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# PLATEN

BEHOORENDE BIJ DE

# WATERBOUWKUNDE,

DOOR

N. H. HENKET, DR. Ch. M. SCHOLS EN J. M. TELDERS,

HOOGLEERAREN AAN DE POLYTECHNISCHE SCHOOL TE DELFT.

MET MEDEWERKING VAN

VERSCHILLENDE INGENIEURS.

---

DERDE DEEL <(2<sup>e</sup> gedeelte.)>

**Afd. XIV. Bruggen.**

---

'S-GRAVENHAGE, DE GEBROEDERS VAN CLEEF.

XXX  
343/2



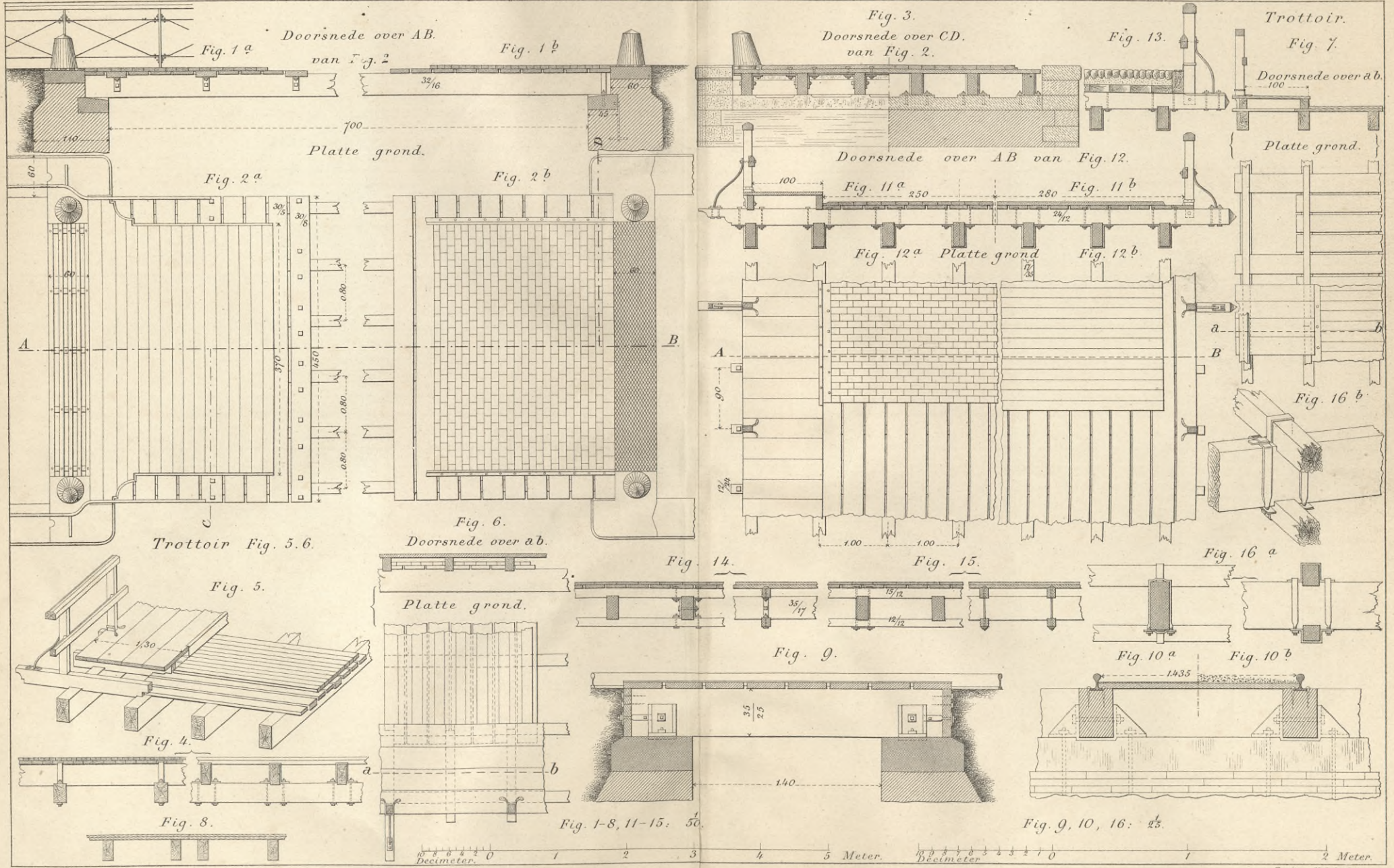
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Akc. Nr. 502/52

DDK-12 277/2017











Brug in den polder Mastenbroek in den Grintweg van Kampen naar Genemuiden Fig. 1-3.

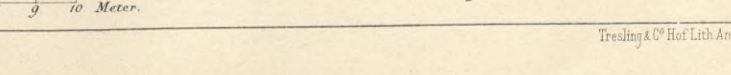
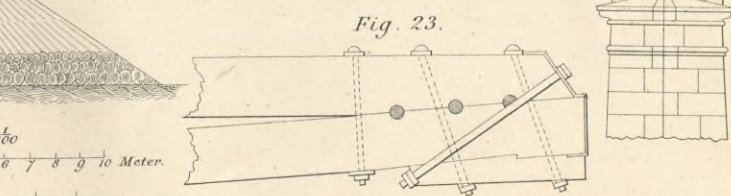
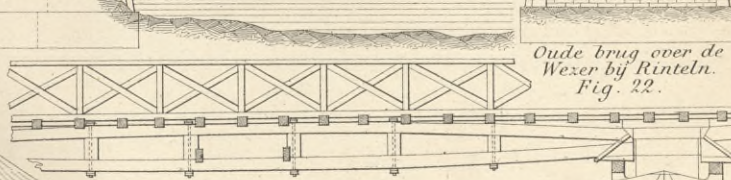
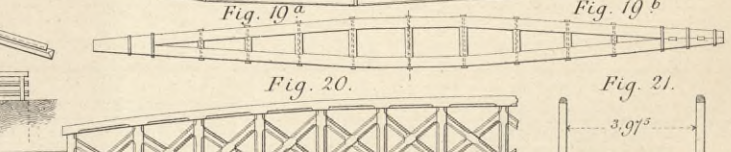
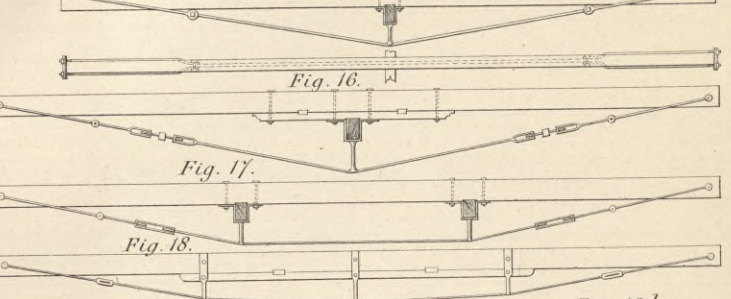
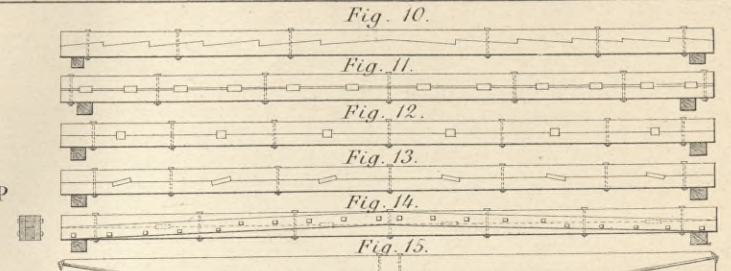
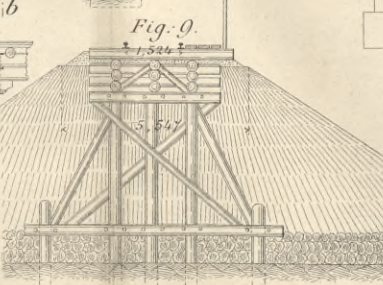
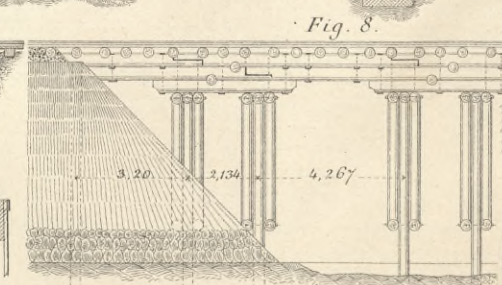
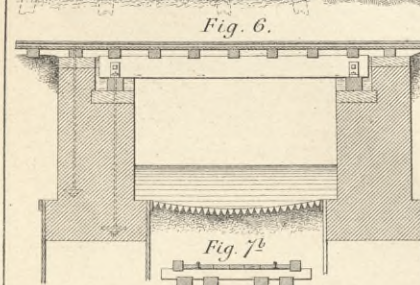
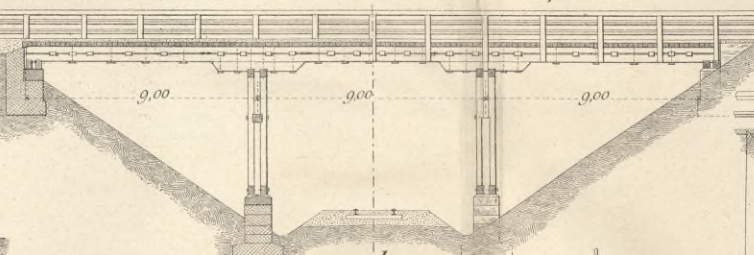
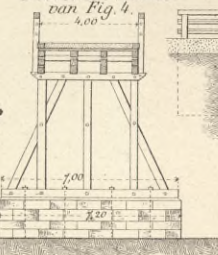
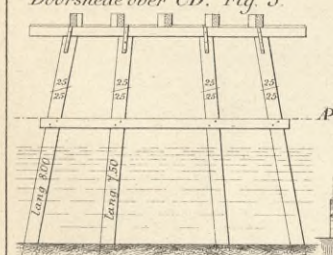
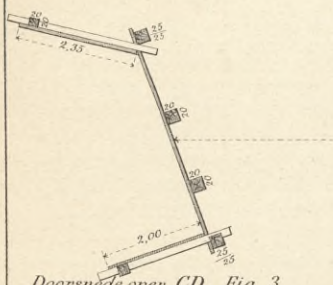
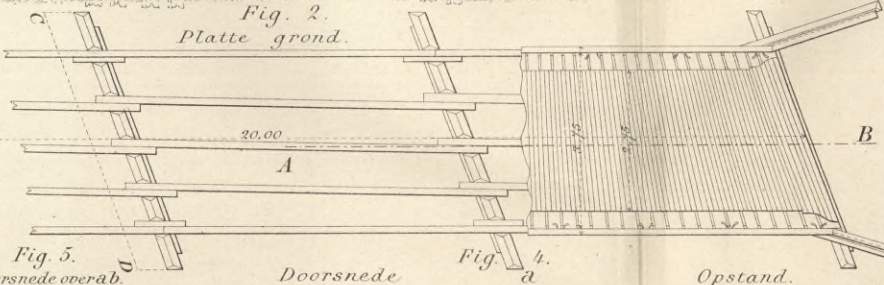
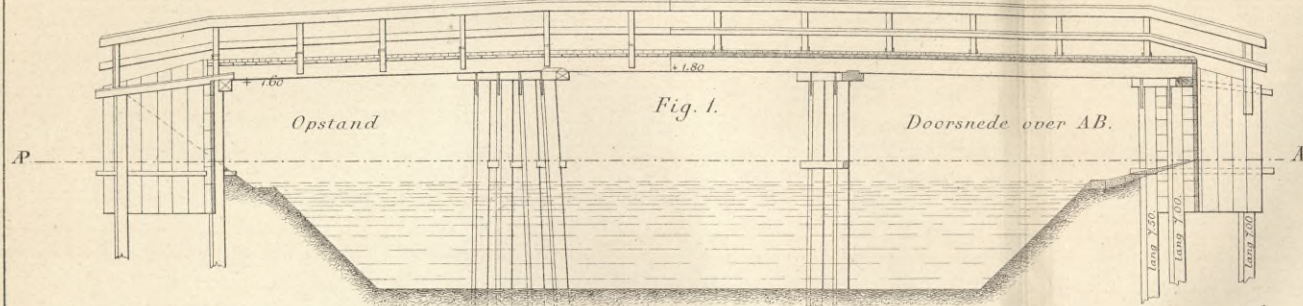
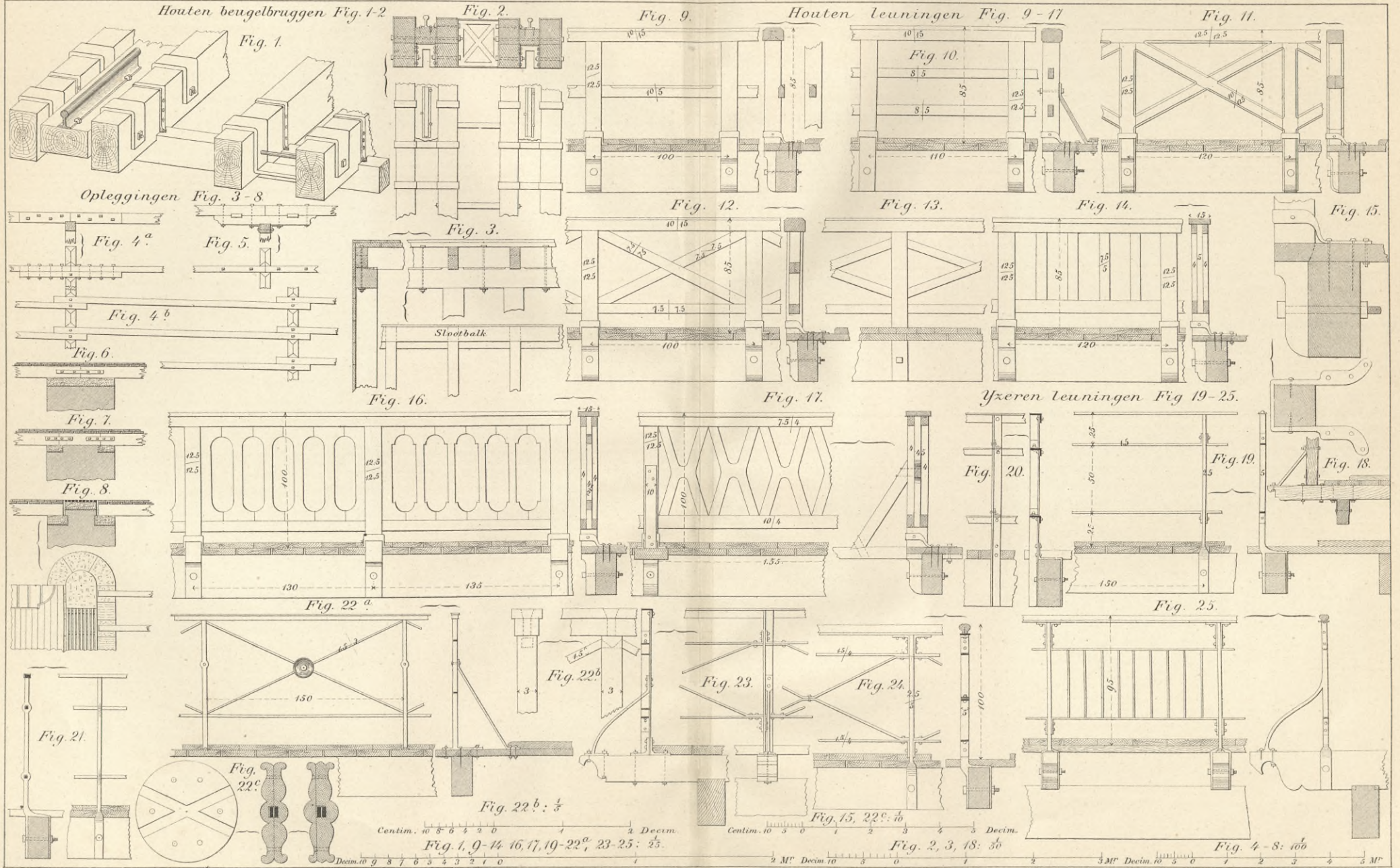


Fig. 1-3, 6, 7, 10-19: 1:50  
 Fig. 4, 5: 2:50  
 Fig. 8, 9, 20, 21: 1:50  
 Fig. 22: 1:50  
 Fig. 23: 5:0  
 0 1 2 3 4 5 6 7 8 9 10 Meter.







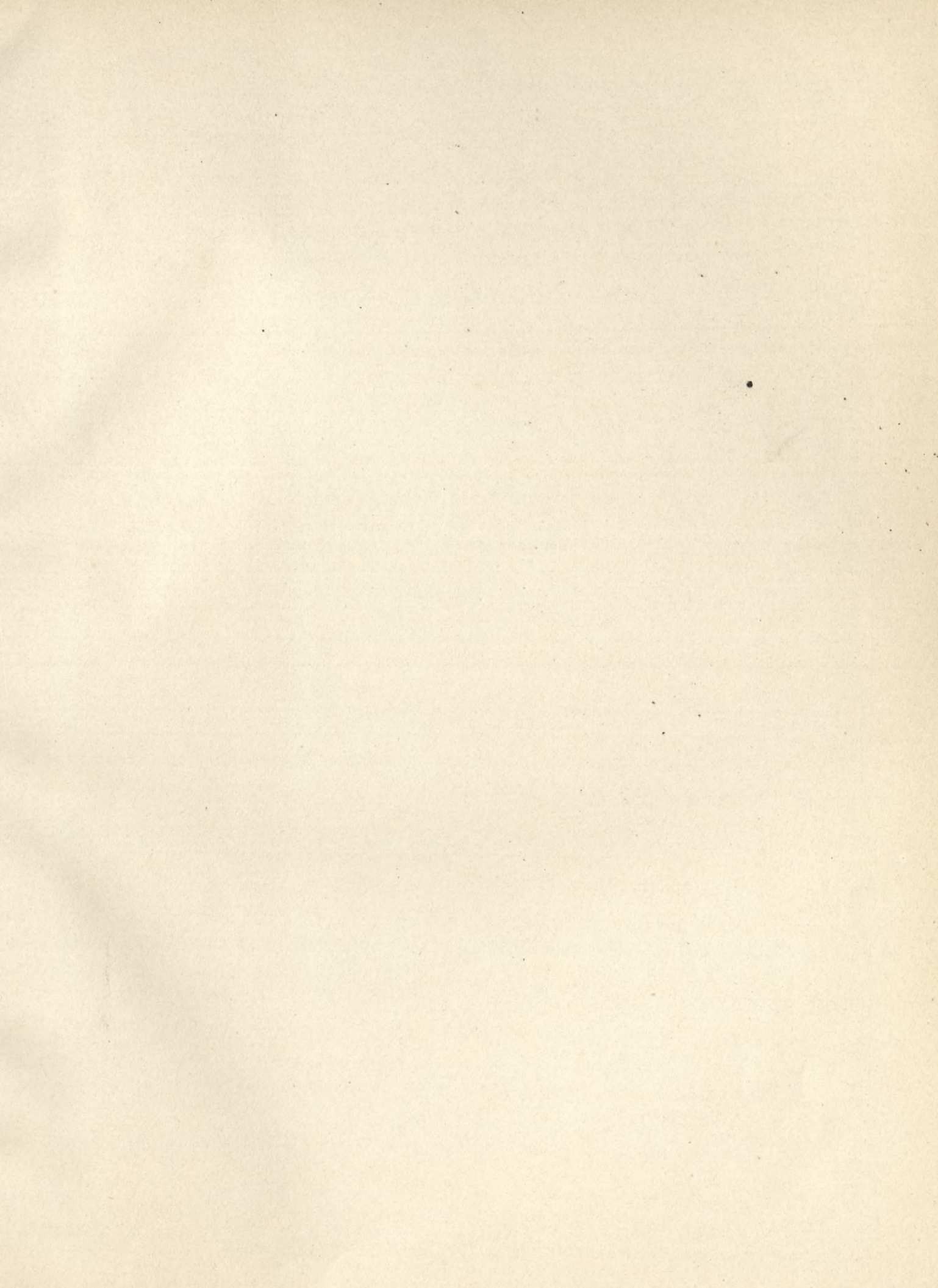


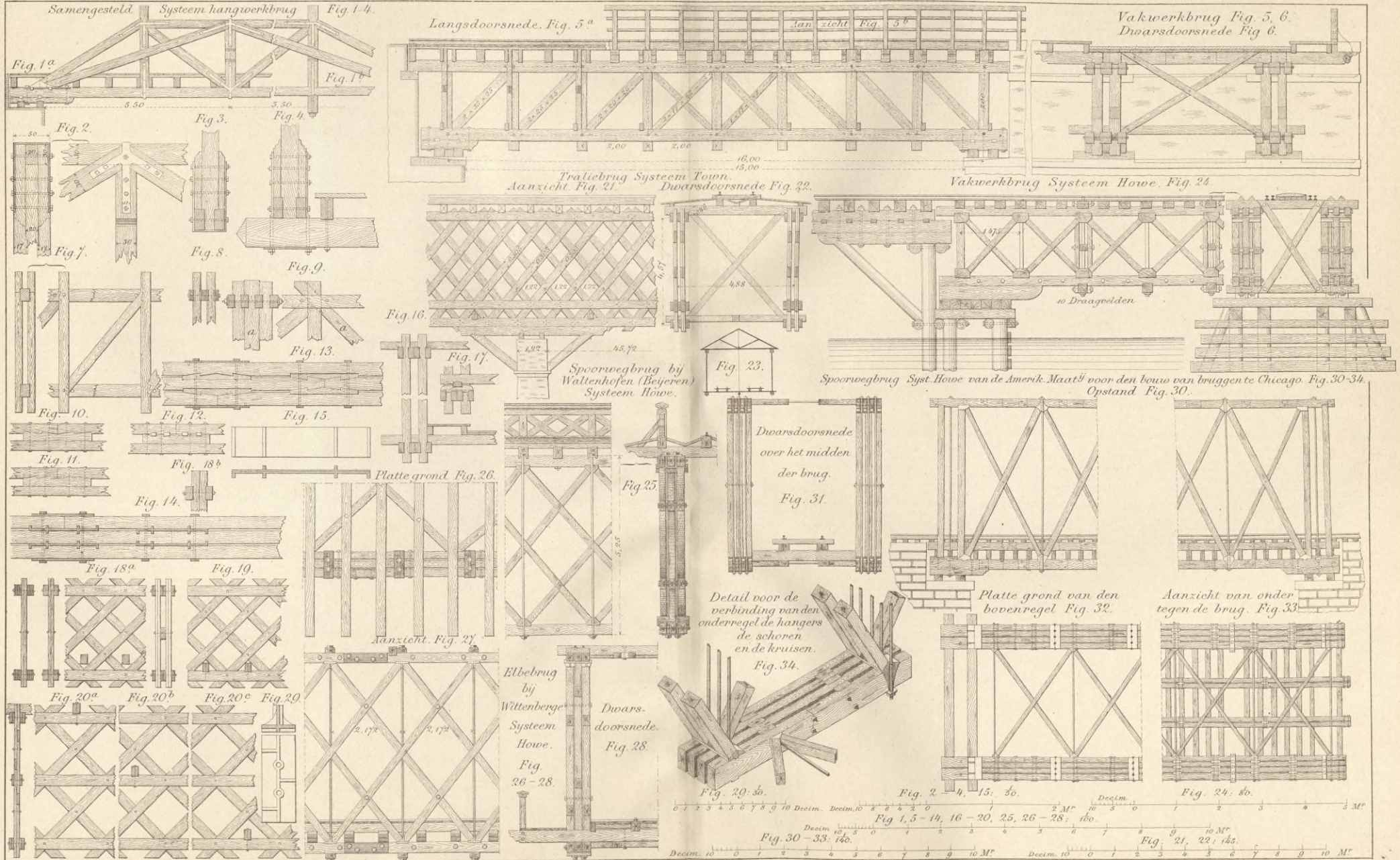






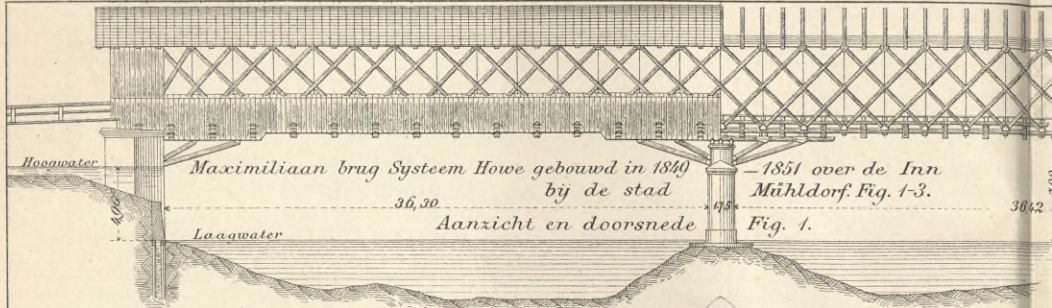




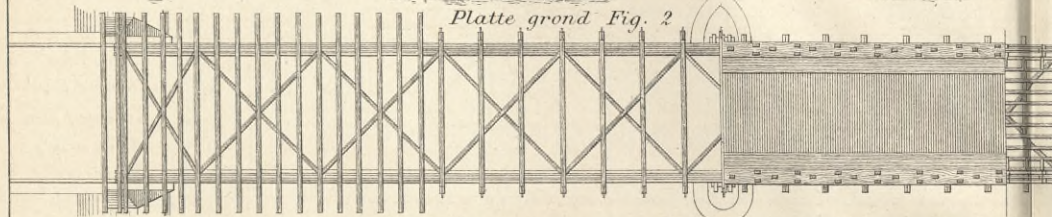






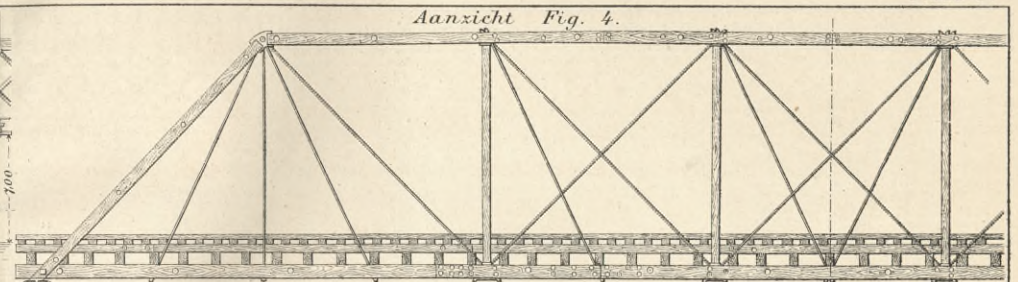
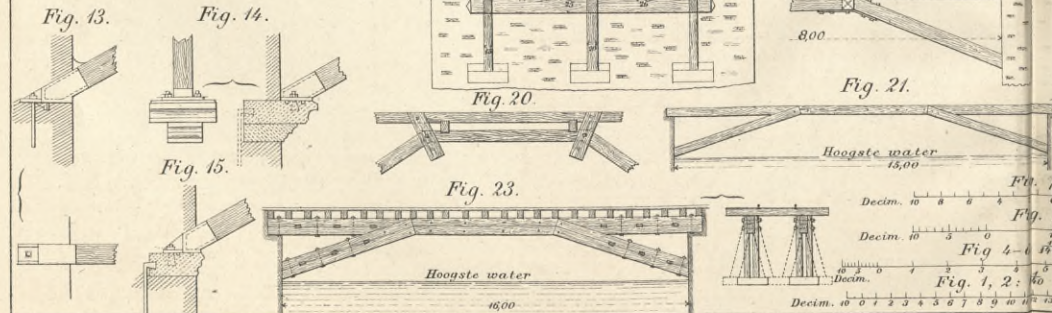
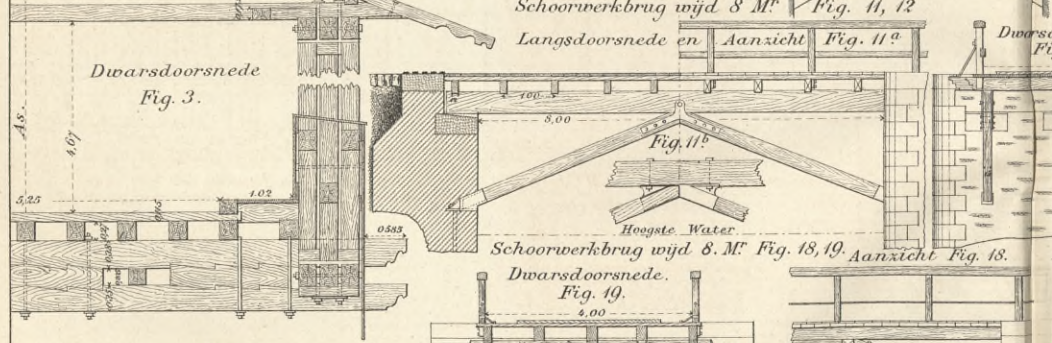
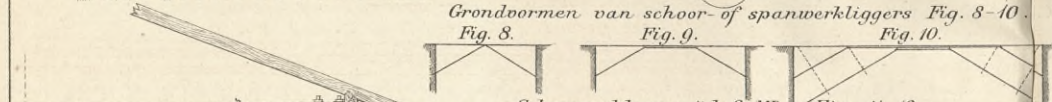


Aanzicht en doorsnede Fig. 1.

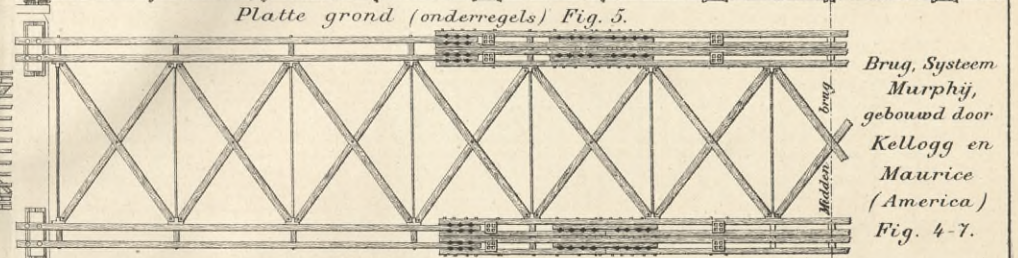


Platte grond Fig. 2.

Grondvormen van schoor- of spanwerkliggers Fig. 8-10. Fig. 8. Fig. 9. Fig. 10.

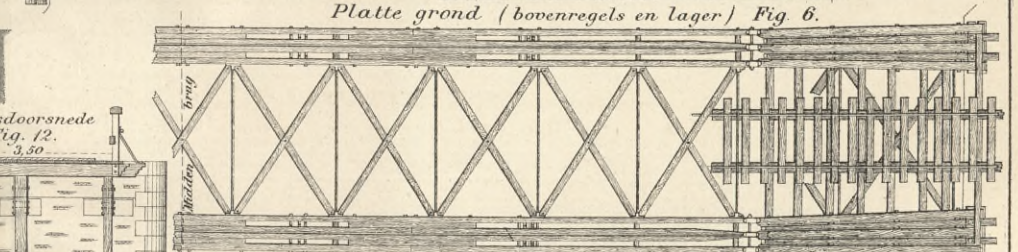


Aanzicht Fig. 4.

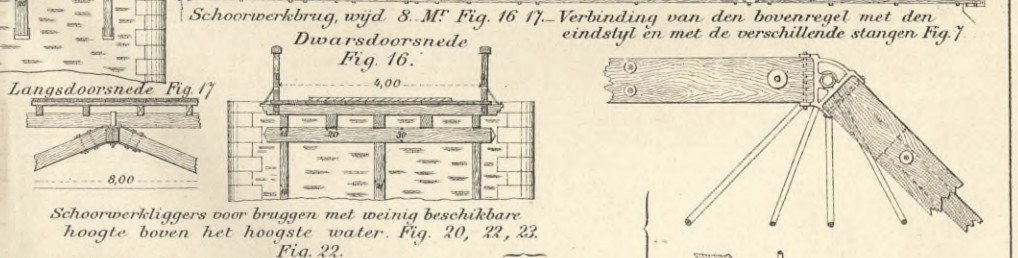


Platte grond (onderregels) Fig. 5.

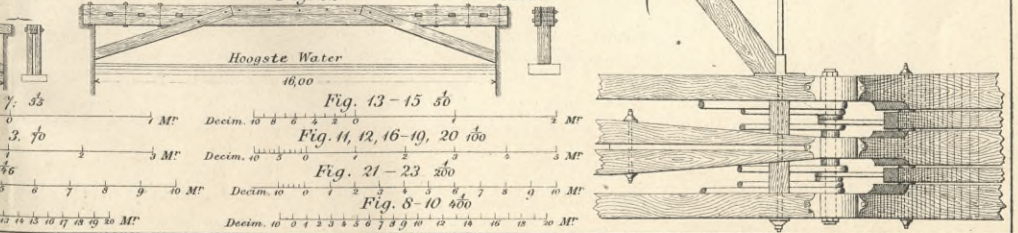
Brug, System Murphy, gebouwd door Kellogg en Maurice (America) Fig. 4-7.



Platte grond (bovenregels en lager) Fig. 6.



Schoorwerkbrug wijd 8 Mtr Fig. 16 17. Verbinding van den bovenregel met den eindstyl en met de verschillende stangen Fig. 7.

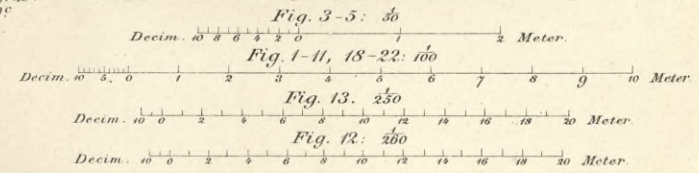
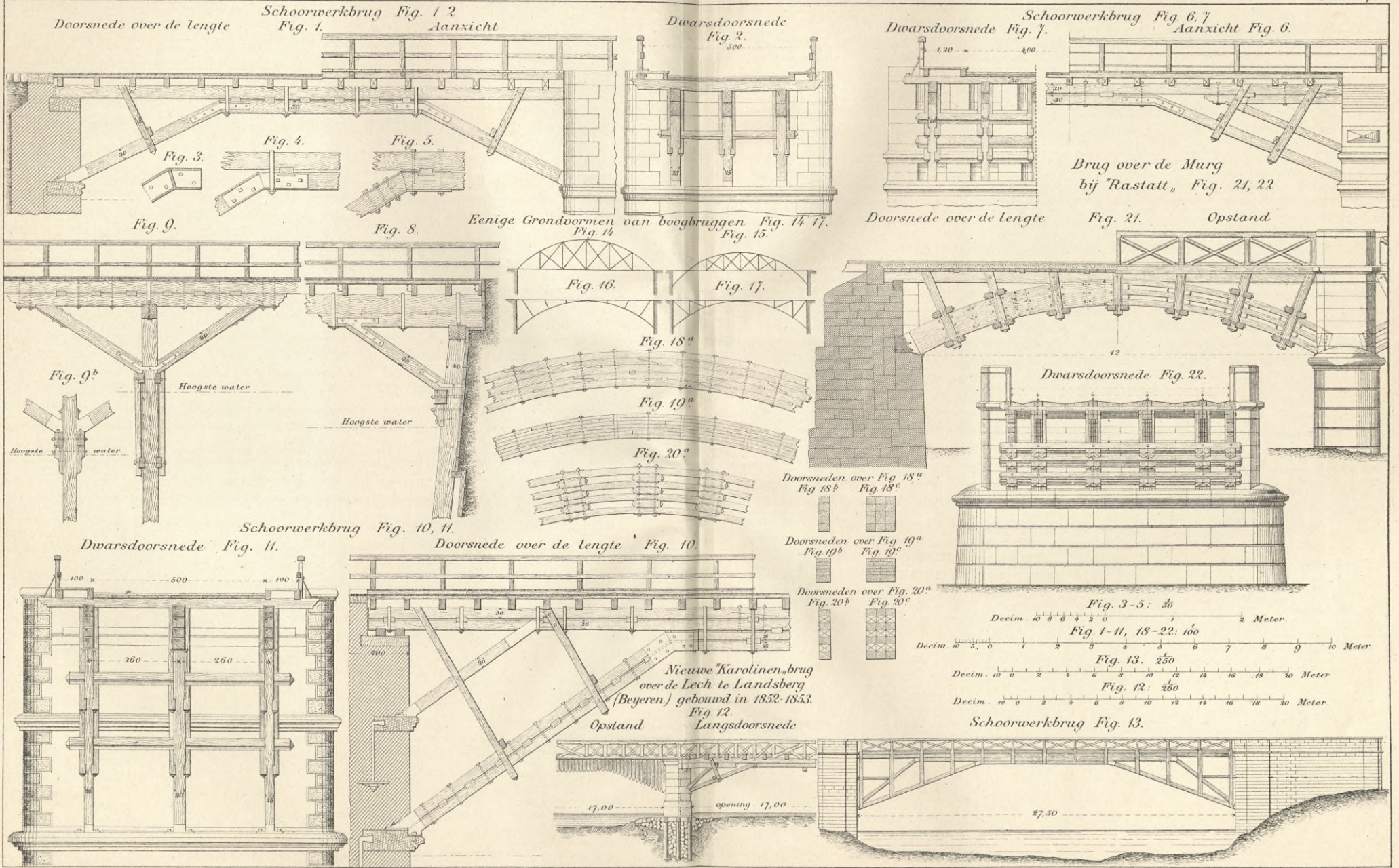


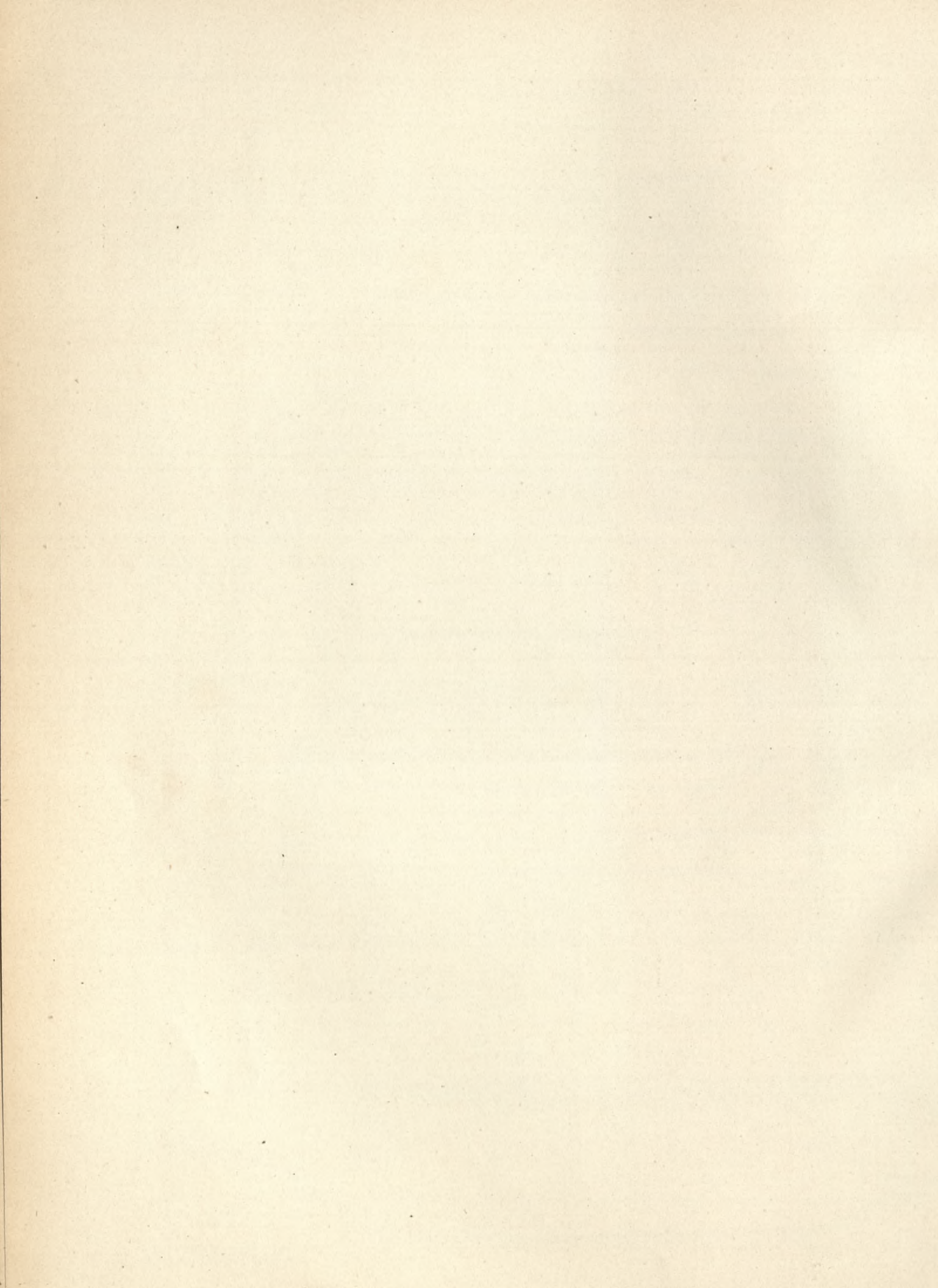
Schoorwerkliggers voor bruggen met weinig beschikbare hoogte boven het hoogste water. Fig. 20, 22, 22.







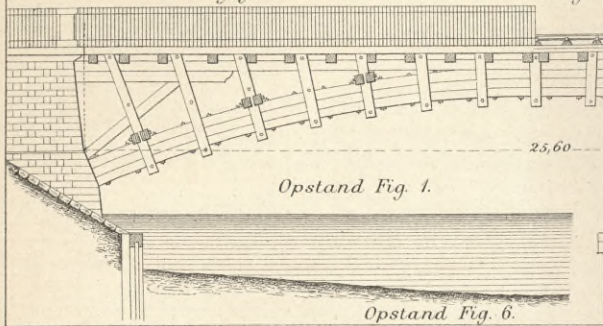






Brug gebouwd in 1836-1837 te St. Petersburg in den Zarskoe-Selo spoorweg Fig. 1, 2.

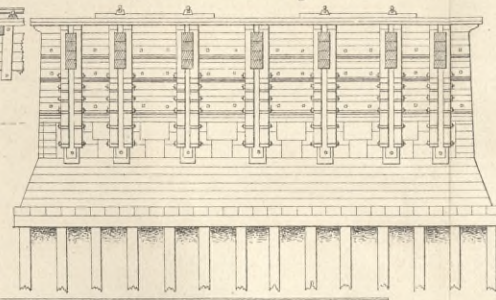
Dwarsdoorsnede Fig. 2.



Opstand Fig. 1.

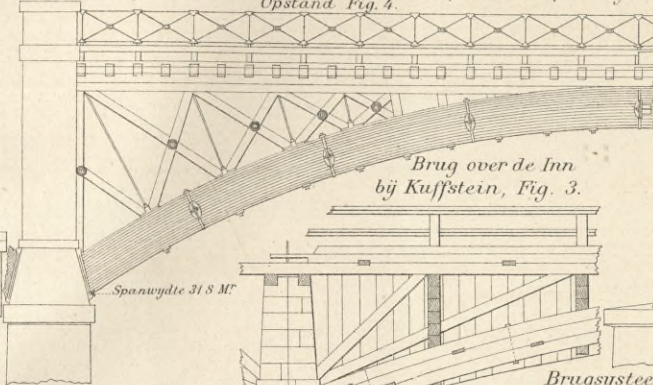
25,60

Opstand Fig. 6.



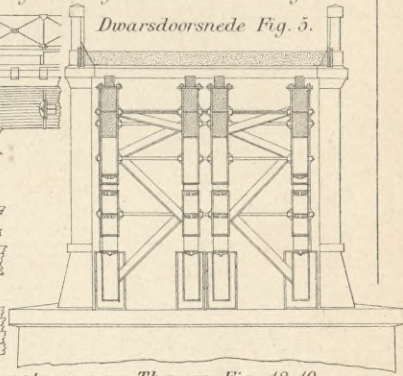
Brug in 1845 gebouwd over de Seine in den Atmospherischen spoorweg van Parys naar St Germain Fig. 4, 5.

Opstand Fig. 4.

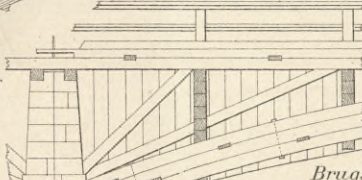


Spanwydte 31,8 M.

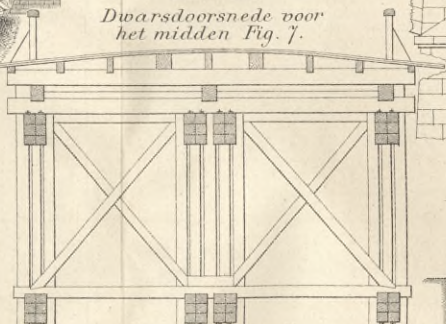
Dwarsdoorsnede Fig. 5.



Brug over de Inn bij Kuffstein, Fig. 3.



Dwarsdoorsnede voor het midden Fig. 7.



Brugsysteem van Thayer Fig. 18, 19.

Opstand Fig. 18.

Dwarsdoorsnede

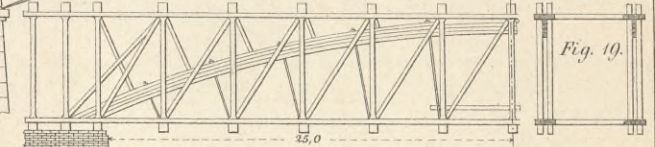


Fig. 19.

Enige Grondvormen van brugliggers van Samengesteld Systeem Fig. 10-17

Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

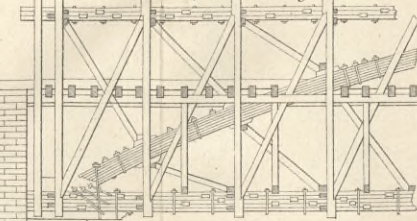
Fig. 16.

Fig. 17.

Dwarsdoorsnede Fig. 27.

Balkbrug van Brown samengesteld Systeem, Fig. 20, 21.

Opstand Fig. 20.



Dwarsdoorsnede Fig. 21.



Boogvalwerkbrug van Burr Fig. 26, 27

Opstand Fig. 26.

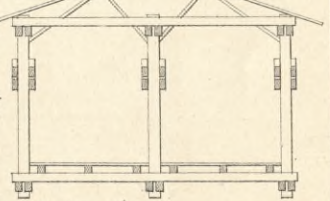
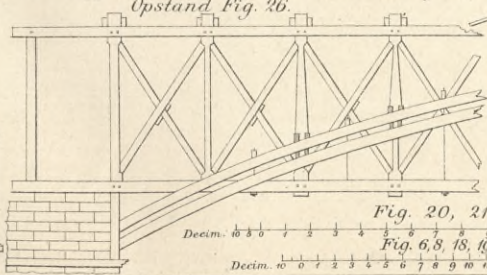


Fig. 20, 21, 26, 27: 200.

Fig. 6, 8, 18, 19: 300.

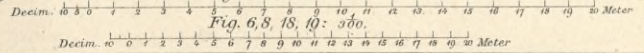


Fig. 9.

Cascade-brug gebouwd door Brown in den Erie spoorweg Fig. 6-9.

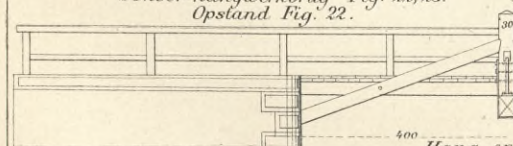
Spanwydte 83,80

Gedeelte platte grond Fig. 8.



Schoor-hangwerkbrug Fig. 22, 23.

Opstand Fig. 22.

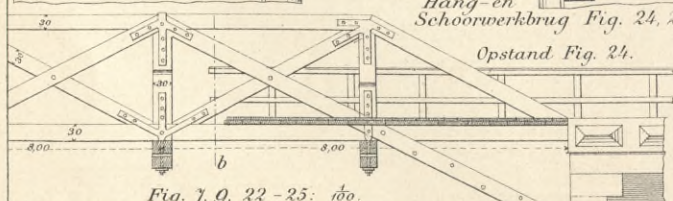


Dwarsdoorsnede Fig. 23.



Hang-en Schoorwerkbrug Fig. 24, 25.

Opstand Fig. 24.



Dwarsdoorsnede Fig. 25.

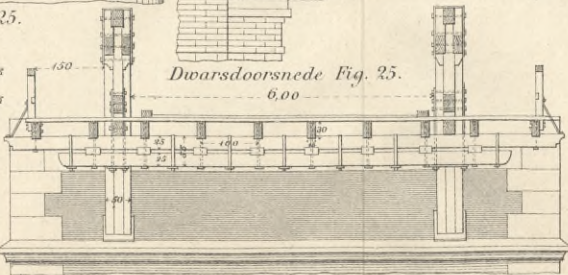
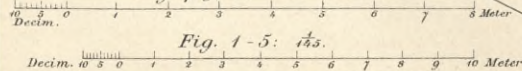


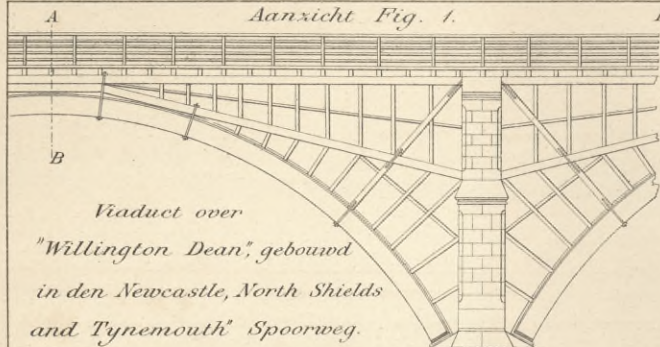
Fig. 7, 9, 22-25: 100.

Fig. 1-5: 1/25.





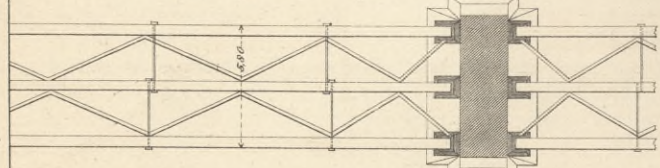




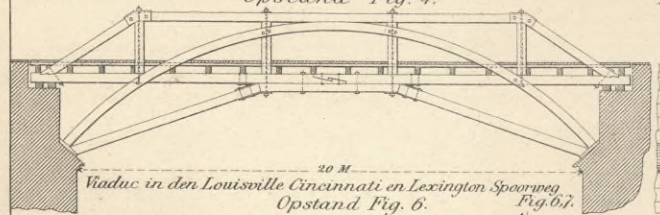
Viaduct over  
"Wilmington Dean", gebouwd  
in den Newcastle, North Shields  
and Tynemouth' Spoorweg.

Fig. 1-3.

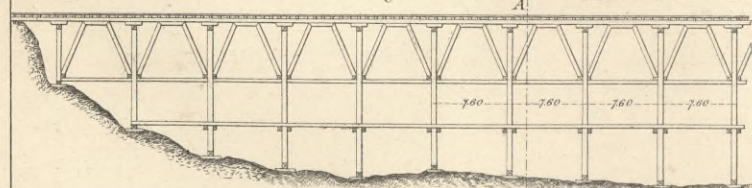
Platte grond Fig. 2.



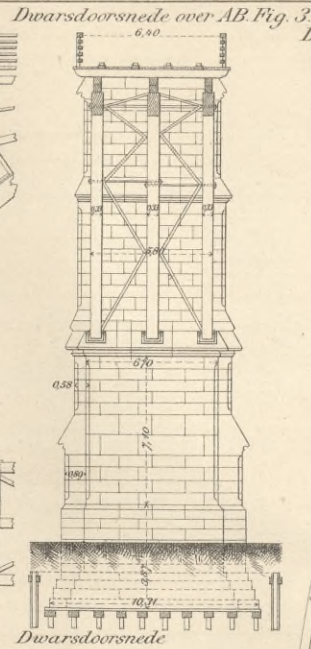
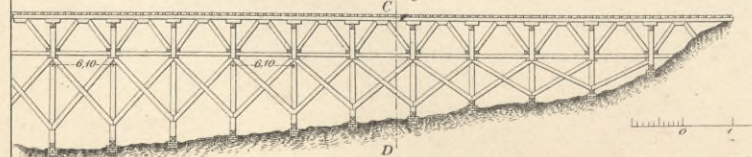
Hang-schoorwerk boogbrug Fig. 4, 5.  
Opstand Fig. 4.



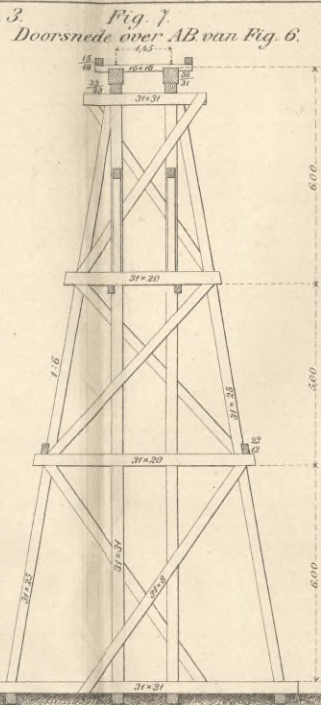
Viaduc in den Louisville Cincinnati en Lexington Spoorweg.  
Opstand Fig. 6.



Viaduct in den Philadelphia Reading Spoorweg Fig. 8, 9.  
Opstand Fig. 8.



Dwarsdoorsnede  
Fig. 5.



Viaduct in den Union Pacific Spoorweg Fig. 10-13.  
E. Opstand Fig. 10.

Fig. 9.  
Doorsnede over CD.  
van Fig. 8.

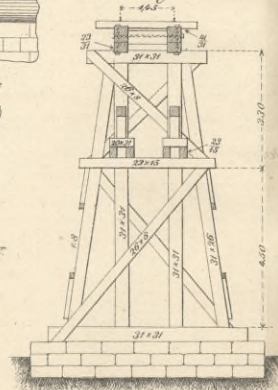
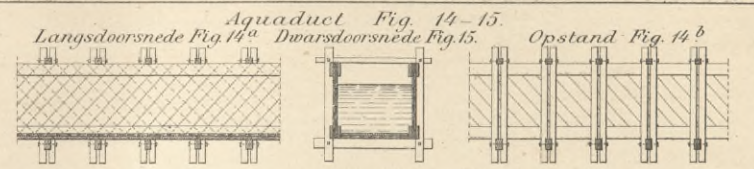


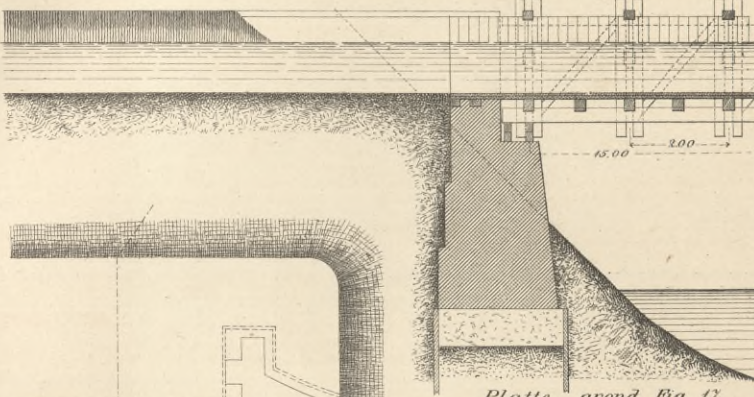
Fig. 14-18. do

Fig. 1-3. 4.5

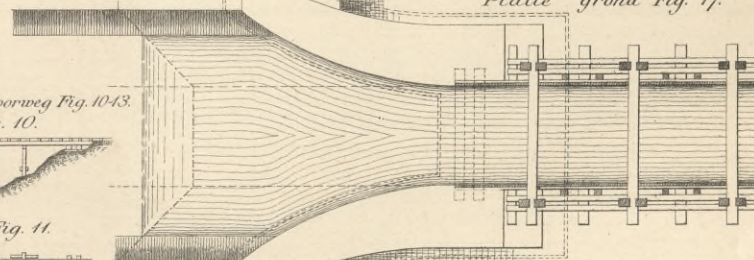


Aquaduct Fig. 16-18.

Doorsnede over de lengte Fig. 16.



Platte grond Fig. 17.



Dwarsdoorsnede  
Fig. 18.

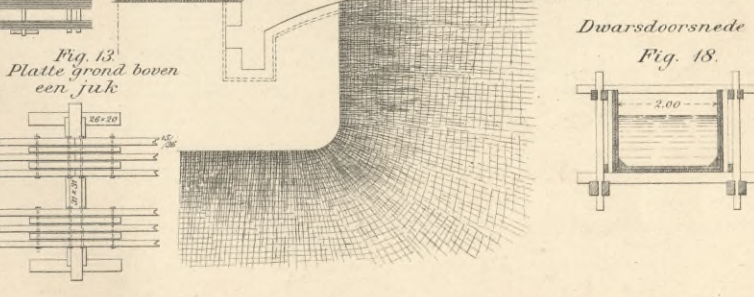
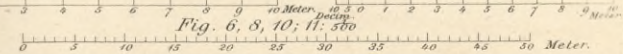
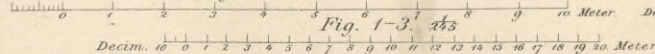


Fig. 7, 9, 12, 13: 4.0

Fig. 4, 5: 4.00









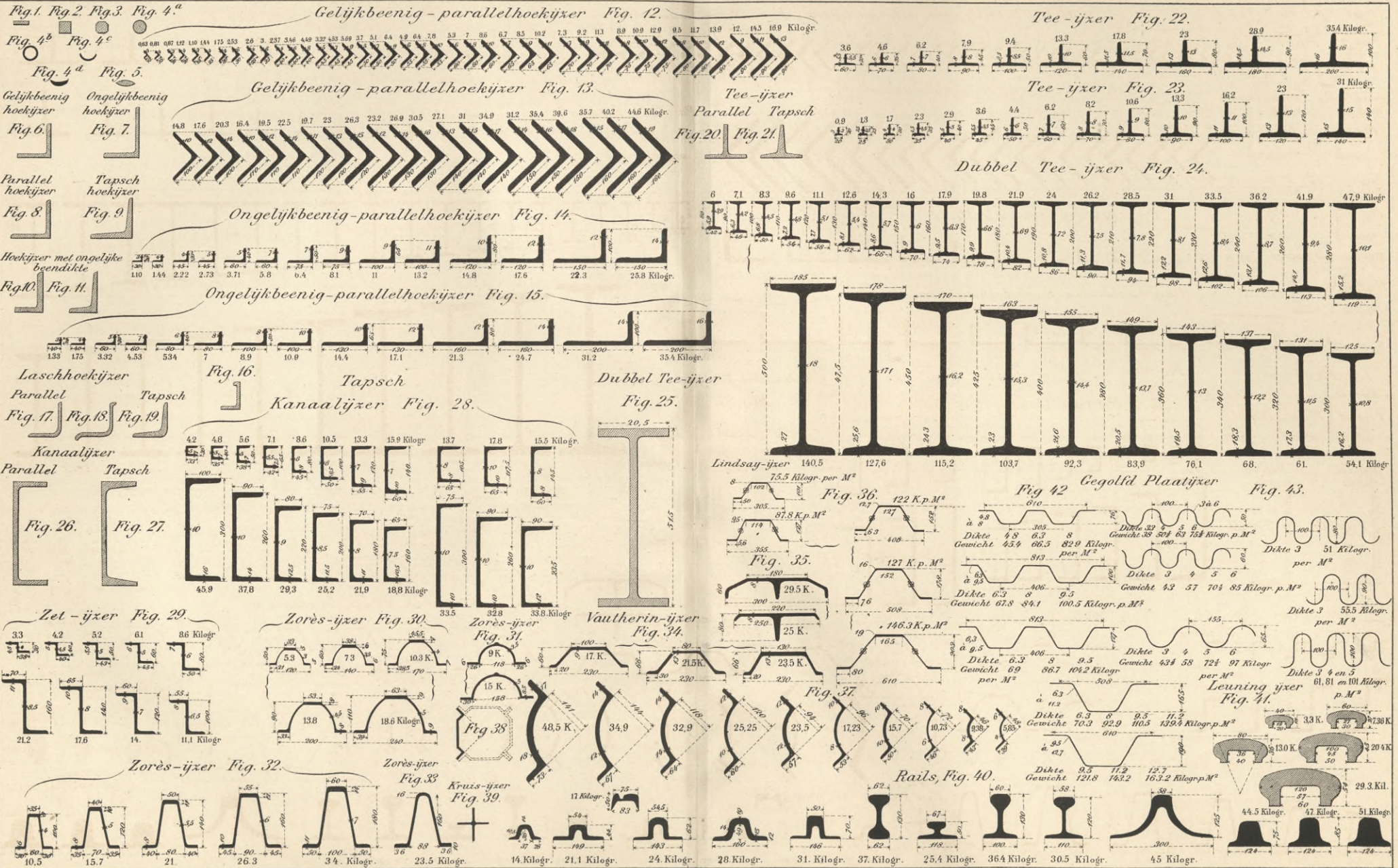














Fig. 1. Vijzel met los boven- en onderstuk.

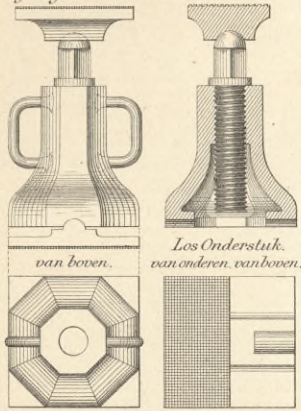


Fig. 3. Vijzel met draaibaar bovenstuk.

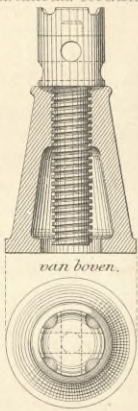


Fig. 5. Tegenhouder met toebehooren.

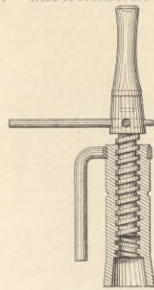


Fig. 7. Omslag met boor voor het versenken van gaten.

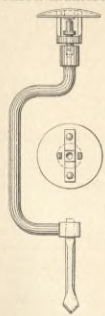


Fig. 8. Opruimers.

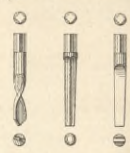


Fig. 9. Sleutels voor de Opruimers.

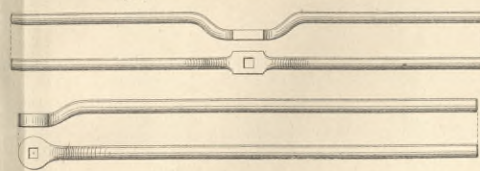


Fig. 10. Schroefsnij-ijzer met toebehooren.

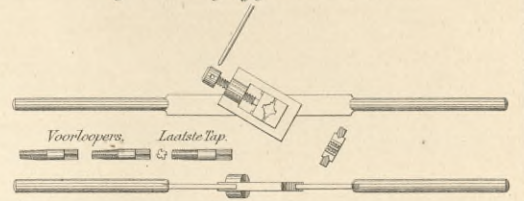


Fig. 11. Drift. Fig. 12. Beitel met tang voor het afsnijden der koppen van afgekeurde klinknagels.

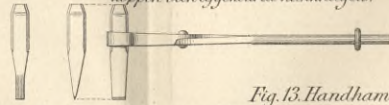


Fig. 6. Tegenhouder.

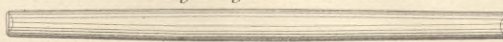


Fig. 13. Handhamer wegende 0,6 KG.

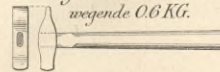


Fig. 14. Klinkhamer wegende 2,6 KG.



Fig. 15. Voorhamer wegende 4. KG.

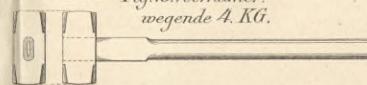


Fig. 2. Sleutel voor de Vijzel Fig. 1.

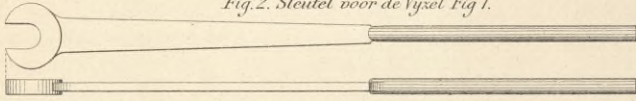


Fig. 4. Gasbuis als sleutel voor de Vijzel Fig. 3.

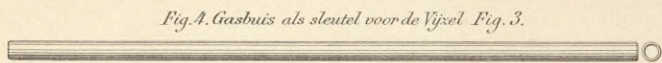


Fig. 16. Dop met tang, tot vorming der klinkboutkoppen.

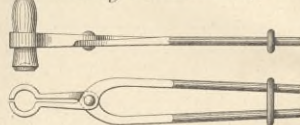


Fig. 18. Klemschroef.

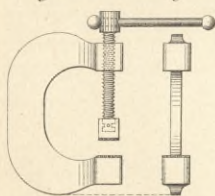


Fig. 17. Tangetje voor het behandelen van warme klinkbouten.

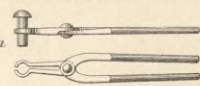


Fig. 19. Schroefbout voor het tegen elkander zetten van te klinken platen en hoekijzers.



Fig. 20. Ratelboor met toebehooren.

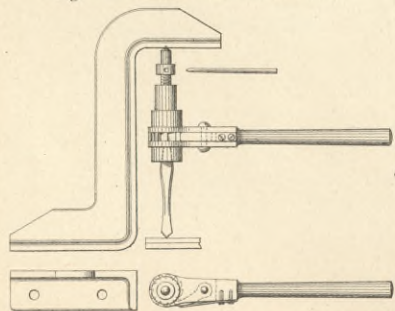


Fig. 21. Centerboor.



Doorsnede over ab.

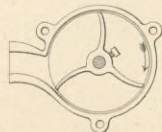


Fig. 22. Weldsmidse.

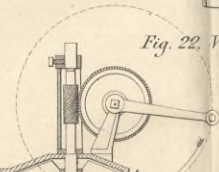


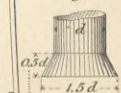
Fig. 26.



Fig. 24.



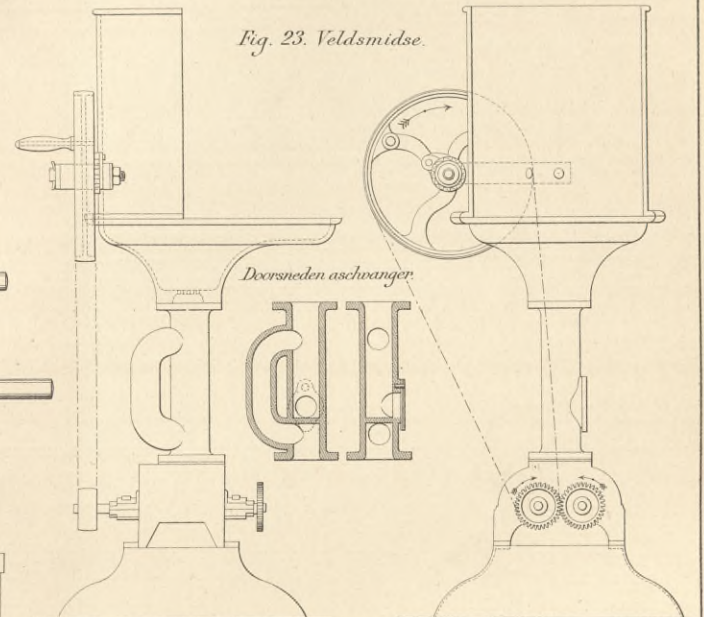
Fig. 25.



Kop

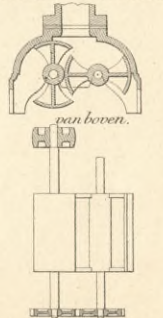


Fig. 23. Veldsmidse.



van boven.

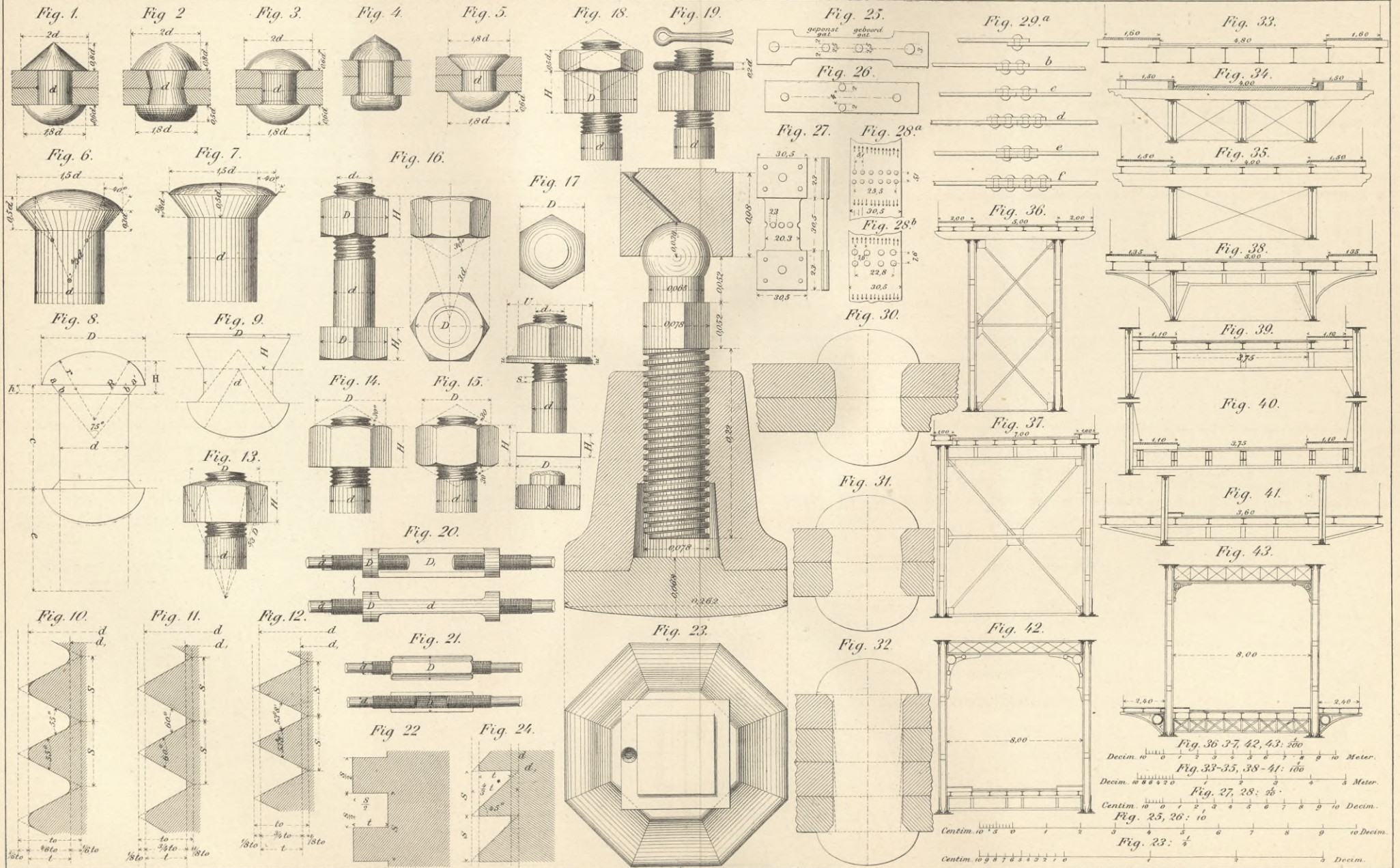
Ventilator in doorsnede.



van boven.



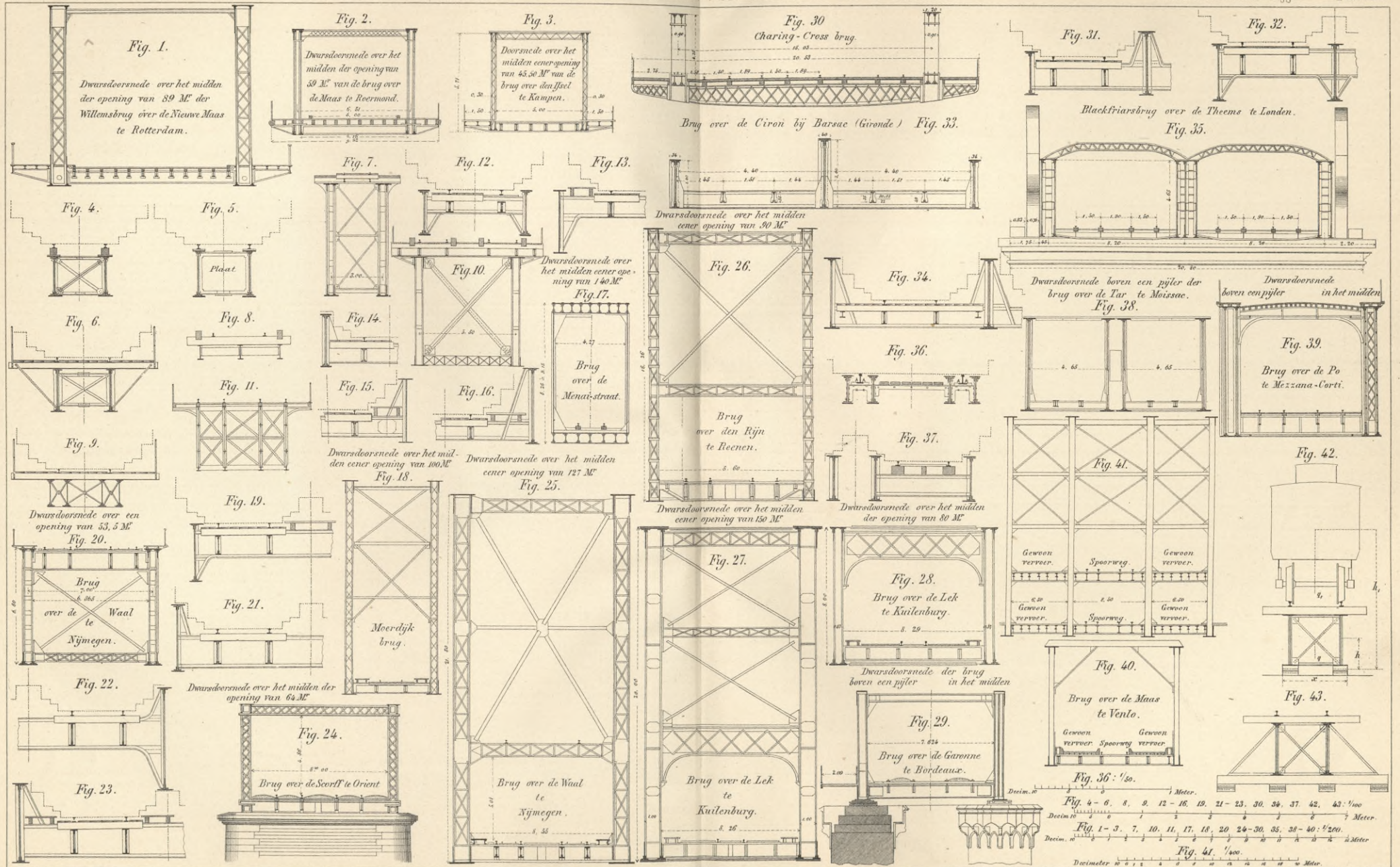




Decim. 10 0 1 2 3 4 5 6 7 8 9 10 Meter.  
 Decim. 10 0 1 2 3 4 5 6 7 8 9 10 Meter.  
 Centim. 10 0 1 2 3 4 5 6 7 8 9 10 Decim.  
 Fig. 25, 26: 10  
 Fig. 27, 28: 5  
 Fig. 23: 5  
 Centim. 10 0 1 2 3 4 5 6 7 8 9 10 Decim.



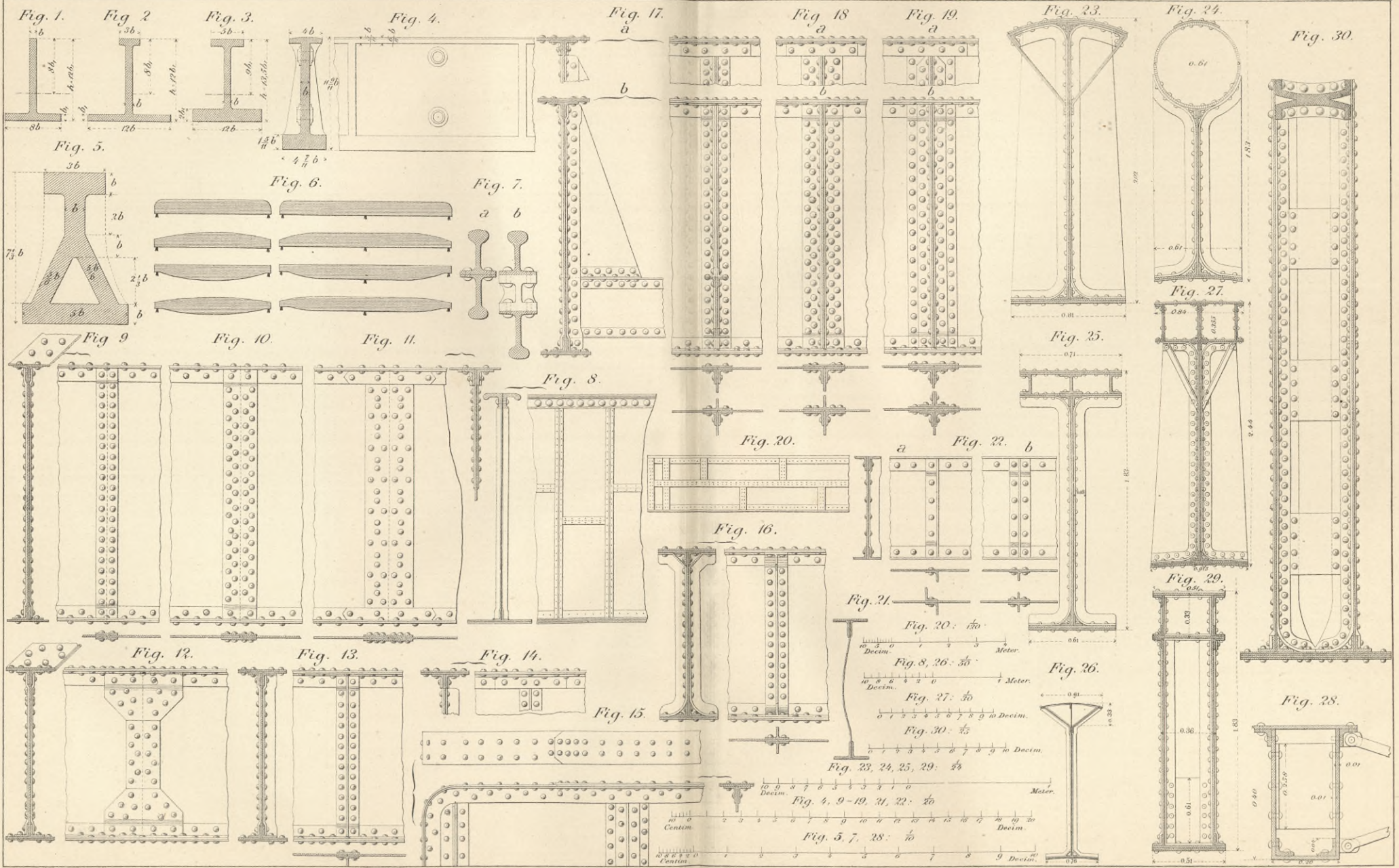












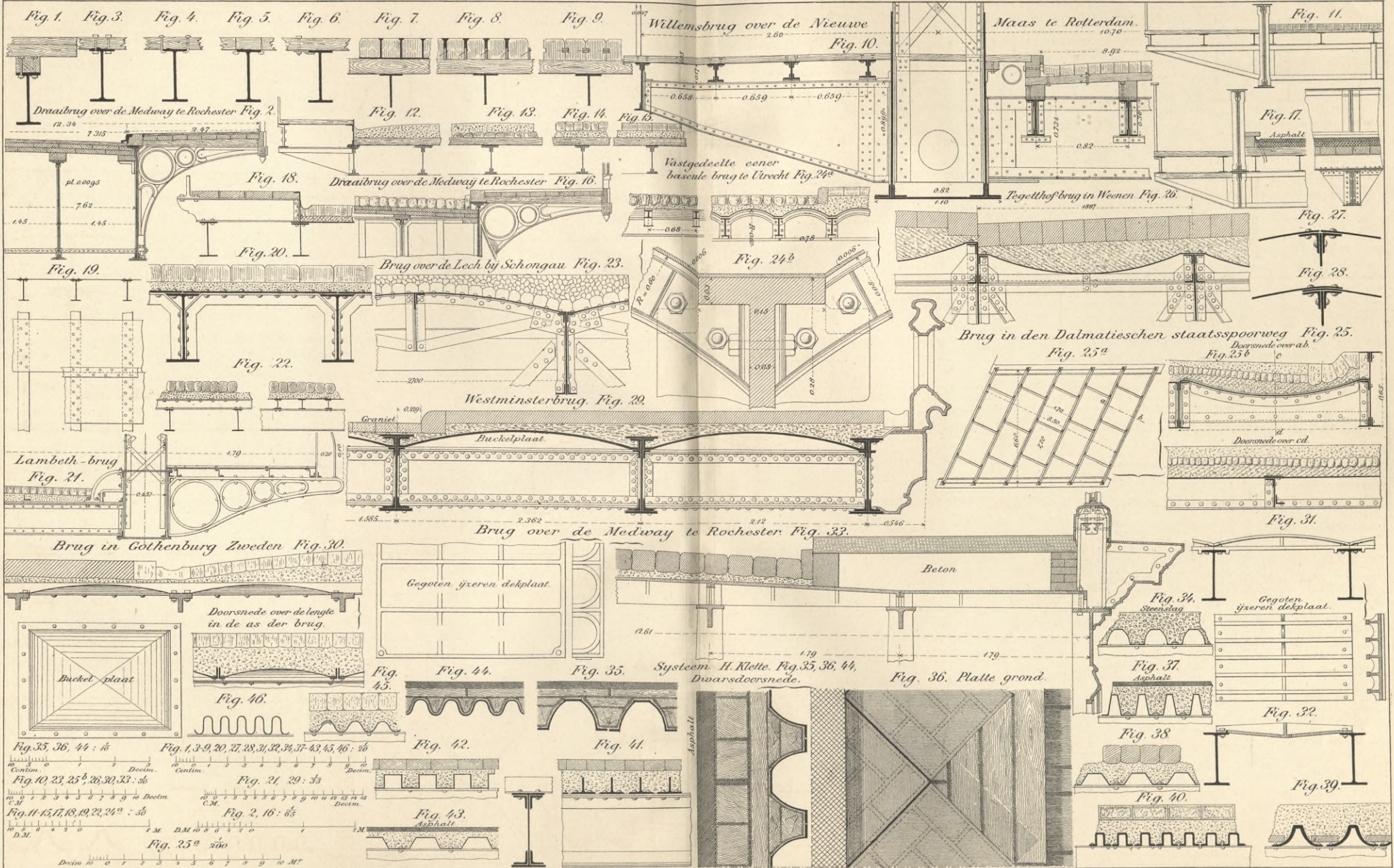






















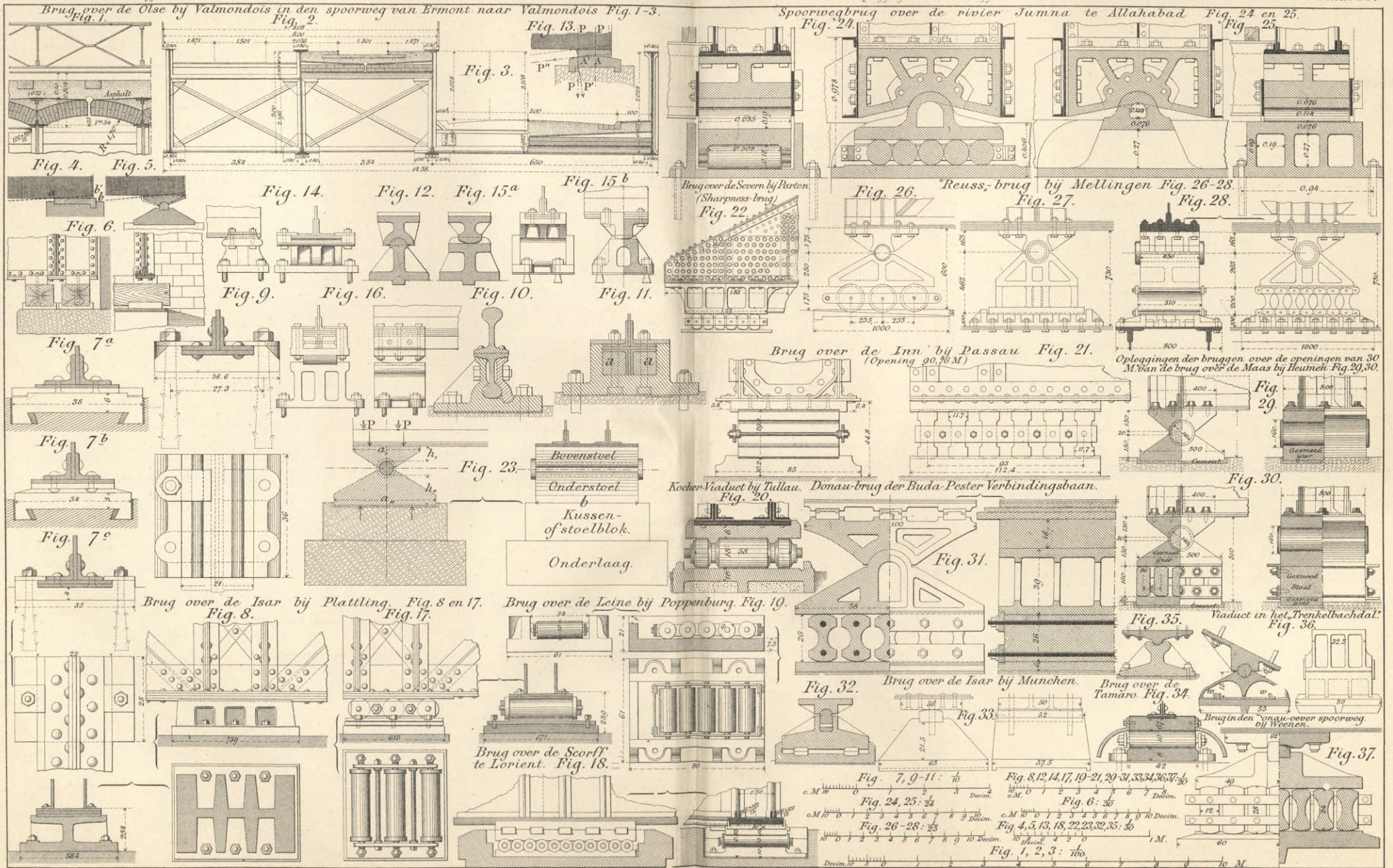
















Opleggingen van de brug over den Rijn beneden Arnhem Fig. 1 en 2  
Fig. 1. op Pijler V

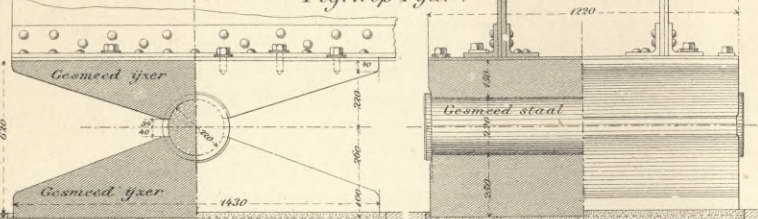
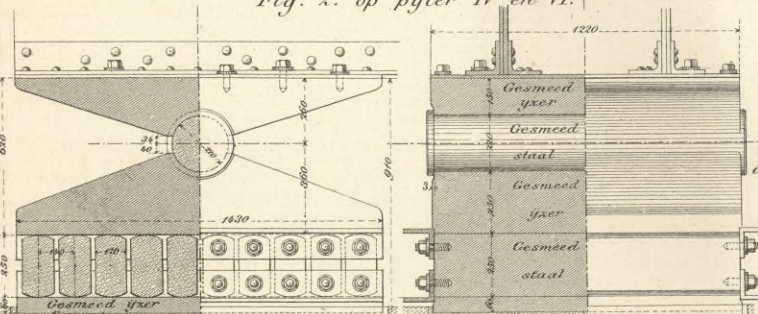


Fig. 2. op pijler IV en VI.



