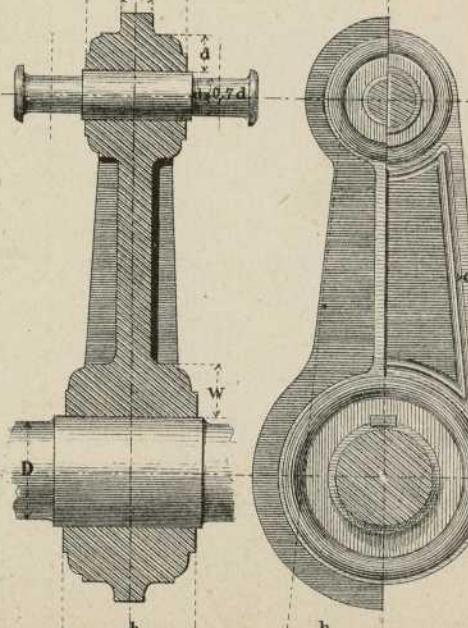


Fig. 457

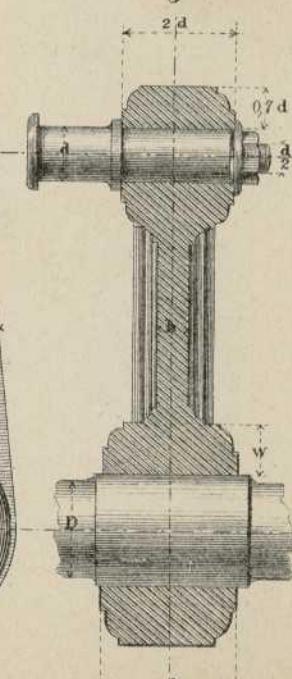


Fig. 464

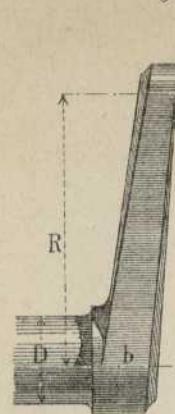


Fig. 465

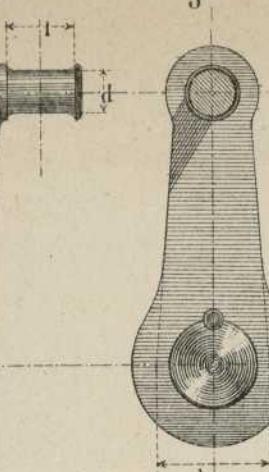


Fig. 466

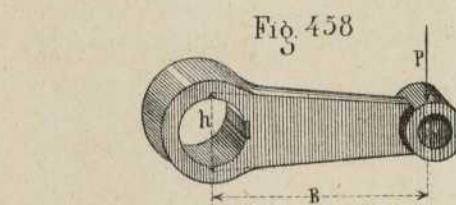
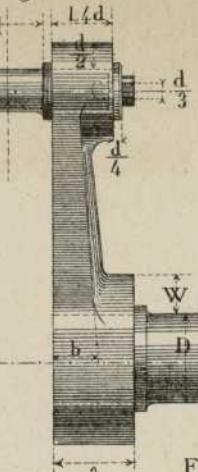


Fig. 462

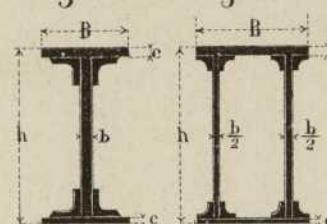


Fig. 463

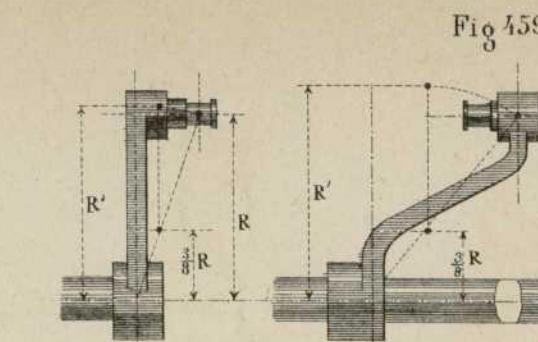
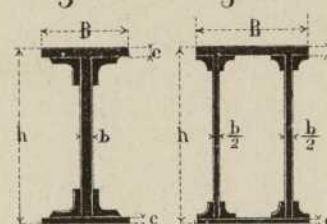


Fig. 459

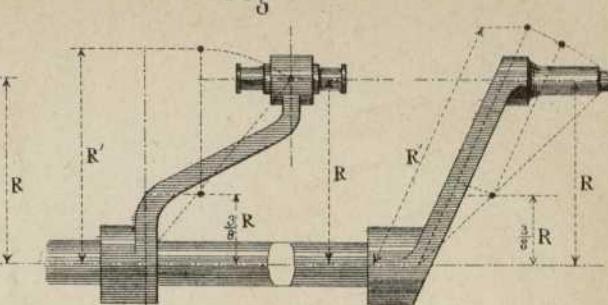


Fig. 460

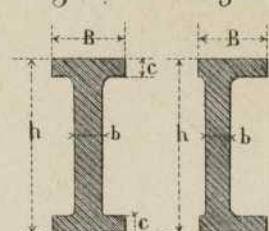
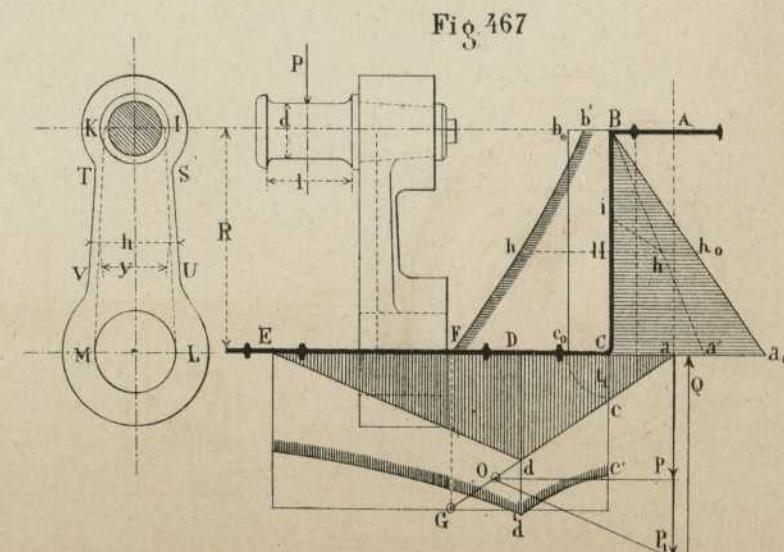
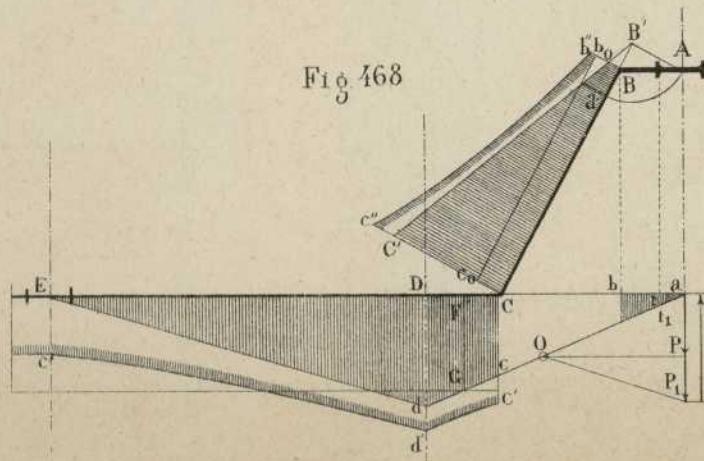
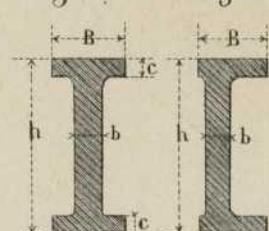


Fig. 461



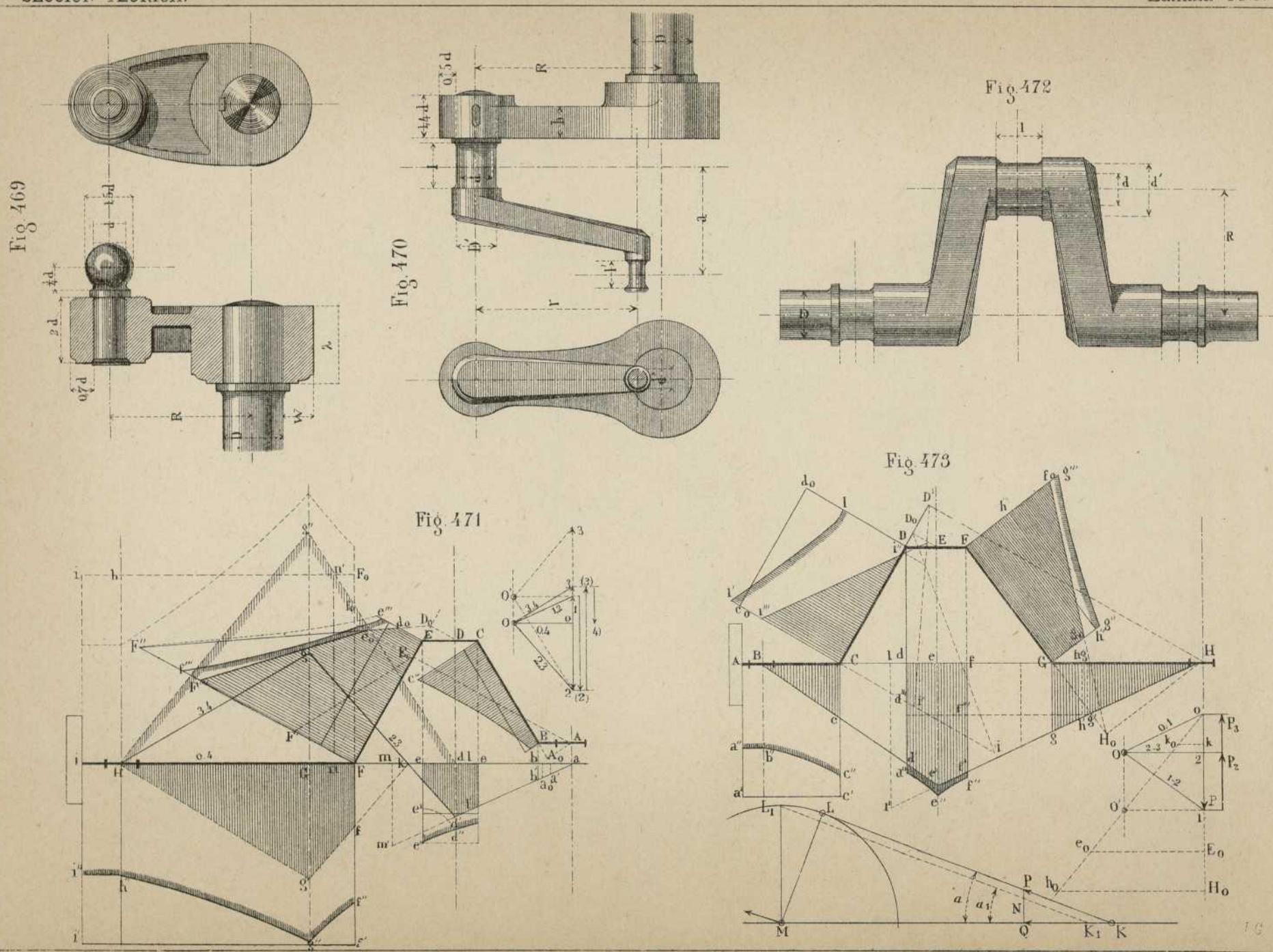


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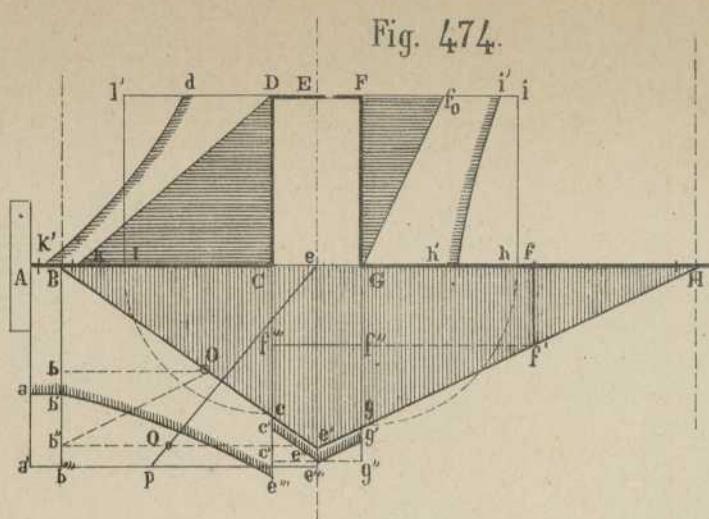


Fig. 476.

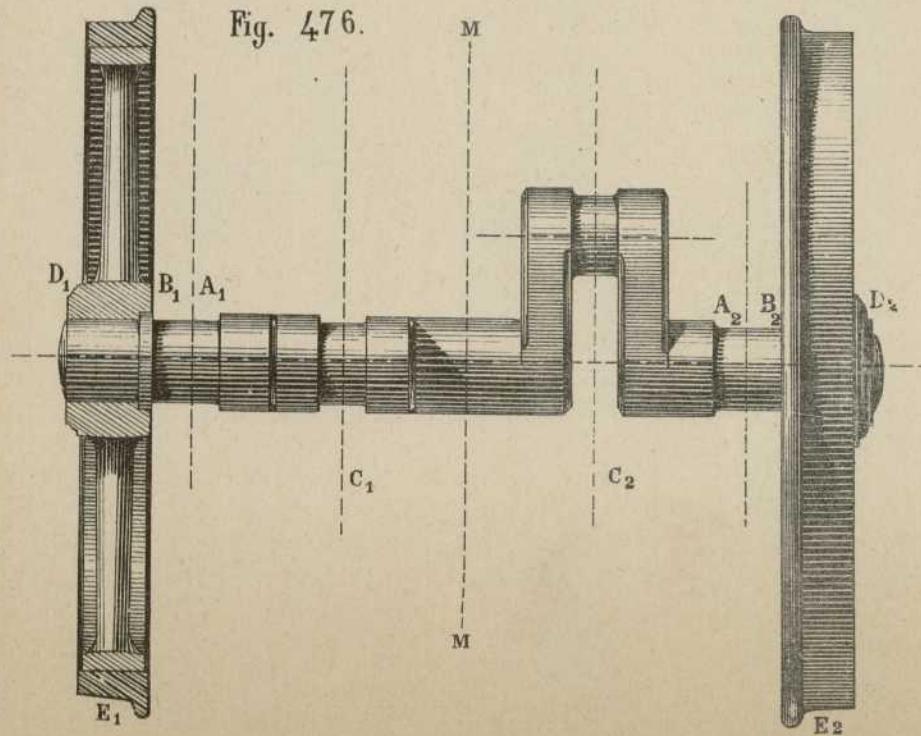


Fig. 475.

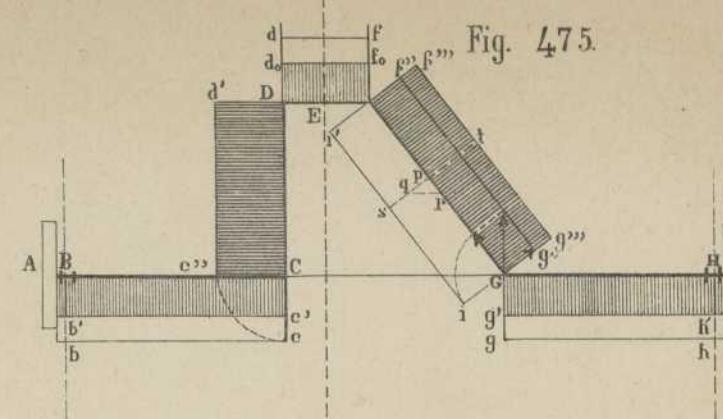
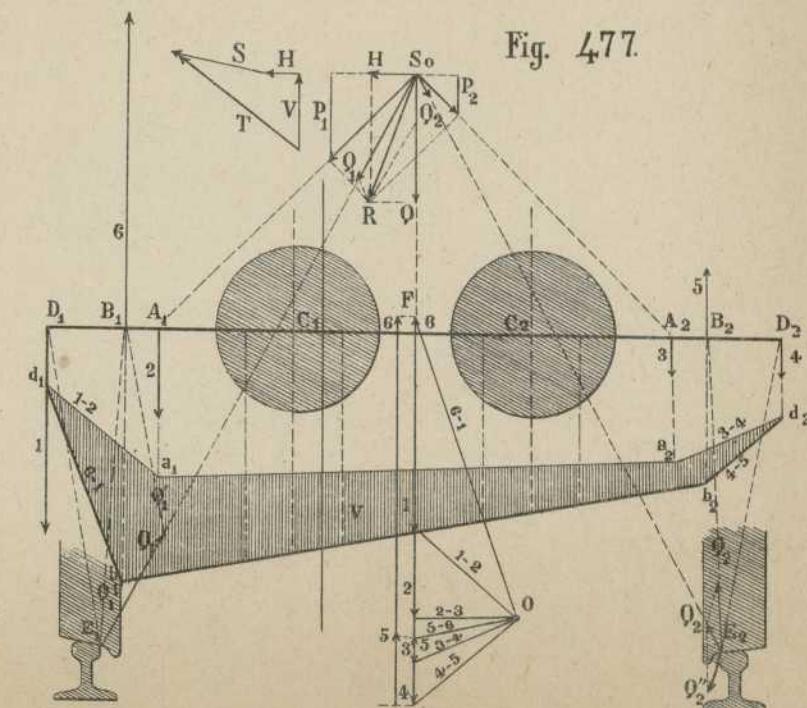


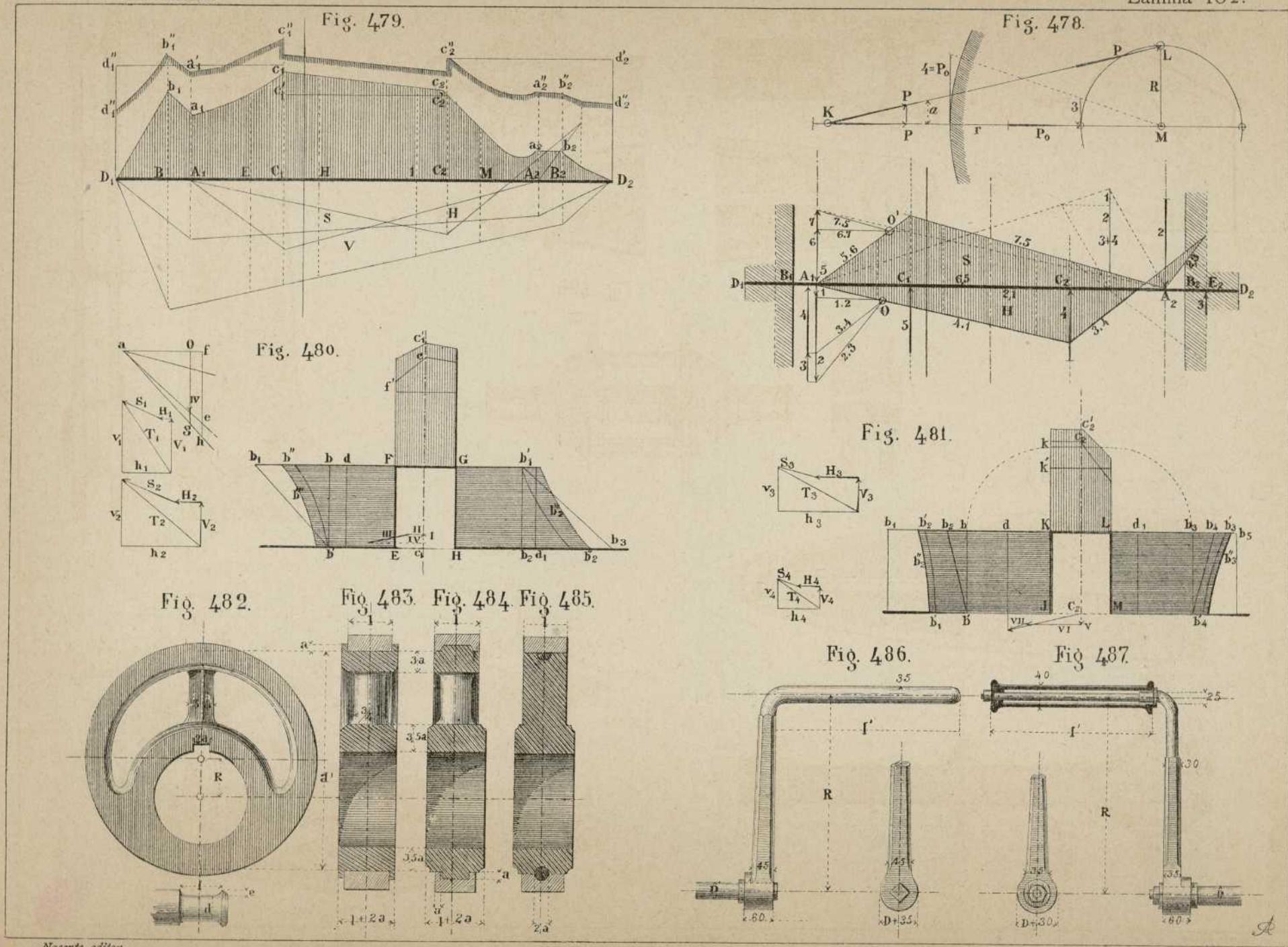
Fig. 477.



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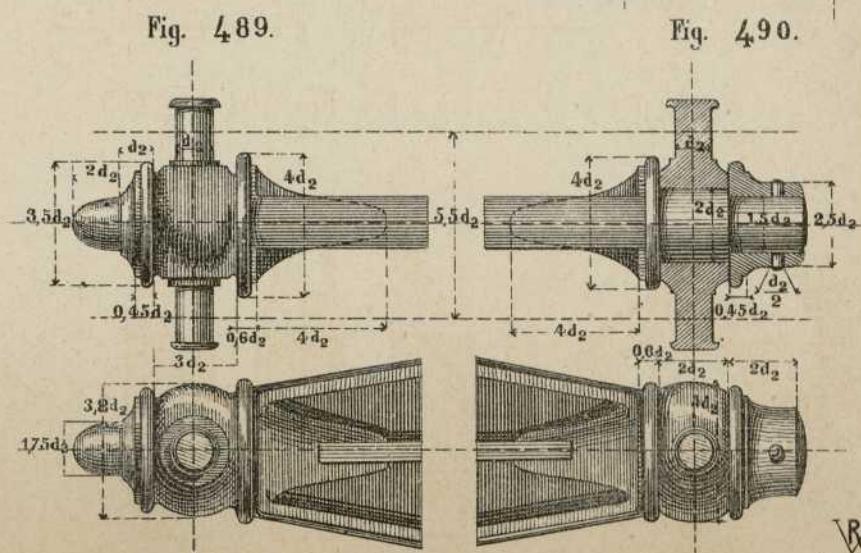
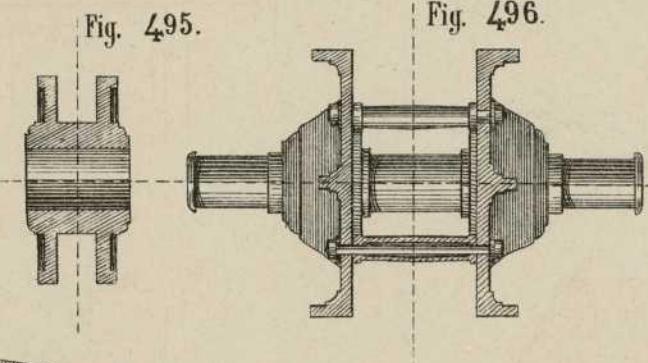
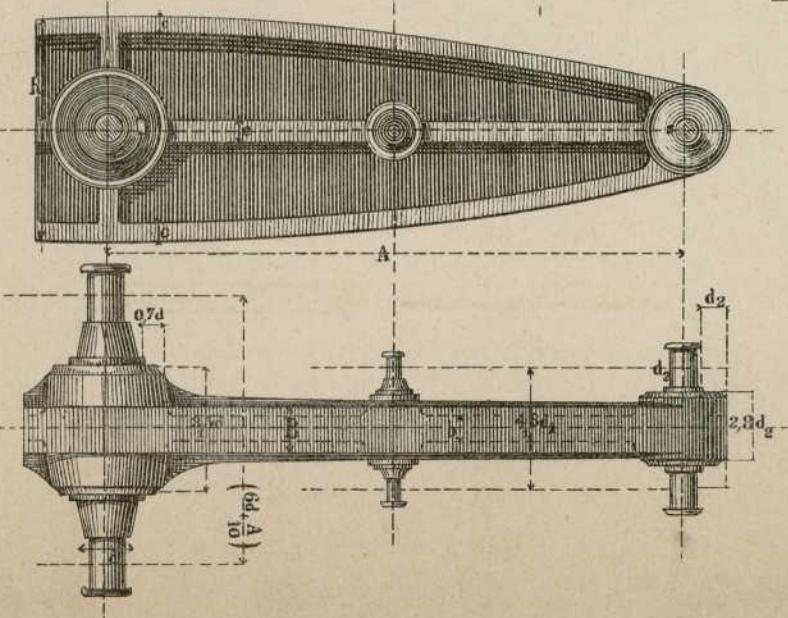
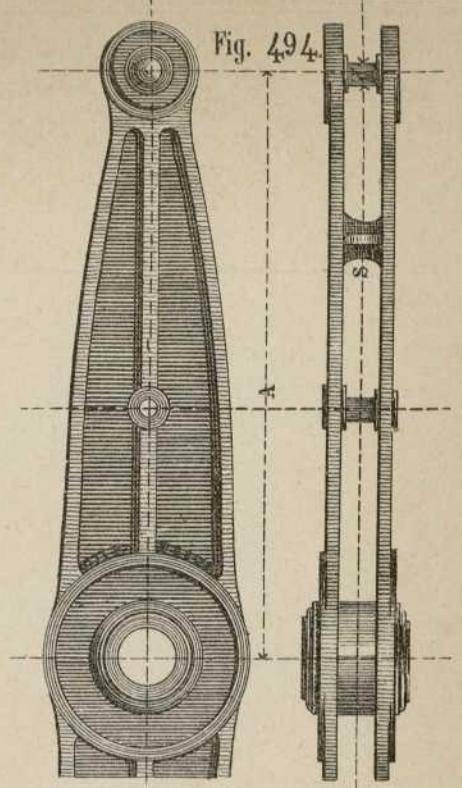
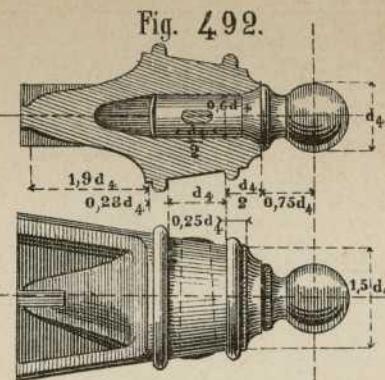
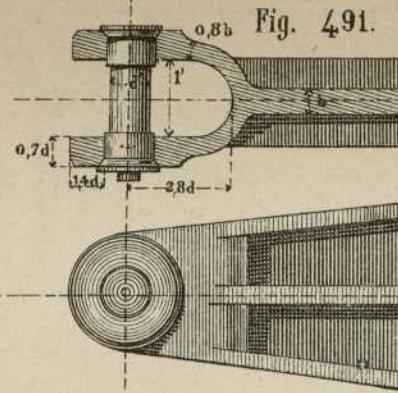
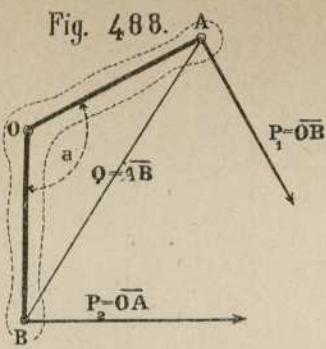


Fig. 497.

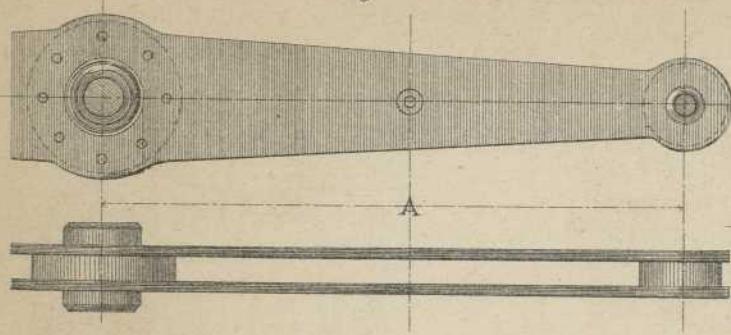


Fig. 502.

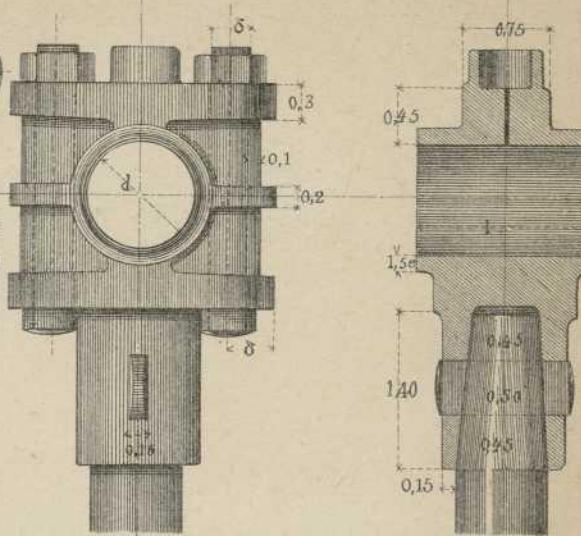


Fig. 500.

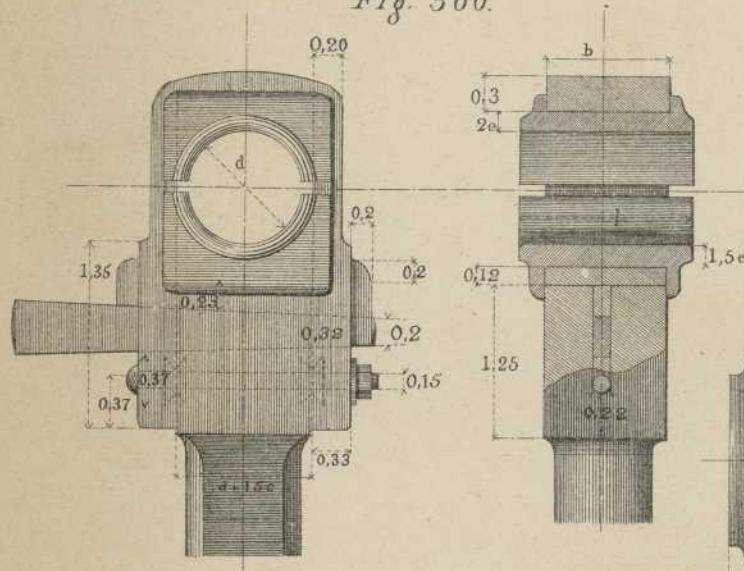


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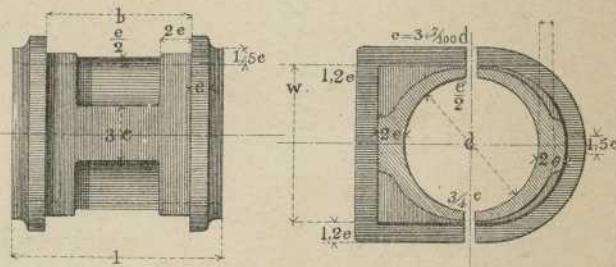


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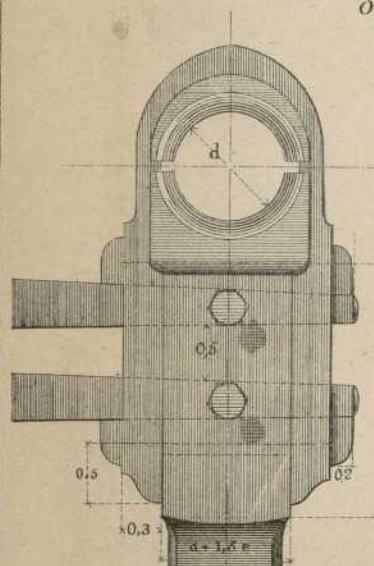
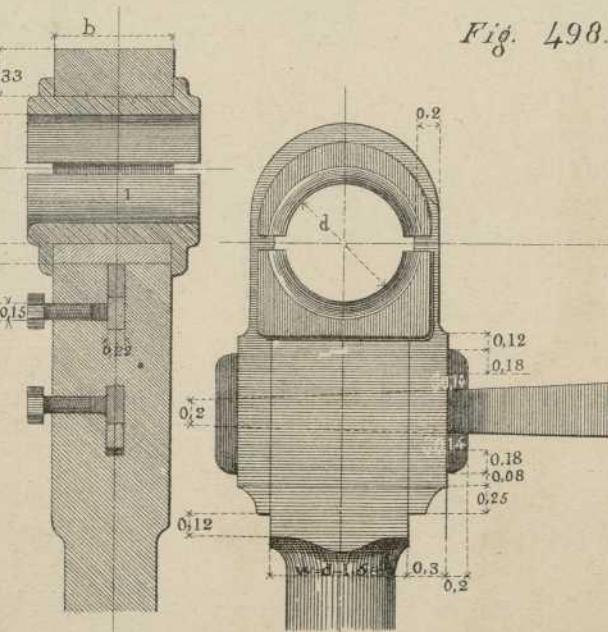


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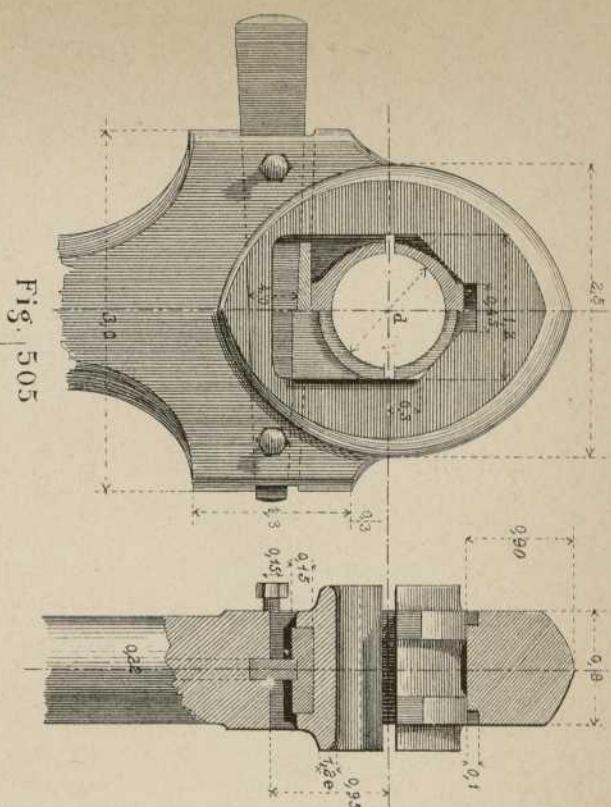
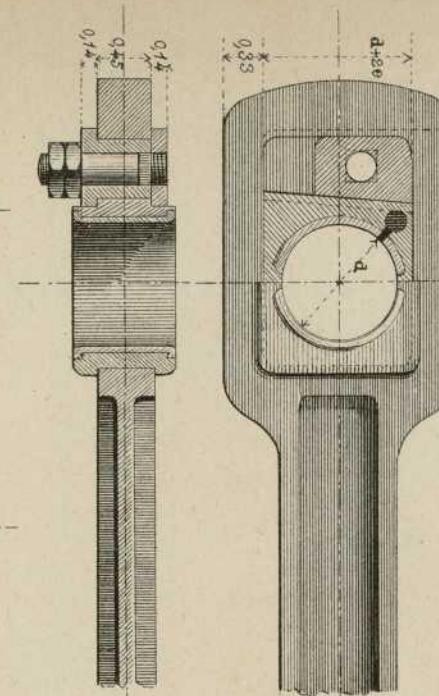
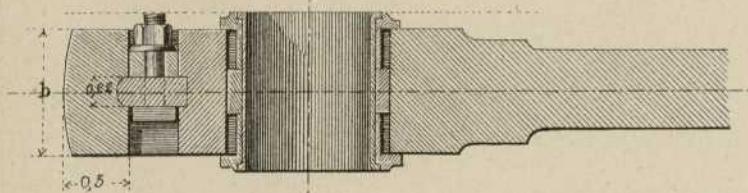
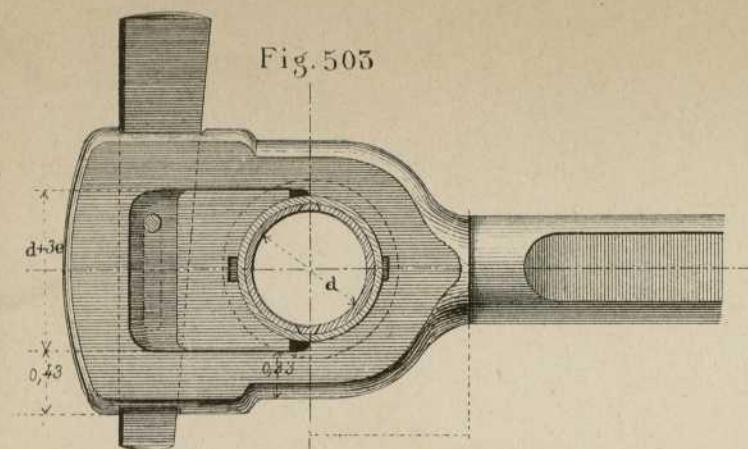


Fig. 507

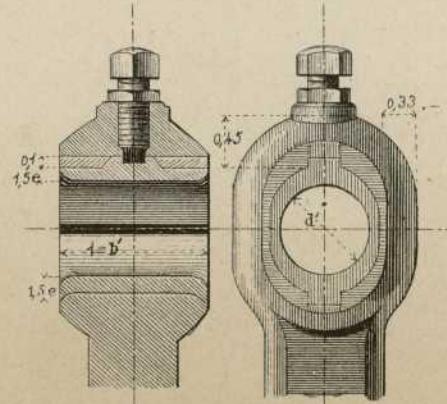
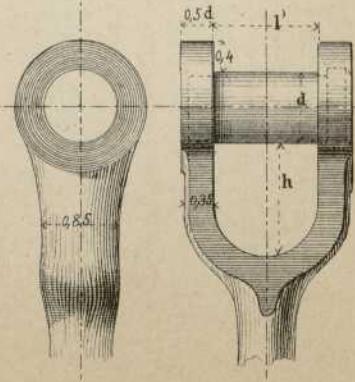
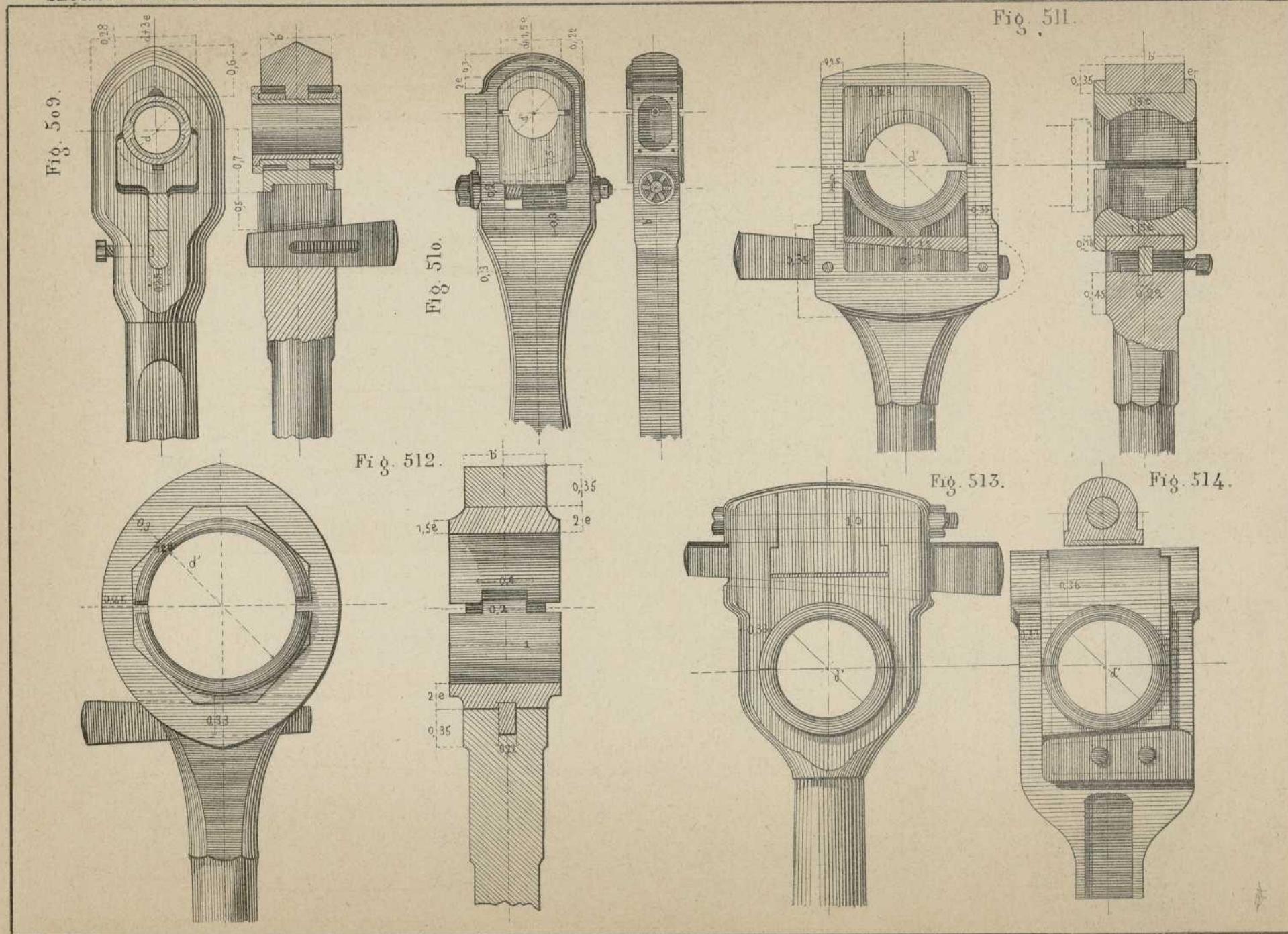


Fig. 508





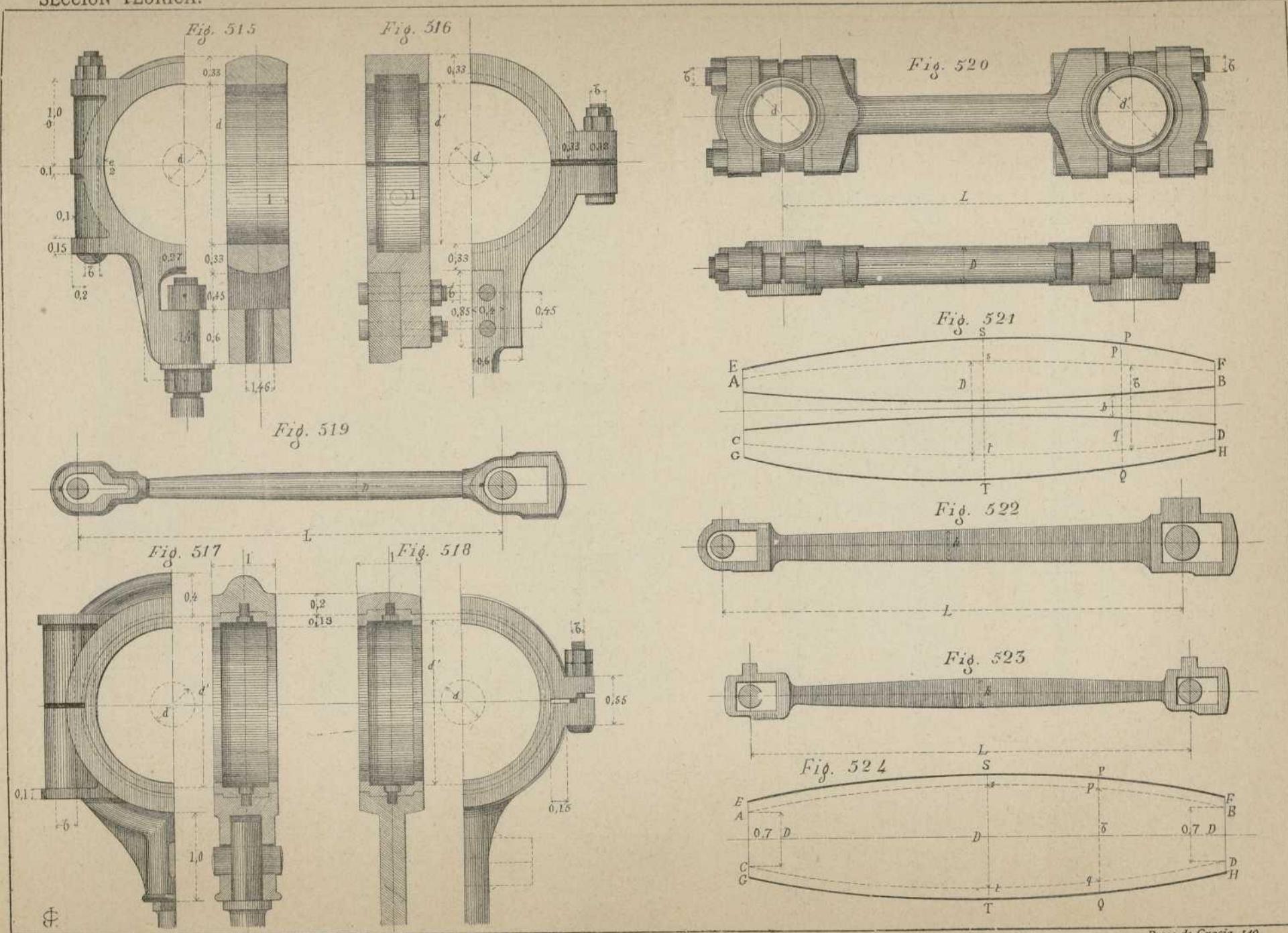


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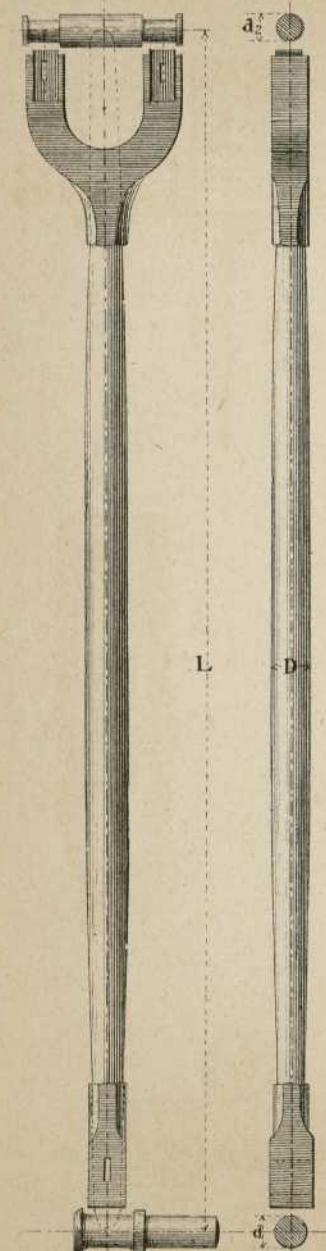


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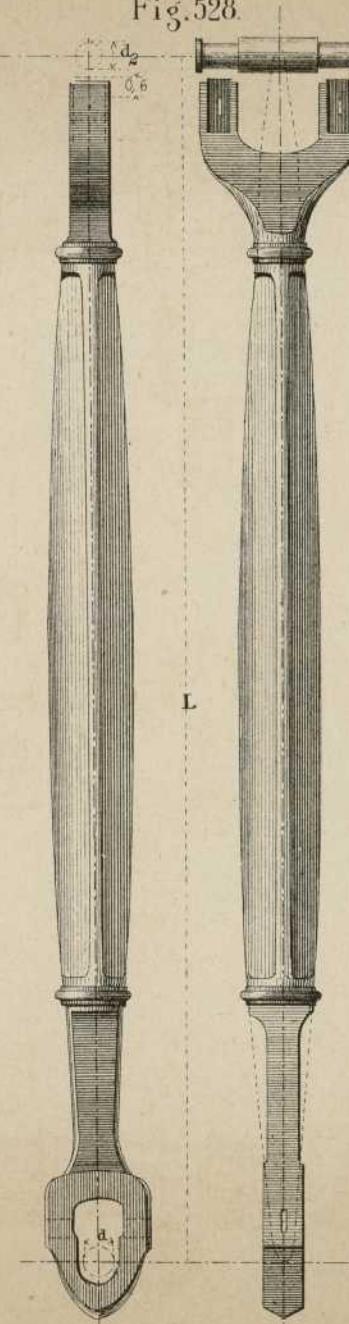


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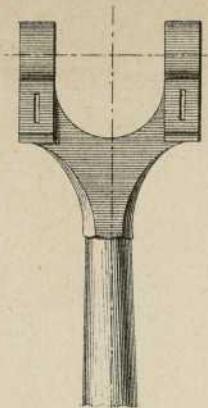


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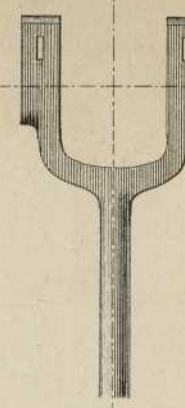


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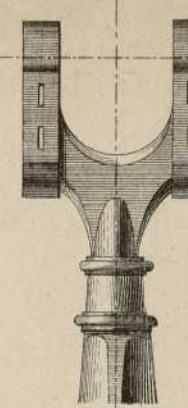


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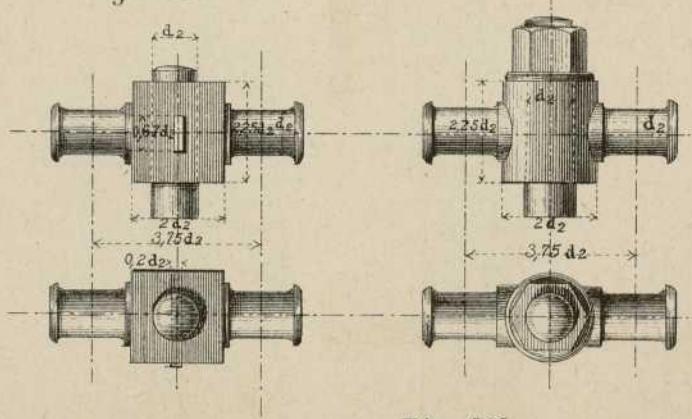


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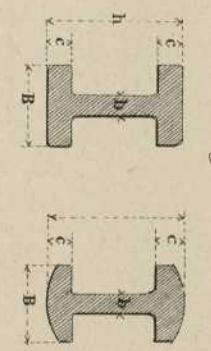
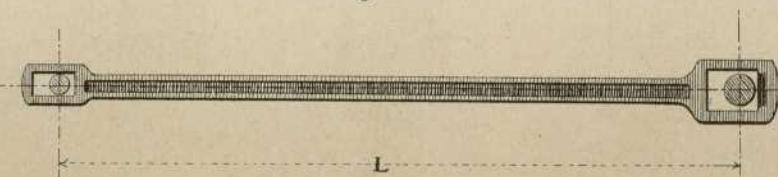


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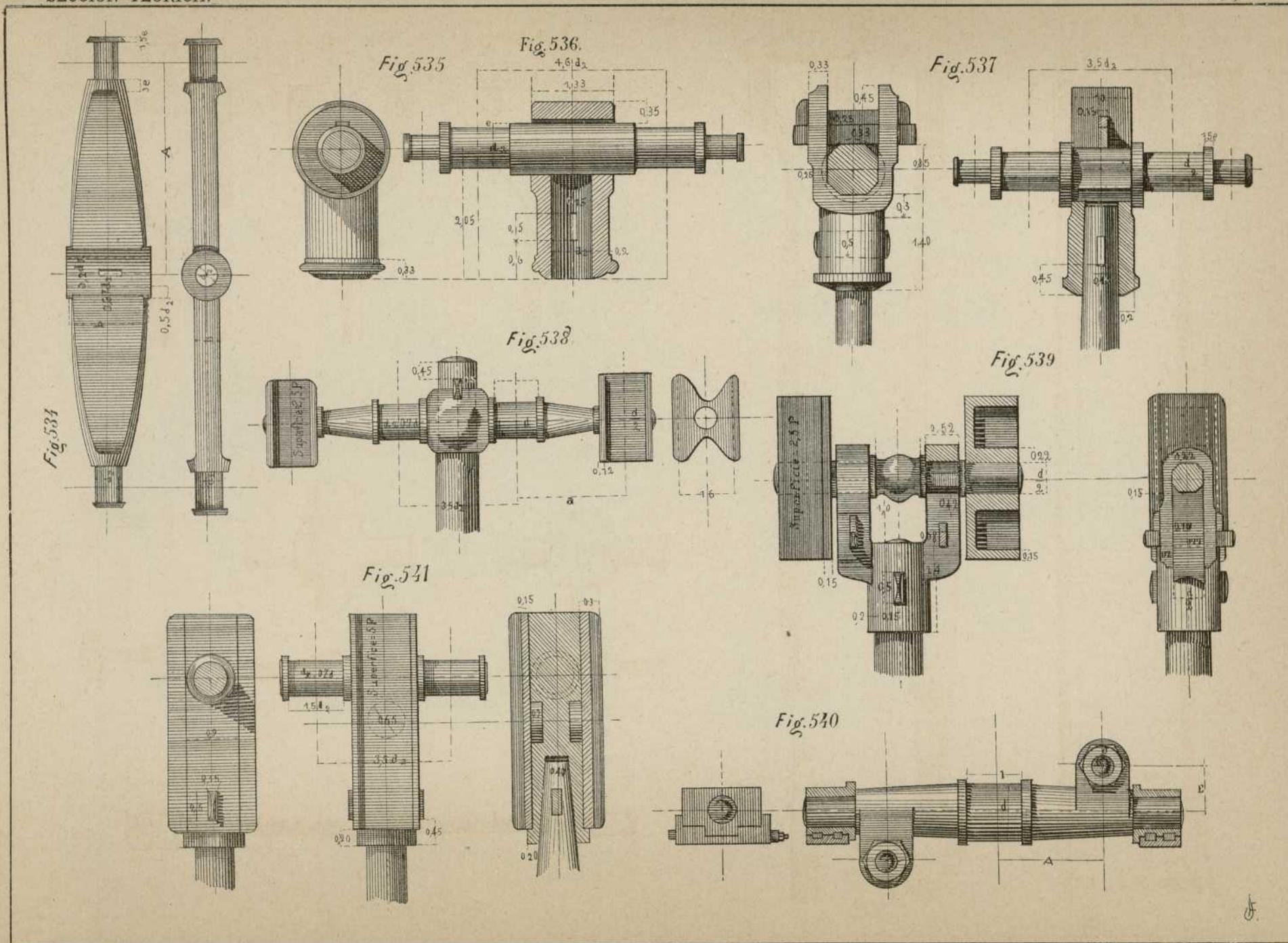


