

A T L A S

ZUR

C O N S T R U C T I O N S L E H R E

FÜR DEN

M A S C H I N E N B A U.

VON

C. L. MOLL UND F. REULEAUX,

CIVIL-INGENIEUREN.



ERSTER BAND.

ERSTE LIEFERUNG. ENTHALTEND TAFEL I — X.

BRAUNSCHWEIG,

VERLAG VON FRIEDRICH VIEWEG UND SOHN.

1854.

TECHNISCHE
INFORMATIONSBIBLIOTHEK
UNIVERSITÄTSBIBLIOTHEK
HANNOVER

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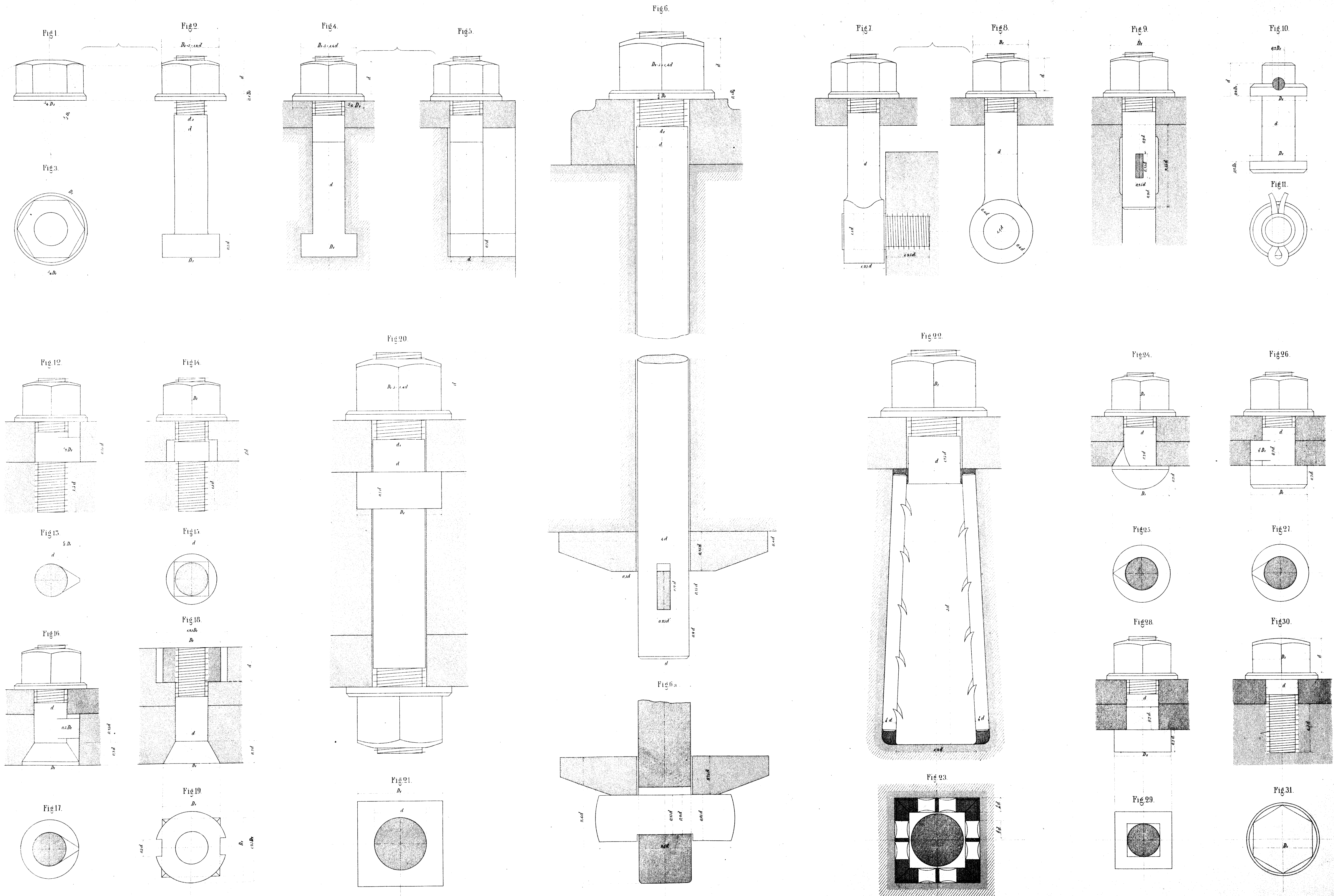


Fig. 1.

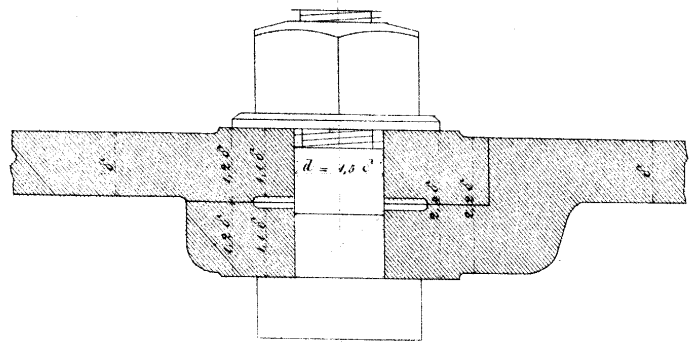


Fig. 2.

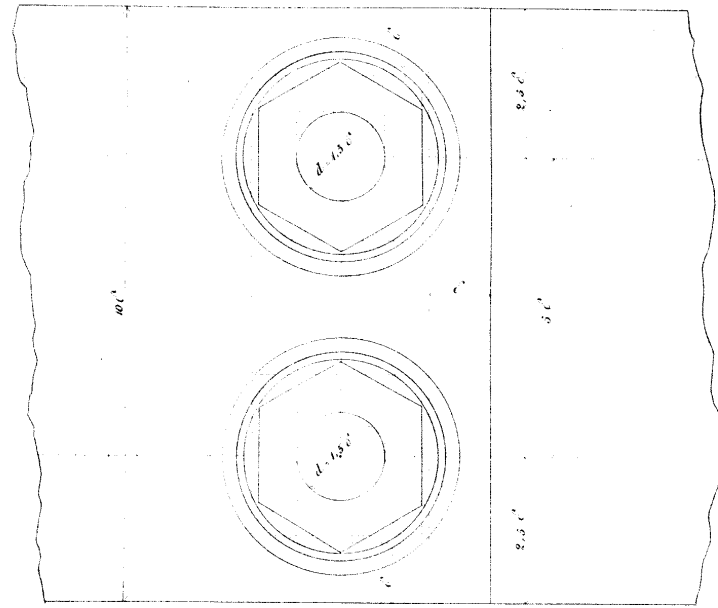


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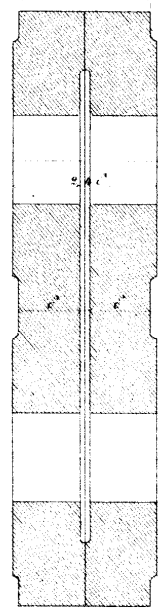


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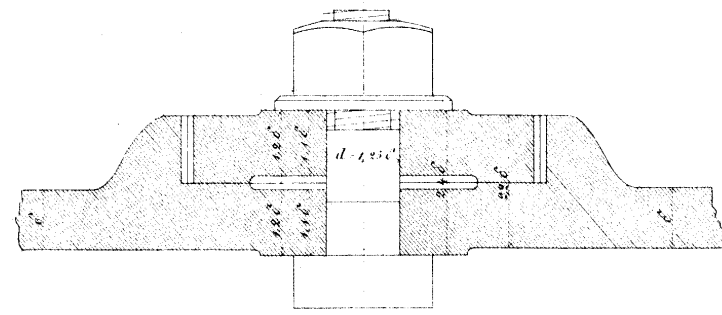


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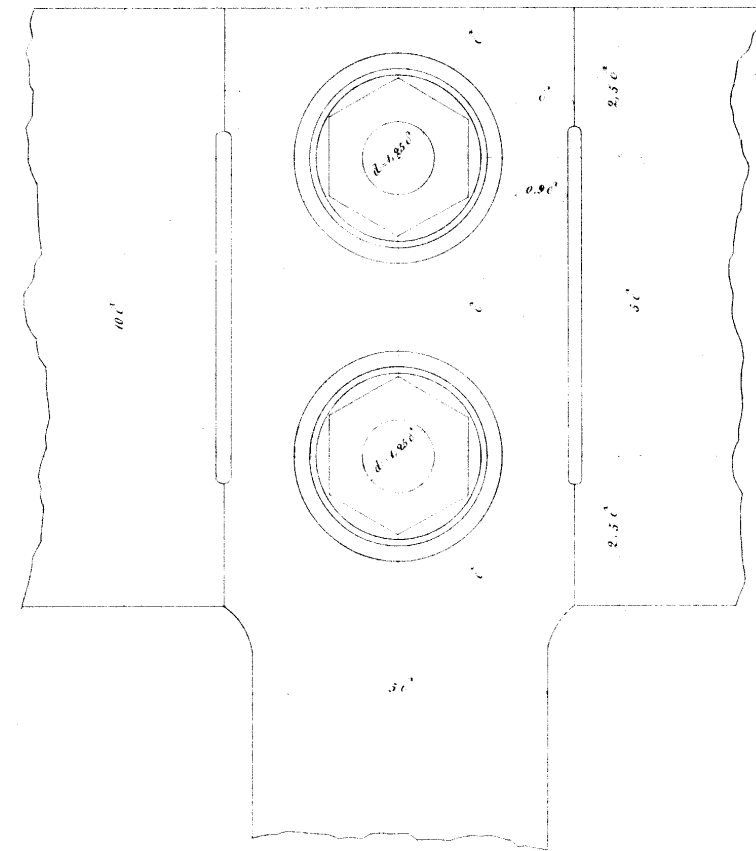


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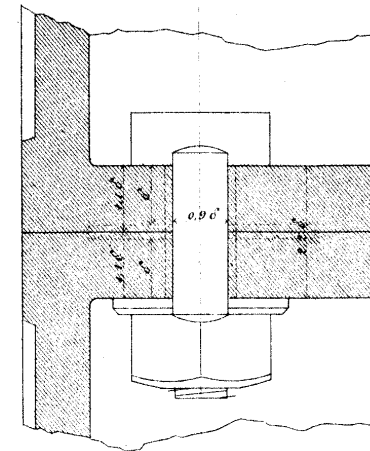


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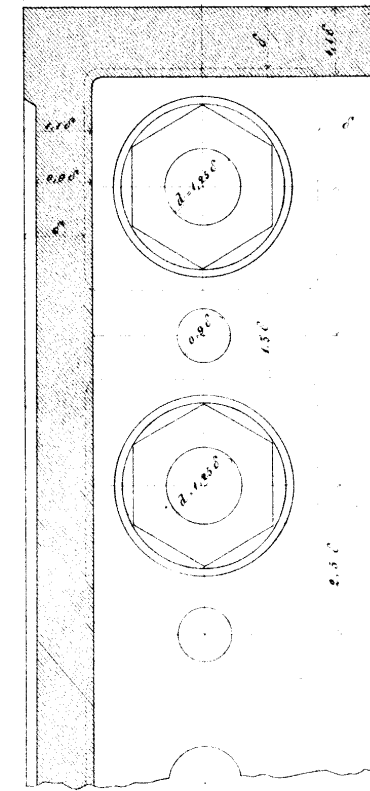


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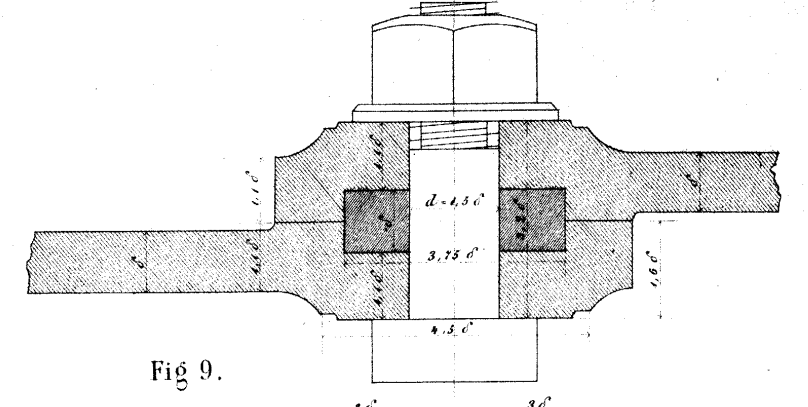


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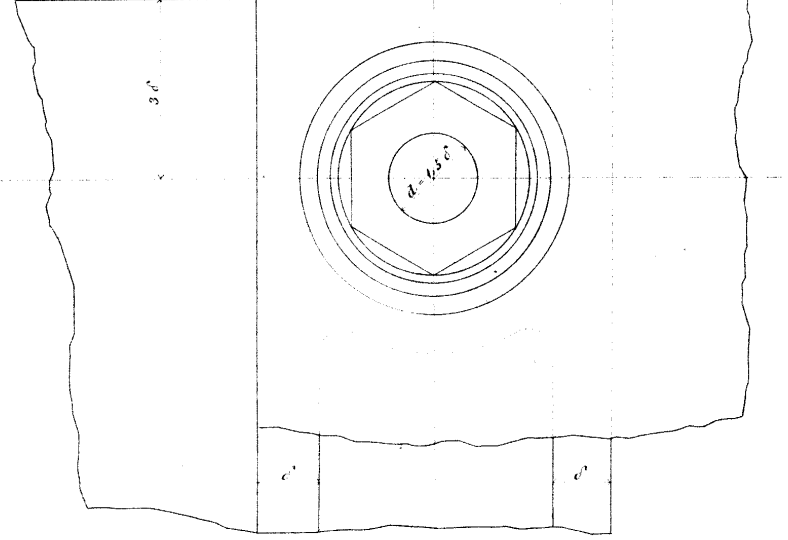


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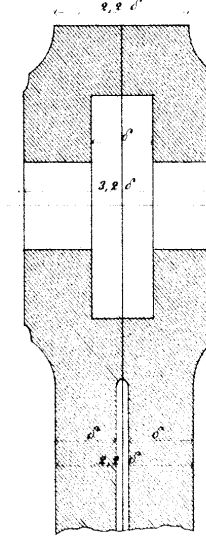


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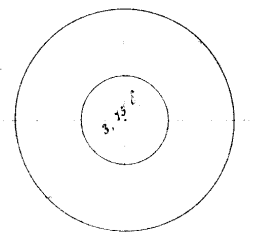
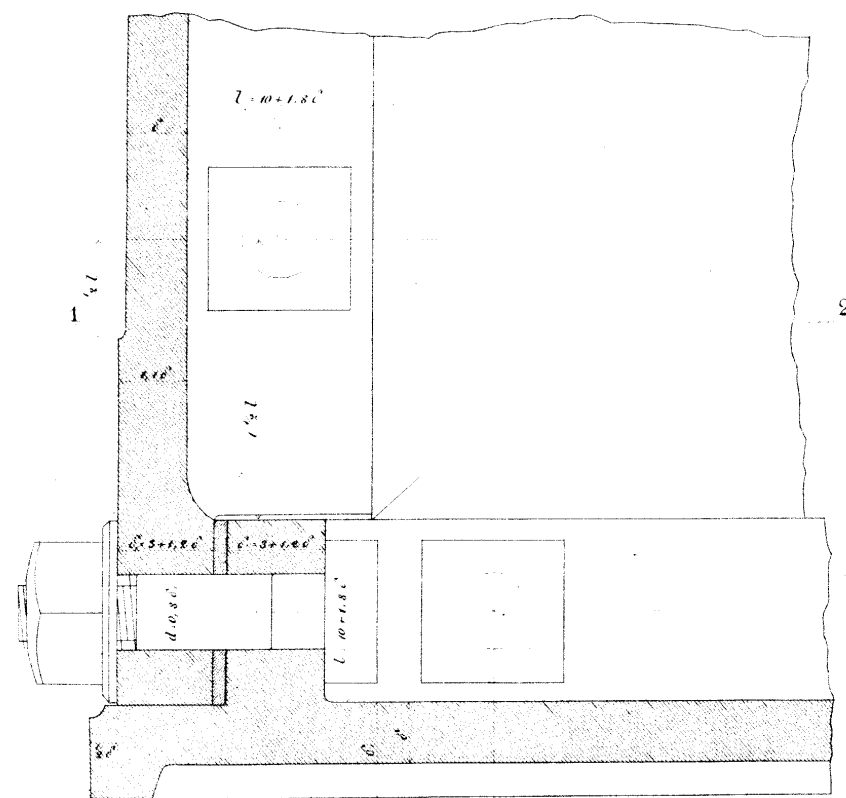


Fig. 18. Schnitt nach 7-8 in Fig. 19.

Fig. 12. Schnitt nach 3-4 in Fig. 13.



Mafsstab der Fig. 14-17 gleich $\frac{3}{10}$.

Fig. 14.

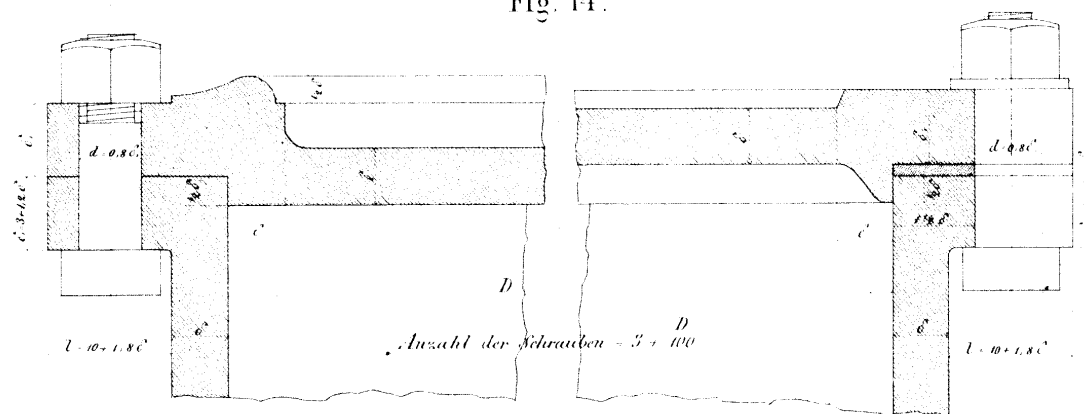


Fig. 16.

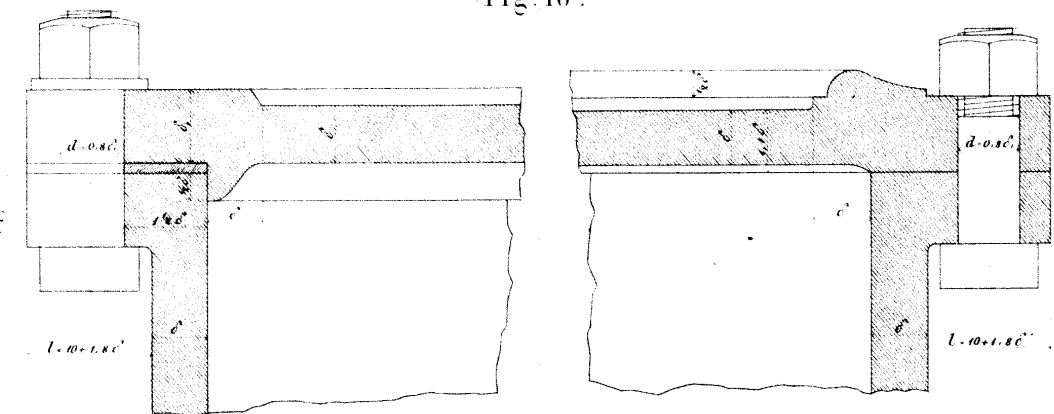


Fig. 13. Schnitt nach 1-2 in Fig. 12.

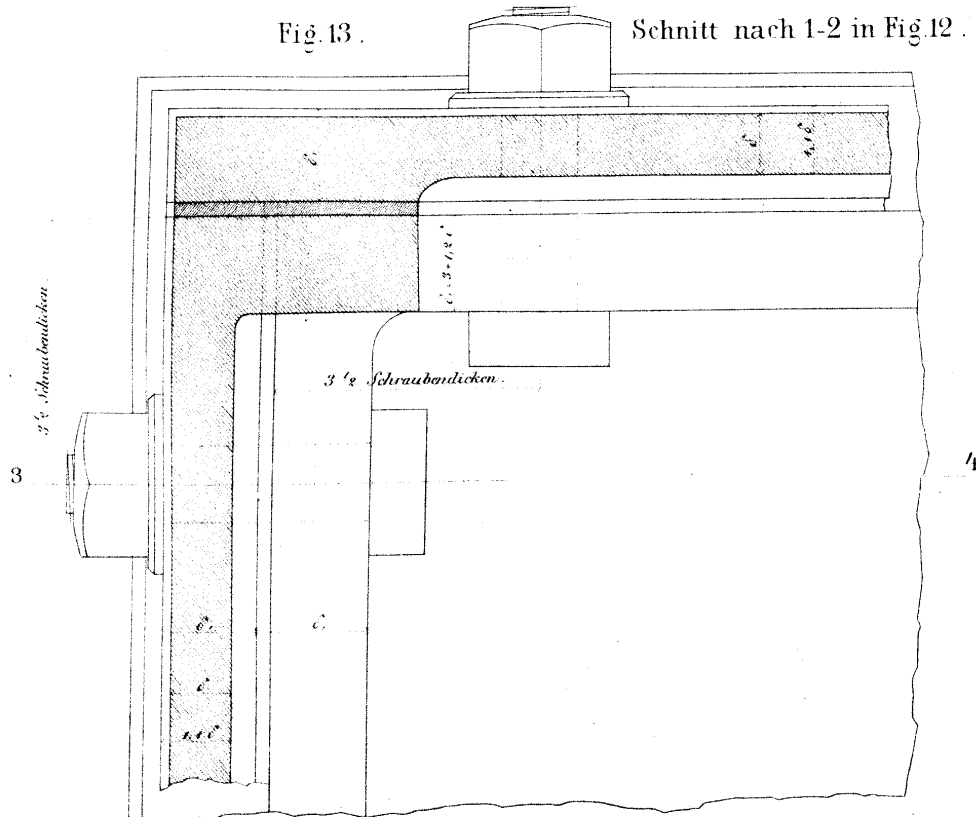


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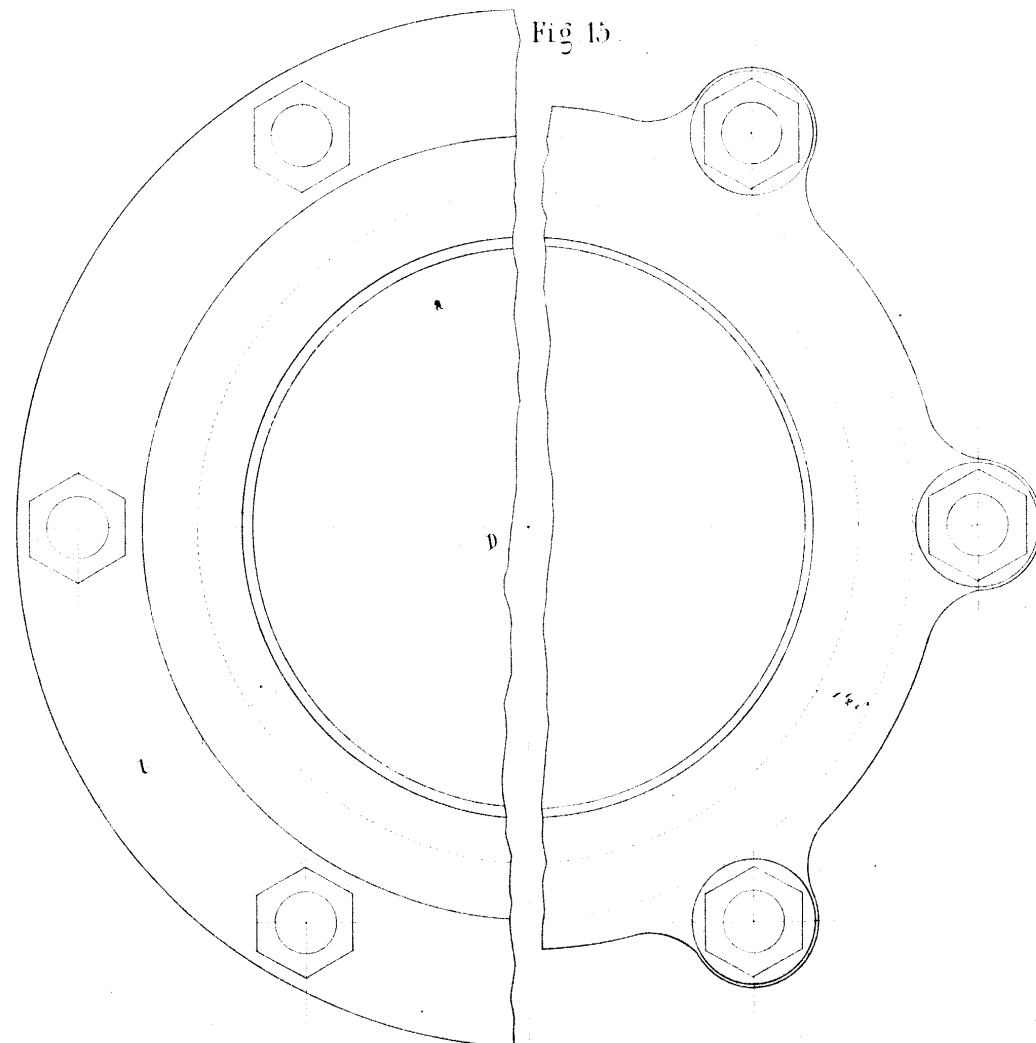


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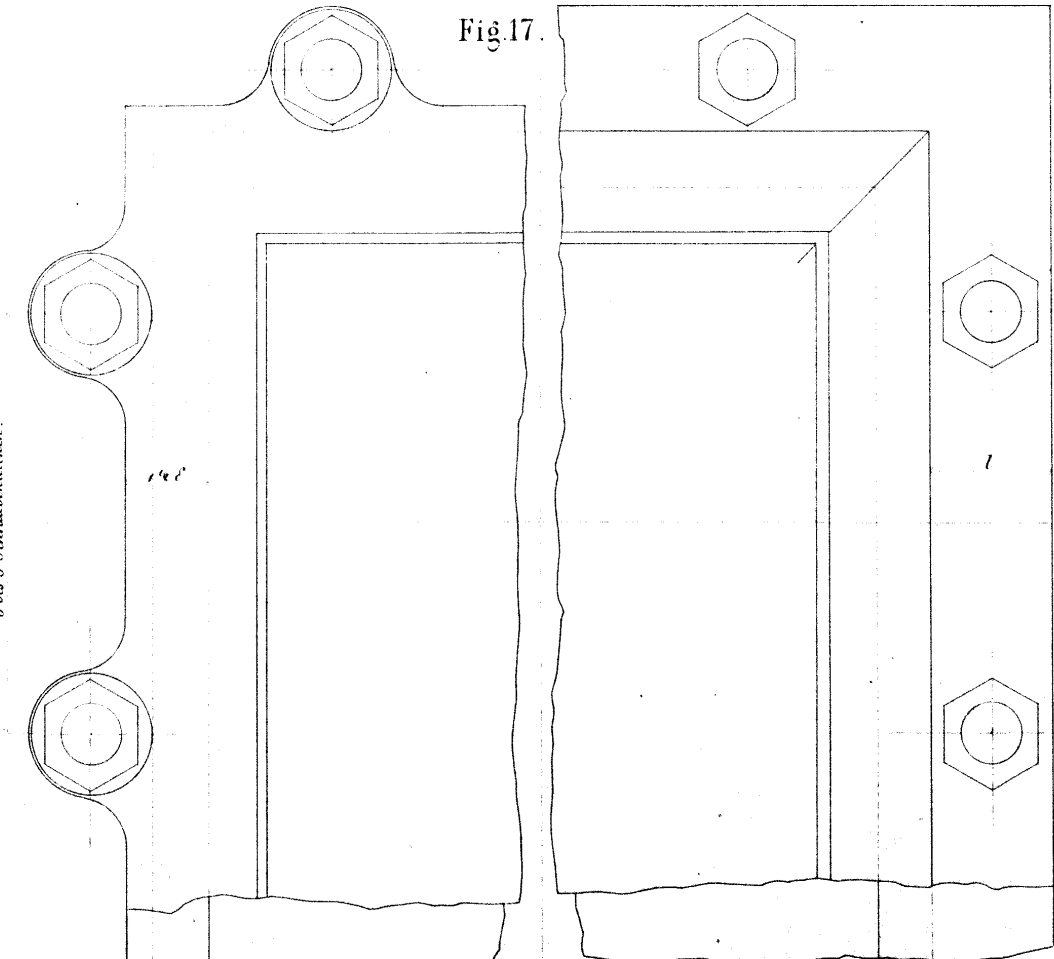
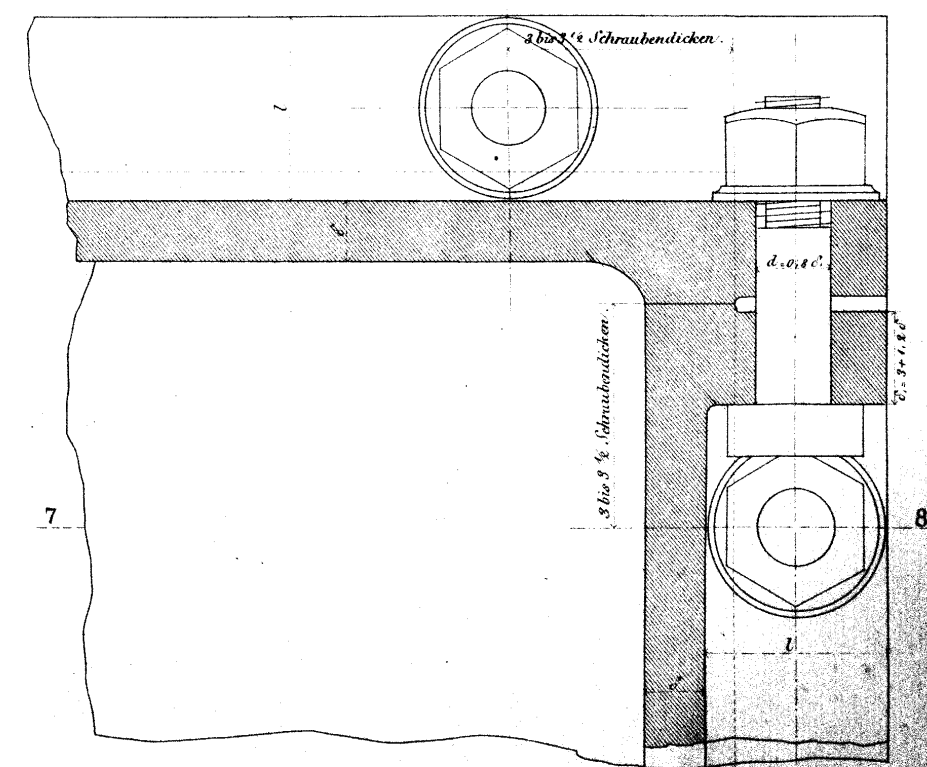


Fig. 19. Schnitt nach 5-6 in Fig. 18.



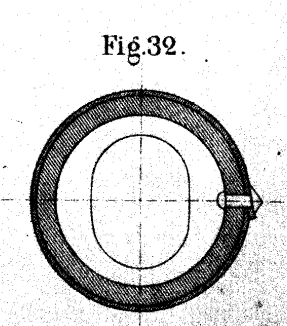
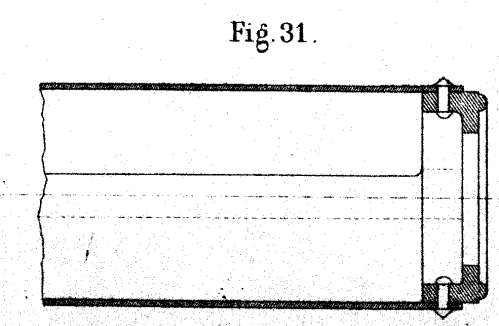
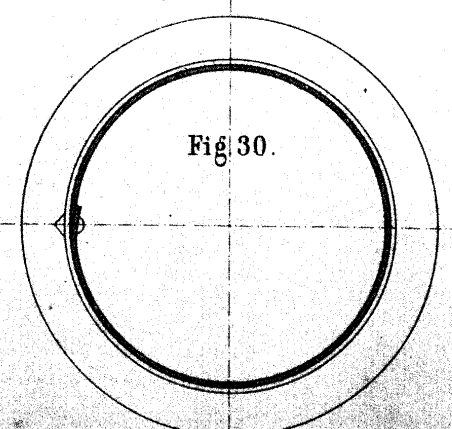
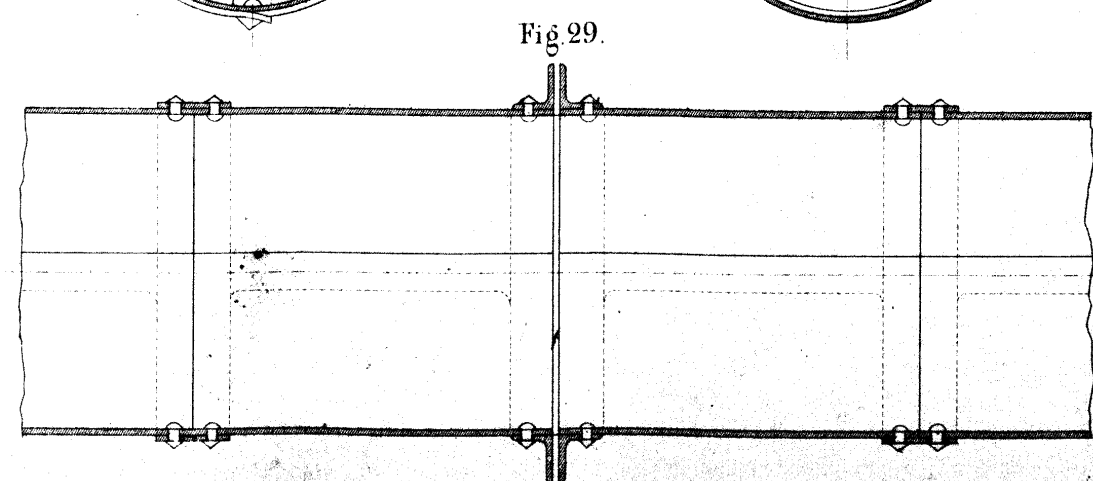
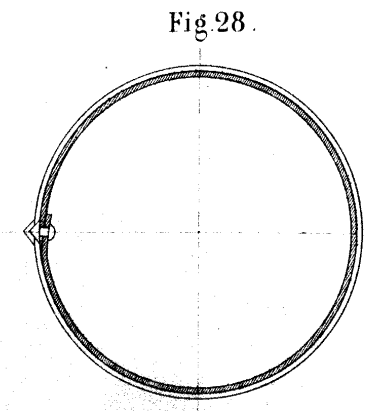
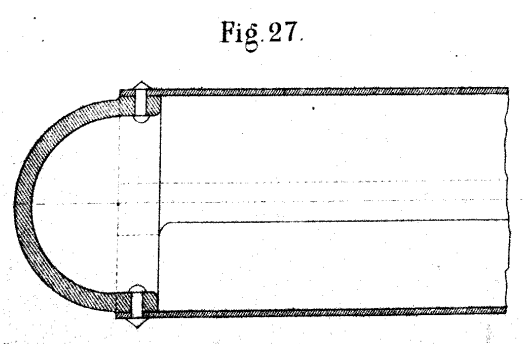
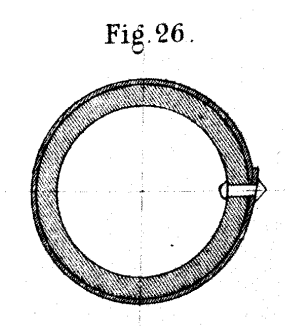
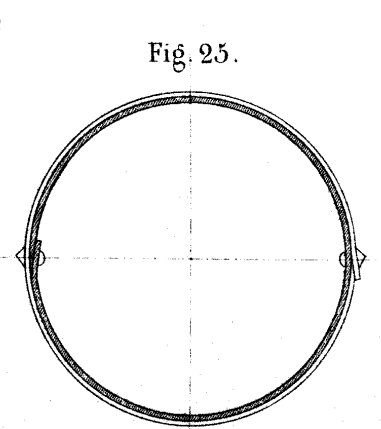
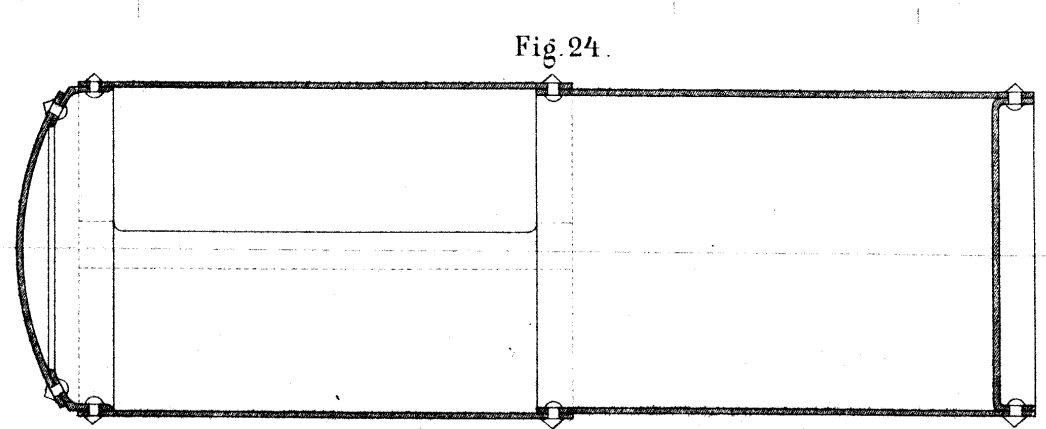
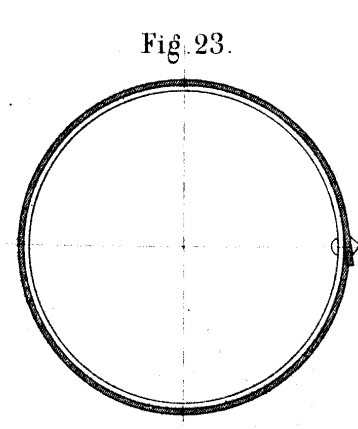
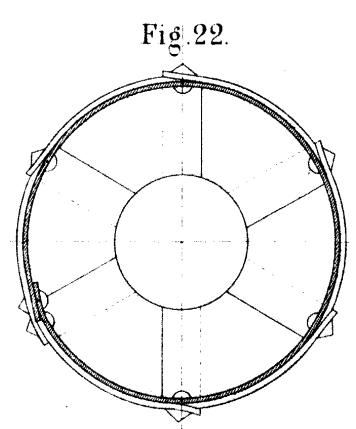
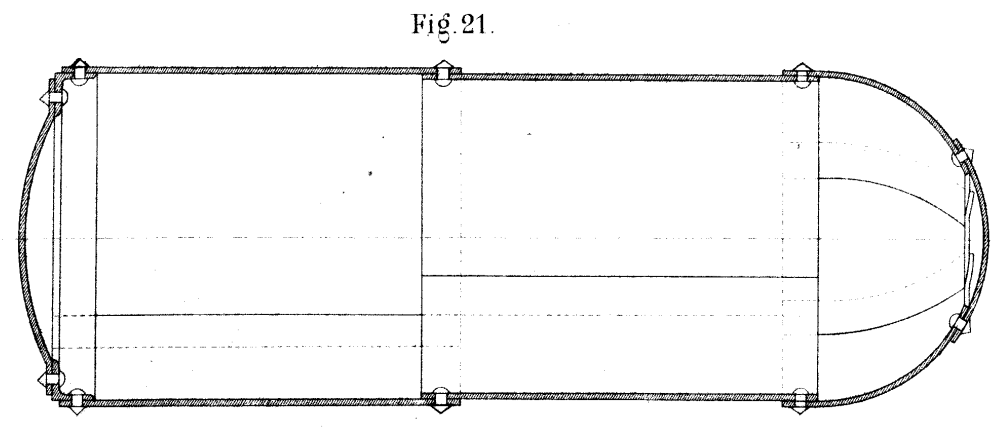
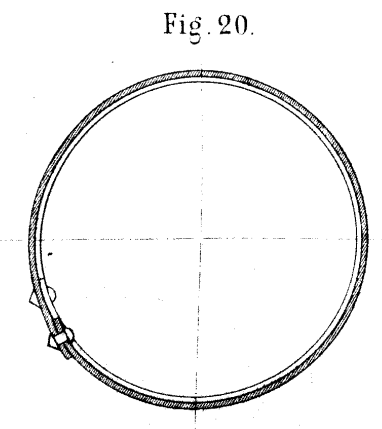
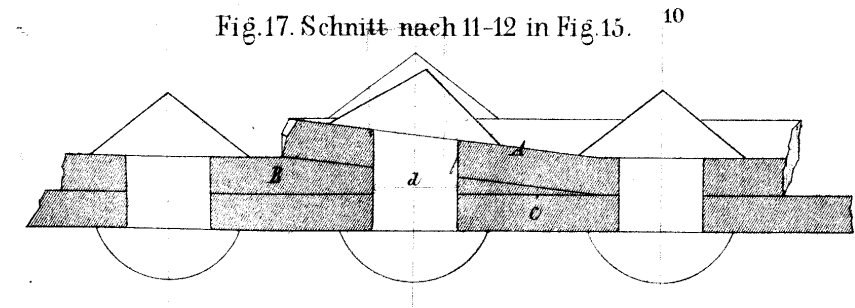
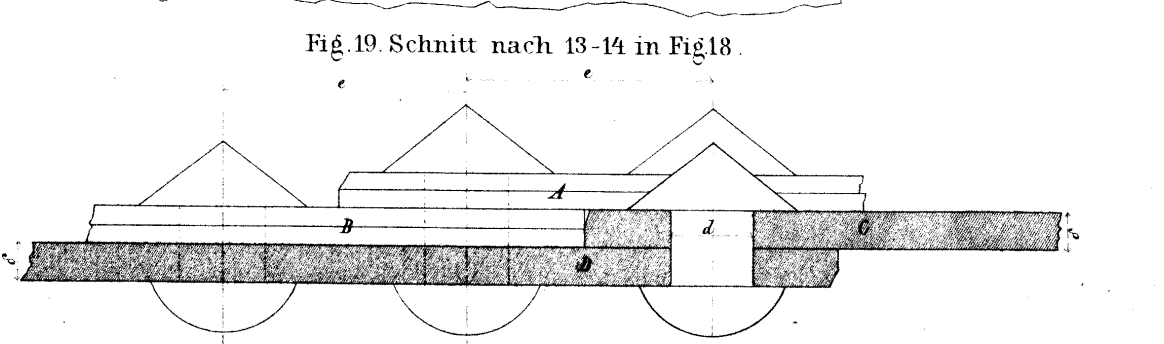
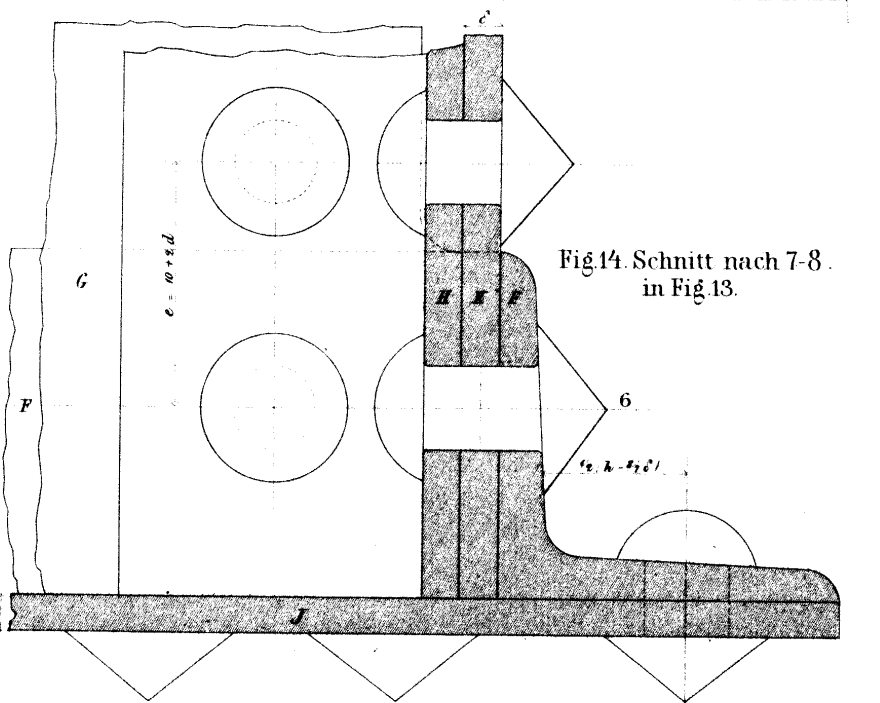
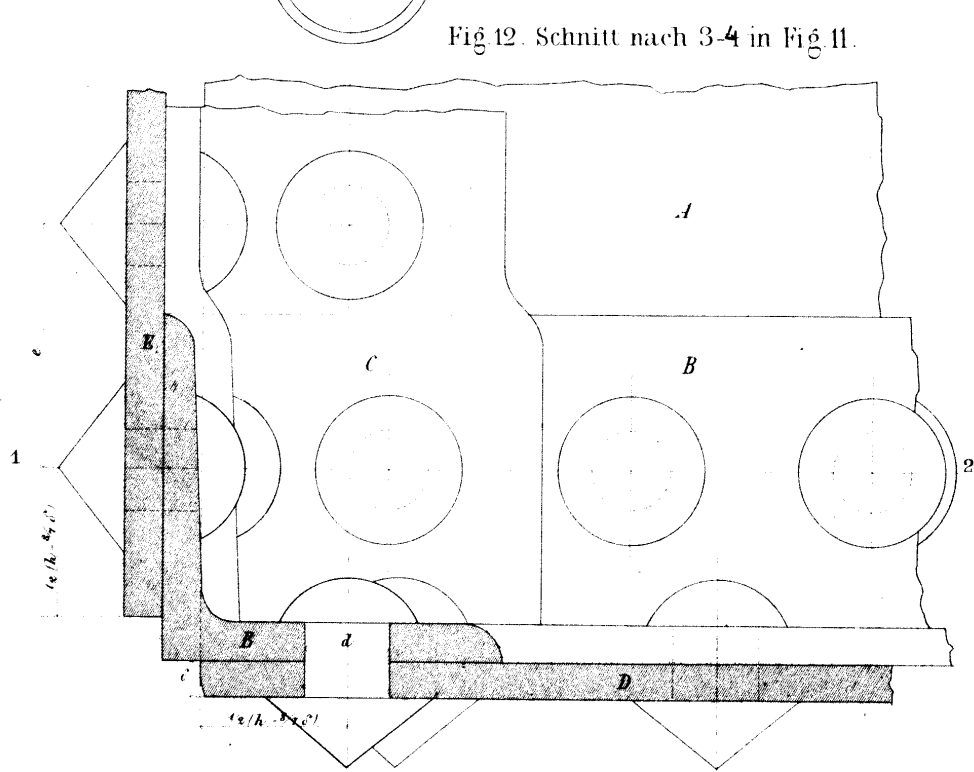
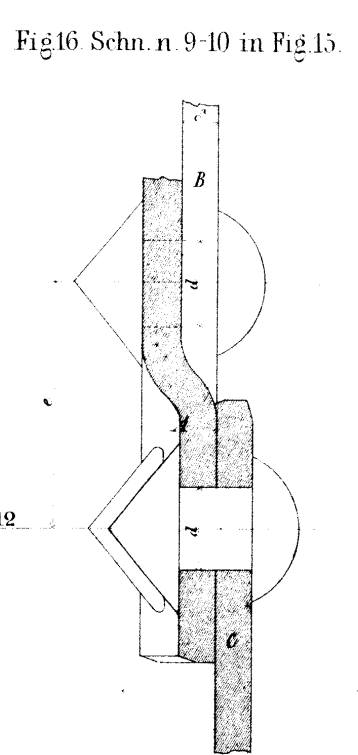
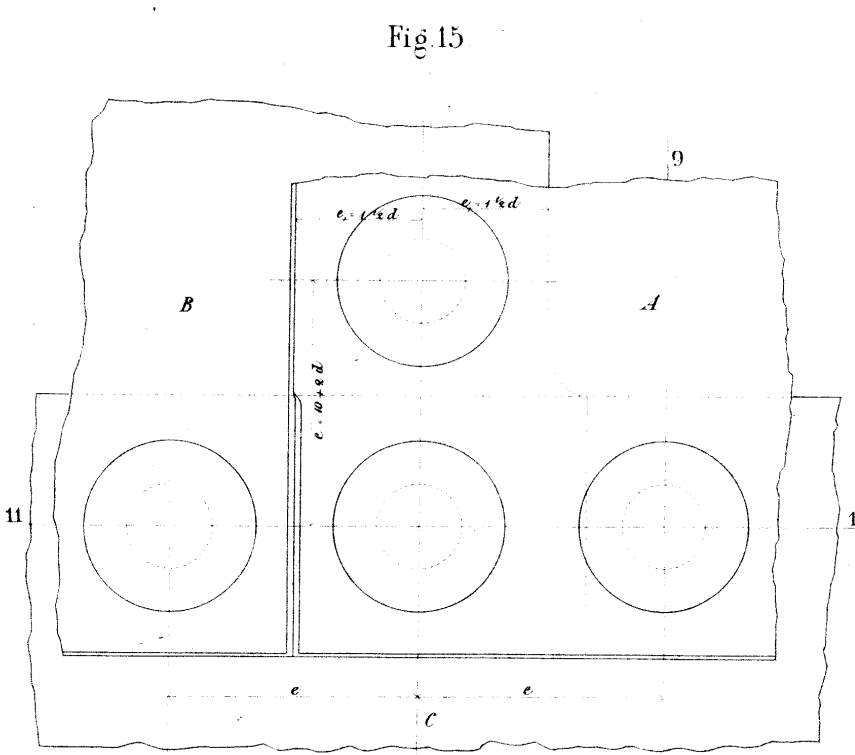
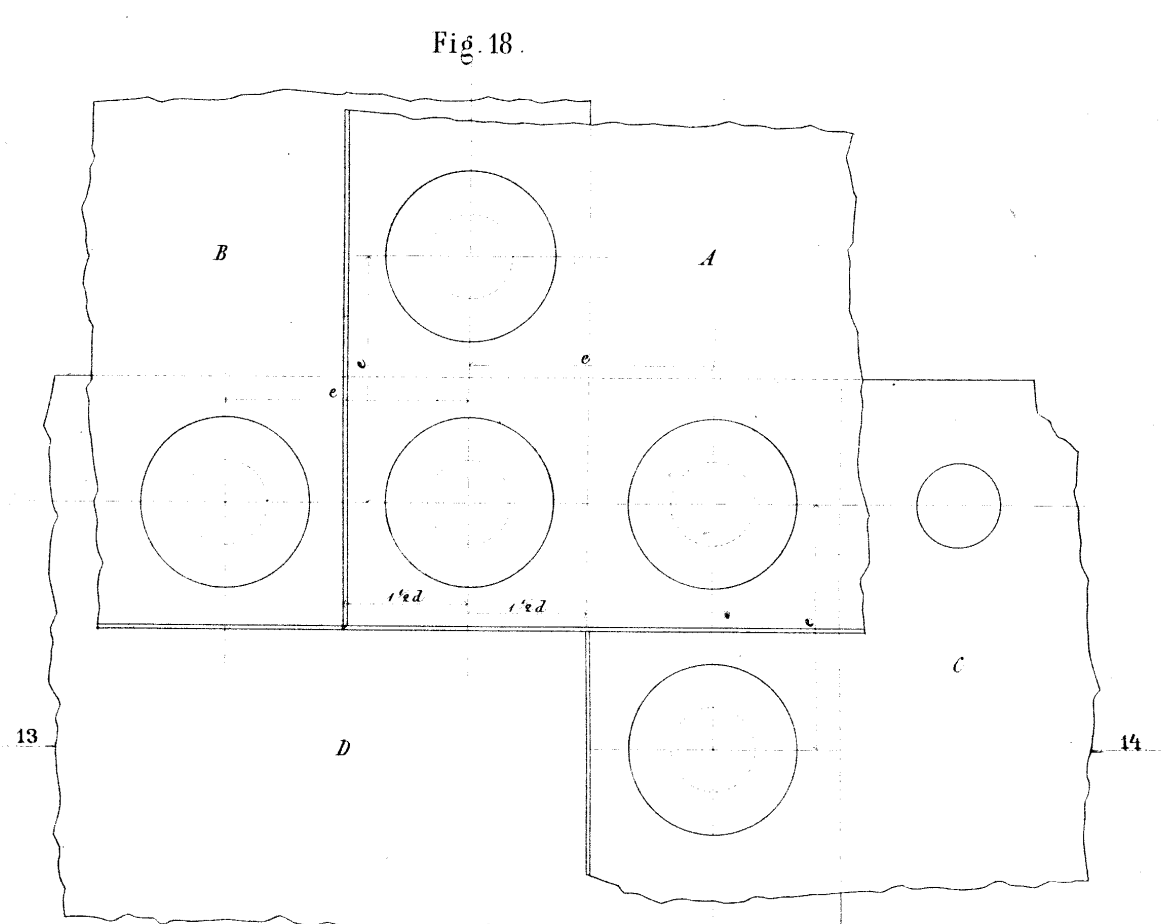
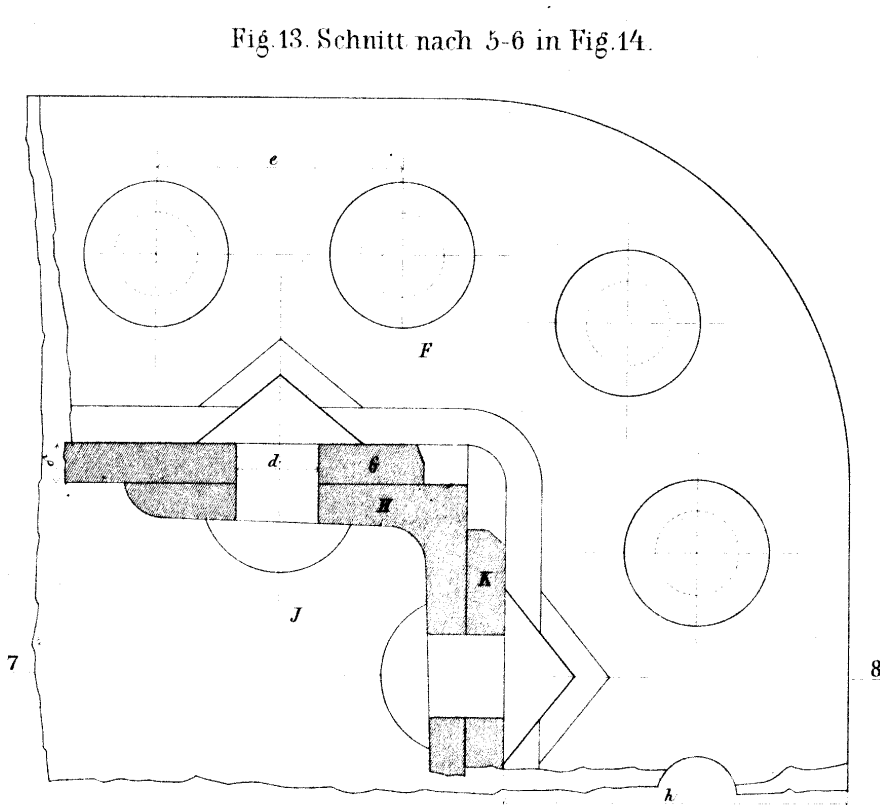
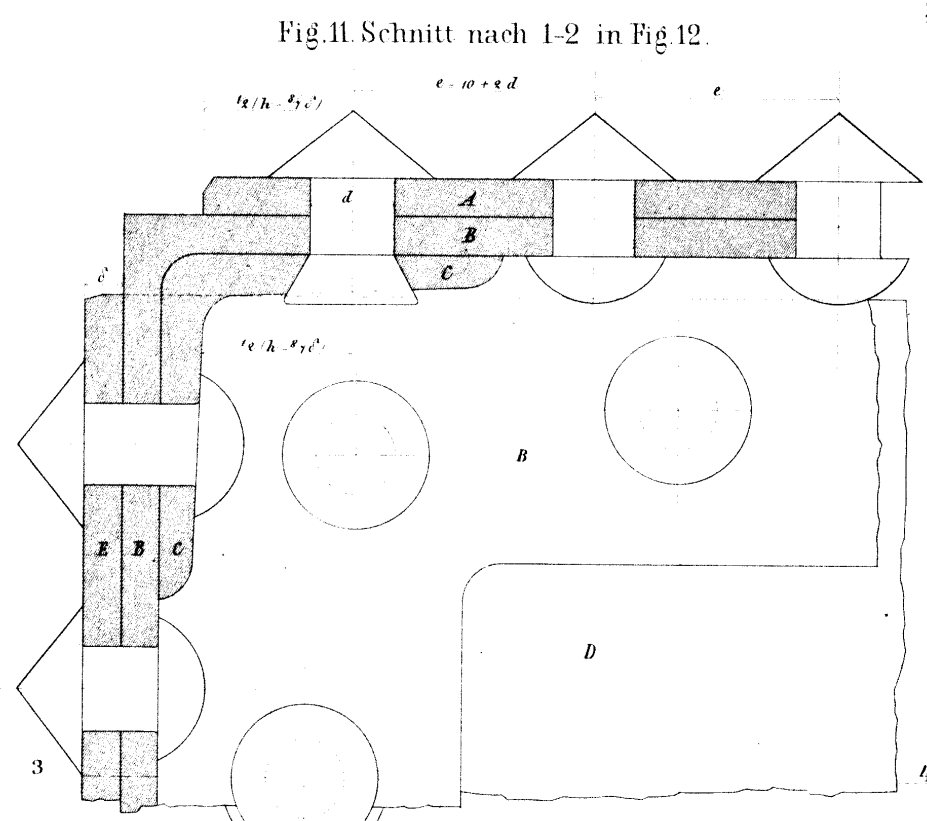
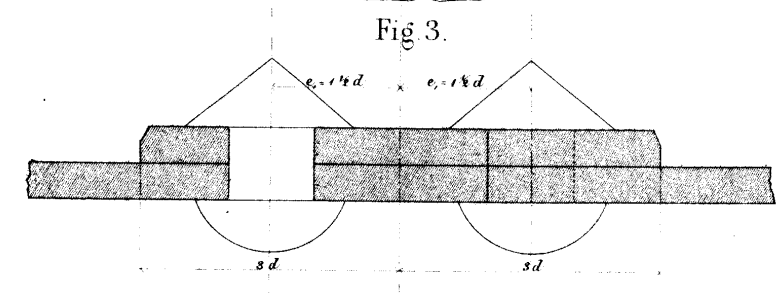
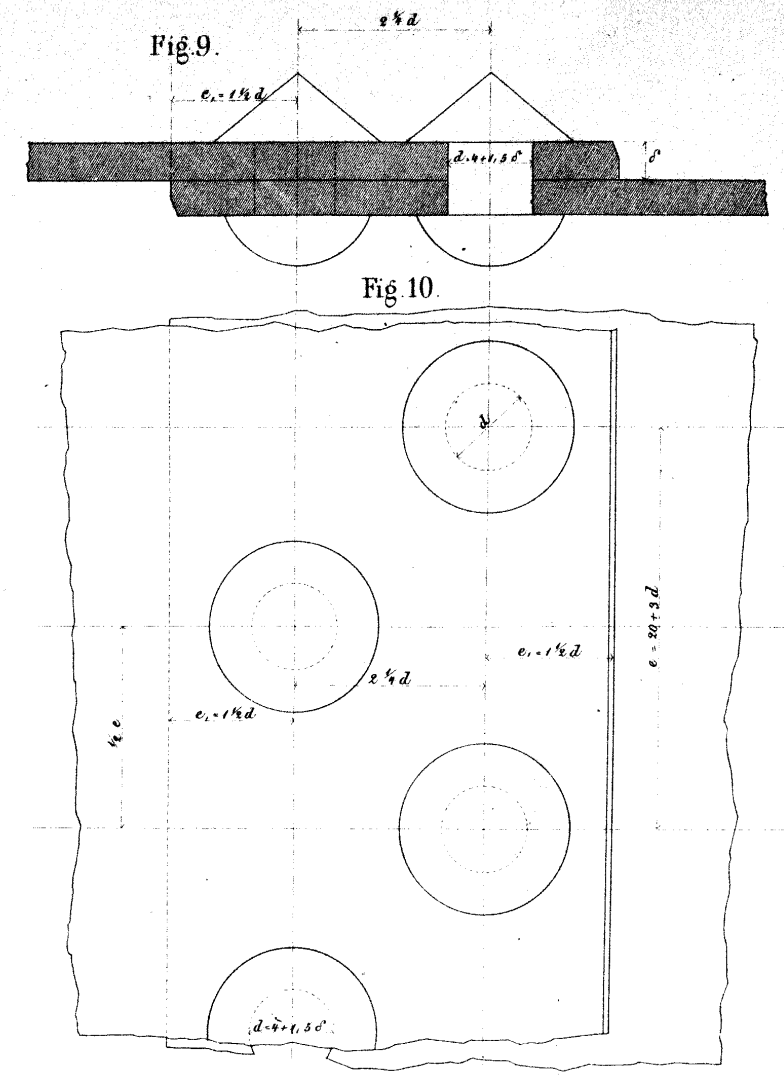
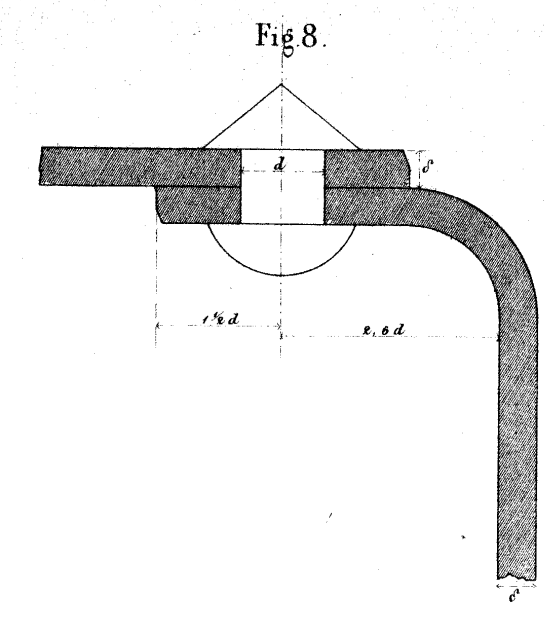
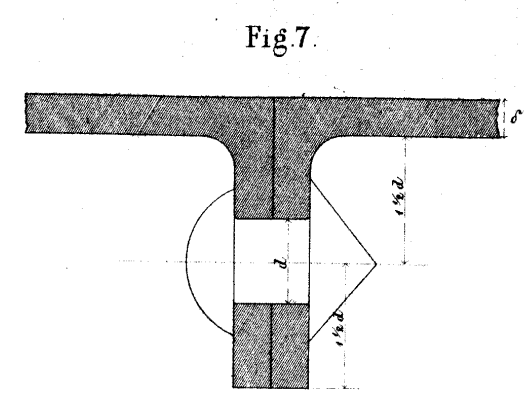
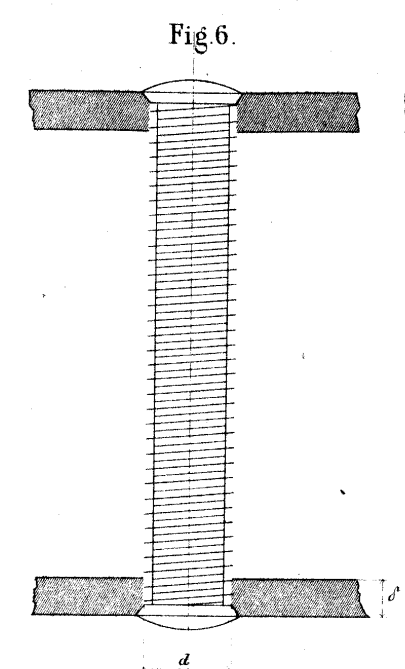
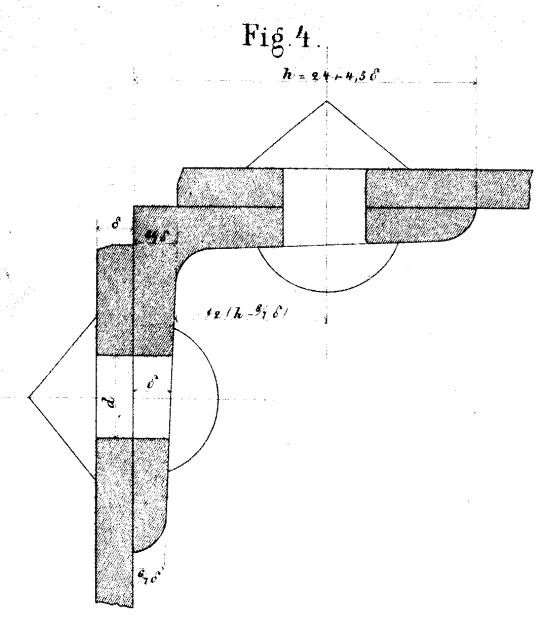
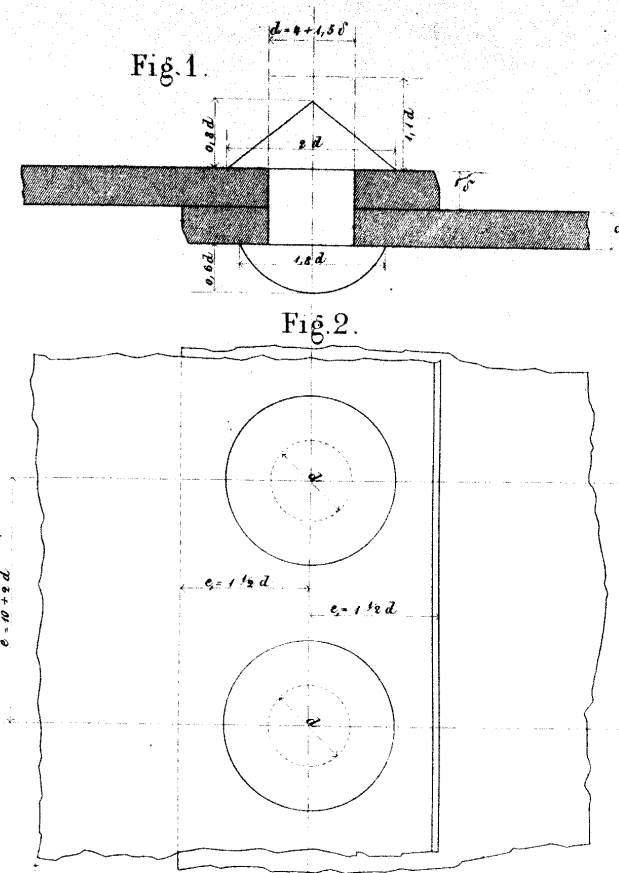


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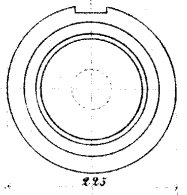


Fig. 1.

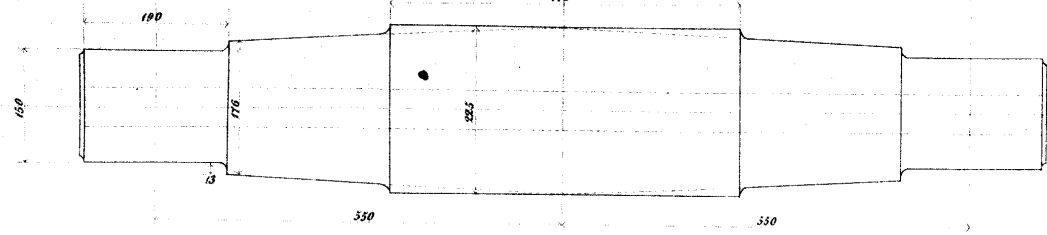


Fig. 5.

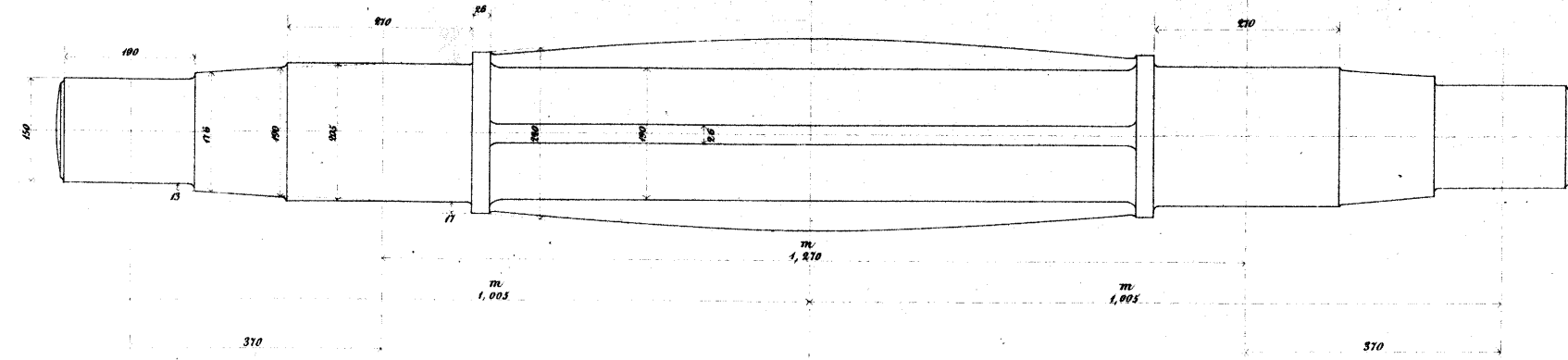


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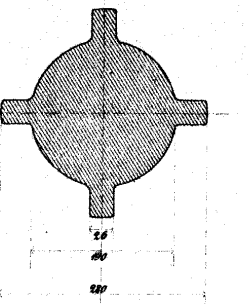


Fig. 4.

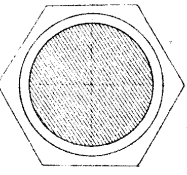


Fig. 3.

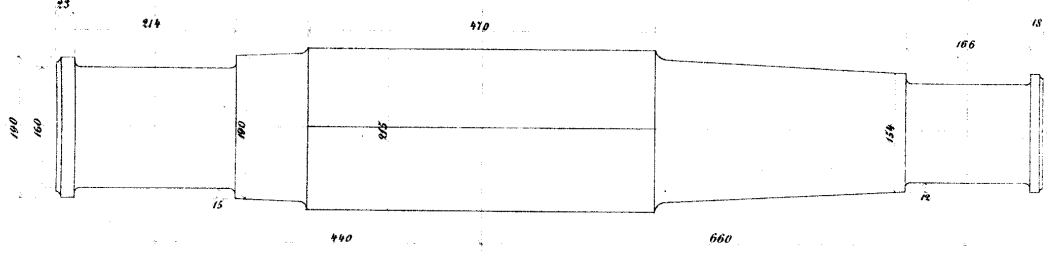


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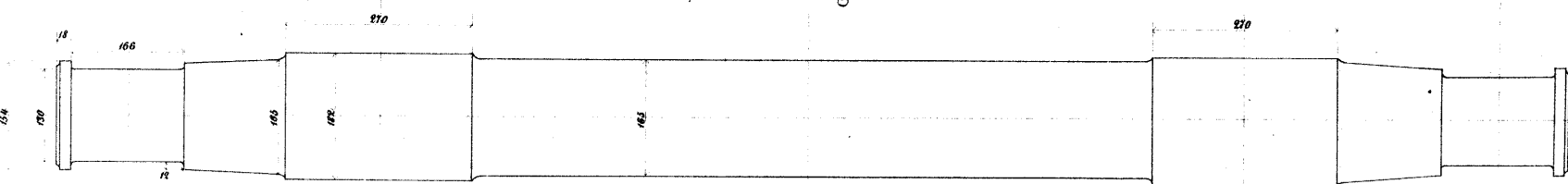


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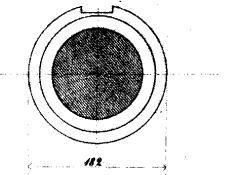


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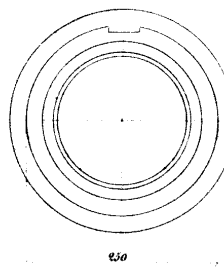


Fig. 9.

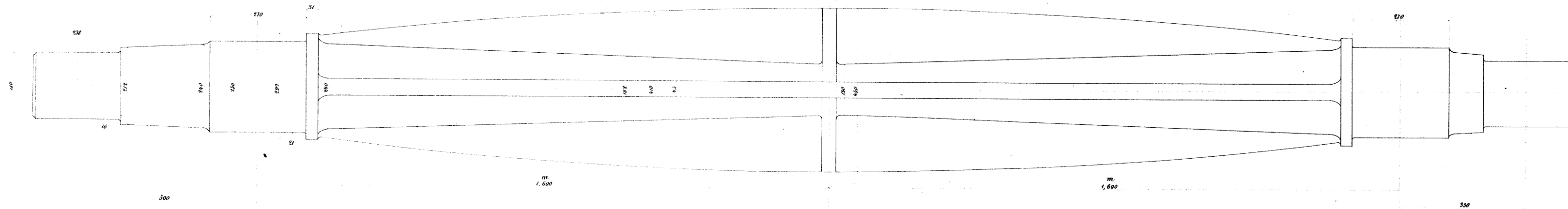


Fig. 11.

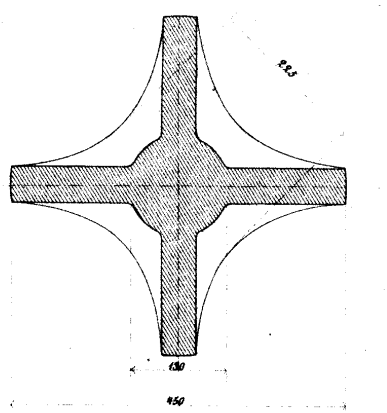


Fig. 13. Schnitt nach 1.2.

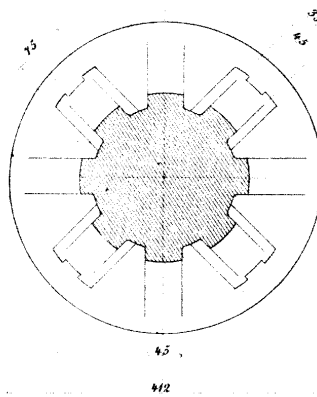


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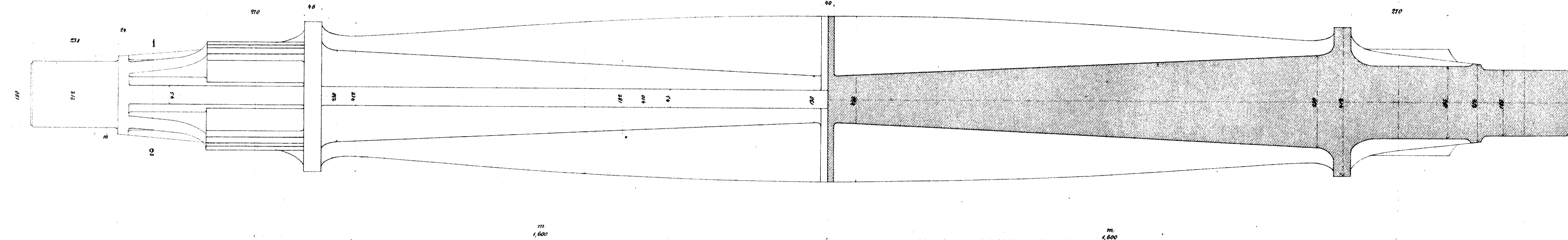


Fig. 14.

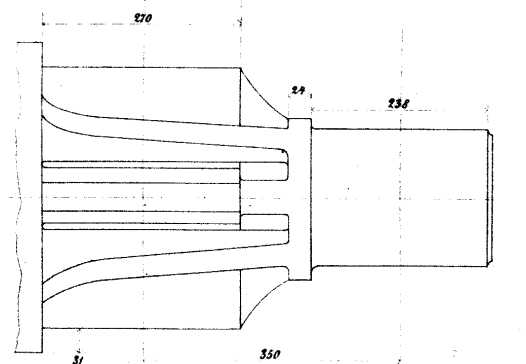


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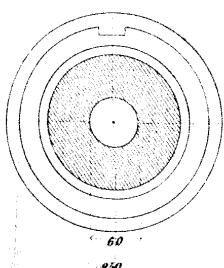


Fig. 15.

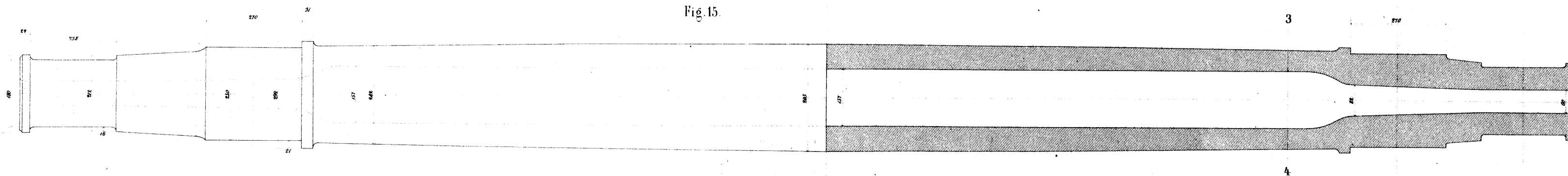


Fig. 17. Schnitt nach 3.4.

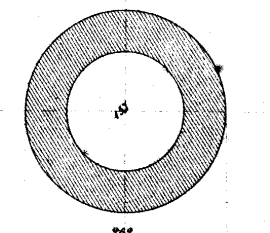


Fig. 19.

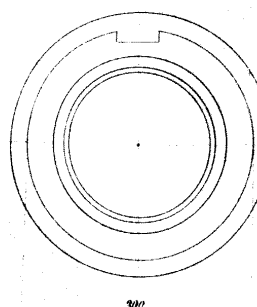


Fig. 18.