Oplegging en krimp- en rekinrichting van de Elbebrug bij Schandau Fig. 3 en 4.

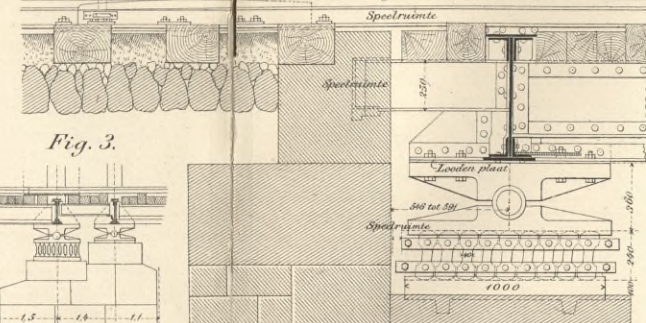
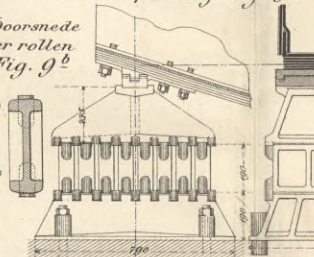


Fig. 3.

Fig. 4.

Rodach-brug in den Beyerschen Staats-Spoorweg Fig. 9.



Doorsnede der rollen Fig. 9.

Doorsnede AB.

Sluismuur

Fig. 4.

4.

Rodachbrug Fig. 10.

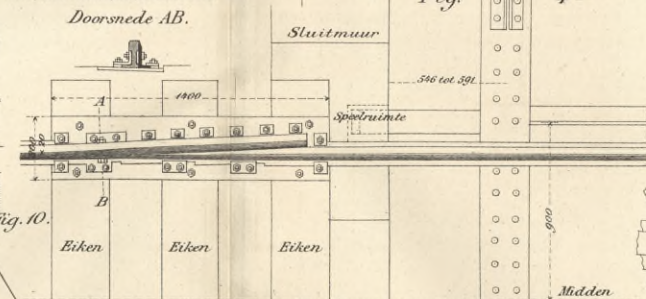
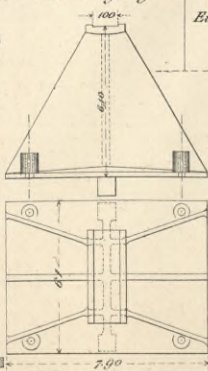


Fig. 13.

Fig. 6 A

Fig. 6 B.

Brug bij Reenen Fig. 20.

Brug beneden Arnhem Fig. 19.

Brug over de Parnitz in den Breslau-Schweidnitz-Freiburger spoorweg Fig. 7.

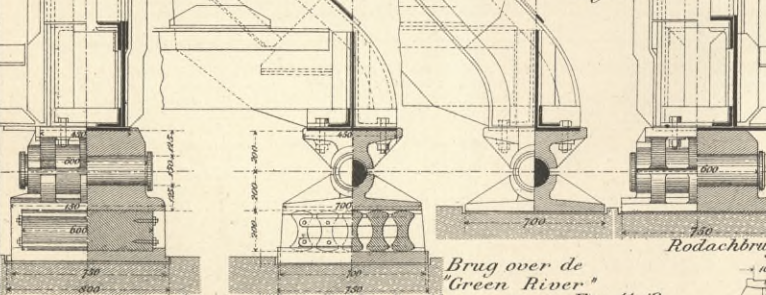


Fig. 8.

Brug over de "Green River" in den Louisville en Nashville spoorweg Fig. 11, 12

63.8 Metër

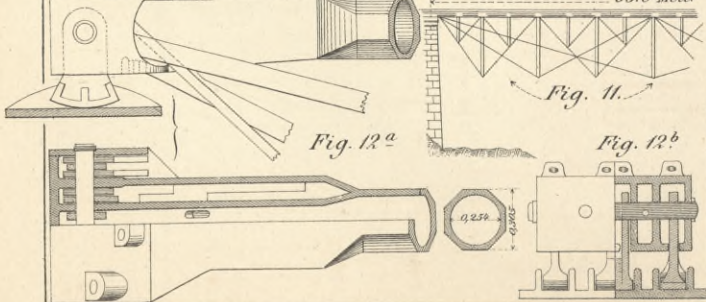


Fig. 12.

Fig. 12.

Fig. 9.

Fig. 4.

Fig. 1, 2, 9.

Fig. 5, 6.

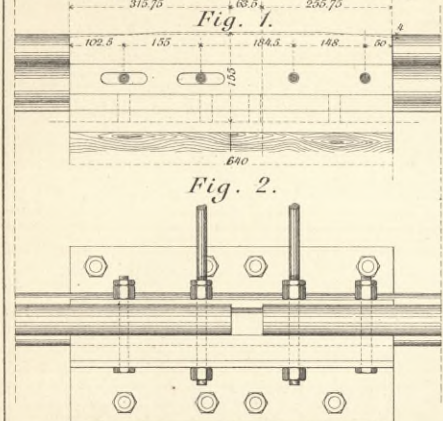
Fig. 13, 14 - 22.

Fig. 11.

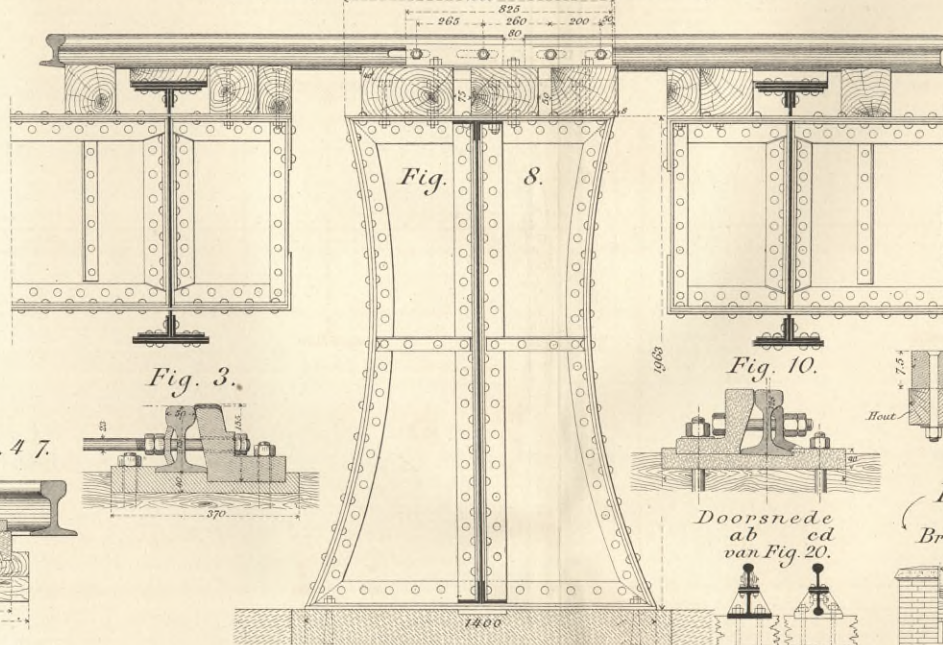




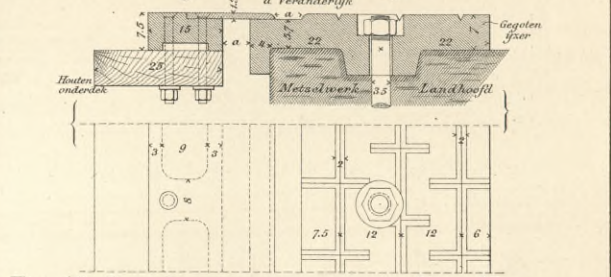
Spoorwegbrug over de Nieuwe Maas te Rotterdam Fig. 1, 2, 3.



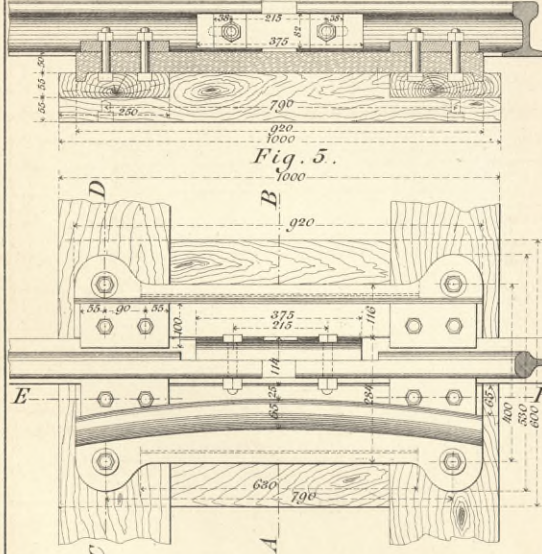
Spoorwegbrug over den Rijn, beneden Arnhem. Fig. 8, 9, 10.



Willemsbrug over de Nieuwe Maas te Rotterdam Fig. 15, 16, 17. Bij een landhoofd.



Brug over de Szamos bij Szalmar Fig. 4, 5, 6, 7.



Brug over de Maas te Venlo Fig. 11-14.

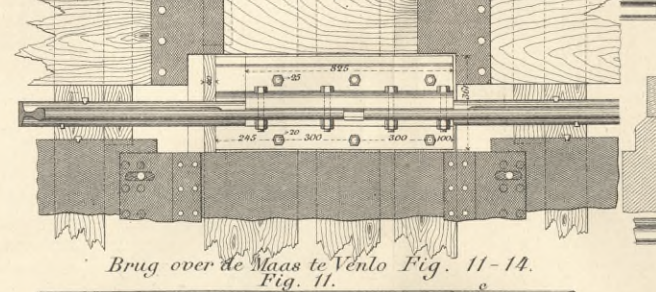


Fig. 16. Tusschen twee openingen. Fig. 17. Voor de trottoirs.

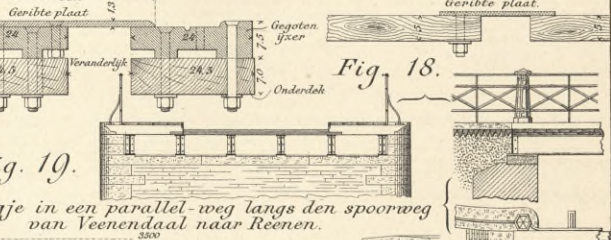
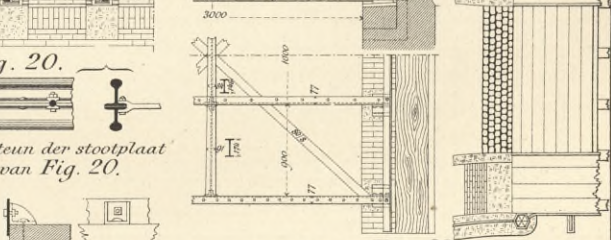


Fig. 19. Brugje in een parallel-weg langs den spoorweg van Veenendaal naar Reenen.



Doorsnede over AB. Doorsnede over CD.

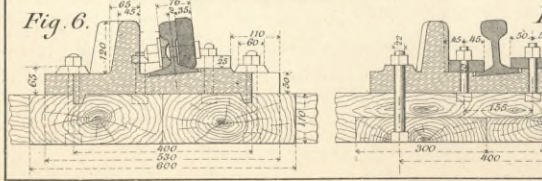


Fig. 11. Fig. 12. Fig. 13. Fig. 14.

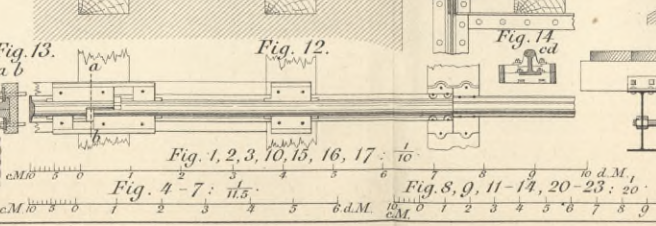
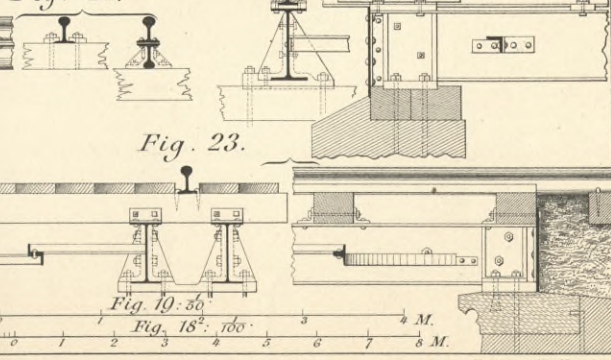


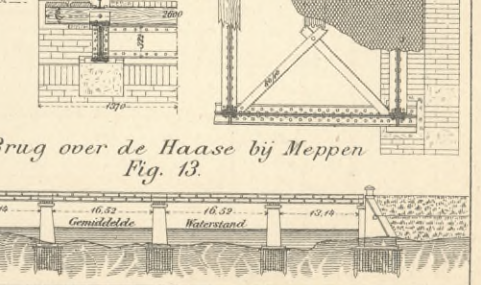
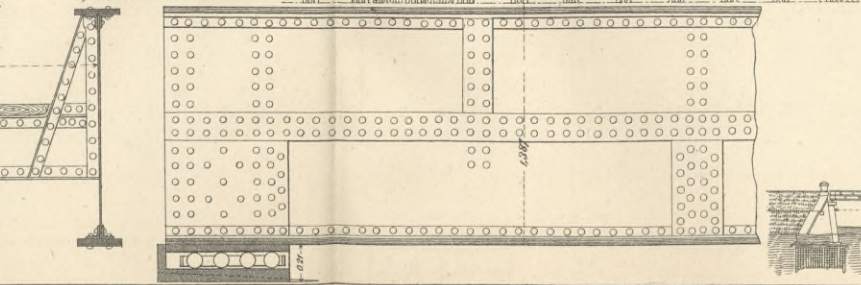
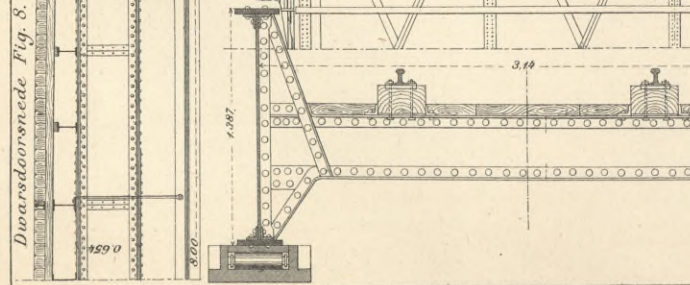
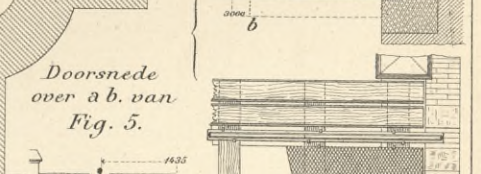
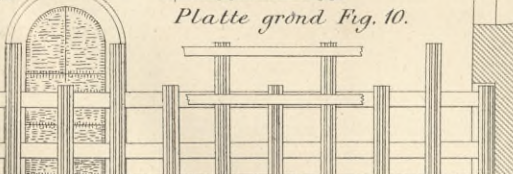
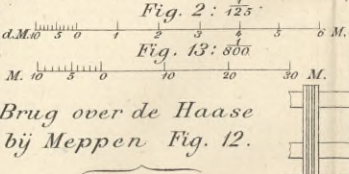
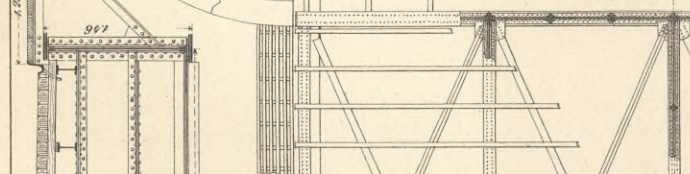
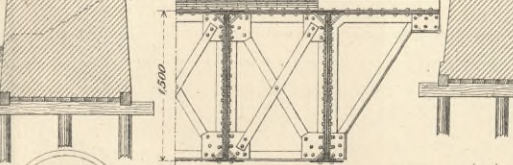
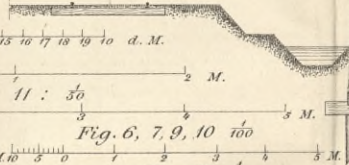
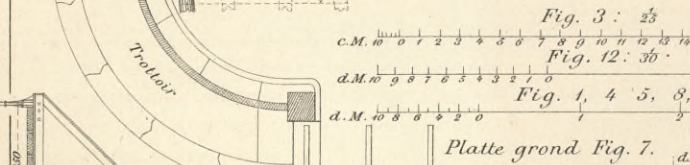
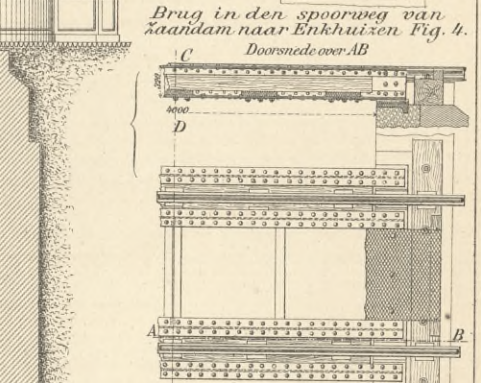
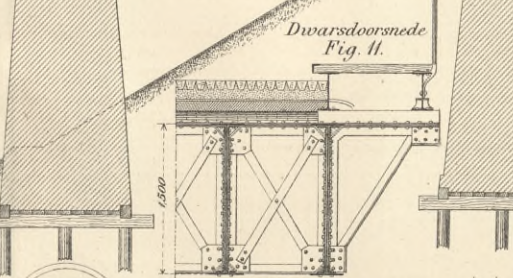
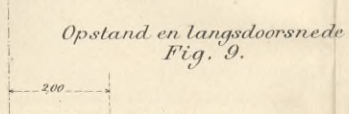
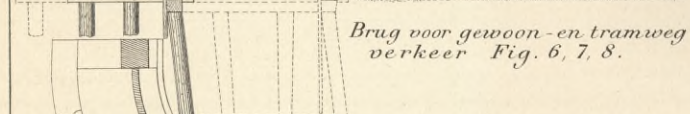
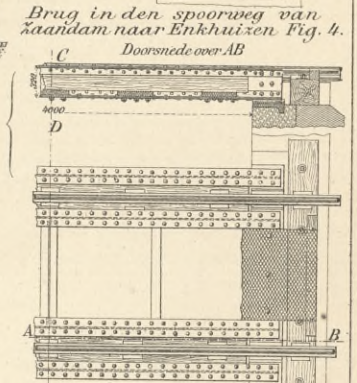
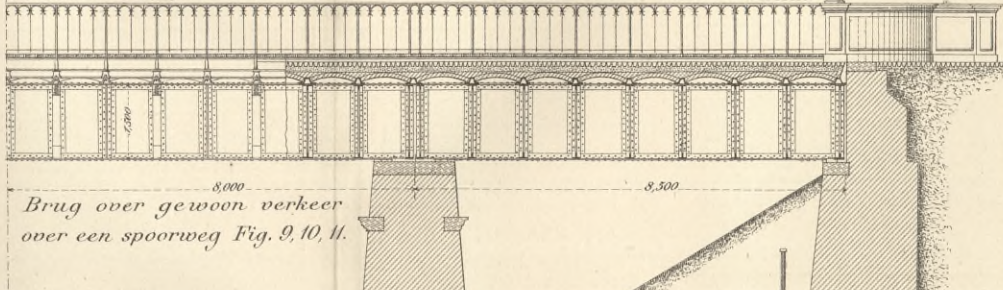
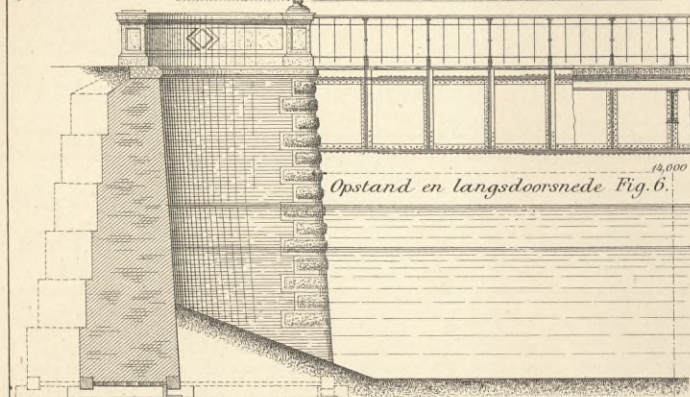
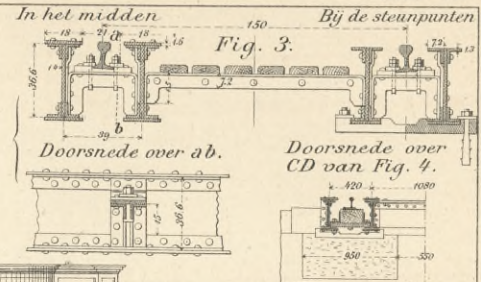
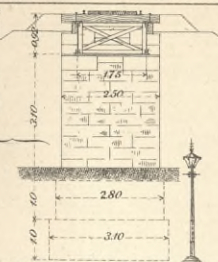
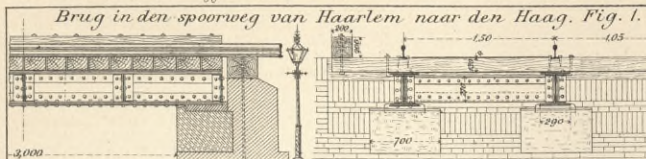
Fig. 20. Steun der stootplaat van Fig. 20. Fig. 21. Fig. 22. Fig. 23.







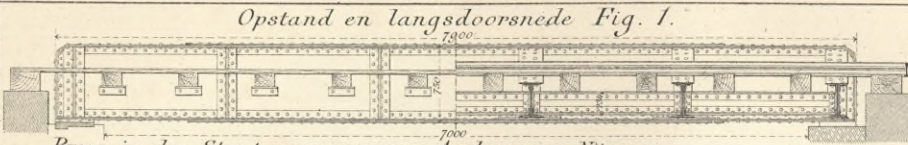




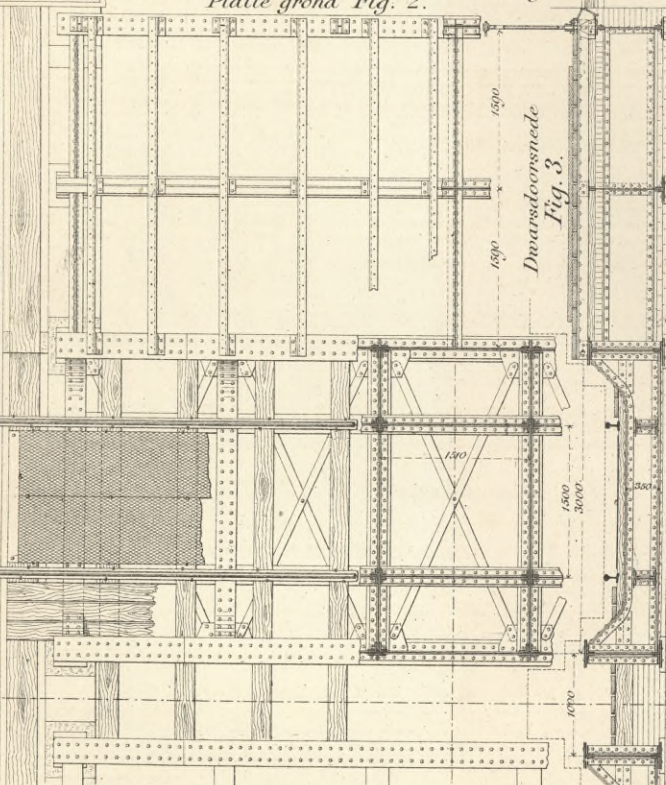




Opstand en langsdoorsnede Fig. 1.

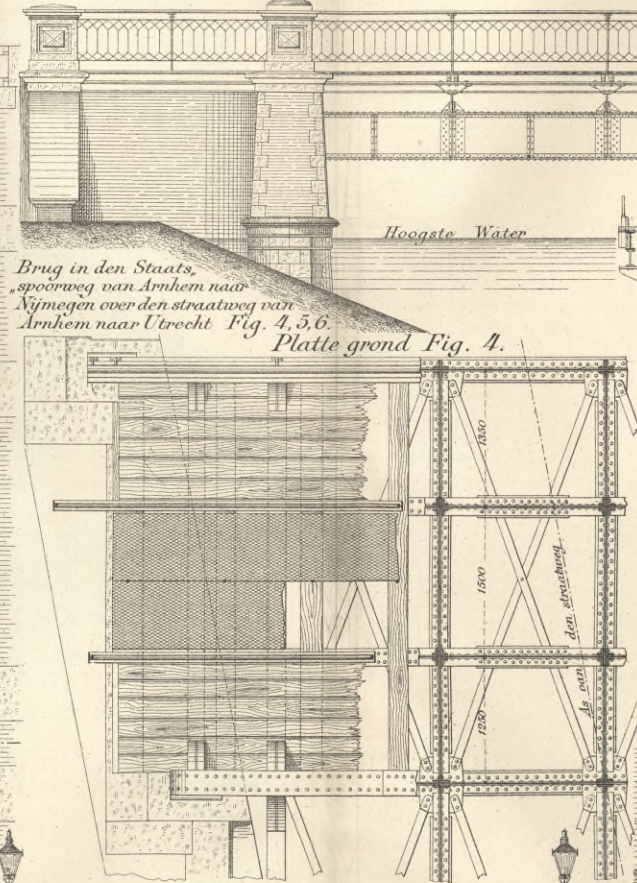


Brug in den Staatsspoorweg van Arnhem naar Nijmegen in den lagen weg nabij de Hütte Oosterbeek Fig. 1, 2, 3. Platte grond Fig. 2.



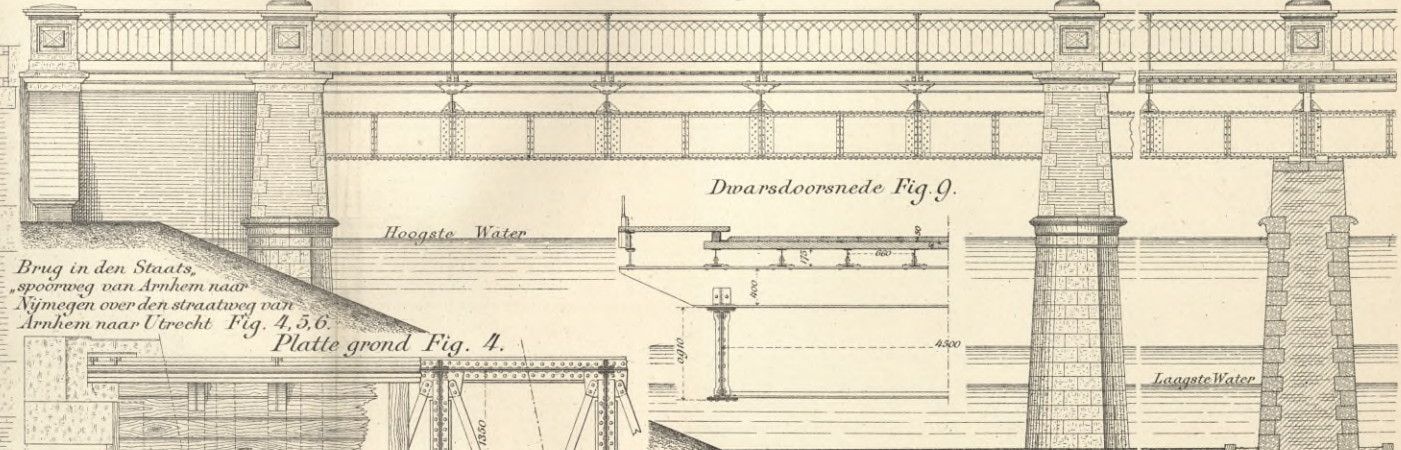
Dwarsdoorsnede Fig. 3.

Brug in den Staatspoorweg van Arnhem naar Nijmegen over den straatweg van Arnhem naar Utrecht Fig. 4, 5, 6. Platte grond Fig. 4.

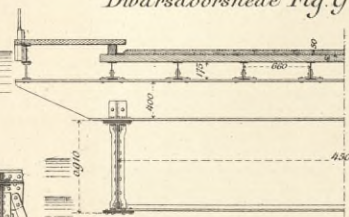


Dwarsdoorsnede Fig. 11.

Brug voor gewoon verkeer met 3 openingen Fig. 7, 8, 9. Opstand Fig. 7.

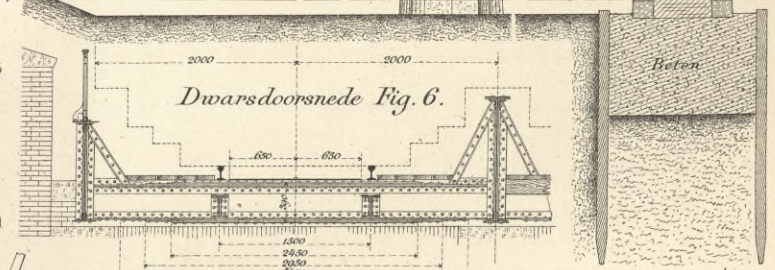


Dwarsdoorsnede Fig. 9.



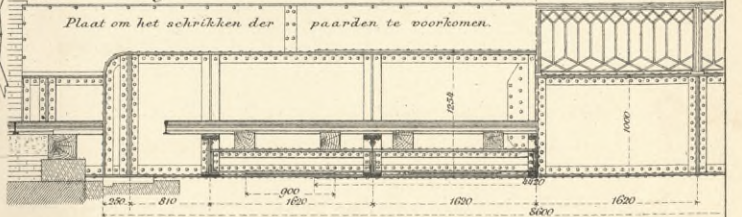
Langsdoorsnede Fig. 8.

Dwarsdoorsnede Fig. 6.



Langsdoorsnede en Opstand Fig. 5.

Plaat om het schrikken der paarden te voorkomen.



Brug over de Rechtboomsloot in den Oostelijken wal van de Geldersche Kade te Amsterdam Fig. 10, 11.

Opstand Fig. 10.

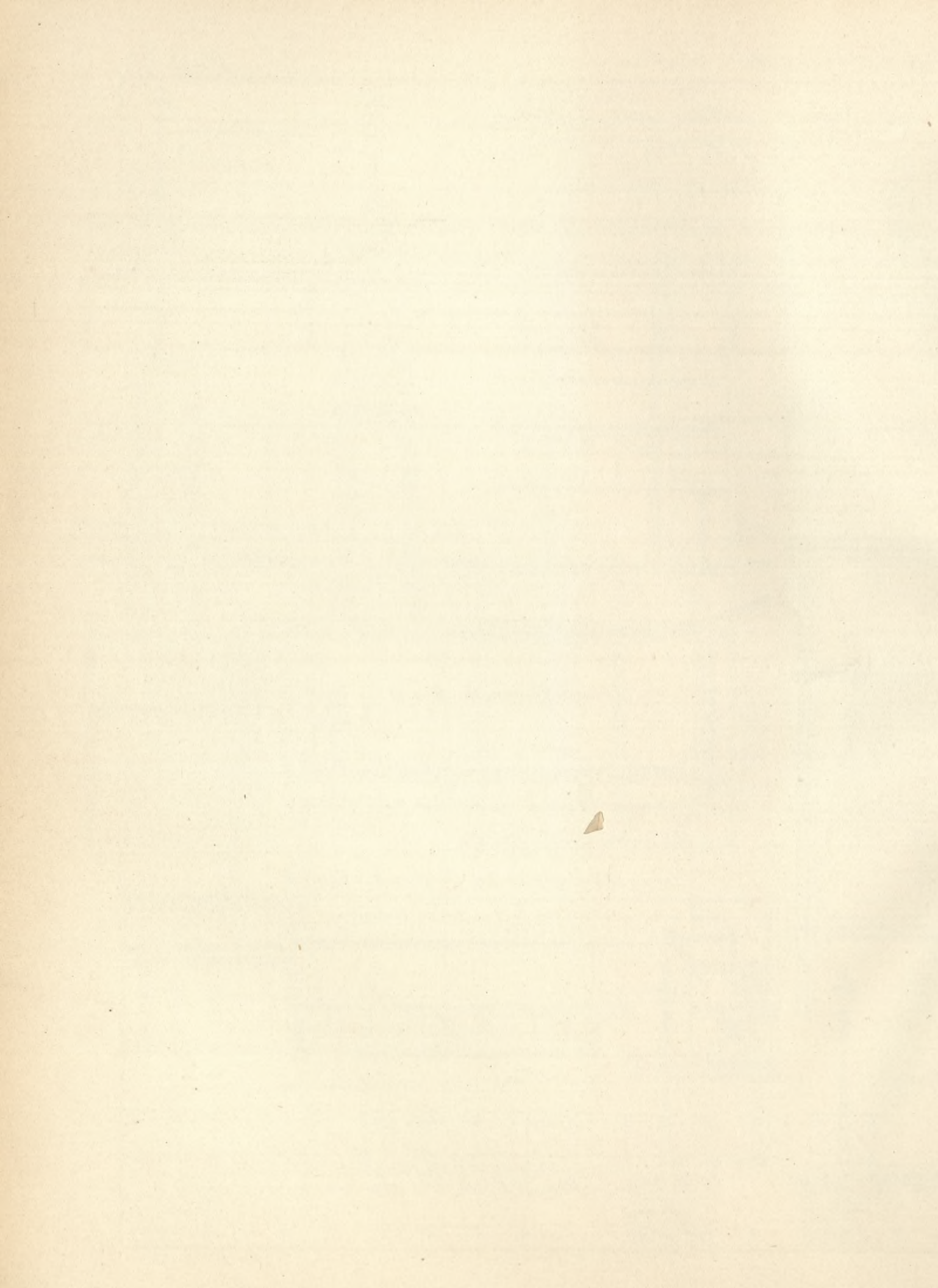


Fig. 1-6, 9 : 1/50.

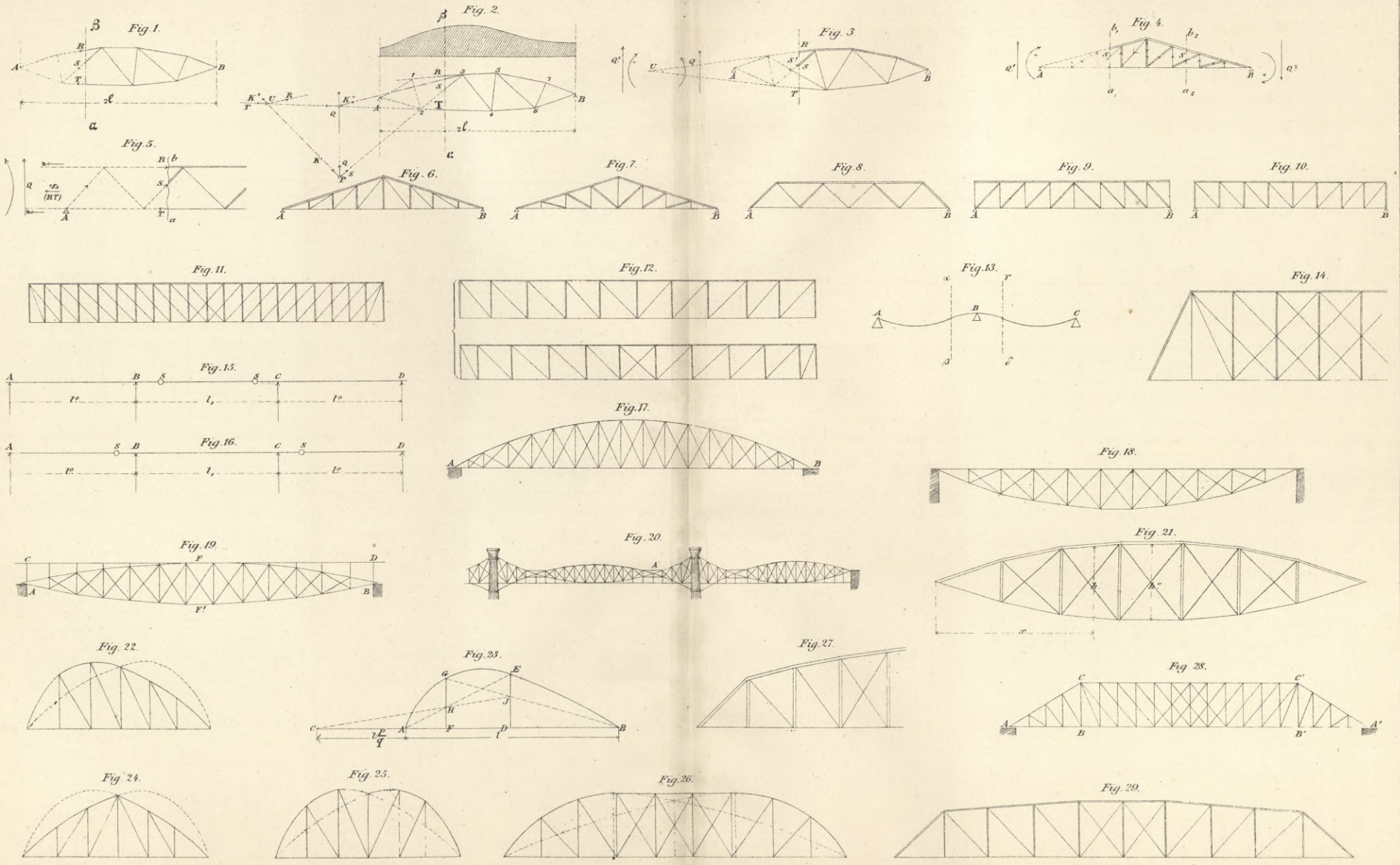
d.M. 10 8 6 4 2 0 1 2 3 4 5 Meter

Fig. 7, 8, 10, 11 : 1/100.

d.M. 10 5 0 . 1 2 3 4 5 6 7 8 9 10 Meter



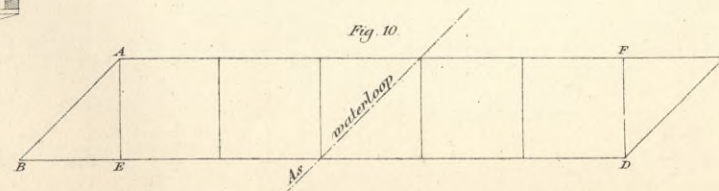
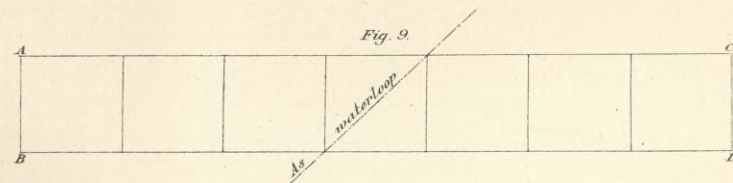
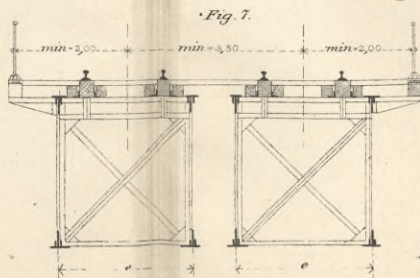
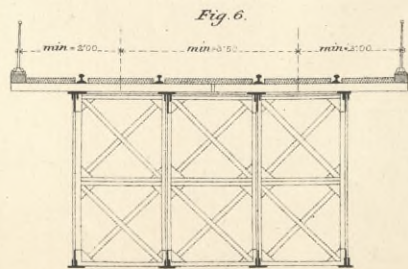
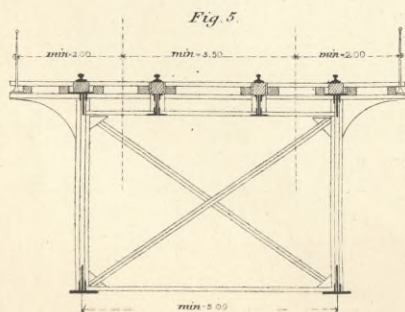
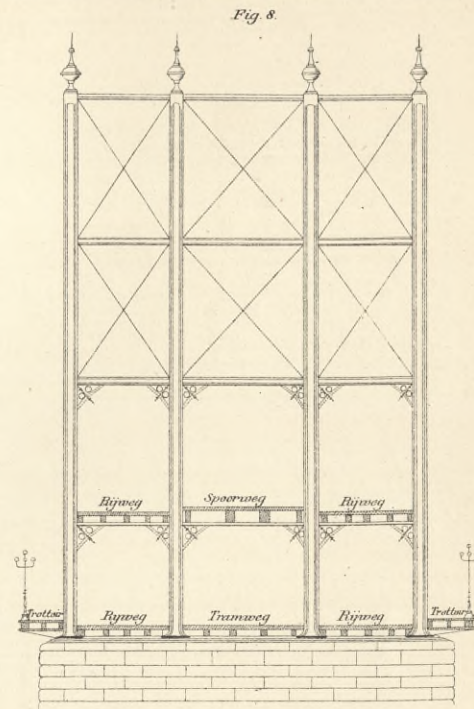
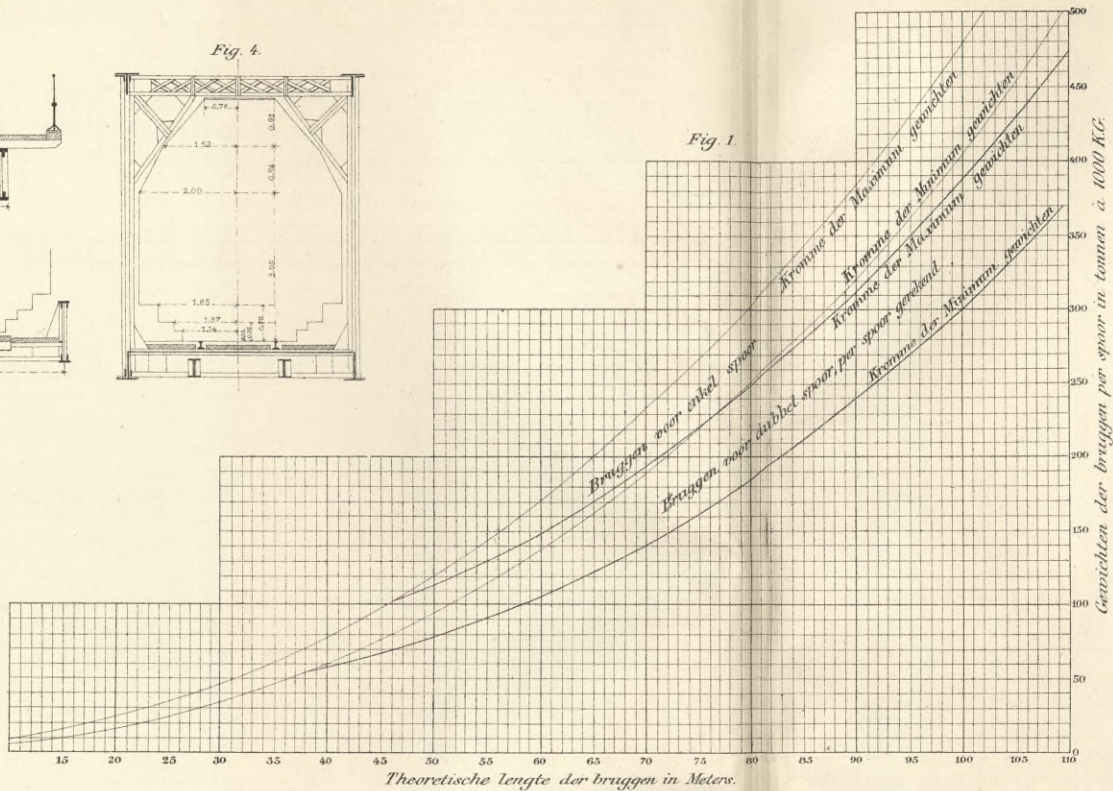
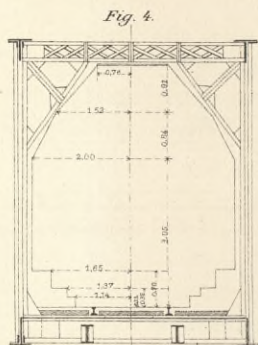
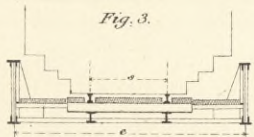
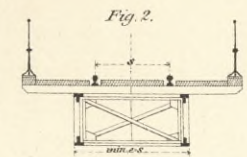






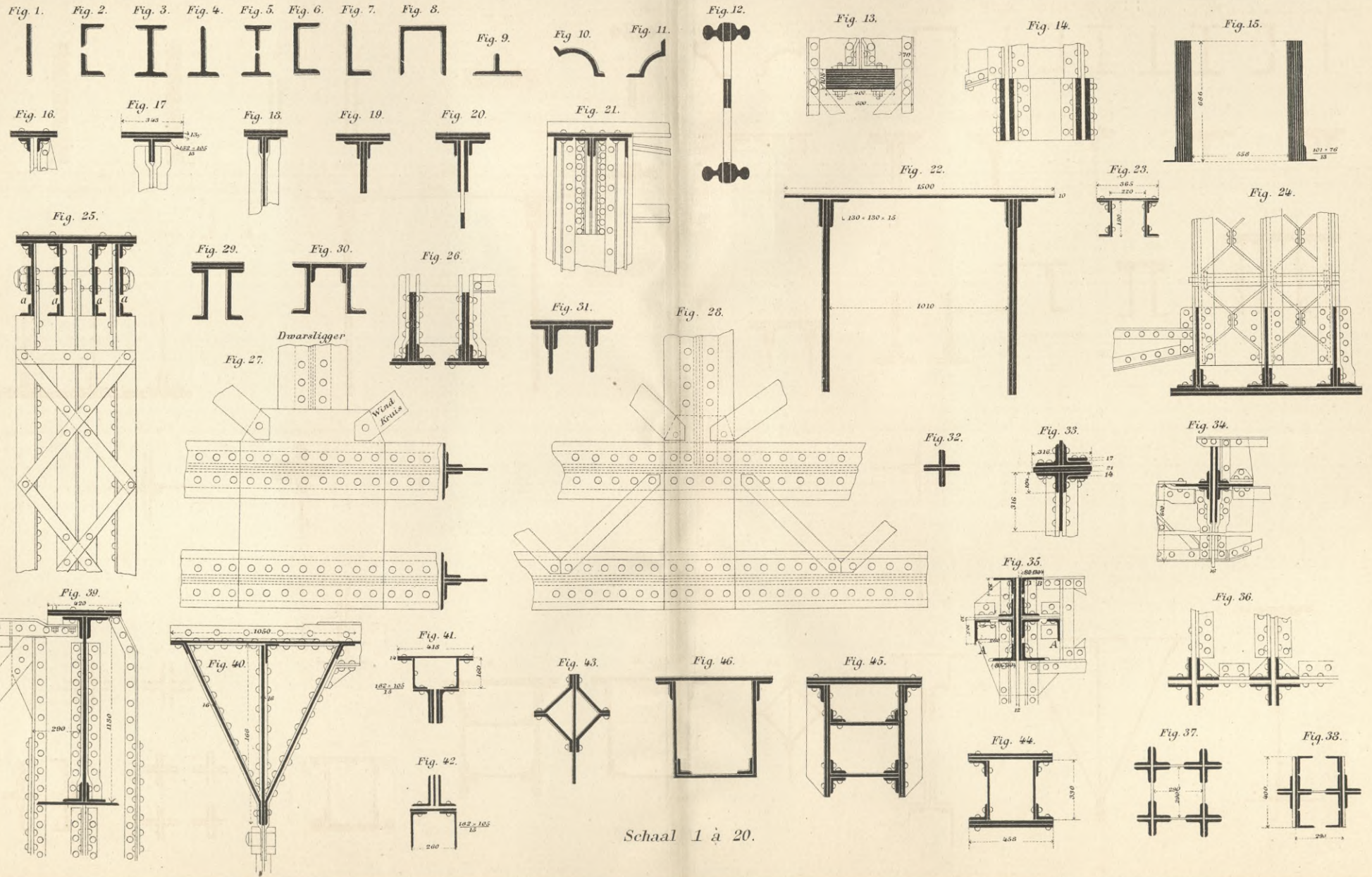












Schaal 1 à 20.



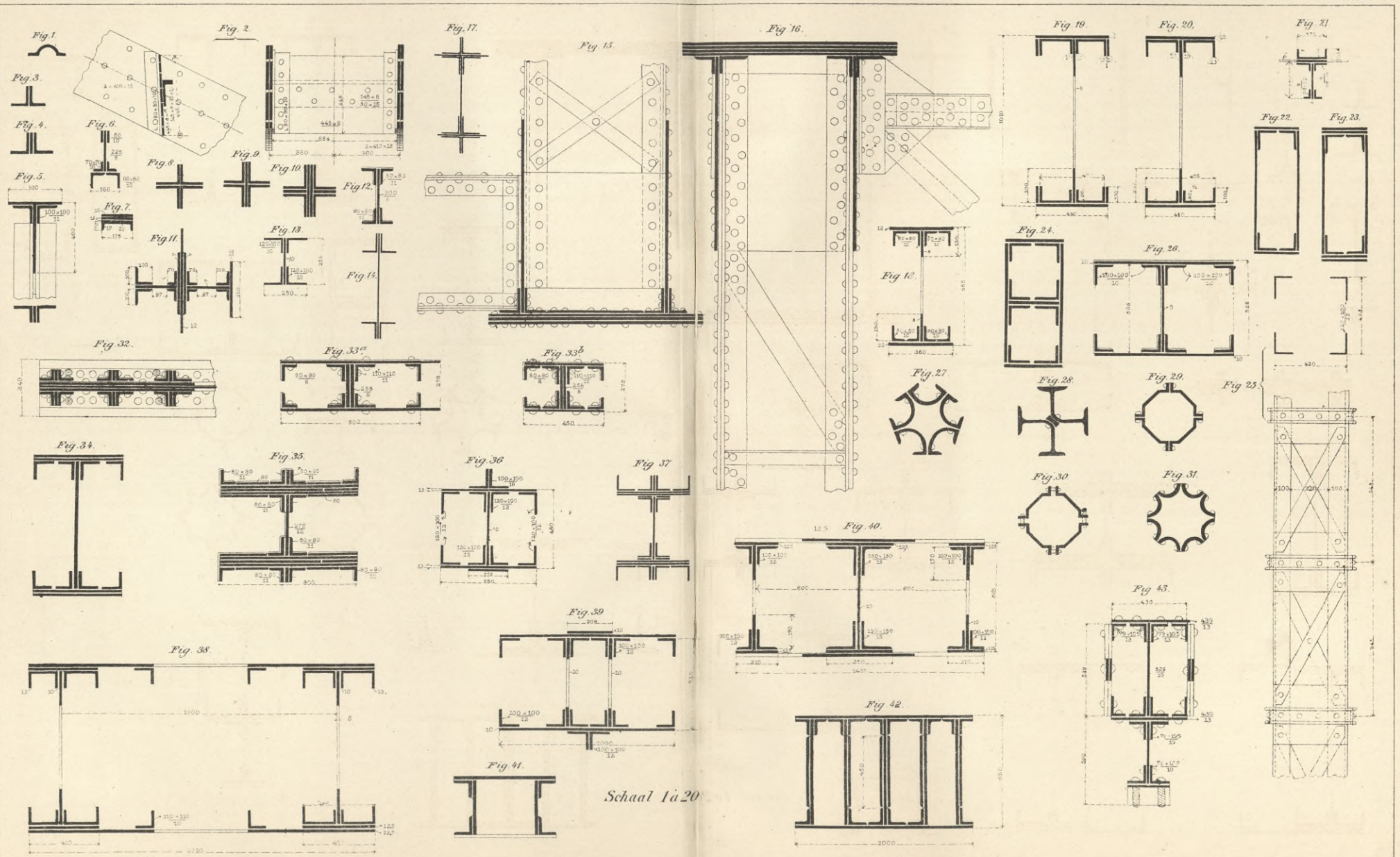








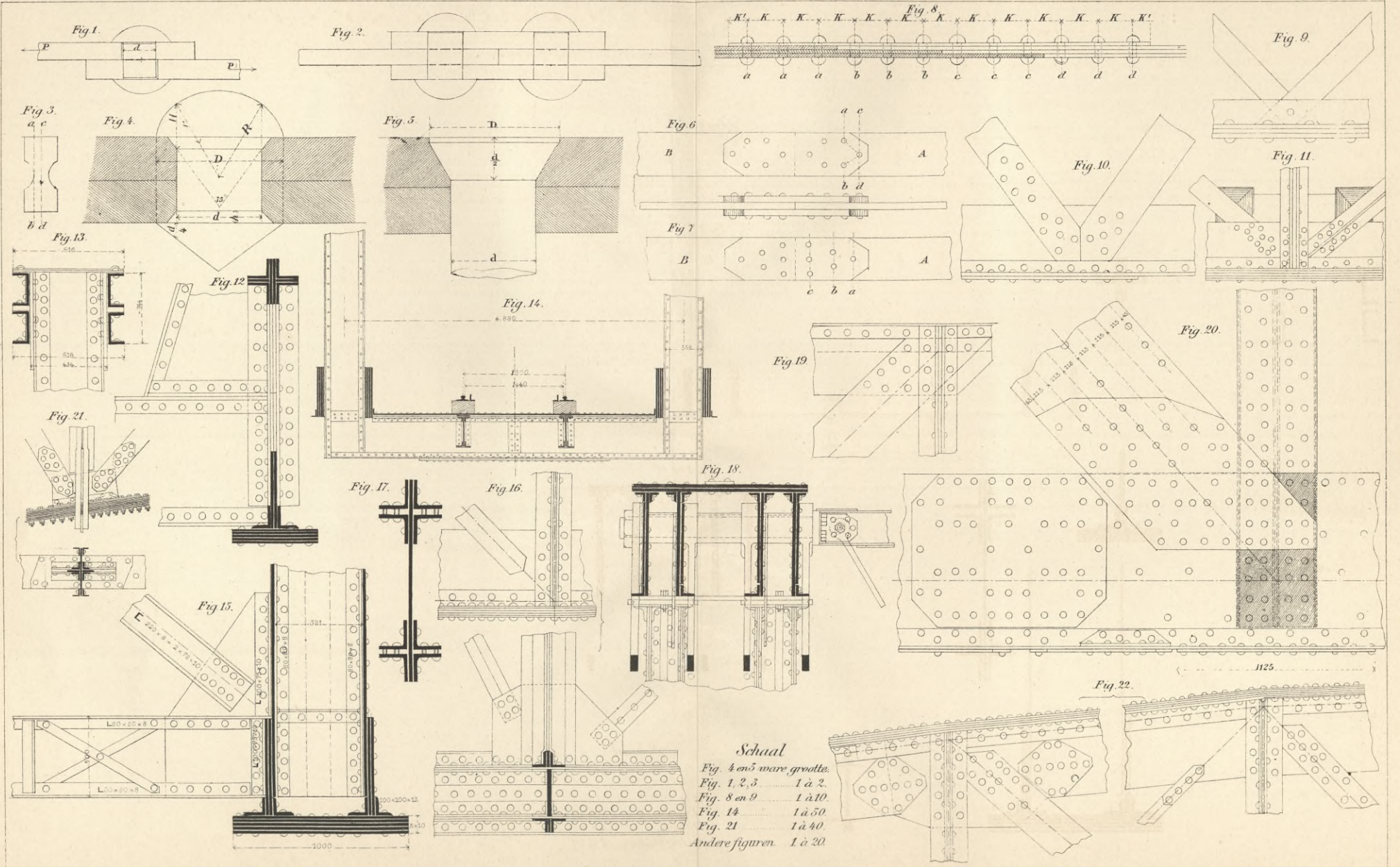




Schaal 1 à 20







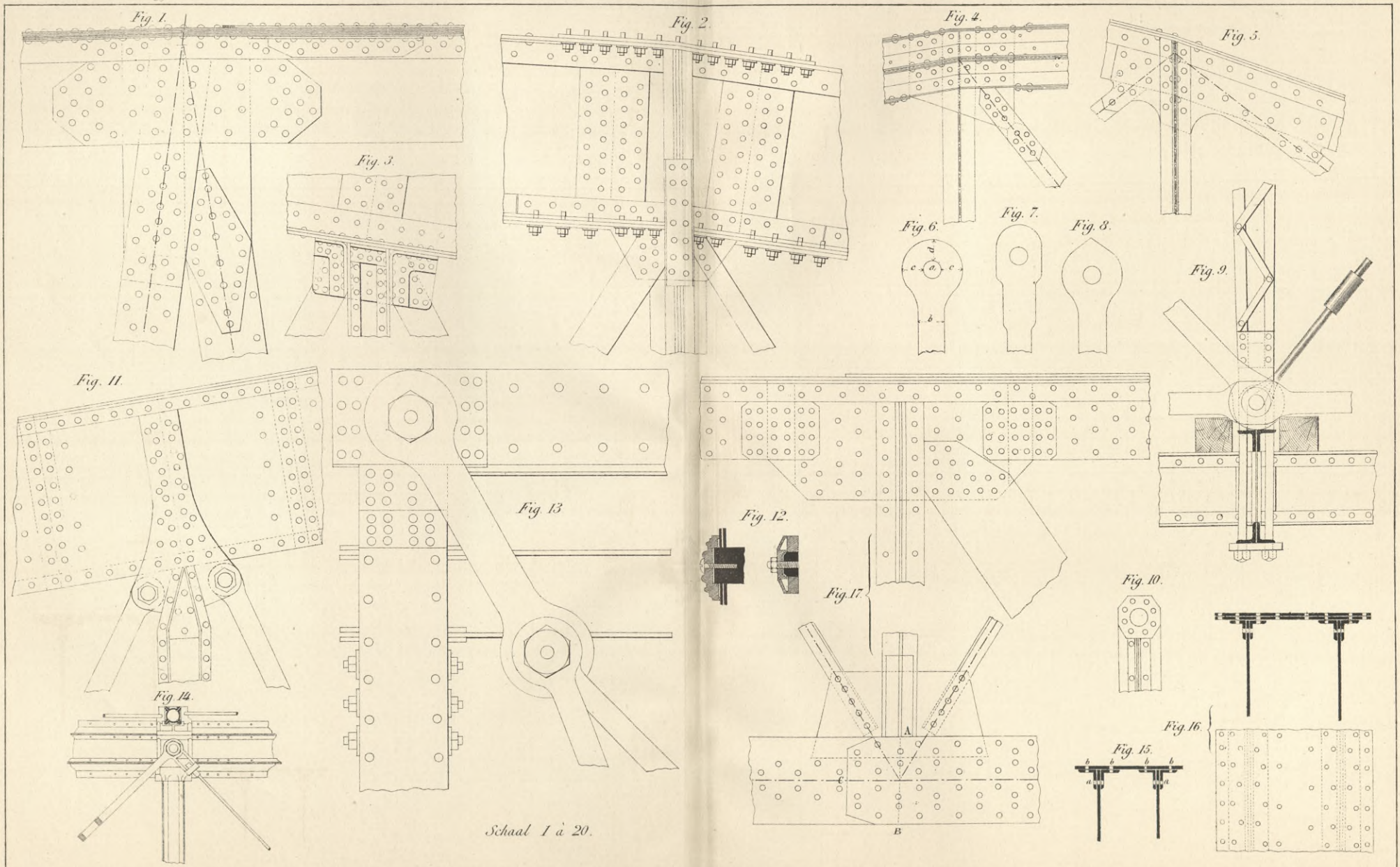
*Schaal*

- Fig. 4 en 5 ware grootte.
- Fig. 1, 2, 3 ..... 1 à 2.
- Fig. 8 en 9 ..... 1 à 10.
- Fig. 14 ..... 1 à 50.
- Fig. 21 ..... 1 à 40.
- Andere figuren ..... 1 à 20.









Schaal 1 à 20.

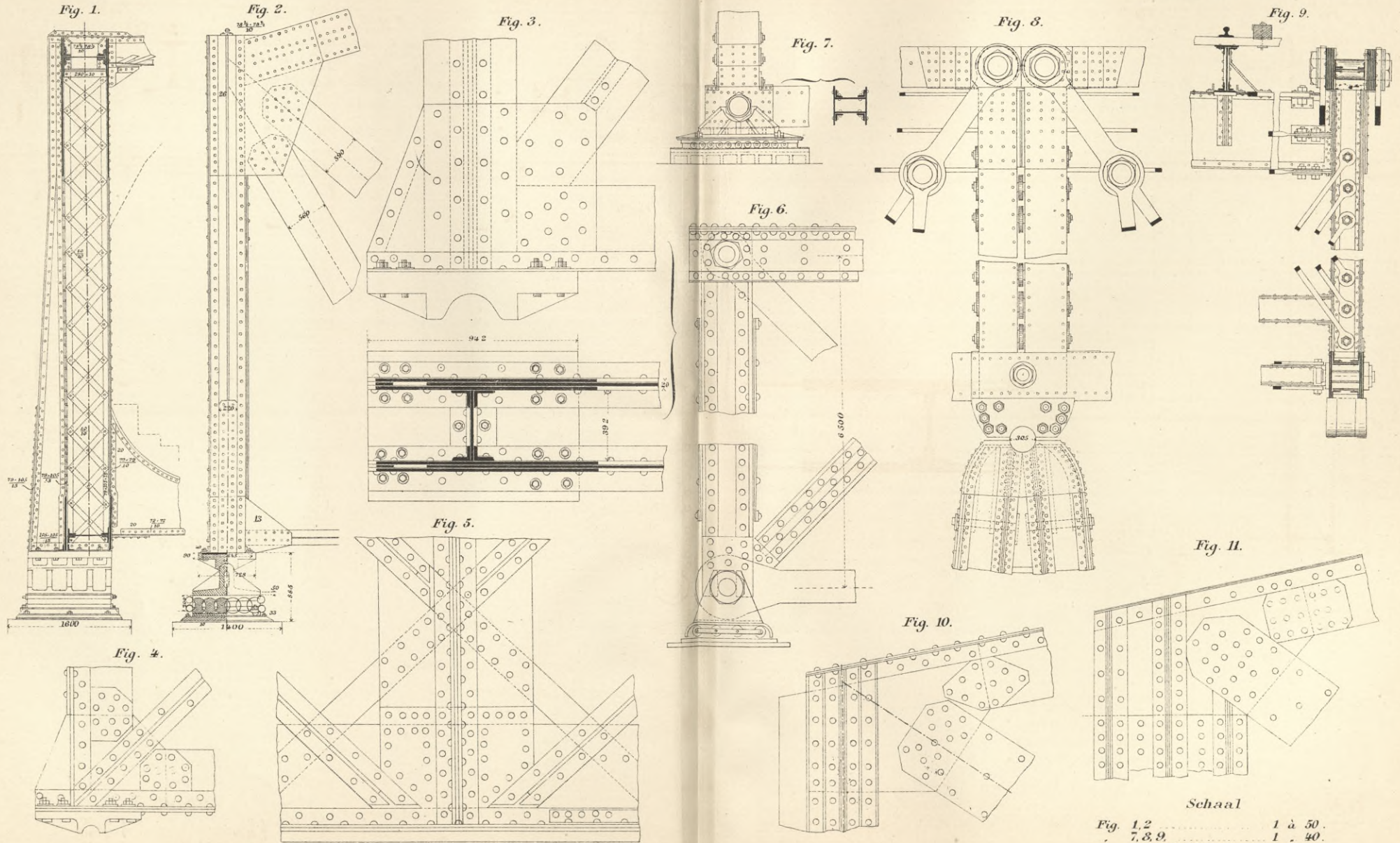


















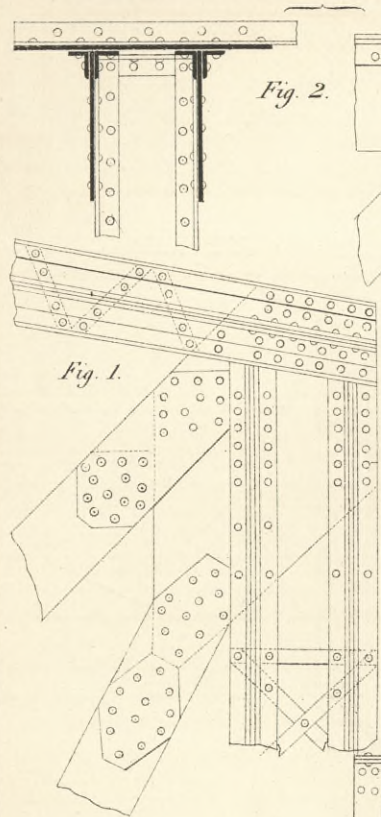


Fig. 2.

Fig. 1.

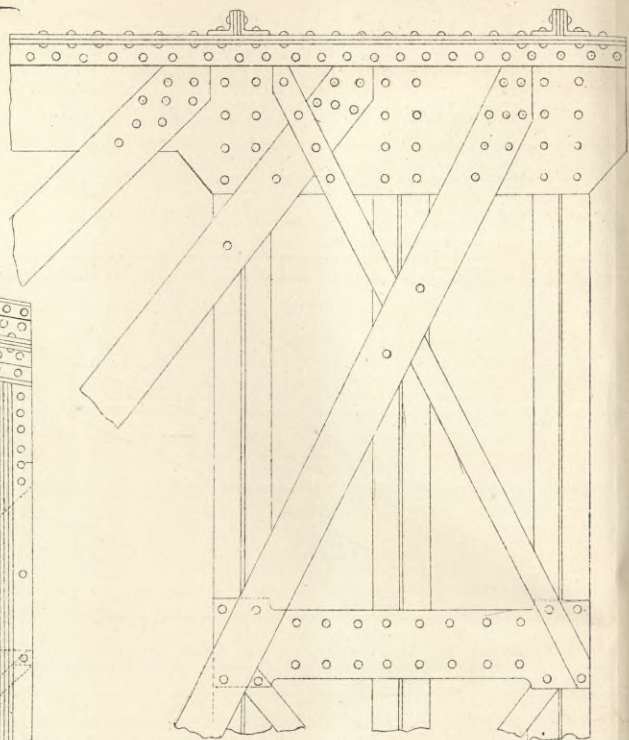


Fig. 3.

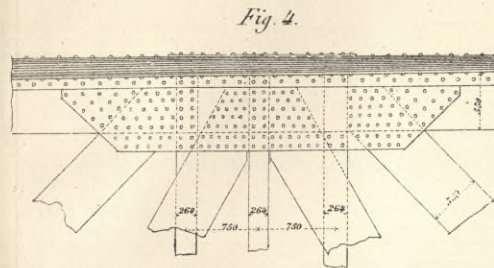


Fig. 4.

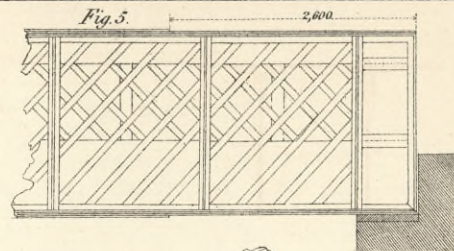


Fig. 5.

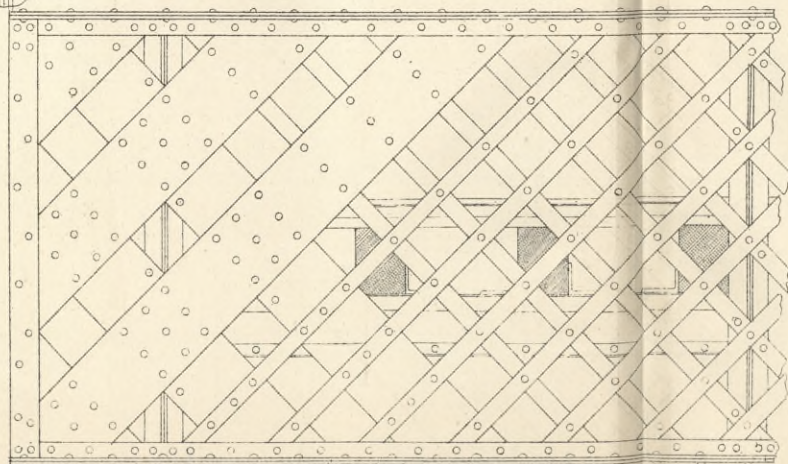
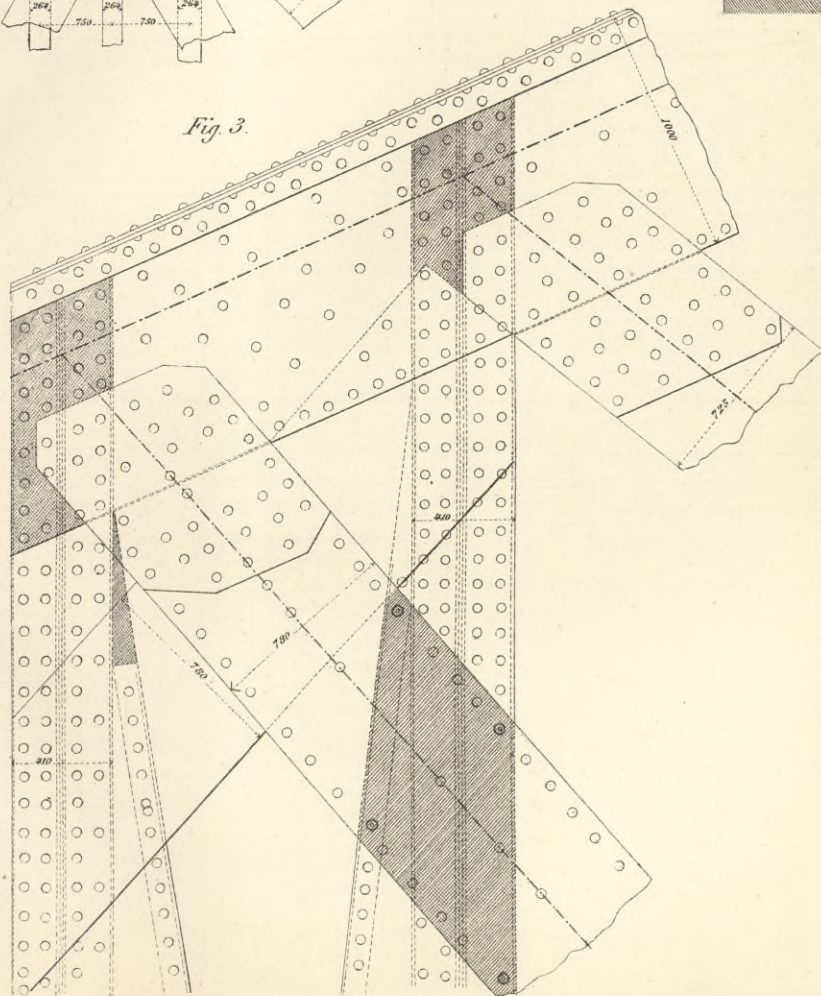


Fig. 6.



Schaal.

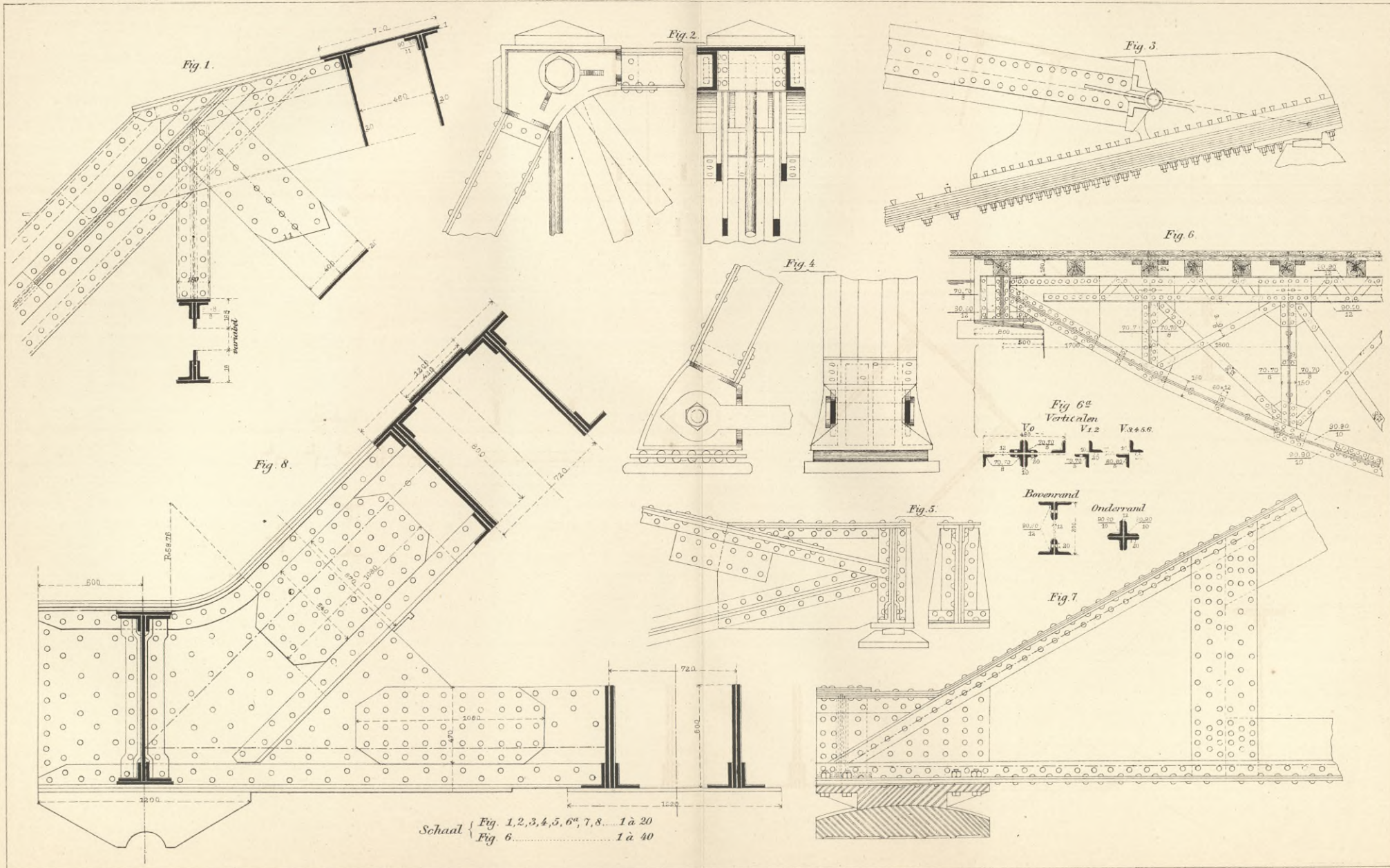
Fig. 1, 2, 3, 1 à 20

Fig. 4, 5, 1 à 50.

Fig. 6, 1 à 25.







Schaal { Fig. 1, 2, 3, 4, 5, 6<sup>a</sup>, 7, 8... 1 à 20  
 Fig. 6..... 1 à 40







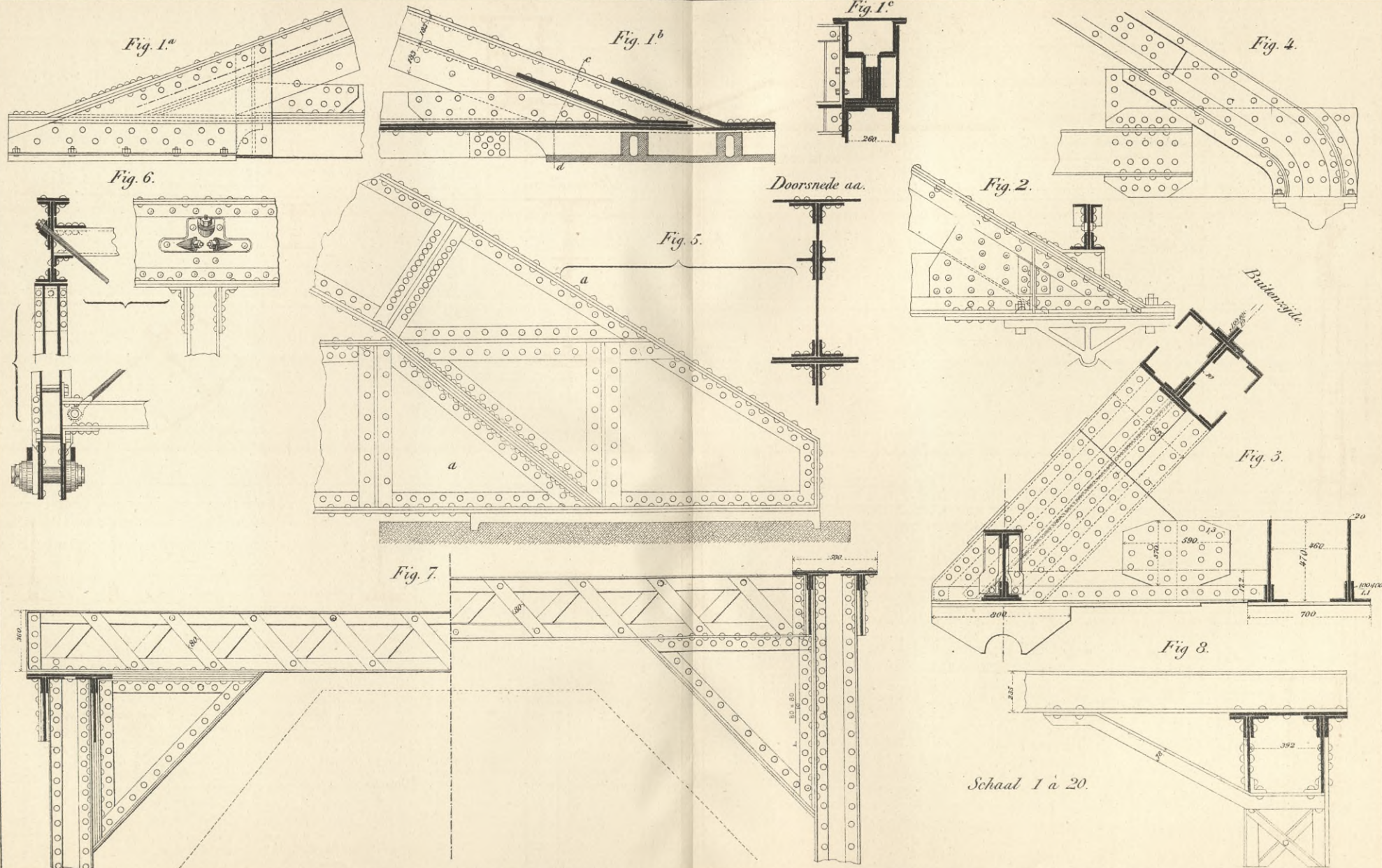






Fig. 1.

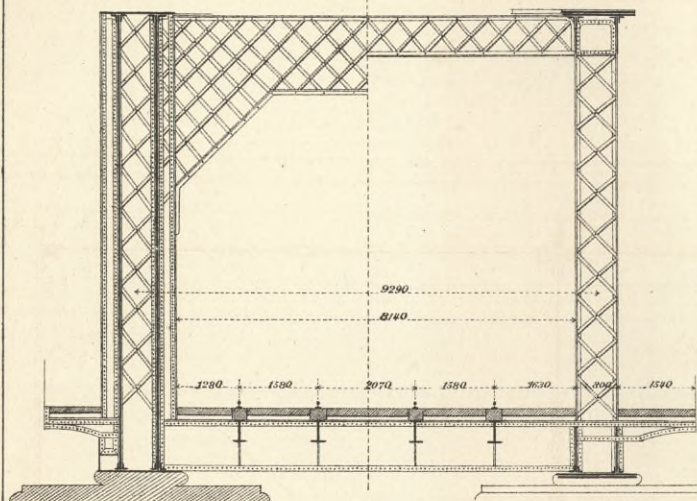


Fig. 3.

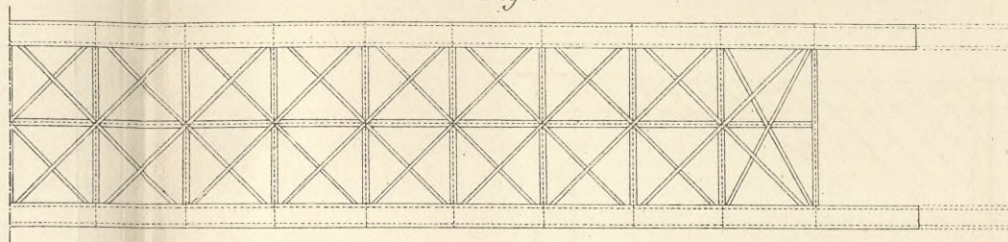


Fig. 2.

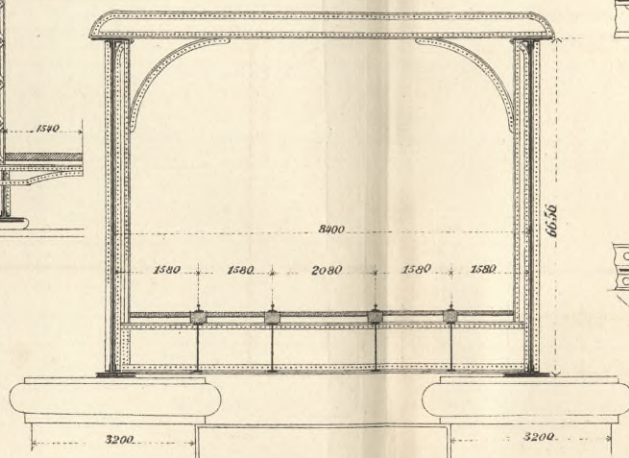


Fig. 4.

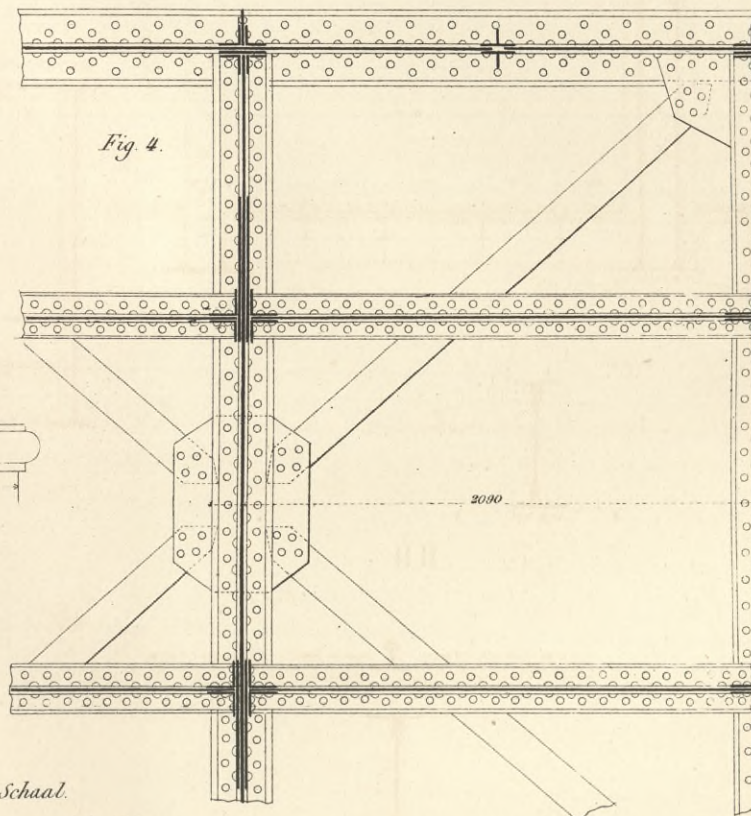


Fig. 5.

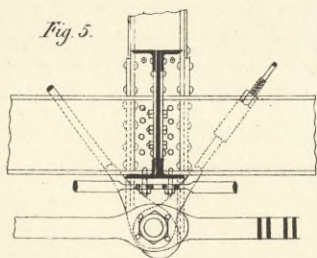
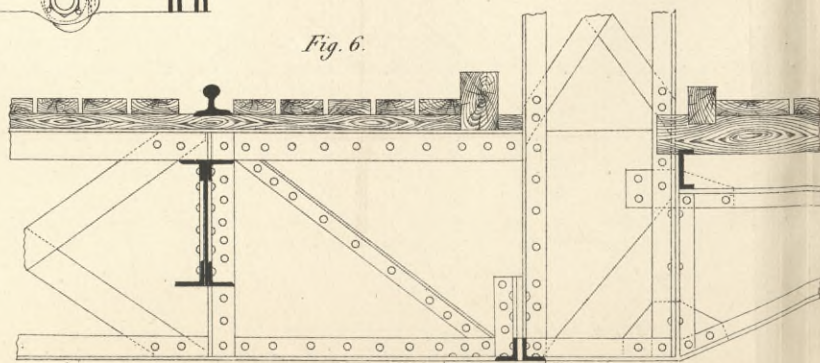


Fig. 6.



Schaal.

Fig. 1 2 1 a 100.  
 3 1 a 250.  
 4 5, 6. 1 a 20.





Fig. 3.

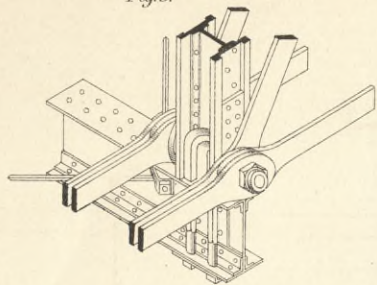


Fig. 2.

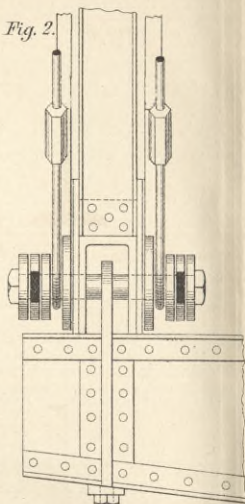


Fig. 4.

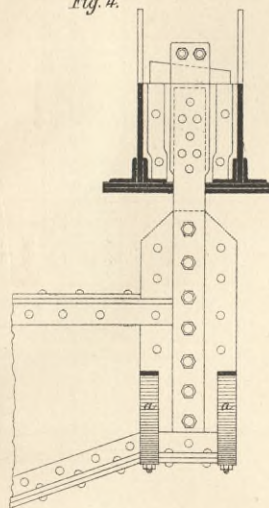


Fig. 8.

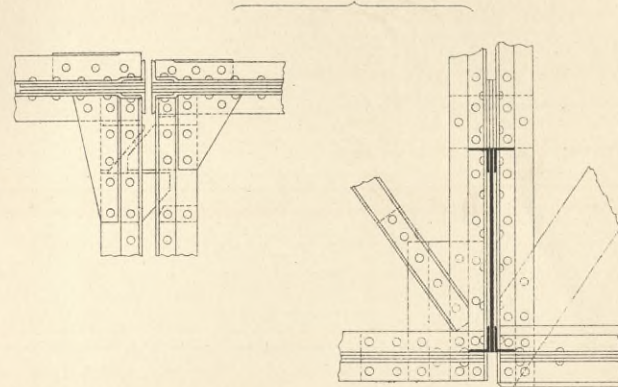


Fig. 1.

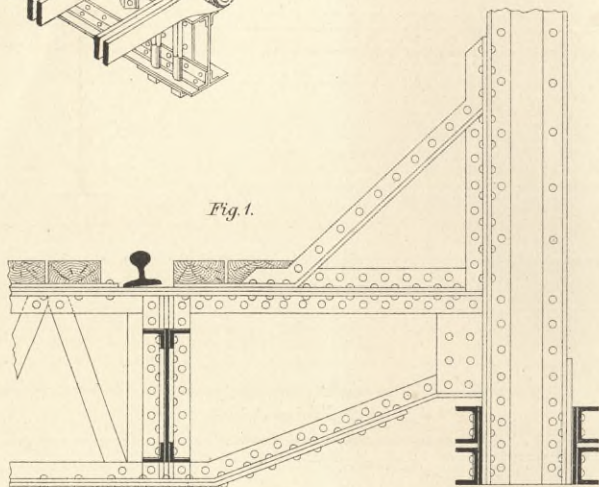


Fig. 6.