Fig. 542

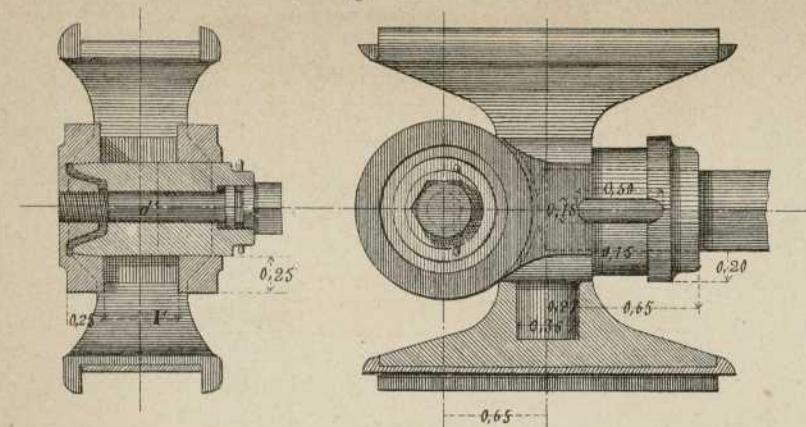


Fig. 543

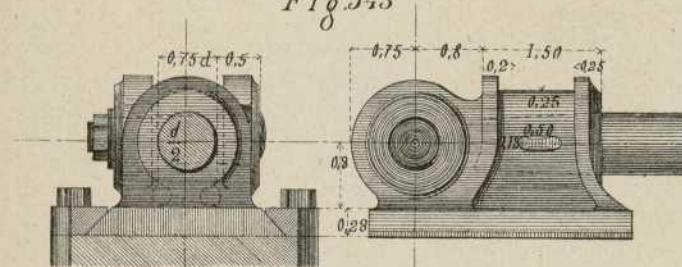


Fig. 544

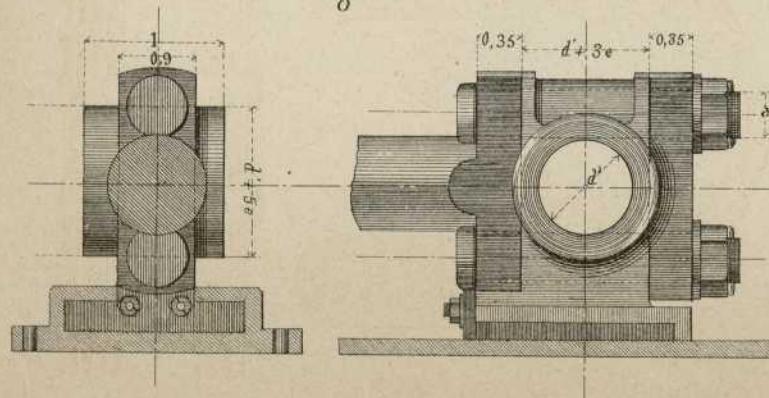


Fig. 545

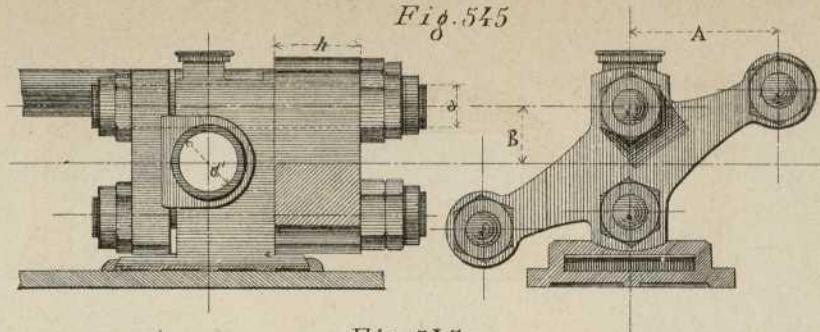


Fig. 546

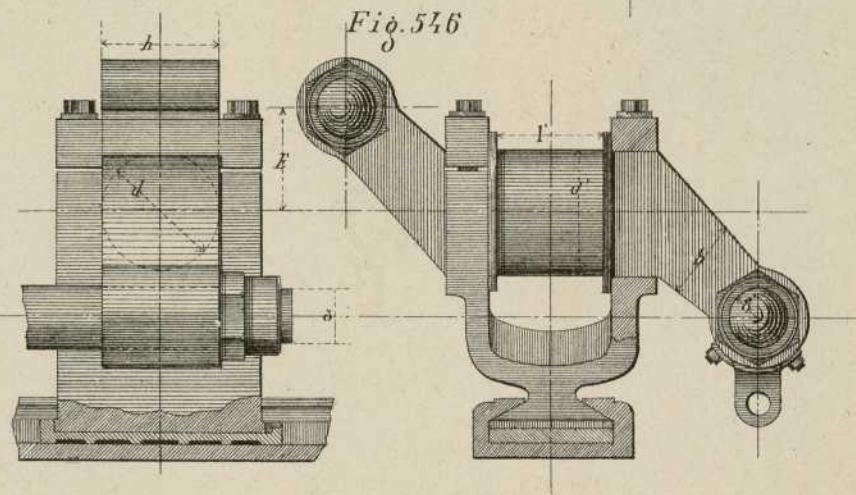


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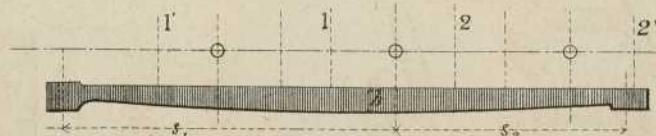
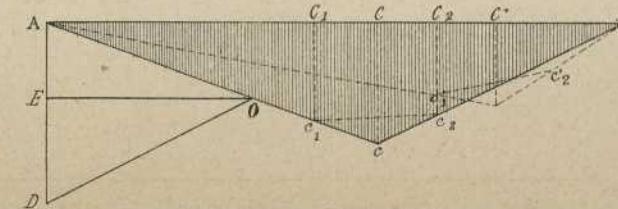


Fig. 548



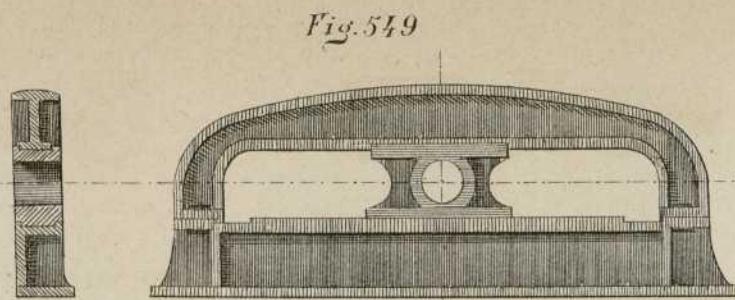


Fig. 549

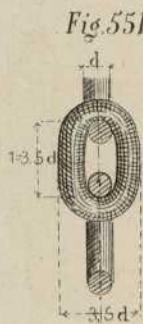


Fig. 551

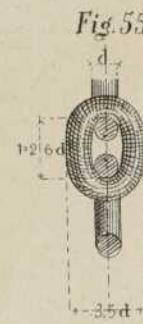


Fig. 552

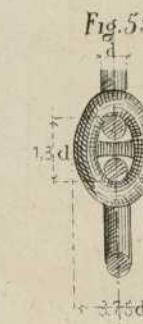


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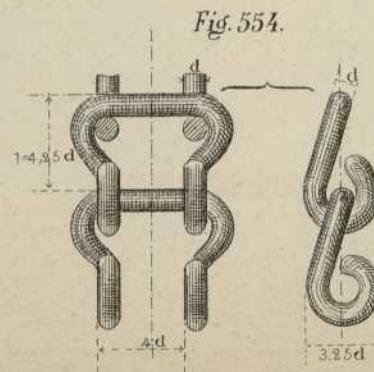


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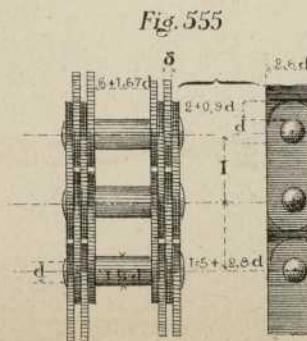


Fig. 555

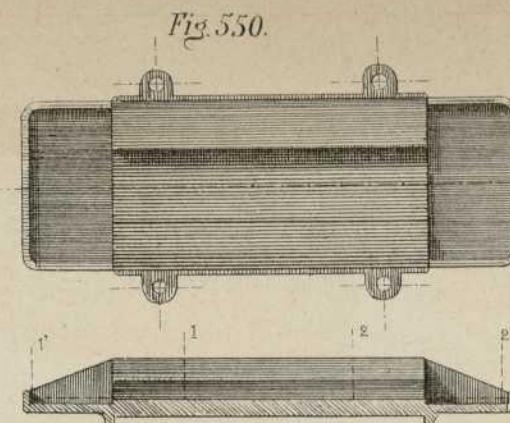


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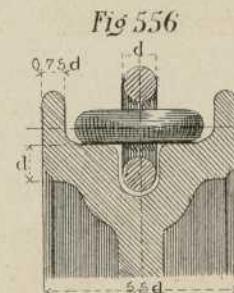


Fig. 556

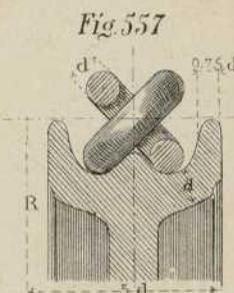


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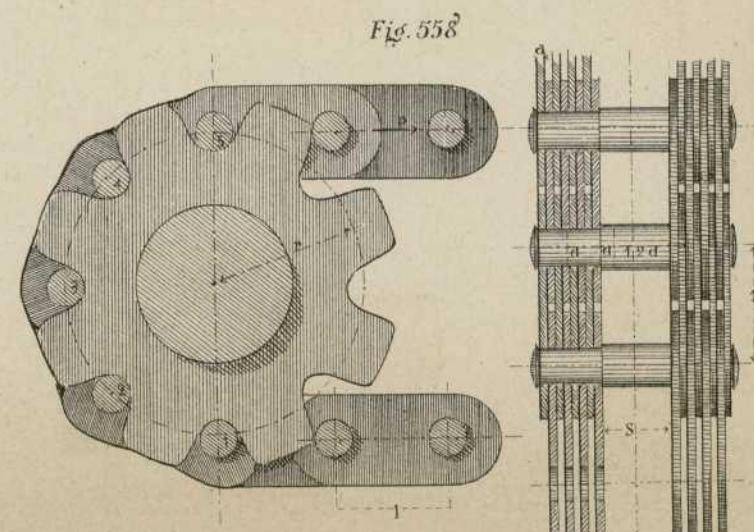


Fig. 558

J.M.

SECCION TEÓRICA.

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Lámina 112.^a

Fig. 559

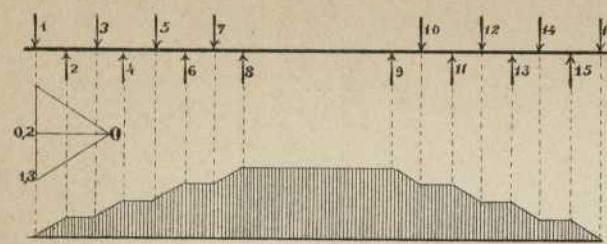


Fig. 560.

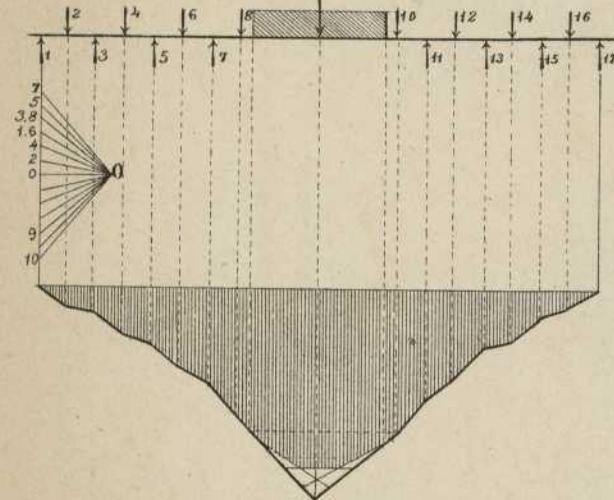


Fig. 565

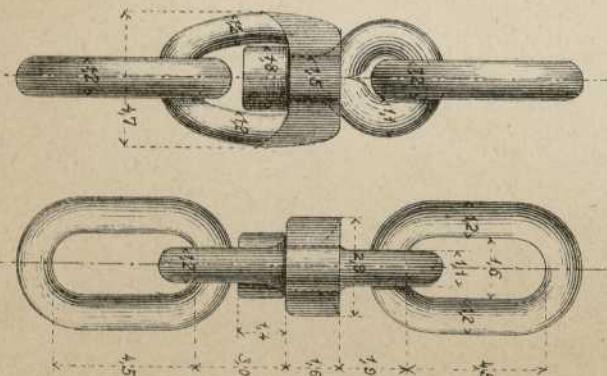


Fig. 563

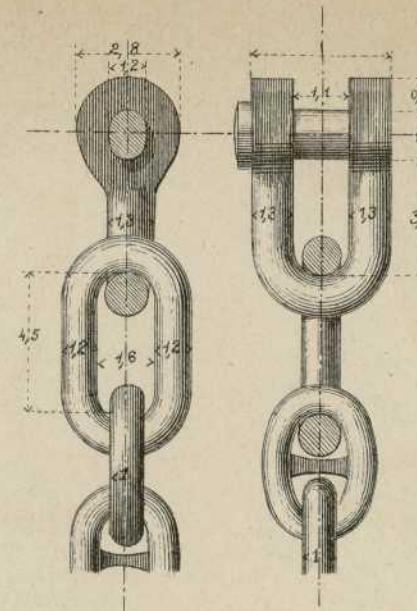


Fig. 562

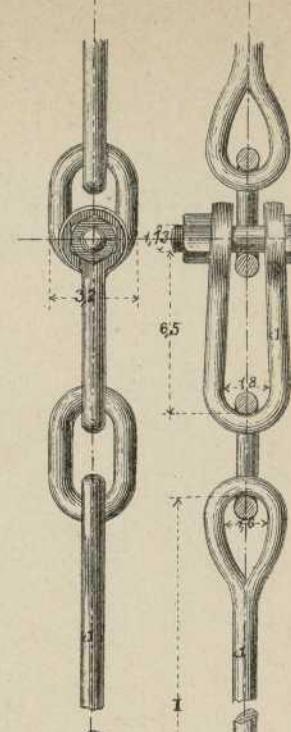


Fig. 564

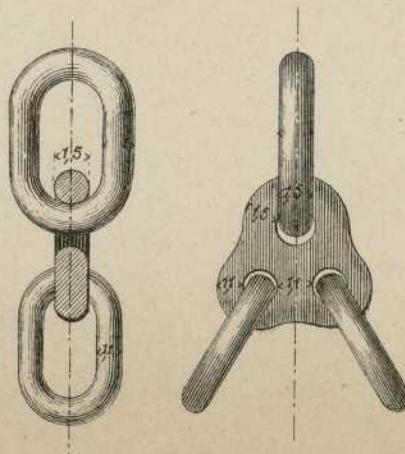
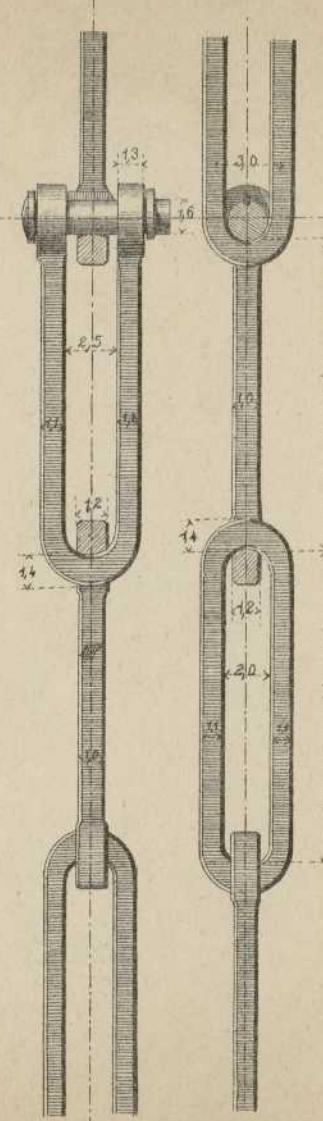


Fig. 561



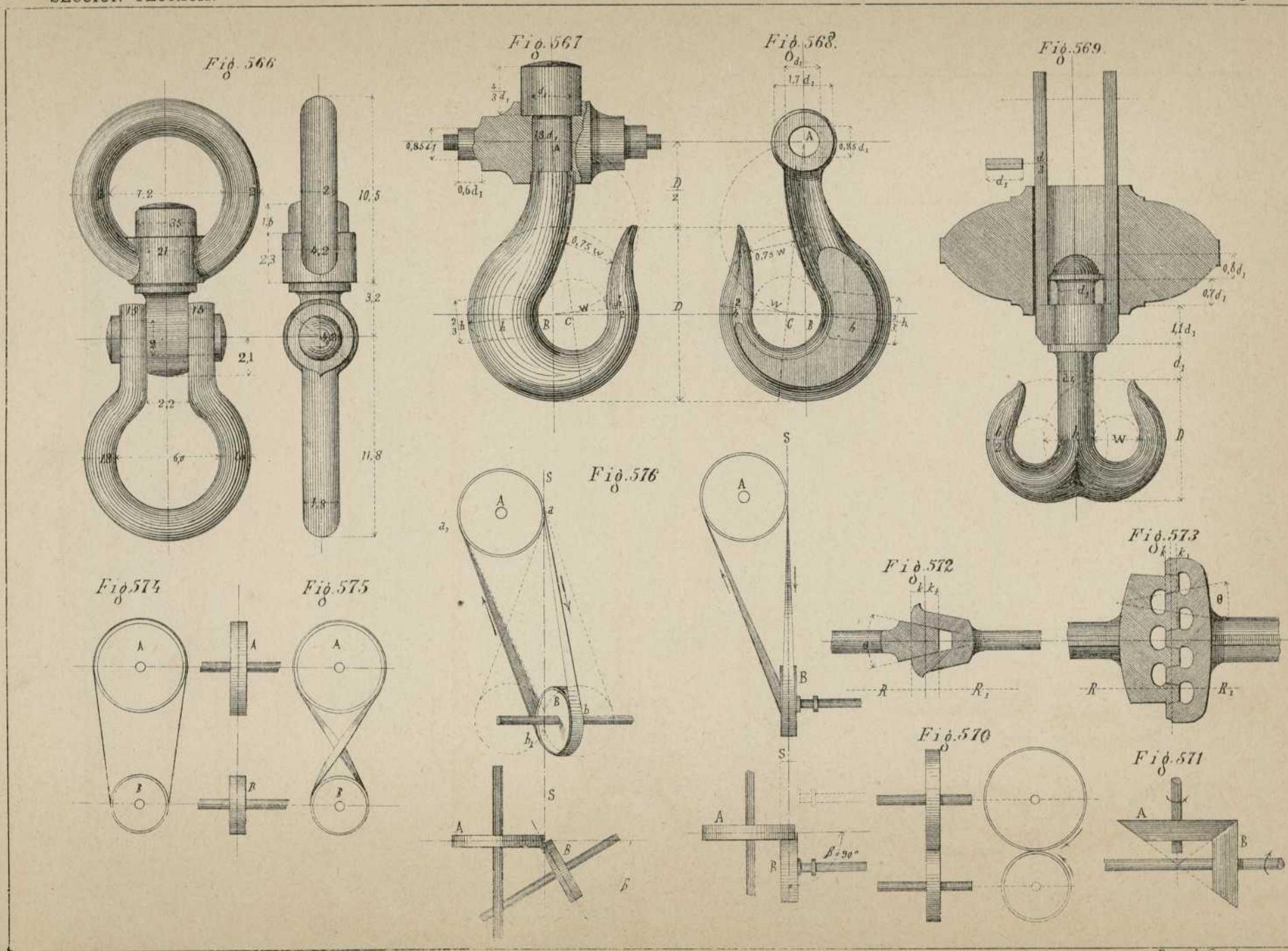


Fig. 577

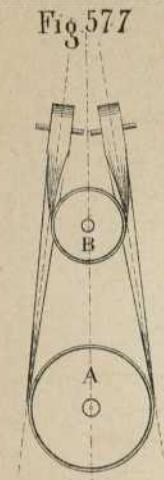


Fig. 578

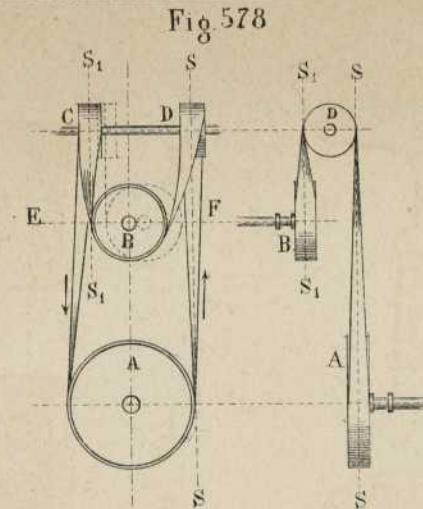


Fig. 579

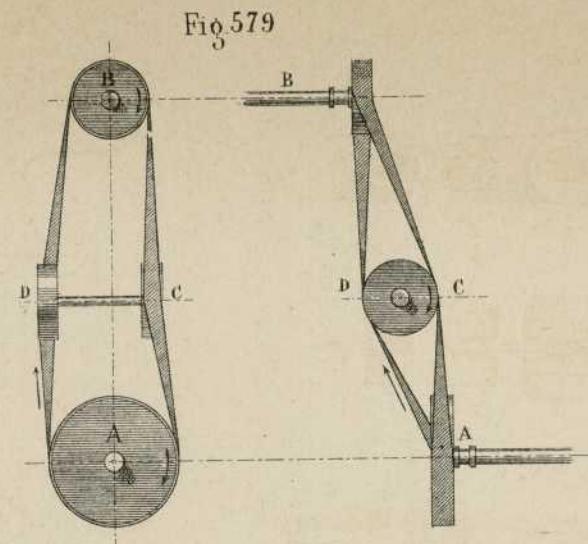


Fig. 580

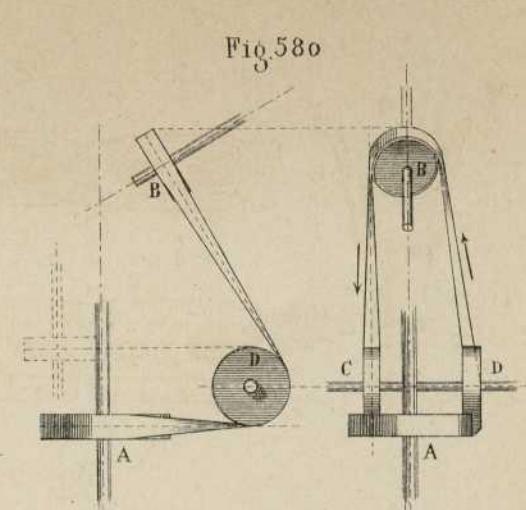


Fig. 581

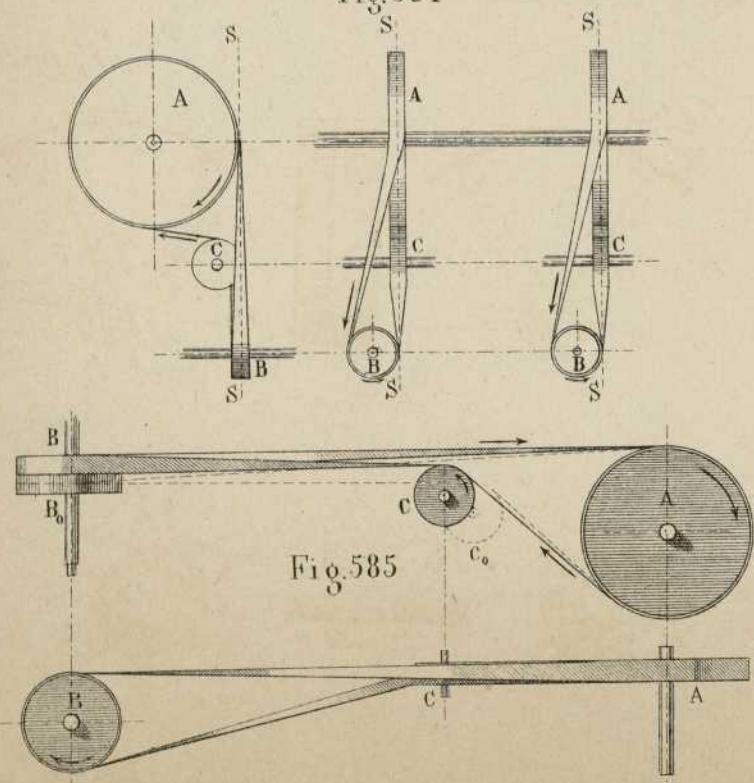


Fig. 581

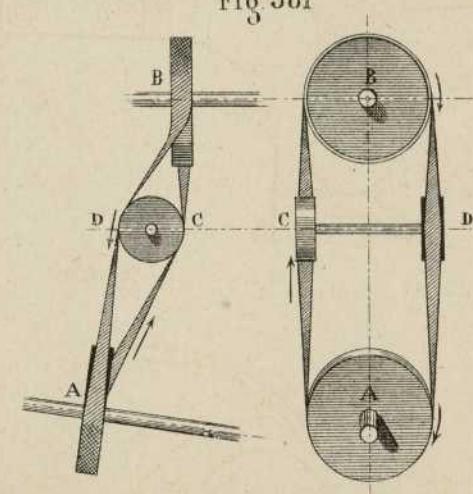


Fig. 582

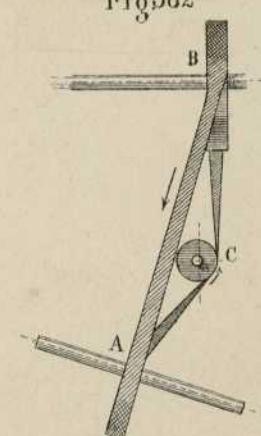
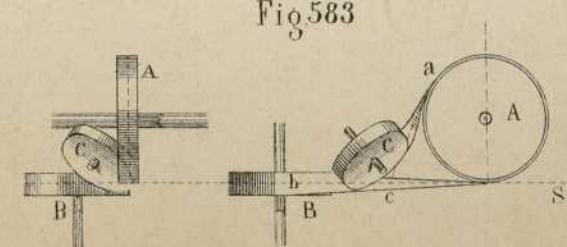
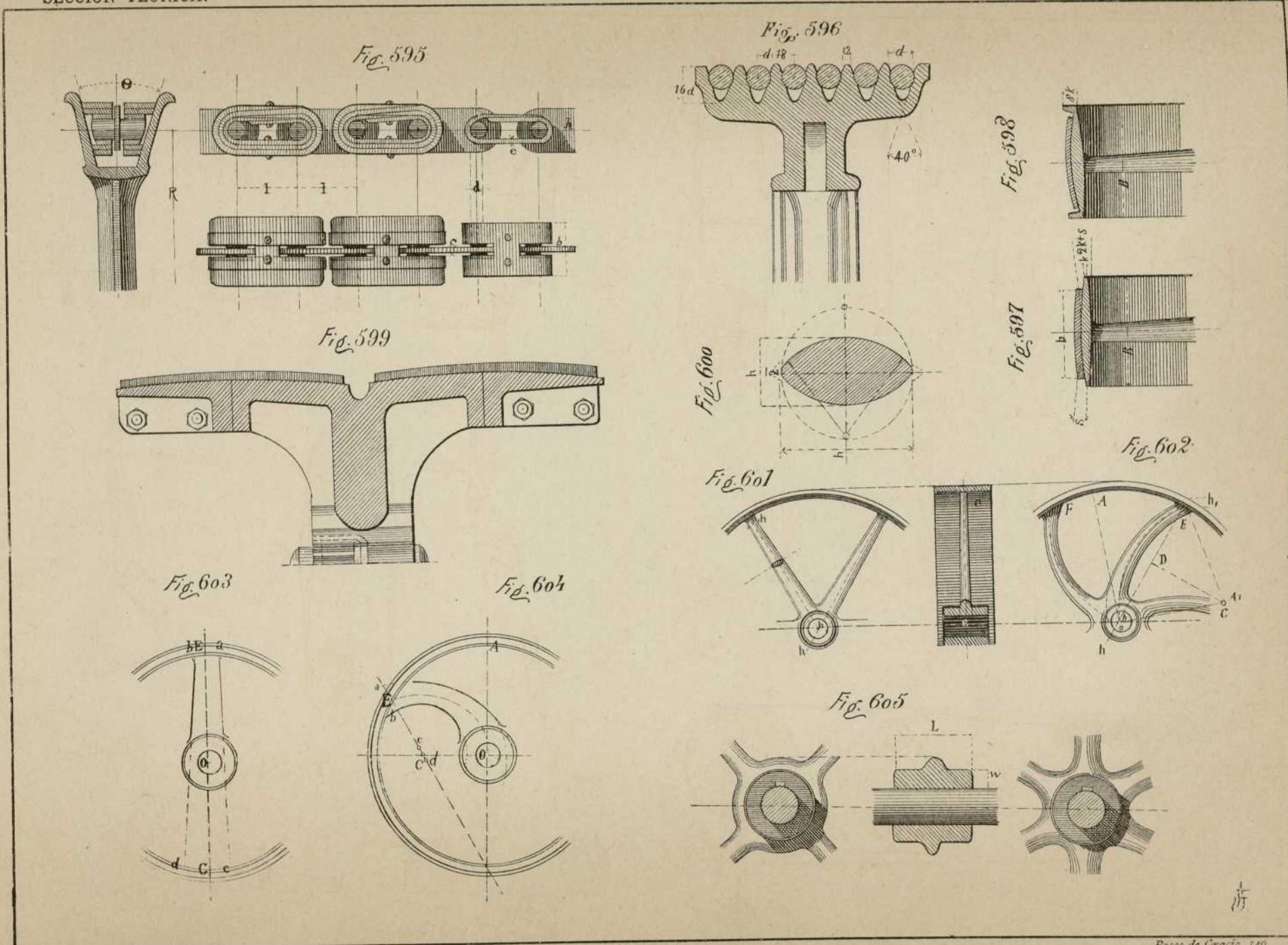


Fig. 583





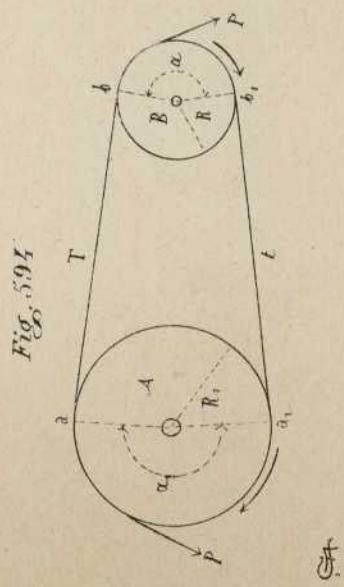
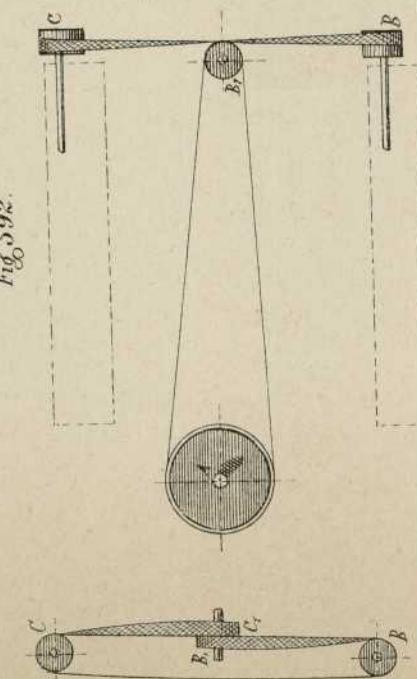
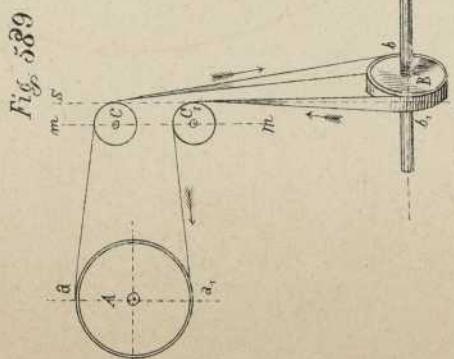
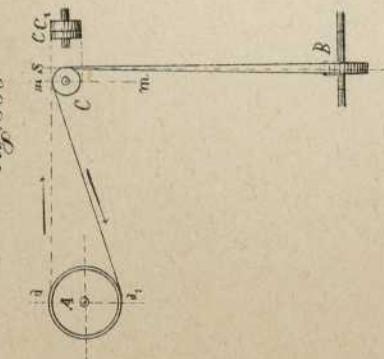
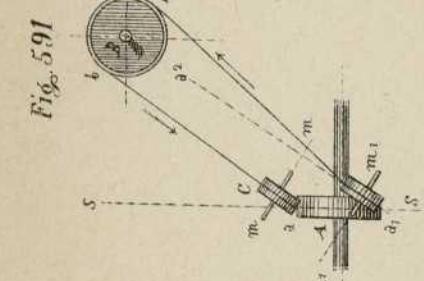
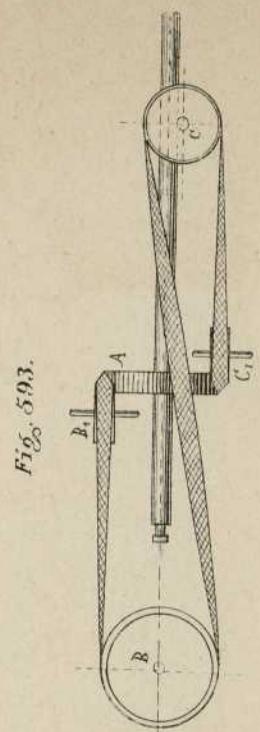
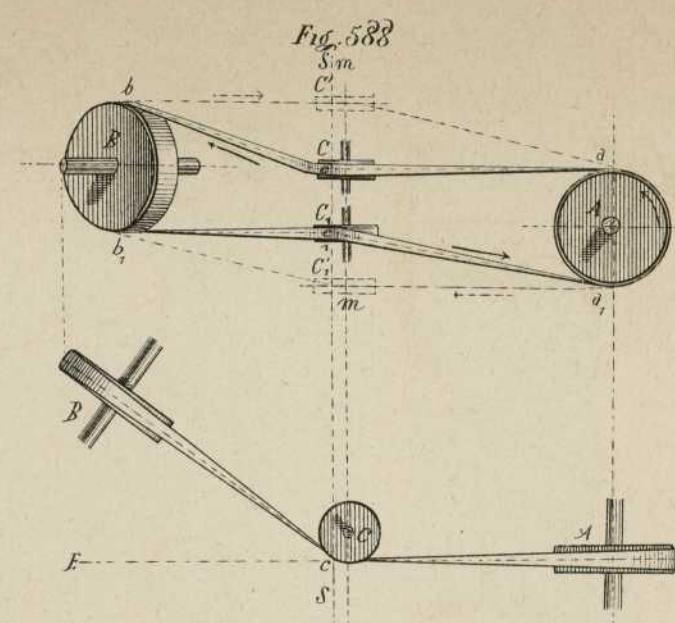
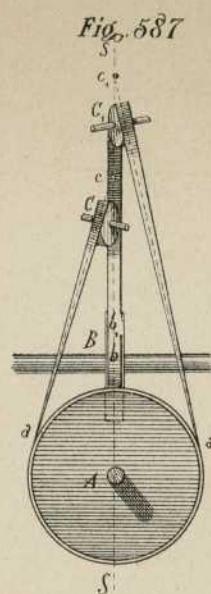
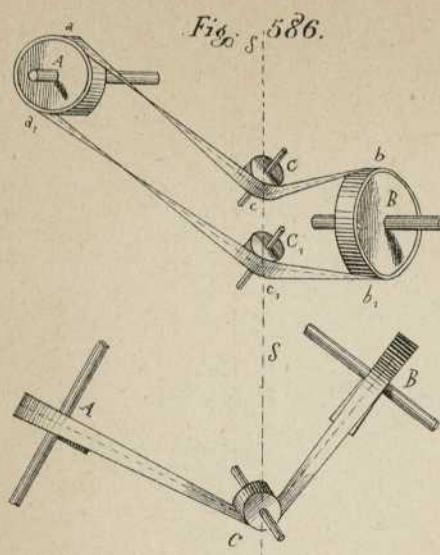


Fig. 606.

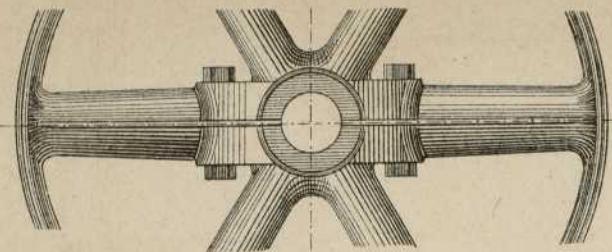


Fig. 607

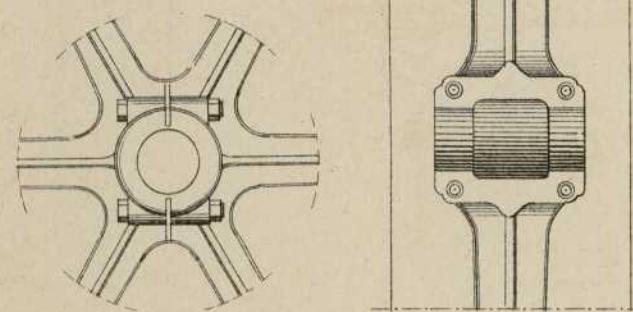


Fig. 608

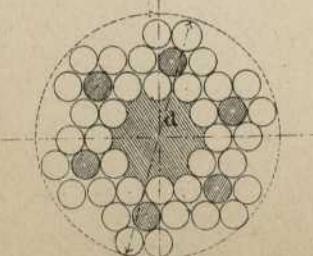


Fig. 609

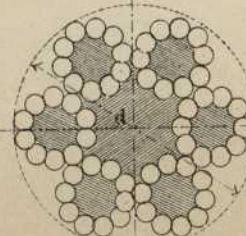


Fig. 610

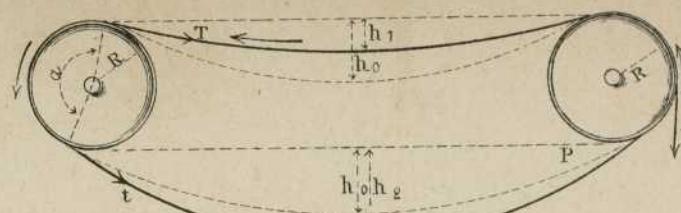


Fig. 611

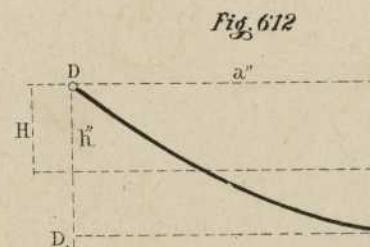
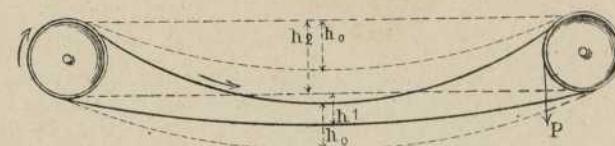


Fig. 613

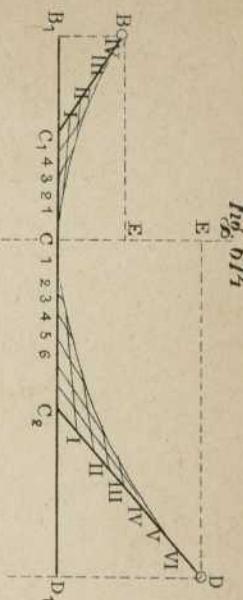
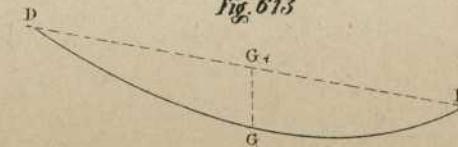


Fig. 614

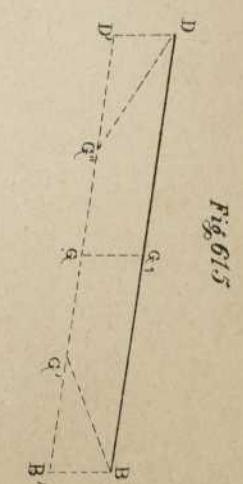


Fig. 615

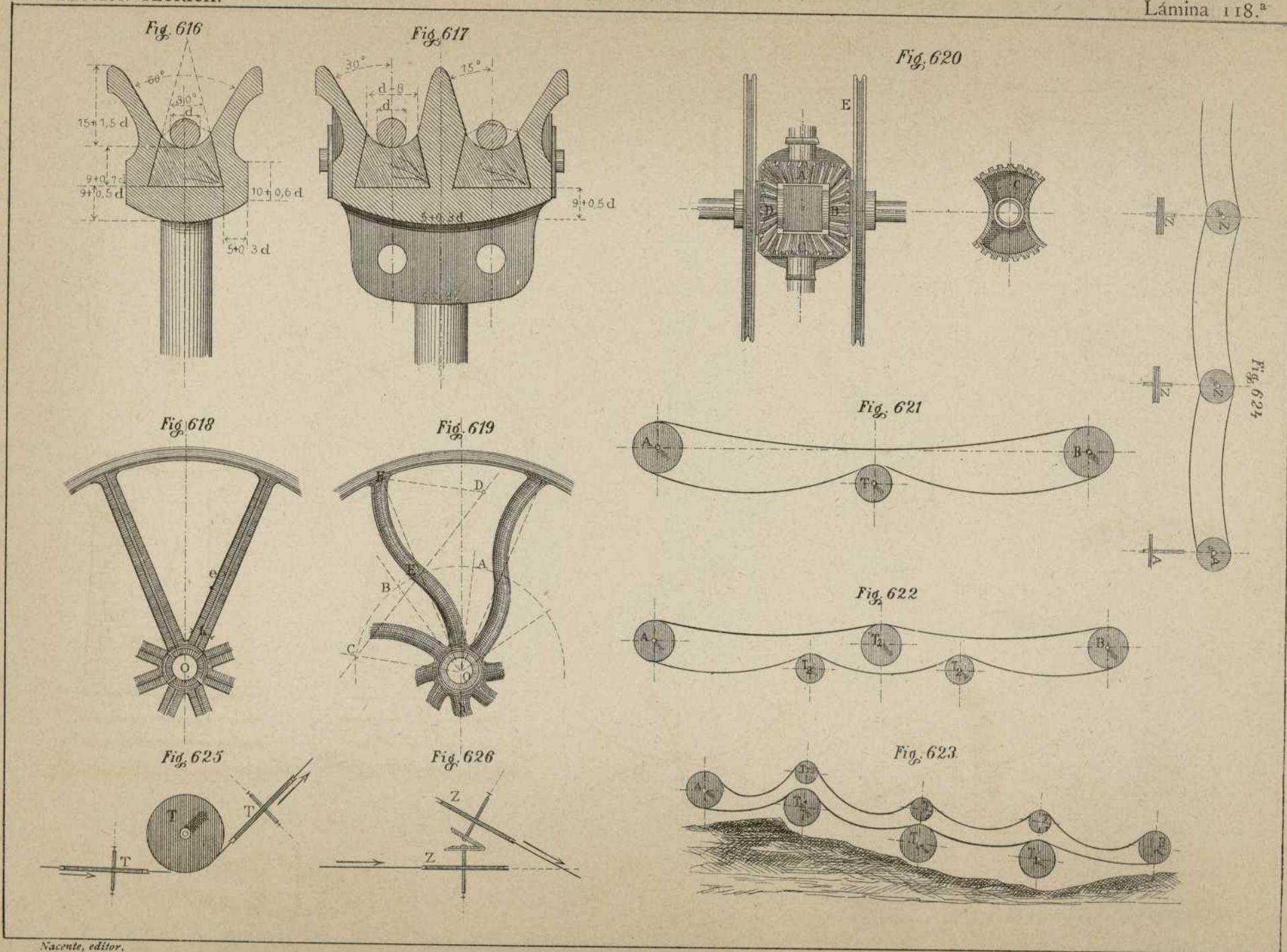


Fig. 627

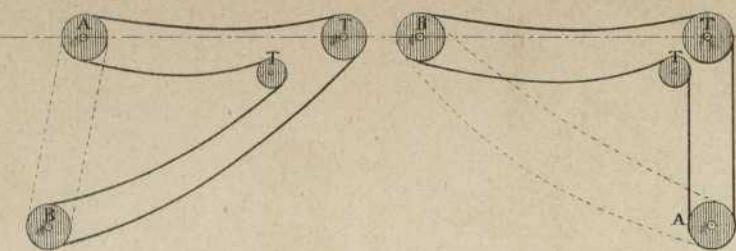


Fig. 628

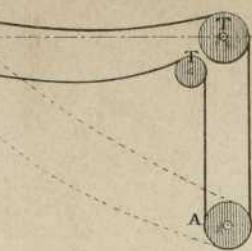


Fig. 632

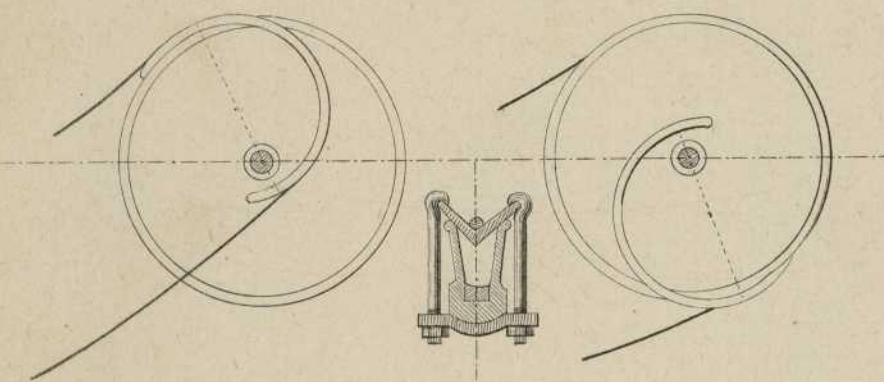


Fig. 634

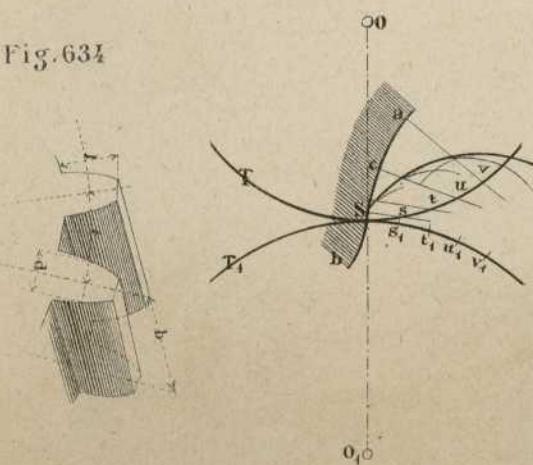


Fig. 635

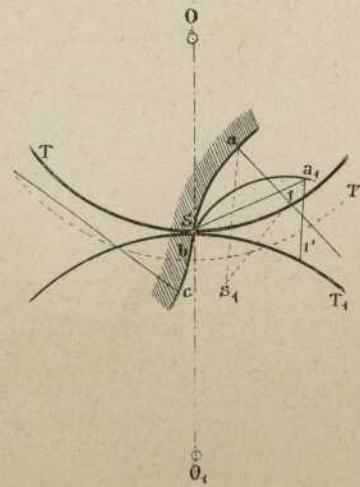


Fig. 629

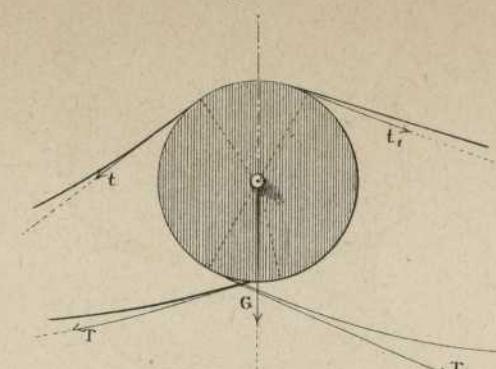


Fig. 630

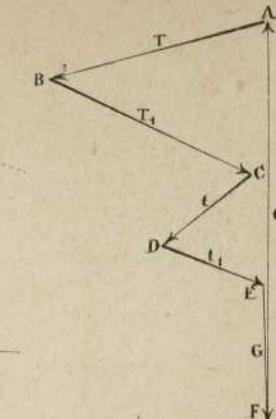


Fig. 631

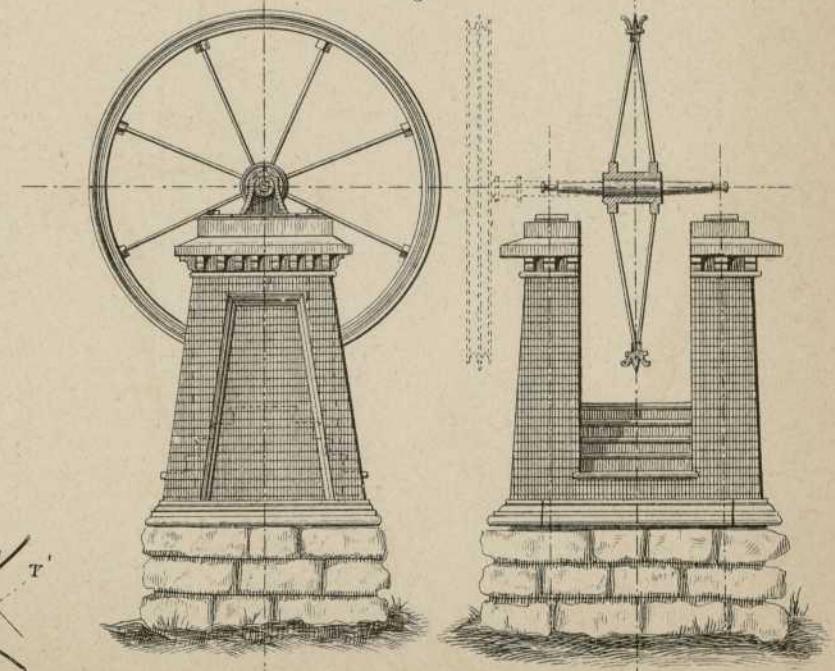
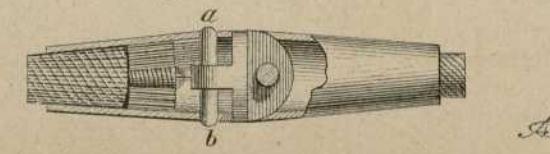
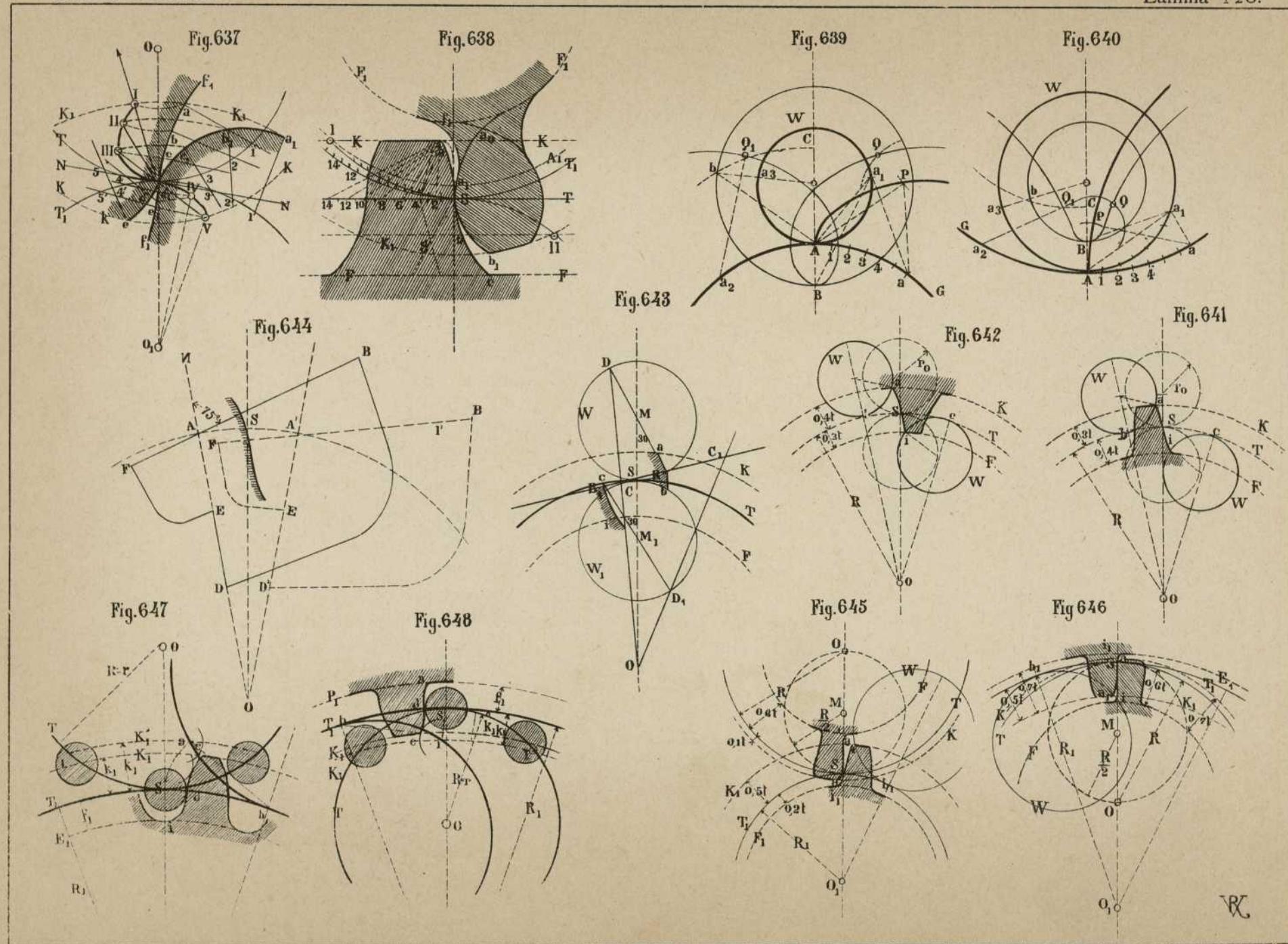


Fig. 633





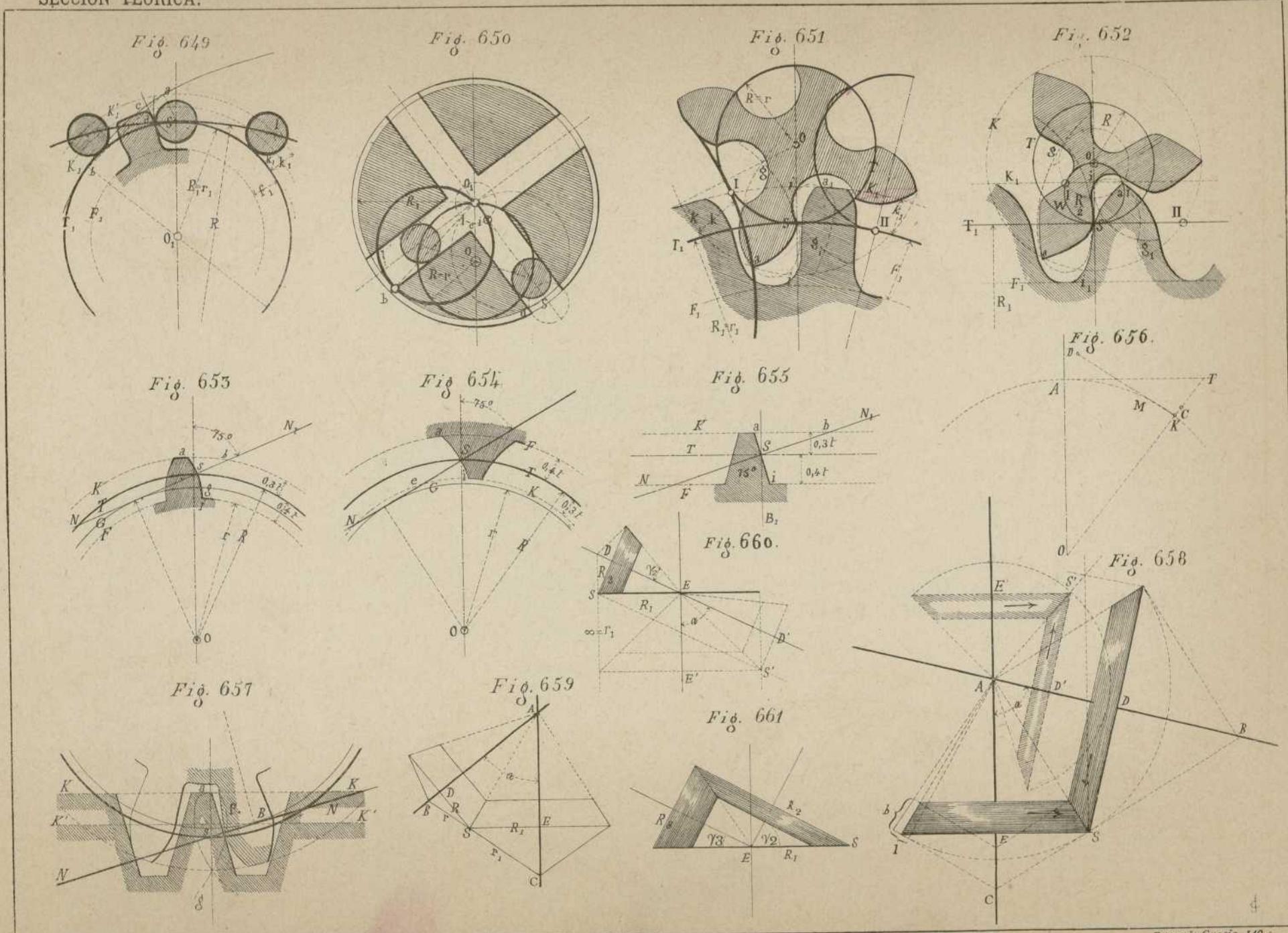


Fig. 678.