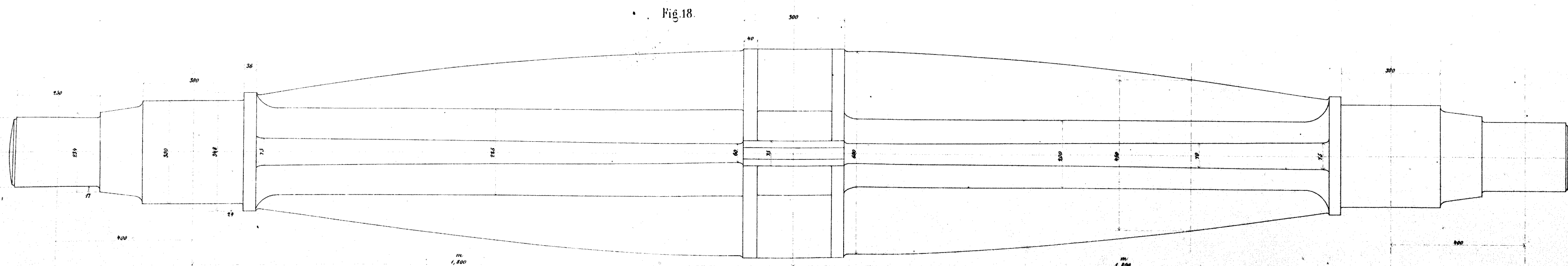
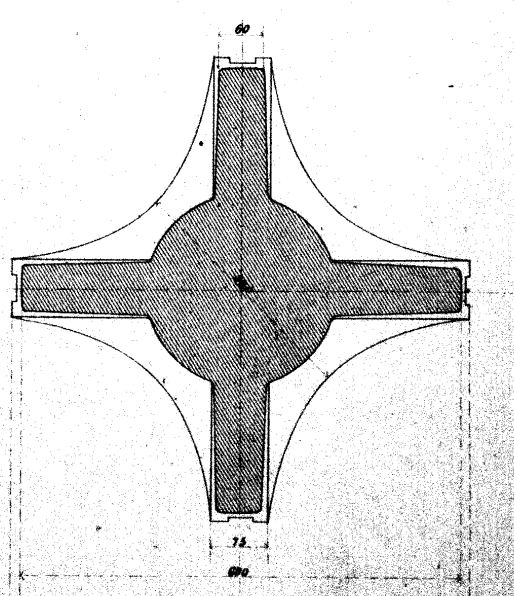


Fig. 20.



Masstab zu 1/10.



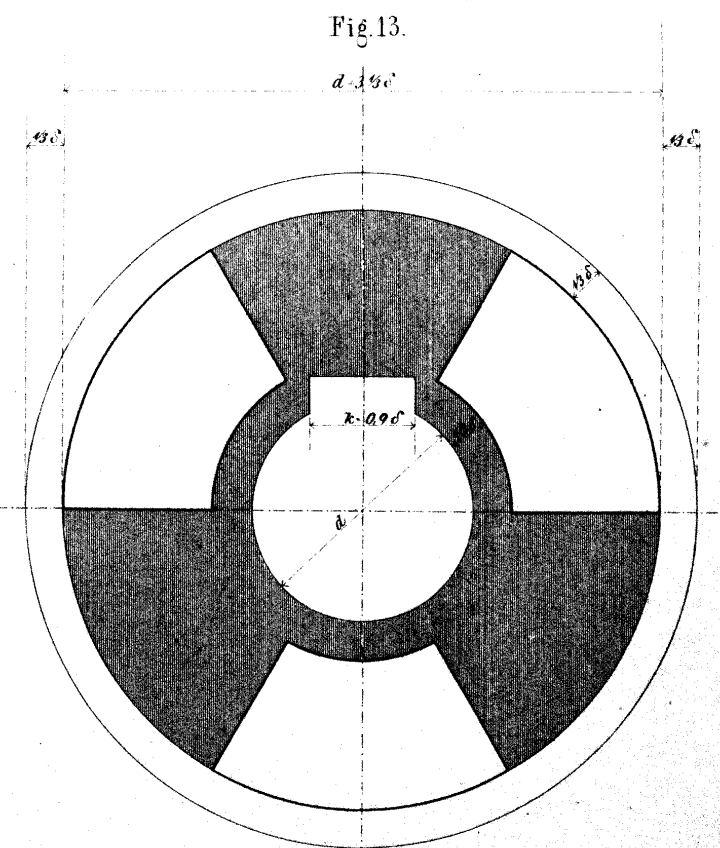
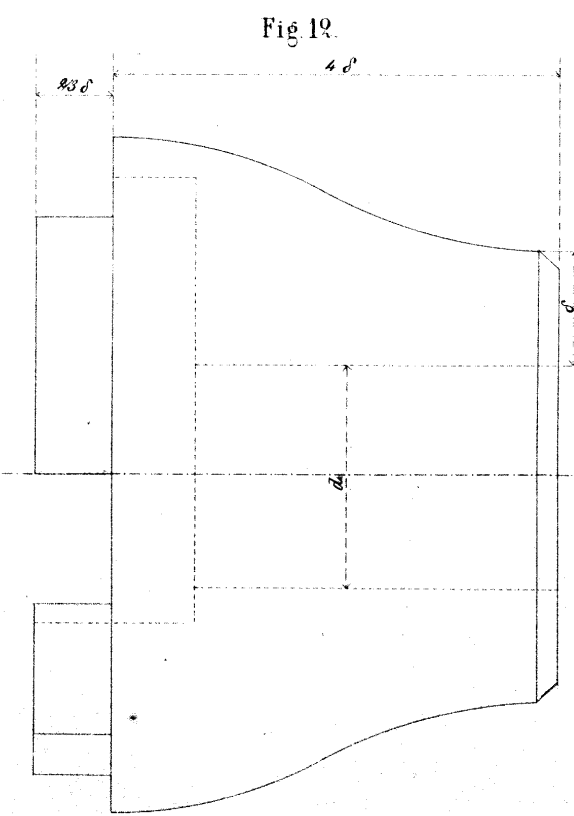
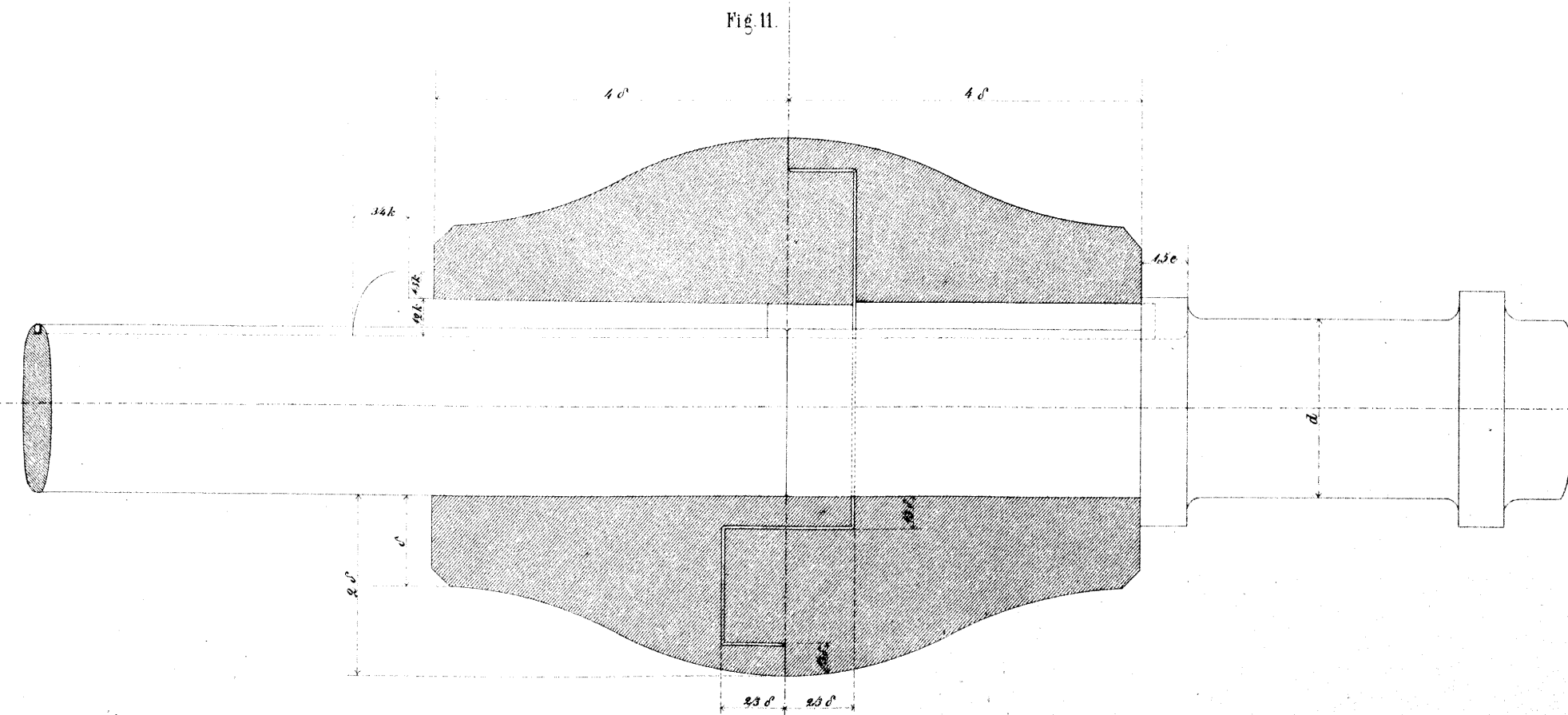
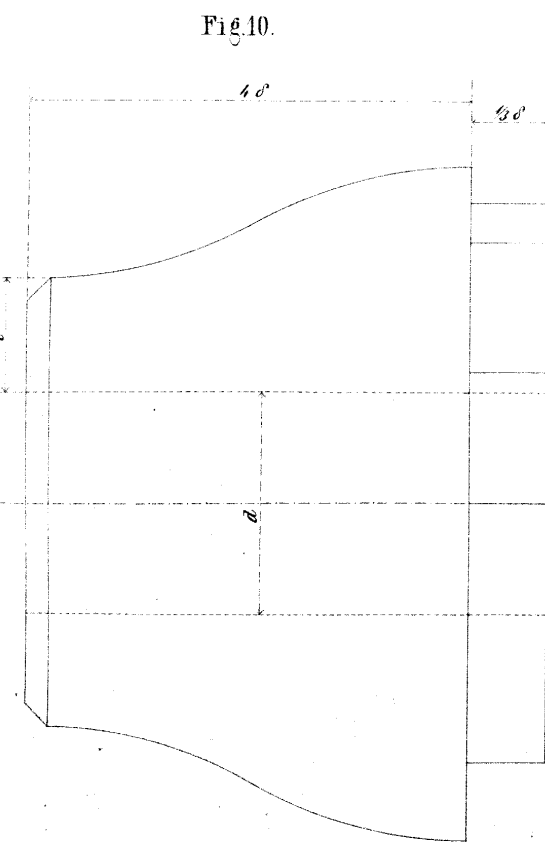
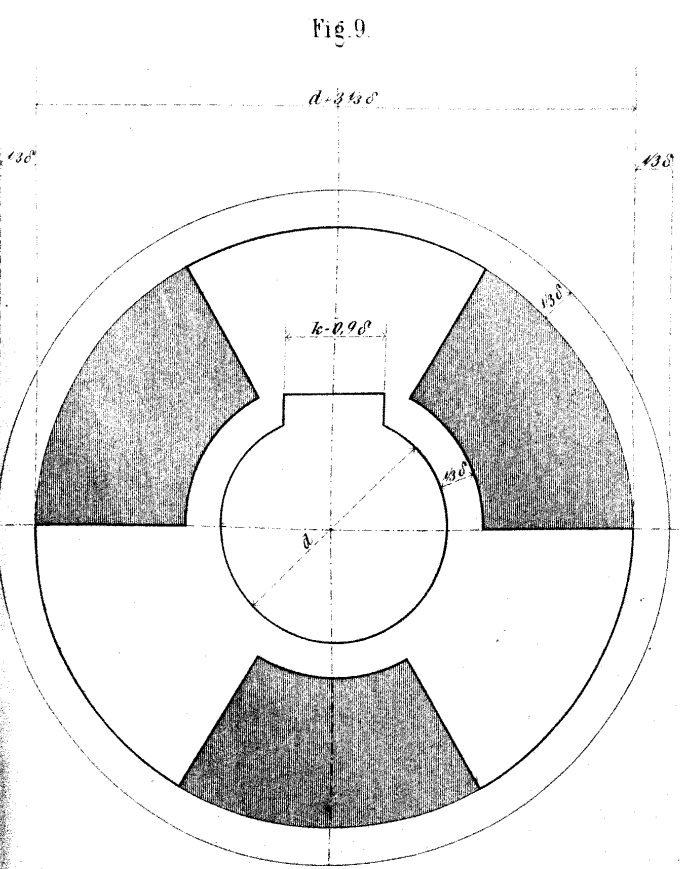
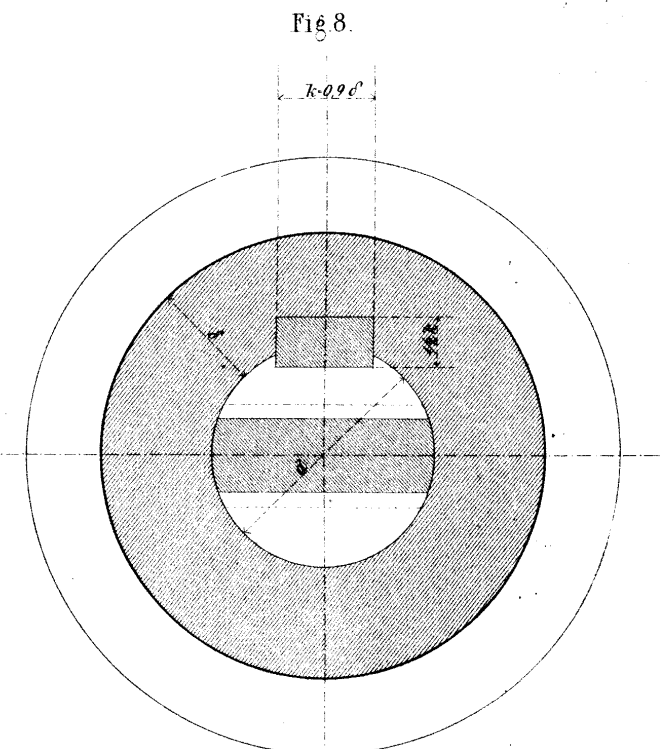
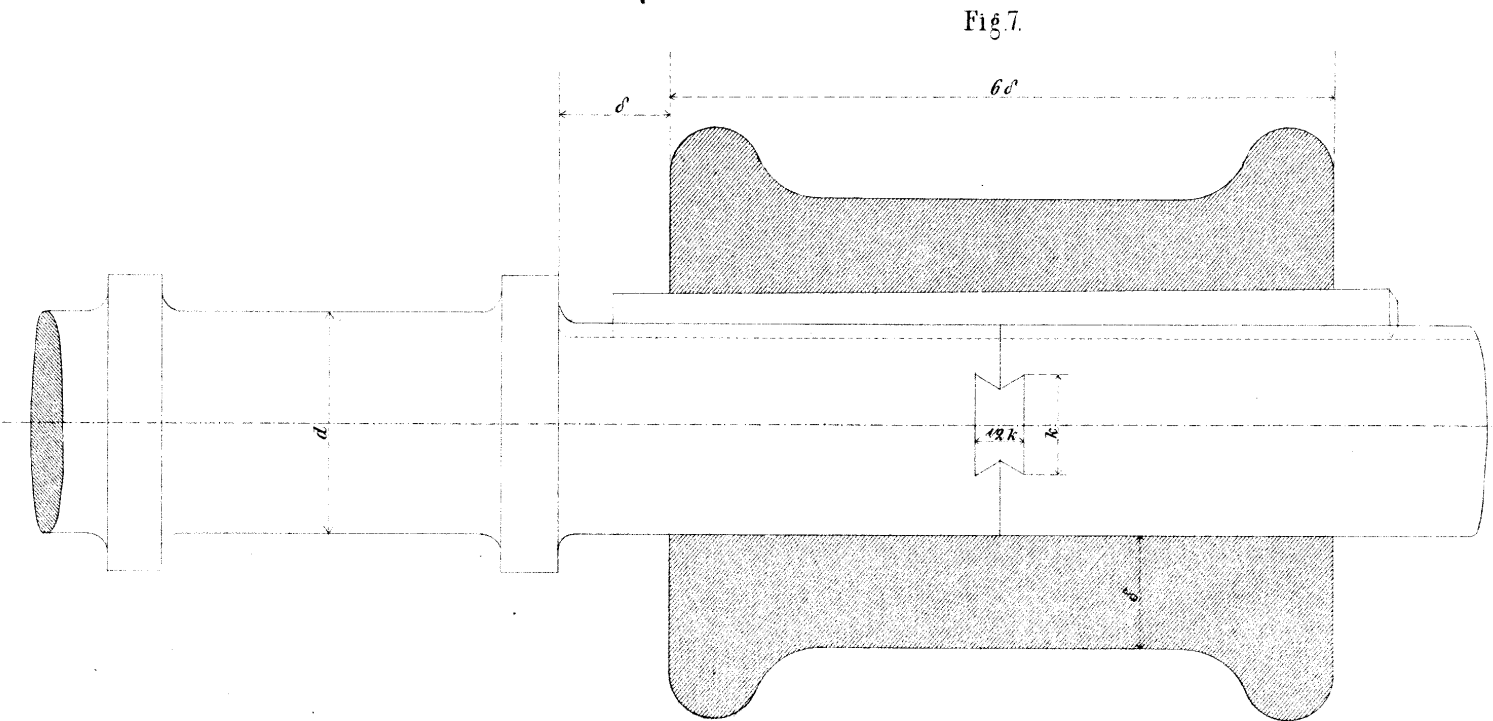
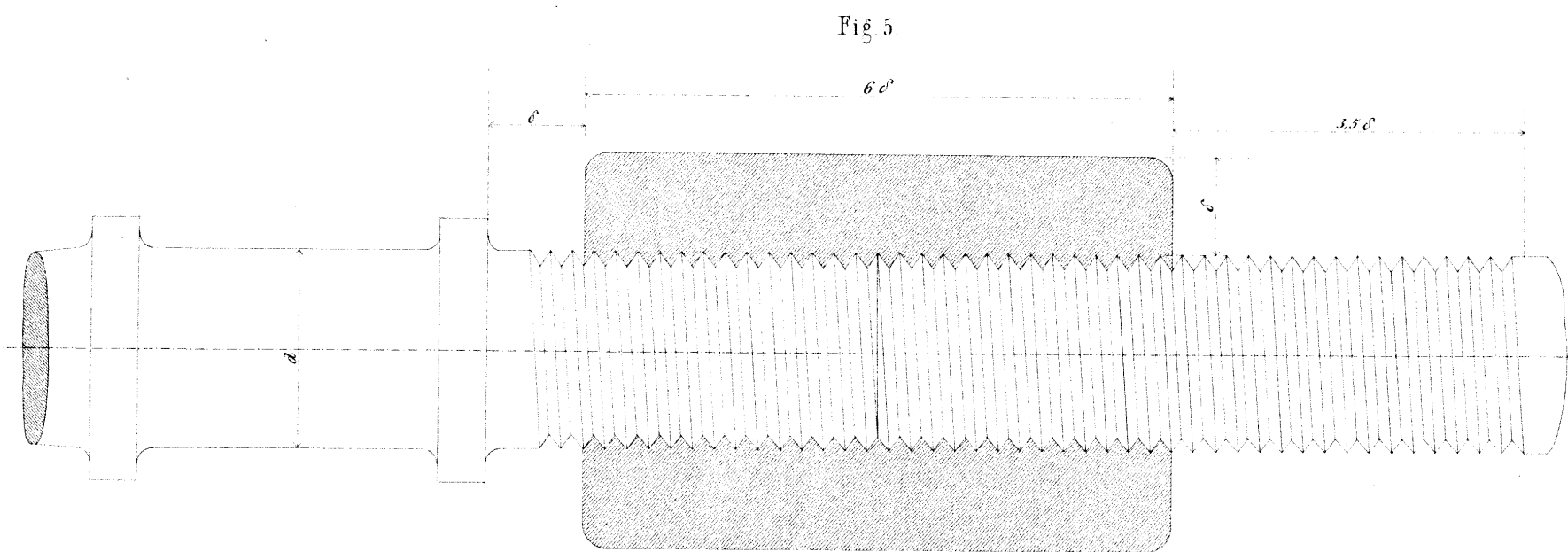
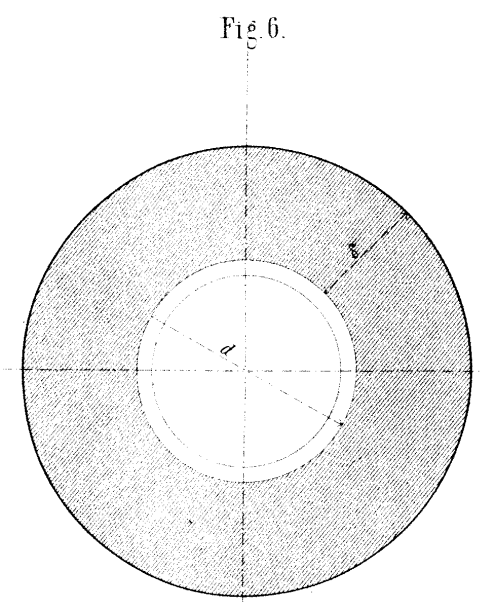
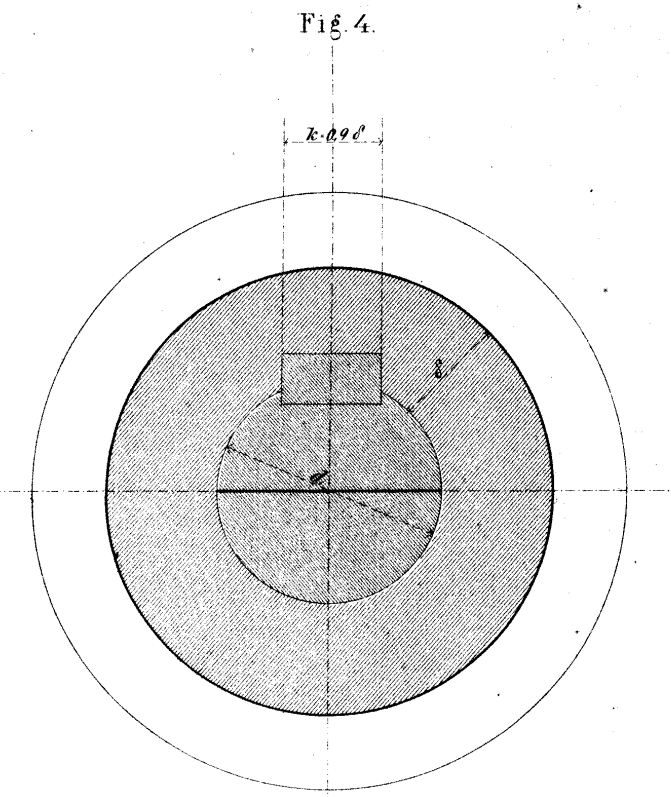
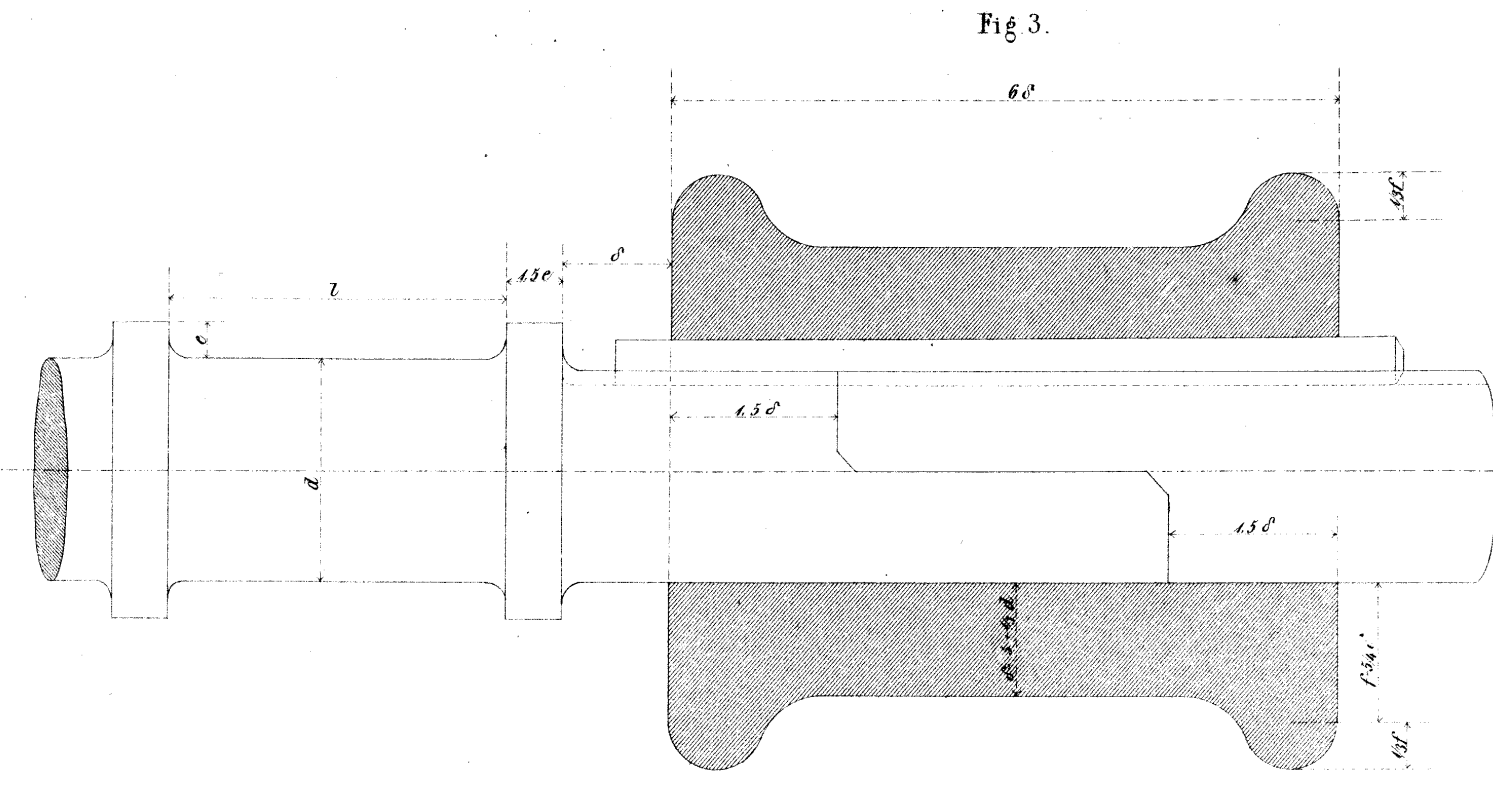
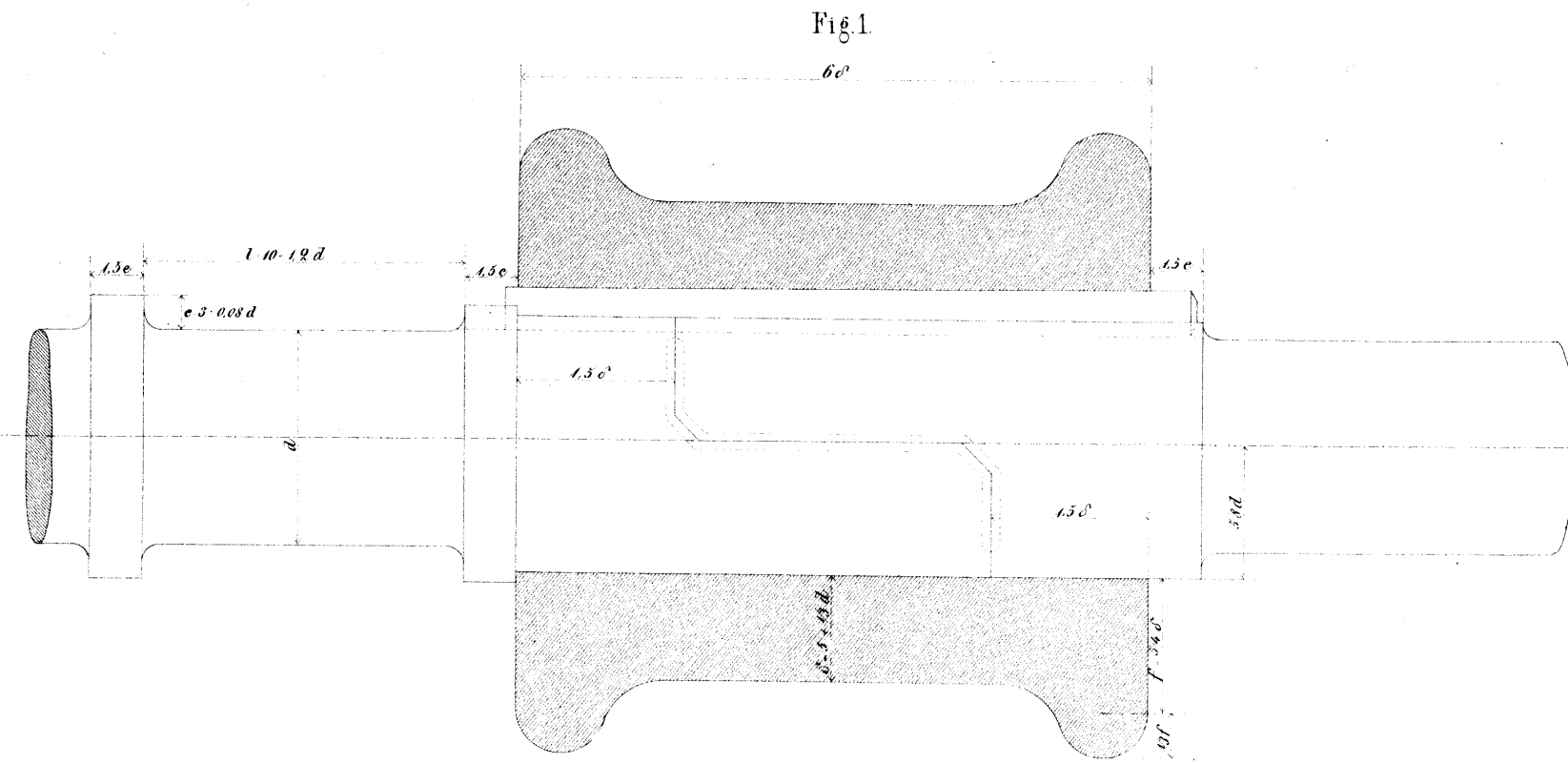
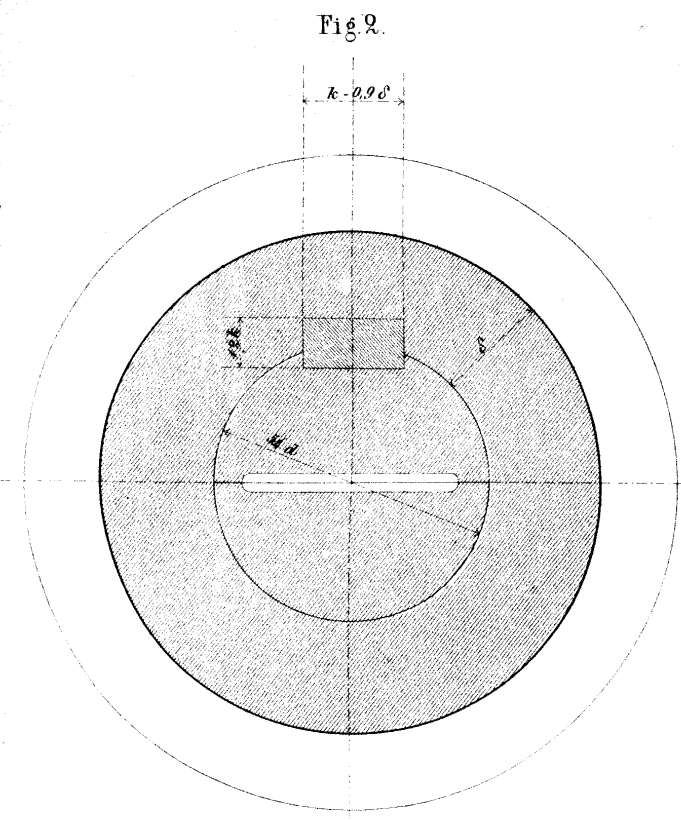


Fig 1.2.3. Lager für Zapfen von 20-200 mm Dchn.

Fig 1

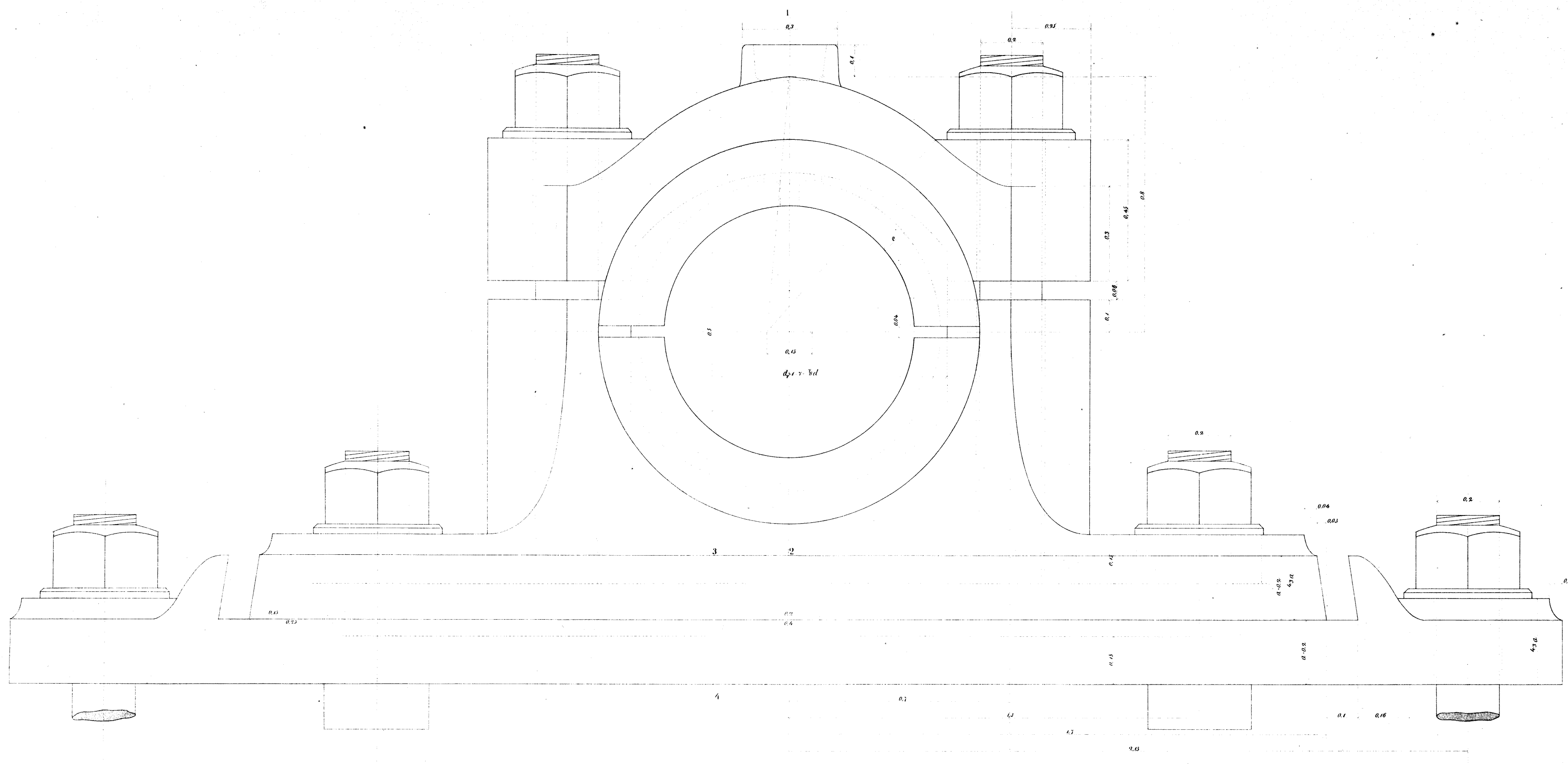
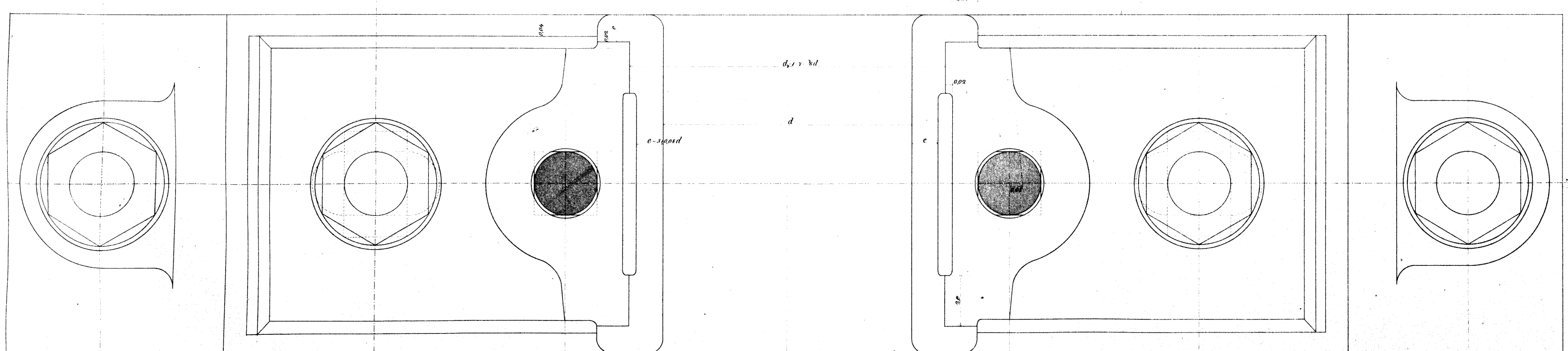


Fig 2



Verhältniss Maßstab.

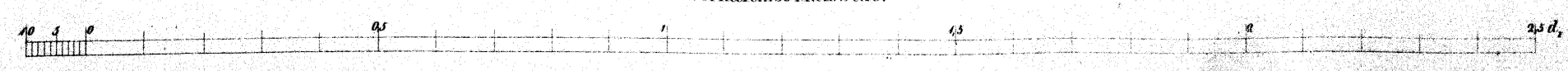


Fig 3. Schnitt nach 1.2.3.4.

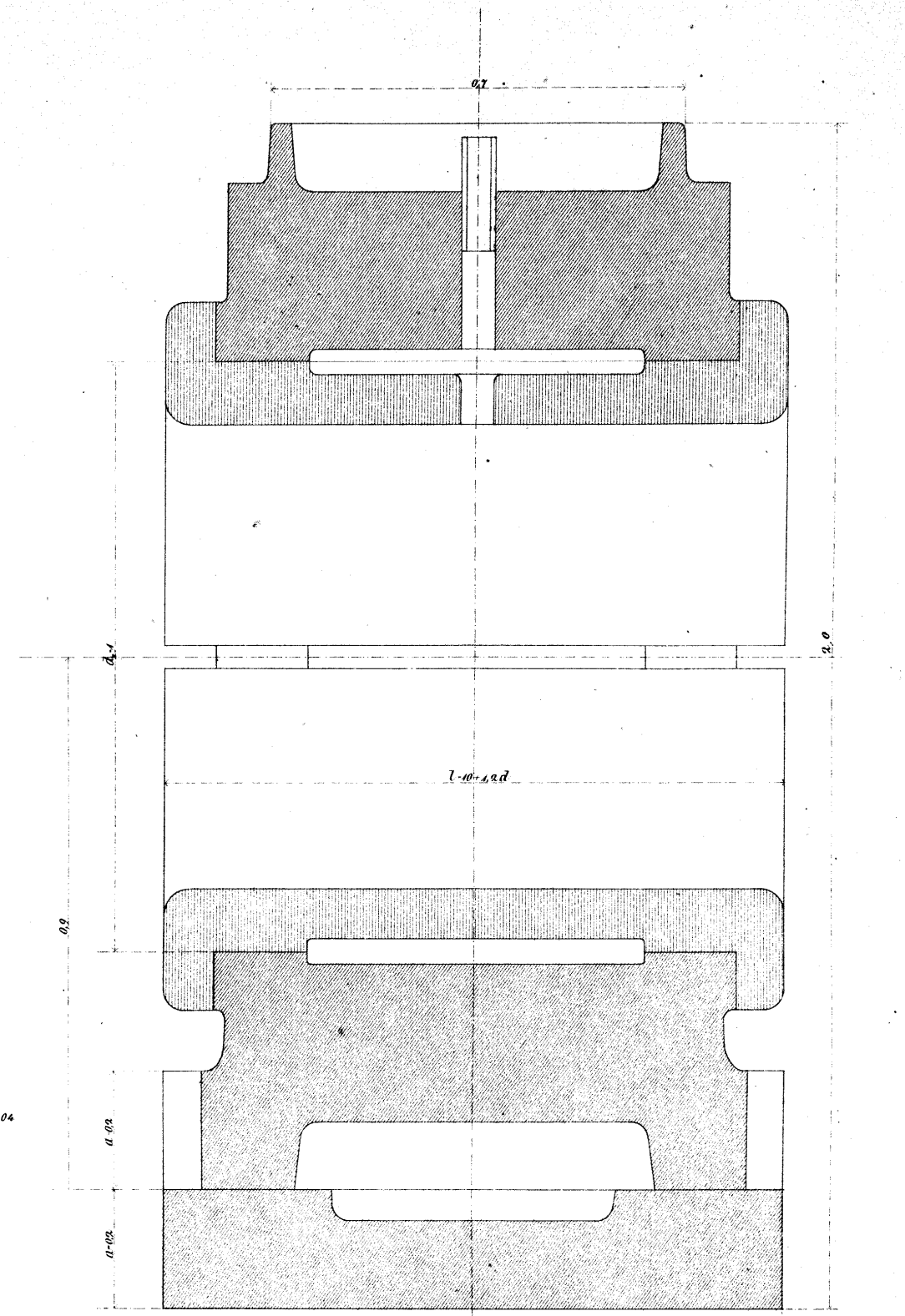


Fig 4 u. 5. Lager für Zapfen von 200 mm an

(in der nat. Größe.)

Fig 4

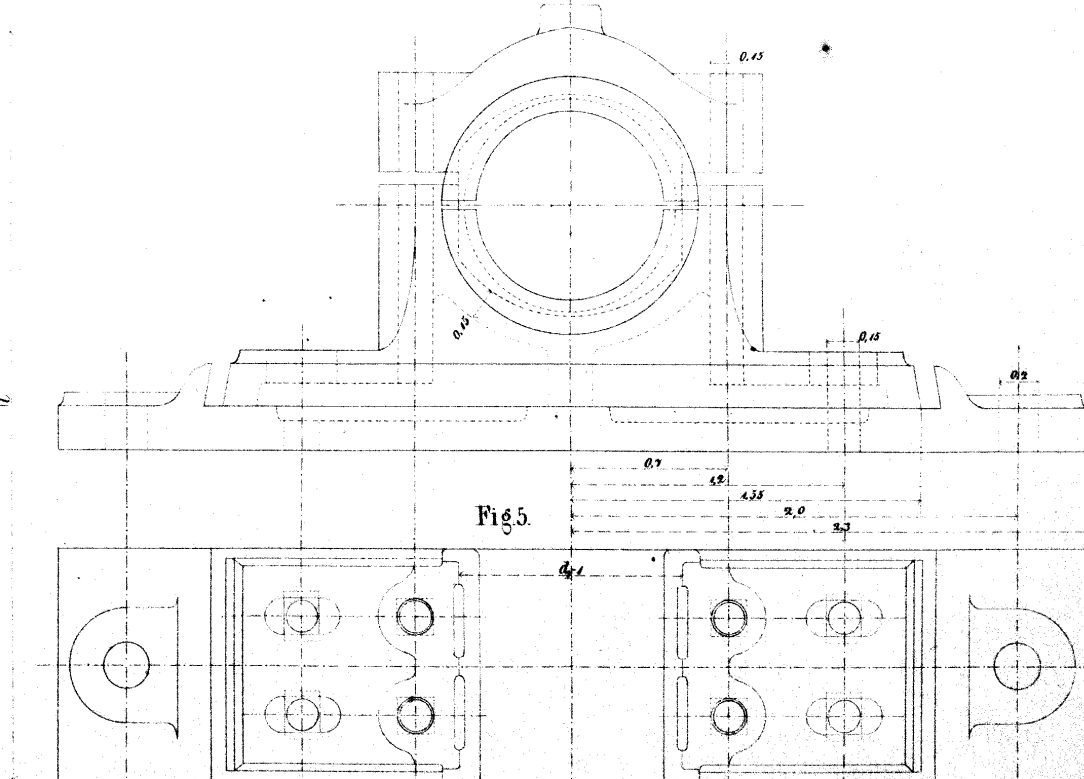
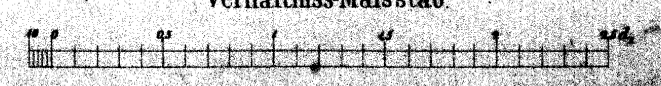


Fig 5

Verhältniss Maßstab.



FUSSLAGER (Fig 1,2,3) UND SEITENLAGER (Fig 4,5)

Fig 1

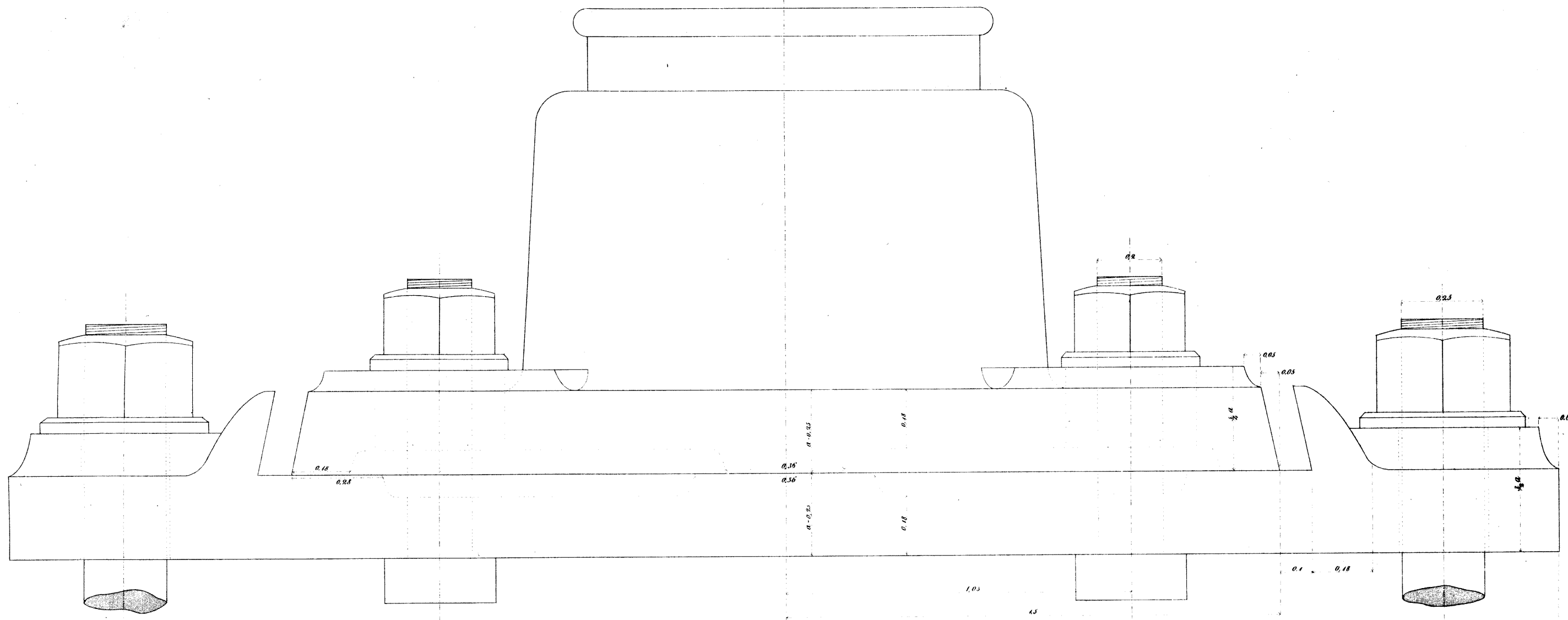
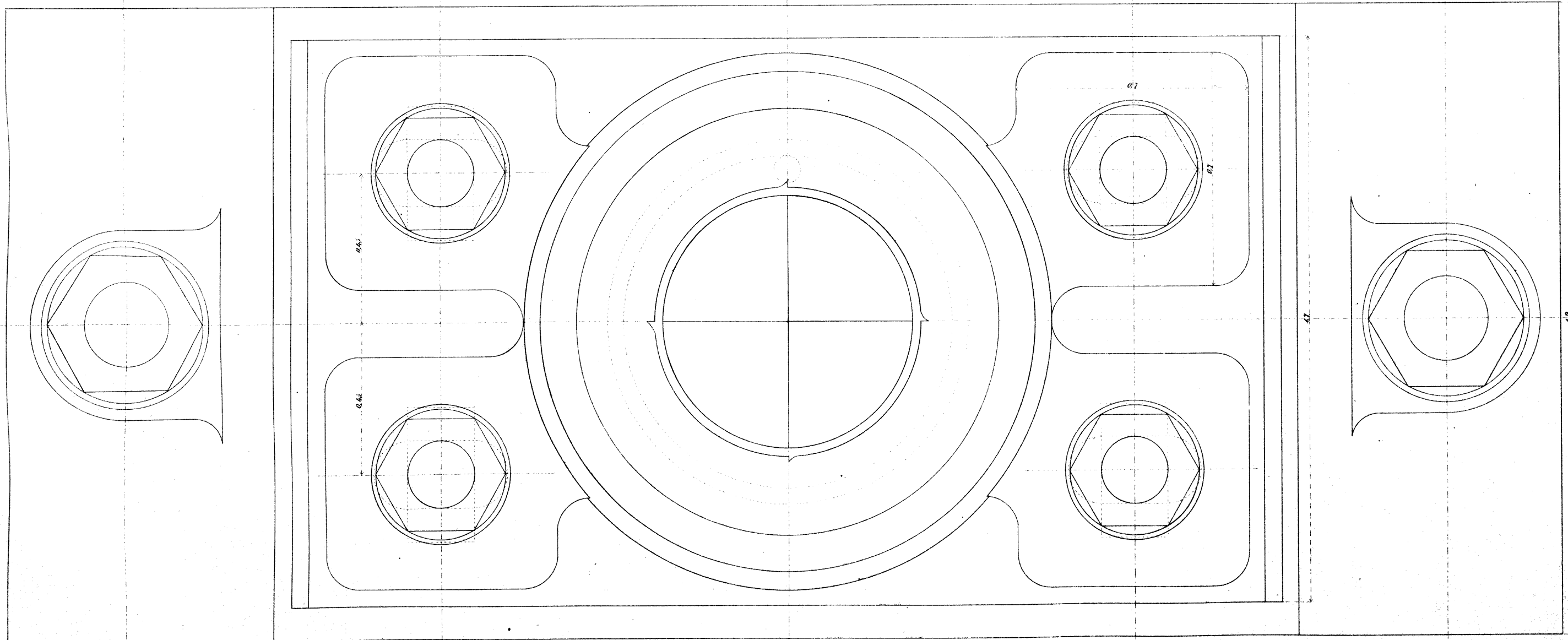


Fig 2



Verhältniß-Maßstab zu Fig 1,2,3

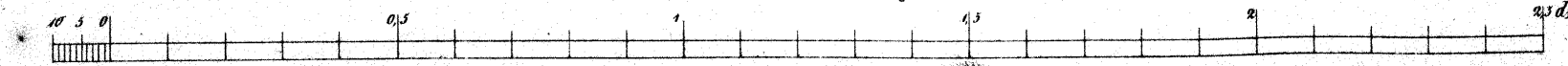


Fig 3

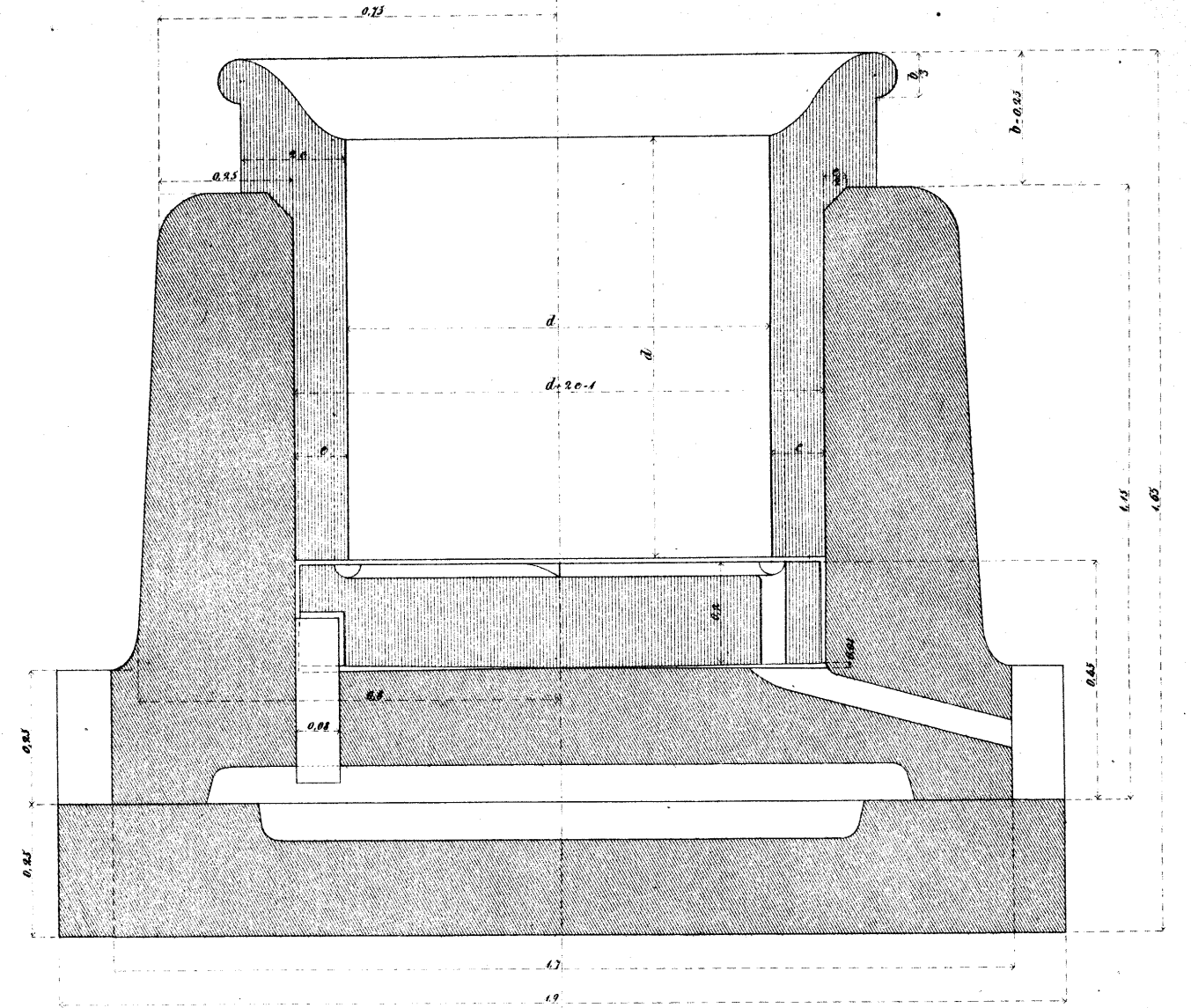
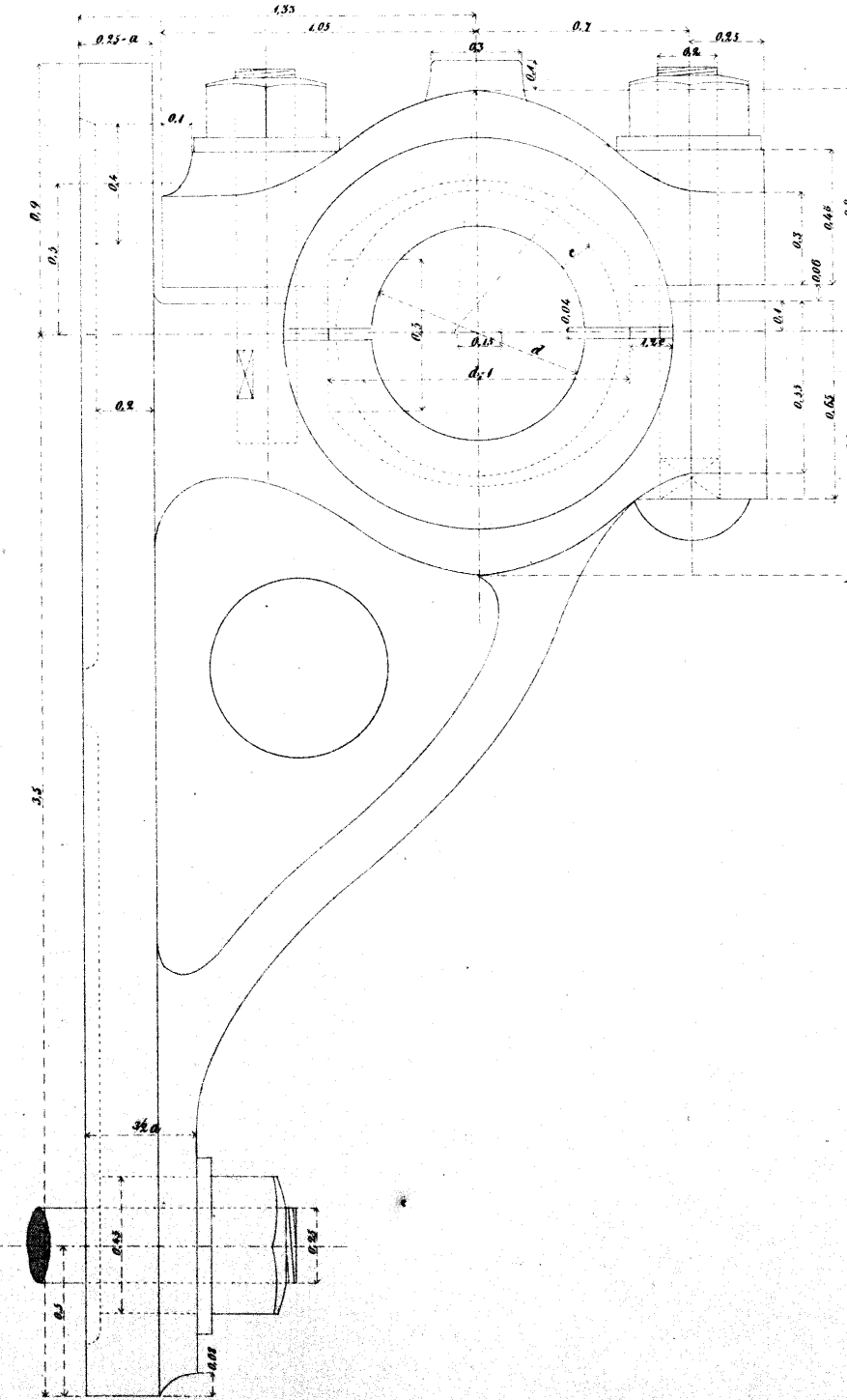


Fig 4



Verhältniß-Maßstab zu Fig 4,5

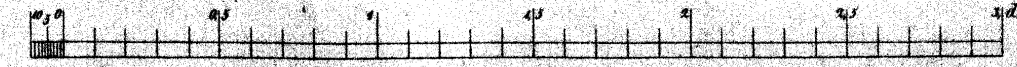
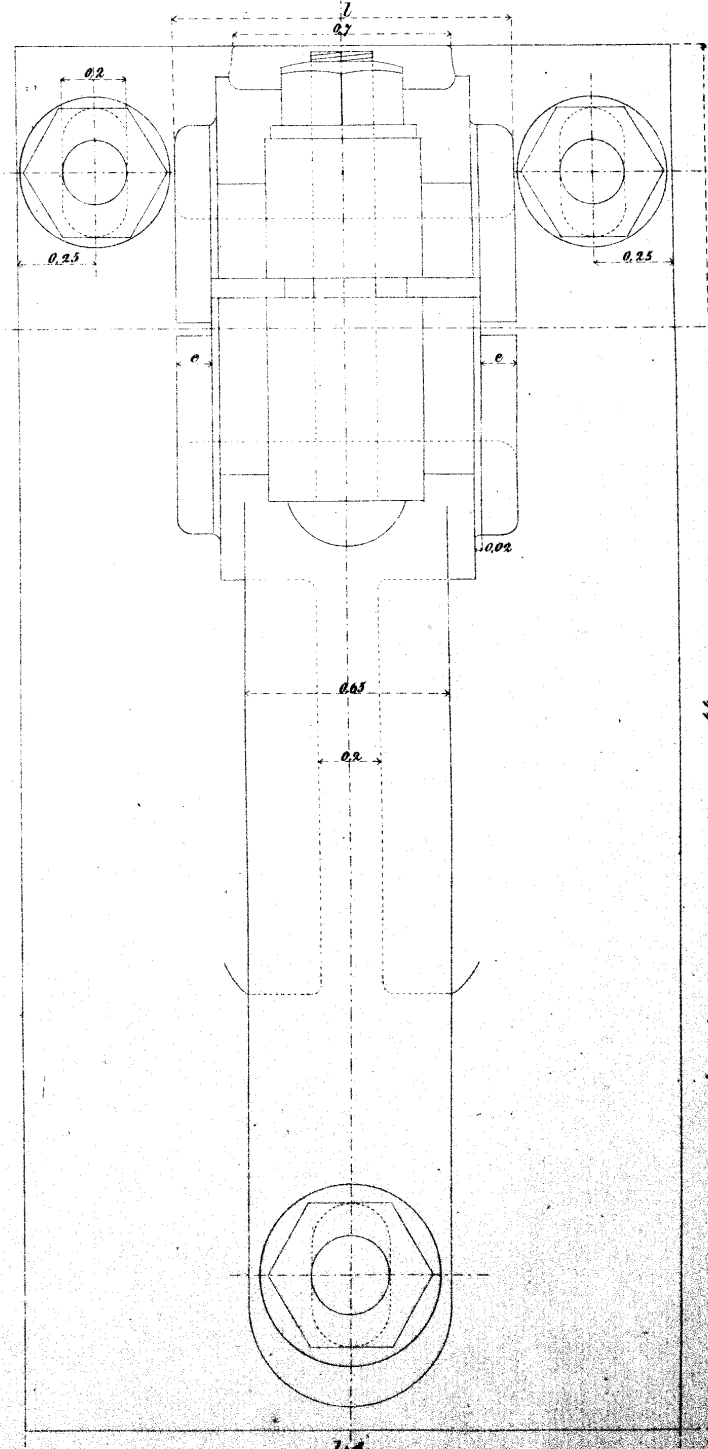
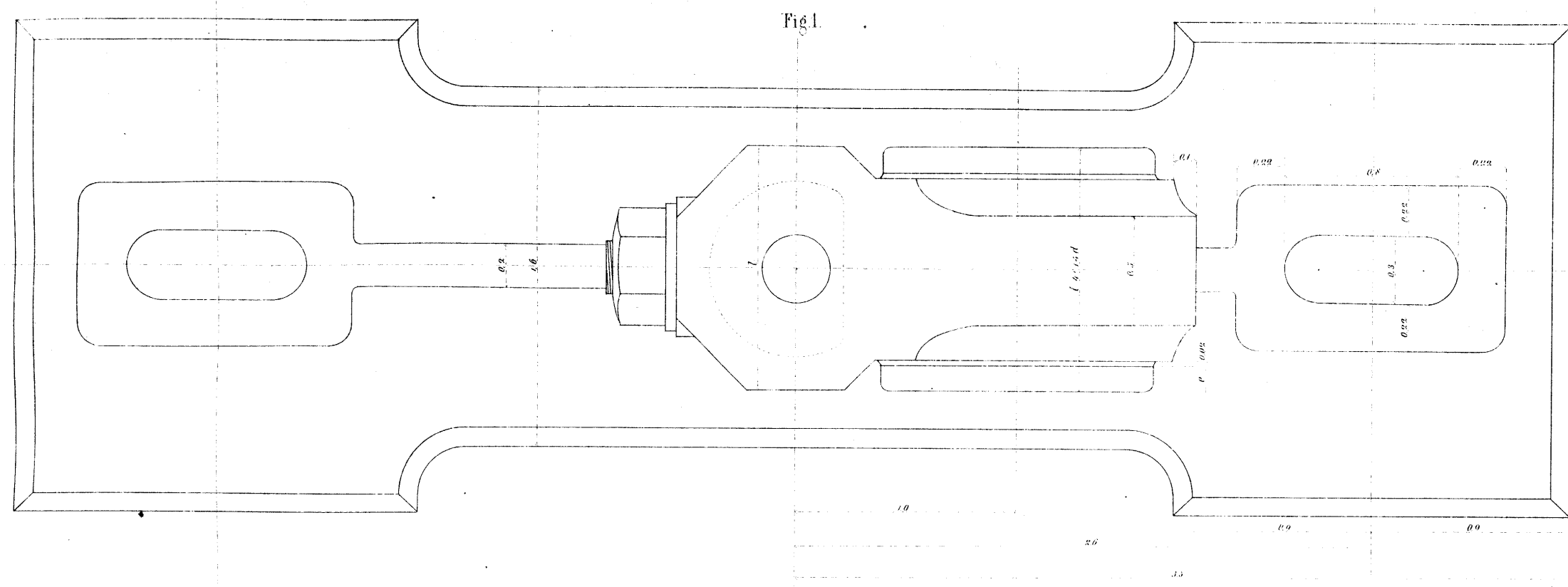


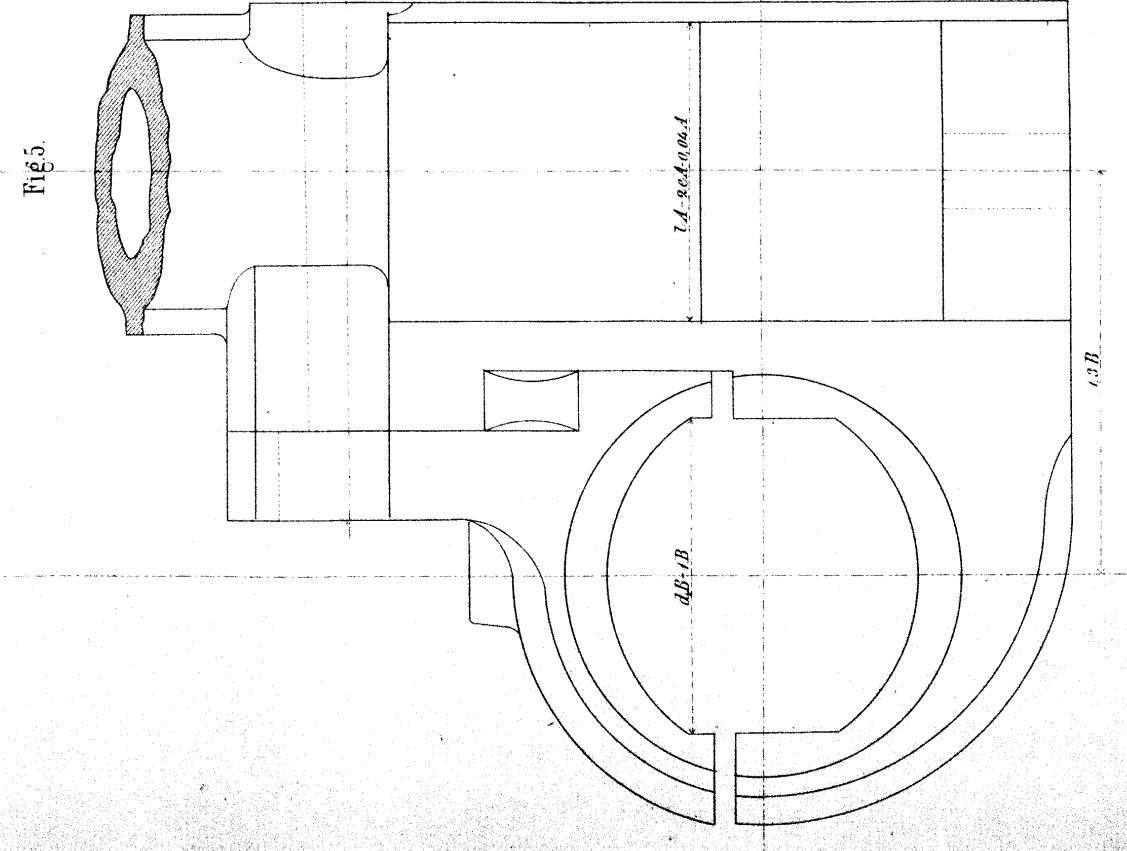
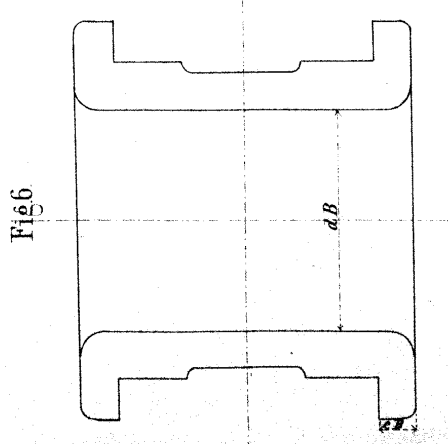
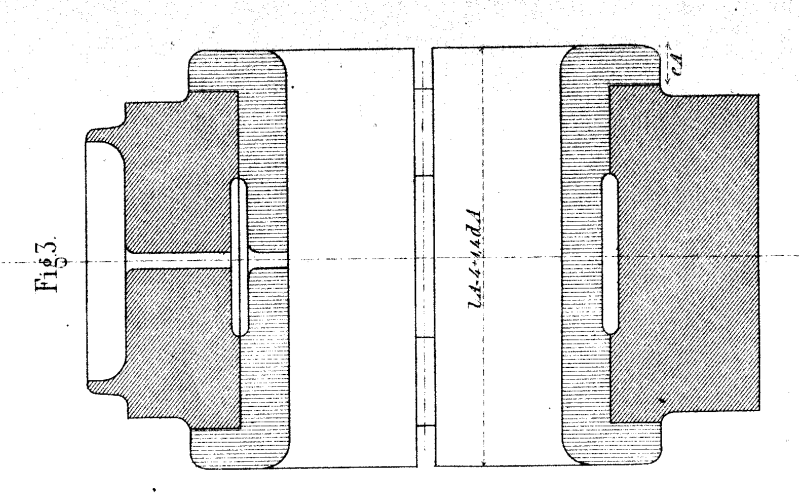
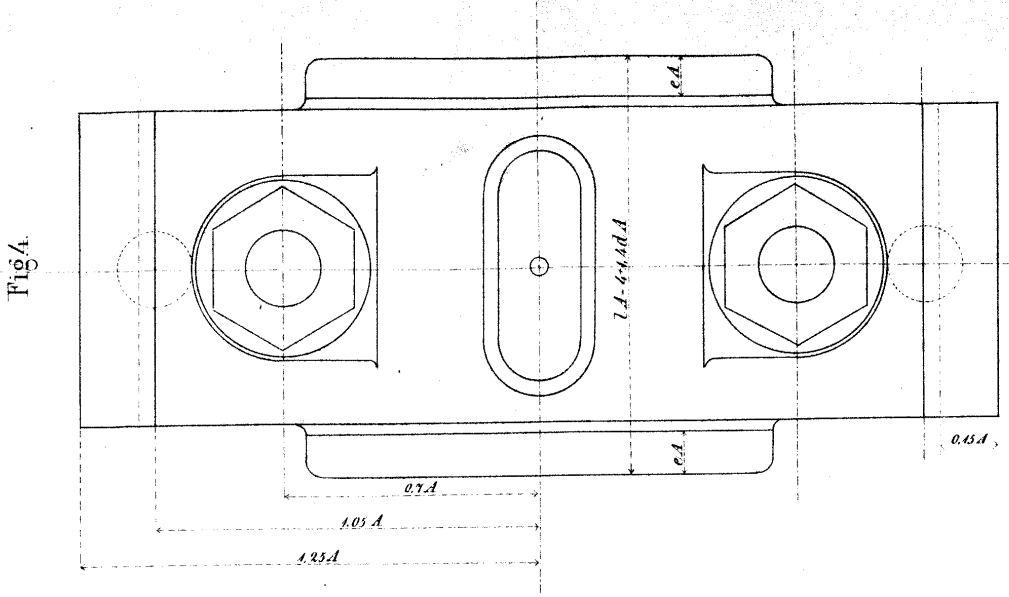
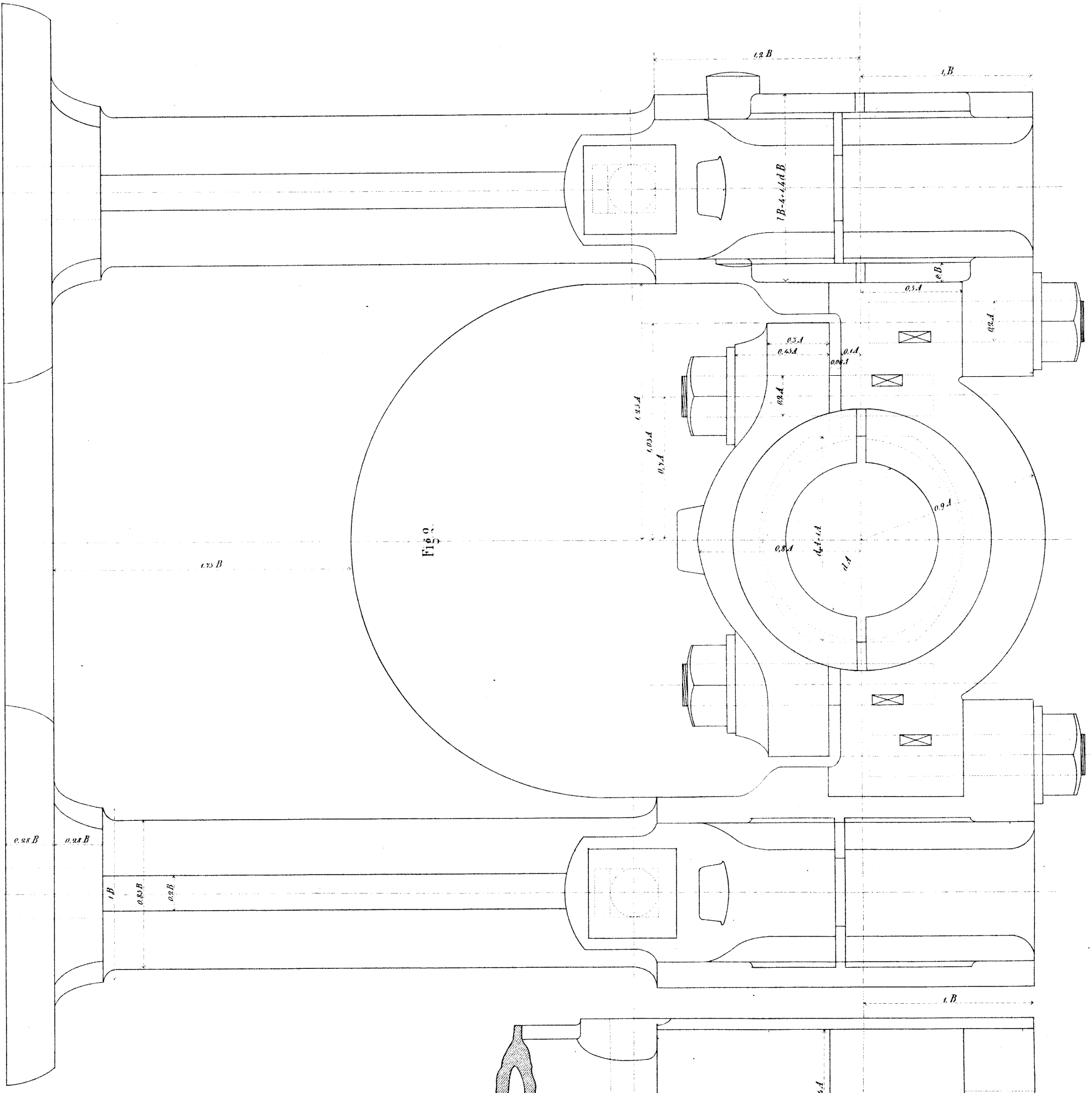
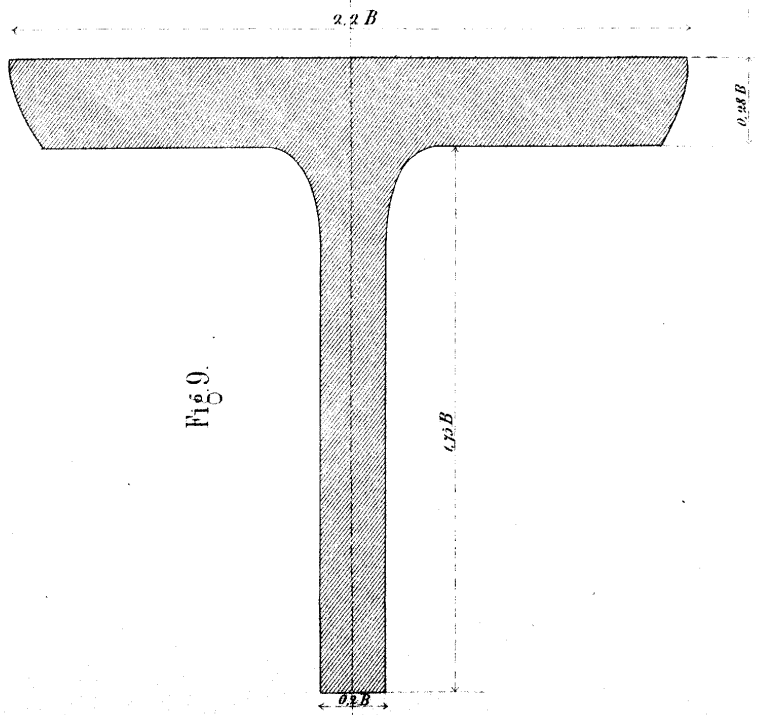
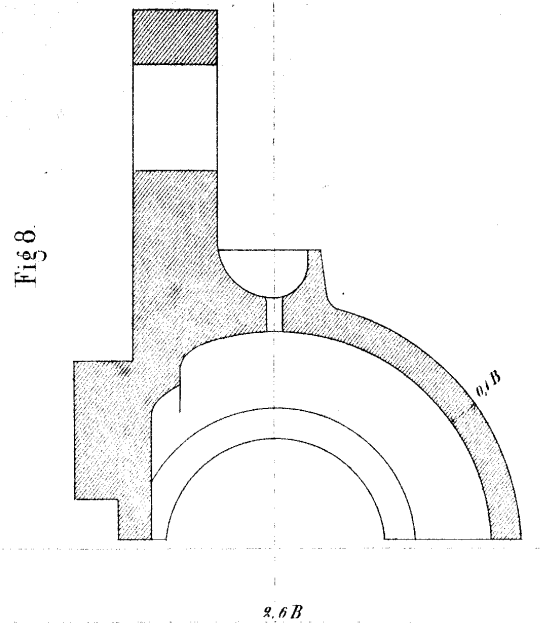
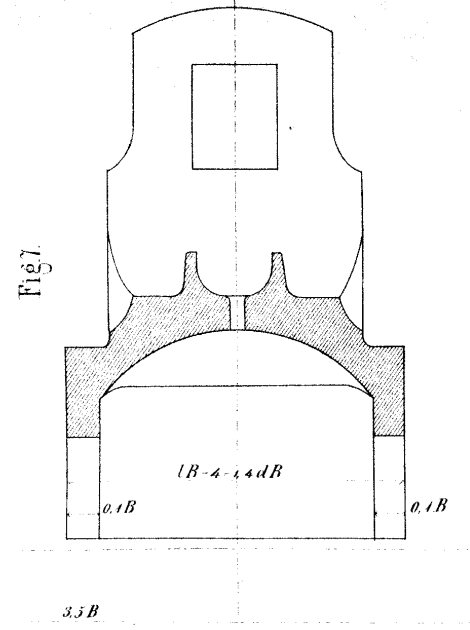
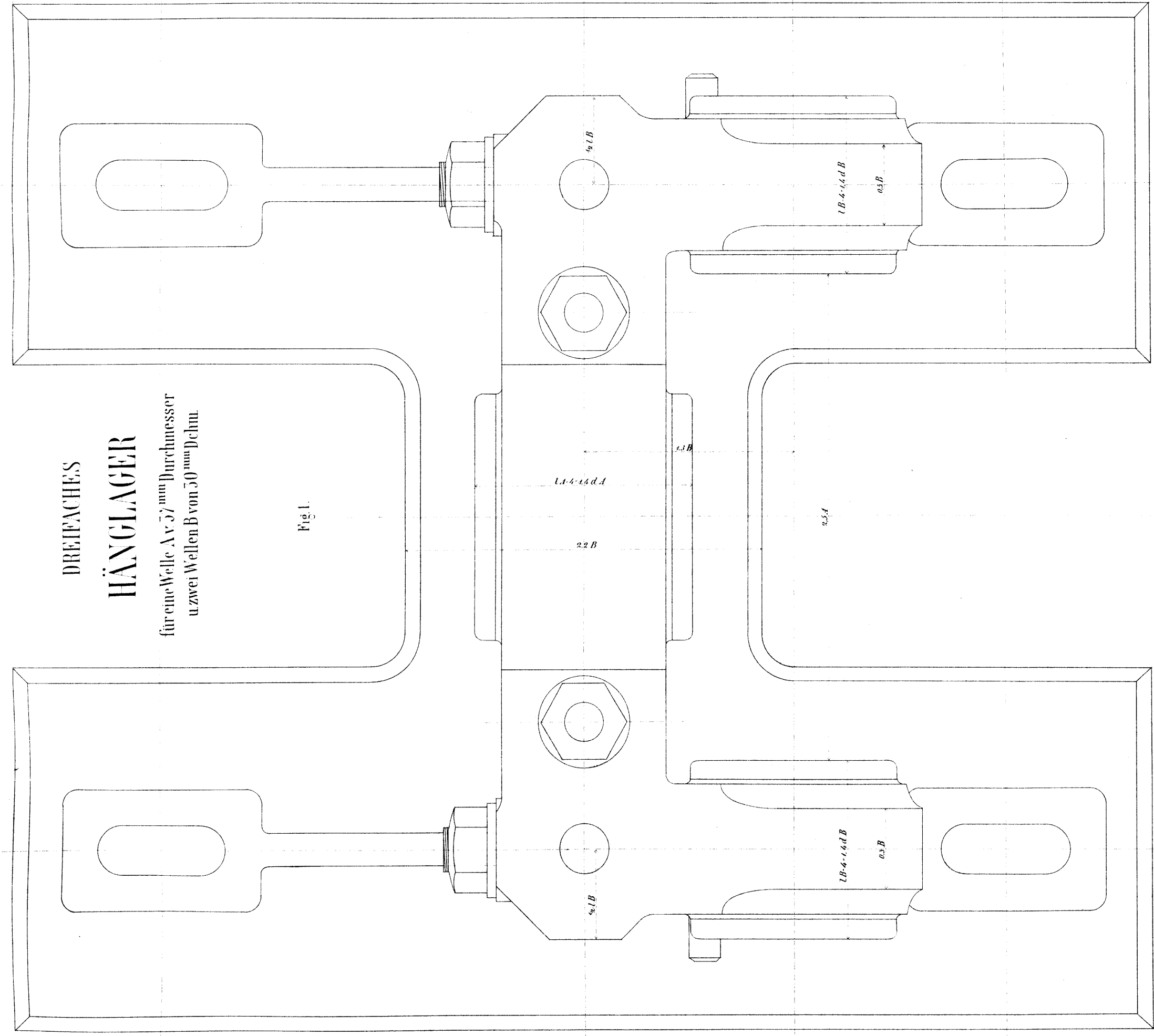
Fig 5





DREIFACHES HÄNGLAGER

für eine Welle A v. 57 mm Durchmesser
u. zwei Wellen B von 30 mm Dchn.