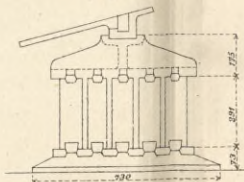


Fig. 9<sup>b</sup>

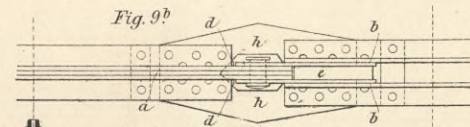


Fig. 9<sup>a</sup>

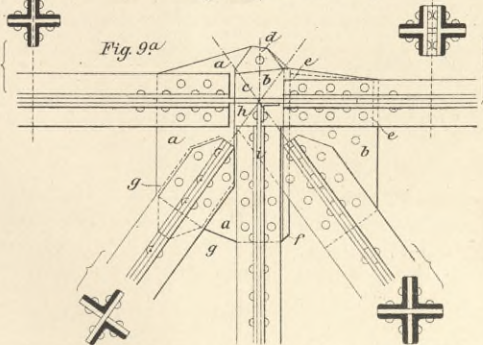


Fig. 9<sup>c</sup>

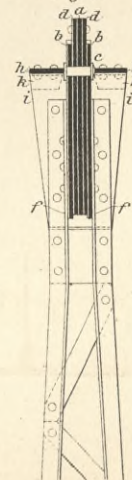


Fig. 5.

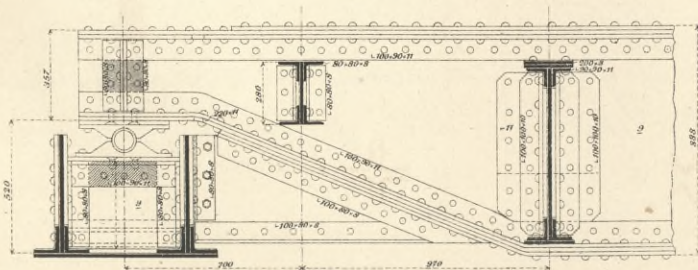
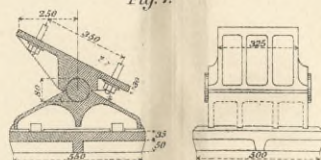


Fig. 7.



Schaal 1 à 20.















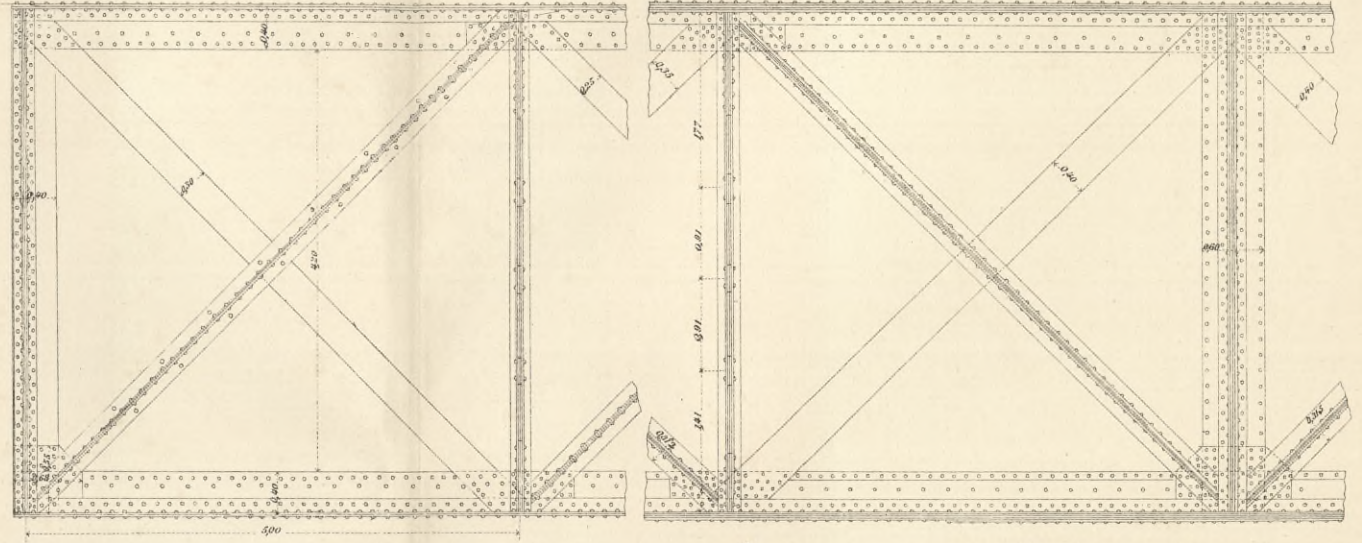
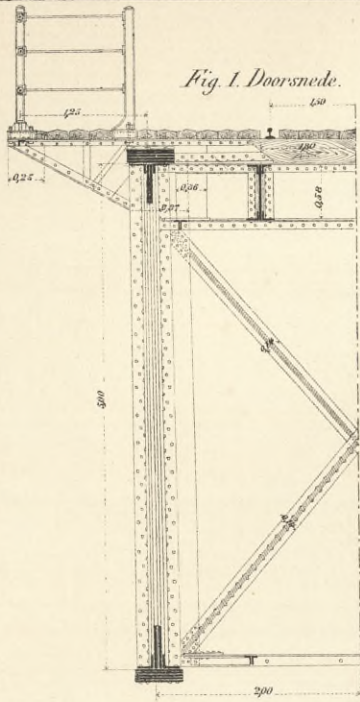




Thaya Viaduct bij Znaim. ( Fig. 1 en 2 ).

Fig. 2. Lengte Aansicht.

Fig. 1. Doorsnede.



Brug over de Pruth bij Cernovitz. (Fig. 4-7).

Fig. 4. Opstand.

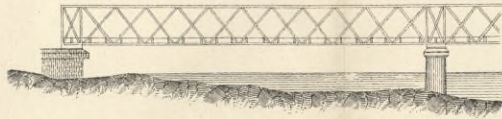
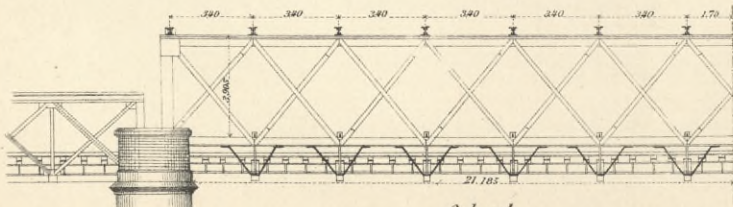


Fig. 3. Brug over de Lahn bij Oberlahnstein.



Schaal.

Fig. 1 en 2. 1 à 50. Fig. 4. 1 à 500  
Fig. 3. 1 à 200. Fig. 5, 6, 7. 1 à 40

Fig. 5. Doorsnede.

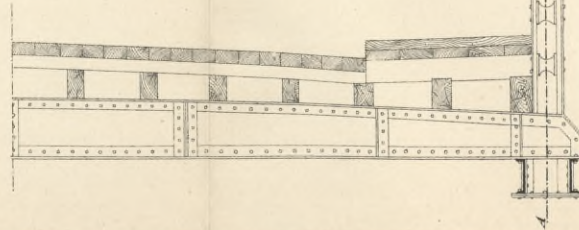
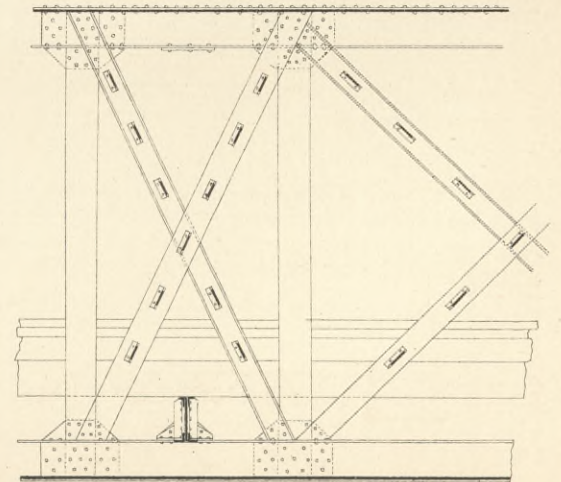


Fig. 6.



Fig. 7. Doorsnede over AB.









Brug over de Elbe bij Tetschen (Fig. 1-4.)

Fig. 3. Doorsnede groote Spanning.

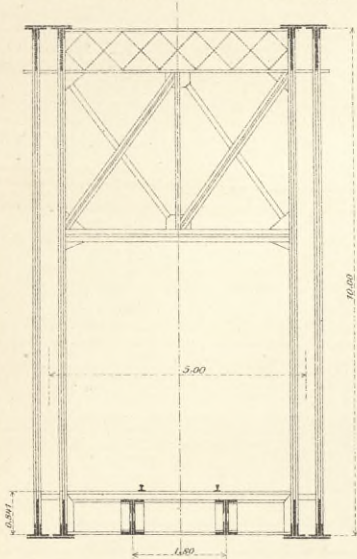


Fig. 4 Doorsnede kleine Spanning.

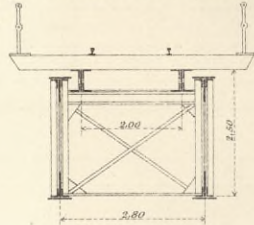


Fig. 1. Aanzicht.

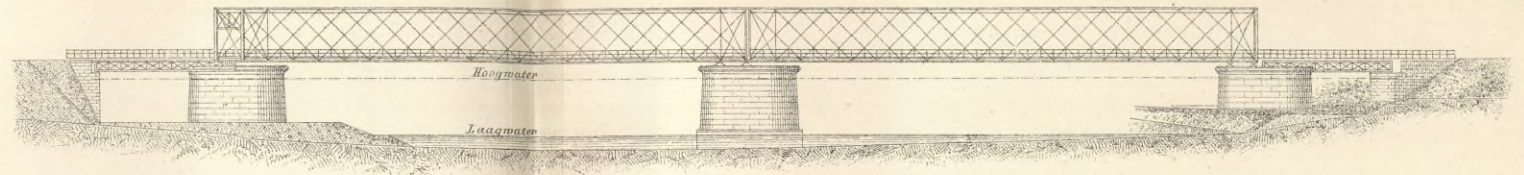
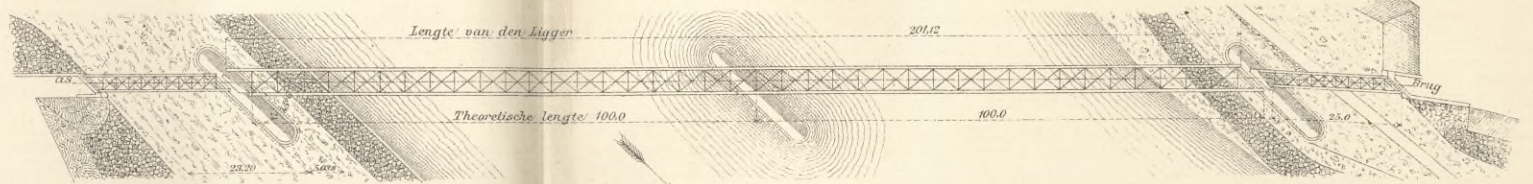
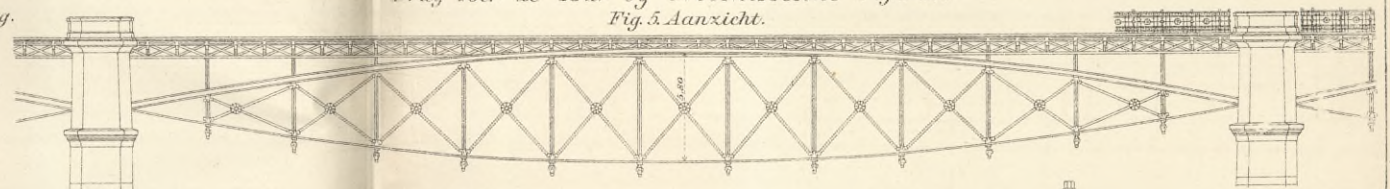


Fig. 2. Platte grond.



Brug over de Isar bij Grosshesselohe (Fig. 5-8<sup>b</sup>)  
Fig. 5. Aanzicht.



Bevestiging aan Bovenrand.  
Fig. 7. Opstand.

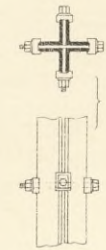
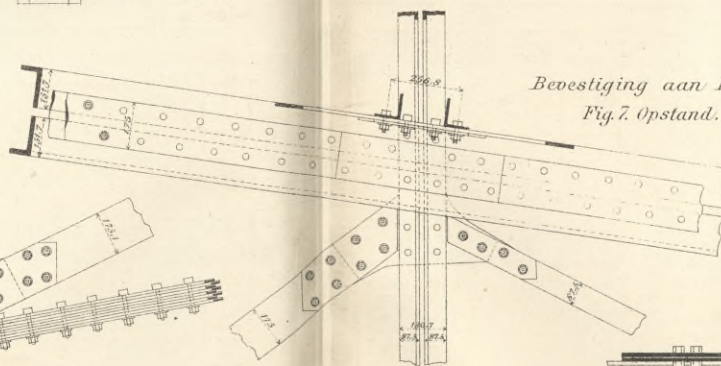


Fig. 6. Verticaal.

Bevestiging aan Onderrand.  
Opstand.

Fig. 8<sup>a</sup>

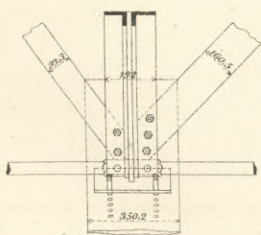


Fig. 8.

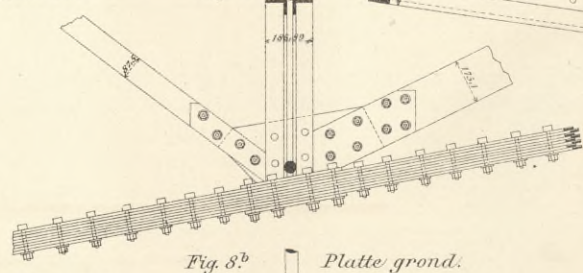


Fig. 8<sup>b</sup> Platte grond.

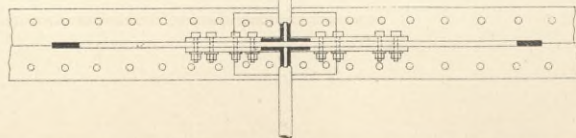
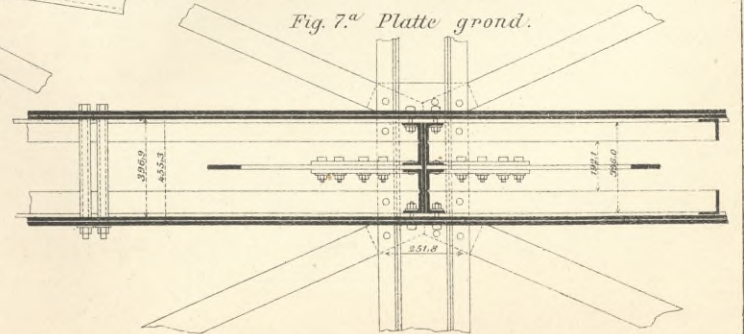


Fig. 7<sup>a</sup> Platte grond.



Schaal

- Fig. 1 en 2 1 à 1000.
- Fig. 5 1 à 138.
- Fig. 3 en 4 1 à 100.
- Fig. 6, 7, 8 1 à 20.





Fig. 2. Doorsnede bij het midden.

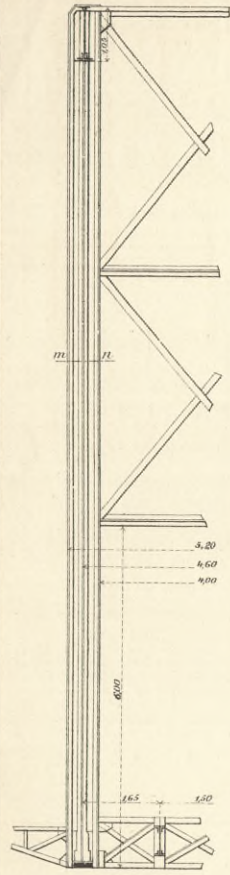
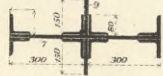


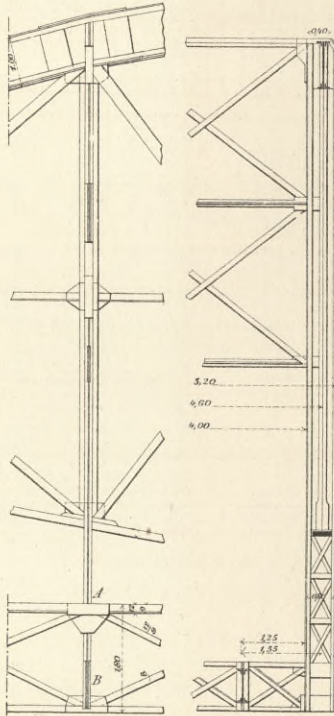
Fig. 5. Doorsnede m n.



Schaal:

- Fig. 10, 13 ..... 1 à 1000.
- Fig. 1 ..... 1 à 500.
- Fig. 2, 3, 4, 7 ..... 1 à 100.
- Fig. 6, 11, 12, 14 ..... 1 à 50.
- Fig. 5, 8, 9 ..... 1 à 20.

Fig. 3. Aanzicht Fig. 4. Doorsnede bij 2° verticaal.



Brug over den Rijn bij Mainz. (Fig. 1 6.)

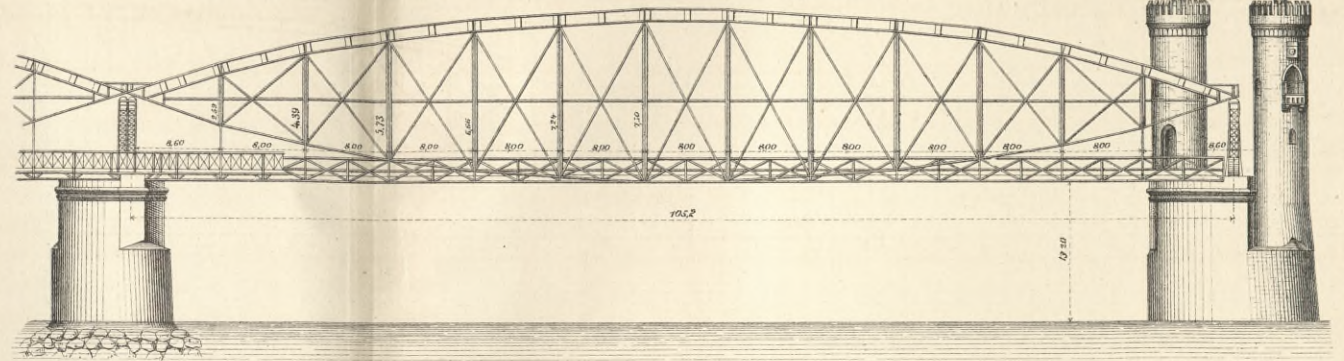
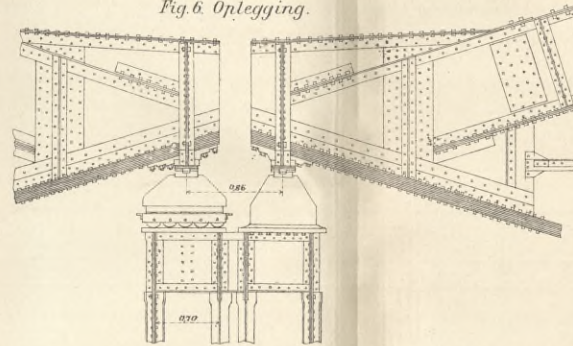


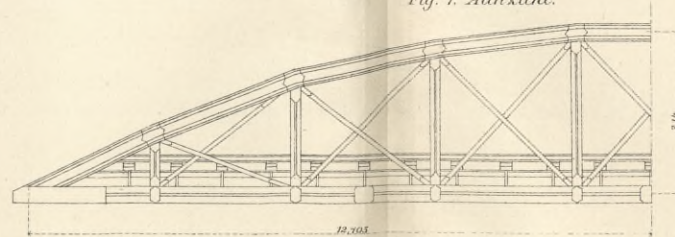
Fig. 1. Opstand.

Fig. 6. Oplegging.



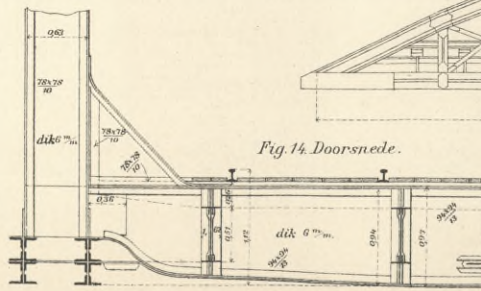
Brug over de Brahe bij Cxersk. (Fig. 7-9)

Fig. 7. Aanzicht.



Brug over de Weser bij Corvej. (Fig. 13 en 14.)

Fig. 13. Aanzicht.



Brug over de Ruhr bij Altstaden. (Fig. 10-12.)

Fig. 10. Aanzicht.

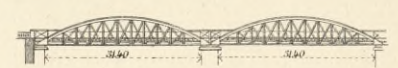


Fig. 12. Doorsnede bij het einde.

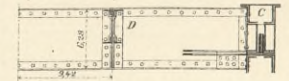


Fig. 11. Doorsnede bij het midden.

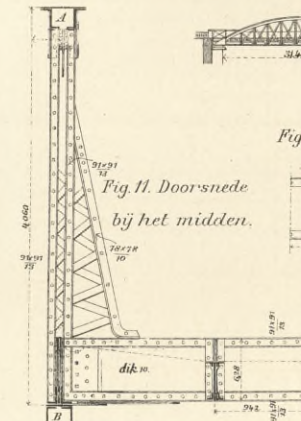


Fig. 8. Verbinding Bovenrand.

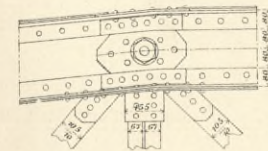
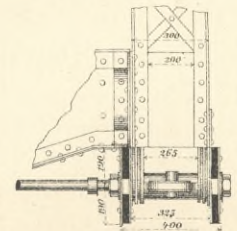


Fig. 9. Verbinding Onderrand.









De Viaduct in het Effziedal in den Spoorweg Nordhausen Wetzlar (Fig 1 en 2).

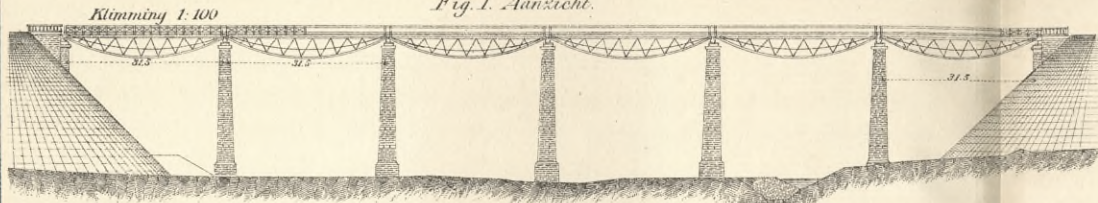
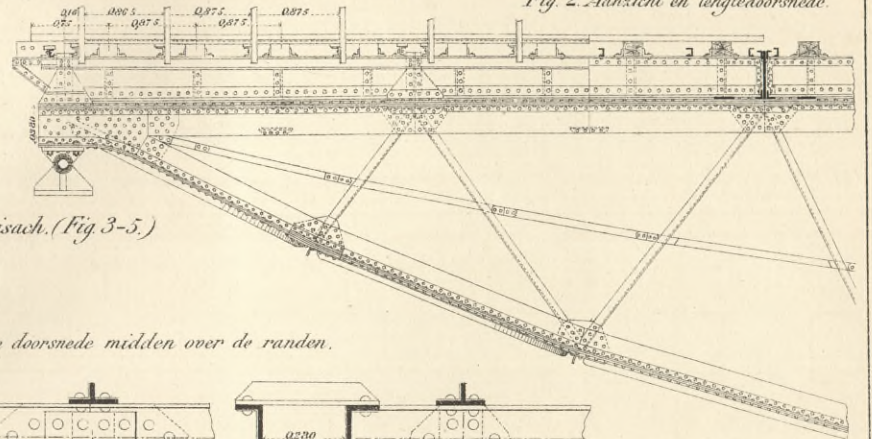


Fig 2 Aanzicht en lengtedoorsnede.



Brug over de Dreisam in den Spoorweg Freiburg Breisach. (Fig 3-5.)

Fig 4. Dwarsdoorsnede Bovenrand bij het midden.

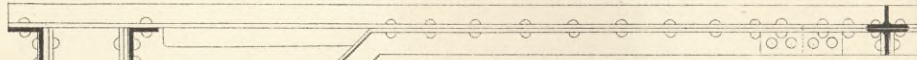


Fig 3. Lengte doorsnede midden over de randen.

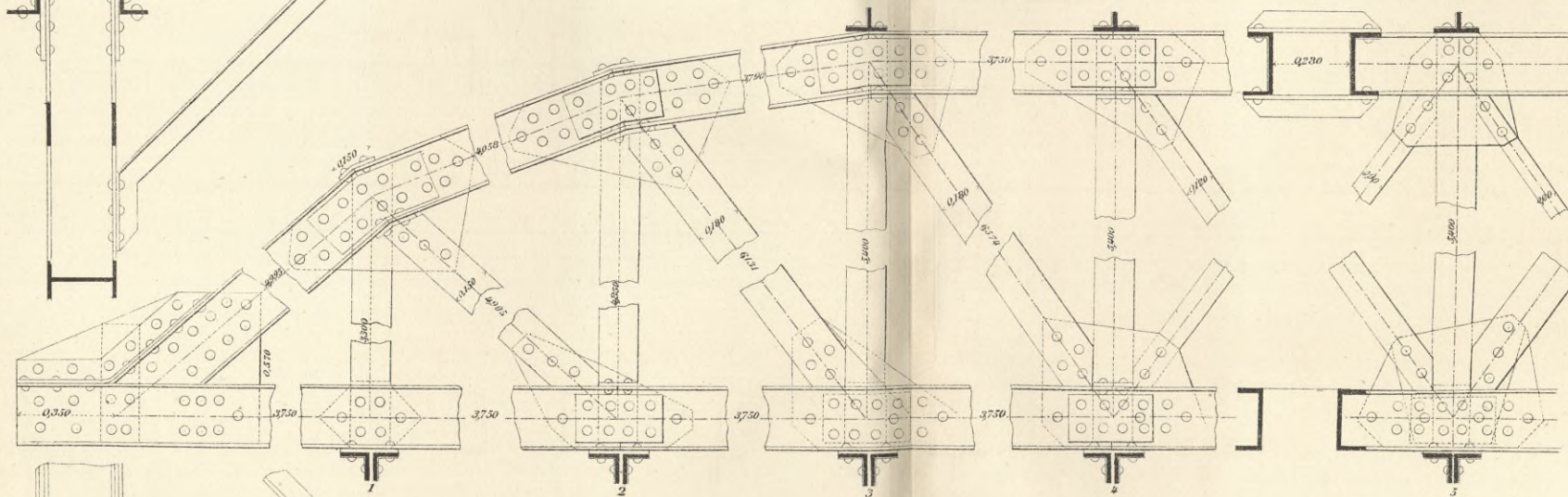


Fig 8. Doorsnede.

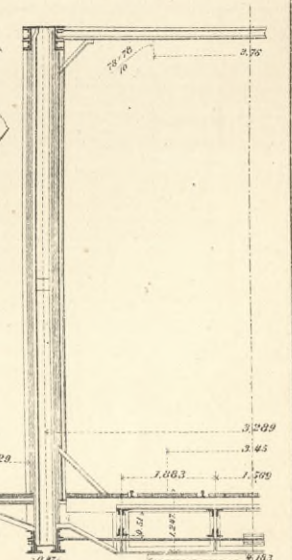
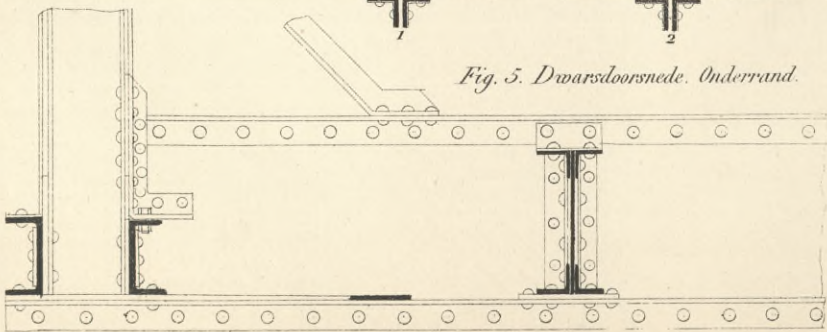


Fig 5. Dwarsdoorsnede. Onderrand.

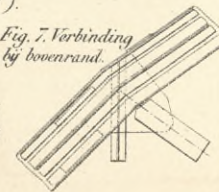


Brug over de Elbe bij Domitz. (Fig 6-8).

Fig 6. Aanzicht.



Fig 7. Verbinding bij bovenrand.



Schaal:  
Fig 1 en 6. 1 à 1000.  
Fig 3. 1 à 100.  
Fig 2 en 7. 1 à 50.  
Fig. 3, 4, 5. 1 à 20.





Brug over den Rijn bij Dusseldorf. (Fig. 1-3).  
Fig. 1. Aanzicht.

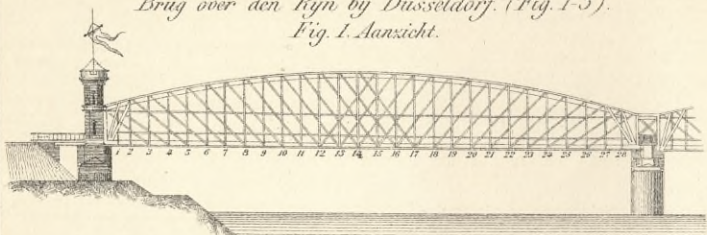


Fig. 2. Doorsnede.

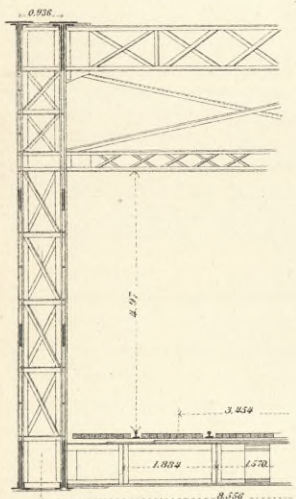


Fig. 3. Aanzicht aan het einde.

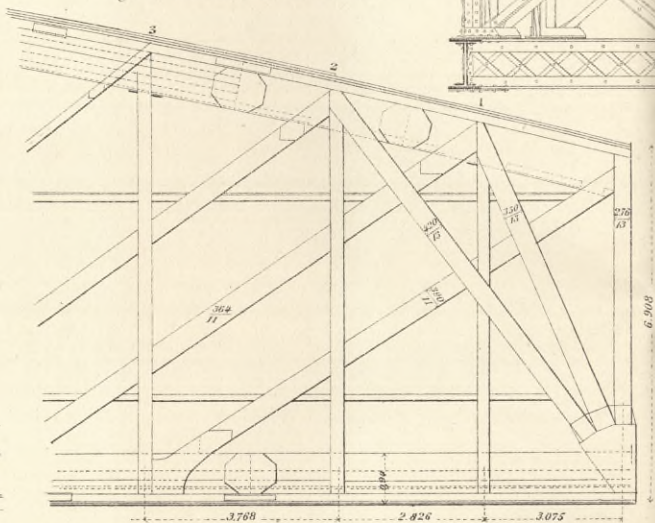
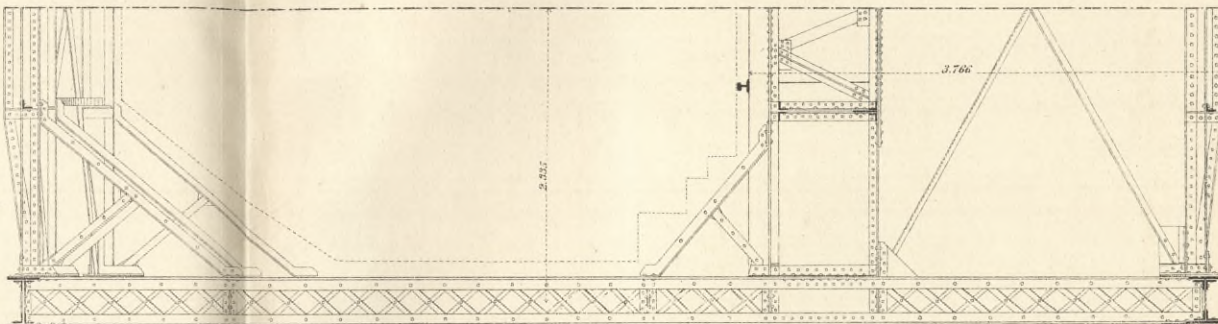


Fig. 6. Doorsnede



Telegra Bruig in den spoorweg Galatz-Bucharest. (Fig. 4-6).

Fig. 5. Eindvertikaal.

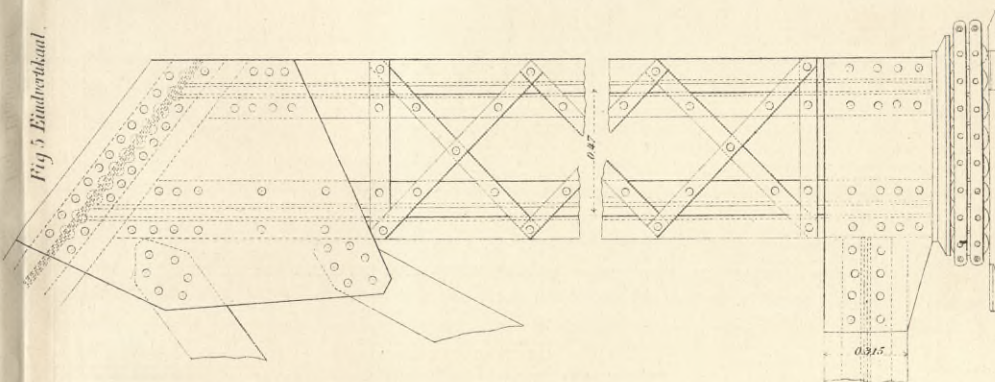
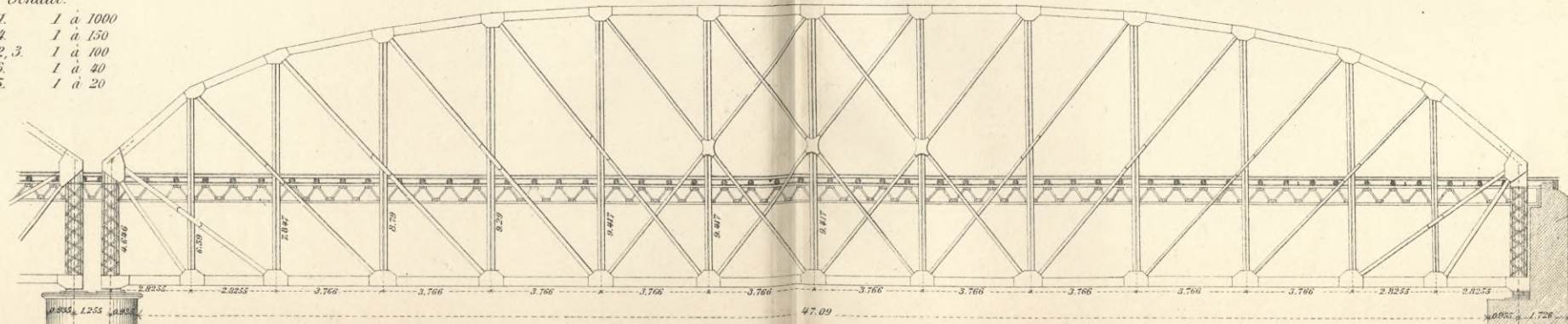


Fig. 4. Aanzicht.

Schaal.

- Fig. 1. 1 à 1000
- Fig. 4. 1 à 150
- Fig. 2, 3. 1 à 100
- Fig. 6. 1 à 40
- Fig. 5. 1 à 20



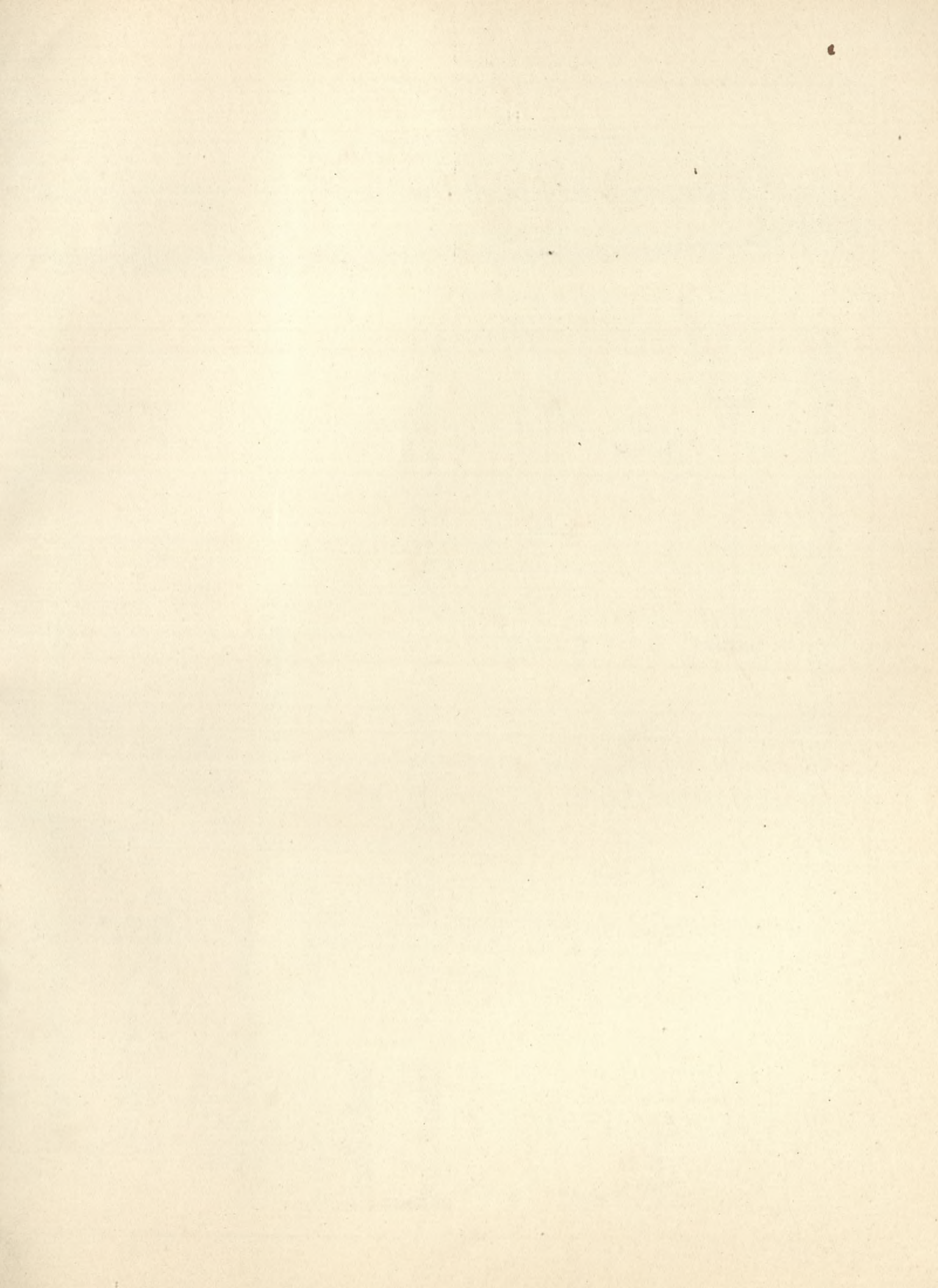












Brug bij Tilsit over de Memel.  
Fig. 1. Algemeen opstand.

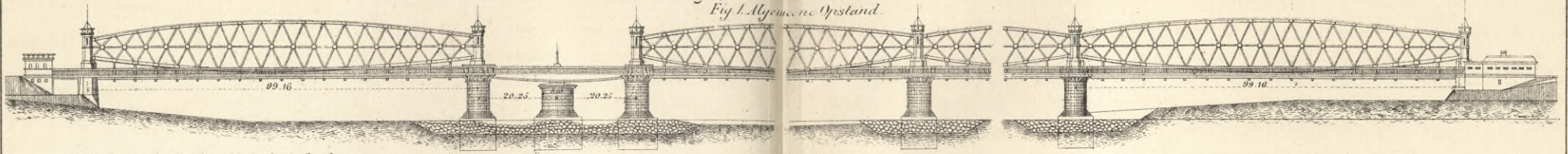


Fig. 2. Doorsnede volgens de A der brug.

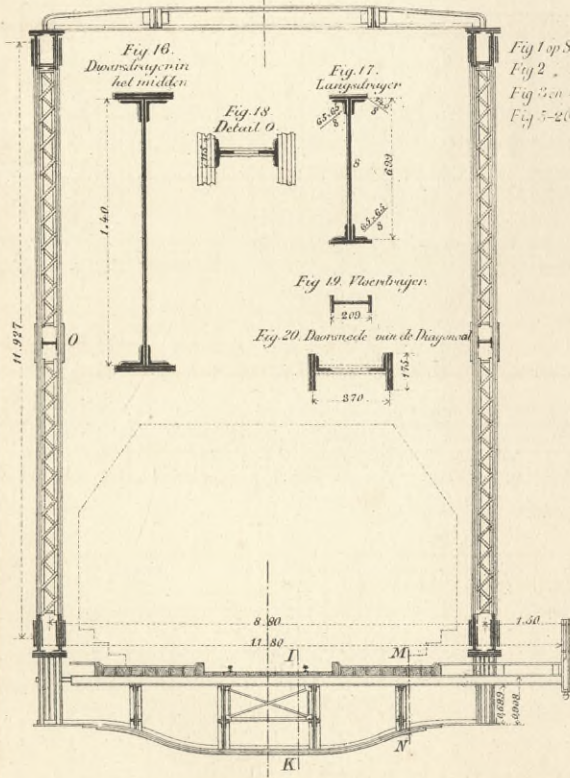


Fig. 1 op Schaal 1 a 1000.  
Fig. 2 " 1 a 100.  
Fig. 3 en 4 op 1 a 20  
Fig. 5-20 op 1 a 25

Fig. 3. Half aanzicht.

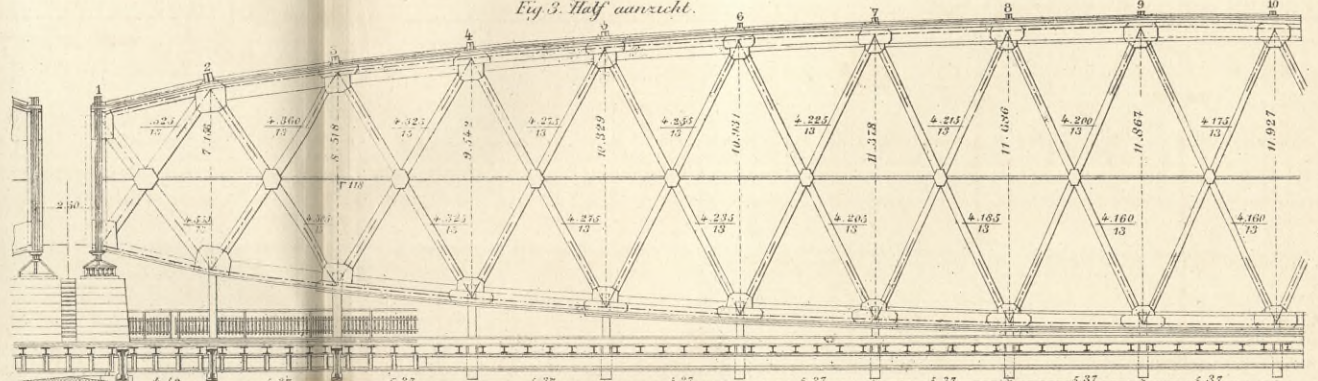


Fig. 5. Langsdoorsnede volgens MN en IK in Fig. 2.

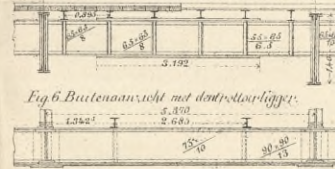


Fig. 7. 10° knooppunt van boven gezien.



Fig. 8. Opstand bovenrand in het 10° knooppunt.

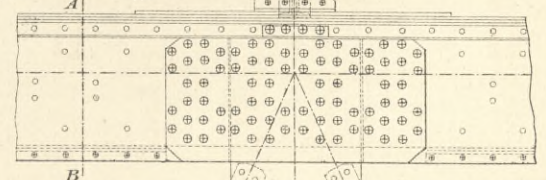


Fig. 1. Platte grond.

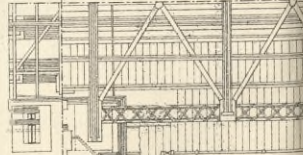


Fig. 6. Buitenaanzicht met dekkingsplaat.

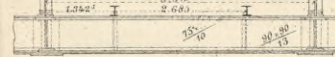
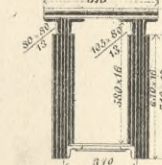


Fig. 13. Doorsnede AB in fig. 9.



A

B

Fig. 10. Aanzicht onderwand in knooppunt N° 10.

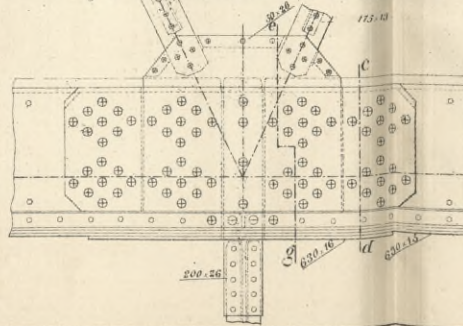


Fig. 12. Doorsnede e d in fig. 10.

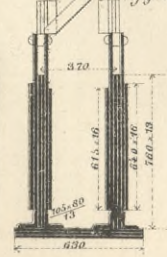
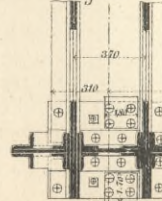


Fig. 14.



Doorsnede Eind-Vertikaal

Fig. 15. 10° knooppunt van onder gezien.

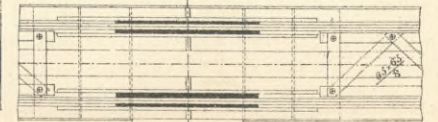


Fig. 9. Platte grond onderwand in knooppunt N° 10

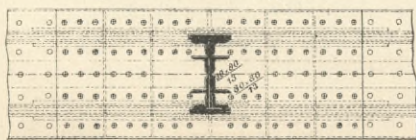
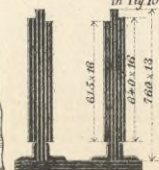


Fig. 11. Doorsnede c d in Fig. 10







Brug over de Warthe bij Posen (Fig. 1, 2, 3.)

Fig. 1. Aanzicht.

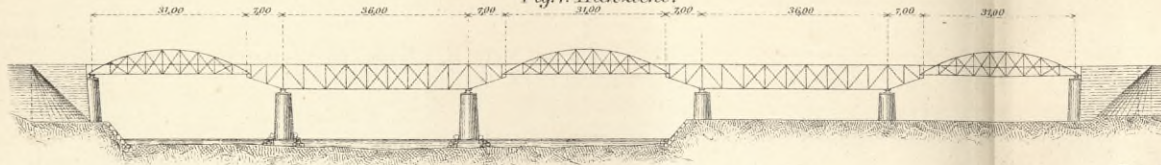


Fig. 2. Aanzicht bij zwevend steunpunt.

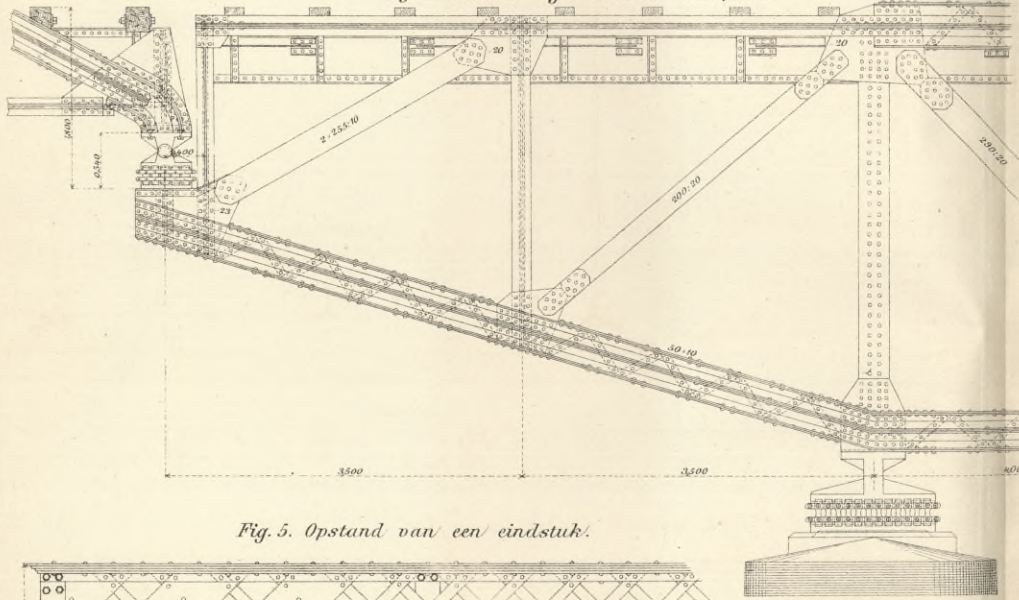
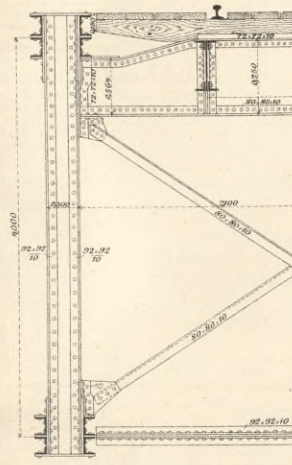
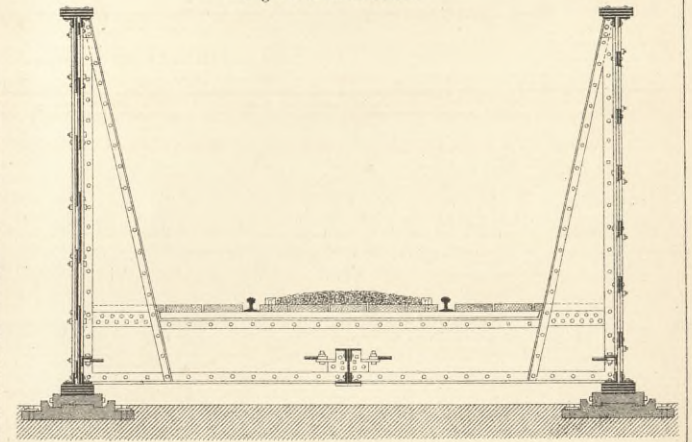


Fig. 3. Doorsnede.



Brug over de Maas bij Maastricht (Fig. 4, 5, 6.)

Fig. 4. Doorsnede.



Schaal.

Fig. 1 ..... 1 à 1000.

Fig. 2 en 3 ..... 1 à 50.

Fig. 4, 5, 6 ..... 1 à 40.

Fig. 5. Opstand van een eindstuk.

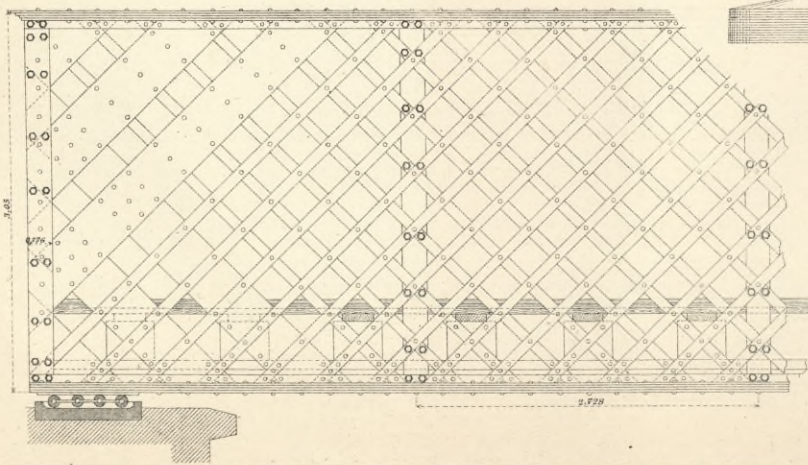
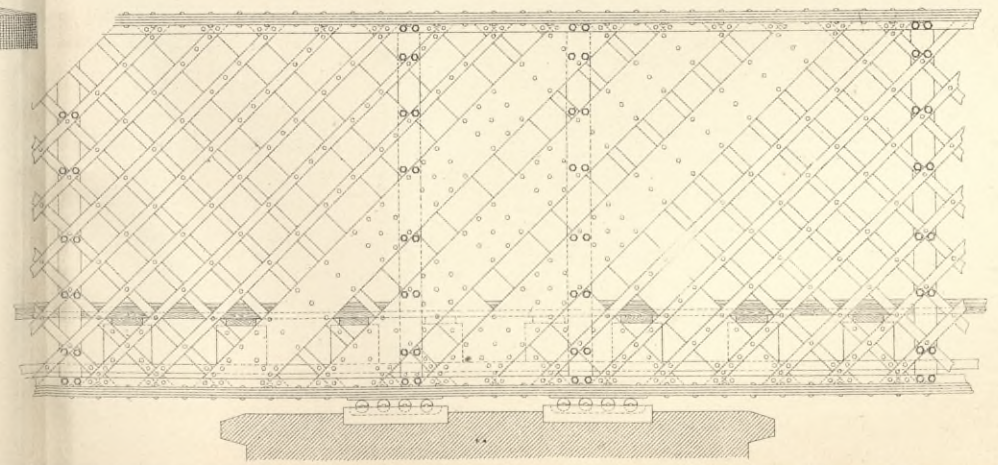
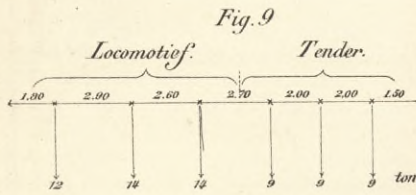
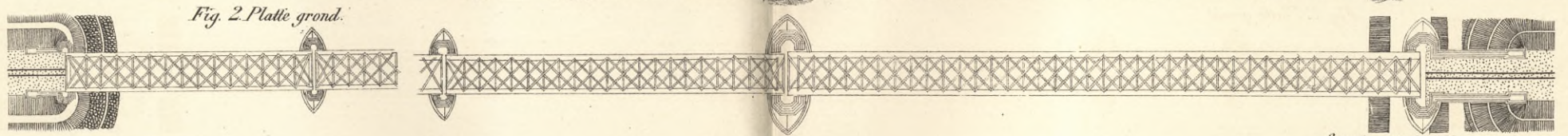


Fig. 6. Opstand boven een pijler.









Spanning van 150.00 M.  
Fig. 3. Aansicht bij de steunpunten.

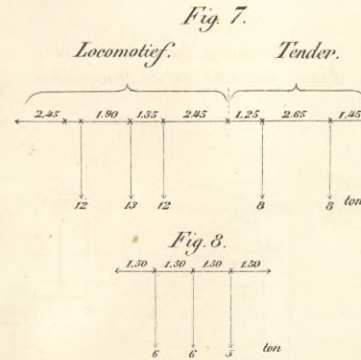
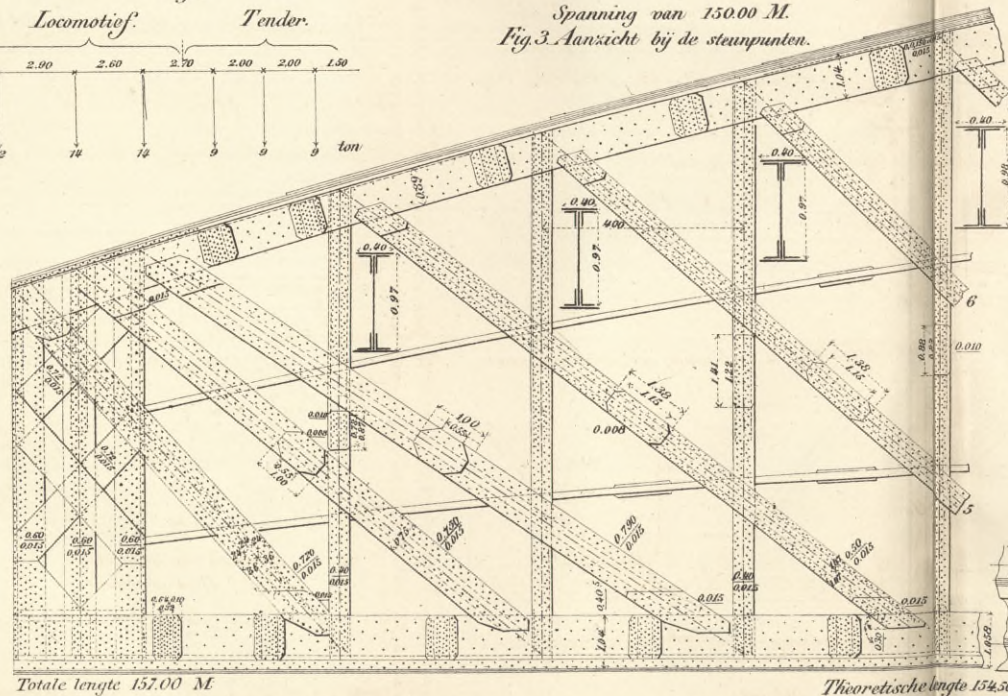
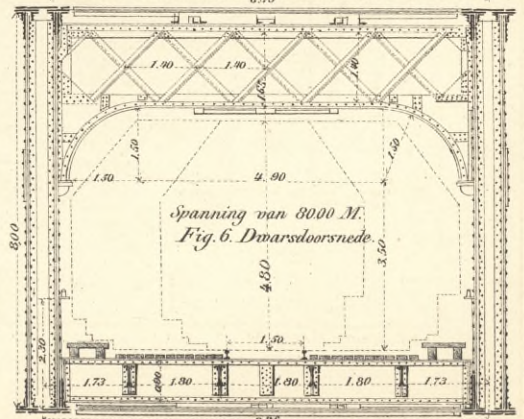
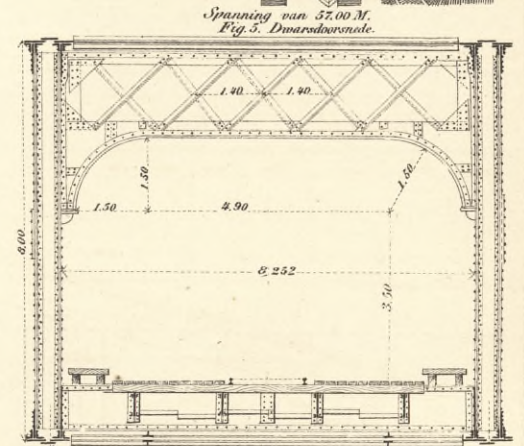
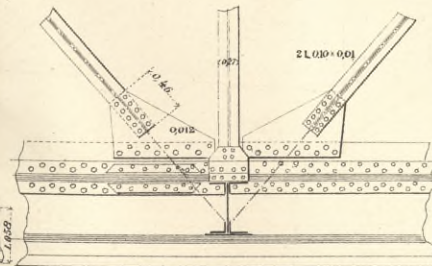


Fig. 4. Verbinding der winderstijningen.



Schaal.

Fig. 1, 2. 1 à 1000  
 " 7, 8, 9. 1 " 200  
 " 3, 5, 6. 1 " 100  
 " 4. 1 " 50







Brug over de Lek te Kuitenburg. Fig. 1-3.

Brug over de Waal bij Bonmel. (Fig. 4-7).  
Spanning van 120.00 M.

Spanning van 150.00 M.  
Fig. 1. Doorsnede over de 19<sup>e</sup> verticaal.

Spanning van 150.00 M.  
Fig. 2. Dwarsdoorsnede over de 3<sup>e</sup> verticaal.

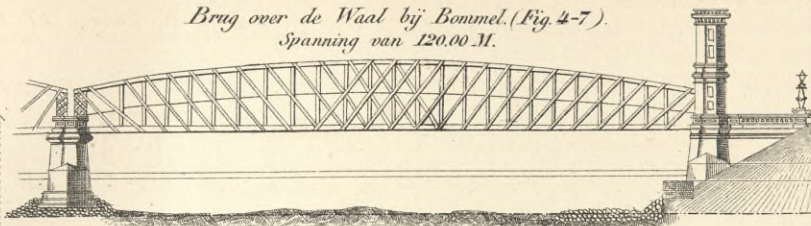
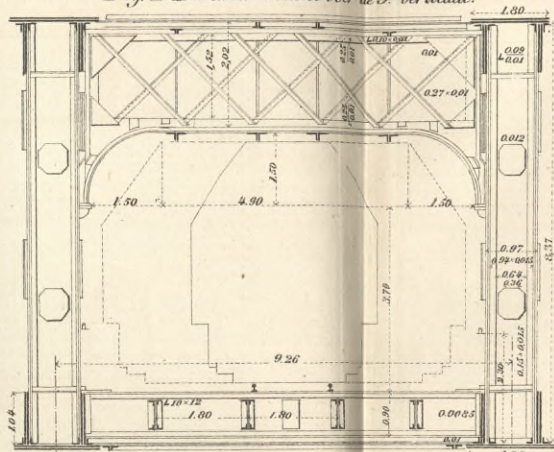
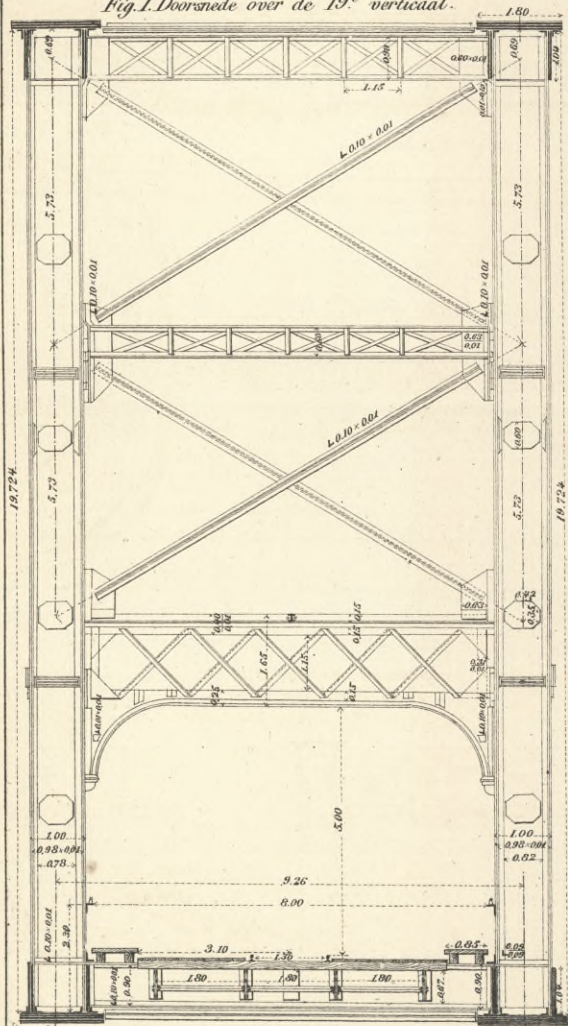


Fig. 4. Opstand.

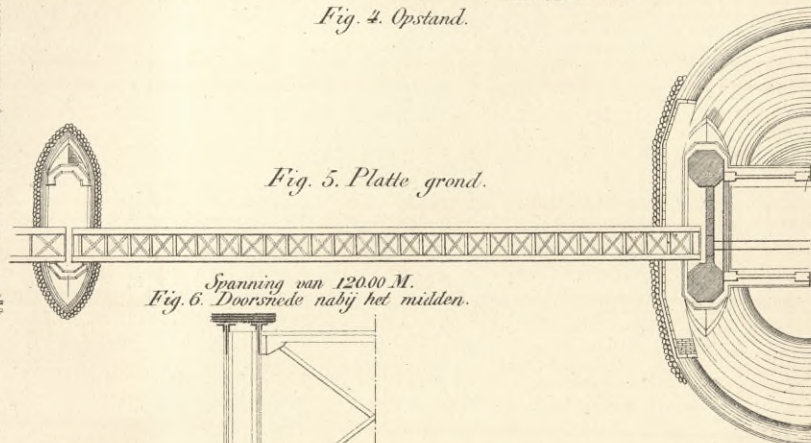
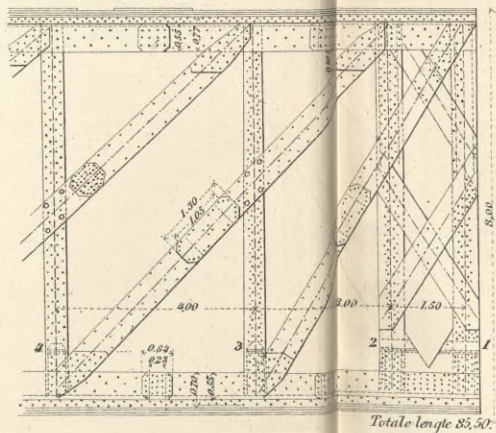


Fig. 5. Platte grond.

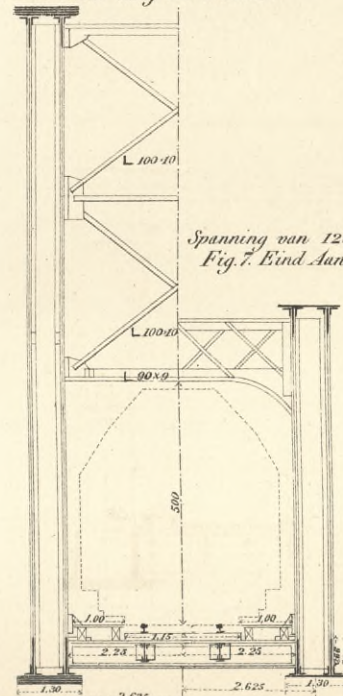
Spanning van 120.00 M.  
Fig. 6. Doorsnede nabij het midden.

Spanning van 80.00 M.  
Fig. 3. Opstand



Totale lengte 85.50

Spanning van 120.00 M.  
Fig. 7. Eind Aanzicht.



Schaal.  
Fig. 4 en 5. .... 1 à 1000.  
Fig. 1, 2, 3, 6, 7. .... 1 à 100.





Stalen brug over de Schie te Rotterdam (Fig. 1-3).

Fig. 1. Opstand. Spanning van 32,00 M.

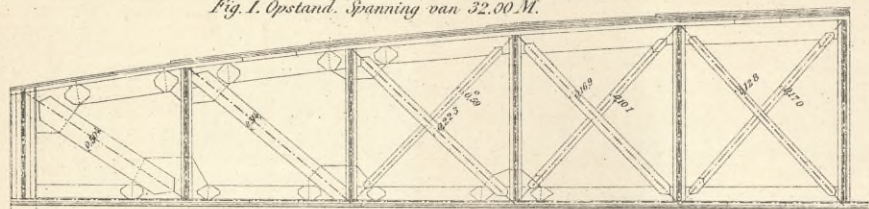


Fig. 2. Ondergrond.

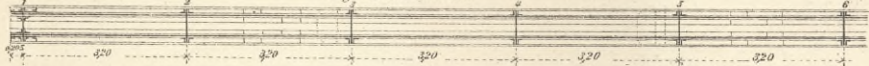


Fig. 3. Dwarsdoorsnede.



Brug op het Hoopje te Rotterdam (Fig. 4-6).

Fig. 3. Opstand en Doorsnede. Spanning van 29,50 M.

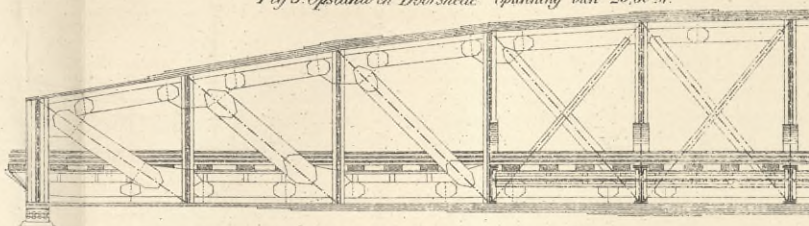
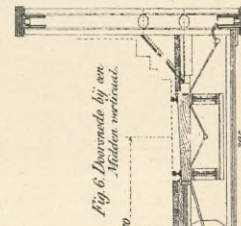


Fig. 6. Doorsnede bij een Middenverbuig.



Stalen brug van 28,81 Meters lengte (Fig. 7-8).

Fig. 7. Opstand en Doorsnede.

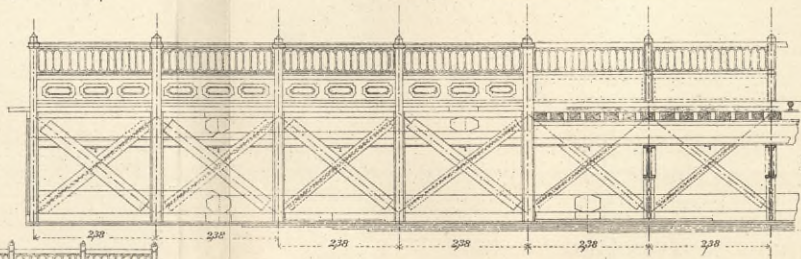


Fig. 8. Dwarsdoorsnede.

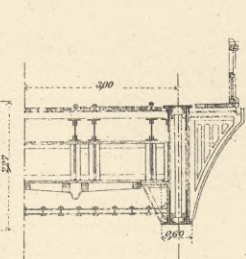
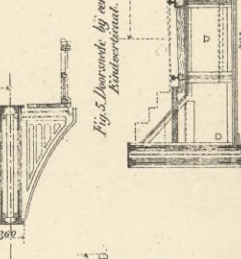


Fig. 5. Doorsnede bij een Kinderoverspanning.



Brug nabij de Halte Beurs (Fig. 9-12).

Fig. 9. Halve Opstand van een Hoofligger. Fig. 10. Halve Opstand van een Trotoirvligger.

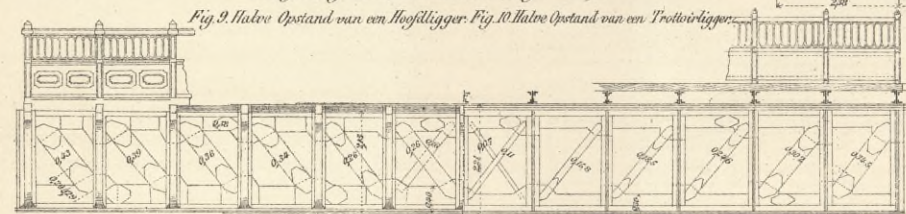


Fig. 11. Ondergrond.

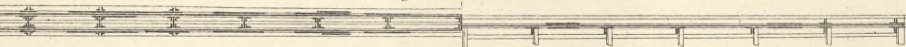


Fig. 12. Dwarsdoorsnede.

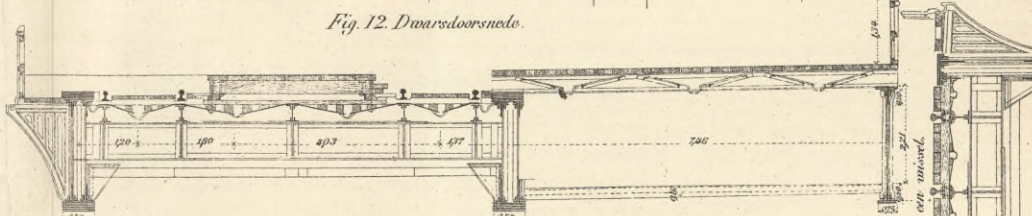
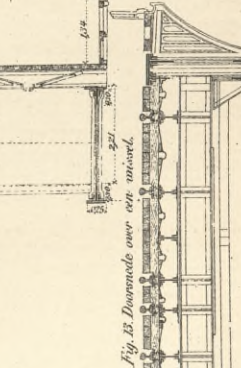


Fig. 13. Doorsnede over een vanover.



Brug over de Kolk (Fig. 14-16).

Fig. 14. Opstand.

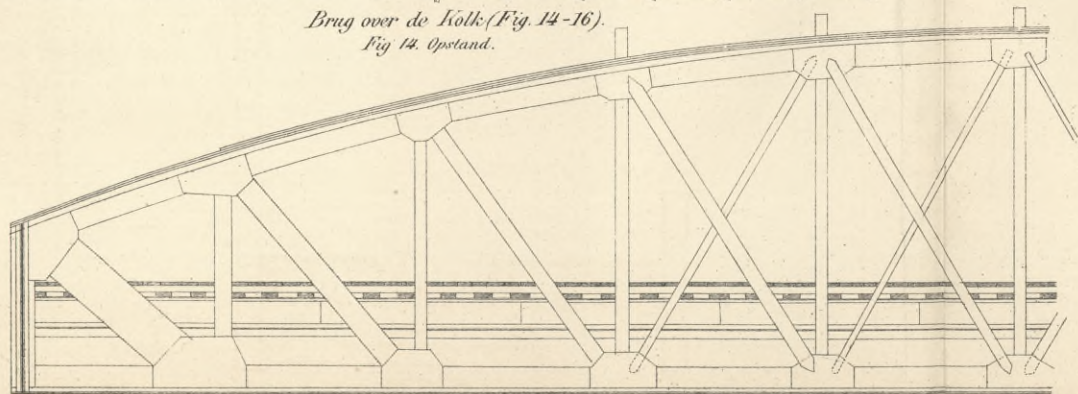


Fig. 15. Dwarsdoorsnede bij verticaal 1 en 6.

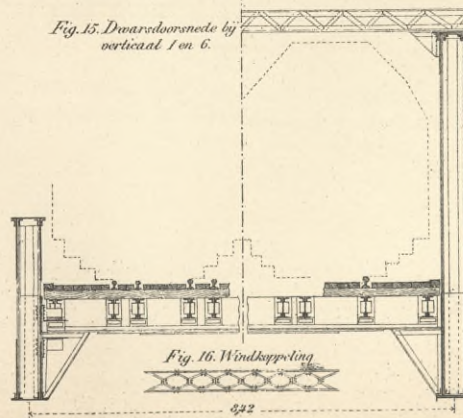


Fig. 16. Windspeeling



Schaal 1 à 100.







Brug over de Nieuwe Maas te Rotterdam. (Fig. 1-3)

Fig. 1. Opstand.  
Spanning van 87,40 M.

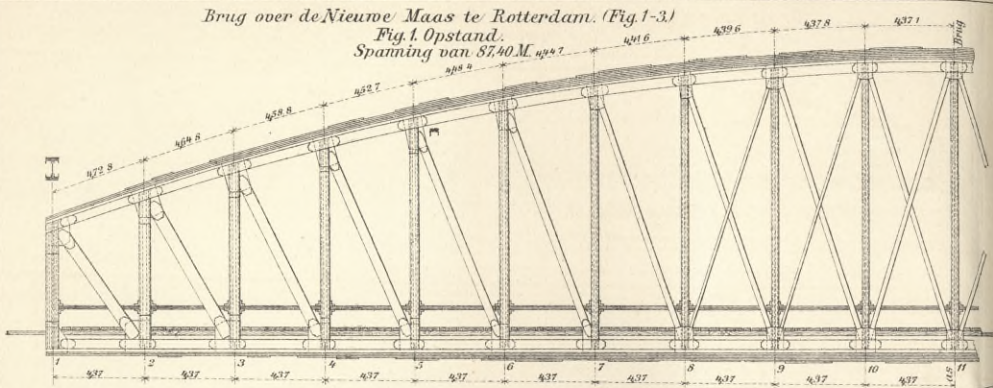
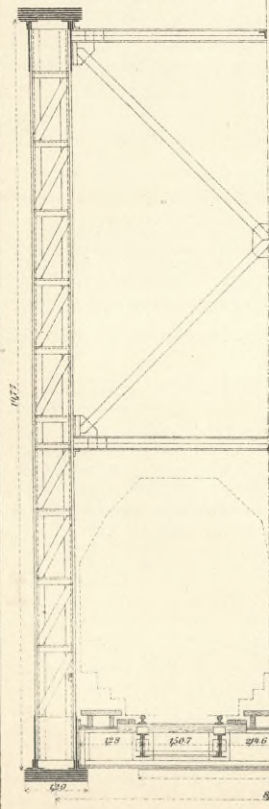


Fig. 2. Doorsnede over Verticaal 11.



Brug over de Oude Maas te Dordrecht. (Fig. 8-10)  
(Zie verder volgende plaat Fig. 1.2)

Fig. 9. Aanzicht bij Steunpunten.

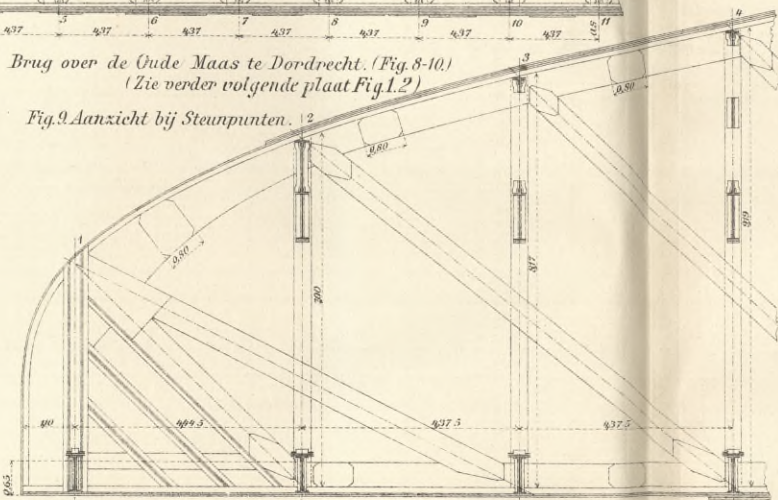


Fig. 3. Doorsnede over Verticaal 1.

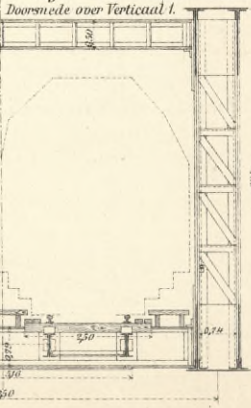


Fig. 8. Opstand.

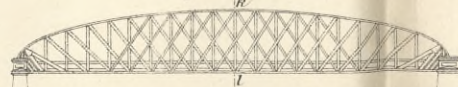
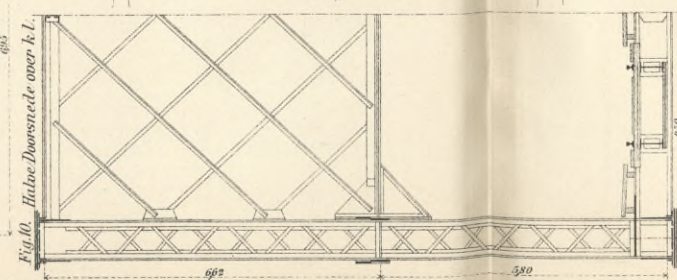


Fig. 10. Halve Doorsnede over k.l.



Brug over de Noorderhaven te Rotterdam. (Fig. 4-6)

Fig. 4. Opstand.  
Spanning van 80,26 M.

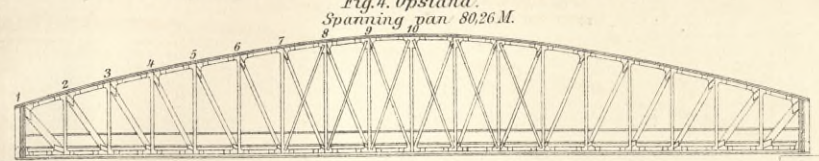
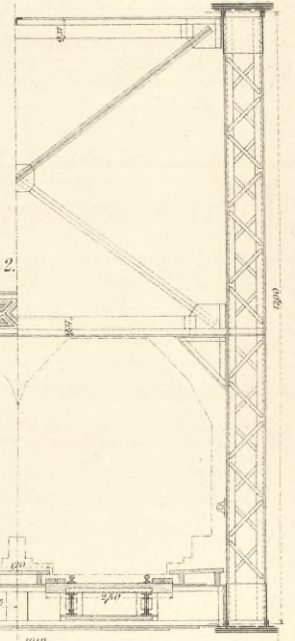


Fig. 12. Halve Doorsnede.



Fig. 6. Halve Doorsnede over Verticaal 10.



Schaal

Fig. 8. 11	1 à 1000.
" 4	1 à 500.
" 1	1 à 250.
" 2, 3, 5, 6, 9, 10, 12	1 à 100.
" 7	1 à 20.

Fig. 5.

Halve Doorsnede over Verticaal 2.

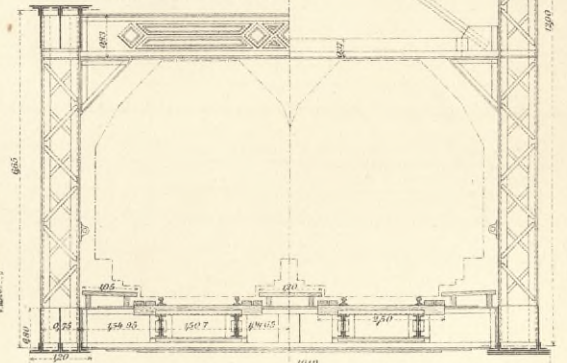
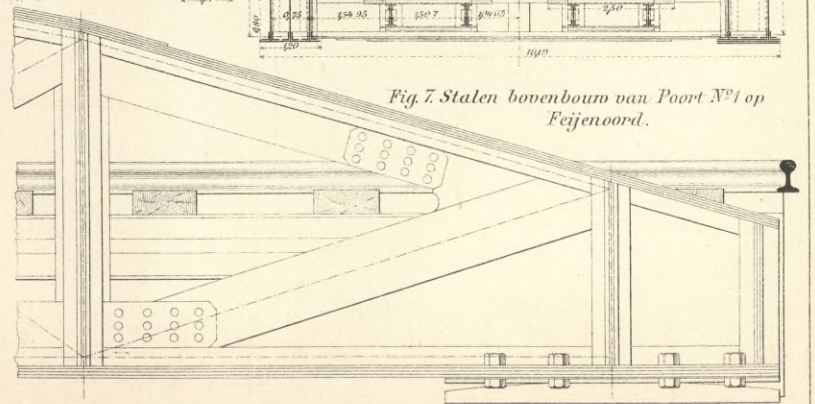


Fig. 7. Stalen bovenbouw van Poort N°1 op Feijenoord.







Brug over de Oude Maas bij Dordrecht.  
Bevestiging van dwarsdragers. (Fig. 1, 2).

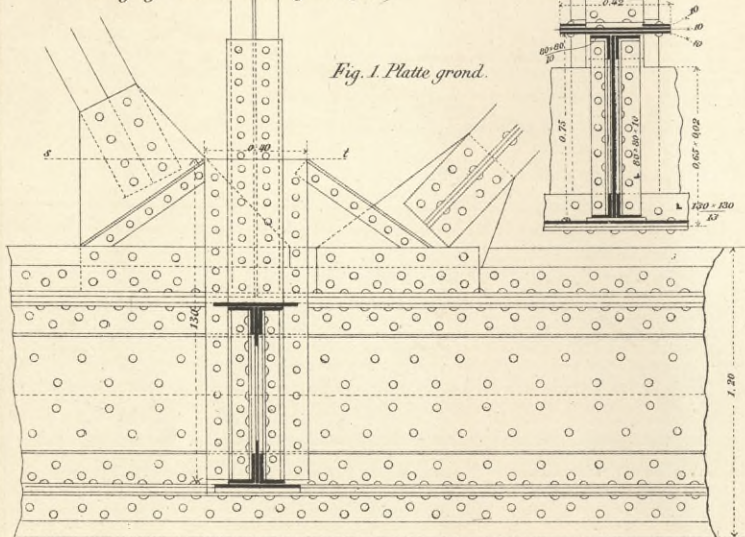


Fig. 2. Doorsnede s.t.

Fig. 1. Platte grond.

Brug over den Rijn nabij Arnhem. (Fig. 3-4).  
Fig. 3. Aanzicht spanning 90 M.

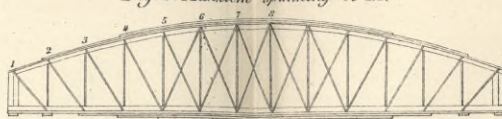


Fig. 3. Aanzicht spanning 90 M.

Fig. 4. Aanzicht bij steunpunt.

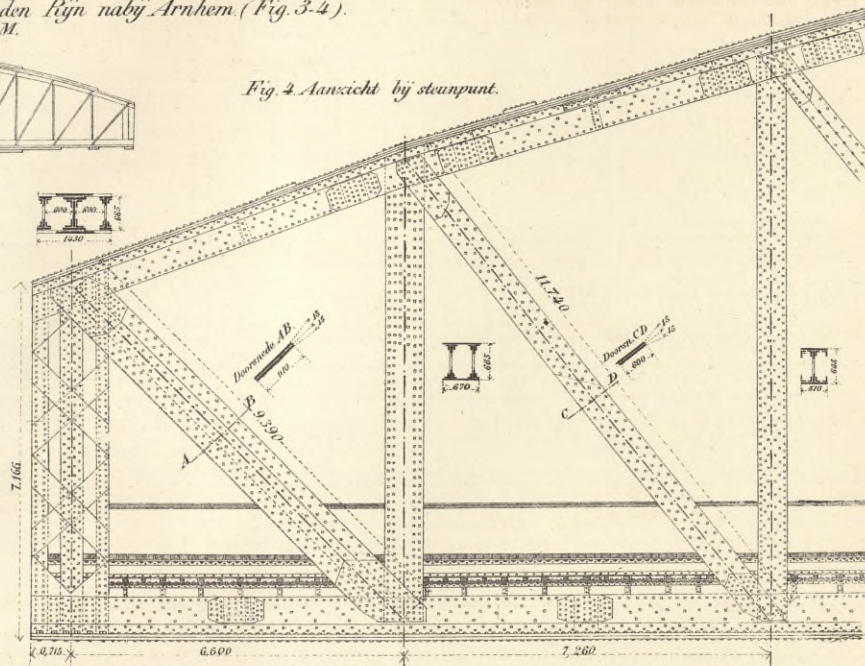
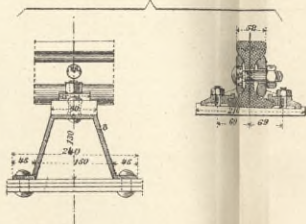


Fig. 8. Bevestiging spoorclaven.



Brug over de Maas nabij Heumen. (Fig. 5-8).  
Fig. 5. Aanzicht.



Fig. 6. Dwarsdoorsnede groote spanning.

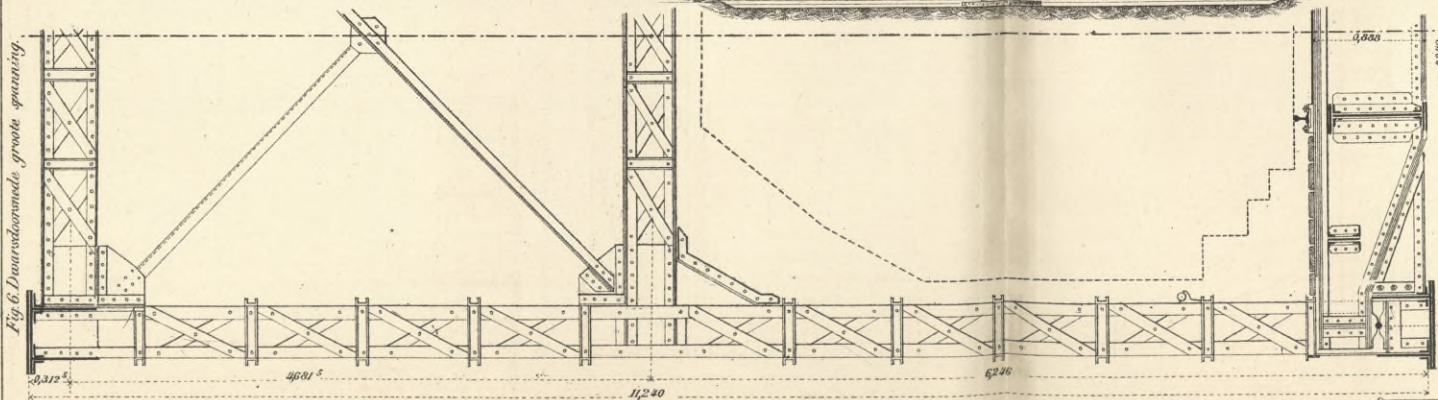
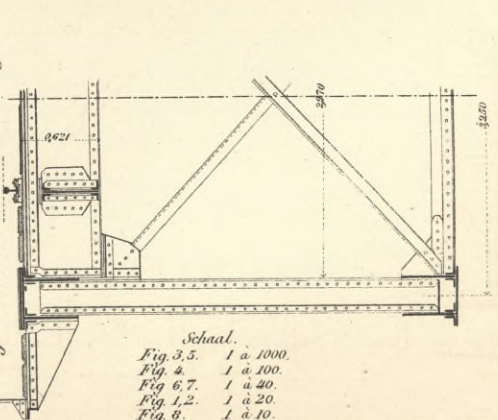


Fig. 7. Dwarsdoorsnede kleine spanning.