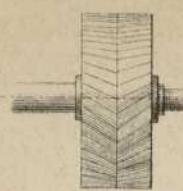


Fig. 665.

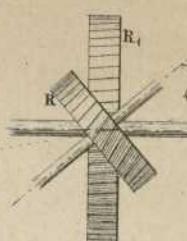


Fig. 666.

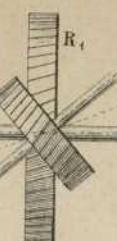


Fig. 667.

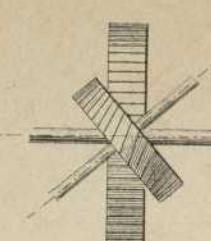


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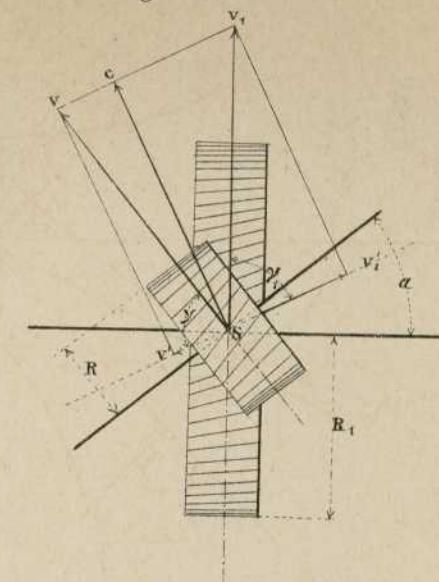


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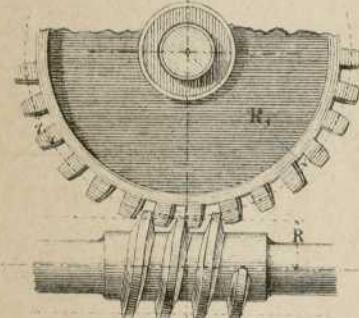


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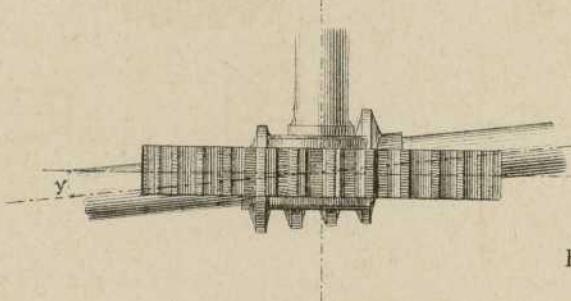


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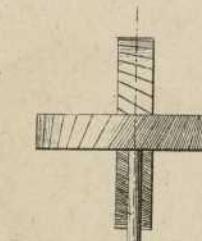


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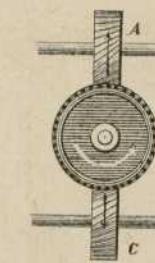


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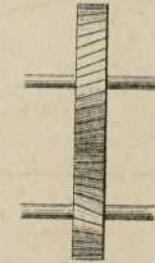


Fig. 671.



Fig. 672.

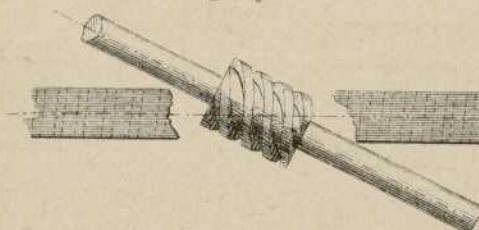


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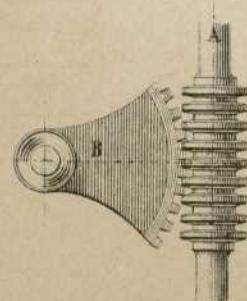


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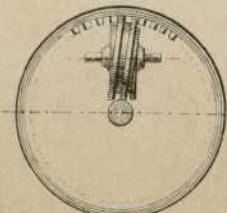


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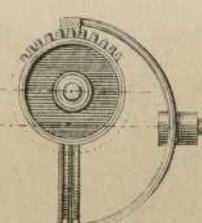


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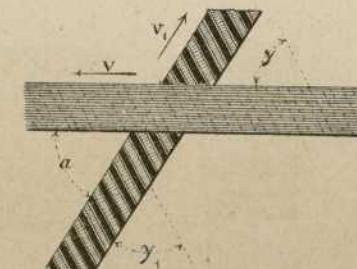
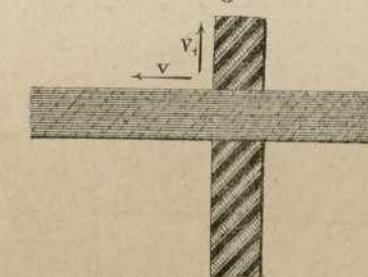


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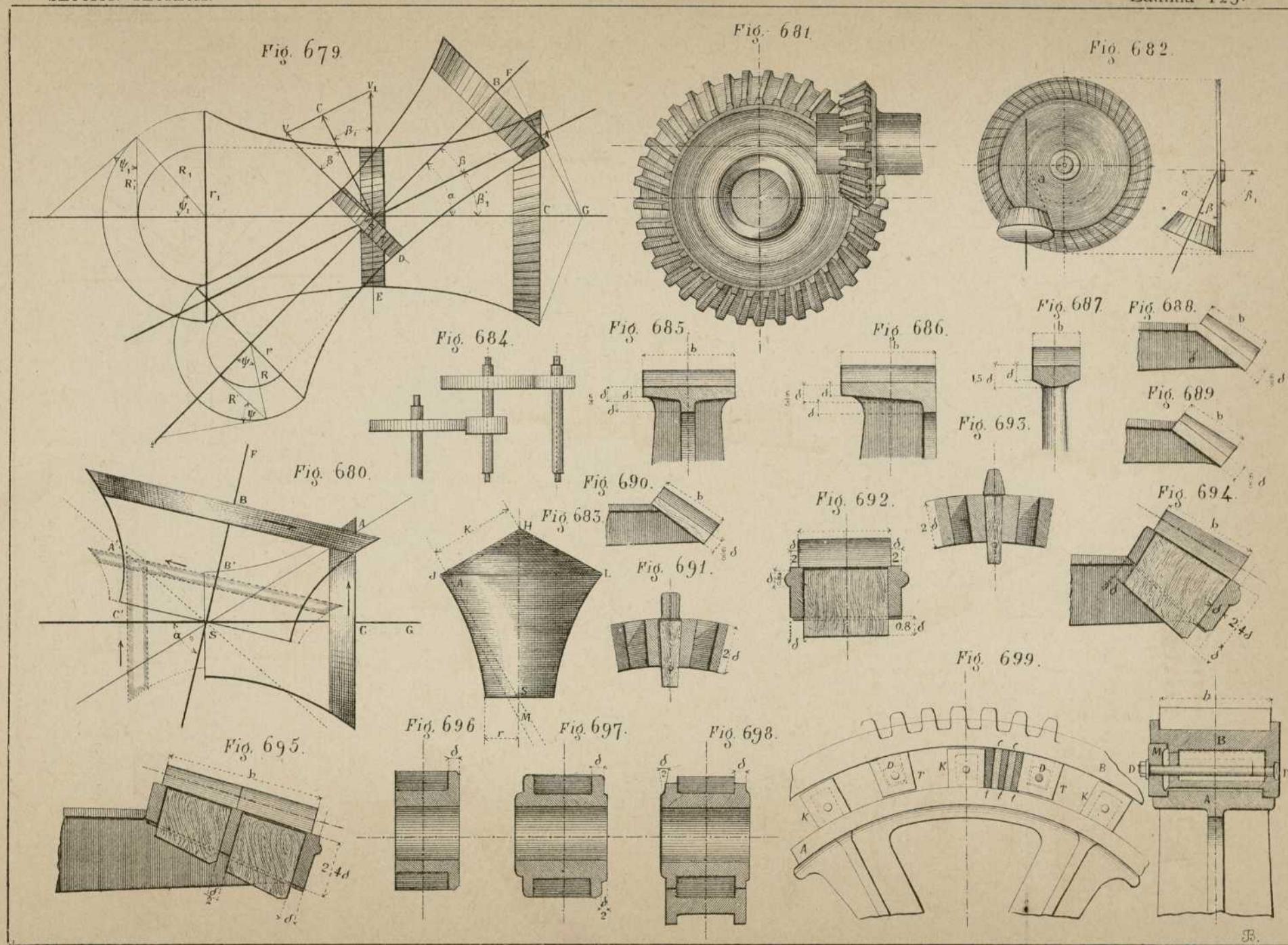


Fig. 700.

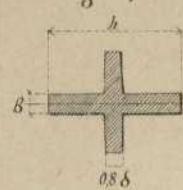


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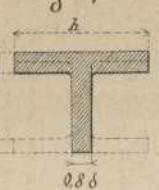


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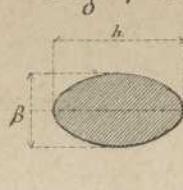


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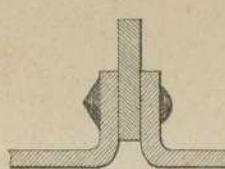


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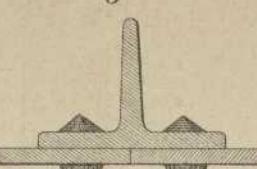


Fig. 716.



Fig. 703.

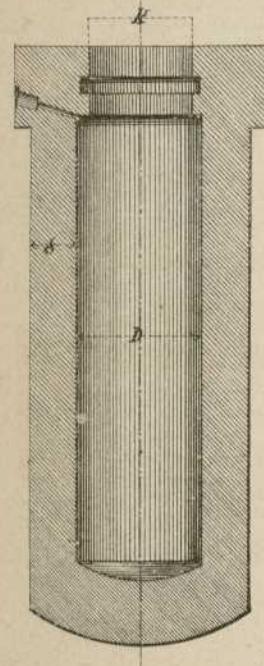


Fig. 704.

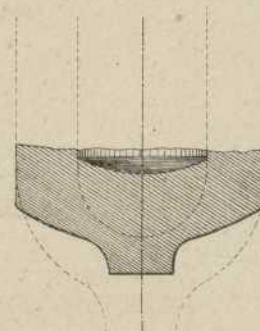


Fig. 705.

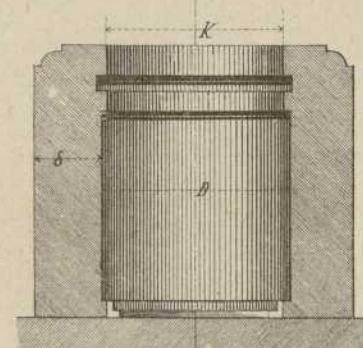


Fig. 708.

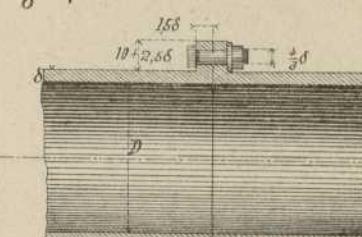


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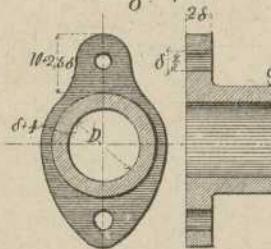


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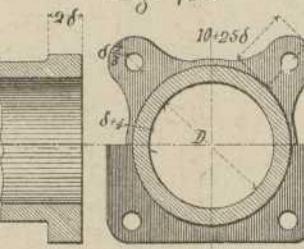


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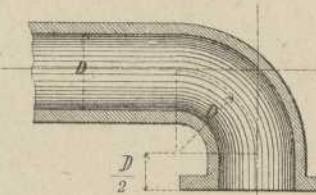


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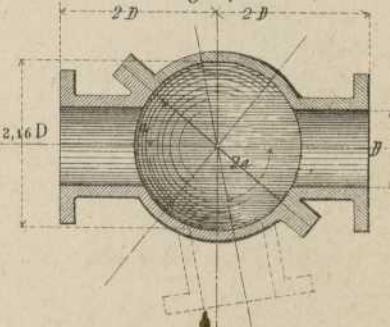


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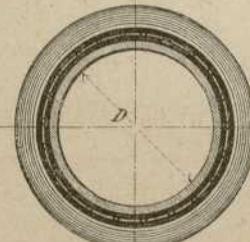


Fig. 714.



Fig. 715.

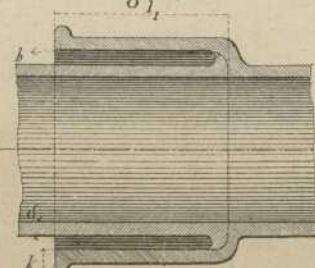


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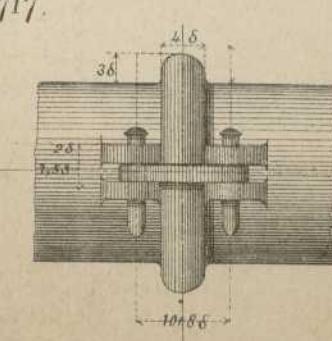
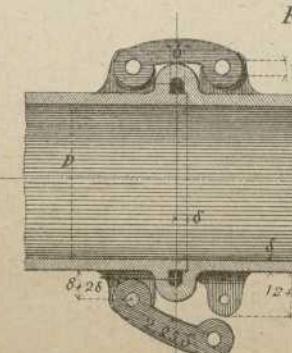


Fig. 727.

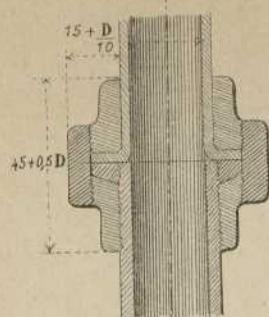


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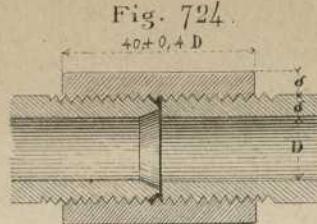


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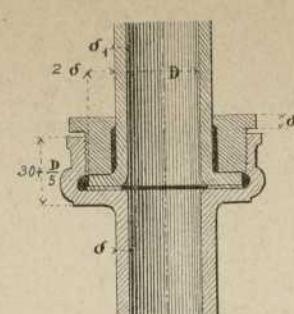


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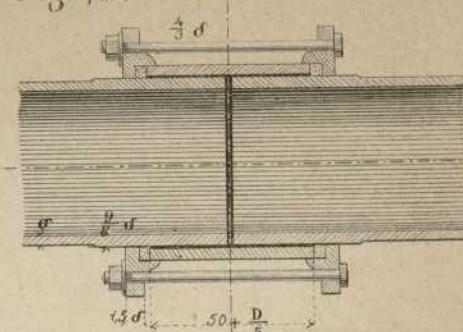


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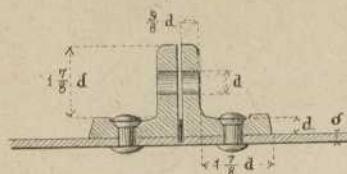


Fig. 722.

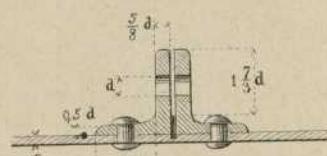


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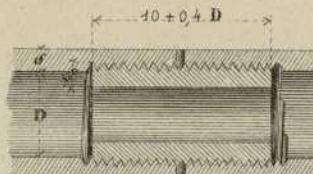


Fig. 721

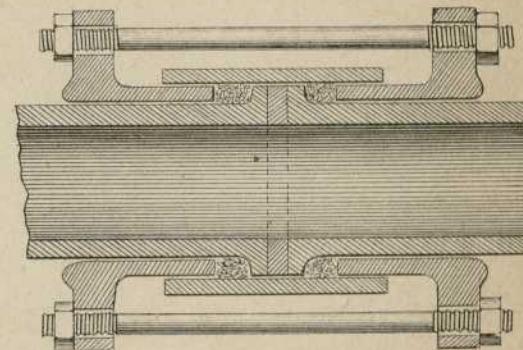


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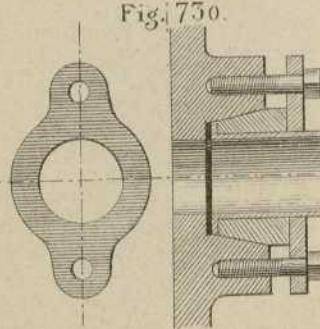


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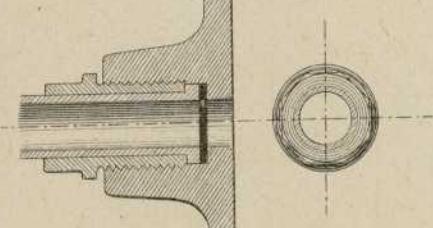


Fig. 729.

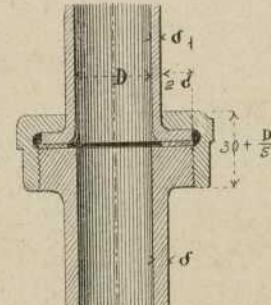


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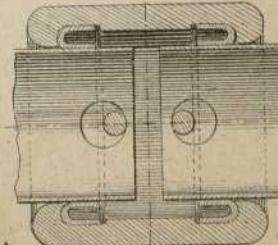


Fig. 726.

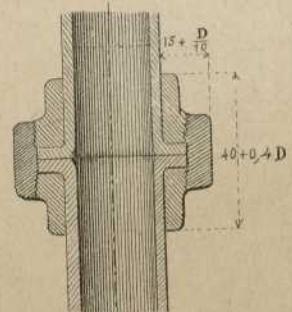


Fig. 720.

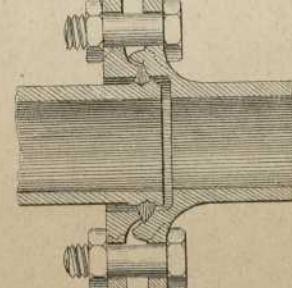


Fig. 718.

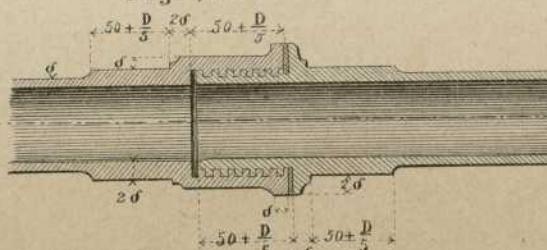


Fig. 733.

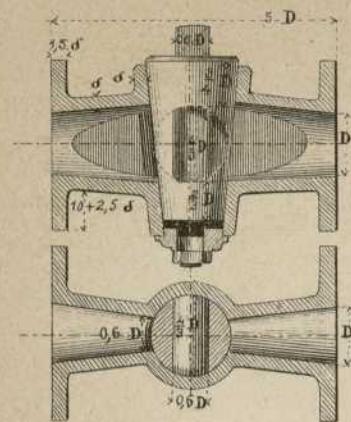


Fig. 734.

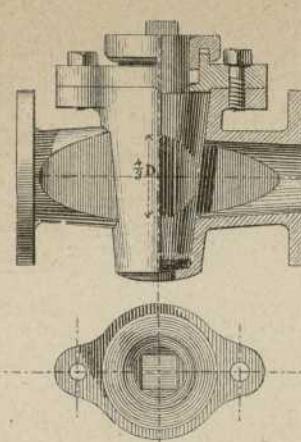


Fig. 735.

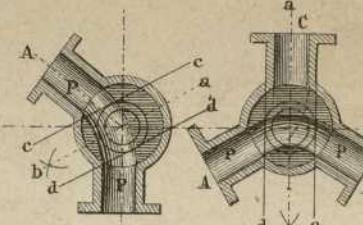


Fig. 736.

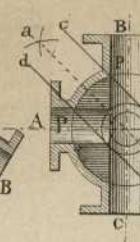


Fig. 737.

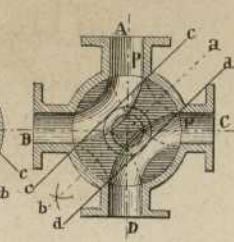


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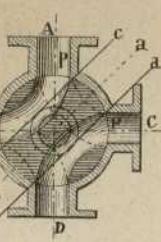


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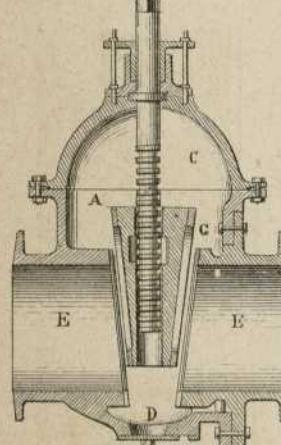


Fig. 745.

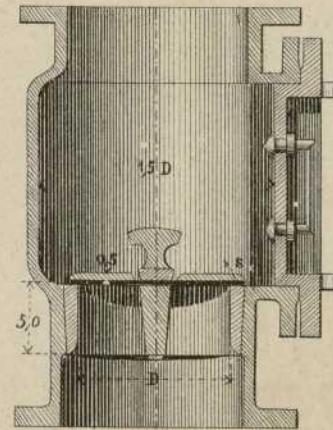


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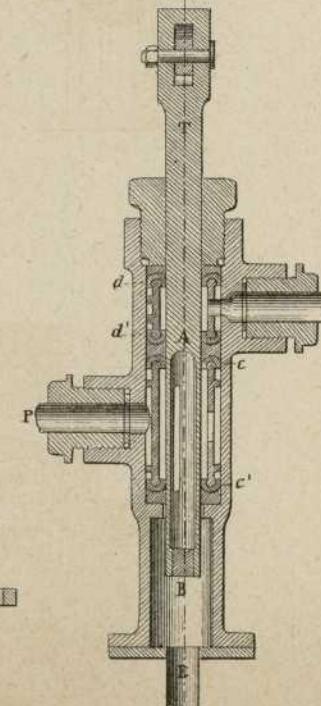


Fig. 740.

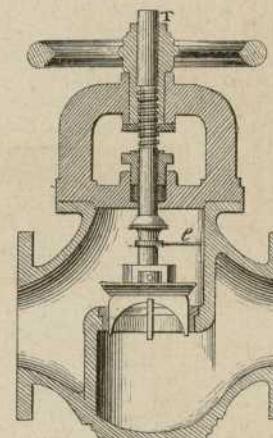


Fig. 739.

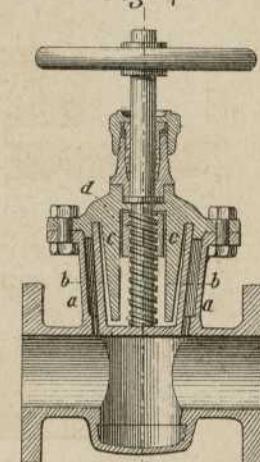


Fig. 743.

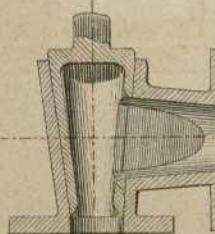


Fig. 744.

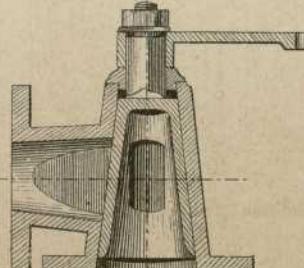
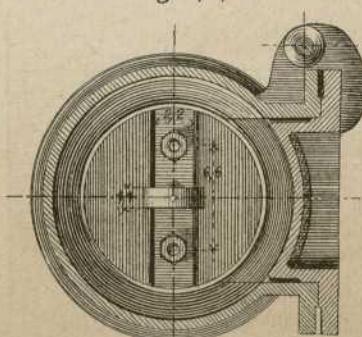


Fig. 746.



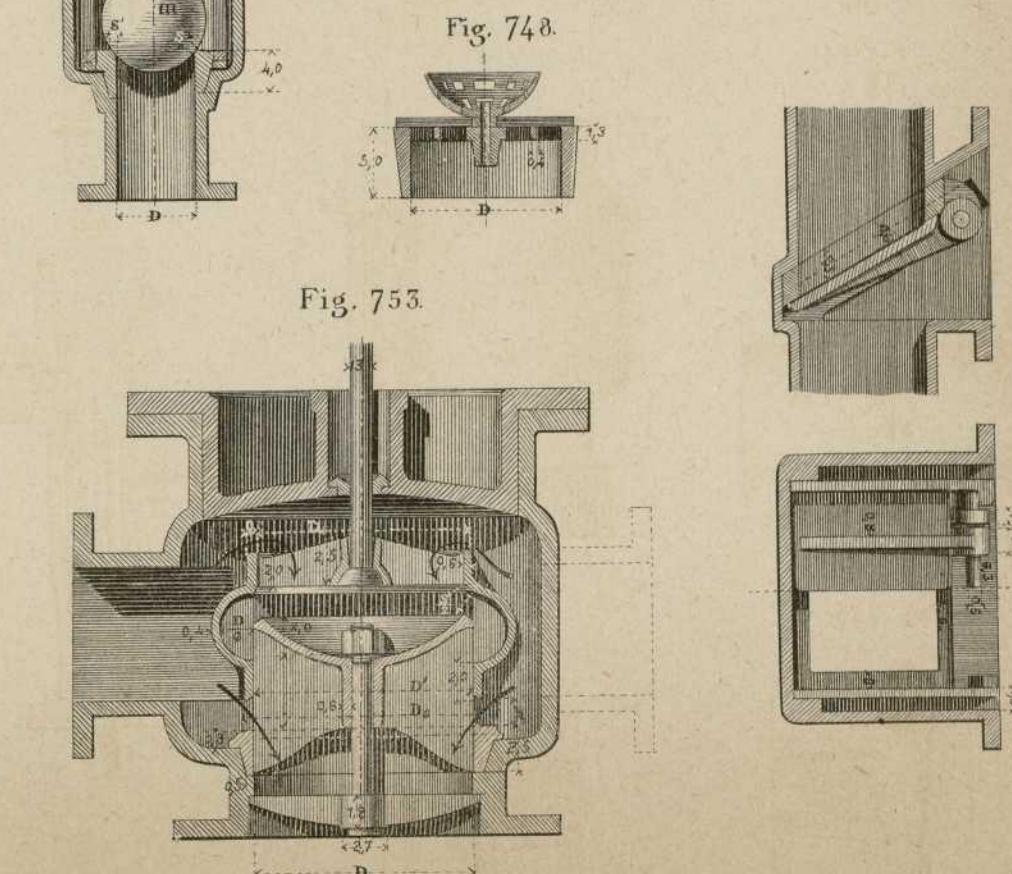
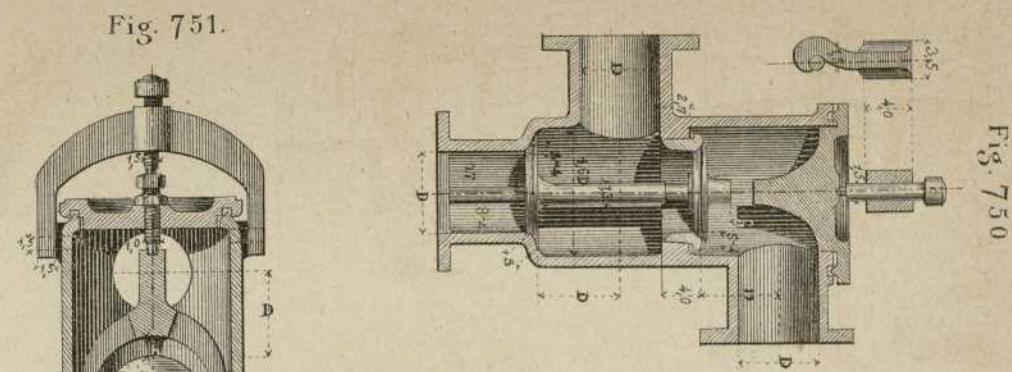
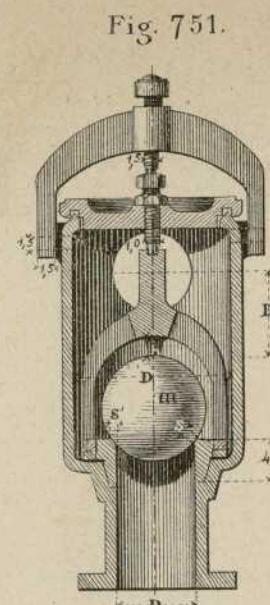
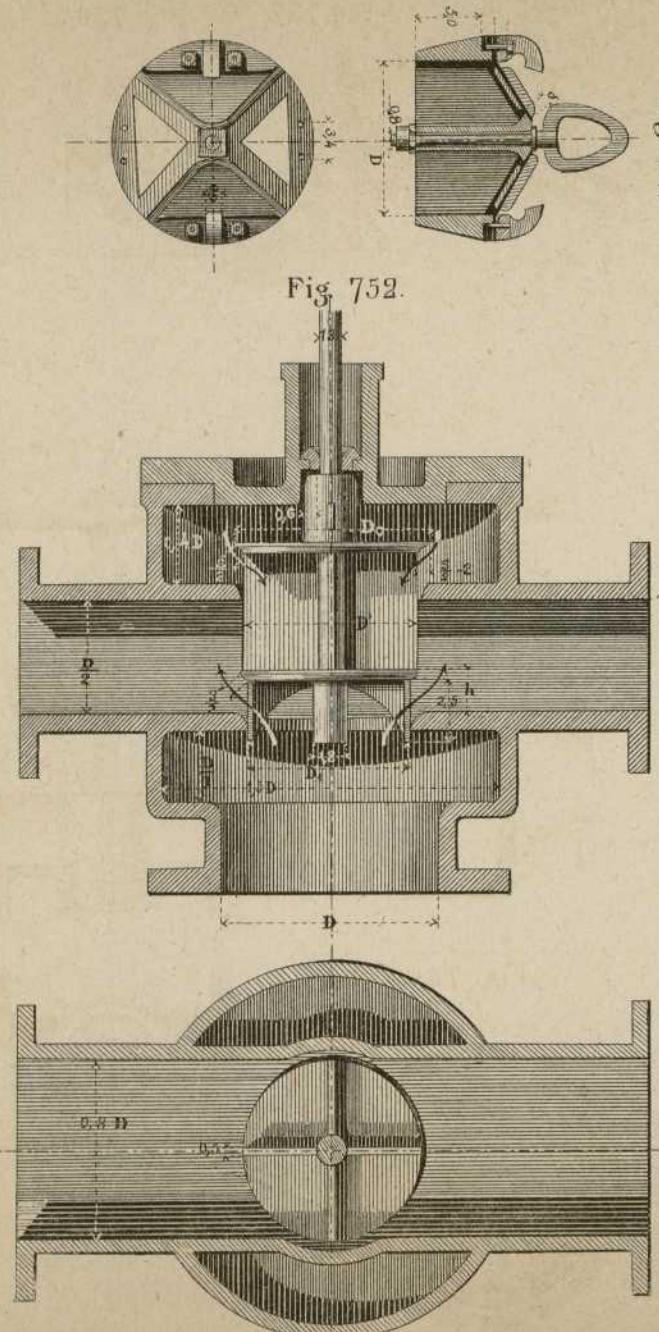
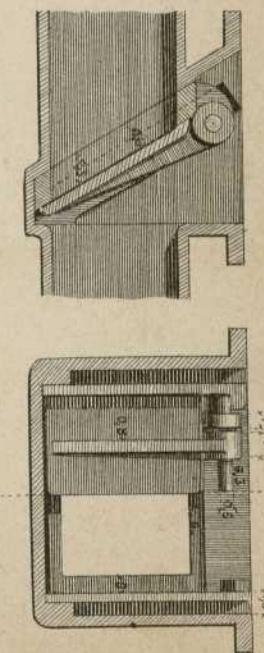


Fig. 749.



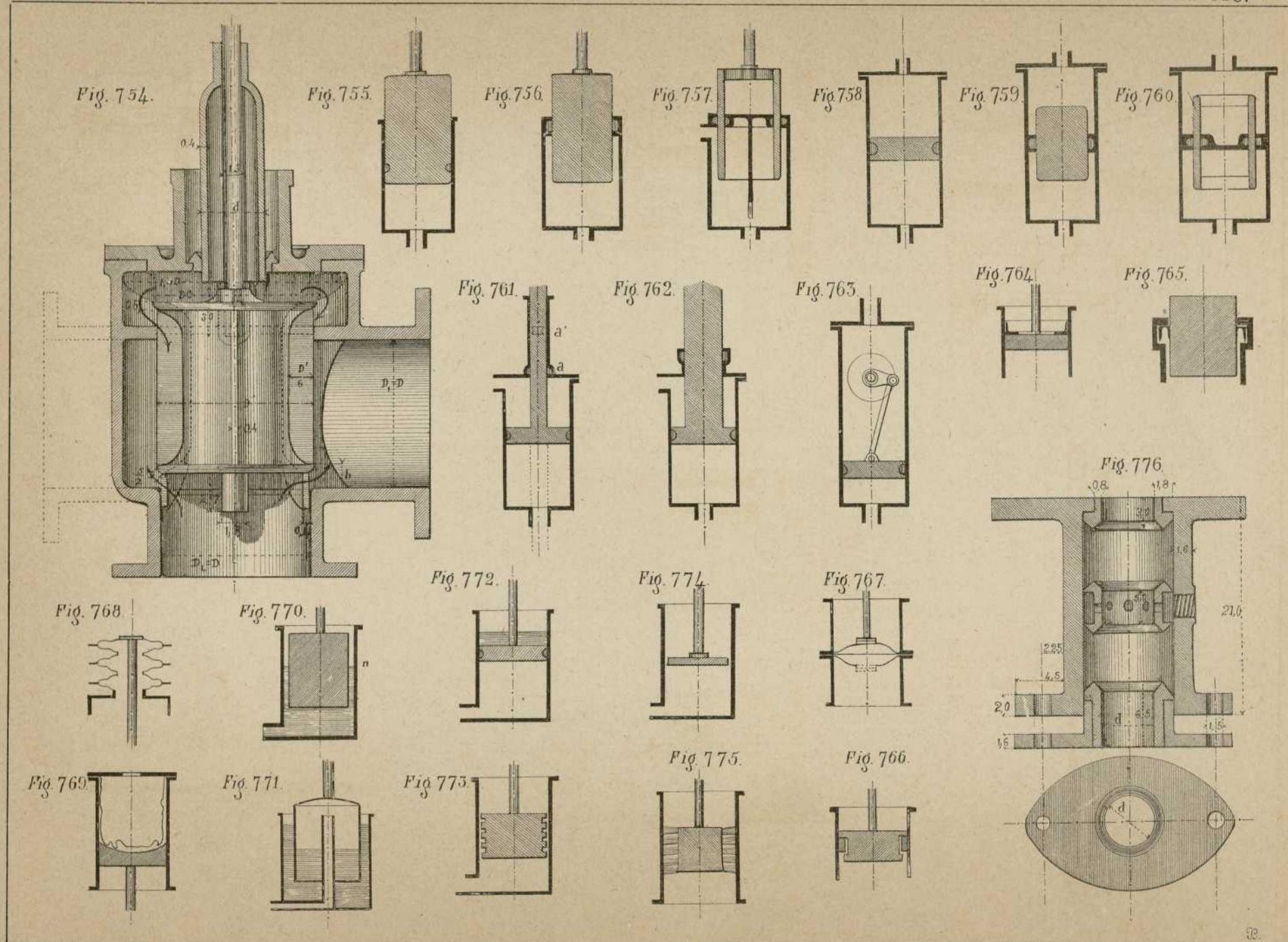


Fig. 777.

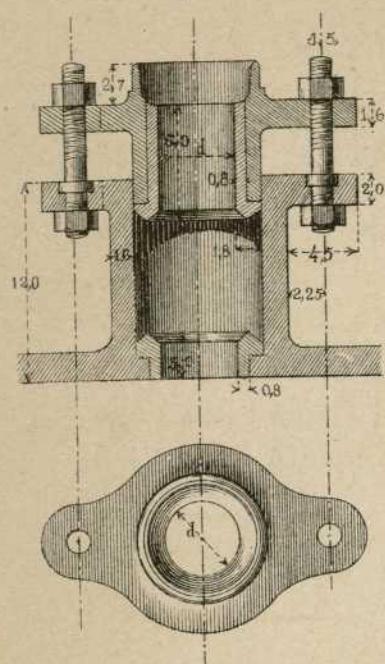


Fig. 781

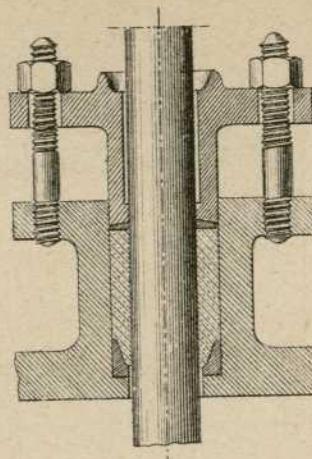


Fig. 780

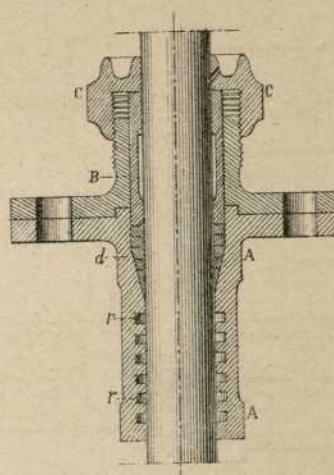


Fig. 779.

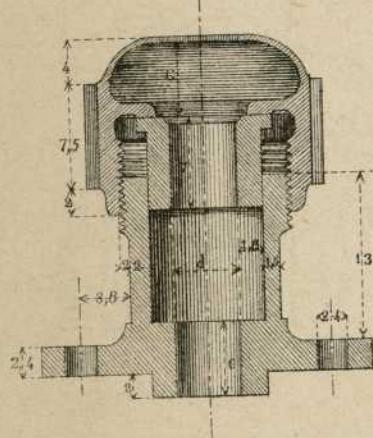


Fig. 785.

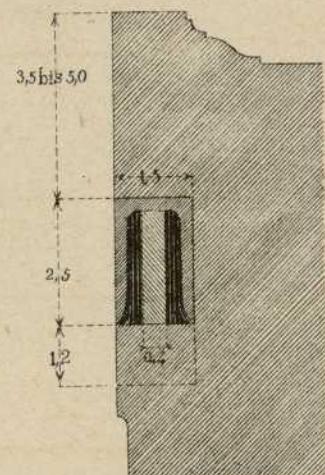


Fig. 782.

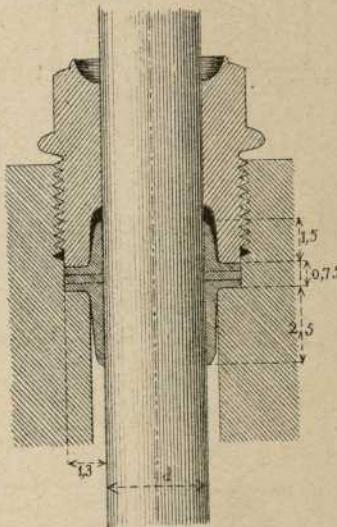


Fig. 778.

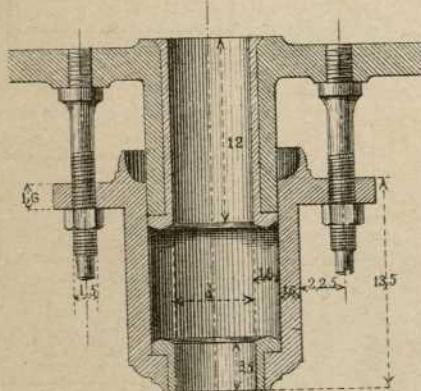
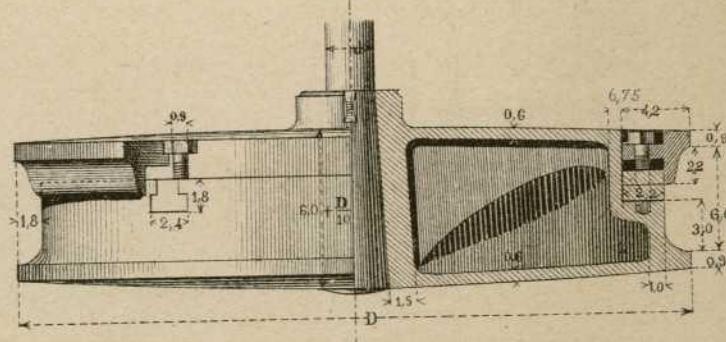


Fig. 784



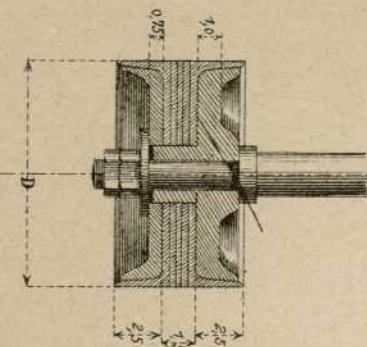


Fig. 794.

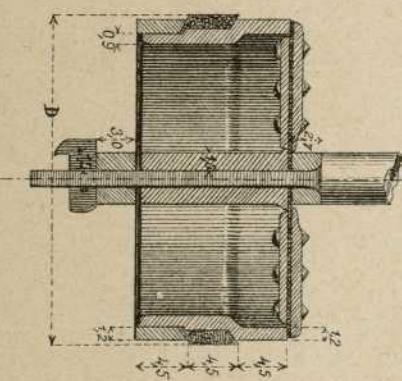


Fig. 795.

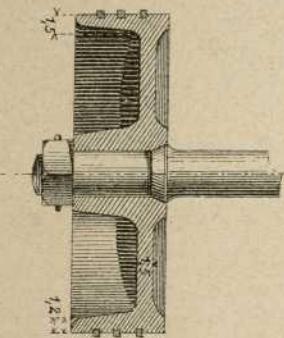


Fig. 790.

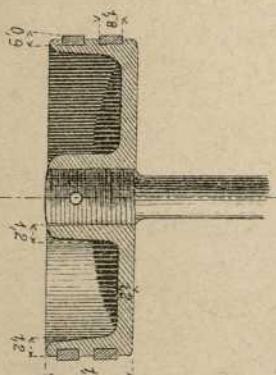


Fig. 791.

Fig. 785

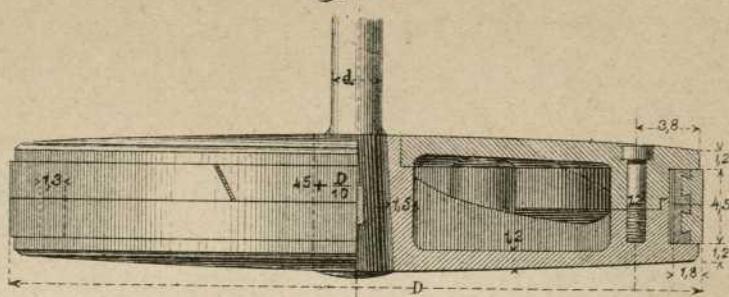


Fig. 786.

Fig. 787.

Fig. 788.

Fig. 789.

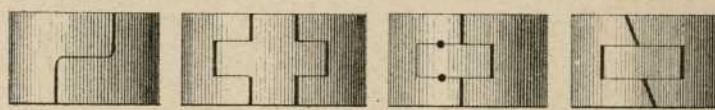


Fig. 792.