Verhältniss-Maßstab A zu dem mittleren grösseren Lager
 Verhältniss-Maßstab B zu den beiden seitlichen kleineren Lagern

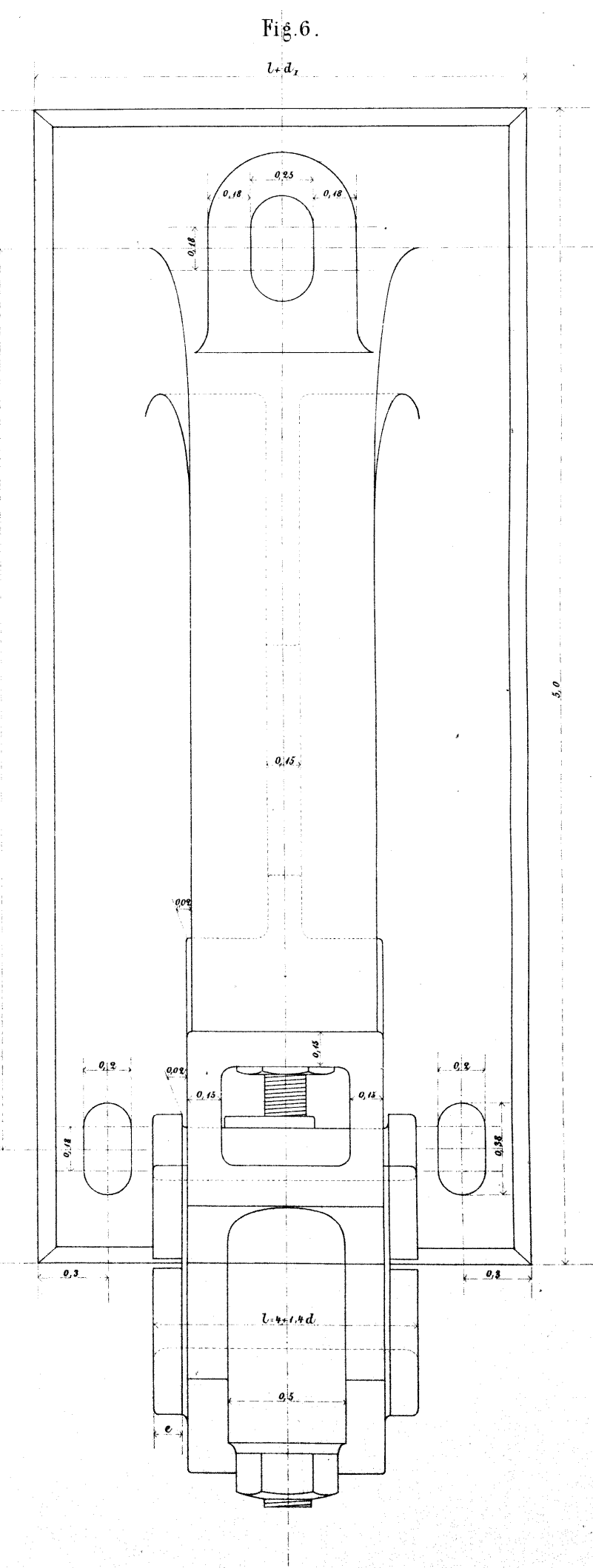
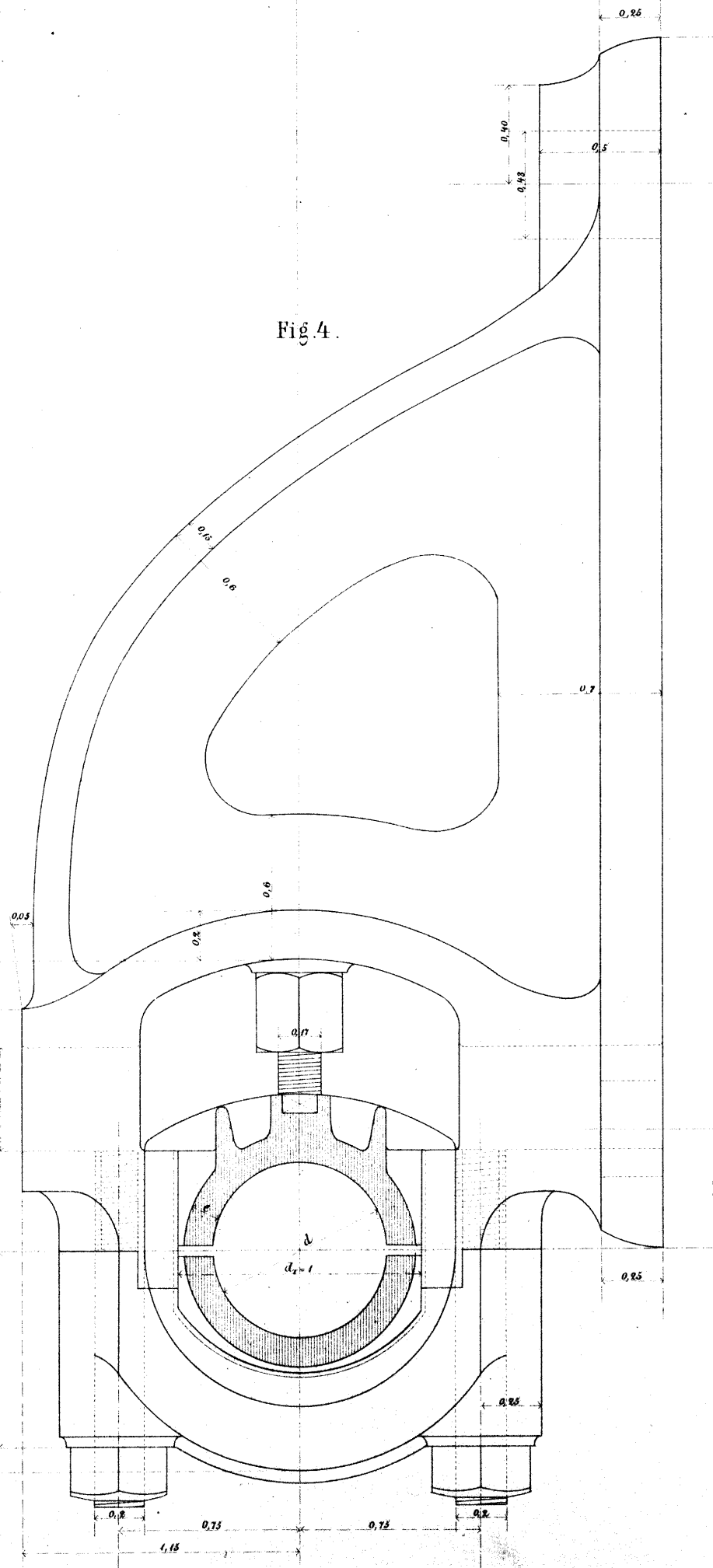
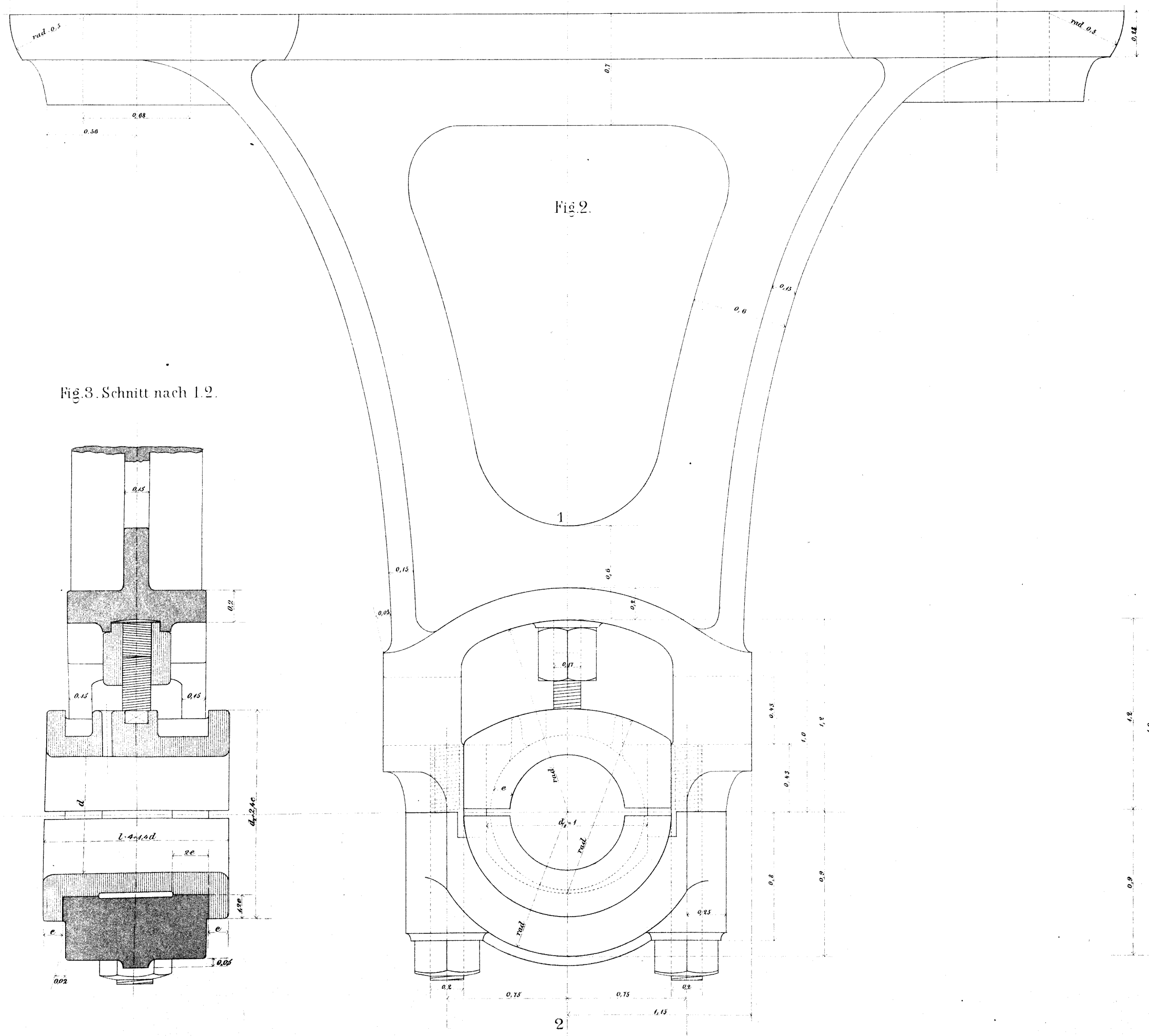
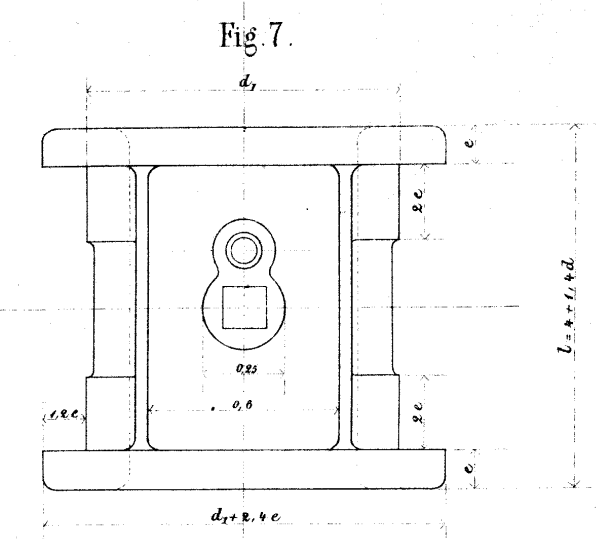
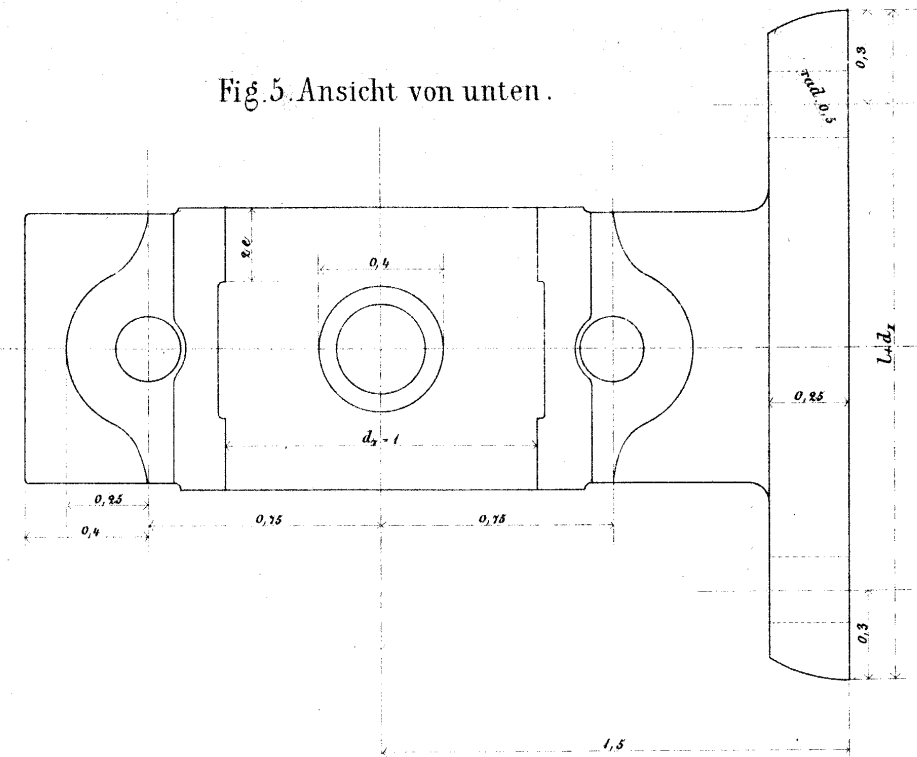
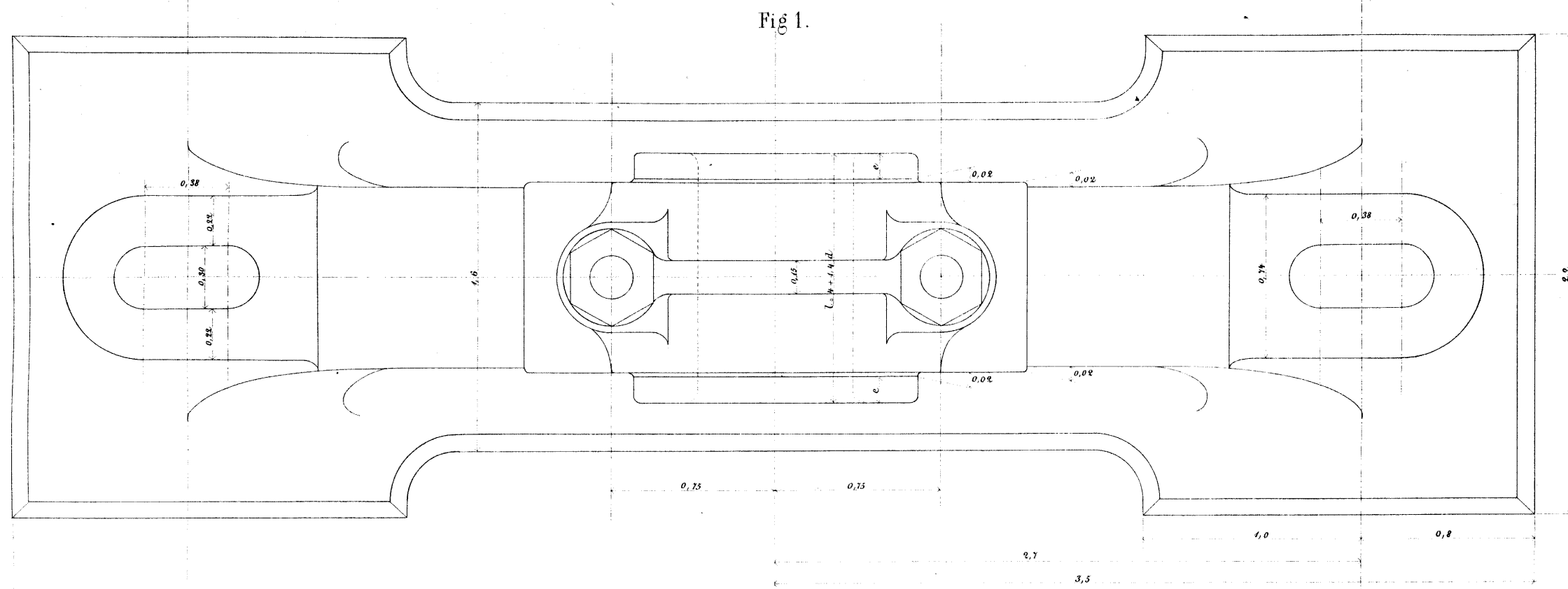
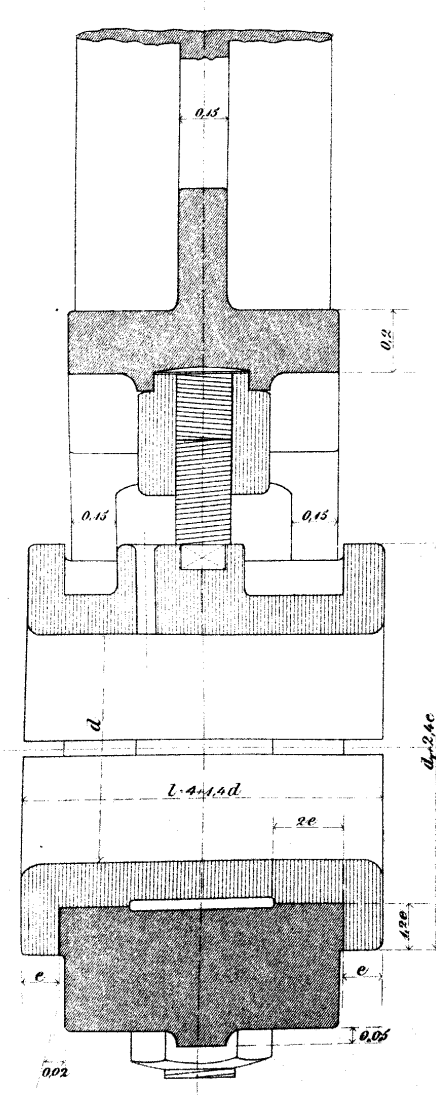


Fig 3. Schnitt nach 1.2.



Verhältniss-Maßstab.



Fig. 2.

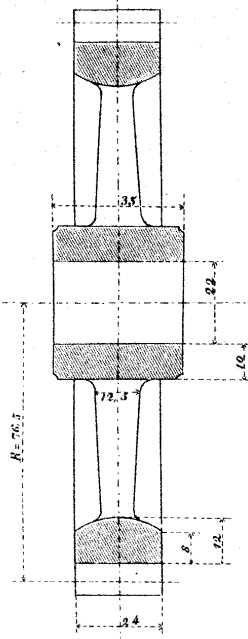


Fig. 1.

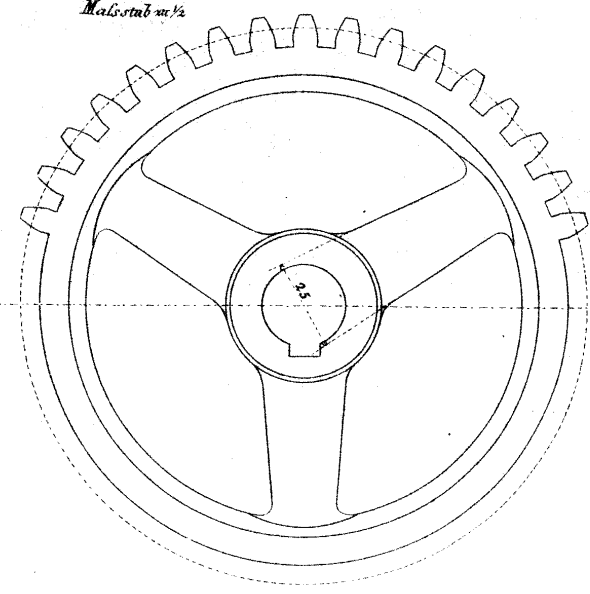


Fig. 3. nat. Gr.

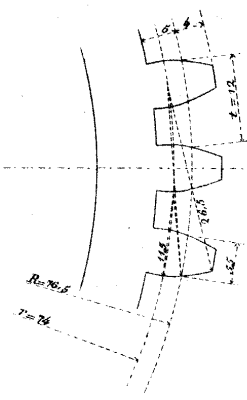


Fig. 6. nat. Gr.

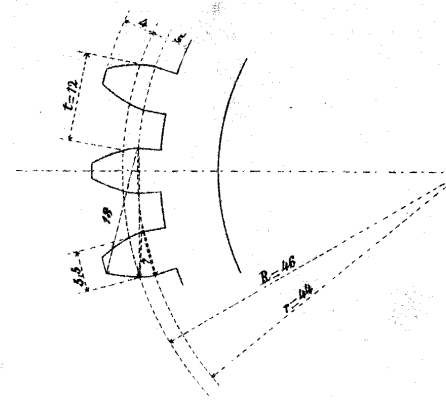


Fig. 4.

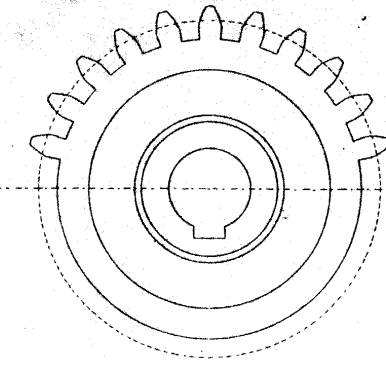


Fig. 5.

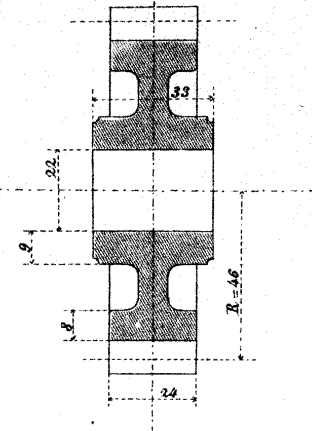


Fig. 7.

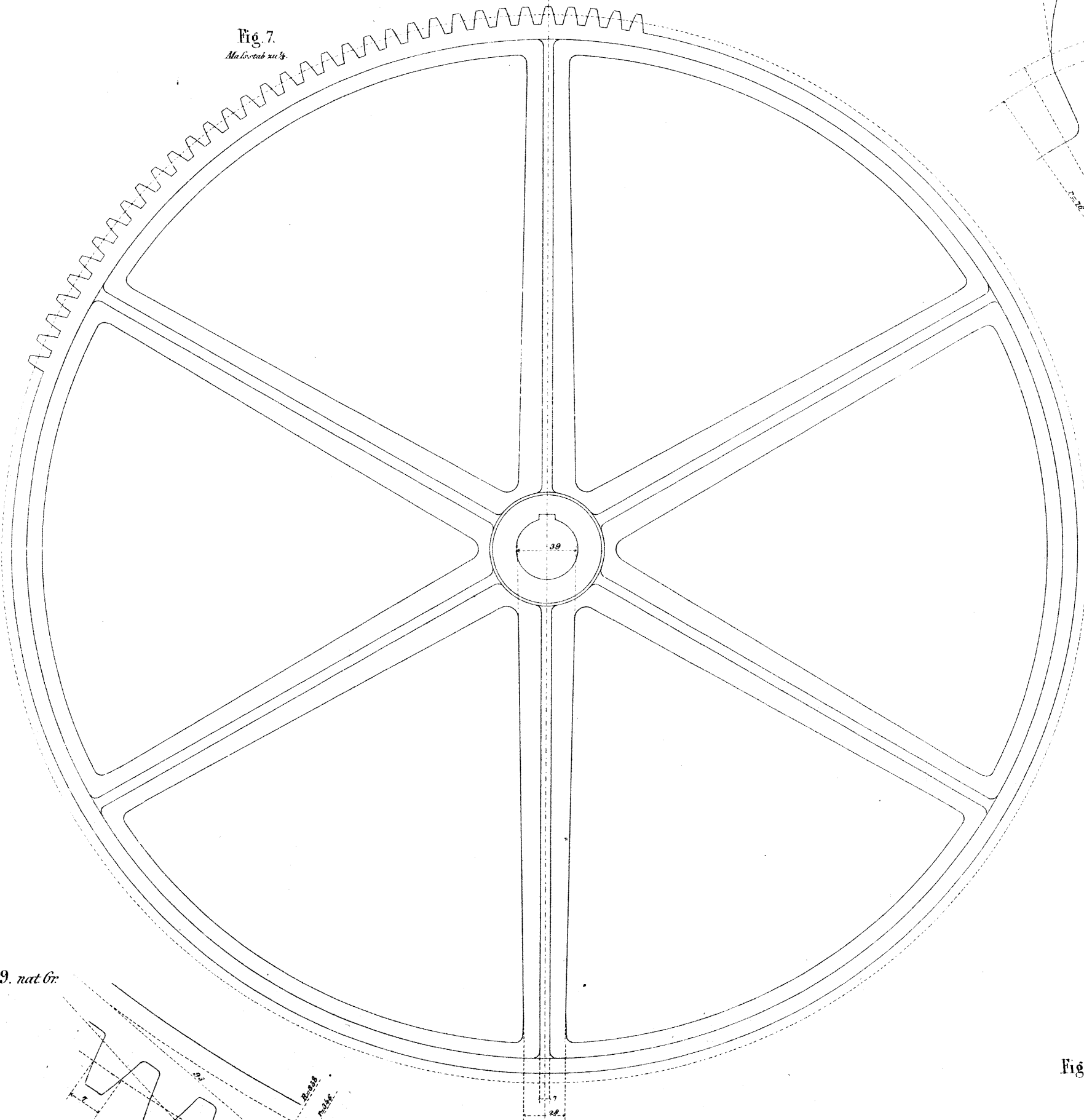


Fig. 15. nat. Gr.

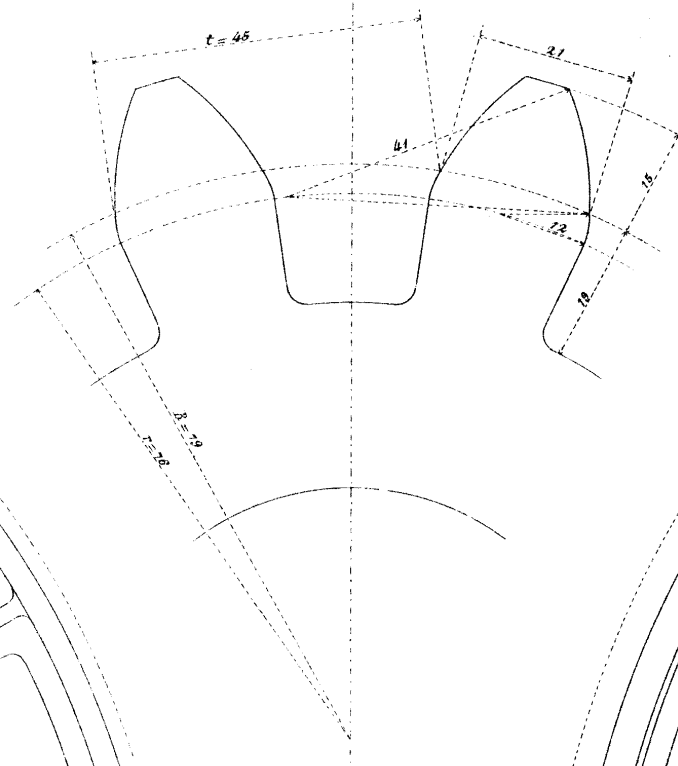


Fig. 10.

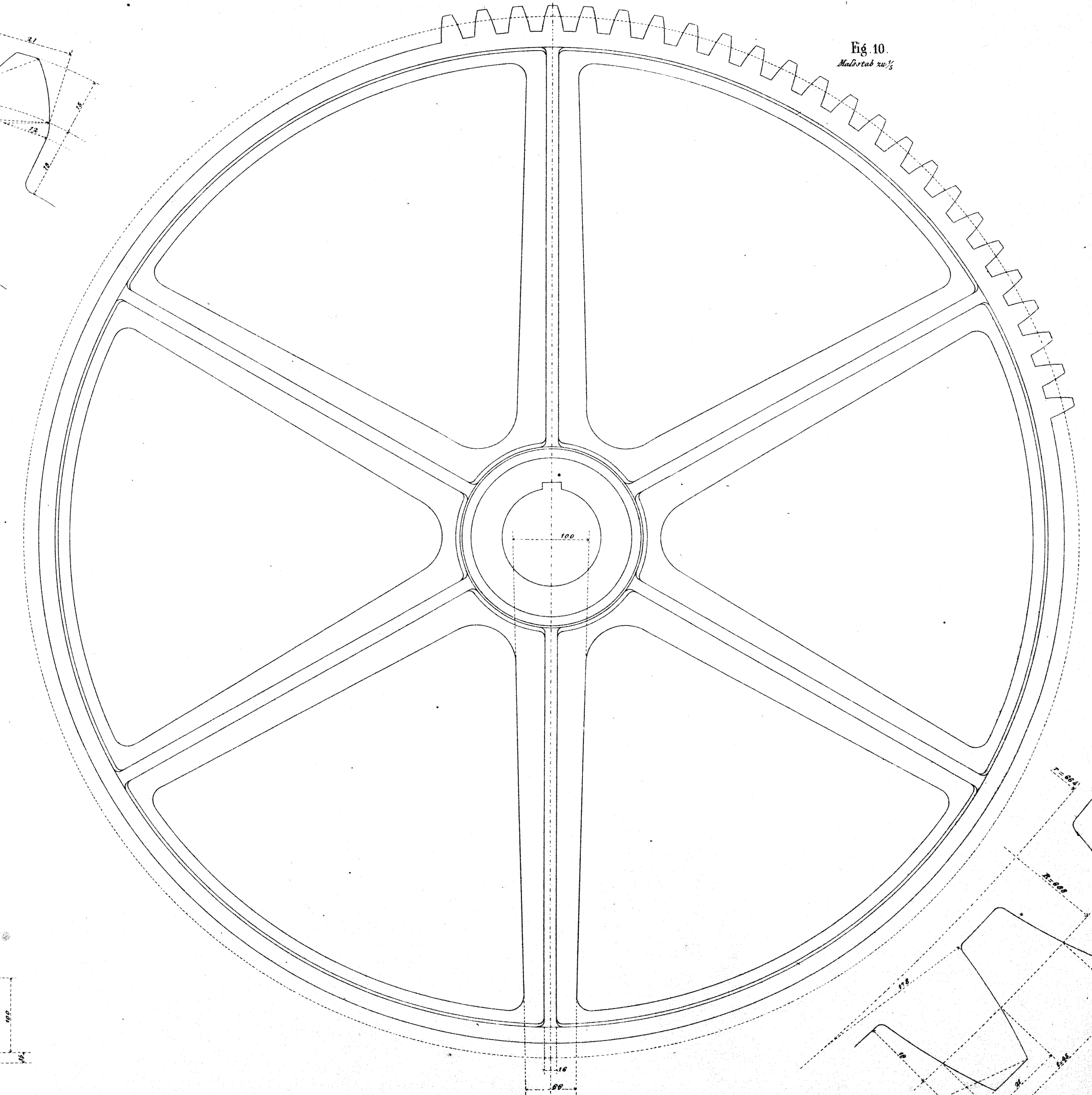


Fig. 13.

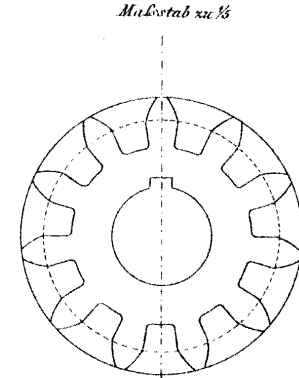


Fig. 14.

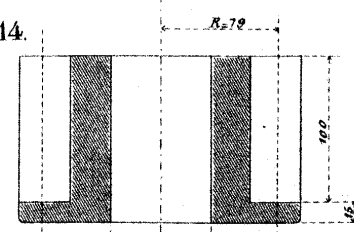


Fig. 9. nat. Gr.

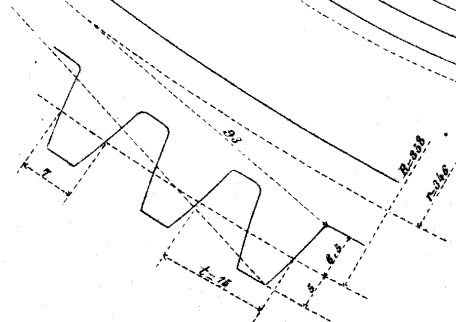


Fig. 12.

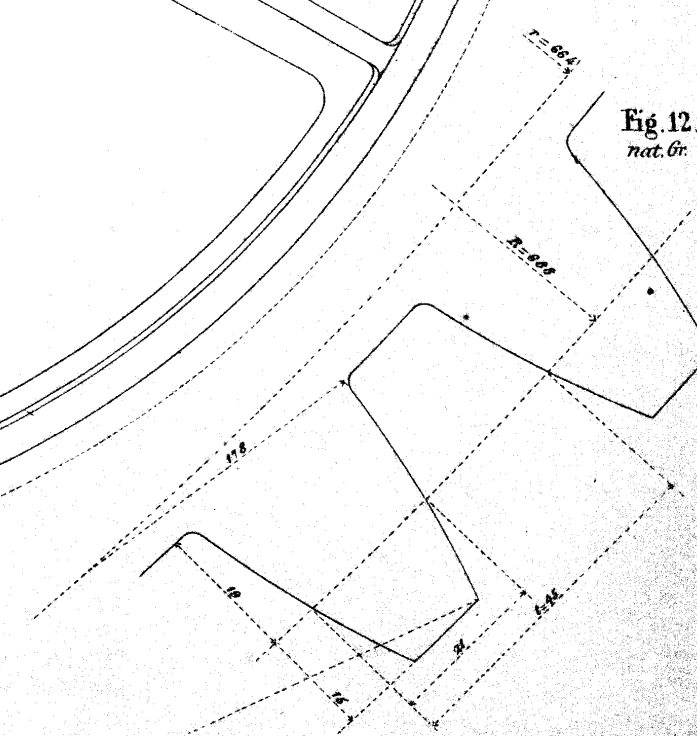


Fig. 8.

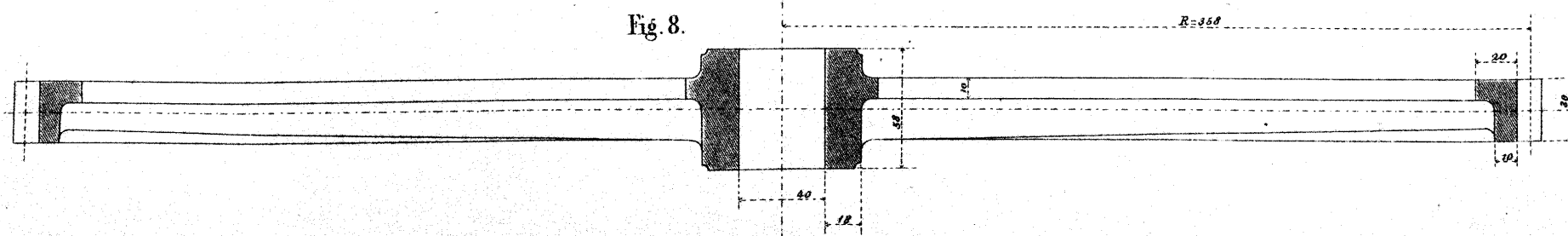
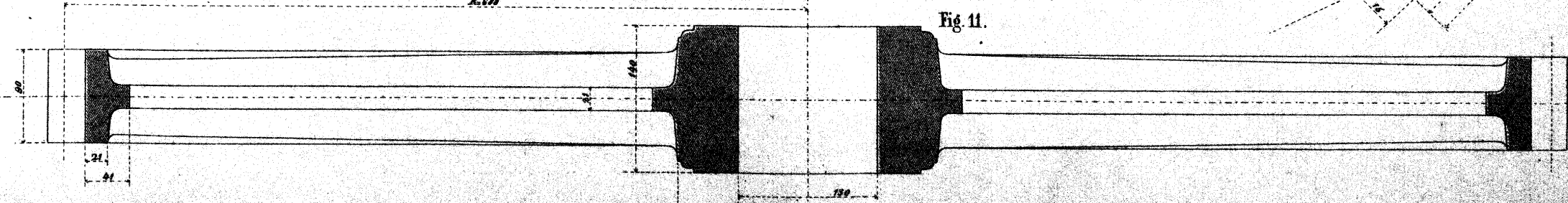


Fig. 11.



ZAHNRÄDER.

Fig. 1.

Malsstab 1:10

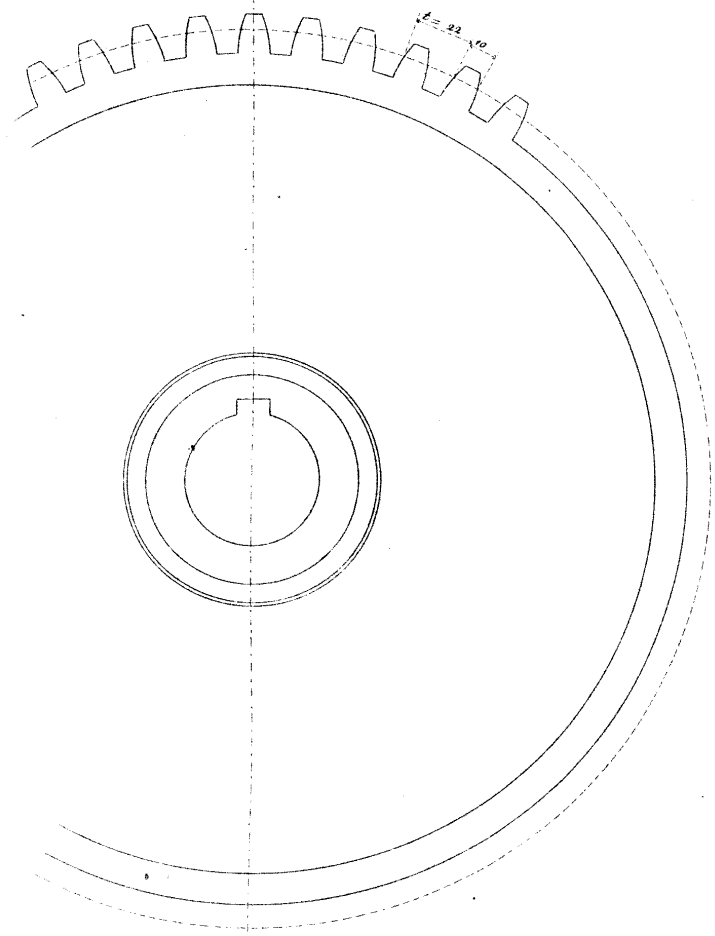


Fig. 3.

Malsstab 1:10

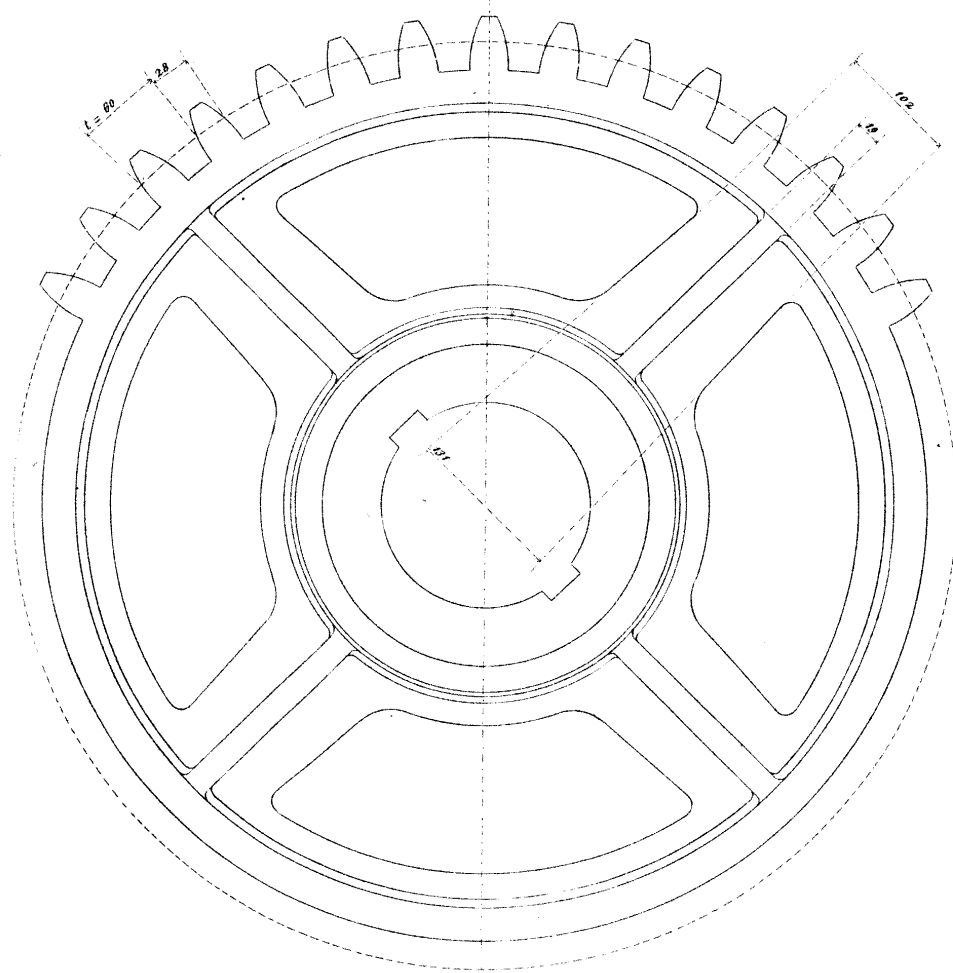


Fig. 7.

Malsstab 1:10

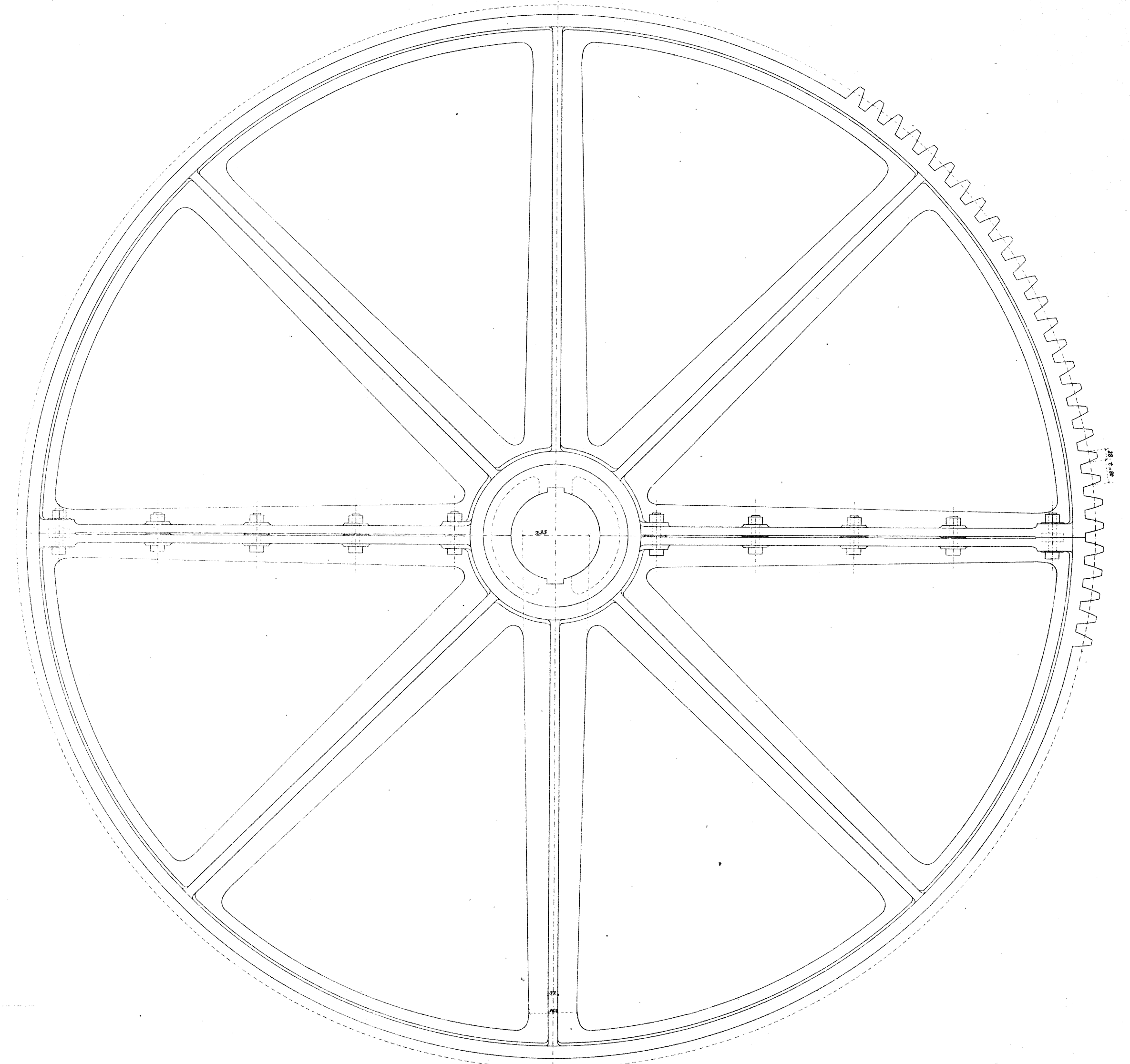


Fig. 2.

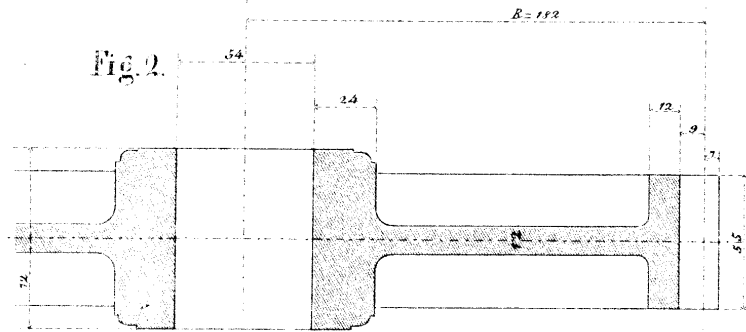


Fig. 4.

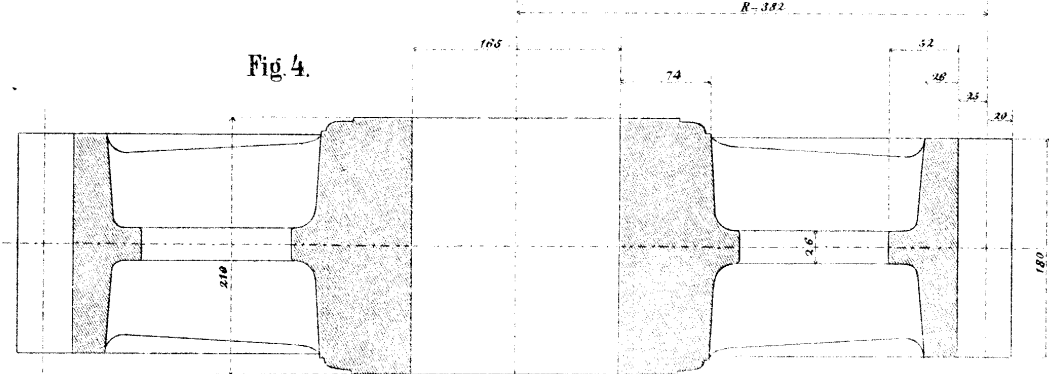


Fig. 6.

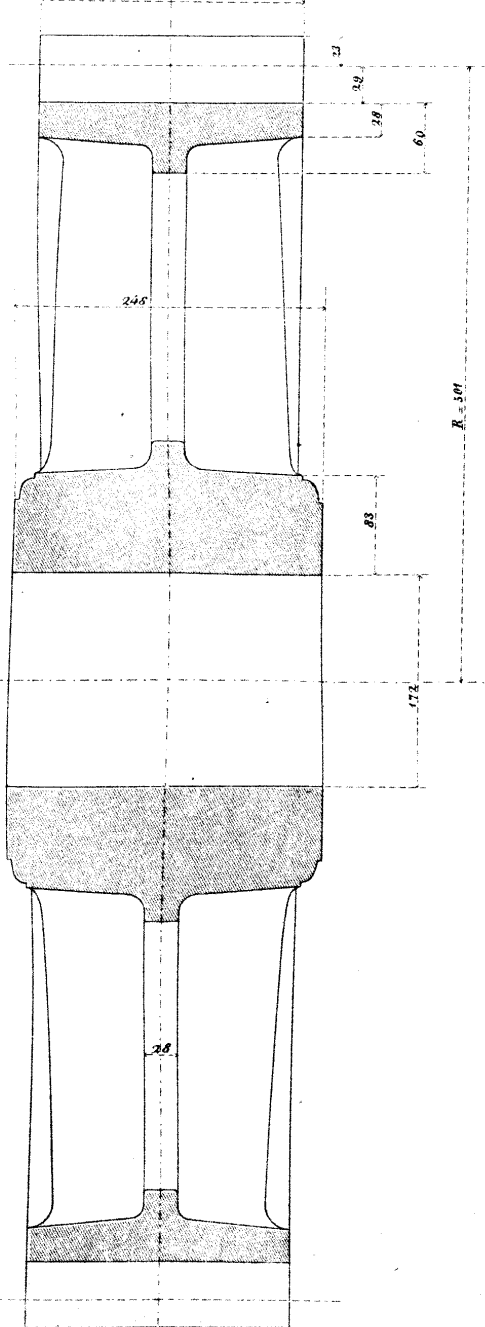


Fig. 5.

Malsstab 1:10

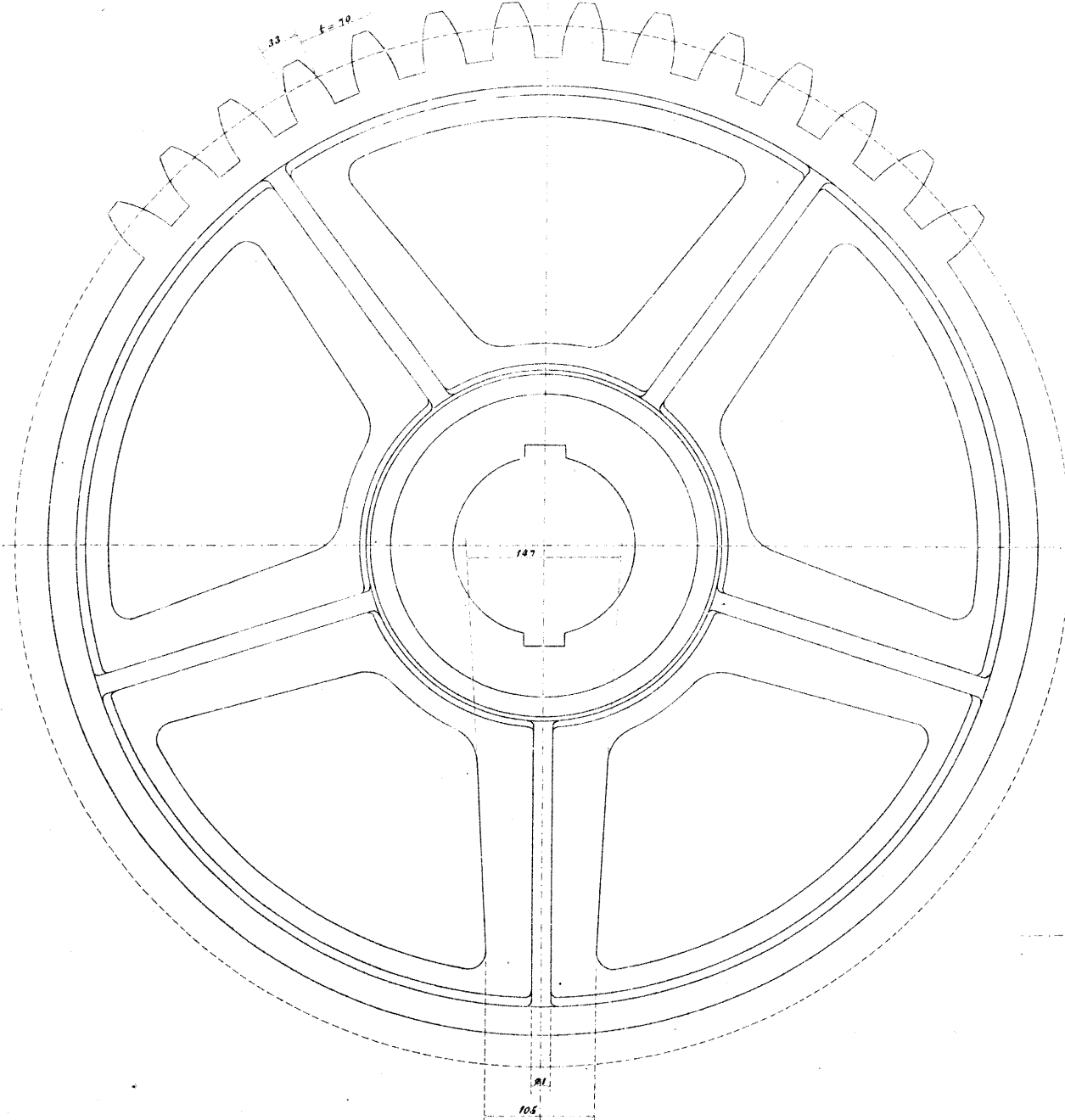
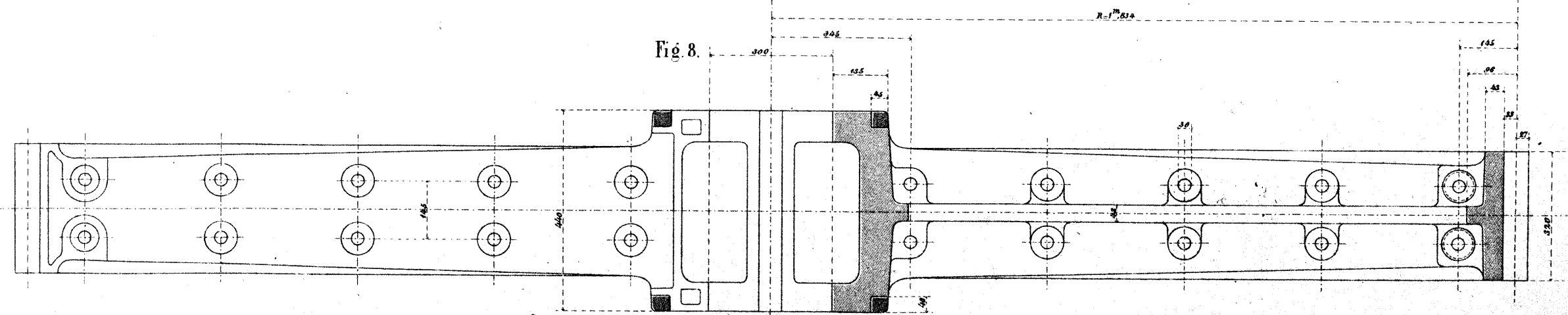
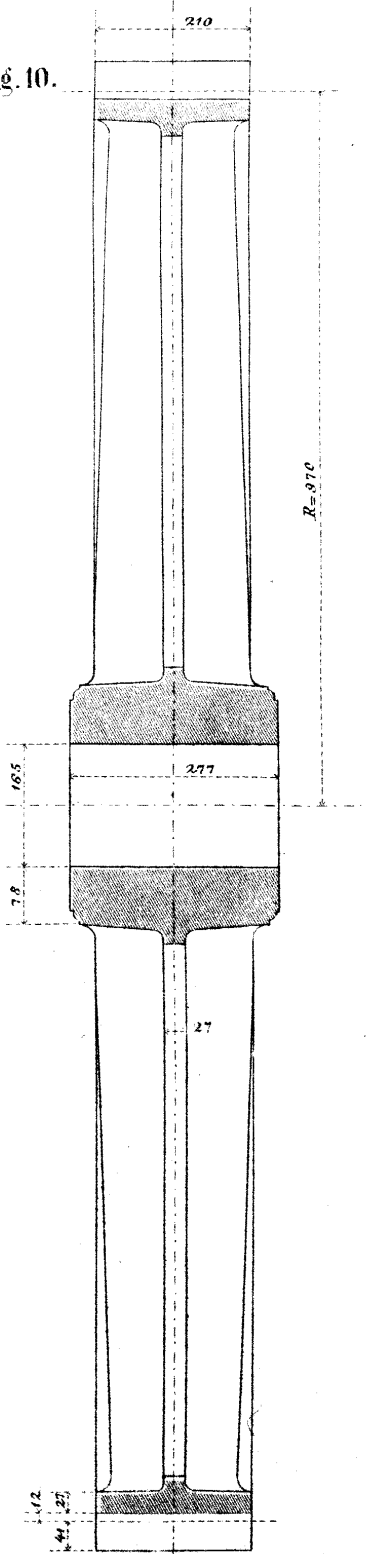
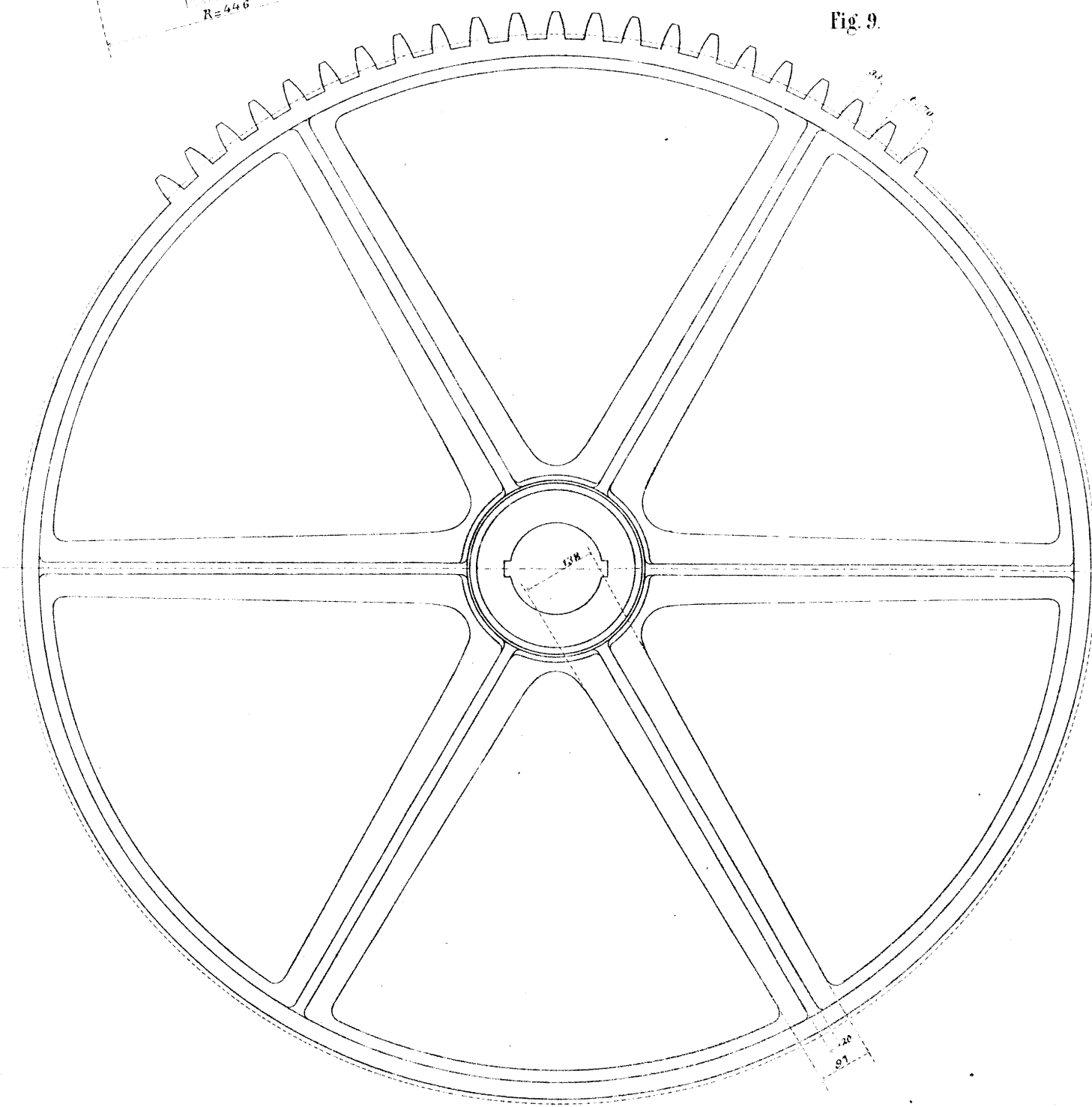
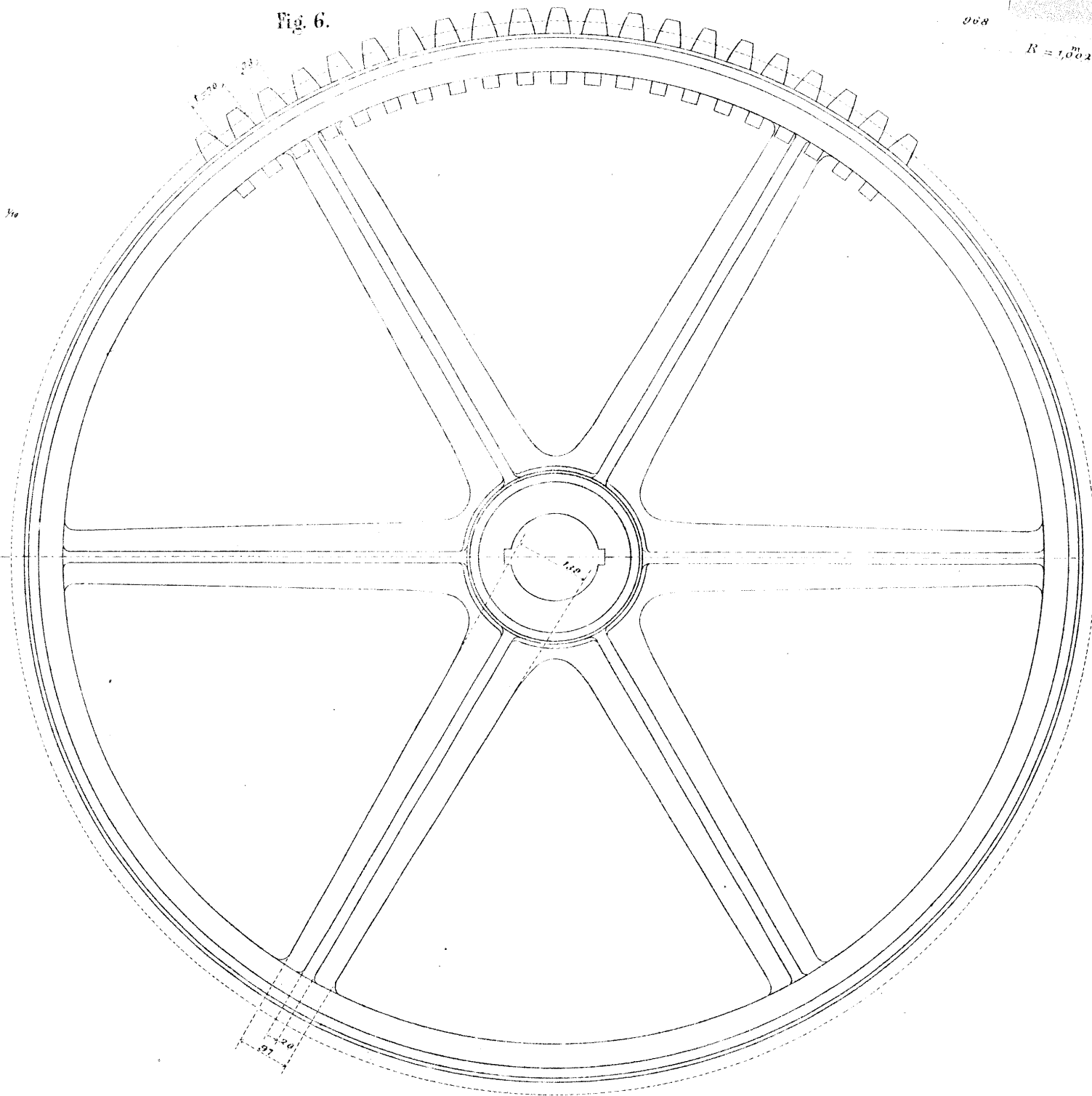
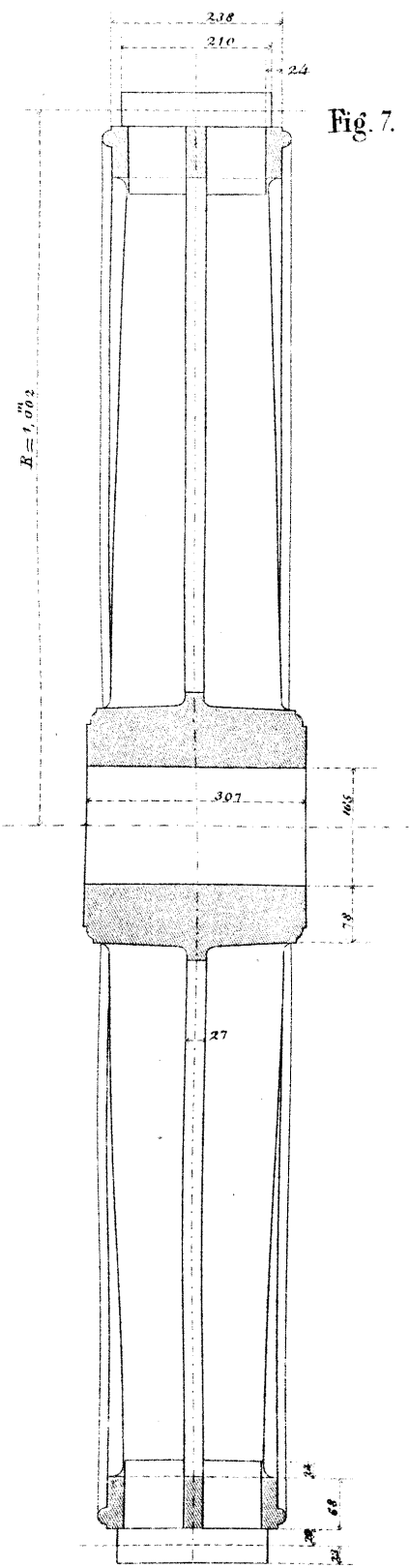
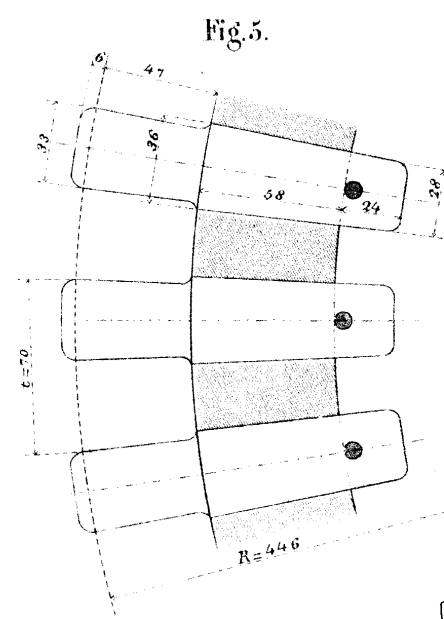
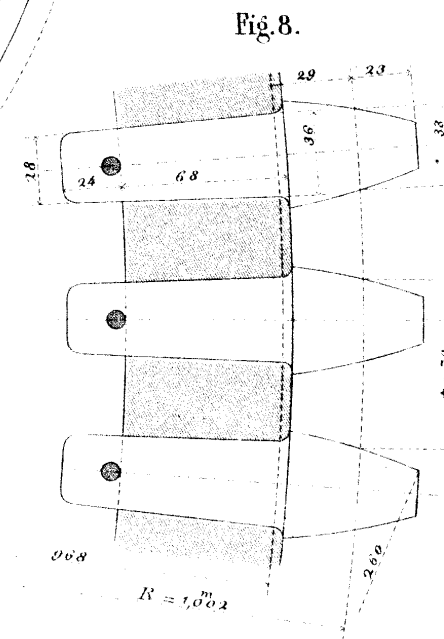
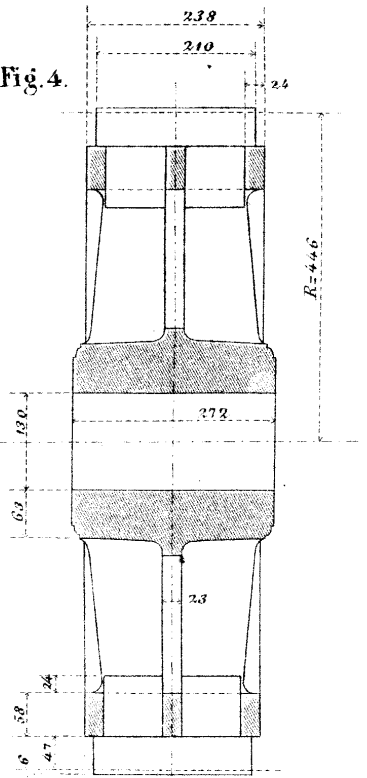
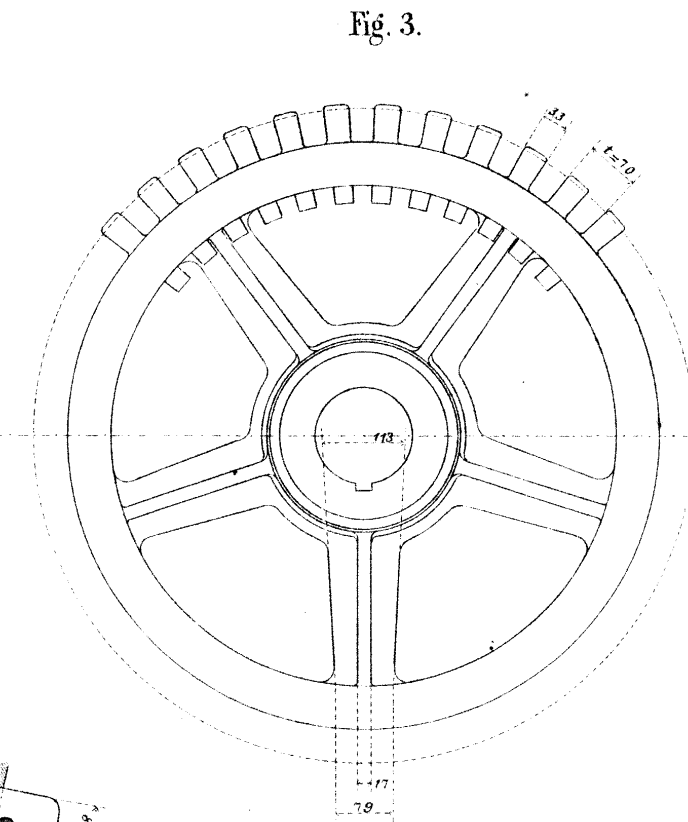
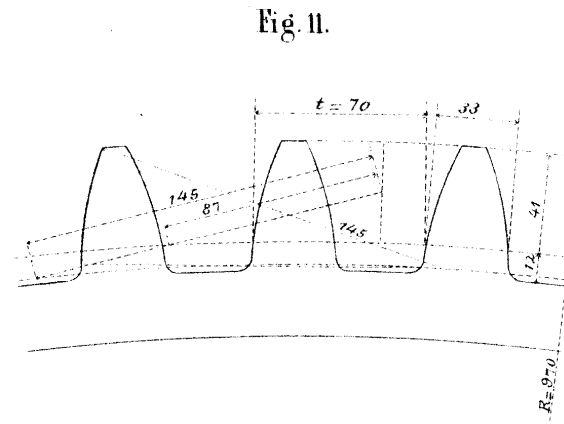
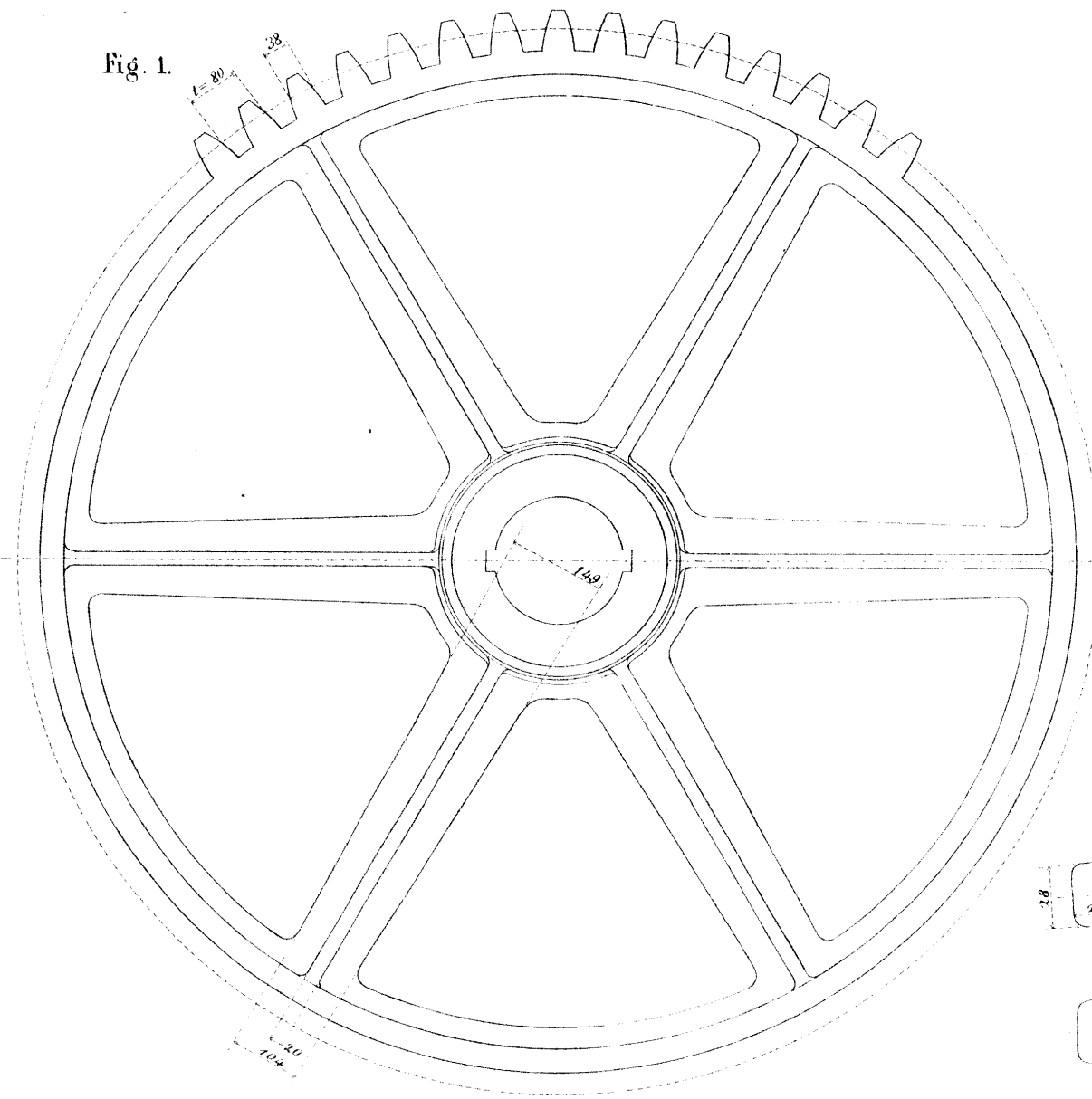
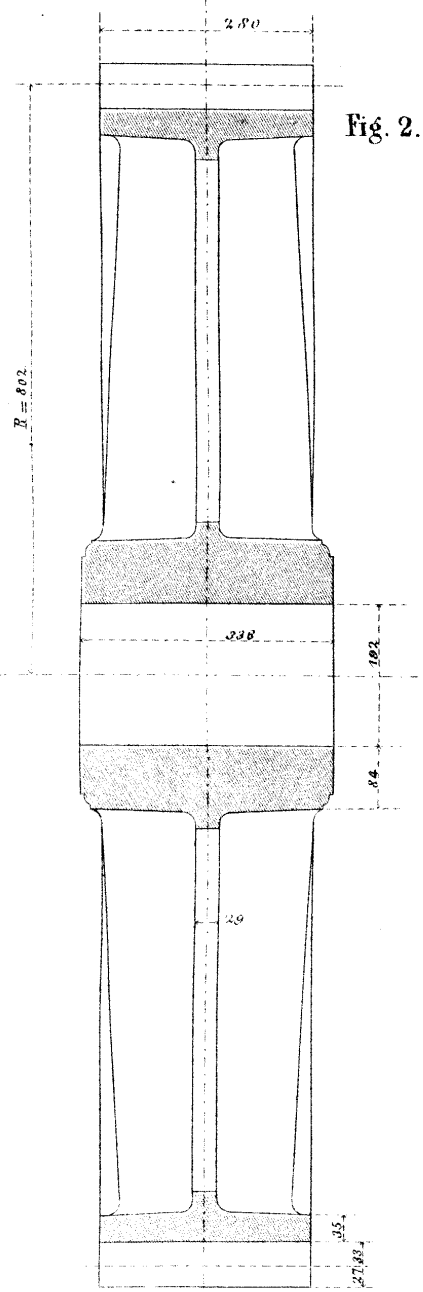


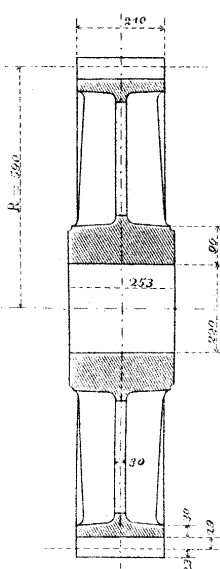
Fig. 8.