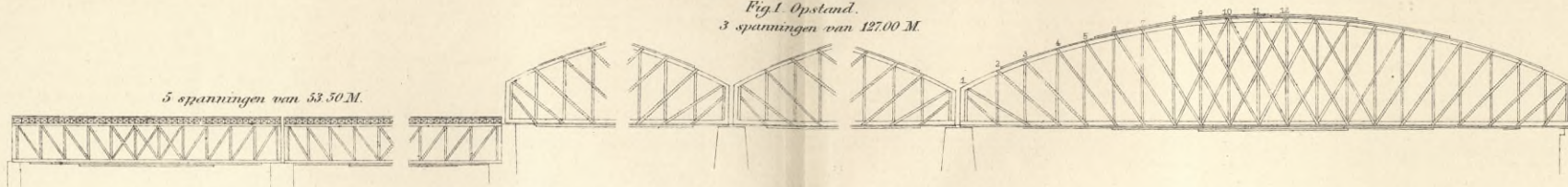
Schaal.  
Fig. 3, 5. 1 a 1000.  
Fig. 4. 1 a 100.  
Fig. 6, 7. 1 a 40.  
Fig. 1, 2. 1 a 20.  
Fig. 8. 1 a 10.





Brug over de Waal beneden Nijmegen

Fig. 1. Opstand.  
3 spanningen van 127.00 M.



5 spanningen van 53.50 M.

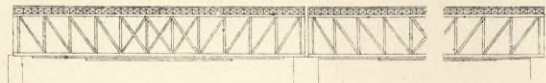


Fig. 2. Platte grond.

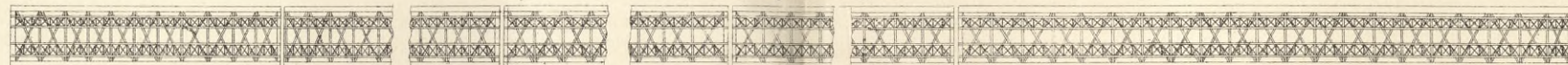
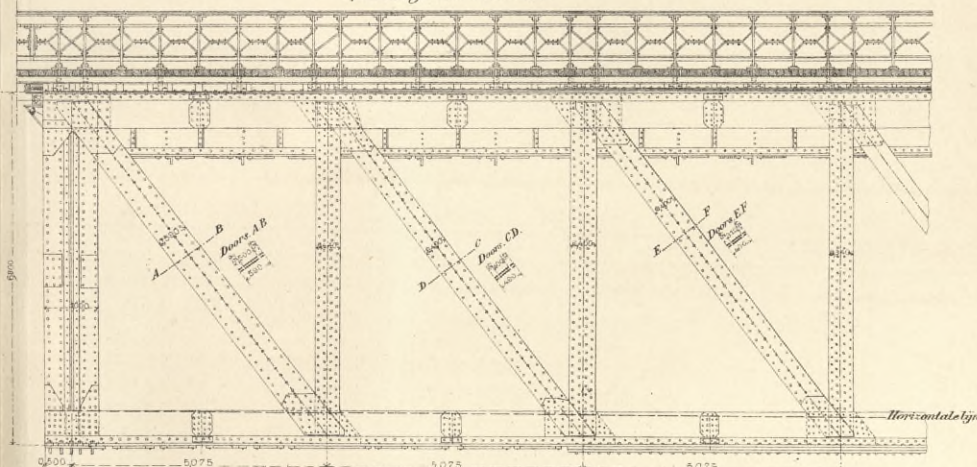


Fig. 4. Aanzicht.  
Spanning van 53.50 M.



Schaal.

Fig. 1 en 2 1 a 1000  
Fig. 3-6 1 a 100

Fig. 3. Aanzicht bij de steunpunten.  
Spanning van 127 M.

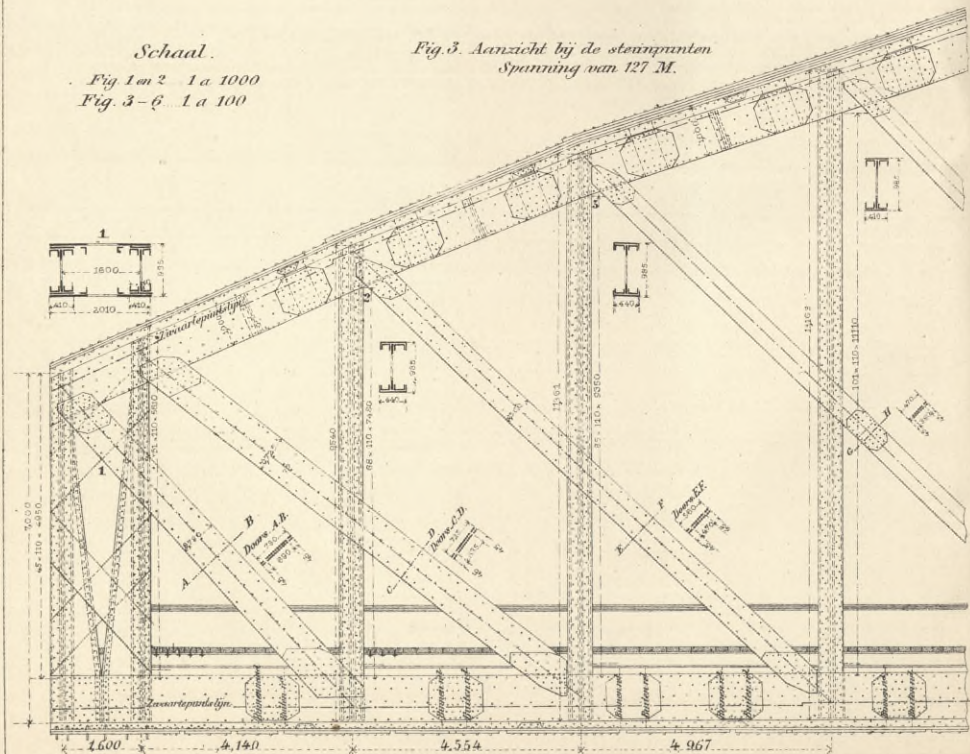


Fig. 5. Einlaanzicht.  
spanning van 127 M.

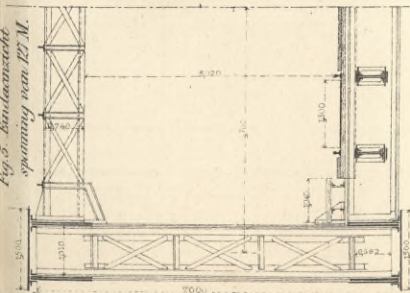
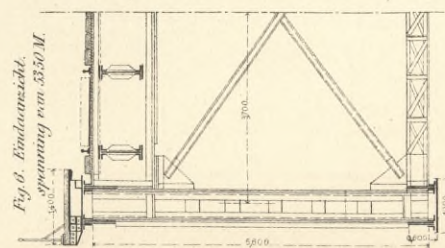


Fig. 6. Einlaanzicht.  
spanning van 53.50 M.









Brug over den Rijn bij Reenen. (Fig. 1-7).

Fig. 1. Aansicht.

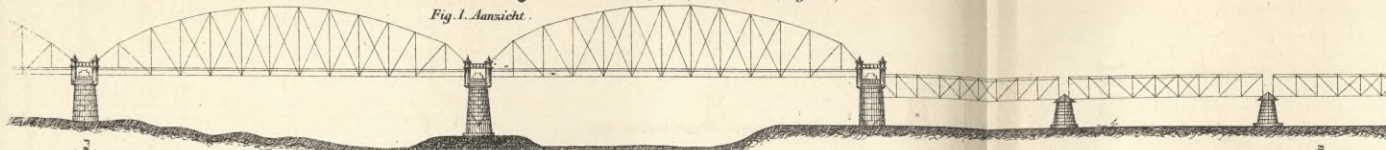


Fig. 2. Doorsdoorsnede groote spanning.

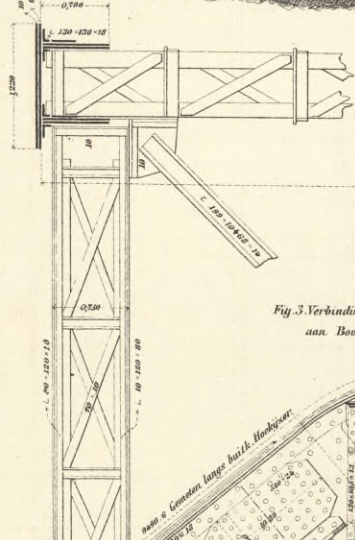
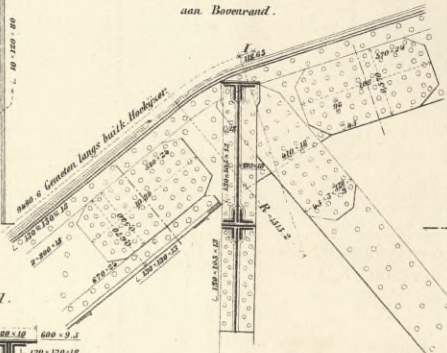


Fig. 3. Verbinding Eendstijl aan Bovenrand.



9000 & 6000 lange balk. Hoofdw. 200-150-10

Fig. 4. Eendstijl.

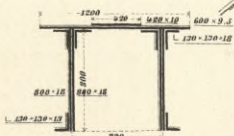
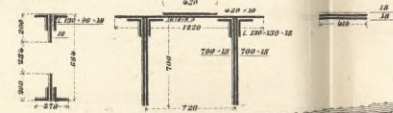


Fig. 5. Verticaal I.

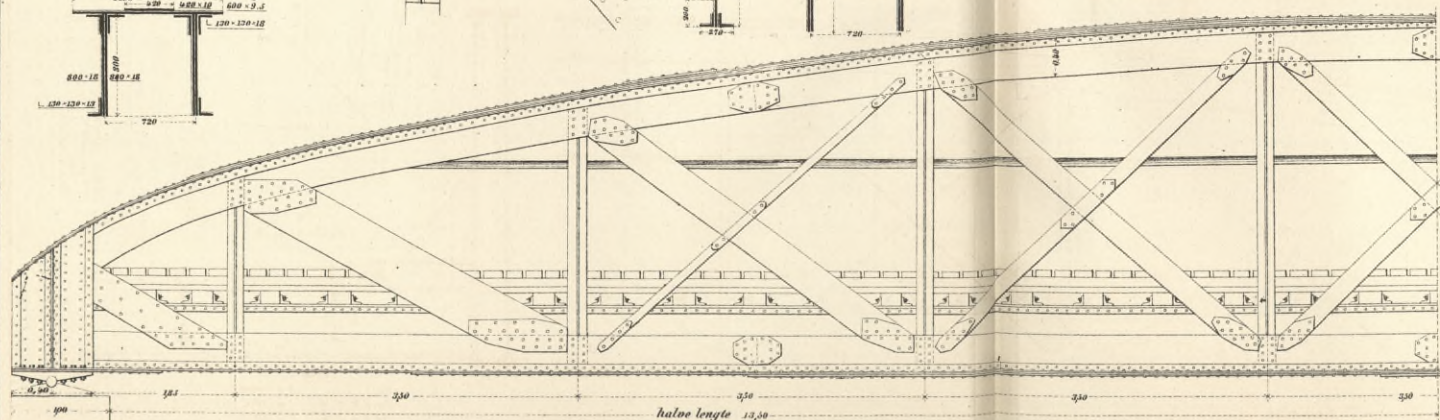
Fig. 6. Bovenrand.

Fig. 7. Doorsnede I.



Brug tegenover Oosterdoksluis te Amsterdam. (Fig. 8-9).

Fig. 8. Aansicht.



(Fig. 10) Brug over het Noordzeekanaal bij Zaandam.

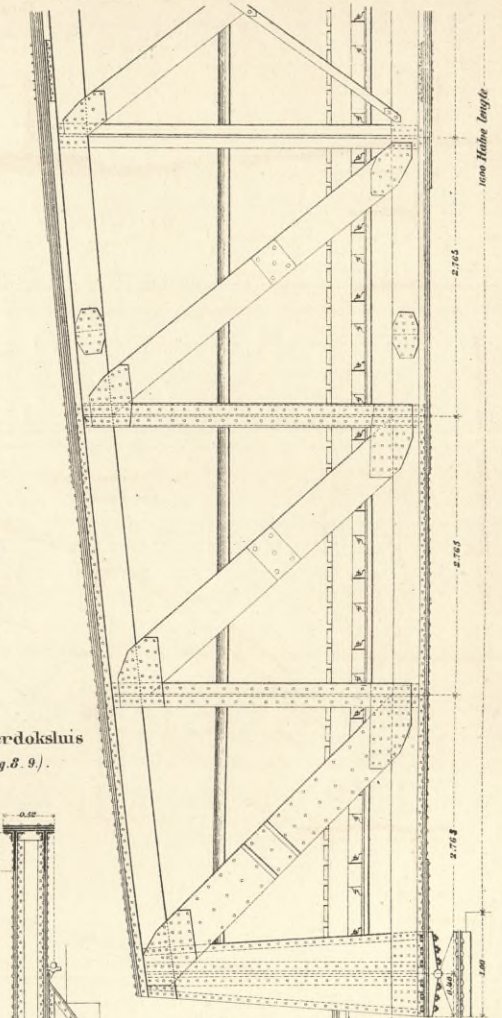
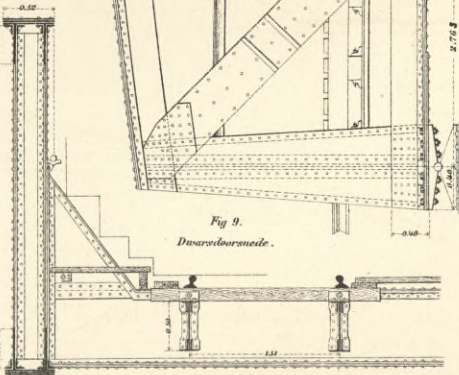


Fig. 9. Doorsdoorsnede.



Schaal.

Fig. 1. 1 à 1000  
Fig. 2, 3, 9, 10. 1 à 50.  
Fig. 4, 5, 6, 7, 1 à 40.











Brug voor gewoon verkeer te Fontenoy-Rohan. (Fig. 1-3).  
Fig. 1. Opstand.

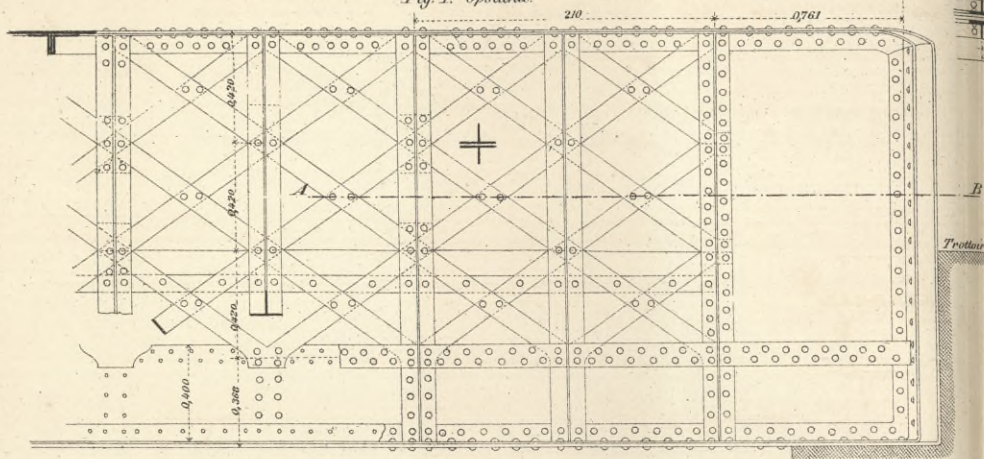


Fig. 2. Dwarsdoorsnede.

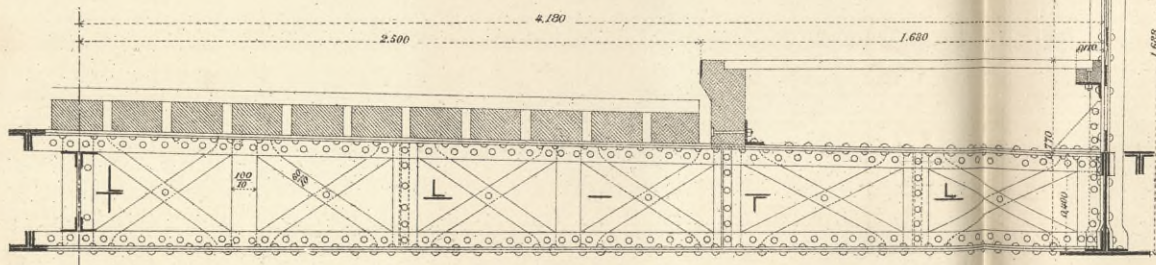


Fig. 4. Lengte aanzicht en doorsnede.

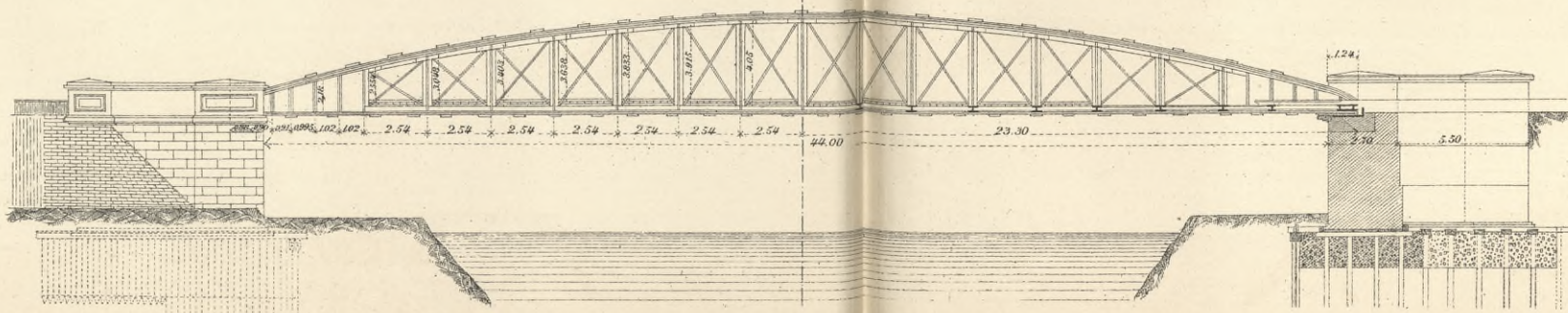


Fig. 3. Doorsnede over AB.

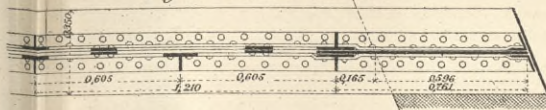
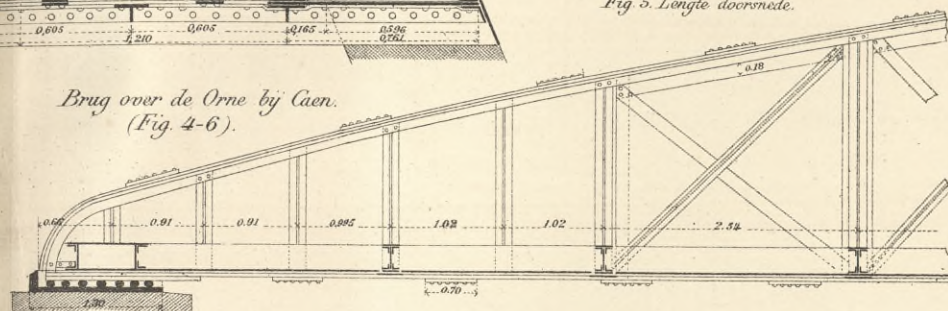
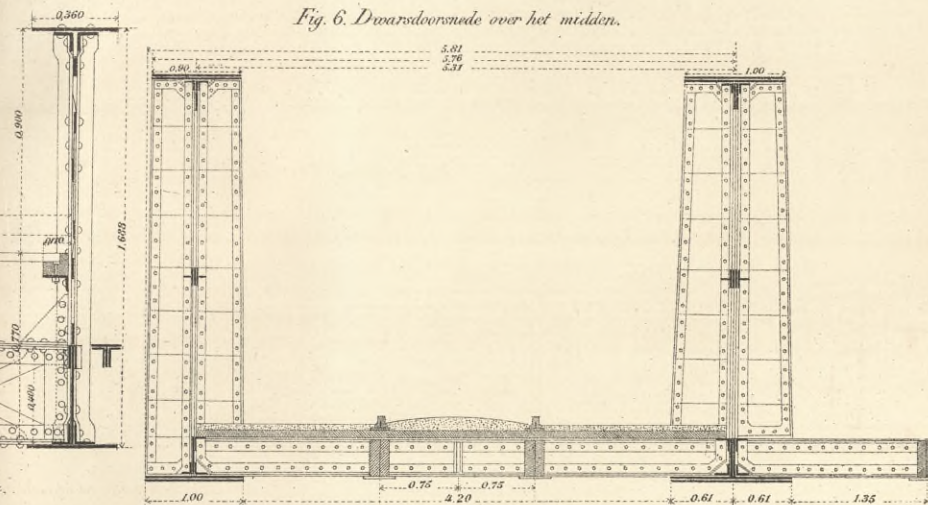


Fig. 5. Lengte doorsnede.



Brug over de Orne bij Caen. (Fig. 4-6).

Fig. 6. Dwarsdoorsnede over het midden.



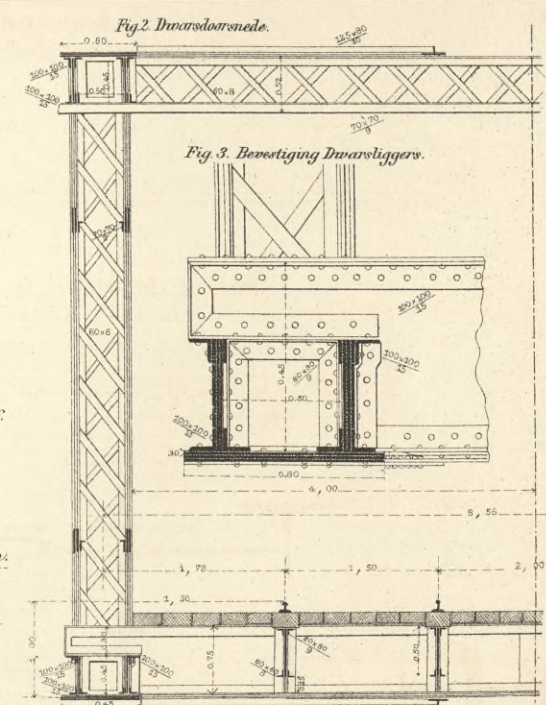
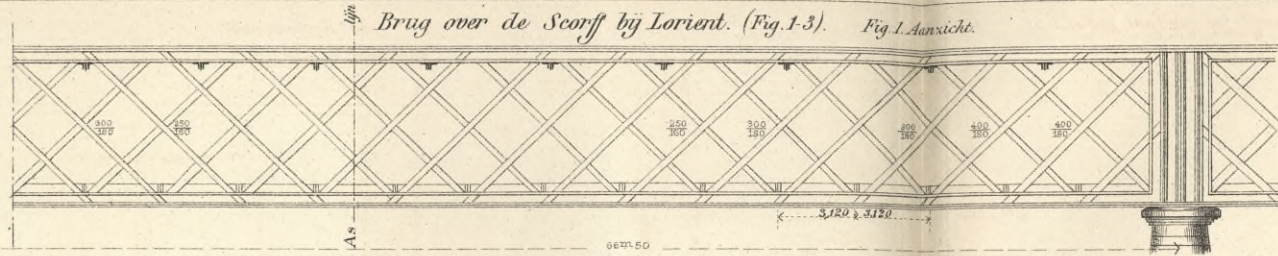
Schaal.

- Fig. 4. - 1 à 200.
- Fig. 5, 6. - 1 à 50.
- Fig. 1, 2, 3. - 1 à 20.

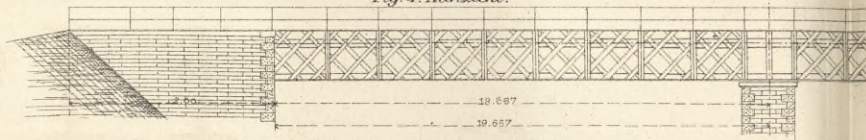








Brug over de Eure in den Spoorweg Orleans-Rouaan (Fig 4-6). Fig. 4. Aanzicht.



Schaal  
 Fig. 1. 4. 7. .... 1 à 200  
 Fig. 2. 8. .... 1 à 50  
 Fig. 3. 5. 6. 9. 10. 11. 12. .... 1 à 20

Fig. 10. Traliestaaf.

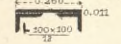


Fig. 11. Verticalen.

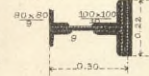


Fig. 5. Doorsnede.

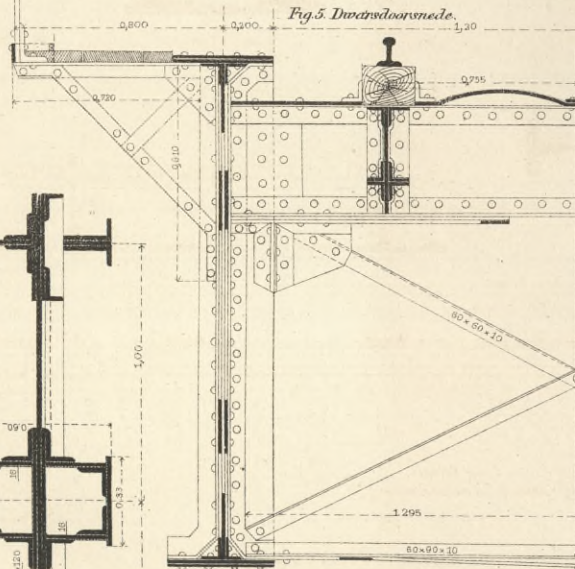
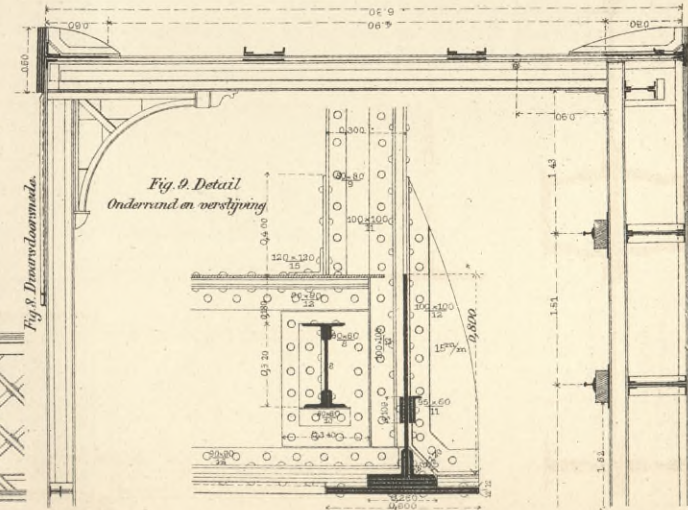
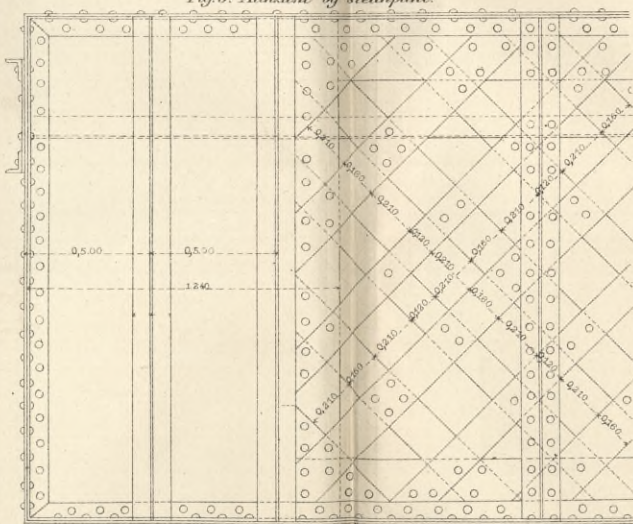
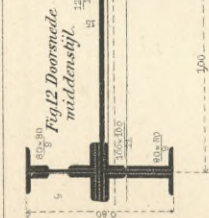
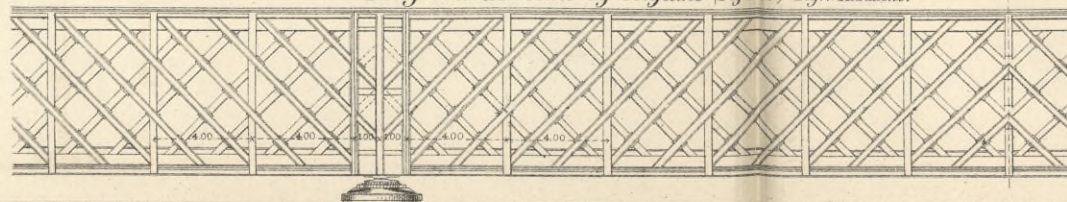


Fig. 6. Aanzicht bij steunpunt.



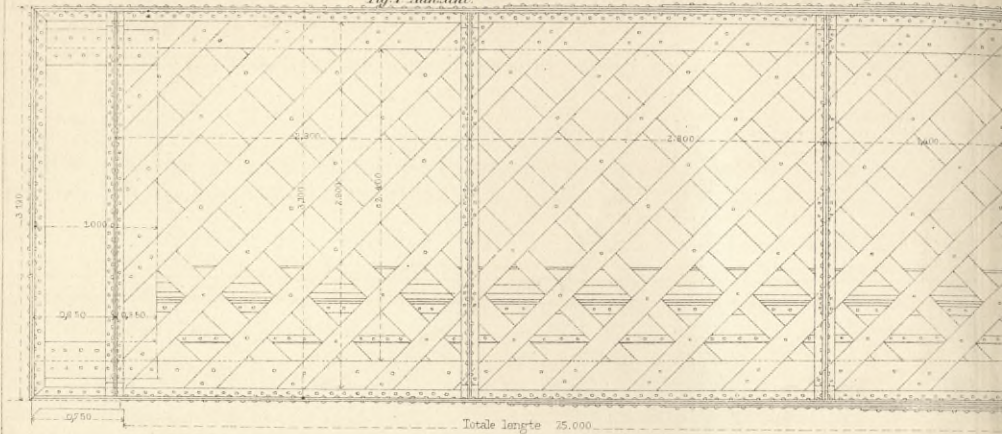
Brug over de Seine bij Conflans (Fig 7-12) Fig. 7. Aanzicht.







Brug over de Vaillière in den Spoorweg Chalons s. Saône-Lons le Saulnier. (Fig. 1 2).



Viaduct bij Thouars in den Spoorweg Bressuire-Tours. (Fig. 10 II)

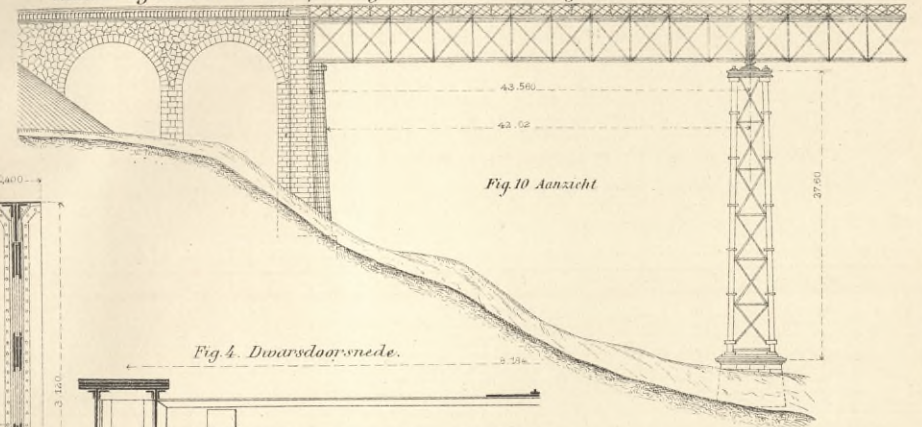
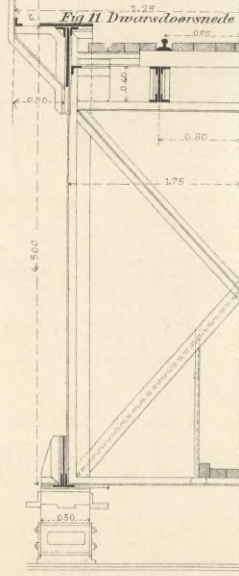
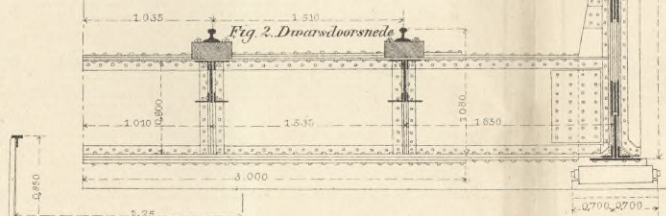
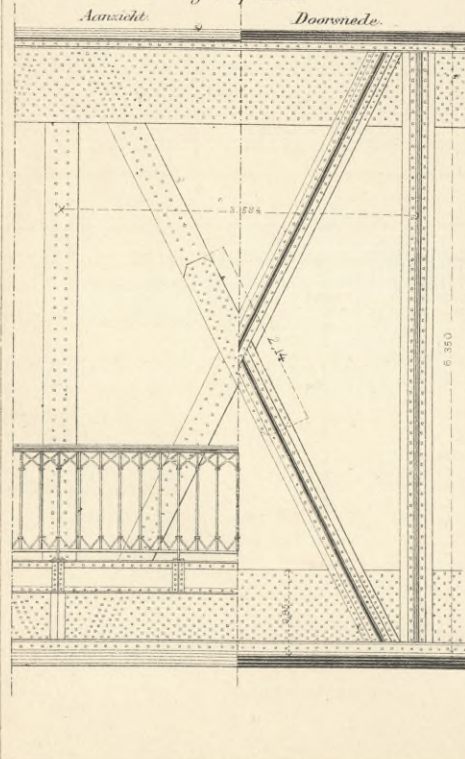


Fig. 4. Doorsdoorsnede.

Fig. 5 Opstand.



- Schaal
- Fig. 3 1 à 1000
  - Fig. 10 1 à 500
  - Fig. 6 1 à 200
  - Fig. 4, 5, 7, 11 1 à 50
  - Fig. 1, 2 1 à 40
  - Fig. 8, 9 1 à 20

Fig. 8 Verticaal

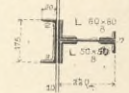
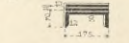
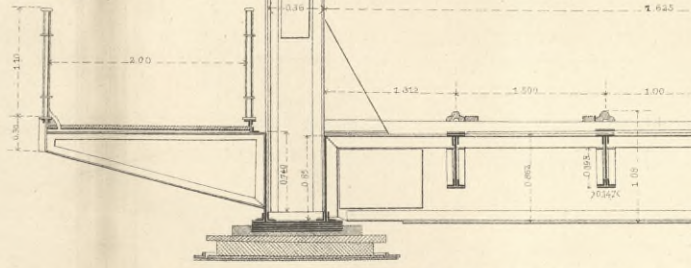
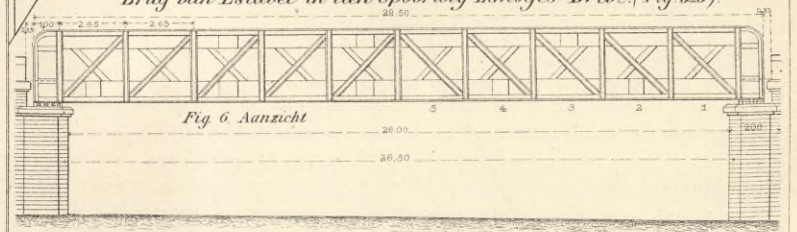


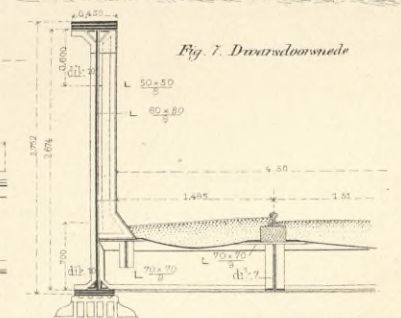
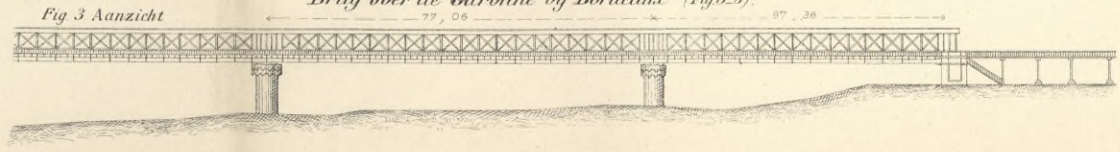
Fig. 9 Drukschoor



Brug van Estavel in den Spoorweg Limoges-Brive. (Fig. 6 9)



Brug over de Garonne bij Bordeaux. (Fig. 3 5)





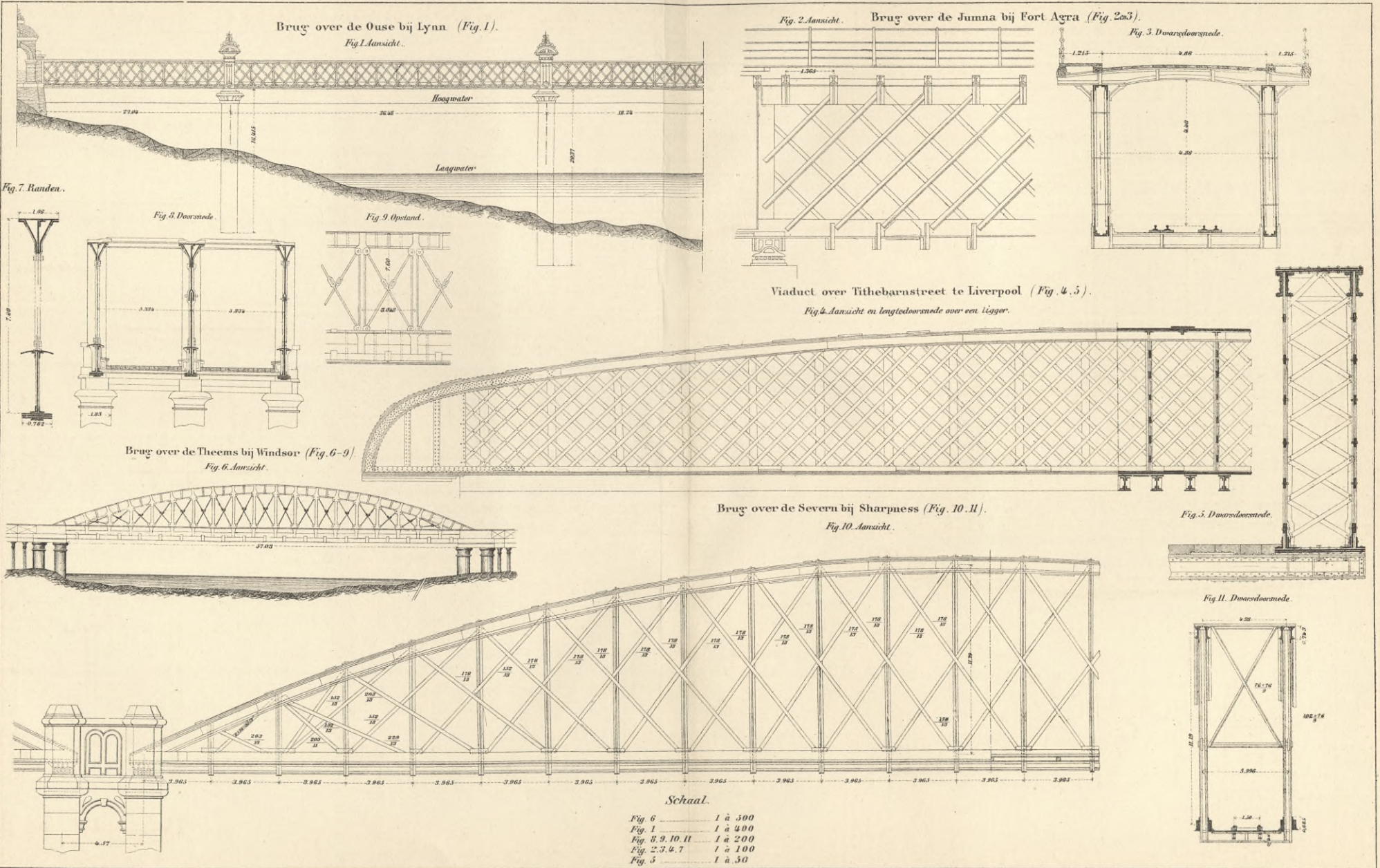












Schaal.

- Fig. 6 ..... 1 à 500
- Fig. 1 ..... 1 à 400
- Fig. 8, 9, 10, 11 ..... 1 à 200
- Fig. 2, 3, 4, 7 ..... 1 à 100
- Fig. 5 ..... 1 à 50





Crumlin Viaduct in den Spoorweg: Newport-Abergavenny-Herford (Fig. 1-3).

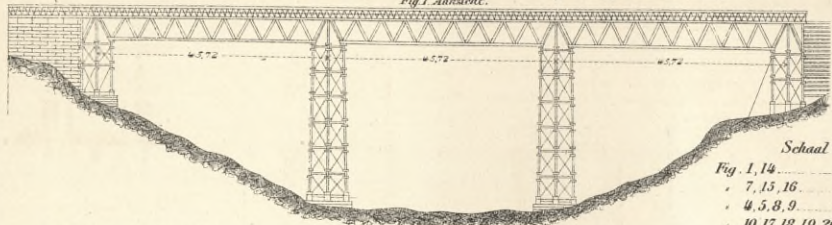


Fig. 2. Ansicht bij steunpunt.

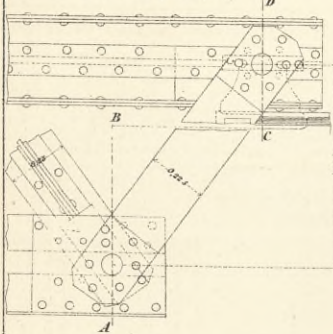
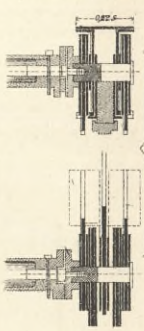


Fig. 3. Doorsnede ABCD.



Schaal.  $\frac{1}{100}$   
Fig. 1, 14 ..... 1 à 1000.  
7, 15, 16 ..... 1 à 200.  
4, 5, 8, 9 ..... 1 à 100.  
10, 17, 18, 19, 20 ..... 1 à 50.  
2, 3, 6, 11, 12, 13 ..... 1 à 20.

Kistna Viaduct bij Raichore (Fig. 4-6).

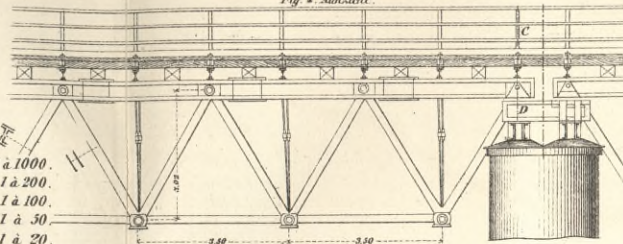


Fig. 5. Doorsnede.

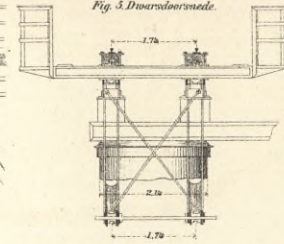


Fig. 6. Detail doorsnede CD.

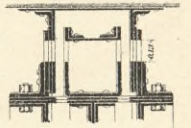


Fig. 15. Doorsnede.

Brug over de Wye bij Chepstow (Fig. 14-20).

Fig. 14. Ansicht.

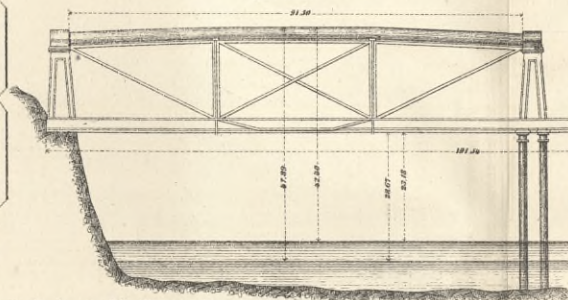


Fig. 17. Regeling van den stand der trekstangen.

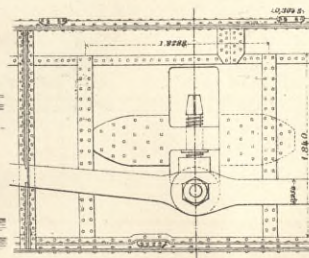
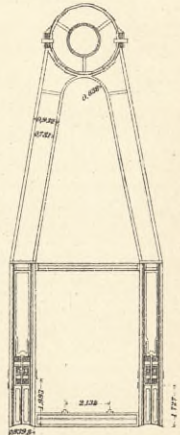
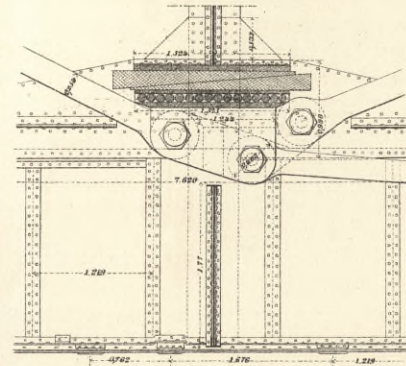


Fig. 18. Benestiging Verticaal.



Brug over de Jumna bij Allahabad (Fig. 7-13).

Fig. 7. Ansicht.

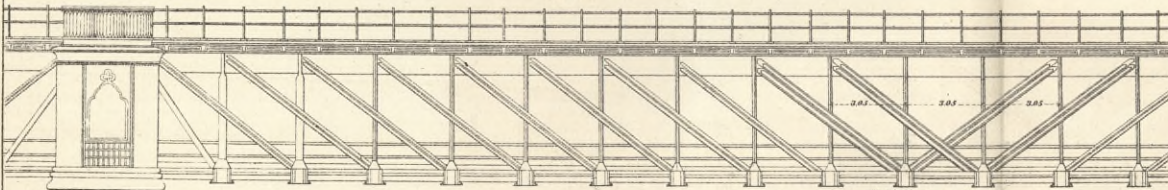


Fig. 16. Gedetailleerd Ansicht.

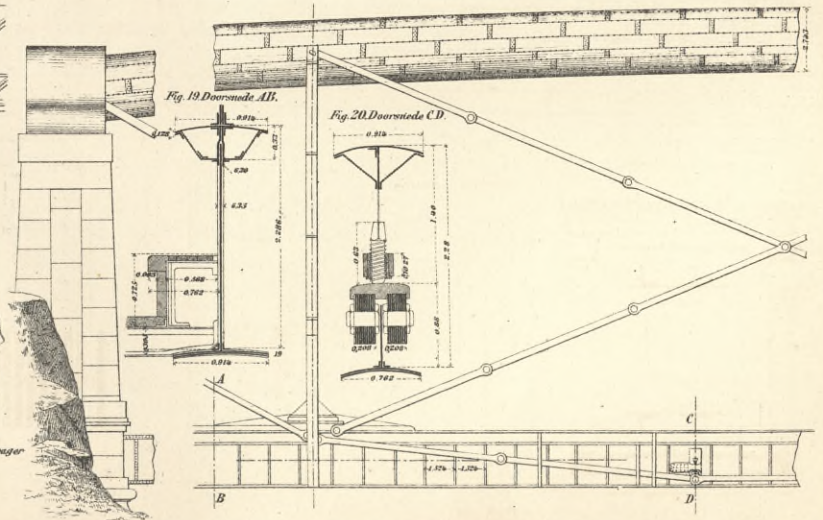


Fig. 8. Doorsnede.

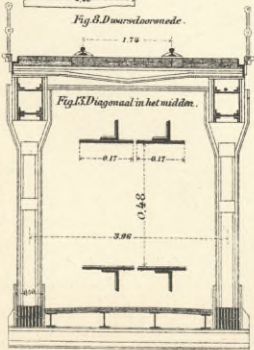


Fig. 9. Einderbinding.

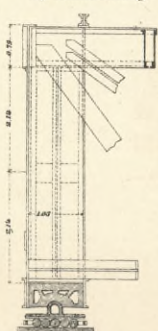


Fig. 10. Verticaal.

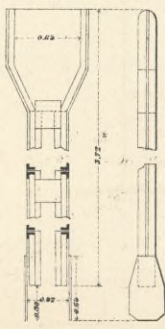
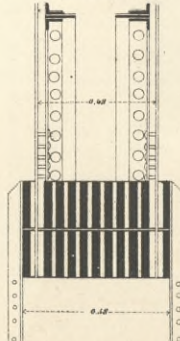
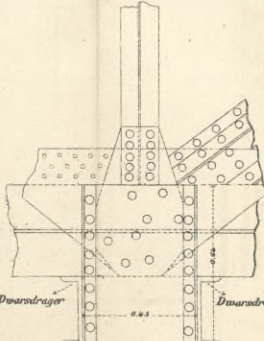


Fig. 11. Doorsnede.



Verbinding aan onderwand.

Fig. 12. Ansicht.









Brug over de Tamar bij Saltash. (Fig. 1-5).

Fig. 1. Aanzicht.

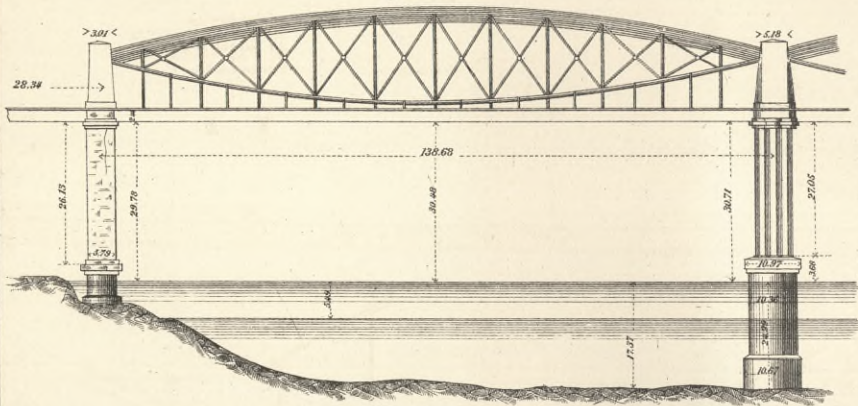


Fig. 2. Gedetailleerd Aanzicht.

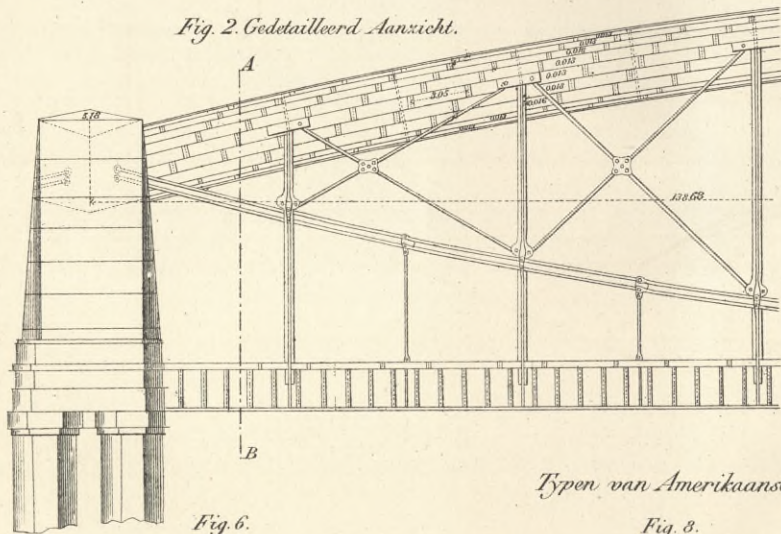


Fig. 4. Detail Onderrand met Langsdrager.

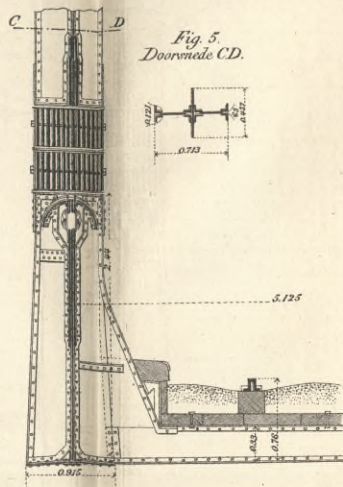


Fig. 5. Doornale CD.

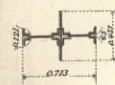


Fig. 3. Doorsnede AB.

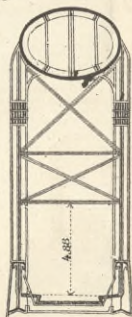


Fig. 15. Type Keystone Bridge C°

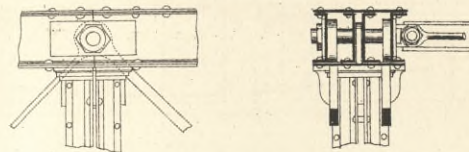
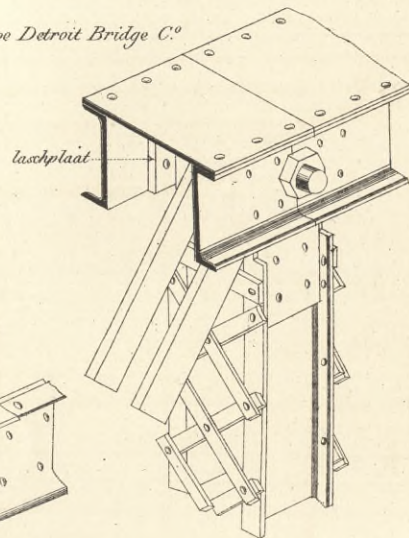


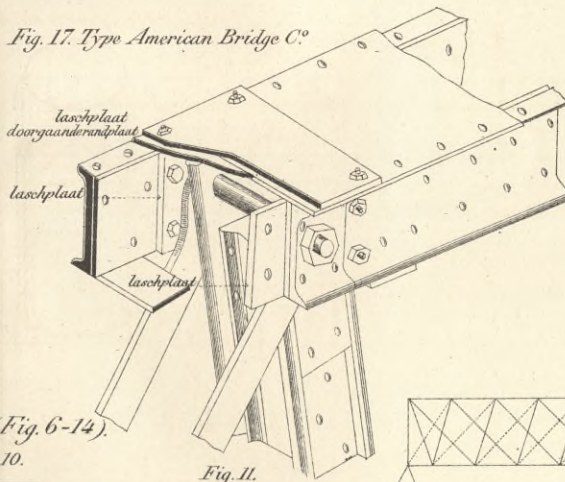
Fig. 16. Type Detroit Bridge C°



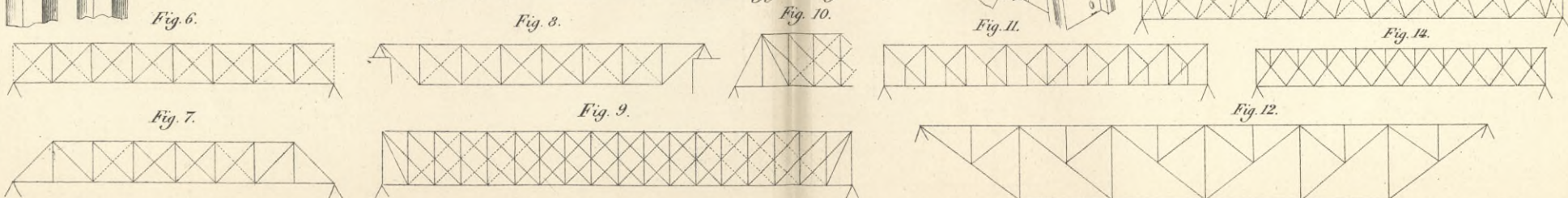
Schaal.

Fig. 1. 1 à 1000  
2, 3. 1 à 250  
4, 5. 1 à 50

Fig. 17. Type American Bridge C°



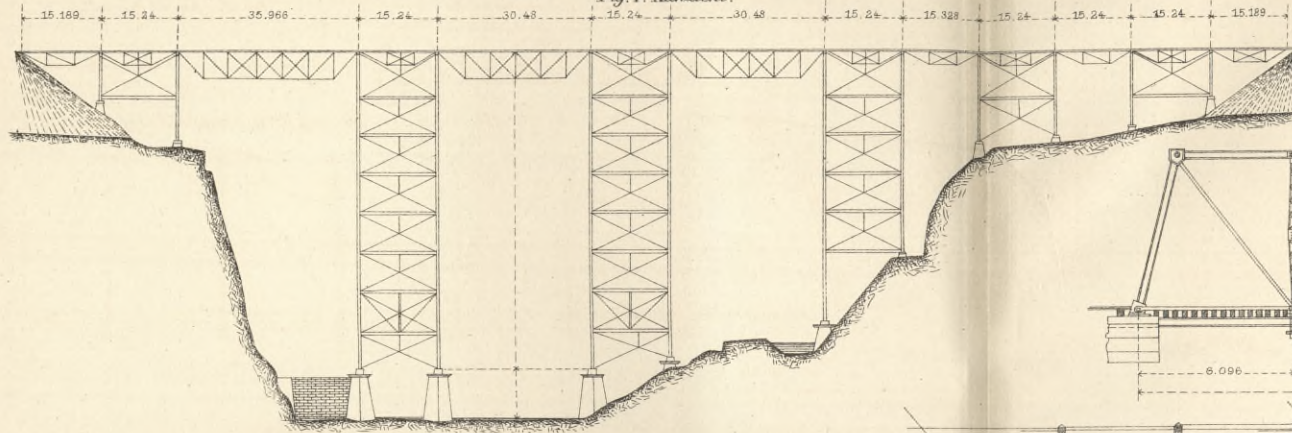
Typen van Amerikaanse Vakwerkbruggen (Fig. 6-14).







Viaduct over de Genesee bij Portage (Fig. 1-7)  
Fig. 1. Aanzicht.



Spanning van 30.48 Meter.  
Fig. 3. Aanzicht.

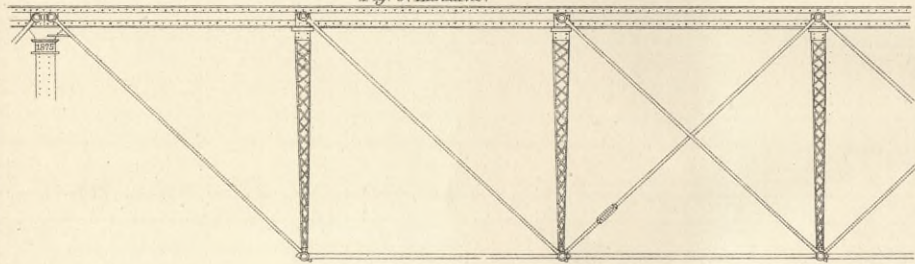


Fig. 4. Platte grond.

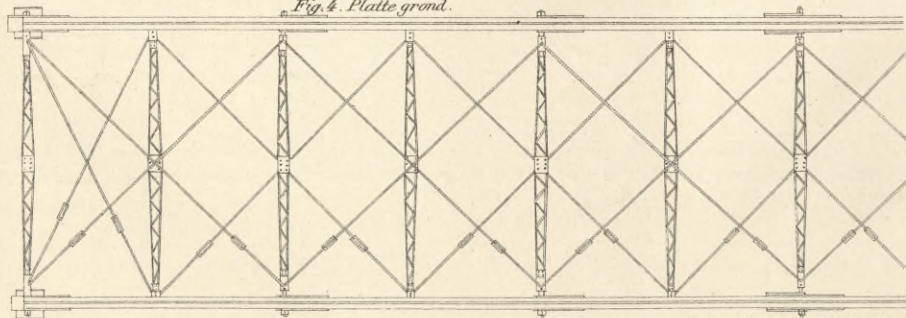
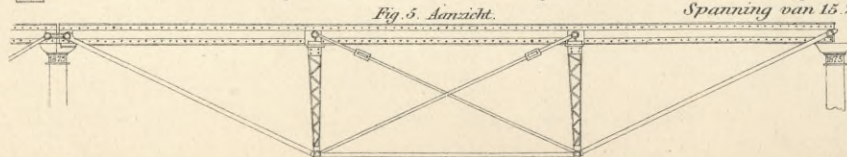


Fig. 5. Aanzicht.



Spanning van 15.24 Meter.

Fig. 6. Doorsnede.



Rijplak en leuning  
Fig. 6. Langs doorsnede

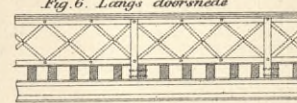
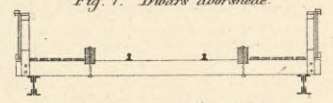


Fig. 7. Dwars doorsnede.



Brug over de Hoosie, in den Spoorweg Troy-Greenfield (Fig. 8-12)  
Fig. 8. Aanzicht.

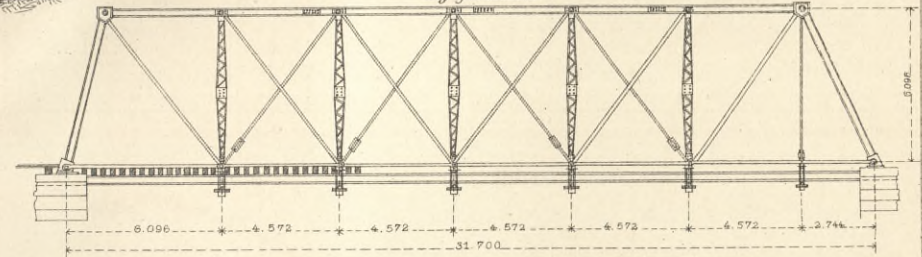


Fig. 9. Platte grond.

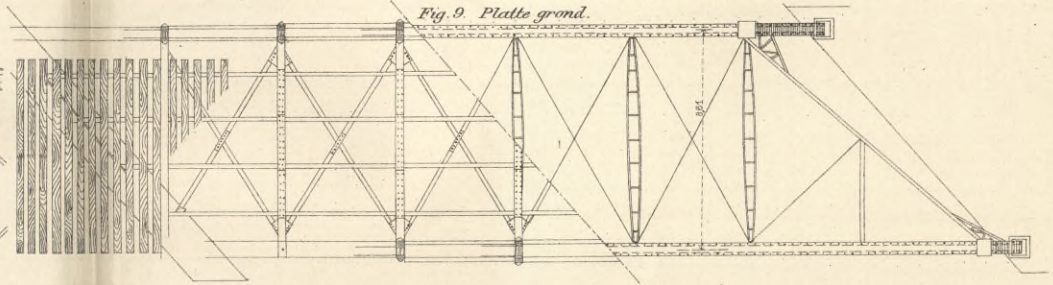
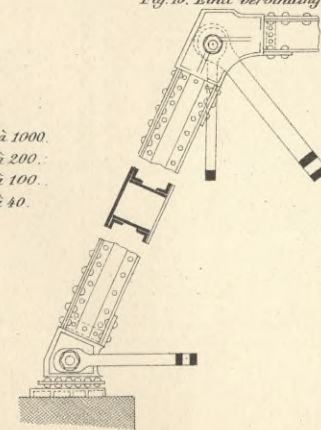


Fig. 10. Eind verbinding



Verbinding aan Randen  
Fig. 11. Aanzicht

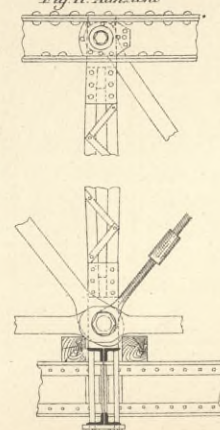
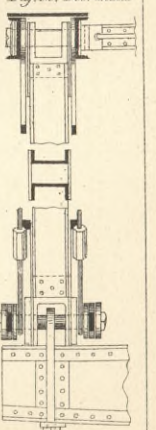


Fig. 12. Doorsnede



Schaal

- Fig. 1 ..... 1 à 1000.
- Fig. 8, 9 ..... 1 à 200.
- Fig. 3, 4, 5, 6, 7. 1 à 100.
- Fig. 10, 11, 12. 1 à 40.





Brug over het Lansdowne dal te Philadelphia. (Fig. 1-4).

Fig. 1. Aanzicht.

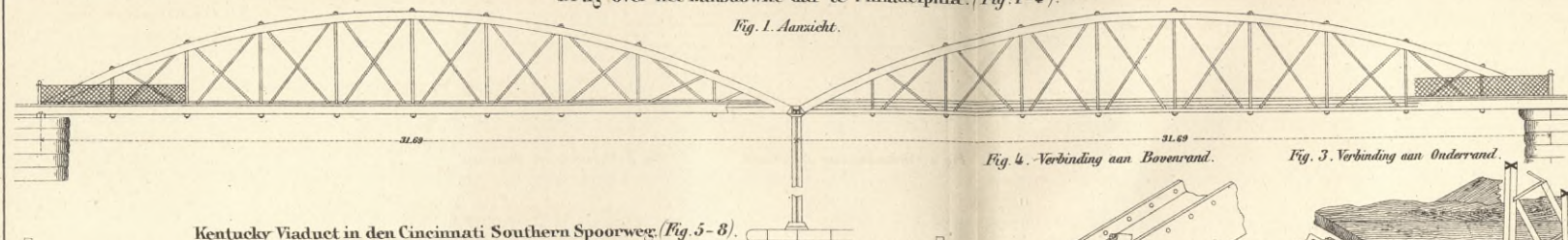


Fig. 2. Eindverbinding.

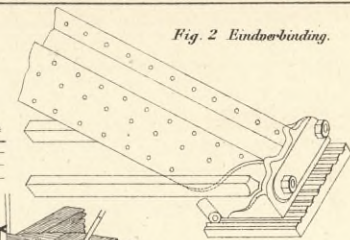


Fig. 4. Verbinding aan Bovenrand.

Fig. 3. Verbinding aan Onderrand.

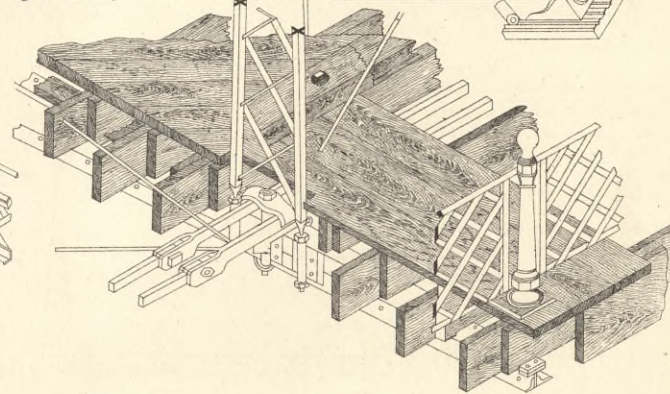
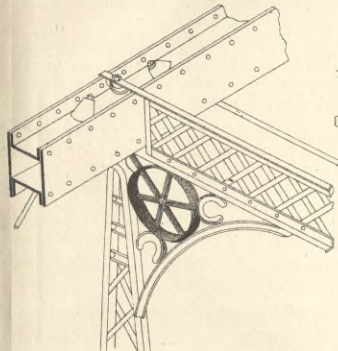


Fig. 6. Aanzicht.

Kentucky Viaduct in den Cincinnati Southern Spoorweg. (Fig. 5-8).

Fig. 5. Aanzicht.

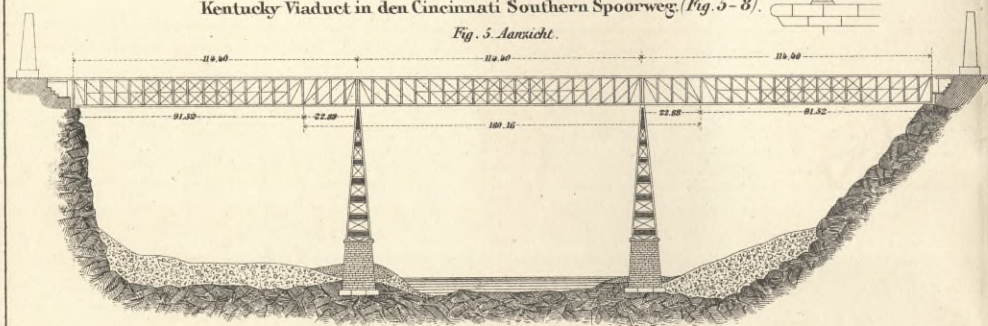


Fig. 7. Verbinding bij Tweevoud steunpunt.

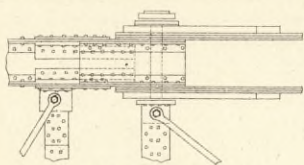
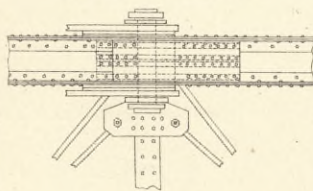
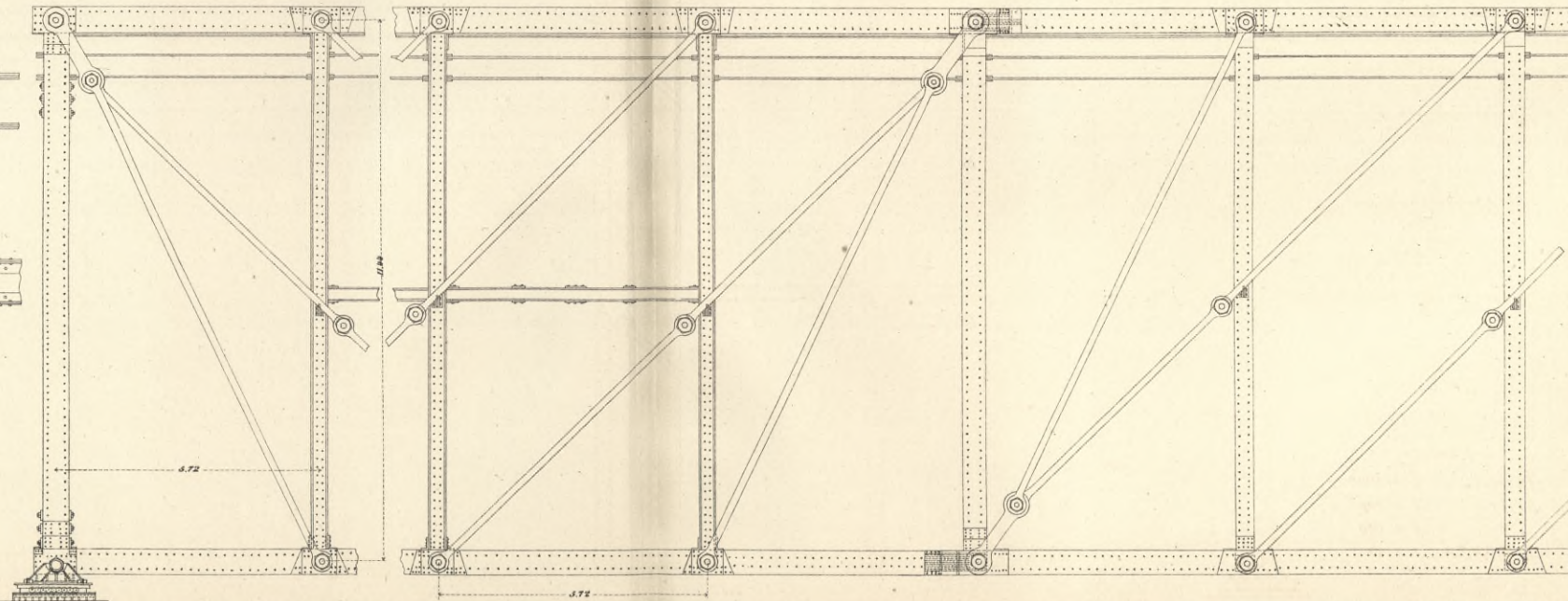


Fig. 8. Verbinding Windkransen.



Schaal.

- Fig. 5. .... 1 à 2000.
- " 1 ..... 1 à 200.
- " 6 ..... 1 à 100.
- " 2, 3, 4, 7, 8 ... 1 à 40.









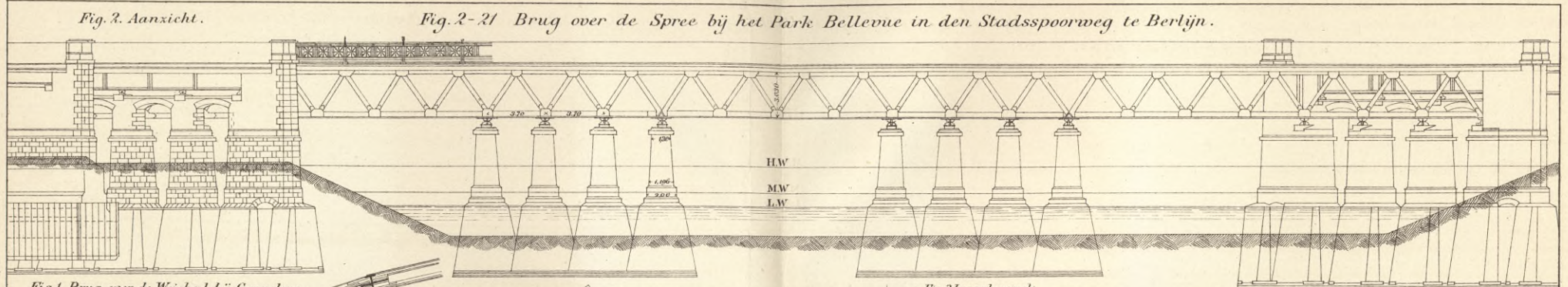


Fig. 1. Brug over de Weichsel bij Graudenz. Verstijving van den bovenrand aan het einde.



Fig. 14. Oplegging eindpijler.

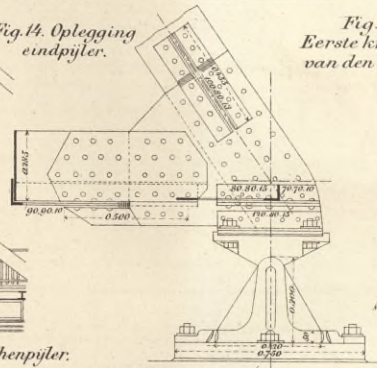


Fig. 3-5 Eerste knooppunt van den bovenrand.

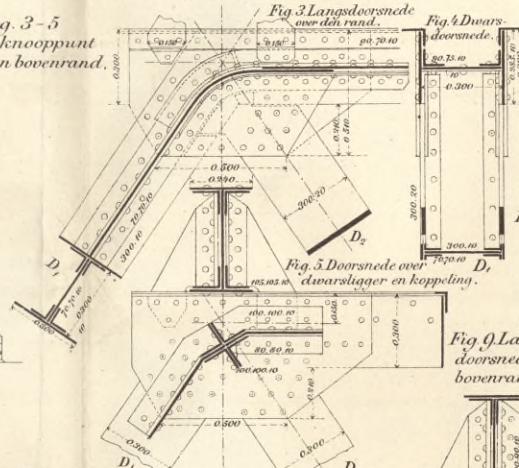


Fig. 6-8 Eerste knooppunt van den onderrand.

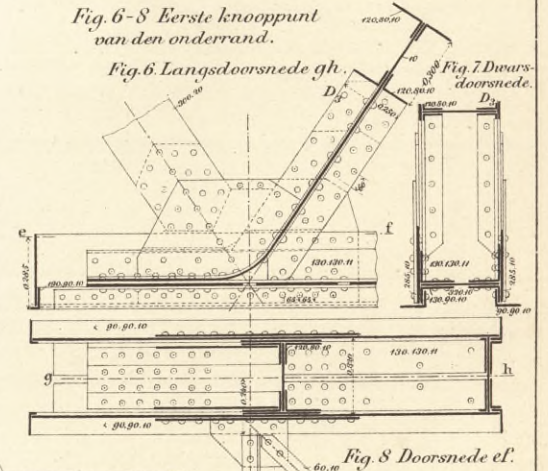


Fig. 15-21 Oplegging op een tusschenpijler.

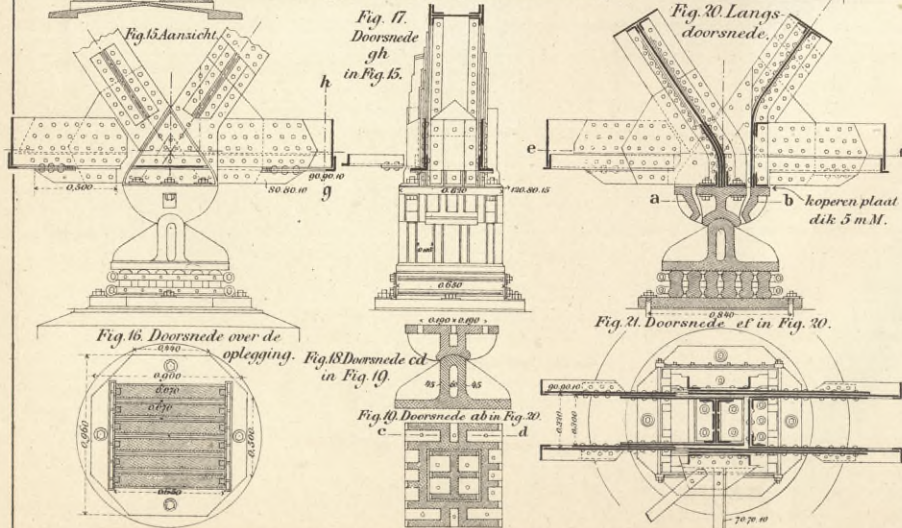


Fig. 5. Doorsnede over dwarsligger en koppeling.

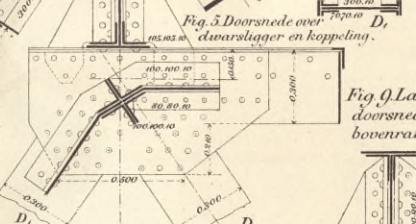


Fig. 9. Langsdoorsnede bovenrand.

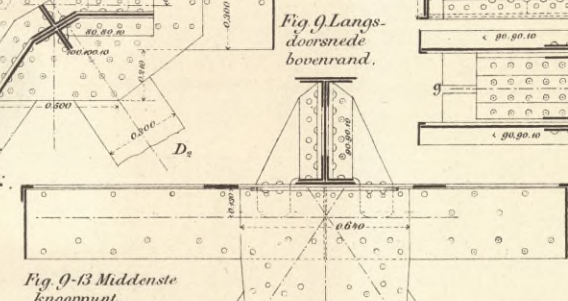
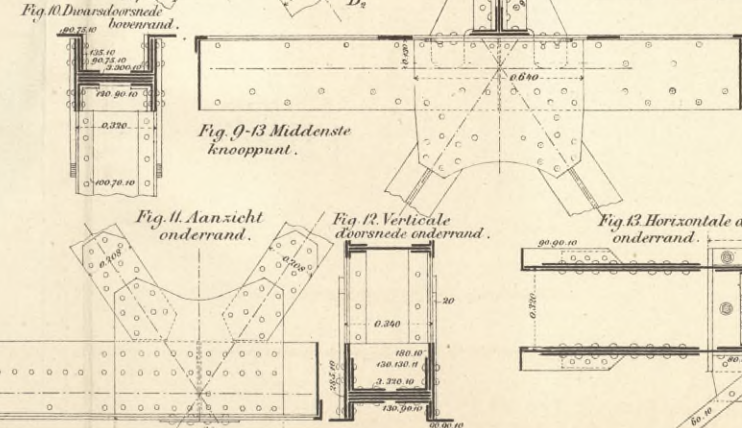


Fig. 9-13 Middenste knooppunt.



Schaal van

Fig. 1	1 à 150
2	1 à 250
3-14	1 à 30
15-21	1 à 30.













Fig. 1-4. Brug van Ore Hill bij Salisbury (Amerika) stelsel Howe.

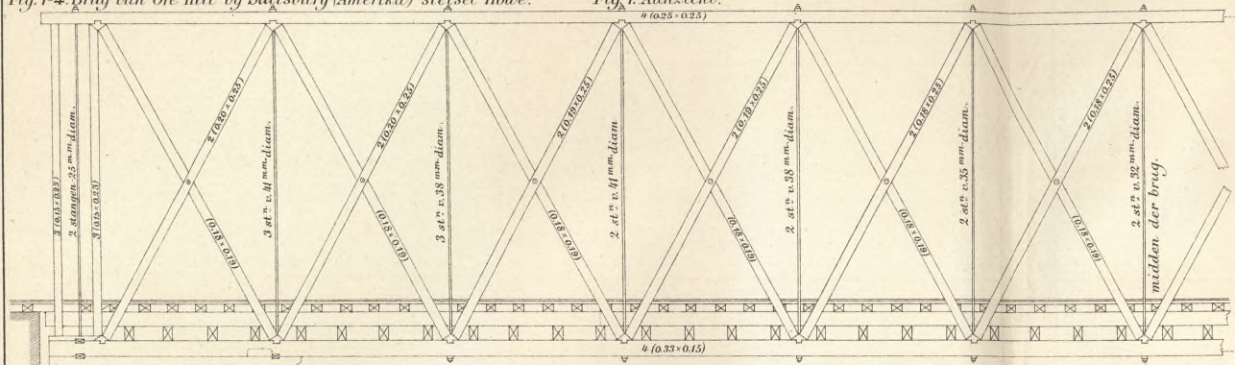


Fig. 1. Aanzicht.

Fig. 2. Doorsnede.

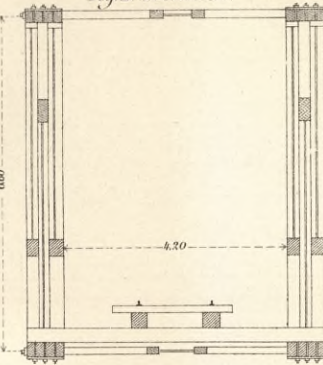


Fig. 3. Beneden Knooppunt.

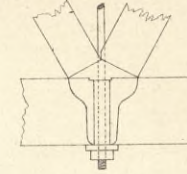


Fig. 4. Boven-Knooppunt

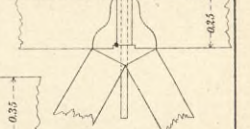


Fig. 11. Knooppunt onderand.

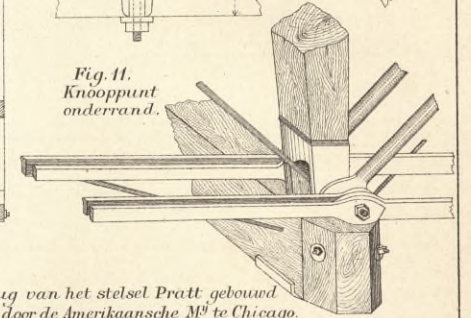


Fig. 5. Doorsnede AB.

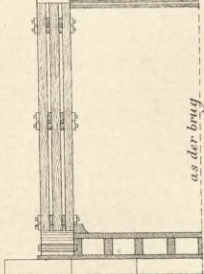


Fig. 5-11. Brug van het stelsel Marphy-Whipple Fig. 6. Aanzicht.

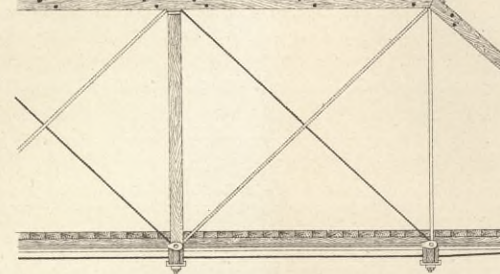


Fig. 7. Knooppunt bovenrand (Aanzicht).

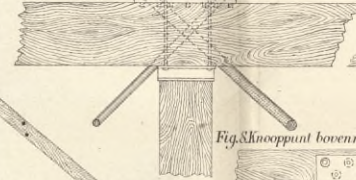


Fig. 9. Einde bovenrand (Aanzicht)



Fig. 12-18. Brug van het stelsel Pratt gebouwd door de Amerikaanse M<sup>o</sup> te Chicago.



Fig. 19. Brug van het stelsel Post in hout en ijzer. Aanzicht.

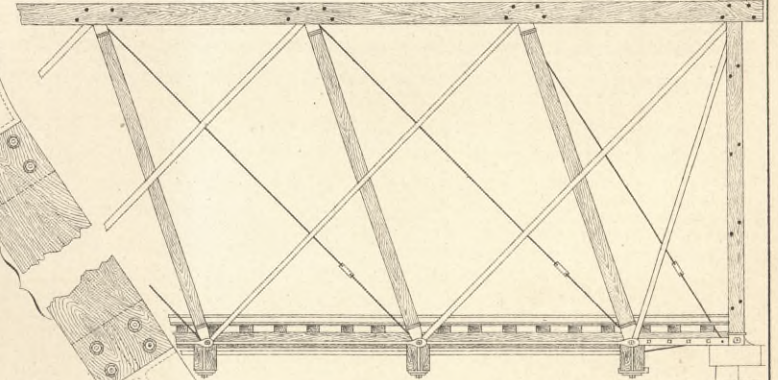


Fig. 10. Einde bovenrand (platte grond).

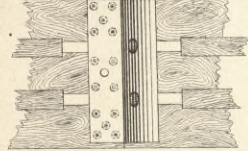


Fig. 15. Boven- en beneden knooppunt.

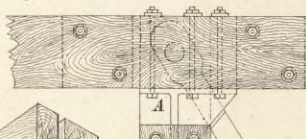


Fig. 16. Doorsnede over een ligger.

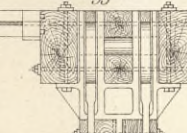


Fig. 17. Doorsnede bij het einde met weglating der randen.

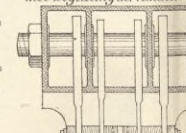


Fig. 18. Verbinding eindstijl met de randen.



Fig. 14. Perspectiefisch aanzicht van de schoen verbinding.

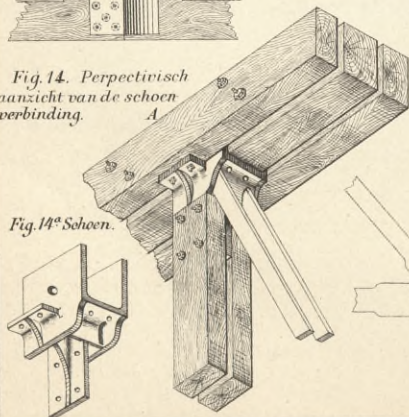


Fig. 14<sup>a</sup> Schoen.