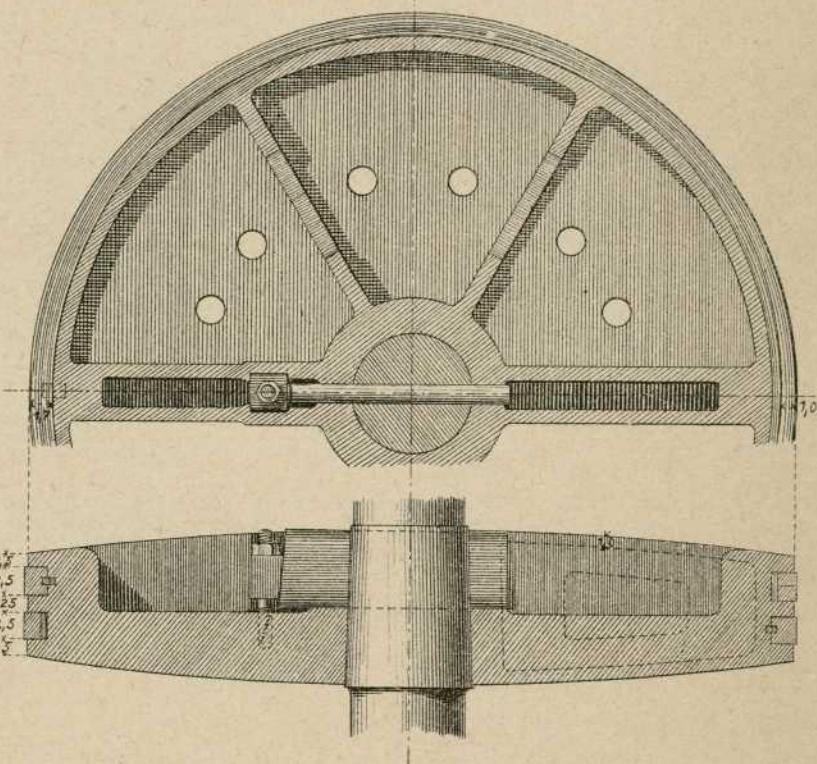
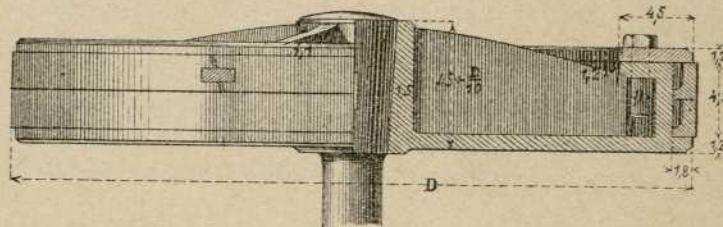


Fig. 793



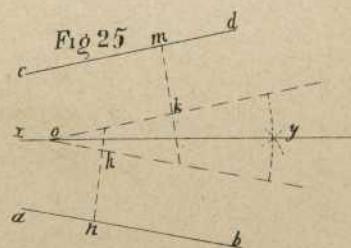
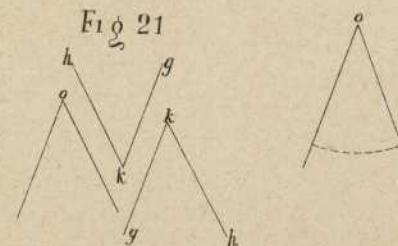
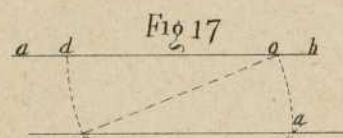
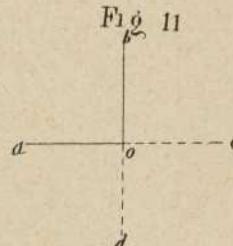
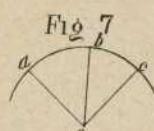
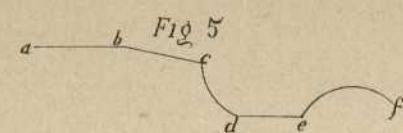
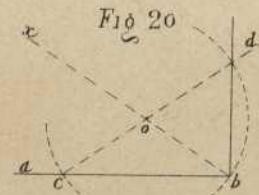
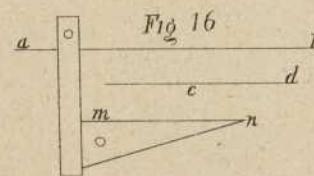
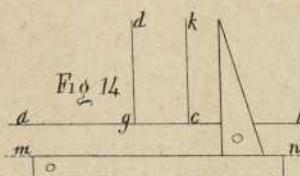
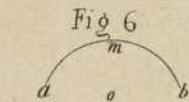
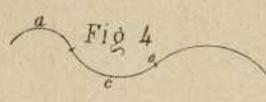
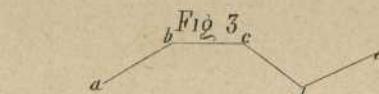
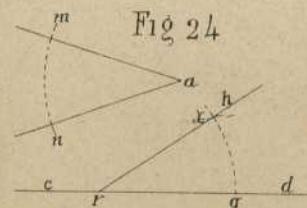
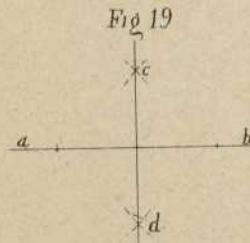
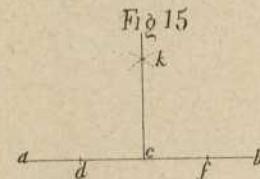
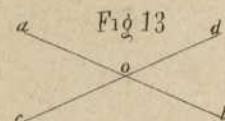
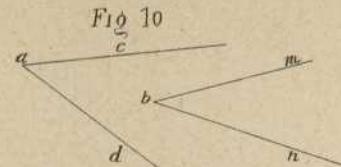
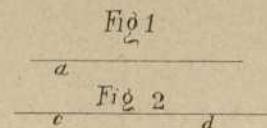


Fig. 8

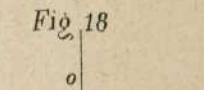
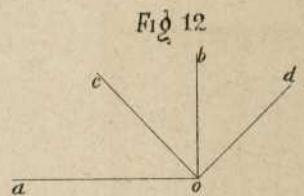
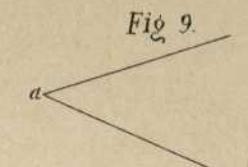
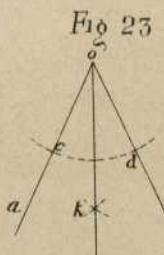
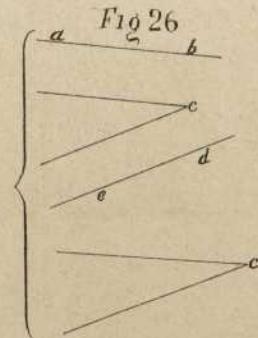
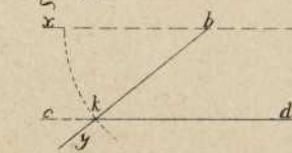
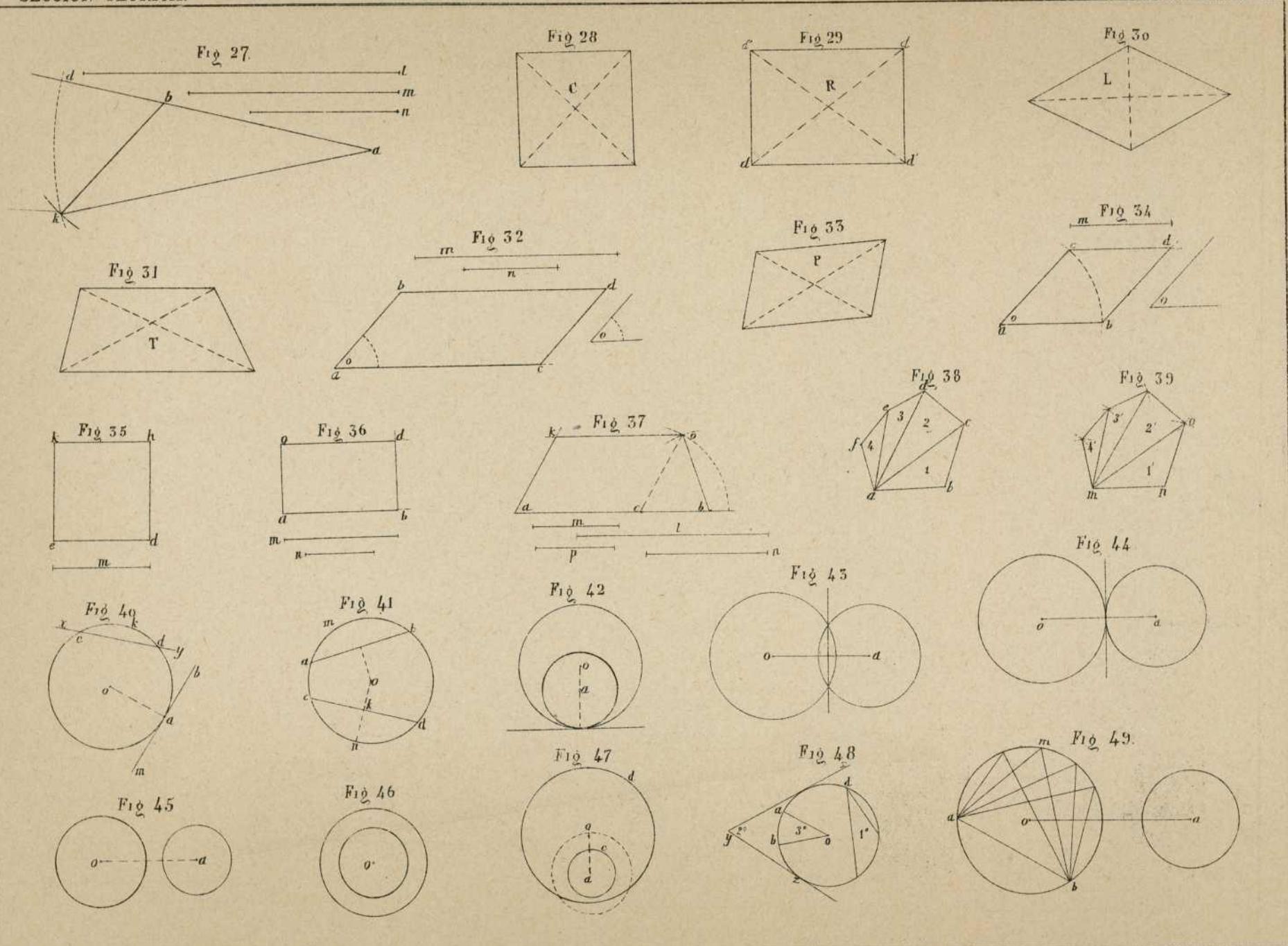
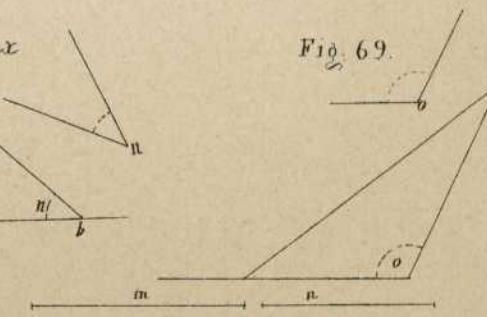
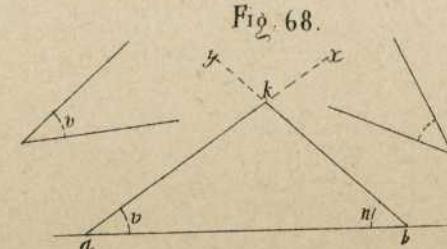
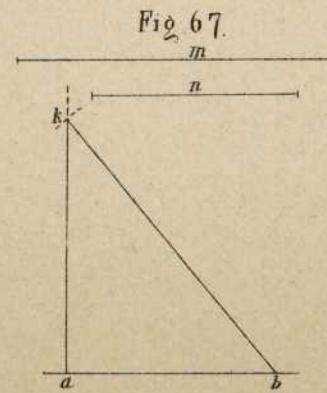
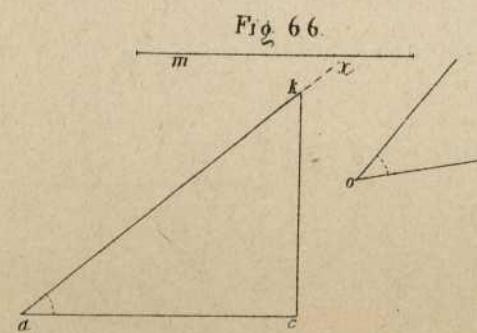
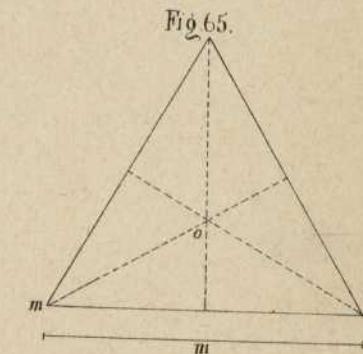
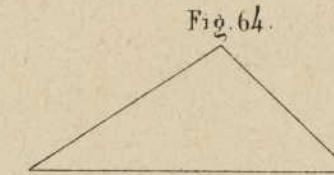
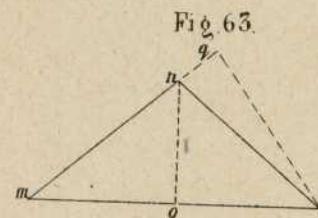
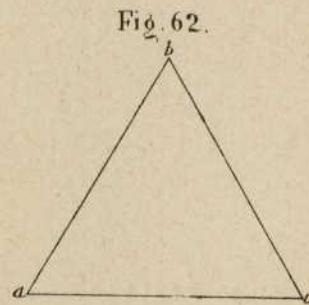
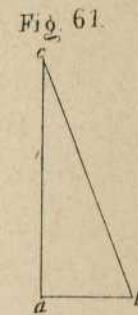
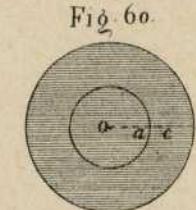
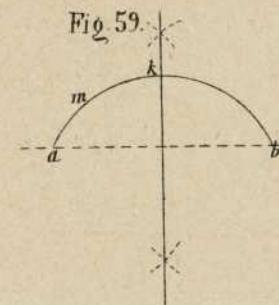
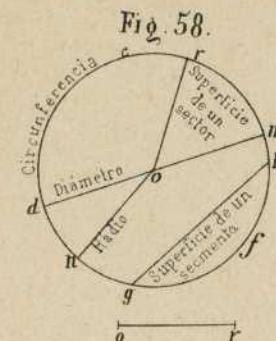
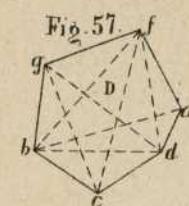
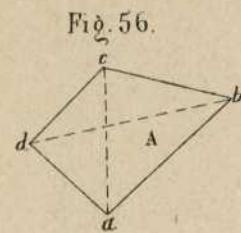
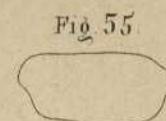
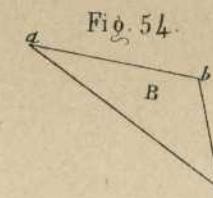
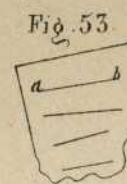
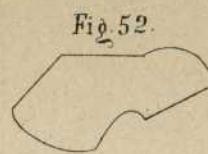
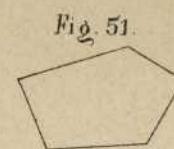
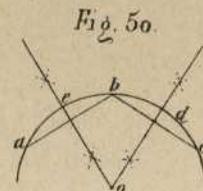
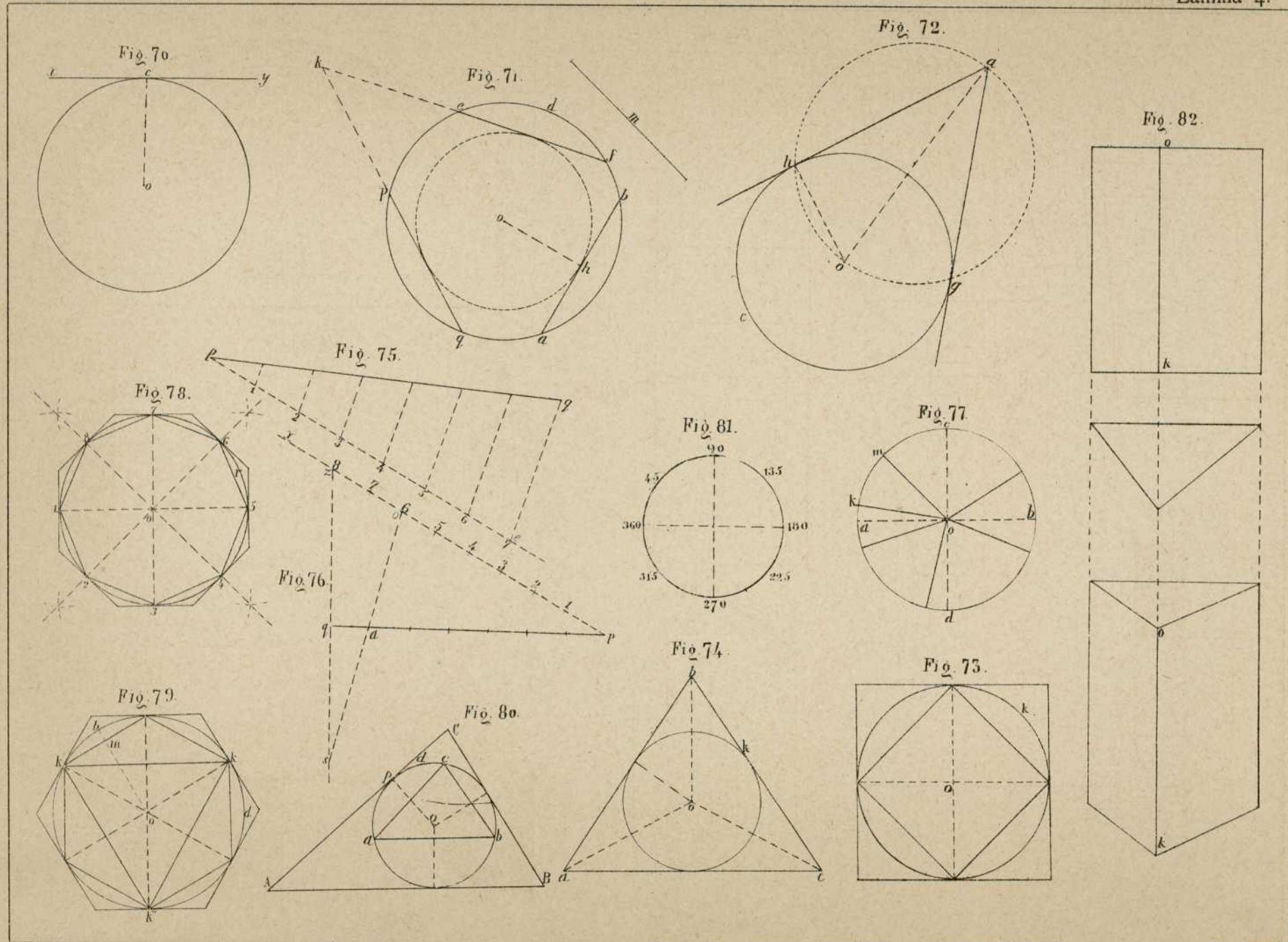


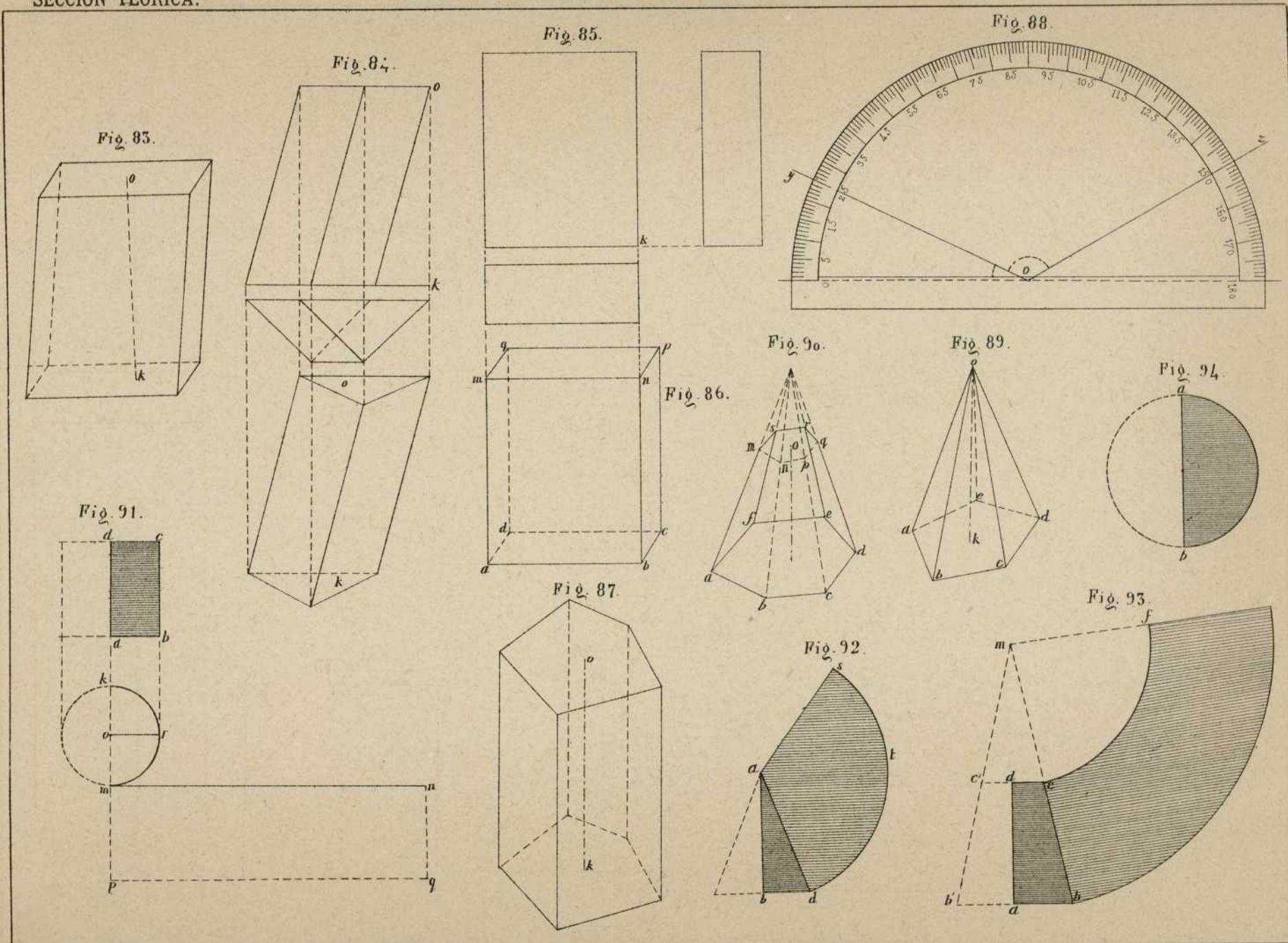
Fig. 22

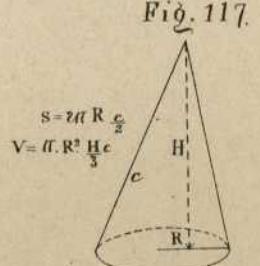
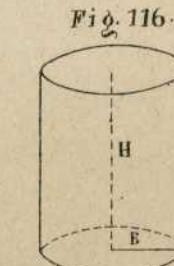
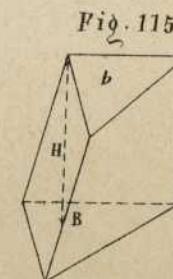
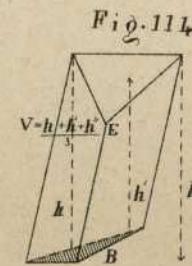
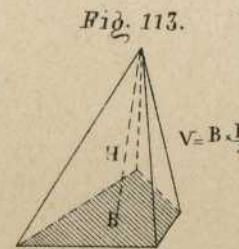
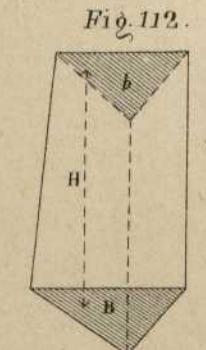
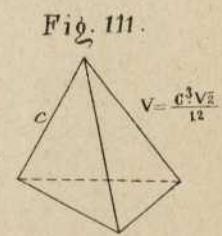
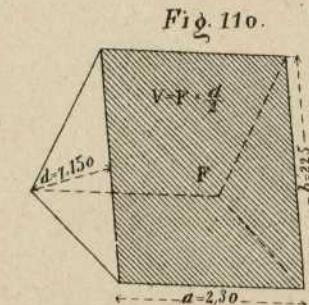
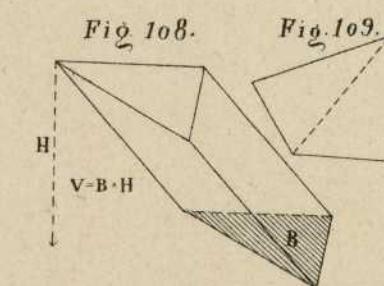
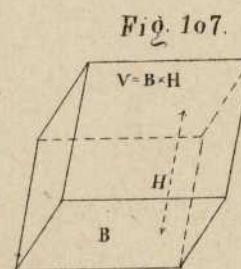
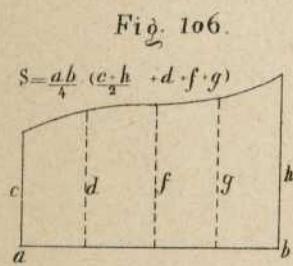
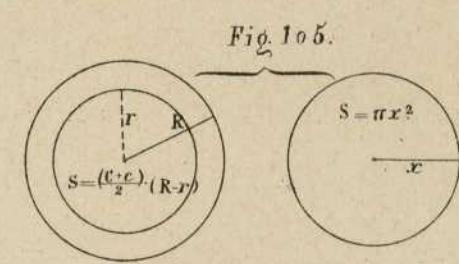
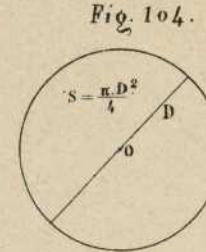
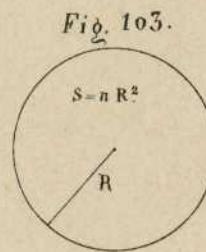
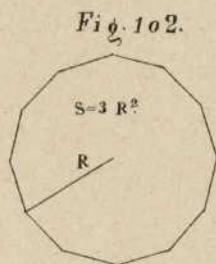
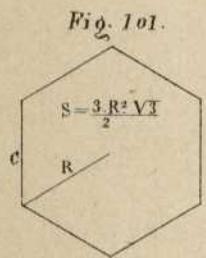
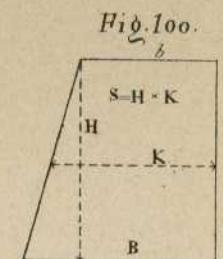
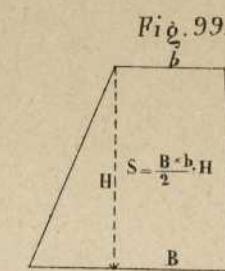
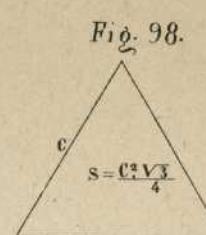
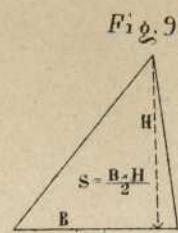
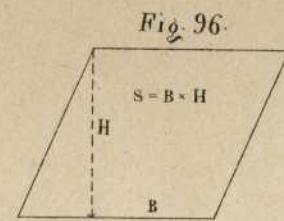
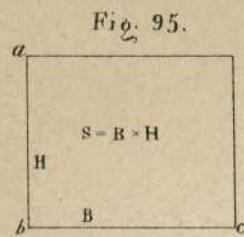












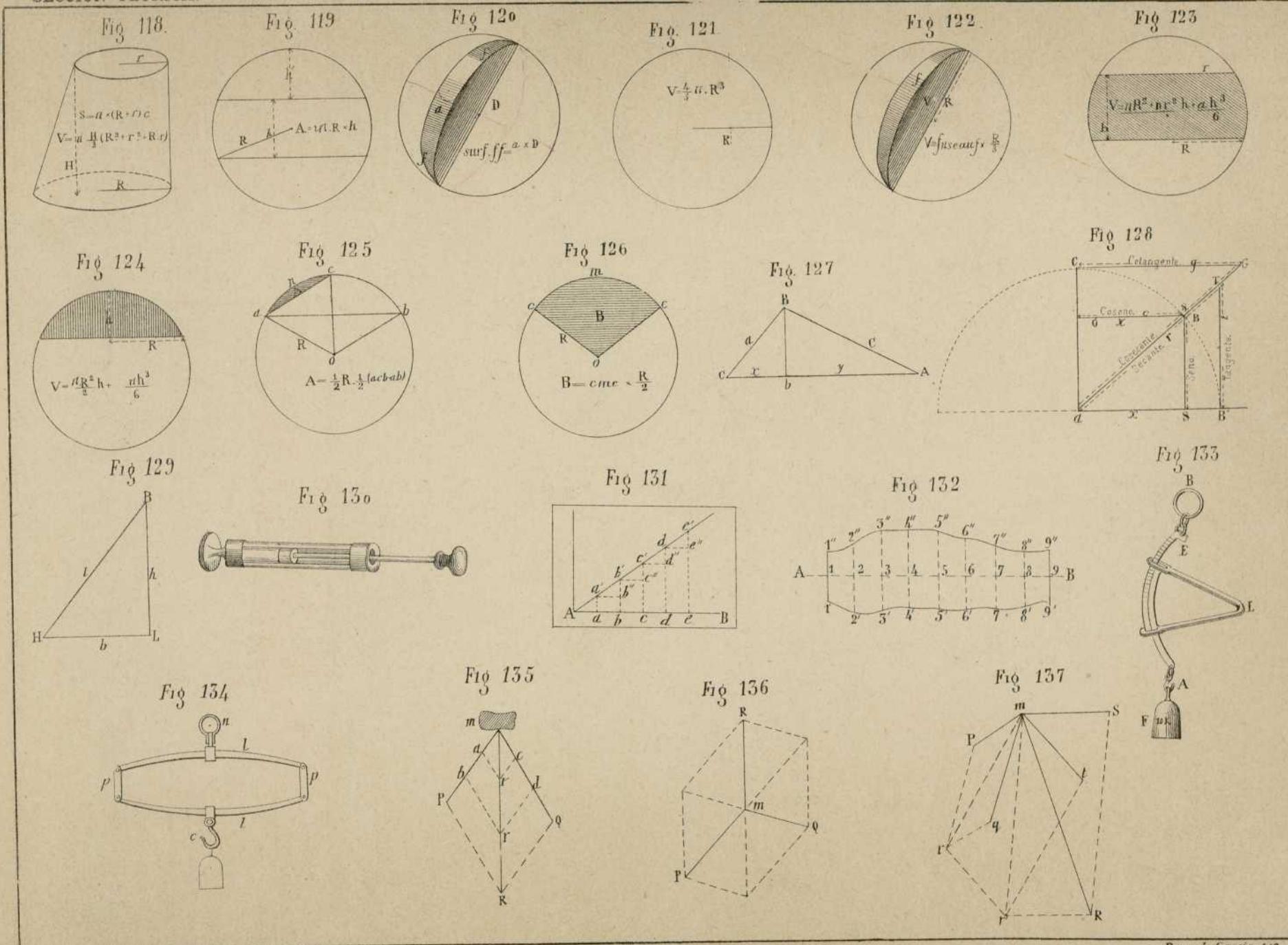


Fig. 138.

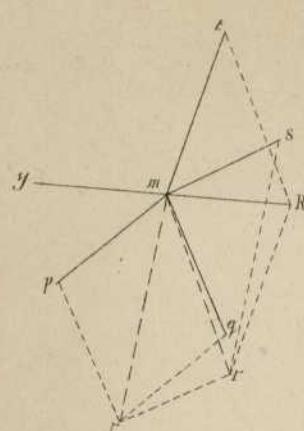


Fig. 139.

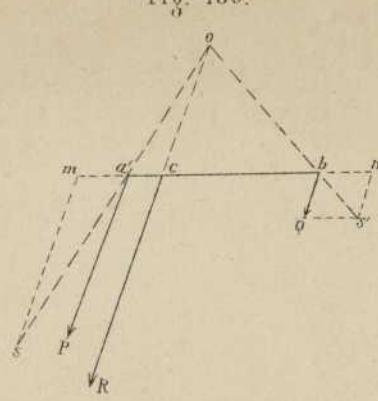


Fig. 140.

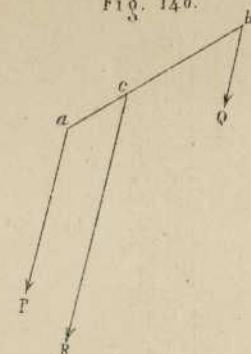


Fig. 141.

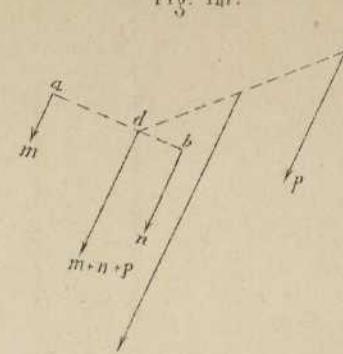


Fig. 142.

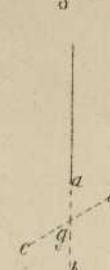


Fig. 143.

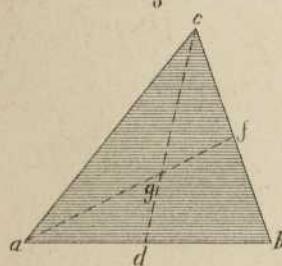


Fig. 144.

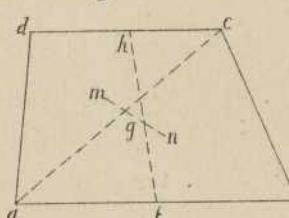


Fig. 145.

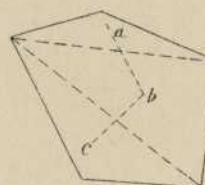


Fig. 146.

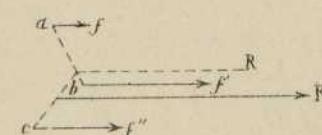


Fig. 147.

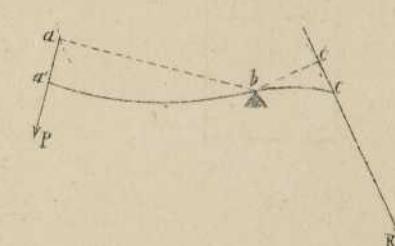


Fig. 153.

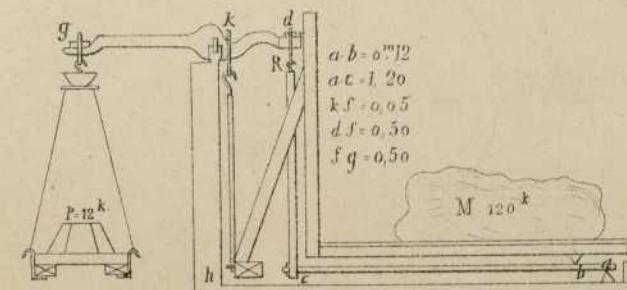


Fig. 148.

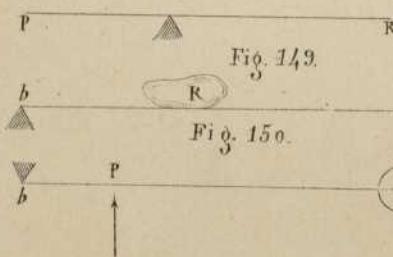


Fig. 149.

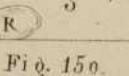


Fig. 150.

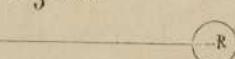


Fig. 151.

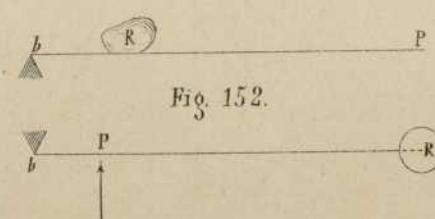


Fig. 152.

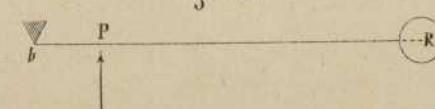


Fig. 154.

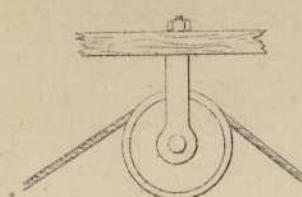


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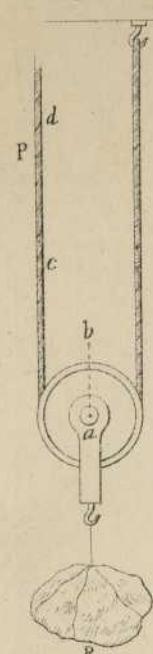


Fig. 156.



Fig. 157.

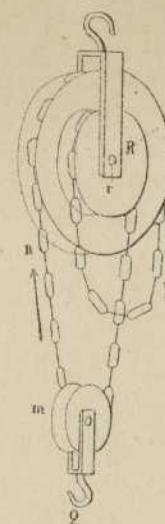


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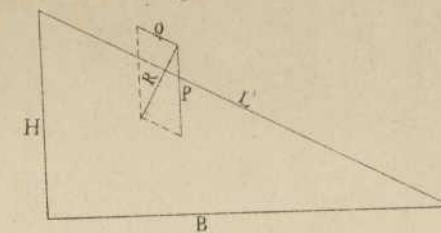


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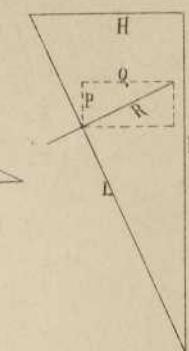


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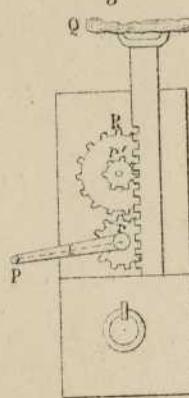


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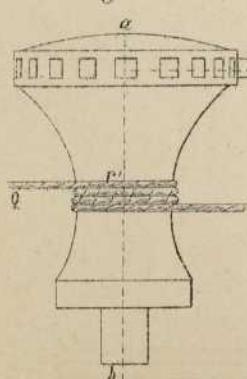


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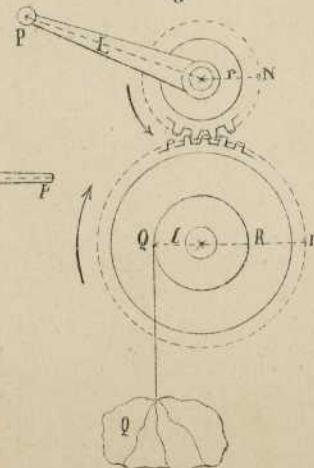


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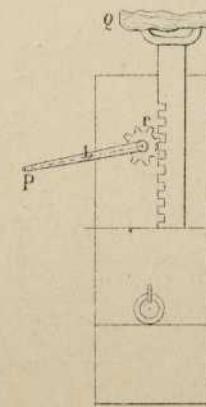


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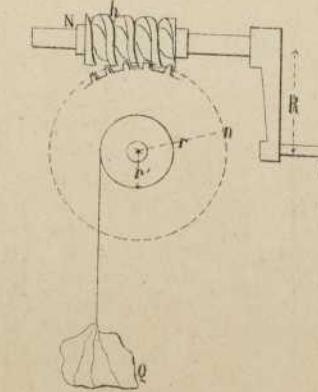
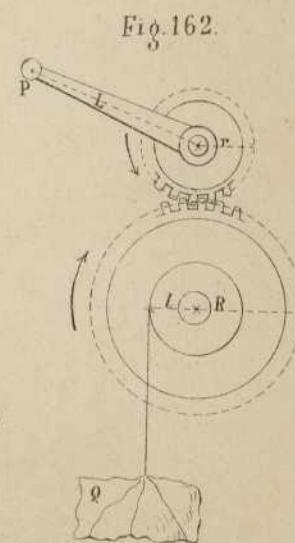


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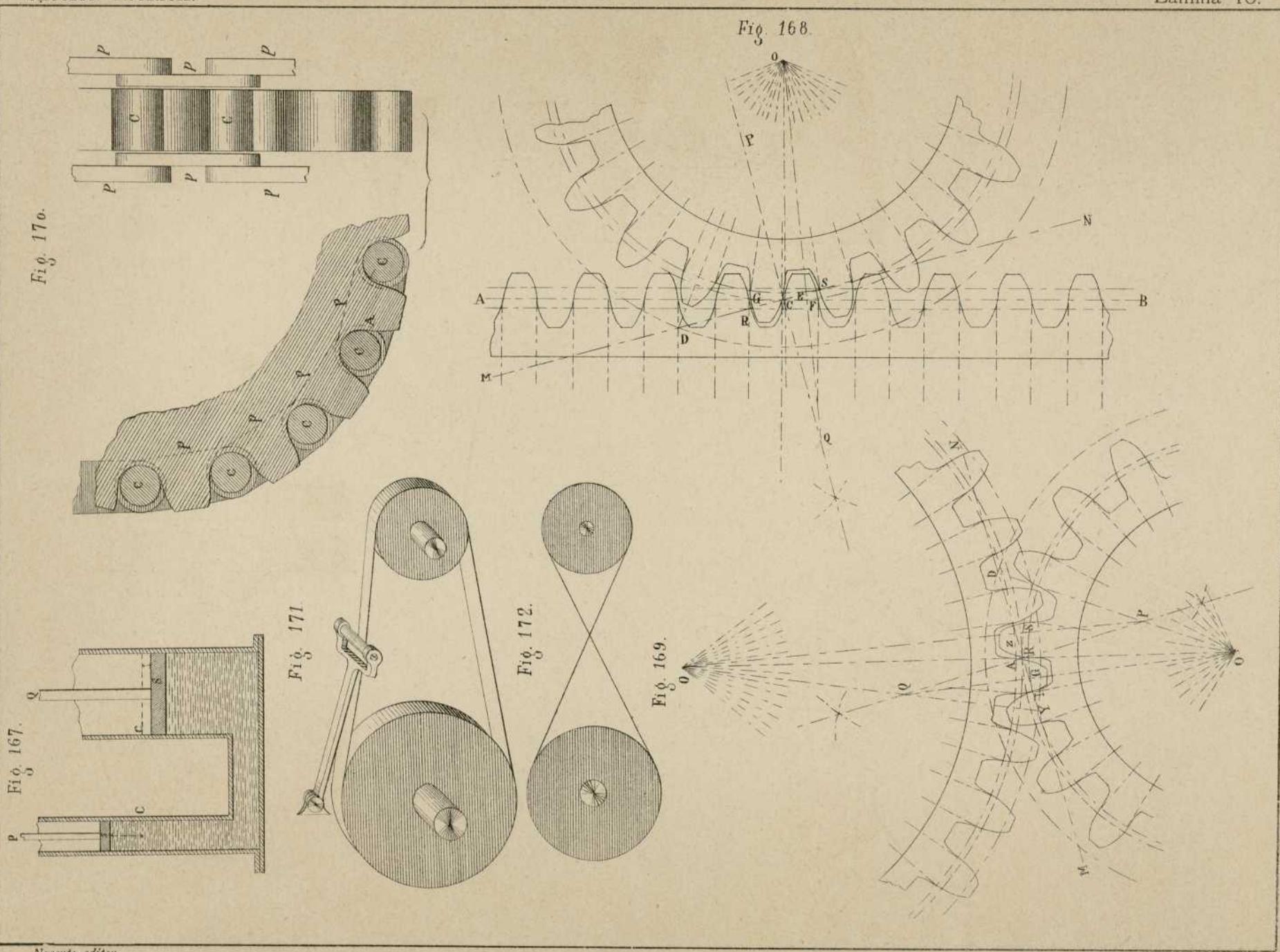


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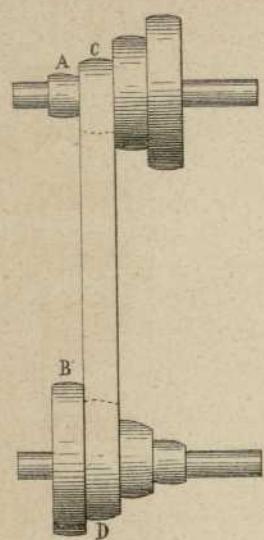


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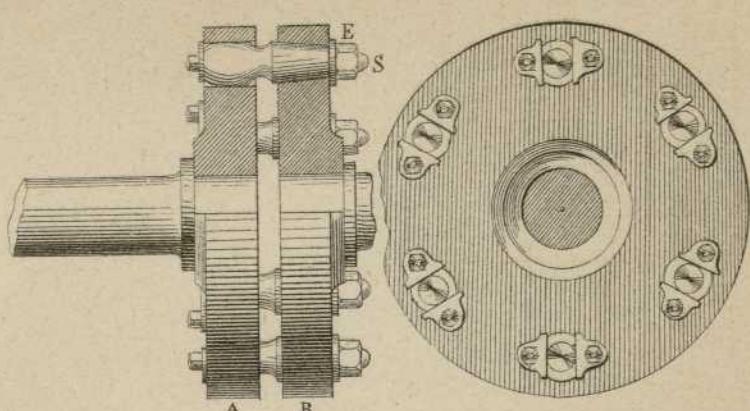


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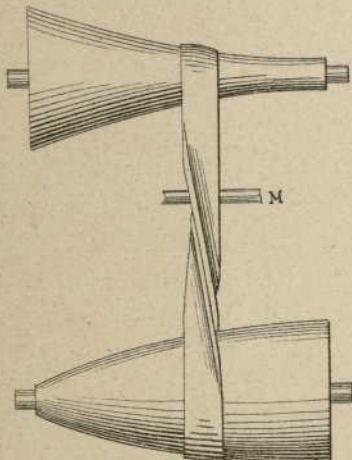


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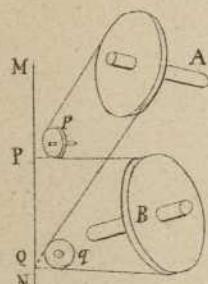


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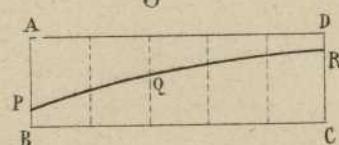


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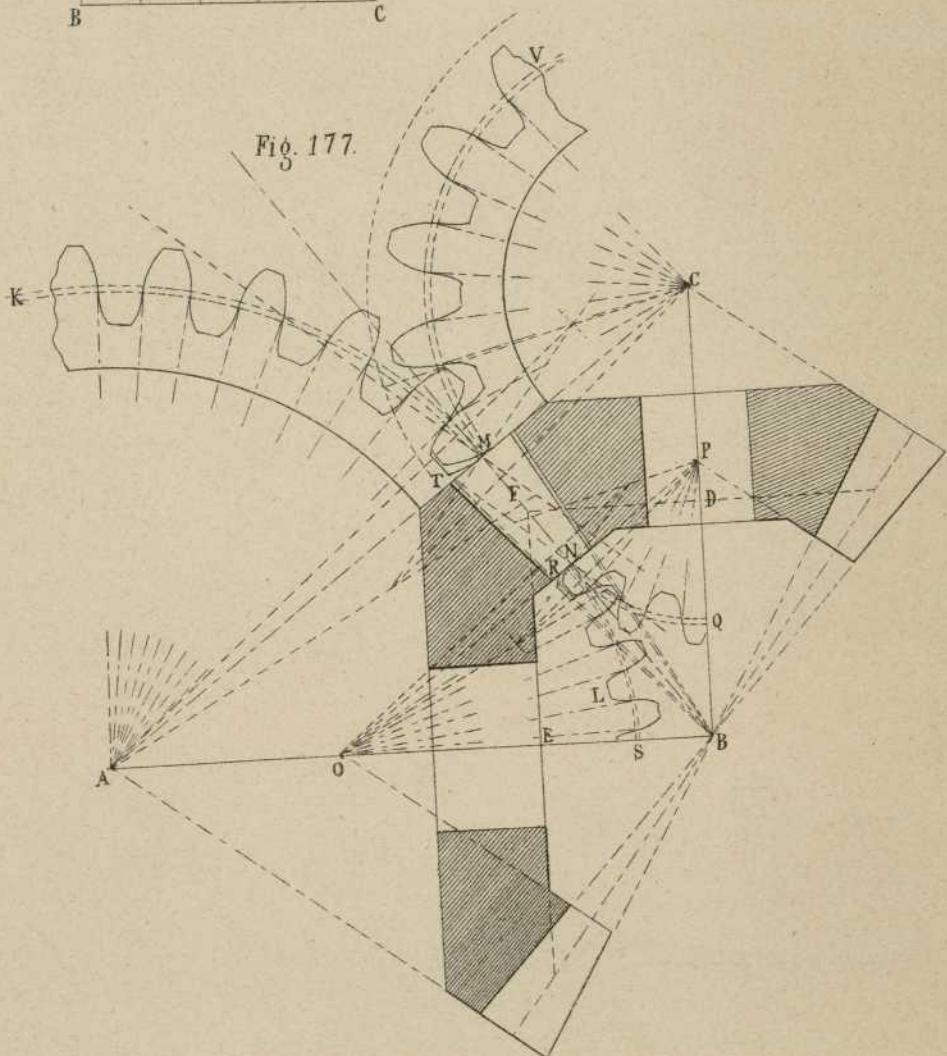


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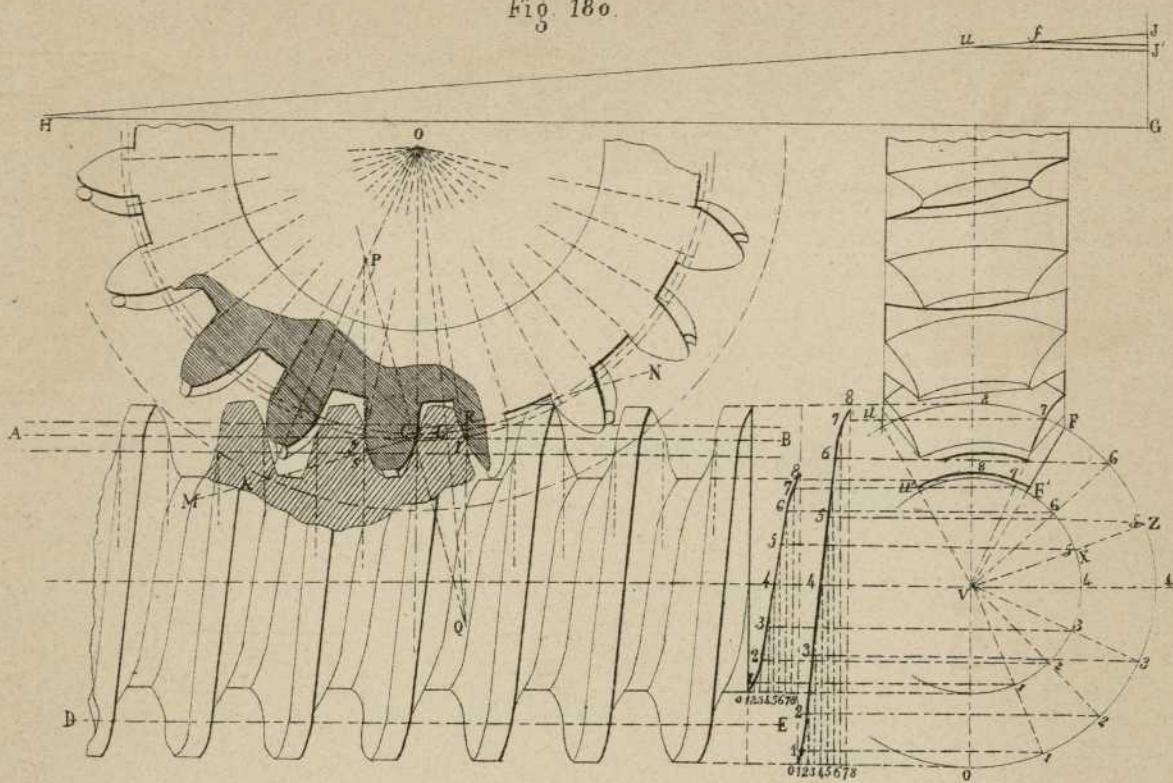


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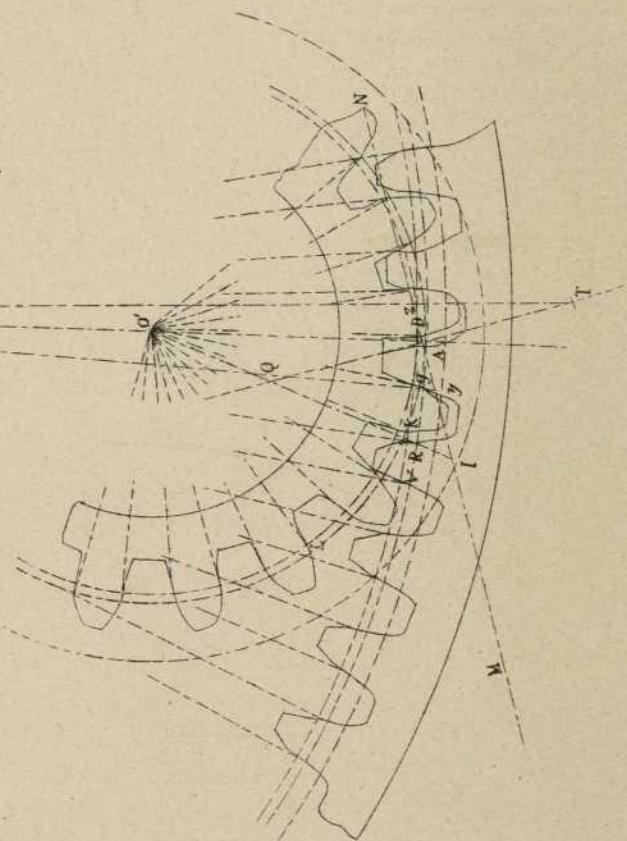
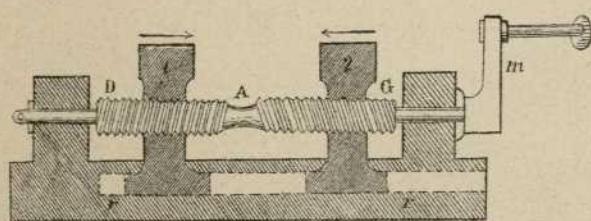
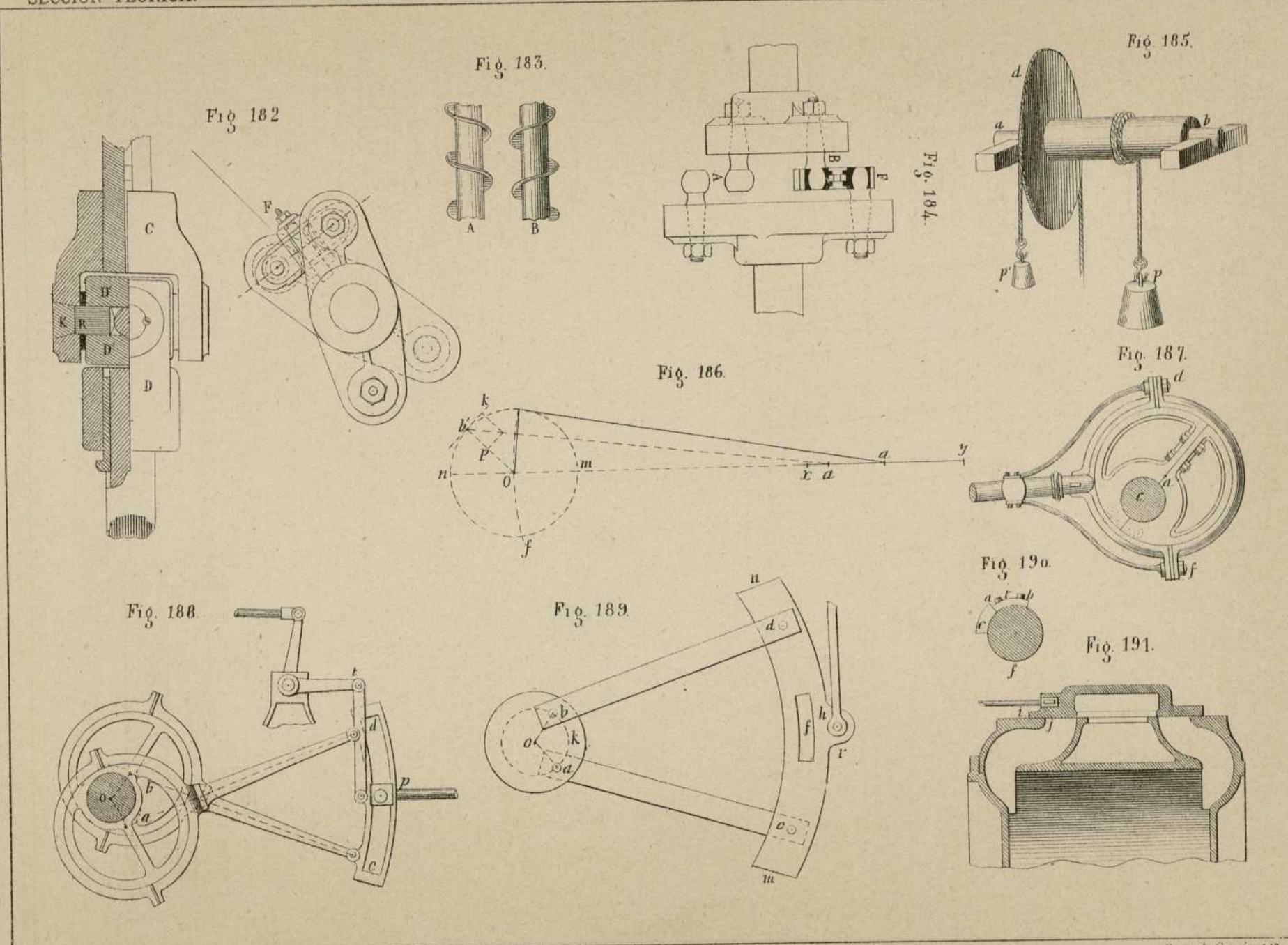
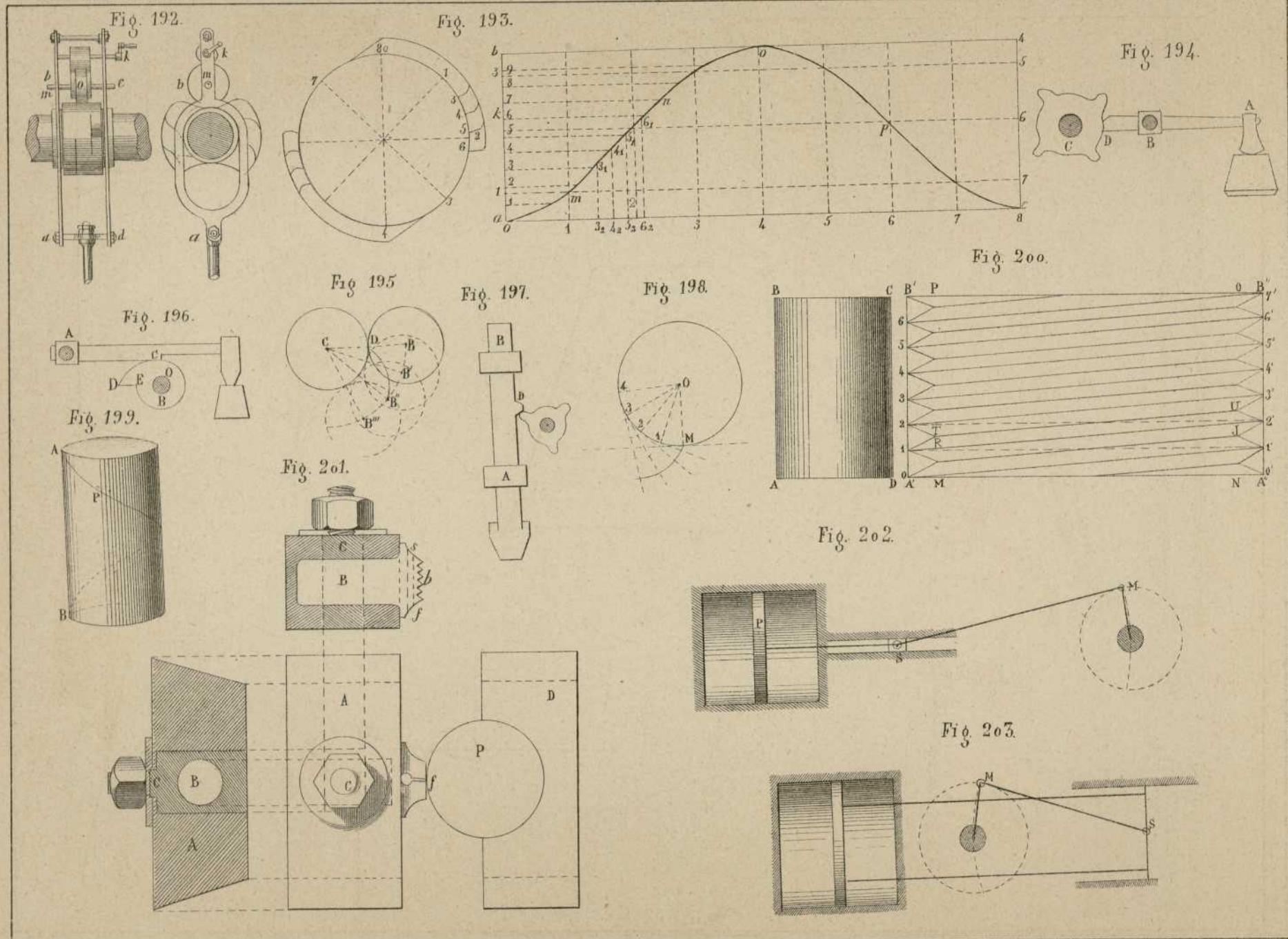