ZAHNRÄDER.

Fig. 2.



Maßstab zu No.

Fig. 1.

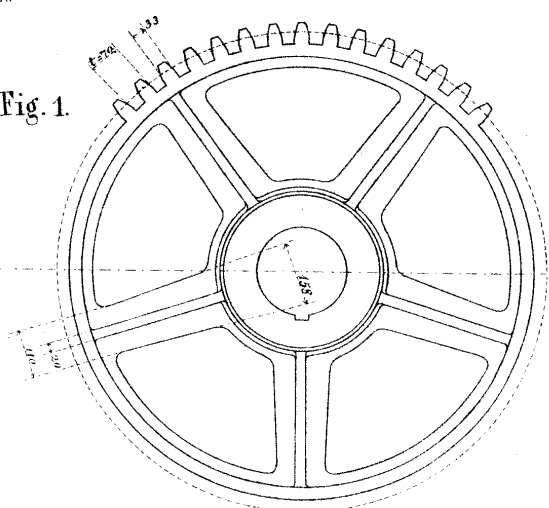
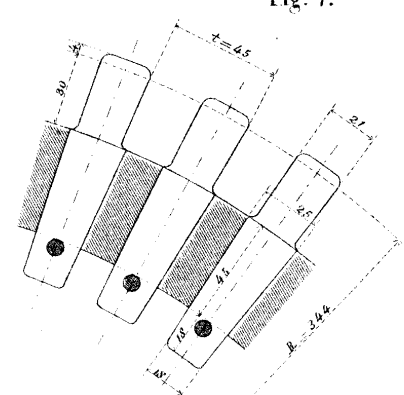
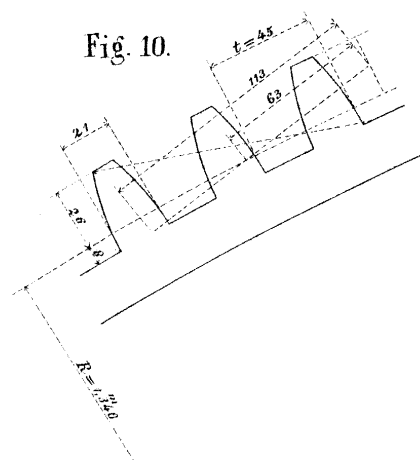


Fig. 7.



Maßstab zu No.

Fig. 10.



Maßstab zu No.

Fig. 5.

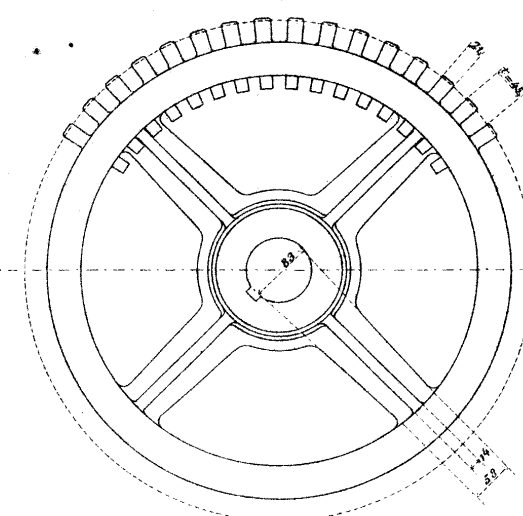


Fig. 6.

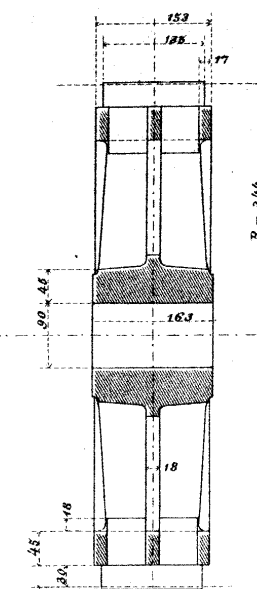


Fig. 3.

Maßstab zu No.

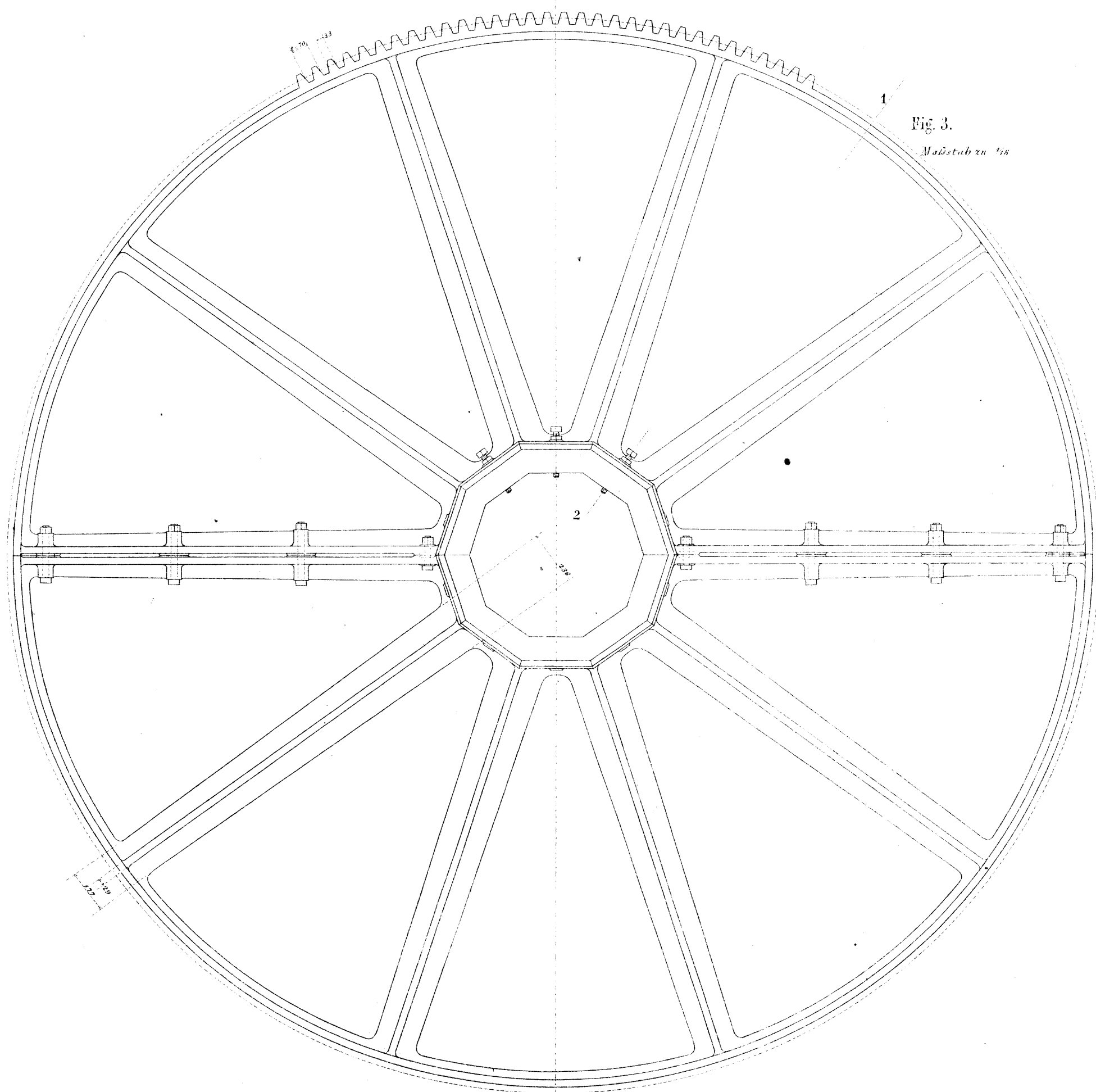


Fig. 8.

Maßstab zu No.

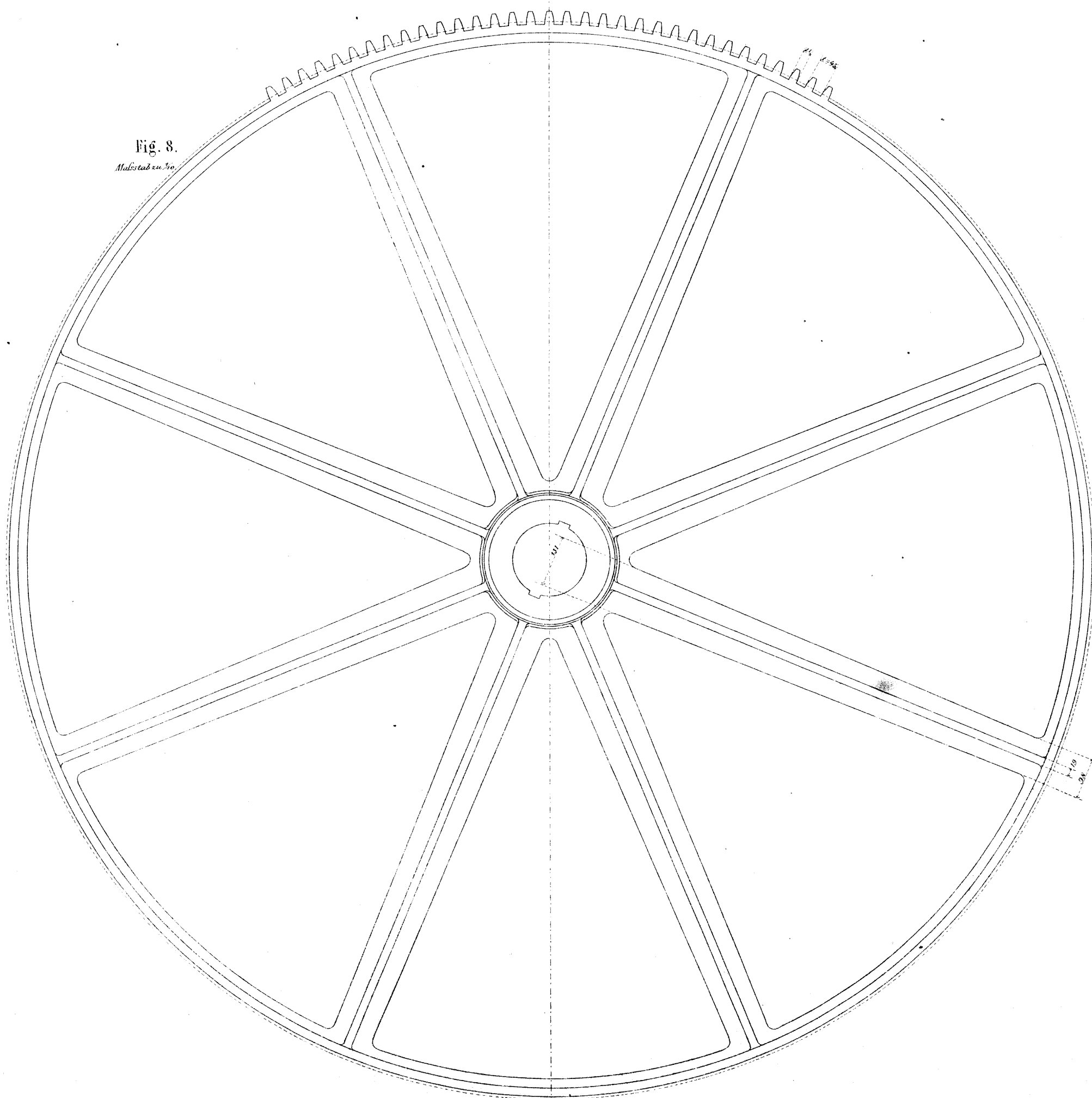


Fig. 4.

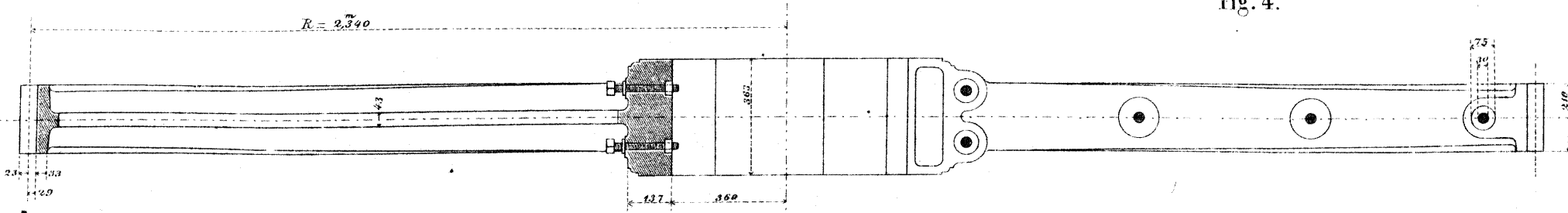
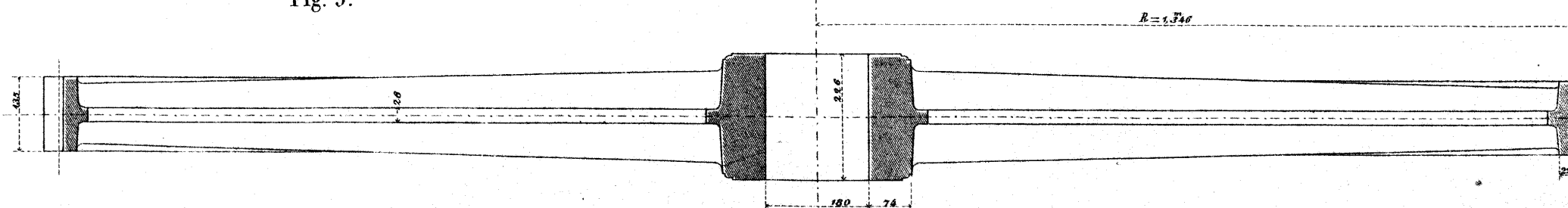


Fig. 9.



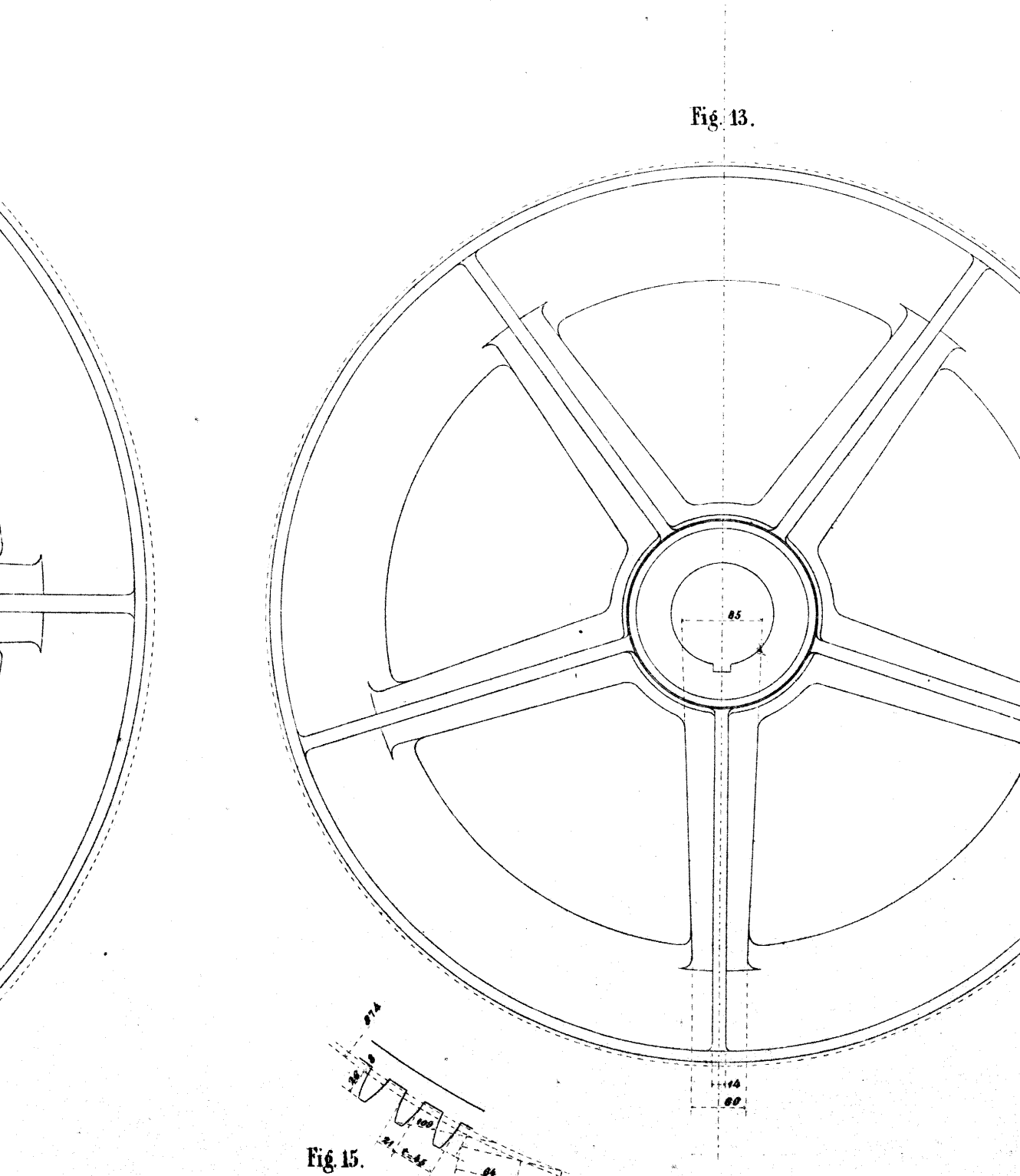
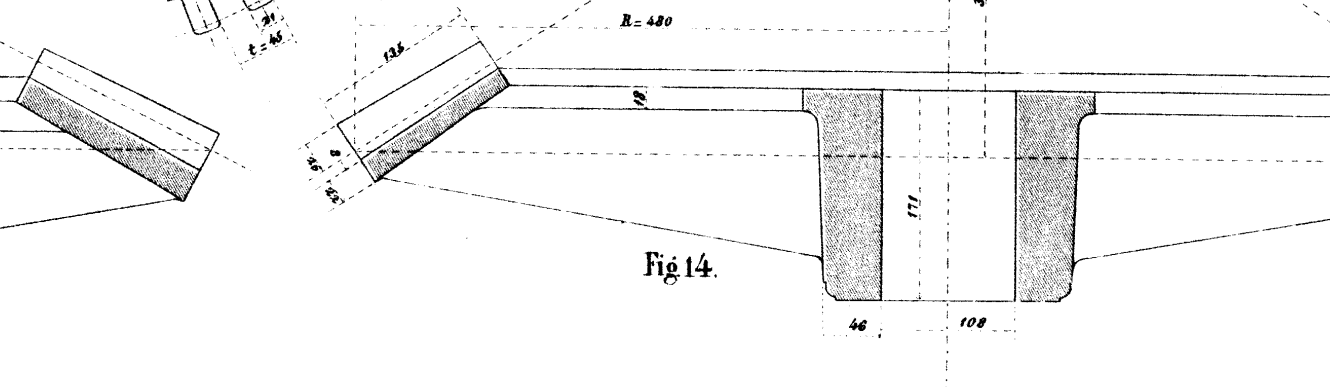
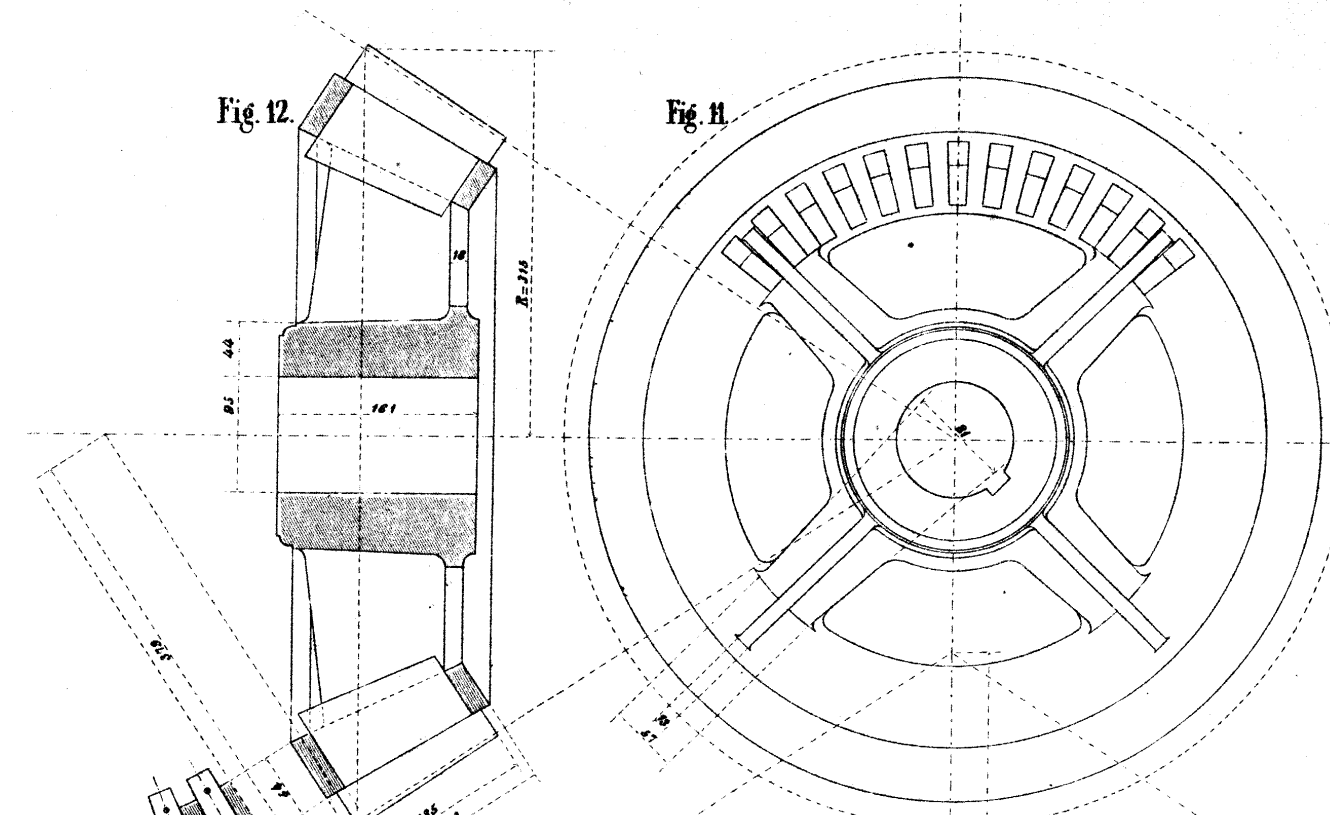
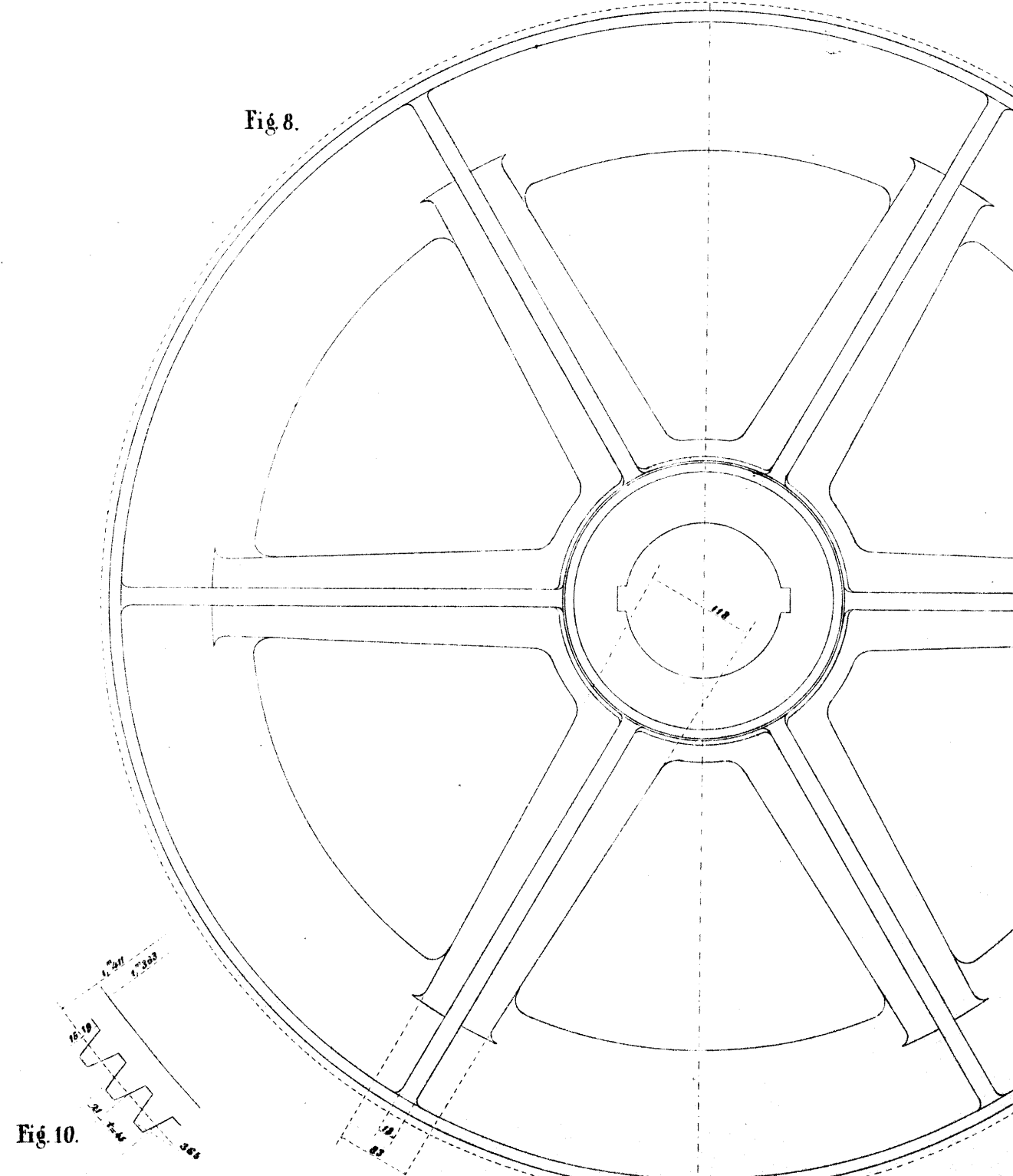
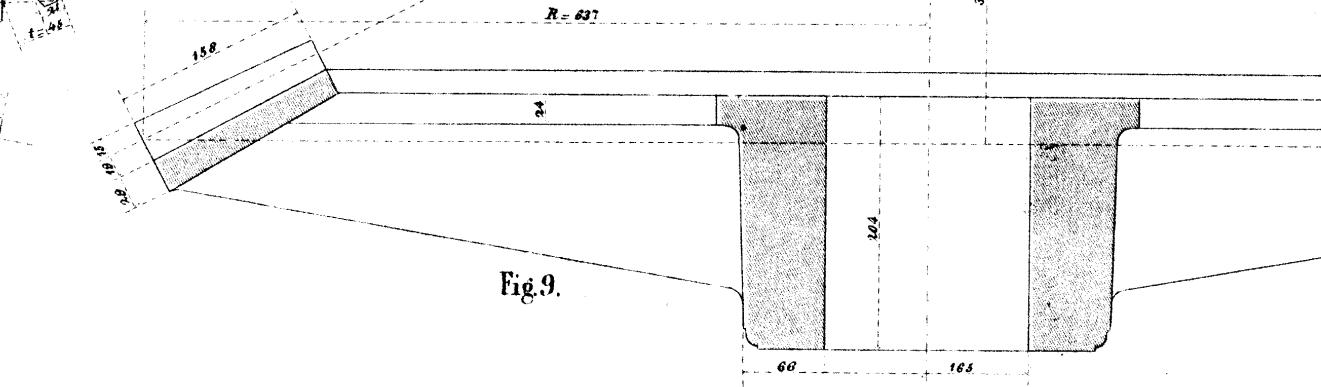
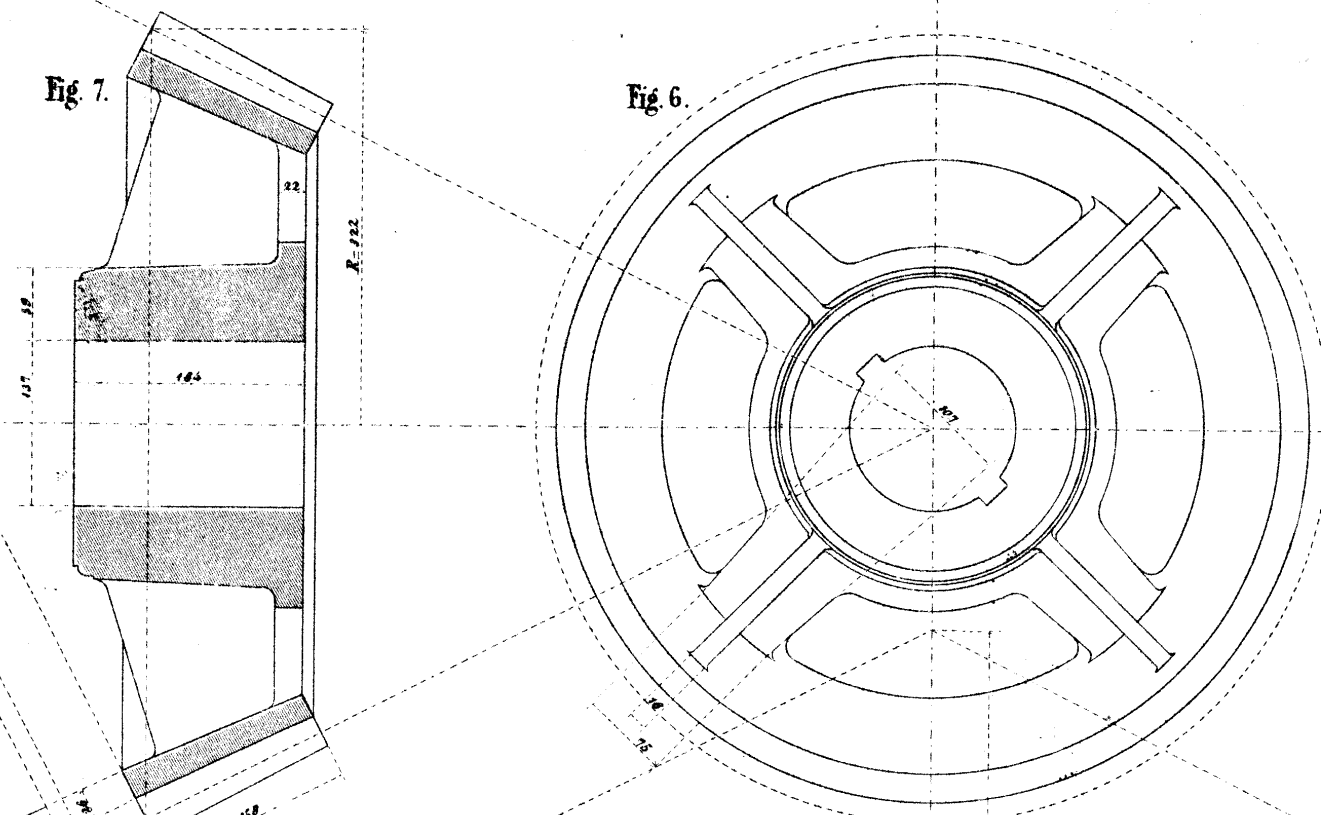
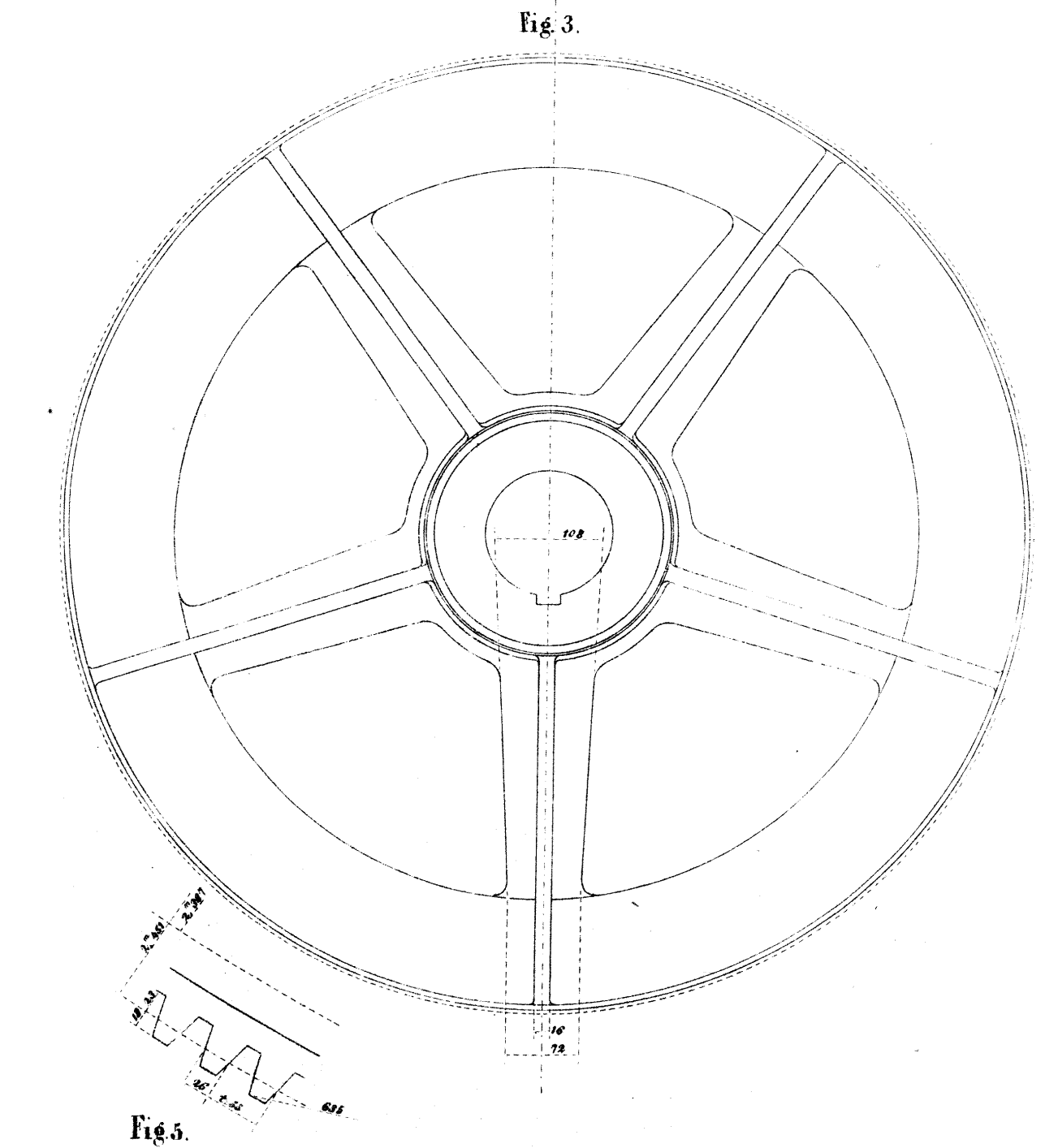
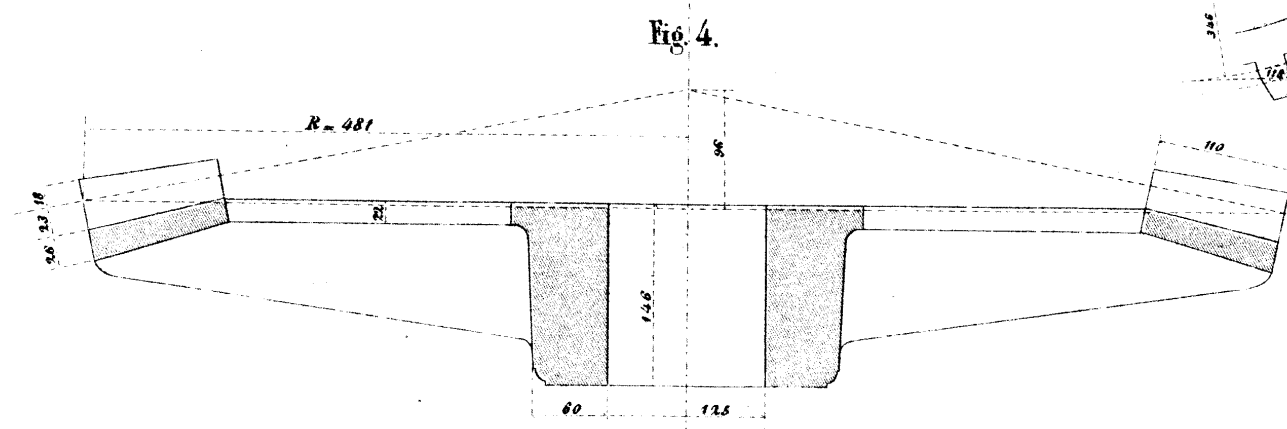
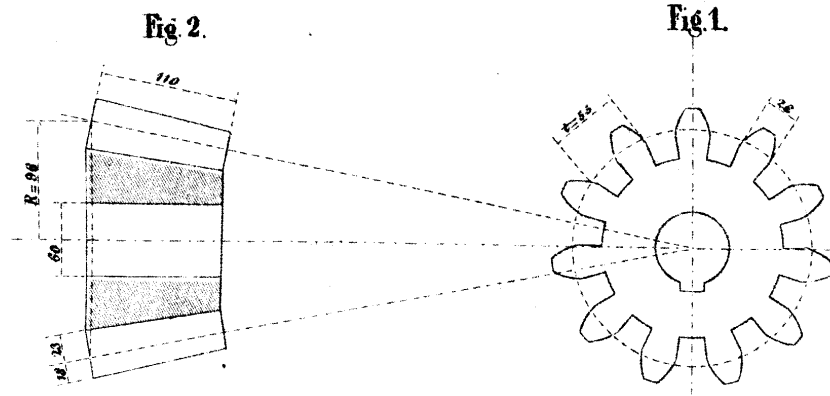


Fig. 1.
Maßstab zu '3.

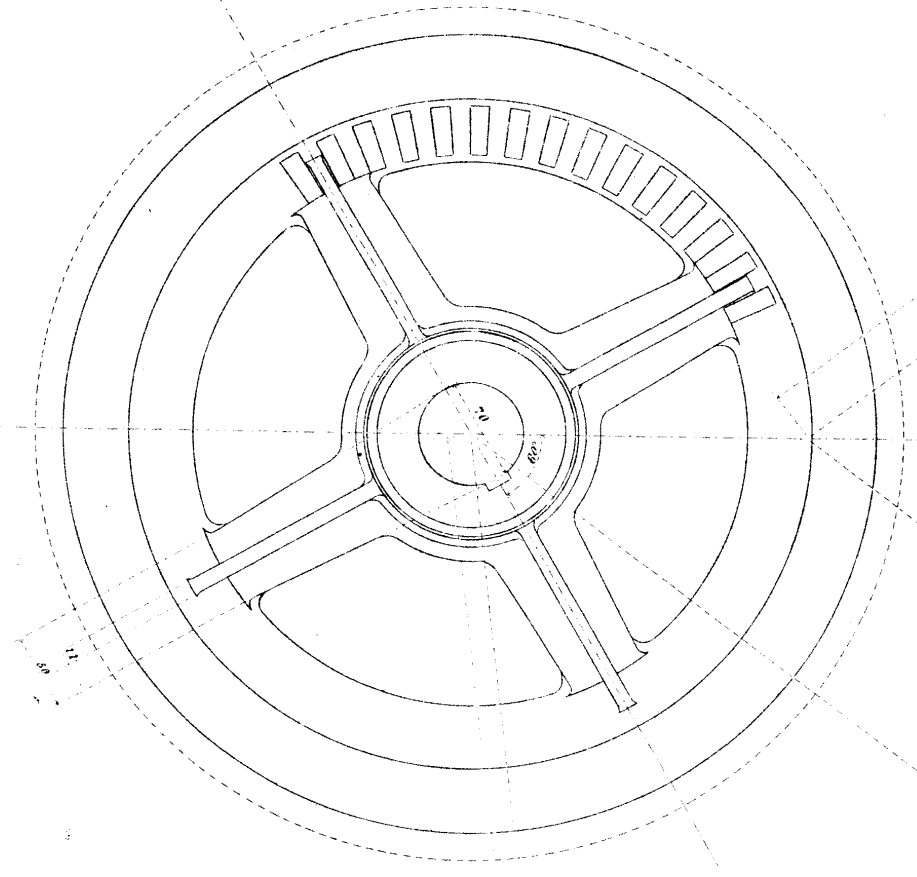


Fig. 5.

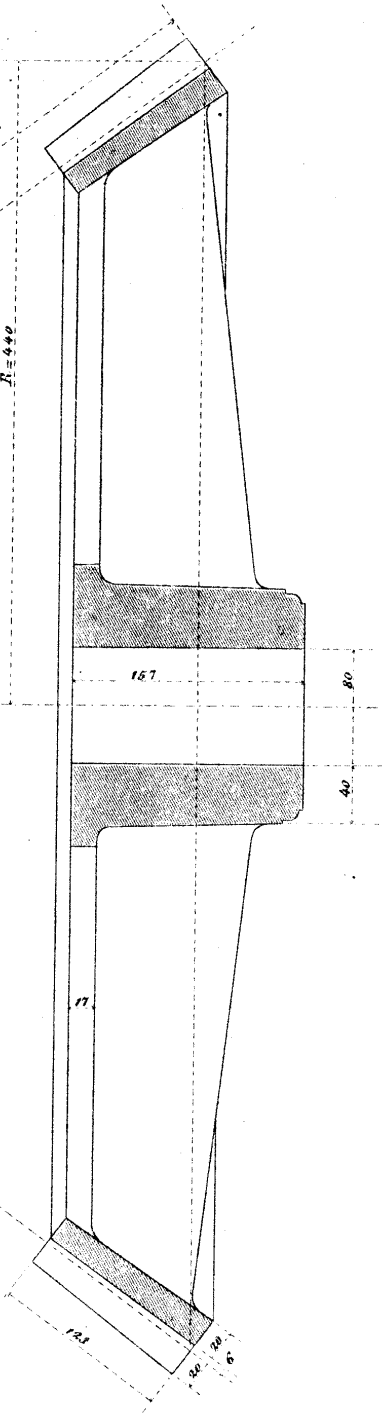


Fig. 4.

Maßstab zu '3.

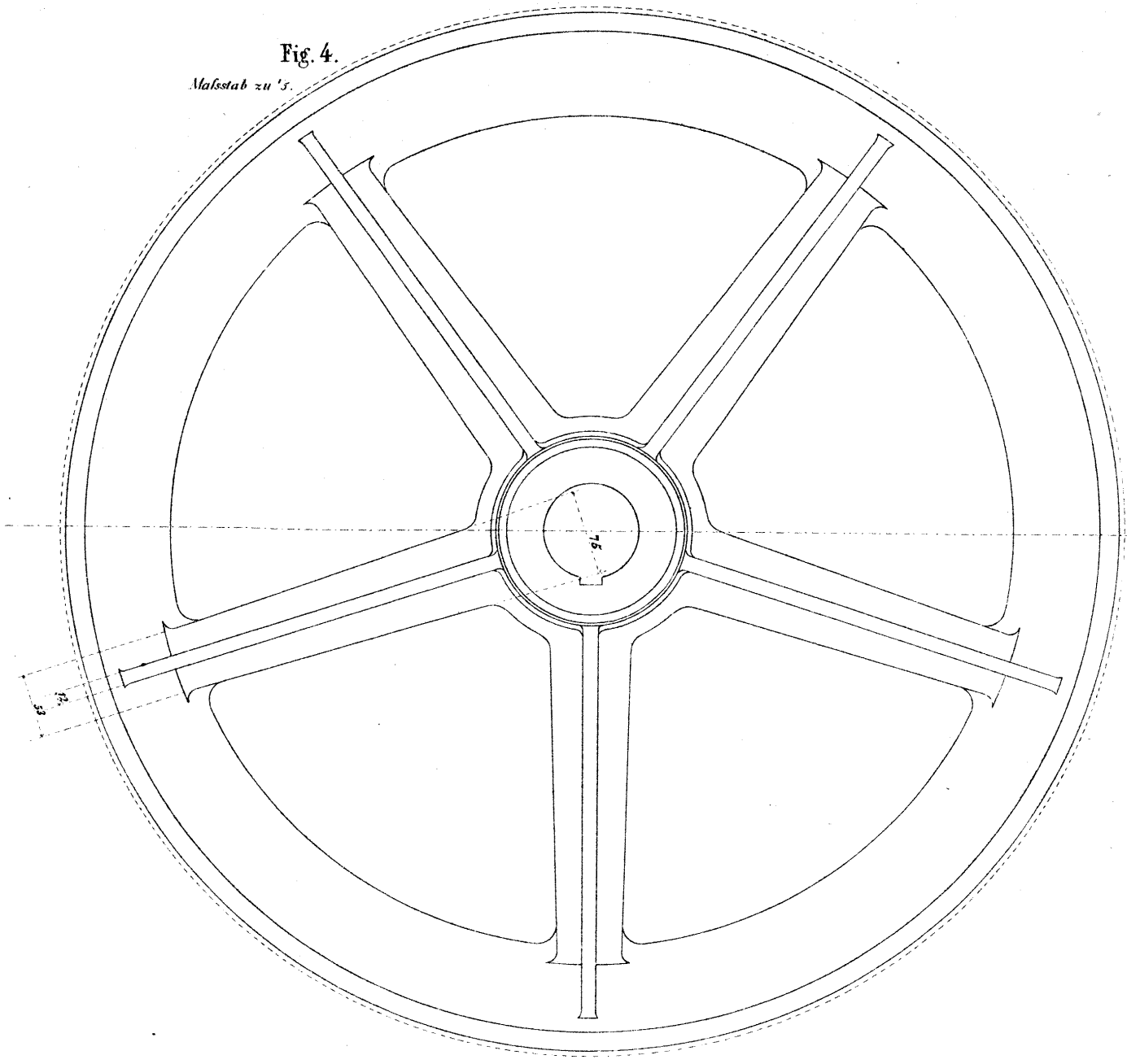


Fig. 6.

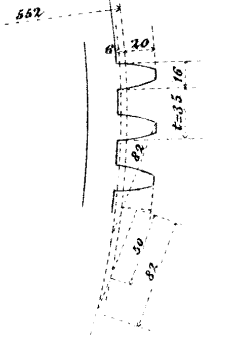


Fig. 3.

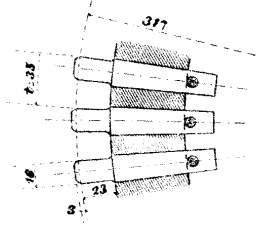


Fig. 2.

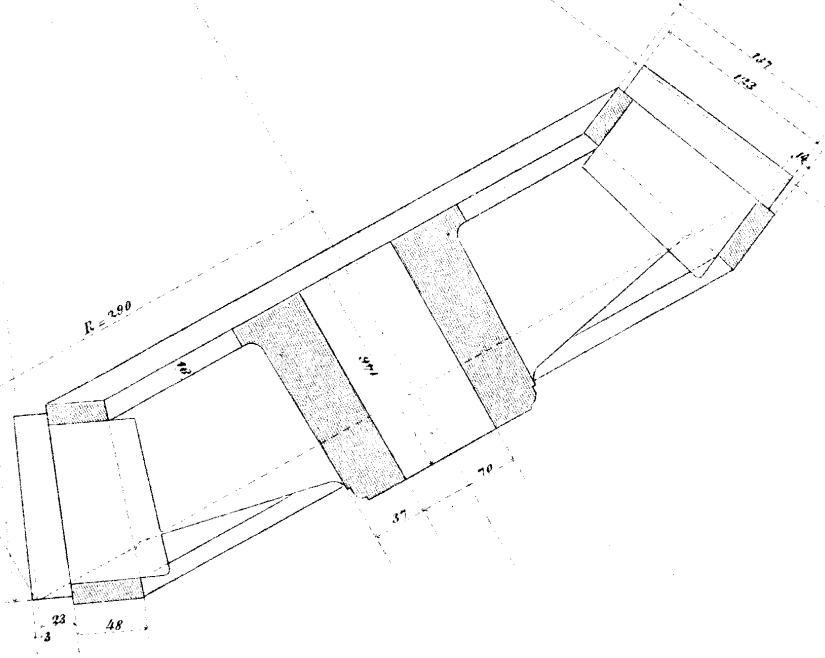


Fig. 11.

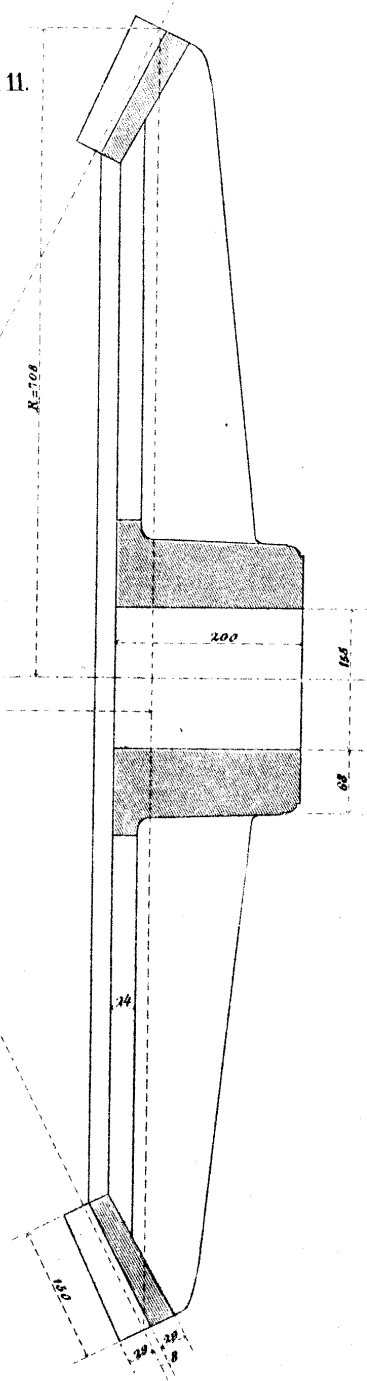


Fig. 10.

Maßstab zu '3.

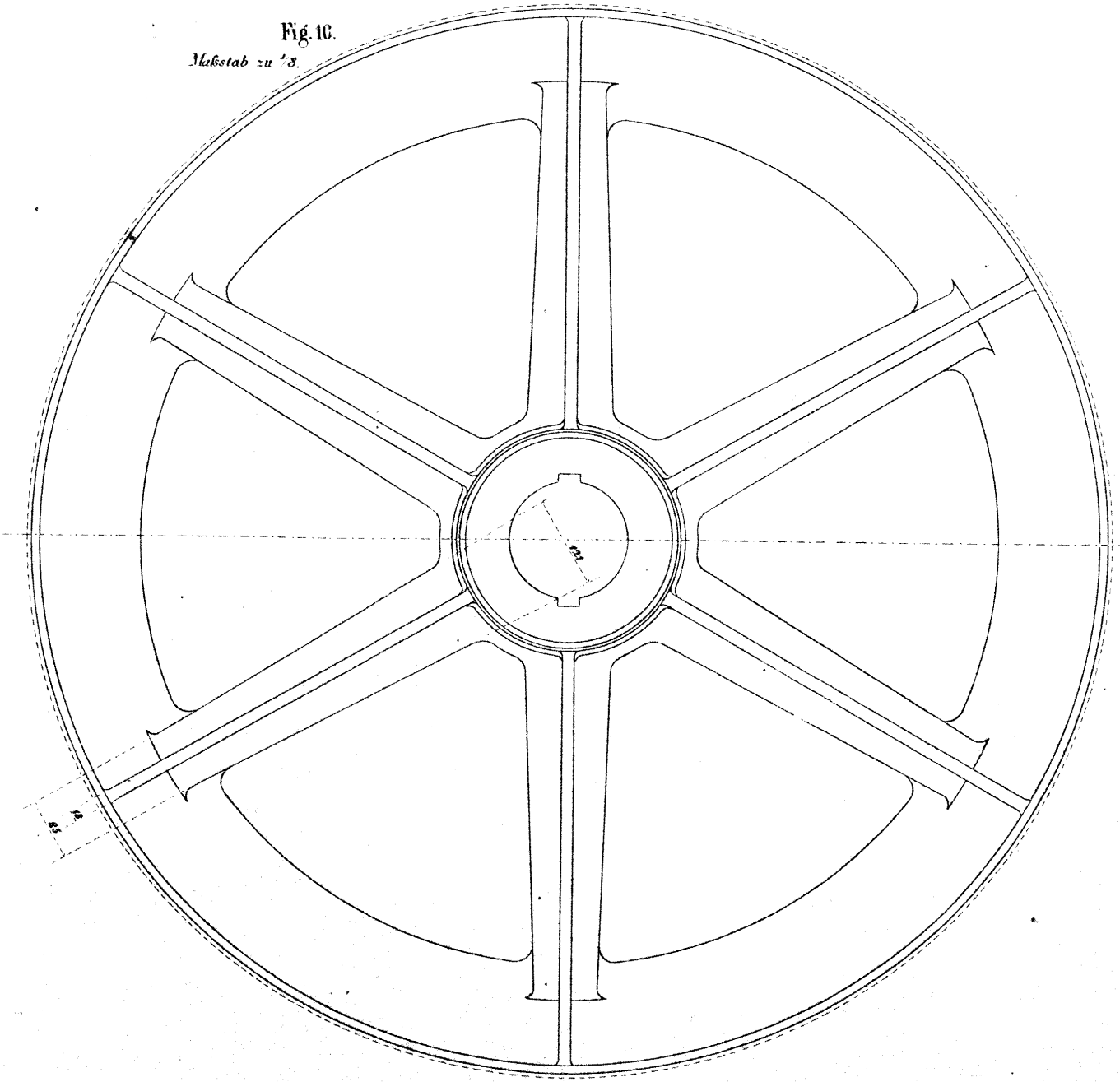


Fig. 12.

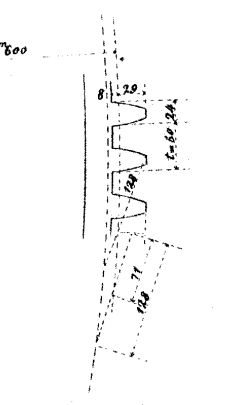


Fig. 7.
Maßstab zu '3.

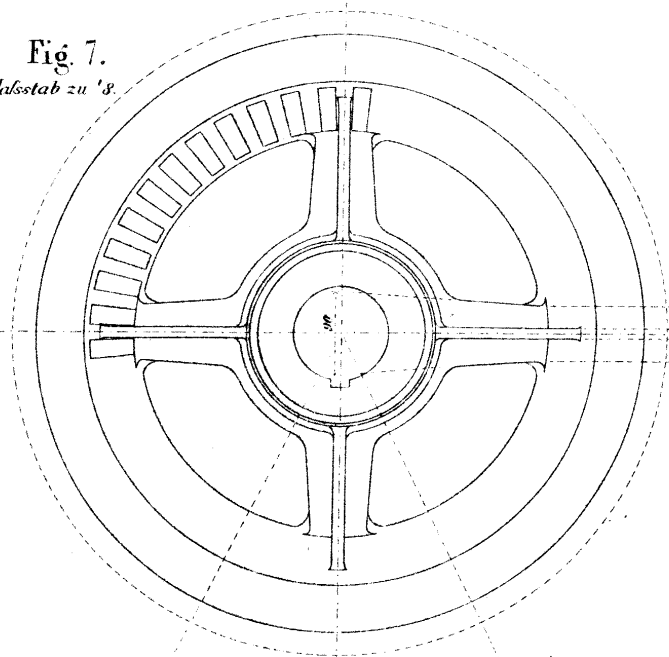


Fig. 9.

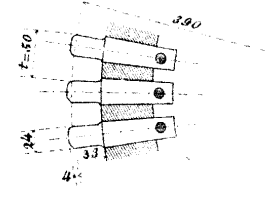


Fig. 8.

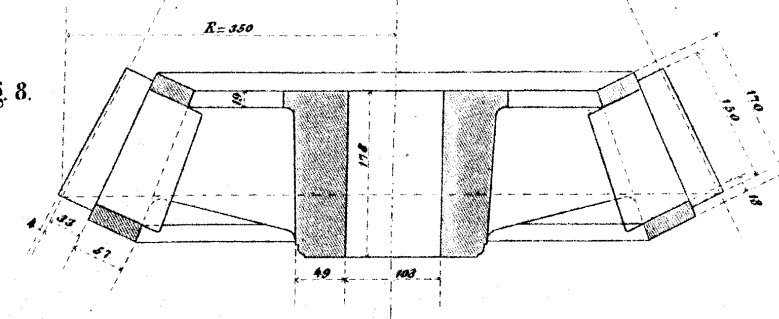


Fig. 1.

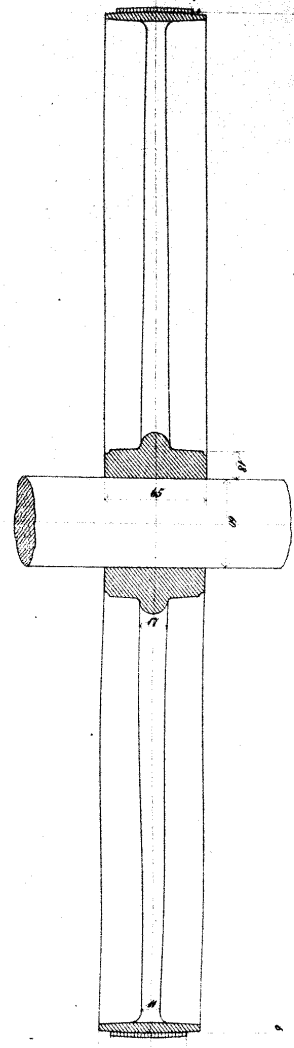
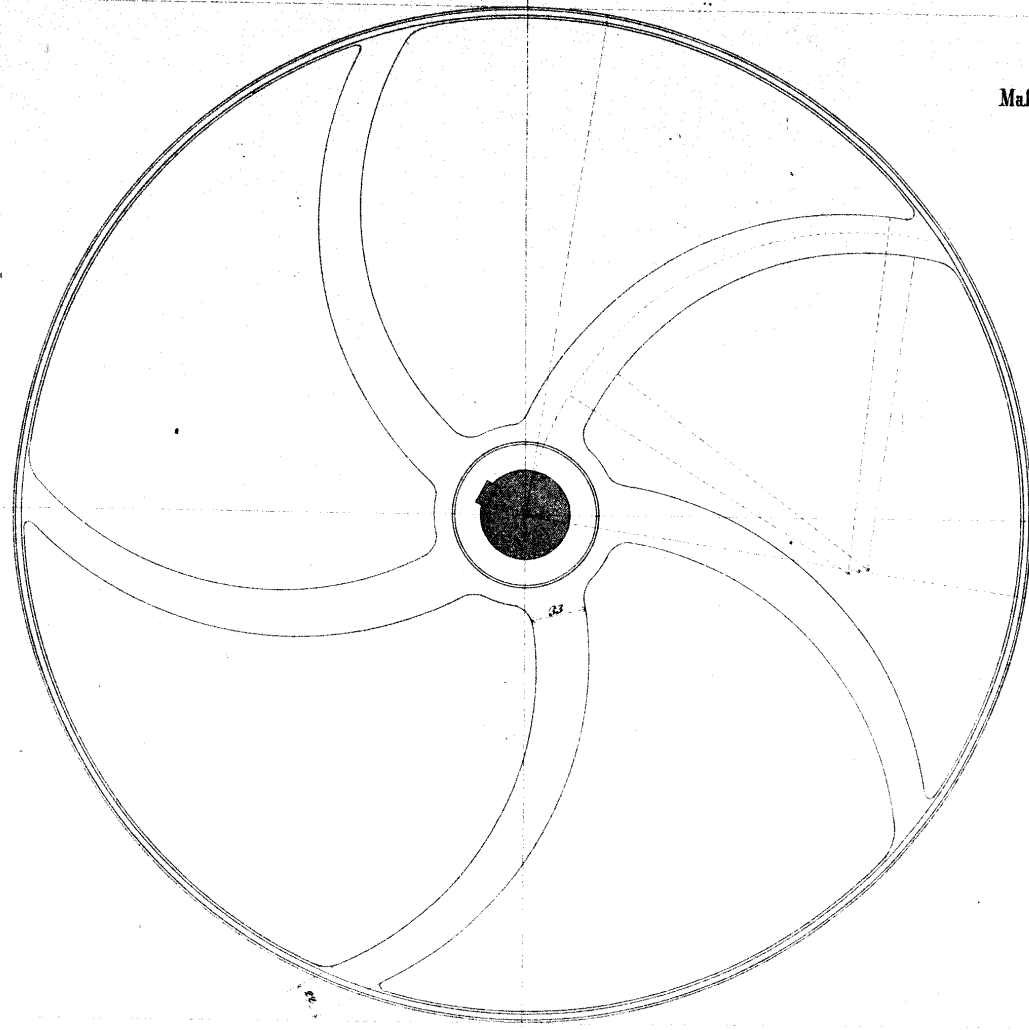


Fig. 2.



Maßstab zu 1/5.

Fig. 3.

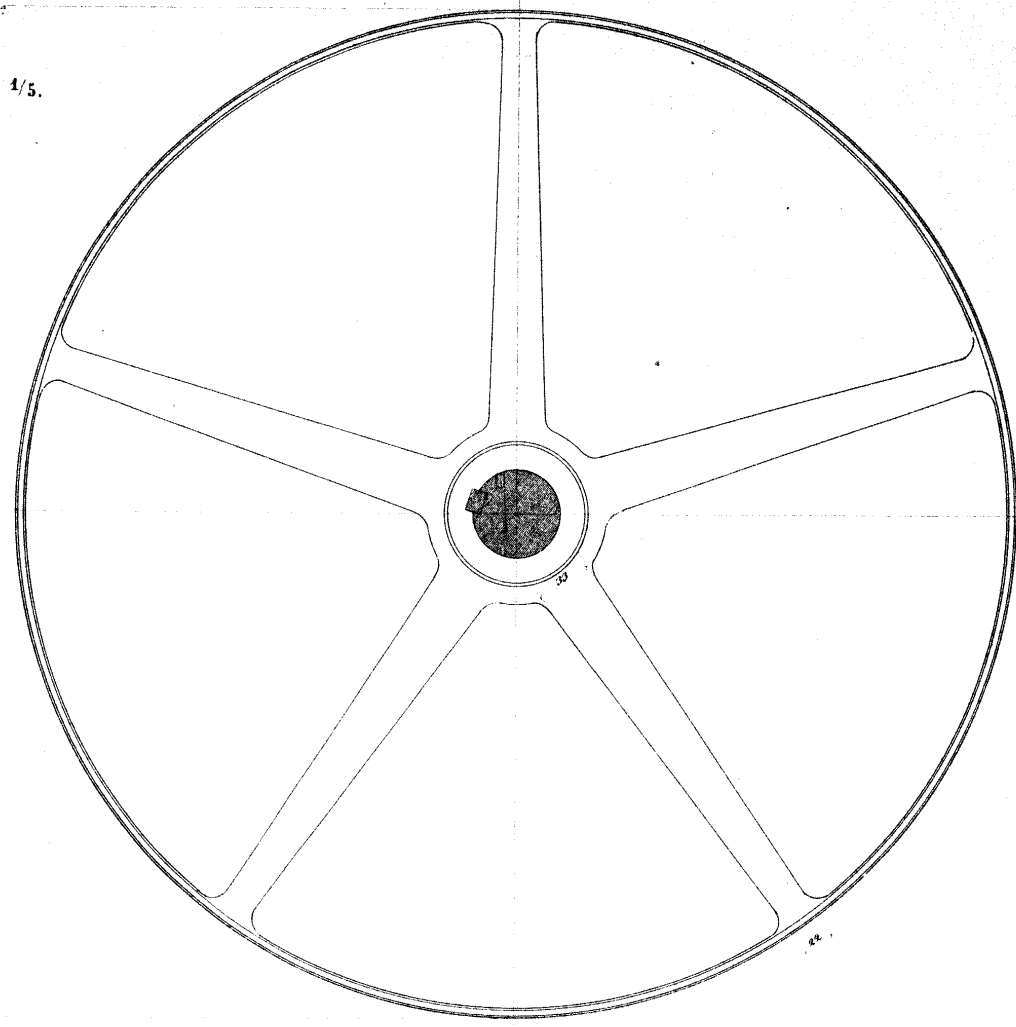


Fig. 4.

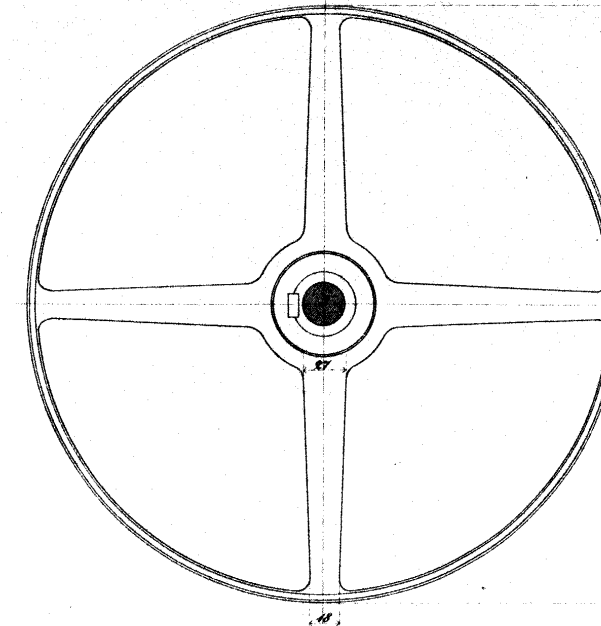
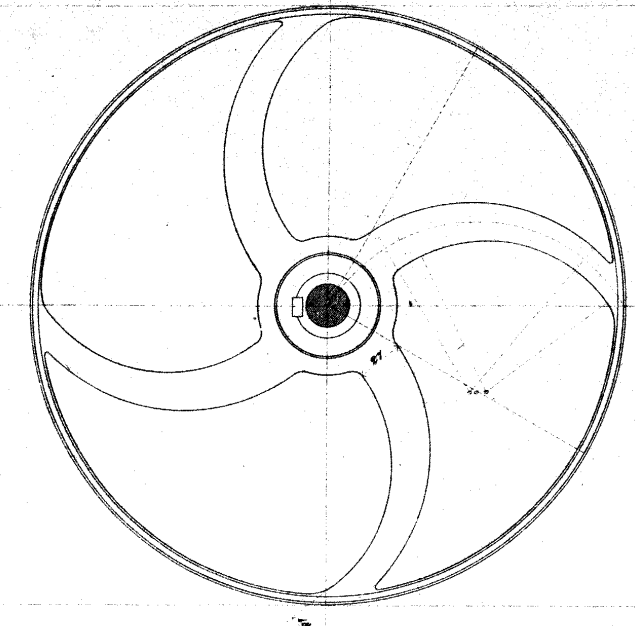


Fig. 5.



Maßstab zu 1/5.

Fig. 6.

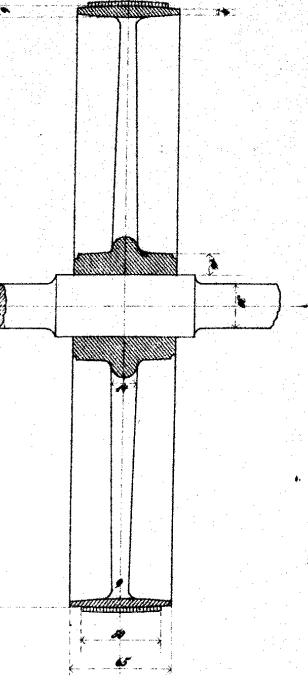
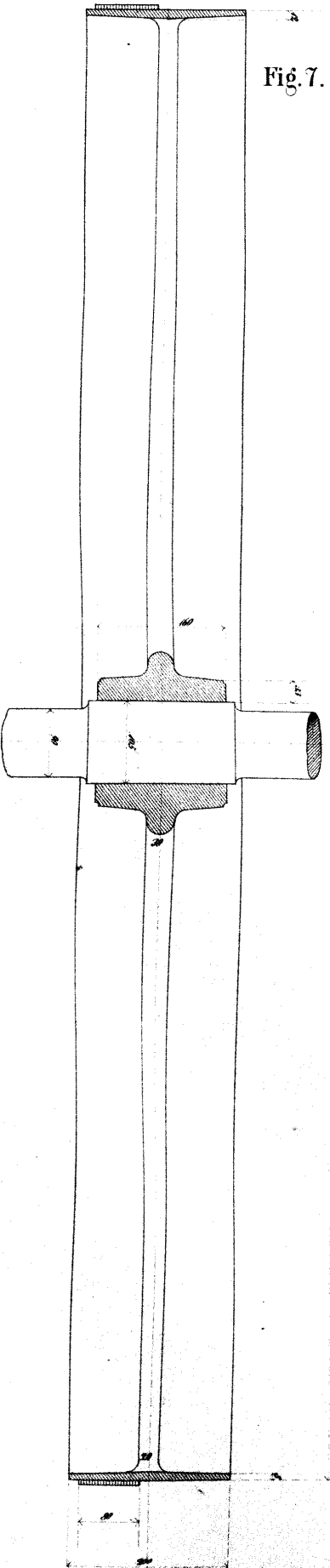


Fig. 7.



Maßstab zu 1/8.

Fig. 8.