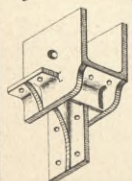
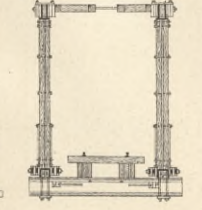


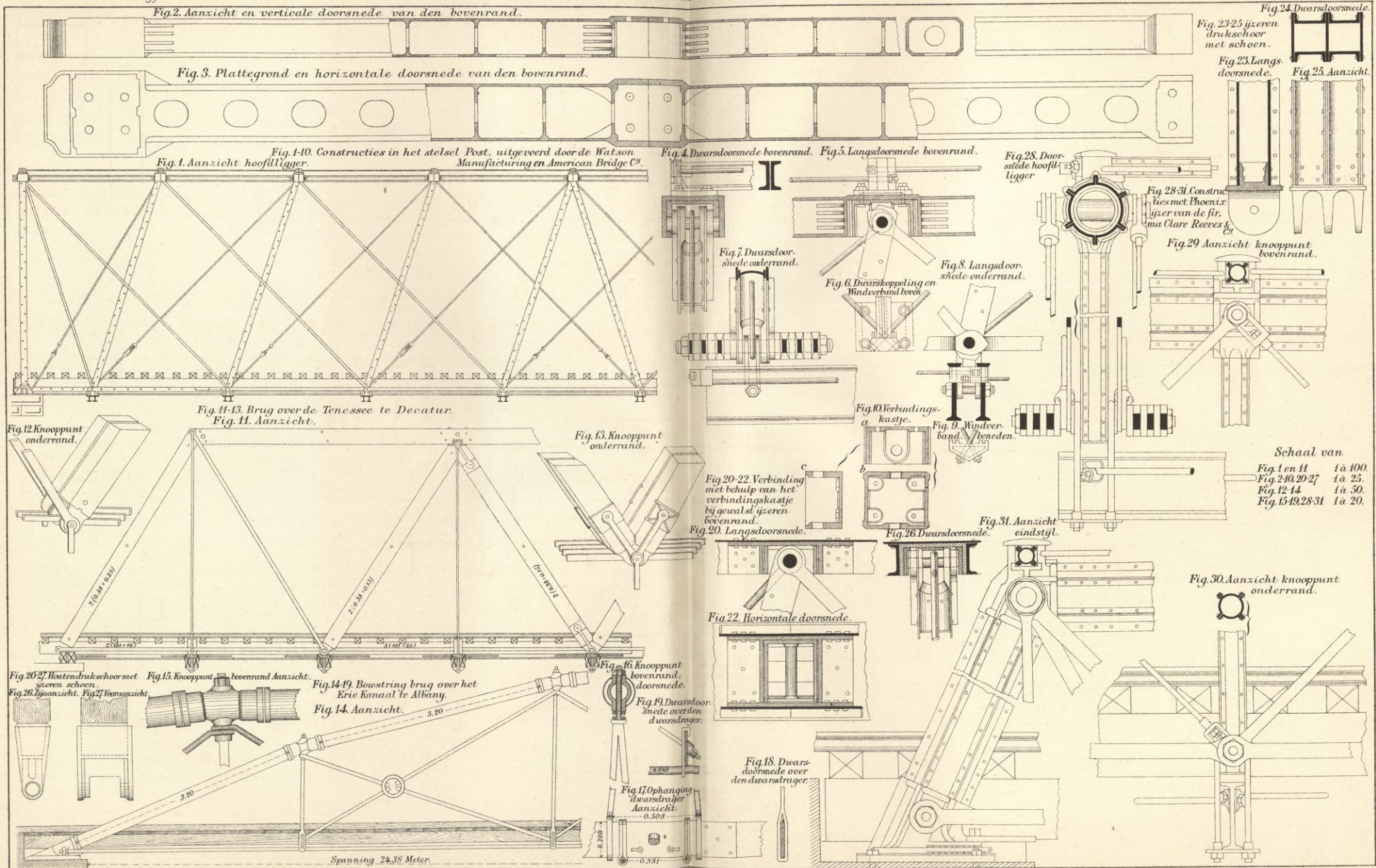
Fig. 13. Dwarsdoorsnede.



Schaal van Fig. 1, 2, 5, 6, 19 1 à 100.  
 Fig. 3, 4 1 à 25.  
 Fig. 7, 8, 9, 10, 11, 14, 15, 16, 17 en 18 1 à 20.  
 Fig. 12 en 13 1 à 200.





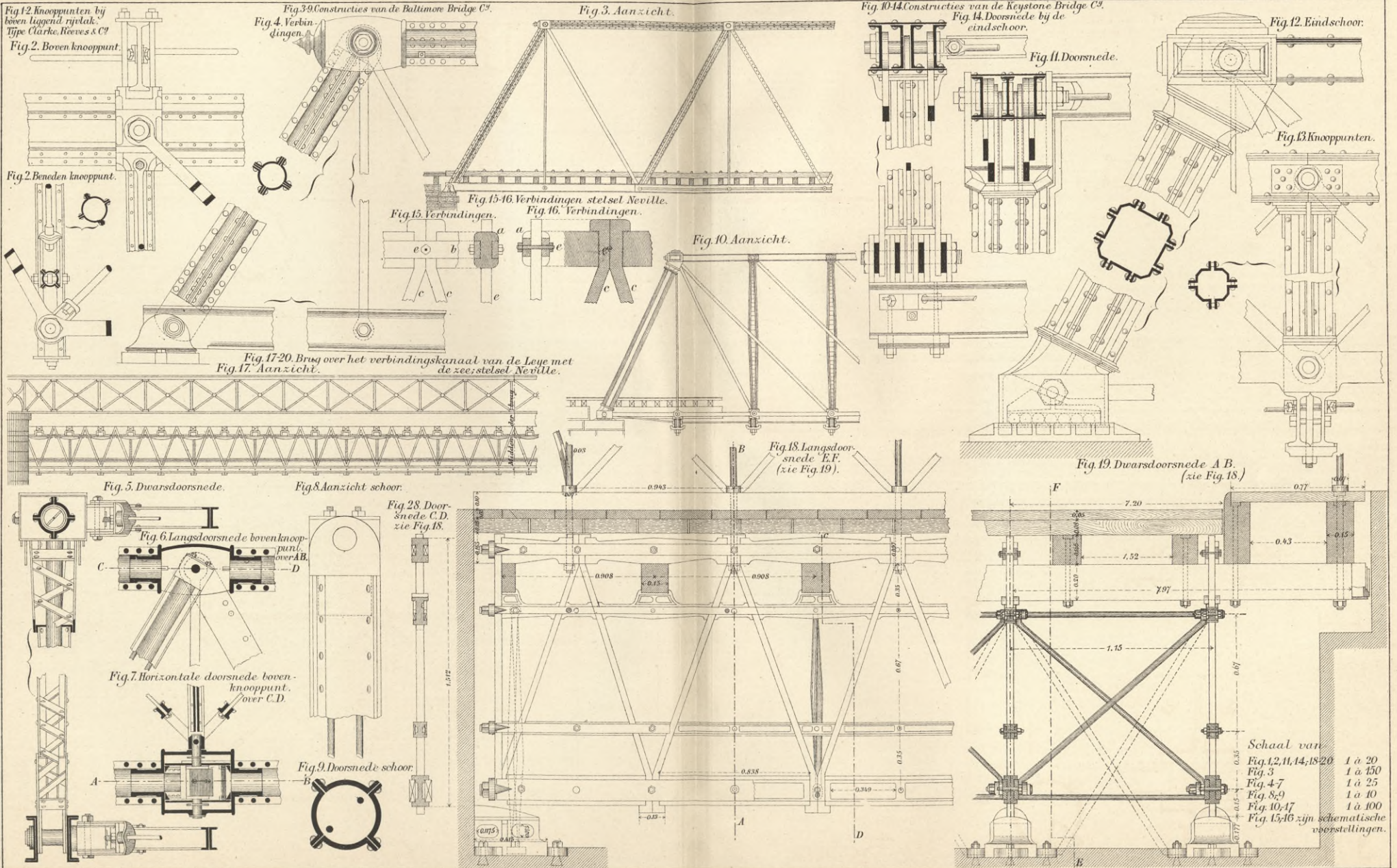


Schaal van

Fig 1 en 11	1 à 100.
Fig 20, 20-27	1 à 25.
Fig 12-14	1 à 50.
Fig 15-19, 28-31	1 à 20.







Schaal van  
 Fig. 1, 2, 11, 14, 18-20 1 à 20  
 Fig. 3 1 à 150  
 Fig. 4-7 1 à 25  
 Fig. 8, 9 1 à 10  
 Fig. 10-17 1 à 100  
 Fig. 15-16 zijn schematische voorstellingen.







Fig. 13. Brug over de Trent bij Newark. stelsel Warren.

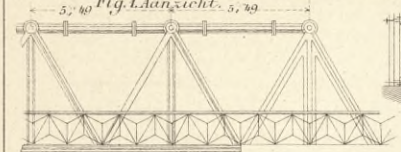


Fig. 6-13. Schifform stelsel. Fig. 6. Type voor kleinere hoogten. Fig. 7. Type voor grootere hoogten.

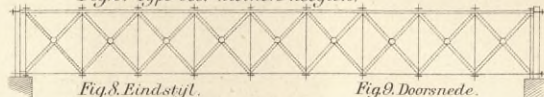


Fig. 8. Eindstyl.

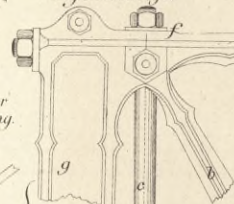


Fig. 9. Doorsnede.

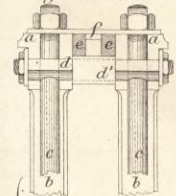


Fig. 10. Aan- zicht Knooppunten.

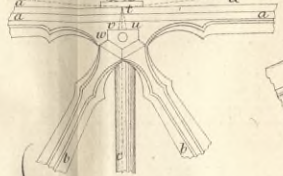


Fig. 16. Aanzicht hoekverbinding.

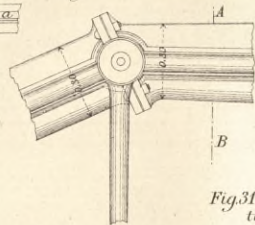


Fig. 14-19. Brug in den Spoorweg tusſchen Carlsruhe en Rastatt. Fig. 14. Doorsnede.

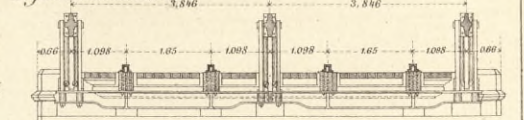


Fig. 15. Aanzicht.

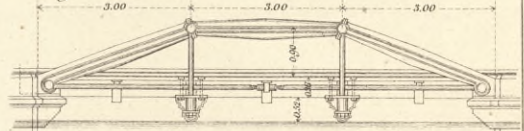


Fig. 2. Vooraanzicht Fig. 3. Zijaanzicht drukschoor.

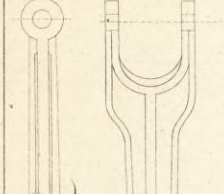


Fig. 5. Verbinding der hoofdliggers onderling.

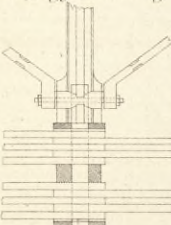


Fig. 4. Ophanging van den ondertrand.

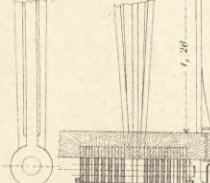


Fig. 11. Vooraanzicht snijpunt diagonalen.

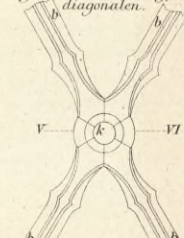


Fig. 12. Zijaanzicht snijpunt diagonalen.

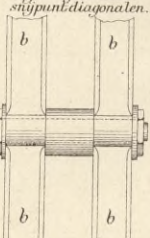


Fig. 19. Doorsnede A.B. zie Fig. 10.

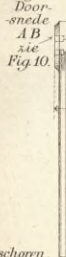
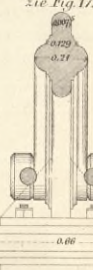


Fig. 18. Doorsnede C.D. zie Fig. 17.



Schaal van  
Fig. 1, 2, 23, 29, 30 1 à 200  
Fig. 2, 5, 24-28 1 à 40  
Fig. 14, 15 1 à 100  
Fig. 16-19, 31, 32 1 à 200  
Fig. 6-13, 20, 21 zijn schematische voorstellingen.

Fig. 17. Aanzicht oplegging.

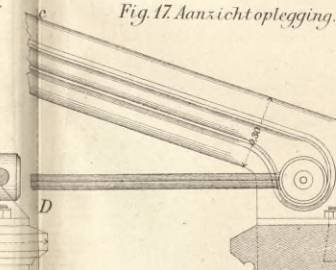


Fig. 31. Aanzicht tusſchenstyl.

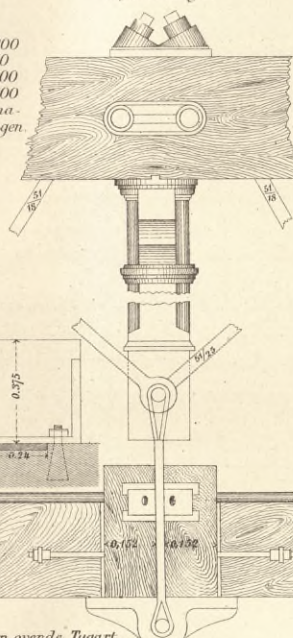


Fig. 32. Aanzicht middenstyl.

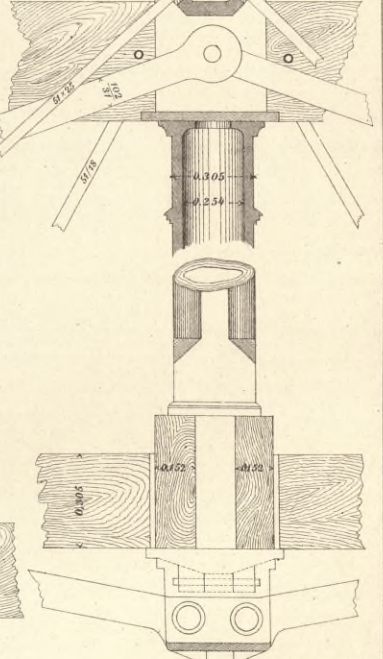


Fig. 13. Type Doorsnede

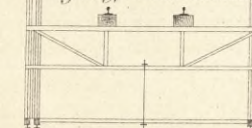


Fig. 20. Type Stelsel Fink.

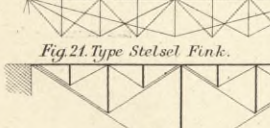


Fig. 21. Type Stelsel Fink.



Fig. 22-28. Brug over de Greenrivier (Stelsel Fink). Fig. 22. Aanzicht.

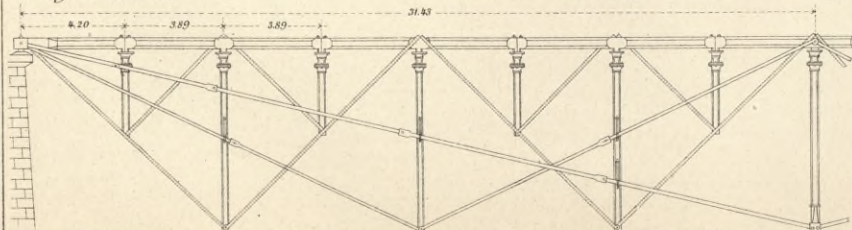


Fig. 24. Aanzicht bovenknooppunt.

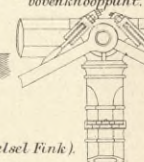


Fig. 25. Styl met trekschoeren. Doorsnede en Zijaanzicht.

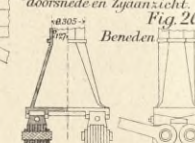


Fig. 26. Beneden knooppunt.



Fig. 27. Oplegging. Aanzicht.

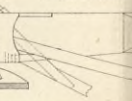


Fig. 28. Oplegging. Doorsnede.

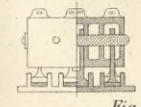


Fig. 29-32. Brug te Grafton over de Tygart.

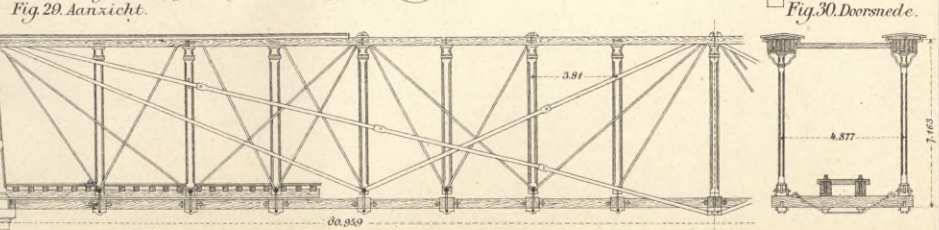






Fig. 1-4. Finkligger met toepassing van Phoenix-ijzer Constructie van de Baltimore Bridge C. Fig. 1. Aanzicht.

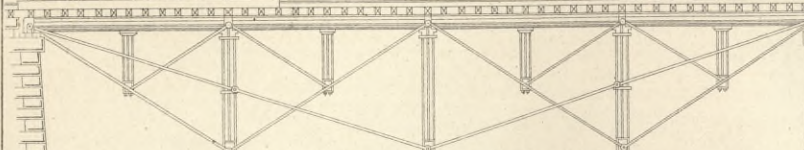


Fig. 2. Oplegging.

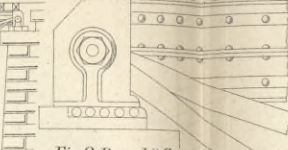


Fig. 3. Aanzicht knooppunt.

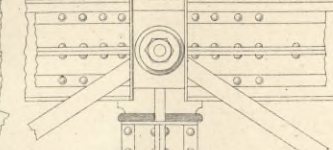


Fig. 4. Doorsnede.

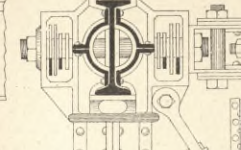


Fig. 10-11. Brug over de Althorpe straat. Fig. 10. Dwaarsdoorsnede. Fig. 11. Horizontale doorsnede.

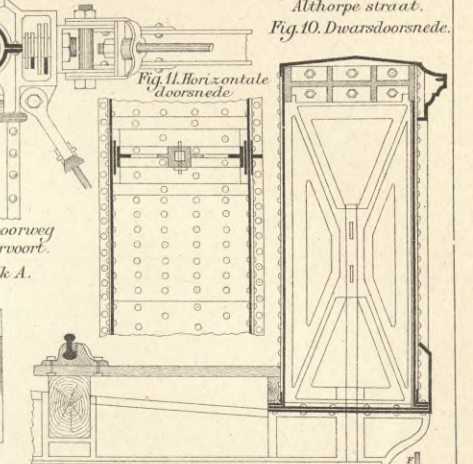


Fig. 7-9. Brug in den Matanzas spoorweg. Stelsel Bollmann. Fig. 7. Aanzicht.

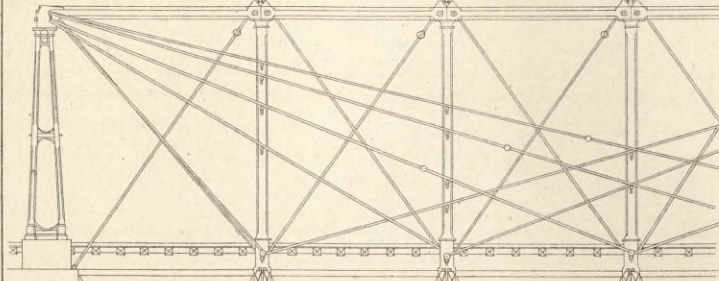


Fig. 8. Halve doorsnede Doorsnede.

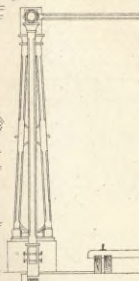


Fig. 9. Brug bij Camden.

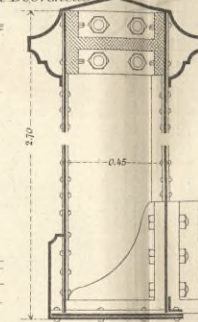


Fig. 12. Brug in den spoorweg Rug bij Leaminaton. Doorsnede.

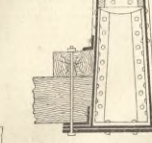


Fig. 13-33. Brug in den Rijn spoorweg over den IJssel bij Westervoort. Fig. 15. Gegoten ijzeren eindstuk A.

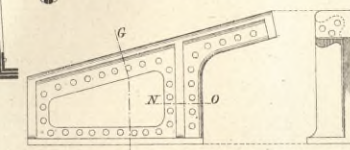


Fig. 13. Aanzicht van een buitenligger.

Fig. 5. Type stelsel Bollmann.

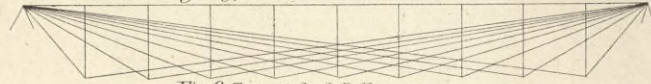
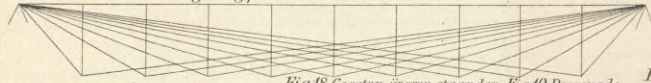


Fig. 6. Type stelsel Bollmann.



De cijfers geven de dikte van het plaat ijzer aan in millimeters.



Fig. 14. Plattegrond buitenligger.

A Gegoten ijzeren eindstukken. D Gegoten ijzeren staanders F Plaatijzeren bojen tot onderlinge bevestiging der hoofdliggers.

Fig. 16. Opstand van een deel van den hoofdligger.

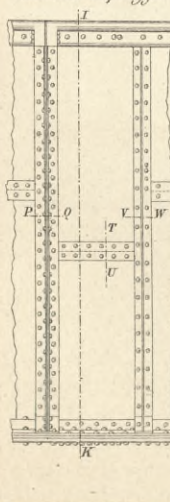


Fig. 17. Gegoten ijzeren staander buitenligger.

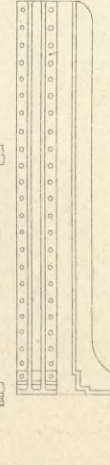


Fig. 18. Gegoten ijzeren staander middenligger.

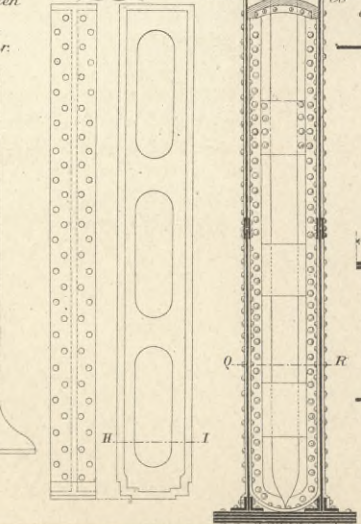


Fig. 21.

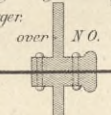


Fig. 22.



Fig. 23.



Fig. 24.



Fig. 26.



Fig. 27.



Fig. 25.



Fig. 28.



Fig. 29.



Fig. 30.



Fig. 21-31. Doorsnede der oorspronkelijke constructie.

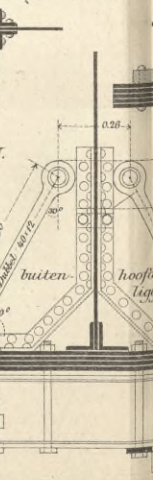


Fig. 28.



Fig. 29.



Fig. 30.



Fig. 31.



Fig. 32.



Fig. 33.



Schaal van Fig. 1, 13, 14, 2-4, 9, 12, 20, 33, 7, 8, 14, 100, 18, 19, 16, 50. Een 8 2/4 m schematische voorstellingen.

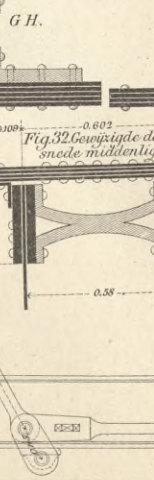


Fig. 20. Nieuwe ophanging der dwarsdragers.

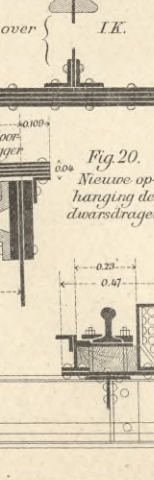


Fig. 32. Gewijzigde doorsnede middenligger.

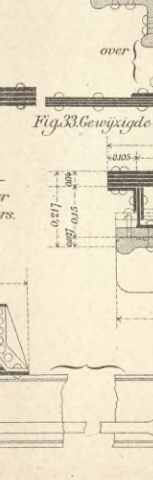
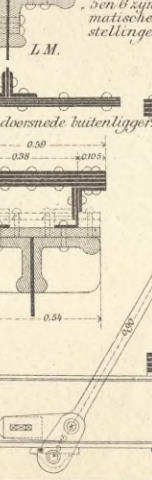
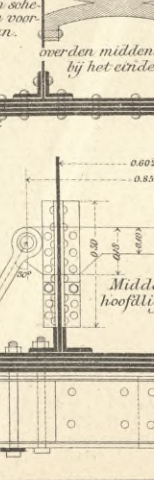


Fig. 33. Gewijzigde doorsnede buitenligger.



Middenhoofdligger.







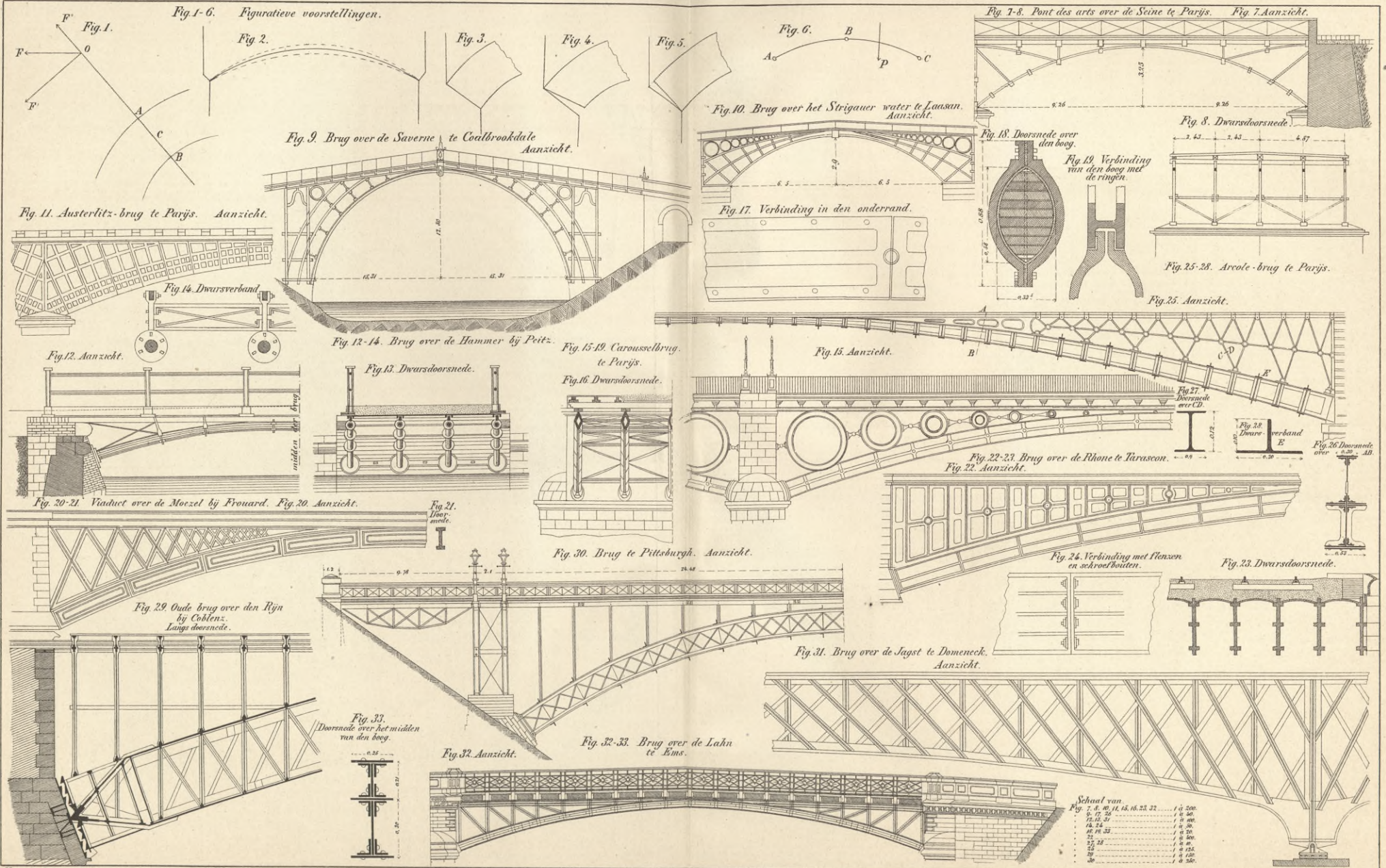


Fig. 1-6. Figurative voorstellingen.

Fig. 7-8. Pont des arts over de Seine te Parijs. Fig. 7. Aanzicht.

Fig. 9. Brug over de Saverne te Coalbrookdale Aanzicht.

Fig. 10. Brug over het Strigauer water te Laasan Aanzicht.

Fig. 11. Austerlitz-brug te Parijs. Aanzicht.

Fig. 18. Doornede over den boog.

Fig. 8. Dwarsdoorsnede.

Fig. 12-14. Brug over de Hammer bij Peitz.

Fig. 15-19. Carousselbrug te Parijs.

Fig. 15. Aanzicht.

Fig. 19. Verbinding van den boog met de ringen.

Fig. 25-28. Arcole-brug te Parijs.

Fig. 25. Aanzicht.

Fig. 12. Aanzicht.

Fig. 13. Dwarsdoorsnede.

Fig. 16. Dwarsdoorsnede.

Fig. 22-23. Brug over de Rhone te Tarascon. Fig. 22. Aanzicht.

Fig. 28. Dwarsverband E.

Fig. 26. Dwarsnede over a-b.

Fig. 20-21. Viaduct over de Mozel bij Frouard. Fig. 20. Aanzicht.

Fig. 21. Door-snede.

Fig. 30. Brug te Pittsburgh. Aanzicht.

Fig. 24. Verbinding met stalen en schroefhouten.

Fig. 23. Dwarsdoorsnede.

Fig. 29. Oude brug over den Rijn bij Coblenz. Lange doorsnede.

Fig. 33. Doornede over het midden van den boog.

Fig. 32. Aanzicht.

Fig. 32-33. Brug over de Lahn te Ems.

Fig. 31. Brug over de Jagst te Domeneck. Aanzicht.

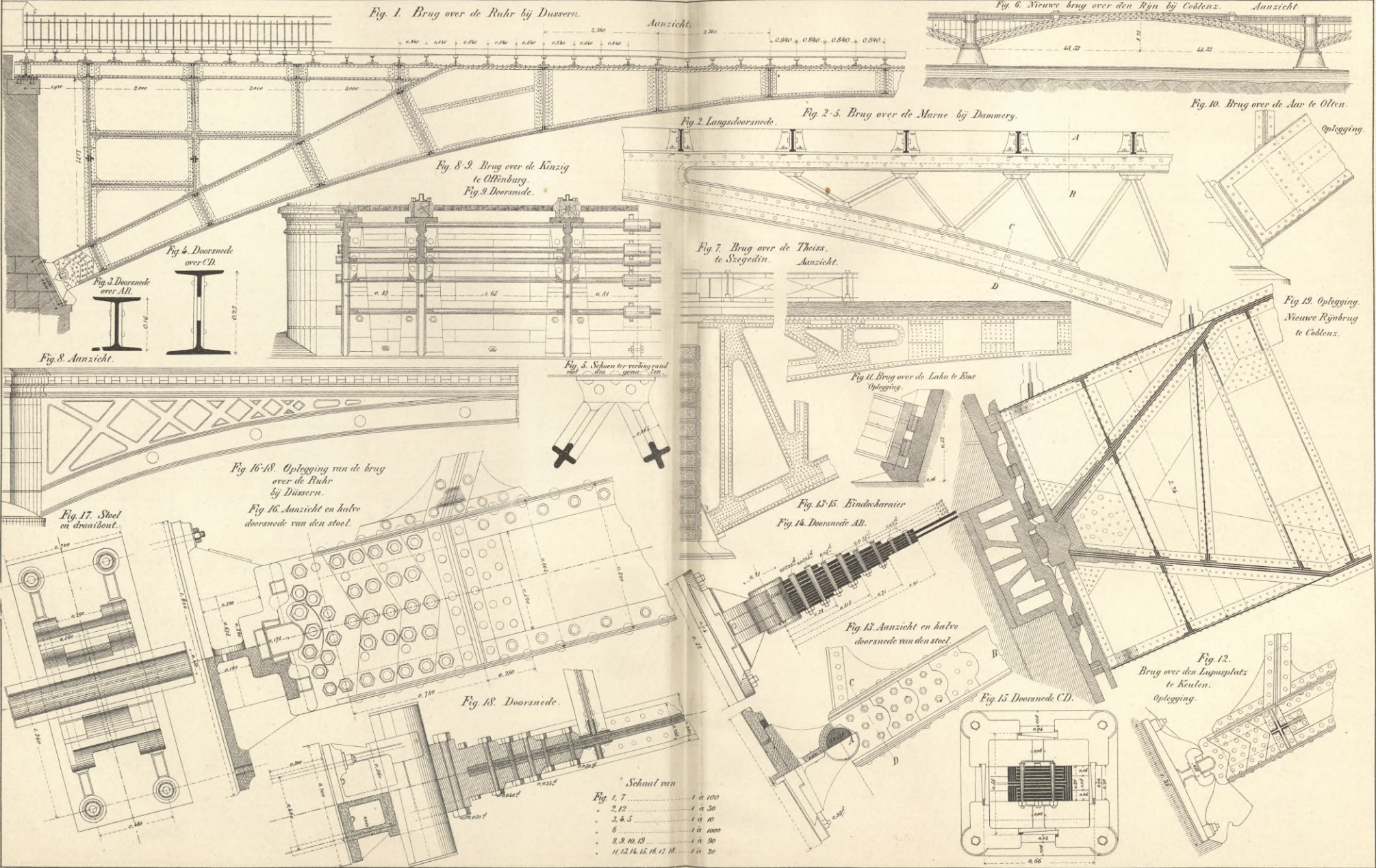
Schaal van

Fig. 1, 5, 10, 11, 15, 16, 22, 32	1 : 500
2, 7, 26	1 : 50
3, 12, 31	1 : 100
13, 24, 33	1 : 20
4, 6, 8, 9, 14, 17, 18, 19, 20, 21, 23, 25, 27, 28, 29, 30	1 : 100
10	1 : 50
11	1 : 100
12	1 : 50
13	1 : 20
14	1 : 100
15	1 : 50
16	1 : 100
17	1 : 50
18	1 : 100
19	1 : 50
20	1 : 100
21	1 : 50
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23	1 : 50
24	1 : 100
25	1 : 50
26	1 : 100
27	1 : 50
28	1 : 100
29	1 : 50
30	1 : 100
31	1 : 50
32	1 : 100
33	1 : 50









Schaal van

Fig. 1, 7	1 a 100
2, 12	1 a 30
3, 4, 5	1 a 10
6	1 a 1000
8, 9, 10, 13	1 a 50
11, 12, 14, 15, 16, 17, 18	1 a 20





Fig. 7-9. Victoriabrug over de Theems bij Windsor.  
Fig. 7. Aanzicht van den middentegger.

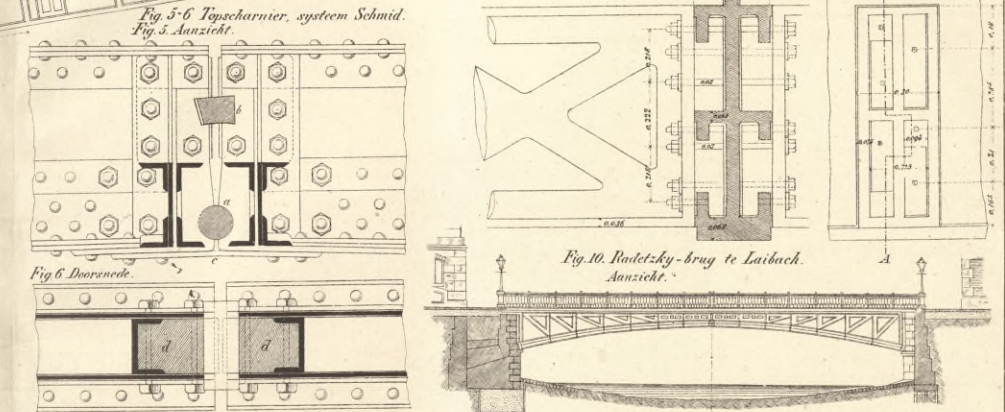
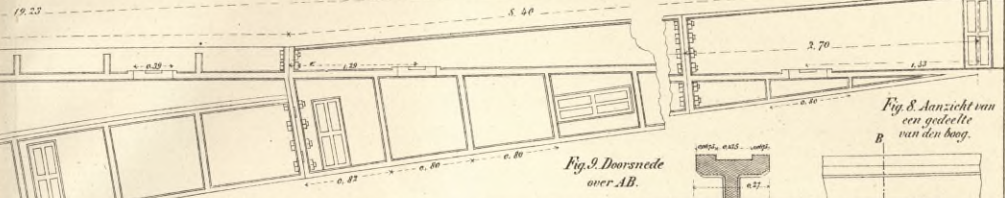
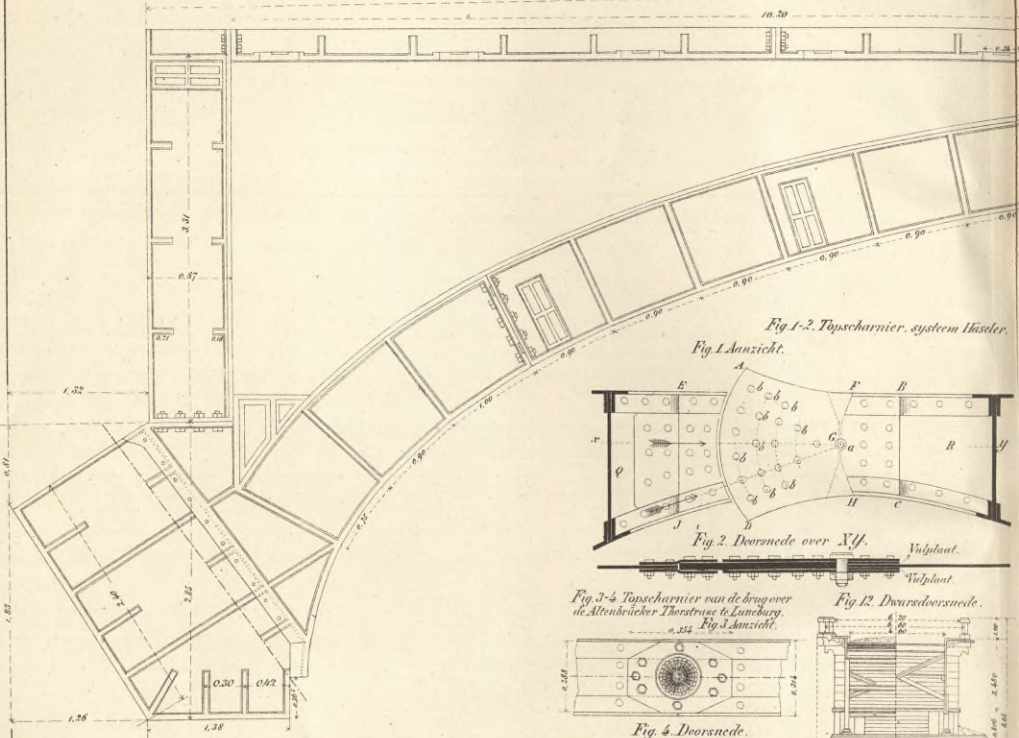
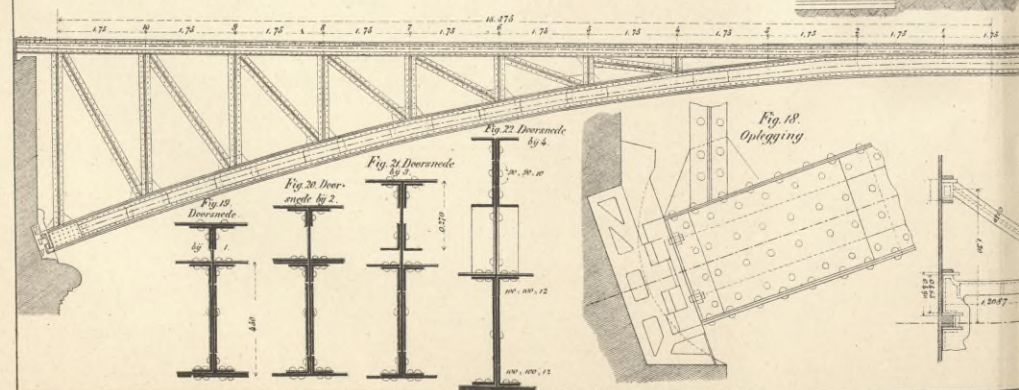


Fig. 17-22. Boven-Mainbrug te Frankfort.  
Fig. 17. Aanzicht.



Schaal van

Fig. 3, 4, 9, 18, 22	1 à 20
7, 14-16	1 à 50
10	1 à 200
11-13	1 à 250
17	1 à 100







Fig. 1-4. Project van een stalen brug over de Theems.

by Londen.

Fig. 1. Aanzicht.

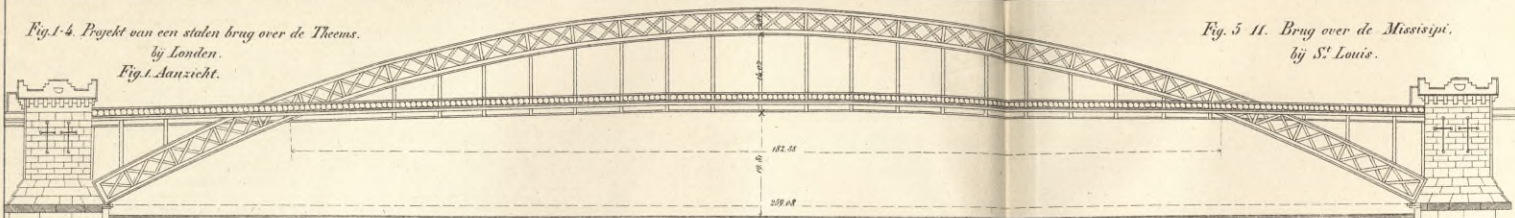


Fig. 2. Aanzicht van een deel des boogs.

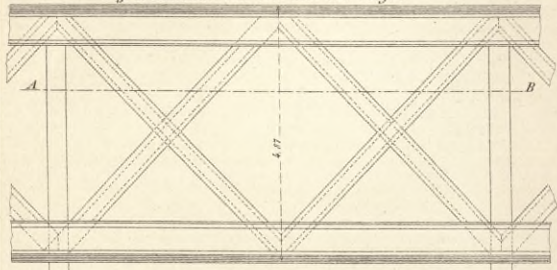


Fig. 4. Doorsnede AB over den boog.



Fig. 19-24. Brug over het Avoedryk kanaal te S<sup>t</sup>. Petersburg.

Fig. 19. Aanzicht.

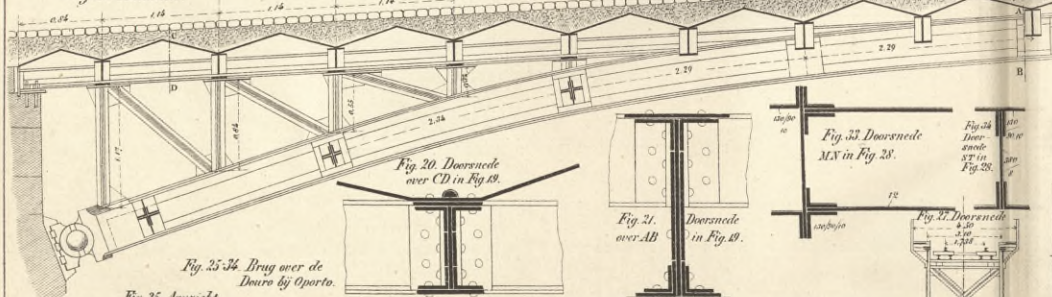


Fig. 20. Doorsnede over CD in Fig. 19.



Fig. 21. Doorsnede over AB in Fig. 19.

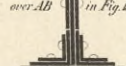


Fig. 22. Doorsnede MN in Fig. 28.

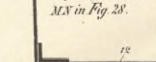


Fig. 23. Doorsnede ST in Fig. 28.



Fig. 25-26. Brug over de Douro by Oporto.

Fig. 25. Aanzicht.

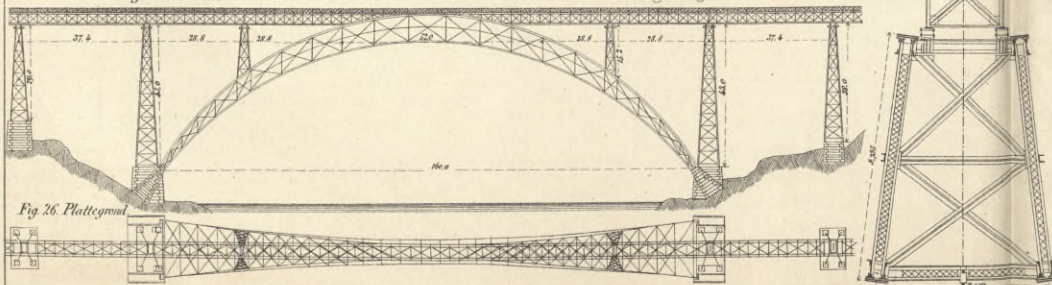


Fig. 26. Plattegrond.

Fig. 5-11. Brug over de Missisipi.

by S<sup>t</sup>. Louis.

Fig. 5. Aanzicht.

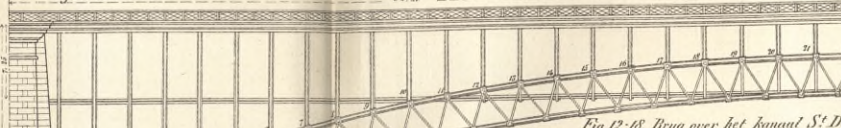


Fig. 13. Doorsnede.

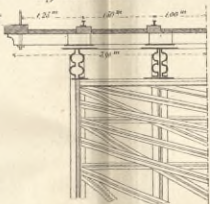


Fig. 14. Doorsnede over het midden.

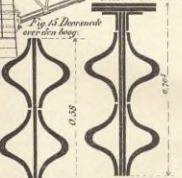


Fig. 15. Doorsnede over den boog.



Fig. 16. Doorsnede over AB in Fig. 15.



Fig. 12-18. Brug over het kanaal S<sup>t</sup>. Denis.

Fig. 12. Aanzicht.

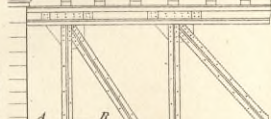


Fig. 11. Oplegging.

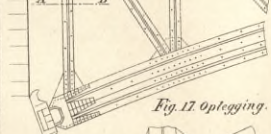


Fig. 10. Doorsnede by de oplegging.

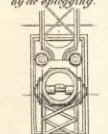


Fig. 9. Krans over de verbinding der boizen.

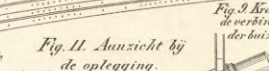


Fig. 28. Aanzicht der oplegging.

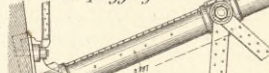


Fig. 22. Eindscharnier.

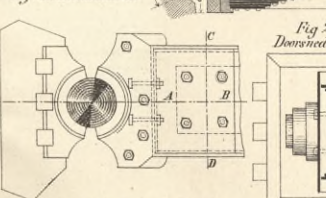


Fig. 24. Doorsnede CD in Fig. 22.

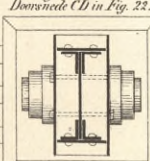
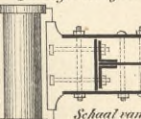


Fig. 23. Doorsnede AB en platte grond (Fig. 22).



Schaal van

Fig. 1	1/1000
2-4, 6, 10-12, 25, 29	1/1000
5	1/500
7-9, 13-16, 22-24, 30-34	1/1000
17, 18	1/500
19	1/1000
20	1/500
21	1/1000
23, 26	1/500
27	1/1000

Fig. 6. Doorsnede over den hoekstenen boog by een Knoppunt.

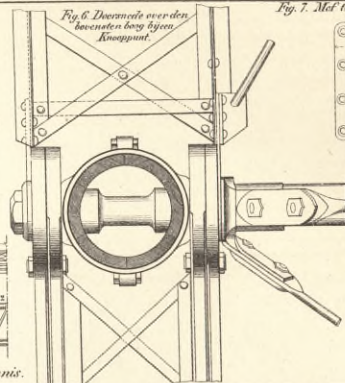


Fig. 7. Met ter verbinding der luisen.

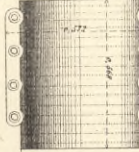


Fig. 8. Doorsnede over een basis.



Fig. 11. Aanzicht by de oplegging.

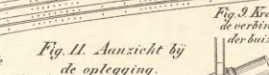


Fig. 28. Aanzicht der oplegging.

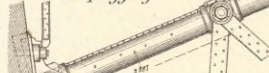


Fig. 32. Doorsnede U'W in Fig. 25.

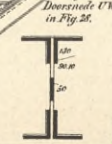
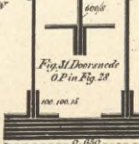


Fig. 31. Doorsnede O'P in Fig. 25.







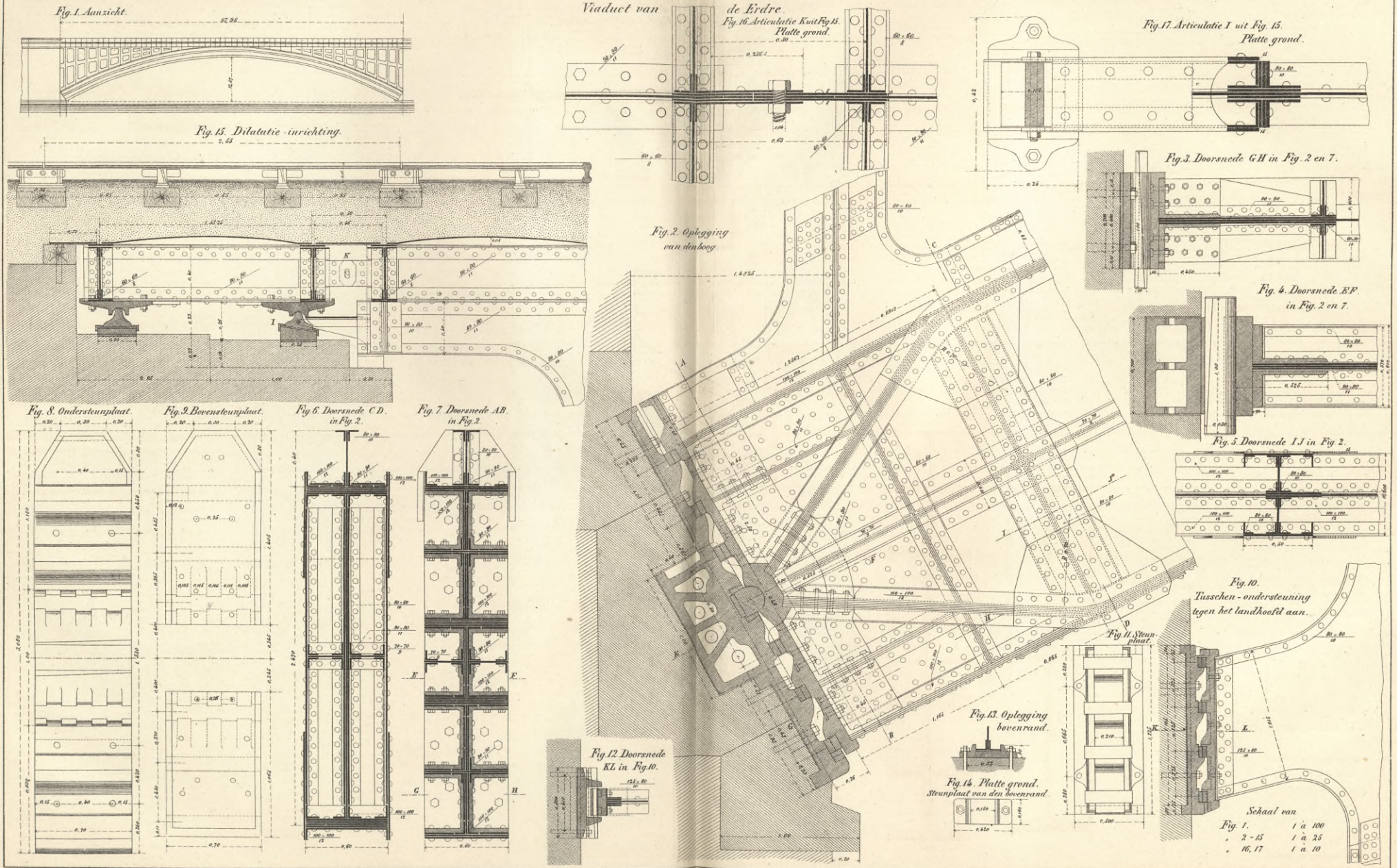


Fig. 1. Aanzicht.

Fig. 15. Dilatatie-inrichting.

Viaduct van de Erde.

Fig. 16. Articulatie Kuit Fig. 15. Platte grond.

Fig. 17. Articulatie I uit Fig. 15. Platte grond.

Fig. 2. Oplegging van den boog.

Fig. 3. Doorsnede GH in Fig. 2 en 7.

Fig. 4. Doorsnede EF in Fig. 2 en 7.

Fig. 5. Doorsnede IJ in Fig. 2.

Fig. 8. Ondersteunplaat.

Fig. 9. Bovensteunplaat.

Fig. 6. Doorsnede C D. in Fig. 2.

Fig. 7. Doorsnede AB. in Fig. 2.

Fig. 10. Tusschen-ondersteuning tegen het landhoofd aan.

Fig. 12. Doorsnede KL in Fig. 10.

Fig. 13. Oplegging bovenrand.

Fig. 14. Platte grond. Steunplaat van den bovenrand.

Fig. 11. Steunplaat.

Schaal van  
 Fig. 1. 1 à 100  
 2 - 15 1 à 25  
 16, 17 1 à 10





Fig. 1-6. Beneden Spree brug te Berlijn. Fig. 2 Langsdoorsnede buiten en door het middenscharnier der brug voor geraden verkeer.

Fig. 4. Dwarsdoorsnede door het middenscharnier en er voor.

Fig. 6. Doorsnede eindscharnier.

Fig. 1. Langsdoorsnede buiten het eindscharnier.

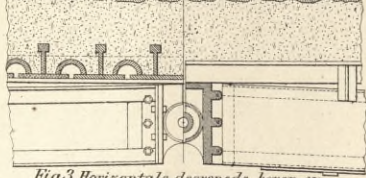


Fig. 3. Horizontale doorsnede boven en door het middenscharnier.

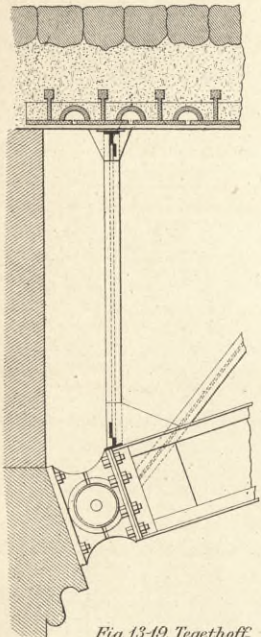
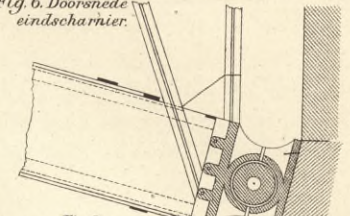
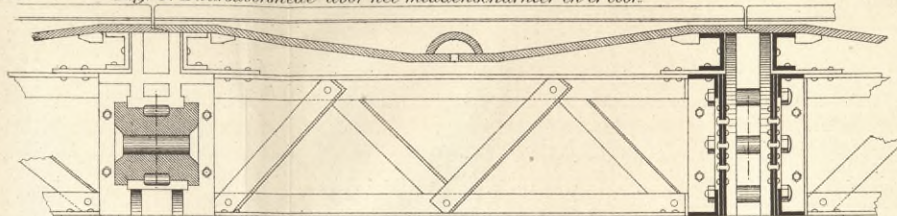


Fig. 5. Midden scharnier spoorwegbrug.

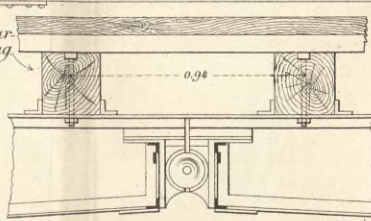


Fig. 7-12. Brug over de 31<sup>e</sup> straat te Philadelphia. Fig. 7. Aanzicht.

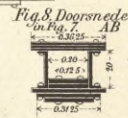


Fig. 14. Dwarsdoorsnede bij knooppunt III.

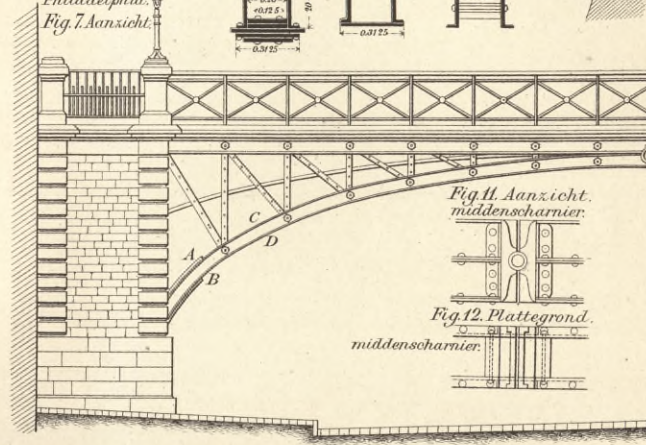
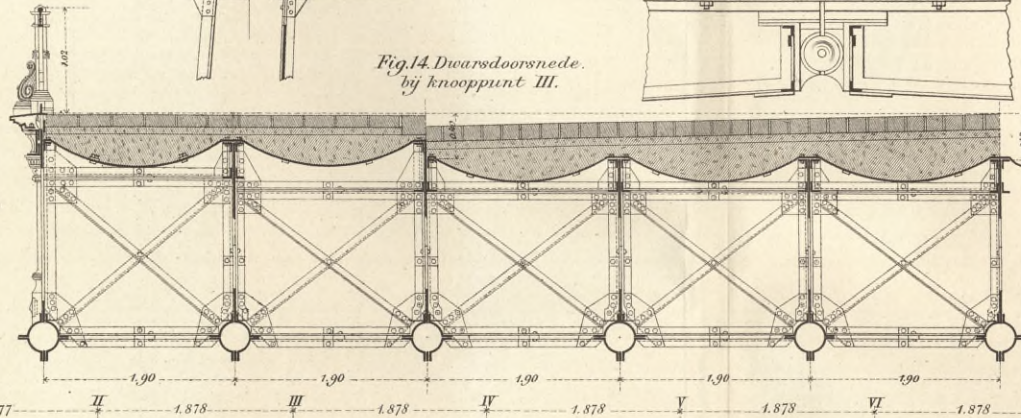


Fig. 11. Aanzicht middenscharnier.

Fig. 12. Plattegrond middenscharnier.

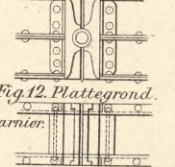


Fig. 13-19. Tegethoff brug te Weenen. Fig. 13. Aanzicht.

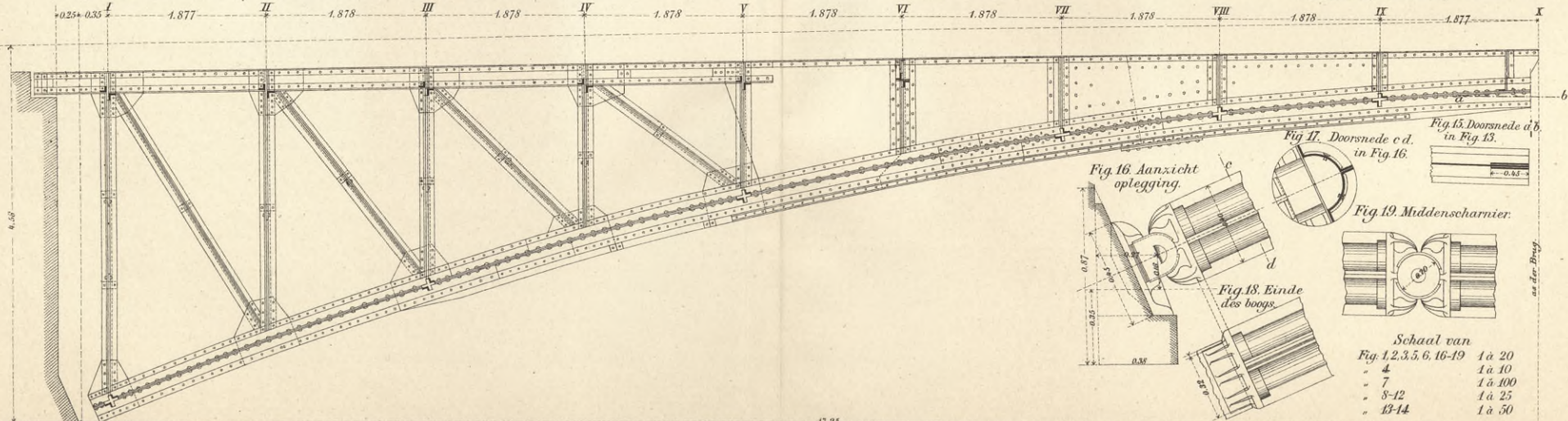


Fig. 16. Aanzicht oplegging.

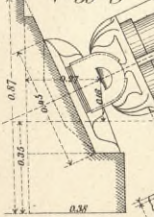


Fig. 17. Doorsnede c d in Fig. 16.



Fig. 19. Middenscharnier.

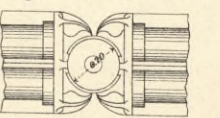
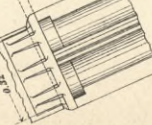


Fig. 18. Einde des boogs.



Schaal van

Fig. 1, 2, 3, 5, 6, 16-19	1 à 20
4	1 à 10
7	1 à 100
8-12	1 à 25
13-14	1 à 50







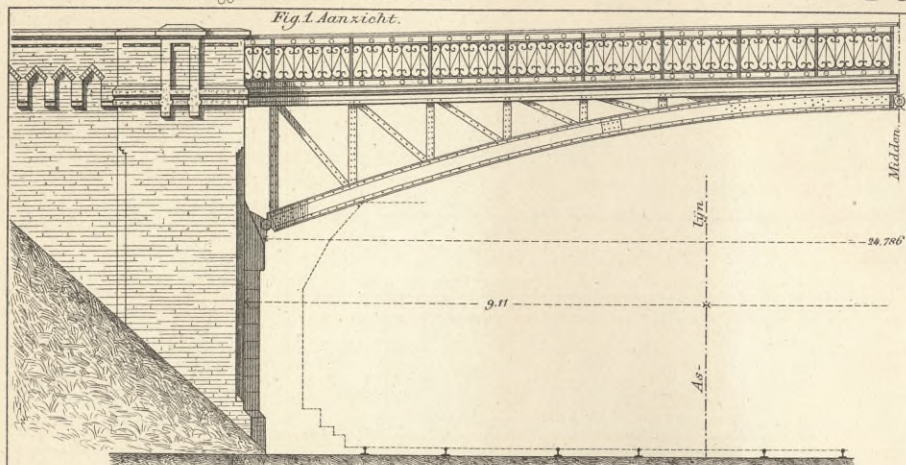


Fig. 1-II. Brug over het Stations emplacement te Arnhem.

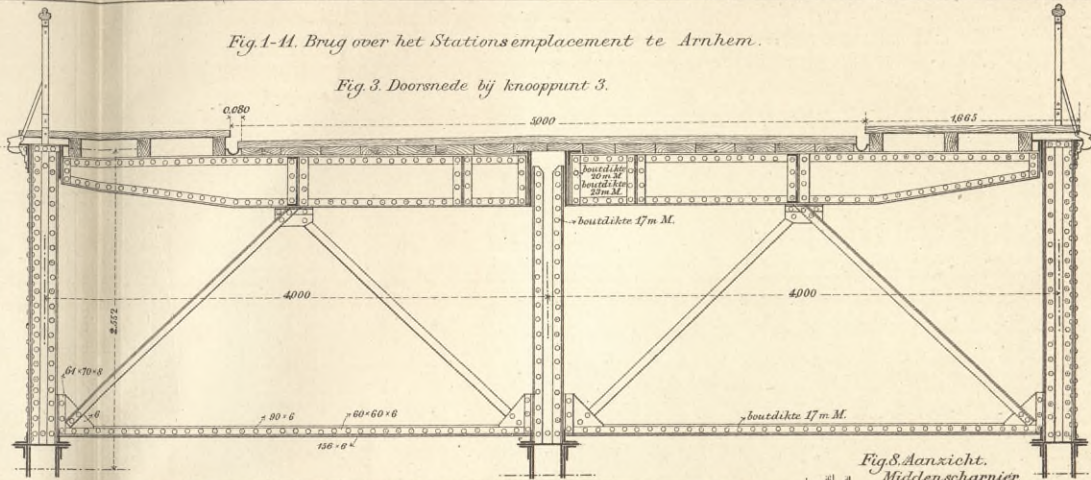


Fig. 3. Doorsnede bij knooppunt 3.

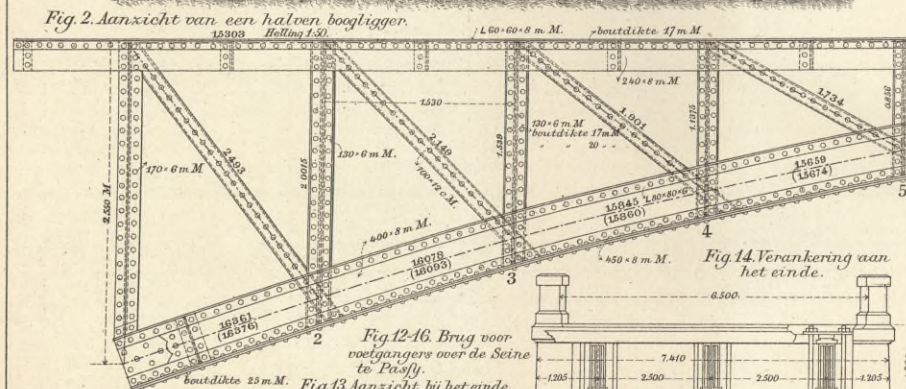


Fig. 2. Aanzicht van een halven booglijger.

Fig. 5. Plattegrond van den steunstoel.

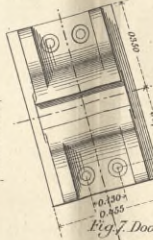


Fig. 4. Eindscharnier.

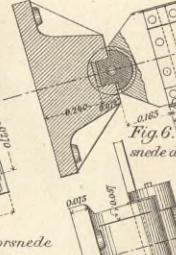


Fig. 6. Horizontale doorsnede der oplegging.

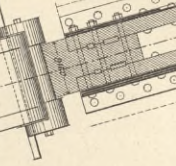


Fig. 8. Aanzicht. Middenscharnier.

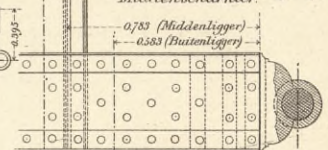


Fig. 9. Horizontale doorsnede middenscharnier buitenlijger.

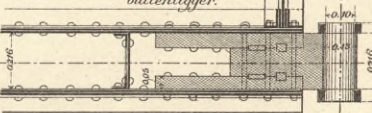


Fig. 10. Horizontale doorsnede middenscharnier en middellijger.

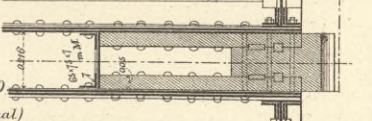


Fig. 12-16. Brug voor voetgangers over de Seine te Pissy.

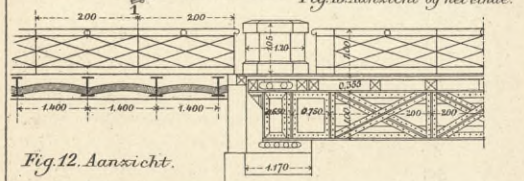


Fig. 12. Aanzicht.

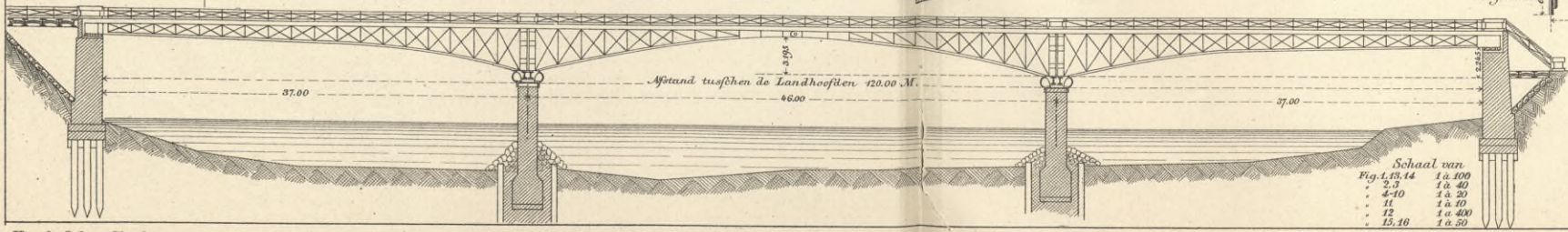


Fig. 13. Aanzicht bij het einde.

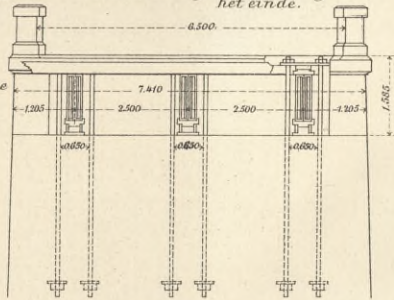


Fig. 14. Verankering aan het einde.

Renvooi betrekkelijk: Fig. 4-10

- Gegoten staal (Tegelstaal)
- Gesmeed gietstaal.
- ijzer.

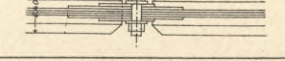
Fig. 11. Doorsnede diagonaal.



Fig. 15. Middenscharnier Aanzicht.



Fig. 16. Middenscharnier Platte grond.



Schaal van

Fig. 1, 13, 14	1 a. 100
" 2, 7	1 a. 40
" 4-10	1 a. 20
" 11	1 a. 10
" 12	1 a. 400
" 15, 16	1 a. 50

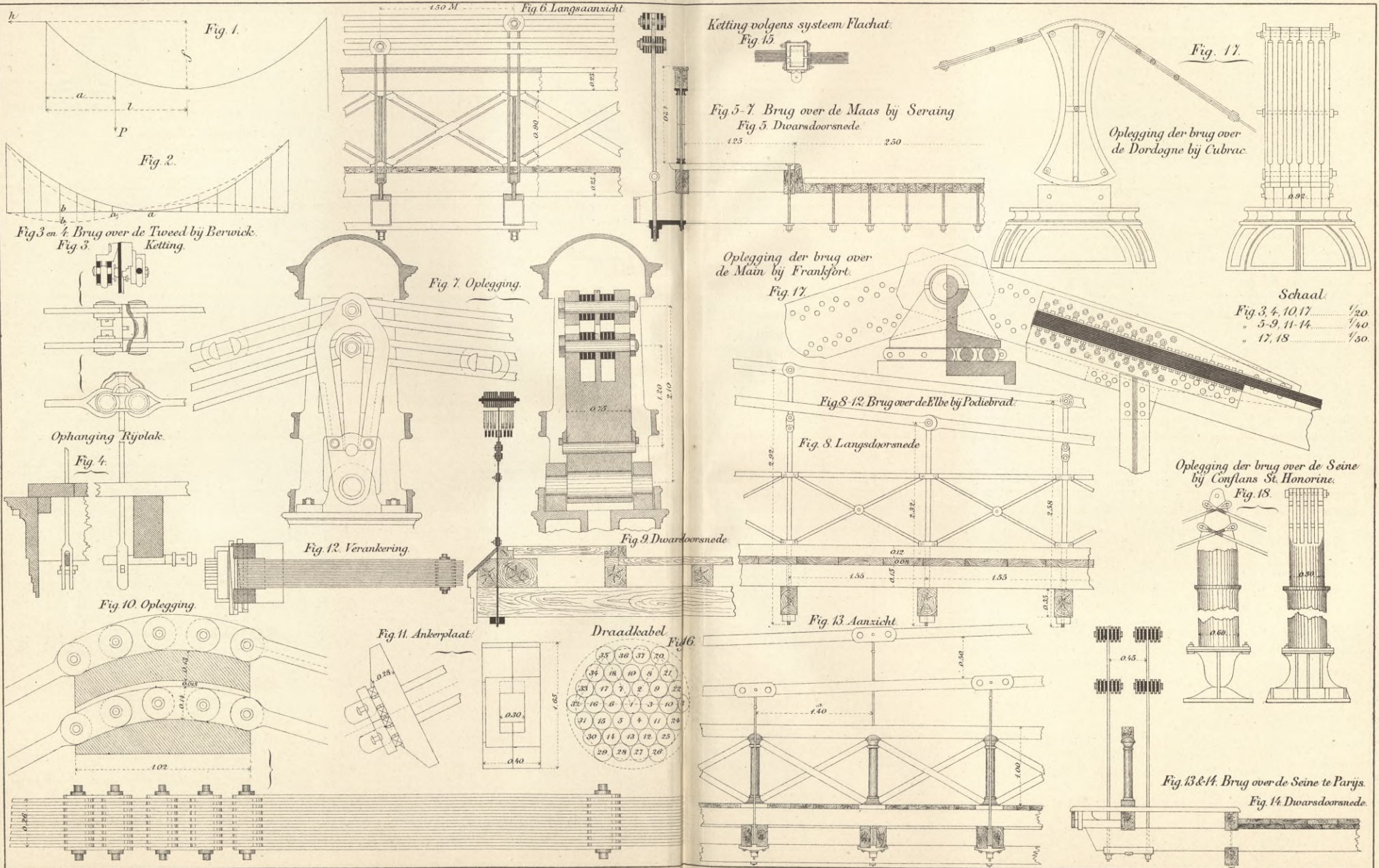








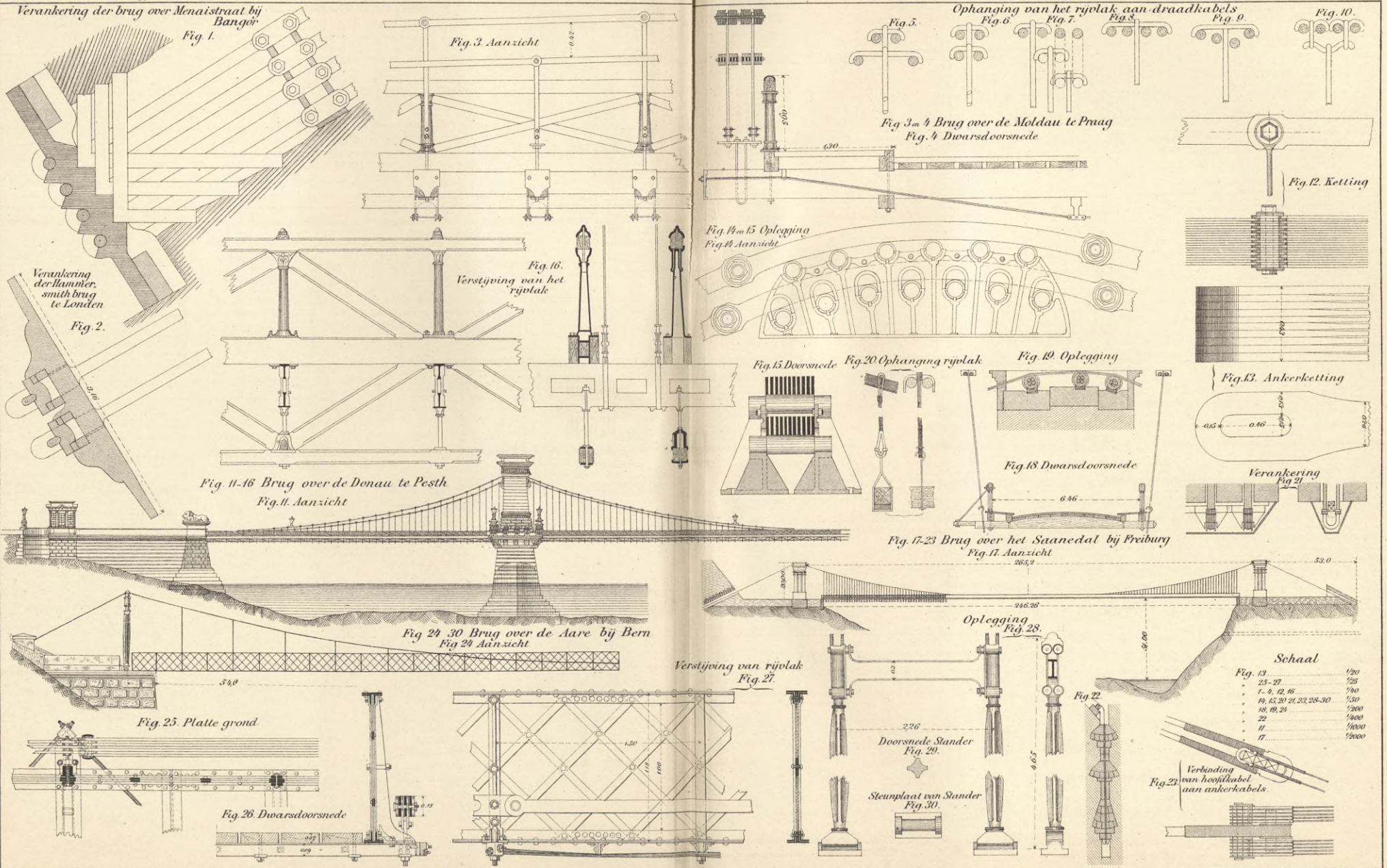












Schaal

Fig. 13	1/20
25 - 27	1/25
1 - 5, 12, 16	1/40
14, 15, 20, 21, 22, 28-30	1/50
18, 19, 24	1/100
22	1/400
11	1/1000
17	1/2000













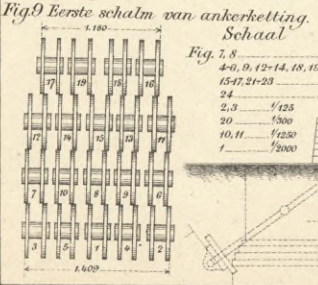
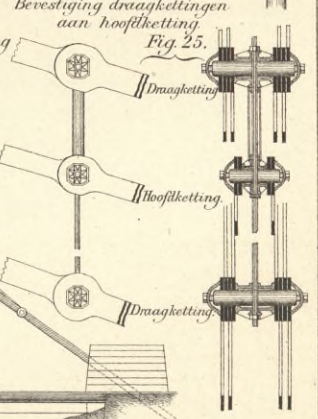
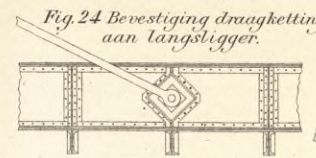
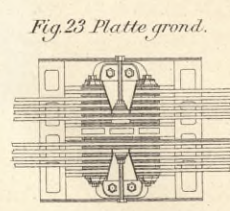
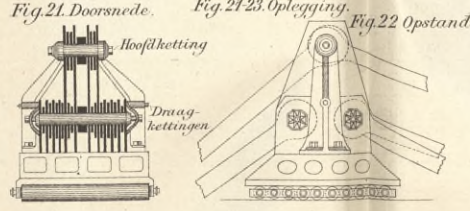
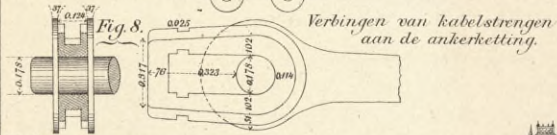
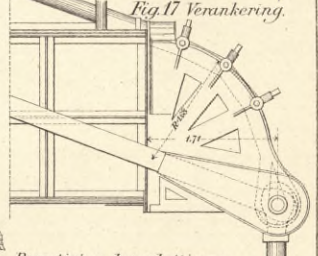
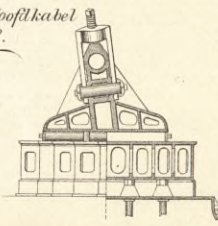
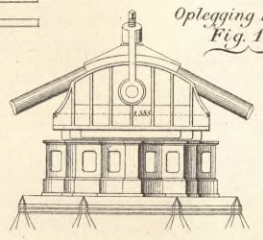
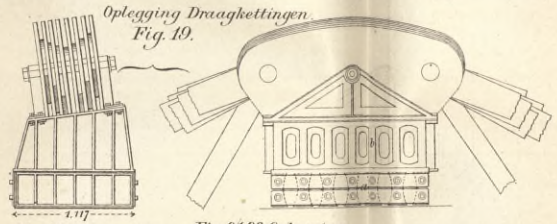
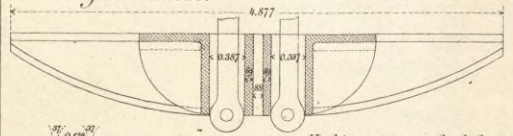
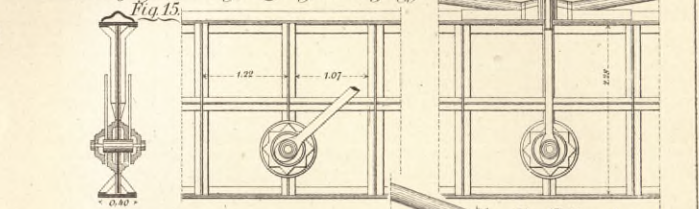
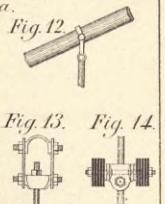
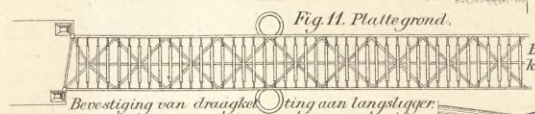
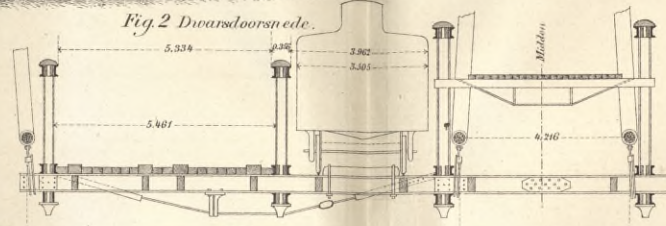
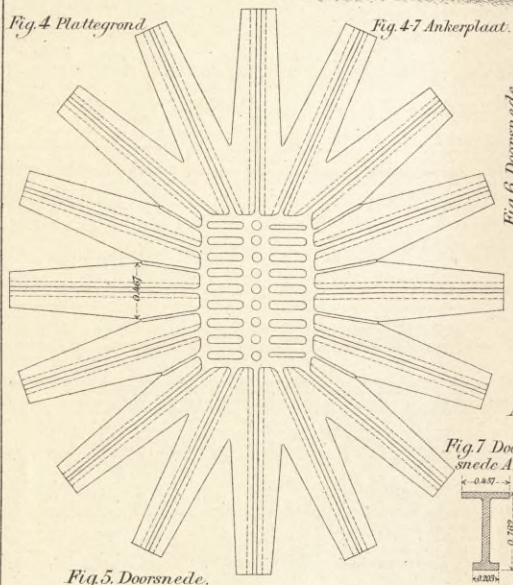
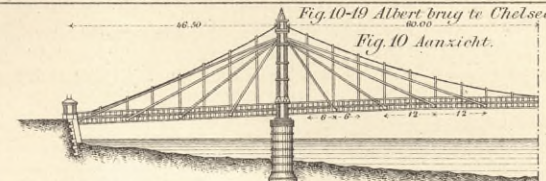


Fig. 7, 8	1/25
4-6, 9, 12-14, 18, 19, 25	1/50
15-17, 21-23	1/75
24	1/100
2, 3	1/125
10	1/200
10, 11	1/250
1	1/500







Fig. 1-7. Brug voor Spoorwegverkeer over het Donaukanaal te Weenen.

Fig. 1. Aanzicht.



Fig. 2. Platte grond.

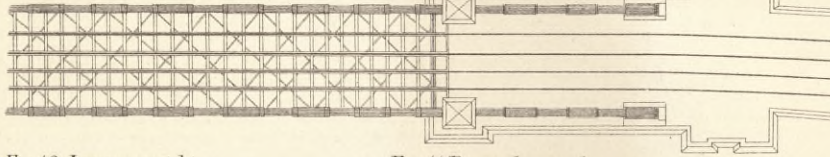


Fig. 10. Langsaanzicht.

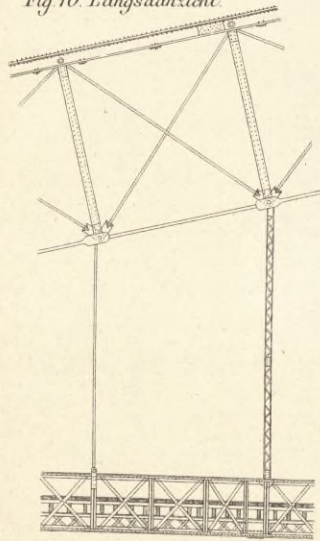


Fig. 11. Dwarsdoorsnede.

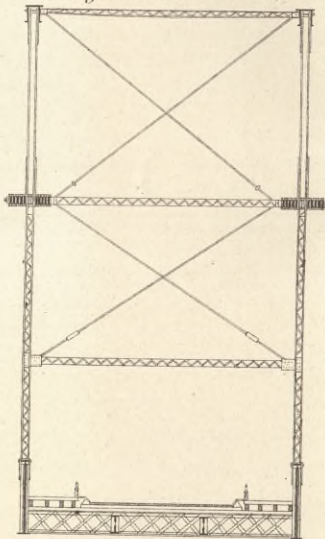


Fig. 12. Oplegging.



Fig. 17. Oplegging op landhoofd.

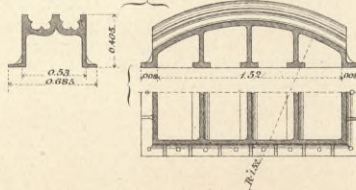
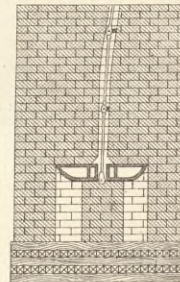


Fig. 13. Verankering.



Schaal

Fig. 15-17	1/50
3-7	1/30
12	1/100
10, 11, 13	1/200
1, 2, 14	1/300
8, 9	1/450

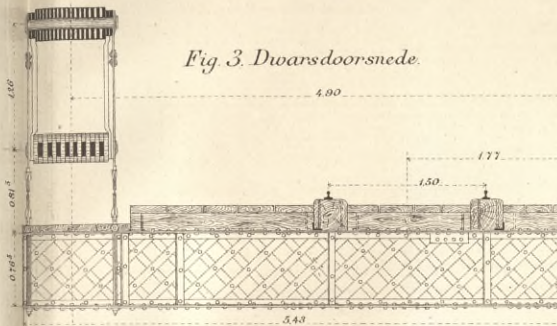
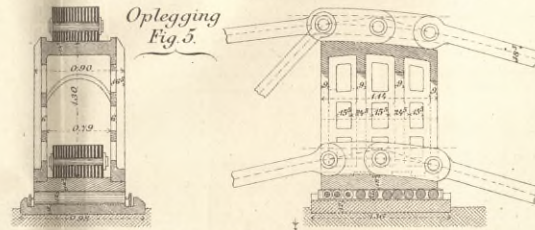


Fig. 3. Dwarsdoorsnede.



Oplegging Fig. 5.

Fig. 8-13. Brug over de Monongahela te Pittsburg

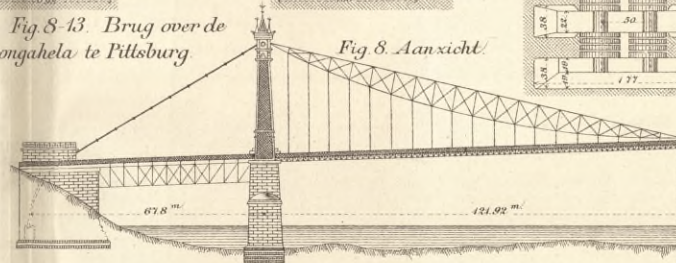


Fig. 8. Aanzicht.

Fig. 9. Platte grond.