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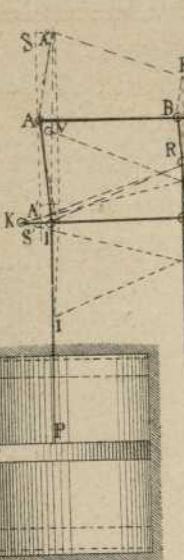


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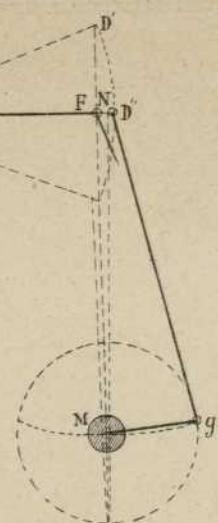


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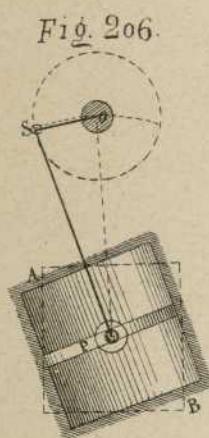


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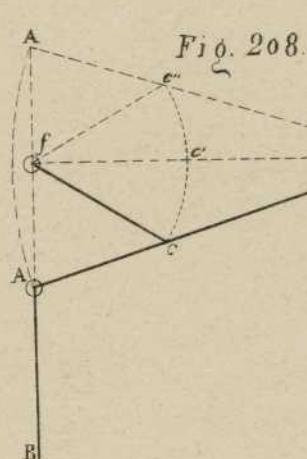


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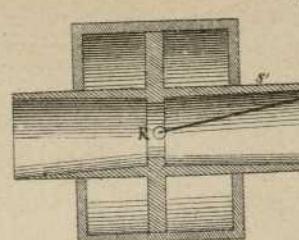


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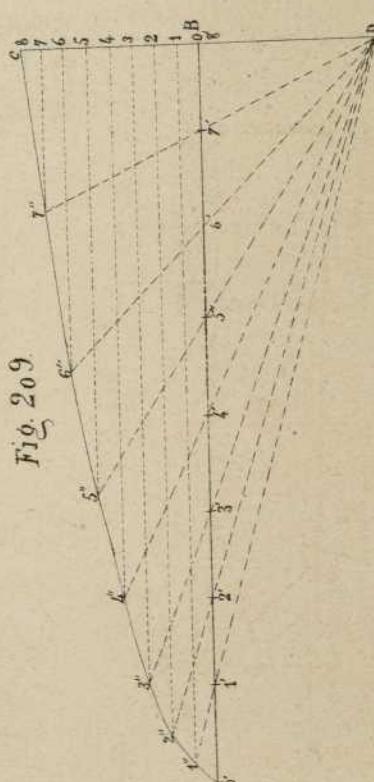
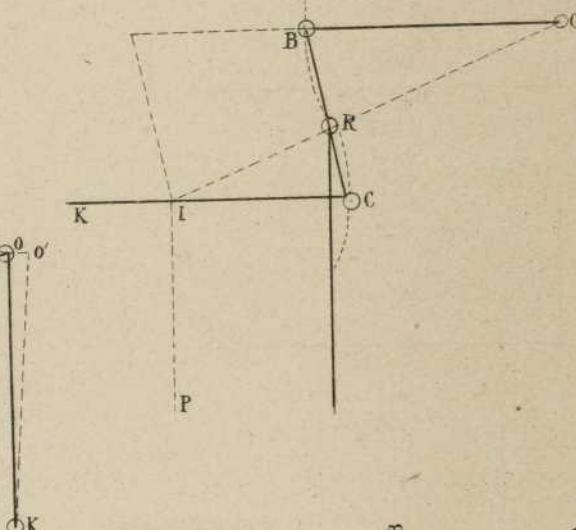


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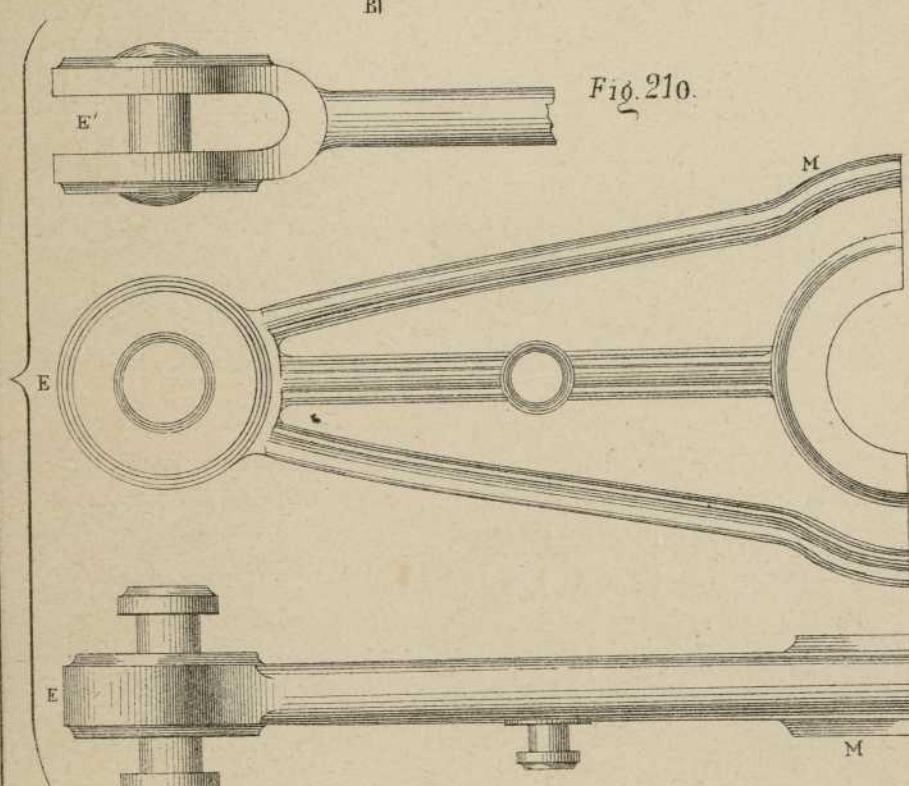


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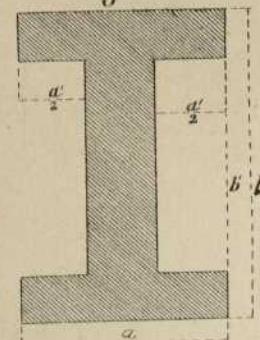


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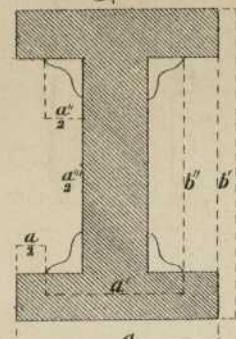


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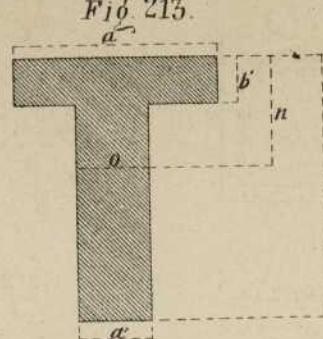


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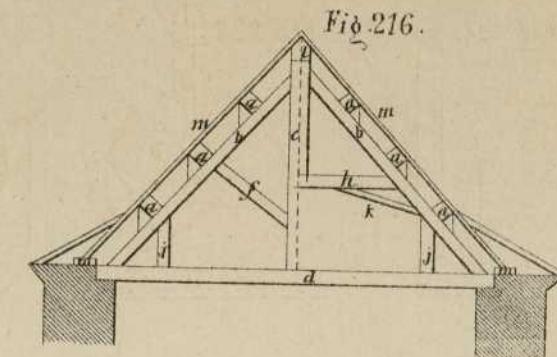


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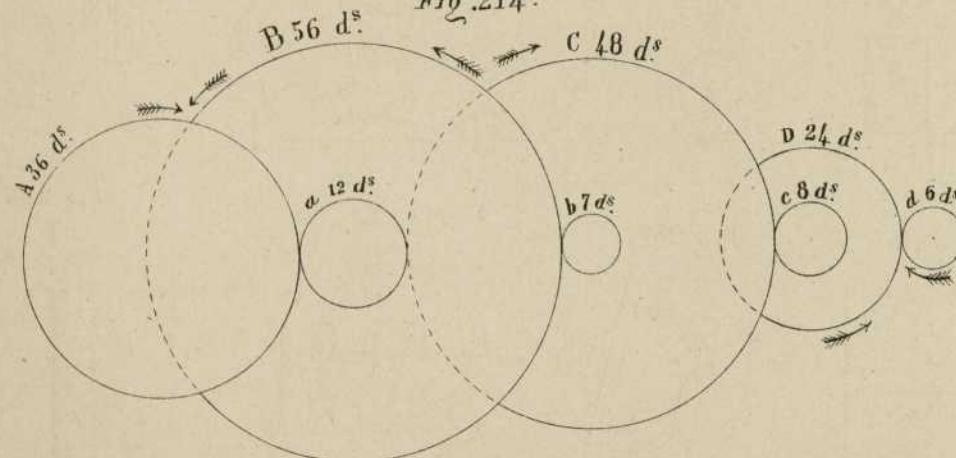


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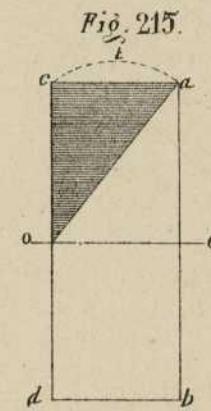


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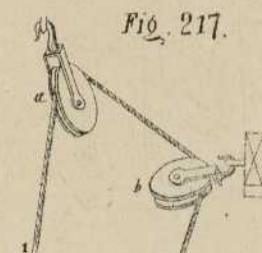


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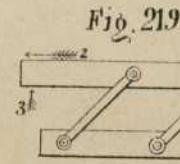
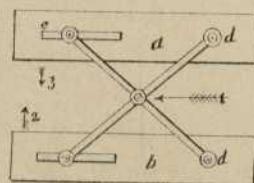


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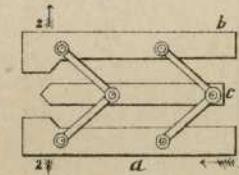


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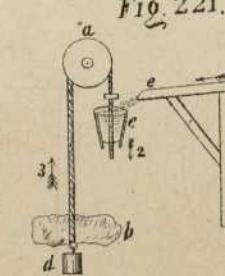
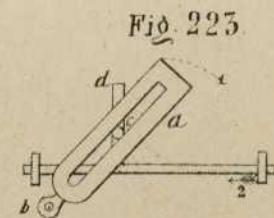
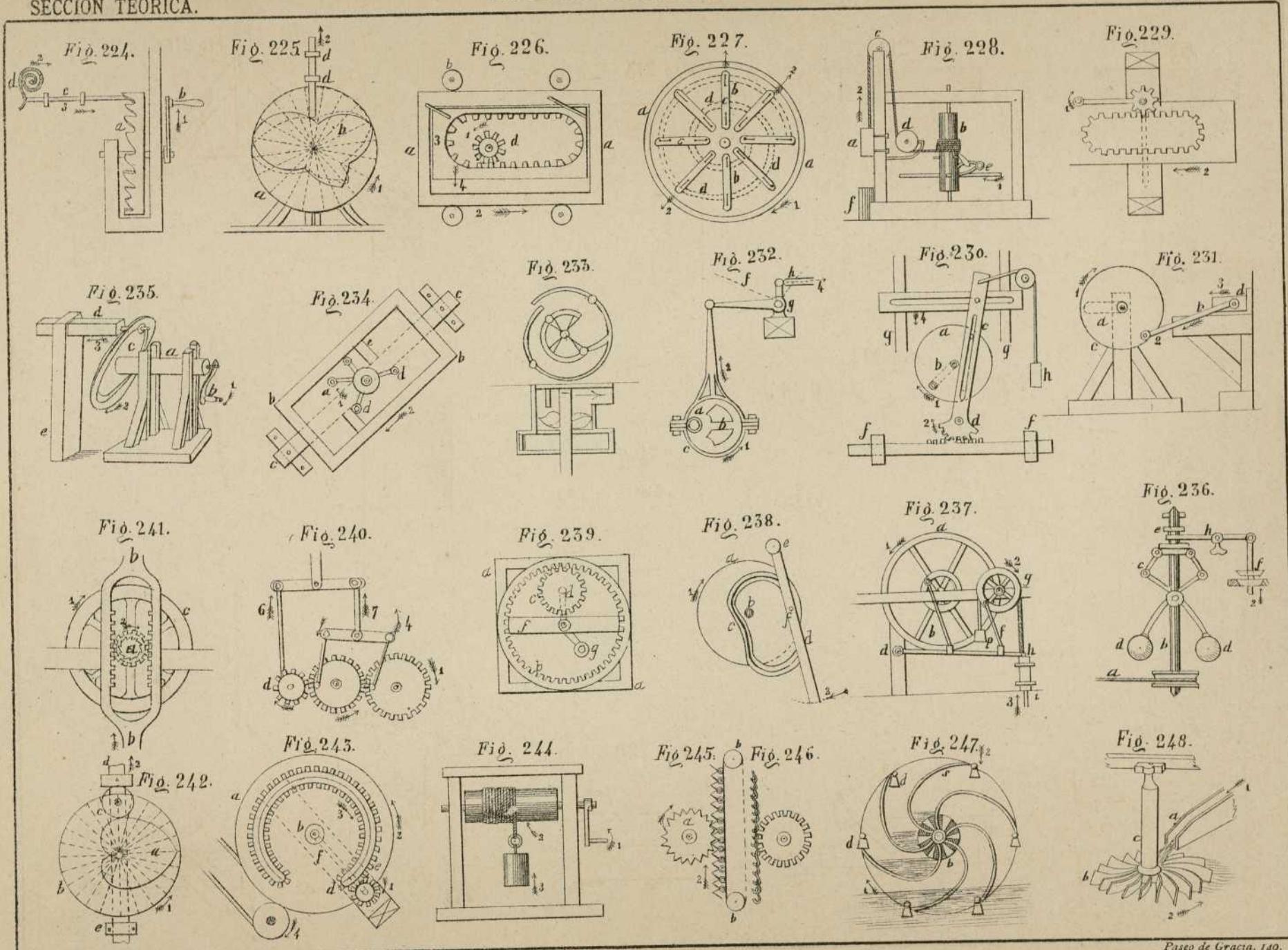
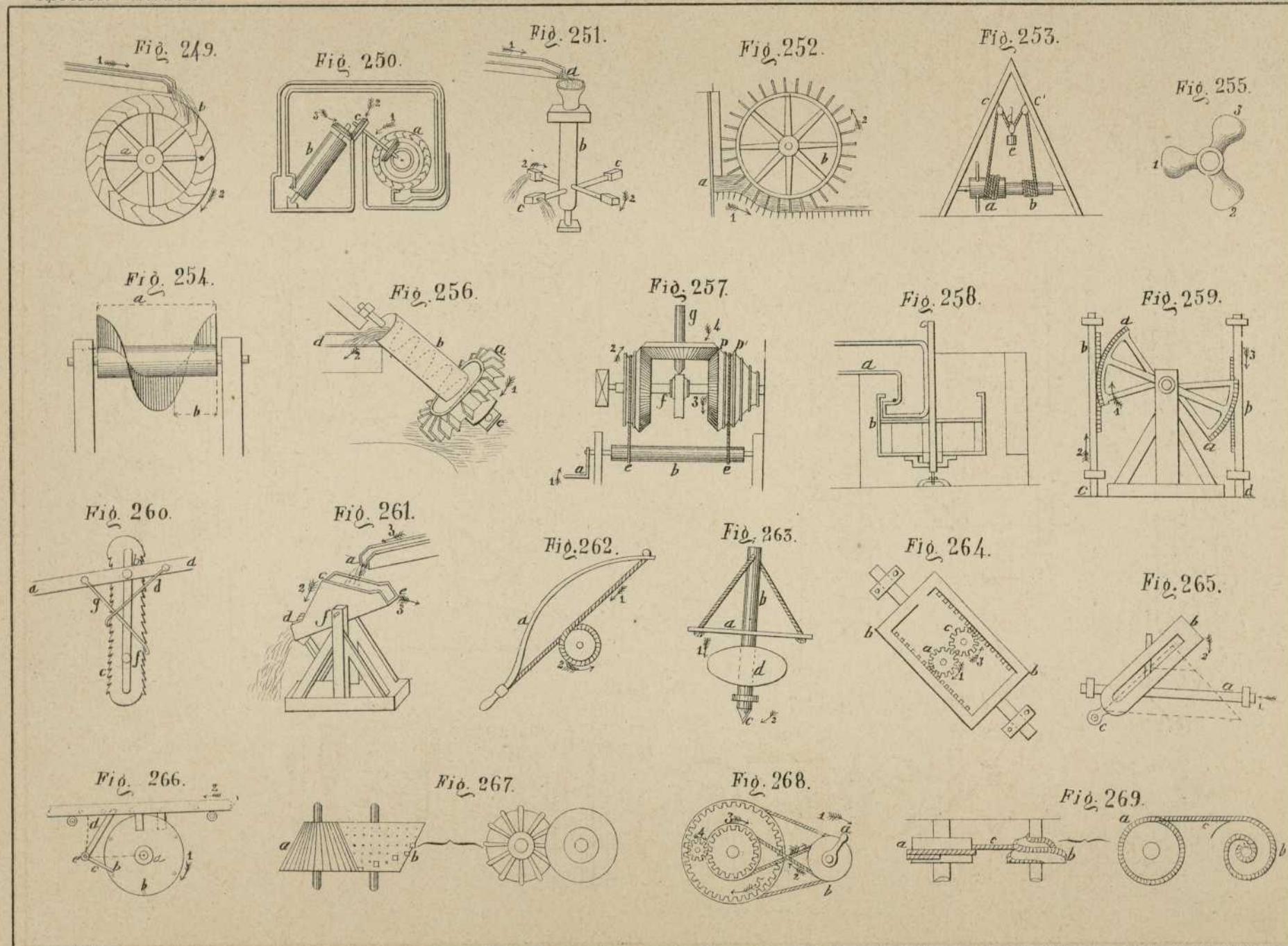


Fig. 223.



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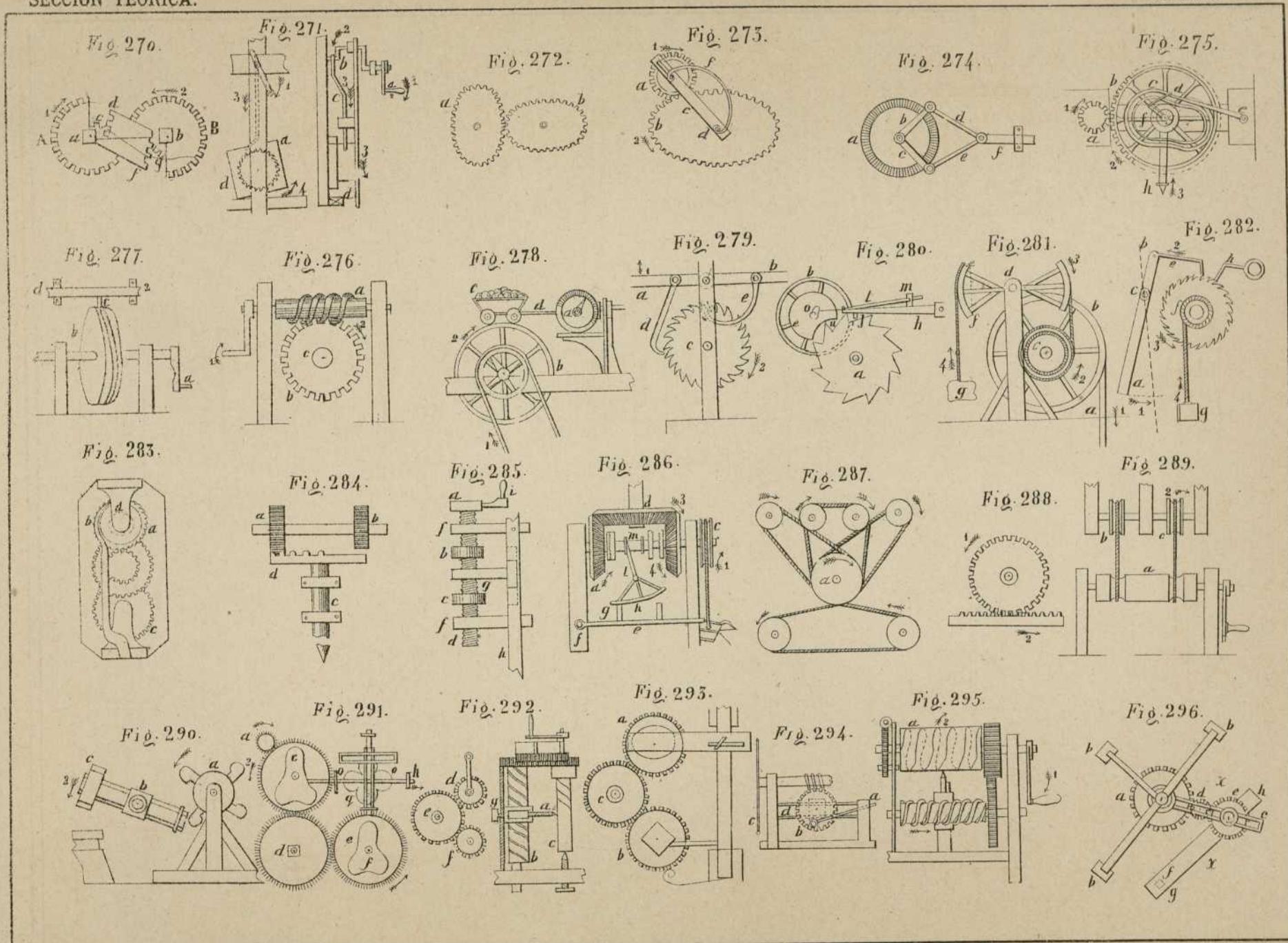


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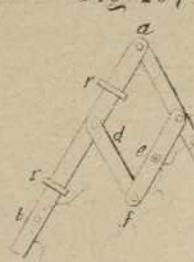


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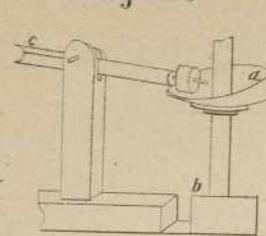


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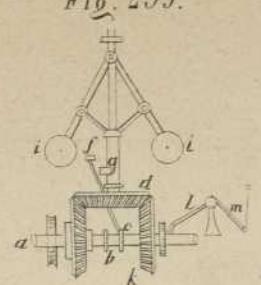


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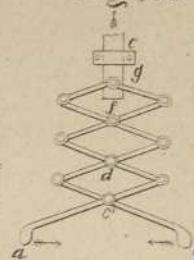


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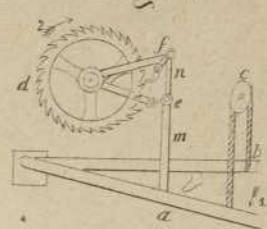


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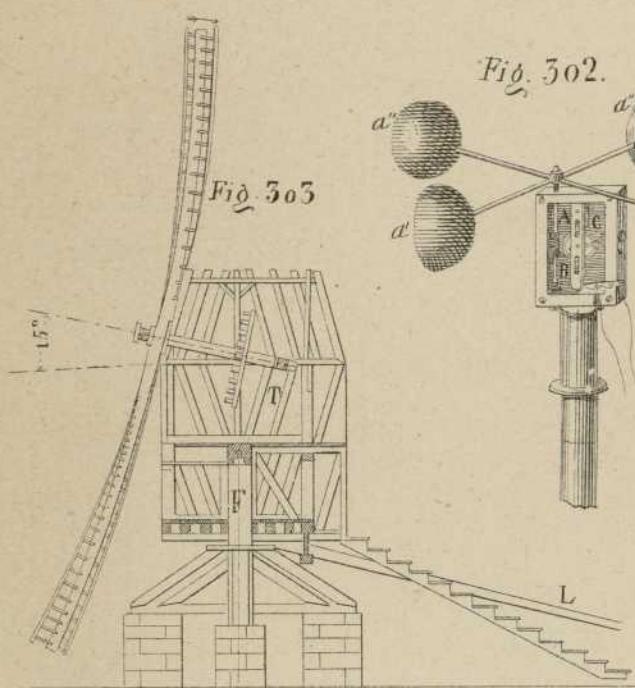


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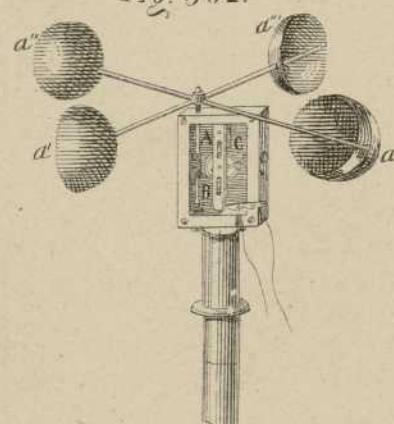


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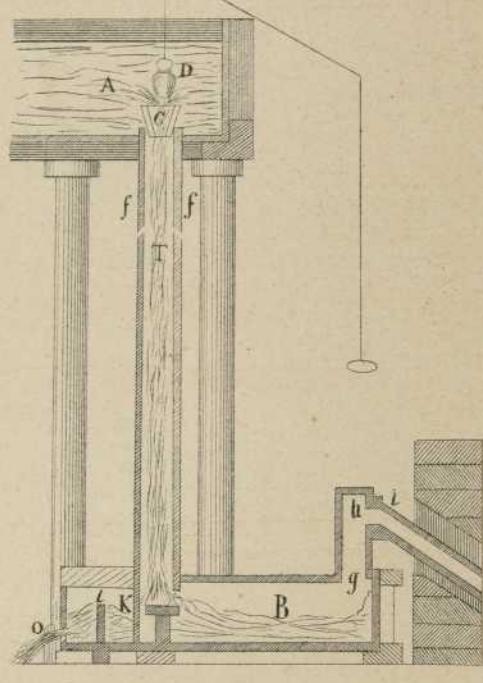


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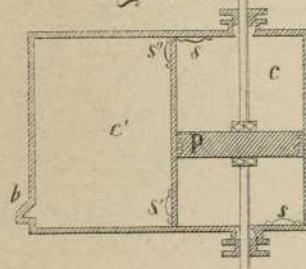


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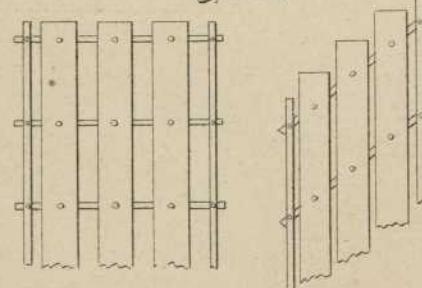


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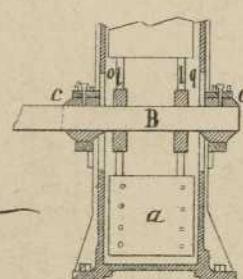
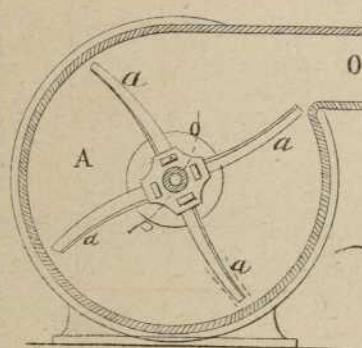
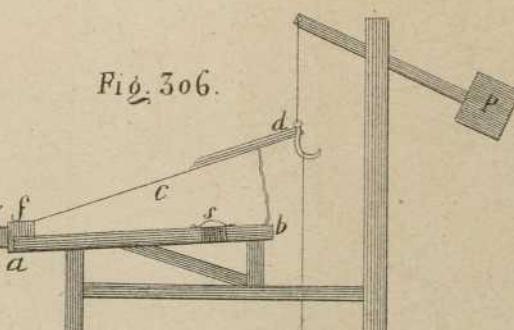


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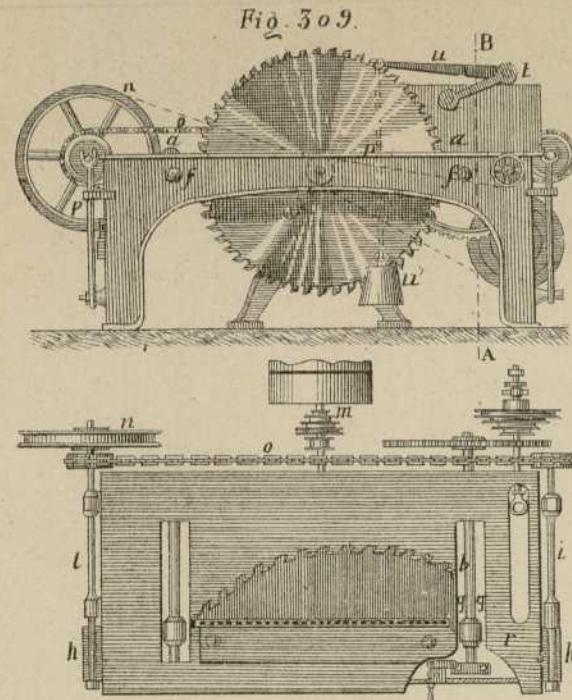
*Fig. 310.*

Fig. 311.

Fig. 312.

Fig. 313.

Fig. 314.

Fig. 317.

Fig. 320.

Fig. 318.

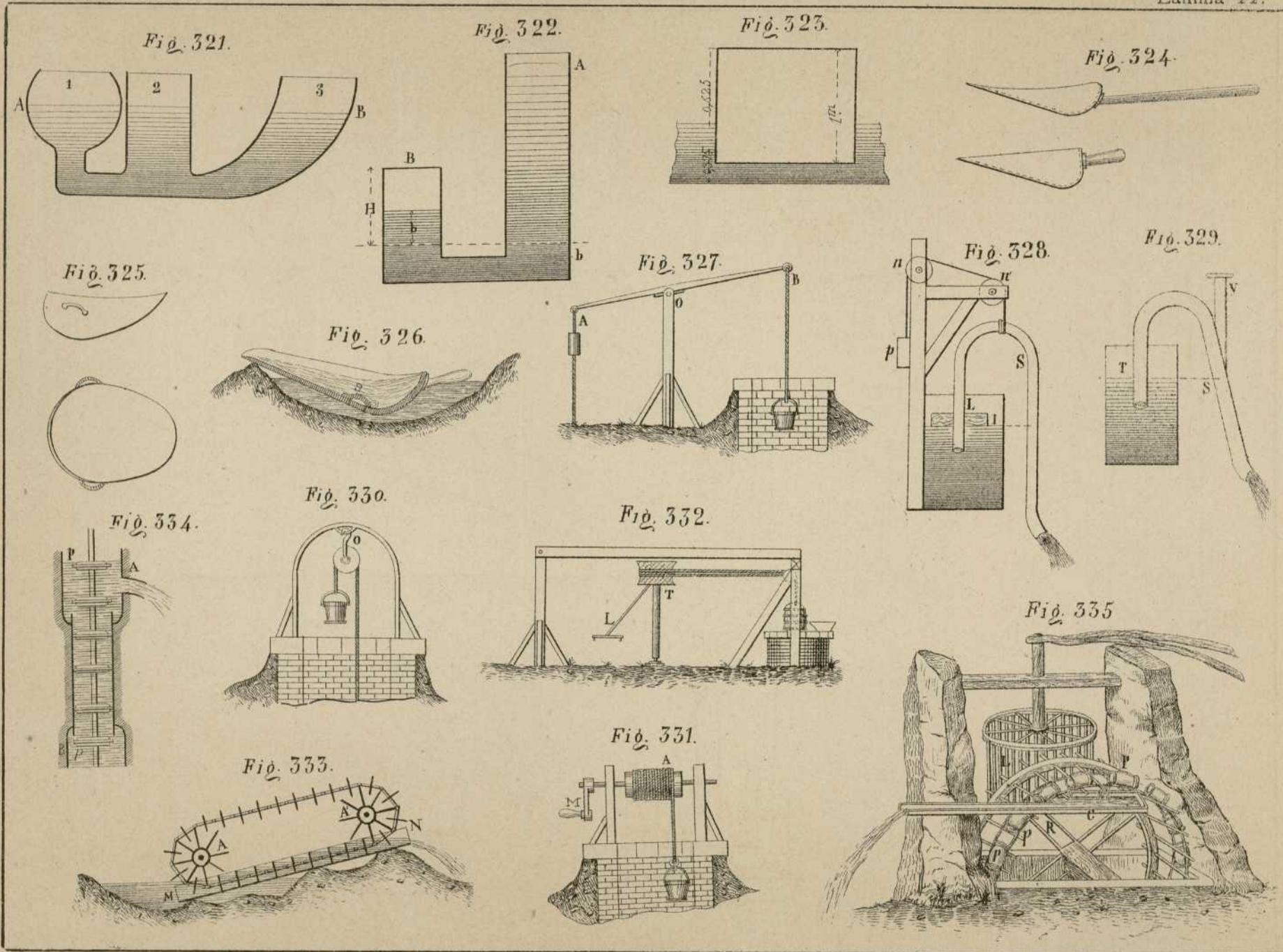
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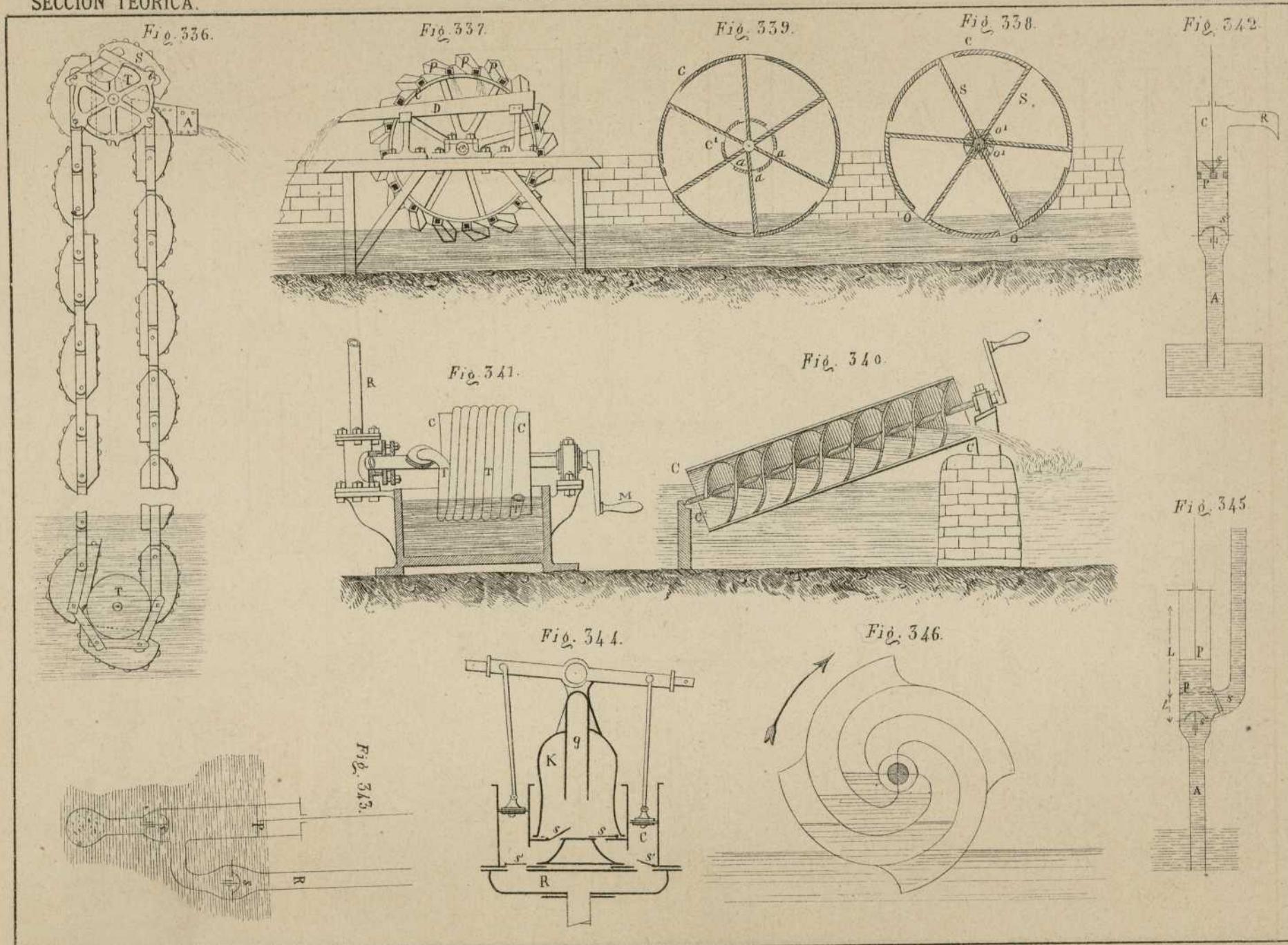
Fig. 316.

Fig. 319.

Nacarín, editor.

Paseo de Gracia, 149.





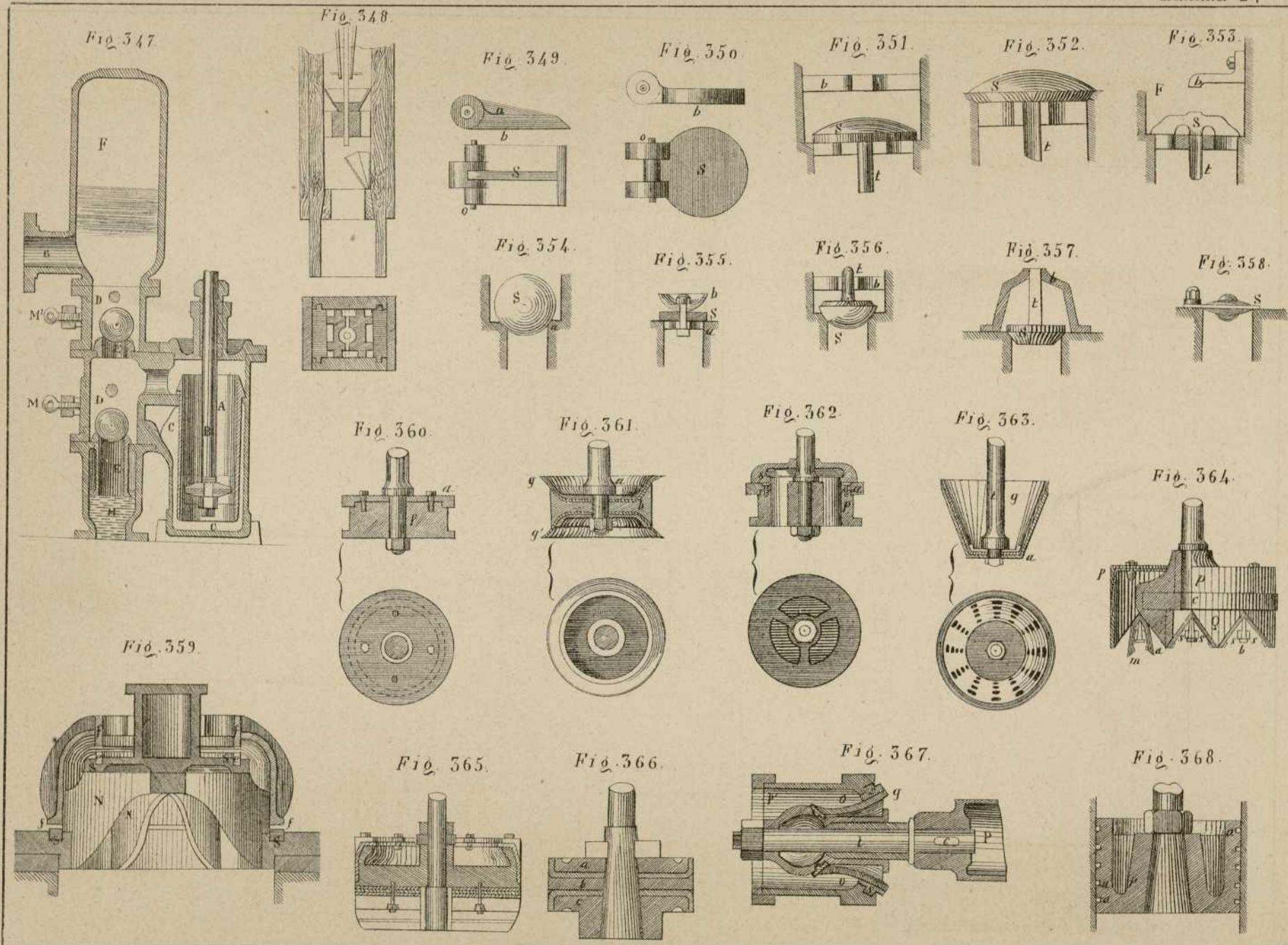


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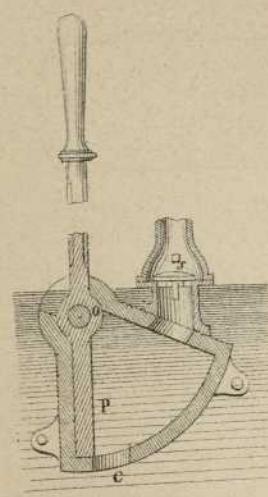


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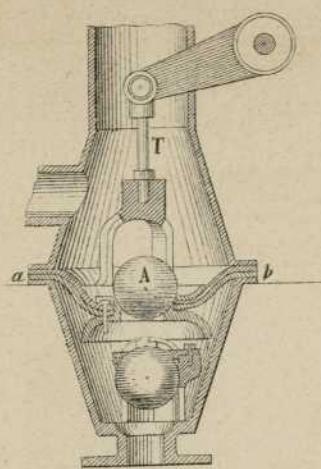


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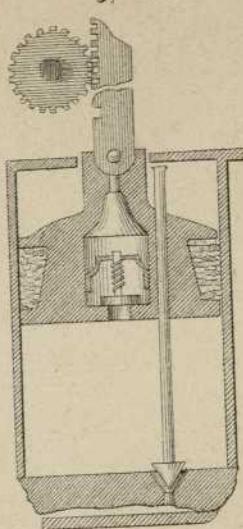


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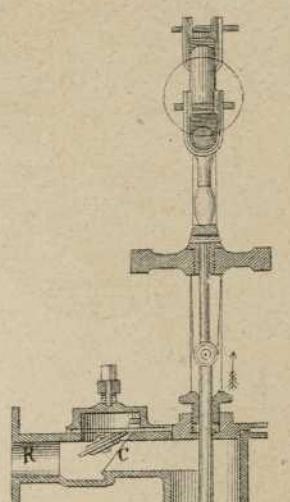


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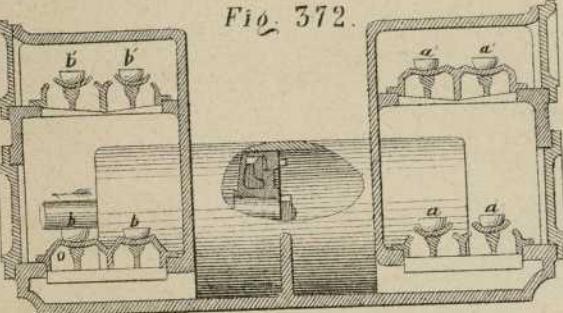
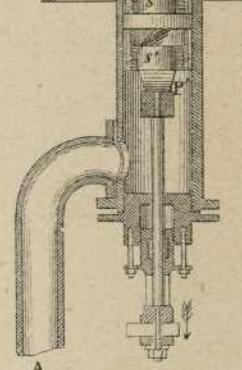
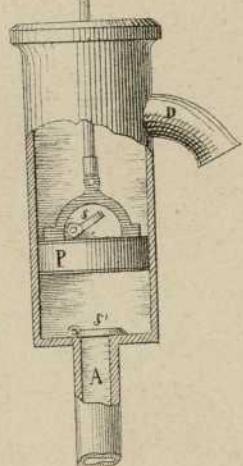


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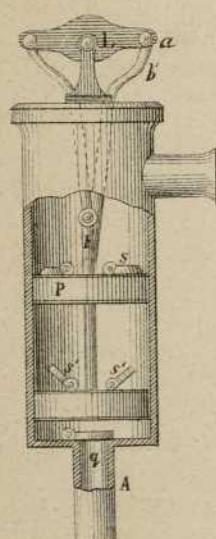


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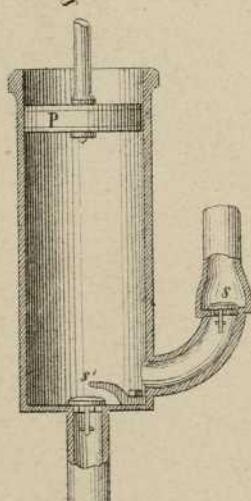


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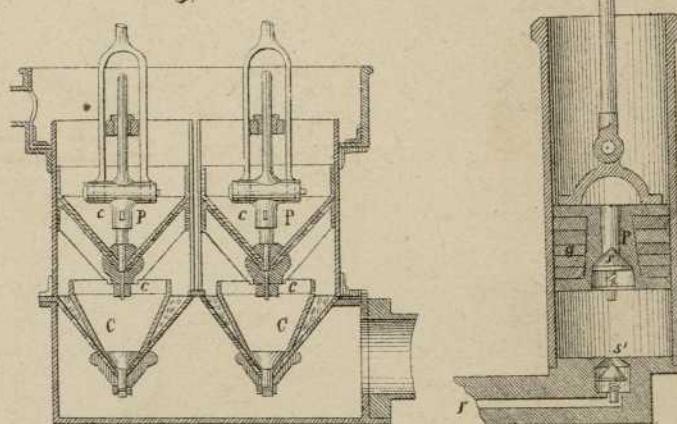


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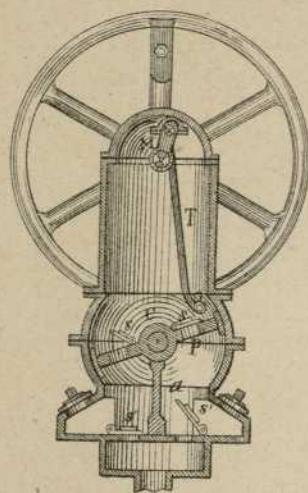


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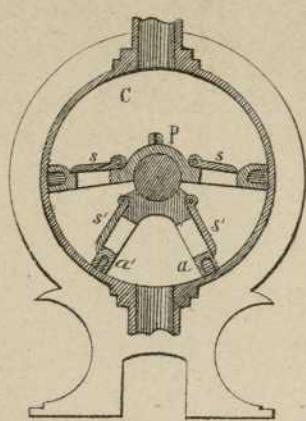


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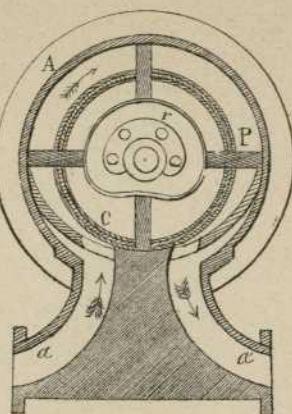


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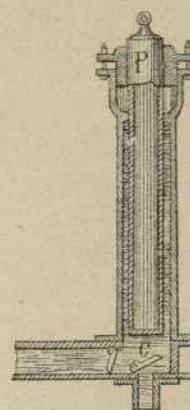


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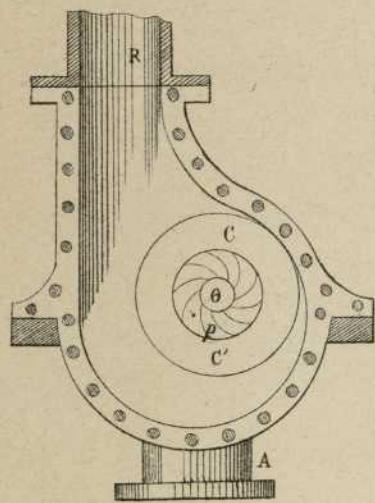


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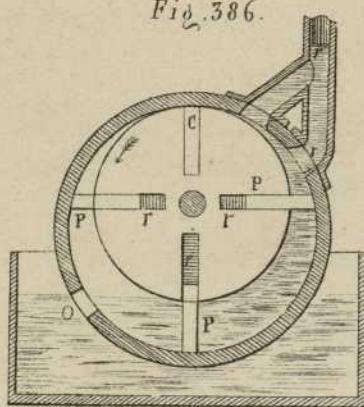


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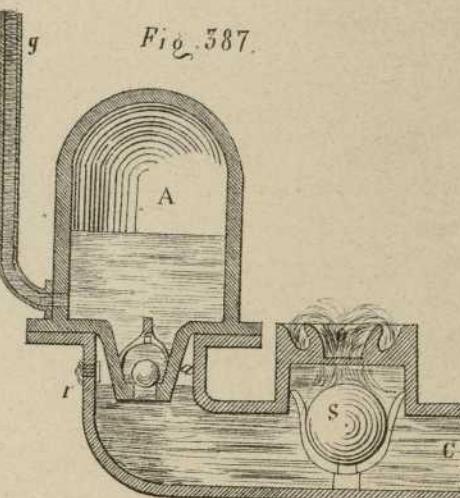


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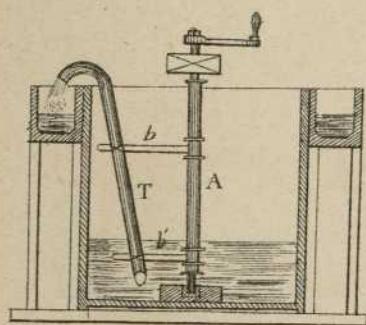


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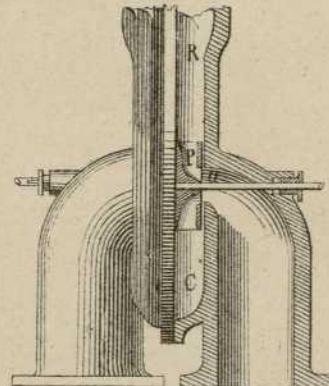


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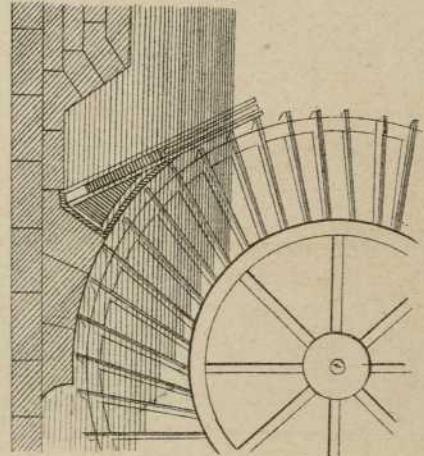


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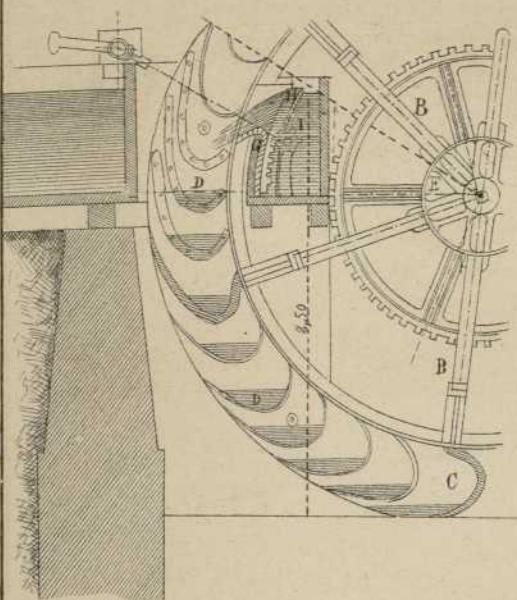


Fig. 395.