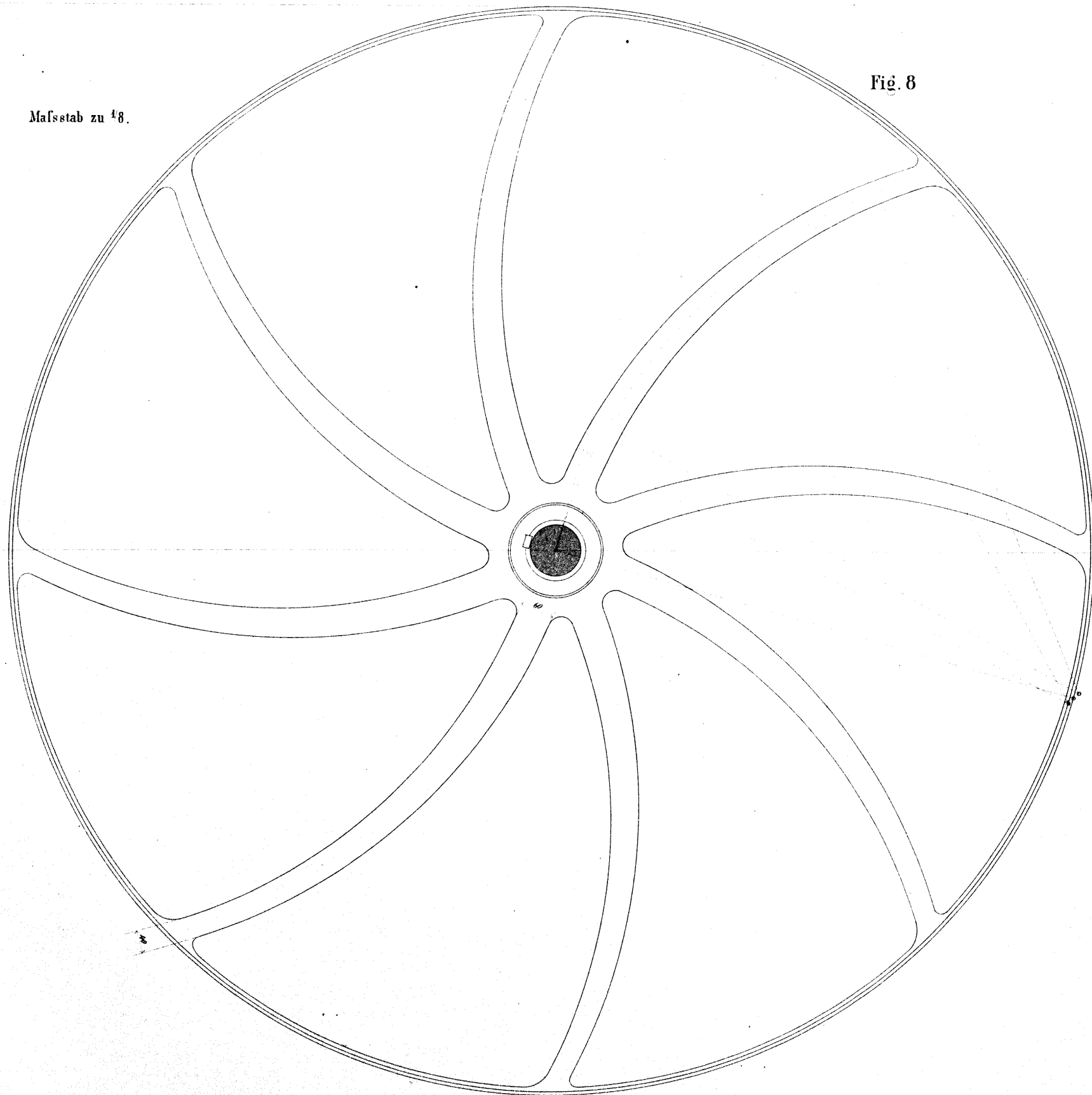
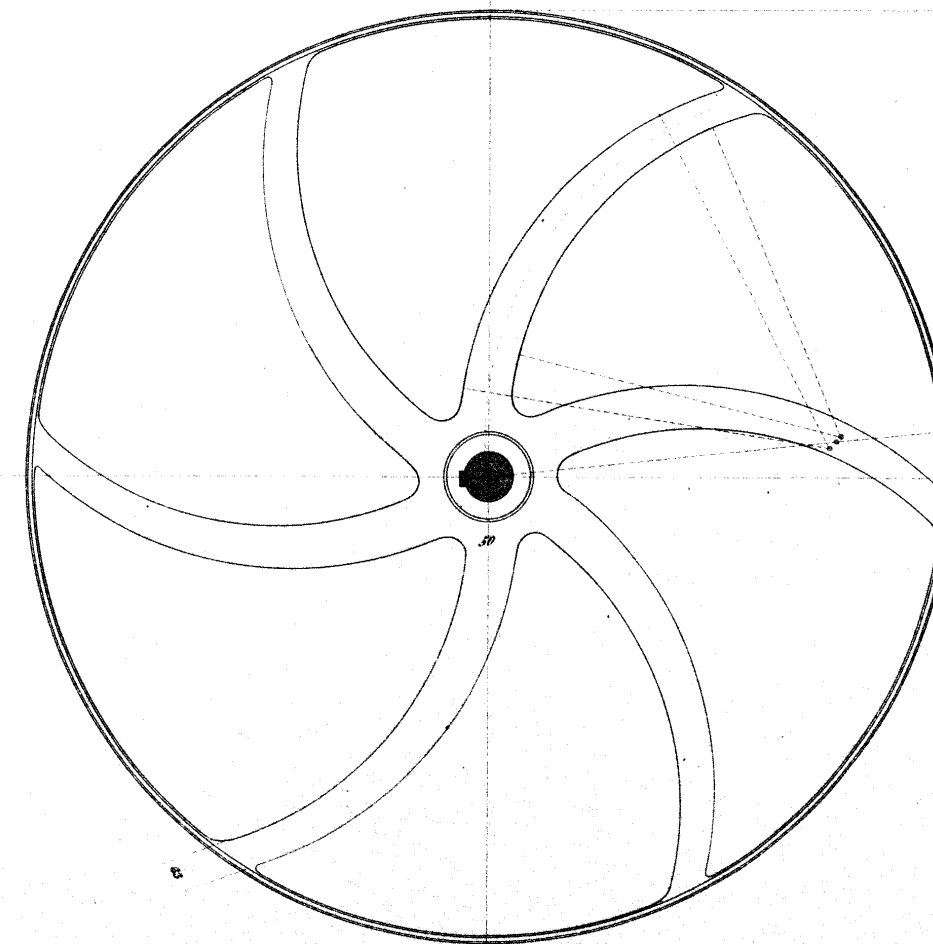
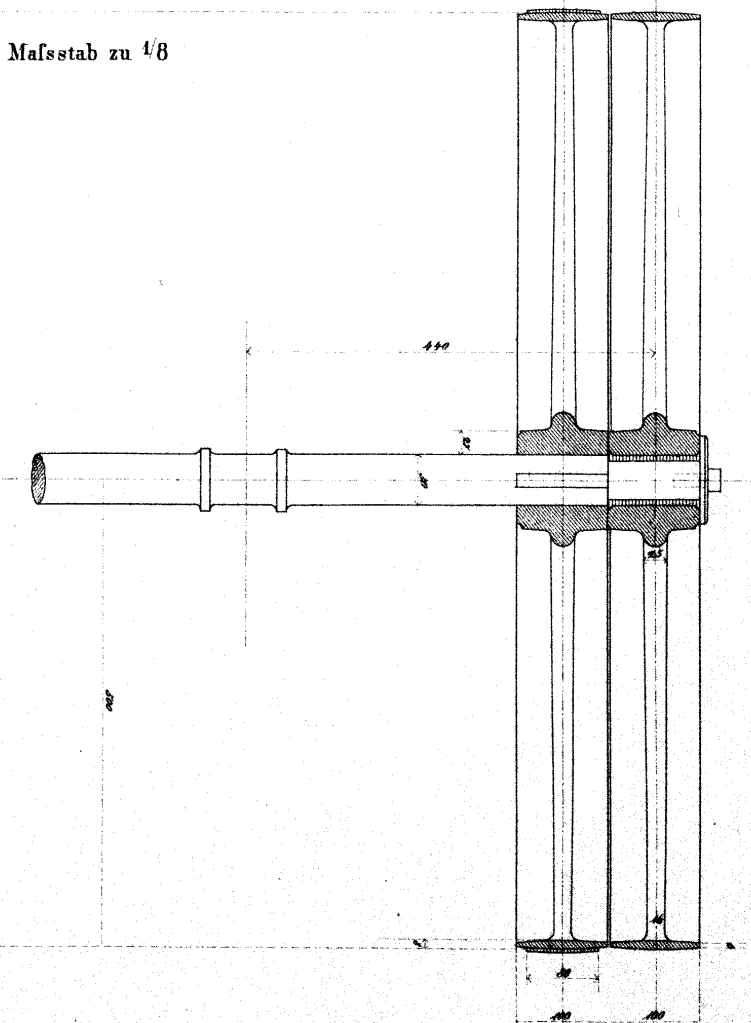


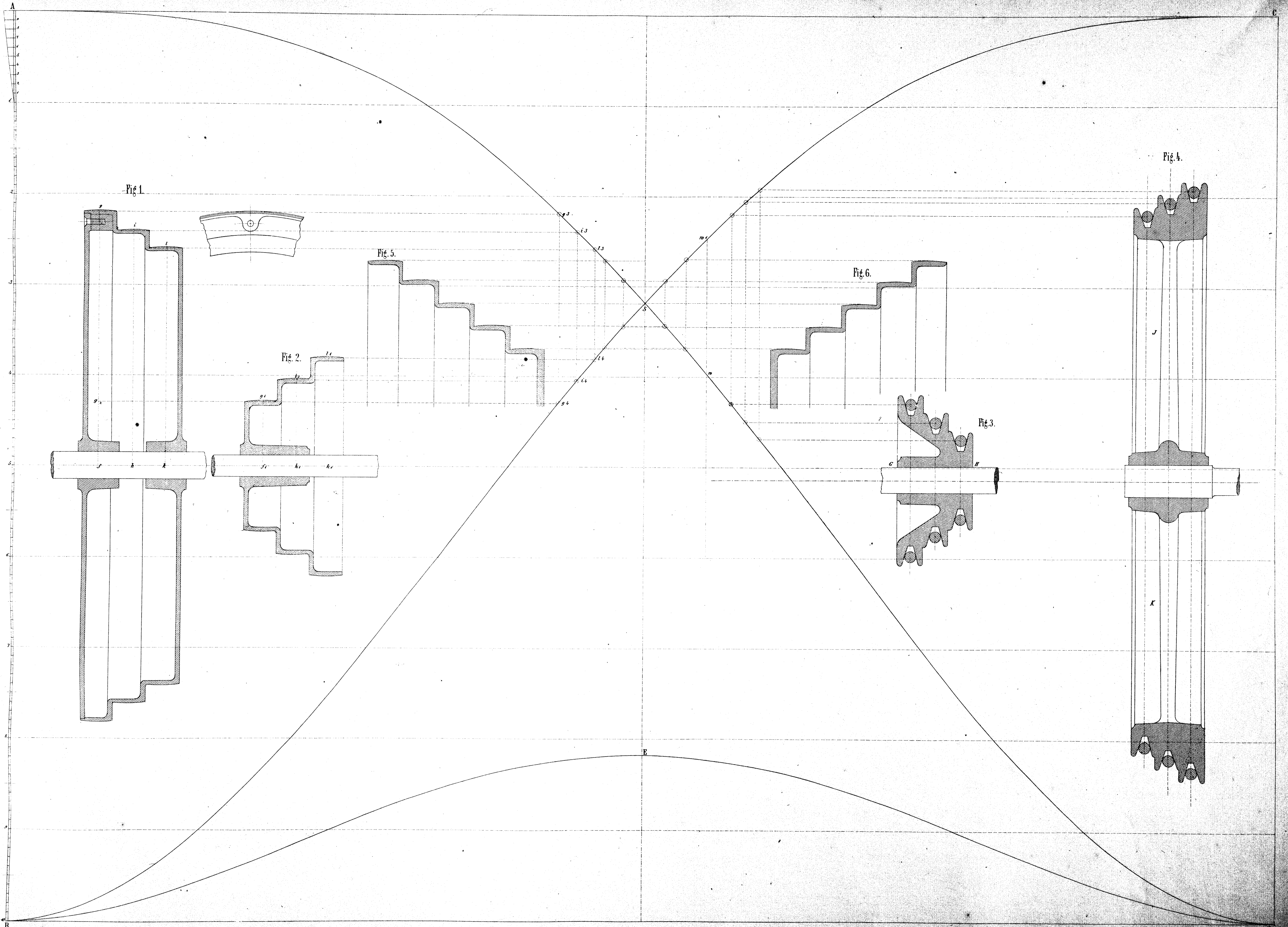
Fig. 9.



Maßstab zu 1/8.

Fig. 10.





EINFACHE LAGERSTÜHLE.

Fig. 1.

Stahlagerstuhl

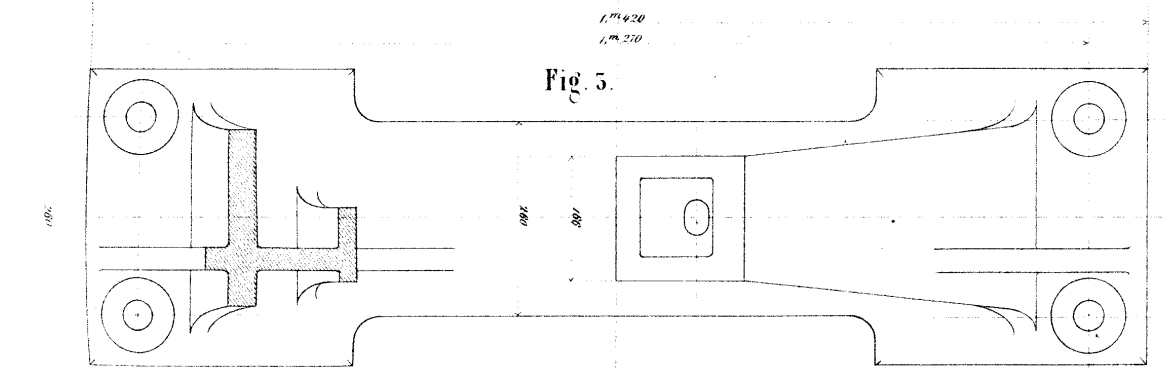
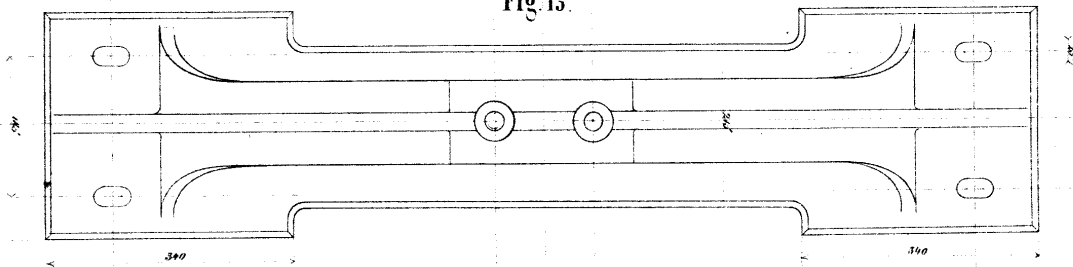
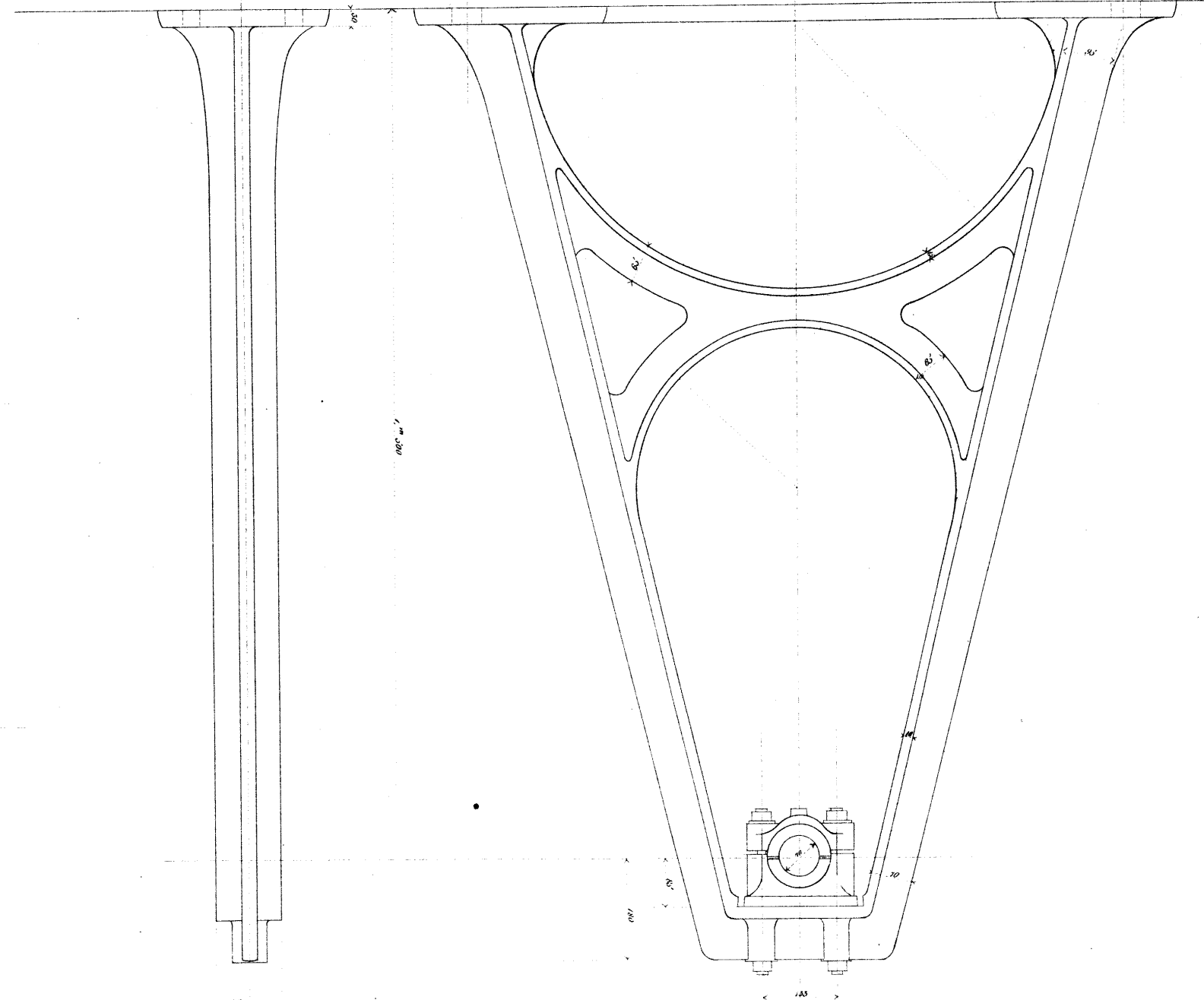
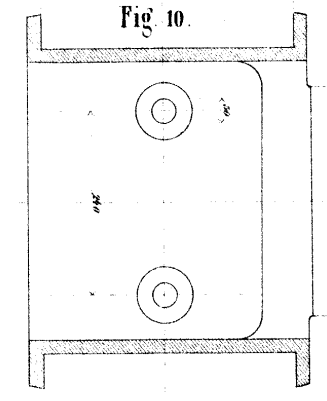
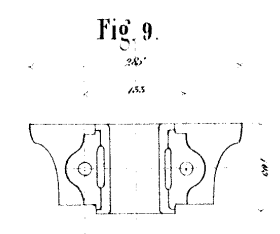
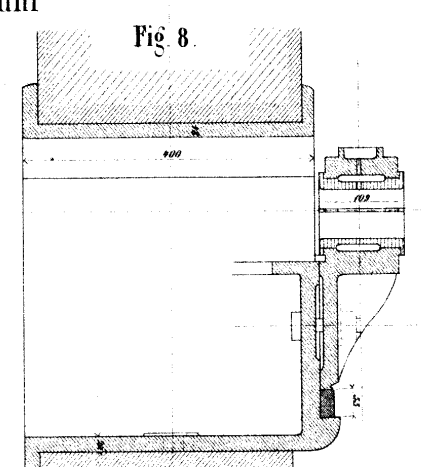
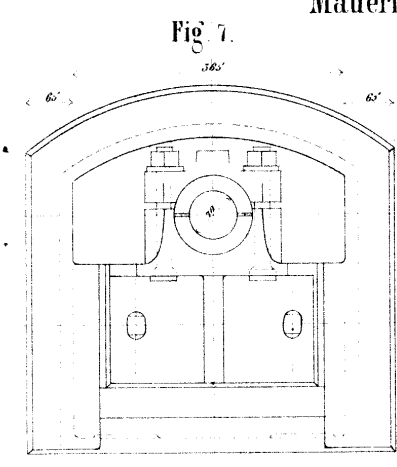
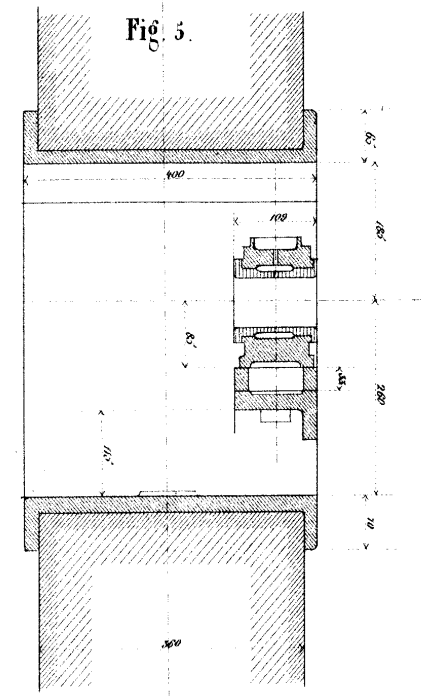
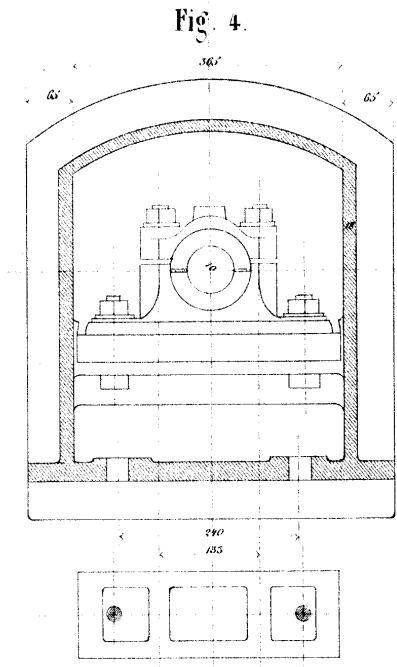
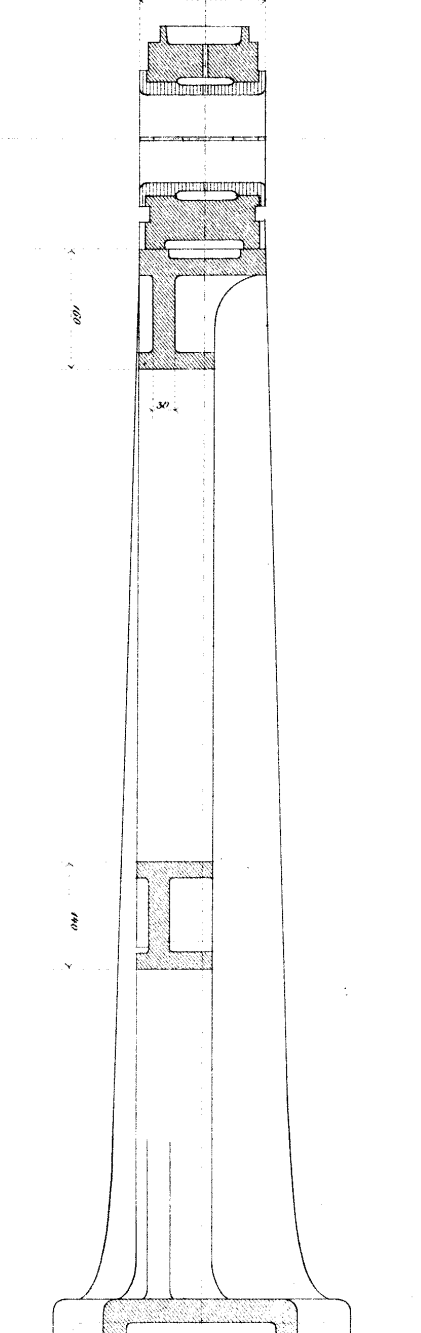
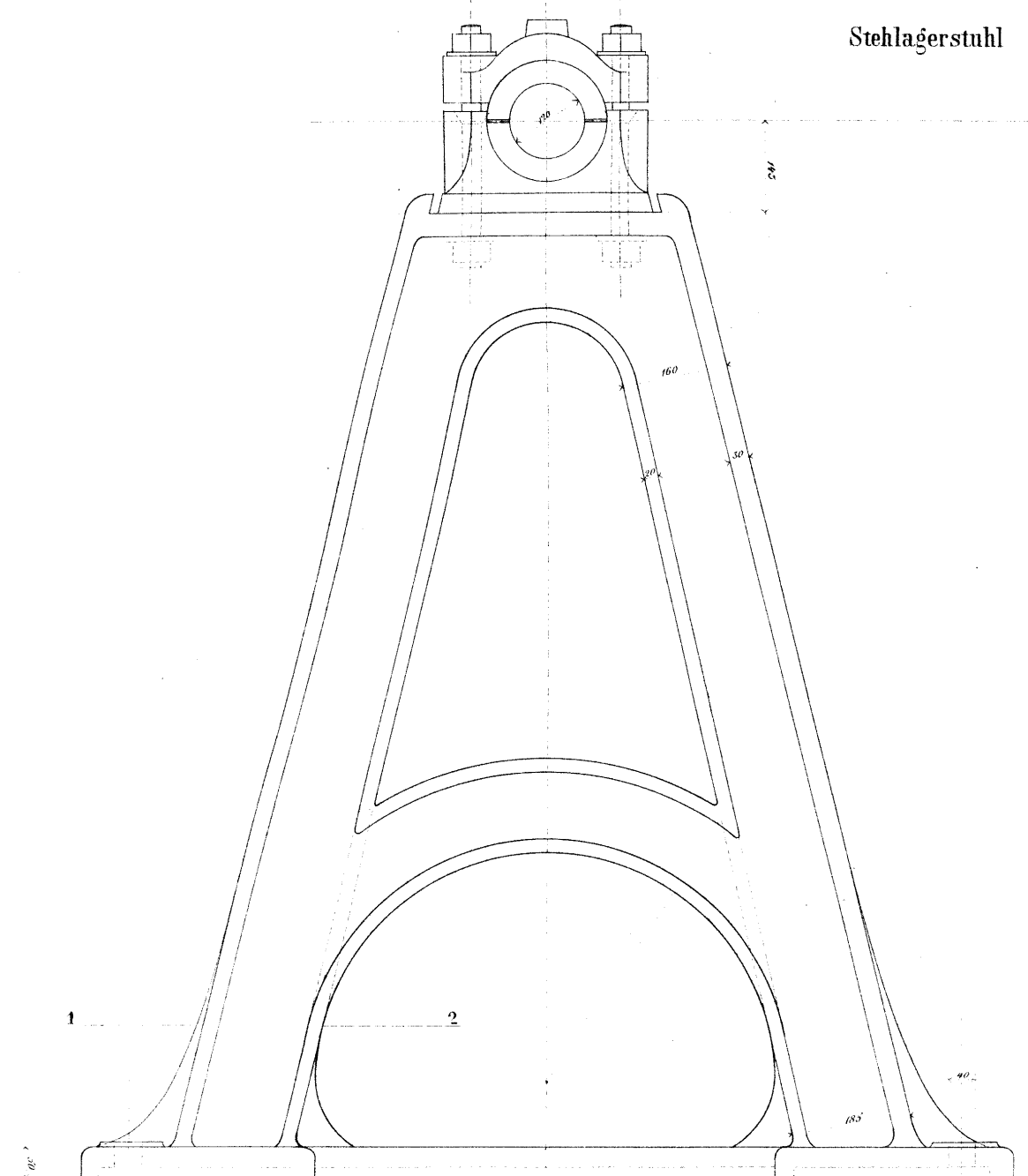
Fig. 2.

Mauerlagerstuhl

Hängender Lagerstuhl

Fig. 12.

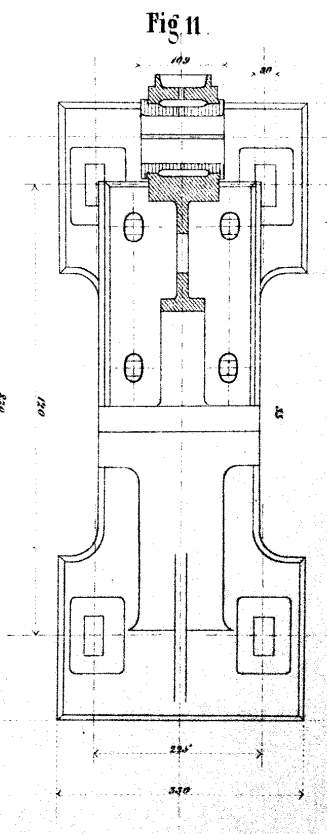
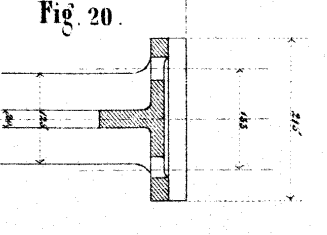
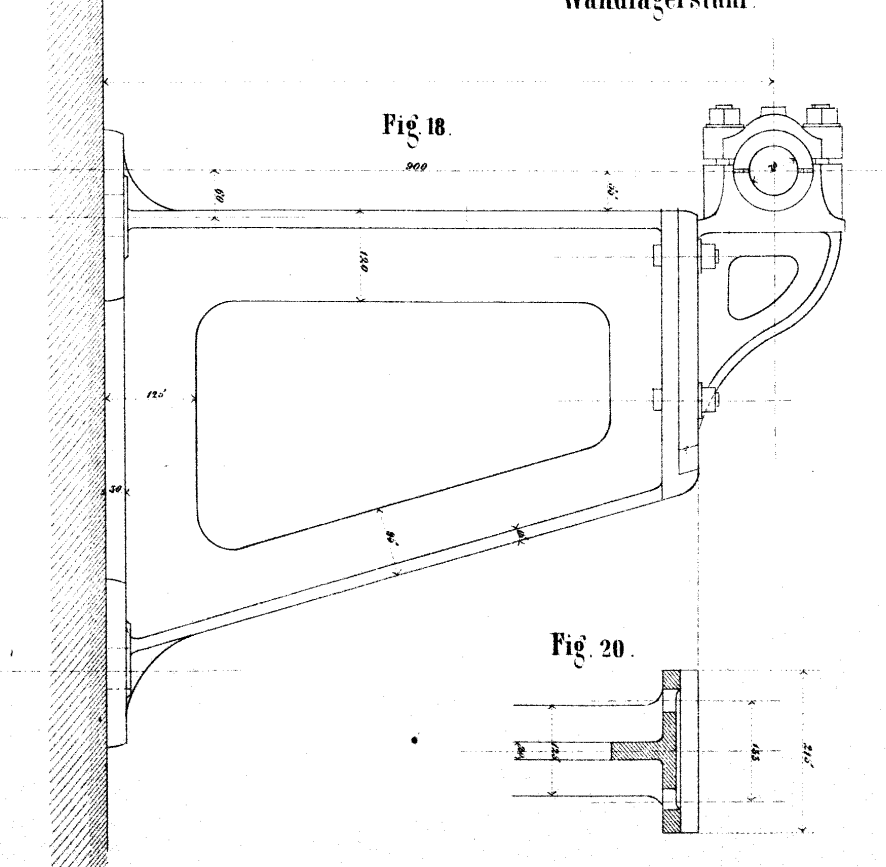
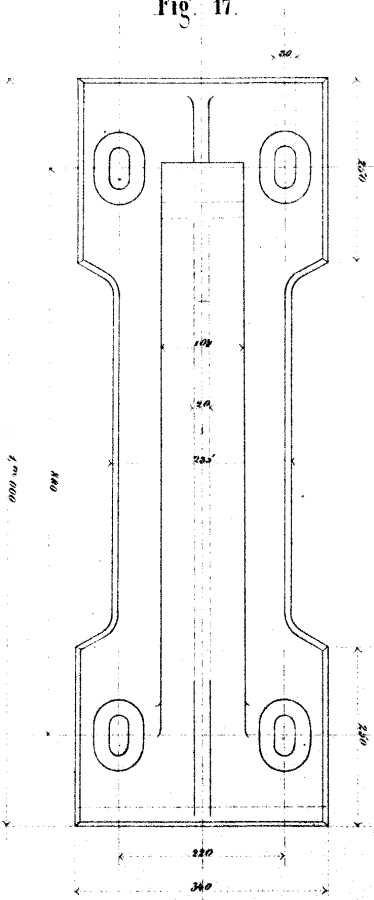
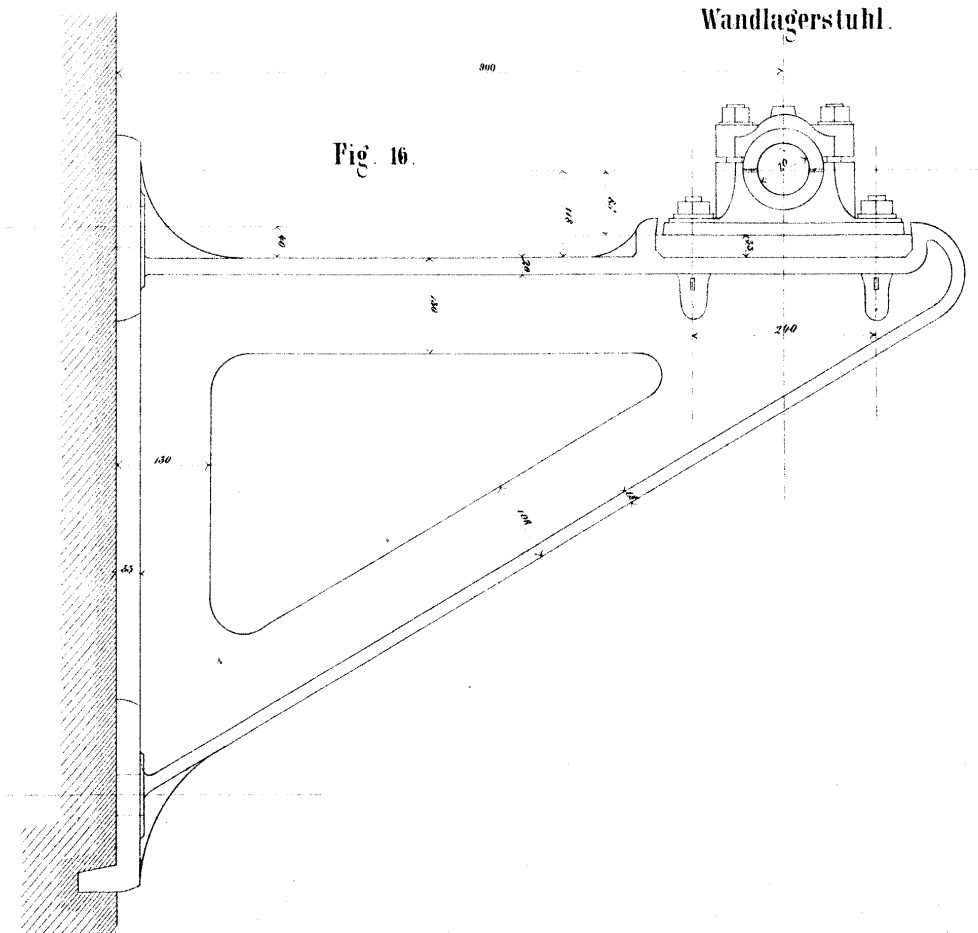
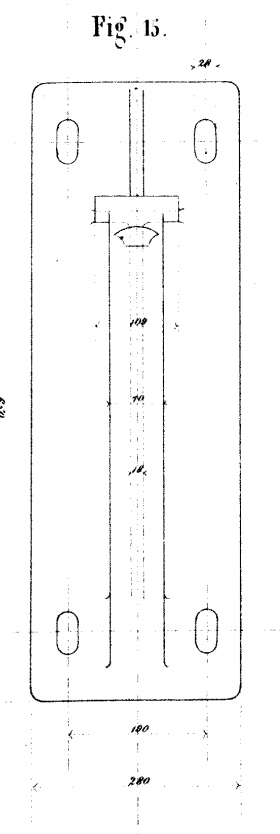
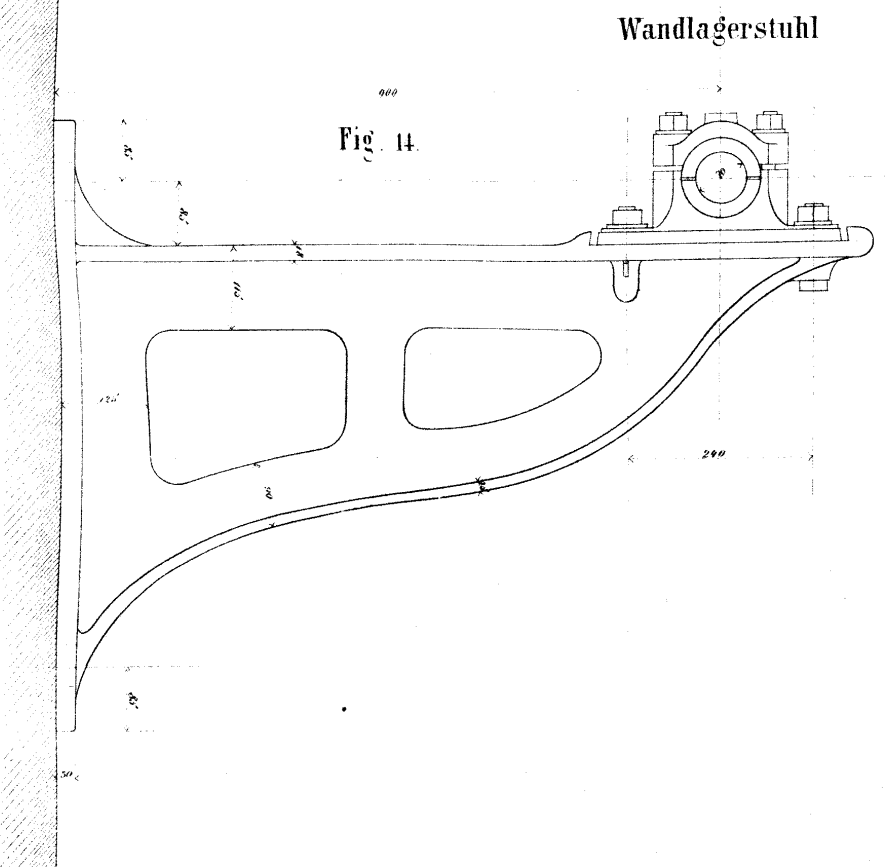
Fig. 11.



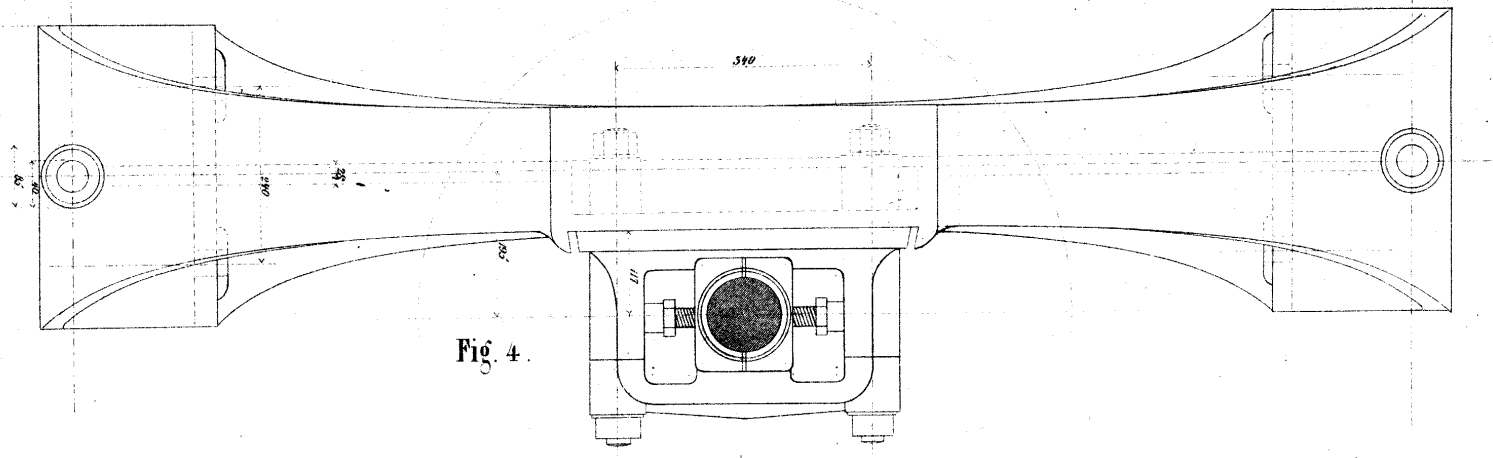
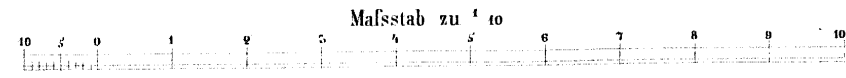
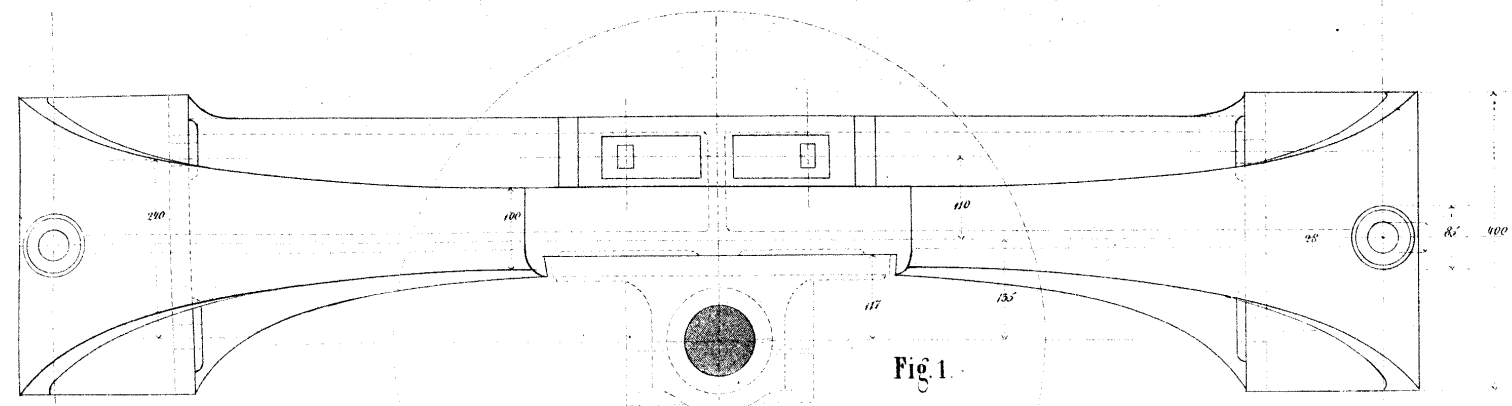
Wandlagerstuhl

Wandlagerstuhl

Wandlagerstuhl

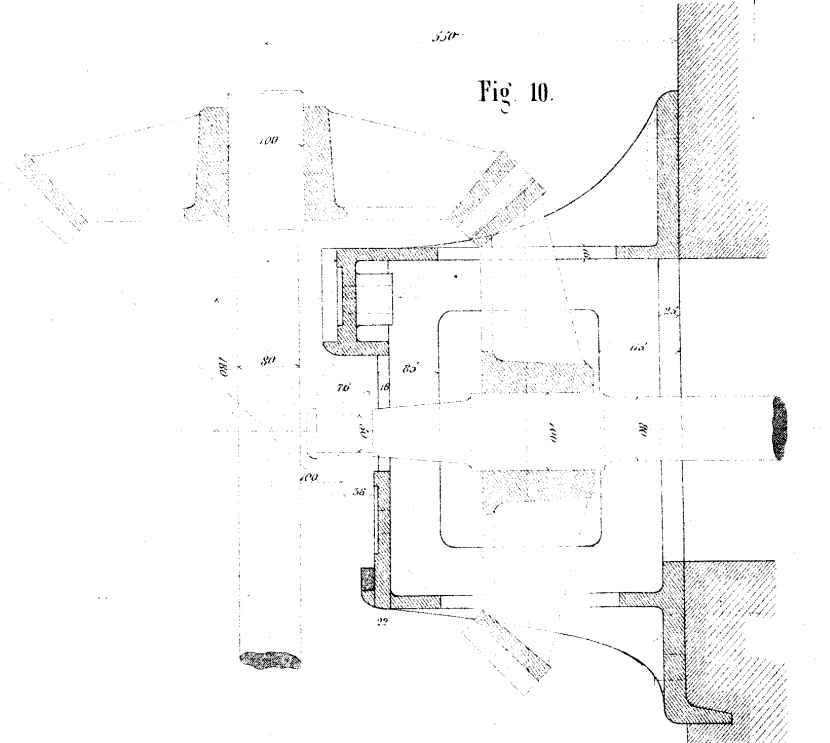
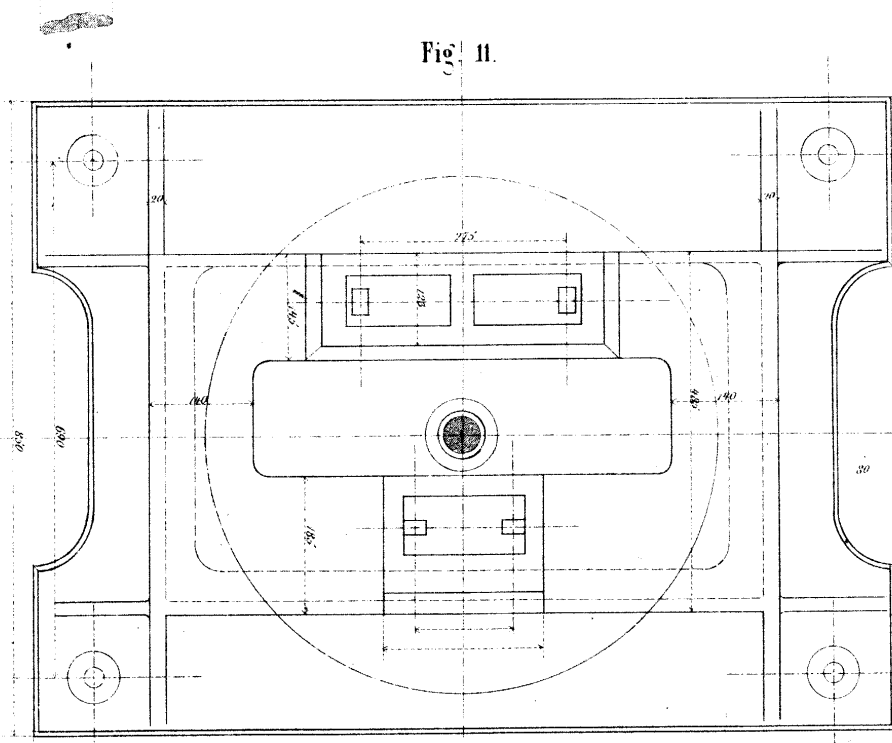
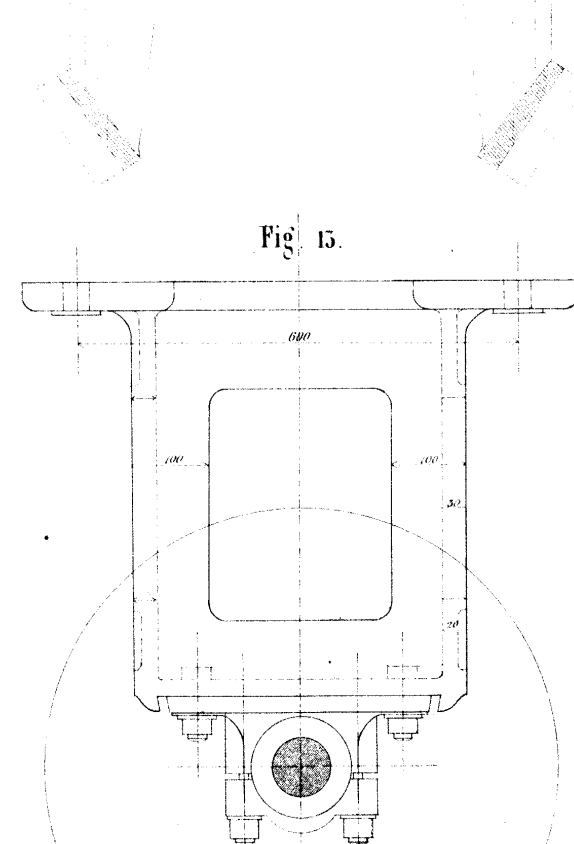
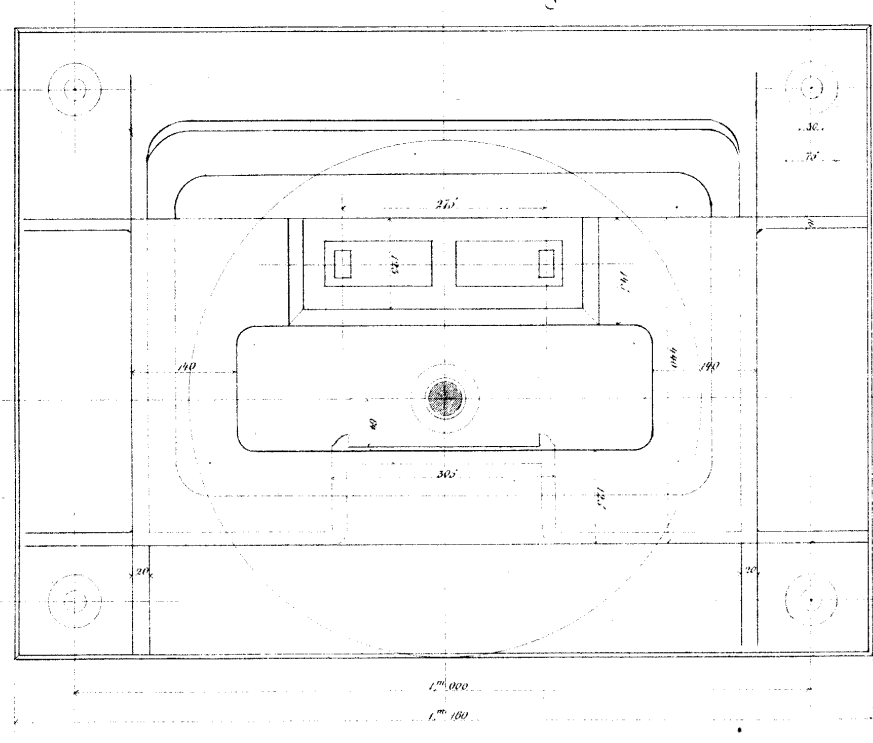
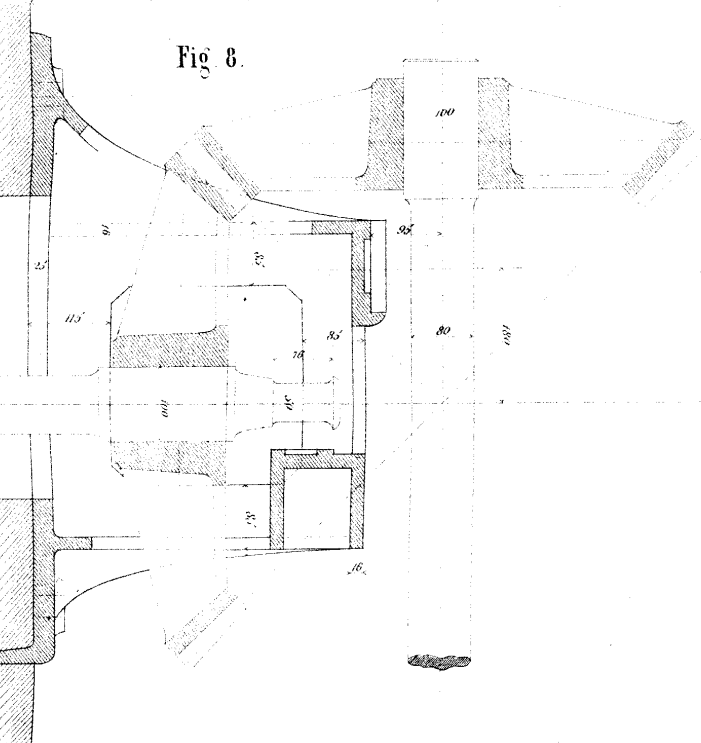
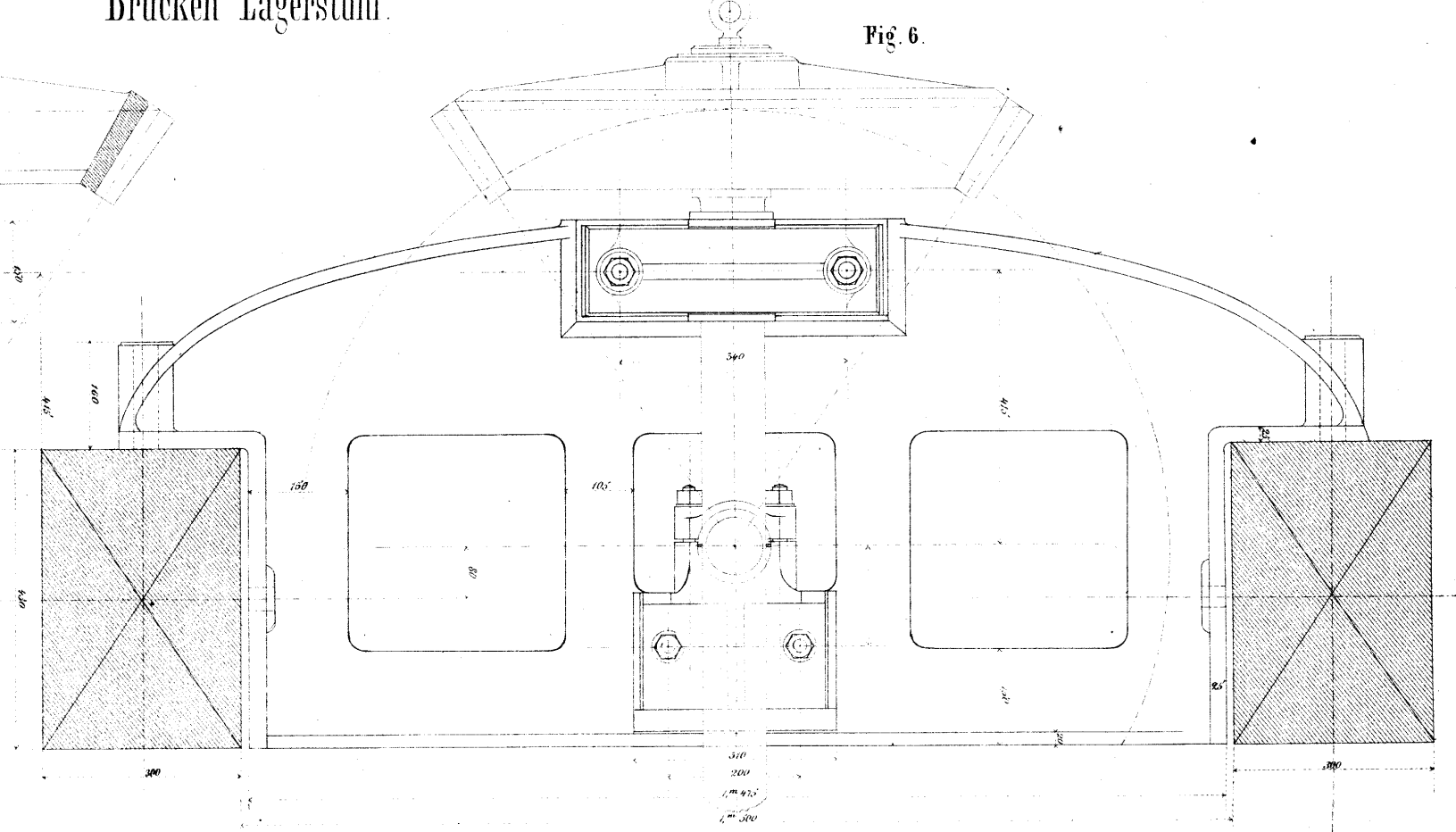
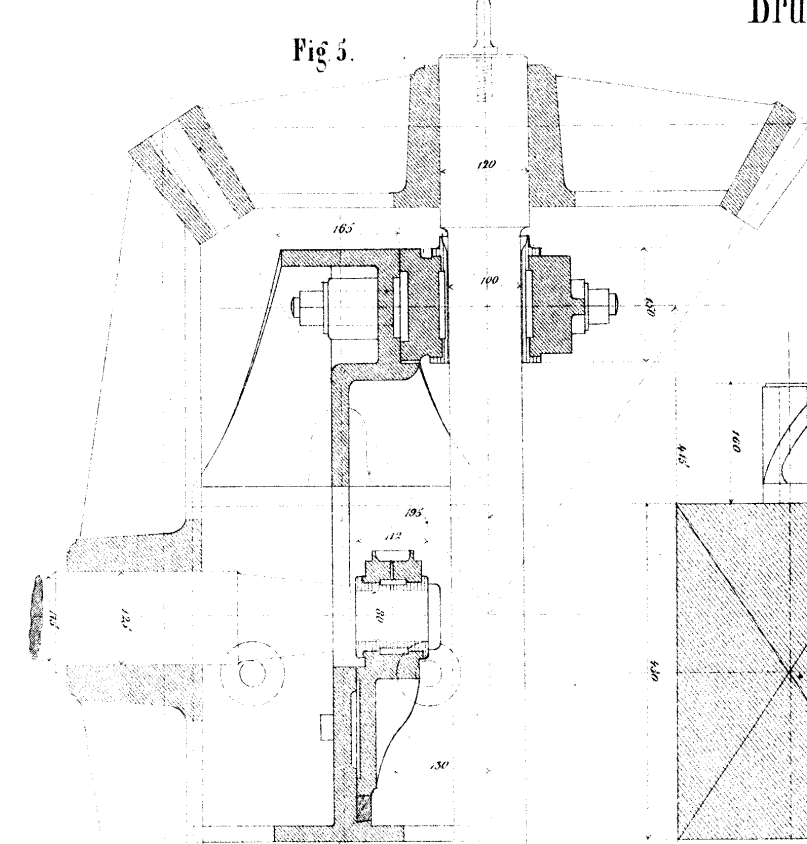
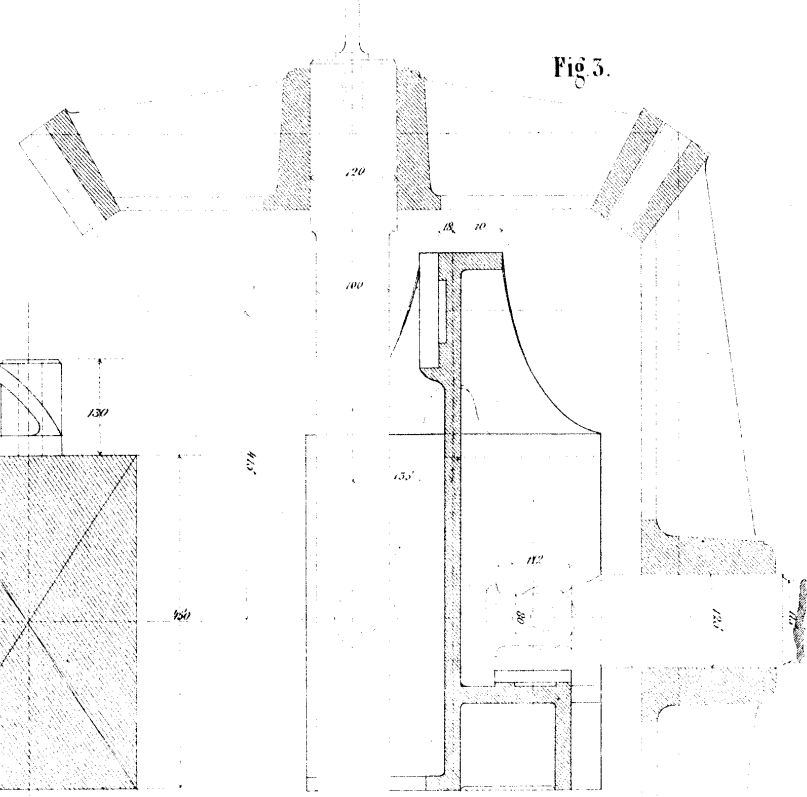
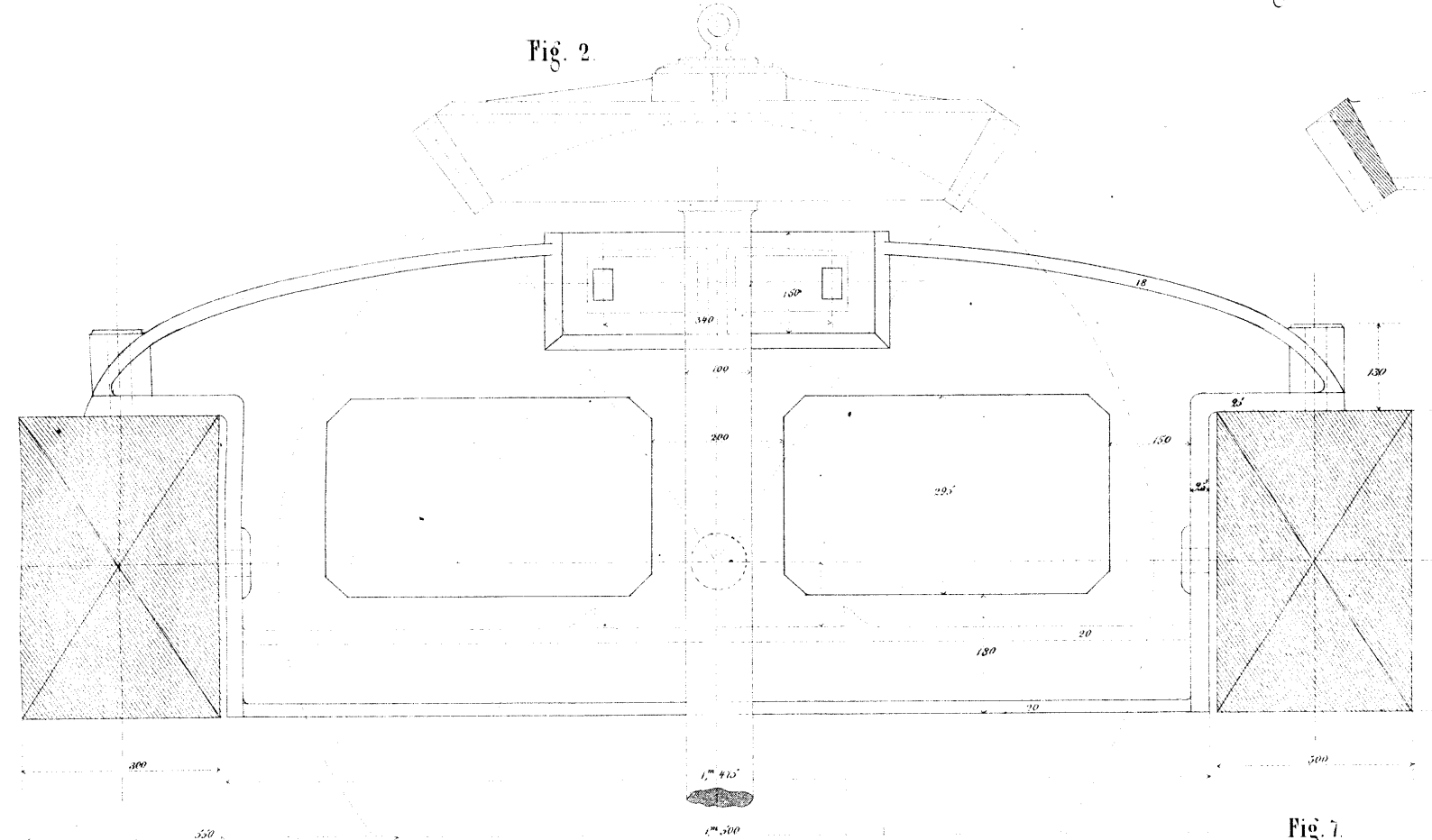


MEHRFACHE LAGERSTÜHLE



Brücken Lagerstuhl.

Brücken Lagerstuhl.



Wand Lagerstuhl.

Wand Lagerstuhl.

Wand Lagerstuhl.

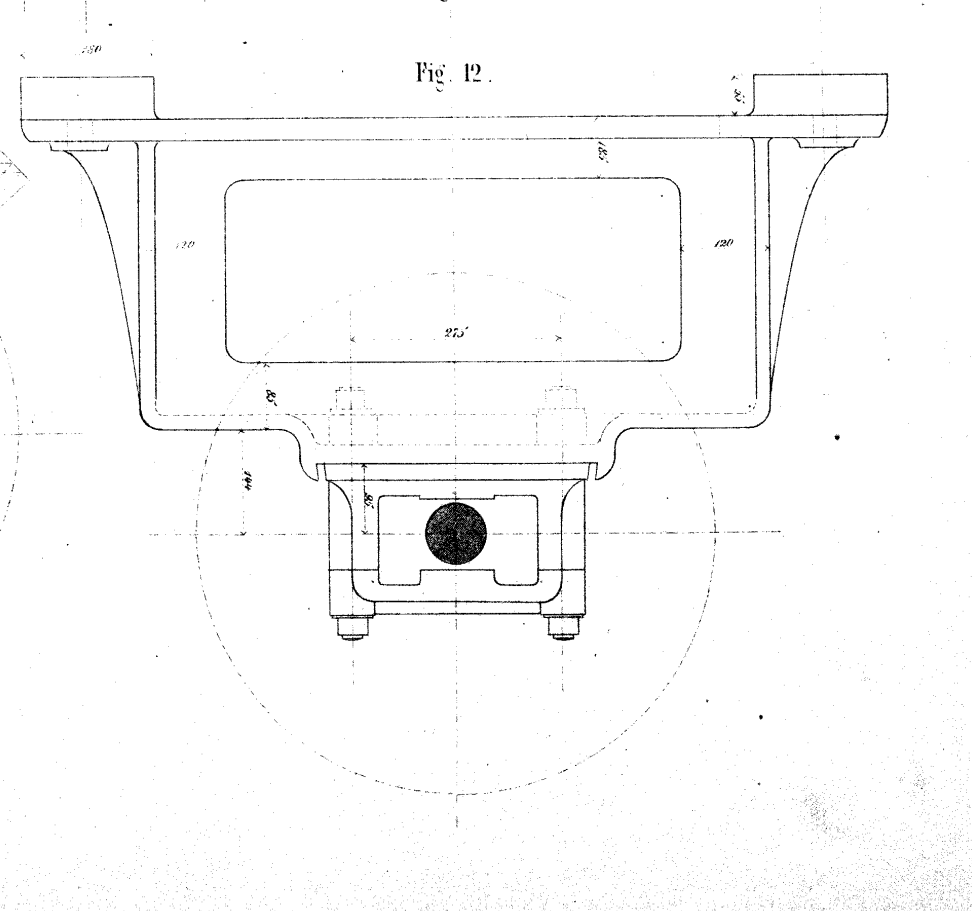
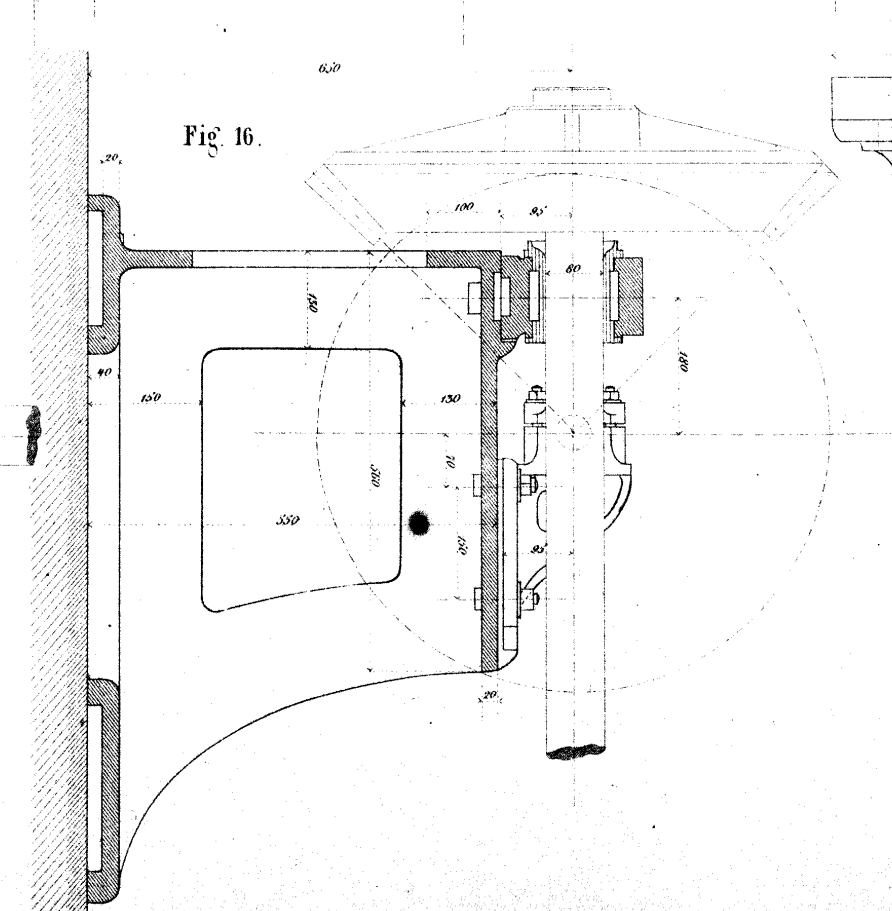
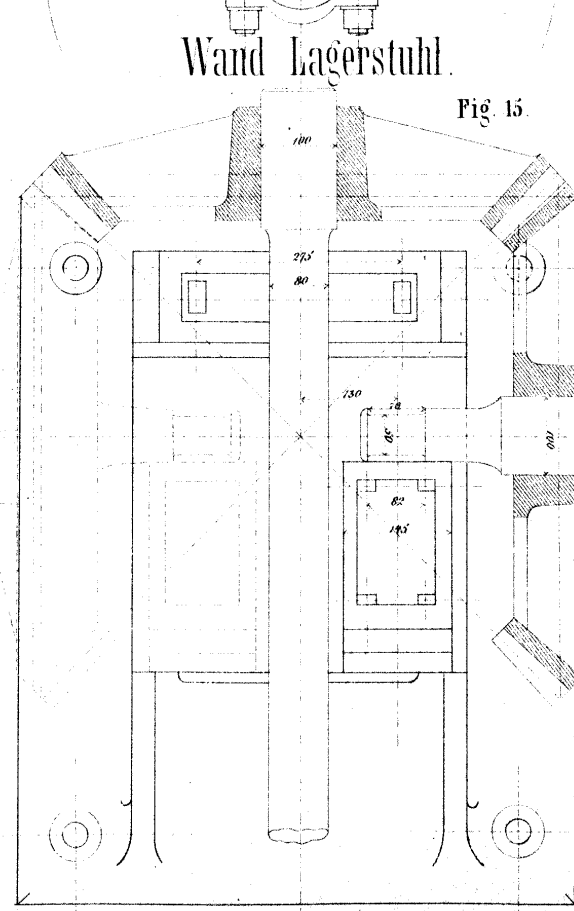
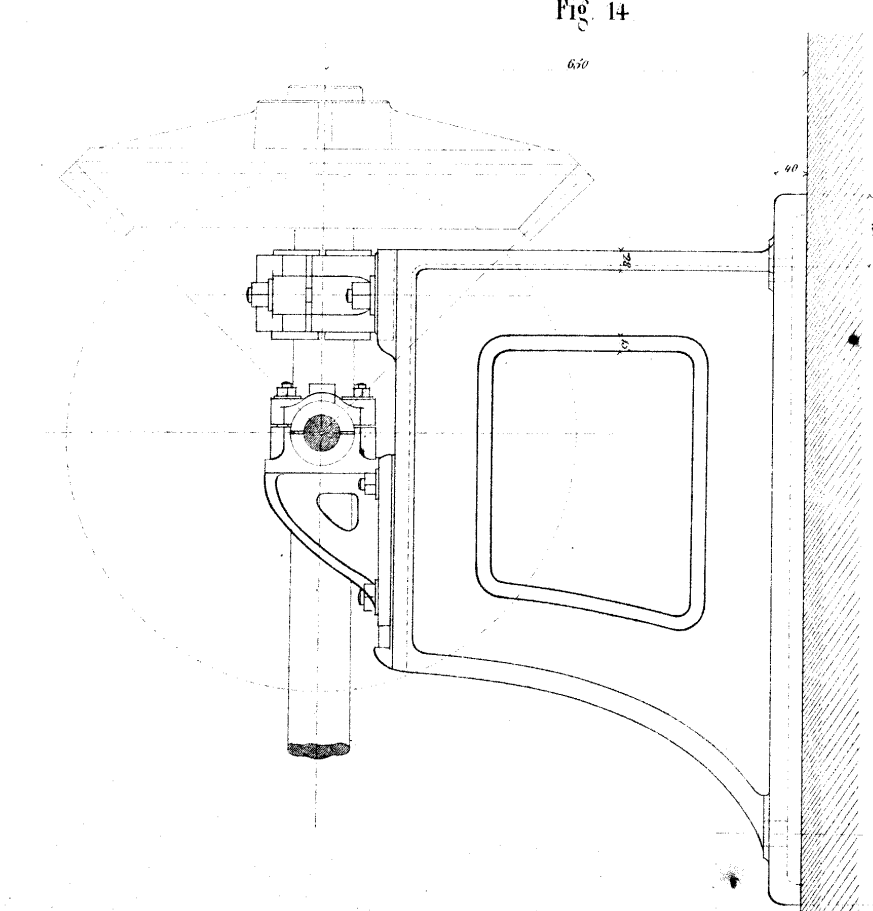
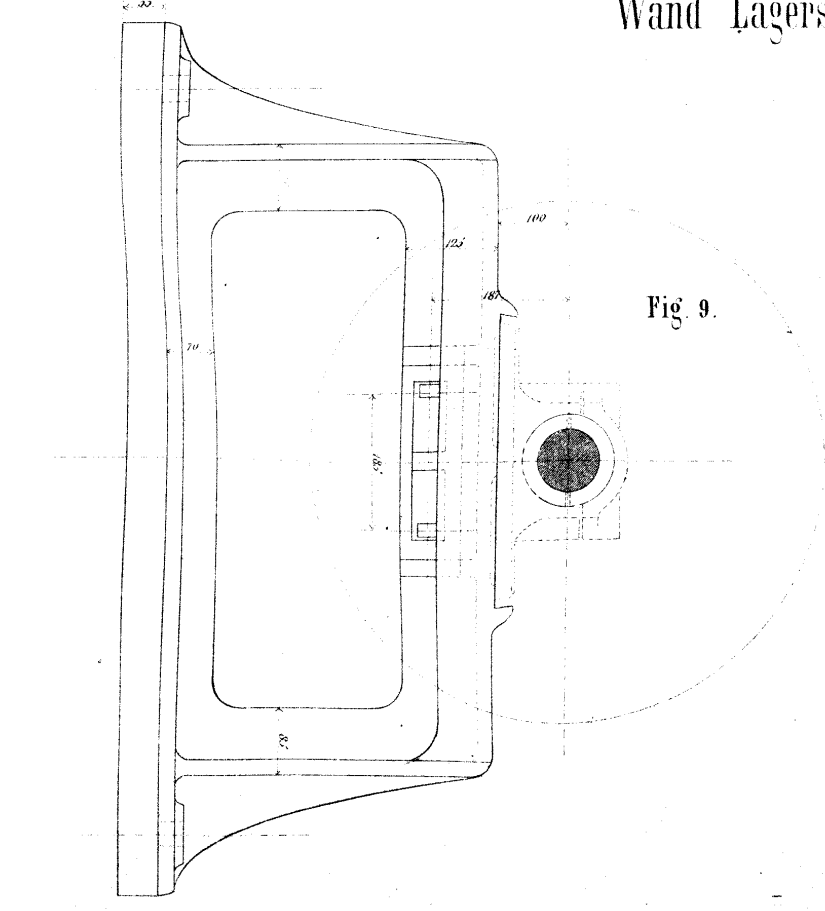
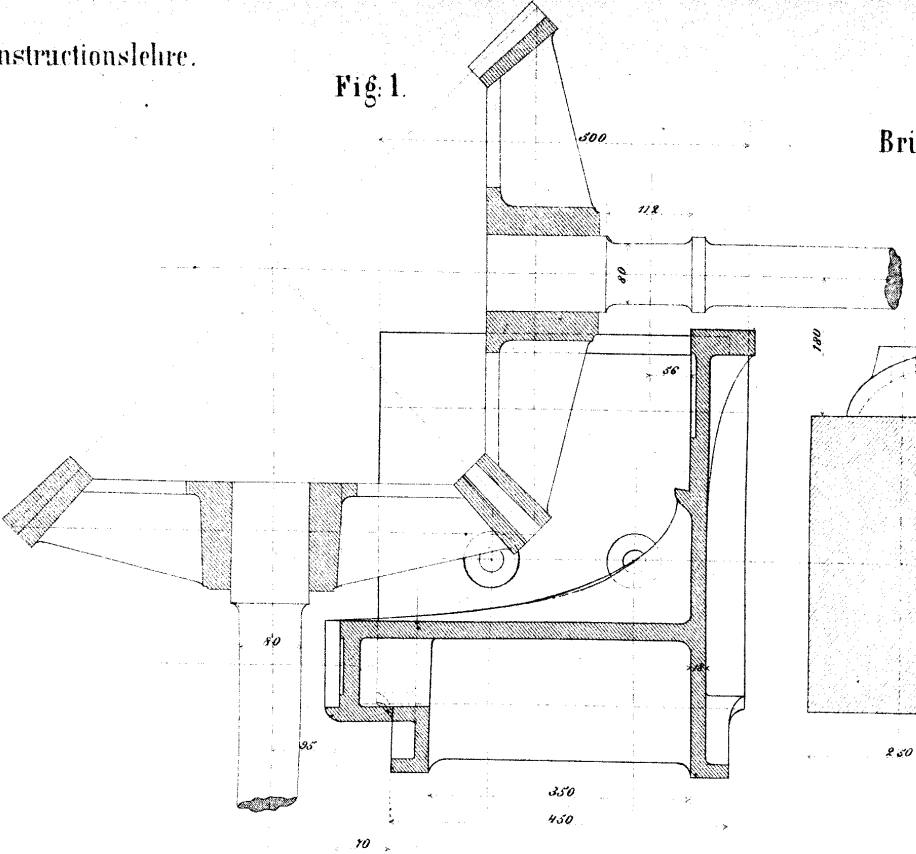
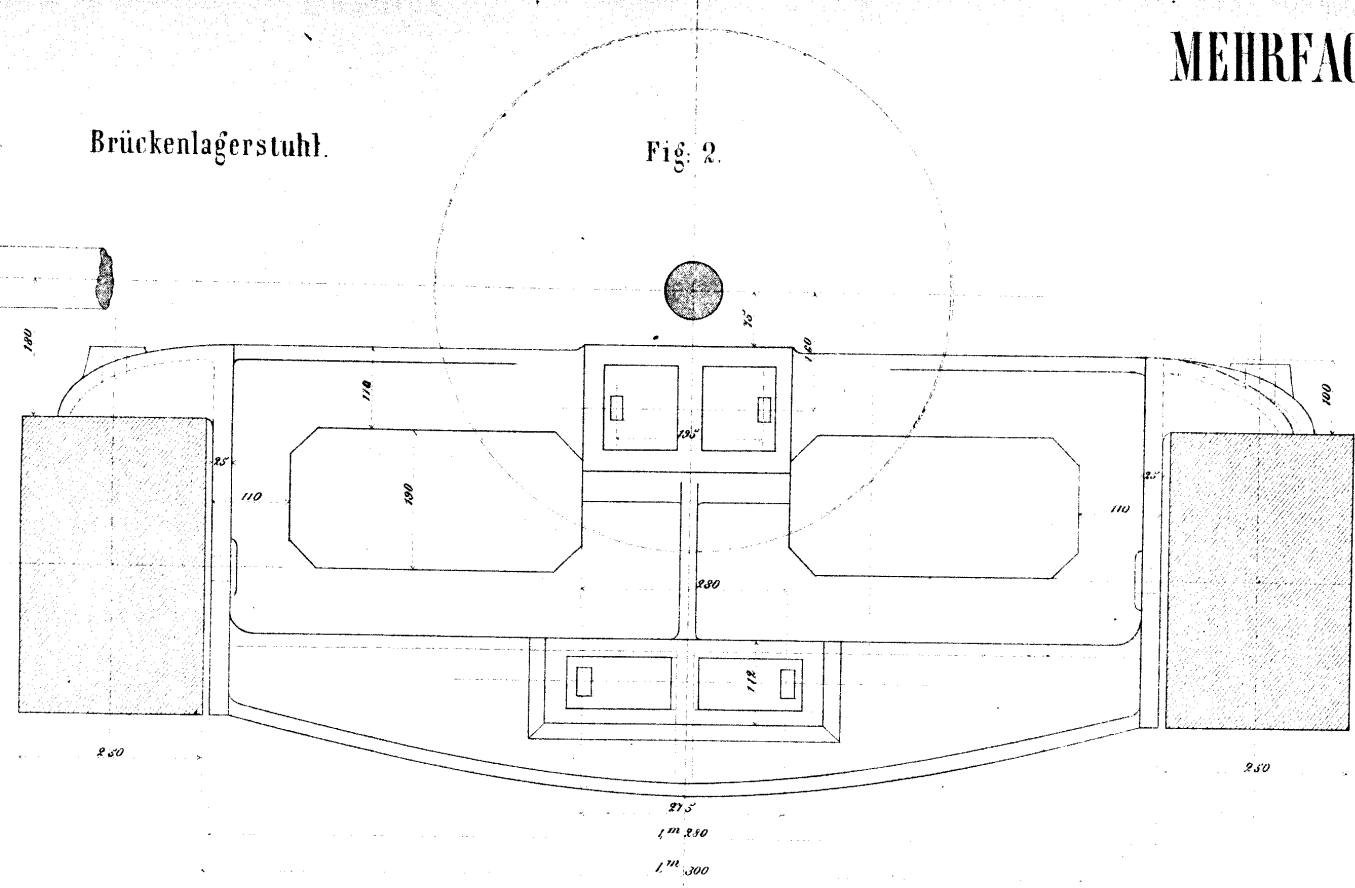


Fig. 1.