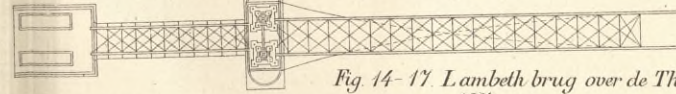


Fig. 14-17. Lambeth brug over de Theems te Londen.

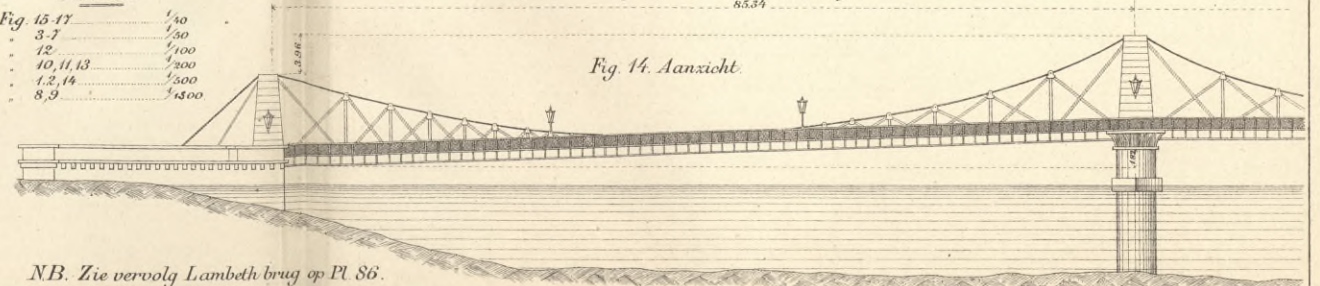


Fig. 14. Aanzicht.



Fig. 4. Langdoorsnede.

Fig. 6 en 7. Verankering Doorsneden

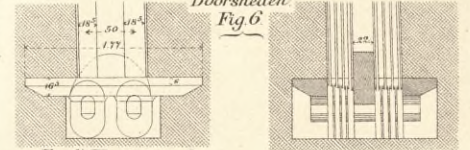


Fig. 7 Platte grond

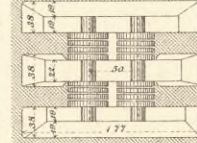


Fig. 15-16. Oplegging op torens

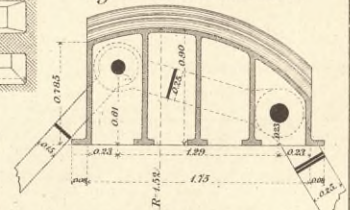


Fig. 15 Verticale doorsnede

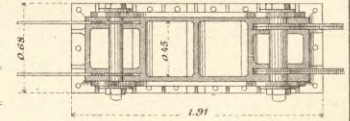
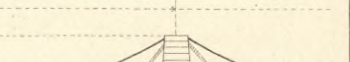


Fig. 16 Horizontale doorsnede



NB. Zie vervolg Lambeth brug op Pl. 86.





Fig. 13. Oplegging op torens.

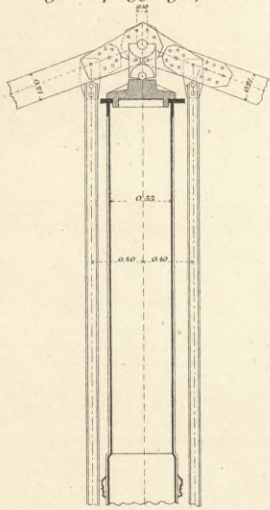


Fig. 4. Langsdoorsnede.

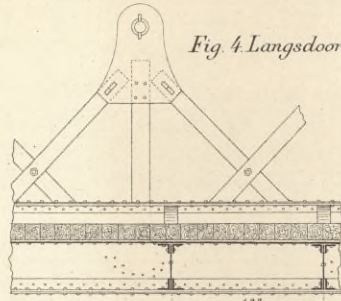


Fig. 3. Leuning met verfloestel.

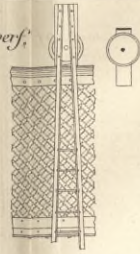


Fig. 5. Langsdoorsnede over langstijger.

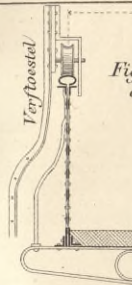
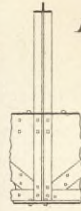


Fig. 2. Dwarsdoorsnede.

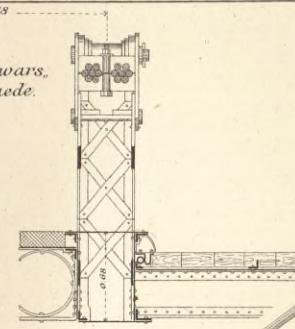


Fig. 1-6. Vervolg Lambethbrug over de Theems te London.

Fig. 1. Verankering.

Fig. 6. Platte grond van kabels.

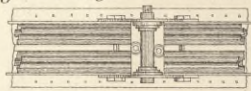


Fig. 14. Verankering A.

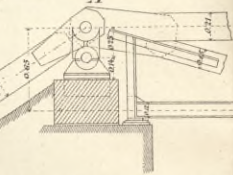
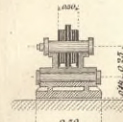


Fig. 15. Doorsnede door oplegging A.



Schaal.

- Fig. 12, 18 ..... 1/20.
- 2-6, 8-11, 13-17 ..... 1/40.
- 1 ..... 1/100.
- 7 ..... 1/200.

Fig. 16. Platte grond van oplegging A.

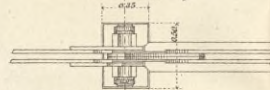


Fig. 11. Doorsnede bovenrand.

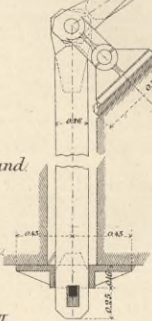


Fig. 10. Verbinding der Verticaal en Diagonalen van Randen.

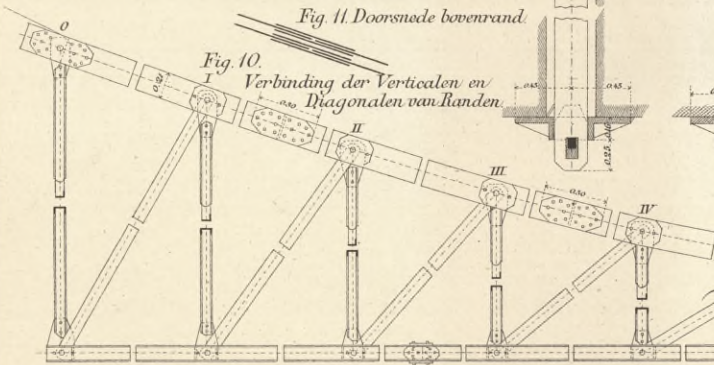


Fig. 17. Doorsnede Verankering.

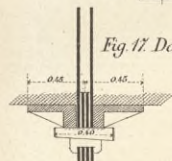


Fig. 18. Topscharnier.

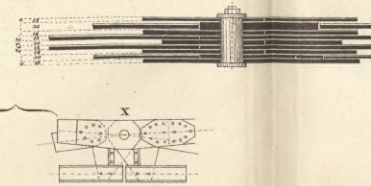


Fig. 12. Diagonaal V met verbinding aan Randen.



Fig. 7-18. Brug over het Station te Gotha.

Fig. 7. Aanzicht!

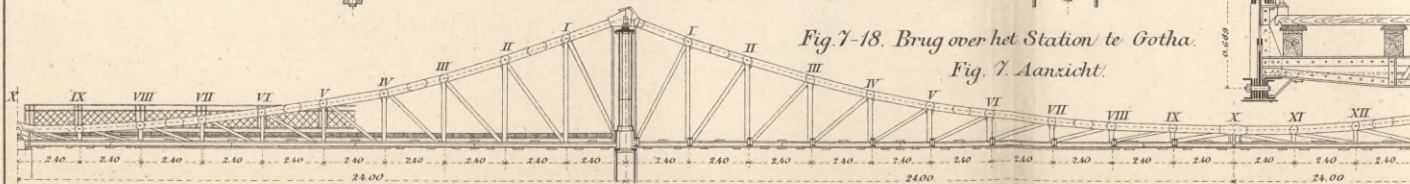


Fig. 8. Dwarsdoorsnede.

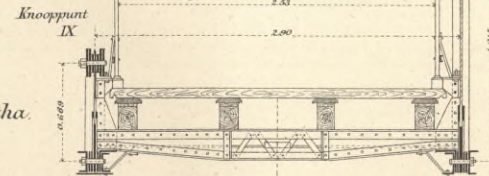
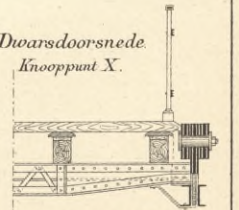


Fig. 9. Dwarsdoorsnede Knooppunt X.









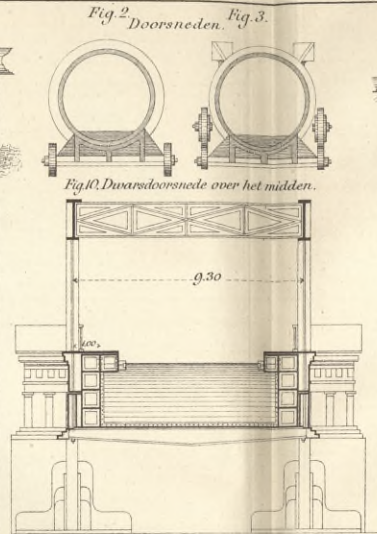
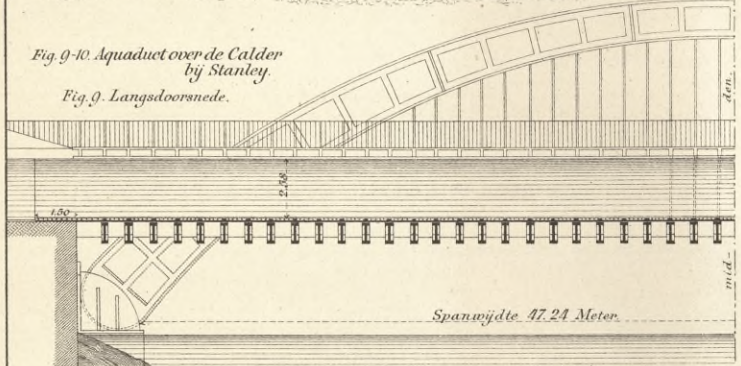
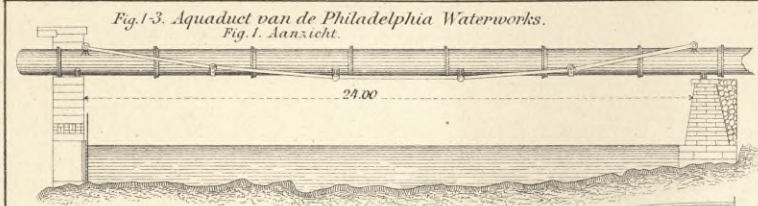
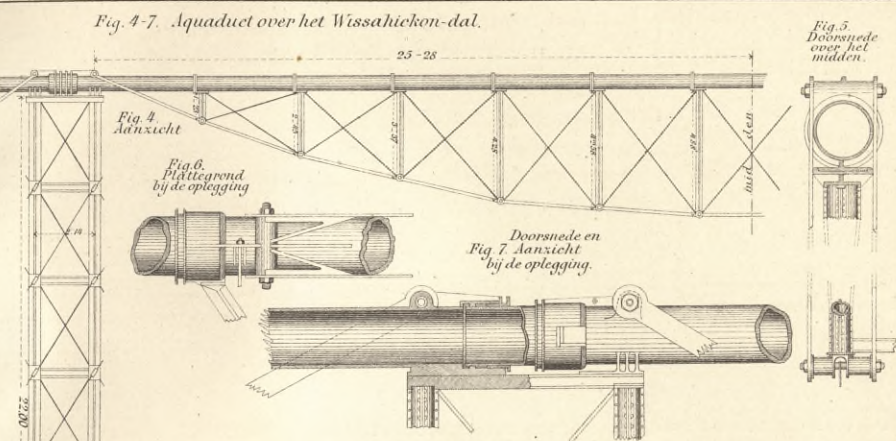
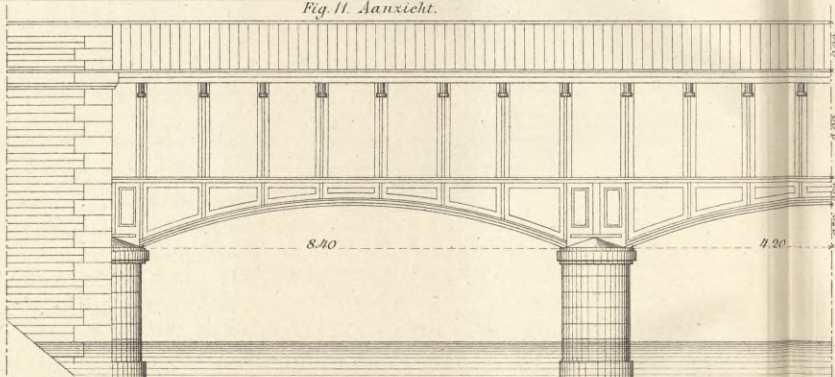


Fig. 11-12. Aquaduct van Barberey aan de Doven-Seine.



Schaal van fig. 1, 4, 9, 10

1, 4, 9, 10	1 à 200
4, 3, 5, 6, 7	1 à 50
8	1 à 1000
11, 12, 13, 14	1 à 100

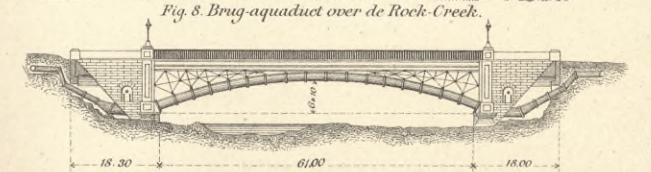
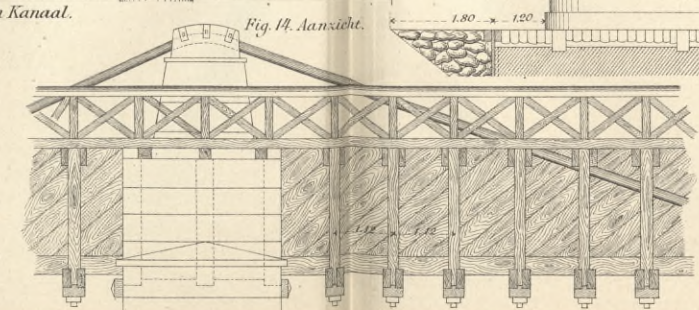
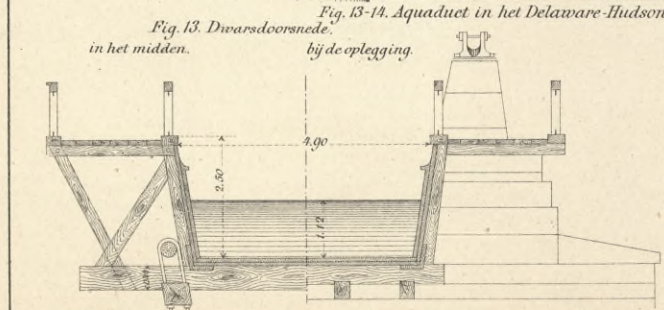
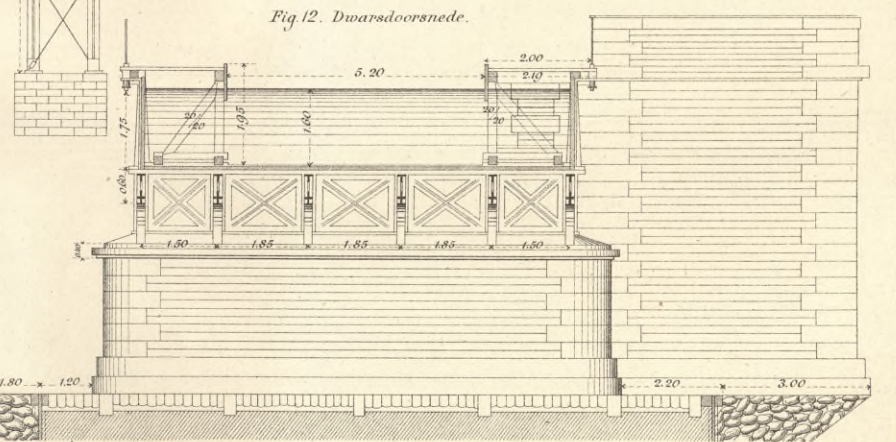












Fig. 1. Klinkbout schema van de Gute hoffnungs hütte.

Diam.: 26mm ● ongekleurd

23mm ● blauw

20mm ● geel

16mm ● rood

13mm ● neutraal

10mm ● groen

Schroefbouts: (kruis van rode lijnen)

Klinkbouts: (de buitenste cirkel blauw)

half verzonken: (de beide concentrische cirkels blauw)

geheel verzonken: (de beide concentrische cirkels blauw)

met één half verzonken kop: (de beide cirkel stukken blauw)

met één geheel verzonken kop: (de 4 cirkel stukken blauw)

bij de montage te slaan: (buitenste cirkel rood)

Fig. 2<sup>a-c</sup> Beproevings-machine van het University College te Londen.

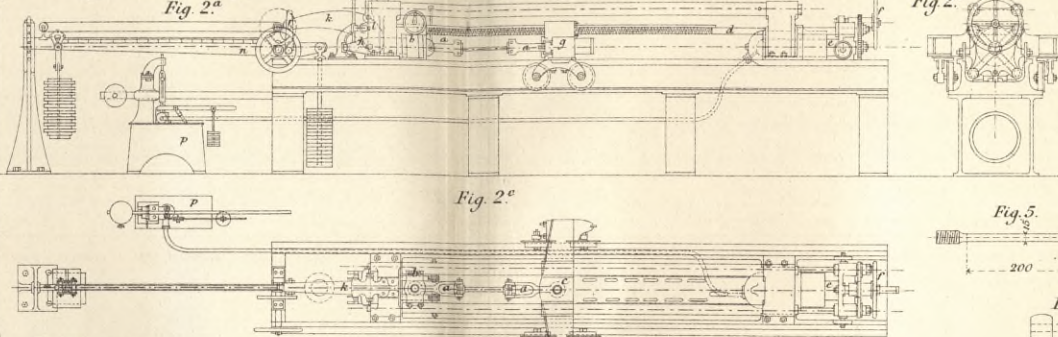


Fig. 3. 500

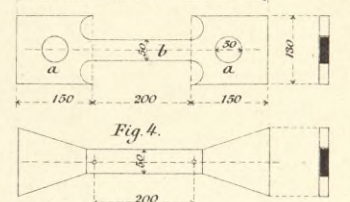


Fig. 4.

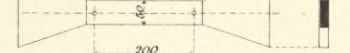


Fig. 5.

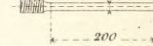


Fig. 6.

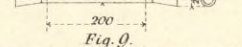


Fig. 7.

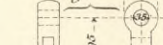


Fig. 9.

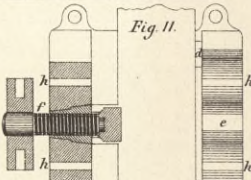
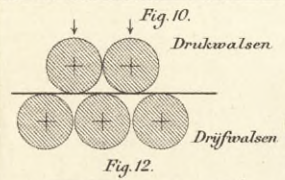


Fig. 18.

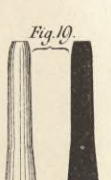


Fig. 10.

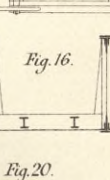


Fig. 16.

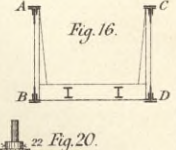
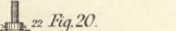


Fig. 20.



Rechter oever

Linker oever

Fig. 17

Hor. R<sup>d</sup> pl.

Hoekijzers.

Vert. R<sup>d</sup> pl.

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 20.

Fig. 30.

Fig. 31.

Fig. 32.

Fig. 33.

Fig. 28<sup>a</sup>

Fig. 28<sup>b</sup>

Fig. 25.

Fig. 26.

Fig. 23.

Fig. 22.

Fig. 21.

Fig. 24.

Fig. 27.

Fig. 28<sup>a</sup>

Fig. 28<sup>b</sup>

Schaal van

Fig. 2, 32, 33. 1 à 50

10, 11, 13, 14, 15. 1 à 20

3, 4, 5, 6, 7, 8, 9, 27. 1 à 10

21, 22, 23, 24, 25, 26. 1 à 5

18, 19, 20, 28, 29, 30, 31. 1 à 4

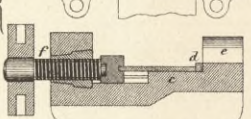
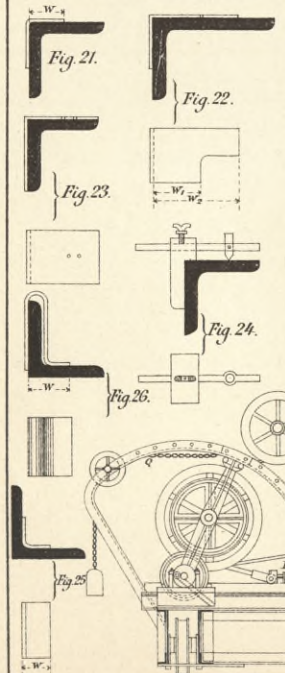


Fig. 11.

Fig. 32.

Fig. 33.

Fig. 28<sup>a</sup>

Fig. 28<sup>b</sup>

Fig. 25.

Fig. 26.

Fig. 23.

Fig. 22.

Fig. 21.

Fig. 24.

Fig. 27.

Fig. 28<sup>a</sup>

Fig. 28<sup>b</sup>

Fig. 25.

Fig. 26.

Fig. 23.

Fig. 22.

Fig. 21.

Fig. 24.

Fig. 27.







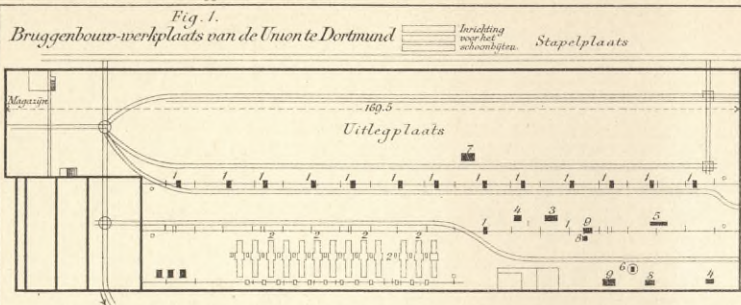


Fig. 2<sup>a</sup> en b Bruggenbouw-werkplaats te Ludwigshafen.

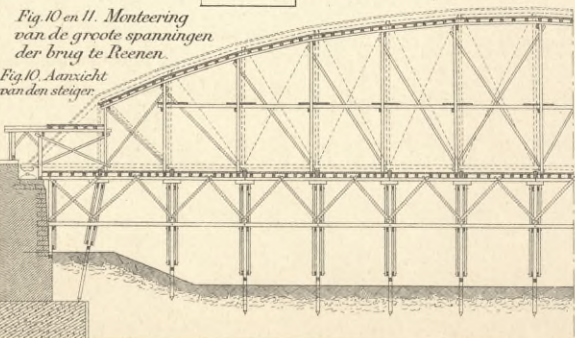
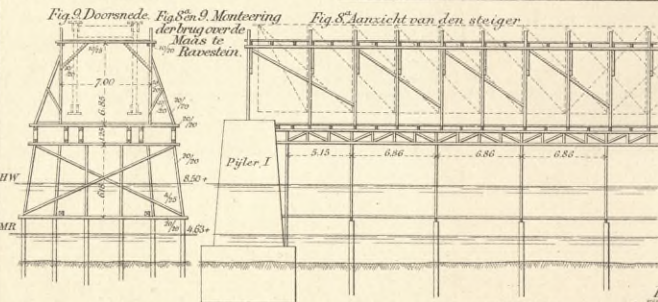
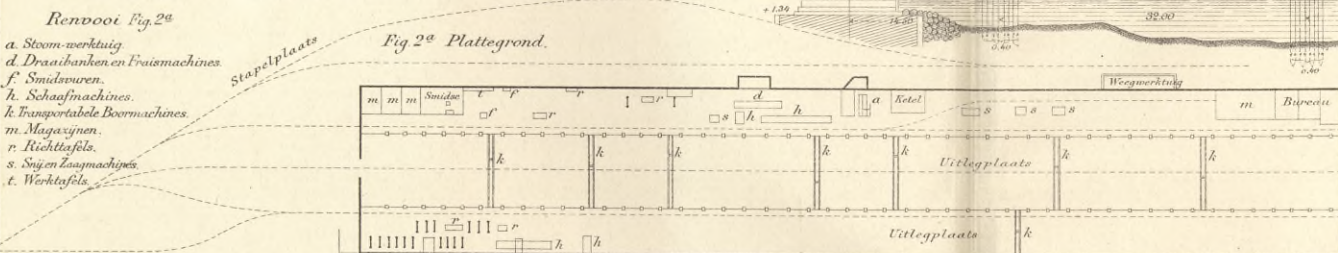


Fig. 3. 8. Monteeing der brug over de Lek bij Kuilenburg.

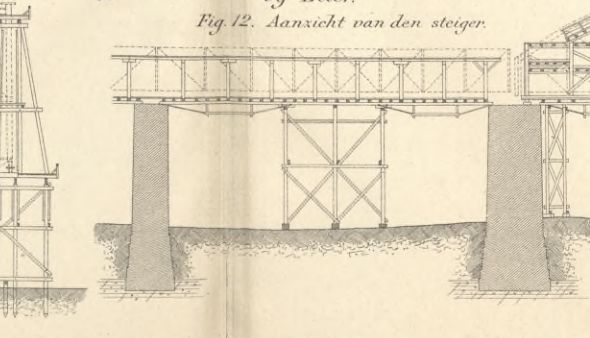
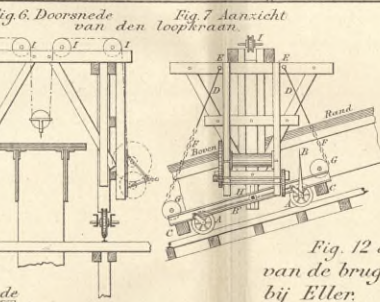
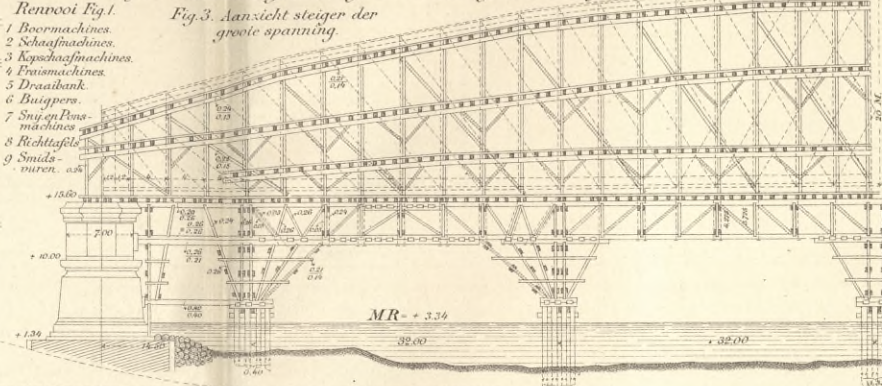
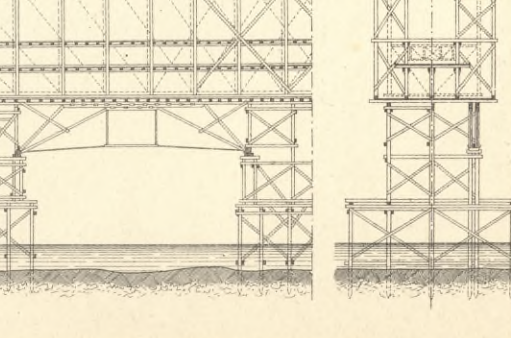
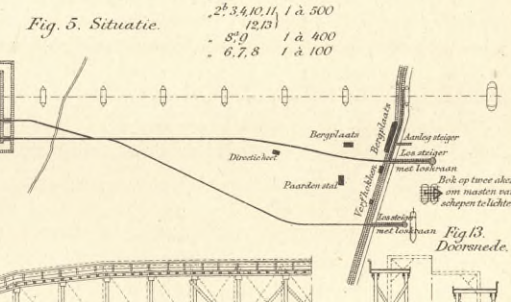
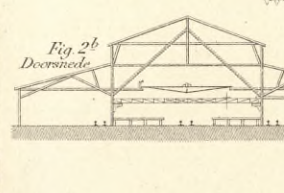
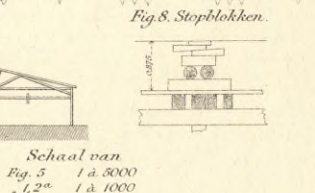
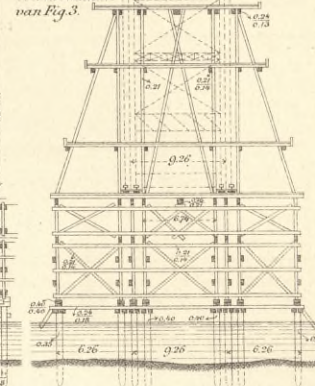


Fig. 4. Doorsnede over het midden van Fig. 3.



Schaal van

Fig. 5	1 à 5000
1, 2 <sup>a</sup>	1 à 1000
2 <sup>b</sup> , 3, 4, 10, 11	1 à 500
12, 13	1 à 400
8 <sup>a</sup> , 9	1 à 400
6, 7, 8	1 à 100





Fig. 1 en 2. Monteerij der groote openingen der brug te Nijmegen over de Waal.

Fig. 1. Aanzicht vanden steiger

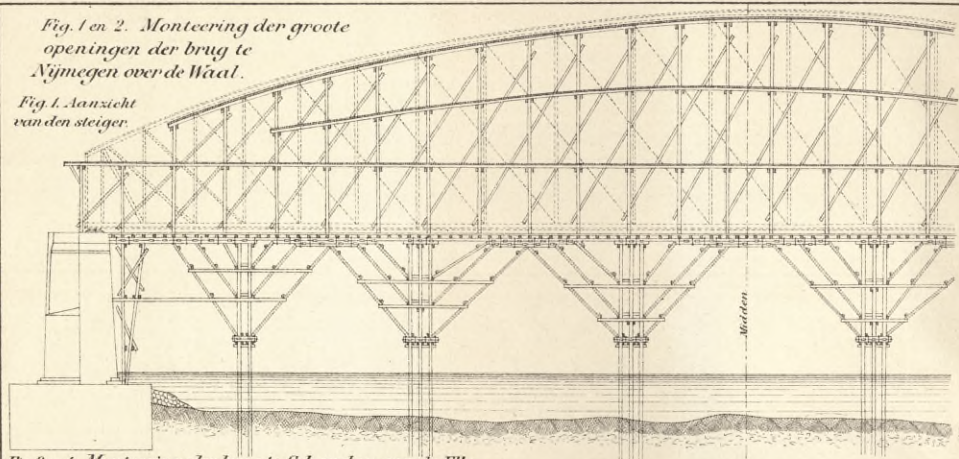


Fig. 2. Doorsnede over het midden.

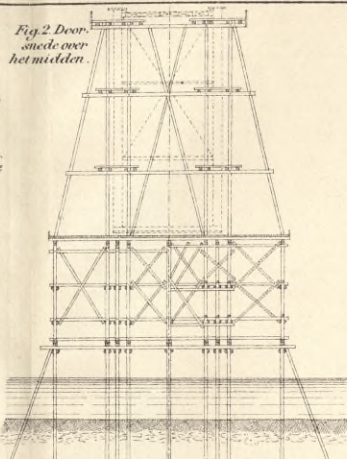


Fig. 3 en 4. Monteerij der brug te Schandau over de Elbe.

Fig. 3. Aanzicht van den steiger

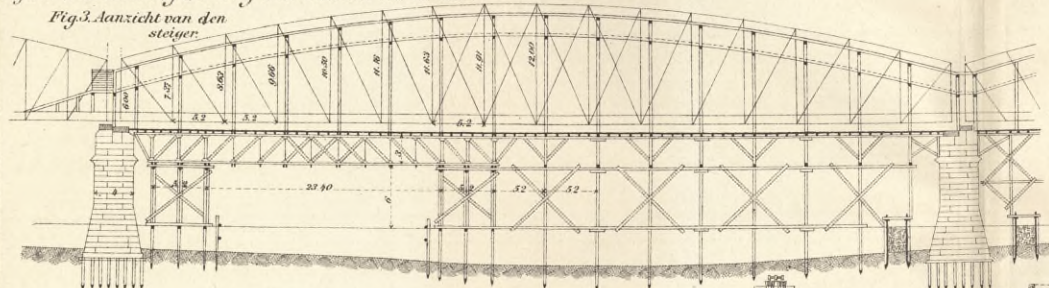


Fig. 4. Doorsnede

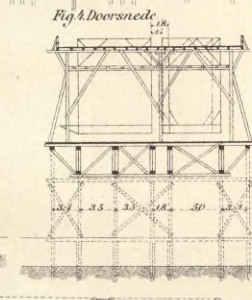


Fig. 5-8. Monteerij der brug bij Graudenz over de Weichsel.

Fig. 5. Aanzicht steigerwerk.

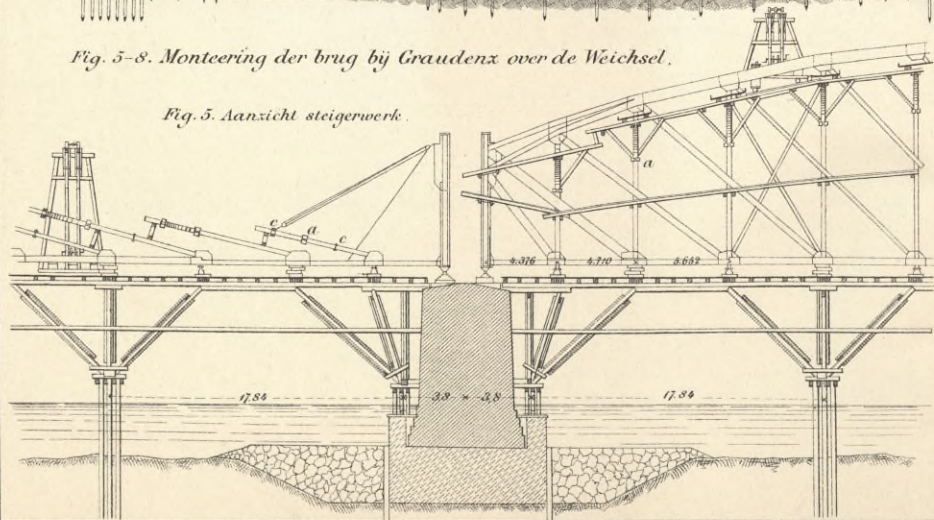


Fig. 6. Doorsnede over het midden.

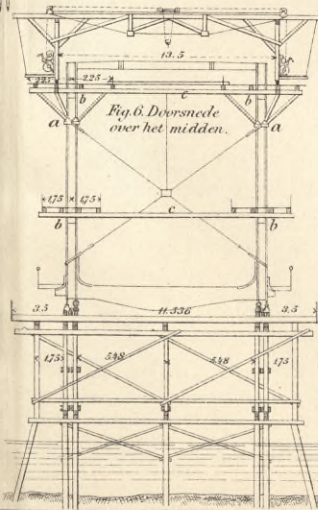


Fig. 9. Steiger van de Elbise Viaduct in den spoorweg Berlijn-Mets.

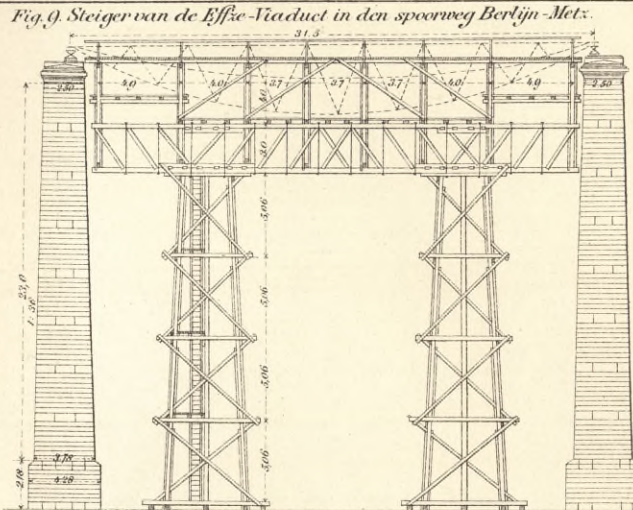


Fig. 7. Aanzicht loophraan.

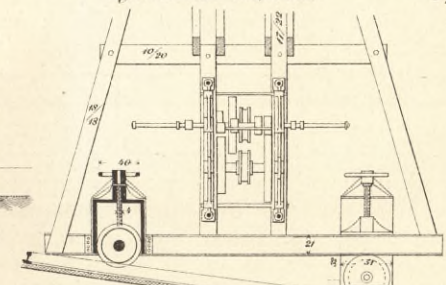


Fig. 8. Doorsnede over de loophraan.

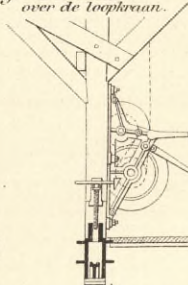


Fig. 10 en 11. Monteerij van de Temes brug. Fig. 10. Aanzicht steiger.

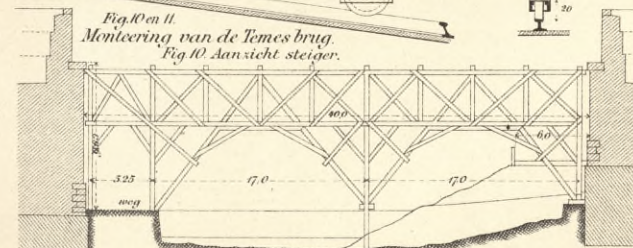
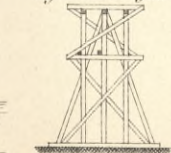


Fig. 11. Doorsnede, juk.



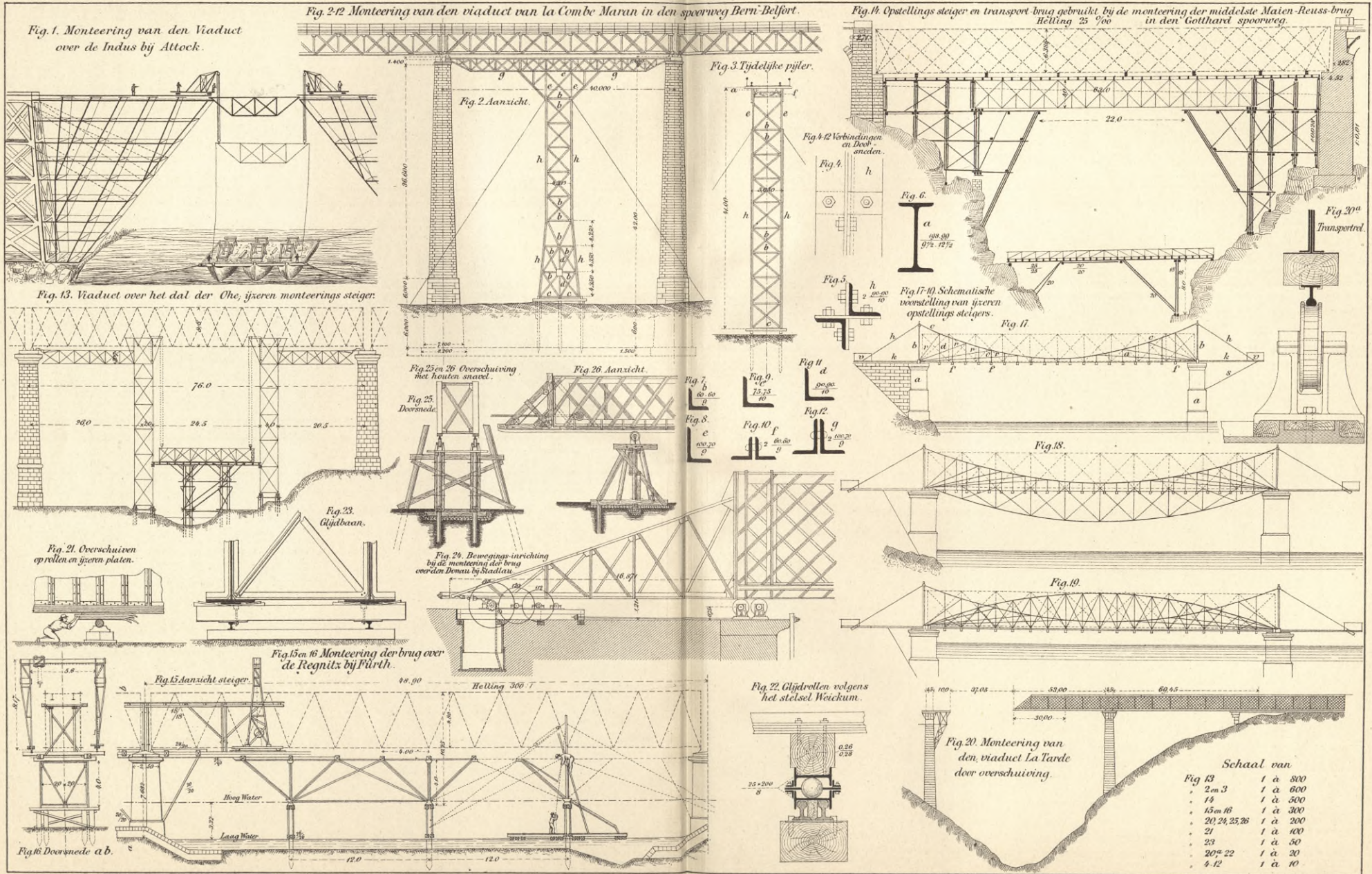
Schaal van

Fig. 1, 2, 3 en 4	1 à 500
10 en 11	1 à 400
5, 6 en 9	1 à 300
7 en 8	1 à 50









Schaal van

Fig 13	1 à 800
2 en 3	1 à 600
14	1 à 500
15 en 16	1 à 300
20, 24, 25, 26	1 à 200
21	1 à 100
23	1 à 50
20 <sup>e</sup> 22	1 à 20
4, 12	1 à 10





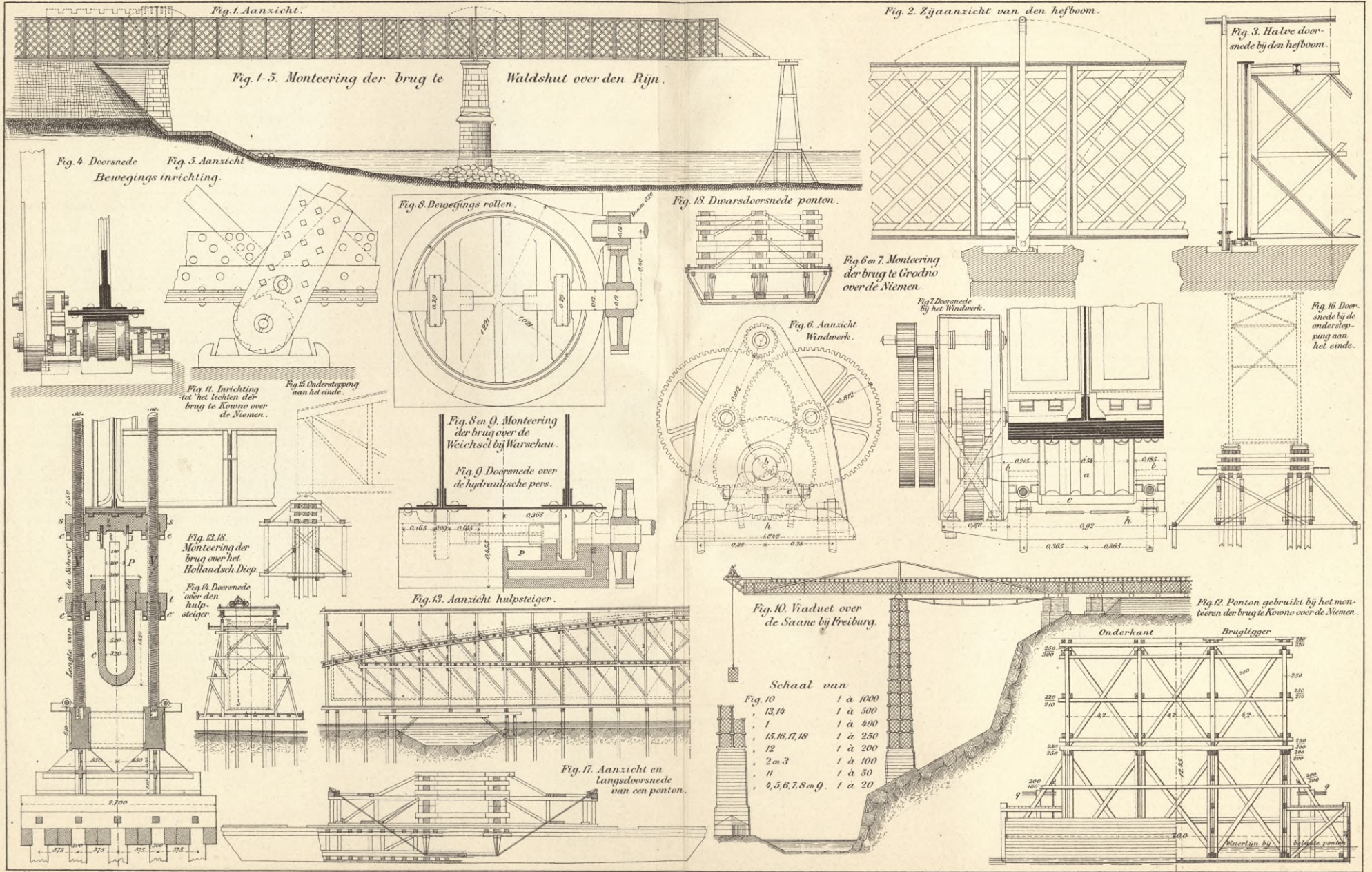














Fig. 1-g. Opstelling van de hangbrug over de East River te New-York.

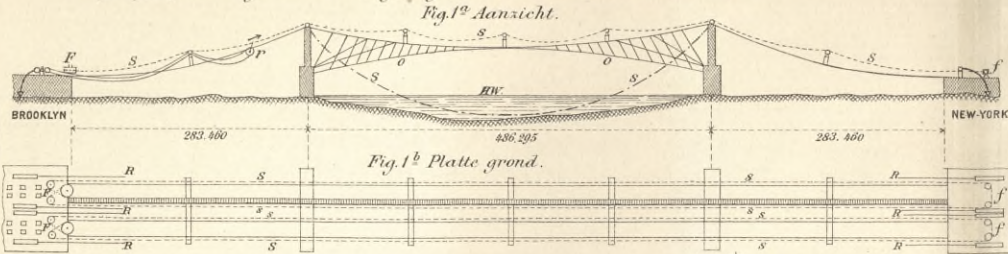


Fig. 11. Monteerling van de brug in den Rheinischen Spoorweg bij Coblenz.

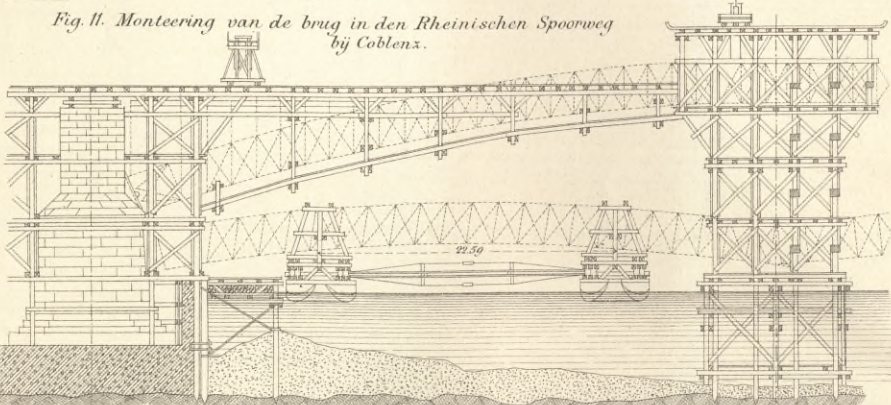


Fig. 10. Monteerling der brug te Elkhantara bij Constantine.



Fig. 12. Monteerling der brug over de Mississippi by S. Louis.

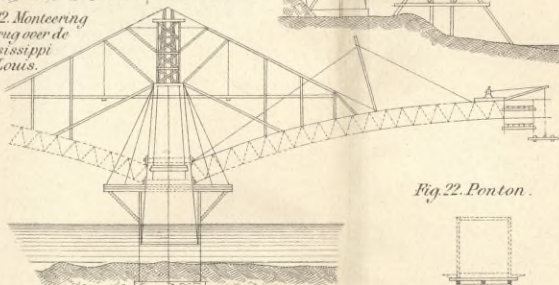


Fig. 13. Monteerling der brug over de Monongahela te Pittsburg.

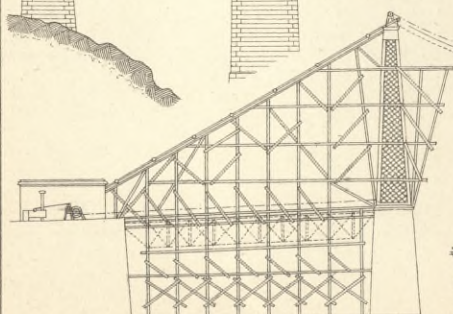


Fig. 20-22 Herstelling van de brug over den Yssel te Kampen. Fig. 20. Aanzicht steiger.

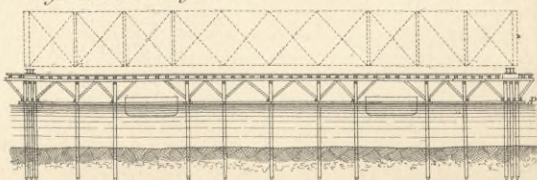


Fig. 22. Ponton.

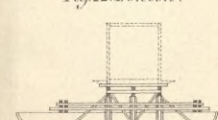


Fig. 21. Doorsnede over den steiger.

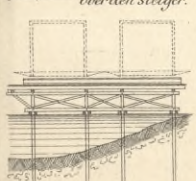


Fig. 14-17 Monteerling der brug over de Hernad. Fig. 14. Aanzicht.

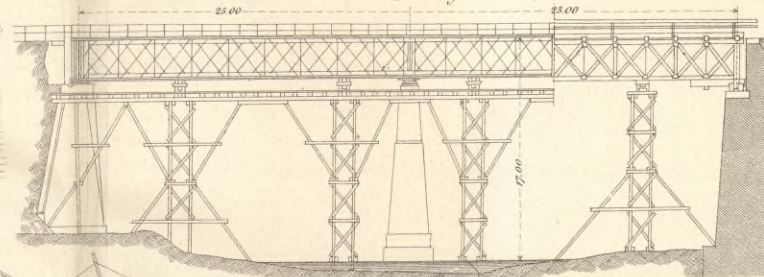


Fig. 17. Zijaanzicht der verschuivingsrollen.

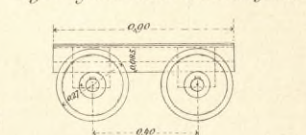


Fig. 15. Doorsnede over den steiger.

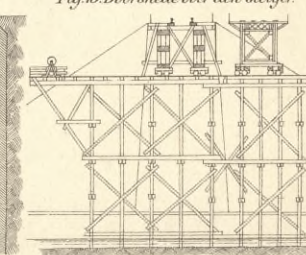


Fig. 18 en 19. Monteerling van de brug over de Mur bij Grätz.

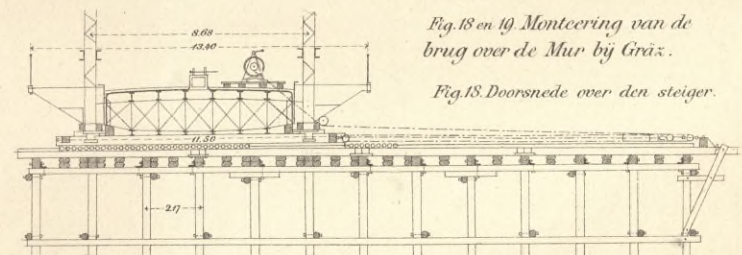
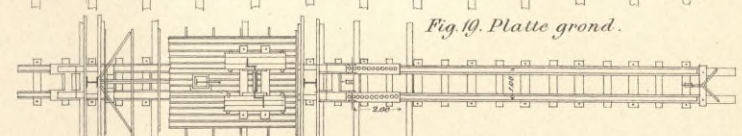


Fig. 18. Doorsnede over den steiger.

Fig. 19. Platte grond.

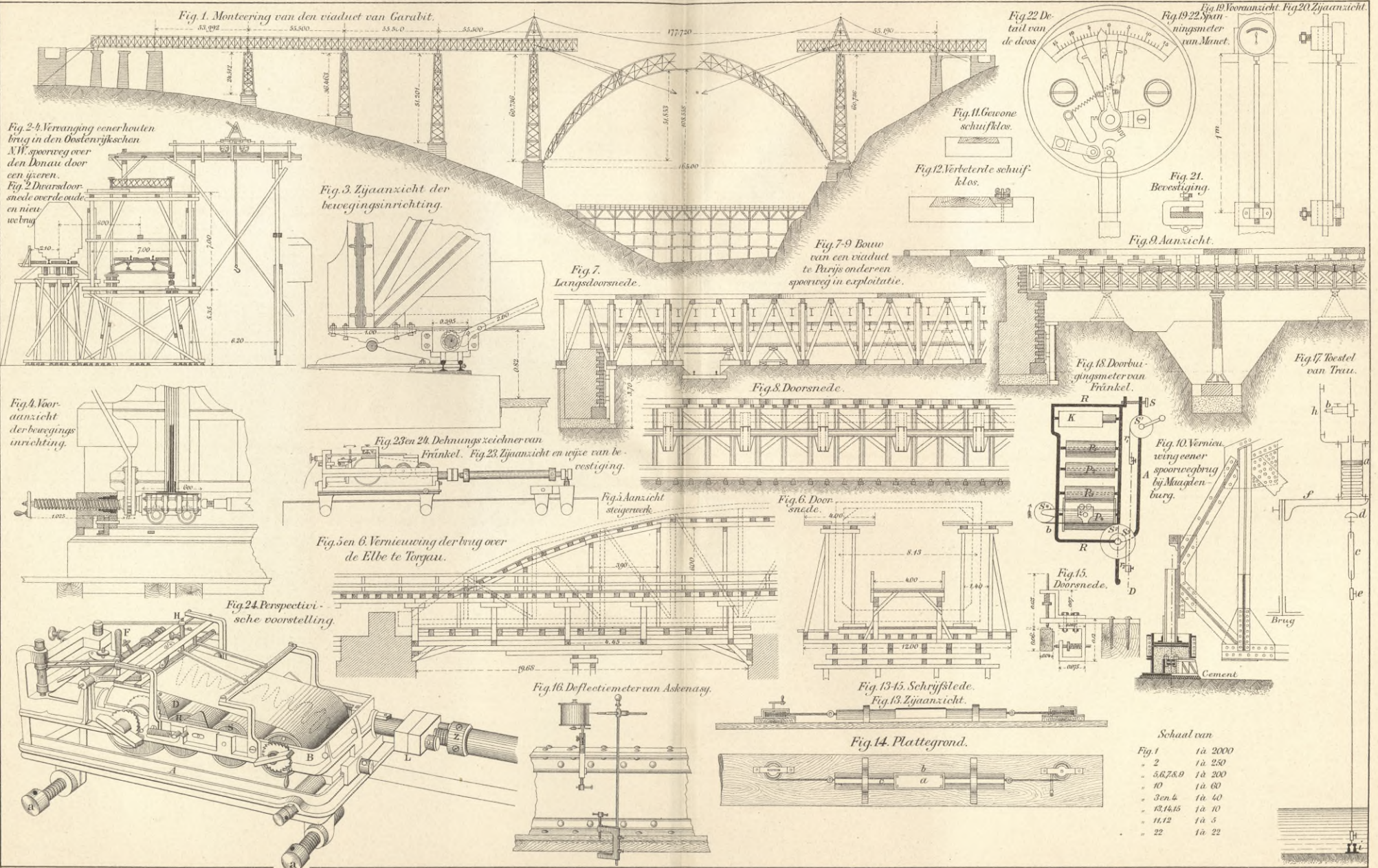


Schaal van

Fig. 13	1 à 1000	Fig. 2	1 à 250
5	1 à 1000 in de hoogte	3, 14, 15, 18, 19	1 à 200
10, 12, 20, 21, 22	1 à 500 in de lengte	6, 7, 8	1 à 100
11	1 à 400	9	1 à 50
		16, 17	1 à 20







Schaal van

Fig. 1	1 à 2000
- 2	1 à 250
- 5, 6, 7, 8, 9	1 à 200
- 10	1 à 180
- 3 en 4	1 à 40
- 13, 14, 15	1 à 10
- 11, 12	1 à 5
- 22	1 à 22





Fig. 1.

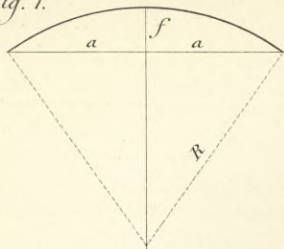


Fig. 2. Korfboog met 3 middelpunten. Methode van Bossut.

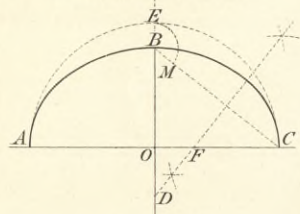


Fig. 3. Korfboog met 3 middelpunten. Methode van Huygens.

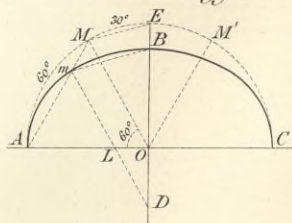
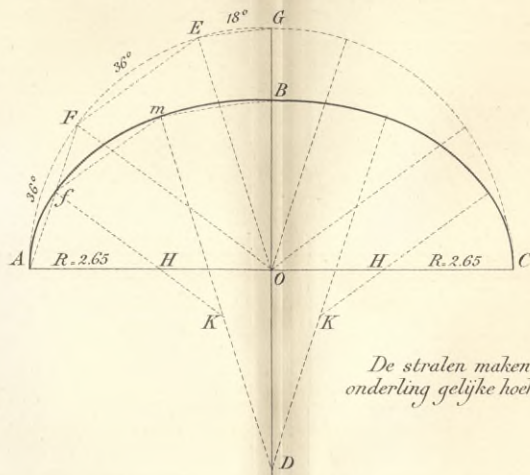
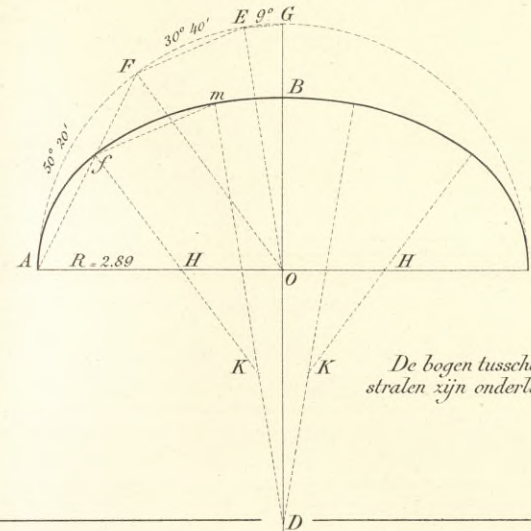


Fig. 4. Korfboog met 5 middelpunten. Methode van Michal.



De stralen maken onderling gelijke hoeken.

Fig. 5. Korfboog met 5 middelpunten. Methode van Michal.



De bogen tusschen de stralen zijn onderling gelijk.

Fig. 9. Boog met 3 middelp.

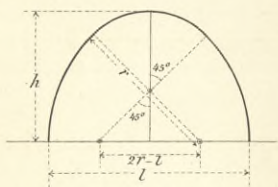


Fig. 10. Boog met 5 middelp.

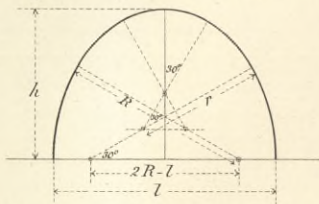


Fig. 8.

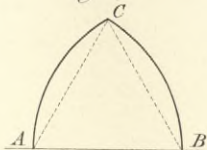
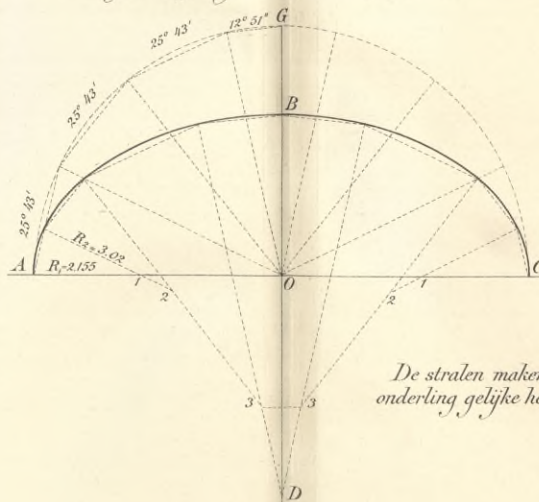
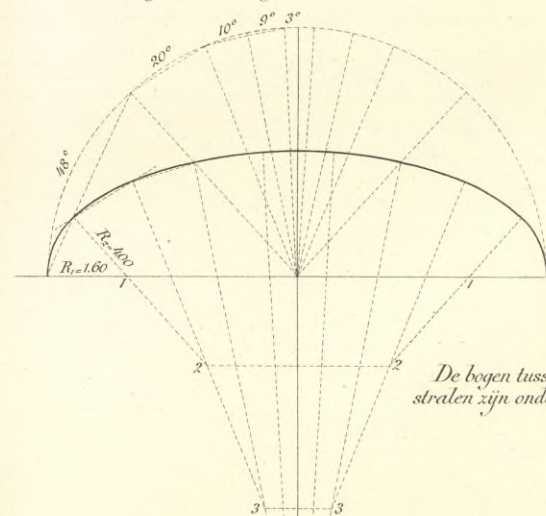


Fig. 6. Korfboog met 7 middelpunten.



De stralen maken onderling gelijke hoeken.

Fig. 7. Korfboog met 9 middelpunten.



De bogen tusschen de stralen zijn onderling gelijk.







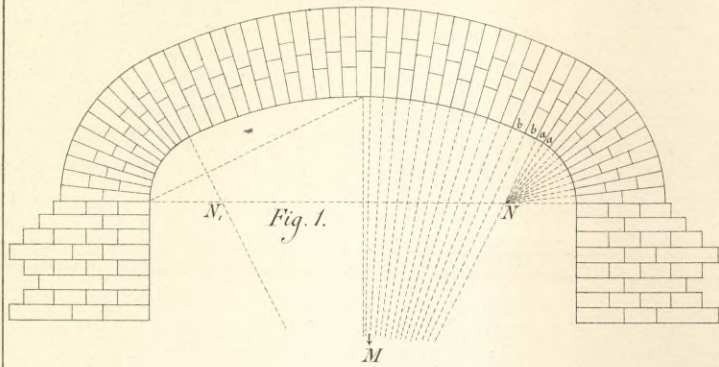


Fig. 1.

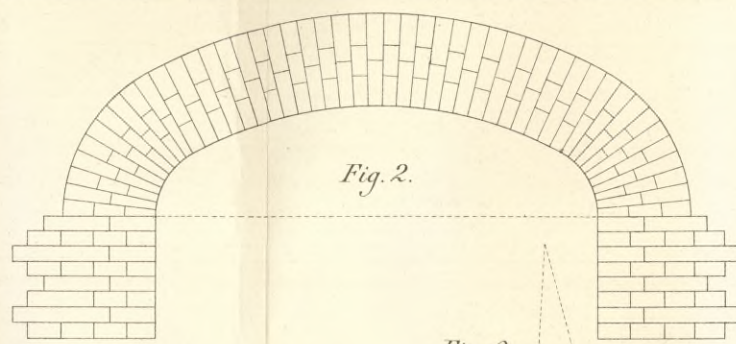


Fig. 2.

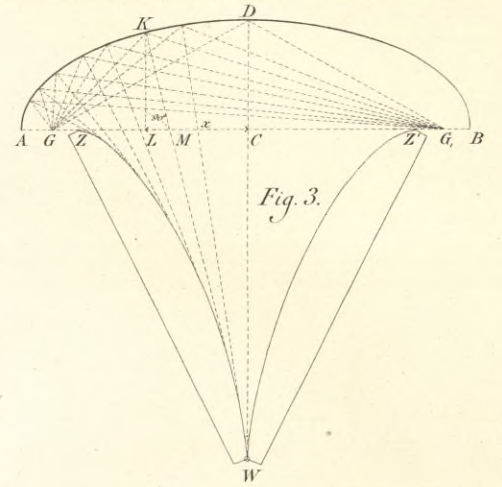


Fig. 3.

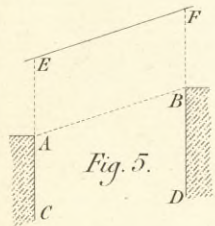


Fig. 5.

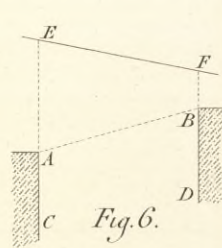


Fig. 6.

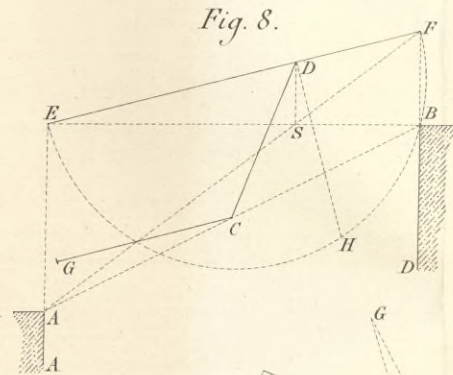


Fig. 8.

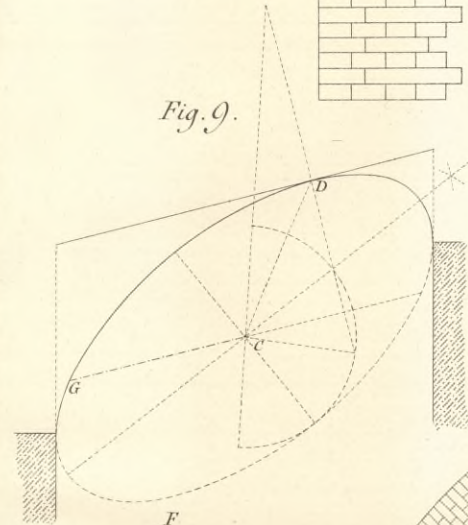


Fig. 9.

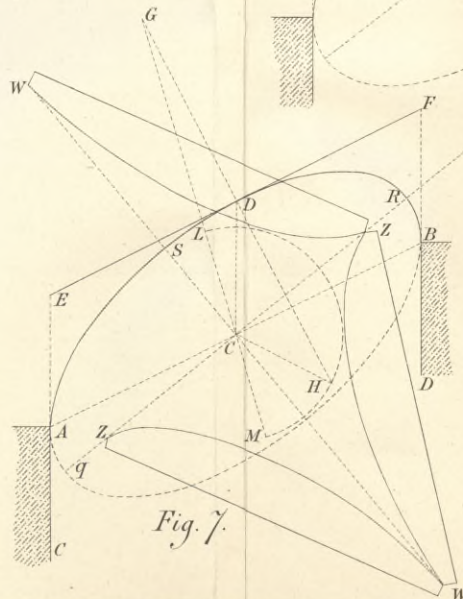


Fig. 7.

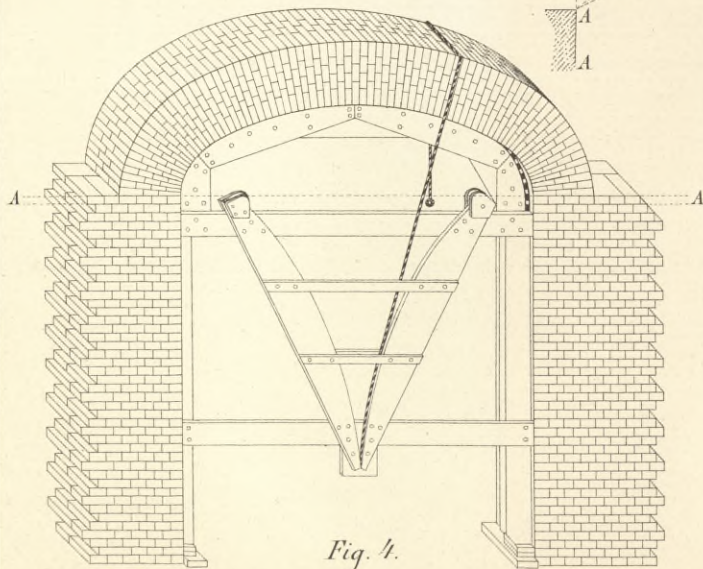


Fig. 4.

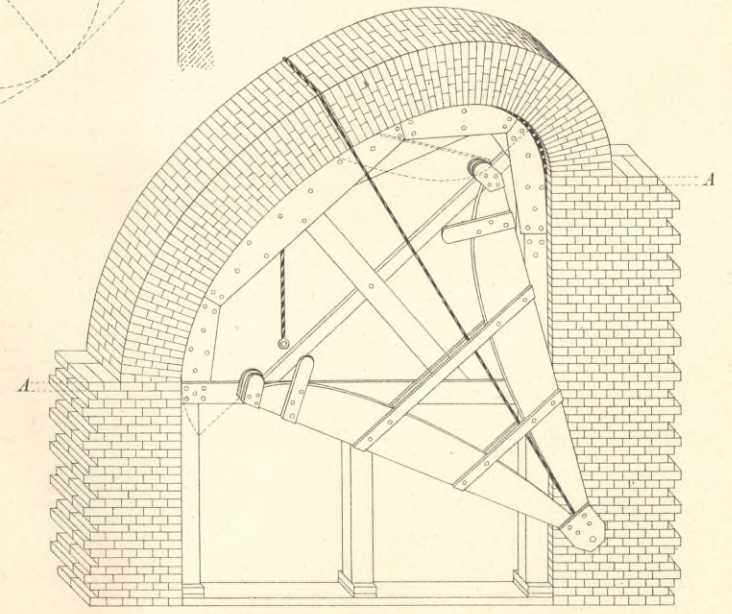


Fig. 10.





Fig. 1. Korfboog uit 11 middelpunten.  
Boog der brug te Neuilly.

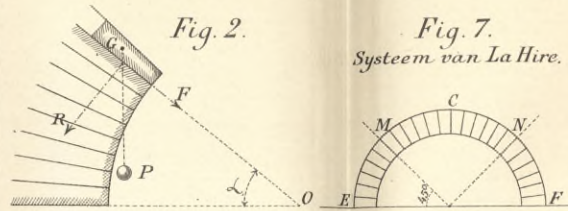
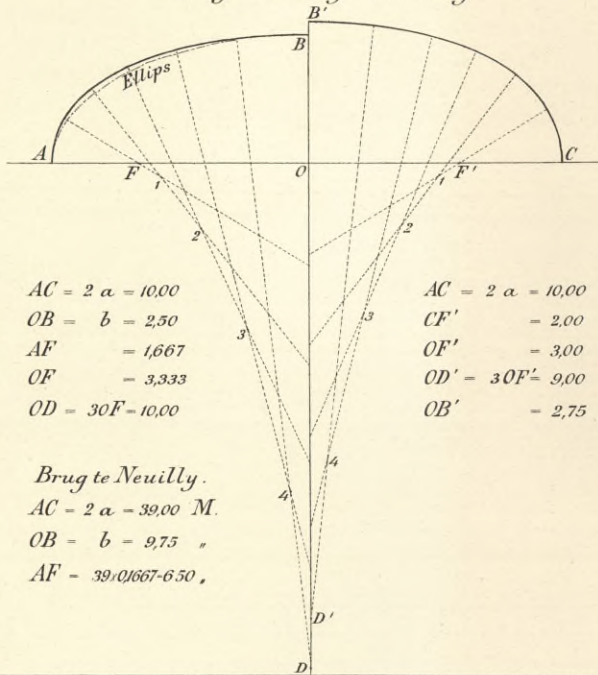


Fig. 6. Voeg van den eersten welfsteen (Brug te Nemours)

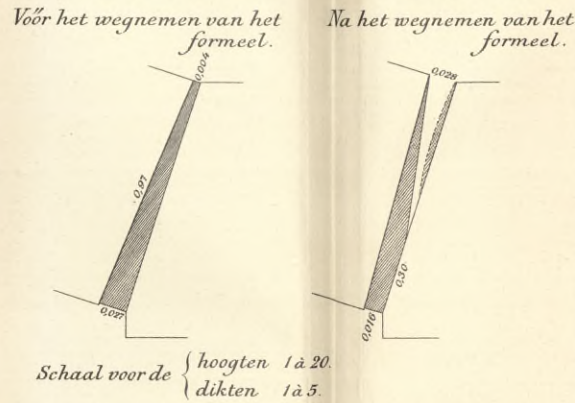


Fig. 3. Maat der zettingen voor een gewelf met  
halfcirkelvormigen boog.

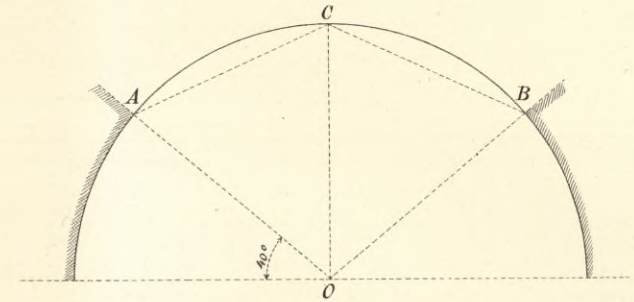


Fig. 4. Maat der zettingen voor een gewelf met  
sterk gedrukten segmentboog.

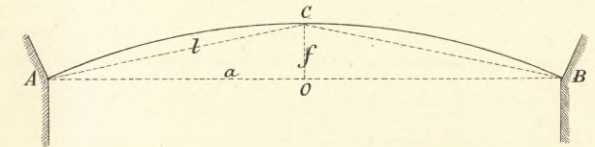


Fig. 8. Gewelf van 260 M. opening rustende  
op het formeel nadat dit 0,02 M. gezakt is.

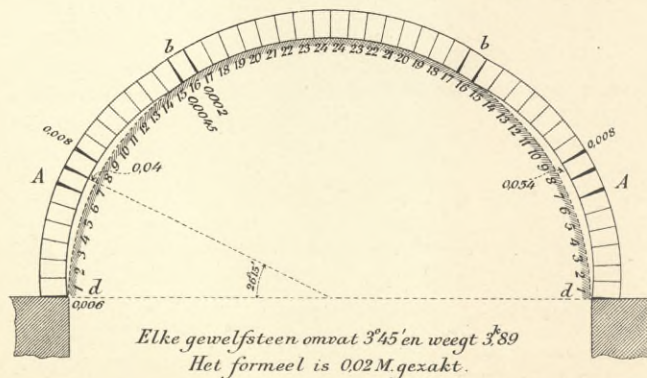


Fig. 9. Gewelfomspannen met een koord  
dat de helft van het gewelf omvat.

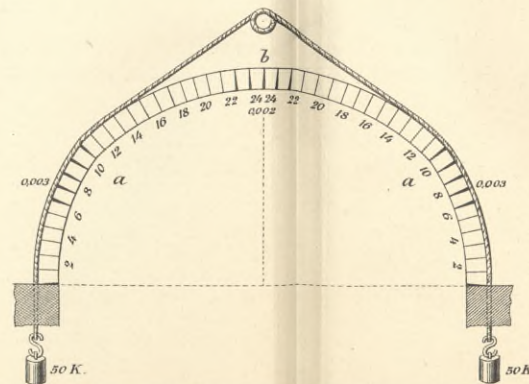


Fig. 5. Brug „la Concorde” te Parijs.

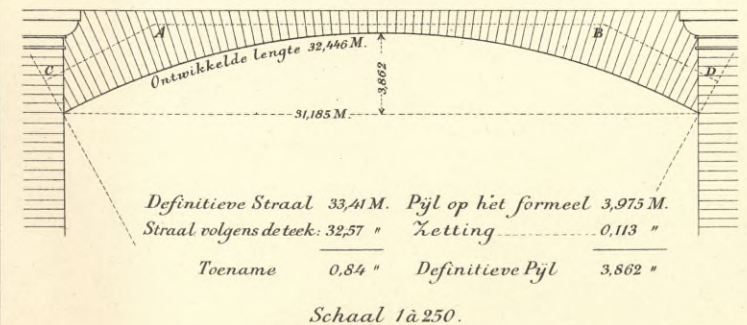








Fig. 1.

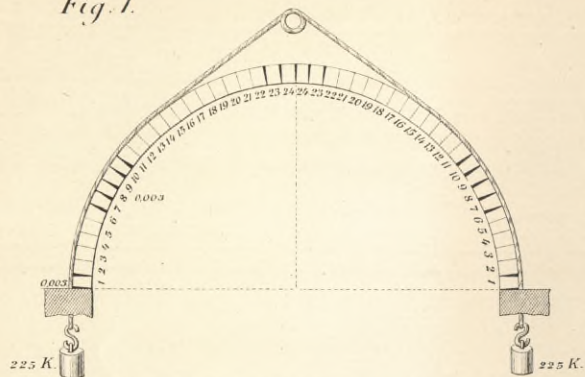


Fig. 2.

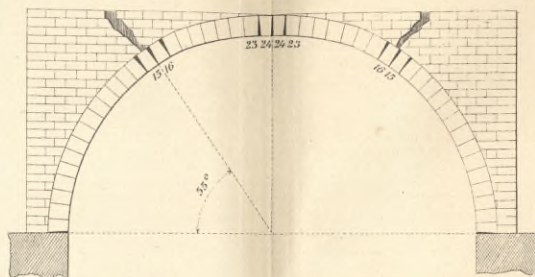


Fig. 3. Gewelf van 260 M opening uit 3 middelp. en op een derde gedrukt.

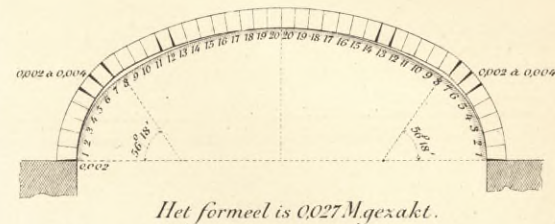


Fig. 4. Gewelf gedeeltelijk omspannen door een koord dat met verschillende gewichten is belast.

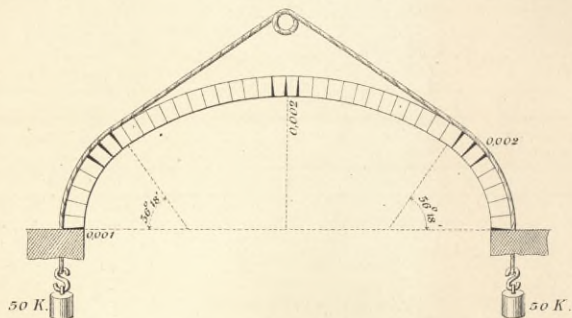


Fig. 5.

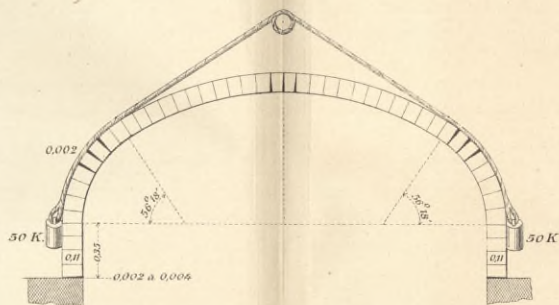


Fig. 6.

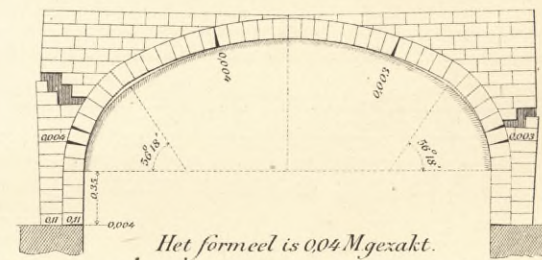


Fig. 7.

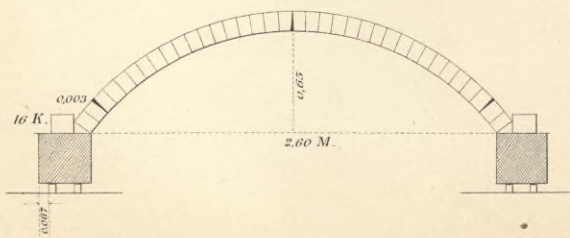


Fig. 8.

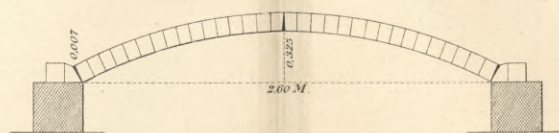


Fig. 9.

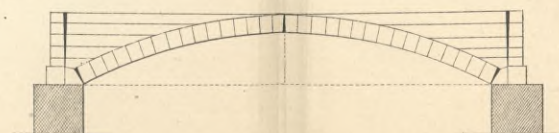


Fig. 10.

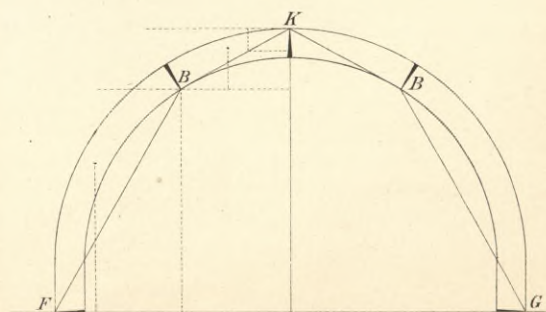












Fig. 1. Brug van 20.00 M. opening met korbboog op  $\frac{1}{3}$  gedrukt (Pijl 0,67 M).

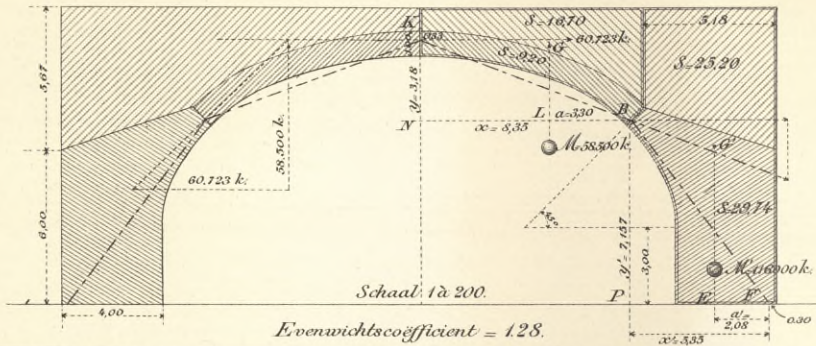
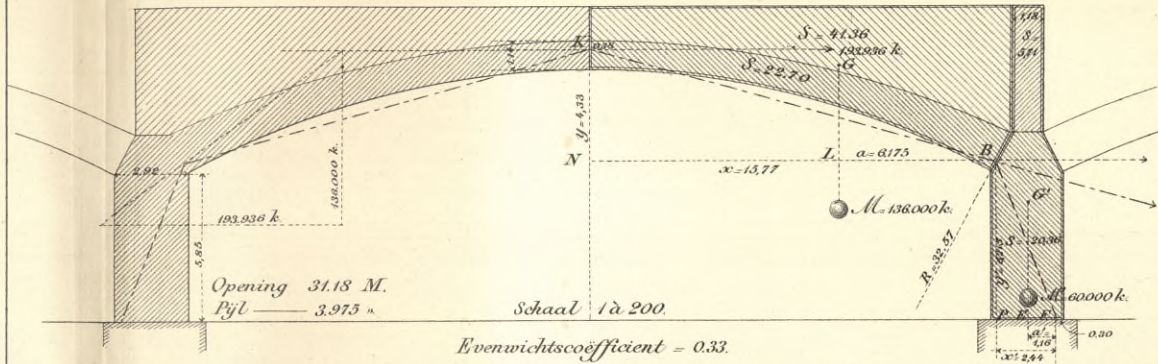


Fig. 2. Brug Louis XVI (Pont de la Concorde) te Parijs.



Viaduct te Port l'Aunay over de Aulne. (Fig. 7-9).

Fig. 7. Lengtedoorsnede.

Fig. 8. Dwarsdoorsnede.

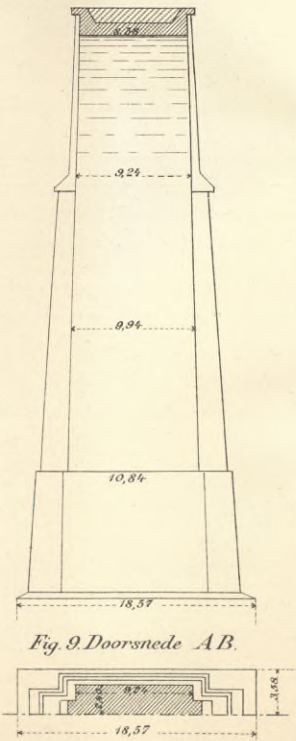
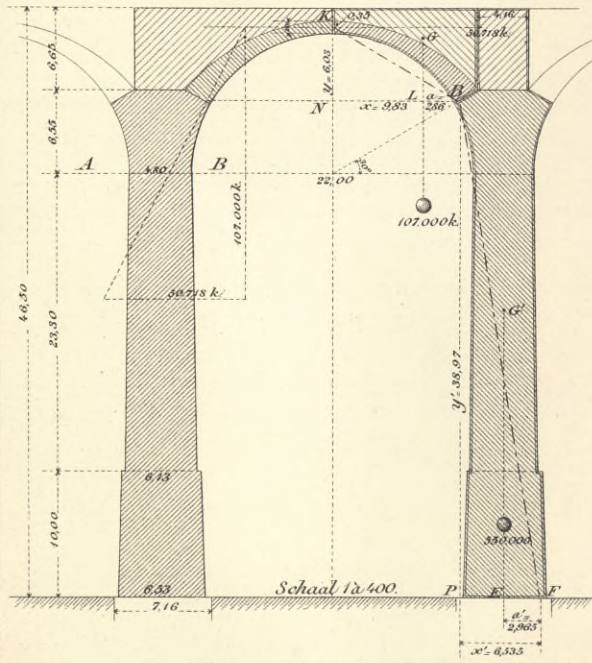


Fig. 3. Brug te Neuilly.

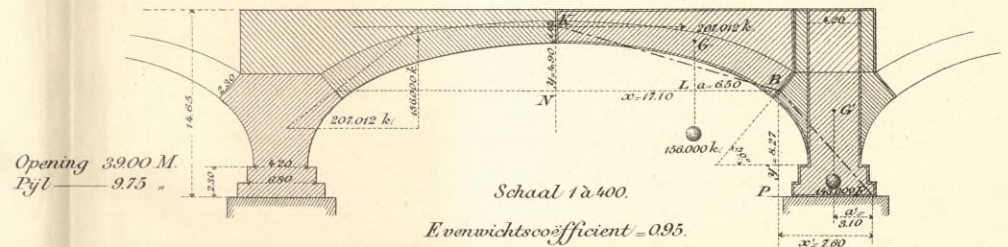


Fig. 6. Viaduct te Auray.

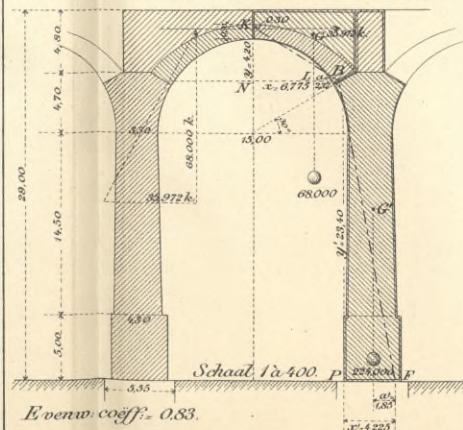


Fig. 4. Pont d'Austerlitz te Parijs.