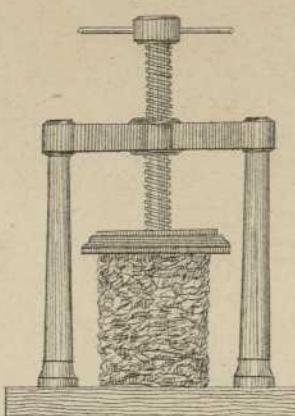


Fig. 396.

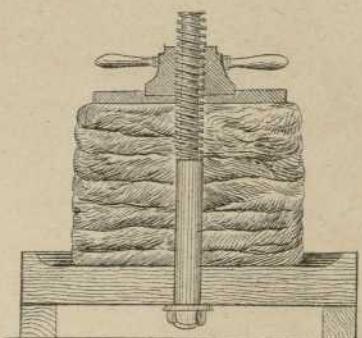


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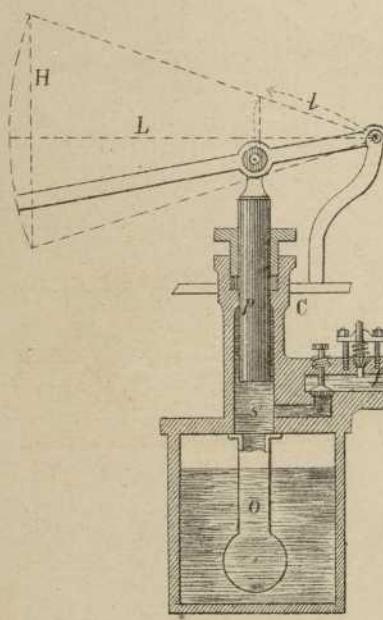
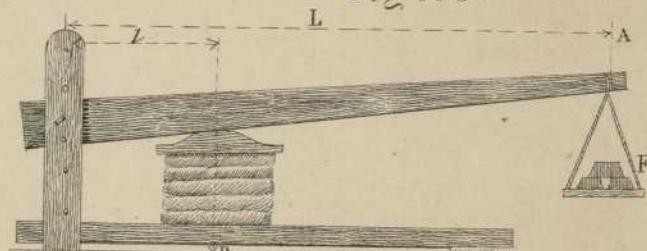


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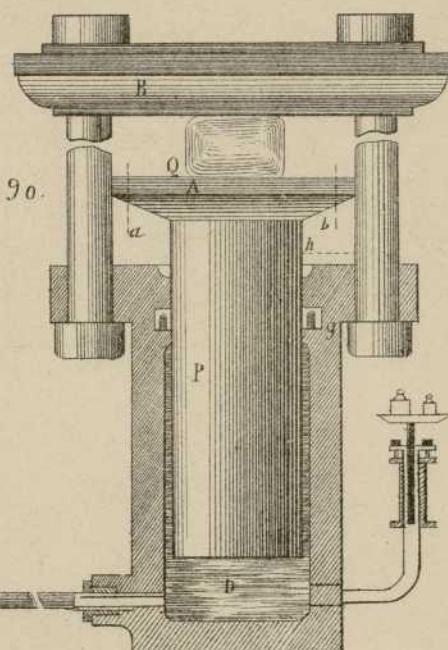


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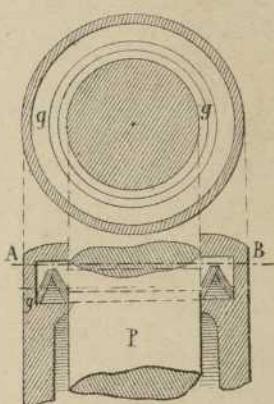


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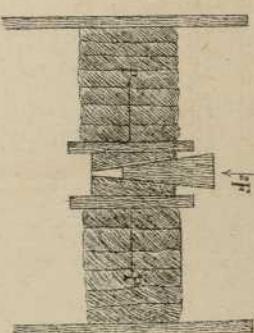
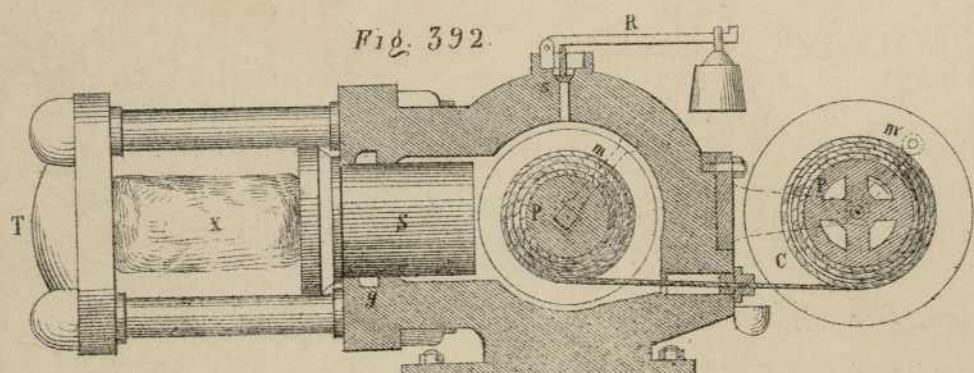


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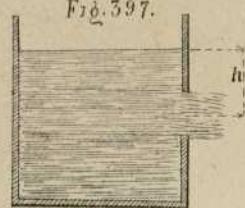


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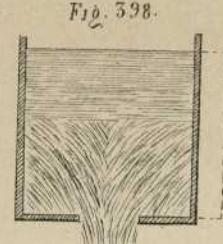


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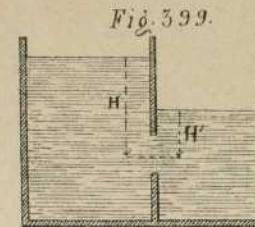


Fig. 400.

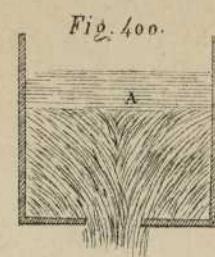


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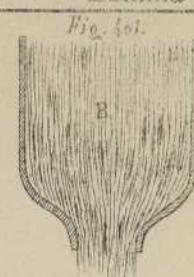


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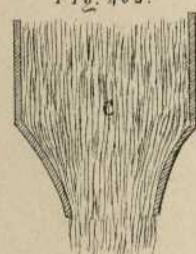


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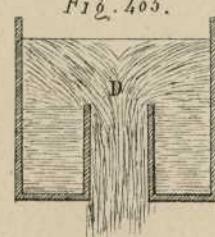


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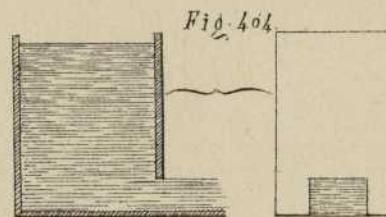


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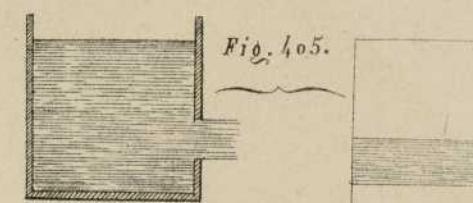


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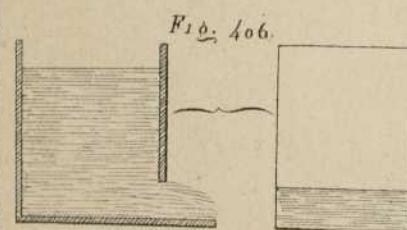


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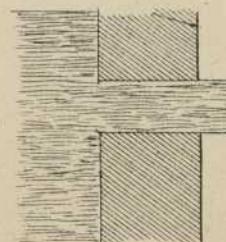


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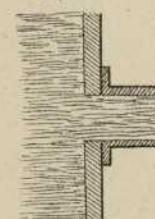


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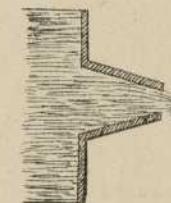


Fig. 410.



Fig. 411.

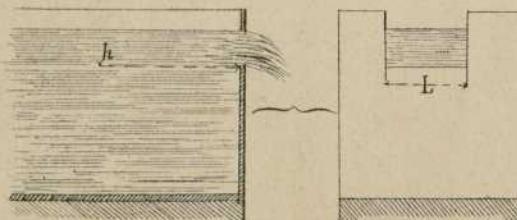


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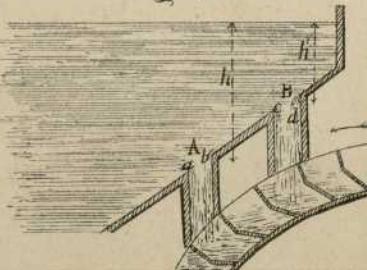


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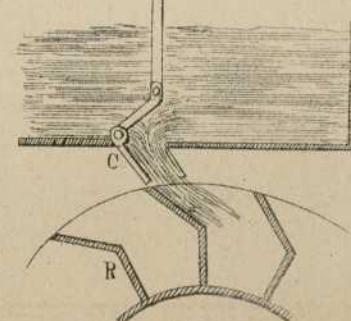


Fig. 414.

Corte por AB.

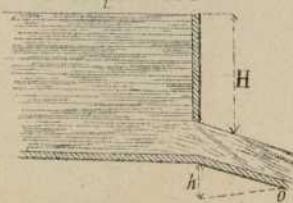


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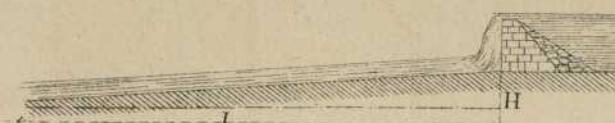


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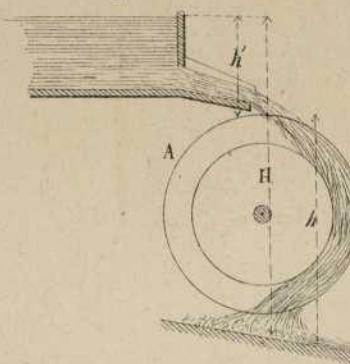


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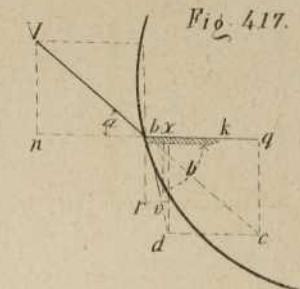


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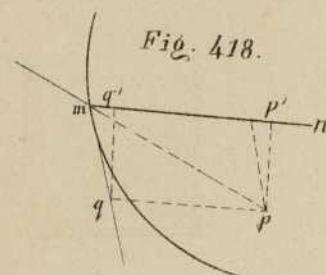


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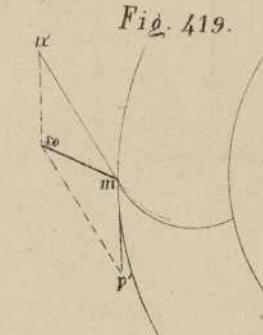


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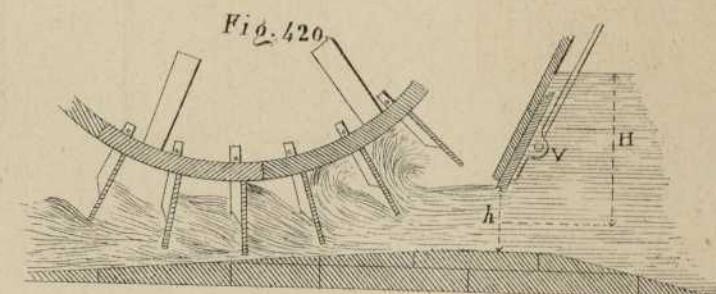


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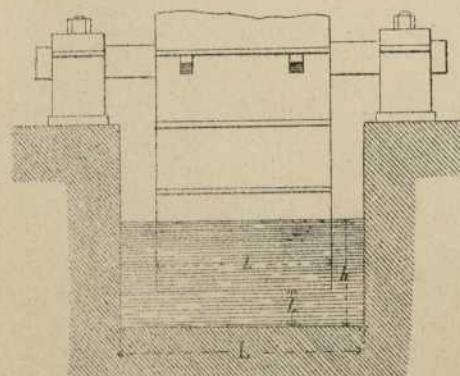


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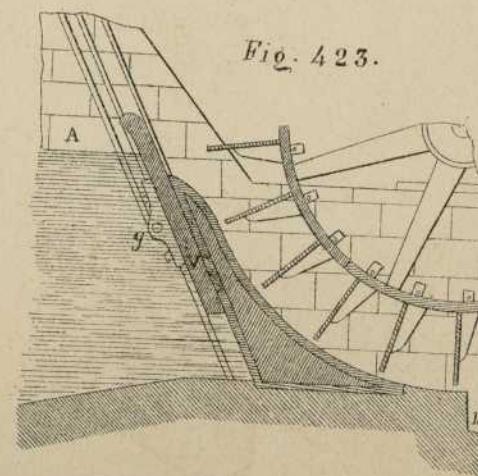


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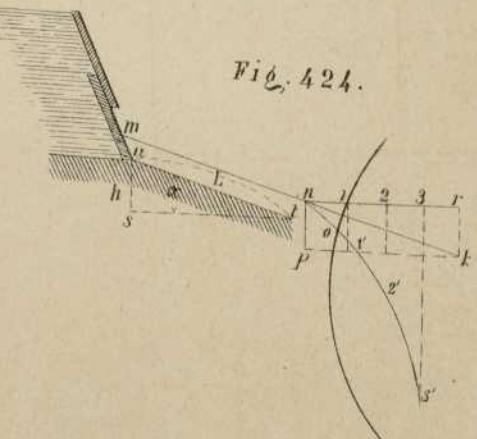


Fig. 424.

Fig. 425.

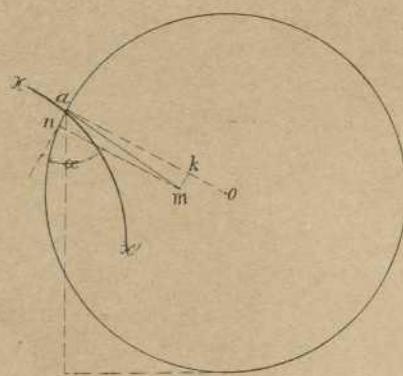


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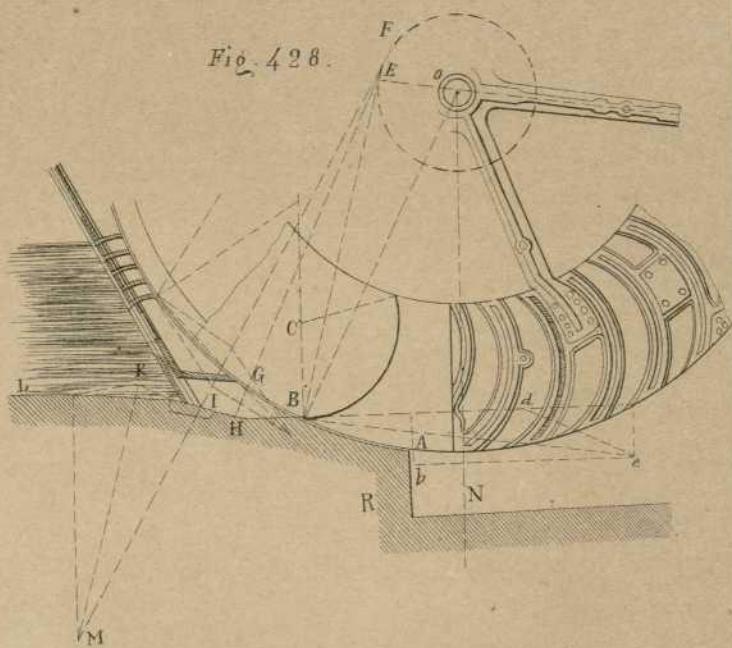


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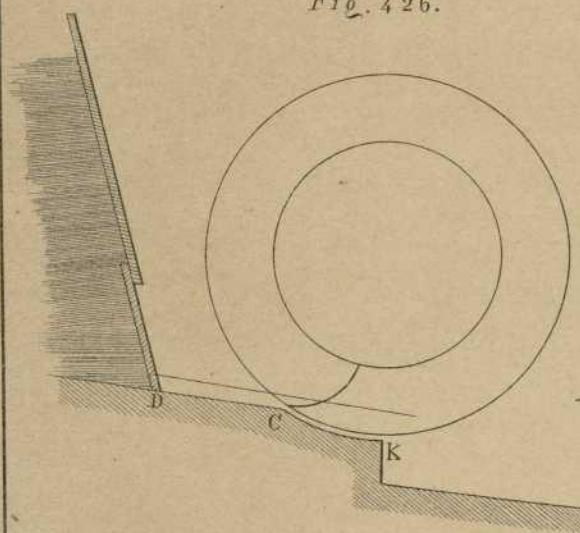


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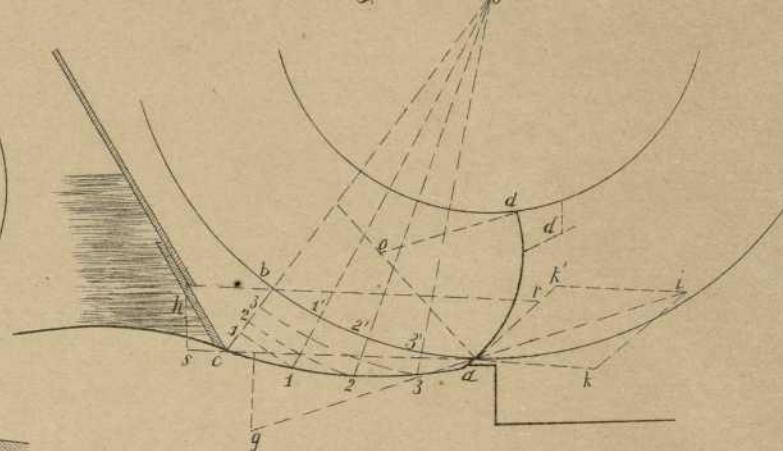


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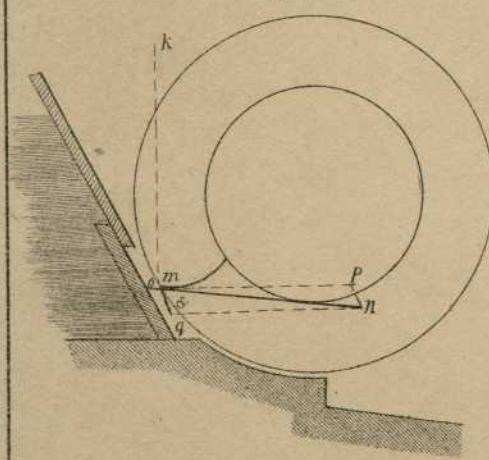


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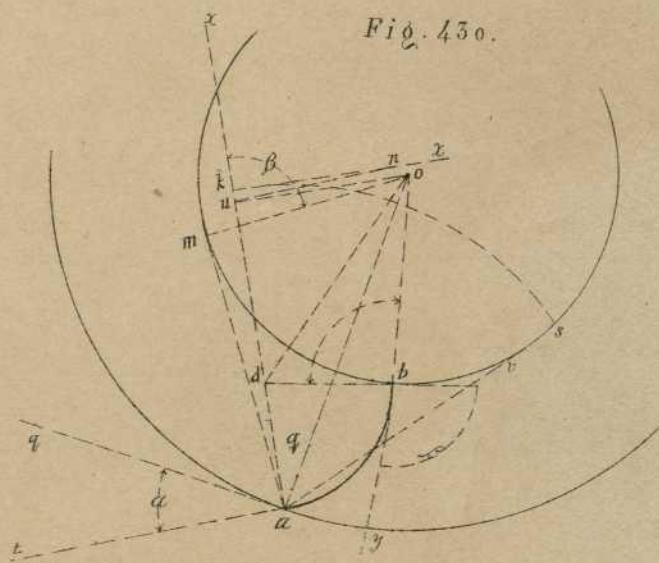


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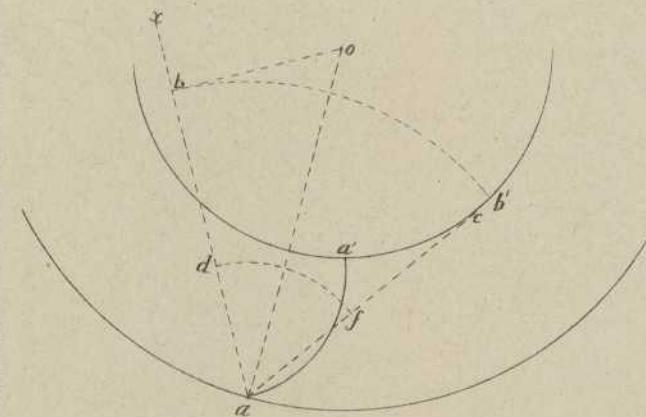


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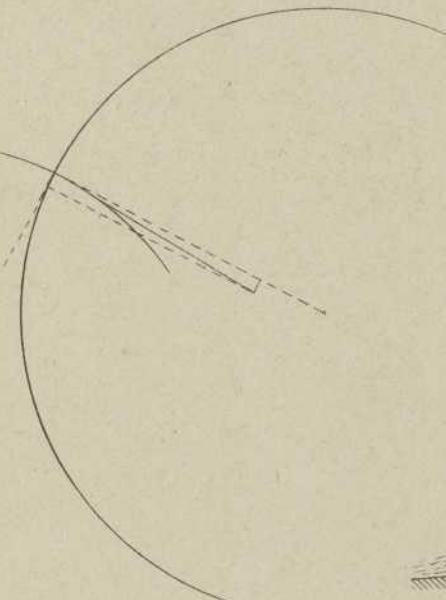


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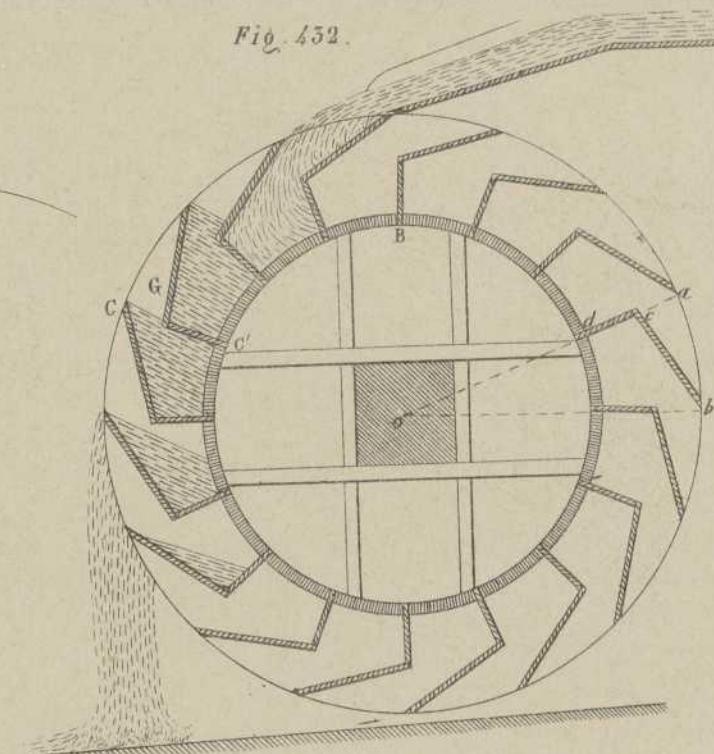


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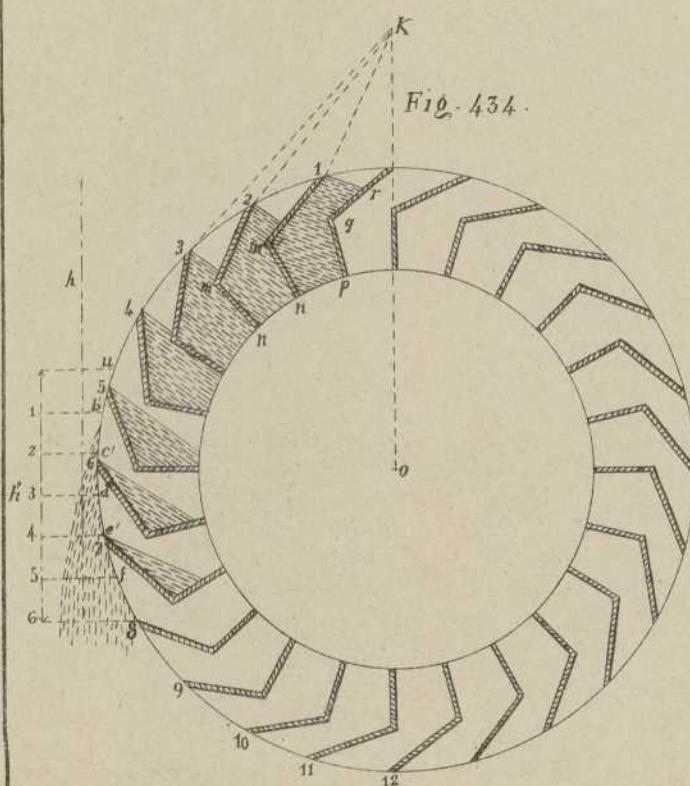


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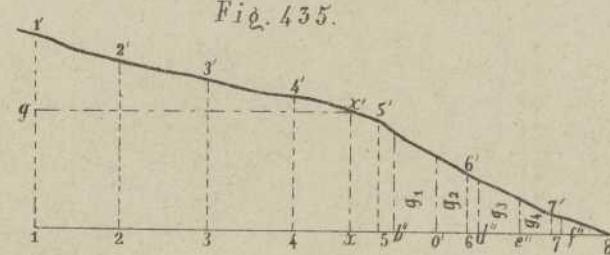
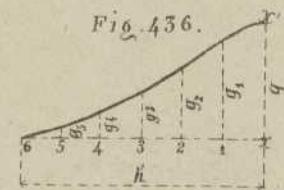


Fig. 436.



Cortes verticales par AB, CD, EF

Fig. 437.

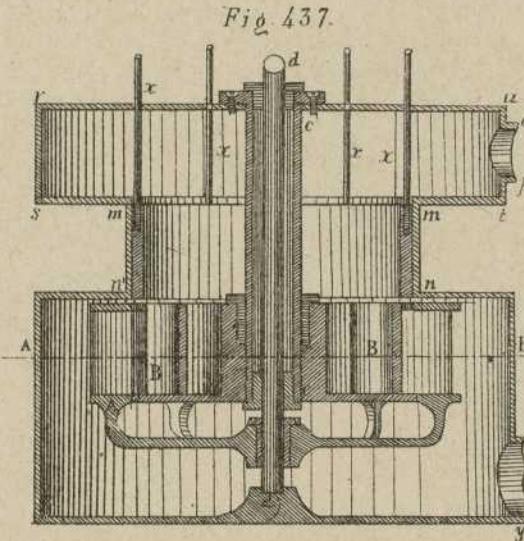


Fig. 438

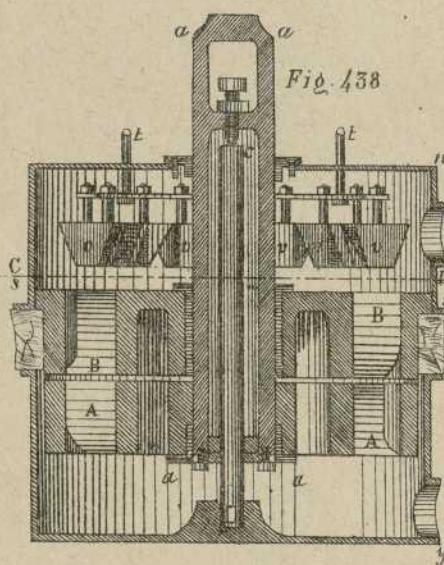
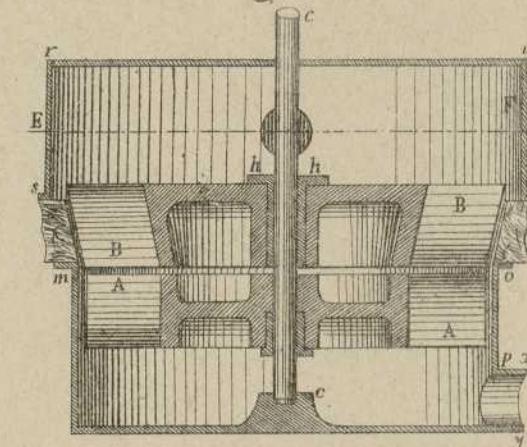
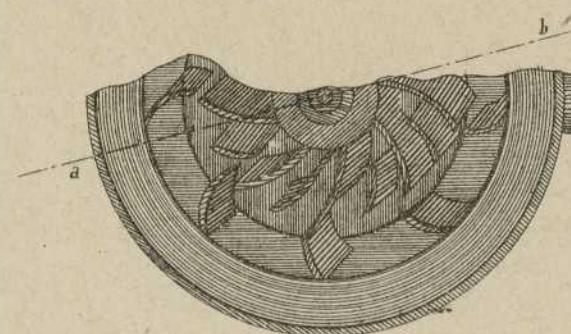


Fig. 439

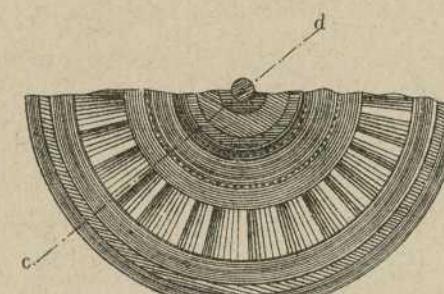


Semicortes de tres turbinas.

par AB.



par CD.



par EF.

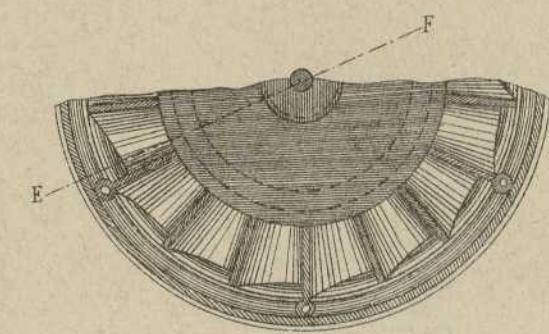


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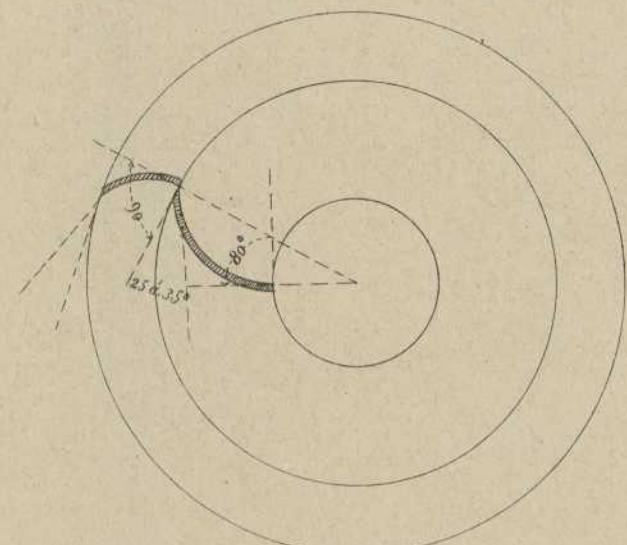


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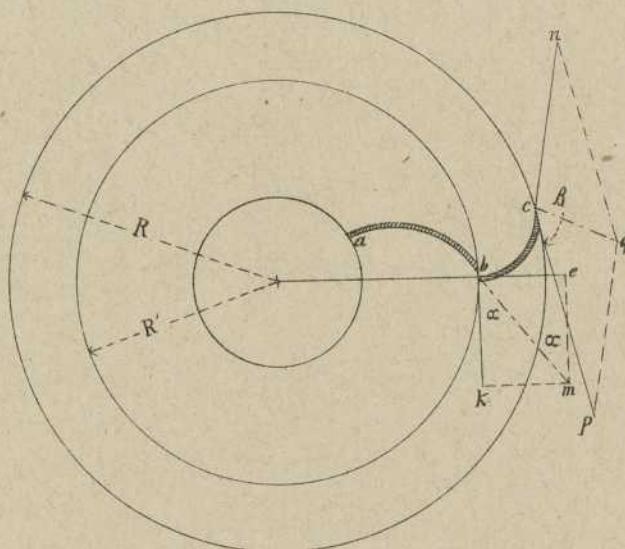


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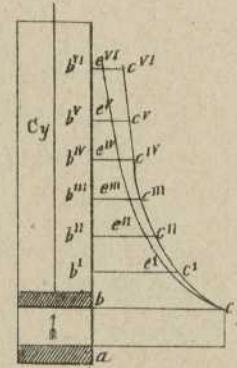


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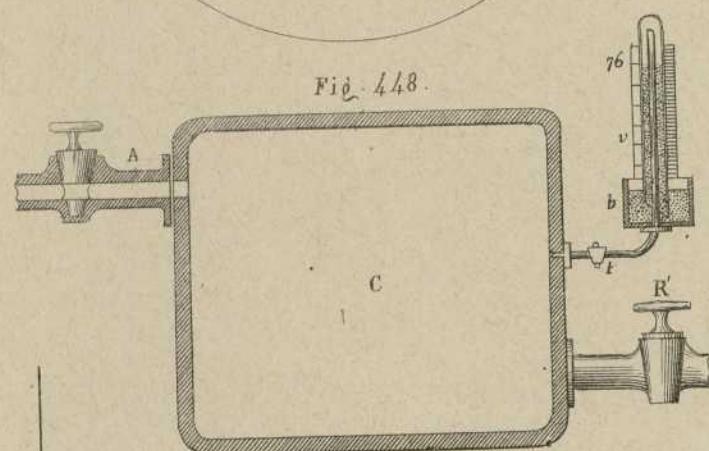


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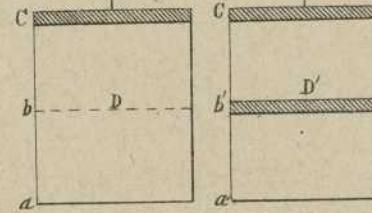


Fig. 447.



Fig. 445.

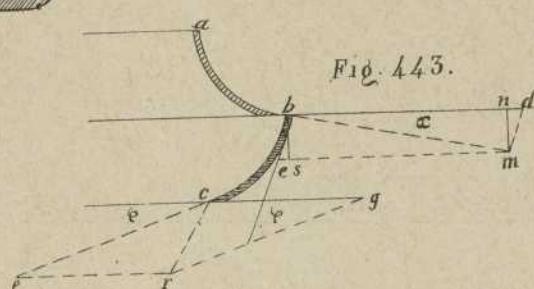
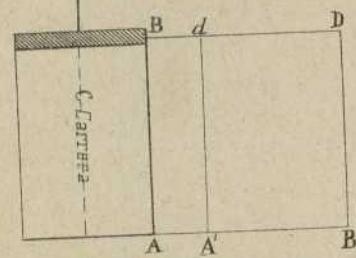


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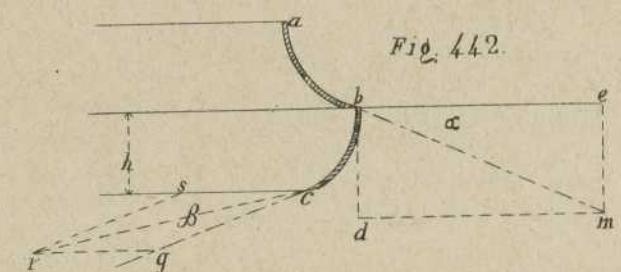


Fig. 442.

Fig. 449.



Fig. 450.

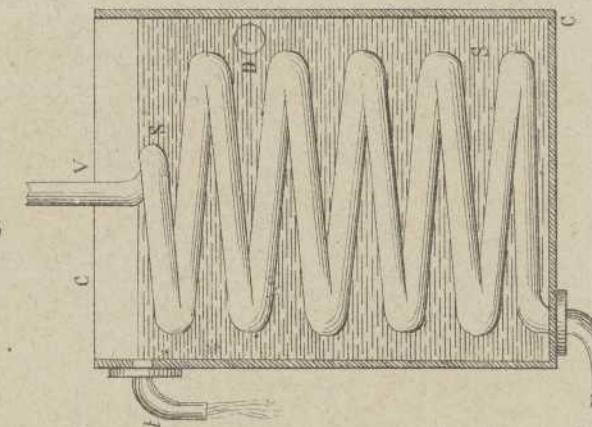


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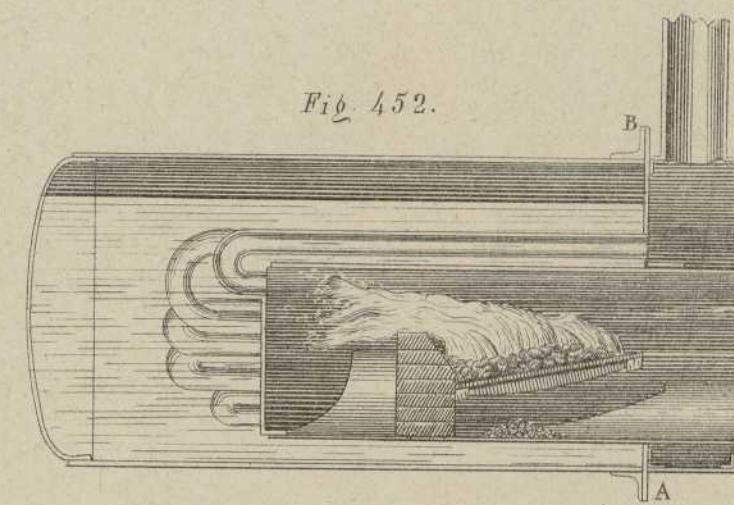
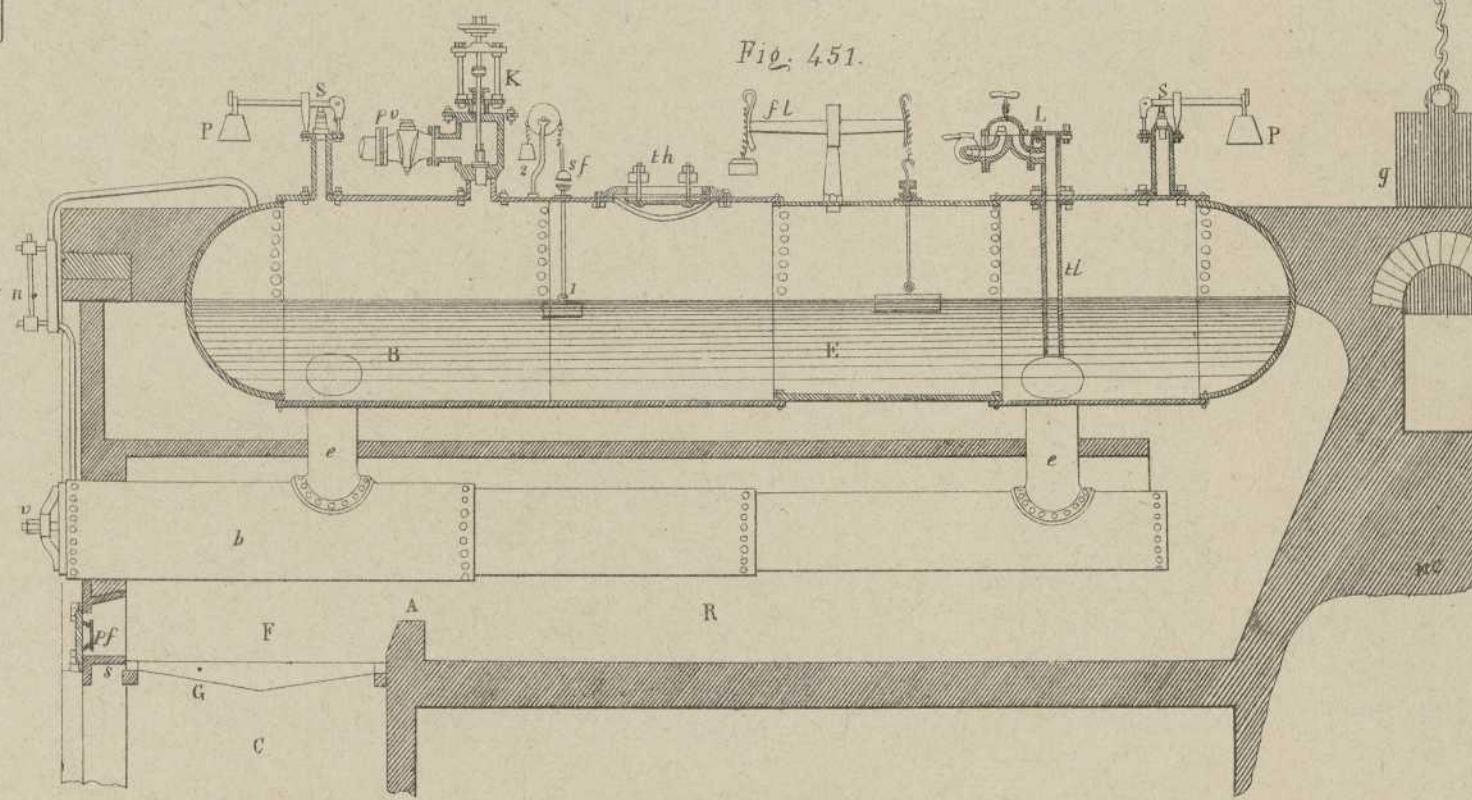


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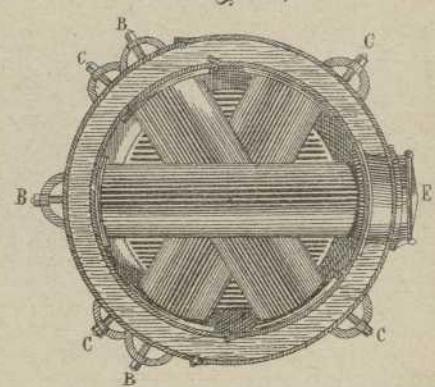
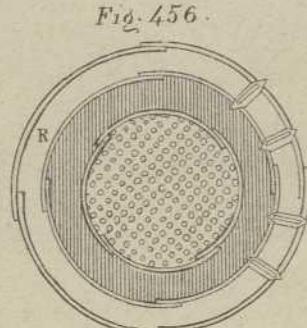
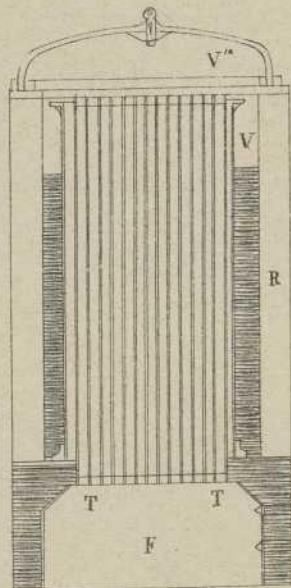
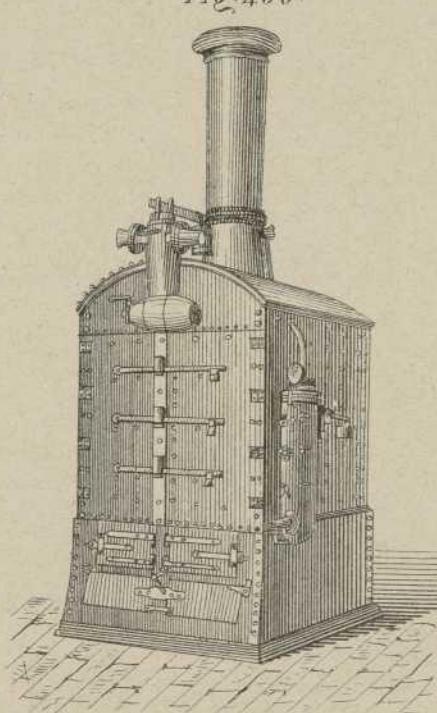
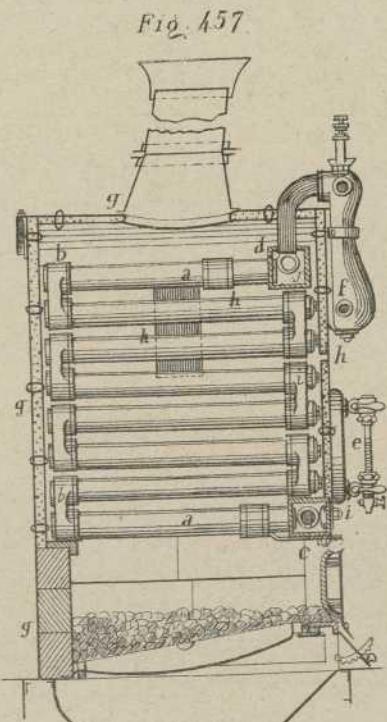
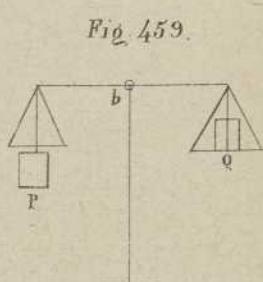
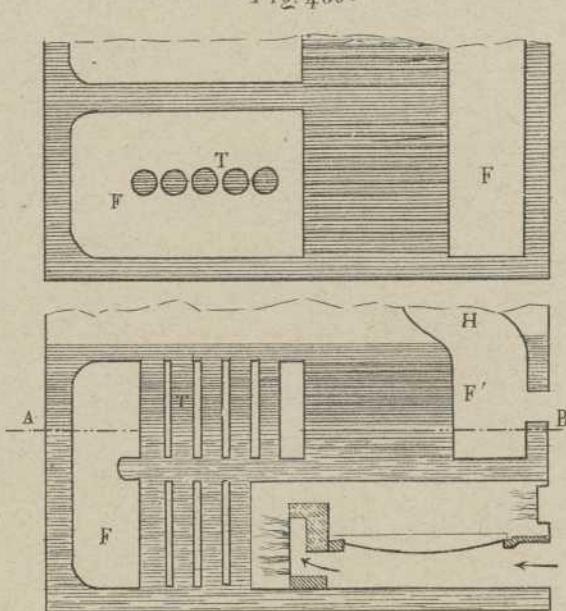
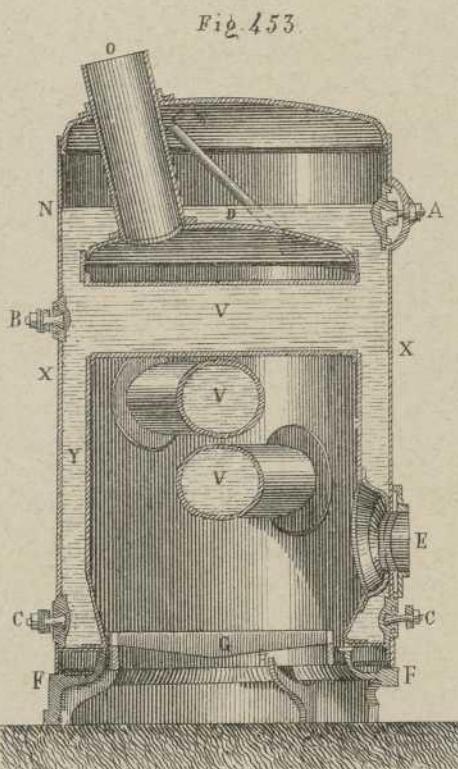


Fig. 461.