Brückenlagerstuhl.

Fig. 2.



Brückenlagerstuhl.

Fig. 3.

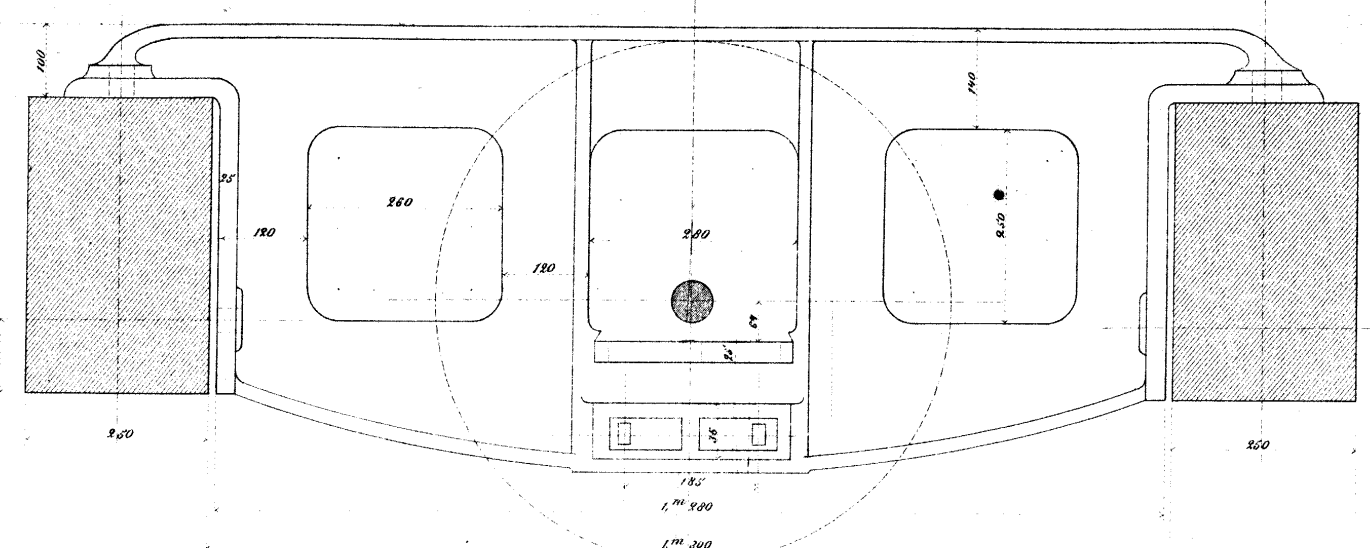


Fig. 4.

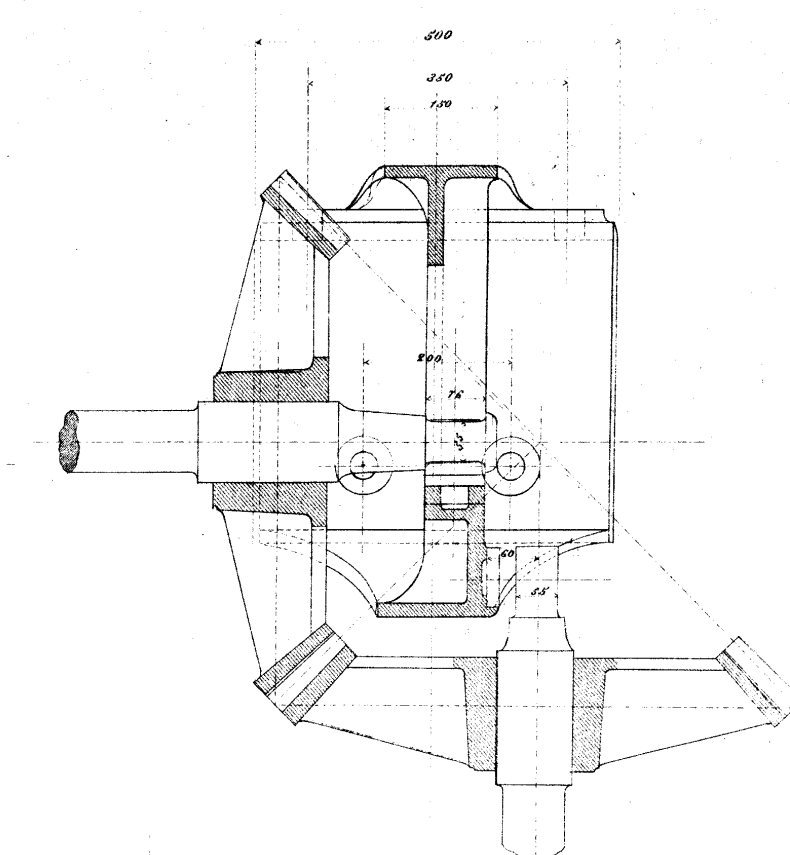
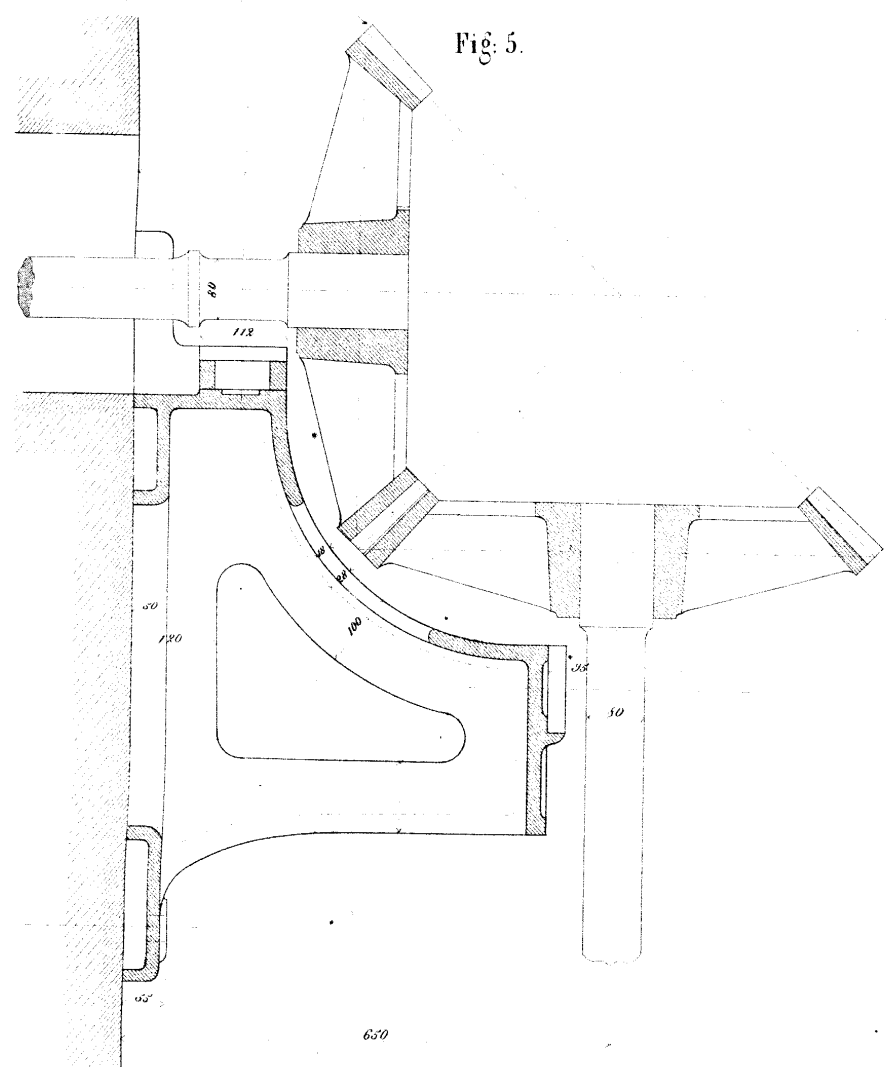


Fig. 5.



Wandlagerstuhl.

Fig. 6.

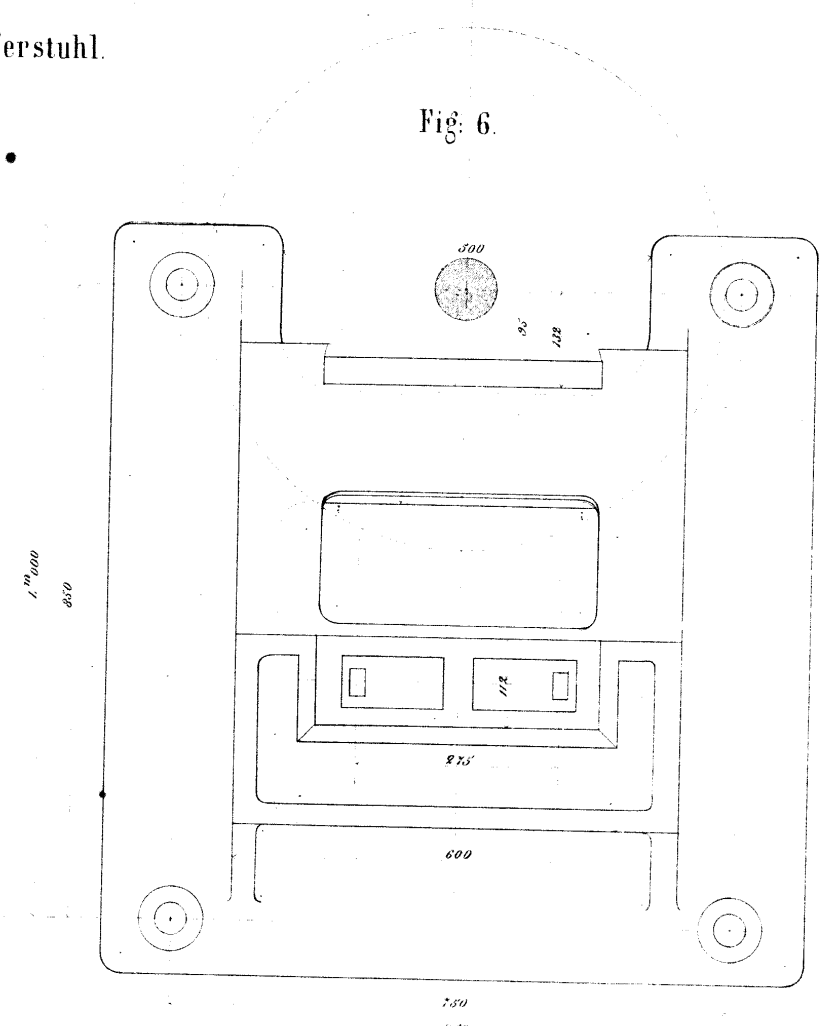
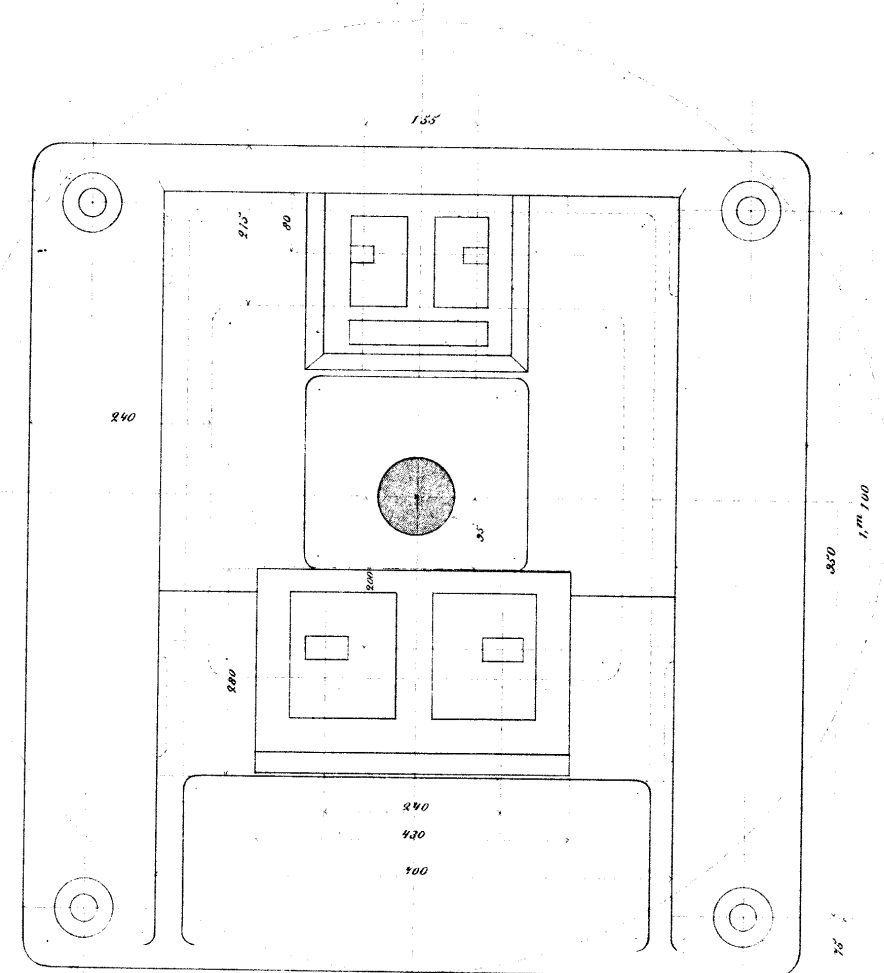


Fig. 7.



Wandlagerstuhl.

Fig. 8.

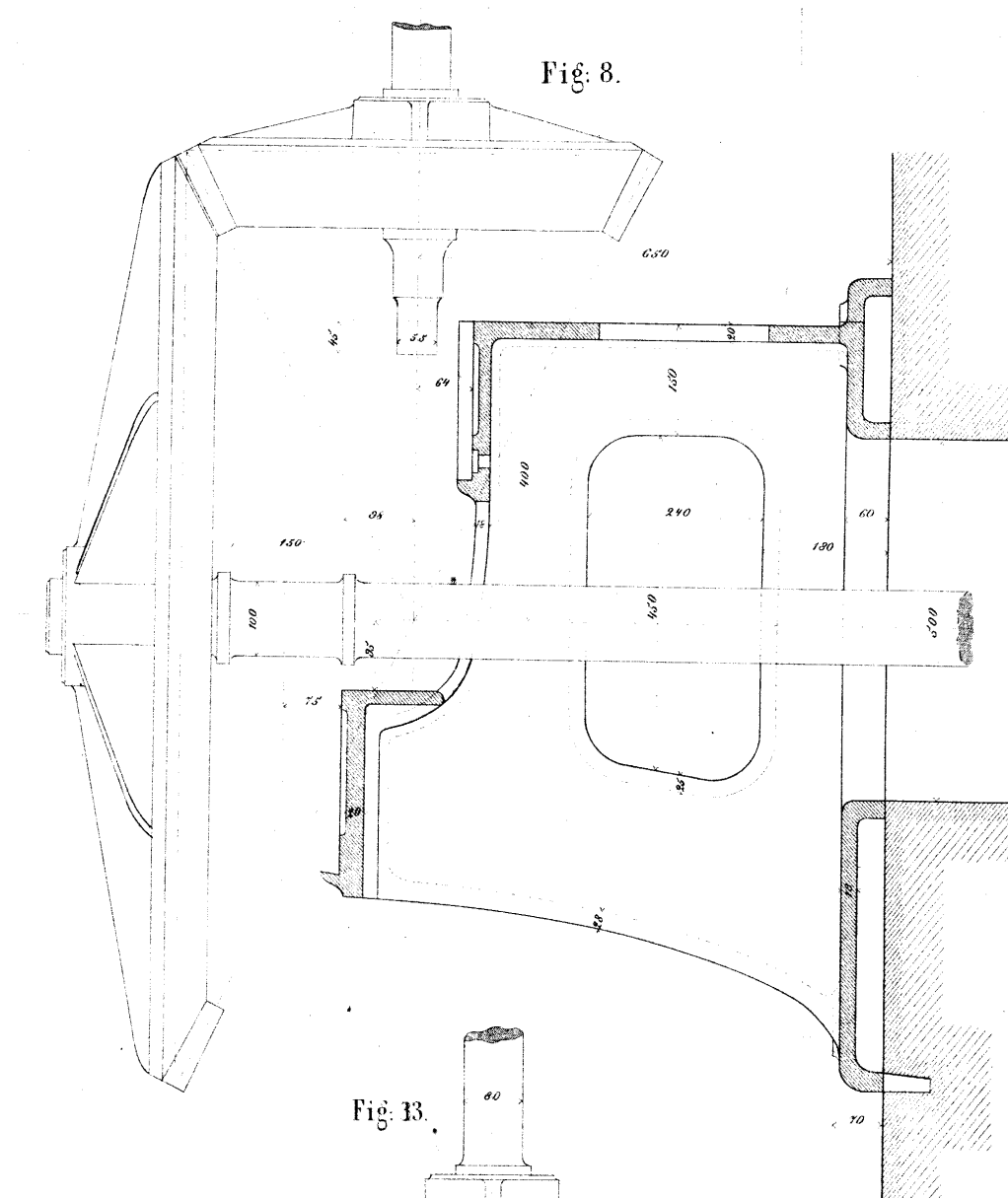
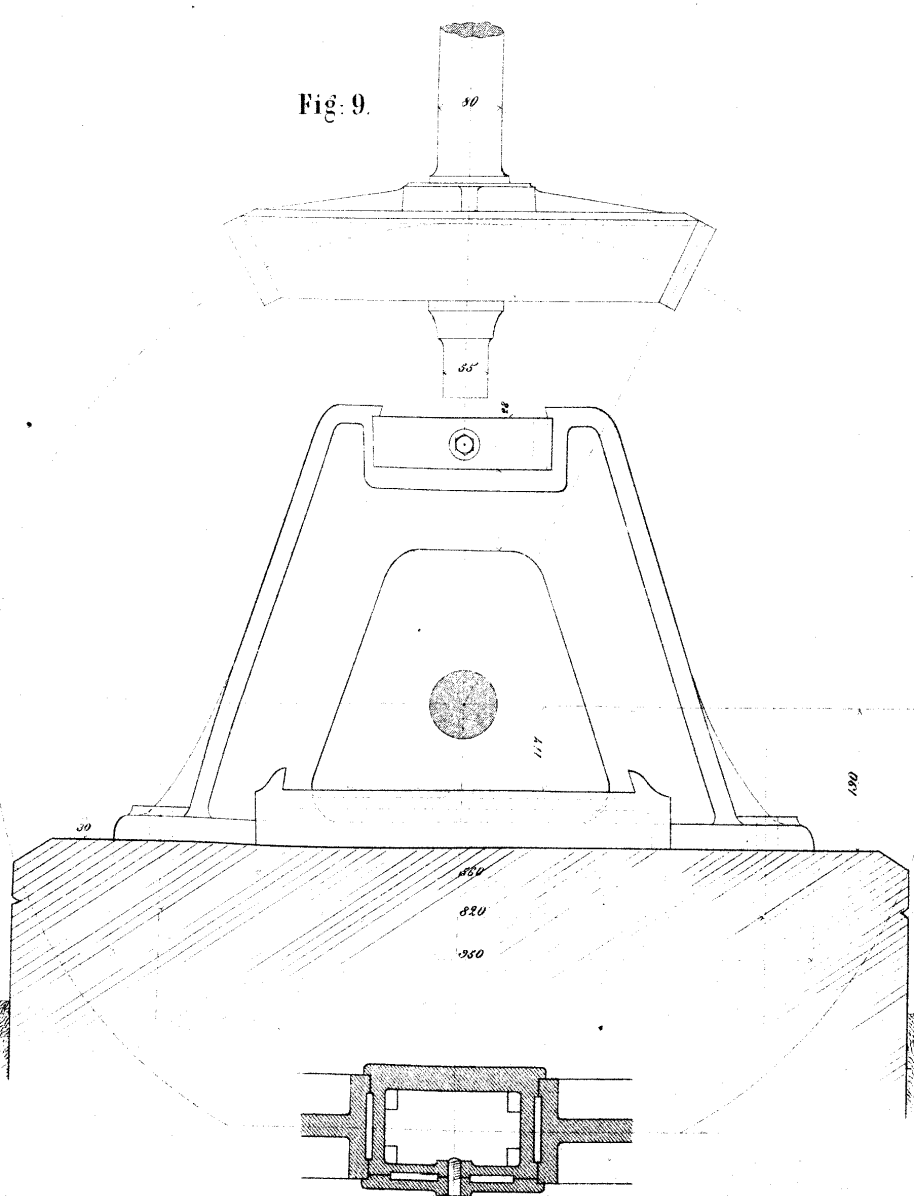


Fig. 9.



Fusslagerstuhl.

Fig. 10.

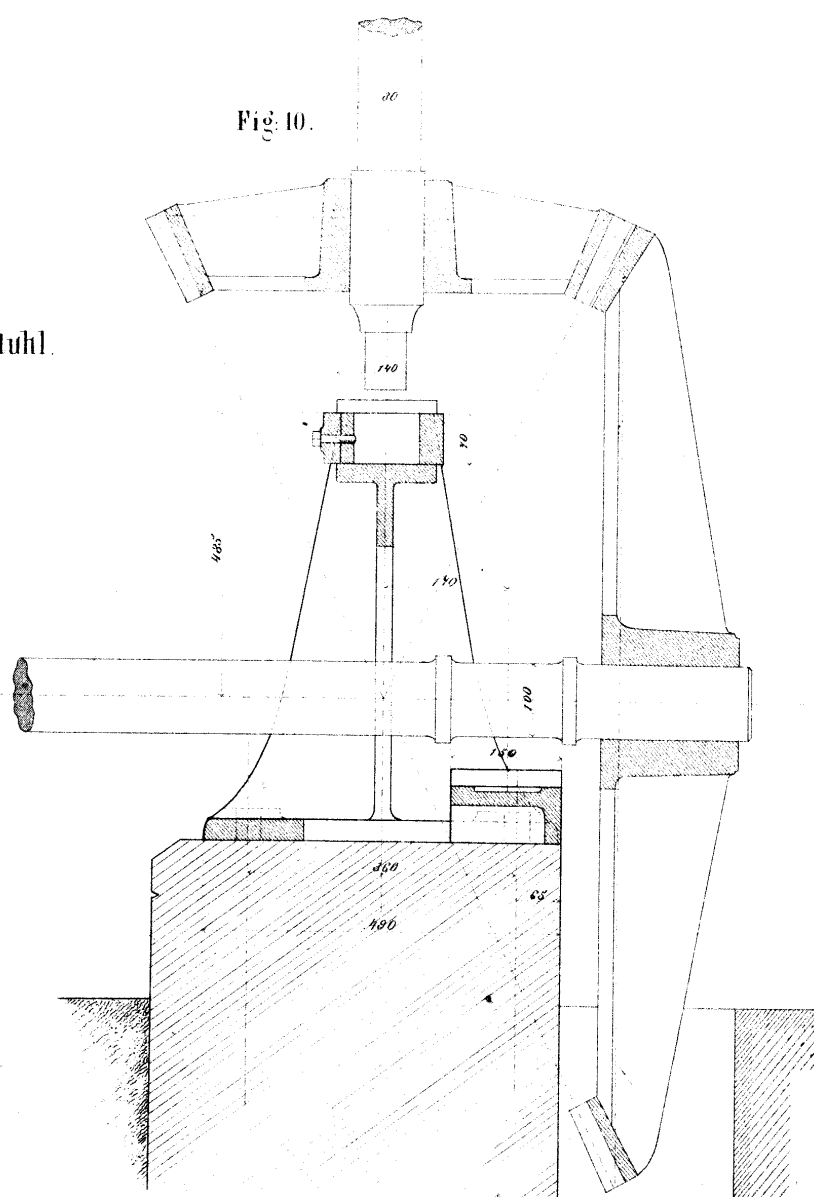
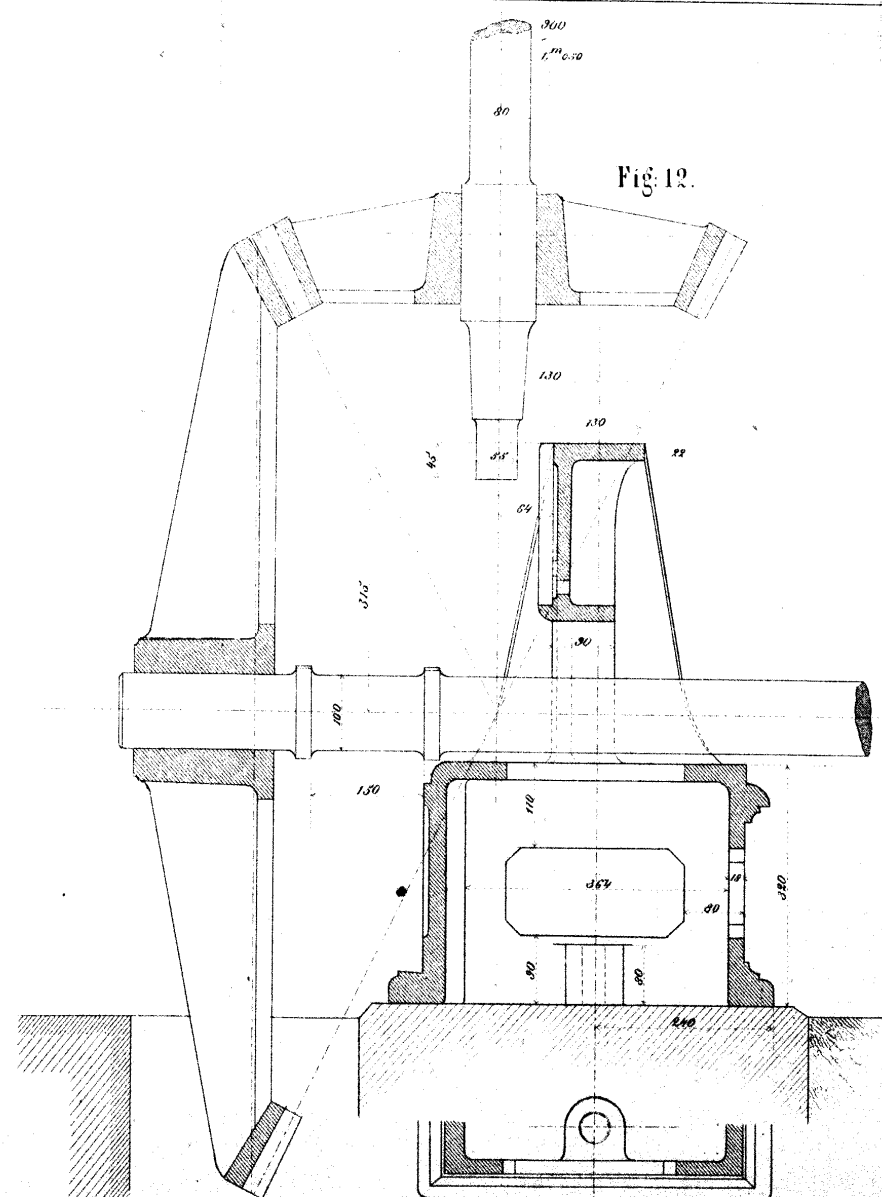


Fig. 12.



Fusslagerstuhl.

Fig. 13.

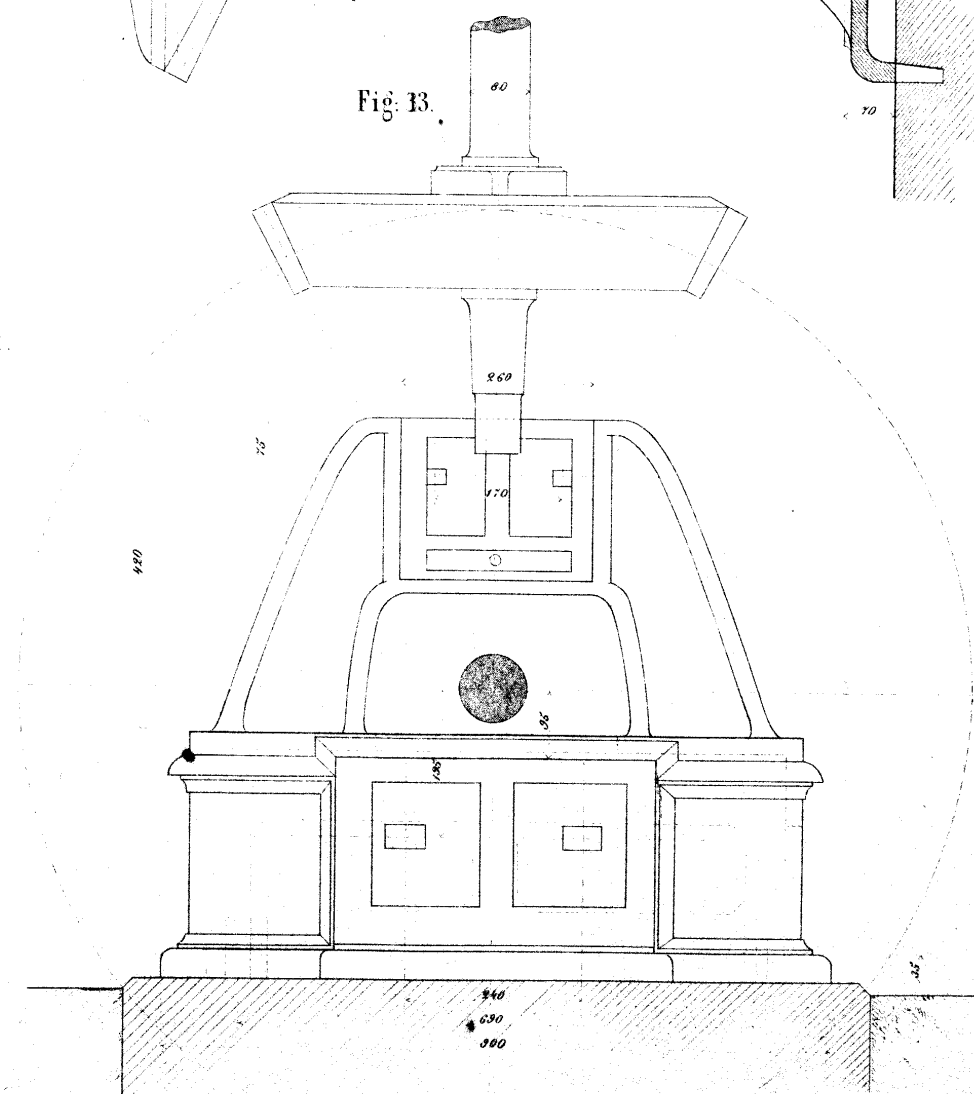


Fig. 11.

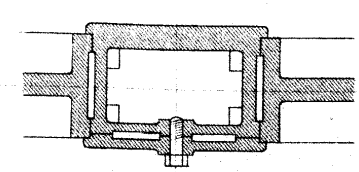


Fig. 14.

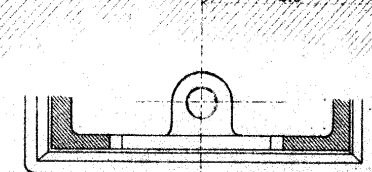
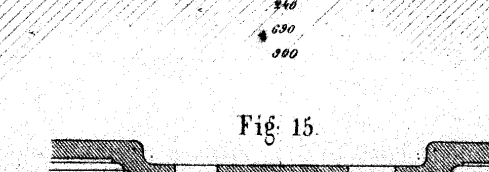


Fig. 15.



Wandlagerstuhl für 2 Lager.

Fig. 1.

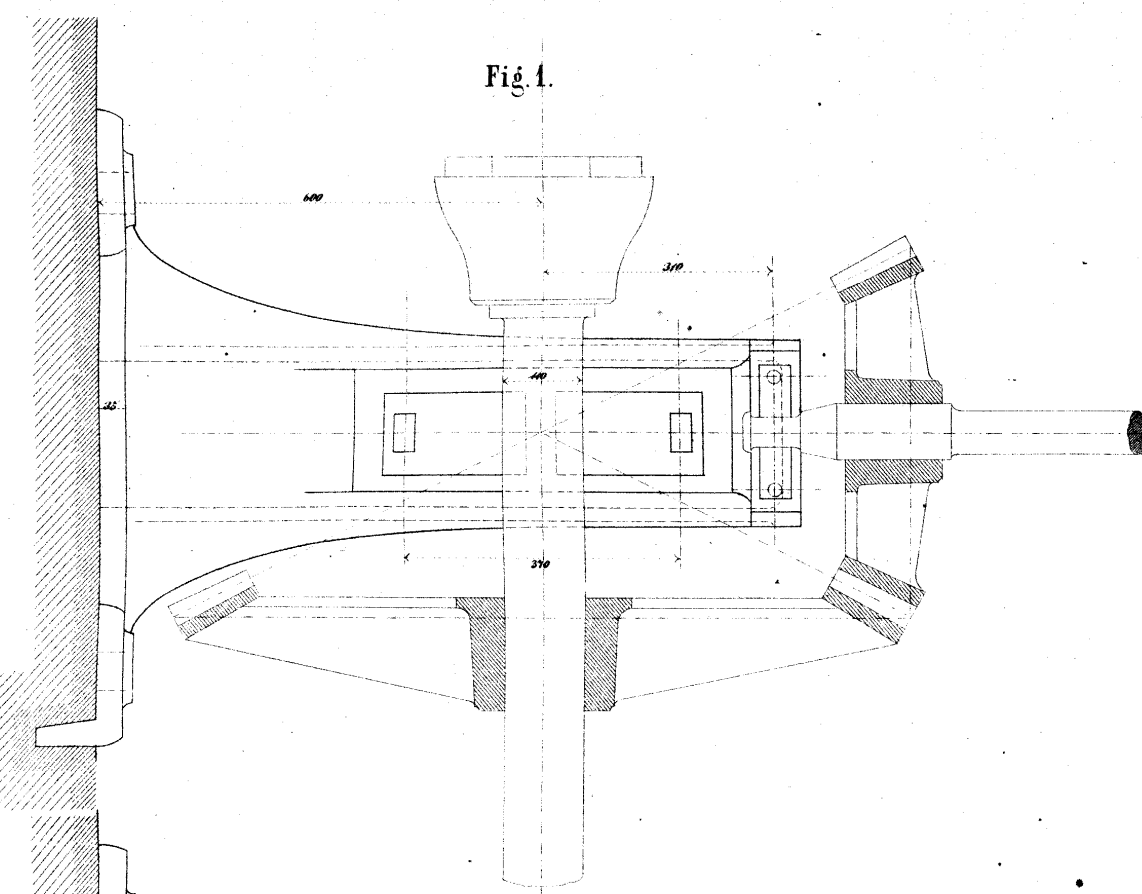


Fig. 2.

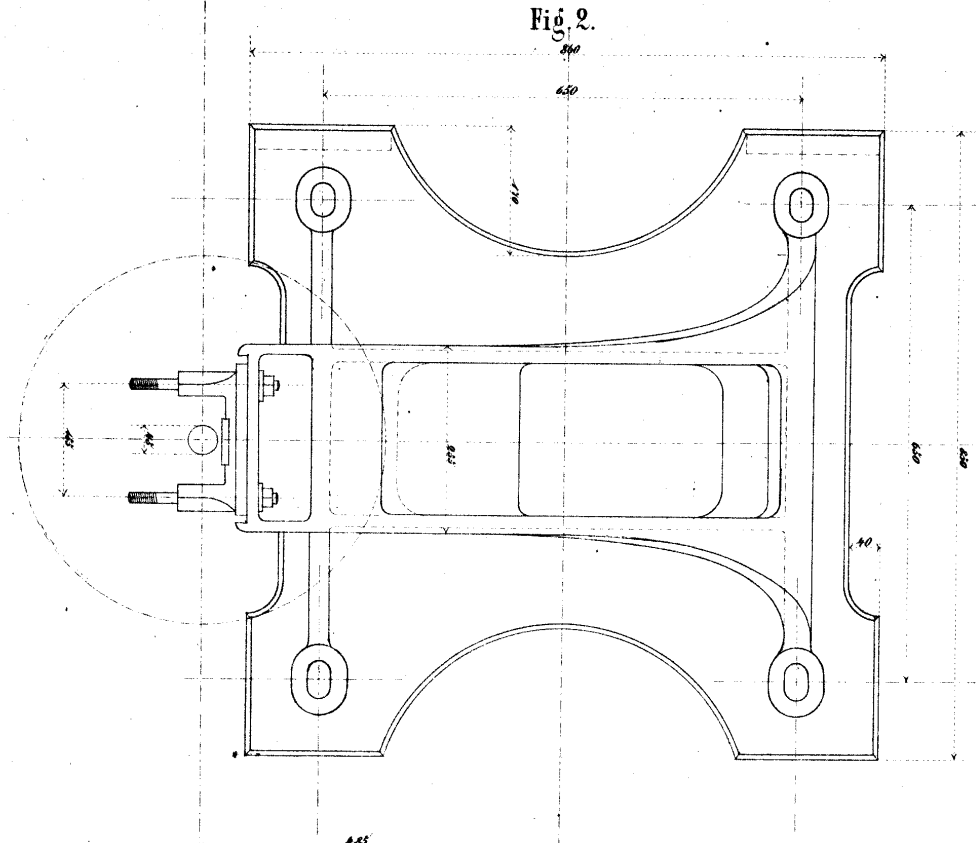
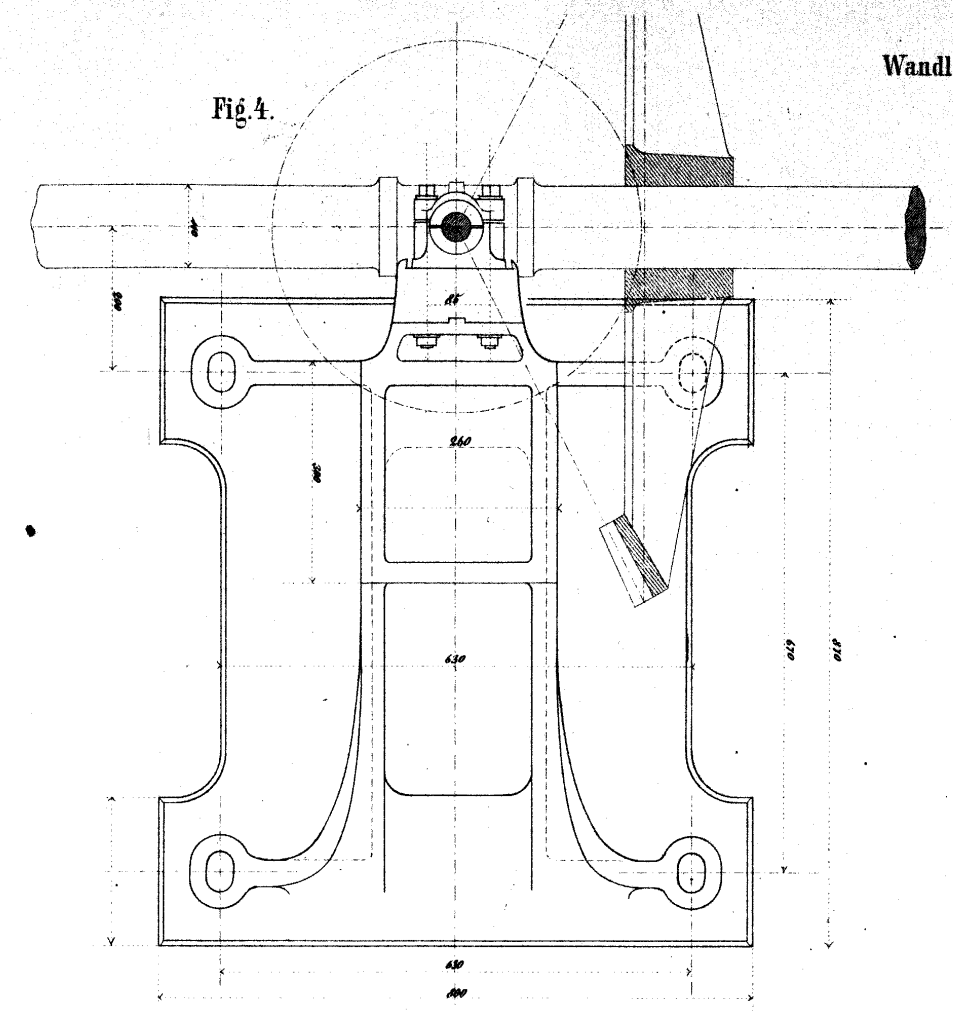


Fig. 4.



Wandlagerstuhl für 2 Lager.

Fig. 5.

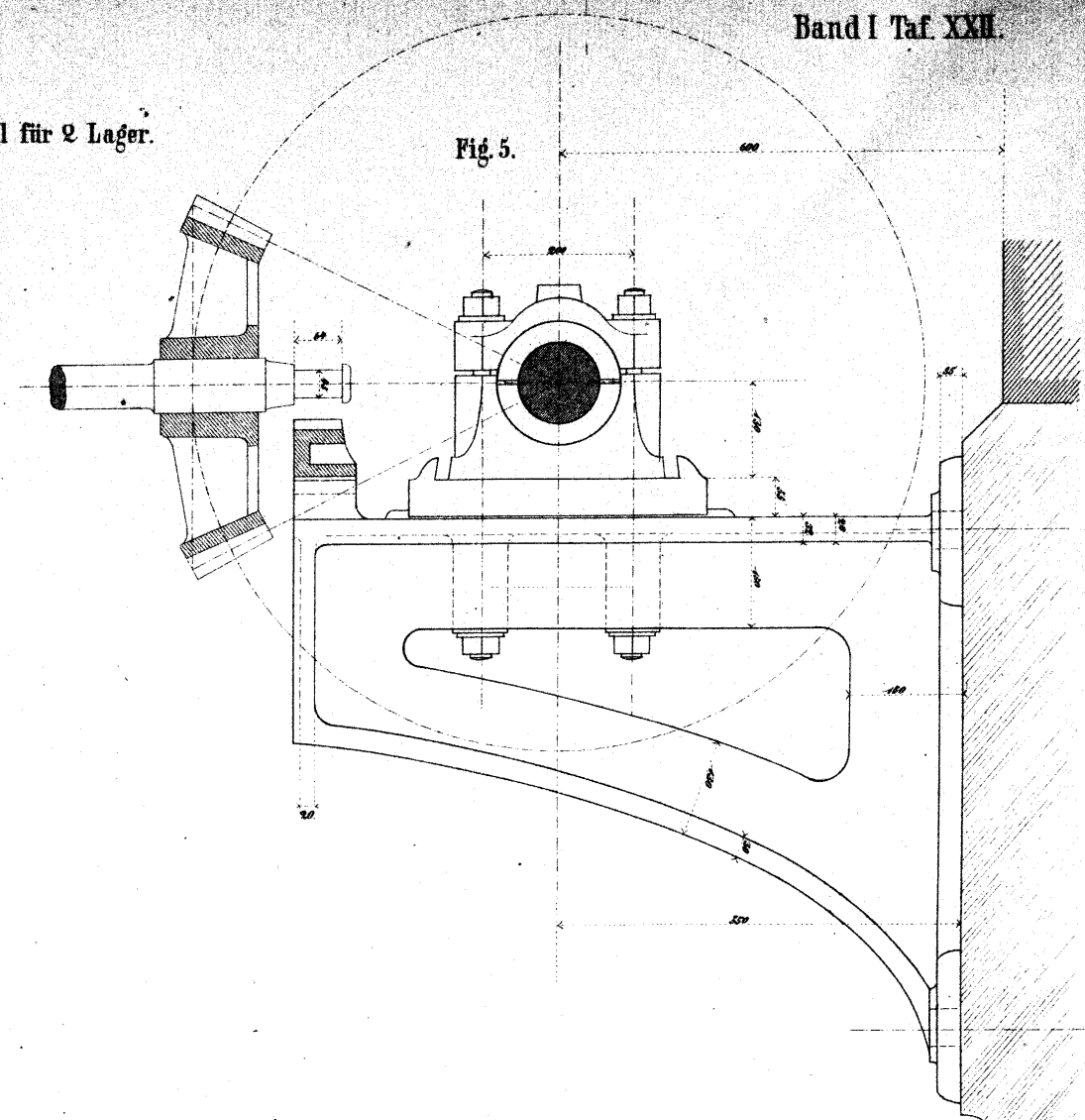


Fig. 3.

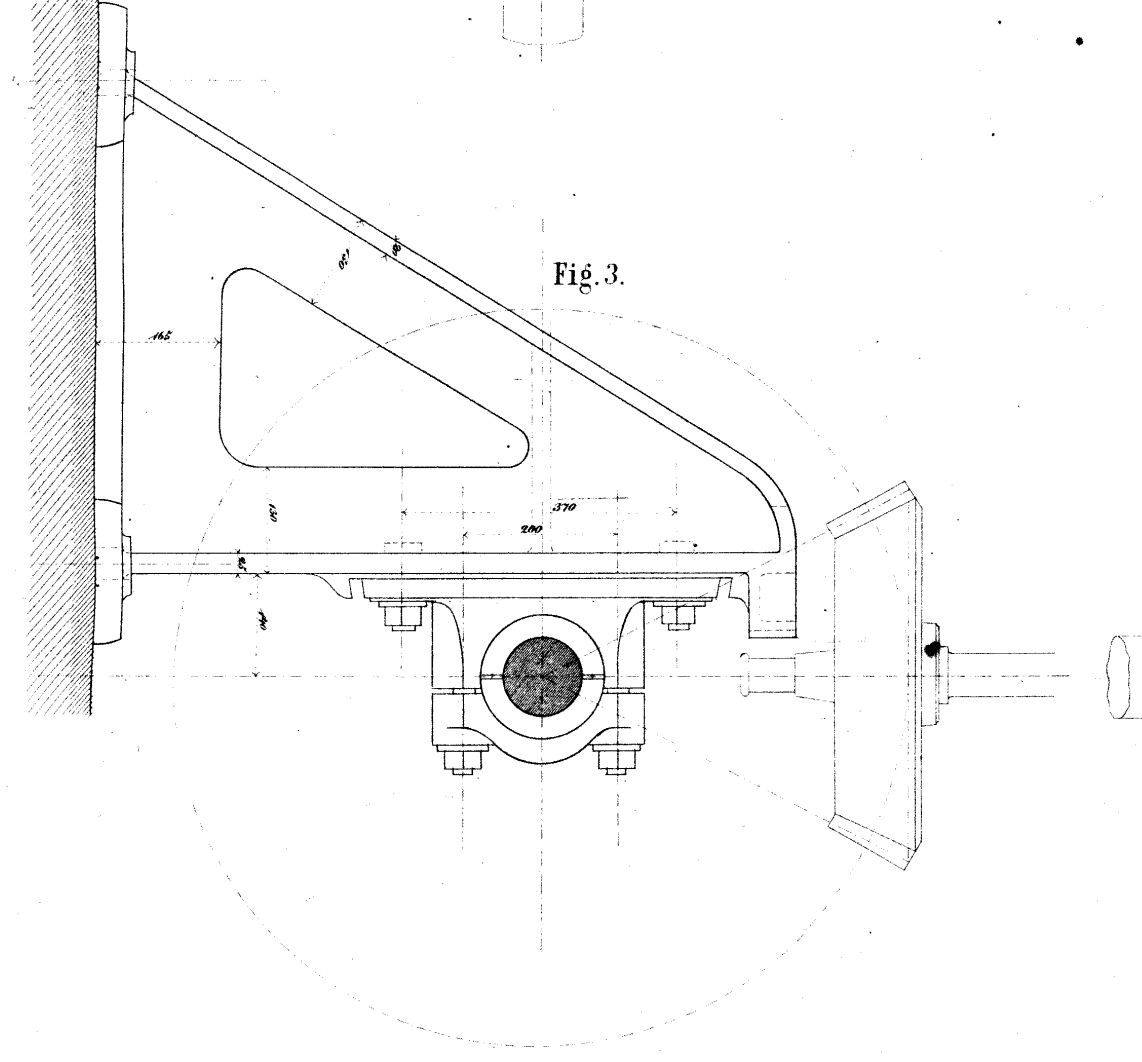
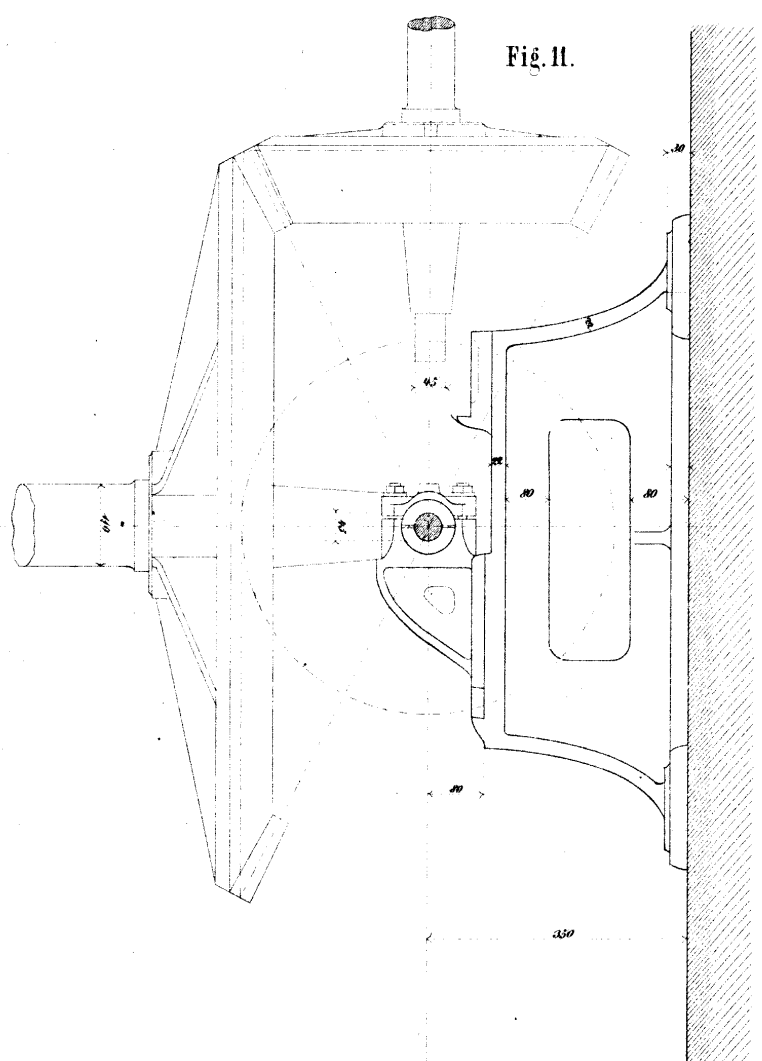


Fig. 11.



Wandlagerstuhl für 4 Lager.

Fig. 12.

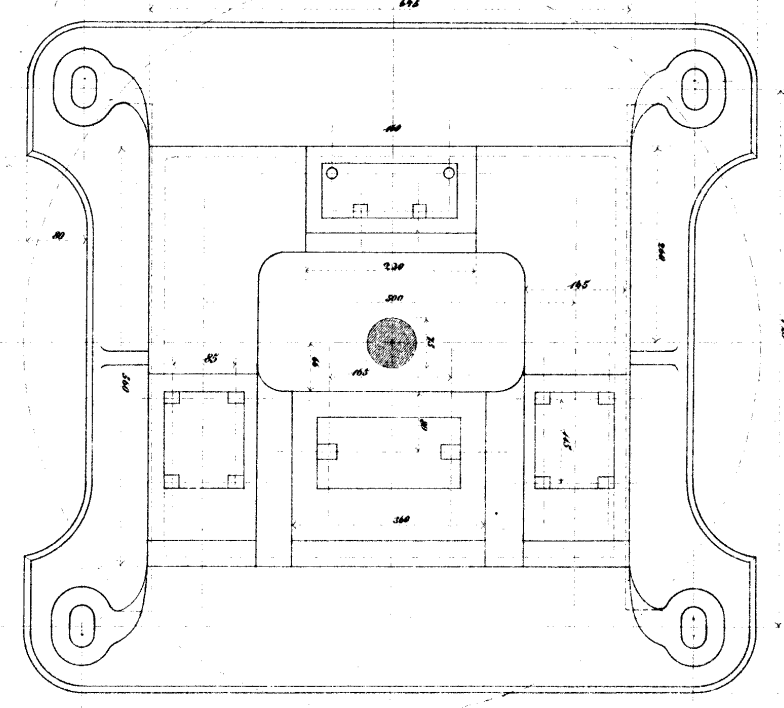


Fig. 13.

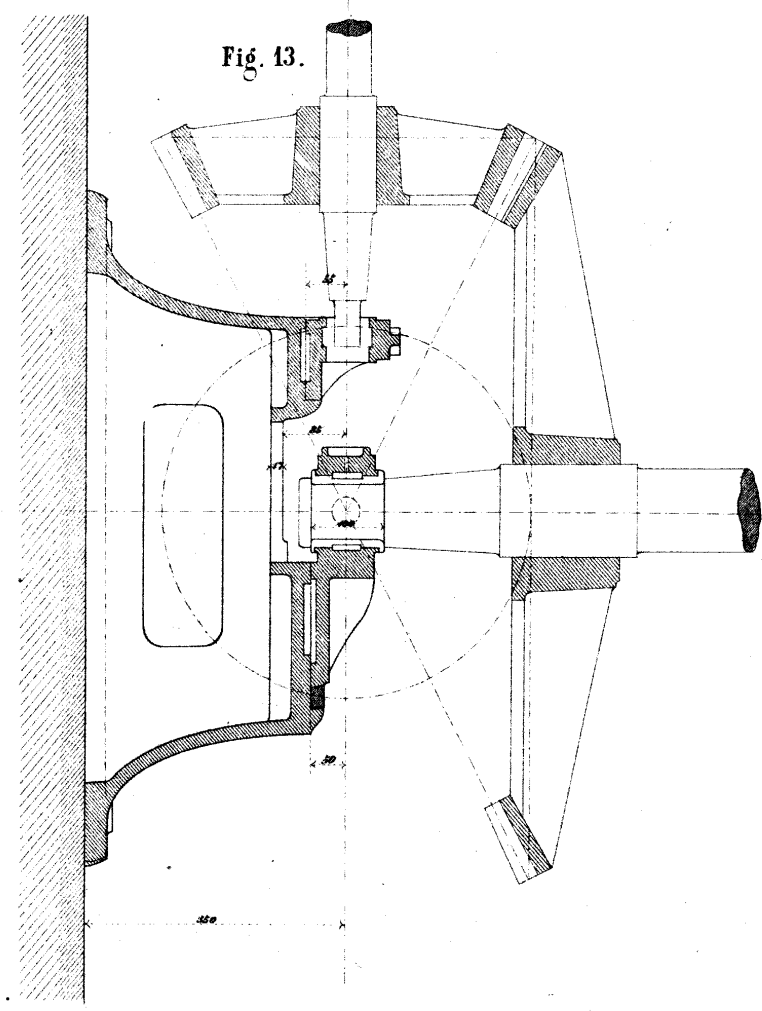


Fig. 10.

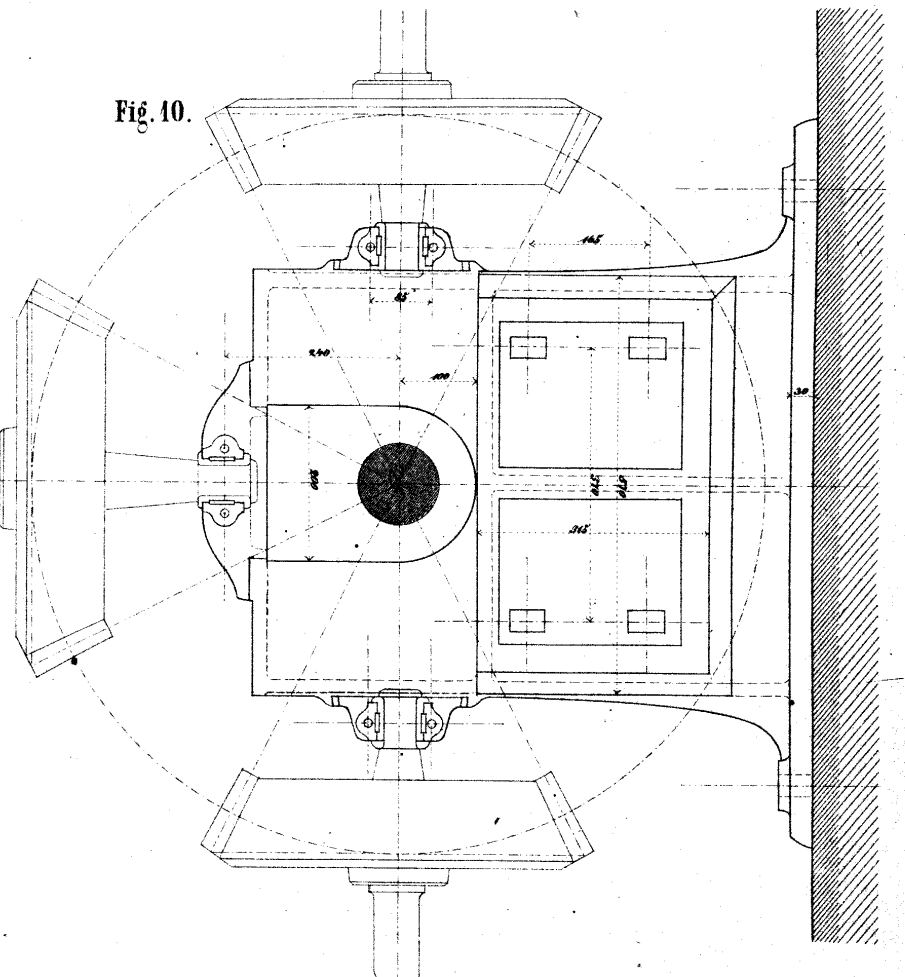
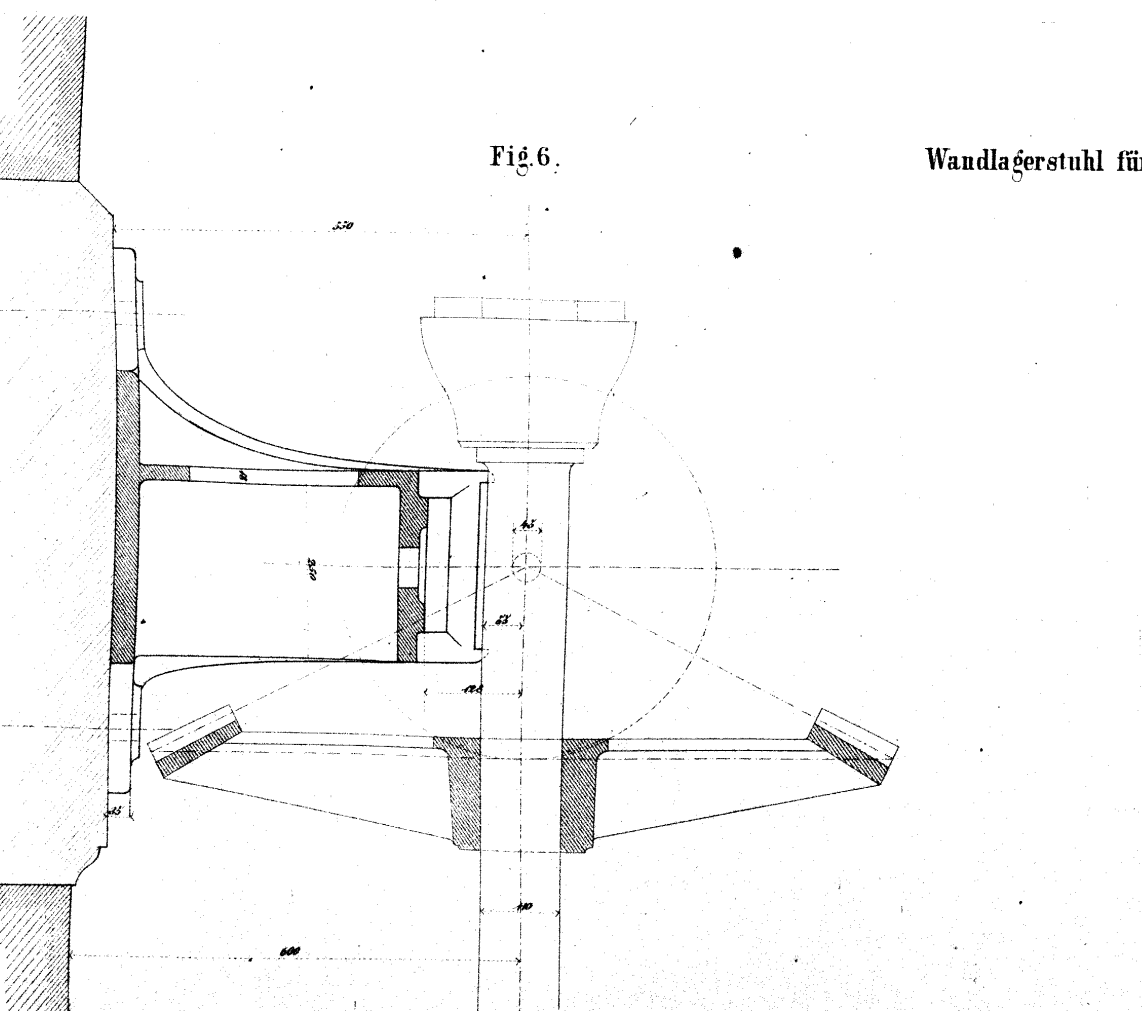


Fig. 6.



Wandlagerstuhl für 3 Lager.

Fig. 7.

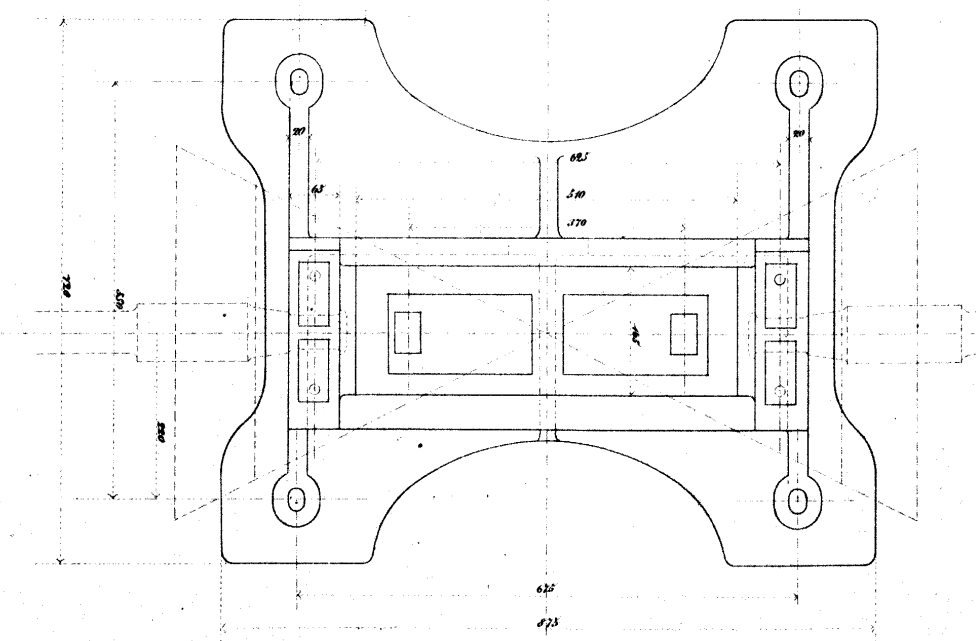
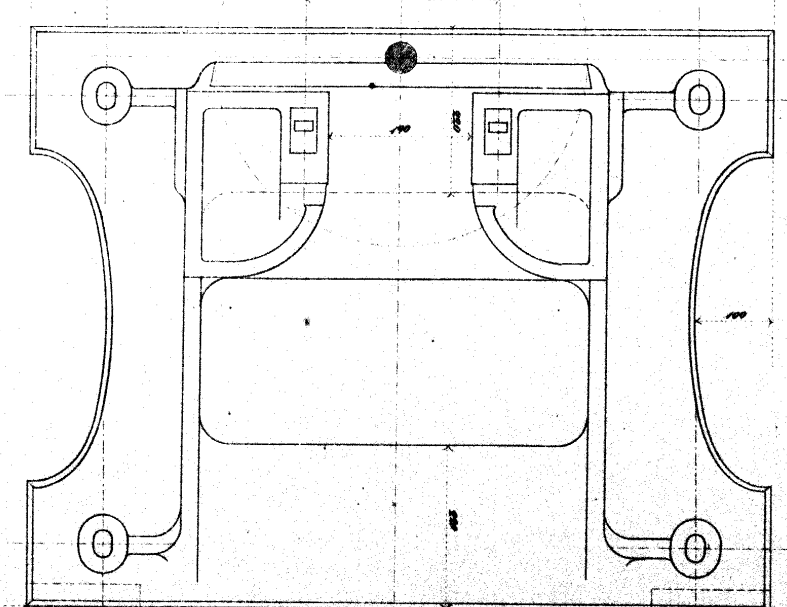
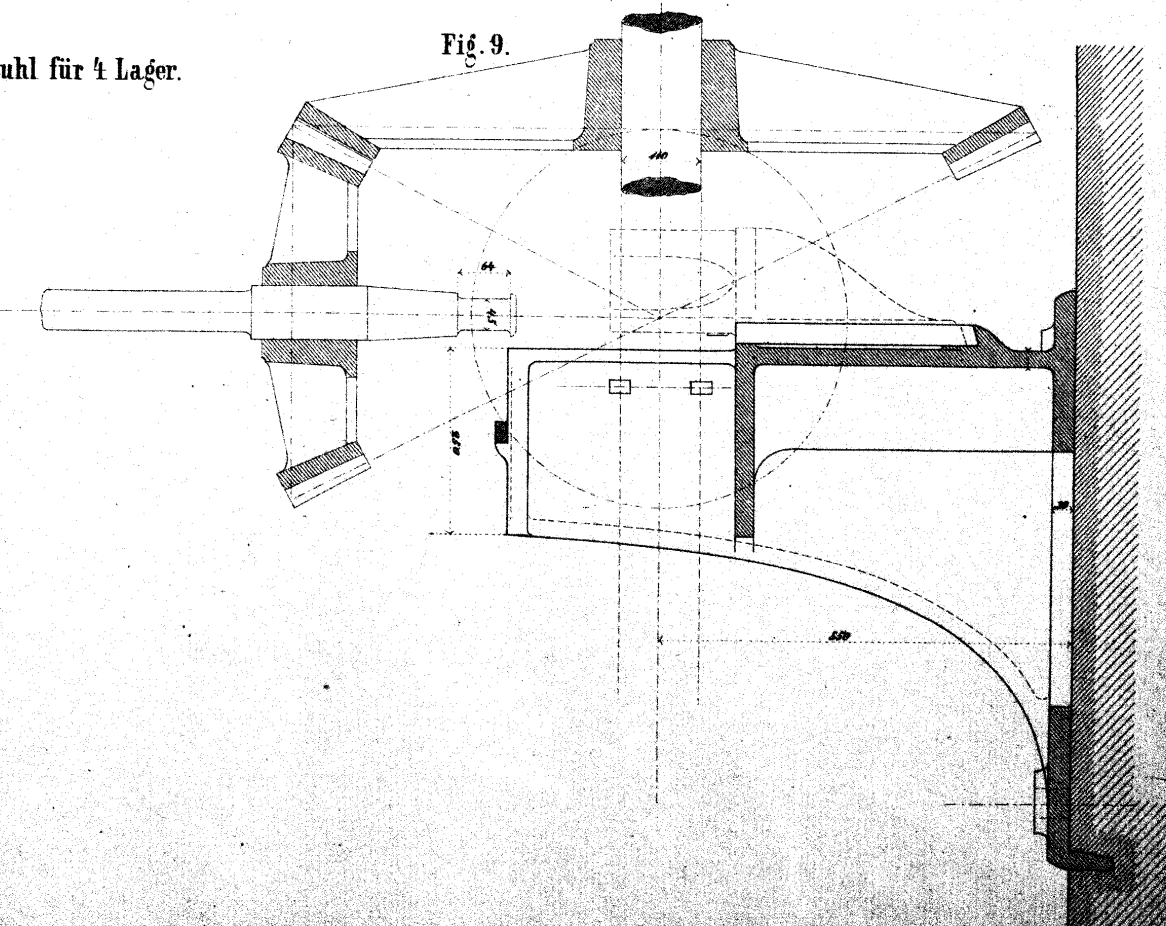


Fig. 8.

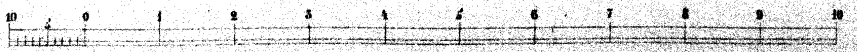


Wandlagerstuhl für 4 Lager.

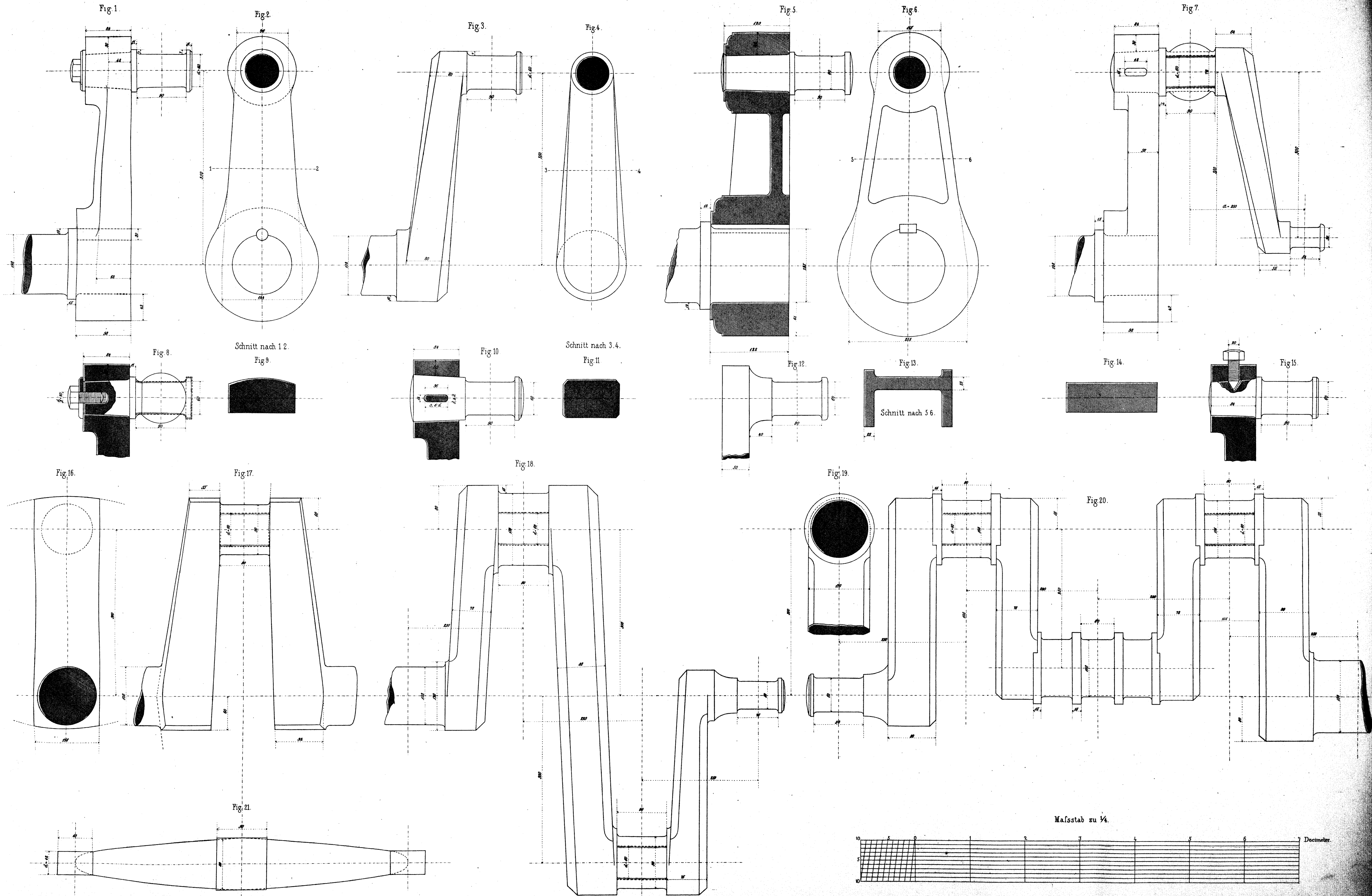
Fig. 9.



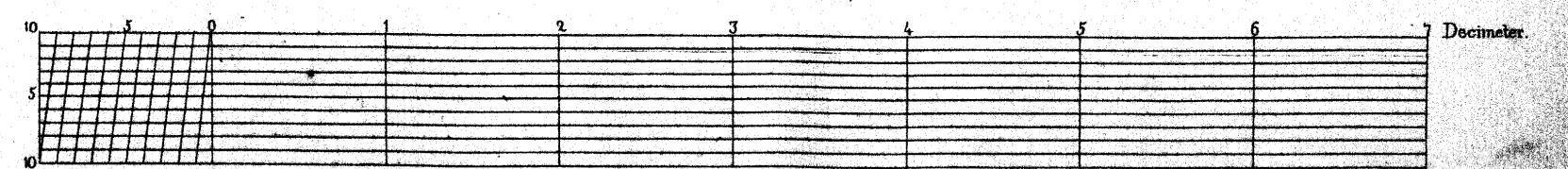
Maßstab zu 1/10



KURBELN.



Mafsstab zu 1/4.



BALANCIERS.