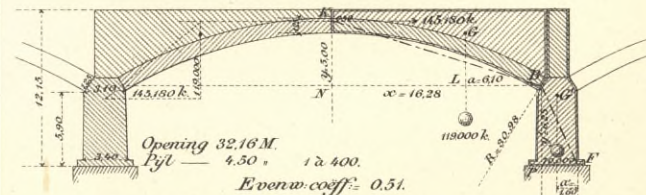
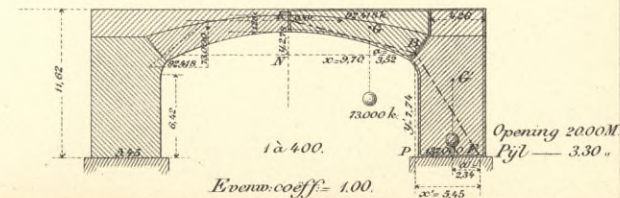


Fig. 5. Pont du Transit te Parijs.









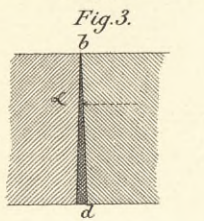
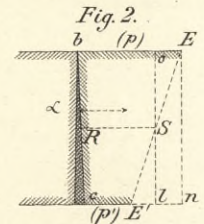
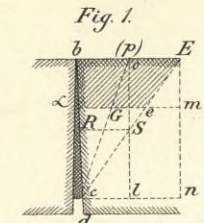


Fig. 4.

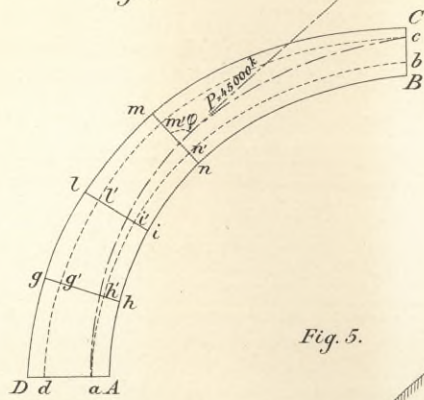


Fig. 5.

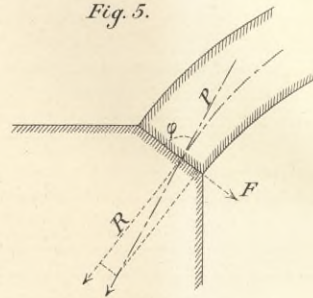


Fig. 7.

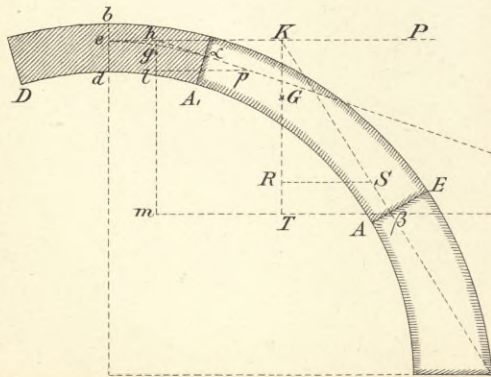
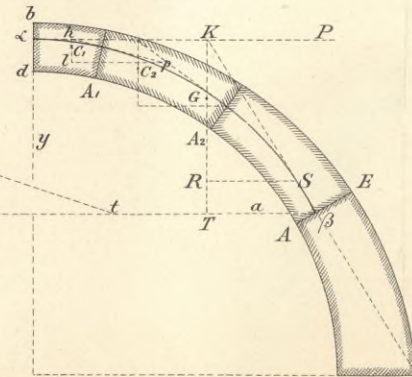


Fig. 6.



Boog eener brug te Parijs.

Fig. 8.

Gewelf zonder belasting.

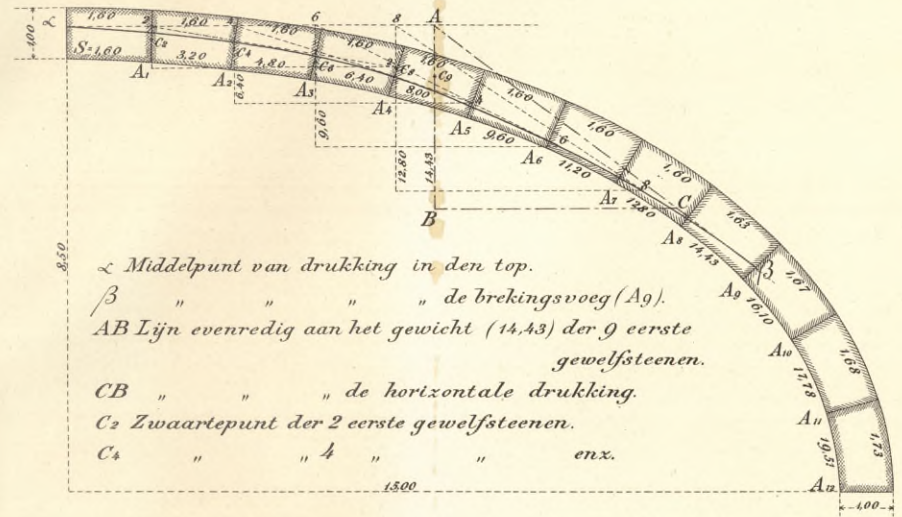
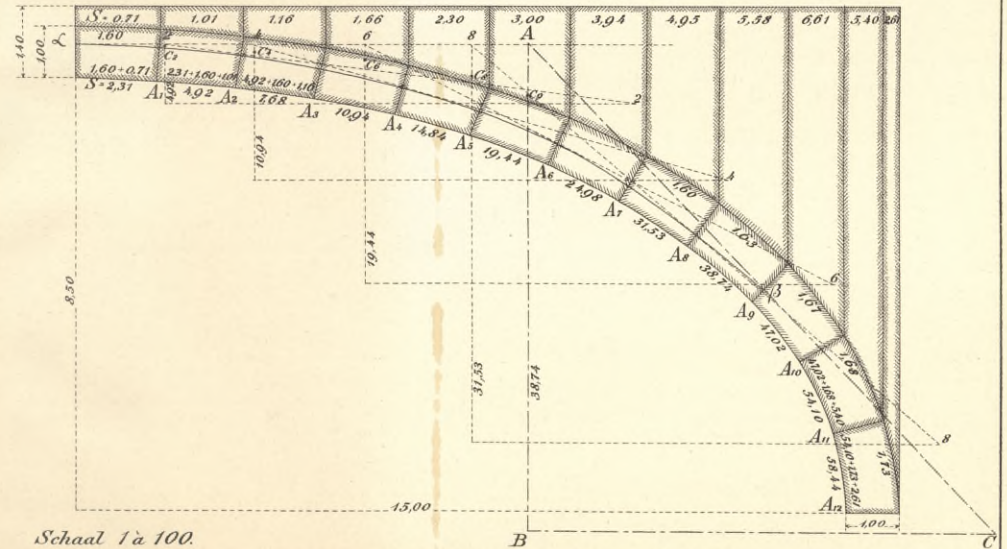
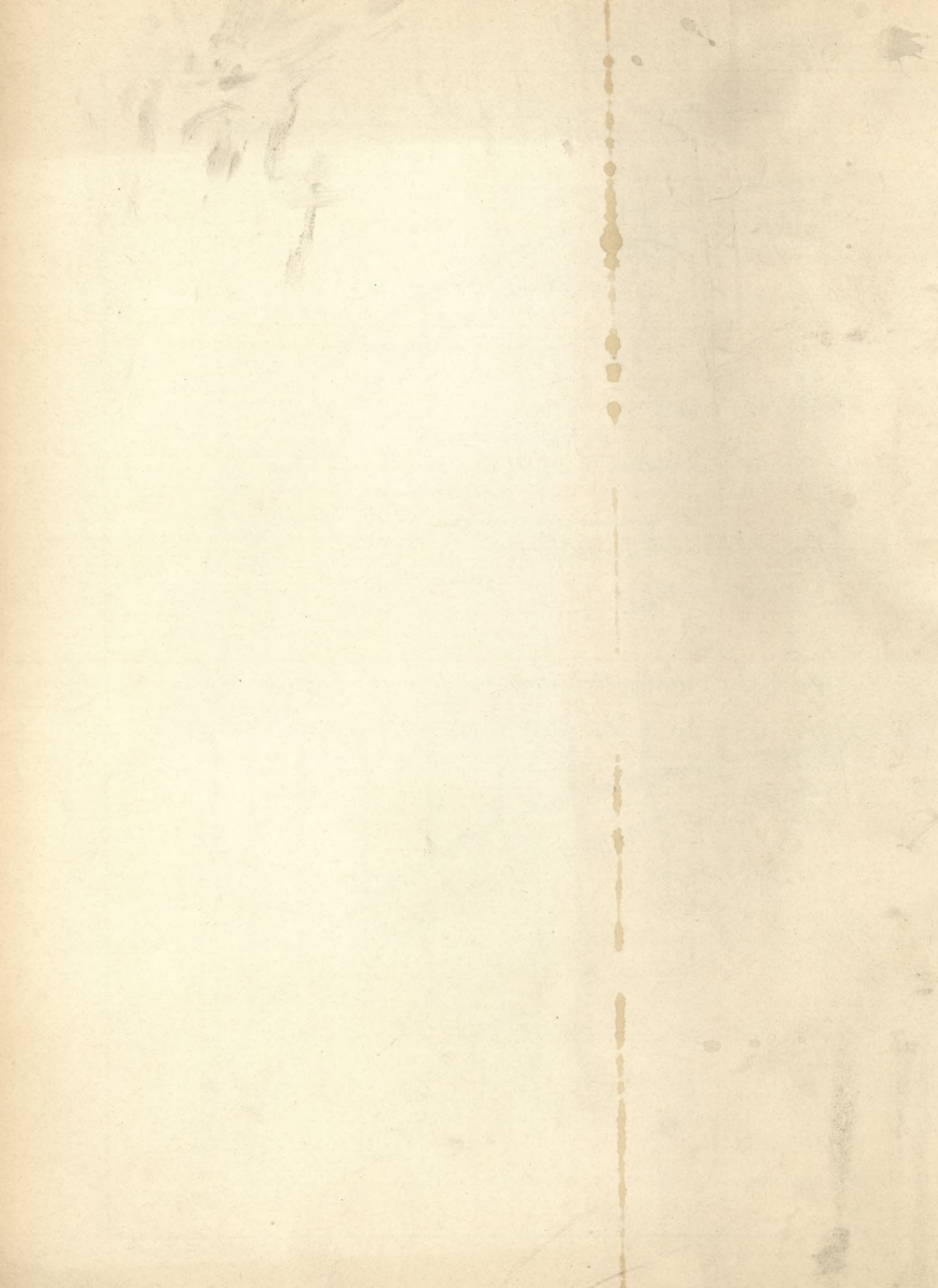


Fig. 9. Gewelf met volledige belasting na de voltooiing der brug.







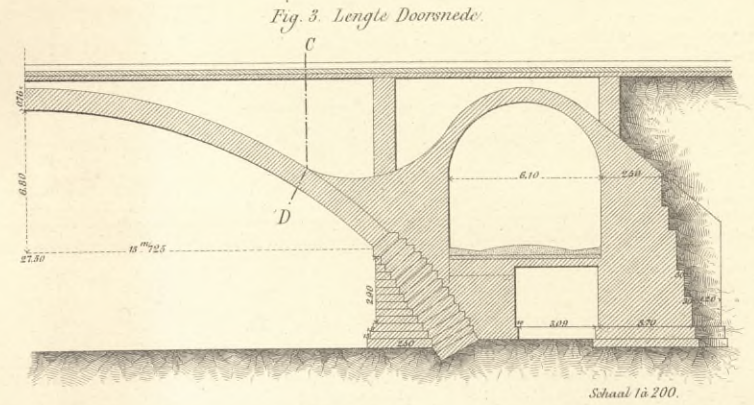
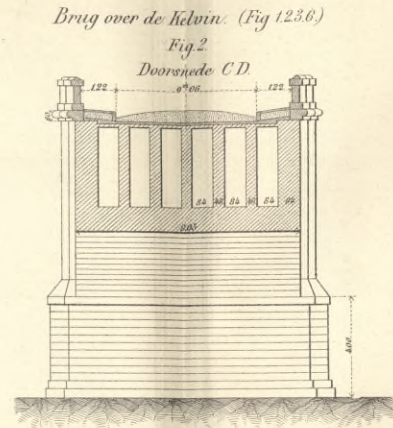
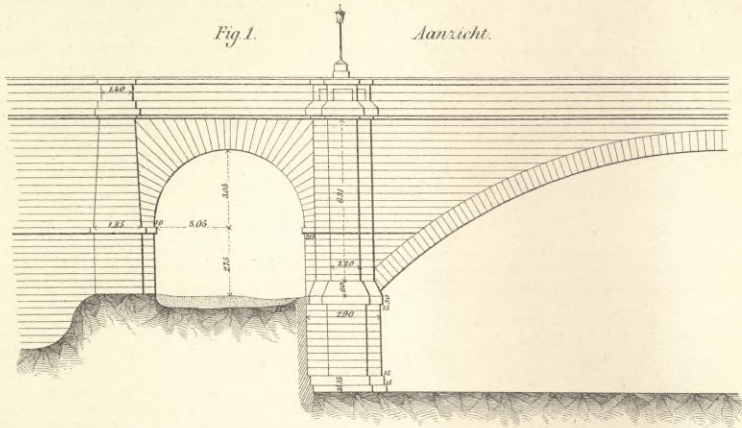
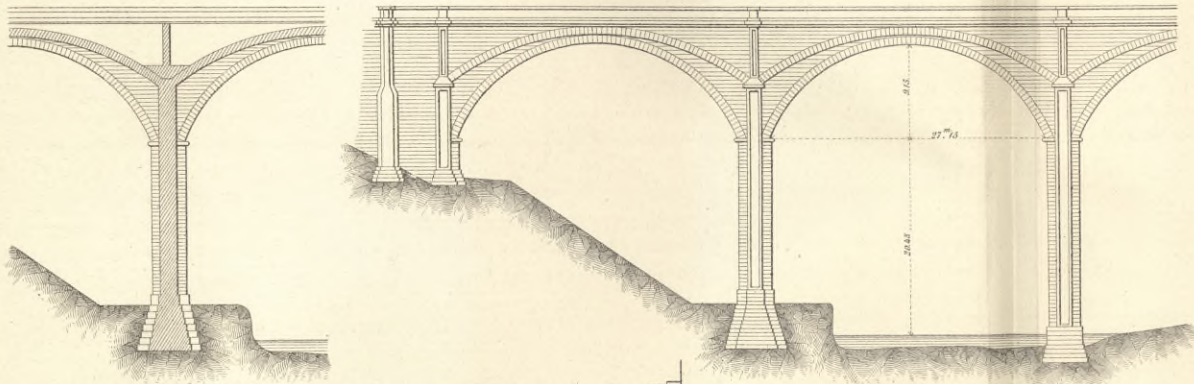


Fig. 4. *Lengte Doorsnede.*

Fig. 5. *Viaduct van Edimburg. (Fig. 4589.)*



Schaal 1 à 500

Fig. 6. *Horizontale Doorsnede.*

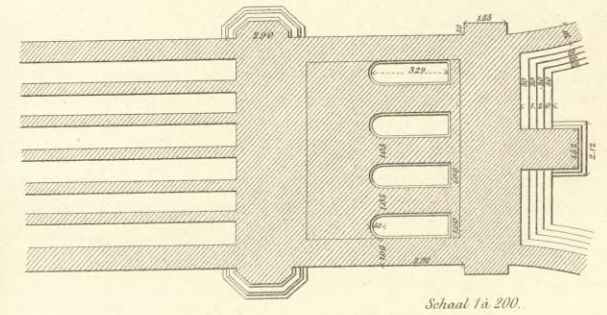


Fig. 7. *Doorsnede van de Chester Brug.*

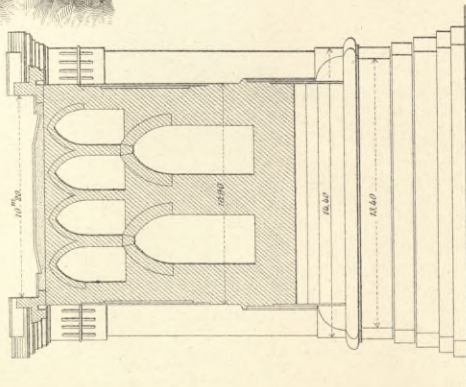


Fig. 8. *Lengte Doorsnede.*

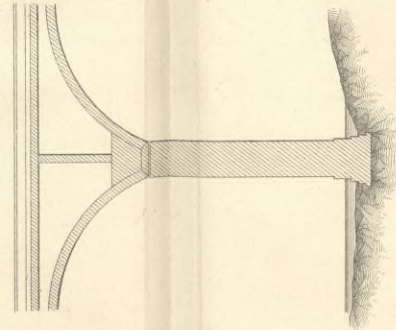
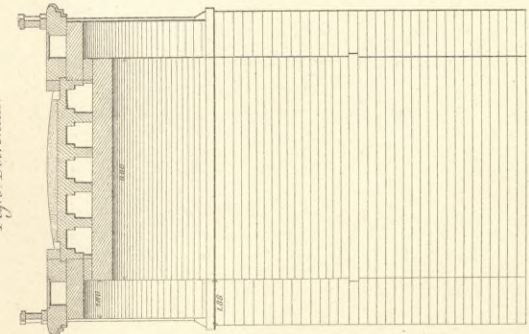


Fig. 9. *Doorsnede.*







Voorbeeld van aanmulling der  
ruimten boven de gewelven.

Fig. 1.

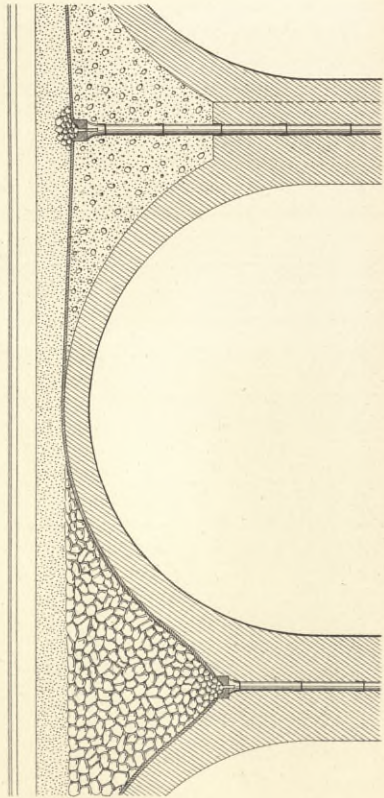
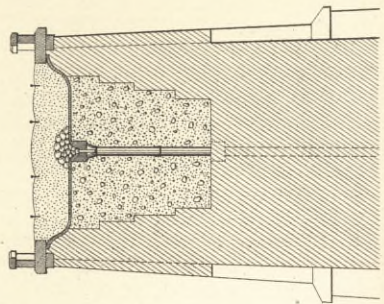


Fig. 2. Doorsnede.



Voorbeeld eener toepassing met  
dwarsgewelven.

Fig. 3.

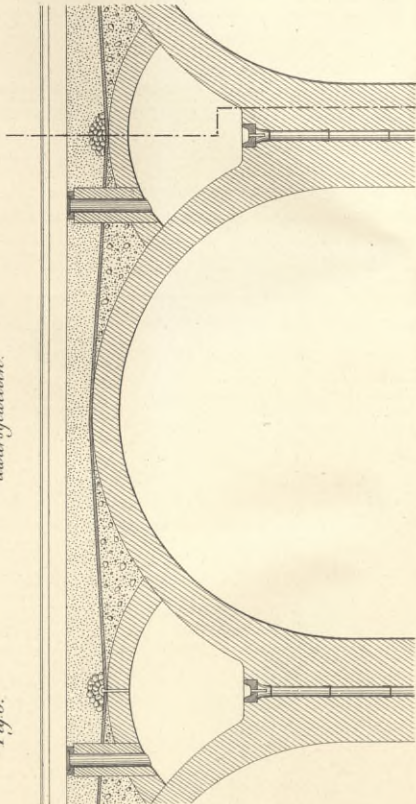
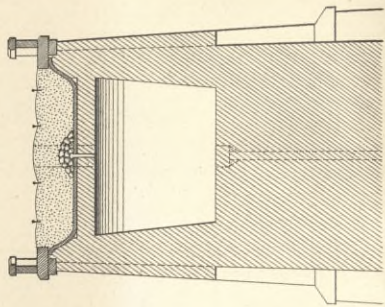


Fig. 4. Doorsnede.



Voorbeeld eener toepassing met  
langsgewelven.

Fig. 5.

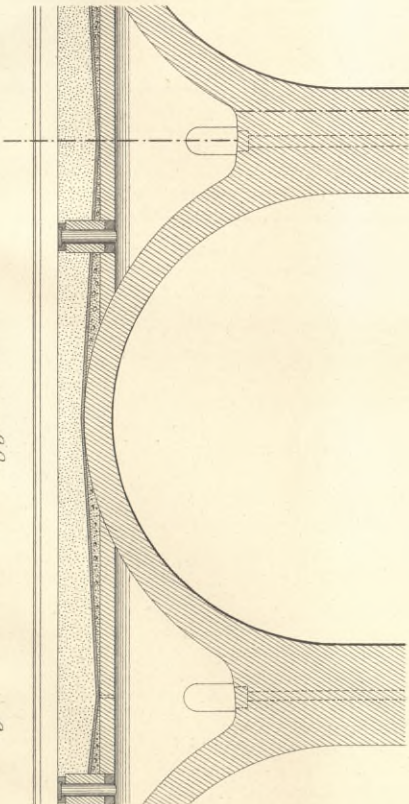
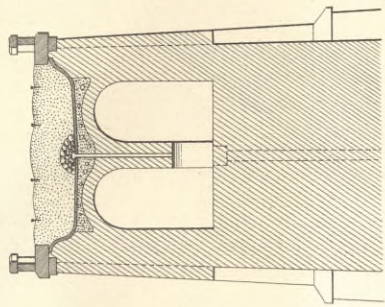


Fig. 6. Doorsnede.



Voorbeeld eener toepassing met  
drie langsgewelven.

Fig. 7.

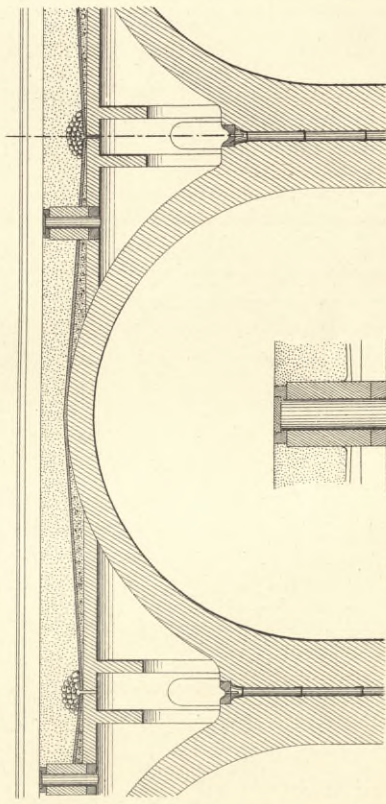
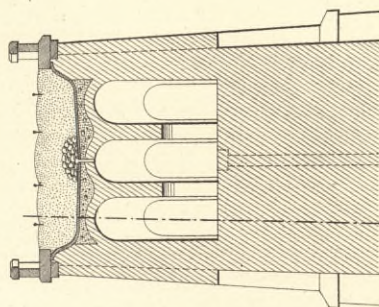


Fig. 8. Doorsnede.



1 à 10.

Schaal 1 à 200.







Fig 1. Viaduct te Rotterdam (Fig. 1234)  
Schaal 1 à 200.

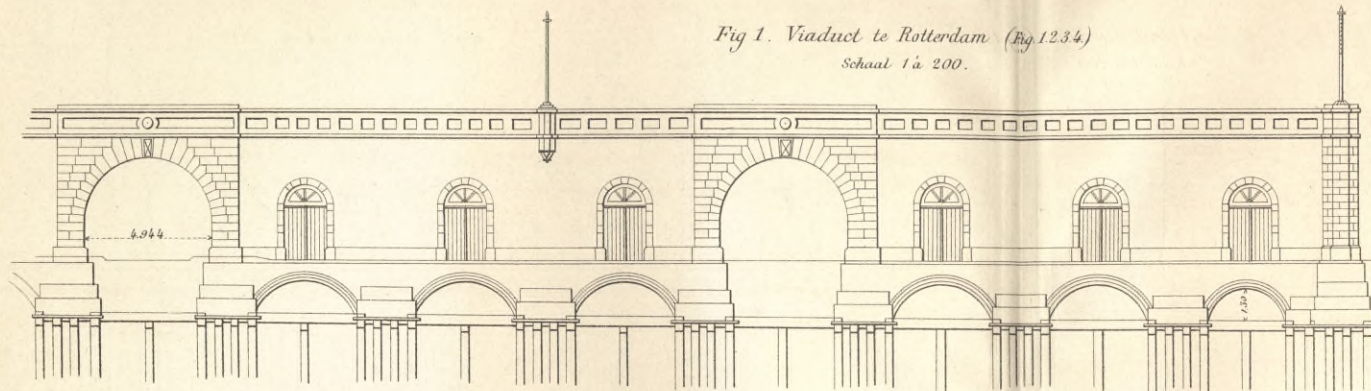


Fig. 2. Doorsnede volgens AB.

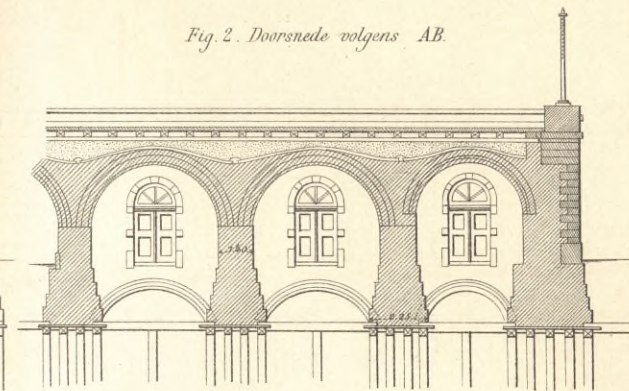


Fig 3. Platte Grond.

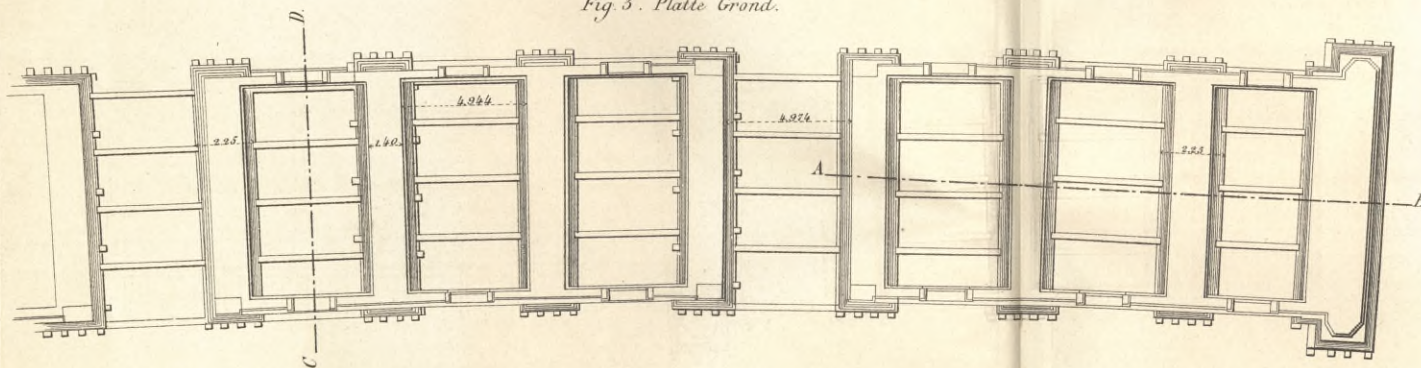


Fig 4. Doorsnede volgens C.D.

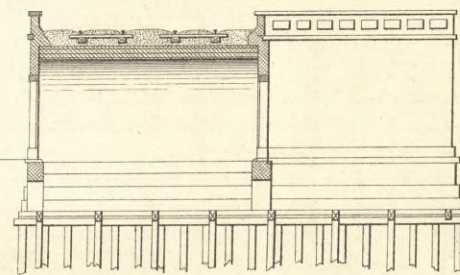
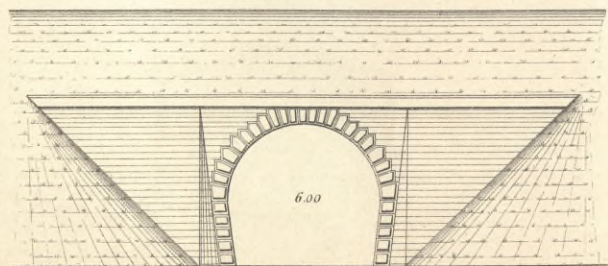


Fig 4. Aanzicht.



Poort met keermuren (Fig. 456)  
Schaal 1 à 200. Fig 5. Doorsnede.

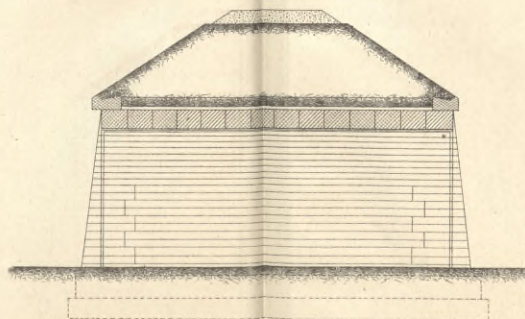
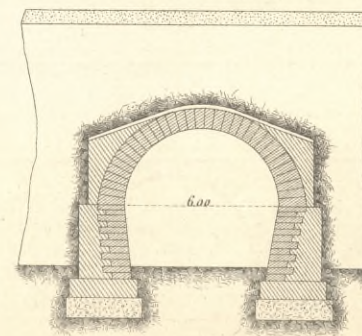
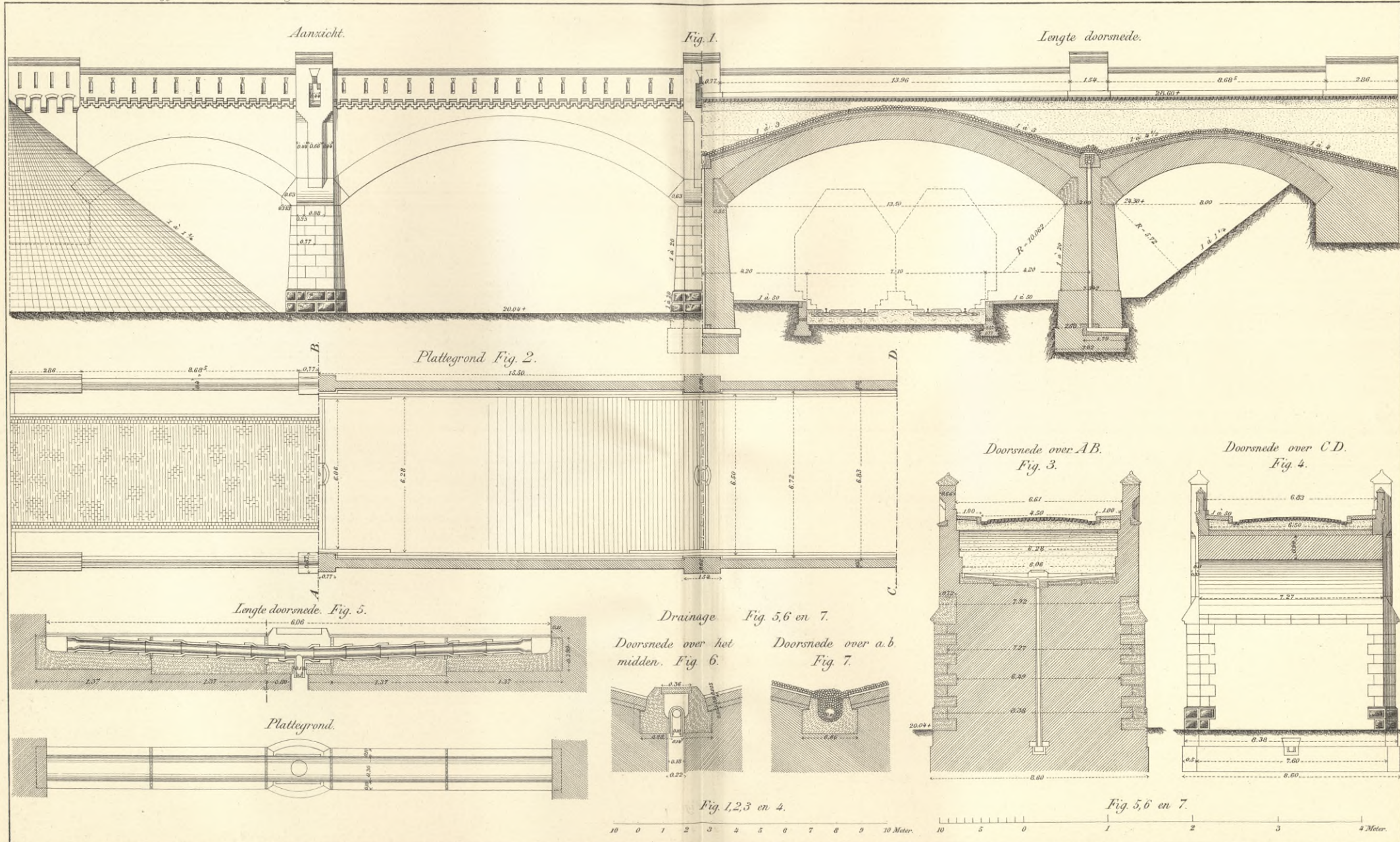


Fig 6. Doorsnede.





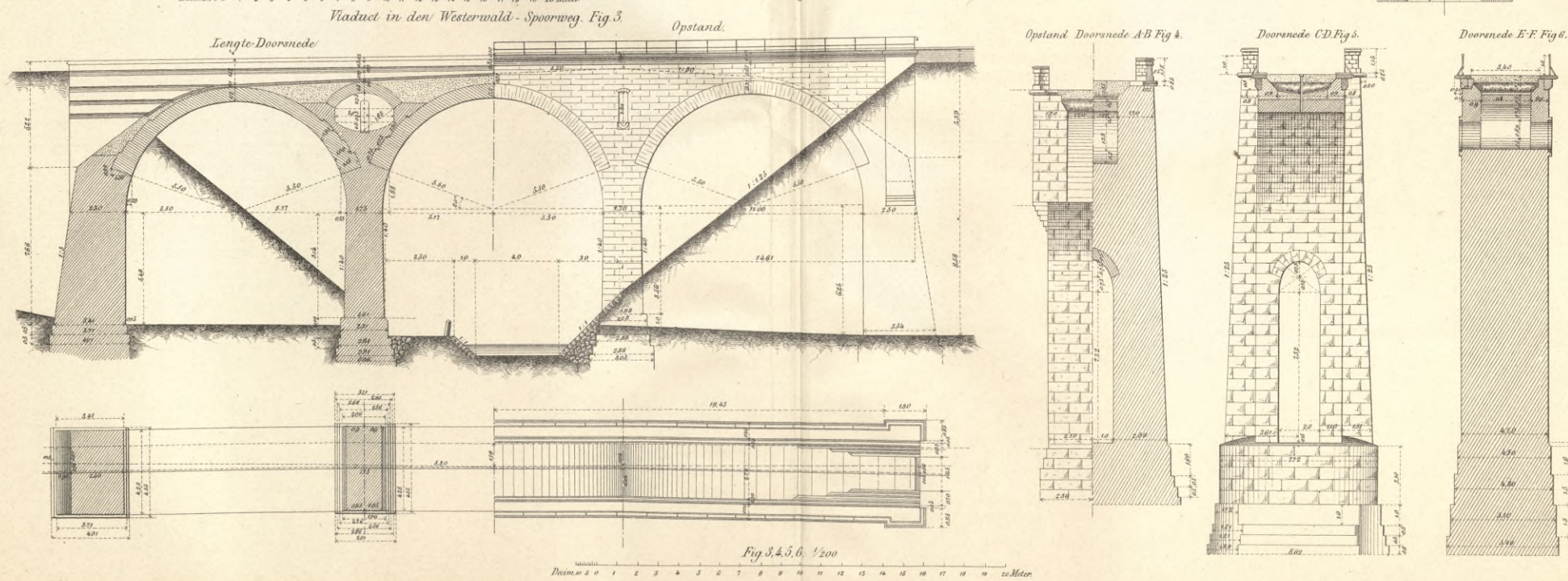
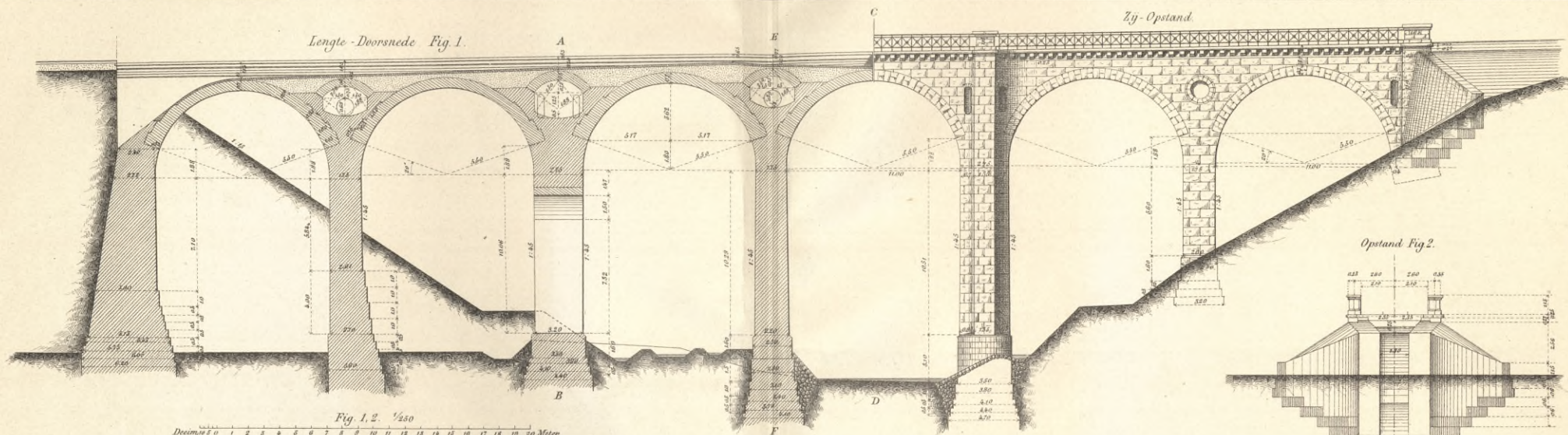










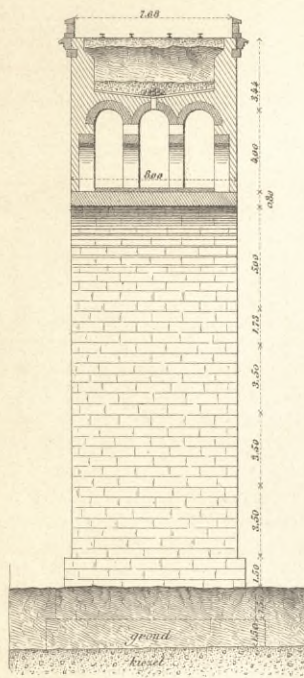




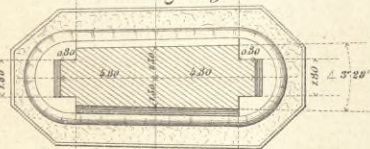


Doorsnede e-f.

Fig. 5.



Doorsnede g-h Fig. 6.



Doorsnede a-b Fig. 3.

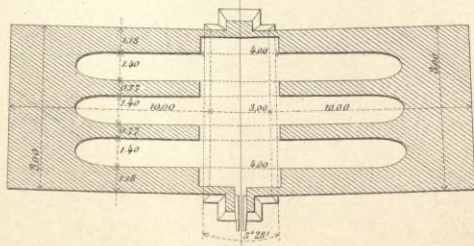


Fig. 1. Aanzicht. Schaal 1 à 1000.

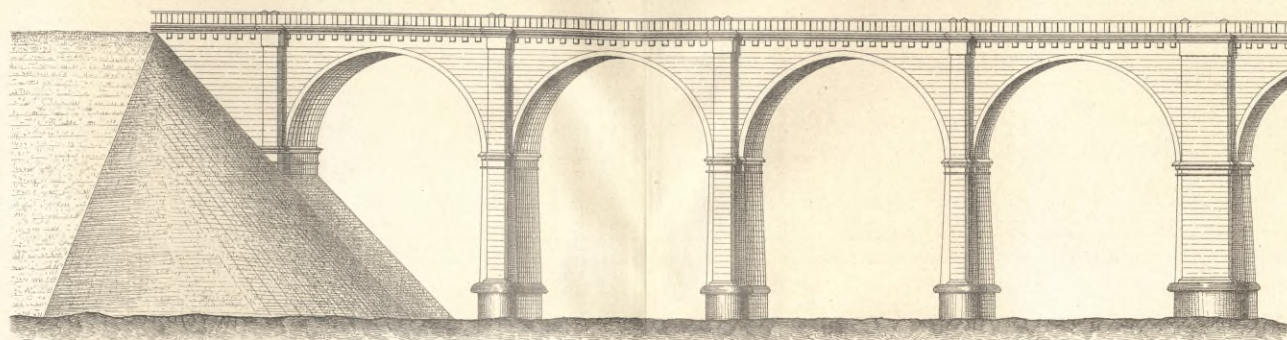
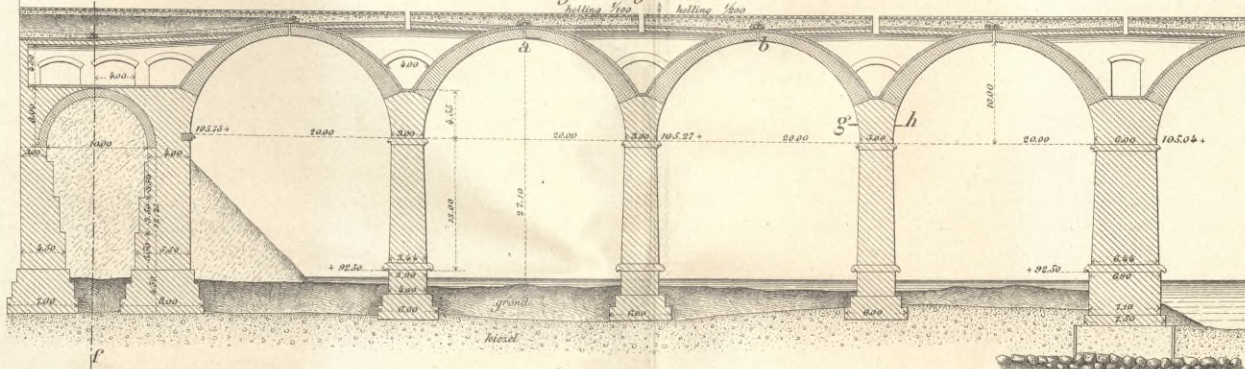
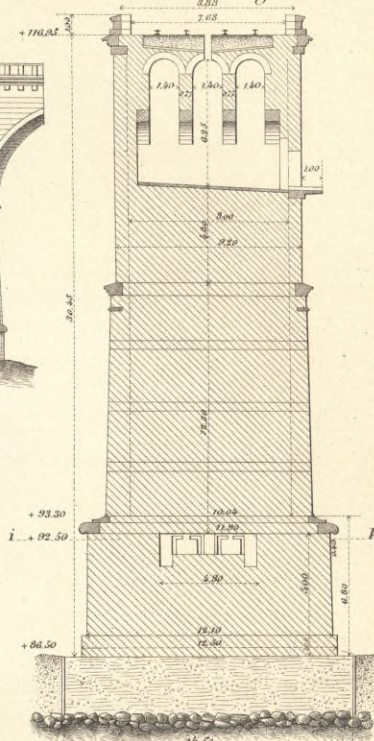


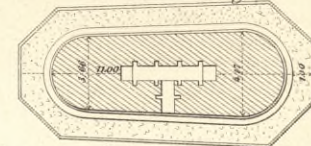
Fig. 2. Lengte doorsnede



Doorsnede e-d Fig. 4



Doorsnede i-k Fig. 7.



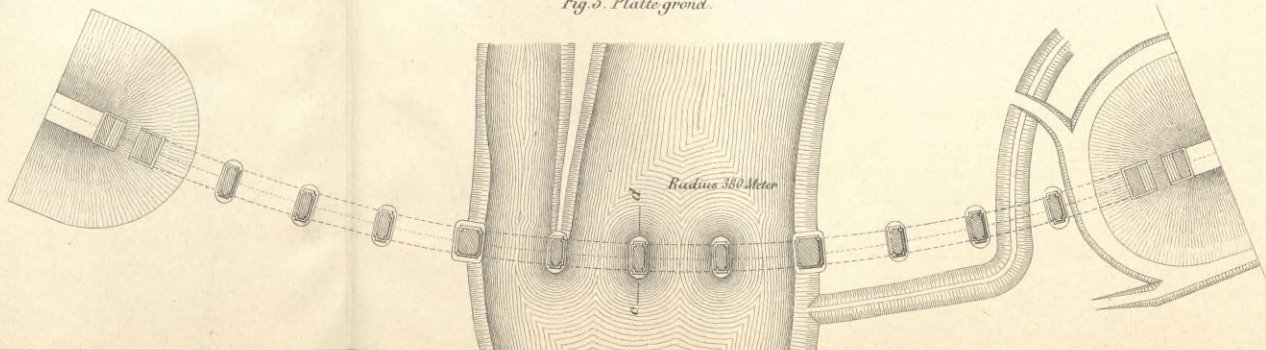
Schaal voor Fig. 1. 1/1000

Schaal voor Fig. 3. 1/500

Schaal voor Fig. 2. 1/500

Schaal voor Fig. 4, en 8. 1/250

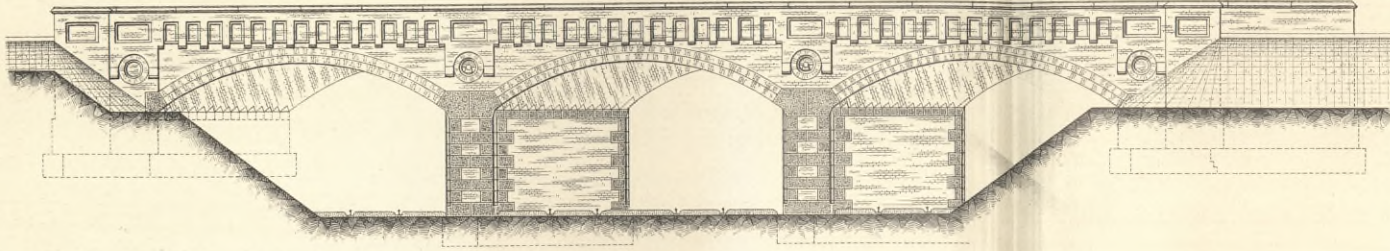
Fig. 3. Plattegrond.



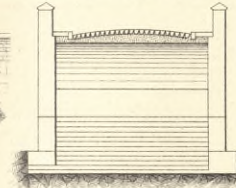




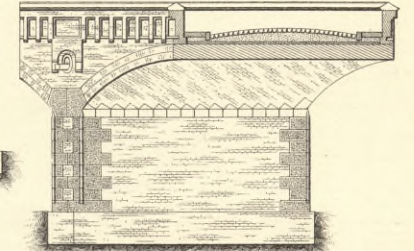
Vooraanzicht. Fig. 1.



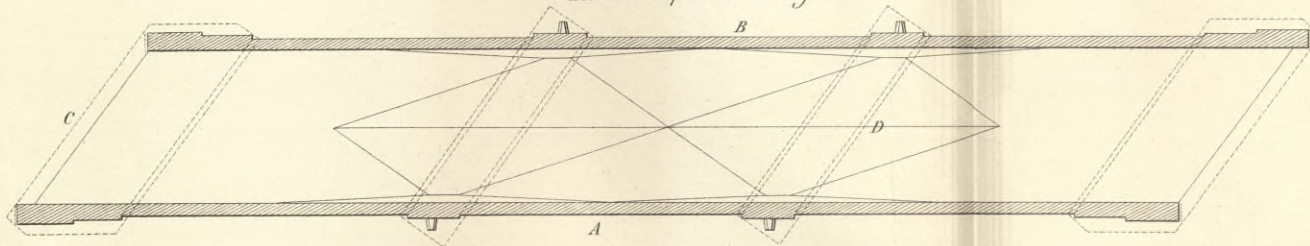
Zijaanzicht. Fig. 2.



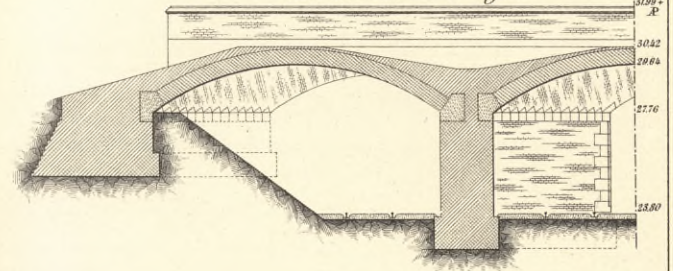
Doorsnede over AB. Fig. 3.



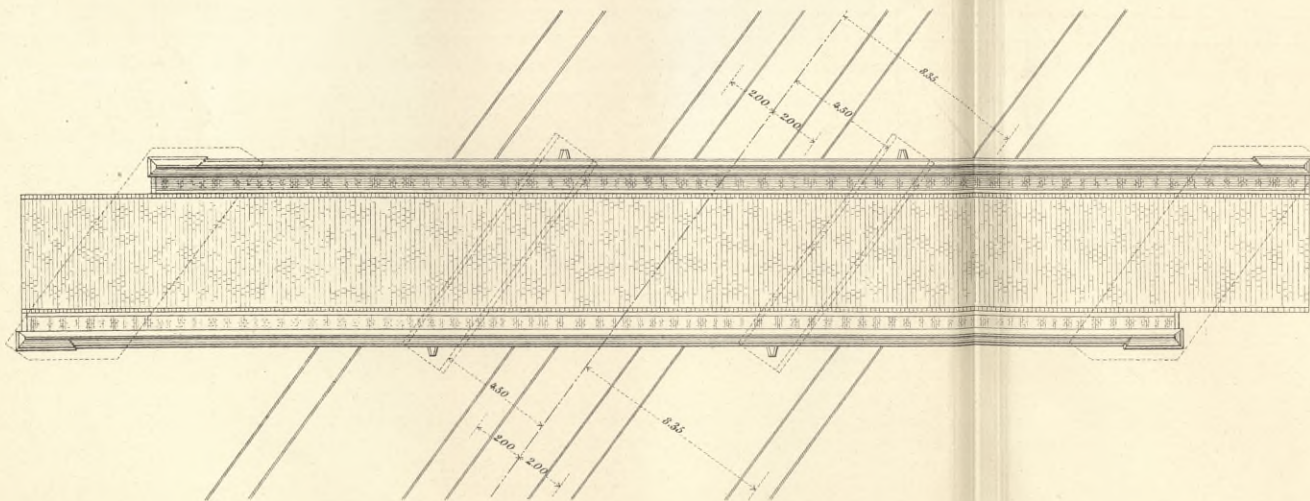
Doorsnede op 30.42 + P. Fig. 4.



Doorsnede over CD. Fig. 5.

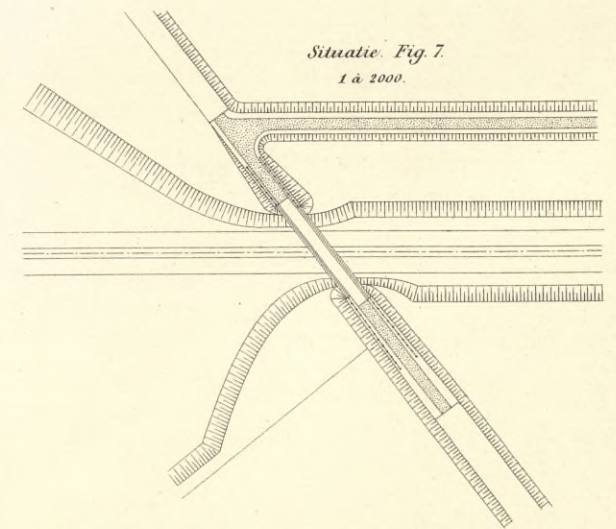


Bovenaanzicht. Fig. 6.



Situatie. Fig. 7.

1 à 2000.

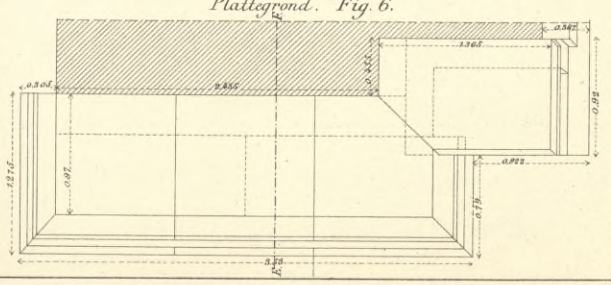
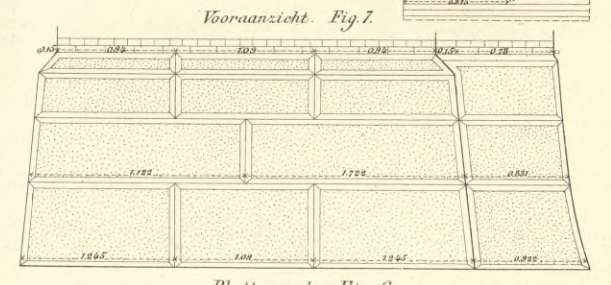
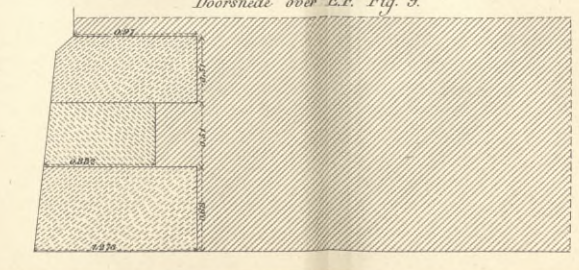
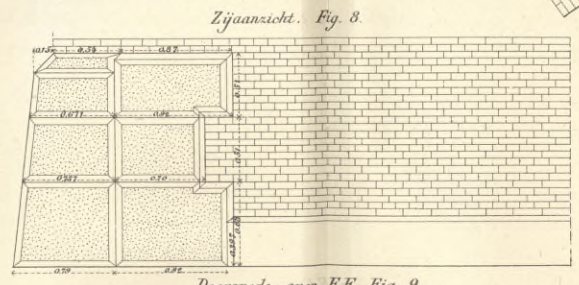
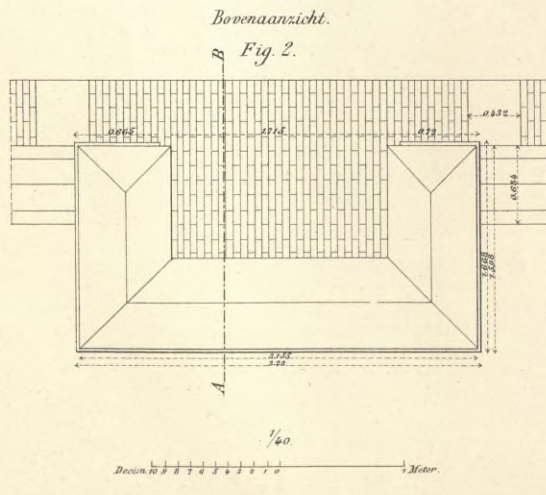
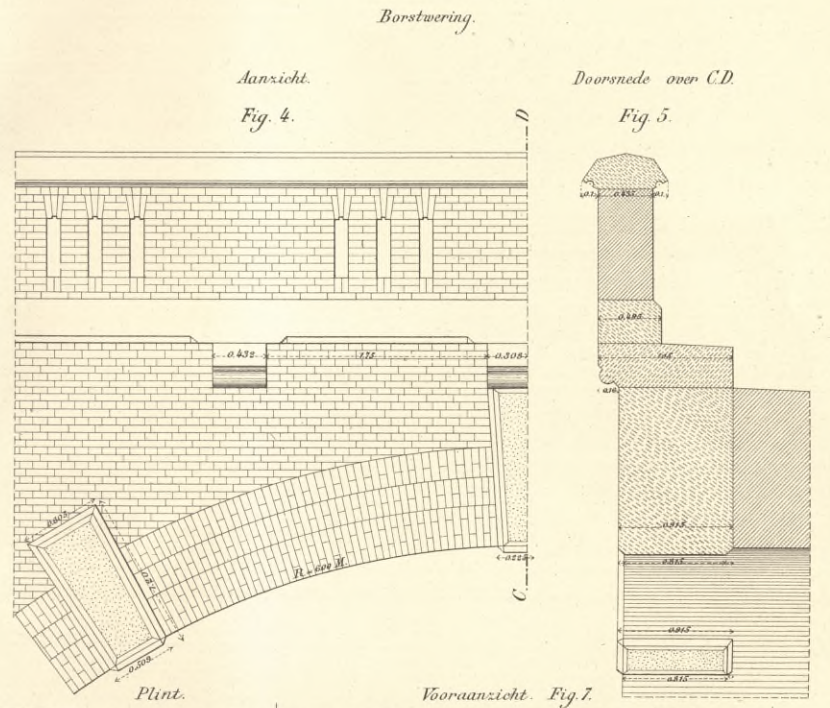
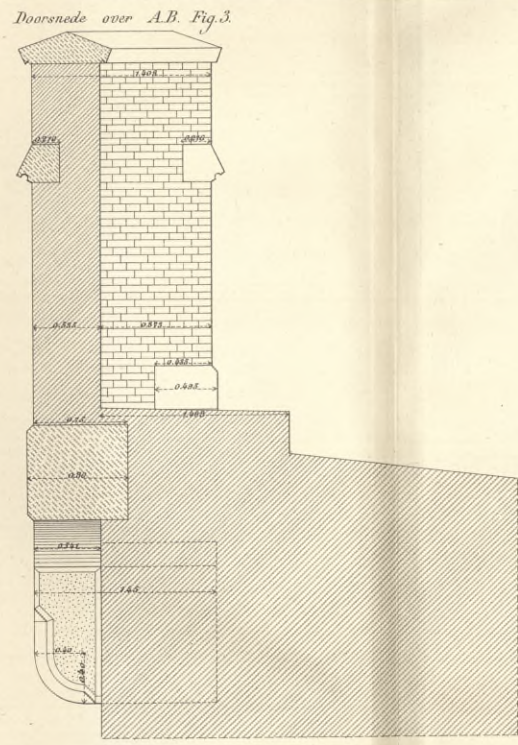
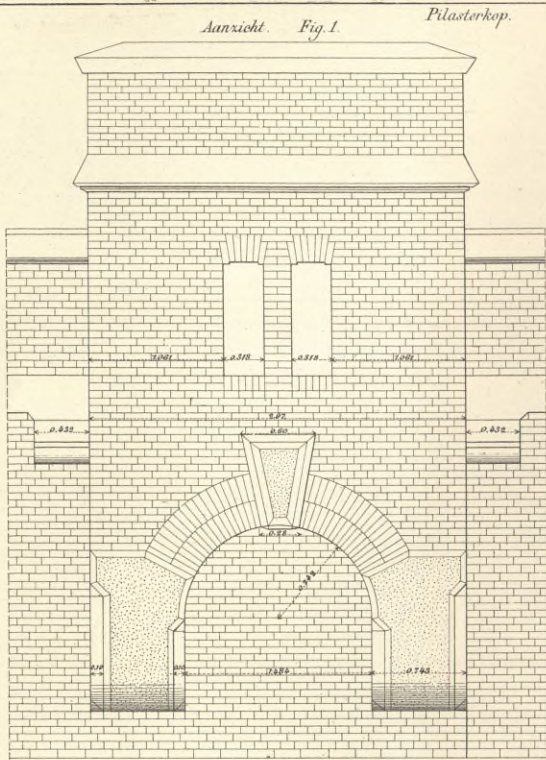


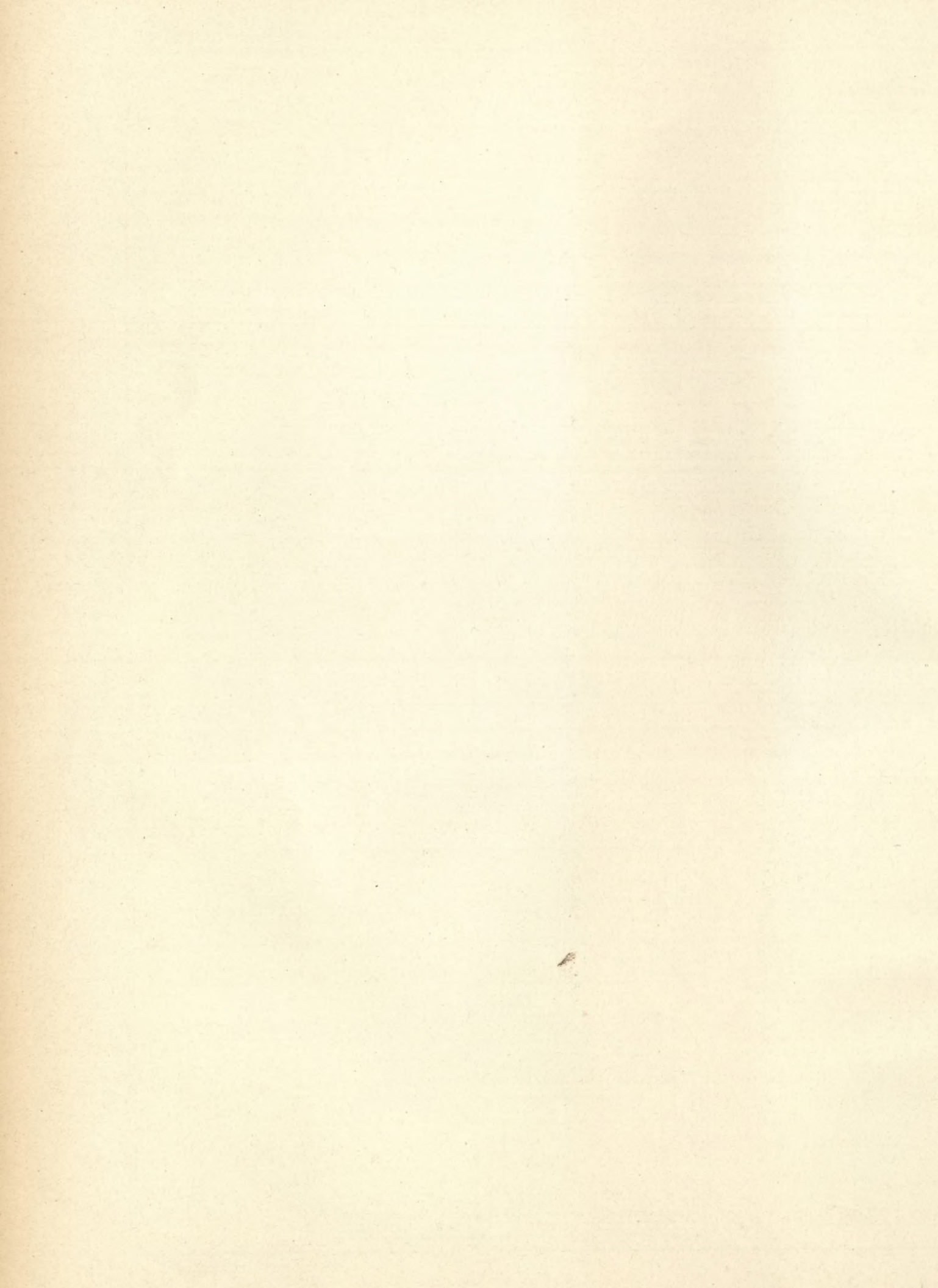
1 0 1 2 3 4 5 10 15 Meter.













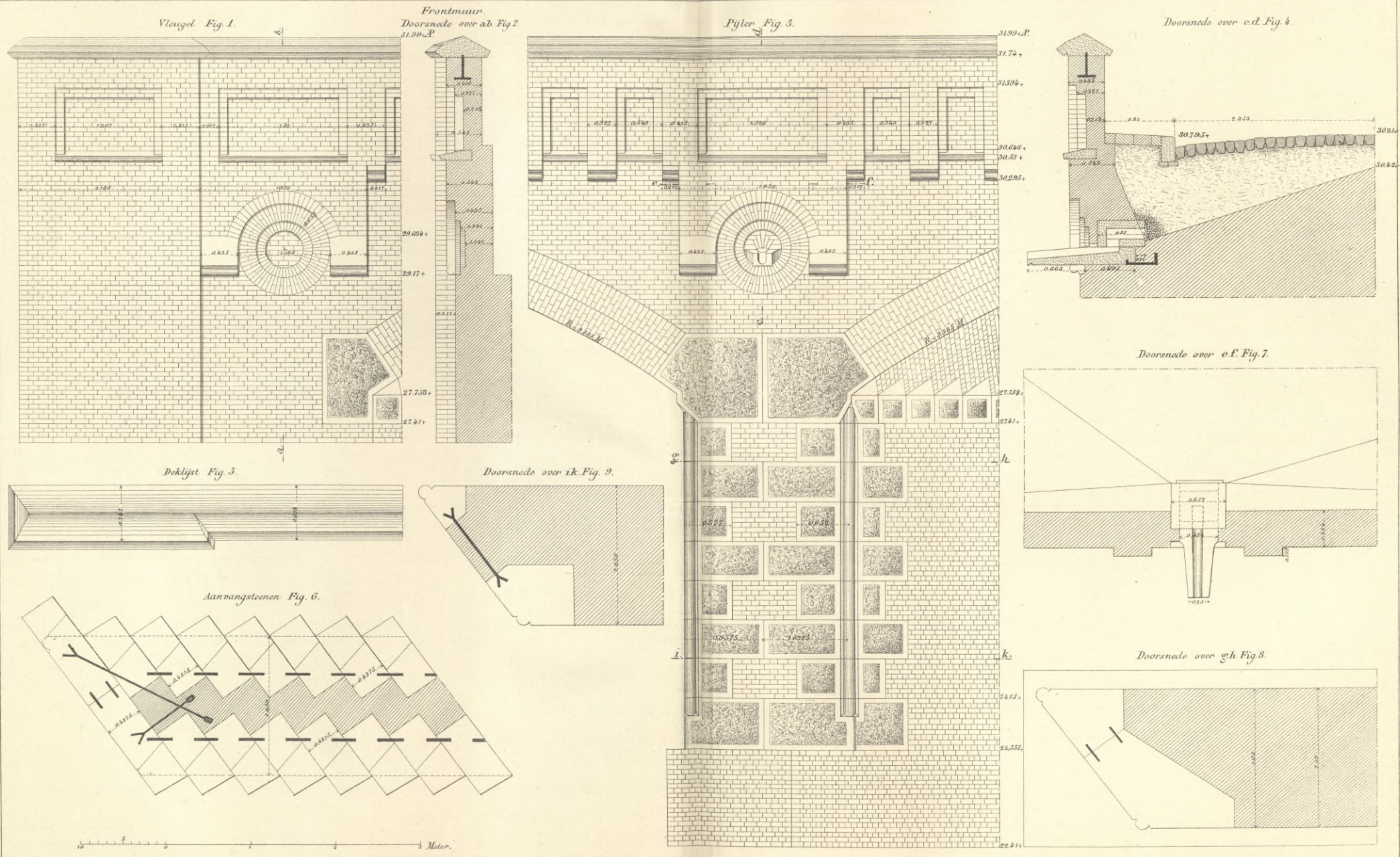






Fig. 1. Algemeen aanzicht. Schaal 1 à 1000.

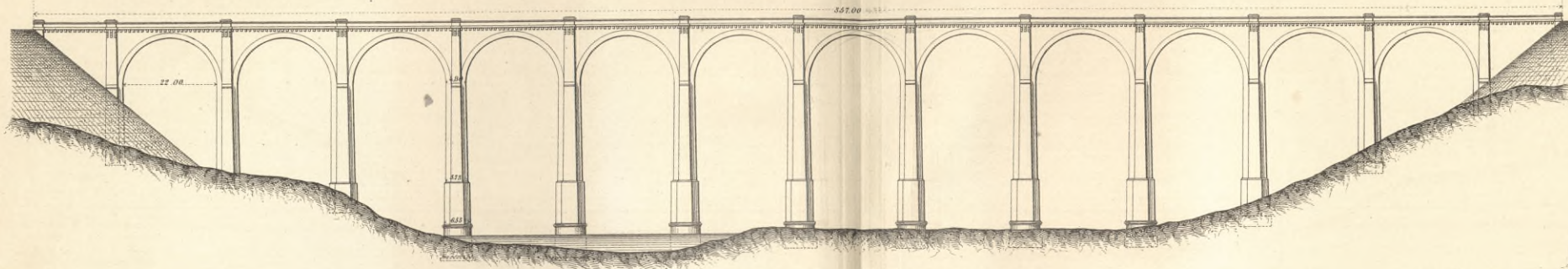


Fig. 2. Dwarsdoorsnede.

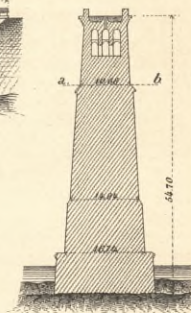


Fig. 3. Doorsnede a b.



Fig. 8. Aanzicht. Schaal 1 à 100.

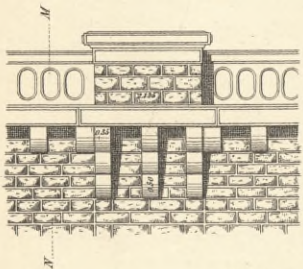


Fig. 9. Doorsnede M.N.

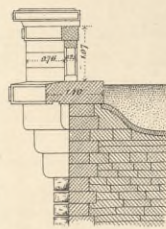


Fig. 4. Aanzicht. Schaal 2 1/2 à 1000.

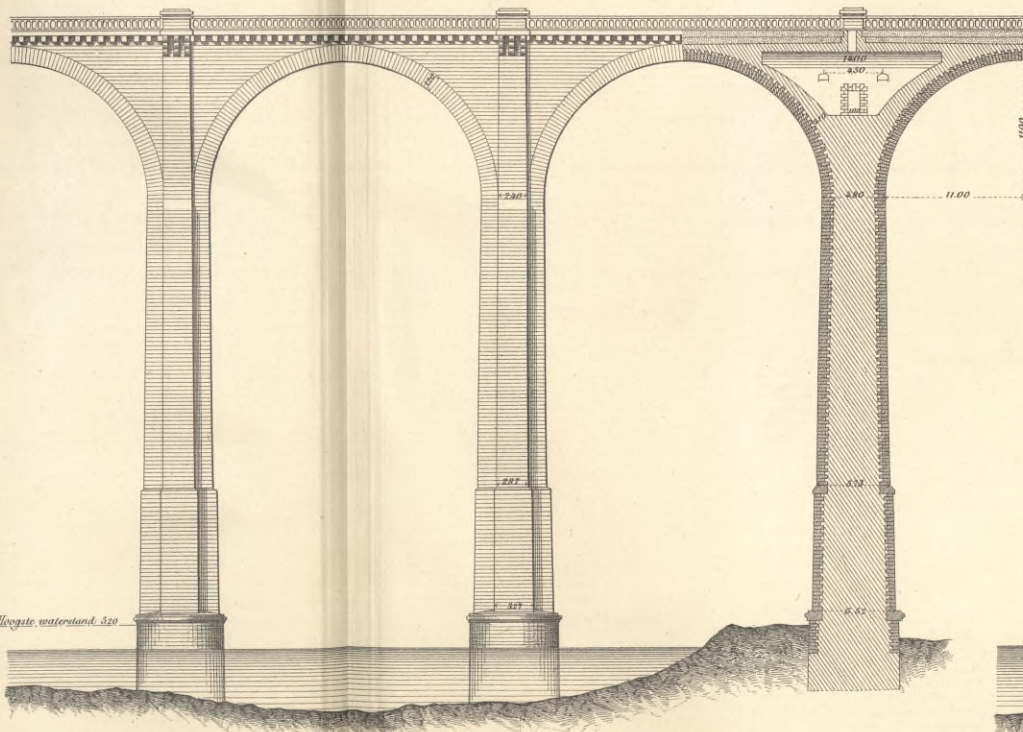
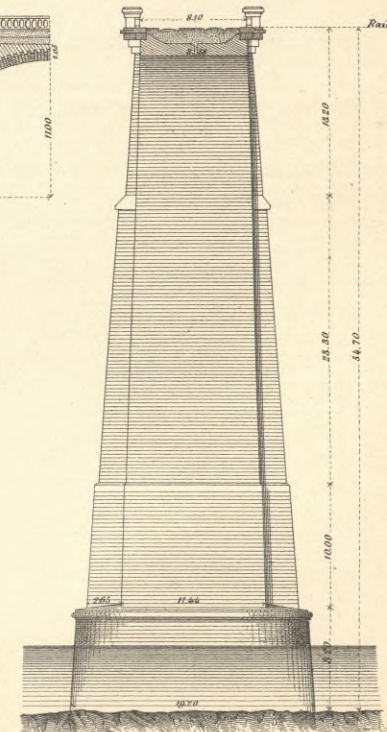


Fig. 5. Langdoorsnede.

Fig. 6. Dwarsdoorsnede.



Afdekking der Conterforten.

Fig. 10. Vooraanzicht.



Fig. 11. Zijaanzicht.



Schaal 1 à 100.

Fig. 7. Dwarsdoorsnede over de as van een pijler.

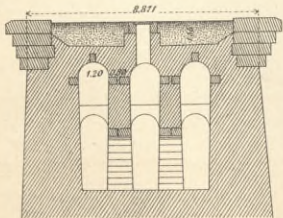
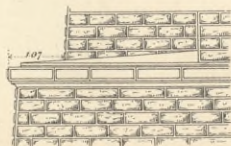


Fig. 12. Afdekking van den voet eens pijlers.



Schaal 1 à 100.

Hoogte waterstand. 520













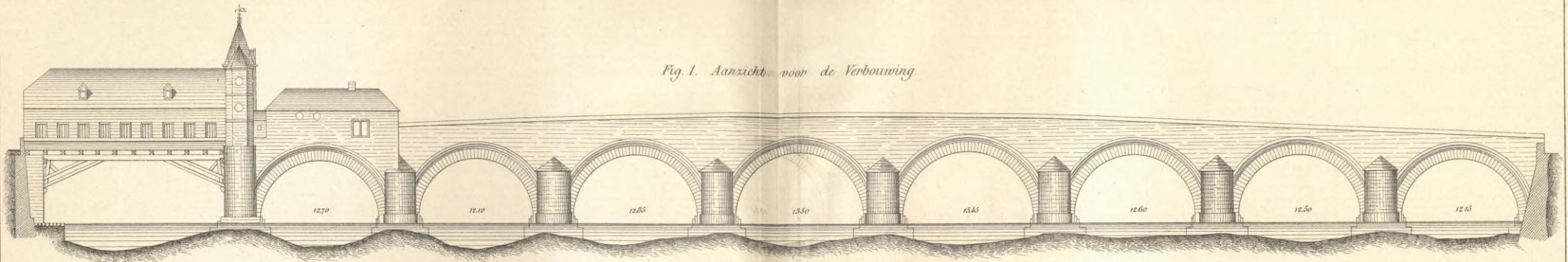
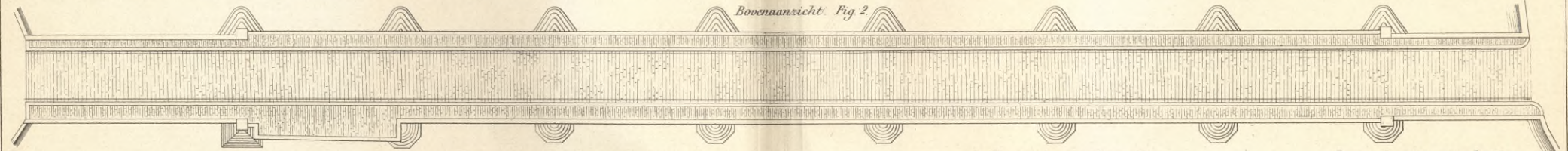


Fig. 1. Aanzicht voor de Verbouwing



Bovenaanzicht Fig. 2

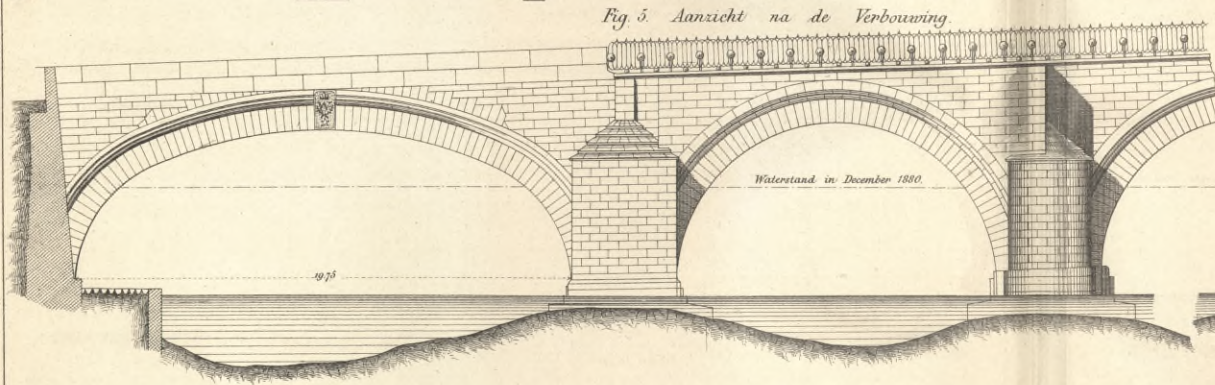


Fig. 5. Aanzicht na de Verbouwing.

Waterstand in December 1880.

Doorsnede over den piler. Fig. 3.

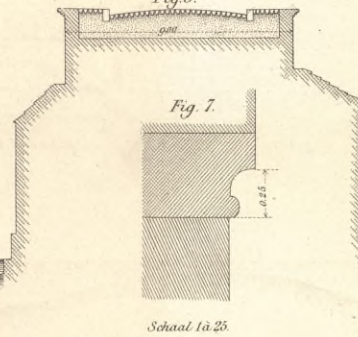


Fig. 7.

Schaal 1 à 25.

Doorsnede over een boog. Fig. 4.

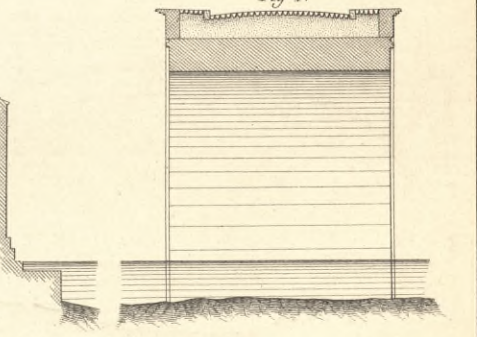


Fig. 6. Brug Du Saint-Esprit over de Rhone.

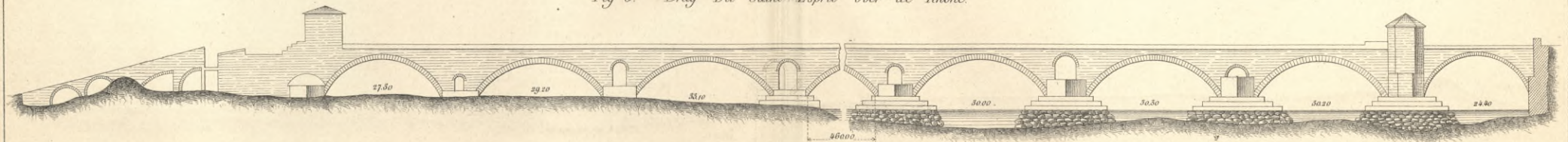


Fig. 1 en 2

Fig. 3, 4 en 5.

Fig. 6.

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Meter.

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Meter.

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Meter.







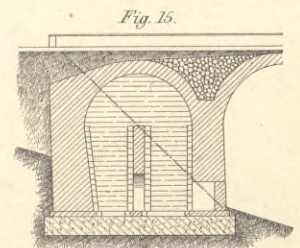
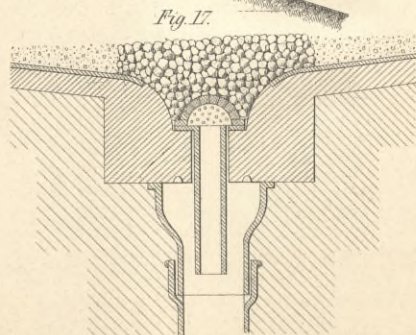
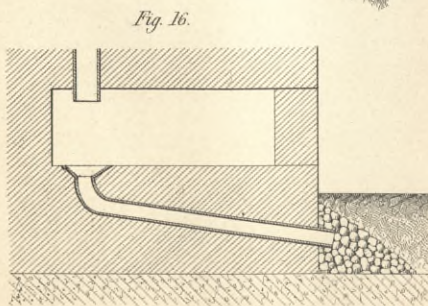
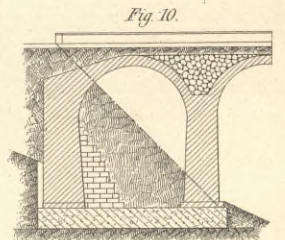
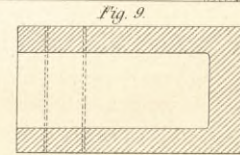
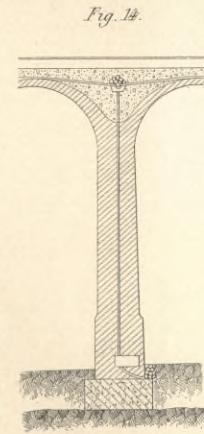
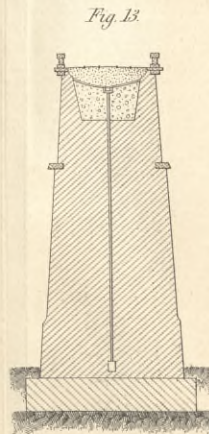
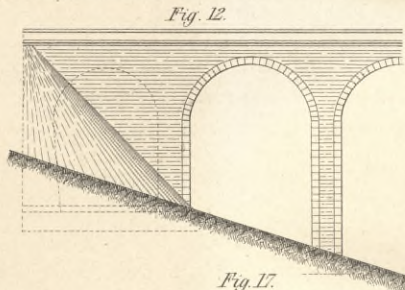
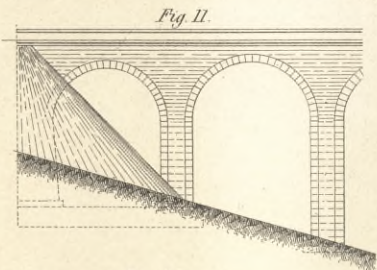
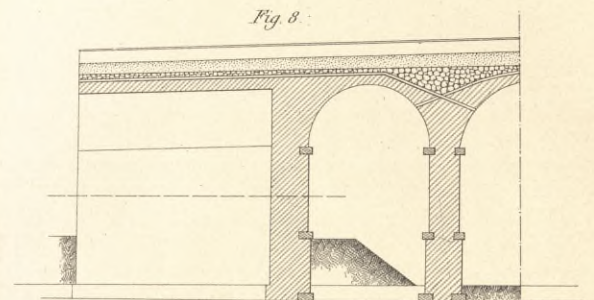
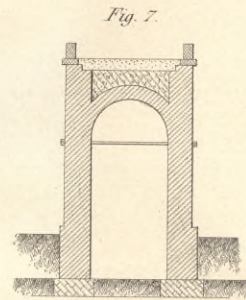
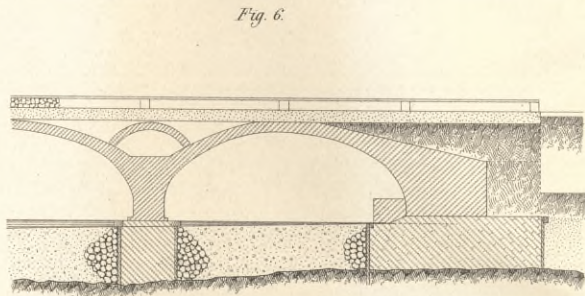
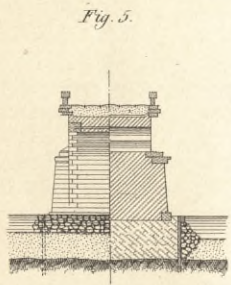
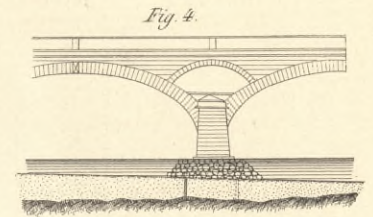
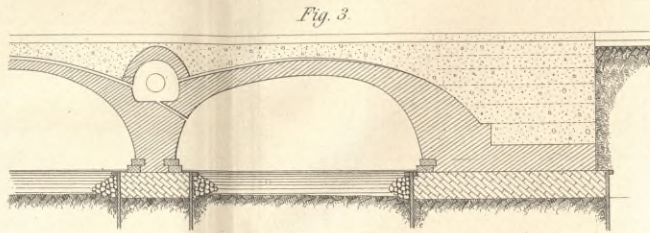
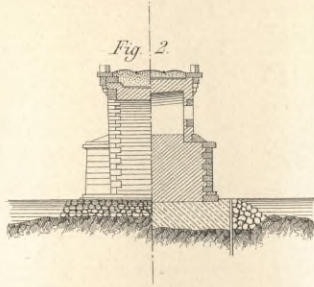
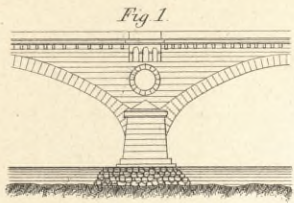






Fig. 1.

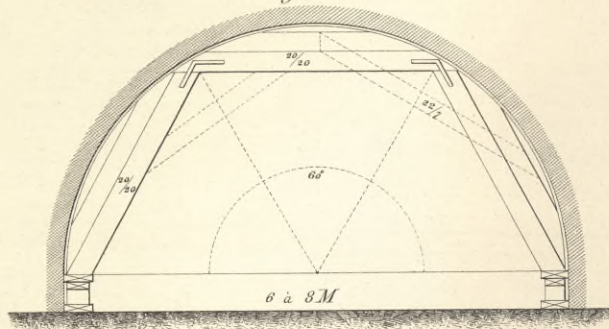


Fig. 2.

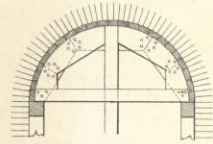


Fig. 3.

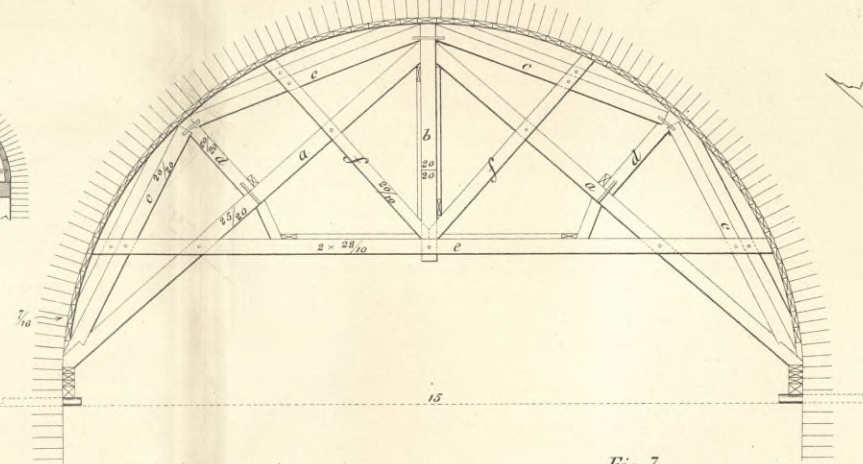


Fig. 4.