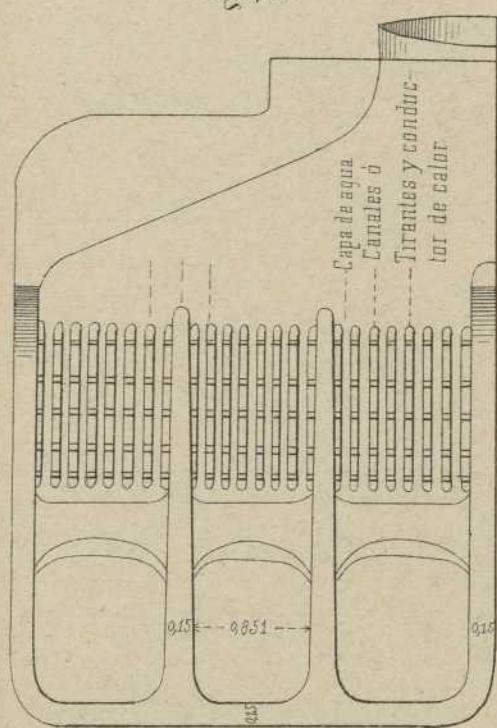


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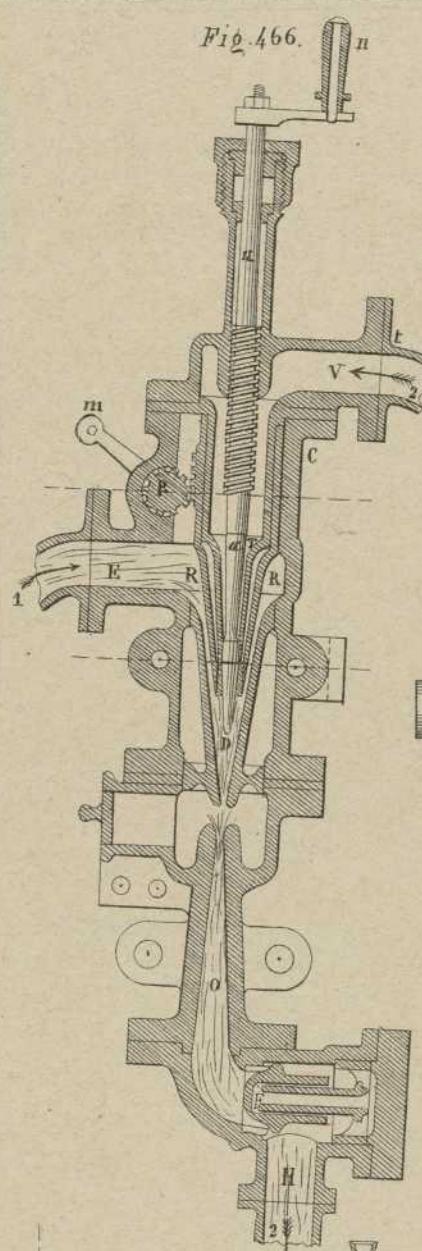


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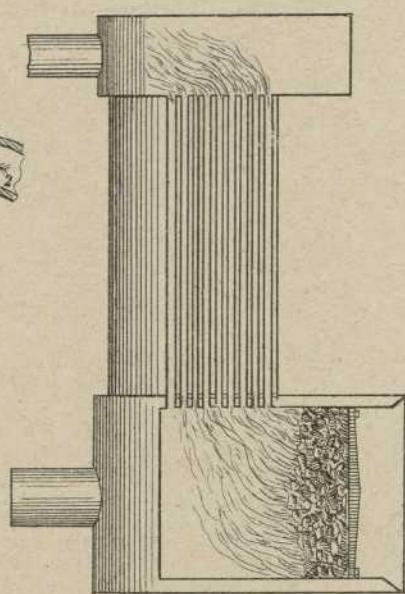


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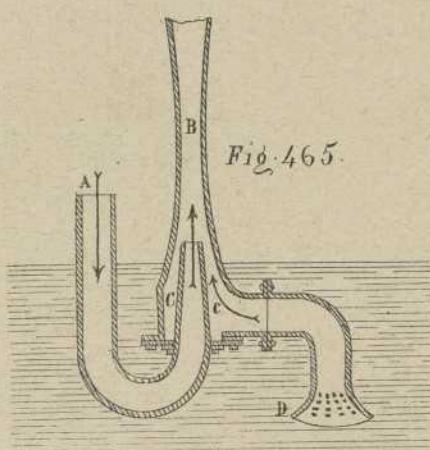


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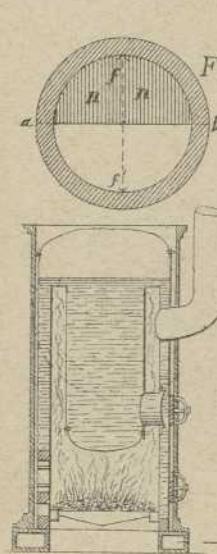


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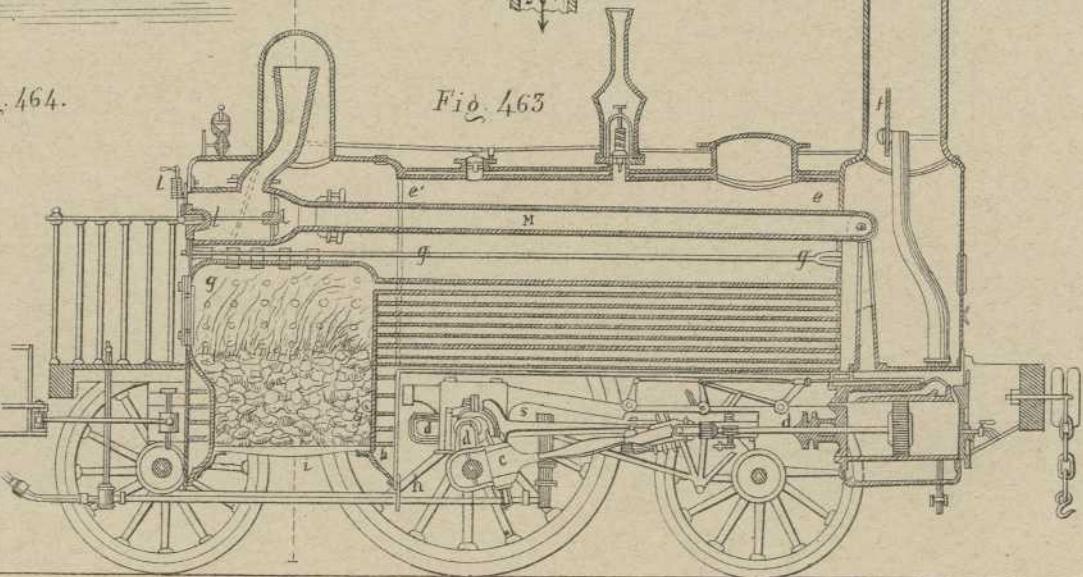


Fig. 467

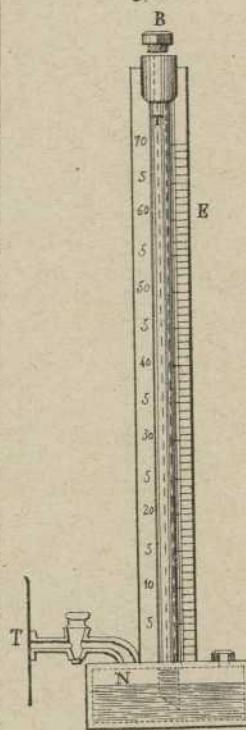


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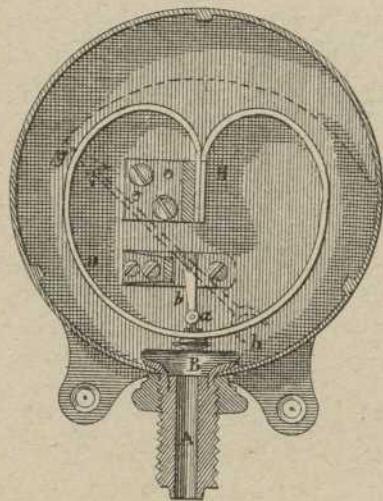
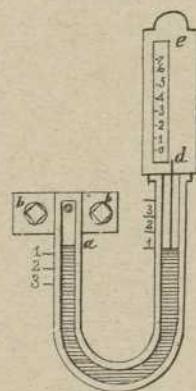


Fig. 470

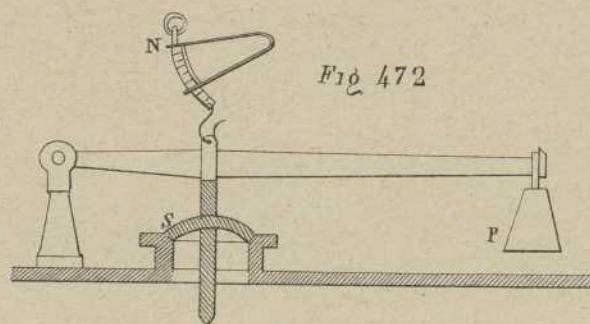
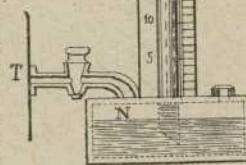
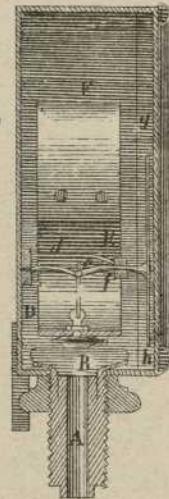


Fig. 472

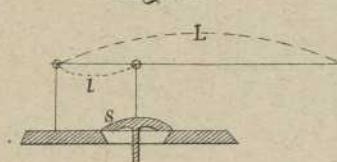


Fig. 471

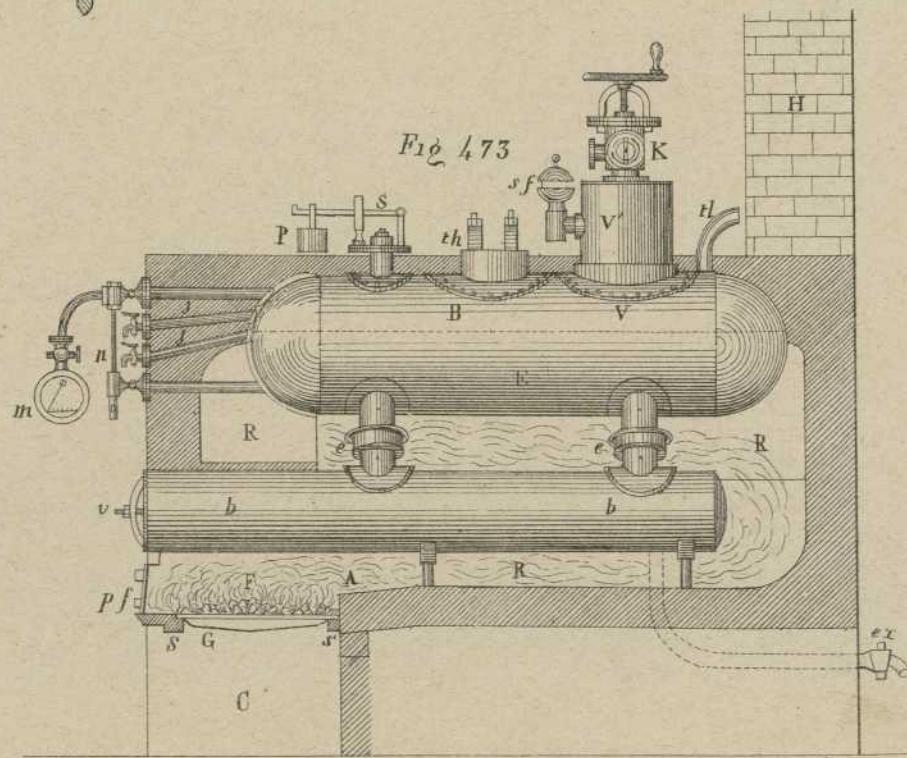
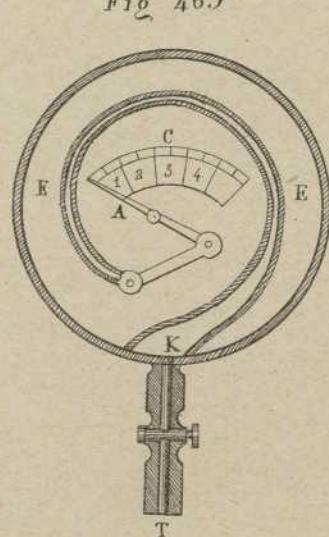
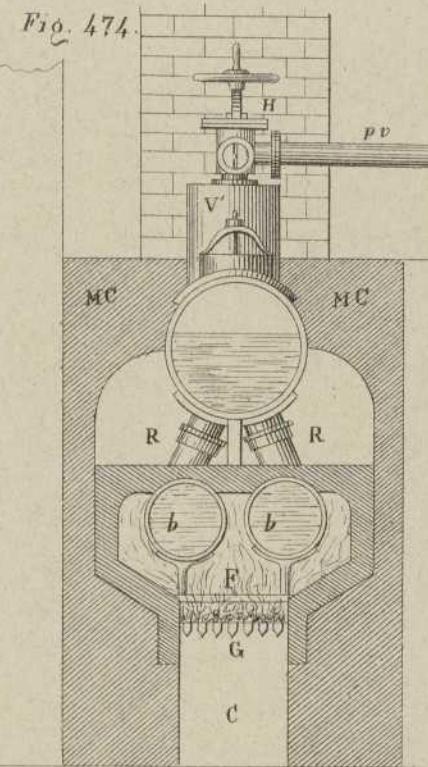
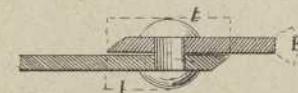
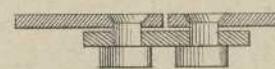
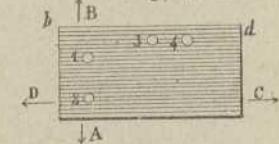
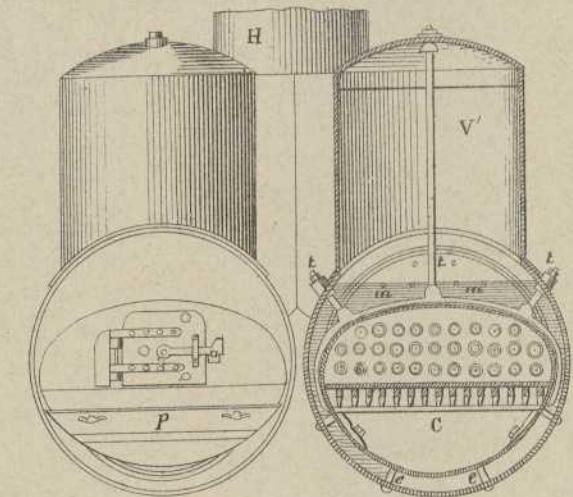
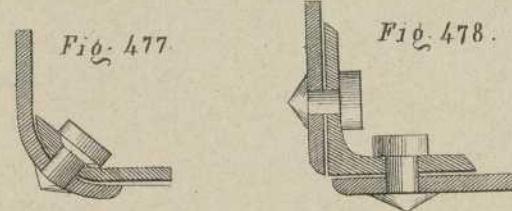
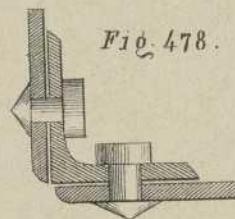
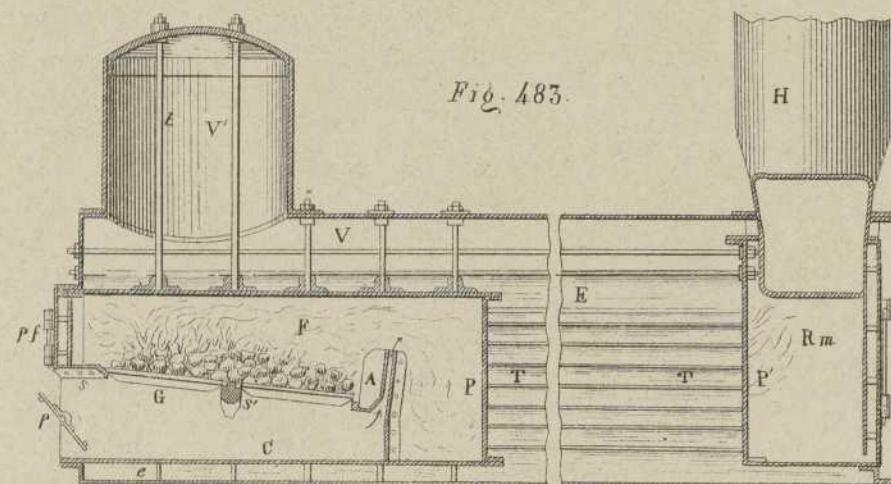
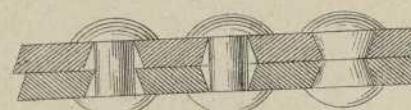
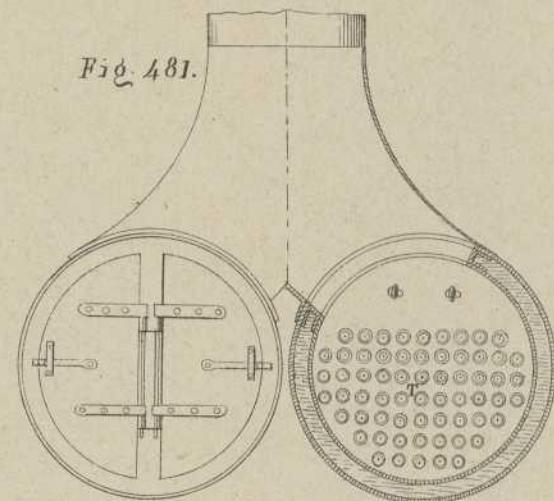
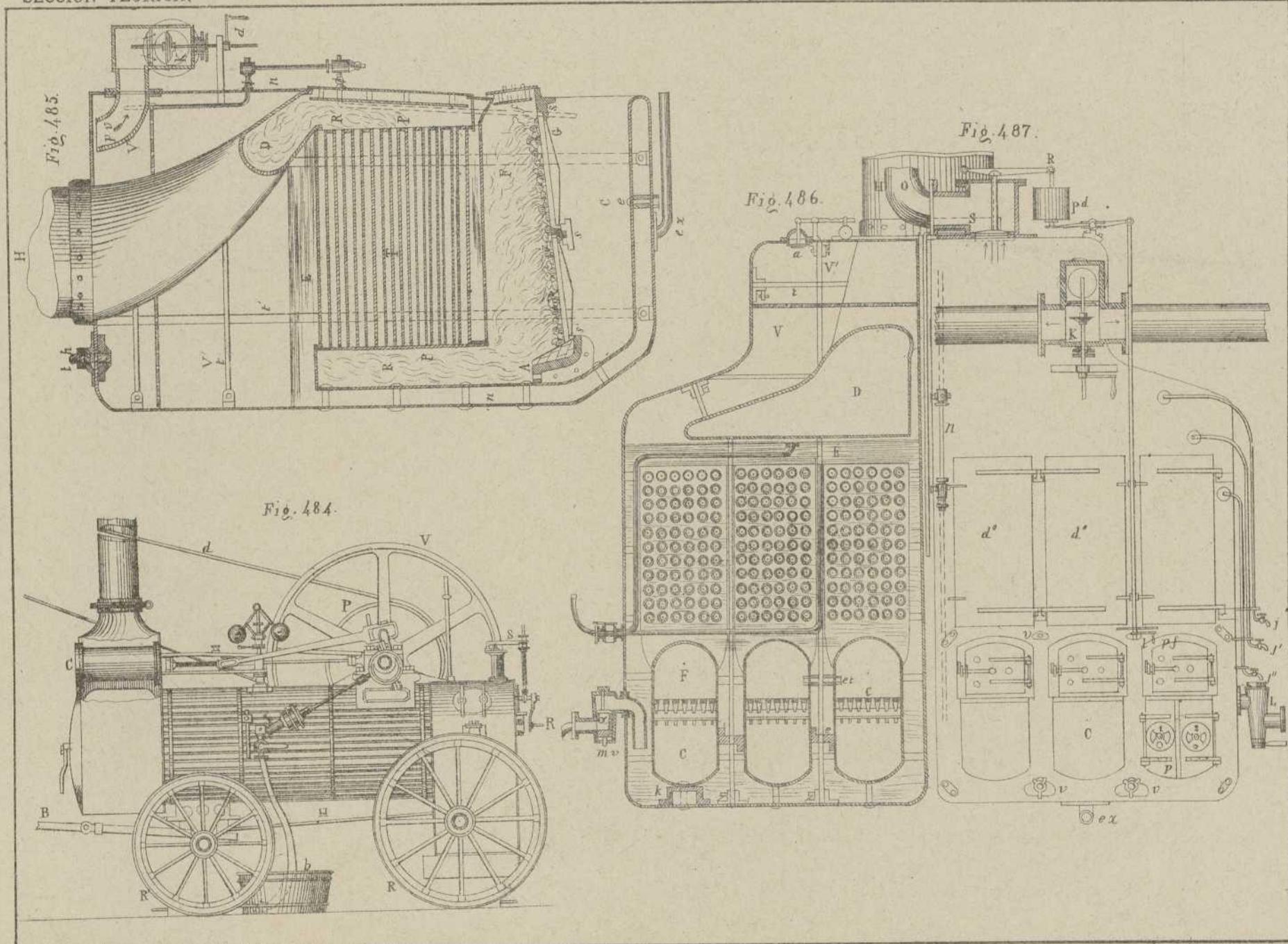


Fig. 473

*Fig. 475.**Fig. 476.**Fig. 479.**Fig. 482.**Fig. 477.**Fig. 478.**Fig. 480.**Fig. 481.*



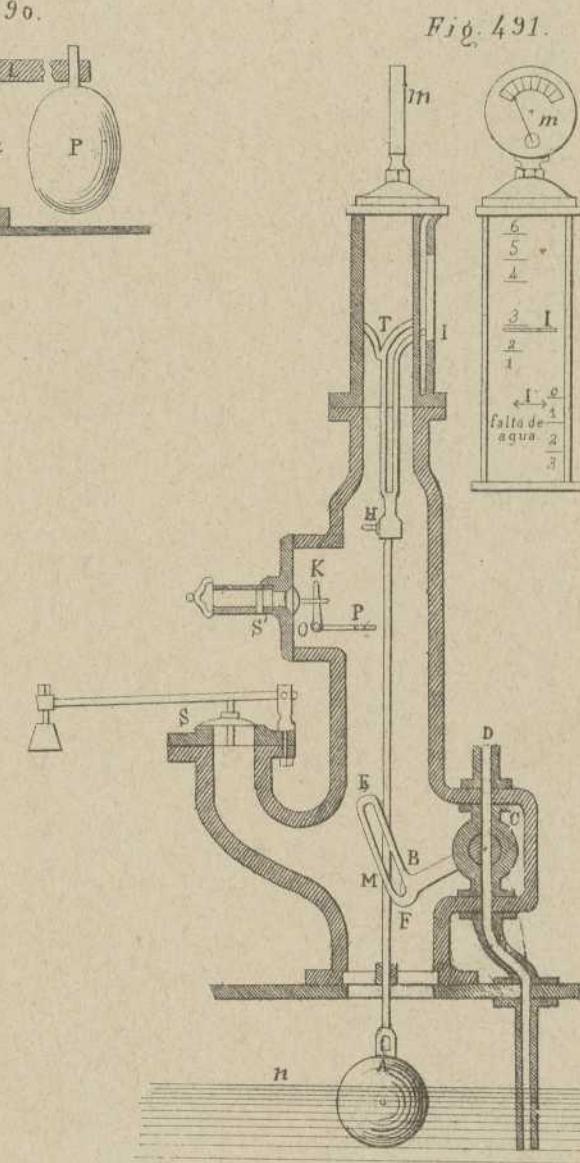
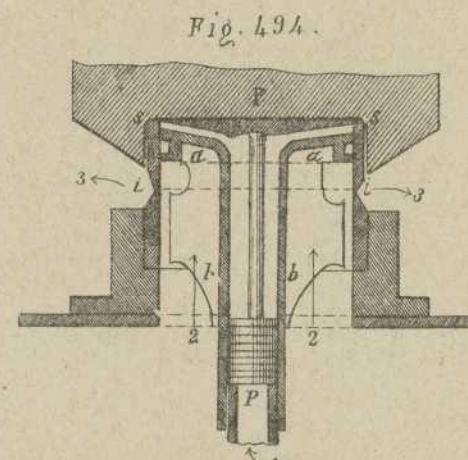
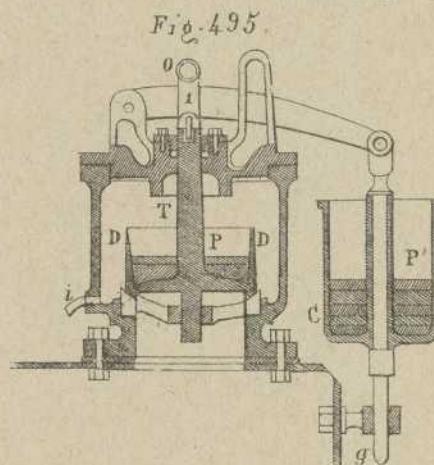
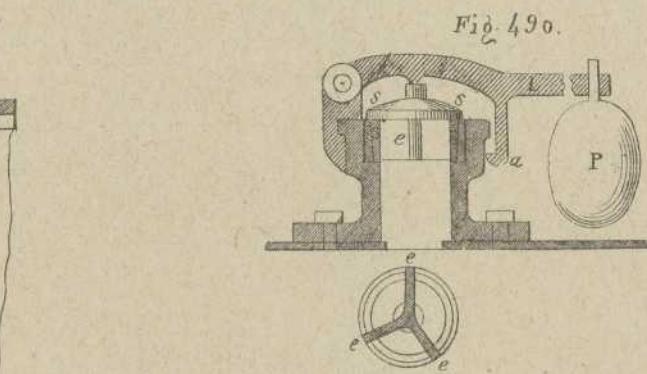
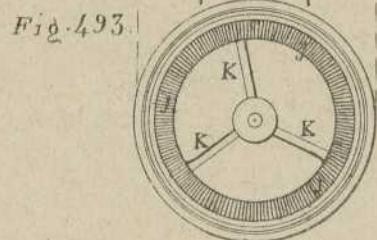
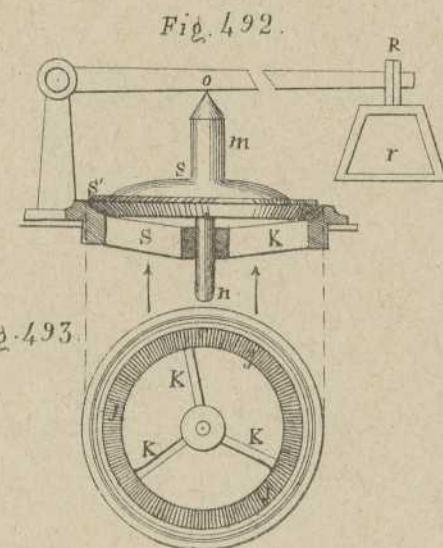
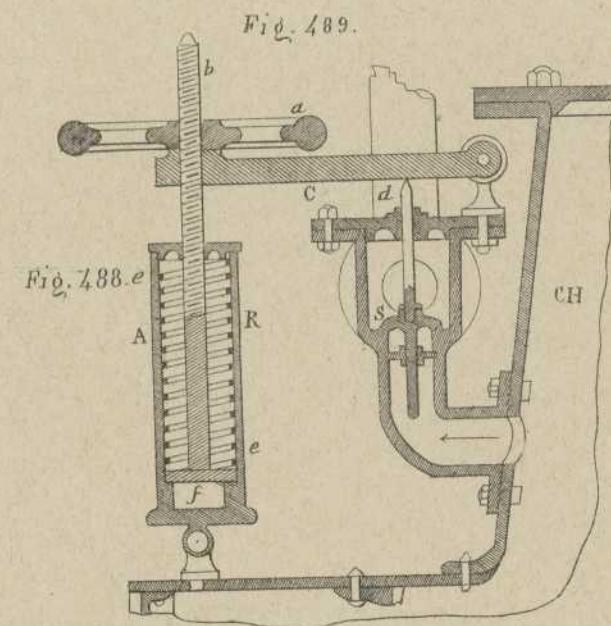


Fig. 496.

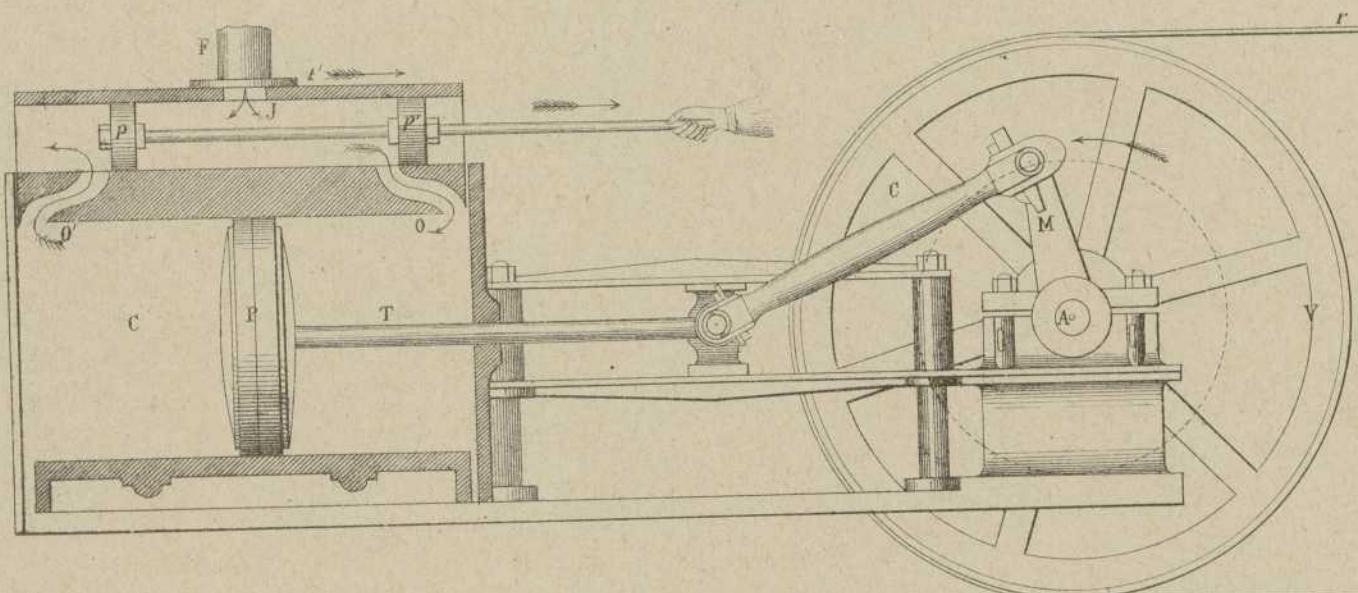


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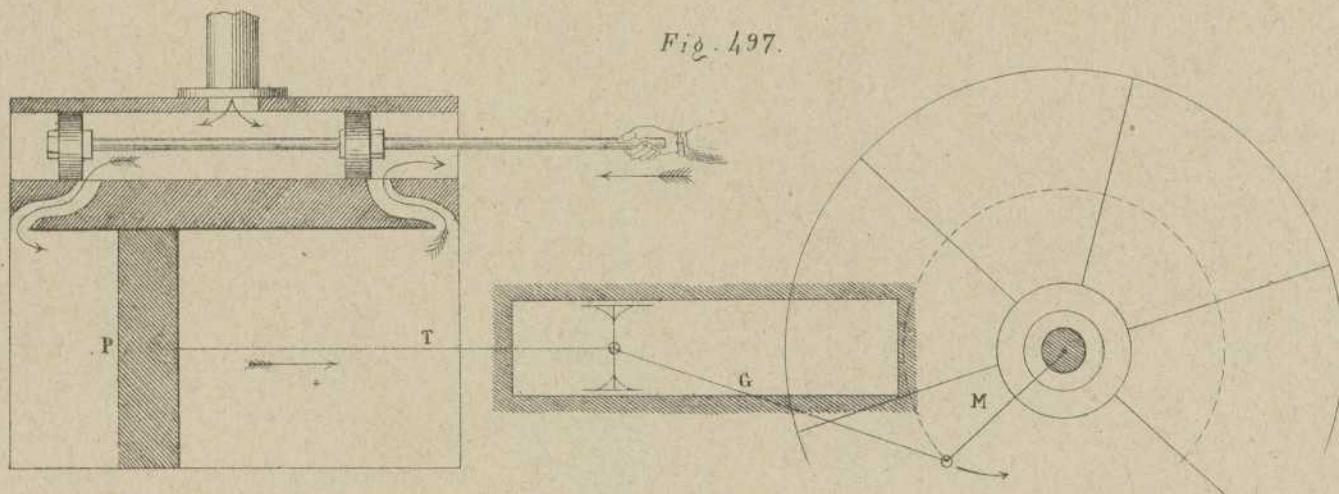


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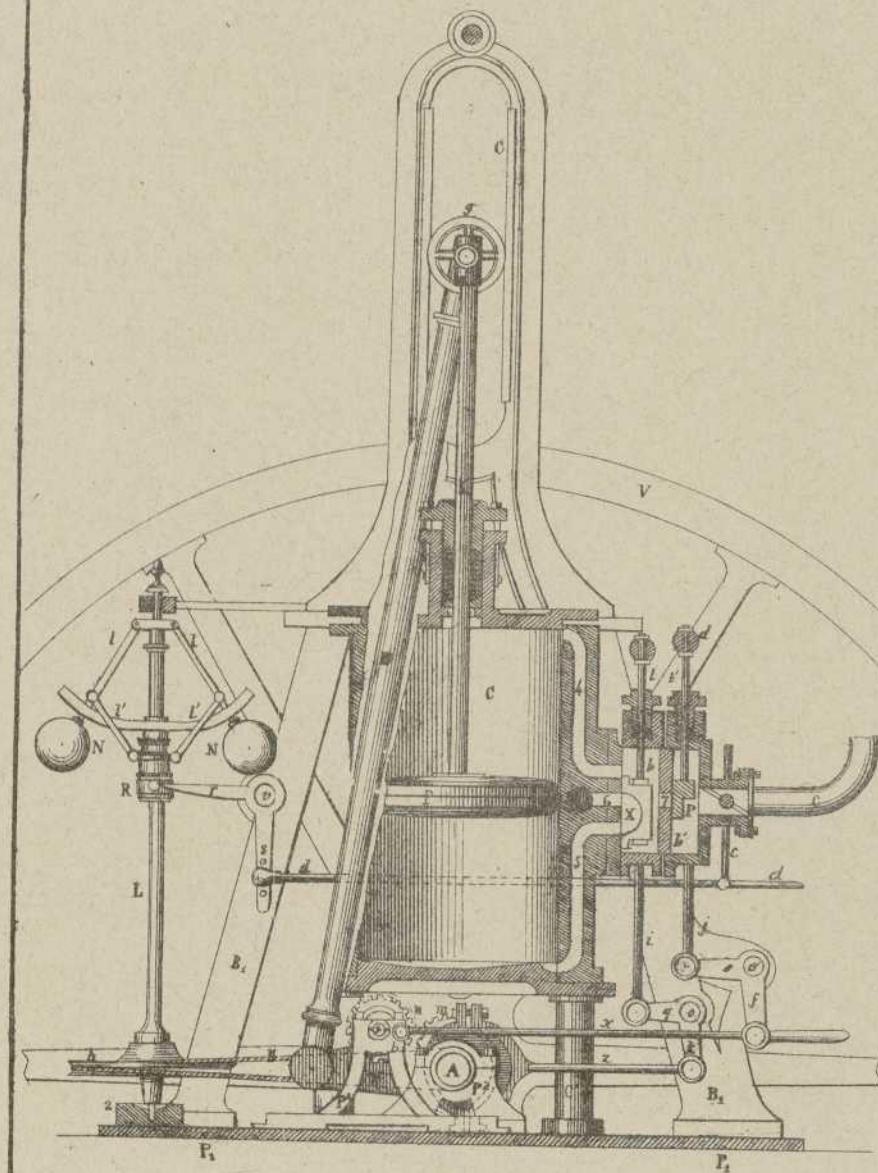


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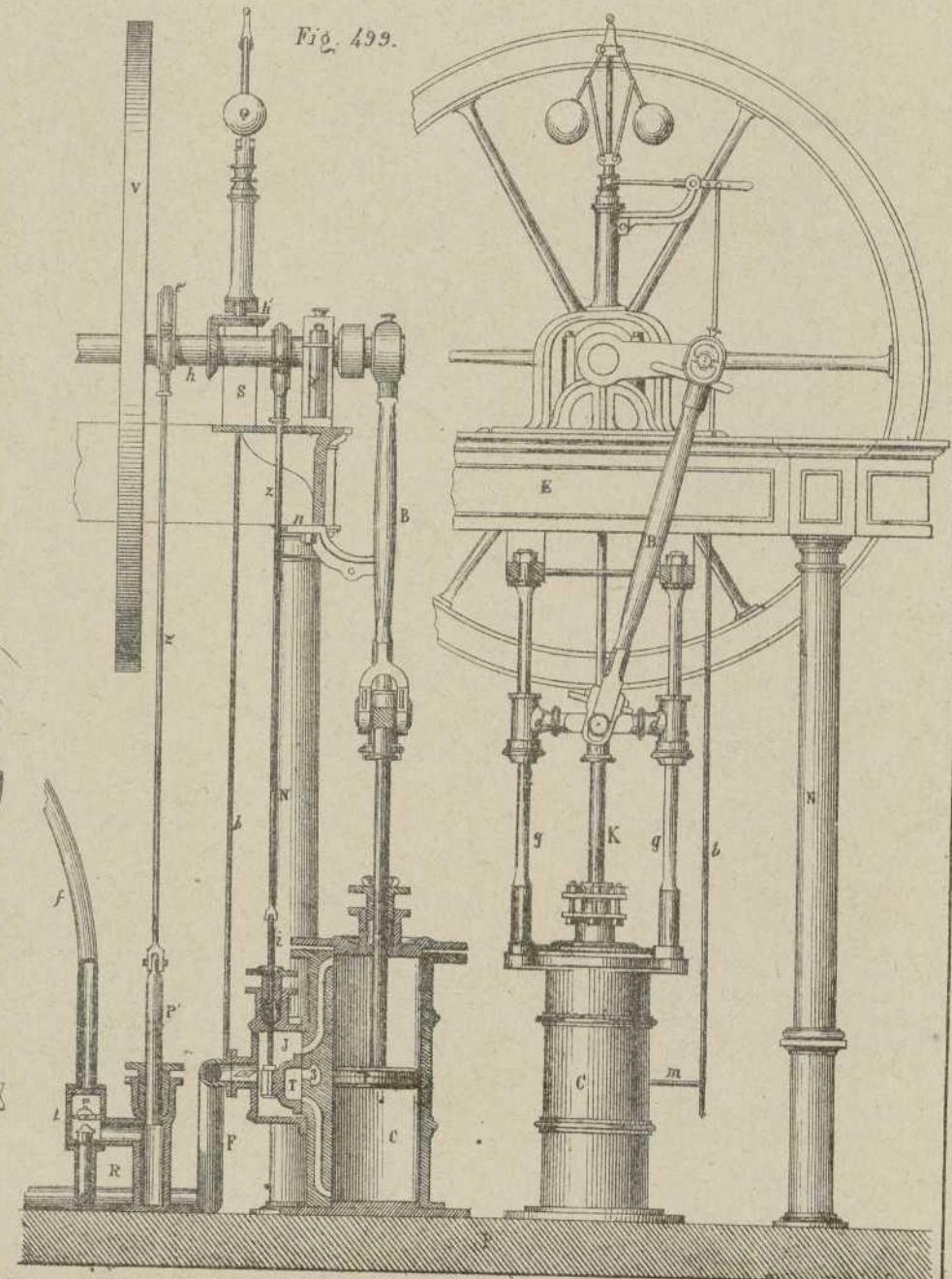
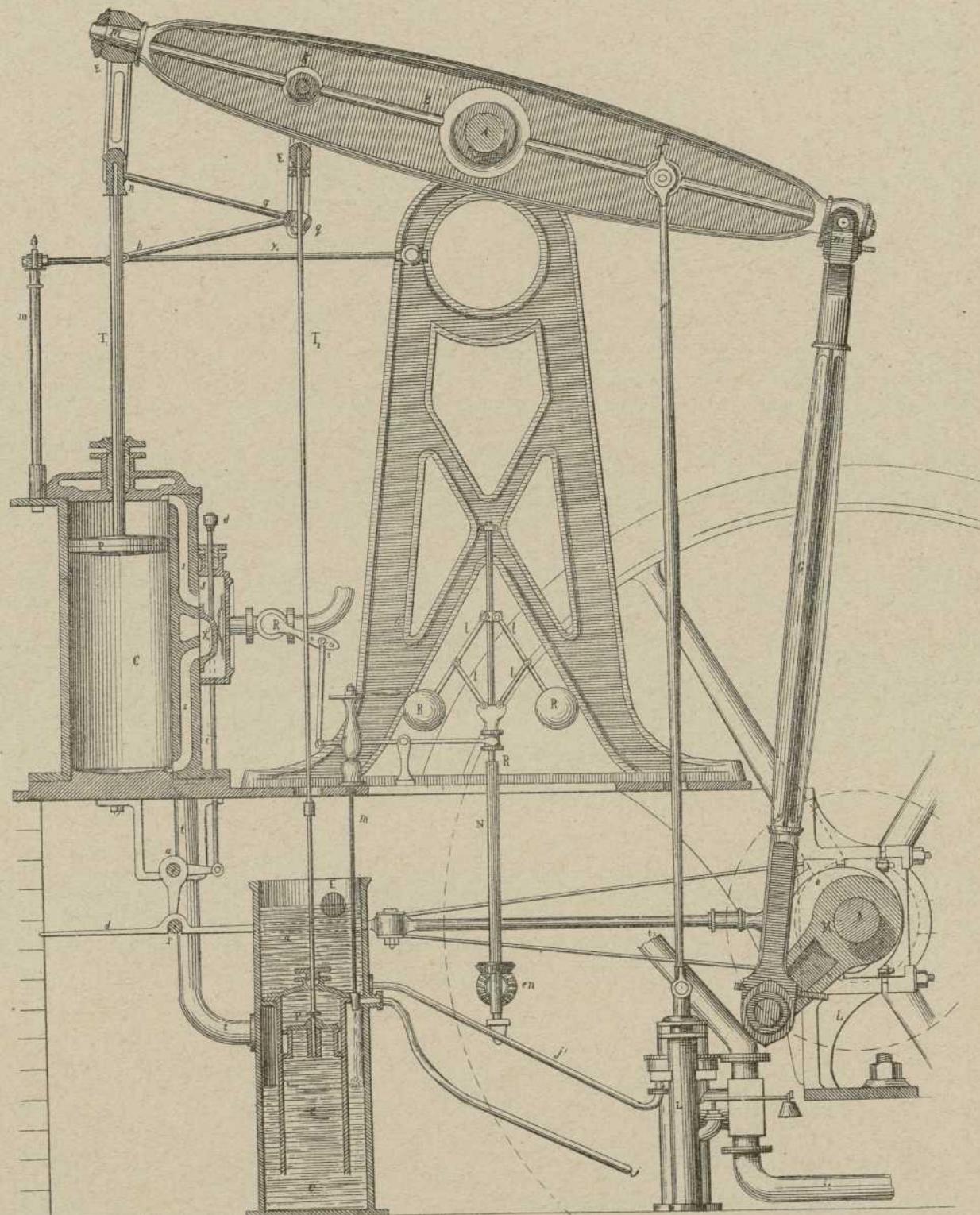


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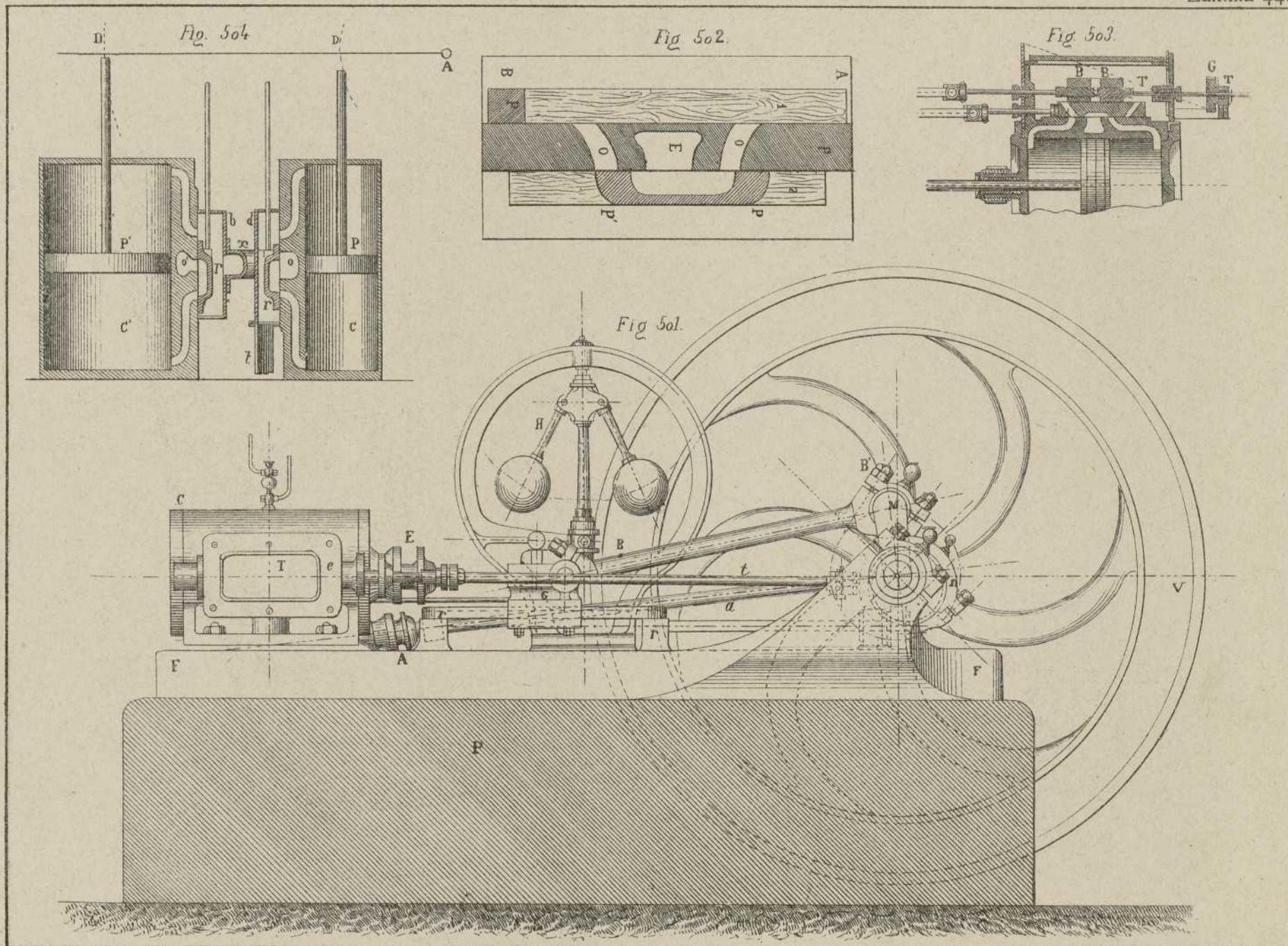


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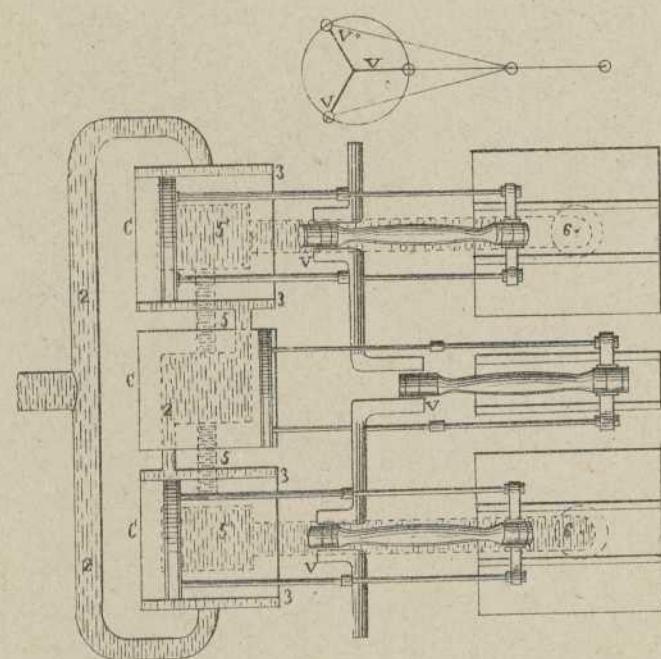


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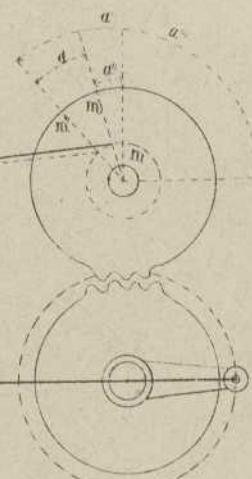
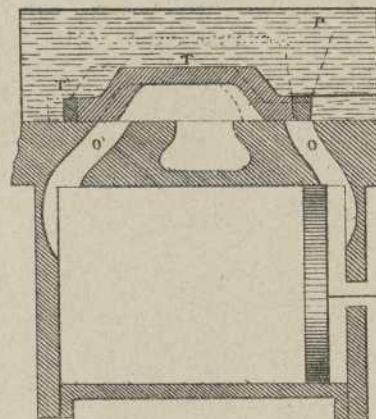


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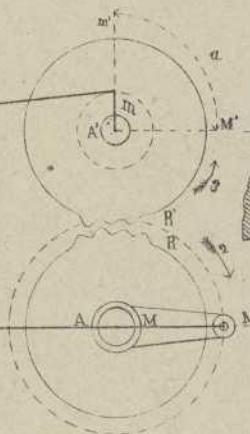
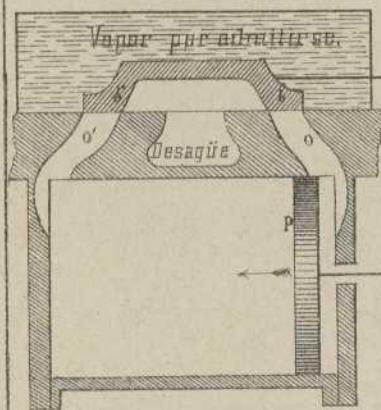
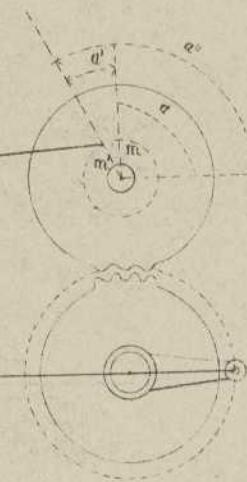
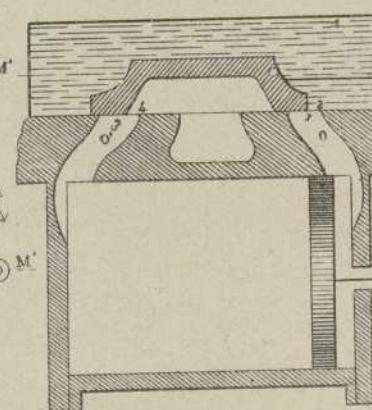


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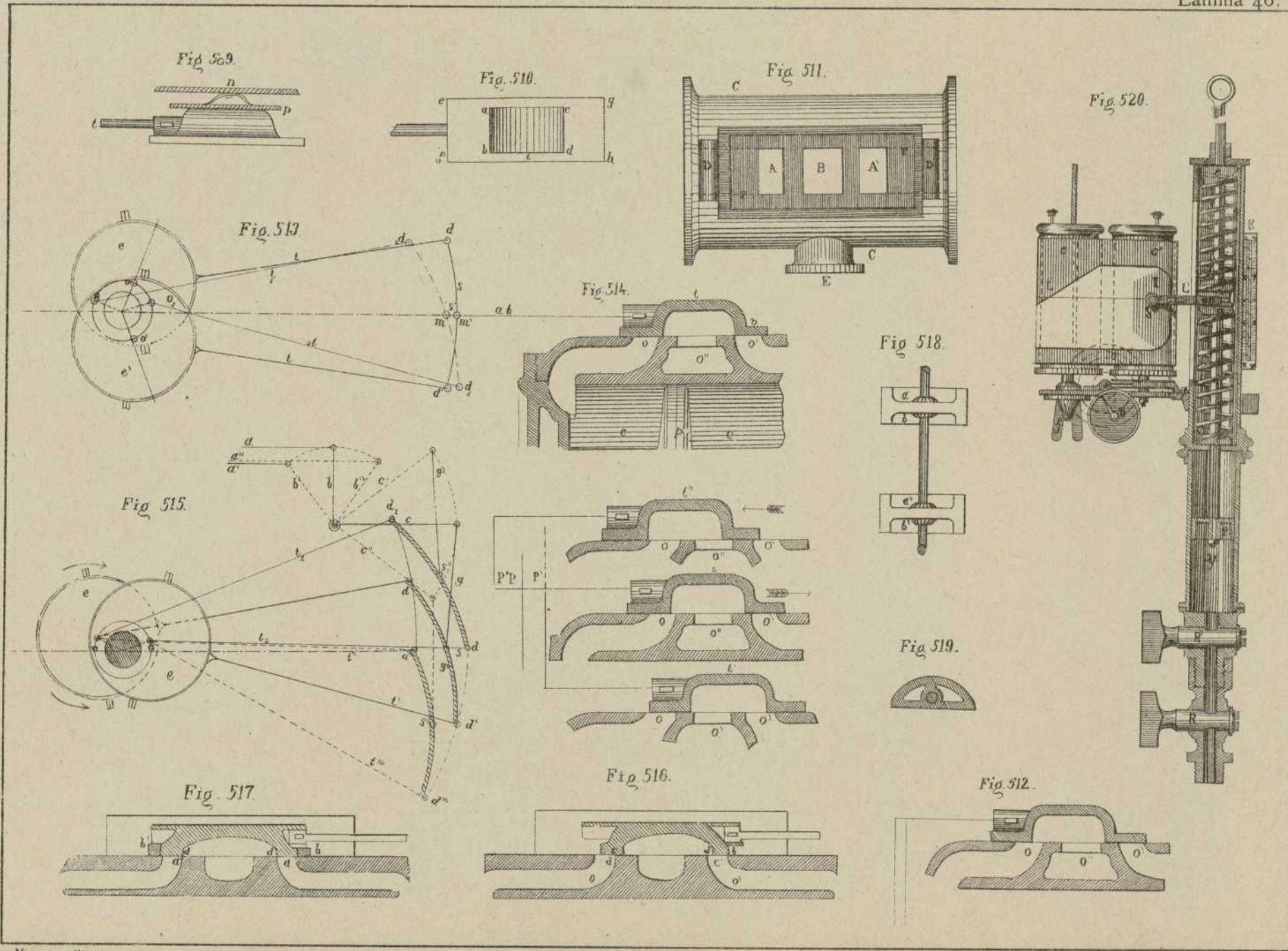


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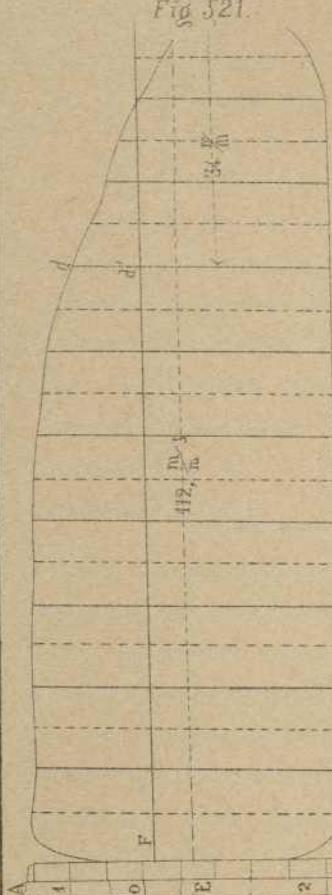


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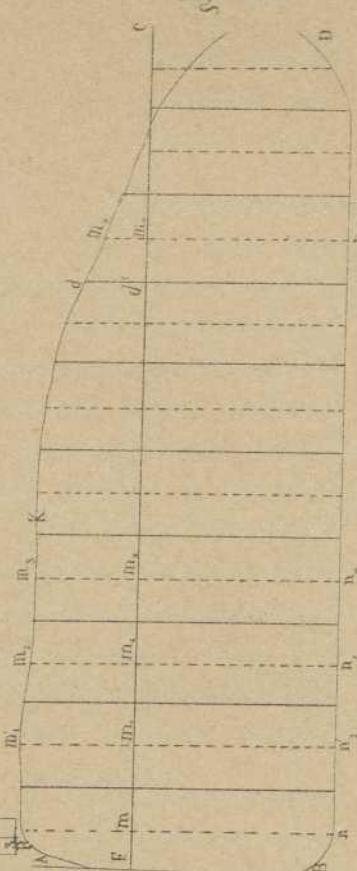
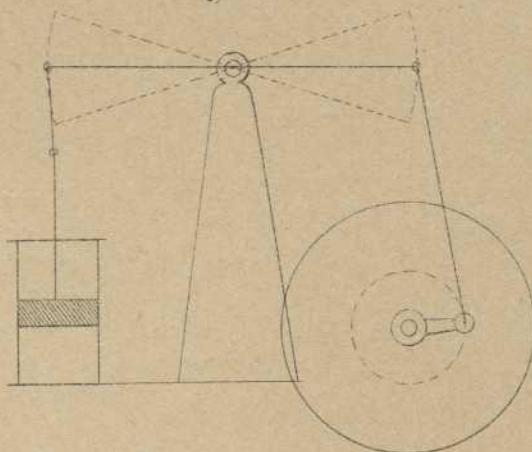
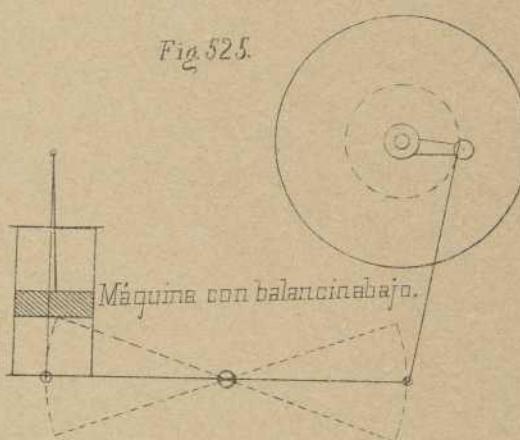


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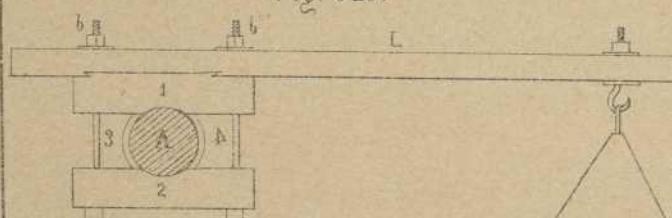
Máquina con balancín arriba.