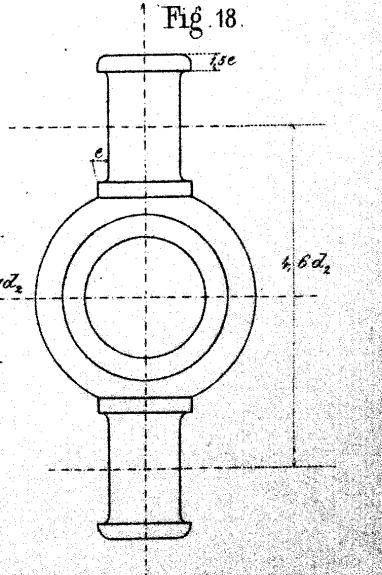
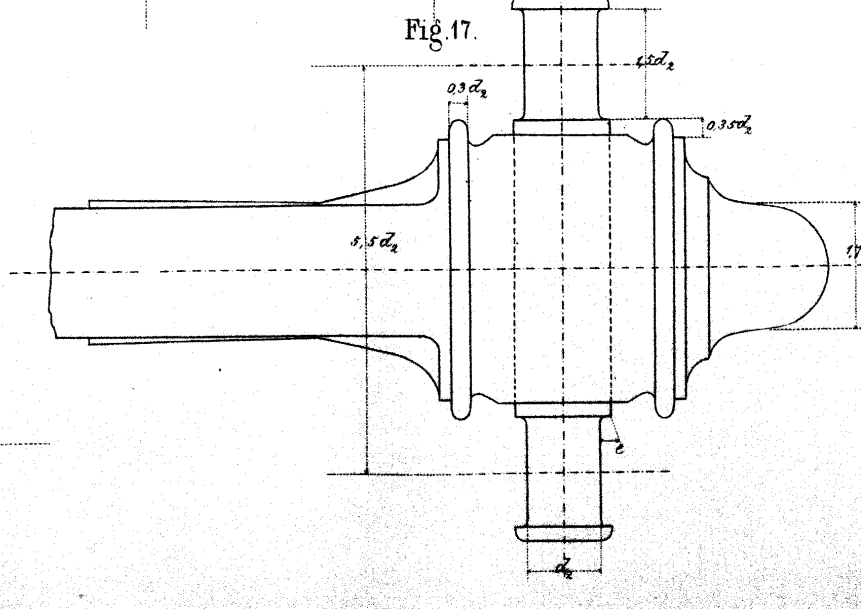
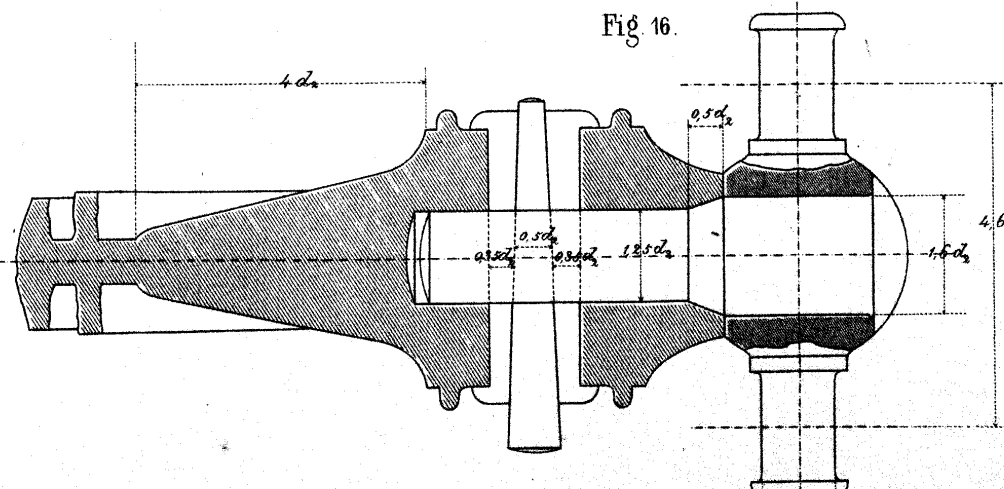
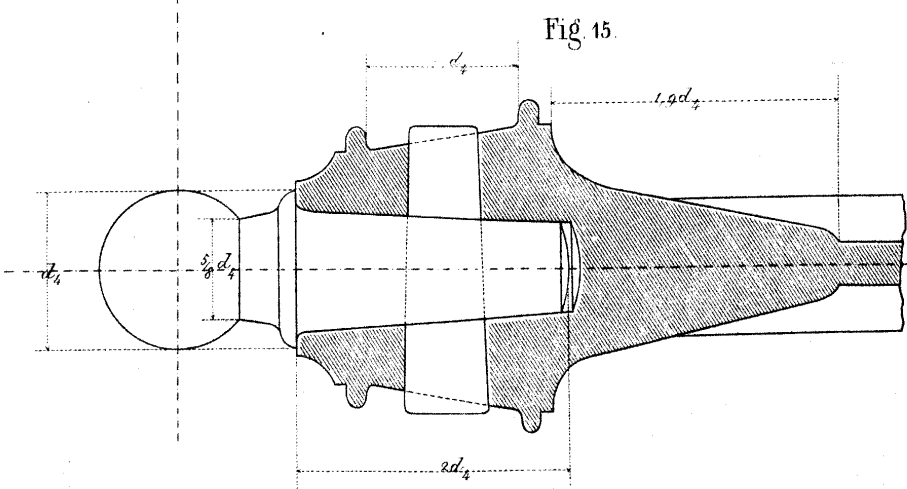
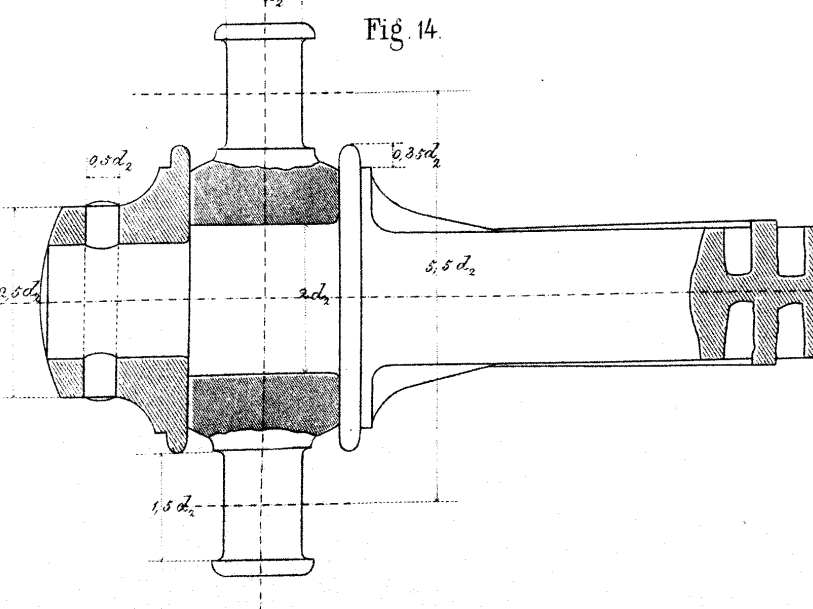
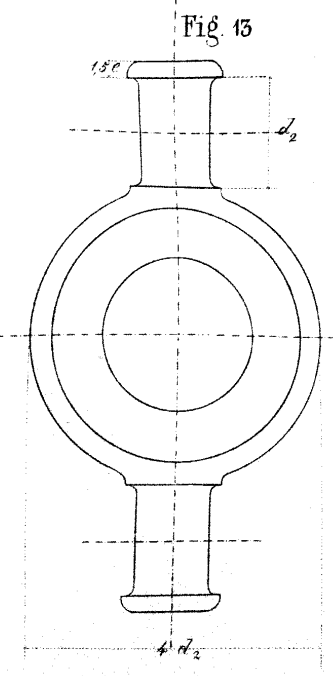
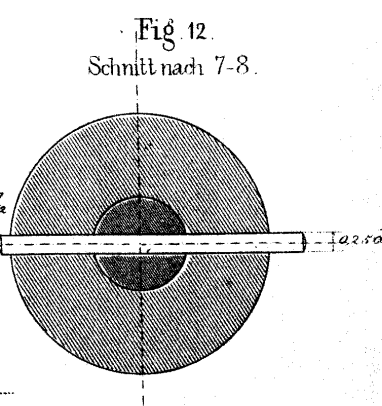
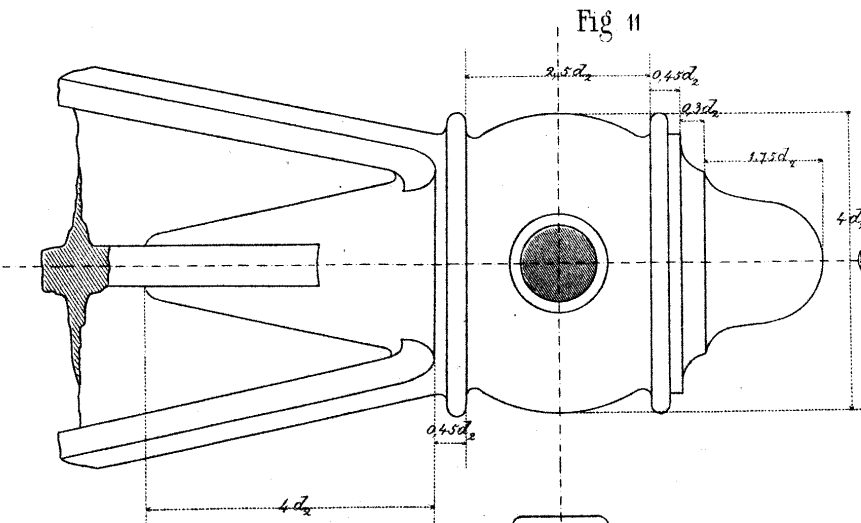
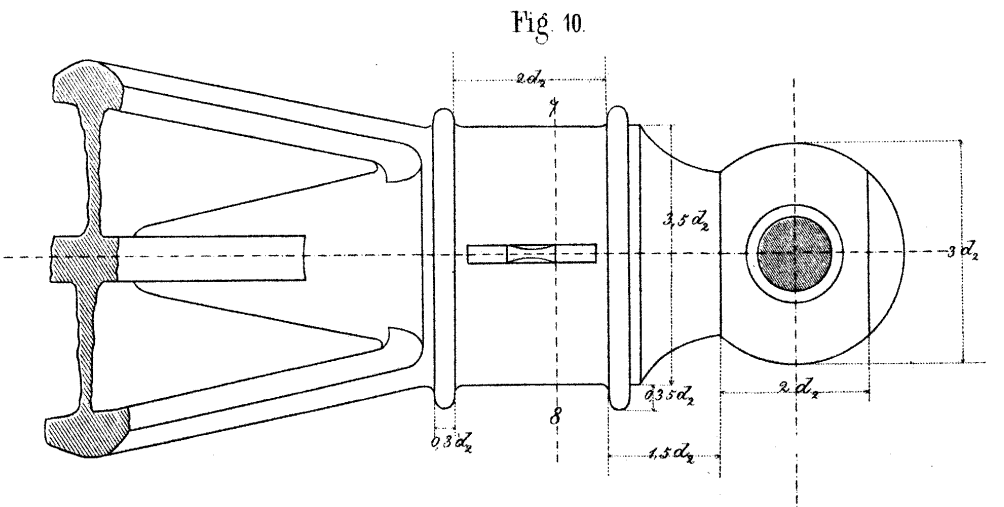
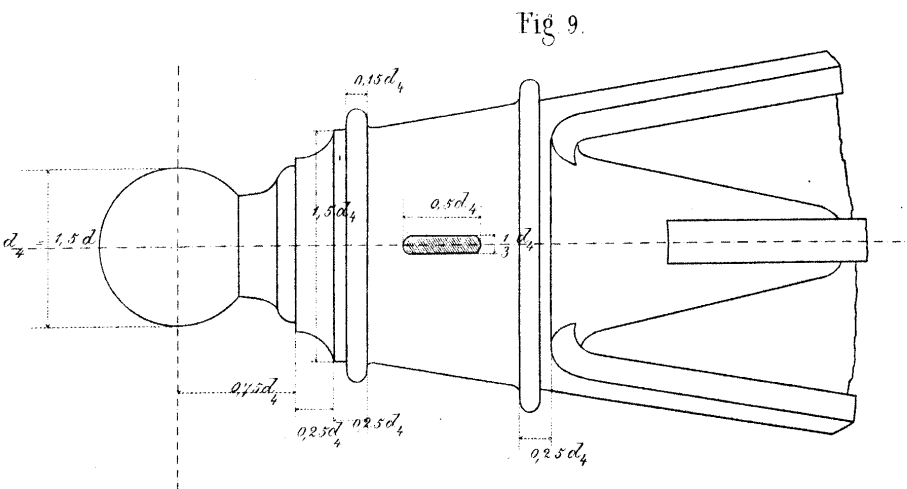
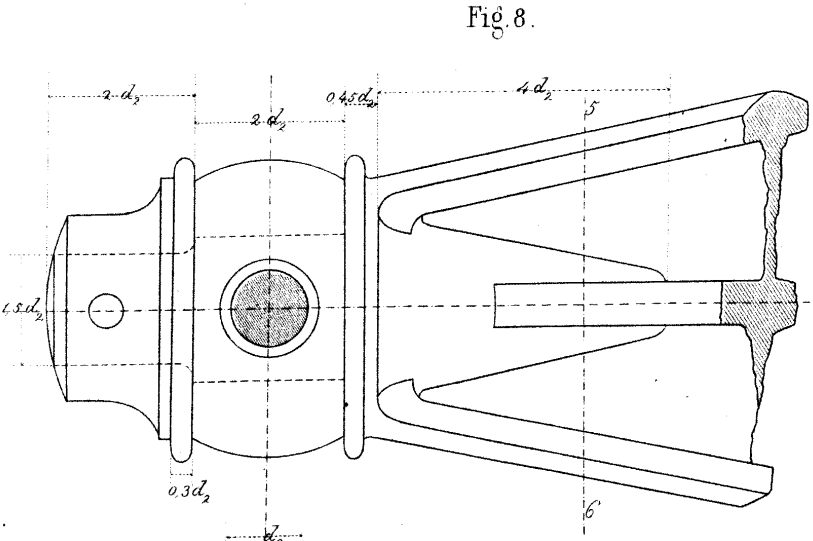
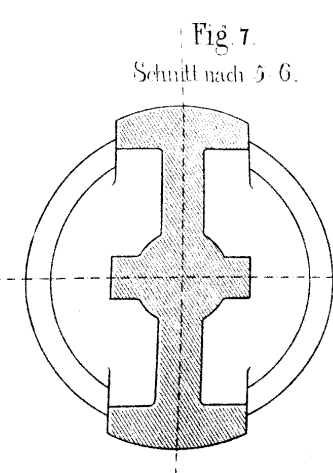
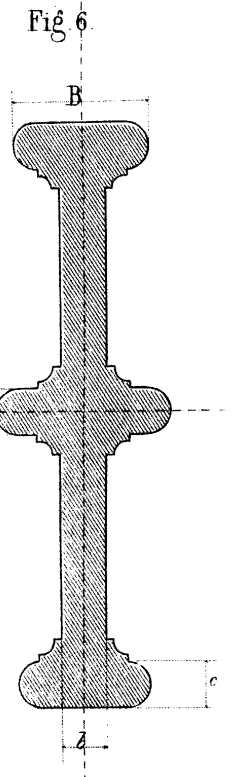
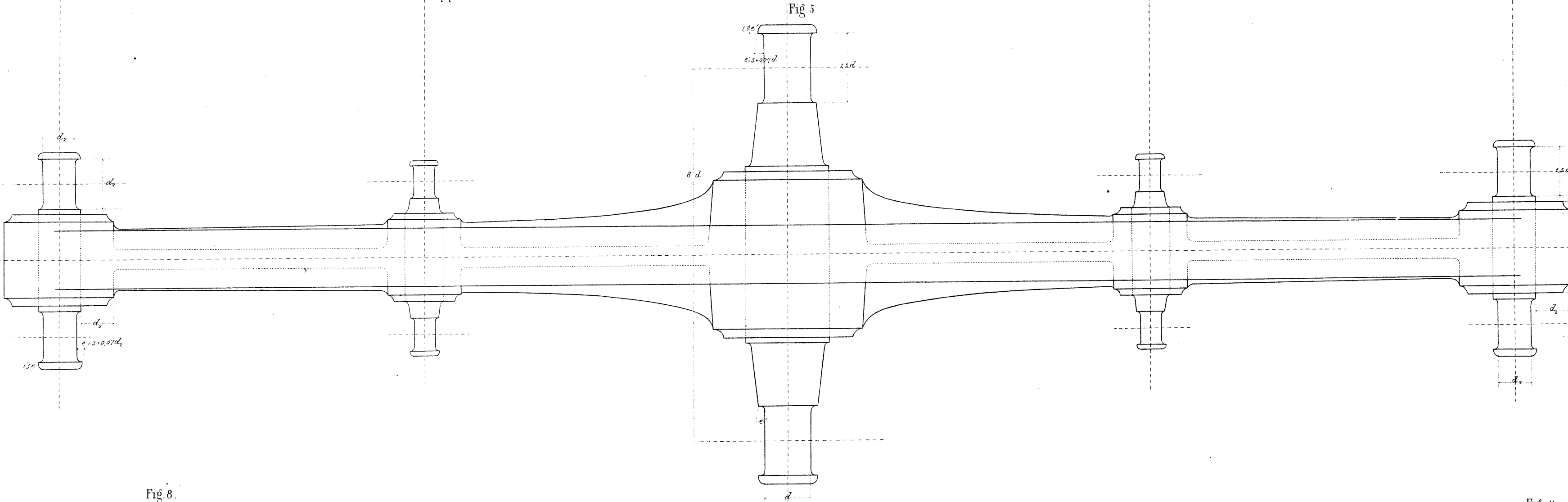
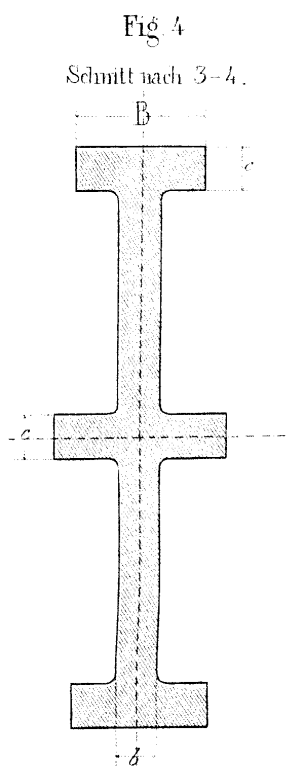
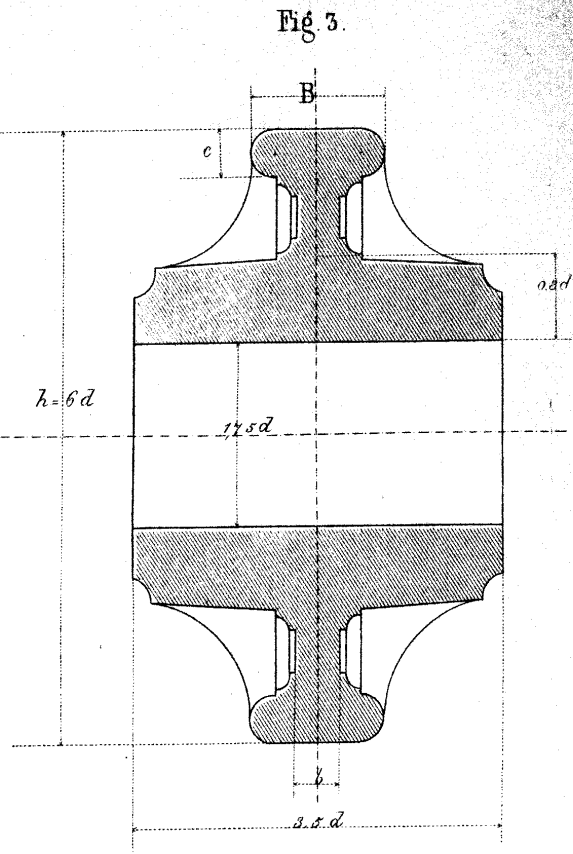
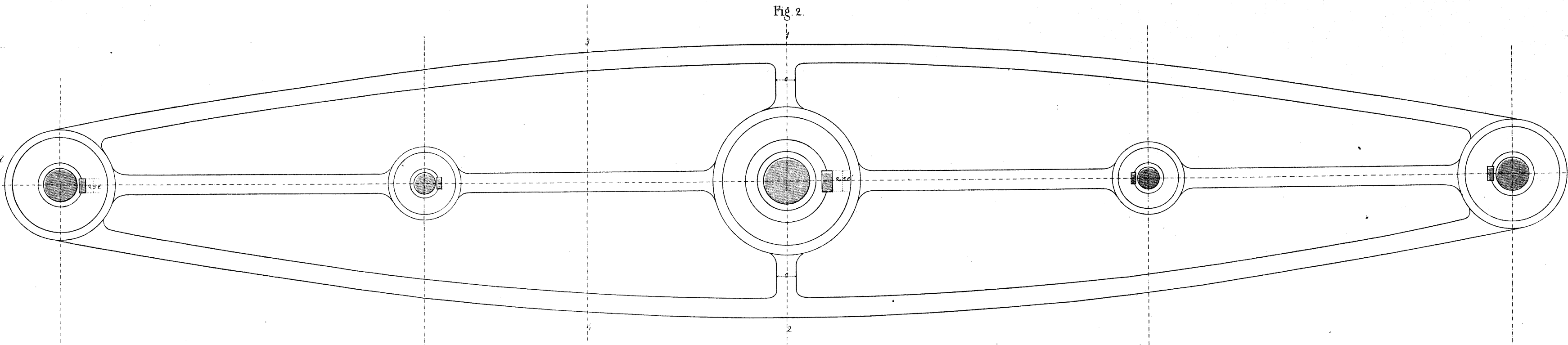
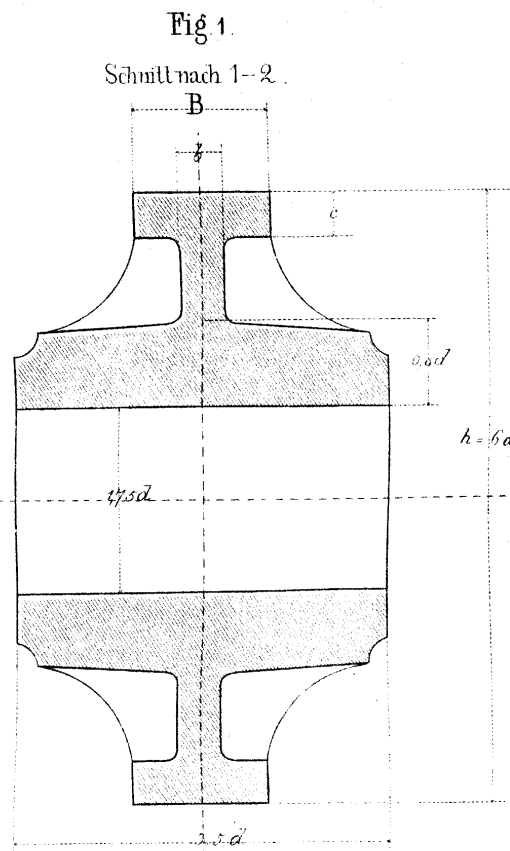


Fig. 1.

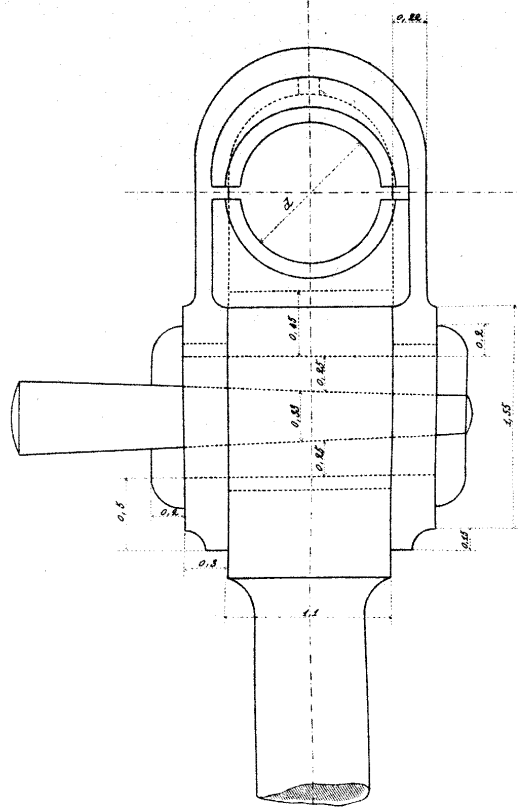


Fig. 2.

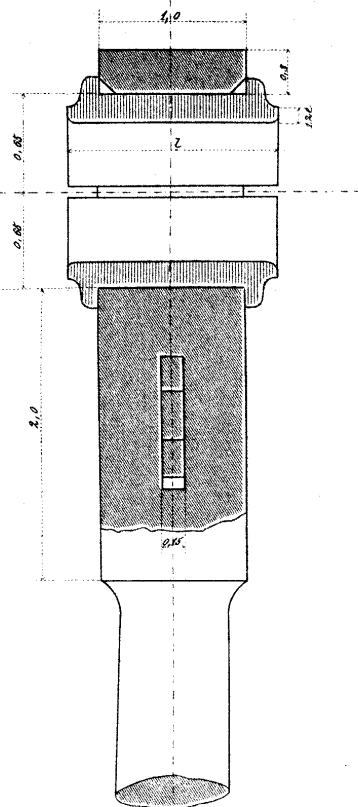


Fig. 3.

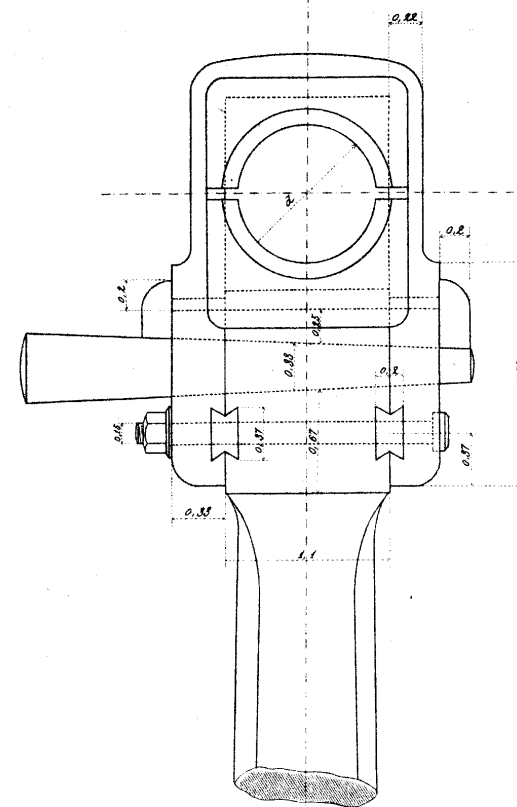
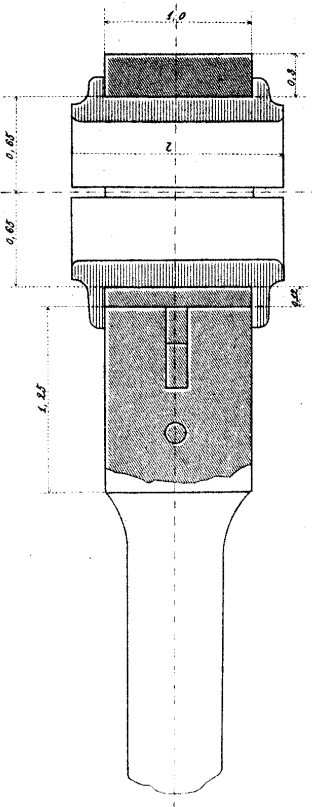


Fig. 4.



Bezug-Einheit: $a = d + 5^{mm}$

Fig. 5.

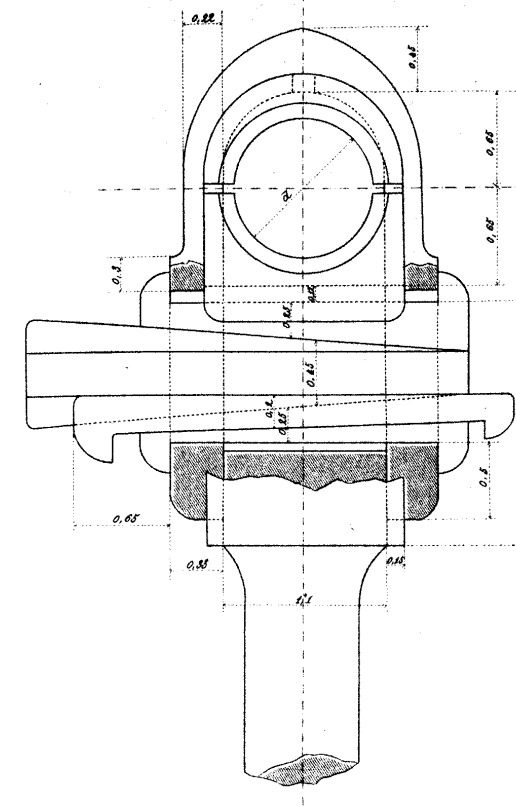


Fig. 6.

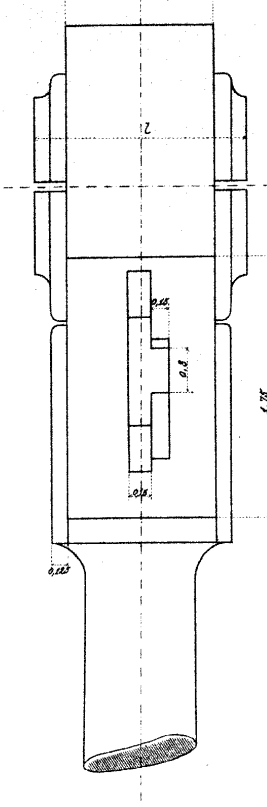


Fig. 7.

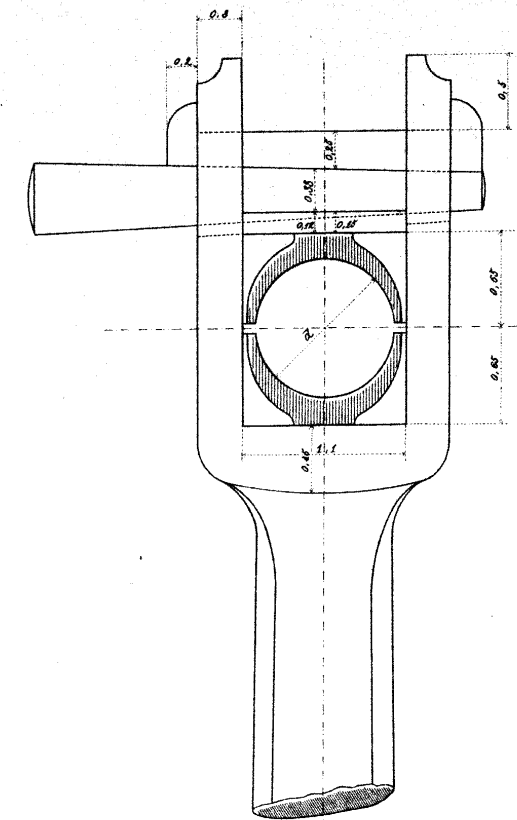


Fig. 8.

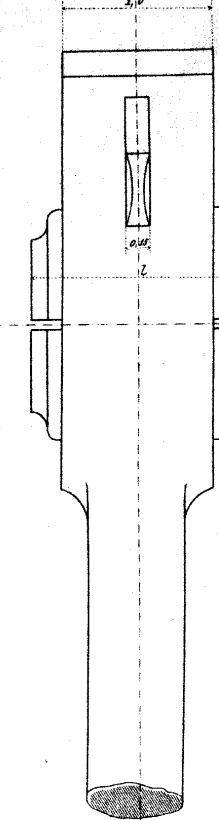


Fig. 9.

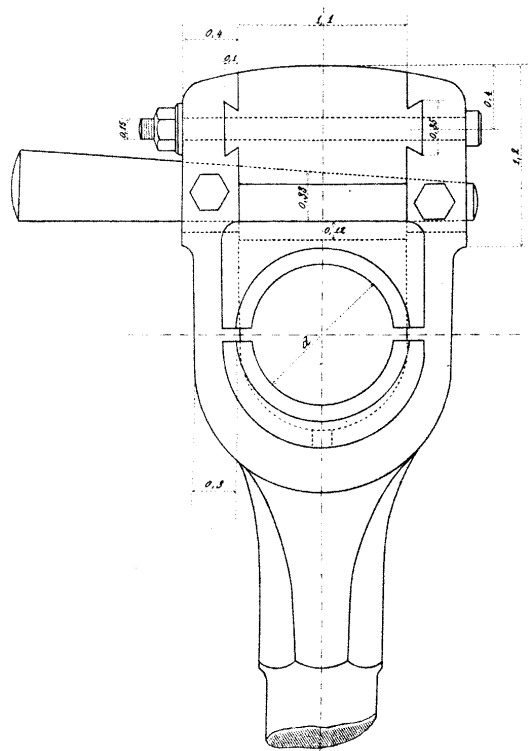


Fig. 10.

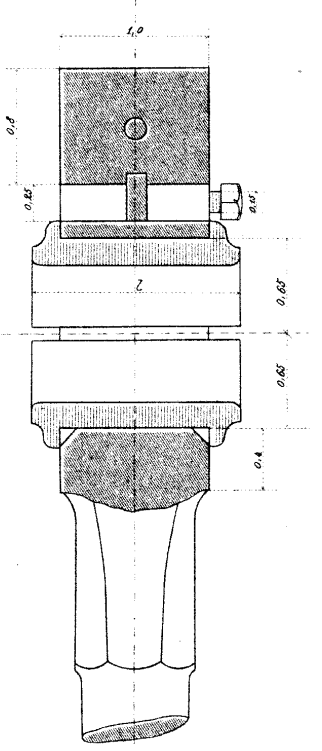


Fig. 11.

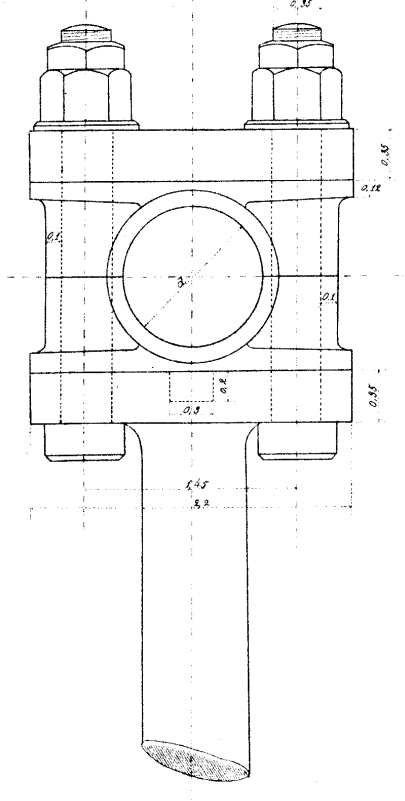


Fig. 12.

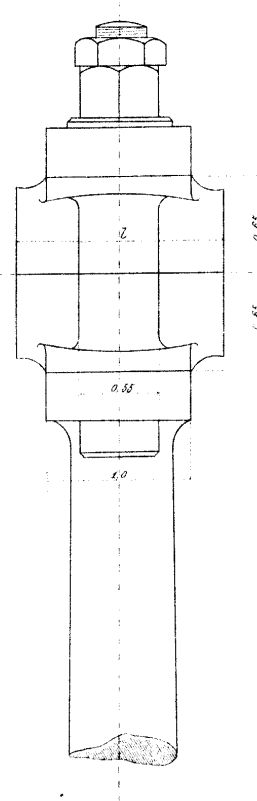


Fig. 13.

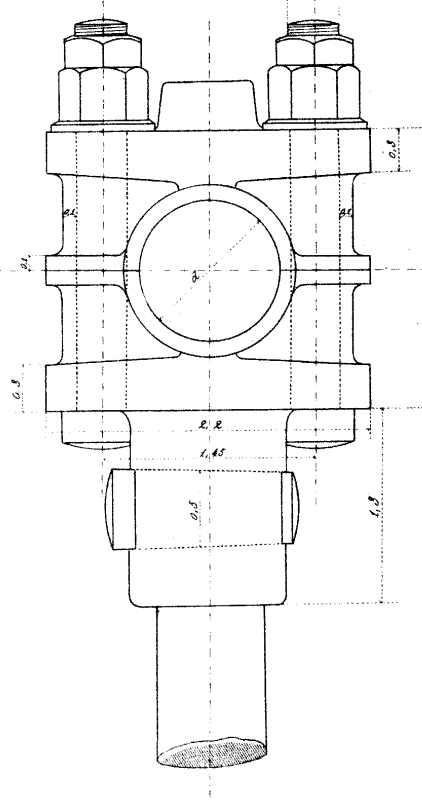


Fig. 14.

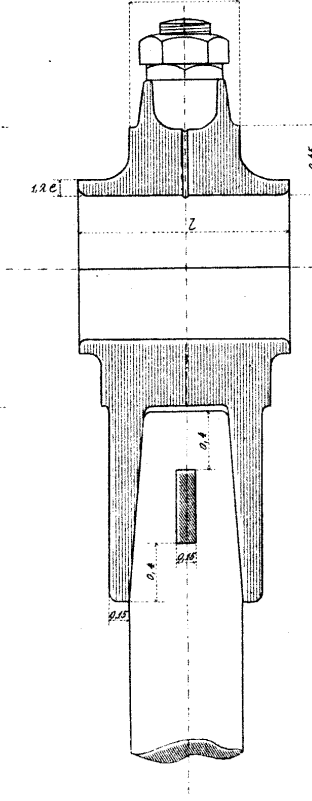


Fig. 15.

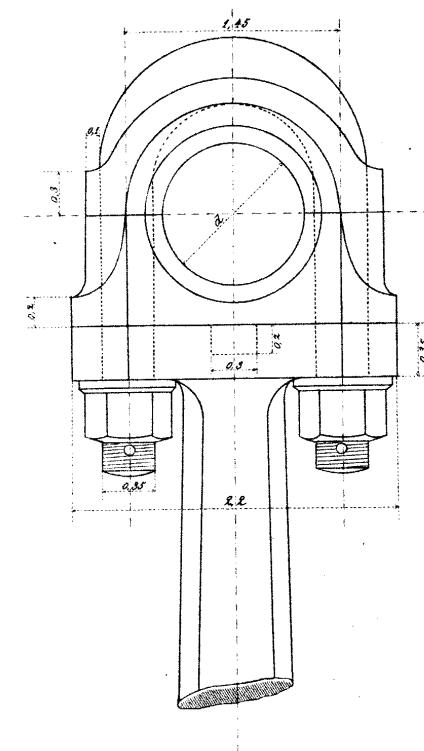


Fig. 16.

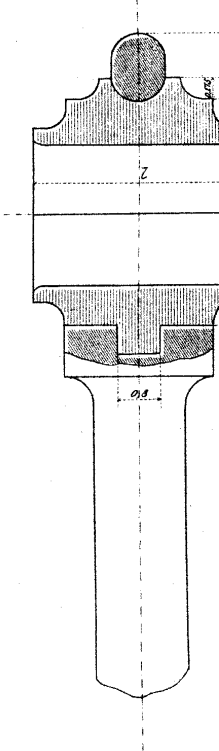


Fig. 17.

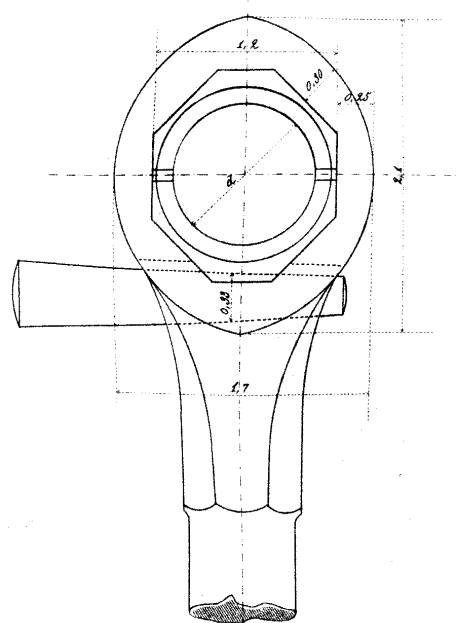


Fig. 18.

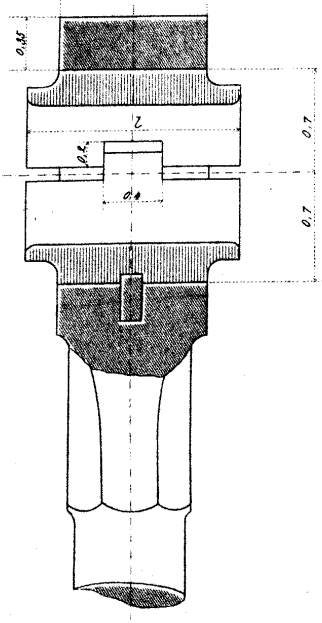


Fig. 19.

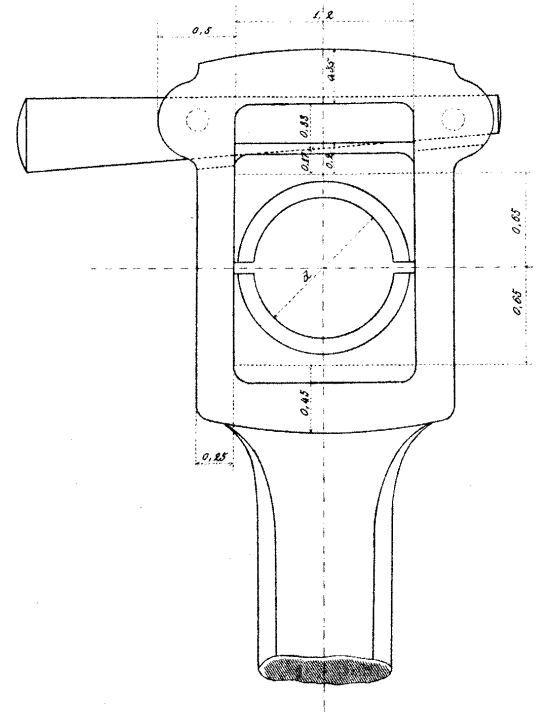


Fig. 20.

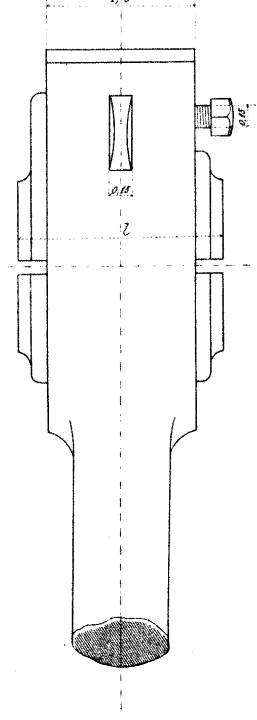


Fig. 21.

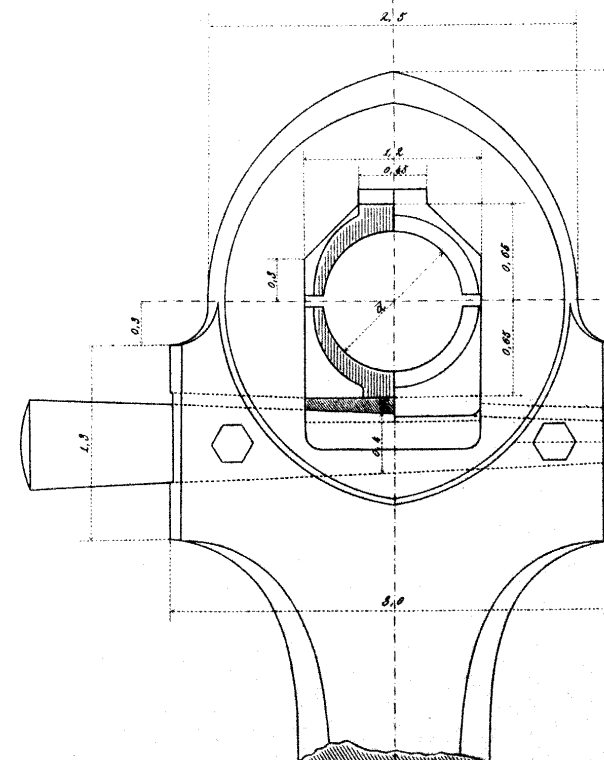


Fig. 22.

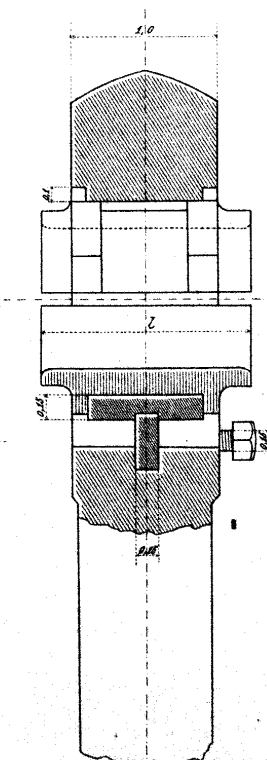


Fig. 23.

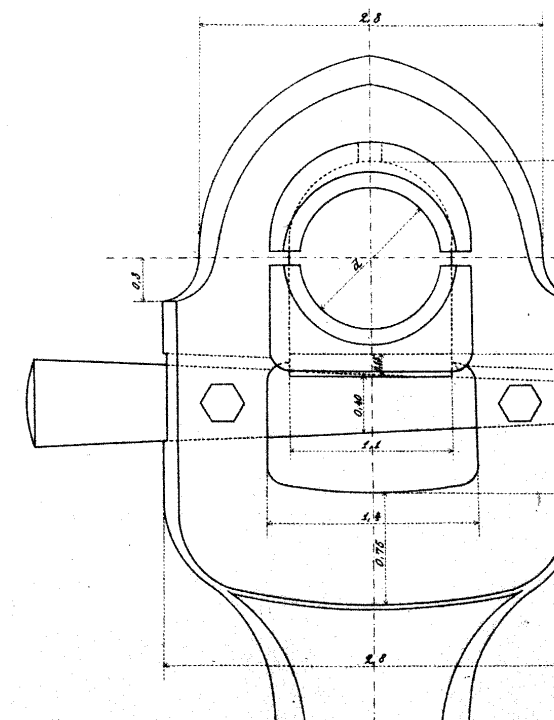
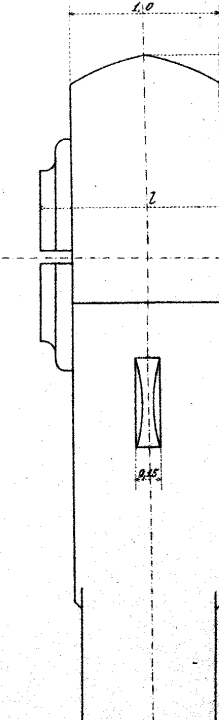
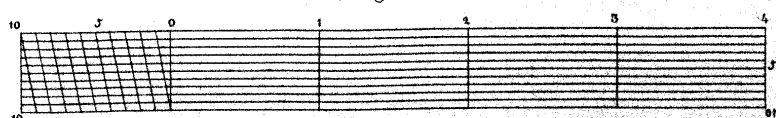


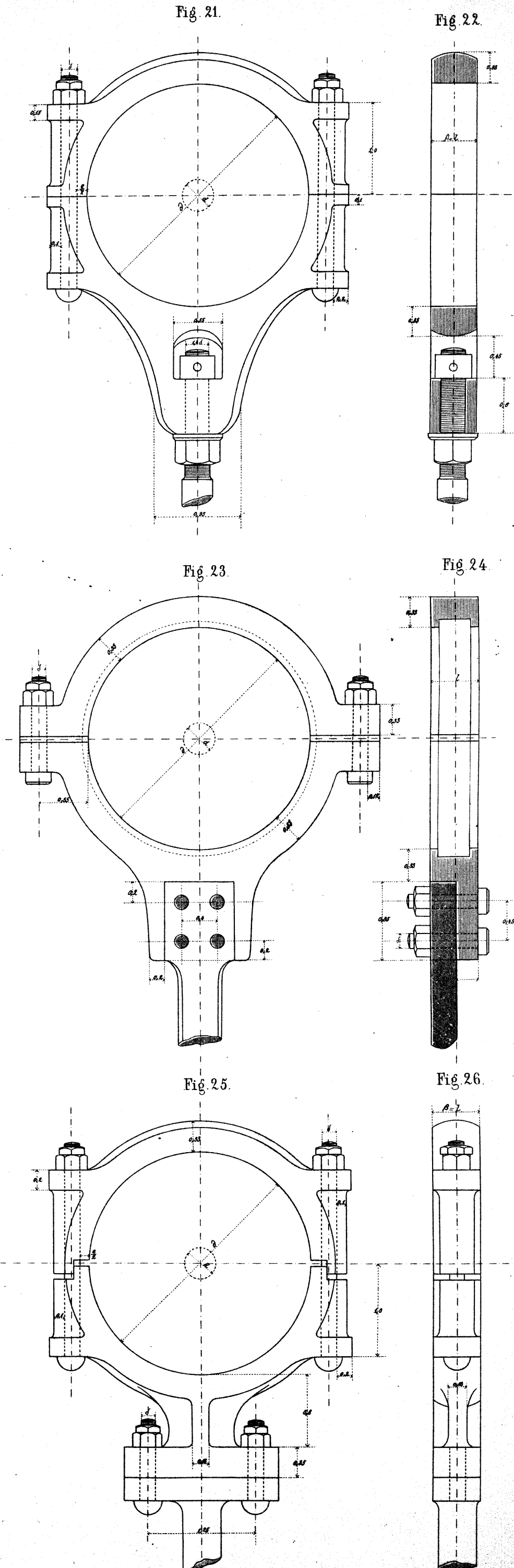
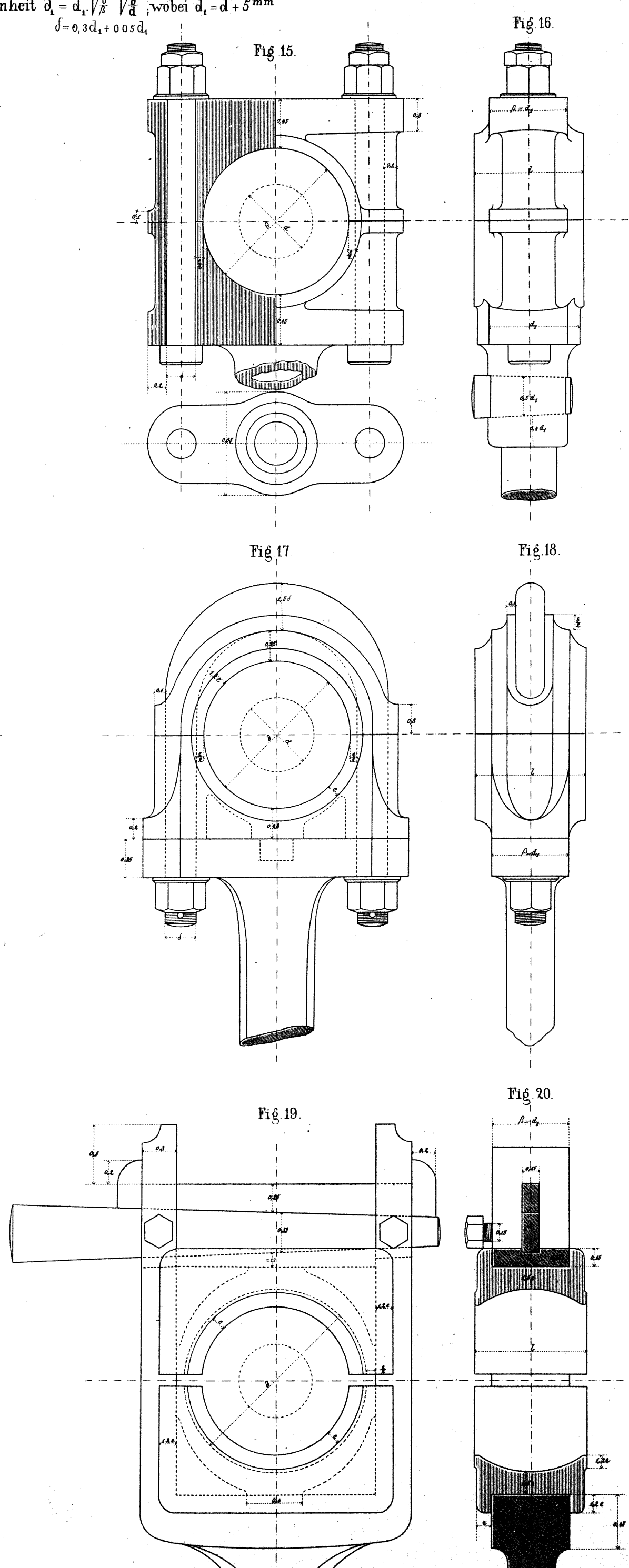
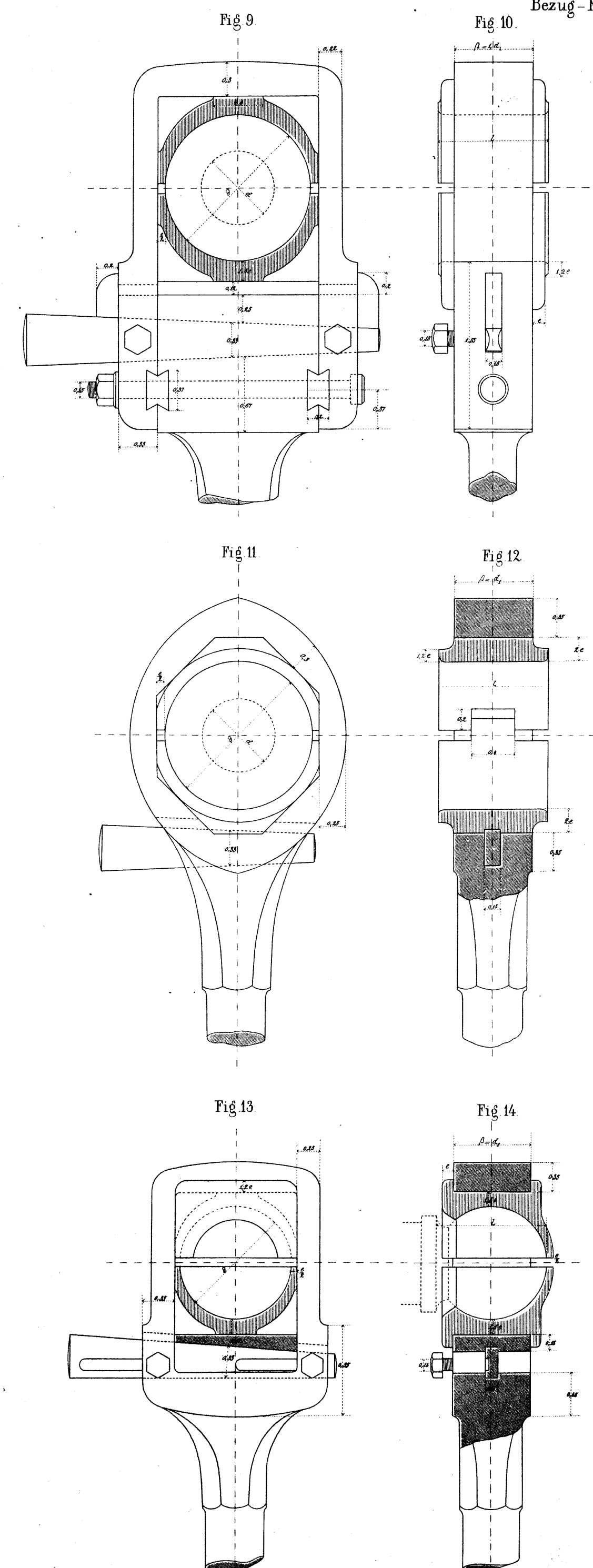
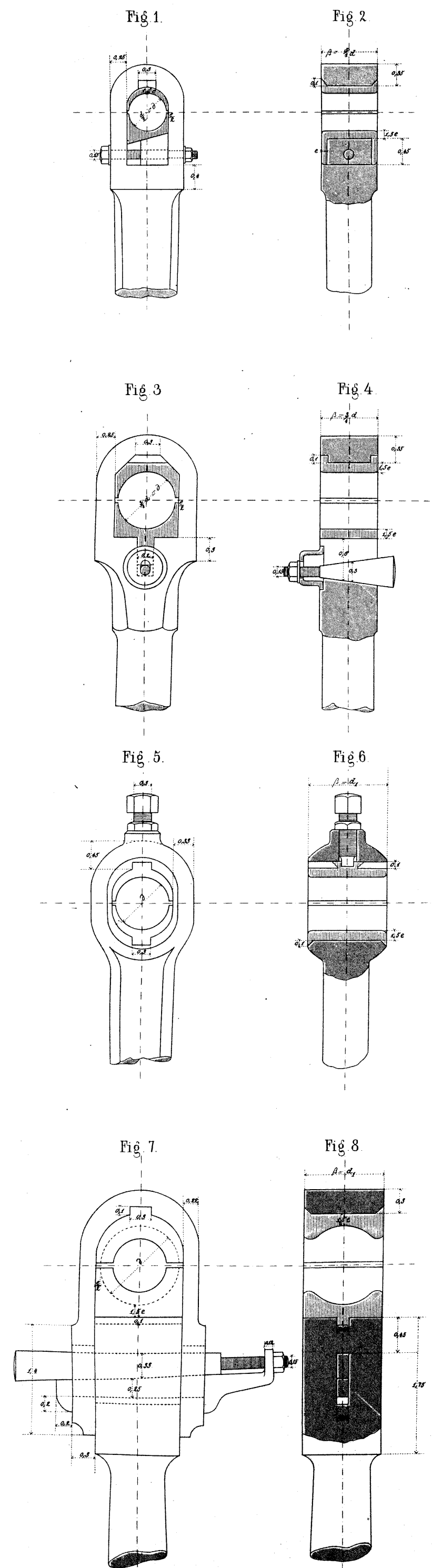
Fig. 24.



Verhältnis-Maßstab, zugleich Decimeter-Maßstab zu 1/5.



Bezug-Einheit $d_1 = d_1 \sqrt{\frac{b}{d}} \sqrt{\frac{d}{d}}$, wobei $d_1 = d + 5 \text{ mm}$
 $f = 0,3 d_1 + 0,05 d_1$

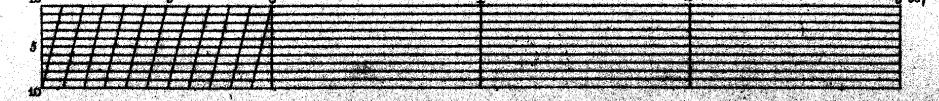
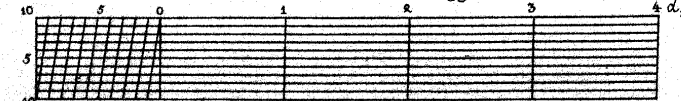


Verhältnis Maßstab zu Figg. 5-6.

Verhältnis Maßstab zu Figg. 7-8; zugleich Decimeter Maßstab zu allen Figuren.

Verhältnis Maßstab zu Figg. 9-12, 15-18.

Verhältnis Maßstab zu Figg. 21-26.



SCHUBSTANGEN.

Fig. 1.
Schnitt nach 1-2.

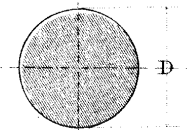


Fig. 4.

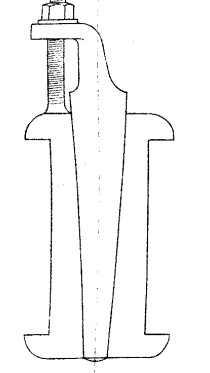


Fig. 7.
Schnitt nach 3-4.

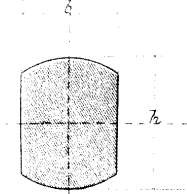


Fig. 10.
Schnitt nach E-F.

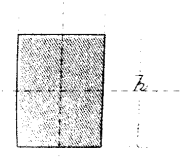


Fig. 13.
Schnitt nach 9-10.

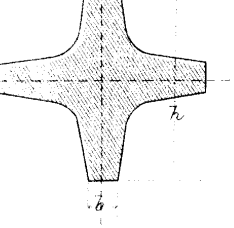


Fig. 16.
Schnitt nach 11-12.

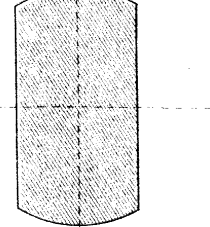


Fig. 2.

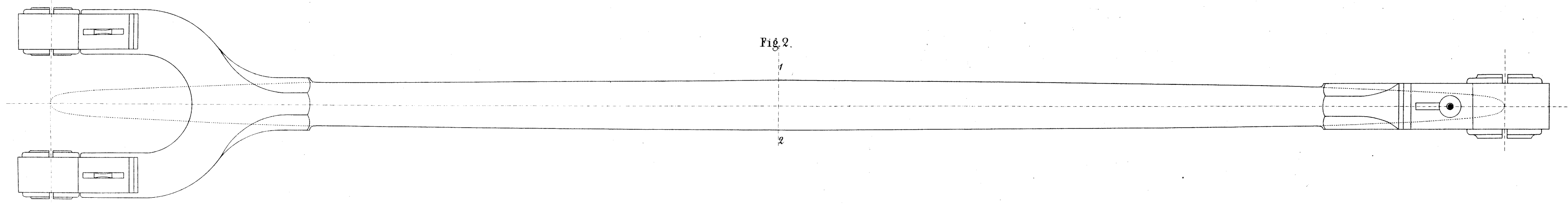


Fig. 5.

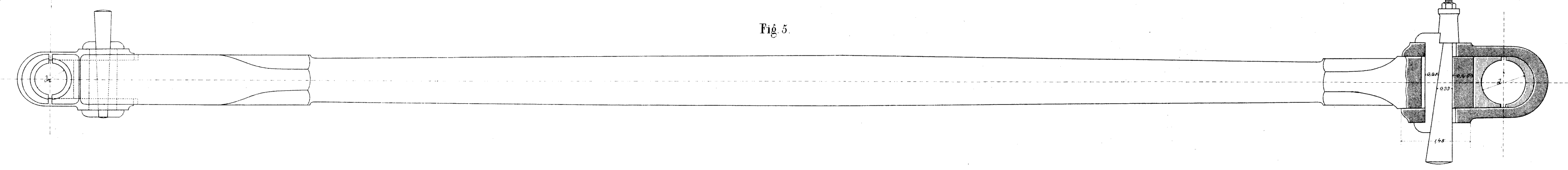


Fig. 8.

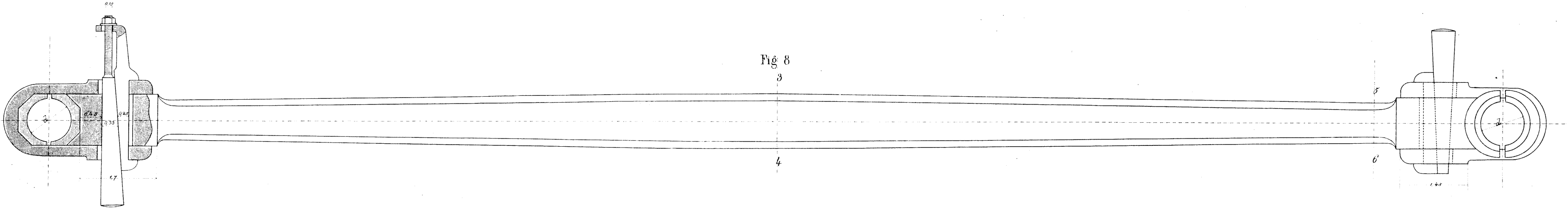


Fig. 11.

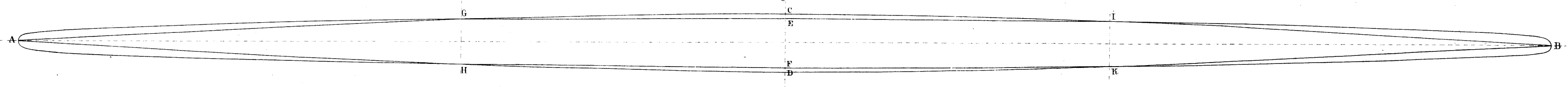


Fig. 14.

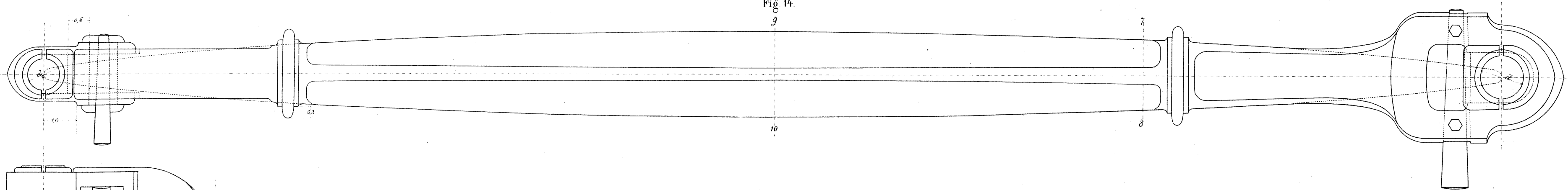


Fig. 17.

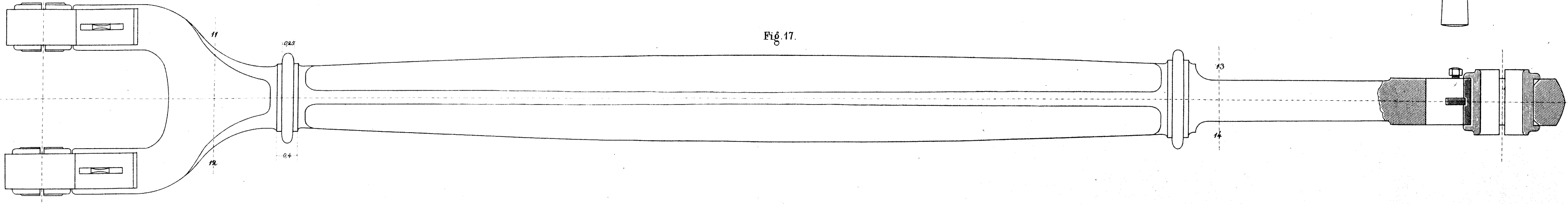


Fig. 3.

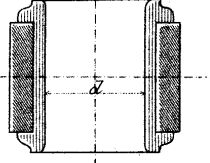


Fig. 6.

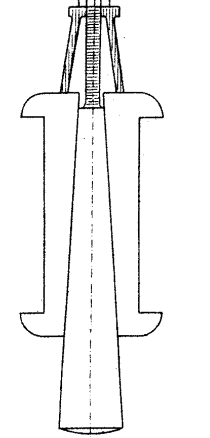


Fig. 9.
Schnitt nach 5-6.

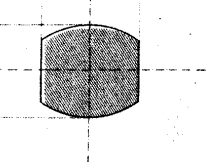


Fig. 12.
Schnitt nach C-D.

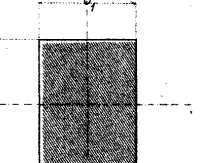


Fig. 15.
Schnitt nach 7-8.

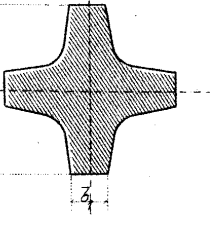
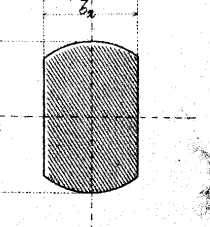


Fig. 18.
Schnitt nach 13-14.

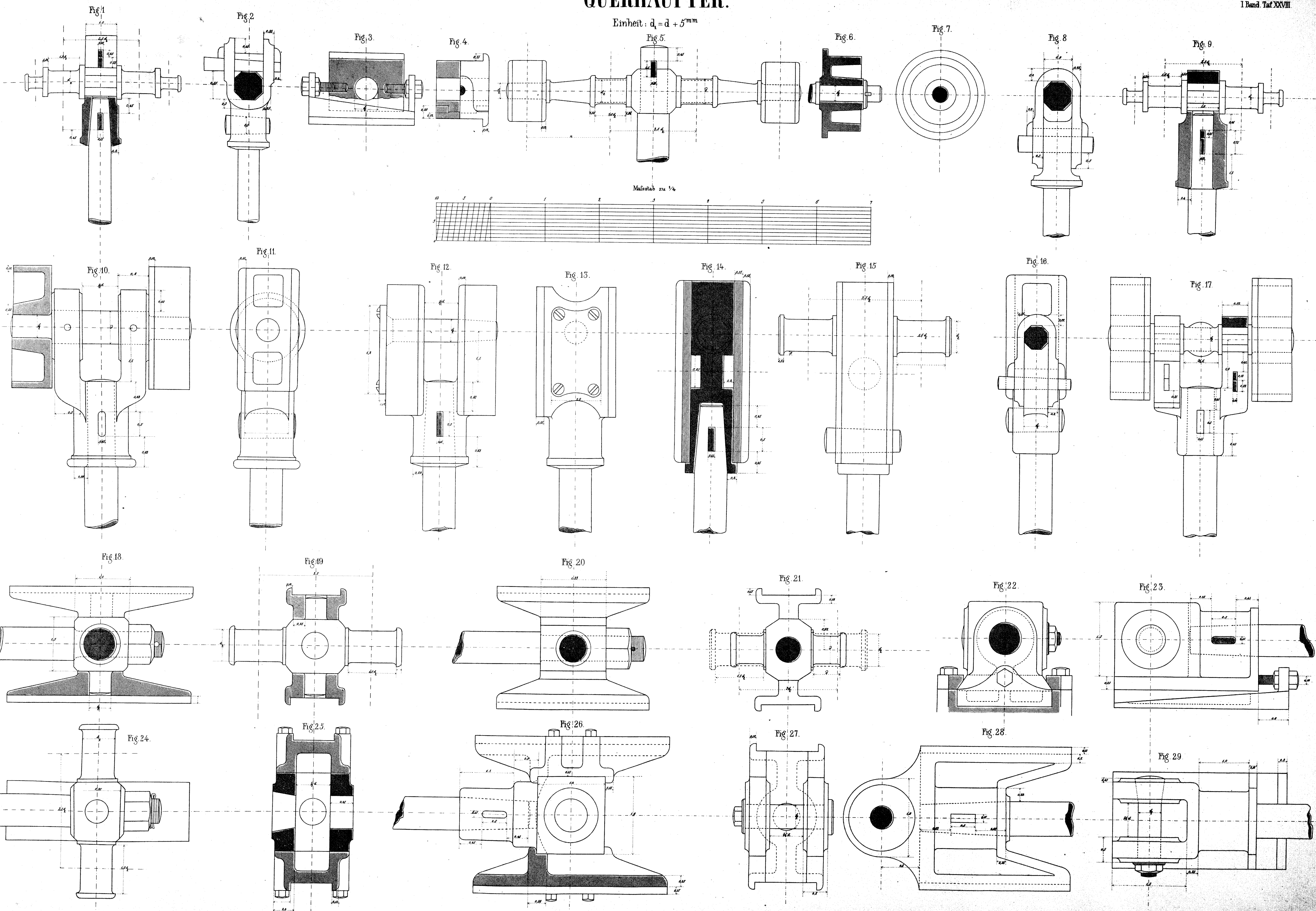
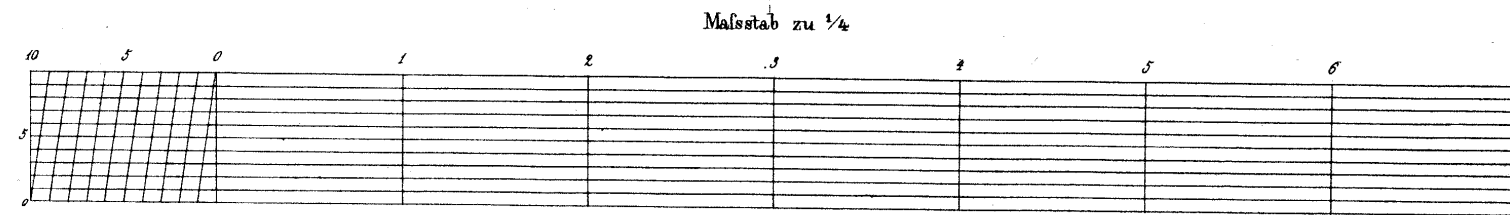


Maßstab zu 1/4.



QUERHÄUPTER.

Einheit: $d = d + 5^{mm}$



VENTILE.

Einheit: $s = 4 + \sqrt{D}$

Fig. 1.

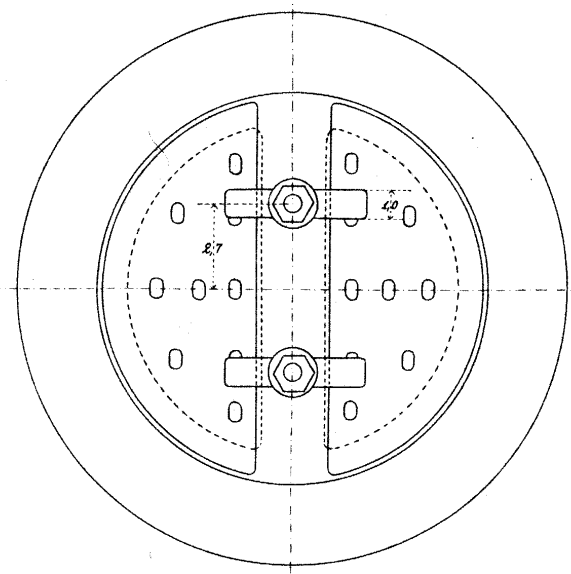


Fig. 2.

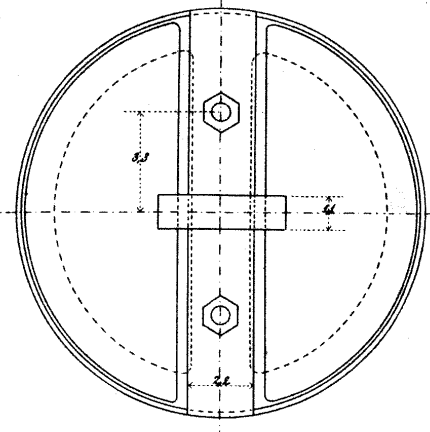


Fig. 3.

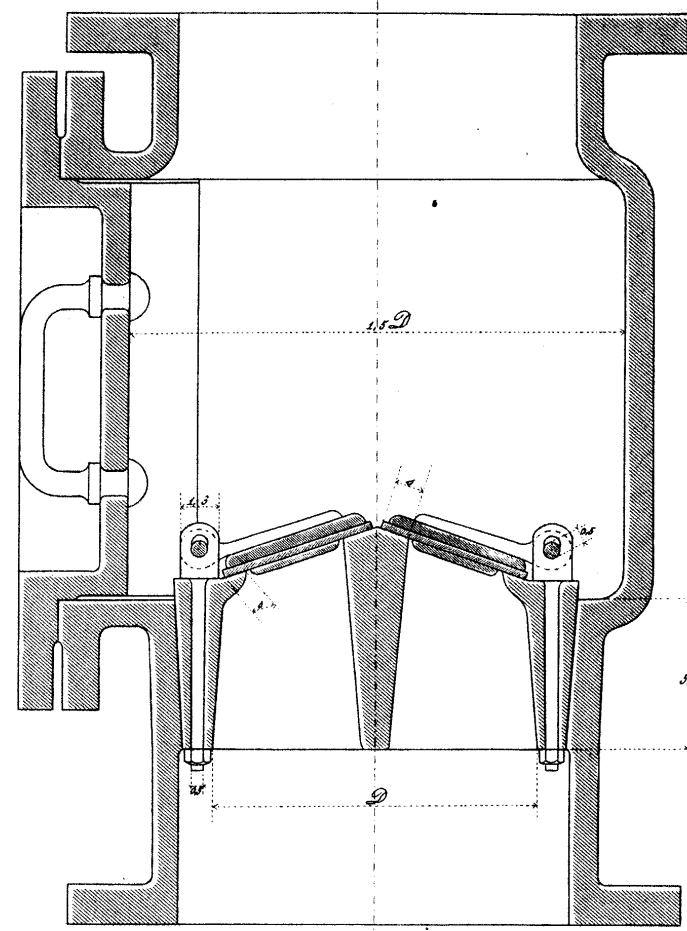


Fig. 4.

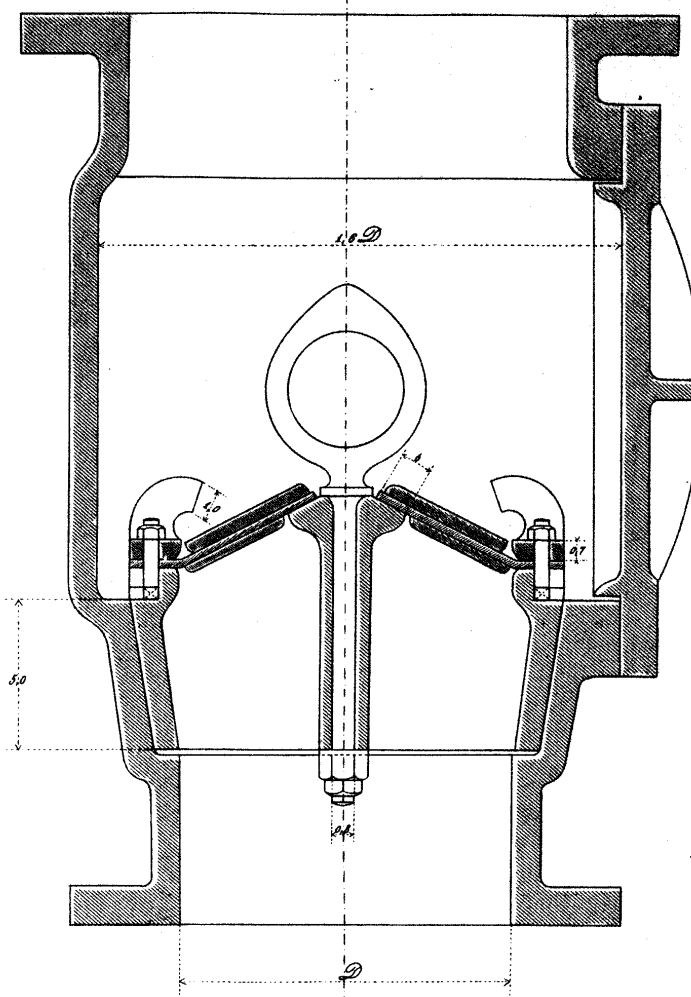


Fig. 5.

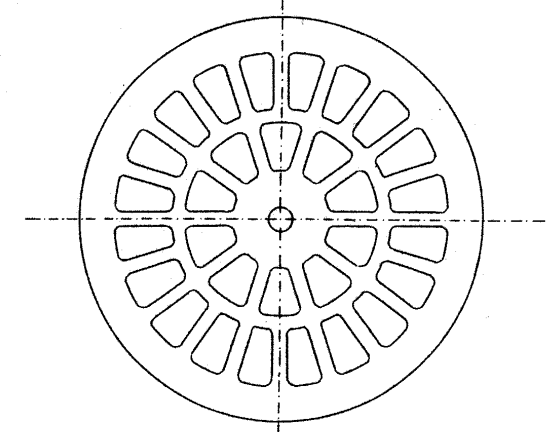


Fig. 6.

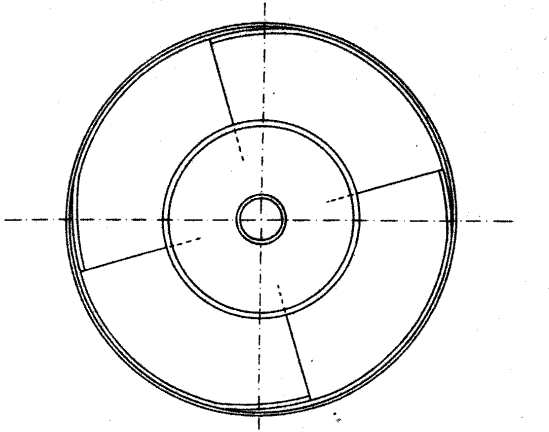


Fig. 7.