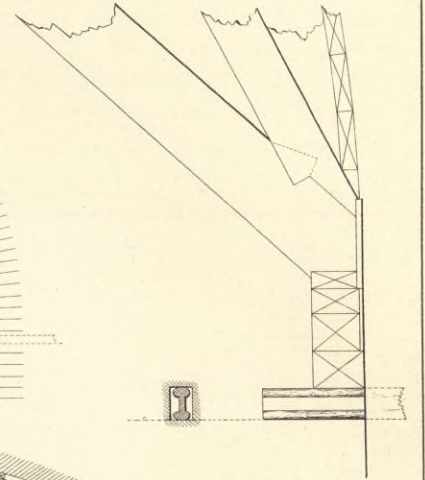


Fig. 5.

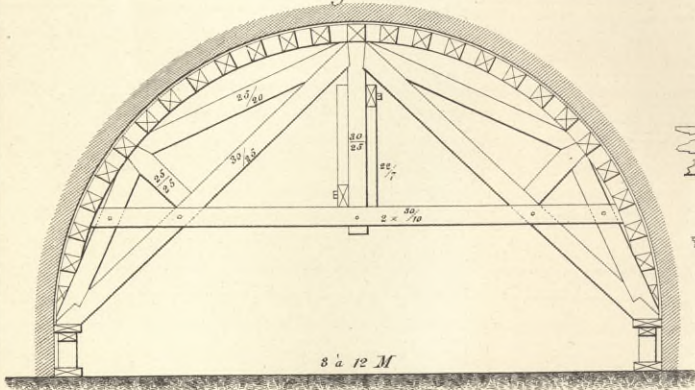


Fig. 10.

Fig. 11. (Schaal 1/10).

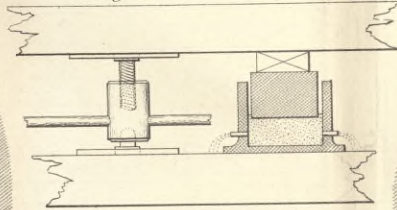


Fig. 7.

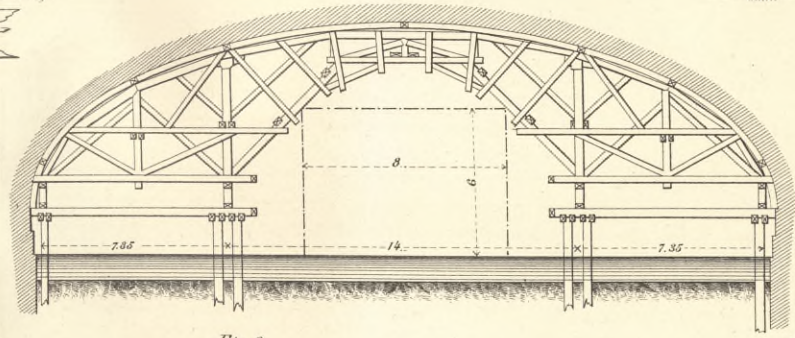


Fig. 6.

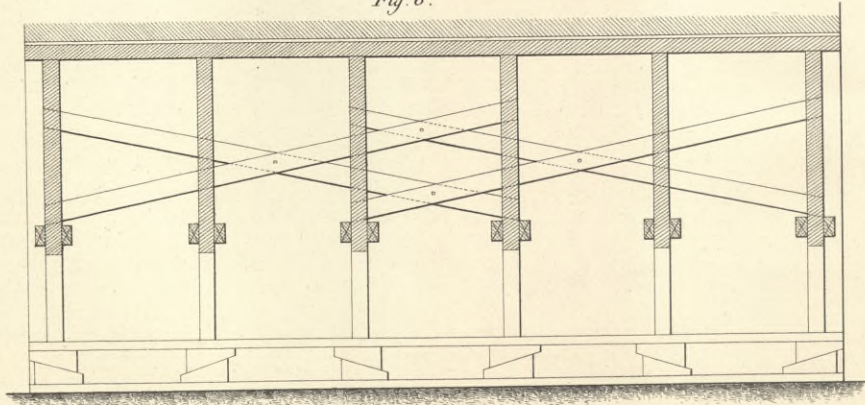


Fig. 8.

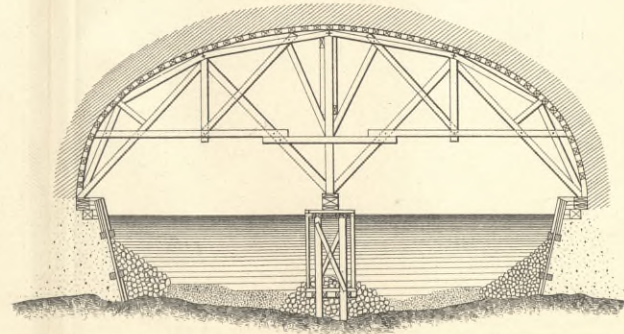


Fig. 9.

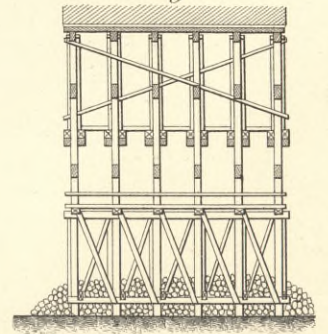






Fig. 1. Brug de la Concorde

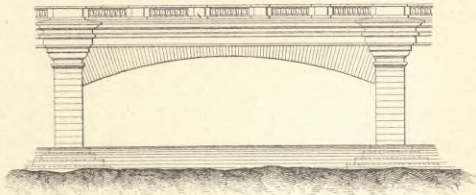


Fig. 2.

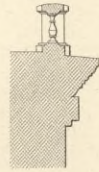


Fig. 3. Brug van Neuilly

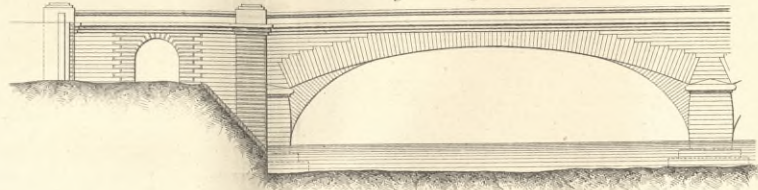


Fig. 4.

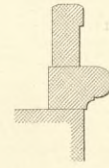


Fig. 5. Brug Marie te Parijs

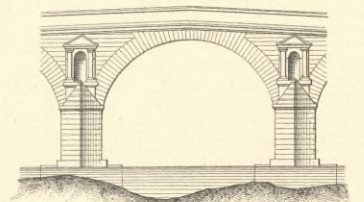


Fig. 6. Brug des Invalides

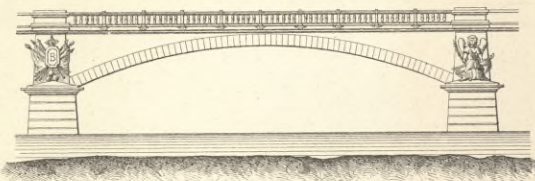


Fig. 7.

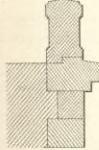
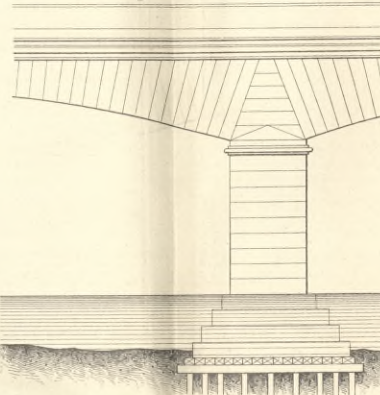


Fig. 8.



Brug. Saint Maxence.

Fig. 9.

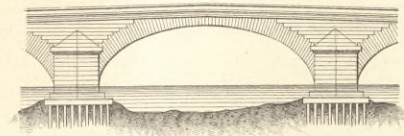


Fig. 10. Profil Brug te Florence.

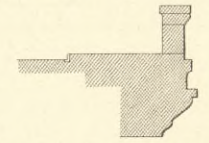


Fig. 11. Brug der Tuileries.

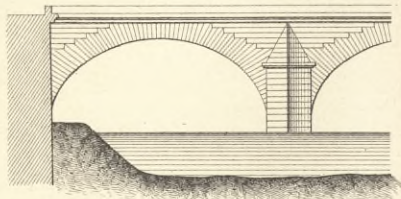


Fig. 12.

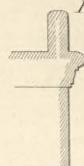


Fig. 13. Brug van S. Angelo

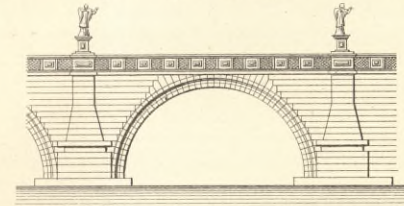


Fig. 14. Profil van de Archivolten en de Borstwering van de Rialtobrug te Venetie.

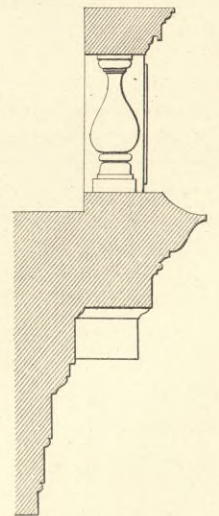


Fig. 15. Brug des Arches te Luik.

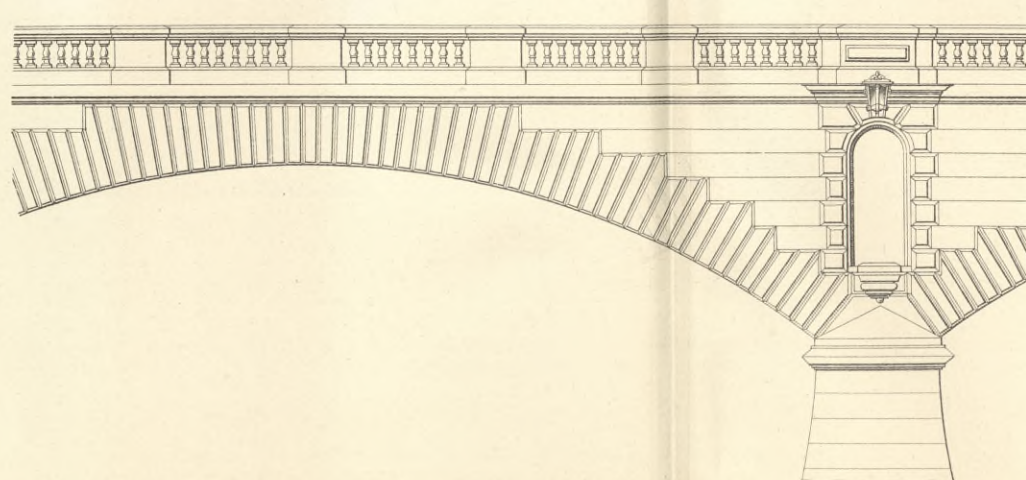


Fig. 16.

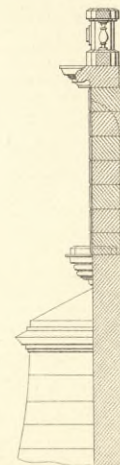


Fig. 17.

Borstwering Viaduct bij Herdecke.

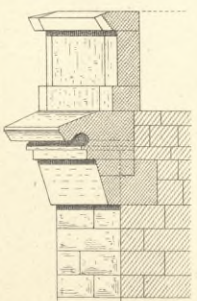








Fig. 1 Algemeen Aanzicht. (Schaal 1 à 500).

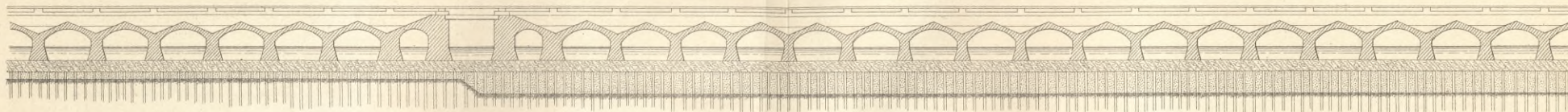


Fig. 2 Aanzicht. (Schaal 1 à 100).

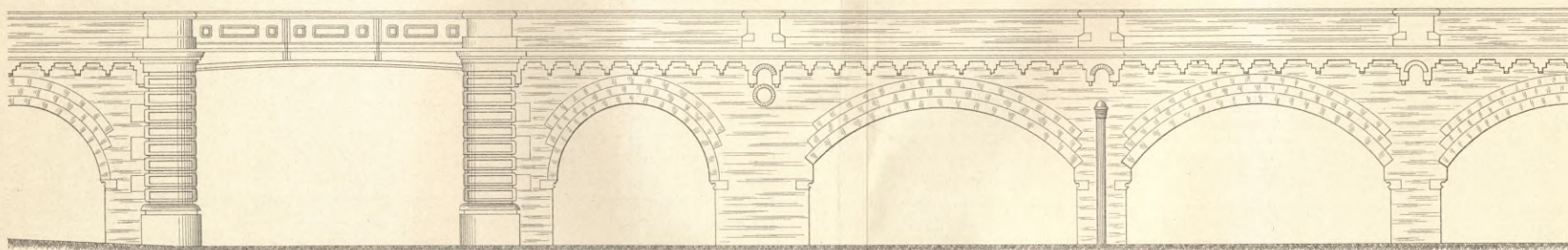


Fig. 3 Doorsnede.

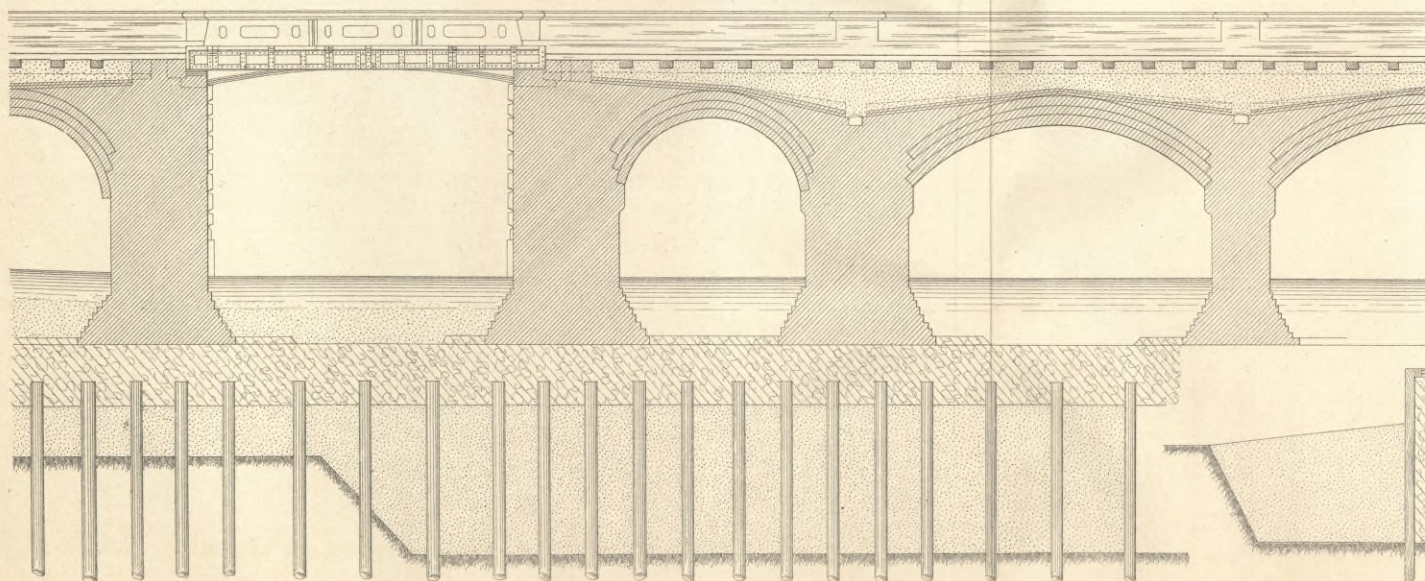


Fig. 4  
Profil Oranjebrug (Eenhoornsluis).

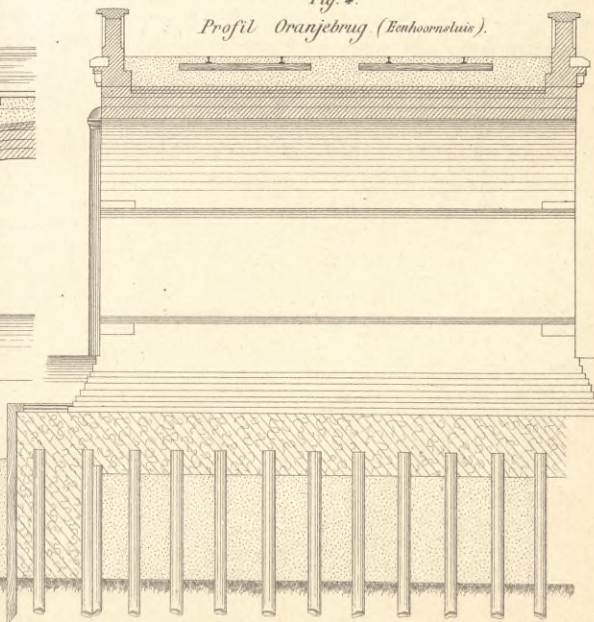






Fig. 1. Aqueduct du Gard. Fig. 1 en 2.

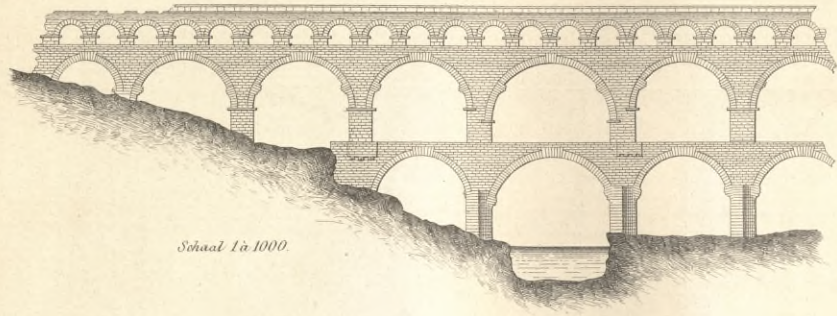


Fig. 2. Doorsnede.



Fig. 3. Aqueduct de Roquefavour. Fig. 3 en 4.

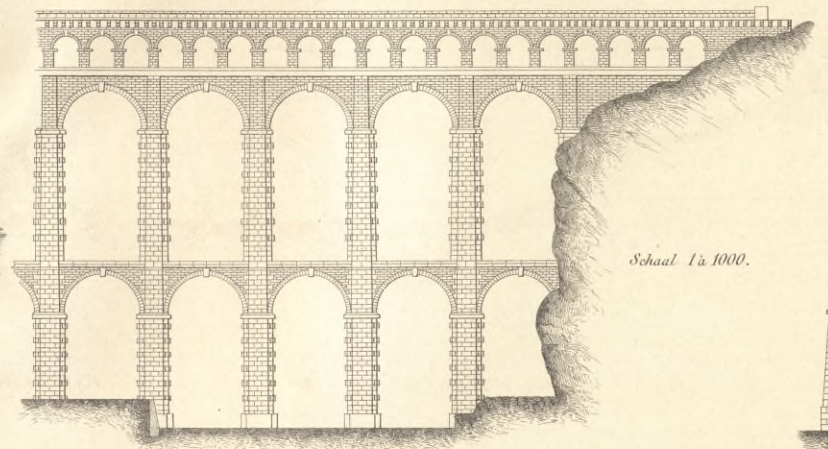


Fig. 4. Doorsnede.

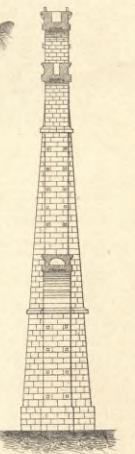


Fig. 5. Aqueduct de Capentras. Fig. 5 en 6.

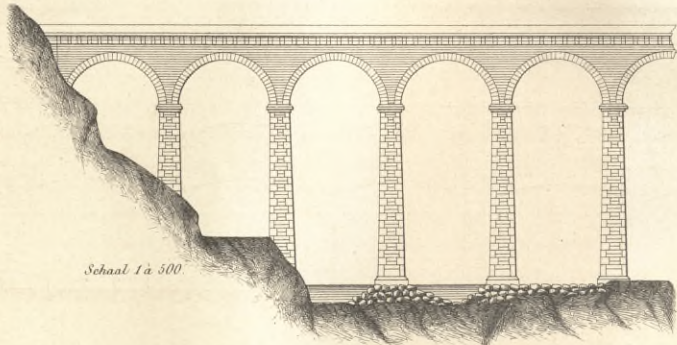


Fig. 6. Doorsnede.

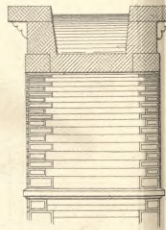


Fig. 7. Kanaalbrug over de Largue. Fig. 1 en 2.

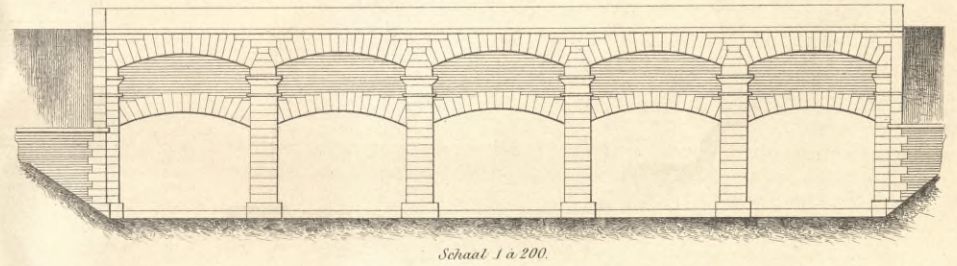


Fig. 9. Brug over den Spoorwegbaan te Quimper. Fig. 9 en 10. Aanzicht.

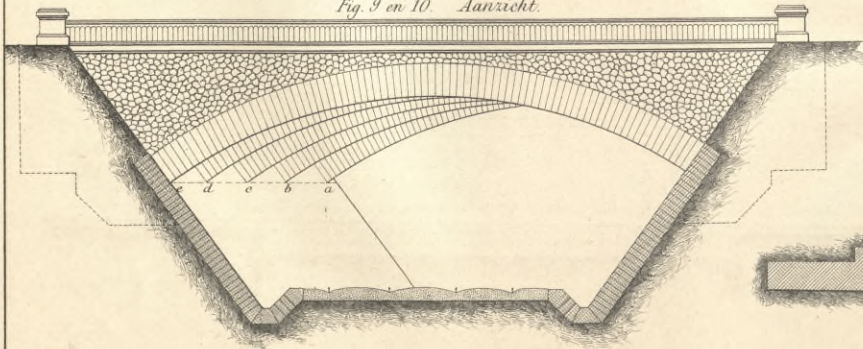


Fig. 10. Platte Grond.

Schaal 1 à 200.

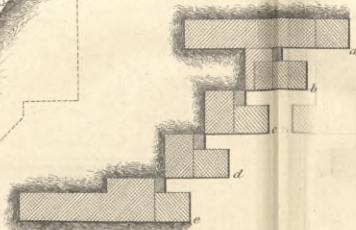


Fig. 8. Doorsnede.

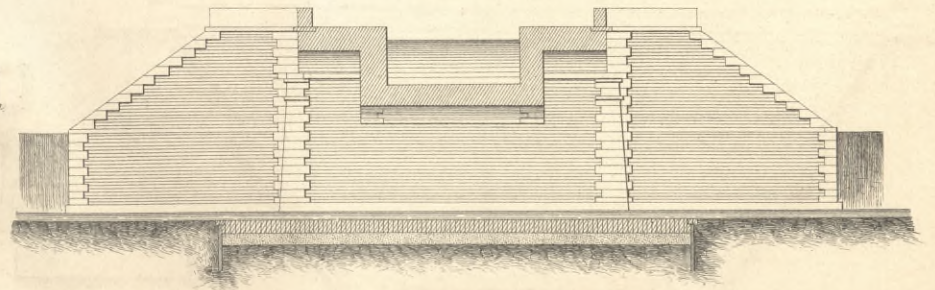






Fig. 1.

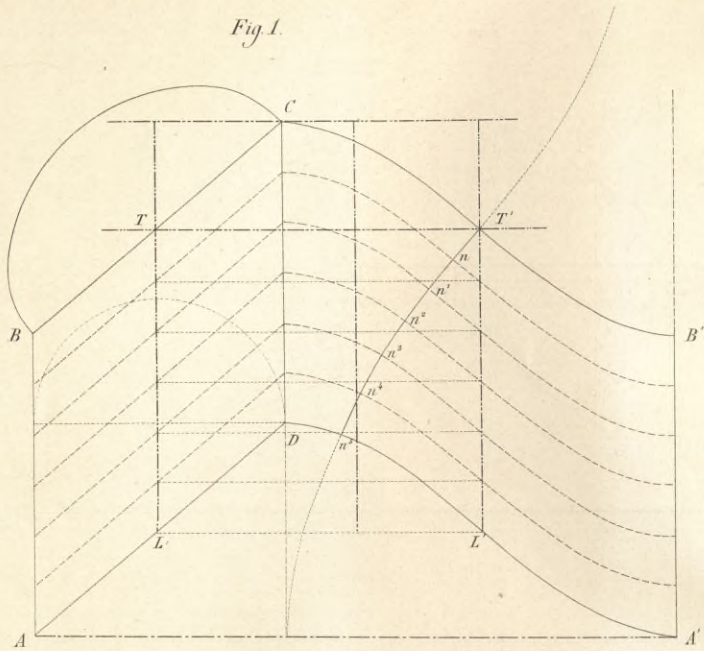


Fig. 2.

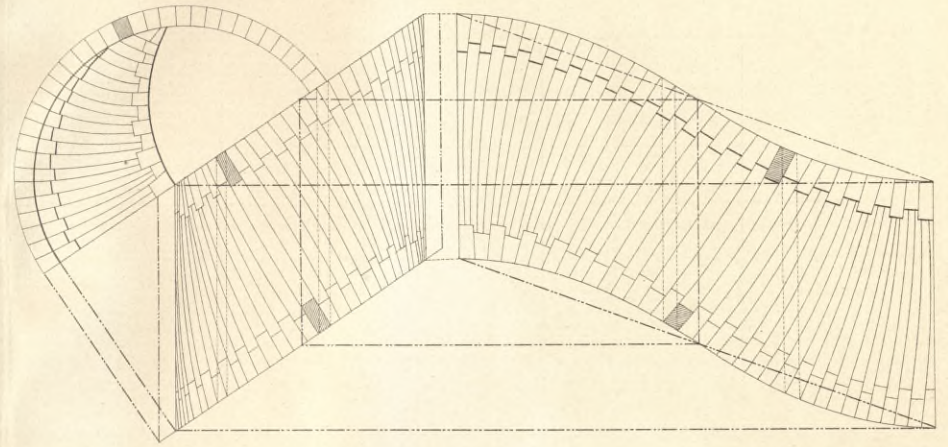


Fig. 3.

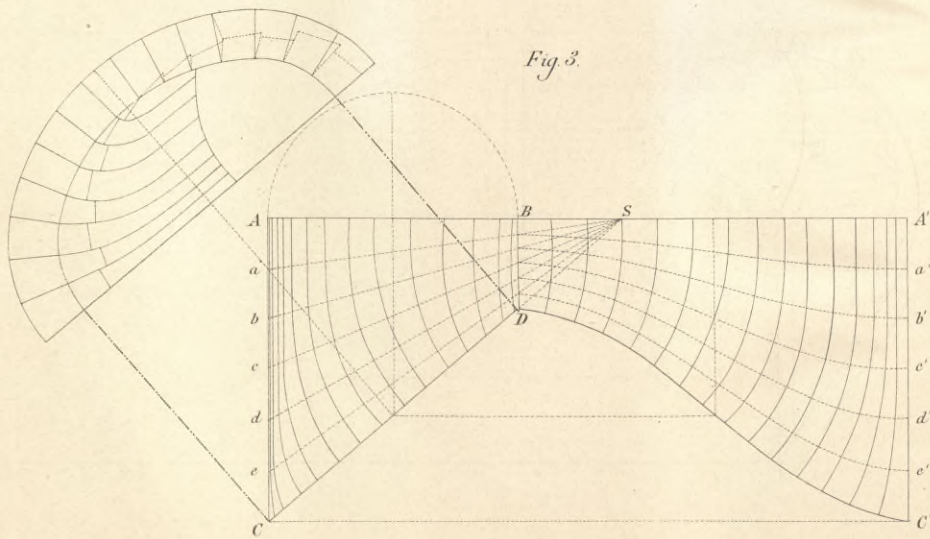


Fig. 4.

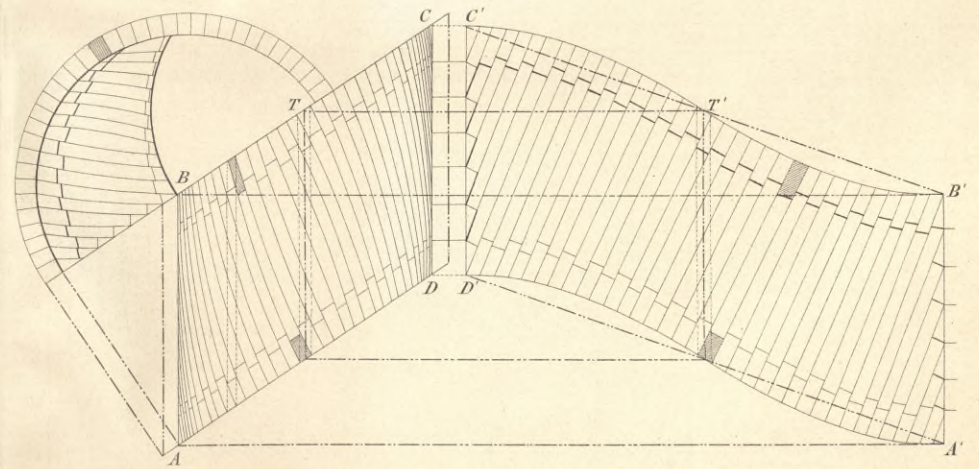








Fig. 1.

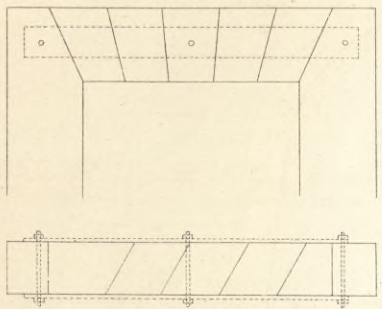


Fig. 2. Gemengd Stelsel.

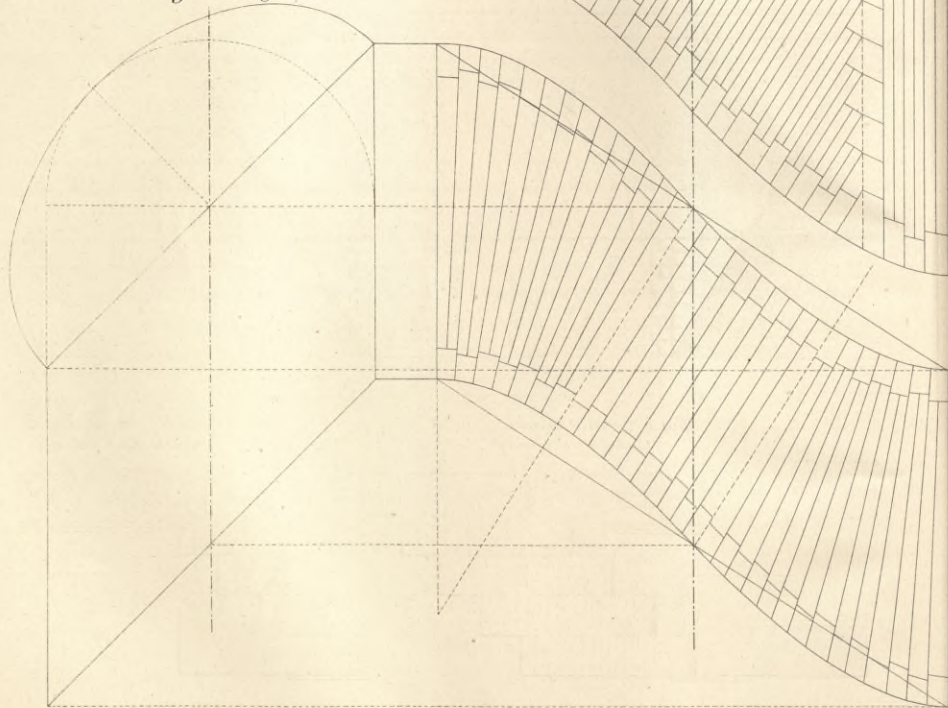


Fig. 3. Gemengd Stelsel.

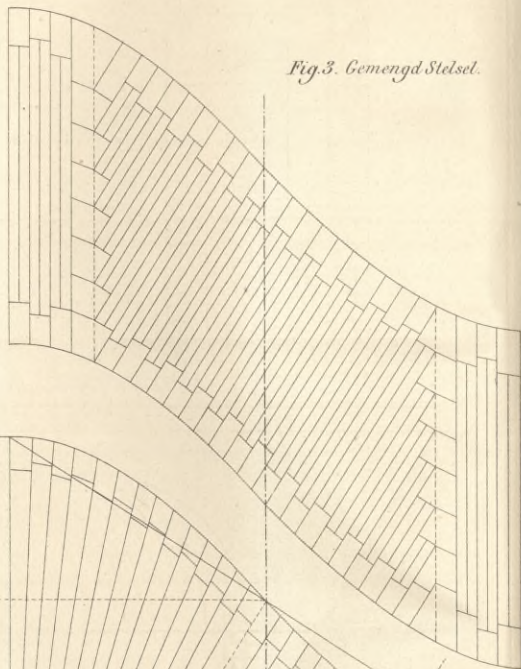


Fig. 4. Doorsnede C.D.

Schaal 1 à 200

Fig. 5. Doorsnede A.B.

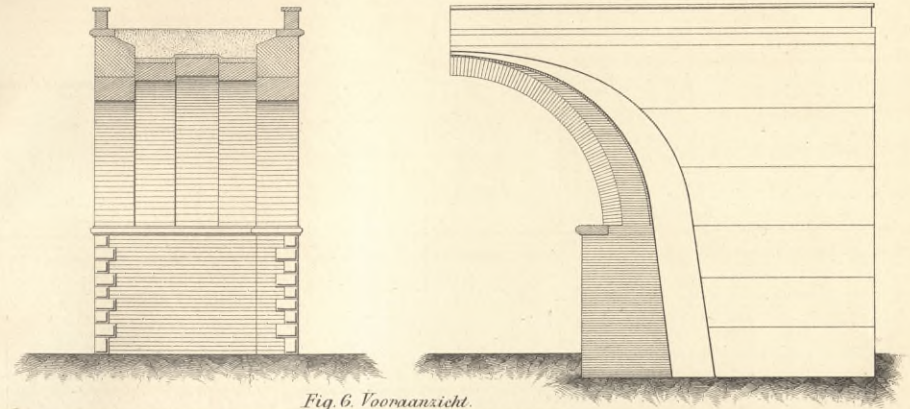


Fig. 6. Vooraanzicht.

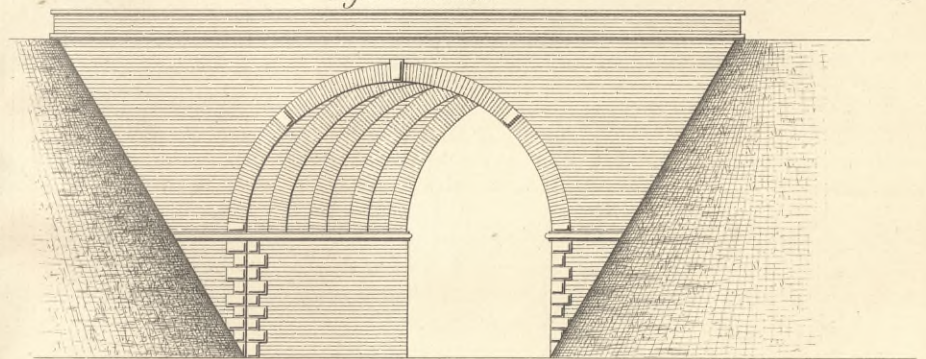


Fig. 7. Boven Aanzicht  
zonder aanrastering.

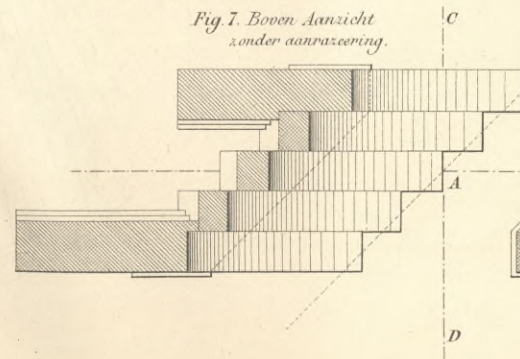
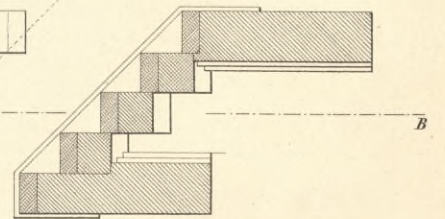
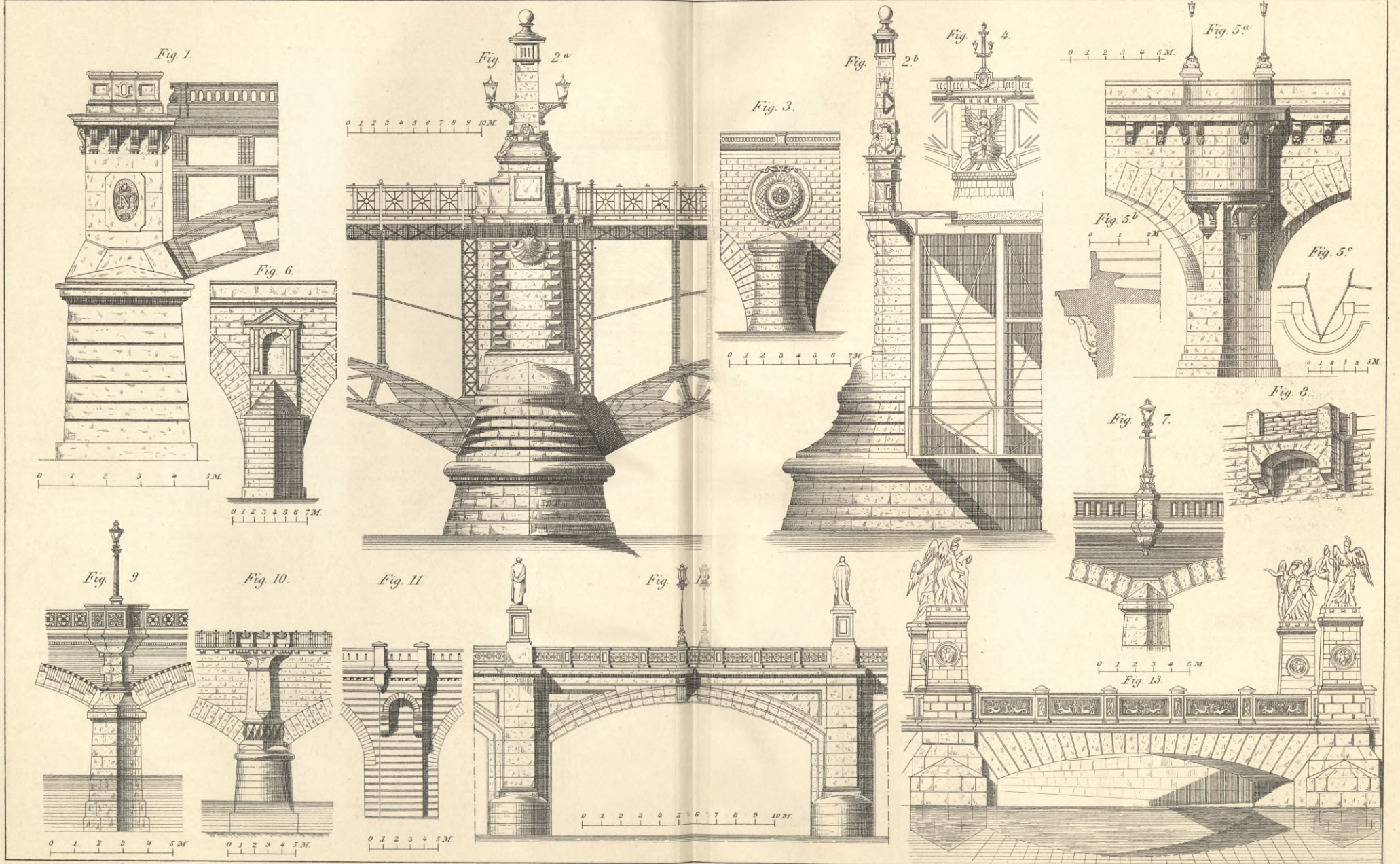


Fig. 8. Doorsnede ter hoogte van de  
geboorte der gewelven.















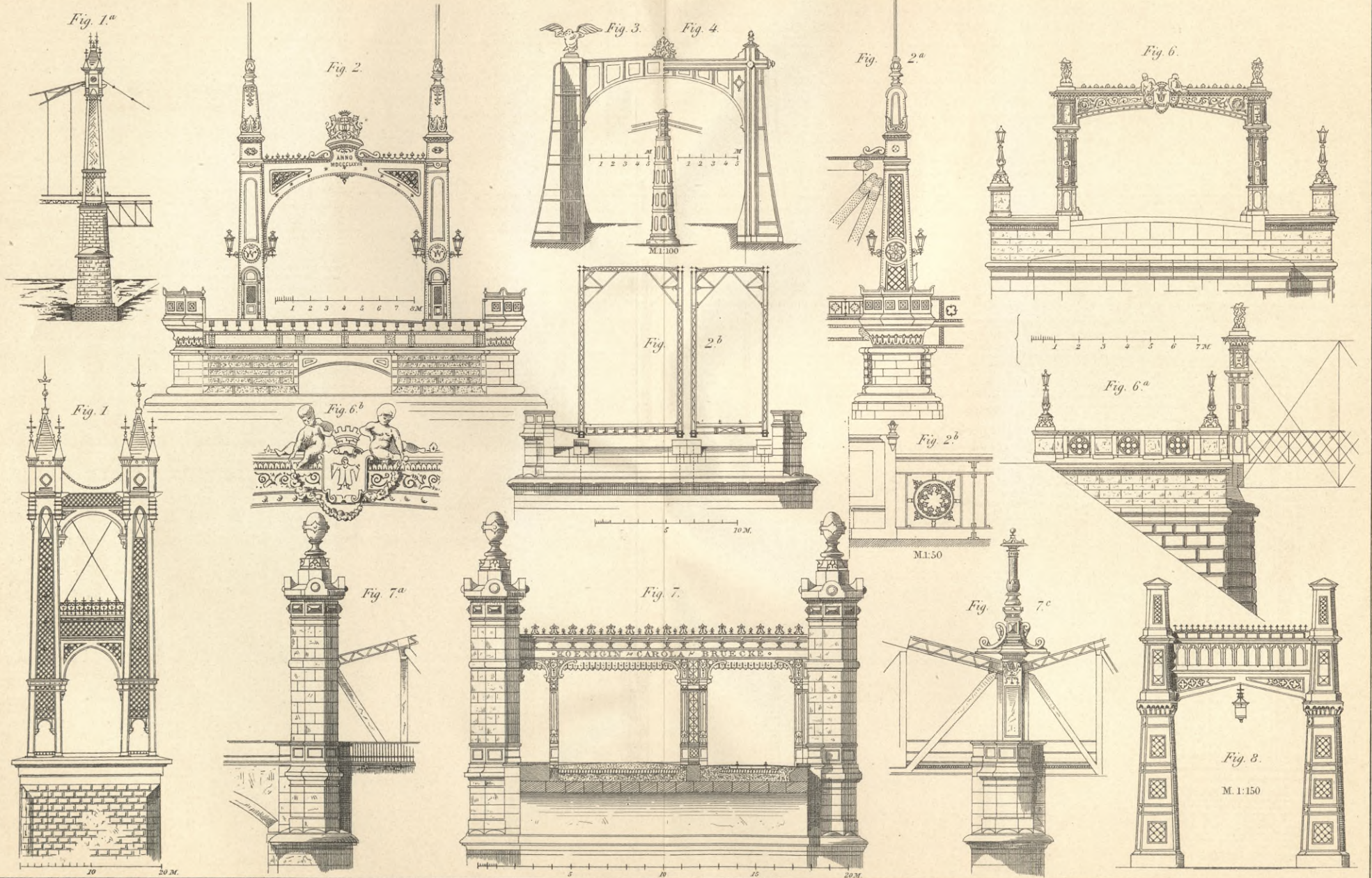






Fig. 1.

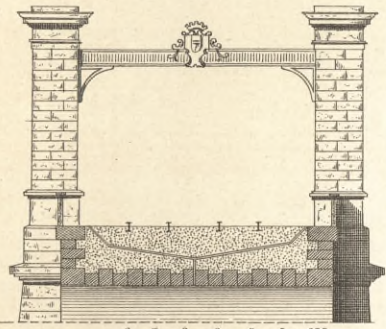


Fig. 2.

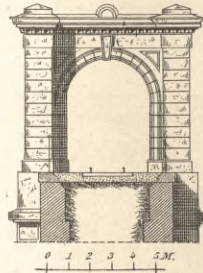


Fig. 3.

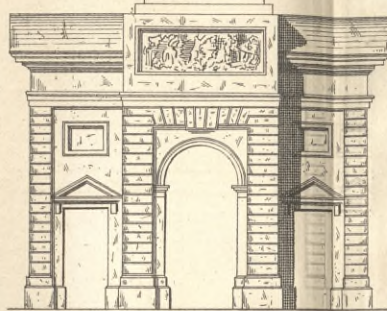


Fig. 3<sup>a</sup>.

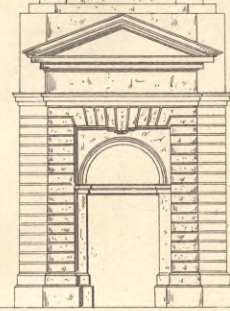


Fig. 4<sup>a</sup>.

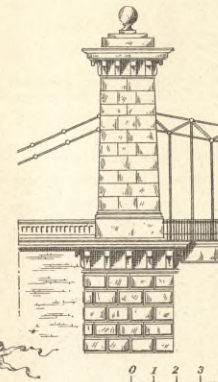


Fig. 4.

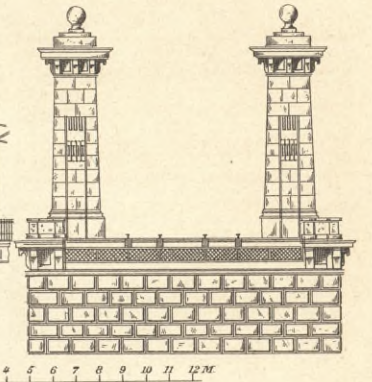


Fig. 5.

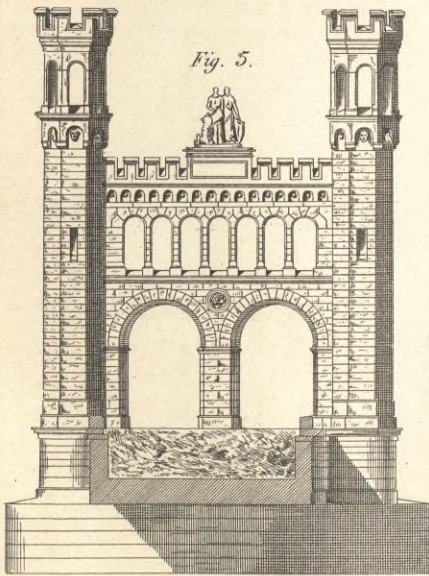


Fig. 6.

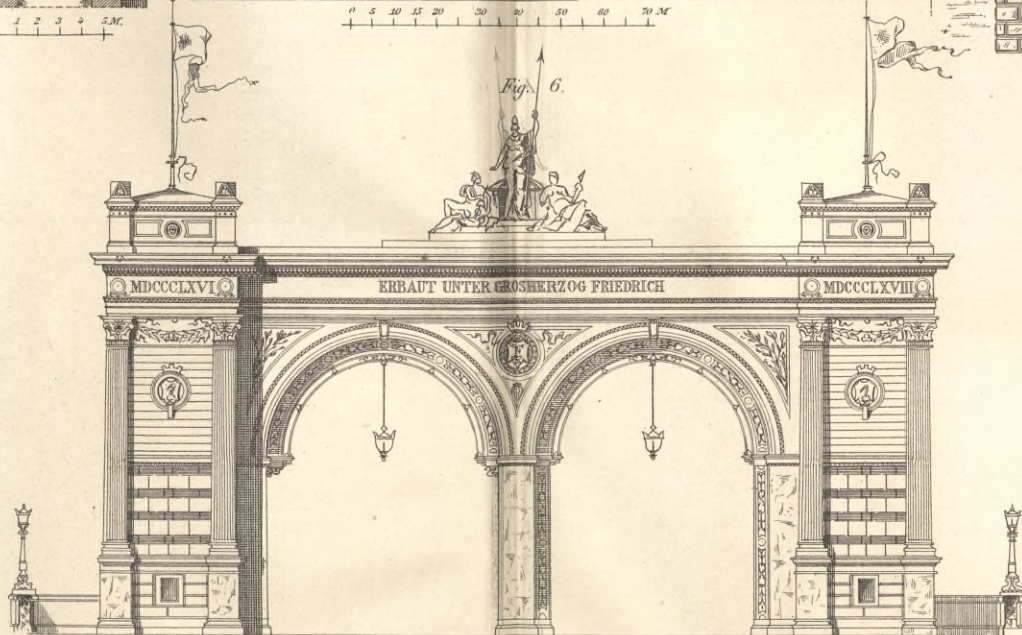


Fig. 7.

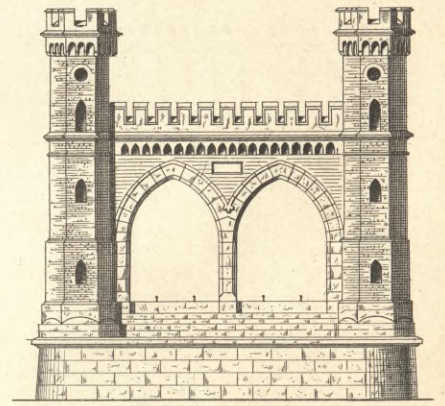


Fig. 5<sup>a</sup>.



Fig. 6<sup>a</sup>.

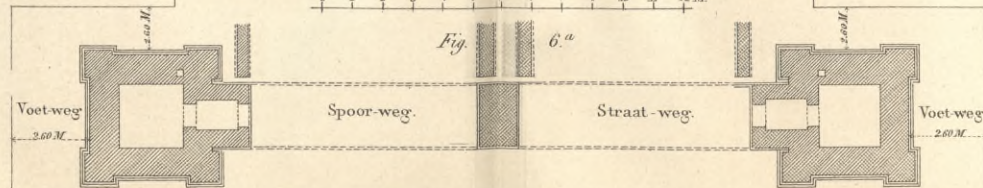


Fig. 6<sup>b</sup>.

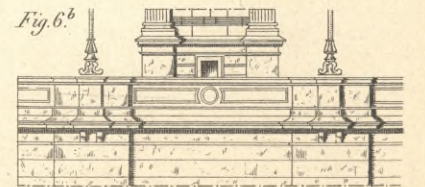








Fig. 1.

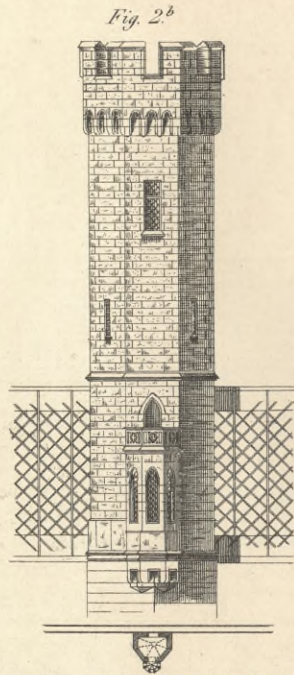


Fig. 2<sup>b</sup>

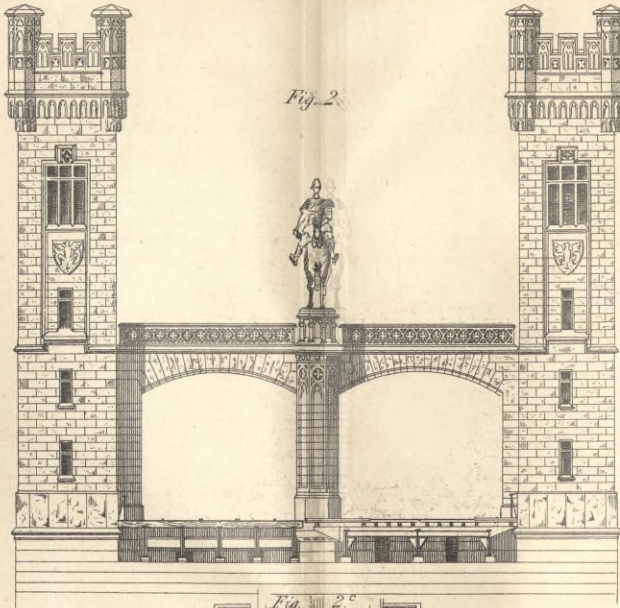


Fig. 2.

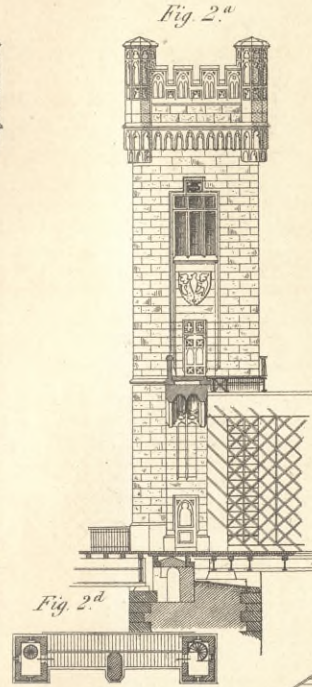


Fig. 2<sup>a</sup>

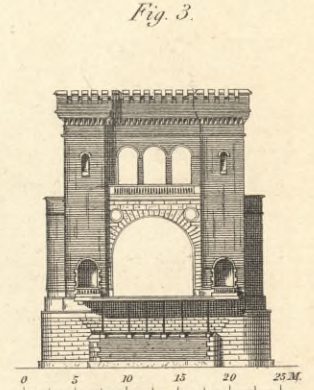


Fig. 3.

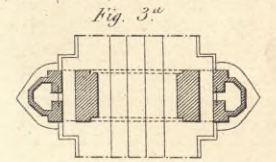


Fig. 3<sup>a</sup>

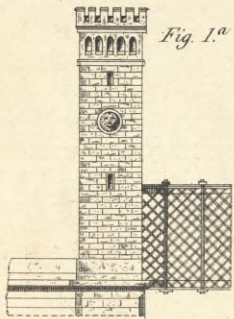


Fig. 1<sup>a</sup>

M 10 9 8 7 6 5 4 3 2 1 0 3 6 9 12 15 M  
Opstand. Platte Gronden.



Fig. 2<sup>c</sup>

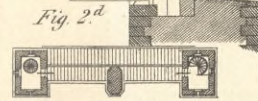


Fig. 2<sup>d</sup>

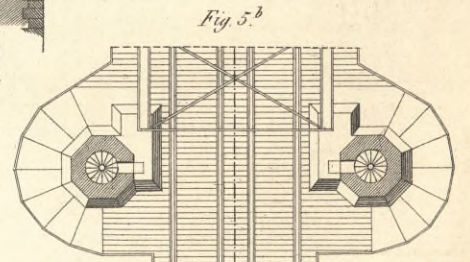


Fig. 5<sup>b</sup>

0 1 2 3 4 5 6 7 8 9 10 M

Fig. 5.

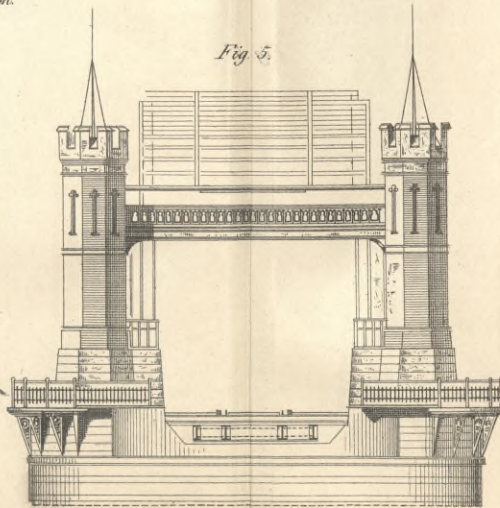
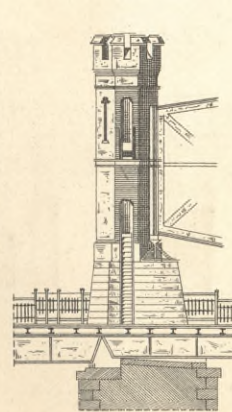


Fig. 5<sup>a</sup>



0 1 2 3 4 5 6 7 8 9 M

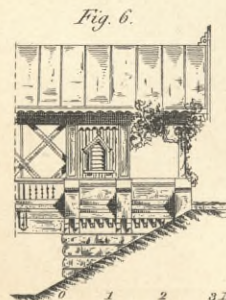


Fig. 6.

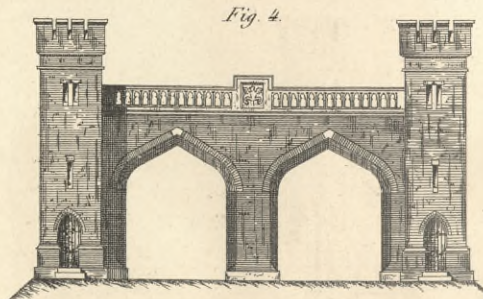


Fig. 4.

0 10 20 30 40 50 60 70 80 90 100 M

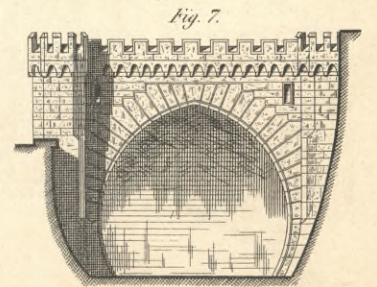
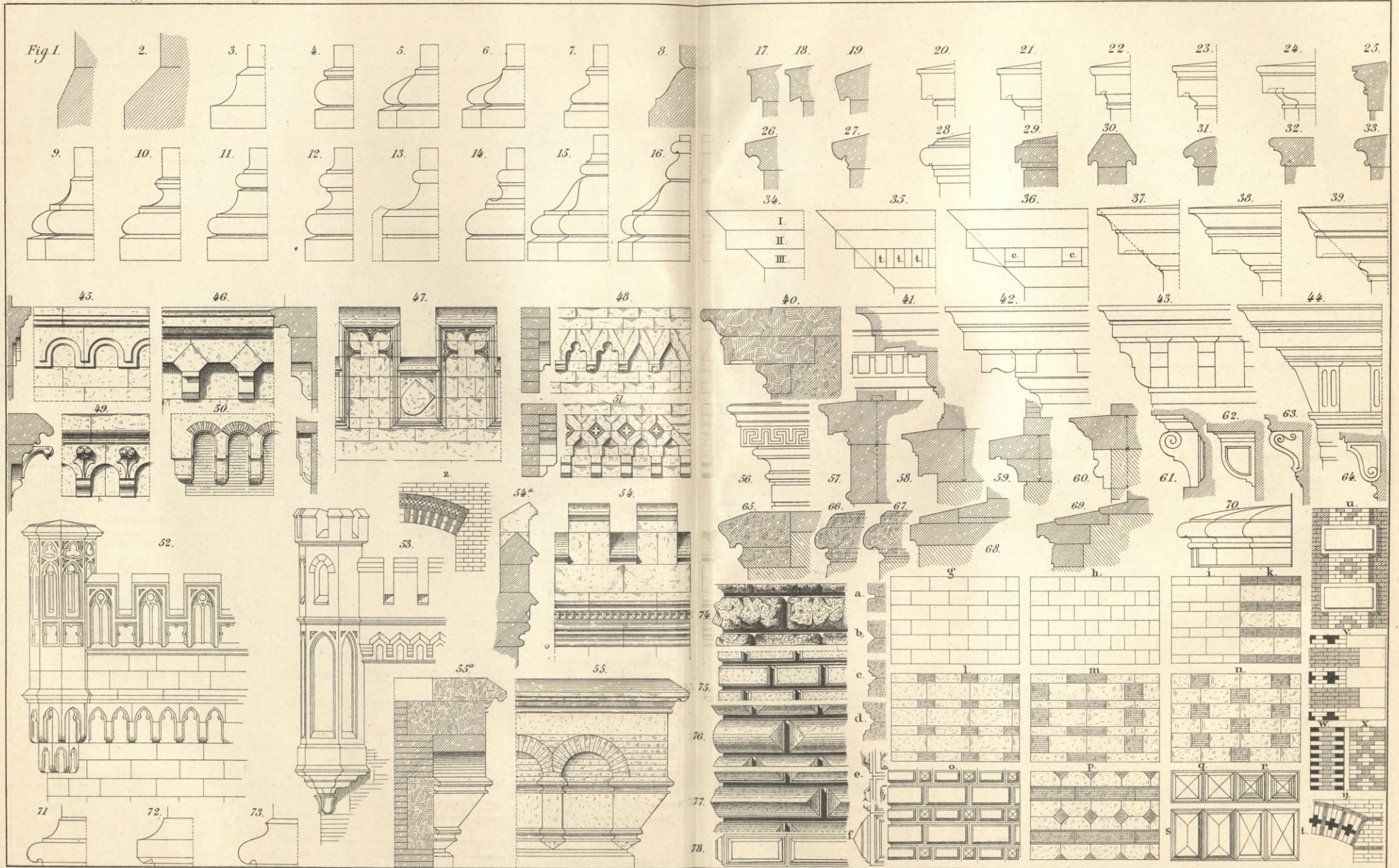


Fig. 7.













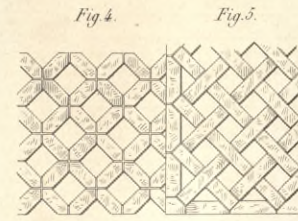
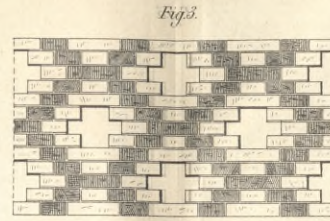
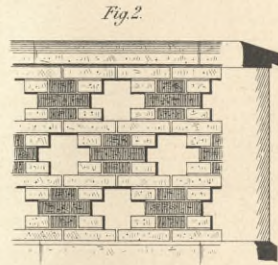
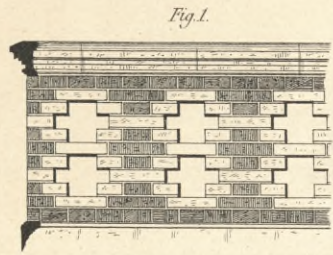


Fig. 5.

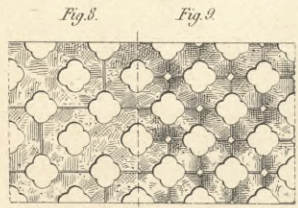
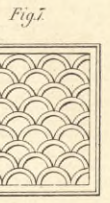
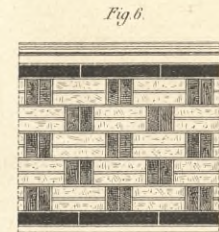


Fig. 9.

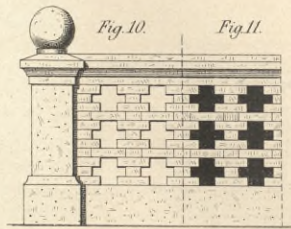


Fig. 11.

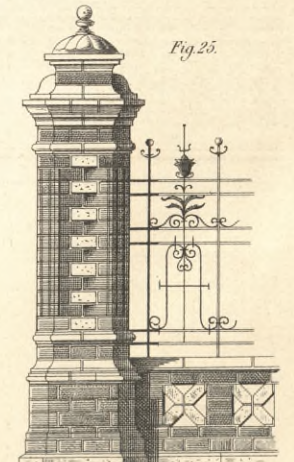
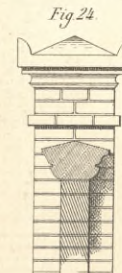
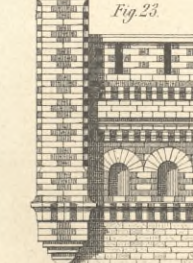
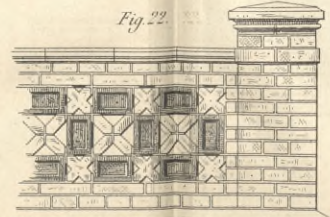
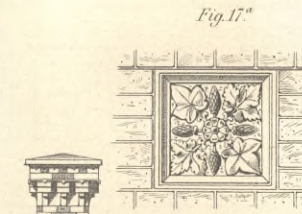
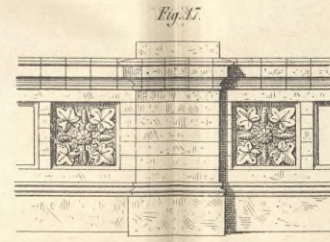
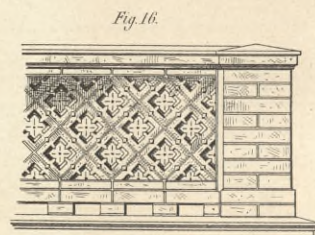
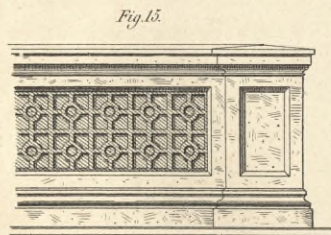
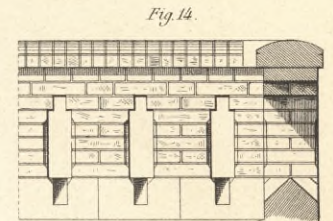
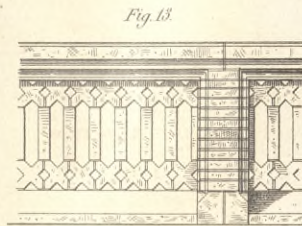
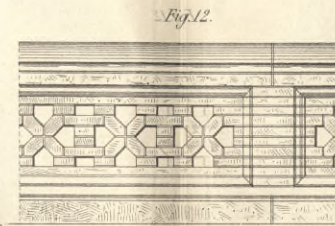






Fig. 1.



Fig. 2.

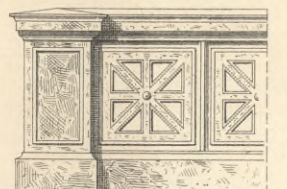


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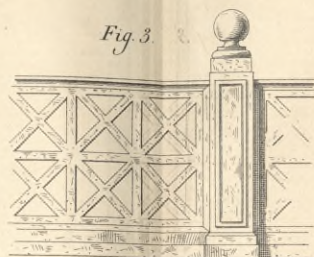


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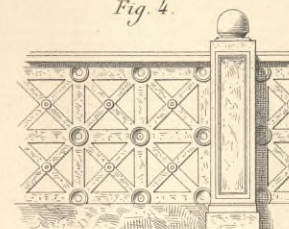


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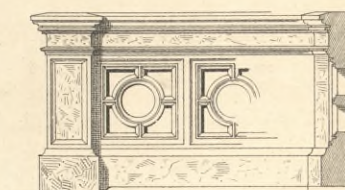


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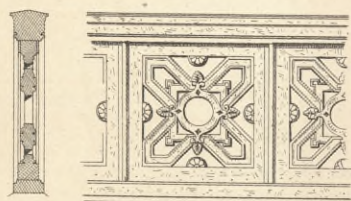


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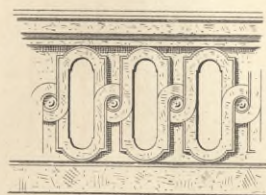


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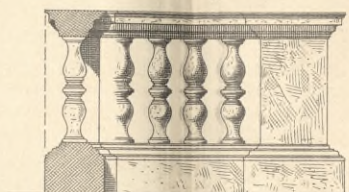


Fig. 9.



Fig. 10.



Fig. 11.

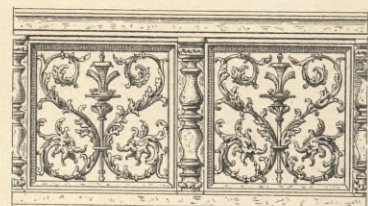


Fig. 12.



Fig. 13.

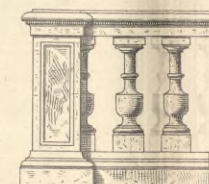


Fig. 14.



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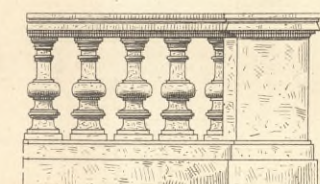


Fig. 16.



Fig. 18.

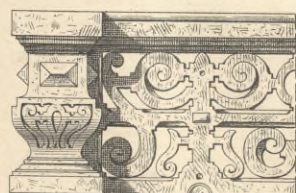


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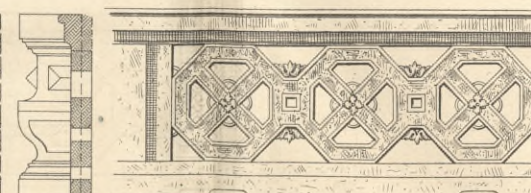


Fig. 20. Fig. 21.

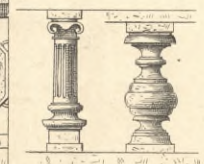


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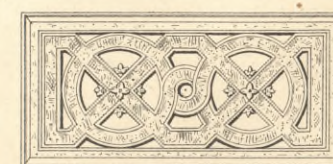


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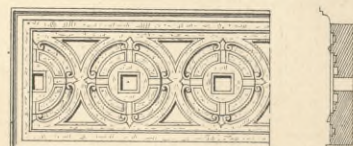








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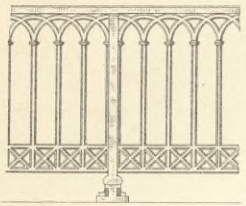


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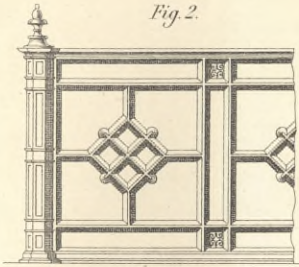


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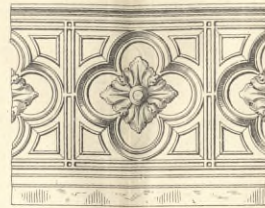


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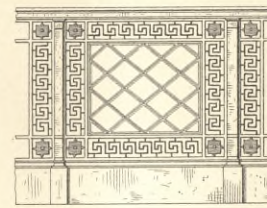


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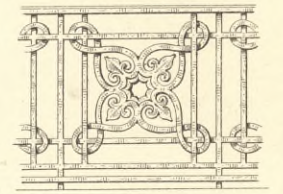


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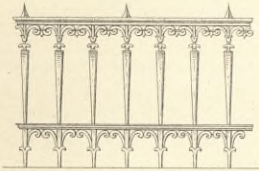


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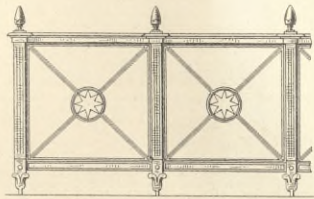


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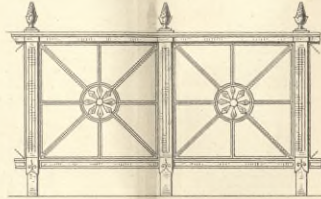


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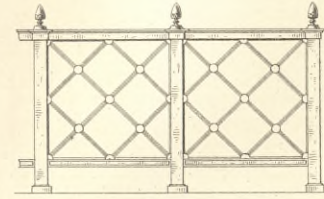


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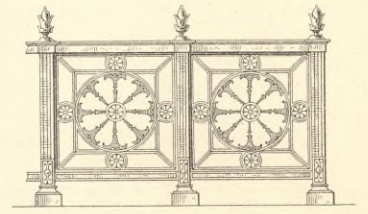


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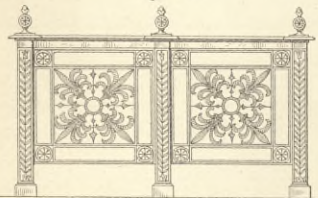


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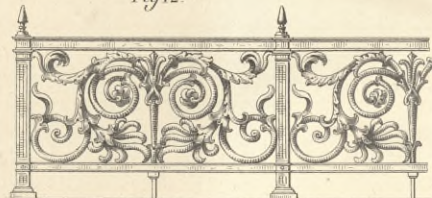


Fig. 13.



Fig. 14.

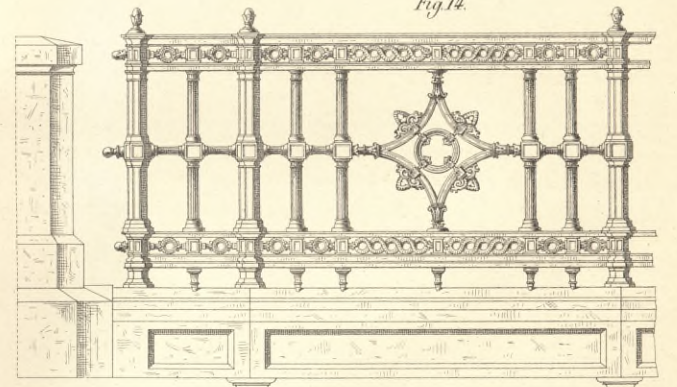


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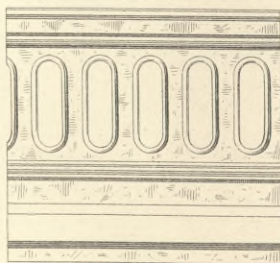


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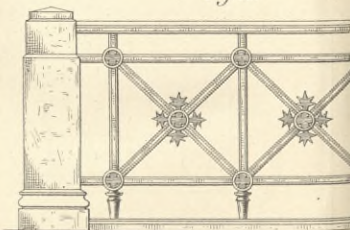


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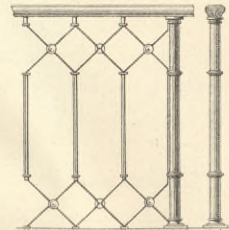


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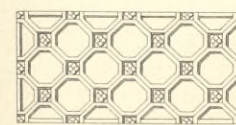
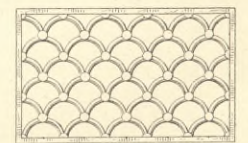
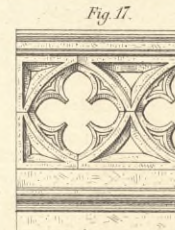
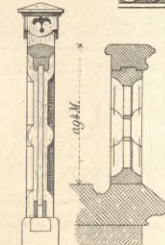
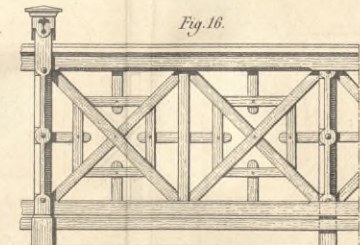
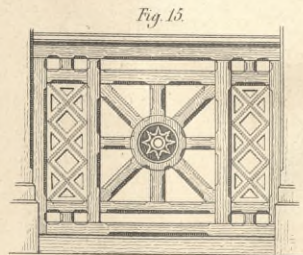
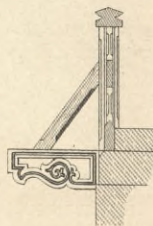
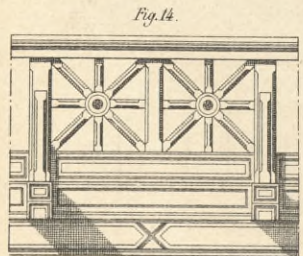
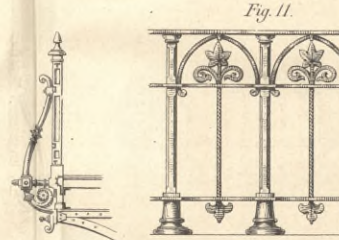
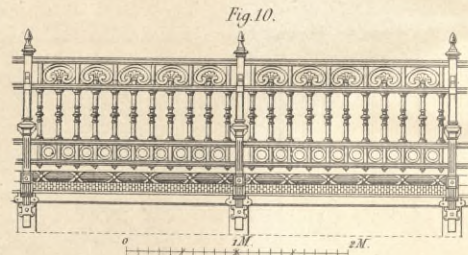
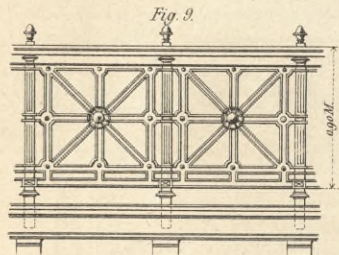
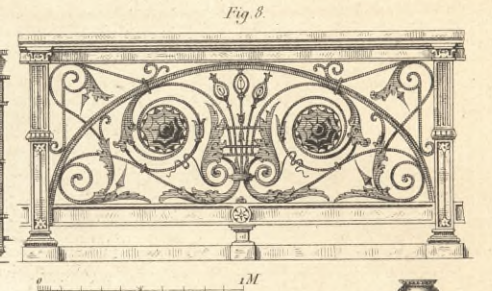
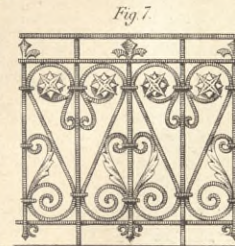
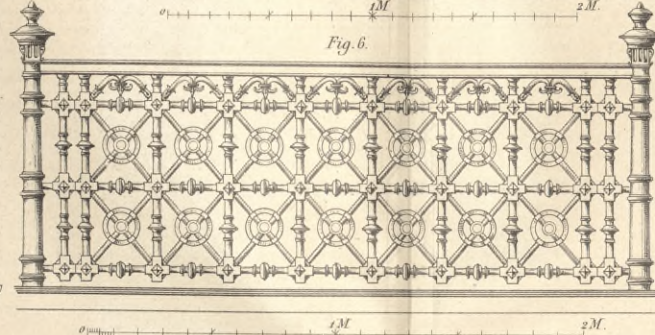
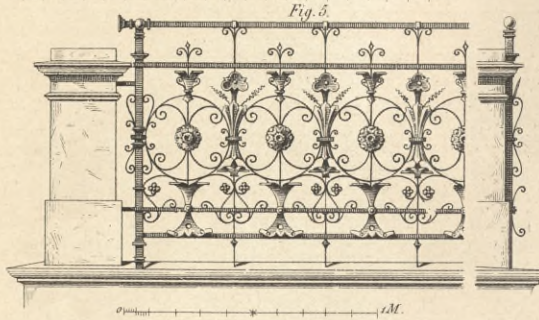
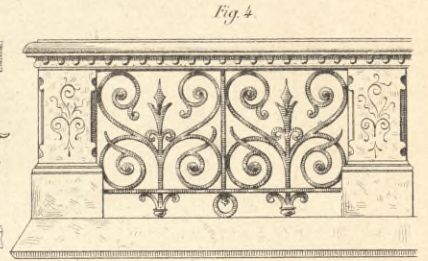
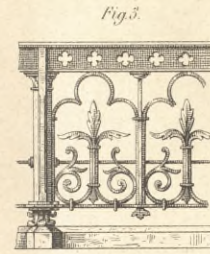
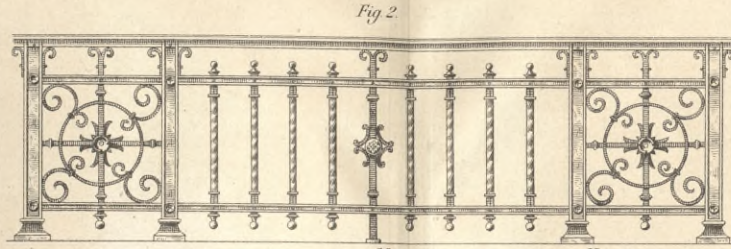
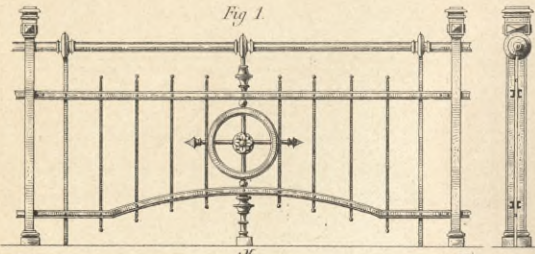


Fig. 19.





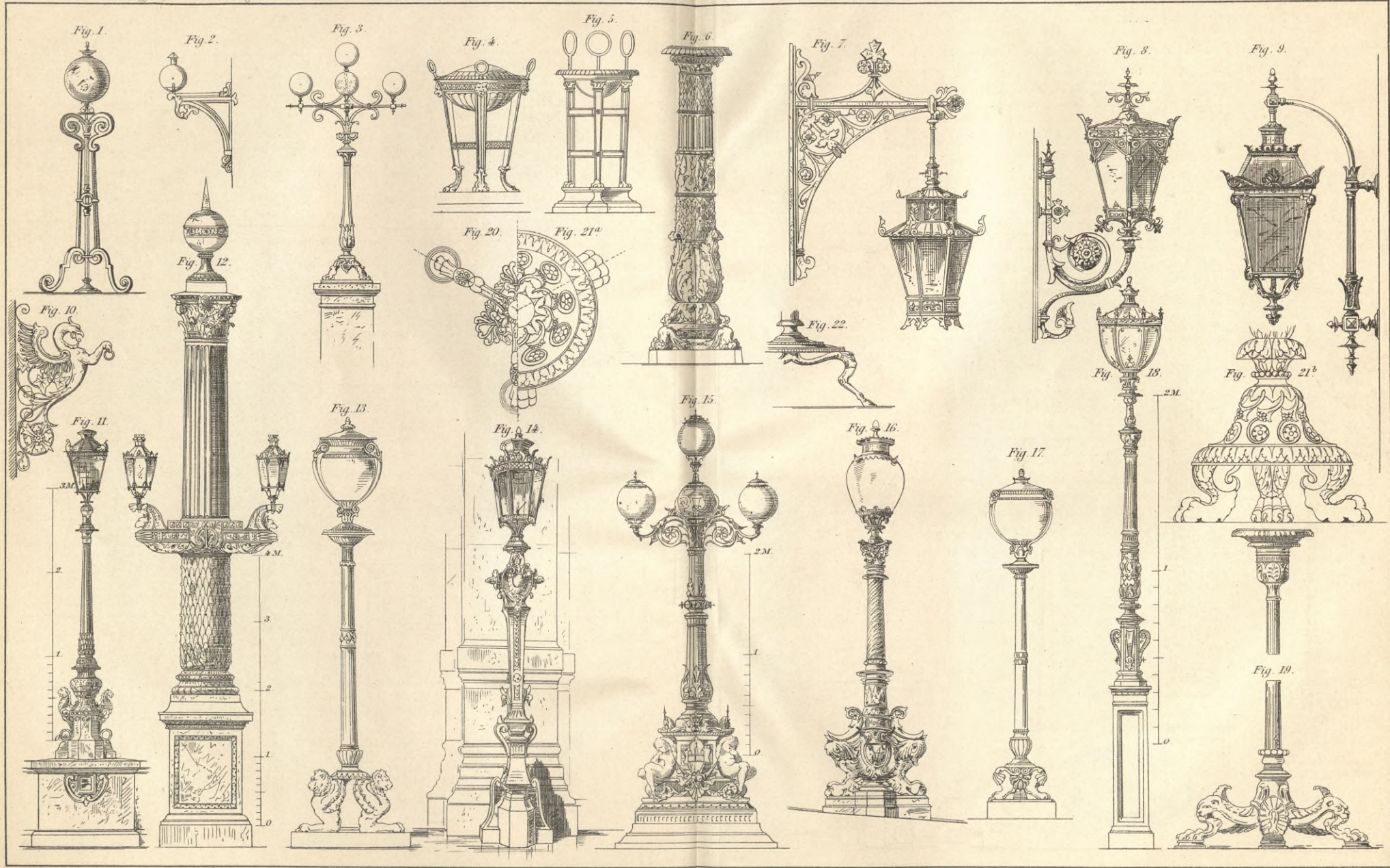








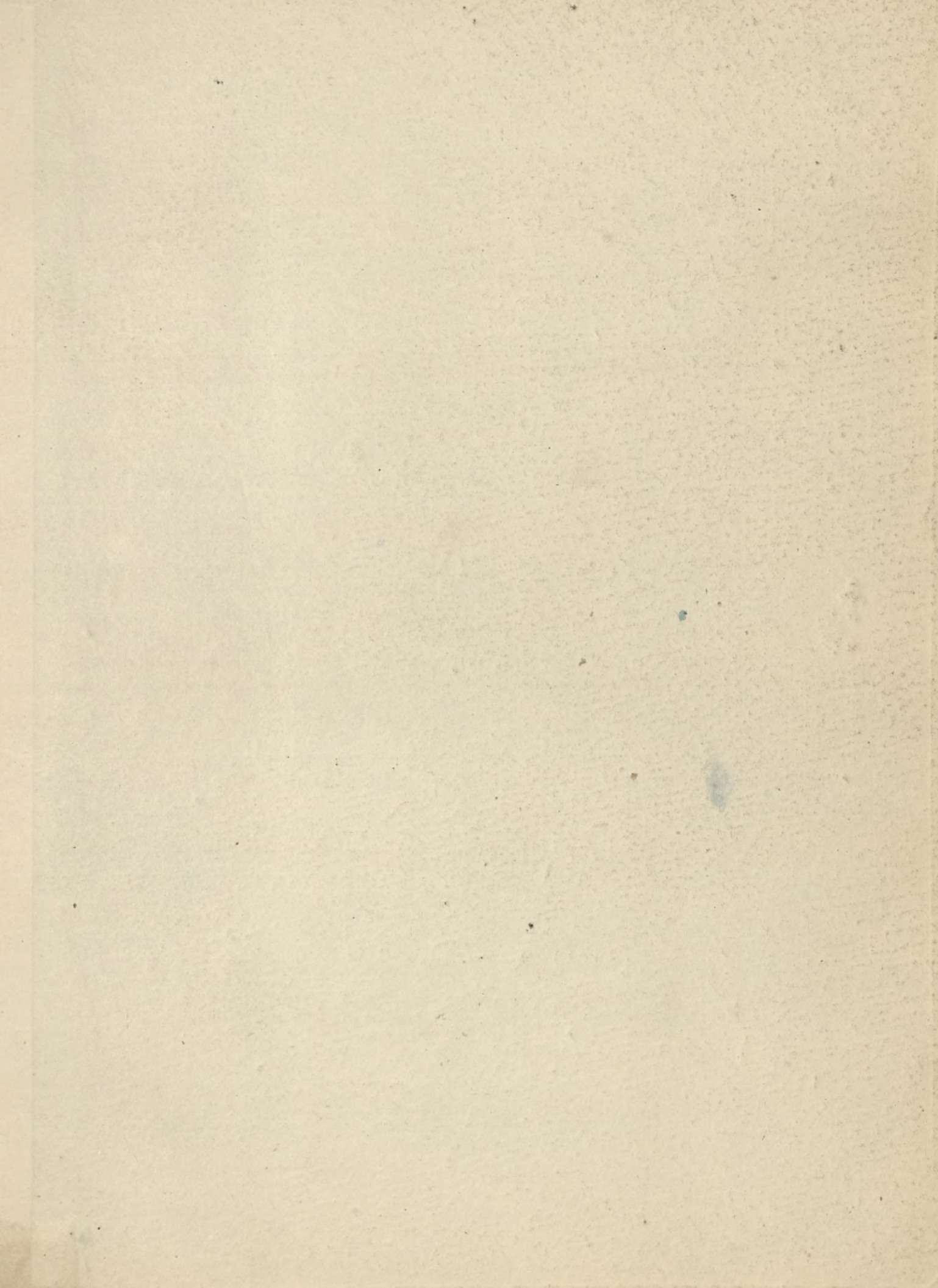












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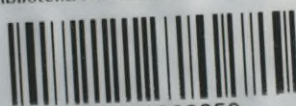
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