Fig. 525.



Máquina con balancín abajo.

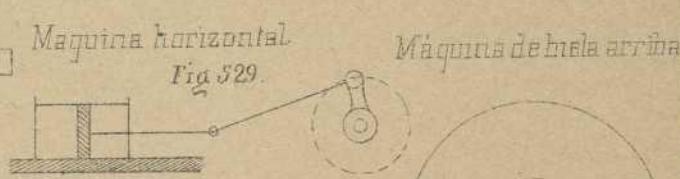
Fig. 523.



Máquina de biela en cuadro.

Máquina horizontal.

Fig. 529.



Máquina de biela arriba.

Máquina de martinet.

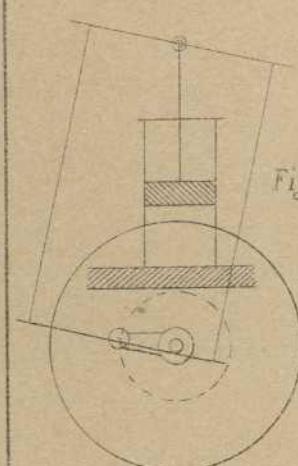


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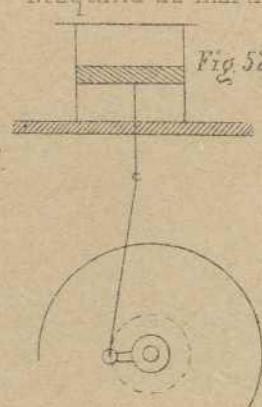


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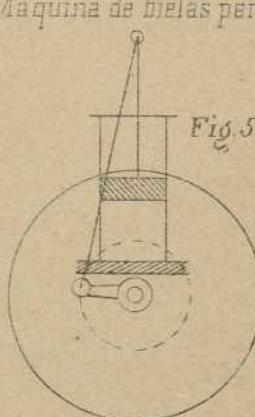


Fig. 528.

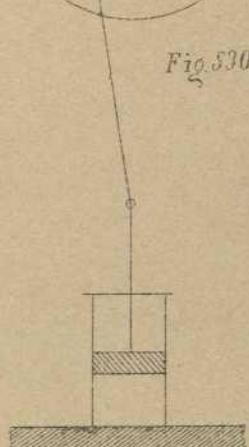


Fig. 530.

Fig. 531.

Máquina de fiela barra ó de cilindro oscilante.

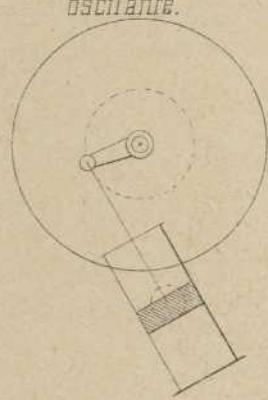


Fig. 532
Máquina de fiela oscilante.

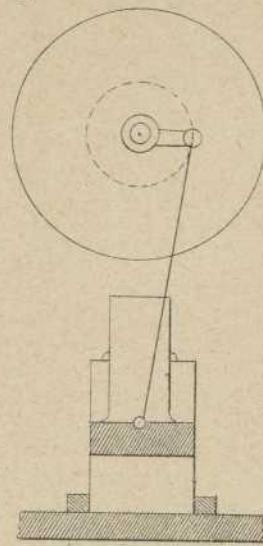


Fig. 533.

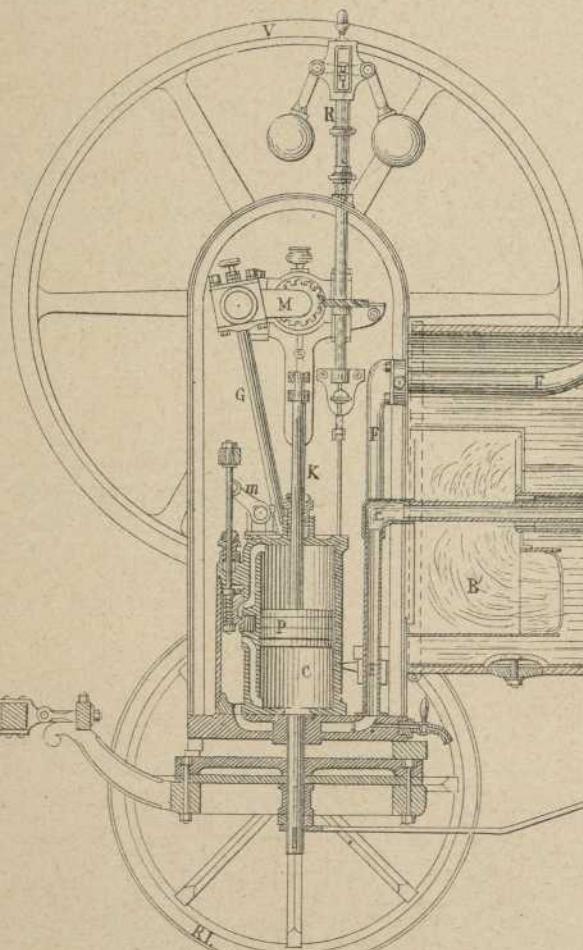
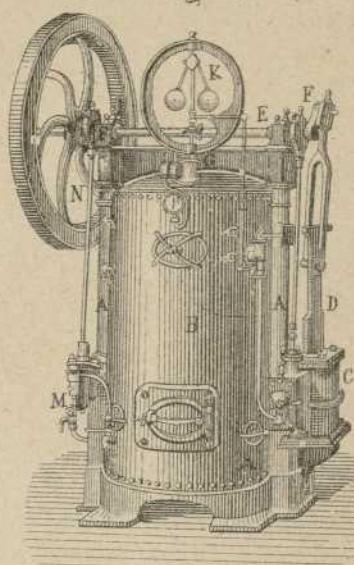


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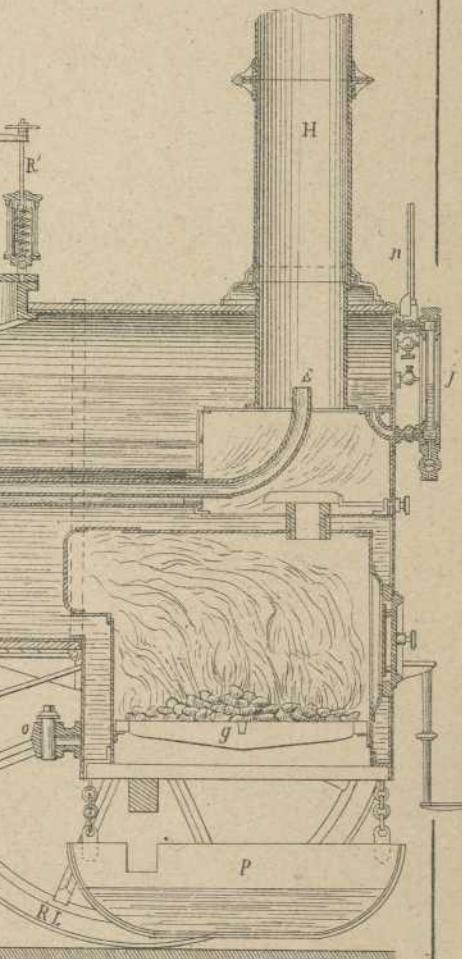


Fig. 535.

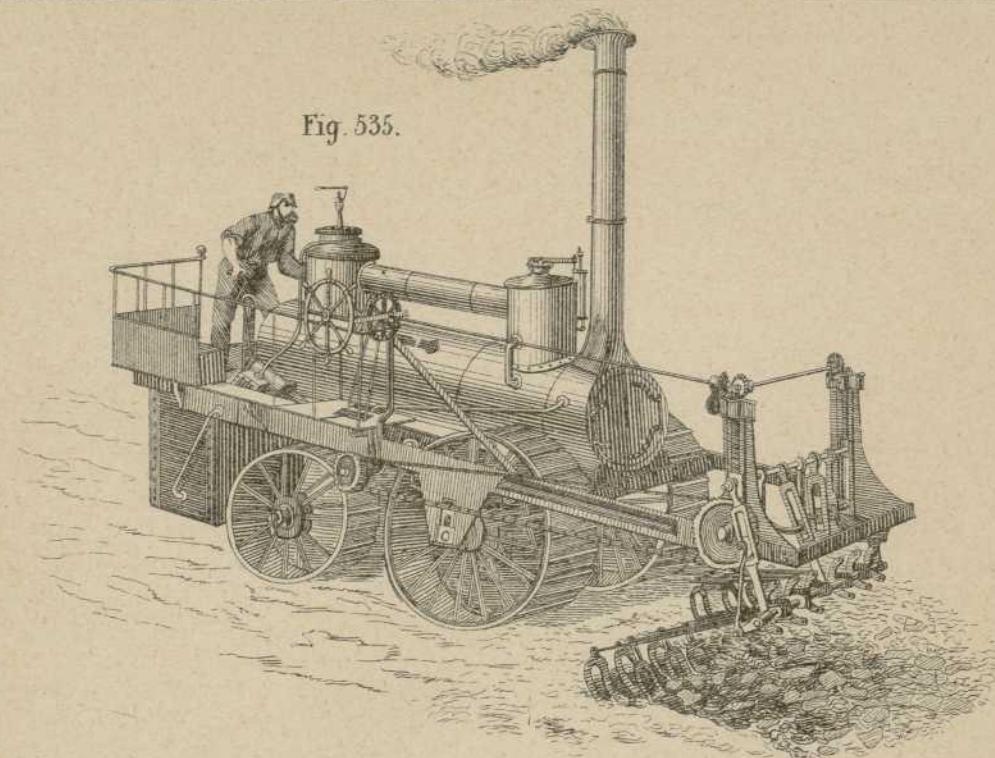


Fig. 536.

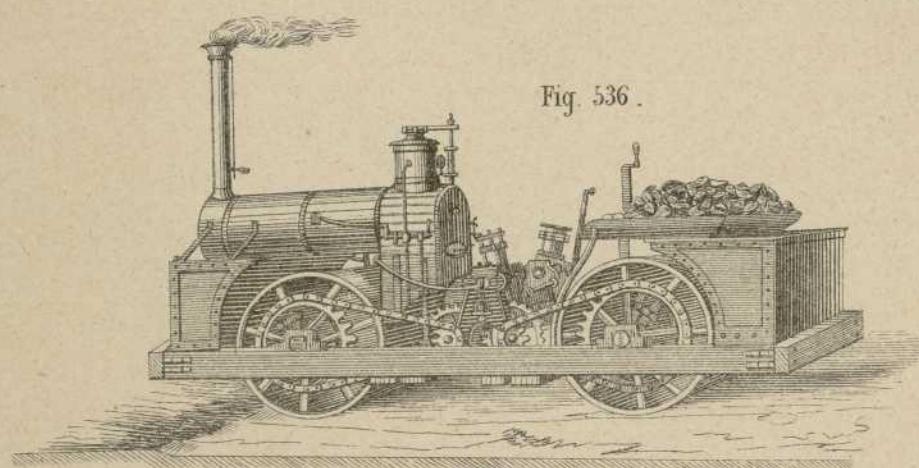
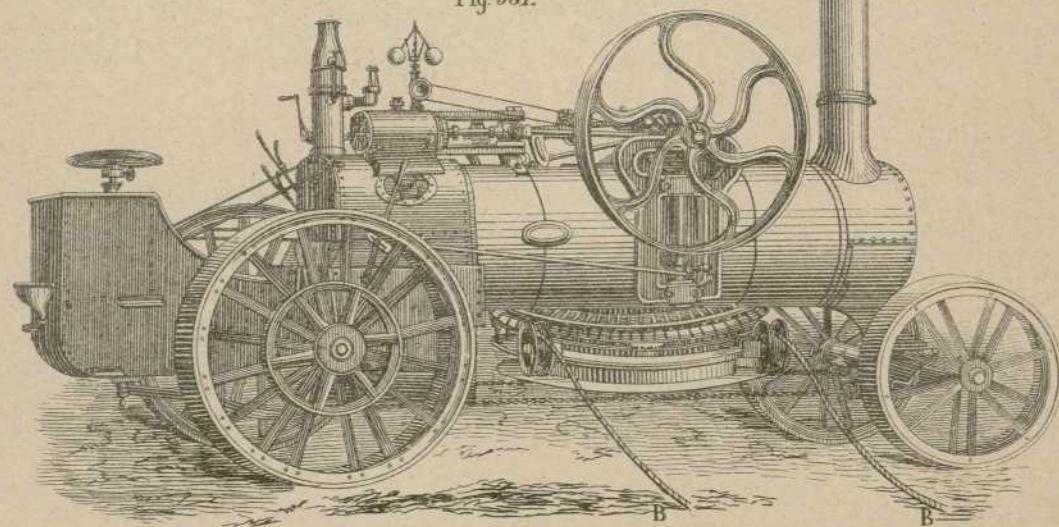


Fig. 537.



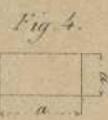


Fig. 7.

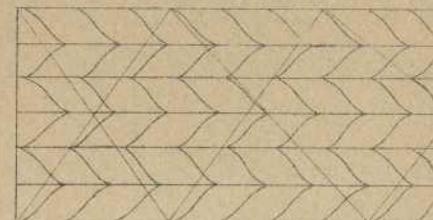


Fig. 9.



Fig. 10.

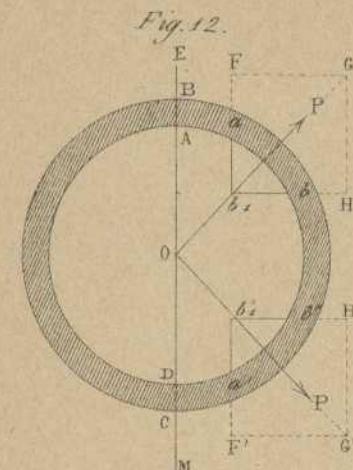
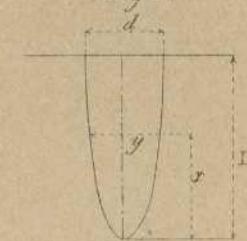


Fig. 8.



Fig. 11.

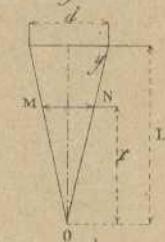


Fig. 13.

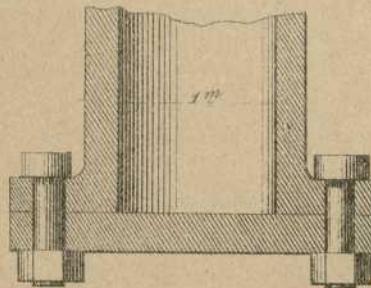


Fig. 14.

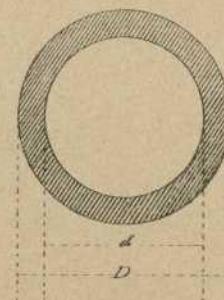


Fig. 15.

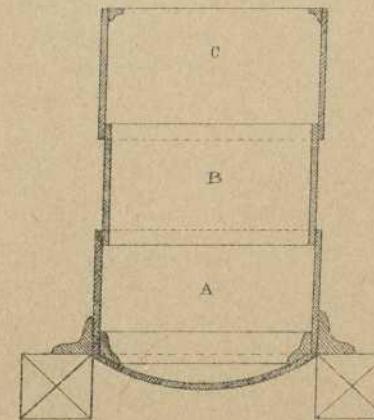


Fig. 16.

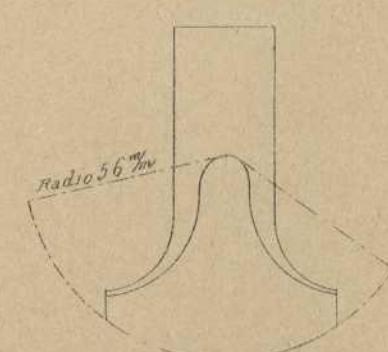


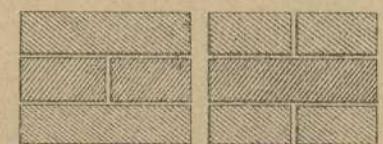
Fig. 17.



Fig. 17.



Fig. 19.



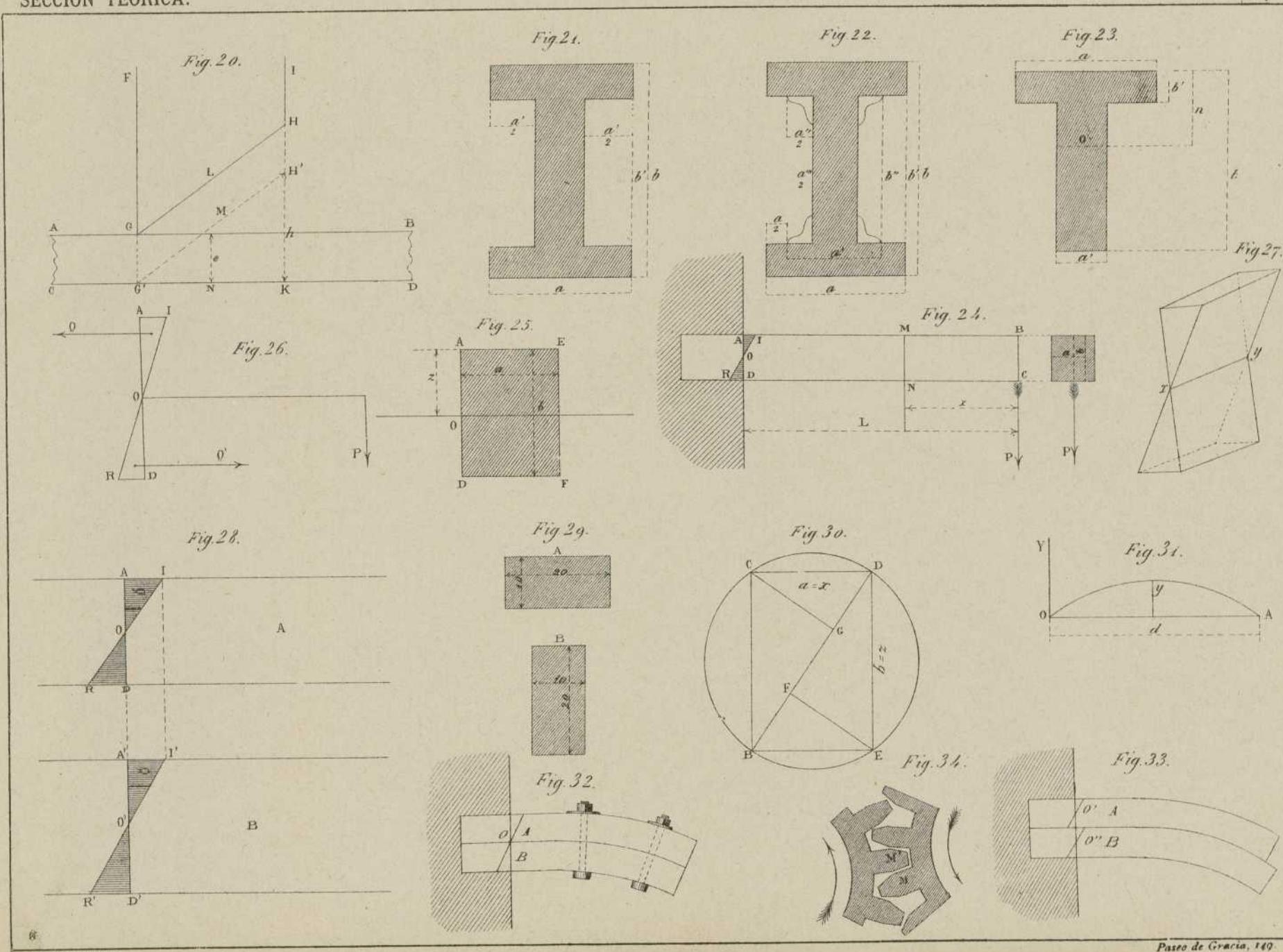


Fig. 1.

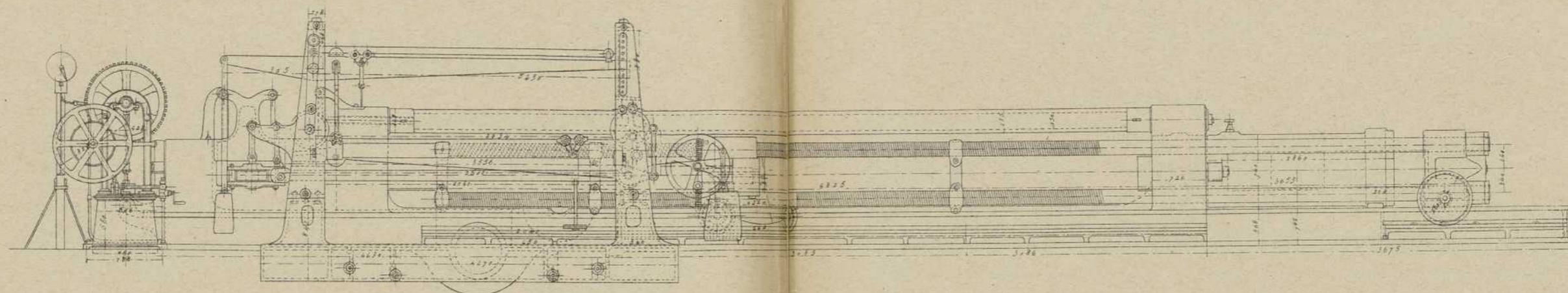
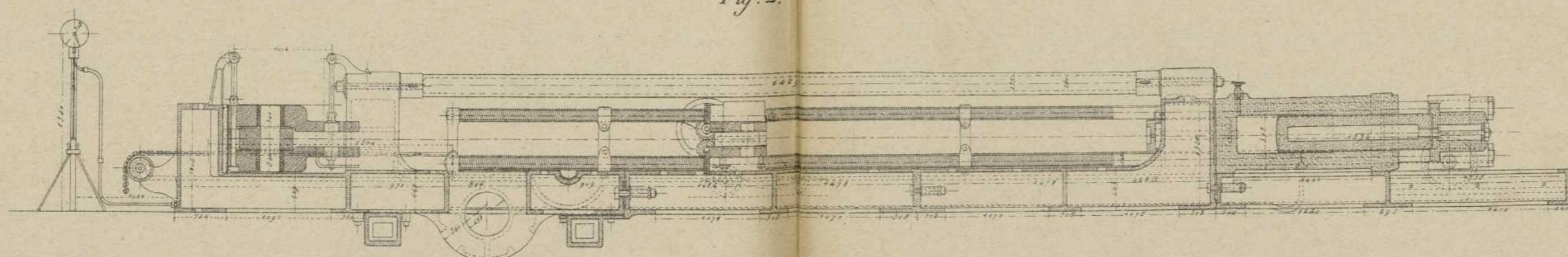
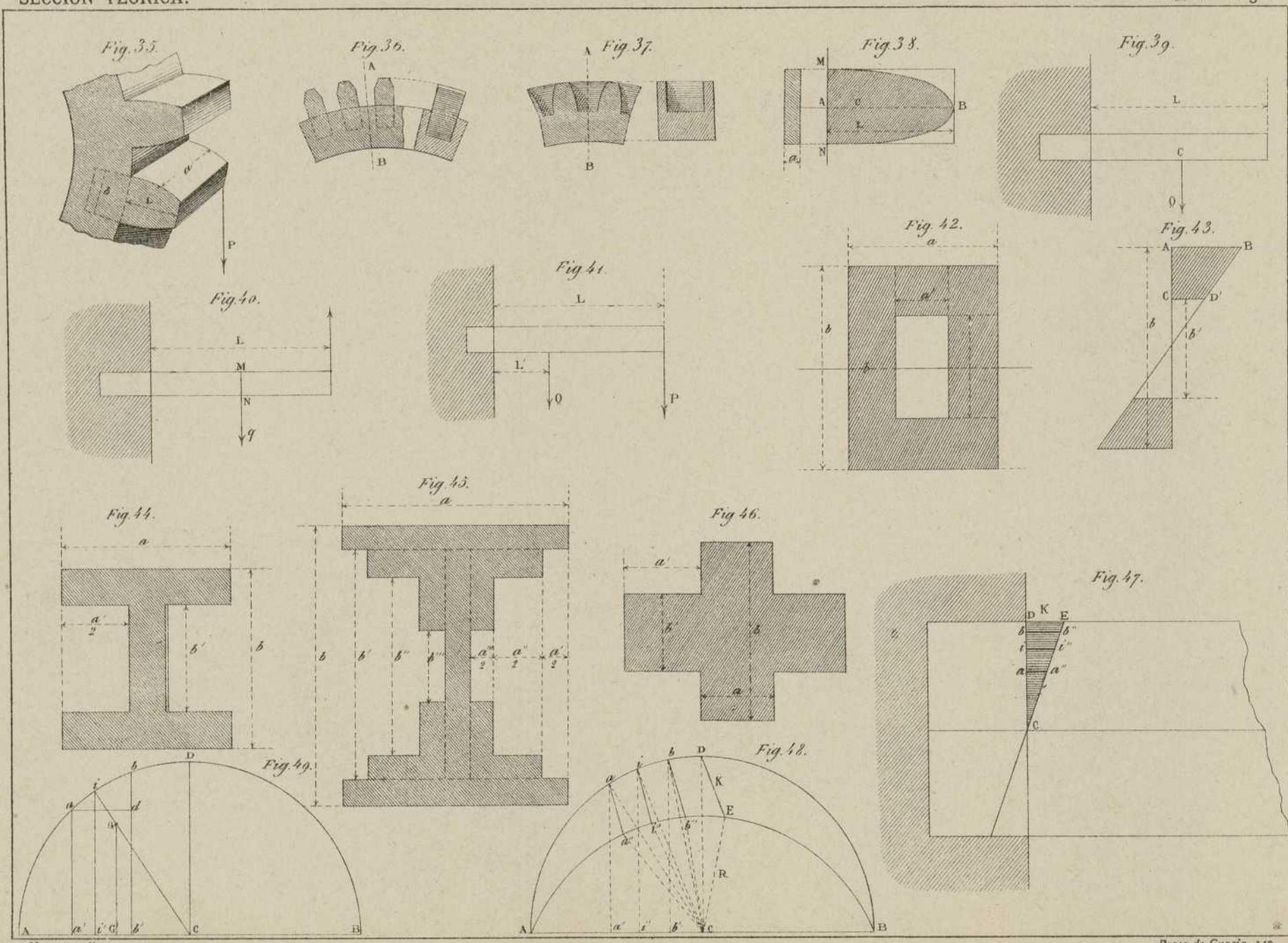
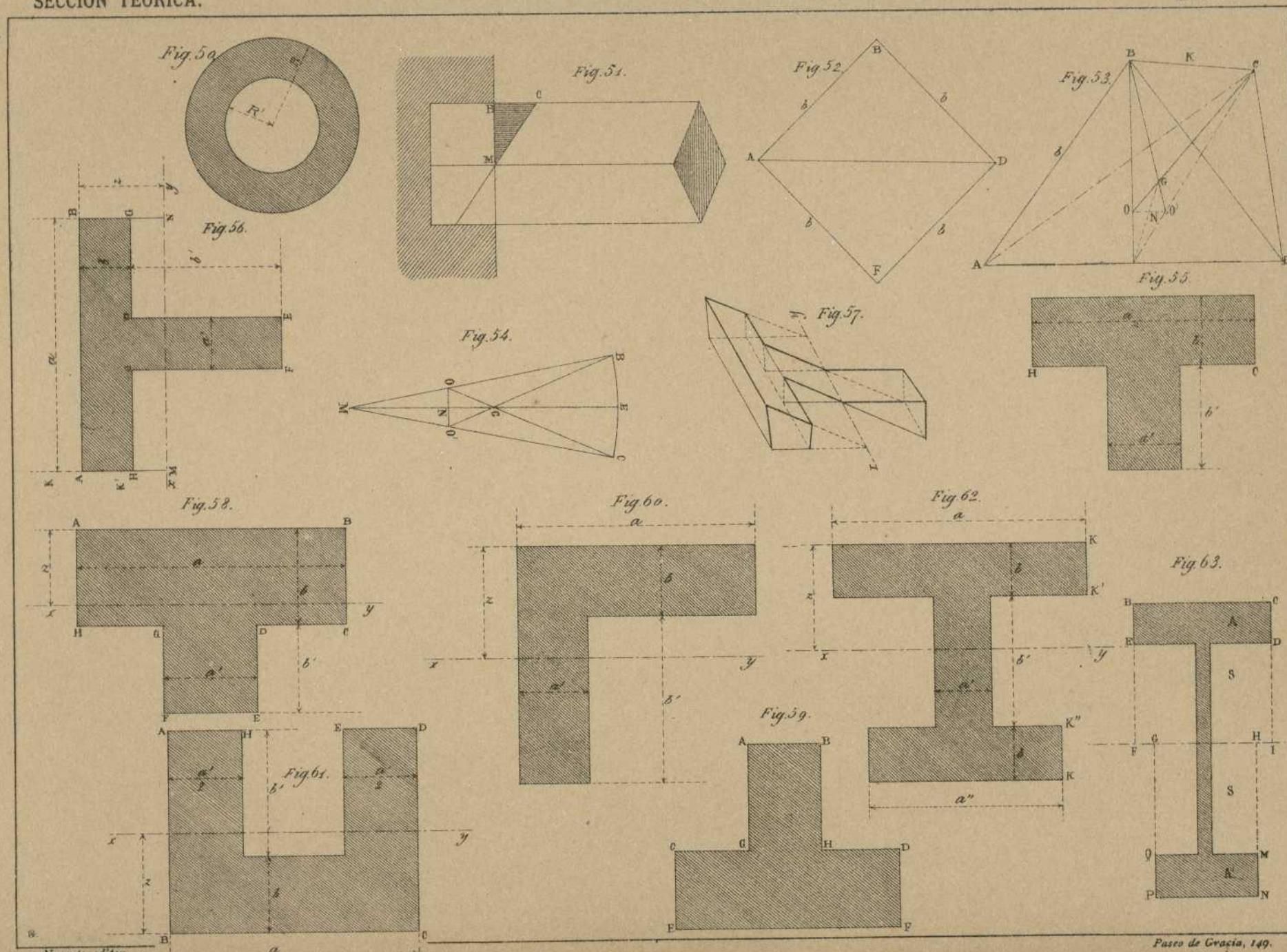


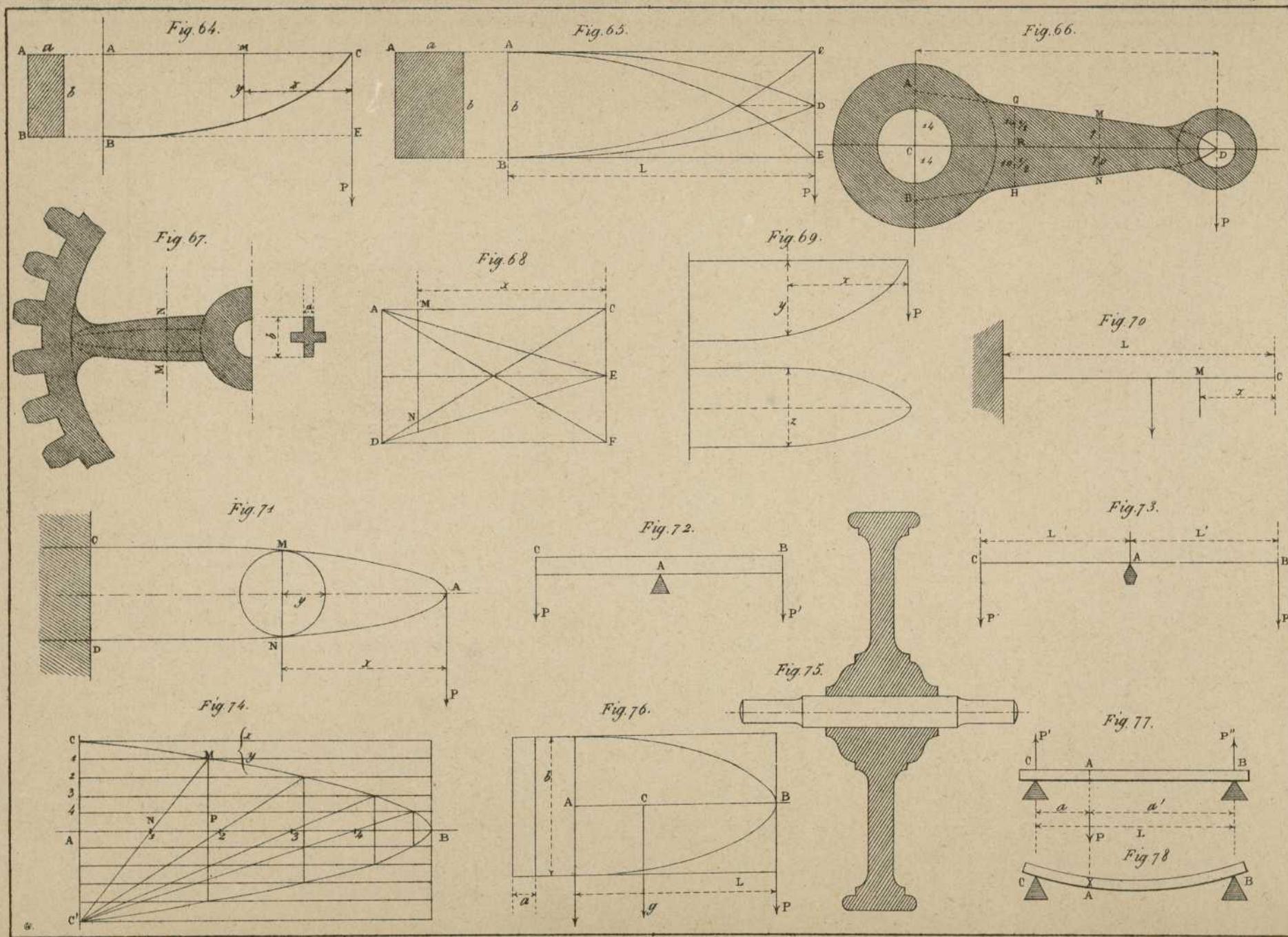
Fig. 2.

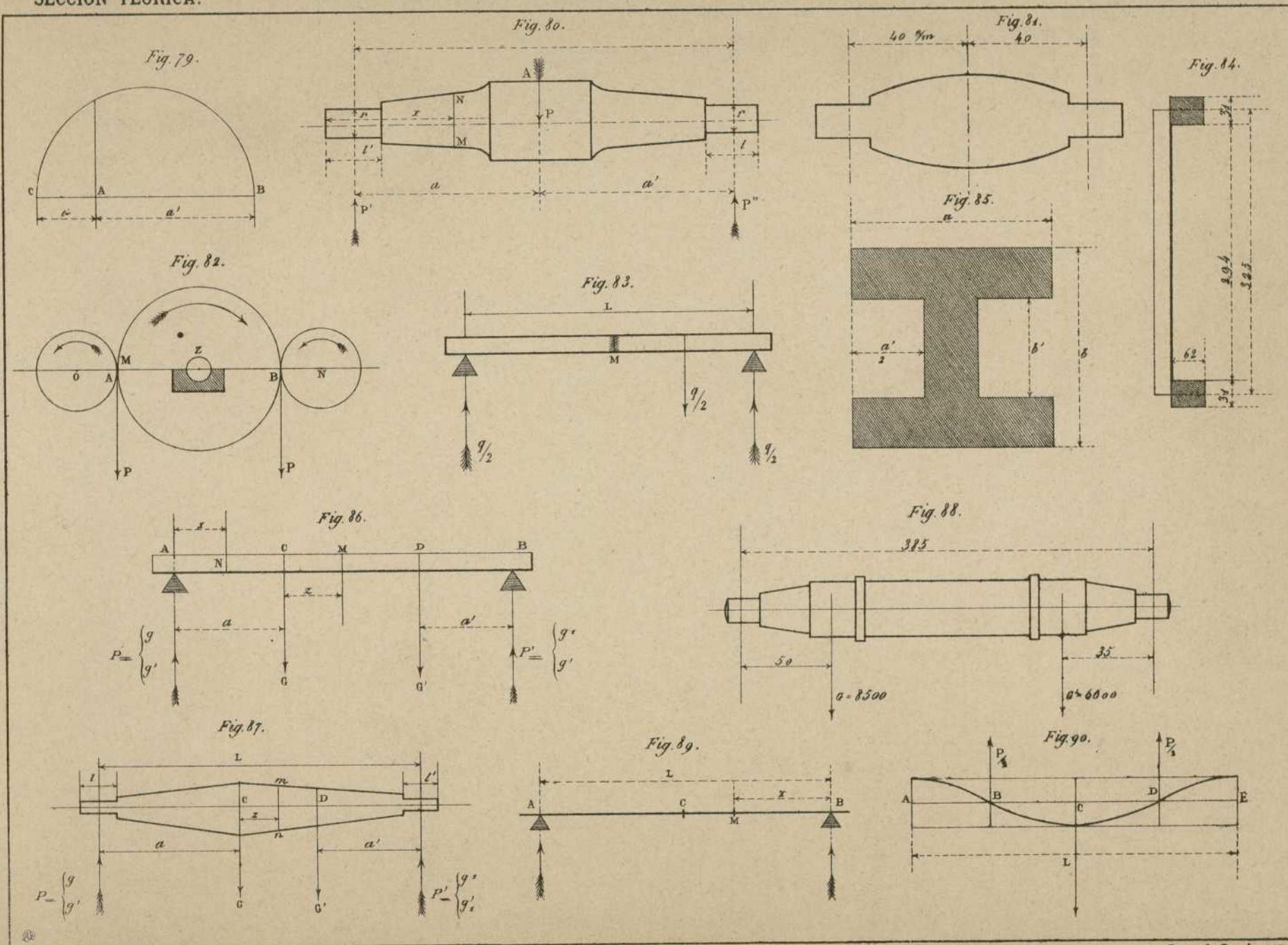


Escala de 1:20.









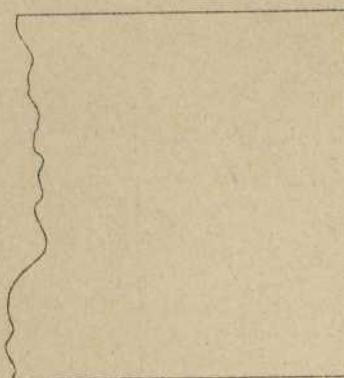


Fig. 91.

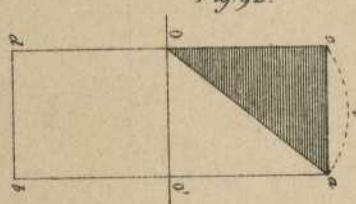


Fig. 92.

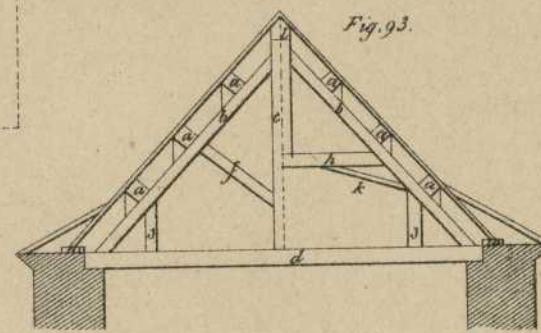


Fig. 93.

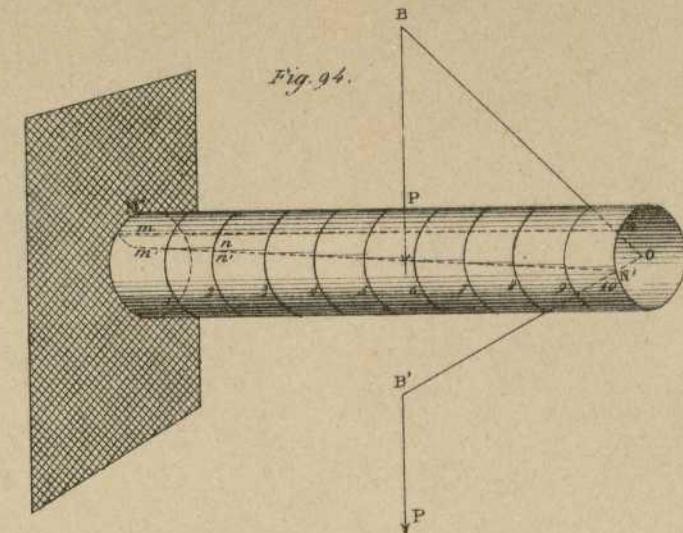


Fig. 94.

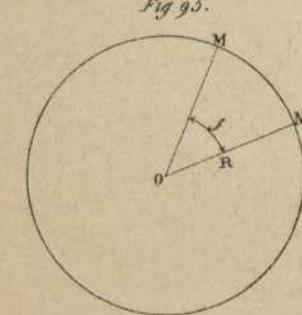


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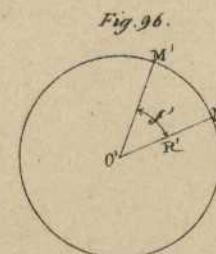


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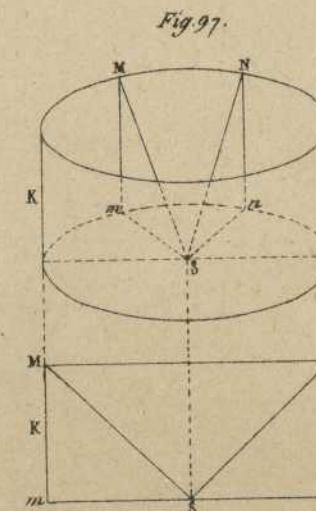


Fig. 97.

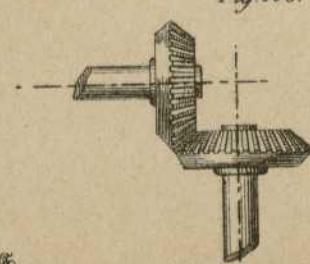


Fig. 100.

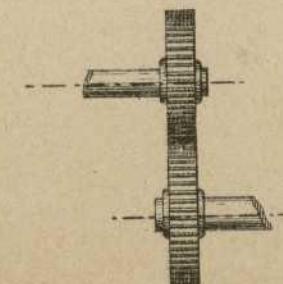


Fig. 101.

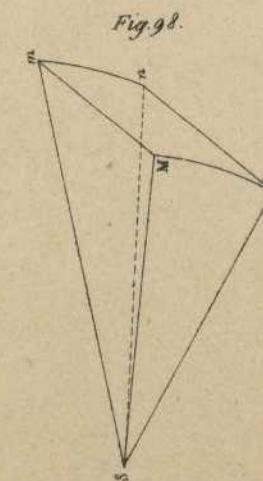


Fig. 98.

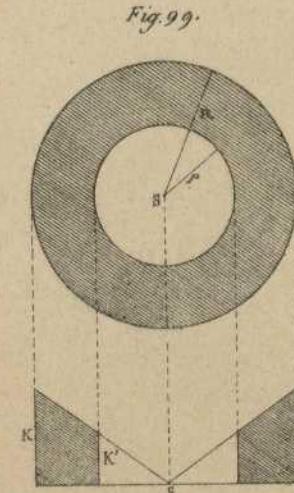
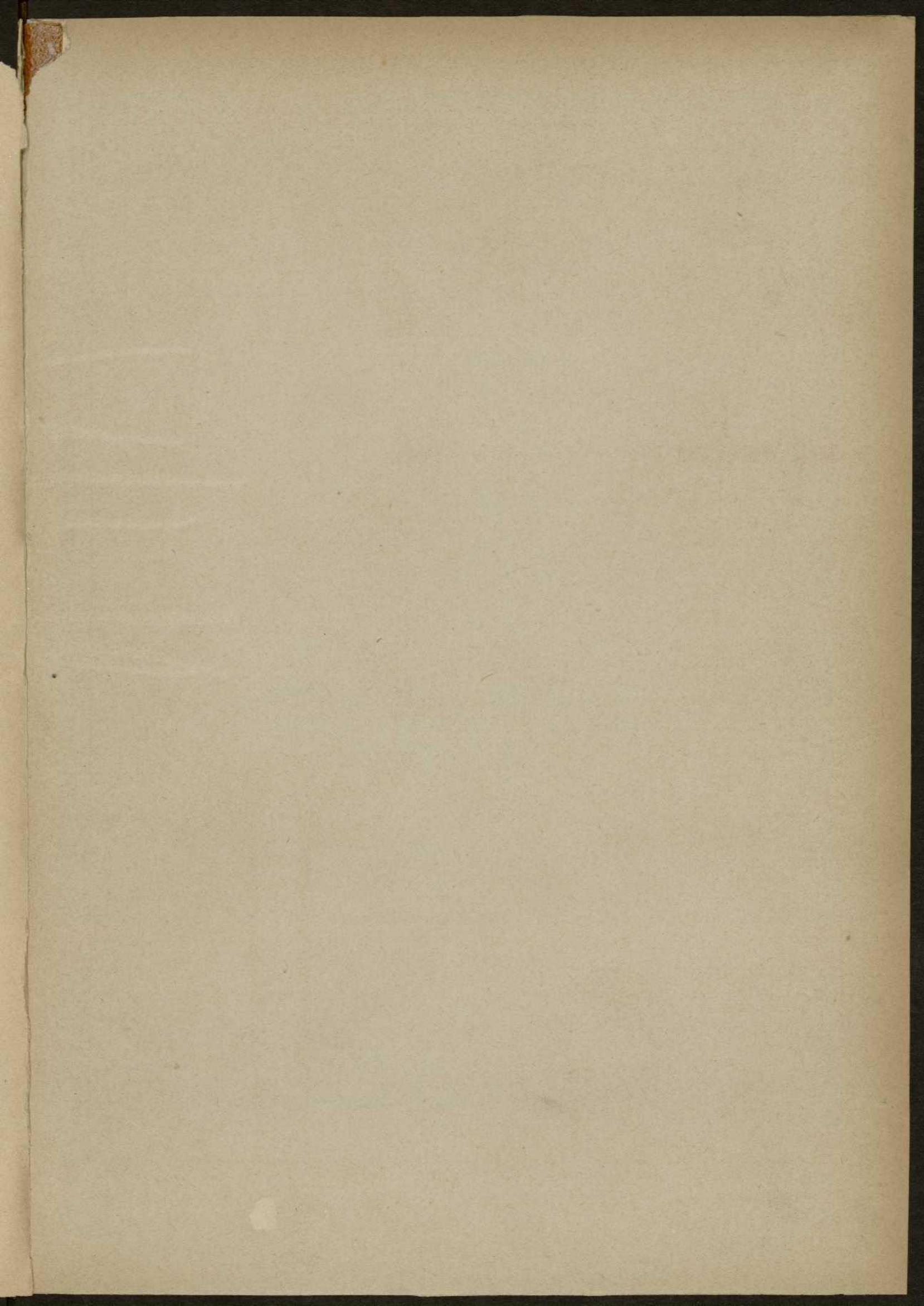
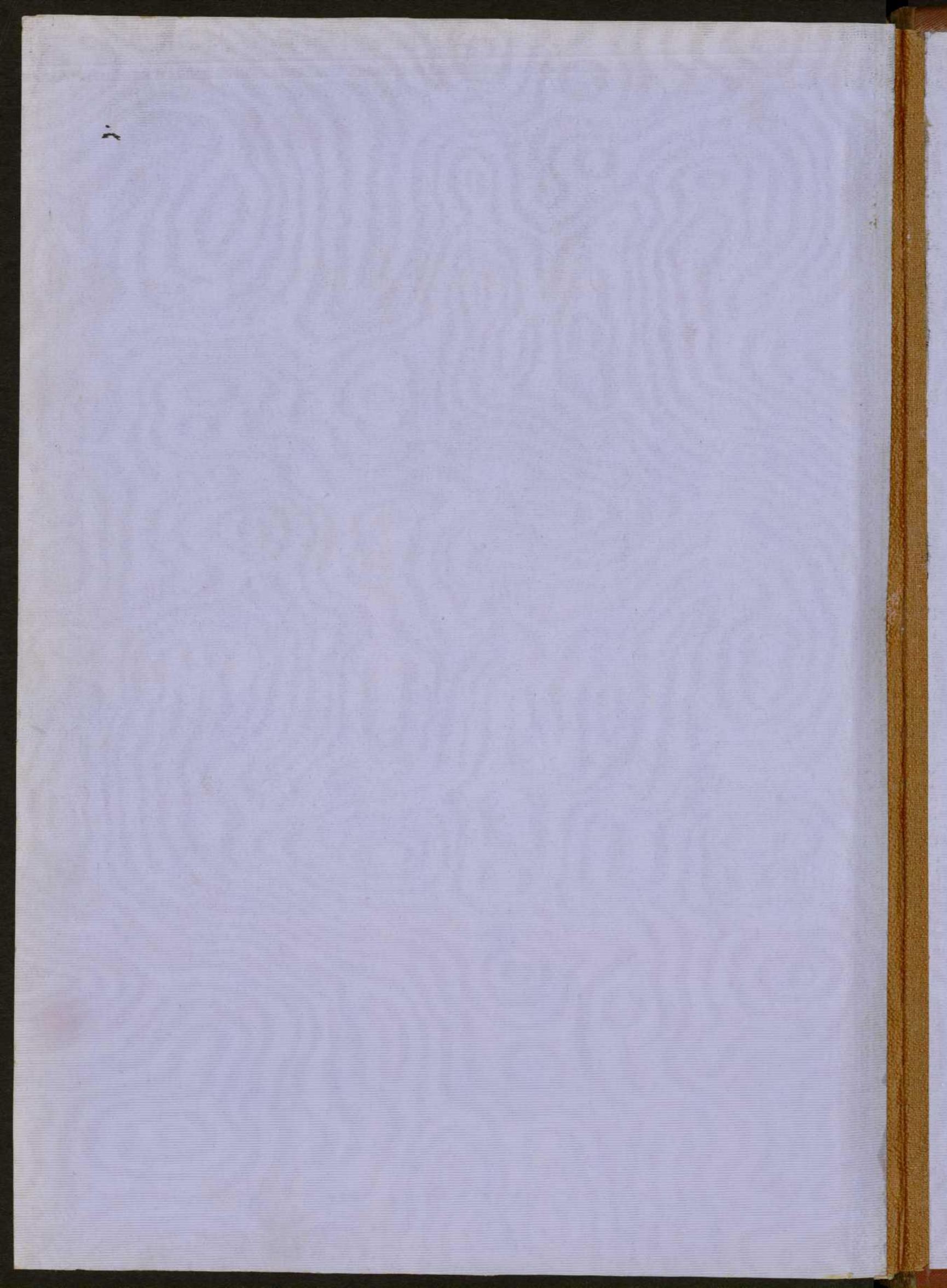
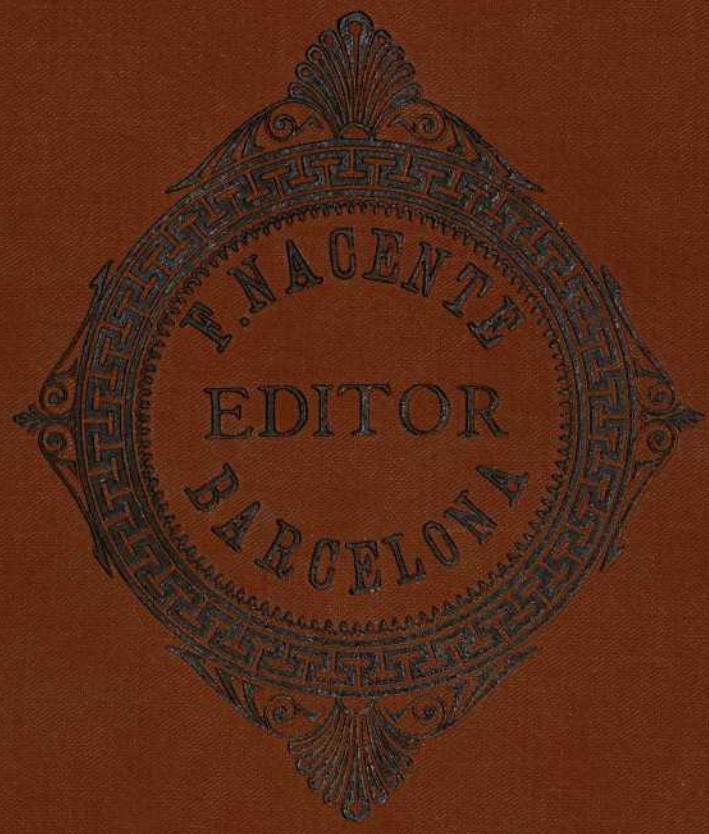


Fig. 99.





ESTANTE 10
Tabla 4.^a
N.^o 2



16.



16.457

A. DOMINGO
BARCELONA