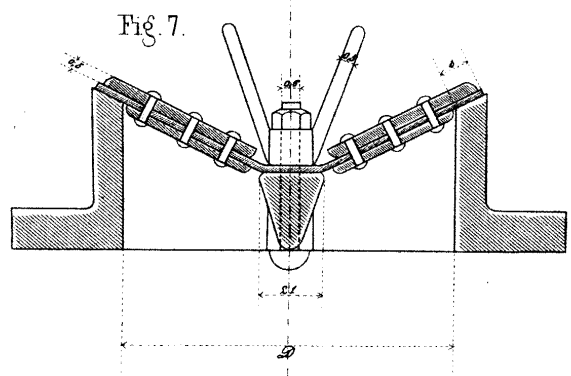


Fig. 8.

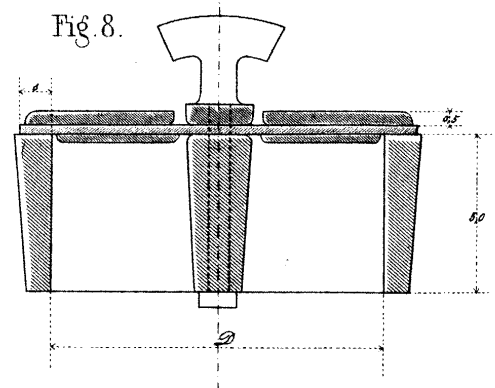


Fig. 9.

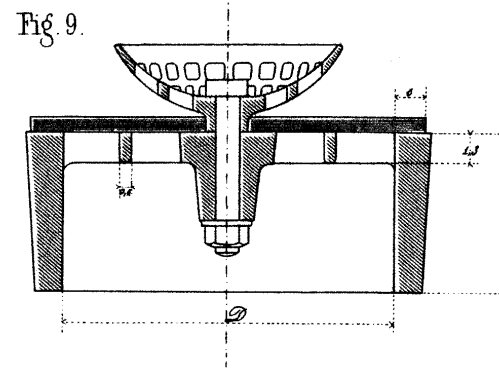


Fig. 10.

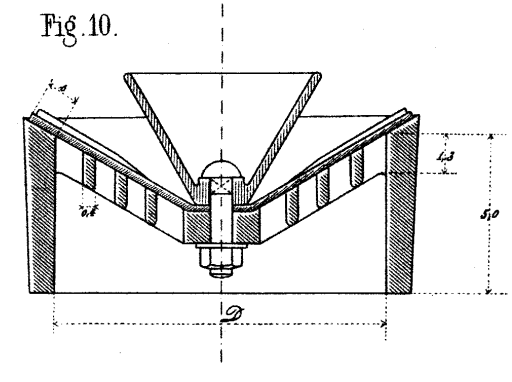


Fig. 11.

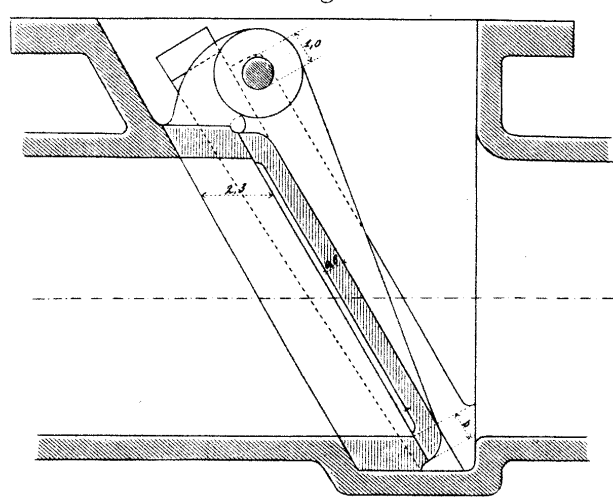


Fig. 12.

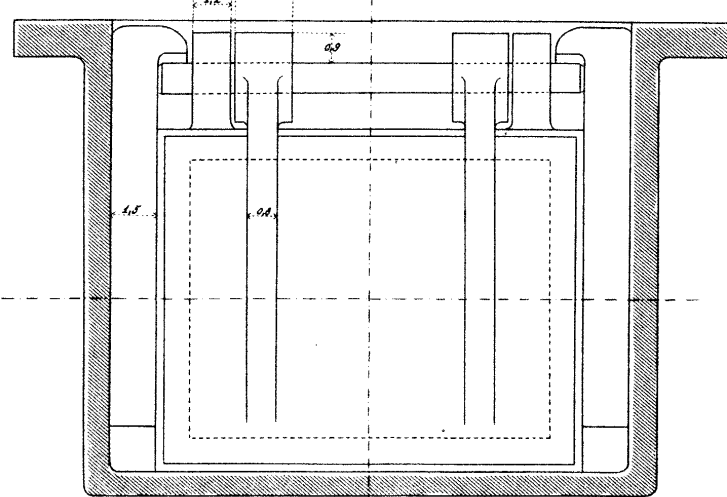


Fig. 13.

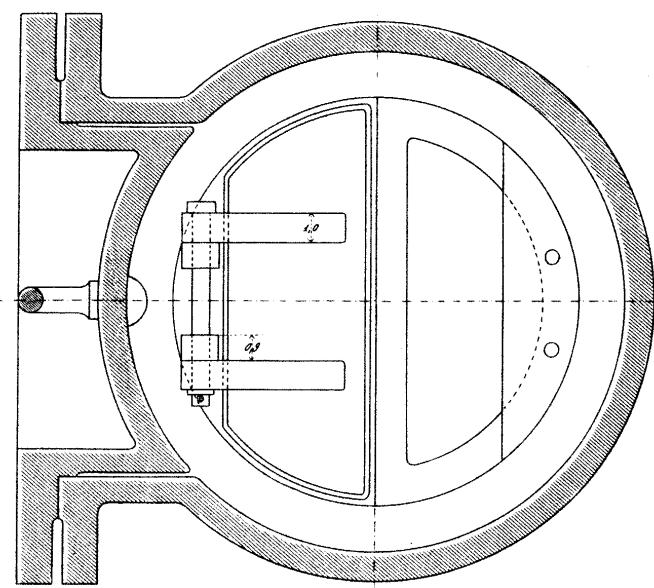


Fig. 14.

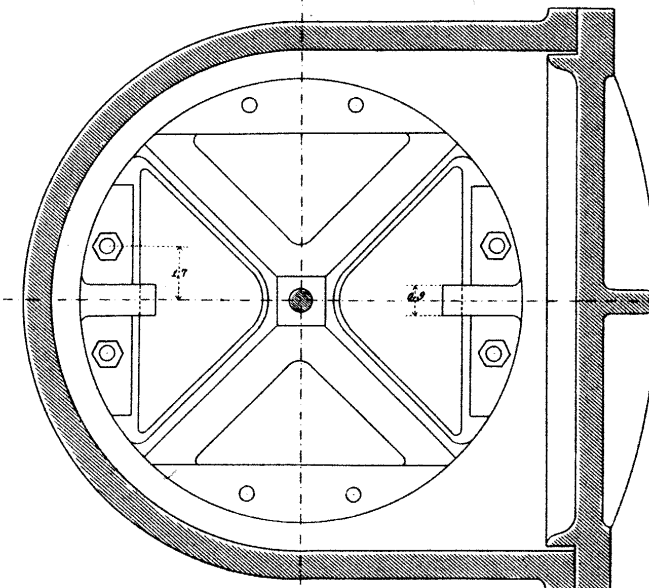


Fig. 15.

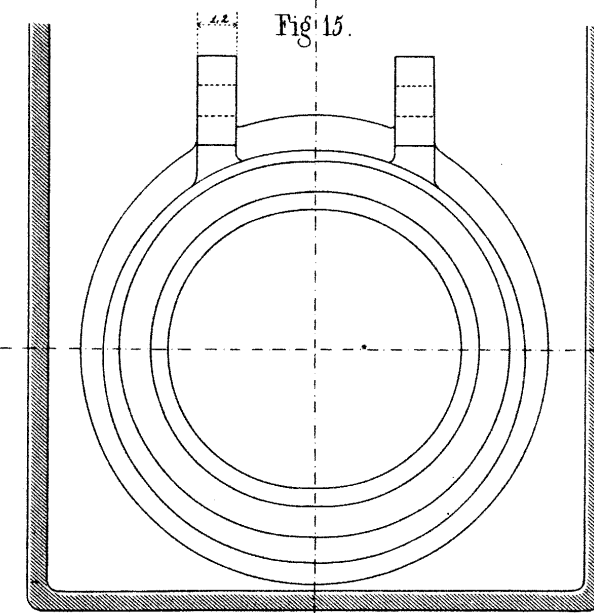


Fig. 16.

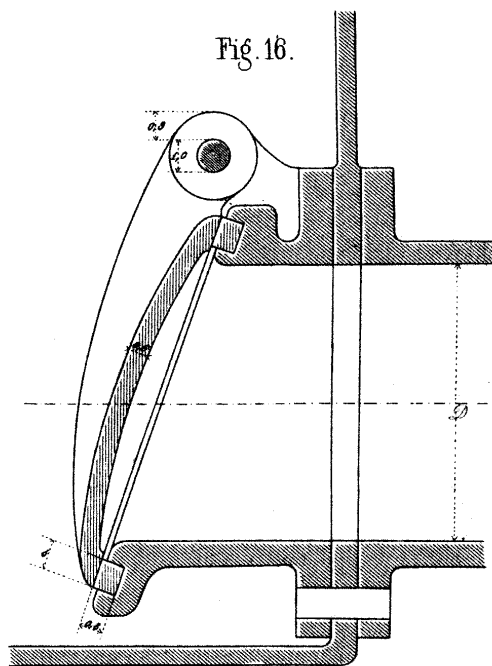


Fig. 17.

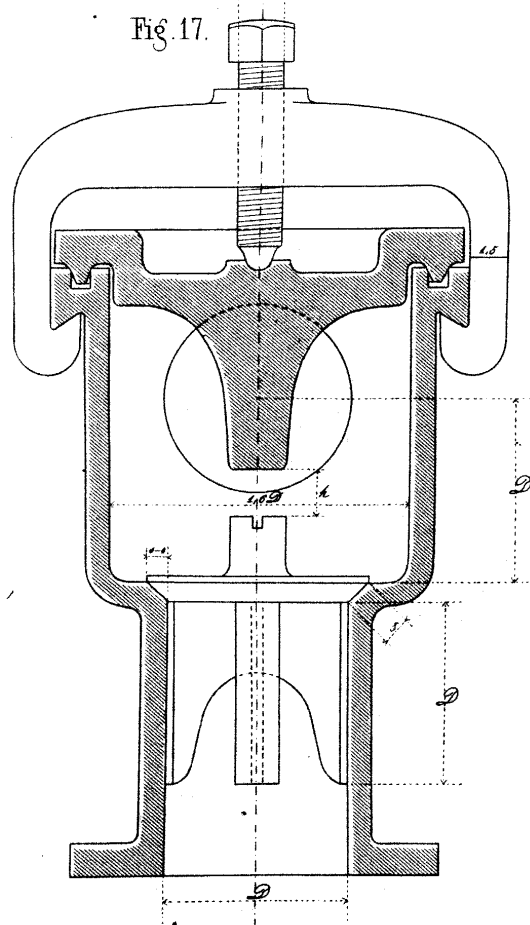


Fig. 18.

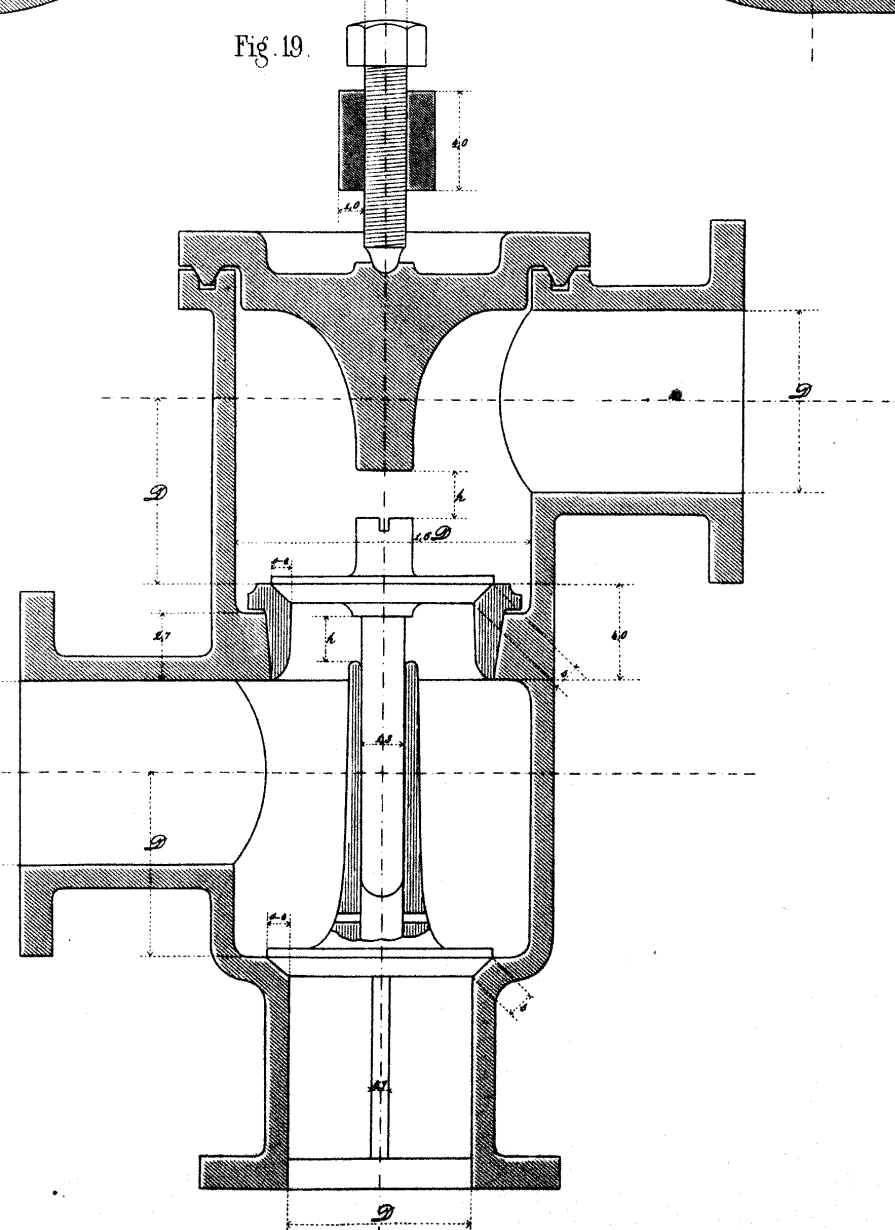


Fig. 19.

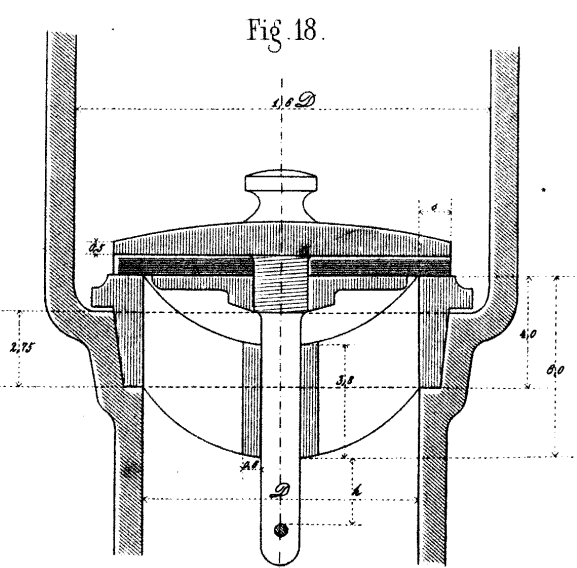


Fig. 20.

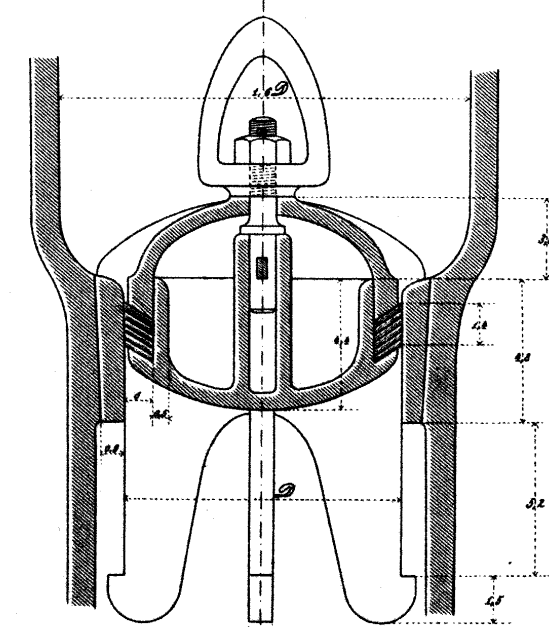


Fig. 21.

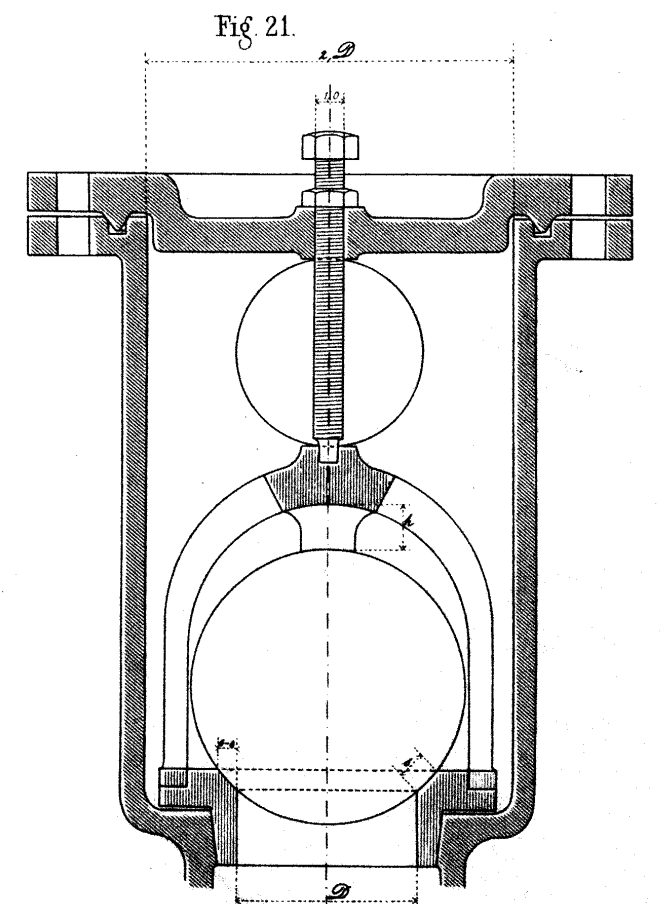


Fig. 22.

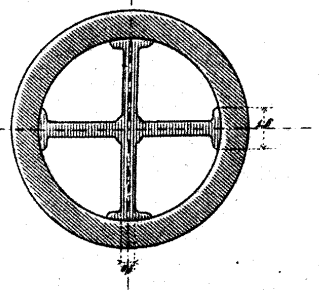


Fig. 23.

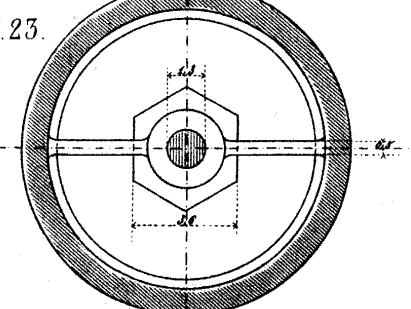


Fig. 24.

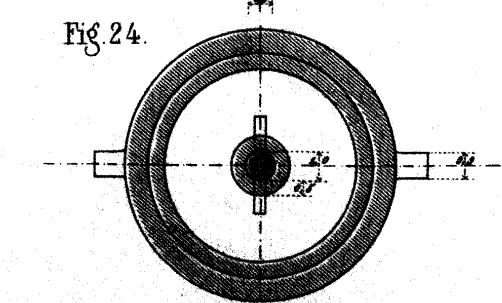
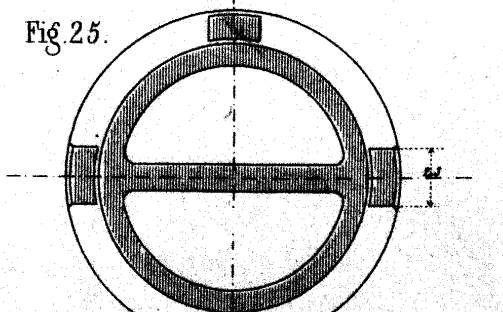


Fig. 25.



Maßstab zu $\frac{1}{4}$



DOPPELSITZVENTILE.

Einheit: $s = 4 + \sqrt{D}$

Fig. 1.

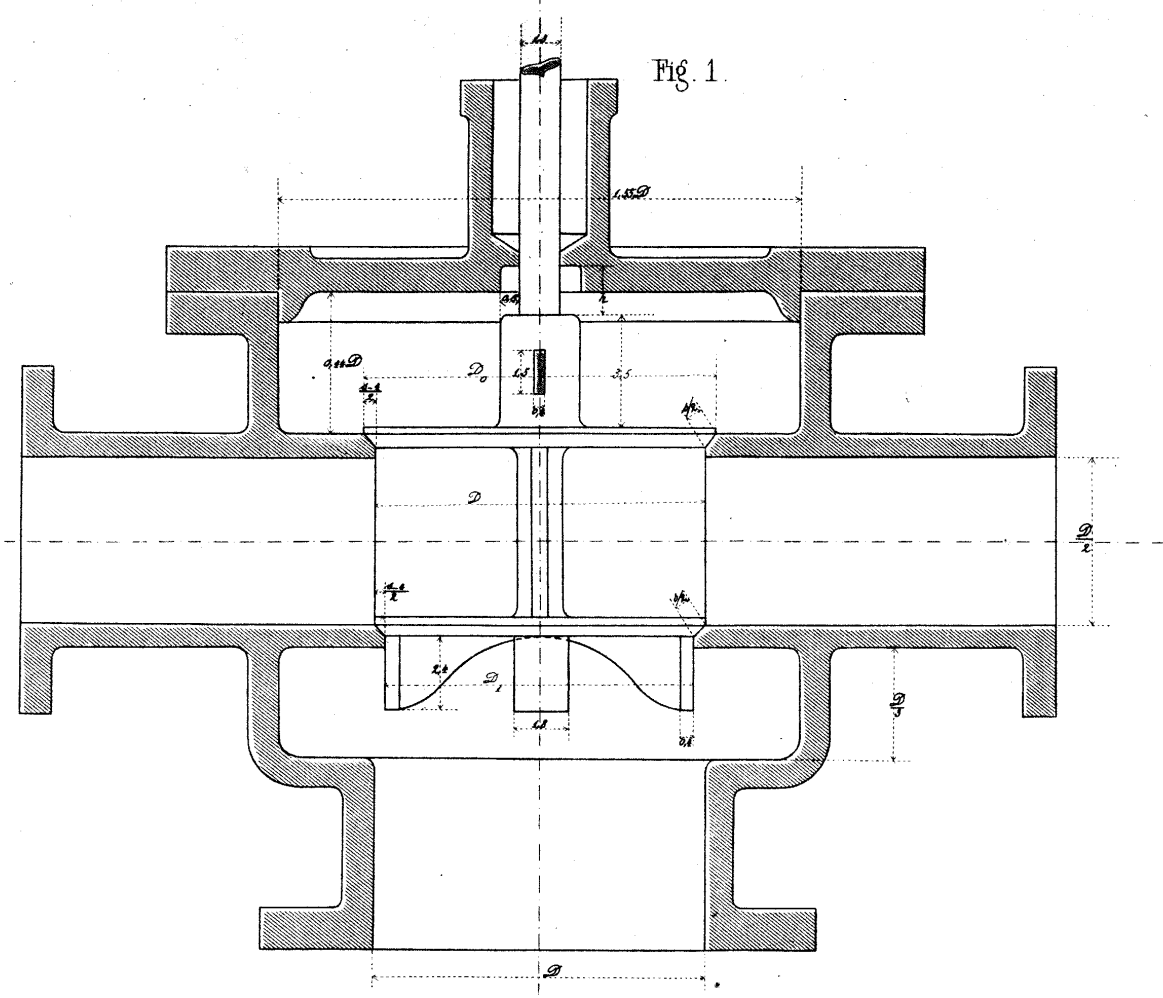


Fig. 5.

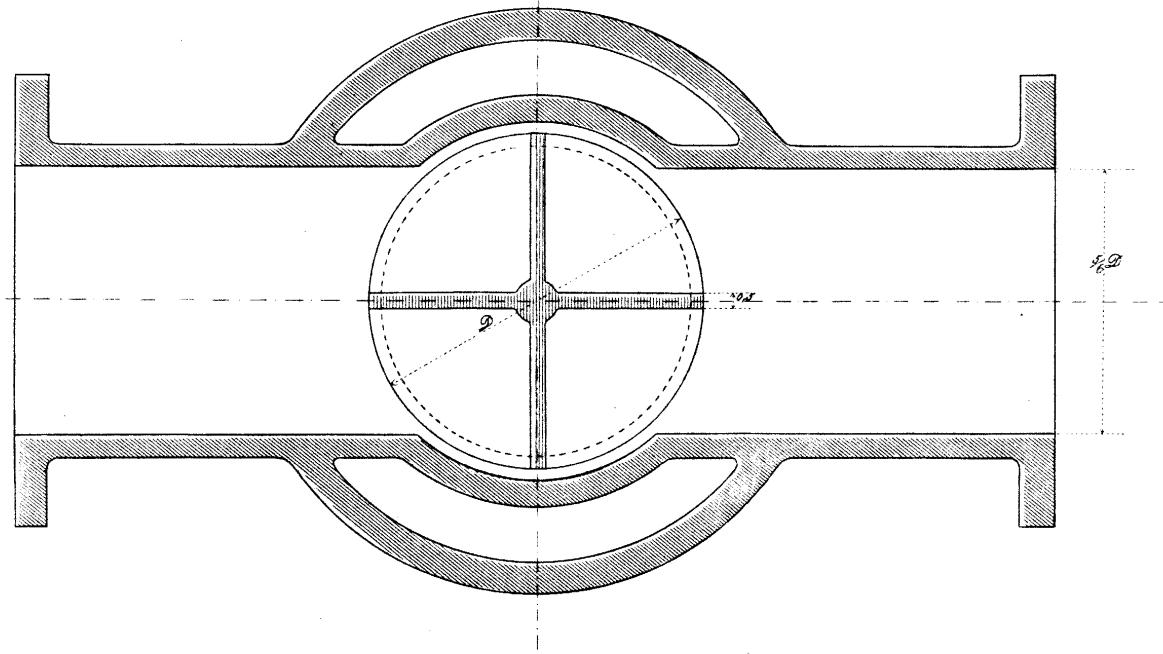


Fig. 2.

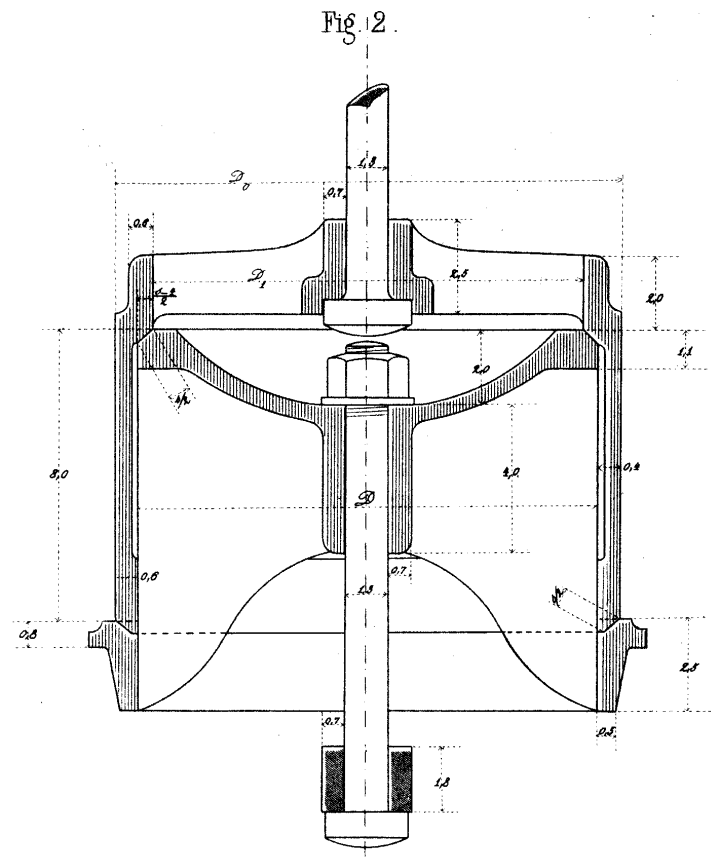


Fig. 6.

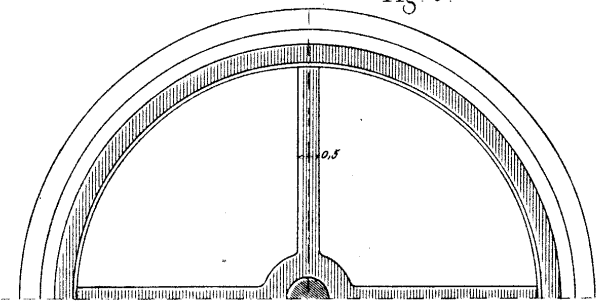


Fig. 3.

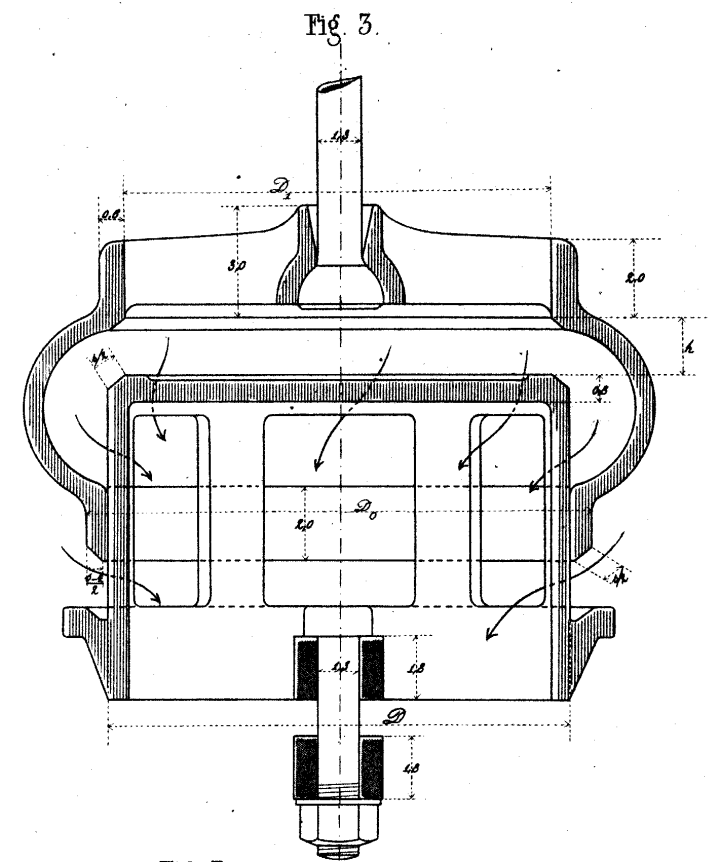


Fig. 7.

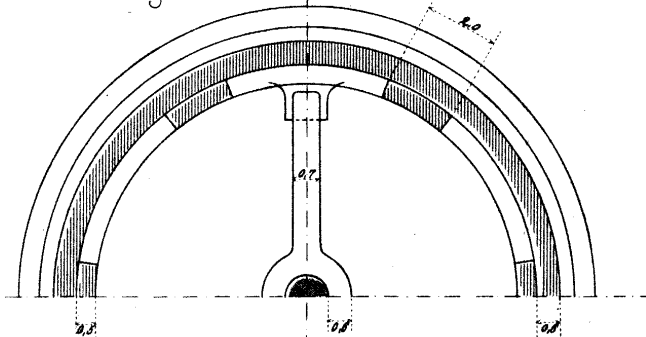


Fig. 4.

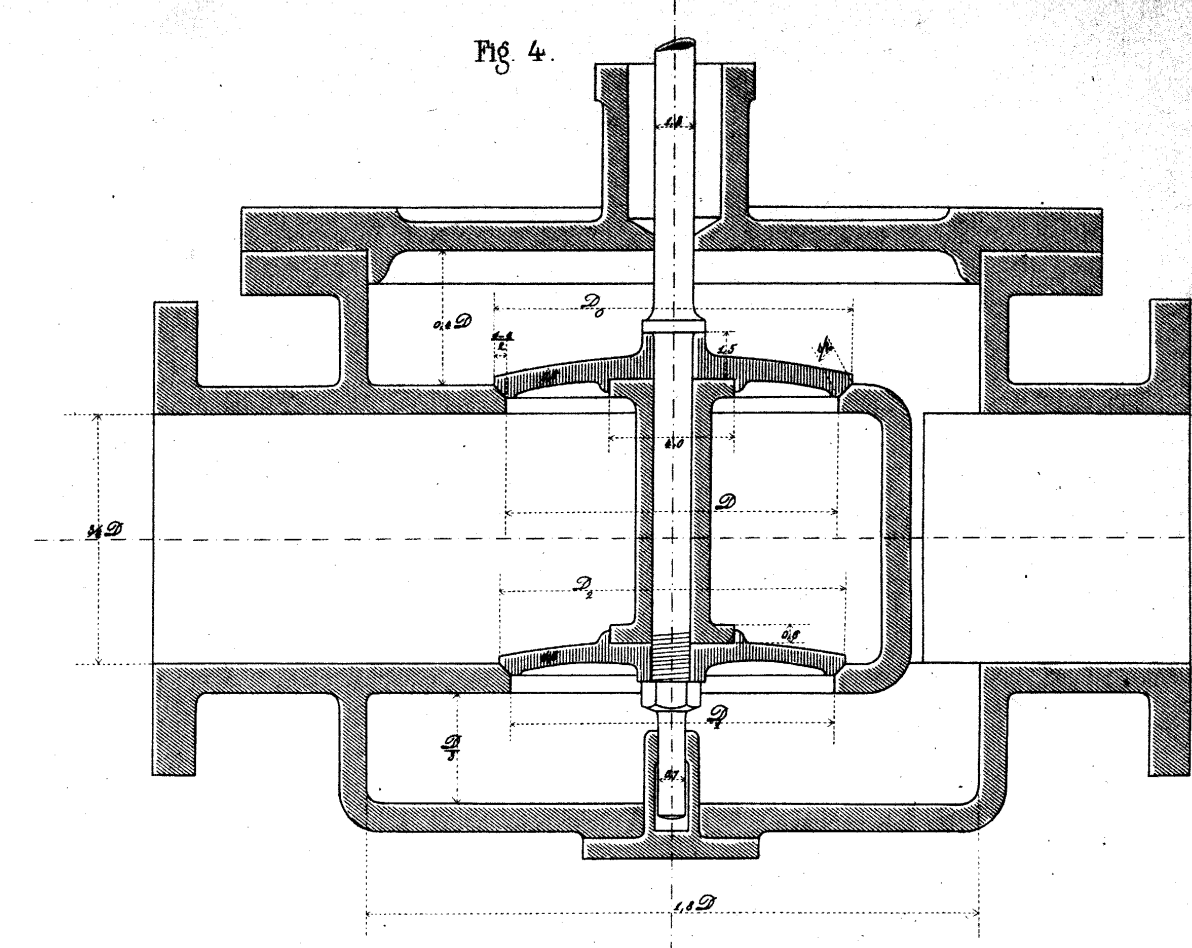
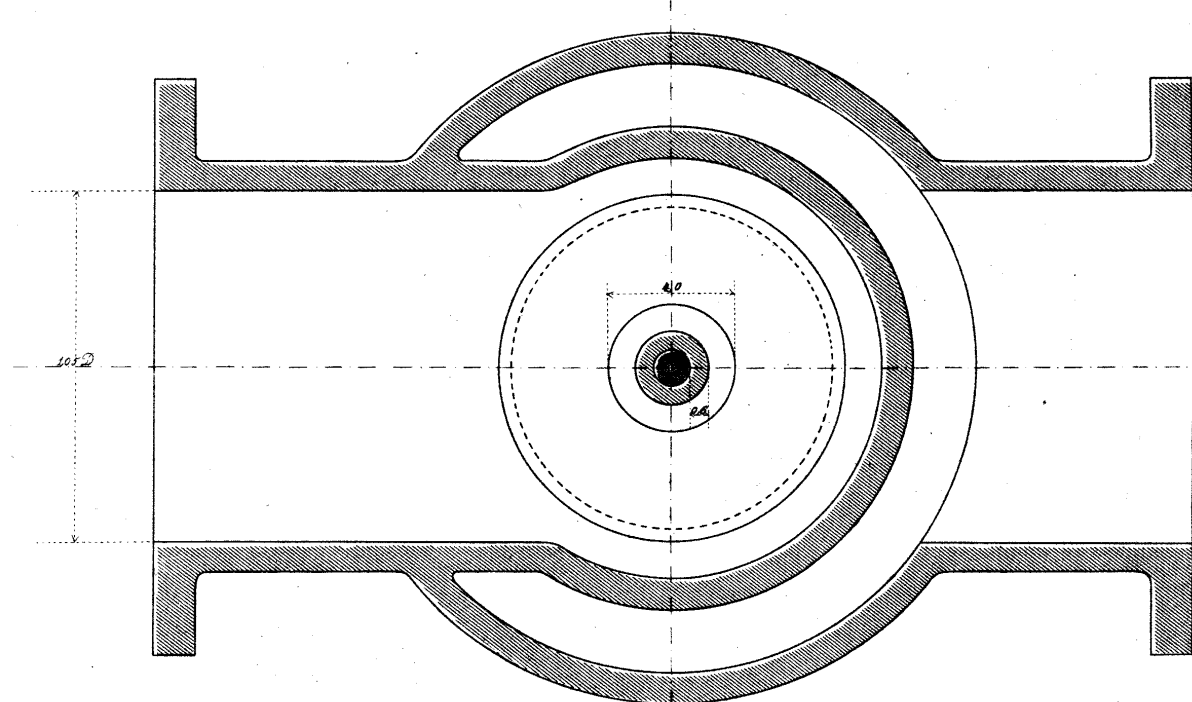


Fig. 8.



Maßstab zu 1/4.

Fig. 9.

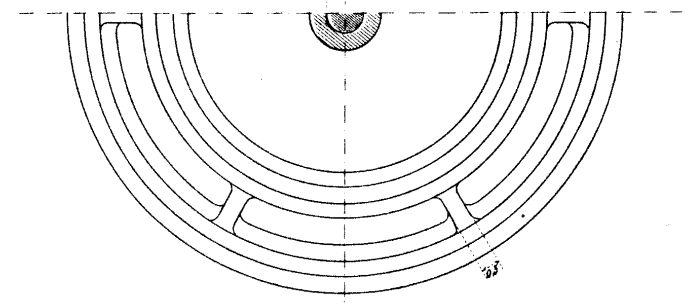


Fig. 10.

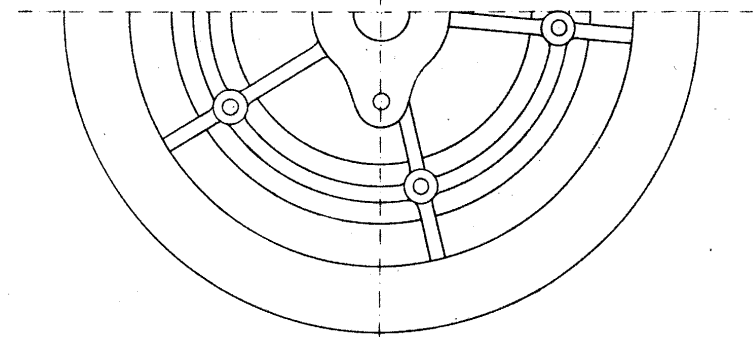


Fig. 11.

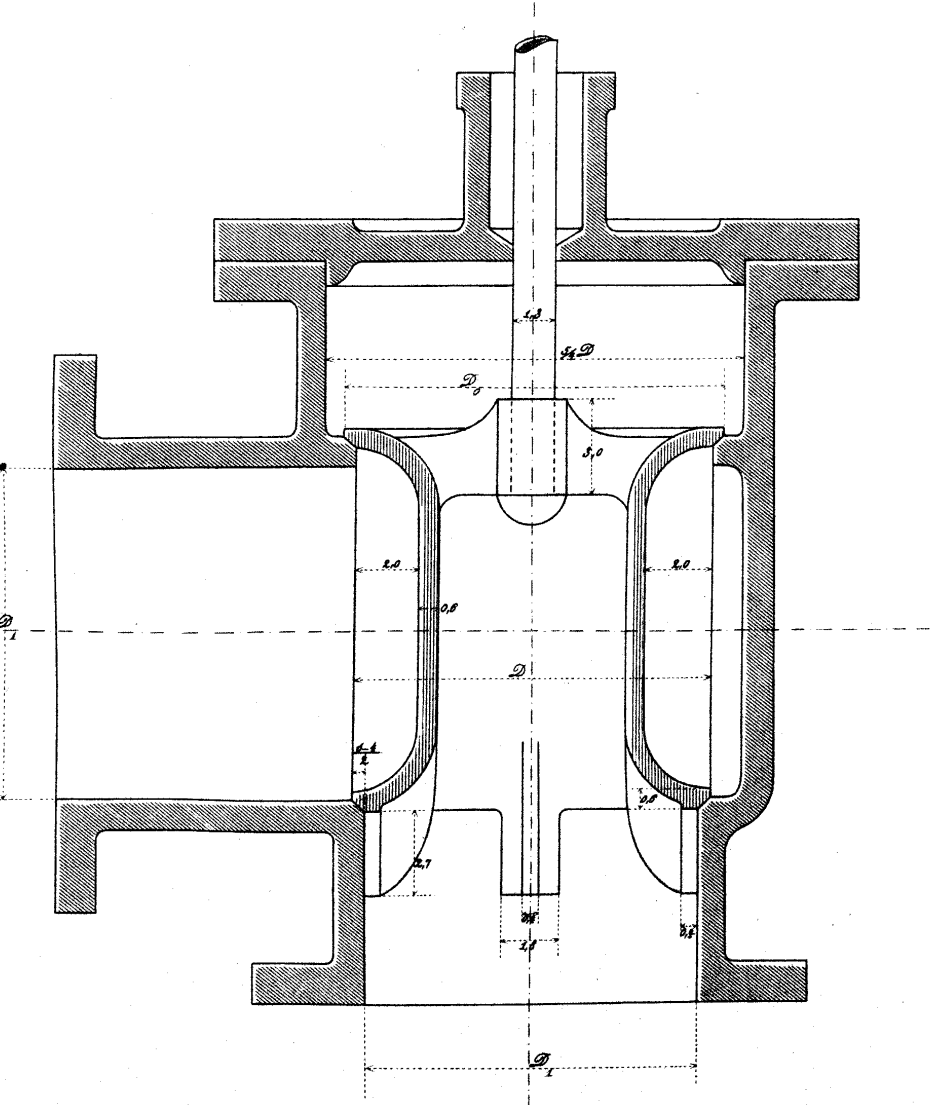


Fig. 12.

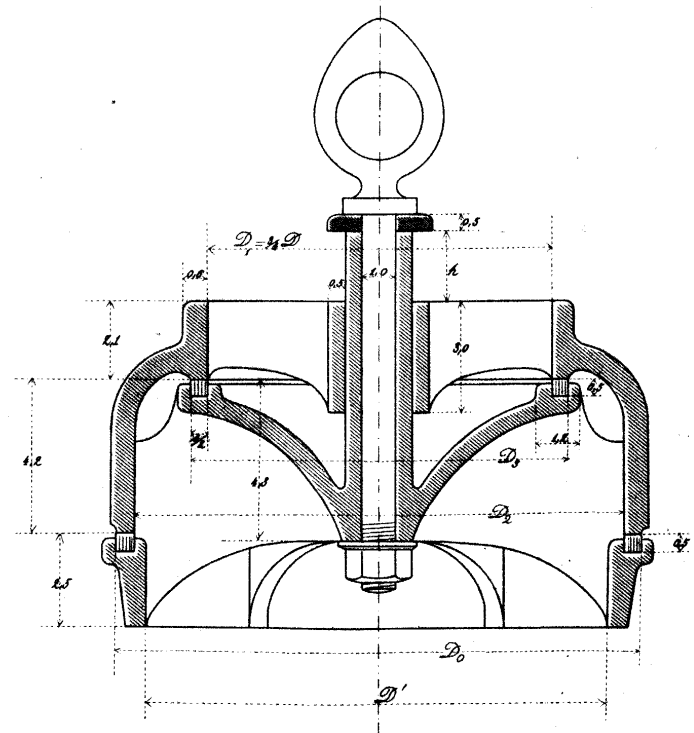


Fig. 13.

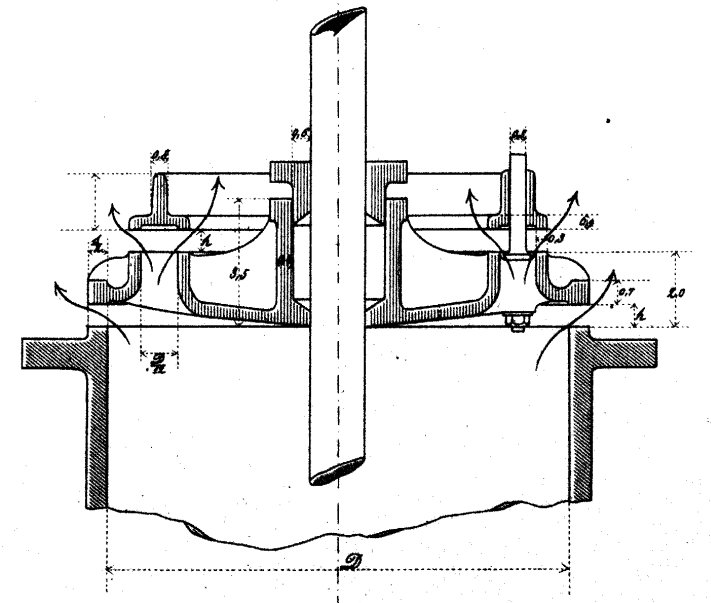
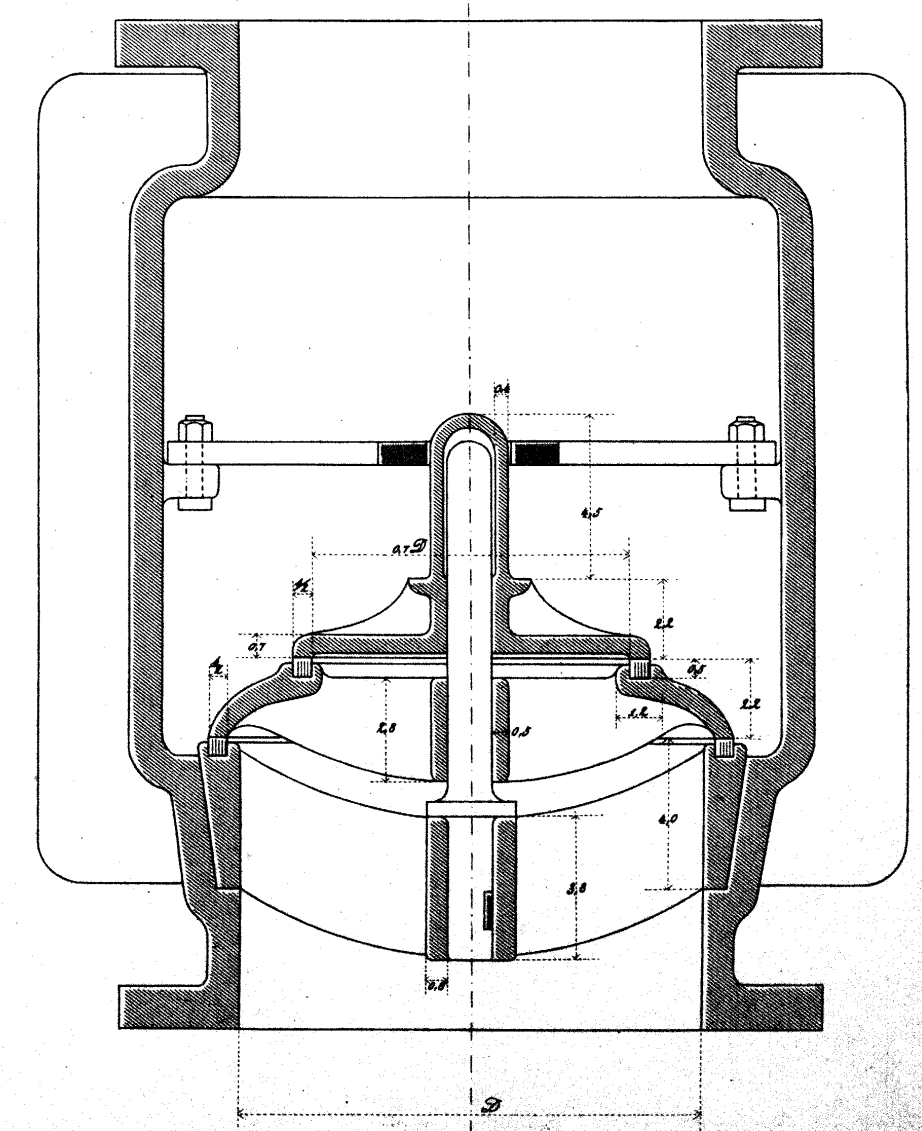


Fig. 14.



Einheit s - 4 + √d

Einheit D₁ - 4 + √D

Fig. 1.

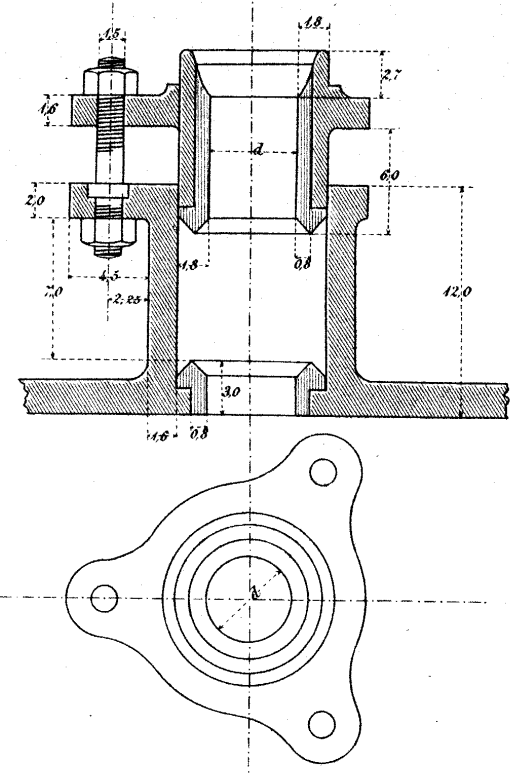


Fig. 2.

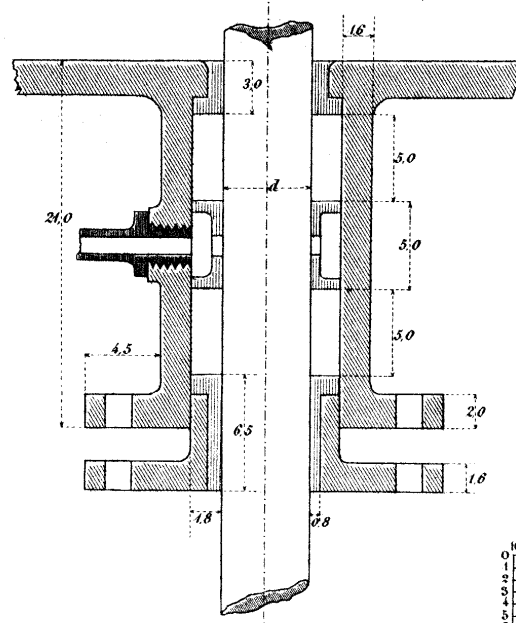


Fig. 3.

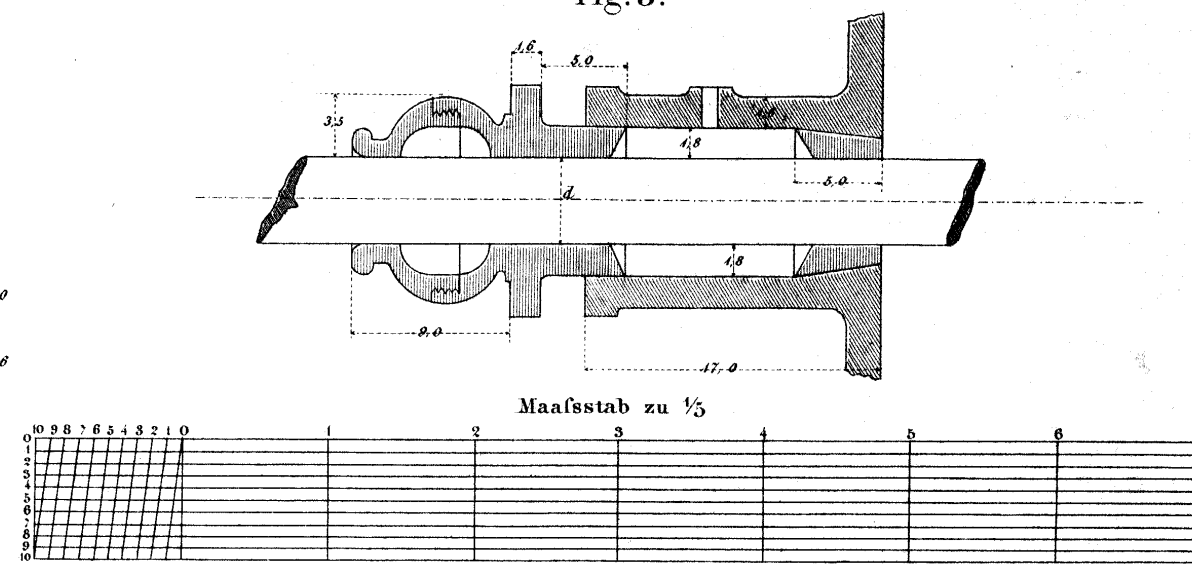


Fig. 4.

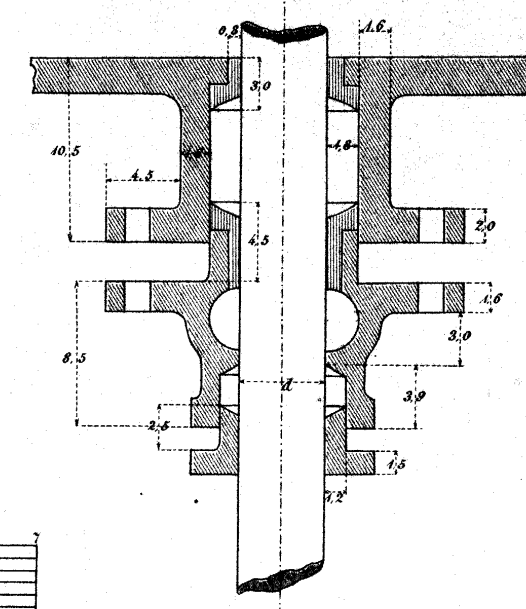


Fig. 5.

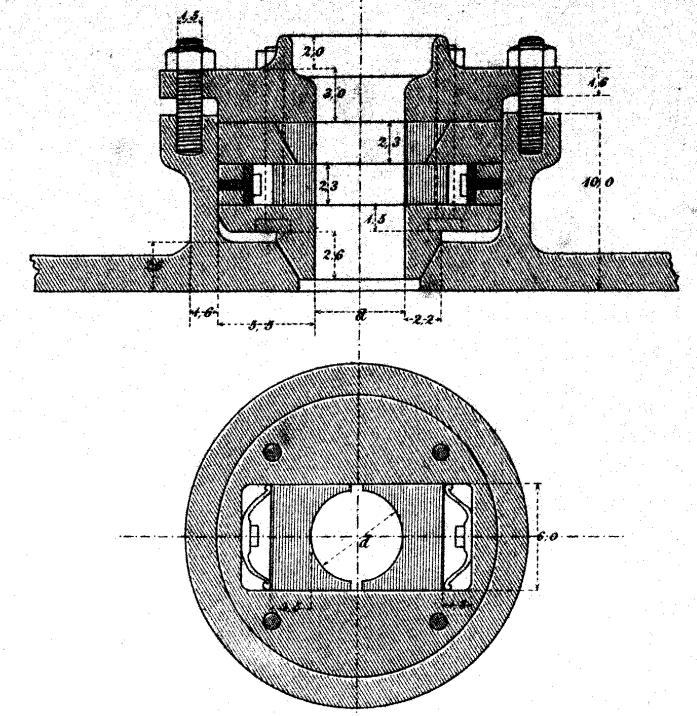


Fig. 6.

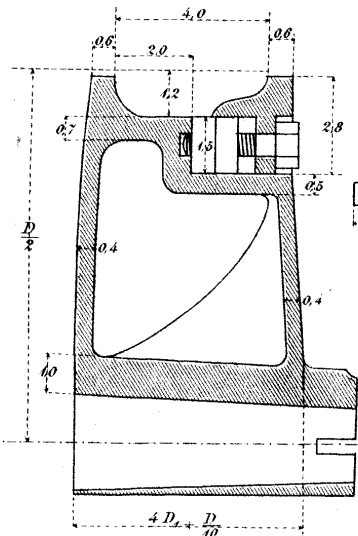


Fig. 7.

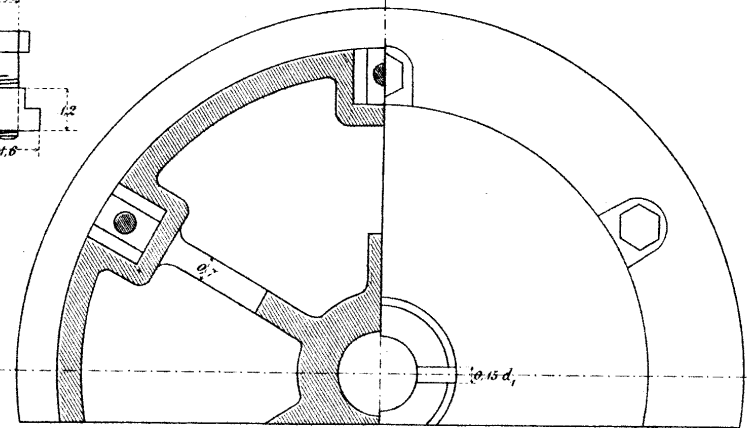


Fig. 8.

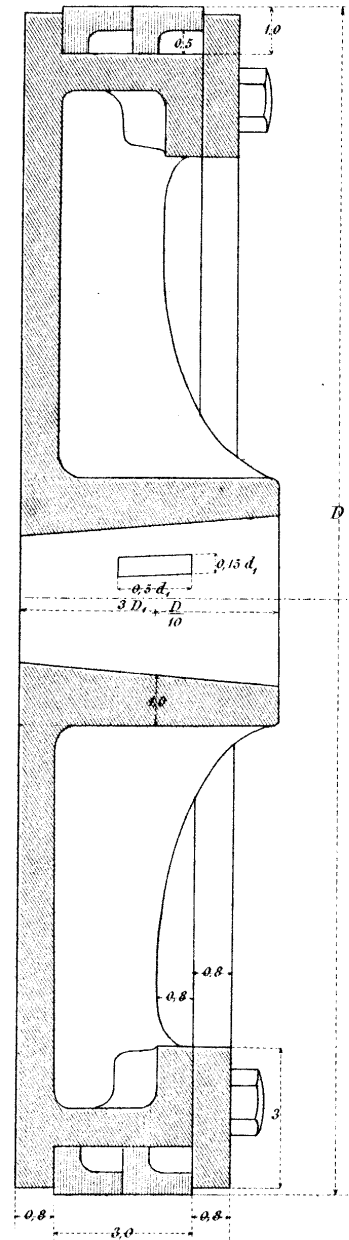


Fig. 9.

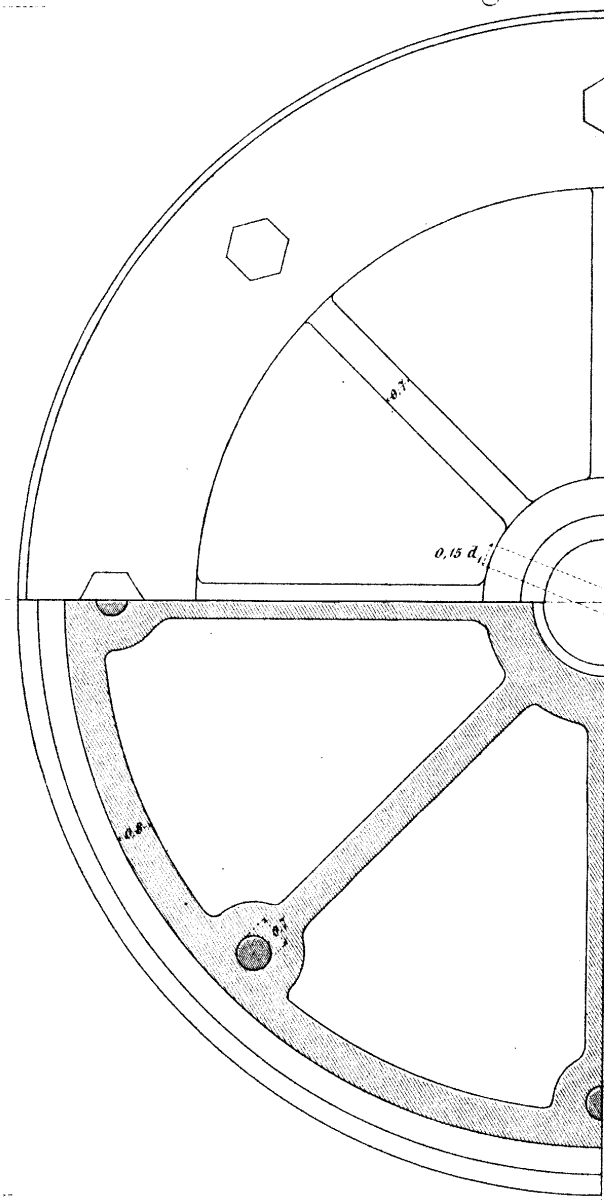


Fig. 10.

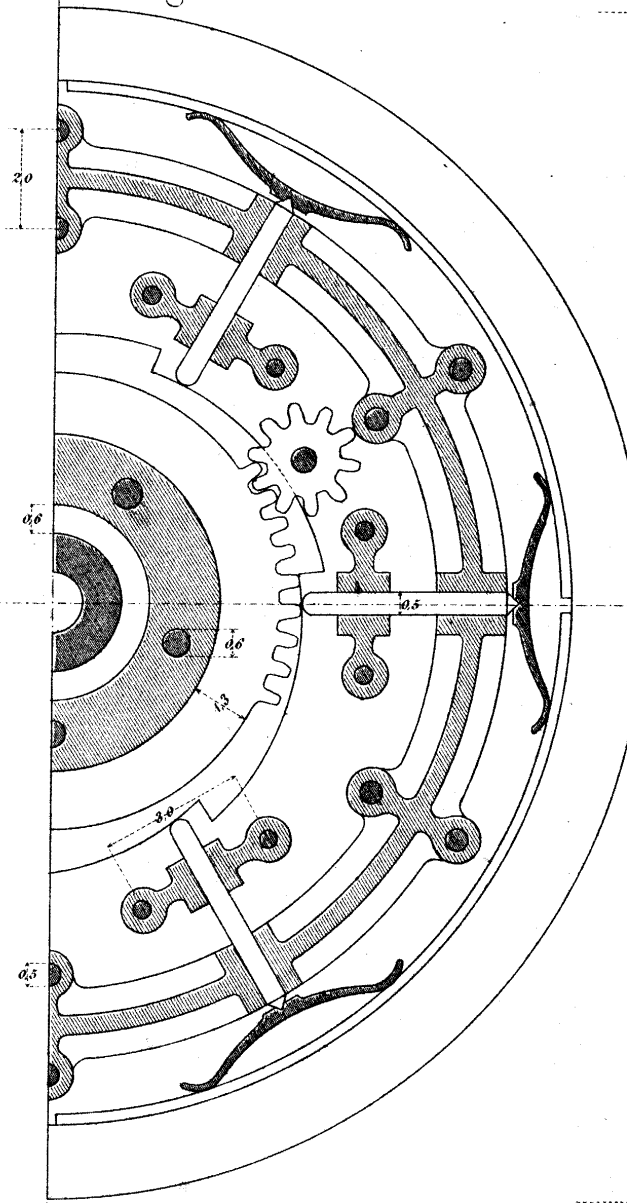


Fig. 11.

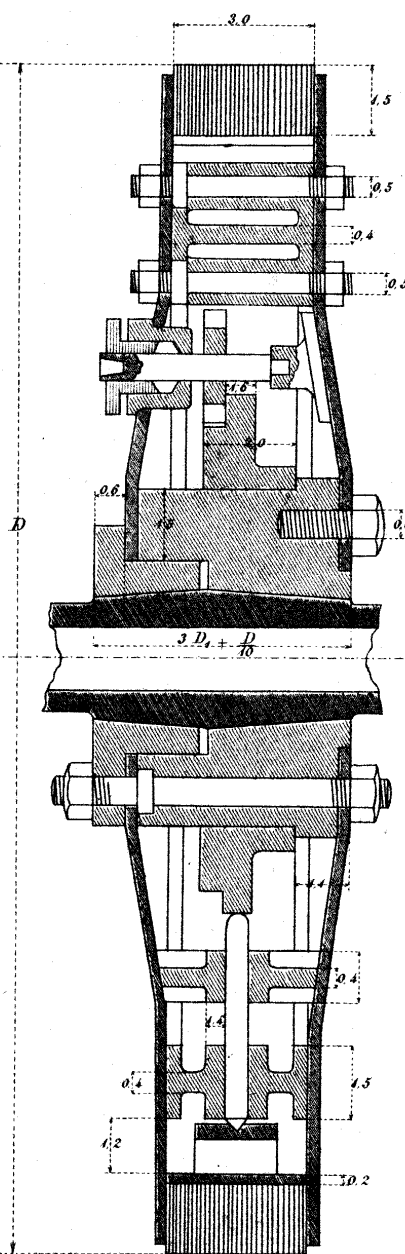


Fig. 12.

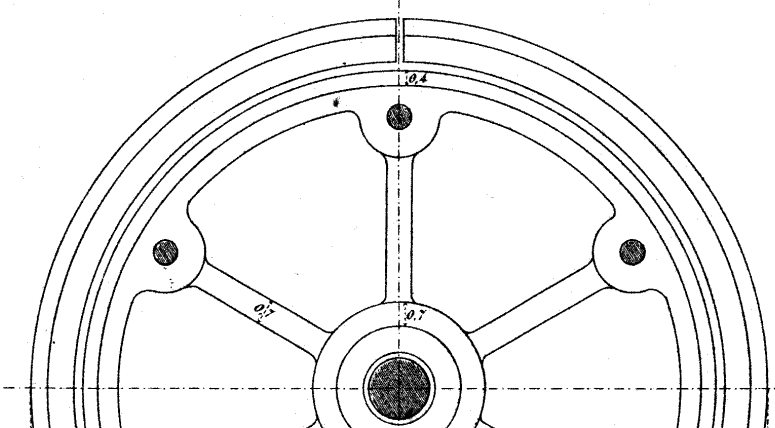


Fig. 13.

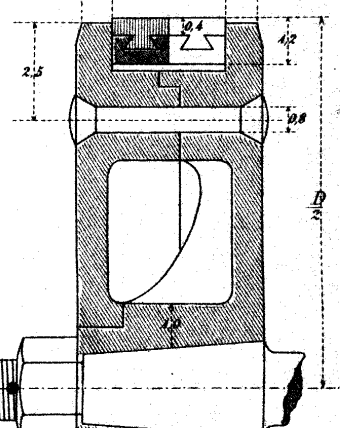


Fig. 14.

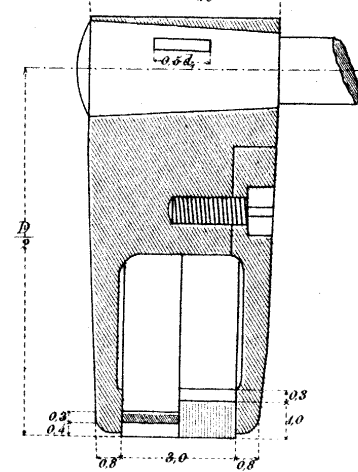


Fig. 15.

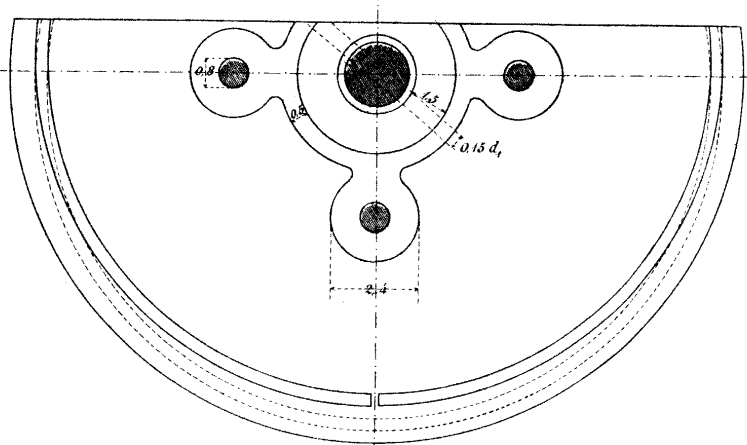


Fig. 16.

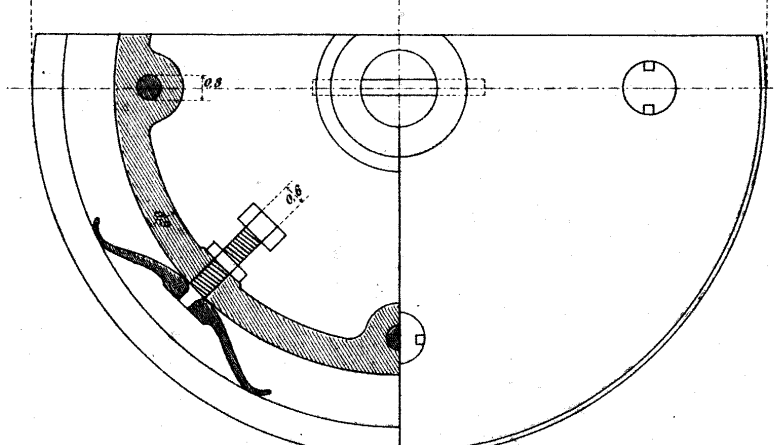


Fig. 17.

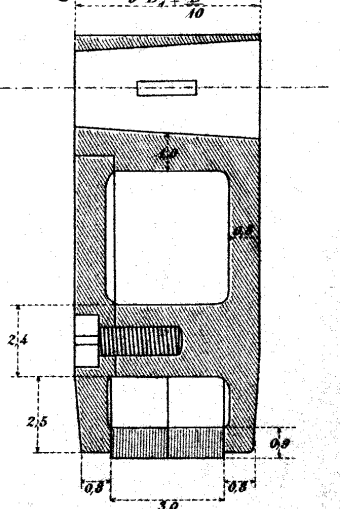


Fig. 18.

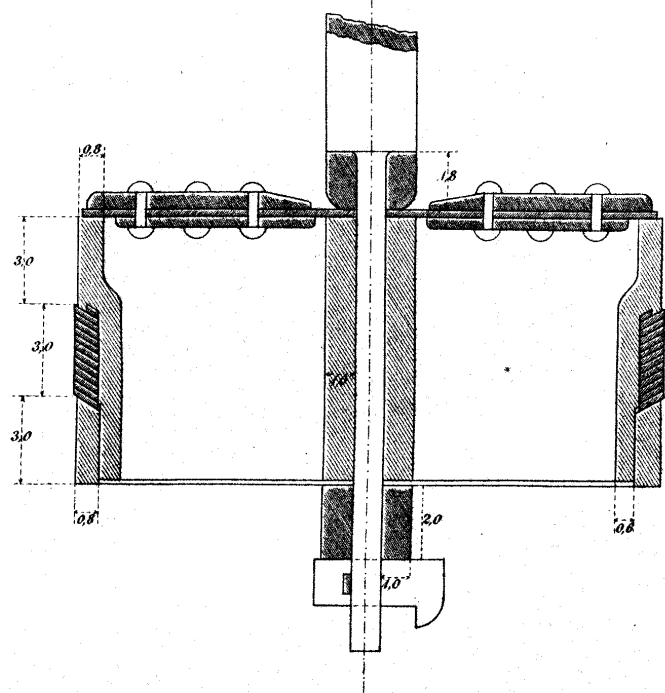


Fig. 19.

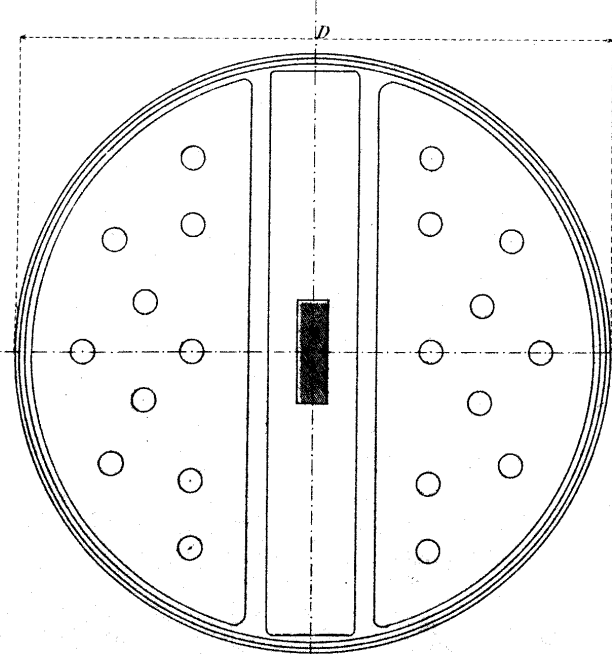


Fig. 20.

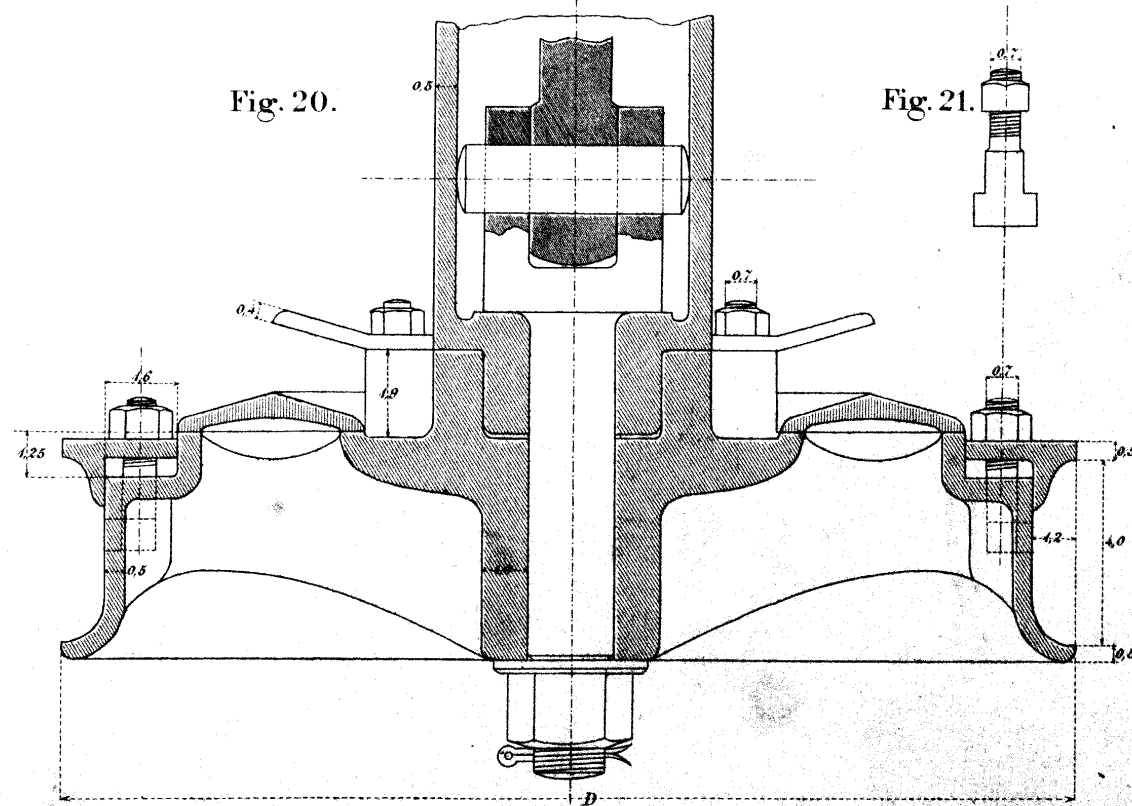


Fig. 21.

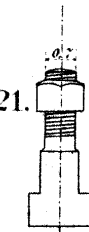


Fig. 22.

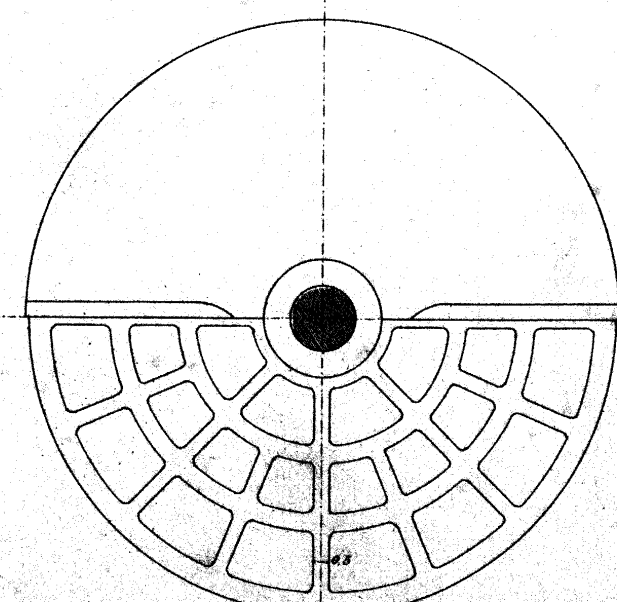


Fig. 23.

